Sustainability of the UK Public Finances: A Long-Run Perspective

Summary

Commentary on the public finances has been prominent in the news following the Chancellor's Spring Statement on 13 March 2018.[1] Much of the comment has focused on developments since the financial crisis and forecasts for the next few years. This Briefing takes a wider perspective and places the existing debt and deficit positions in a longer-term context, both historical and into the future. From this perspective, it explores the question of whether the debt position is 'sustainable'.

Origins and History of Public Debt

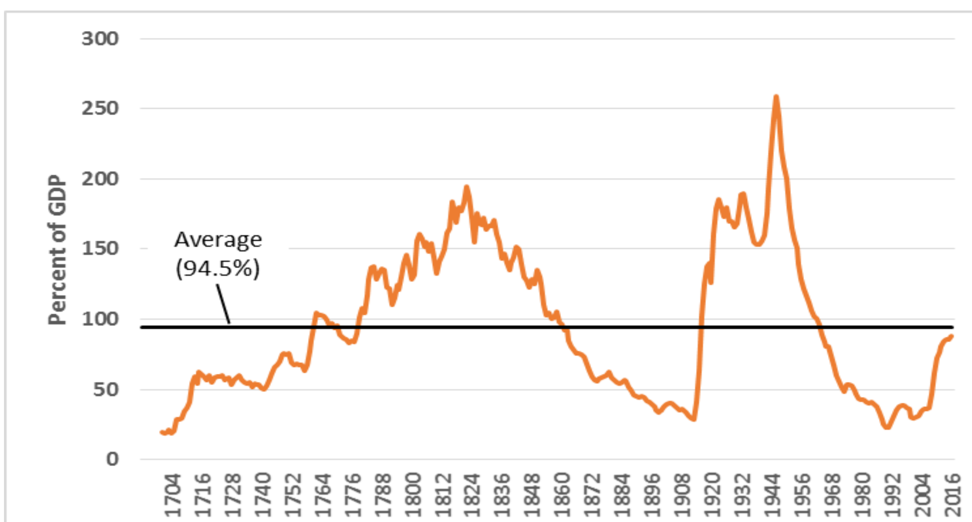
The origins of public sector borrowing can be explained as follows:

> The starting date for UK government debt is widely seen as 1694 when King William III used a syndicate of merchants to sell debt to finance the Nine Years War. This syndicate went on to become the Bank of England.[2]

In 1718, the national debt stood at £57 million.[3] Today it is £1.7 trillion,[4] more than 30,500 times as large. However, the economy has also grown significantly over this period. Therefore, when making comparisons over periods longer than just a few years, the common measure to use is debt relative to the size of the economy—ie as a percentage of Gross Domestic Product (GDP).

As Figure 1 shows, net debt on this basis trended upwards from the late 17th Century, peaking at nearly 200 percent of GDP shortly after the Napoleonic Wars. The major increases during this period were associated with the financing of the country's involvement in various wars, including the War of the Spanish Succession, the Seven Years War and the American War of Independence.[5]

Figure 1: UK Public Net Debt 1700 to 2016[6]



Chris Smith | 29 March 2018

From the 1820s to 1914, debt fell fairly consistently, to stand at 28 percent of GDP on the eve of the First World War. During the two World Wars, with the Great Depression in between, debt increased to 259 percent of GDP. It then followed a falling trend again, to 37 percent of GDP just prior to the financial crisis in the late 2000s: as Figure 1 shows, this was unusually low by historical standards. Since the crisis, however, this measure has risen sharply: in fact, by around 50 percent of GDP.[7] This increase is unprecedented in peacetime,[8] and the resultant debt is, as Figure 1 shows, high by the standards of recent decades. Nevertheless, in the context of longer-term history, it is far from unusual and is still actually below the average for the whole period shown in Figure 1.

Why Does Debt and Borrowing Vary?

The national debt (or, to be precise, Public Sector Net Debt (PSND)) is the accumulated value of the deficits and surpluses which the Government run each year (called Public Sector Net Borrowing, (PSNB)). It is possible for borrowing to fall while debt is rising; for example, if the PSNB falls, as the Office for Budget Responsibility (OBR) predicts, from £45 billion in 2017/18 to £37 billion in 2018/19[9], this would be a decrease in the annual deficit, but would still represent a deficit and would likely add to the overall stock of debt. The PSNB is, in turn, the difference between government spending and income in a given year, and these separate components can vary significantly over time.

