TheCityUK

THE ECONOMICS OF FISCAL POLICY

INDEPENDENT ECONOMISTS GROUP

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TheCityUK

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INDEPENDENT ECONOMISTS GROUP

TheCityUK's Independent Economists Group (IEG) was established in April 2012 as a forum to bring together leading economists in financial and professional services. The IEG meets quarterly with the aim of providing independent and informed analysis of macroeconomic issues as well as key issues that the industry is facing both in the UK and internationally. Analysis incorporates implications of these issues for financial and professional services and for authorities in the UK and EU.

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FOREWORD

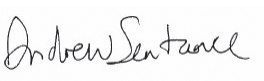
Fiscal policy in the UK and other major economies has become a complex and controversial subject. Unlike monetary policy, where the instrument of policy is the short-term interest rate, which can be supplemented by injections of Quantitative Easing, there are many levers which contribute to the operation of fiscal policy.

Government spending in the UK in 2015/16 is expected to total £742bn (39.6% of GDP) while the Office of Budget Responsibility expects the Exchequer to raise £673bn (35.9% of GDP) in revenue. The way these large sums are spent and raised affects the economy as well the aggregate totals. The impact of different forms of government spending on the economy can vary considerably – with investments in infrastructure, education and skills having a more direct positive impact on the economy's productive potential. The economic impact of different taxes and the way in which they are structured can also vary considerably.

One of the main messages of this latest report from TheCityUK's Independent Economists Group is that the microeconomic impact of fiscal policy–through its effects on the productive capacity of the economy, employment and investment incentives–is just as important as the macroeconomic impact, through the effect of different levels of borrowing and debt on the level of demand.

The report also looks at the value of fiscal rules, such as the Chancellor of the Exchequer's objective of returning UK public finances to surplus by the end of this Parliament. Such rules embody sensible objectives–that when the economy is growing well there is an opportunity to put public finances in better order and reduce debt. They also reflect good fiscal discipline. But a good fiscal rule should be applied with a view to the broader impact on the economy, not as a rigid straitjacket.

We need to beware of the risk that fiscal rules focussing on debt and deficits can exaggerate economic cycles, as public finances are themselves very sensitive to the ups and downs of the economy. Also, fiscal rules should not be laid down in such detail that they constrain sensible adjustments in the structure of the tax system and act as a block to rational tax reform.



Andrew Sentance
Chair, TheCityUK Independent Economists Group

EXECUTIVE SUMMARY

- The operation of **fiscal policy** is extremely complex, involving a myriad of different policy instruments. It also **has important distributional implications** because of the impact of tax and spending decisions on different groups, making democratic accountability important.
- **Corporate tax rates can have a significant impact on the location choices of firms**. A majority of OECD countries have both cut corporate tax rates and raised VAT since the start of the cycle. This tax mix is likely to be good for productivity growth, because of its impact on decisions on where to locate corporate activity, but has implications for distribution.
- Evidence suggests that government spending has a greater positive effect on national income during recessions than during non-recessionary times, suggesting that **government spending could play a role in economic stabilisation**.
- Government debt in most countries increased sharply over the crisis. **There is no specific level at which government debt becomes a problem for growth**, and a debt level of 80% of GDP is not necessarily a problem for the UK. However, the risk of 'crowding out' of private-sector investment, and the need for fiscal headroom to deal with future crises does suggest a need to reduce debt levels.
- **Several aspects of the framework for the UK's new fiscal rule, announced as part of the Summer Budget on 8 July, are welcome**, including using the level of GDP growth as a trigger for adjusting targets, rather than whether GDP is deemed to be above or below trend. However, there are also several areas where steady stewardship will be required so as to avoid, for example, pro-cyclical behaviour (as the constraint will be loosest when growth is strong) and volatility in tax and spending. The new rule will also mean that most of the time UK fiscal policy will tend to be contractionary, with limited options for stabilisation in periods of below trend growth.
- The IEG's **main recommendations** in light of this analysis are:
  - Tax reform in the UK should concentrate on VAT; income tax and National Insurance; and property taxes such as business rates.
  - Any approach to reducing debt should be gradual, to take account of the impact of fiscal consolidation on economic growth.
  - Fiscal rules should be set in a way that does not lead to perverse incentives, whereby the target itself is more important than the value to taxpayers.
  - To this end, the processes underpinning the scrutiny of fiscal policy may be more important than the specific rule that is chosen, and so due consideration of the institutional and political context within which the rule will operate is paramount.

SUMMARY OF RECOMMENDATIONS

Tax Policy

1. Tax reform in the UK should concentrate on VAT; income tax and National Insurance; and property taxes such as business rates.

2. Tax regimes need to consider the corporate perspective. For example, having a consistent approach to taxes on companies is important, because it will allow companies to plan better. Where changes to tax systems will place significant administrative burdens on businesses, it will be important to ensure that companies are willing to bear these costs in order to move to a better system overall.

Debt Policy

3. Government debt is not bad per se, and can even be helpful if it is used for growth enhancing investment. For example, taking advantage of low interest rates to finance infrastructure projects could help support growth. However, it should be recognised that the lead times associated with infrastructure investment may limit its role in stabilisation, although still allowing a role for promoting growth

4. Reducing debt levels in 'good times' is nevertheless important, because it provides a potential buffer to allow governments to cope with the impact of future crises.

5. Any approach to reducing debt should be gradual, to take account of the impact of fiscal consolidation on economic growth.

6. A proper definition of net debt, as well as whole of government accounts which include the capital stock, are needed to help improve understanding of countries' fiscal positions.

Institutional Framework

7. Fiscal rules should be set so that they do not lead to perverse incentives, whereby the target itself is more important than the value to taxpayers.

8. To this end, the processes underpinning the scrutiny of fiscal policy may be more important than the specific rule that is chosen, and so due consideration of the institutional and political context within which the rule will operate is paramount.

1: INTRODUCTION

Fiscal policy is controversial, in part because the decisions underpinning it are political–the questions of which sections of society to support, what services to provide, and what is the right level of tax all have political implications. However, while the choices may be political, much of the understanding of how fiscal policy works and what its impact will be comes from economics. The aim of this report is therefore to try and separate out the politics of fiscal policy from the economics and to highlight some of the findings from economics about how fiscal policy works and why.

This does not mean that economists, or even economics, are immune from politics. However, by examining the empirical evidence, the aim is to try and understand how the world really works, rather than how we would like it to. Good policy-making has to be based on more than just a political conviction, it also needs to be underpinned by an understanding of the most effective way to achieve the desired goals.

In general fiscal policy is used to achieve three main policy goals:

- Growth;
- Stabilisation; and
- Redistribution.

However, how a government chooses to achieve any one of these three goals can have important implications for its ability to achieve the remaining two. Getting the mix right is hard, and involves choices about which segments of society to favour or protect and whether or not to spend now at the expense of future generations. Of course sometimes the goal is just to be re-elected, and this can also have a significant impact on policy choices and is just one reason why fiscal policy can be a difficult tool to use effectively. If people anticipate that governments will change their behaviour in response to elections, they will adjust the way they respond to incentives to account for this.

Fiscal policy involves political choices about who pays and who benefits

In Greece most of the pain of fiscal adjustment has been felt by those on lower incomes, rather than the elite. This has had repercussions for the willingness of Greek voters to support austerity. One of the things that differentiates the UK and Greece is that in the UK the coalition government was prepared to take tough actions, while Greece, it could be said, has had a tendency to try and find ways not to take action, for example on port privatisation. Often those reasons are linked to politics. For example, the fact that the potential buyers for Greek ports were from Russia and China has complicated the situation.

This report contributes to the debate on fiscal policy, by considering specific aspects of each of these in turn. It is based on a discussion on fiscal policy by TheCityUK's Independent Economist Group, together with the background analysis by Analytically Driven Ltd.[1] The key issues highlighted by the IEG, together with recommendations by the group, are presented as a series of pull out sections within the main text of the analysis.

The report starts by examining one of the ways in which fiscal policy can promote growth, by considering the impact of tax on corporate behaviour and potential growth in Section 2. However, fiscal policy does not just have the ability to influence trend growth. Therefore Section 3 looks at the evidence on the extent to which fiscal multipliers differ in recessions rather than booms, and the implications for the use of fiscal policy as an effective stabilisation tool. The impact of government debt, which is a form of redistribution across generations, is discussed in Section 4. Section 5 examines the operation of fiscal policy more broadly, how it works in practice, and why it tends to be messy, highlighting the difficulties in designing effective fiscal policy. Finally, Section 6 discusses whether fiscal rules could help improve the operation of fiscal policy. The IEG's discussion took place after Chancellor George Osborne had announced his intention to introduce new fiscal rules in the UK, but before the Chancellor's Summer Budget on July 8th set out specific proposals for how these fiscal rules will be implemented in the UK. Therefore Analytically Driven Ltd has used the underlying analysis, as well as the issues raised in the IEG's discussion, to assess the likely success of the Chancellor's proposals, and this analysis is presented in the final part of Section 6.

The interaction between fiscal policy and electoral success is complex

There is an asymmetry in favour of consumption now, both amongst voters and politicians. This means government deficits are not necessarily seen as a bad thing by voters, although particularly in times of economic crisis a reputation for good economic management is important.

The impact of having a credible economic policy on a party's chances of electoral success is one reason for fiscal rules. For example, this was a key reason for the Labour Party in the UK promising to abide by fiscal rules in the run up to the 1997 election. Providing an explicit fiscal rule can give voters something transparent to use to hold politicians to account. Using a fiscal rule can also sometimes be a defence against other members of the party, by providing a target that has to be met.

Often fiscal discipline is linked to political conviction. In the early 1980s UK government spending was not allowed to rise, because the belief was that government spending as a share of GDP should fall. The fiscal rule was, in effect, driven by the conviction of the then-prime minister, Margaret Thatcher.

[1] *The IEG held a discussion on fiscal policy on June 29th 2015, before the Summer Budget on July 8th 2015. This report presents the outcome of these discussions, with the issues highlighted by the IEG, together with their recommendations, shown as a series of pull-out boxes within the analysis provided by Analytically Driven Ltd.*

2: FISCAL POLICY AND GROWTH – THE IMPACT OF TAXATION ON INCENTIVES

Fiscal policy influences potential growth through its impact on the incentives of both firms and workers. For example:

- corporate taxes and subsidies directly influence firms' profitability;
- consumption taxes influence the likelihood that consumers will buy a firm's products, particularly if they are price sensitive;
- taxes on labour income affect the incentives that workers face, influencing how much effort they put in;
- benefits change the incentives of workers to accept work;
- government spending on areas like education and health influence the quality of the workforce;
- government spending on capital projects, such as the transport infrastructure, can improve productivity and increase feasible market size; and
- government deficits can potentially influence long-term interest rates and therefore the cost of future investment financed by borrowing.

While these factors will influence outcomes for all firms in an economy, perhaps they have the biggest impact on firms that are internationally mobile and operate in more than one country. These firms have an important impact on an economy's productive potential, as evidence on firm level productivity shows that these firms are generally the most productive firms operating in any economy.[2]

Governments believe that their tax policies influence corporate decisions on investment and location, as tax competition plays an important role in how countries set their taxes. For example, in the EU-15 corporate tax rates fell from an average of 38% in 1995 to 30% in 2005, and analysis confirms that this was partly due to strategic interactions amongst Western European governments seeking to attract investment.[3]

What is noticeable is that even in the wake of the 2008-09 financial crisis, with all the pressures that this has put on government budgets, the trend continues to be towards lower corporate tax rates, with only 6 out of 34 OECD countries raising corporate tax rates between 2006 and 2015 and the vast majority cutting rates, see Table 1. The cut in rates has been particularly pronounced in the UK, which recorded the largest cut in corporation tax rates in the OECD (of 10 percentage points) between 2006 and 2015. Within the OECD only Ireland, Slovenia, the Czech Republic, Hungary and Poland have a lower rate of corporation tax than the UK in 2015.

It is not just the headline rate of taxation that matters – the details matter too

In the UK, although corporation tax rates have been falling, investment allowances have been very volatile. This makes it harder for companies to plan.

Business rates in the UK are another area where improvements could be made. At the moment business rates are arbitrary and vary by sector. For example, if a business invests in plant and machinery, its business rates go up. However, reform will be made harder by the desire for any changes to be revenue neutral. For reform to be successful there needs to be a consensus in businesses that they are willing to bear the administrative costs associated with change, to move to a better system overall.

Taxes such the bank levy may be politically attractive, but they will have consequences when it comes to decision making by businesses.

IEG Recommendation:
Tax regimes need to consider the corporate perspective. For example, having a consistent approach to taxes on companies is important, because it will allow companies to plan better. Where changes to tax systems will place significant administrative burdens on businesses, it will be important to ensure that companies are willing to bear these costs in order to move to a better system overall.

[2] See, for example, the discussion in Independent Economists Group (2015), Driver (2014) and Altomonte et al (2013).
[3] Cassette and Paty (2008). In contrast, the authors find that strategic interactions amongst Eastern European countries were weak.

Table 1
Corporate income tax rates in the OECD – 2006 and 2015

	Number countries	Average 2006	Average 2015	Maximum 2015	Minimum 2015	Average size of change
All countries	34	27.57	24.99	39.00	12.50	-2.58
No change	6	23.49	23.49	34.43	12.50	0
Tax cutters	22	30.40	25.71	39.00	17.00	-4.68
Tax increasers	6	21.31	23.83	30.00	19.00	2.53

Note: Based on data from the OECD tax database for combined corporate income tax rates (the rates for corporate income tax set by central and sub-central government combined). Tax cutters are countries where the combined impact of central and sub-central tax decisions means the rate of corporation tax was lower in 2015 than 2006, tax increasers saw this rate increase.
Source: Analytically Driven Ltd

In contrast to the prevalence of cuts in corporation tax rates, over the period 2006 to 2014 roughly two-thirds of OECD countries increased VAT rates. Of the countries raising VAT rates, 62% also reduced corporation tax rates over the period 2006 to 2015.

One reason for concentrating on cutting corporation tax is that analysis suggests that consumption taxes are less harmful for productivity growth than taxes on producers. For example, estimates produced in 2008 suggested that a 12 percentage point reduction in UK corporation tax, financed through changes in VAT coverage, would raise the UK's labour productivity growth rate by about 0.25 percentage points per year over a ten year period.[4] Of course the advantages of consumption taxes from a firm's perspective need to be offset against their distributional impact – consumption taxes disproportionately hit the poor, who consume a larger proportion of their current income than the well-off.

Of course not all the benefits of a cut in corporation tax accrue to the owners of firms, or even to multinationals, because cutting corporation tax attracts firms and this increases the demand for both workers and premises. In the US a one percentage point cut in state level corporation tax is associated with a three to four percent expansion in the number of establishments over a ten year period. Estimates suggest that the impact of increasing the number of firms operating locally means that around 25% of the total benefits of a corporation tax cut go to local landowners, with 35% going to workers and 40% to the owners of firms.[5]

[4] *Johansson et al (2008) and the discussion in Crafts (2012).*
[5] *Suárez Serrato and Zidar (2015).*

2.a Impact of corporation tax on the activities of multinationals

The focus on corporate tax rates as a means to promote growth makes sense given their impact on the activities of multinational firms, with low corporate tax rates associated with both a higher likelihood that a country will be chosen as the base for the headquarters of such a firm, and also an increase in the extent to which it will benefit from foreign direct investment as a host country.[6]

Corporate tax rates also influence how multinationals finance their activities, with a one percentage point higher statutory corporate tax rate in the host country associated with a 0.92 percentage point increase in the internal-debt-to-capital ratio in the borrowing affiliate.[7] This type of financial management can have economically meaningful results for the firm's profits as a whole. Estimates suggest that around one third of the excess returns earned by US corporations abroad can be explained by firms reporting higher income in low tax jurisdictions of their affiliates.[8]

However, there are limits to how effective these tax management strategies can be. For example, multinationals based in high tax jurisdictions, such as the US and Japan, have higher effective tax rates than multinationals based elsewhere.[9] There is also no evidence that US multinationals operating in Europe are able to pay lower taxes on their European operations than other multinationals operating in Europe, although there is some evidence that larger multinationals may pay lower taxes than smaller multinationals.[10] However, as the debate over the taxation of companies like Amazon and Starbucks makes clear, the issue of how multinationals are taxed, and how to make sure their taxes are appropriate, is a controversial one. Furthermore, the increasing importance of both services and the internet, which often make it harder to know where an activity takes place, means that this issue is unlikely to go away.

One of the reasons that the taxation of multinationals is both complex and potentially controversial is that it is not just the rate of corporation tax that

[6] *Egger, Radulescu and Strecker (2013) and Egger and Radulescu (2011).*

[7] *Egger et al (2014).*

[8] *Bosworth, Collins and Chodorow-Reich (2007).*

[9] *See the discussion in Markle and Shackelford (2013), which shows that Japanese multinationals face the highest effective tax rates, with their effective tax rates being 8.5 percentage points higher than multinationals in the US, who face the second highest effective tax rates.*

[10] *See the discussion in Devereux and Loretz (2012).*

matters for how multinationals' activities are structured; the rules around how foreign income is treated can also have a big impact:[11]

- A residence-based system of company taxation, where a firm pays the tax rates prevailing in their country of residence on all their worldwide investments, means that a firm's decision on the location of investment across countries is not distorted by differences in local tax rates. However, this system means that in any market they are operating in where local tax rates are below the tax rates prevailing at home, they will pay a higher tax bill on those earnings than their local competitors. The benefits of this type of system are sometimes referred to as capital export neutrality and such systems are typically implemented as a tax credit system, whereby, to avoid double taxation, firms receive a credit for any tax they have paid locally against the tax bill on their worldwide earnings payable in their country of residence. Depending on how the system is implemented, there may well be incentives for firms to keep foreign earnings invested abroad, rather than to repatriate them.[12]
- A source-based system of company taxation, where a firm pays the tax that prevails in the country where the income is generated, means that competition between firms in the local market is not distorted, as all firms in that market pay the same tax. However, a firm's choice of where to invest will be influenced by local tax rates. This is sometimes referred to as capital import neutrality and is typically implemented as a tax exemption regime. Under this type of regime there will be no cost associated with repatriating earnings from a low tax country.

In 2009 the UK switched from a tax credit to a tax exemption based system for dealing with foreign earnings. Estimates of the impact of this change suggest that, compared to similar subsidiaries owned by non-UK firms, immediately after the change the average foreign subsidiary of UK firms increased its dividend payment by $2.15 million and that the average UK-owned foreign affiliate cut investment by $3.05 million.[13]

[11] See the discussion of the two main types of tax system for foreign profits in Egger, et al (2012).

[12] Countries that apply a residence-based system of taxation for their own firms do, however, typically also tax the activities of foreign firms that take place within their borders. In addition, they will sometimes allow firms that have foreign subsidiaries that are chartered abroad to delay any tax liability until any earnings are repatriated. This is the system prevailing in the US, which is the main example of a country using a residence-based system of taxation, as most countries have a source-based system in place.

[13] See the discussion in Egger, et al (2012).

Despite the fact that from a global perspective a tax credit system is less likely to distort investment, the UK's switch from a tax credit to a tax exemption regime is by no means unique. Between 1998 and 2008 the number of high-income countries using a tax exemption regime rose from 19 out of 37 to 27, with no country moving in the opposite direction.[14] However, although a tax credit system may be optimal, there are reasons why a country might choose to move towards a tax exemption system. These include the fact that, if multinationals are becoming more geographically mobile, having a low tax treatment for the earnings of its foreign subsidiaries (such as a tax exemption system) makes it more likely that a parent company will chose a particular location for its base of operations. In addition, having a tax credit system can distort the ownership of assets in a world where mergers and acquisitions are important, because owners in different countries are taxed differently. Furthermore, there are potentially significant administration costs associated with a tax credit system.[15]

2.b Impact of labour taxes on firms' activities

Taxes on labour, as well as profits, are also important in practice for how multinationals structure their operations, including their internal financing models and where they locate their headquarters. In the case of labour taxation, estimates suggest that a one percentage point increase in employer social security contributions reduces the probability that the average firm will choose that location as a headquarters by 7.39 percentage points, reflecting the impact on firms' costs and therefore profitability.

Even higher labour income tax rates reduce the probability that multinationals will choose a given location as the base for its headquarters, with a one percentage point increase in a country's average labour tax rate reducing the probability of attracting a headquarter by 0.023 percentage points, possibly reflecting the impact of higher tax rates on managerial effort and therefore profitability.[16]

[14] Based on PwC Worldwide Tax Summaries. See the discussion in Devereux, Fuest and Lockwood (2015).

[15] See the discussion in Devereux, Fuest and Lockwood (2015).

[16] Egger, Radulescu and Strecker (2013). Estimates based on a sample of 80 countries and 35,206 firms over the period 2005-2009.

The impact of labour taxation on the location choices made by multinationals does mean that governments have to trade off the benefits of using labour taxation to reduce inequality with the likelihood that this will discourage investment. Furthermore, high top marginal rates of labour taxes can also influence productive potential in other ways, through their impact on the location decisions of superstar inventors – those inventors responsible for the most cited patents, see Table 2.

Table 2

Impact of income tax rates on location decisions of superstar inventors

Country	Cut in top marginal rate of tax	Percentage increase in domestic superstar inventors retained	Percentage increase in foreign superstar inventors attracted
Canada	From 48% to 38%	7.9%	30.6%
Denmark	From 64% to 54%	1.9%	43.8%
France	From 72% to 62%	6.1%	56.4%
Italy	From 55% to 45%	4.0%	35.5%
Japan	From 51% to 41%	0.3%	32.6%
Switzerland	From 56% to 46%	5.5%	36.1%
United Kingdom	From 55% to 45%	10.6%	35.1%
United States	From 47% to 37%	0.1%	23.7%

Note: Impact of a 10 percentage point decrease in the top marginal tax rate in 2000. Superstar inventors are those in the top 1% of the distribution of citations-weighted patents. The overall impact of the change in tax rate not only reflects the level of tax, but also other factors, which determine the attractiveness of a country as a location, such as the size of the market and any language barriers.

Source: Akcigit, Baslandze and Stantcheva (2015).

3: FISCAL POLICY AND STABILISATION

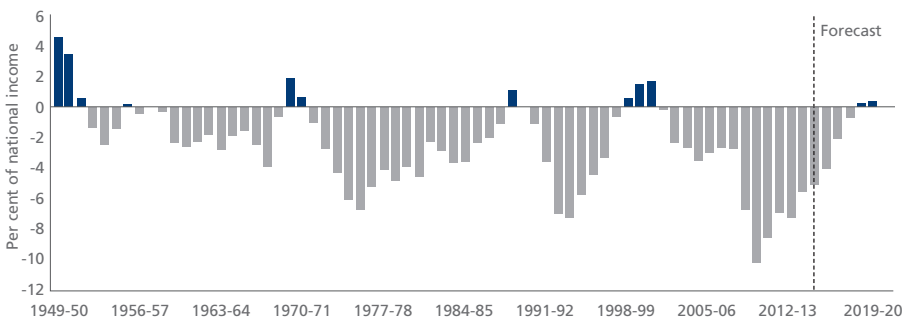
Fiscal policy does not just have the potential to influence trend growth through its impact on corporate behaviour, it can also play an important role in the stabilisation of economic output over the business cycle.[17] This is because some aspects of fiscal policy, such as benefit payments, have automatic stabilisers built in. For example, as output and employment fall, payment of benefits such as unemployment benefits rises, reducing the impact of falling employment and income. This means that fiscal policy becomes countercyclical, with government budget balances deteriorating in recessions (as spending rises relative to tax revenues) and improving in expansions, see for example the pattern of UK budget deficits since 1948 in Figure 1.

The question is, however, to what extent should fiscal policy be used as a tool for stabilising output over the cycle over and above this type of automatic stabiliser. One argument against any proactive stabilisation policy is that fiscal policy typically takes time to adjust.[18] This means that there is a risk that any adjustment to spending or taxes will only take effect after it is no longer needed.

Speed is an issue for using fiscal policy to help stabilise the economy

In the UK during the financial crisis there were some targeted programmes, such as support for mortgage interest payments, which came on stream quickly. However, the HS2 rail project, which gained momentum because the project was seen as an important way of boosting growth, has still not gone ahead. This demonstrates the lags involved in implementation, particularly for large infrastructure projects.

Figure 1
UK public sector budget deficit since 1948



Note: UK public sector net borrowing
Source: OBR (2015).

[17] *In an extreme case, Ricardian equivalence would suggest that efforts to shift the balance of spending and taxation across time have no impact, because agents anticipate that higher spending today implies higher taxes tomorrow. In practice, the evidence on government multipliers in recessions suggests that this will not be the case. This occurs partly because some people are credit constrained and therefore respond to government hand-outs by spending, but also because the impact of government debt build-up often falls on future generations.*
[18] *See, for example the discussion in Borg (2014) on the operation of fiscal policy in Sweden.*

The counter argument, however, is that there is a growing body of evidence that points to the fact that the impact of fiscal policy is much greater in recessions.[19] In particular, the fiscal multipliers associated with increasing government spending rise in recessions, so that $1 of government spending will generate an increase in output of more than $1, see Figure 2. One reason for this may be that government spending is more likely to crowd out private consumption in good times, but does not do so in bad.[20]

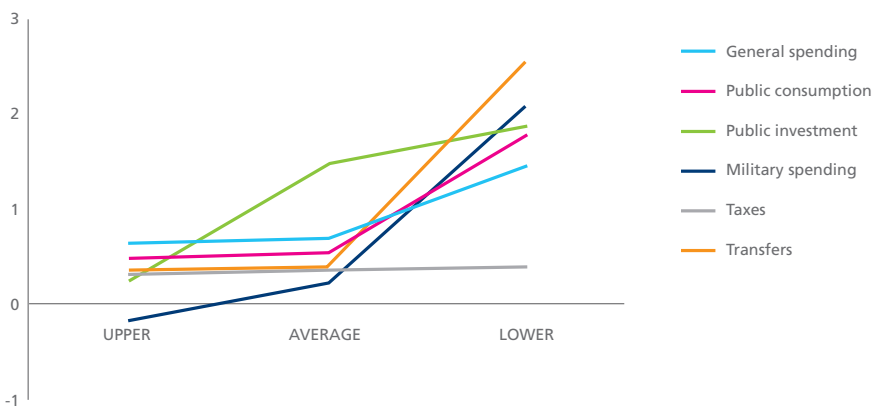
The fact that fiscal multipliers change depending on the state of the cycle implies that government spending could play a potentially powerful role in helping countries to escape recession. Indeed, some estimates suggest that in extreme recessions the long-run multiplier associated with government spending could be as high as 3.1.[21] While this needs to be caveated with the observation that it takes time to adjust spending, and it will be important not to waste resources, it does suggest that there is a role for adjusting fiscal policy depending on the state of the economy.

Design of the fiscal framework needs to consider the impact on growth

Although reducing government debt levels can be sensible, reductions in government spending can damage growth. This needs to be recognised in the design of the fiscal policy framework. There is certainly very limited evidence pointing to expansionary fiscal contractions.

IEG Recommendation:
Any approach to reducing debt needs to be gradual, to take account of the impact of fiscal consolidation on growth.

Figure 2
Fiscal multipliers at different points in the cycle



Note: Compound cumulative multipliers of fiscal impulses for different regimes, based on a meta-regression analysis of the evidence on fiscal multipliers. "Upper" indicates above average economic circumstances (booms); "average" indicates normal times; and "lower" indicates below average economic times (recessions).

Source: Gechert, Hughes Hallett and Rannenberg (2015).

[19] *See, for example the discussion in Auerbach and Gorodnichenko (2012), Gechert, Hughes Hallett and Rannenberg (2015), Perotti (2014) and Riera-Crichton, Vegh and Vuletin (2014).*
[20] *See, for example the discussion in Auerbach and Gorodnichenko (2012.*
[21] *See the discussion in Riera-Crichton, Vegh and Vuletin (2014).*

4: GOVERNMENT DEBT AND THE NEXT GENERATION

Fiscal policy also has important distributional impacts, because policy decisions are often aimed at helping a particular group in society. In the case of decisions about debt and deficits, this not only affects the current generation, but also future generations, who may ultimately need to pay the debt back. However, it can be hard to weigh intergenerational costs and benefits. In effect, governments suffer from a common pool problem, which arises because the beneficiaries of government spending (or tax cuts) ignore the impact of the externality imposed on other taxpayers by the benefits that they are receiving. This creates incentives to postpone fiscal discipline. Problems of this type will arise in all democratic systems, unless voters are perfectly homogeneous and care about their descendants exactly as they care about themselves. These problems are exacerbated when there is an ageing population, as the generation coming up behind is likely to be smaller than the current generation, which increases the burden per person.[22]

What is evident from Table 3 is that this common pool problem is highly prevalent – between 1960 and 2011 70% of the countries listed have run

Table 3
Fiscal discipline in selected OECD countries

	Percentage of years of deficit 1960-2011	Last year in surplus for period 1960-2011	General government gross financial liabilities in 2012, percent of GDP	General government net financial liabilities in 2012, percent of GDP	Net government interest payments in 2012, percent of GDP
Australia	80%	2008	37.3%	-14.5%	0.5%
Austria	82%	1974	96.7%	57.1%	2.1%
Belgium	96%	2006	120.3%	92.1%	3.2%
Canada	76%	2007	95.9%	43.3%	0.5%
Denmark	48%	2008	60.2%	5.4%	0.5%
Finland	20%	2008	63.0%	-50.2%	0.2%
France	90%	1974	111.8%	68.8%	2.4%
Germany	78%	2008	86.3%	49.2%	1.8%
Greece	80%	1972	166.2%	101.2%	4.4%
Ireland	80%	2007	120.8%	78.1%	3.2%
Italy	100%	-	138.1%	112.0%	5.0%
Japan	68%	1992	215.4%	129.2%	0.9%
Netherlands	88%	2008	77.9%	39.4%	1.1%
New Zealand	46%	2008	41.8%	6.7%	0.9%
Norway	4%	2011	34.5%	-166.8%	-2.0%
Portugal	100%	-	137.0%	90.2%	4.3%
Spain	78%	2007	91.0%	57.5%	2.5%
Sweden	42%	2008	44.6%	-26.9%	0.02%
United Kingdom	84%	2001	105.1%	67.3%	2.6%
United States	92%	2000	110.5%	87.4%	3.1%

Note: Percentage of years in deficit and last year in surplus over period 1960-2011 from Wyplosz (2012). Data for Australia start in 1962, for Canada in 1961, for Portugal in 1977 and for Spain in 1962. Data for general government gross financial liabilities, general government net financial liabilities and net government interest payments from OECD Economic Outlook, No 97, June 2015.

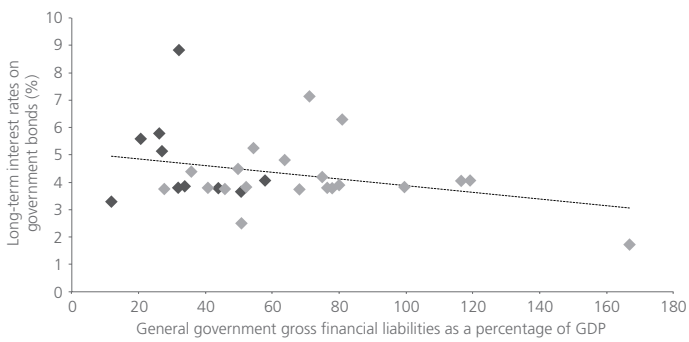
Source: Analytically Driven Ltd.

[22] *See the discussion in Wyplosz (2012).*

a deficit on average in at least three years out of every four, with two of them doing so 100% of the time. This picture of bias in favour of deficits is supported by the experience of the UK, which has only experienced ten years of budget surpluses since 1948 (see Figure 1 in the previous section) – and the UK is by no means the worst offender on the deficit front.

So if most countries are regularly running budget deficits, it is clear that in most countries governments are not being punished for this by voters. Furthermore, as Figure 3 shows, in 2006, the year immediately before the first signs of financial crisis, there appeared to be no clear relationship between the interest rates associated with government debt and the level of the debt itself – indeed if anything higher interest rates are associated with lower debt levels (although that trend is not statistically significant).[23] Japan, for example, had by far the highest level of debt out of the 30 countries, but also paid the lowest nominal interest rates on long-term government bonds. Similarly Iceland, which in 2006 had negative net financial liabilities (meaning its assets outstripped its liabilities), had the highest long-run interest rates on government debt.

Figure 3
Government debt levels and long-run interest rates on government debt for selected OECD countries in 2006



Note: Data from OECD Economic Outlook No 97, June 2015. There were 30 OECD countries with data for both variables. Those countries marked with a dark grey dot had negative net financial liabilities in 2006, meaning their government debt was less than the assets they could easily turn in cash if required (such as foreign exchange reserves).

Source: Analytically Driven Ltd

Voters often have an incentive not to punish governments for running deficits, because they will benefit from the results (albeit potentially at the

Fiscal credibility is only one factor in the cost of government debt

It is not clear how we should define a debt crisis. For example, there is no simple relationship between debt levels and borrowing costs, as the case of Japan illustrates. For Japan borrowing costs partly reflect how the debt is funded and local demand for debt, for example for savings vehicles.

Yields on UK government debt have largely been tracking US yields, in other words they have tended to reflect global factors rather than concern over the specific level of UK debt. Similarly, French 10-year government debt is cheaper now than it has been since the French Revolution, despite the level of debt having risen sharply over the financial crisis.

An important issue for determining the level of debt that is sustainable is the credibility of a country's institutions and government. Greece, for example, lacks such credibility, both because its economy is not growing sustainably and because its institutions are considered too weak to collect taxes.

[23] *There was also no statistically significant relationship between net debt levels and interest rates in 2006, or between gross debt levels and interest rates in 2013, although in the latter case the sign of the relationship was at least positive.*

expense of future generations). However, as the sharp spikes in interest rates on government debt observed in countries like Italy, Ireland, Spain, Portugal and Greece over the course of the financial crisis show, even in OECD countries the potential risks associated with government debt can be significant. Therefore the question is why are financial markets not punishing governments for having either persistent deficits or high debt levels, or at least not punishing them more consistently?

One factor that influences this is that budget deficits per se are not synonymous with rising, or even high debt levels. If an economy is experiencing strong growth then it is perfectly possible for it to run budget deficits and still end up with debt levels that are falling as a share of output. Australia has run a budget deficit on average in four years out of five since 1962, but its gross government debt stood at 37.3% of GDP in 2012, and in practice its assets also outweighed its liabilities, so its net financial liabilities were negative.

In general, there are host of factors that financial markets use to judge the risks associated with repayment of government debt, including:

- the productive potential of the economy – strong growth potential makes repayment more likely;
- the volatility of the economic outlook – stable growth makes repayment more likely;
- the strength of the country's government and legal institutions – strong institutions and stable governments make repayment more likely;
- the government's ability to raise taxes – the willingness of residents to pay tax makes repayment more likely;
- the likelihood that monetary policy will be used to inflate the debt away – a strong monetary policy framework makes repayment more likely;
- the structure of government liabilities – a higher proportion of long-dated debt and debt repayments that are spread out over time make repayment more likely;
- the level of private sector debt in the economy – low levels of private sector debt make repayment more likely; and
- the government's fiscal stance – low levels of government debt and lack of escalating budget problems make repayment more likely.

There is no specific level at which government debt becomes a problem… but having head room to cope with sharp increases in debt during crises helps

Debt is not necessarily bad – for example, if it is used to finance growth-enhancing investment. Therefore, if the allocation of resources is efficient, governments should be relaxed about the timing of debt reduction. However, the acceptable level of debt will depend on risk preferences and some IEG members clearly placed more importance on debt reduction than others.

Debt increased sharply as a result of the financial crisis, which emphasises the importance of having sufficient head room in normal times to accommodate future problems. For the UK, IEG participants felt that a debt level of 80% of GDP is not necessarily a problem on its own. However, if a shock caused debt to rise to 120% of GDP, it would become more problematic. This implies UK government debt needs to fall to allow for future shocks. The fact that Gordon Brown stuck to his debt ceiling of 40% of GDP, allowed space for him to go over when there was a problem.

Therefore, reducing government debt in good times could be a sensible, preventative action to provide enough fiscal space to deal with the impact of future crises and therefore to avoid problems becoming acute. Furthermore, the risk with high debt levels is that interest repayments could potentially absorb an ever-increasing proportion of tax revenues, making it harder for governments to implement their preferred policy options.

IEG Recommendation:
Although government debt is not bad per se, and can even be helpful if it is used for growth enhancing investment, reducing debt levels in good times is important, because it provides a potential buffer to allow governments to cope with the impact of crises, which can cause debt levels to rise sharply.

This makes it harder for governments to know when problems with funding (arising from an increase in markets' assessment of the level of sovereign risk) are likely to occur, particularly as funding crises are rare in practice. Furthermore, there is no generally agreed measure of the level at which government debt becomes problematic, or even an agreed methodology for calculating it. The Maastricht criteria, for example, which set a maximum debt to GDP ratio of 60%, were not based on any scientific assessment of the appropriate level of government debt. Instead the level chosen reflected the political realities of where debt levels stood in key EU members at the time. This lack of any firm economic underpinning meant that in practice countries such as Italy and Belgium were allowed into European Monetary Union, even though their debt levels were far higher than the approved maximum.

Theory suggests that at some point high government debt levels will have a negative impact on economic growth, because they can lead to high real interest rates and crowd out investment and consumption. Although some estimates have suggested that high and rising public debt levels become a problem for economic growth in developed economies at around 90% of GDP, the difficulties with unravelling causality (did high debt cause low growth or vice versa) means that these estimates are not seen as robust. What is clear though is that high debt levels increase the risk of sudden stops, which can generate multiple equilibria, potentially reducing an economy's productive potential because of the resulting dislocation. This argues for keeping debt levels down, without providing a specific threshold to aim for.[24]

However, although there may be advantages in keeping debt levels down, it is important to recognise that the issuance of government debt serves important functions beyond mere borrowing. Even countries like Norway, where government assets significantly outweigh liabilities, still issue government debt. One reason for this is that the rates charged on government debt can act as a good proxy for private sector agents in understanding a country's sovereign risk and so will help the functioning of financial markets. More importantly, government debt is used extensively by financial markets, for example in helping financial sector firms meet their capital requirements, by providing a (relatively) low risk instrument that they can hold to meet any obligations.

Having no government debt in circulation would not be helpful

Economies need both government debt and a liquid market in government debt instruments, because these are important for financial markets.

However, this does not mean that net debt needs to be positive. For example, there are benefits from having a sovereign wealth fund.

Furthermore, to properly understand the government's fiscal position, it would be helpful to have a proper definition of net debt, as well as whole of government accounts which include the capital stock.

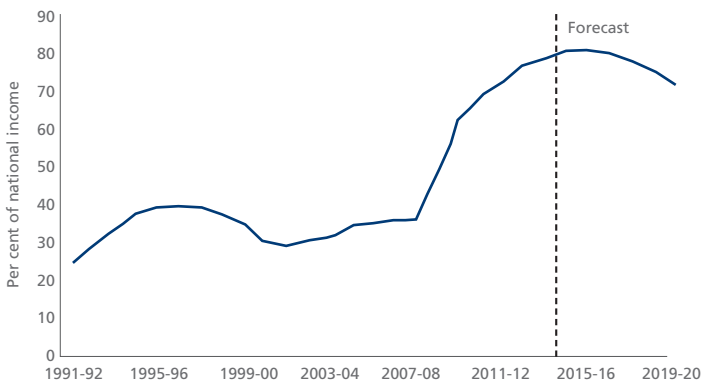
IEG Recommendation:
A proper definition of net debt, as well as whole of government accounts which include the capital stock, are needed to help improve understanding of countries' fiscal positions.

[24] *See the discussion in Roubini (2014).*

4.a **Adjusting government debt levels**

For many countries, including the UK, the sharp rise in government liabilities over the course of the financial crisis reflected the need to take private sector debt onto the public-sector balance sheet in a bid to shore up the banking system. The impact of this in the case of the UK can clearly be seen in Figure 4, as net debt had been fluctuating at less than 40% of GDP until the start of the crisis.

Figure 4
UK debt as a percentage of national income



Note: Net public sector debt, or government debt minus assets that the government could readily turn into cash if required (such as foreign exchange reserves).
Source: OBR (2015).

Therefore, although there is no clear idea of what the optimal debt-to-GDP ratio should look like, the scale of the increase in government debt observed over the financial crisis means that most commentators would argue that some adjustment is desirable in order to give countries the fiscal space needed to deal with any future crises. Of the 30 OECD countries included in Figure 3, only four recorded a fall in gross government financial liabilities between 2006 and 2013 and the average change in government gross financial liabilities was an increase of 27.4 percentage points of GDP. Indeed one country, Ireland, saw an increase of over 100 percentage points of GDP in its gross government financial liabilities.

A key issue is therefore how this adjustment should take place. Analysis suggests that spending-based fiscal adjustments are better than tax-based

adjustments, both because the adjustment is more likely to persist and because it is likely to be associated with a smaller recession.[25] The reason for these differences can be traced to the response of private sector investment, rather than consumption growth, under the different models of fiscal adjustment.[26]

One reason that spending-based adjustments may be more persistent is that agents will have an incentive to adjust behaviour if tax rates are increased substantially. For example, analysis suggests that between 2001 and 2008 the two kinks in the marginal rate of corporation tax in the UK led to a significant bunching of firms at these points, which in the case of the most significant bunching resulted in a deadweight cost of 29% of tax revenue.[27] In contrast, it is harder for agents to circumvent spending cuts.

However, whichever route is chosen to adjust government debt, it is likely that any fiscal adjustment will be contractionary, at least in the short run. Although there are examples of expansionary fiscal contractions, closer analysis suggests that these are rare and often associated with other policy choices, meaning that there is limited evidence that the private sector will be so relieved at the winding back of the state that this will generate a boom.[28] In addition, the timing of any adjustment will have an important impact on the resulting reduction in output. When fiscal consolidation is implemented in a slump, rather than a boom, the result is that a consolidation of one percent of GDP results in real GDP that is four percent lower after five years.[29]

Another cautionary note is also appropriate. Although there are plenty of examples of successful fiscal adjustments that have improved the government's primary balance or the overall deficit, often leading to debt either stabilizing or falling, these episodes are not associated with a fall in the debt-to-GDP to its original level. Instead government debt tends to stabilise, but at a higher level.[30]

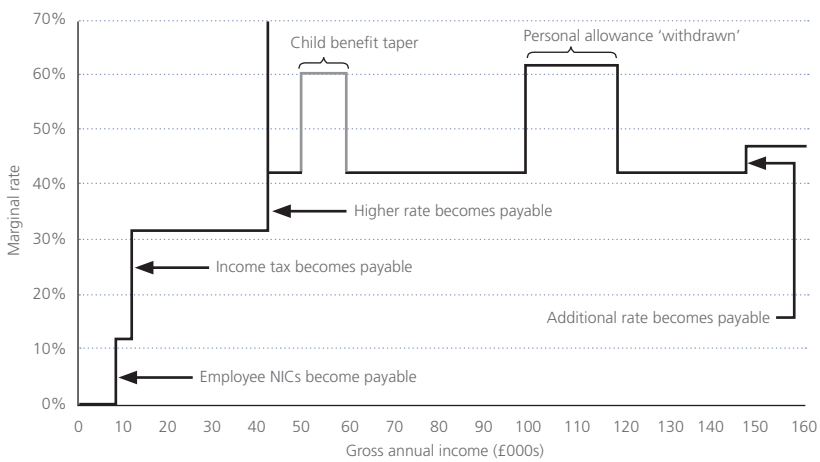
[25] See the discussion in Alesina and Ardagna (2013).
[26] See the discussion in Favero and Giavazzi (2012).
[27] See the discussion in Devereux, Liu and Loretz (2014).
[28] See the discussion in Perotti (2014).
[29] See the discussion in Jordà and Taylor (2013).
[30] See the discussion in Escolano et al (2015).

5: THE OPERATION OF FISCAL POLICY

As the analysis in the previous sections demonstrates, fiscal policy involves an enormously complex set of decisions, spanning multiple policy tools, each with a myriad of potential settings that will affect different groups of economic agents (people and firms) in different ways. Setting fiscal policy is not just a question of deciding on the level of the budget deficit or government debt and sitting back and watching the results. Even if it were possible to guarantee the outcome for these variables (which it isn't), it still matters how the desired result is achieved, both from the perspective of the distribution of wealth throughout society and the productive potential of the economy as a whole. In other words, fiscal policy is much more complicated than monetary policy and there are reasons why democratic accountability will be important.

Figure 5 and Table 4 are two examples of how trying to tailor policies to treat different sectors of society differently can produce strange results. Individually there will be good reasons for these policy choices – trying to protect the poorest members of society; trying to ensure that those who are able to contribute more do so; or simply trying to reduce the cost of a desired tax cut to keep the budget deficit on track. Unfortunately, when taken together, the results can create distortions, not to mention increase the administrative costs associated with a particular policy.

Figure 5
UK marginal rate tax schedule, 2015-16 (for married person, with a non-working spouse and two children)



Note: Marginal rate of income tax and employee National Insurance contributions. Thresholds have been uprated to 2014-15 prices using the consumer price index (CPI). The figure assumes employee contracted into Second State Pension. Thresholds based on announced policy choices in May 2014.

Source: Johnson (2014).

Table 4
UK VAT rates on different foods

Products facing 20% VAT	Products facing 0% VAT
Cereal, muesli and similar sweet-tasting bars	Flapjacks
Potato crisps	Other roasted vegetable chips, tortilla chips
Marshmallow snowballs with no biscuit base	Marshmallow teacakes with a biscuit base
Chocolate bars that are "eaten with fingers"	Chocolate body paint
Sweet-tasting dried fruit for snacking	Sweet-tasting dried fruit for home baking
Chocolate buttons not for use in baking	Chocolate mini-buttons for use in baking
Frozen yoghurt and ice cream	Baked Alaska
Gingerbread men decorated with chocolate	Gingerbread men on which the chocolate amounts to no more than two dots for eyes

Note: Based on announced policy choices in May 2014.
Source: Johnson (2014).

Complexities, such as the ones observed above, arise because of the interaction between the operation of fiscal policy and other policy goals. Most government policies involve some form of fiscal policy measure, either through direct spending choices or the use of taxation to influence (or finance) outcomes. The sheer size of any government's agenda, often involving competing, or even conflicting, goals, therefore means that the operation of fiscal policy can be messy in practice. It also means that it tends to be slow moving – it takes time to work out what the best policy choice will be when that choice needs to be considered in the light of its potential impact on other policy goals.[31]

Furthermore, swings in policy can have a significant impact on the operating environment facing firms, creating or destroying business opportunities. Many industries involve the need for long-term planning, meaning that they value predictability when it comes to policy choices. This was one reason why in 2009 the Insurance Industry Working Group recommended that:

> *"the Government should continue to work with industry to ensure a stable, predictable and competitive tax system for the medium to long-term, which… takes account of increasing global competition in a world in which capital is highly mobile."*[32]

The UK VAT regime could be improved

The UK VAT base is recognised as being very narrow and could be widened. For example, does it make sense that caviar is zero rated for VAT? It would therefore be good to have a debate on VAT. However, it will be hard to get around the government's manifesto tax pledge and the negative impact of previous ineffective attempts to change what is liable for VAT.

It is not just tax policy that can lead to complications

Governments are often keen to help small and medium-sized enterprises, by involving them in government procurement. However, the size of contracts can be an issue. Therefore the approach to using outside contractors needs to recognise that involving small and medium-sized enterprises will often require a larger company to package the deal.

[31] *See, for example, the discussion in Borg (2014) on the time needed to adjust fiscal policy in the Swedish context.*
[32] *Insurance Industry Working Group (2009). The Insurance Industry Working Group was jointly chaired by the Chancellor of the Exchequer, Rt Hon Alistair Darling, MP and Andrew Moss, Group CEO of Aviva and included eight additional senior members of the insurance industry.*

Recommendations of this type are not unusual from groups involving business leaders and embody two key components: firstly, stability and predictability are important, because tax affects decision-making and businesses need to be able to plan; and secondly, capital is mobile, so it is important that the tax regime is competitive, otherwise there is a risk that businesses will shift location, even in a sector like insurance, where the UK benefits from a deep labour market with a strong skills base, because given time other locations can develop that too.

Location choice is one example of how fiscal policy can affect behaviours and in doing so influence economic outcomes, not to mention tax raising potential. However, it is not the only example. For example, significant bunching can occur below key tax thresholds, where tax policy produces kinks in the marginal rate of taxation.[33]

To understand the impact of policy choices, it is therefore important to know both why and how people and firms are adjusting their behaviour. A good example of why this matters is the impact on the behaviour of firms of a pay/don't pay threshold linked to size, see Table 5. This type of threshold will often result in significant bunching of firms just below the threshold. In the case of a threshold linked to the size of sales, if the reason that they are below the threshold is a conscious choice to limit sales in an effort to avoid the need to pay tax, raising the threshold will raise economic output. If instead they are simply too small for the threshold to be relevant, raising it will have no impact on output, but will reduce tax revenues.

Tax simplification is an important agenda

There remains significant scope for improving the tax system in the UK. Such reform should concentrate on tax simplification. For example, tax systems should avoid creating discontinuities in tax rates that adversely affect behaviour.

As well as VAT, other aspects of the tax system that could be improved include integrating income tax and National Insurance thresholds and reforming business rates.

Reform should aim to have a consistent approach to who pays tax and why, and in particular should look at the rationale for why tax rates for different groups differ and how this may affect incentive structures. For example, in the UK unearned income attracts less tax than earned income.

IEG Recommendation:
Tax reform in the UK should concentrate on VAT; income tax and National Insurance; and property taxes such as business rates.

Table 5
Partition of taxpayers in response to a tax threshold

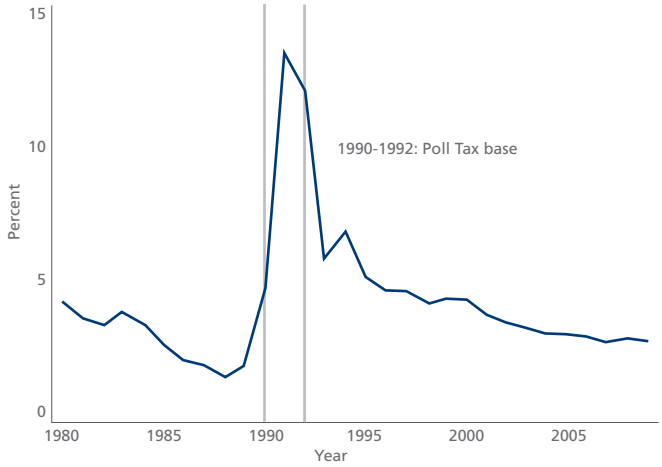
Group	Response to threshold
Microenterprises	Smallest of all – below tax threshold so tax does not apply
Avoiders	Have the potential to grow, but adjust to tax by lowering sales to just below tax threshold
Ghosts	Above the threshold, so legally liable, but pay no tax as do not report earnings
Partial-evaders	Above the threshold, so legally liable, but pay no tax as under report earnings to partially evade tax
Compliers	Part of the formal sector – large firms that remit all taxes due

Source: Based on analysis in Kanbur and Keen (2015).

[33] *See, for example, the discussion of the kinks in the marginal rate of corporation tax in the UK on firm behaviour in Devereux, Liu, and Loretz (2014).*

The split implicit in Table 5, into those who are willing to pay tax and those who are not, raises an important issue for government – the extent of buy-in to the political process. If people simply are not willing to pay tax, and will actively avoid or even evade it, then a government's ability to raise tax revenue breaks down. This is one reason why the situation in Greece is so contentious – there is a perception in the rest of Europe (rightly or wrongly) that the Greek population do not pay their fair share of tax and that this is one factor undermining Greek government finances. Unfortunately, as the experience of the UK's poll tax shows, changing the norms of tax compliance can be difficult – they can deteriorate sharply in response to an unpopular tax, but will take time to improve, even if taxes are seen as fair, see Figure 6.

Figure 6
Property tax evasion in the UK, 1980-2009



Note: Evasion rates in the property tax system stood at 2-3%, but jumped to over 10% when the property tax was replaced by the poll tax, adjusting only slowly after the restoration of a new property tax to replace the poll tax.
Source: Besley, Jensen and Persson (2015).

6: FISCAL RULES

The complexities associated with the operation of fiscal policy mean that fiscal discipline can be hard to achieve – particularly because of the difficulty of assessing the aggregate impact of a multitude of individual policy choices. Therefore, one way in which governments have tried to improve the operation of fiscal policy is through the use of fiscal rules and fiscal councils. These typically aim to improve the effectiveness and transparency of fiscal policy, which also has the effect of providing voters with clear messages about how success should be judged.

In his annual Mansion House speech, the UK's Chancellor of the Exchequer announced on 10 June 2015 that:

> *"in normal times, governments of the left as well as the right should run a budget surplus to bear down on debt and prepare for an uncertain future. In the Budget we will bring forward this strong new fiscal framework to entrench this permanent commitment to that surplus, and the budget responsibility it represents."*[34]

In other words, the government is looking to introduce fiscal rules to commit UK governments to running a fiscal surplus in normal times. This raises two questions: firstly, what is the evidence on the effectiveness of fiscal rules in practice; and secondly, are there specific challenges associated with introducing this type of fiscal rule in the UK context?

6.a How effective are fiscal rules?

Governments suffer a problem when it comes to committing to a particular course of action – they will face incentives to renege in response to events. What is the optimal policy solution at one point in time will not necessarily always be the optimal solution. For example, governments do not want to encourage house building on flood plains, not least because flood prevention measures are costly. However, a policy banning spending on new flood prevention measures will not discourage house building on flood plains – people know that once the houses are built (particularly if there are a lot of new houses) the government's incentives will change and it will want to protect the new houses from flooding. This time inconsistency, and the

It is important to think about the broader purpose of government borrowing

A fiscal rule with a sole focus on maintaining budget surpluses to reduce government debt runs counter to much economic orthodoxy.

Debt is not necessarily a bad thing, particularly if the terms on which the government can borrow are good. Using government debt to finance infrastructure projects can make sense, particularly when interest rates on government debt are low. This is similar to the idea that it makes sense for companies to borrow in order to invest in potentially profitable projects. Therefore deficits can be tolerated, particularly if they are used to invest.

However, the arguments about using government debt to support infrastructure investment rest on the assumption that in the long run the country makes a return on that investment in the form of higher growth, which in turn allows debt to fall. Therefore governments need to be clear about what exactly they are trying to achieve by borrowing, as well as the likelihood of achieving it.

From the perspective of setting fiscal rules, however, it is not likely to be worth differentiating between borrowing for investment and borrowing for other reasons, because governments could have an incentive to reclassify everything as investment. For example, education and health spending can be thought of as investment in the workforce.

IEG Recommendation: Taking advantage of low interest rates to finance infrastructure projects to promote growth could be advantageous.

[34] *Osborne (2015).*

interaction between policy choices, people's expectations and economic structures, has shaped a lot of economic thinking on policy frameworks.[35]

The debate on rules versus discretion suggests that policy rules, particularly policy rules that are hard to change and easy to monitor, can improve outcomes by tying a government's hands. This is a key reason why most economists believe that central banks should be independent – it is easier to commit to using interest rates to stabilise inflation at an appropriate level, and therefore to shape expectations about the future path of inflation, when they are not also being used as a tool in the political business cycle to help governments get re-elected. Furthermore, setting this type of policy rule (central bank independence) to commit governments to a policy of low inflation has the advantage of being relatively simple – monetary policy is a relatively simple policy framework to implement, often involving a single policy tool (usually interest rates), a single policy target (typically inflation) and having relatively limited implications for the distribution of wealth. At least that was the case until the recent financial crisis, which has complicated the role of central banks because of the addition of quantitative easing to the central bank's tool kit (to overcome the constraint of near zero interest rates) and the recognition of the need to use macroprudential tools to achieve financial stability.

However, policy rules involving fiscal policy are likely to be harder to implement effectively. The reason – as the preceding analysis makes clear – is that fiscal policy is complex, messy and hard to adjust quickly – it involves lots of decisions, big and small, about a multitude of different variables that need to be aggregated together to form a complete picture. For example, a decision by a government department to buy paperclips is not a headline policy choice, but it will influence whether or not the government meets its budget targets through its impact on government spending. Furthermore, under a regime that sets limits on the size of the budget deficit, if spending in one department is ring-fenced then, when tax receipts are falling, that department will still be able to buy paperclips, even though front line services in other departments may be under threat.

A simple example of how fiscal rules can have unexpected consequences is the impact of use-it or lose-it rules associated with government spending over the fiscal year, whereby government departments are not allowed to

Fiscal rules can lead to unintended consequences

It is important that fiscal targets are not set in such a way as to create perverse incentives. For example, if a valuable government asset were sold at a large discount merely to raise funds to meet a deficit target, the net economic effect could be negative. The perception that this might have been a factor influencing decisions is one reason why the sale of Royal Mail in the UK was controversial, for example.

IEG Recommendation:
It is important that fiscal rules are set in a way that does not lead to perverse incentives, whereby the target itself is more important than the value to taxpayers.

[35] *See Kydland and Prescott (1977) for the seminal treatment of time inconsistency.*

carry forward any unallocated funds. This type of rule is prevalent in US government departments. Analysis of US Federal procurement suggests that spending in the last week of the year is 4.9 times higher than for the rest of the year, but that IT projects commissioned in that last week are 2.2 to 5.6 times more likely to suffer from below average quality scores. However, these problems are not evident for IT projects in the Department of Justice, which is allowed to roll-over any unused funding for IT budgets.[36]

A fiscal rule covering budget deficits or government debt would be much more complex than a use-it or lose-it spending rule and therefore the scale of any unexpected consequences could be significant. Recent US experience of cliff-edge funding crises and reaching the government debt ceiling show that policy rules enacted to try and ensure future governments will be fiscally responsible can end up creating instability and therefore pose significant risks to economic outcomes.

History also suggests that governments tend to amend numerical fiscal rules at the point when they become binding. Furthermore, if voters really valued fiscal discipline, then the record of persistent deficits so obvious in Table 3 would not be so clear, as governments would have incentives to do better. Instead the incentives are likely to be for voters to let governments convince them that this time is special, and that the need for fiscal disciple should be overridden in the public interest. In this the difficulties associated with forecasting the variables of interest, understanding business cycles and even just measuring current GDP are likely to help justify any deviation from the rule, because it will be so hard to know what the true situation is. This will be compounded by the need to make any rule as credible as possible, which is likely to involve the need to allow for contingencies associated with bad events that would mean the rule will be relaxed depending on circumstances.[37]

So what are the alternatives to binding numerical rules for creating budget discipline? The two main options are delegating responsibility and a better budget process:

- In the case of delegation, which involves making one person (or set of persons) responsible for fiscal discipline, one of the key issues is who the role should be delegated to. A finance minister would still want to be re-

[36] *See the discussion in Liebman and Mahoney (2013).*
[37] *See the discussion in Wyplosz (2012).*

elected and, if part of a coalition, could create friction within the coalition because of the power this would give them to influence policy choices. An unelected official, however, would be responsible for making decisions that would affect the wealth and wellbeing of voters, but could not be held accountable for the choices they made.

- In the case of a better budget process, the use of an institution such as a fiscal council also raises issues of democratic accountability, if it is to be involved in setting budget targets. There may be a greater role for fiscal councils to provide disciple by providing an independent audit function to assess policy options and outcomes, and there are already examples of this type of fiscal council. However, while that is helpful, there is limited evidence that in practice governments adjust their plans in response to concerns raised by fiscal councils.[38]

In the UK, the Office for Budget Responsibility (OBR) acts as a fiscal council. The OBR's current role is to:

- Produce five-year forecasts for the economy and public finances, which are used in the production of the government's Budget and Autumn Statement;
- Use those forecasts to judge the government's performance against its targets for fiscal policy;
- Scrutinise the Treasury's costings of tax and welfare spending measures;
- Assess the long-term sustainability of public finances; and
- Assess the government's performance against the welfare cap.

In general many economists believe that fiscal councils have the potential to improve budget discipline and the OBR's remit to forecast outturns is helpful, because it makes it harder for governments to be overly optimistic in their projections, which was seen as a key problem in the UK context. However, there are currently limits on the extent to which the OBR can look at alternatives to existing government policy, making its role narrower than that of some fiscal councils. Furthermore, its involvement in producing forecasts for government use means it will be important for the OBR to guard its independence as, while its forecasting role is helpful in promoting fiscal discipline, it does create the risk that the OBR could become institutionalised, losing its independent voice.[39]

External scrutiny of fiscal policy is important for success

It is easier to say what a good system would look like, for example what processes and independent scrutiny should be involved, rather than what the appropriate level of any fiscal target should be. Furthermore, in general there is a trade-off between fiscal rules that are simple and therefore easy to monitor and those that are flexible enough to cope with adverse events. However, unless the rule used is one where it is easy to articulate success and failure, even with scrutiny it will be possible for governments to game the system.

Transparency and scrutiny are particularly important for the success of fiscal rules. They provide a form of 'conscience' for governments, by making it easier to tell when governments are not sticking to their promises.

The framework in which fiscal policy works therefore has an important impact on the likelihood that governments will stick to their targets. For example, greater scrutiny from an independent body can help improve the operation of fiscal policy. The Office of Budget Responsibility in the UK is a good example of how external scrutiny can help transparency.

IEG Recommendation:
Ensuring that the processes underpinning the scrutiny of fiscal policy are effective can be more important than the specific rule that is chosen.

[38] *See the discussion in Wyplosz (2012).*
[39] *See, for example, the discussion in Calmfors and Wren-Lewis (2011).*

There are some examples of where rules and institutions have been combined to create fiscal disciple, for example:

- In the Netherlands the budget ceiling is negotiated after each election by the coalition partners and lasts for the duration of the parliament. As such, it is not an arbitrary numerical target, but one that can respond to the democratic process, as the policies proposed by each party are assessed by the CPB (Netherlands Bureau for Economic Analysis) before each election, meaning voters understand the fiscal implications of electing a particular party. The CPB is responsible for the analysis and forecasting of economic and budget outturns and their work is used by the Finance Ministry in setting budgets. A key element of the framework is the agreement on medium-term targets for each department at the start of the parliament, with limited flexibility for adjustment. The work of the CPB is also combined with recommendations from the SER (Social and Economic Council of the Netherlands) on pensions and social security, although these recommendations are not binding. The evidence suggests that these arrangements have improved fiscal discipline in the Netherlands, although the tendency has been for fiscal policy to be pro-cyclical, meaning it has had less of a stabilisation role.
- Switzerland adopted a "debt brake" in 2003 as part of the constitution to reverse the build-up of public sector debt. There is an escape clause, which can be triggered by a three-fifths majority in both chambers of parliament, but in the absence of that the government budget has to be balanced over the cycle. Any slippages over budget balance (positive or negative) are added to a control account and if the cumulative balance is negative it must be brought into balance "over the next few years". This rule has the advantage of flexibility, and has been successful in bringing debt levels down. However, it only covers about a third of Swiss government spending (as most spending takes place at the canton or municipal level) and, as there is no definition of what "the next few years" means, could be subject to slippage in practice.

What is clear is that both these examples of combining fiscal rules with institutional arrangements are well adapted to the political systems operating in the country using them, and this may well be one reason for their success.[40]

Germany has set up a debt brake rule

In 2009, the German parliament passed a fundamental reform of government borrowing rules for central and state governments, setting strict borrowing limits and the requirement for a structurally close-to-balanced or balanced budget. Following a transition, this debt break (or Schuldenbremse) will become binding in 2016 for the central government and in 2020 for the states. This approach matches the Germans' cultural aversion to debt. However, their approach to fiscal policy should not necessarily be seen as the key to their economic success. The German experience has partly been determined by the way in which wage settlements have worked and this will not necessarily be replicated elsewhere.

[40] *See the discussion in Wyplosz (2012).*

6.b What are the challenges associated with mandating UK budget surpluses?

Of the many challenges associated with creating a rule mandating UK budget surpluses in normal times, two stand out. The first is how a policy rule of this type will interact with other government commitments, for example on the share of government spending that is ring fenced and the tax rates that will not increase. The second is the problems associated with forecasting both output and budget outturns.

As part of its election manifesto the Conservative Party made some firm commitments on both tax and spending. In particular, it pledged that there would be no increases in VAT, national insurance, or income tax and that it would look to increase the threshold at which people start to pay both the basic rate and the 40% rate of income tax. Although it did not commit to a level of corporation tax, it did commit to being the most competitive regime in the OECD, and in the Budget presented on 8 July 2015, it was announced that the corporate tax rate would fall from the current 20% to 19% in 2017 and 18% in 2020. In addition, it pledged in its manifesto that:

- the schools budget would be protected, with the amount of money following each child protected, so that total education funding would rise;
- it would increase spending on the NHS;
- it would protect pensioner benefits;
- it would honour its commitment to spend 0.7% of Gross National Income on international development; and
- it would honour its commitment to spend 2% of Gross National Income on defence.

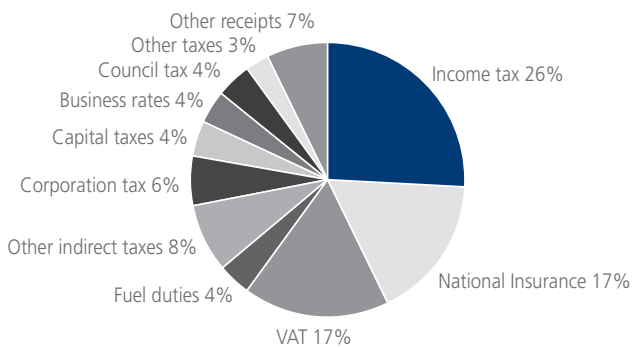
In practice, it also needs to honour any debt payments and interest payments on the UK's national debt, or risk a default. It is also typically seen as desirable to maintain investment spending on projects such as enhancing the UK's infrastructure, even though in practice investment spending often suffers in any drive to improve fiscal discipline.

The pattern of government spending has been shifting in the UK

In the UK, although government spending in absolute terms has not necessarily been falling, where the money is being spent has shifted a lot in recent years. The combination of a fiscal rule and government commitments on ring fencing is likely to accelerate such trends.

Therefore, these commitments leave very little room for manoeuvre if, for example, tax receipts are not as high as expected, or if the size of pensioner benefits have been underestimated. As Figures 7 and 8 make clear, the items associated with firm commitments account for a significant proportion of both revenues and spending. This is compounded by the fact that the

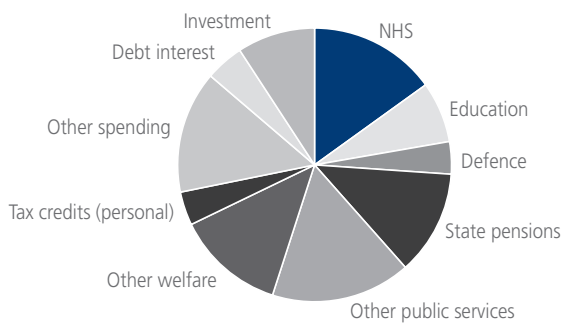
Figure 7
Share of UK government revenues by category, 2015-16



Note: Capital taxes include capital gains tax, inheritance tax, stamp duties and the bank levy. Other non-tax receipts include surpluses from publicly owned companies, interest and dividends, less own resources contribution to EU. Uses data from the Office for Budget Responsibility.

Source: IFS (2015).

Figure 8
Share of UK government spending by category, 2015-16



Note: Data from the OBR (2015). Note that this breakdown does not separate out spending on international development, or the other protected pension payments (such as the winter fuel allowance and TV licence fee payments).

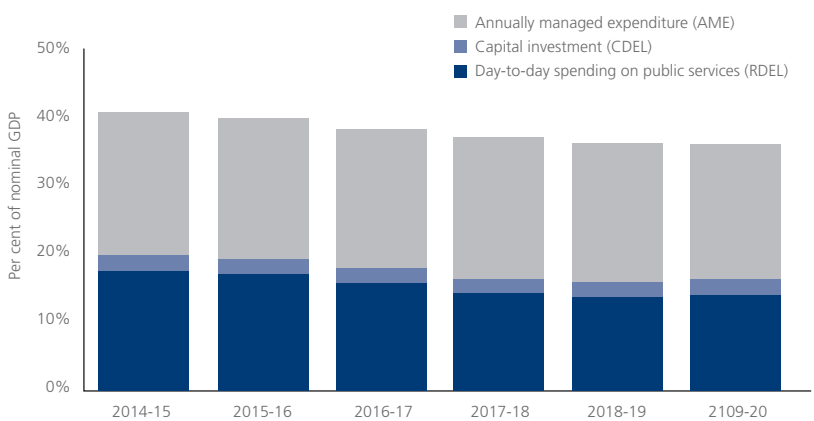
Source: Analytically Driven Ltd

majority of government spending is outside the government's immediate control, because it is not subject to multi-year limits. This form of spending is known as annually managed expenditure (AME) and is expected to remain the most important component of government spending, see Figure 9.

The problems associated with implementing any fiscal rule are likely to be exacerbated by the difficulties associated with forecasting both GDP and budget outturns. If GDP is hard to forecast, it is difficult both to know whether times are normal and to predict likely outturns for government spending and revenues. Furthermore, without accurate forecasts of government budget outturns, it will be harder to know when adjustments to fiscal policy will be needed to meet commitments under the fiscal rule. As Figures 10 and 11 show, the forecast errors associated with forecasts of both UK GDP growth and UK public borrowing have been significant, even outside the recent crisis.

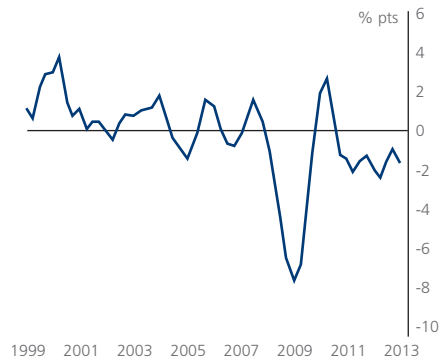
Furthermore, a rule associated with estimating structural budget balances would pose even greater problems. There are significant problems associated with all the methodologies for estimating trend output, with estimates for the current period being most uncertain because of an end-point problem.

Figure 9
Public spending to 2019-20



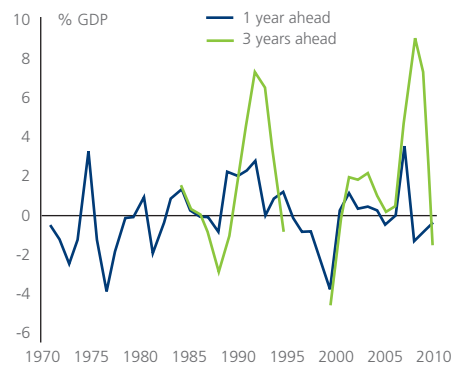
Note: Annually Managed Expenditure is not subject to Treasury multi-year spending limits.
Source: OBR (2015).

Figure 10
GDP growth outturn less MPC's forecast



Note: Forecast errors relative to forecast one year earlier. Based on ONS and Bank of England data.
Source: Broadbent (2013)

Figure 11
UK public borrowing outturn less forecast



Note: Based on HMT data.
Source: Broadbent (2013)

Fiscal policy is very cyclical, which means its design is complicated.

The design of fiscal policy is complicated by the need to cope with economic cycles and their impact on both automatic stabilisers (such as benefit payments) and the need for active stabilisation policy.

This is particularly true when business cycles are long, because this can limit the need for fiscal discipline during a parliamentary term. For example, during the cycle that ran from 1997 until 2006 the then-Chancellor Gordon Brown could be more relaxed about fiscal policy in Labour's second term, because of the fiscal tightening that occurred at the start of Labour's first term. Therefore, even though growth had been strong, the UK entered the financial crisis with a relatively relaxed fiscal policy, meaning there was less scope for stabilisation measures than would have been the case if fiscal policy had been tighter.

Rules associated with fiscal policy over a cycle are also complicated by the difficulties with estimating not only future output but also trend output and therefore the size of the output gap. It can be particularly hard, for example, to estimate output gaps when the trajectory of trend growth is changing. It can also be helpful to distinguish between the short-run and long-run output gaps, as in the latter case factors of production, such as the capital stock, are not fixed.

The size of the output gap matters, because from a stabilisation perspective it determines how tight, or loose, policy should be. For example, in 2007 the UK probably had a slightly more positive output gap (output above trend) than was thought at the time. From a stabilisation perspective, therefore, fiscal policy would have been tighter, if the size of the output gap had been known. However, it is important to recognise that even with complete foresight, a shock the size of the financial crisis would still have required adjustment.

It is also important not just to focus on growth–unemployment is also important. Unless productivity rises, if unemployment increases, growth will stall.

The problems associated with forecasting output and fiscal policy outcomes are also likely to be complicated by the interaction between policy choices, people's expectations and economic structures. If people know that different political parties have different priorities and will react to events in different ways, then they will potentially adjust their behaviour and their response to policy choices, which in turn will alter the way that the economy reacts.[41]

In other words, implementing a fiscal rule of the type proposed by the Chancellor, requiring budget surpluses in normal times, will be fraught with complications.

[41] This is sometimes referred to as the Lucas critique, see Lucas (1976).

6.c The proposed framework for fiscal rules in the UK

Subsequent to the IEG's discussion on 29 June, the UK government published its proposed framework for fiscal rules in the UK as part of the Budget on 8 July 2015.[42] These set two objectives for UK fiscal policy, namely to:

1. ensure sustainable public finances that support confidence in the economy, promote intergenerational fairness, and ensure the effectiveness of wider government policy.
2. support and improve the effectiveness of monetary policy in stabilizing economic fluctuations.

In the short run, to achieve this the government has set two targets:

- firstly, that public sector net borrowing will be in surplus by the end of 2019-20; and
- secondly, that public sector net debt as a percentage of GDP will fall in each year.

However, once public sector net borrowing is in surplus, which the Treasury is defining as 'normal times', the mandate for fiscal policy will be for:

- a surplus on public sector net borrowing in each subsequent year.

In the case of both the short-run targets and the target for normal times, the targets will apply unless the OBR assesses that there has been, or is expected to be, a significant negative shock to the UK, which is defined as GDP growth of less than 1% on a rolling 4 quarter-on-4-quarter basis.

In addition to the targets for headline fiscal policy, there will also be a specific target for welfare spending, which is:

- A cap on welfare spending, at a level set out by the Treasury in the most recently published Budget report, over the rolling 5-year forecast period, to ensure that expenditure on welfare is contained within a predetermined ceiling.

[42] *Therefore this section presents analysis by Analytically Driven Ltd of the likely success of the Chancellor's proposals, which is based on the underlying analysis, as well as the issues raised in the IEG's discussion.*

6.c.i What impact will this framework have?

There are several aspects of this framework which are to be welcomed:

- In particular, the involvement of the OBR, both in assessing outcomes and providing the inputs for the budget calculations, will help ensure transparency, as well as reduce the ability of governments to adjust forecasts to suit their policy goals.
- In addition, using the rate of GDP growth as a trigger for adjusting targets, rather than whether GDP is deemed to be above or below trend, will help by reducing reliance on calculations of trend GDP growth, which are inherently uncertain.
- Finally, the focus on debt reduction will in theory benefit intergenerational fairness, by reducing burdens on future generations. However, in practice the extent to which these rules achieve intergenerational fairness will also depend on the details of where cuts fall. The current government's welfare reforms, for example, are tending to protect pensioner payments.

However, there are also some areas where careful stewardship will be needed. In particular:

- There is a risk that the operation of these fiscal rules, particularly the rule associated with normal times, will be prone to pro-cyclical behaviour. It will be much easier for governments to finance projects when growth is strong, as strong growth is associated with both buoyant tax revenues and lower welfare payments. This will make it hard for the framework to achieve its objective of helping to stabilise economic fluctuations. It will also be a less effective use of resources, in the sense that fiscal multipliers are weakest in periods of strong growth.
- The focus on maintaining a year-on-year surplus means that tax and spending decisions could potentially become very volatile, making it harder for individuals and firms to plan effectively.[43]
- The rules will be associated with far stricter fiscal policy than has been the norm, either in the UK, or elsewhere. This is both because of the need to run a surplus and because that requirement is only relaxed if GDP growth is below 1%. Although a surplus is defined in the proposals as normal times, in practice surpluses have been far from normal – in the UK on

[43] *See for example the discussion in Wren-Lewis (2015) and Portes (2015) on this point.*

average between 1960 and 2011 governments ran deficits 84% of the time. Similarly, between 1956 Q4 and 2015 Q1, 4 quarter-on-4-quarter GDP growth in the UK has only been below 1% around 17% of the time, with only 6 separate incidences, averaging between 7 and 8 quarters long in each case. Average GDP growth over the period was 2.5% and median growth 2.6%. Therefore, most of the time UK fiscal policy will tend to be contractionary, with limited options for stabilisation in periods of below trend growth.

- It is unlikely that the UK will benefit from reduced borrowing costs as a result of this regime, given the tenuous link between debt levels and borrowing costs on government debt. However, the regime will negatively impact the government's ability to use debt to fund infrastructure improvements, even in periods when borrowing costs are low relative to potential returns.
- The focus on a strict numeric fiscal rule, with no room for averaging over time, means that there is a risk that the rule could lead to perverse incentives, whereby the target itself is more important than the value to taxpayers. For example, it could lead to the risk that assets, such as RBS or government land, could be sold at prices below their potential to generate cash to allow a government to meet the rule.

APPENDIX 1
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