As highlighted by various sources, some of the main influences on these income and spending are:

- **Economic conditions**: Generally, when the economy is performing strongly, borrowing falls as receipts go up (eg as more taxable activities are taking place) and spending falls (notably on welfare payments). In downturns the reverse is typically true.[10]
- **Government policy**: Governments can choose to increase or decrease both spending and taxation, directly affecting borrowing. For example, since the financial crisis, "increases in revenues and, to a greater extent, reductions in public spending have contributed to the deficit falling by 7.5 percent of national income by 2016/17. Revenues increased by 1.7 percent of national income and spending decreased by 5.9 percent of national income between 2009/10 and 2016/17".[11] Other significant events linked to this category might include wars[12] and bank bail-outs, at least initially: the long-term impact of these will depend on the income flows from the bailed-out banks and at what price (if any) the shares can be resold.[13]
- **Underlying socio-demographic and technological changes**: This includes developments such as the ageing population, which will reduce the ratio of the working age to pensionable age population[14] and increase expenditure (on the NHS, social care etc).[15] Another example raised is that of the move to electric cars, which, it is predicted, could have a significant impact on revenue through lower fuel duty receipts. For example, the think tank Policy Exchange predicts that revenues from fuel duties will be £9 to £23 billion per annum lower than the OBR is expecting by 2030.[16]

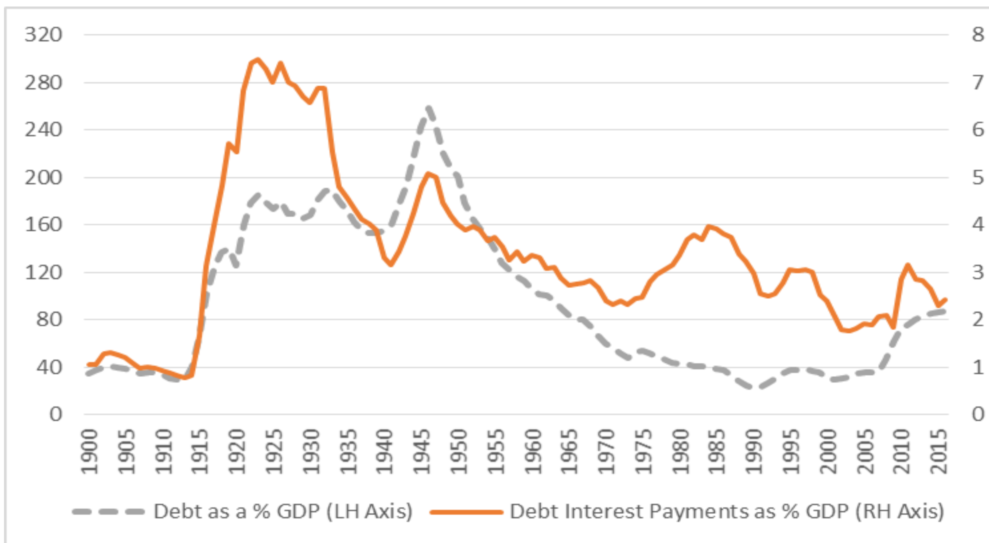
Debt Interest Payments

One consequence of having a national debt is the interest which is payable on it; if the debt is large, the interest payments can themselves become a significant part of government expenditure—potentially leading in turn to higher deficits. The debt is usually financed via the issue of bonds (which may be referred to by other names, such as Treasury bills or gilts). These provide the Government with immediate funds and the purchaser with (again usually) a defined stream of interest payments (the 'coupon' or 'yield') over a defined period (the 'maturity' or 'term').[17]

These bonds can have shorter or longer maturity terms, and hence today's interest payments can reflect both recent and historic deficits. In the past, some debt has even been undated (ie has interest payable in perpetuity); in 2015, the Government redeemed the last of these, including debt first issued in 1720 and 1752.[18] The longest dated bond of recent issue was a 55-year bond issued in 2013, on which interest will still be paid up to 2068.[19]

Figure 2 shows the level of interest payments on the national debt in each year, again expressed as a percentage of GDP, since 1900. The graph also includes the debt data from that period (from Figure 1) for comparison purposes:

Figure 2: Debt and Debt Interest Since 1900[20]



Debt interest is affected by the level of outstanding debt (itself a factor of deficits up to the present day and the maturity of the bonds used to finance them) and the interest rate on it. If there are no major changes in interest rates, debt and debt interest are likely to move broadly together. During the Second World War, interest payments did not rise as quickly as debt; in fact, interest rates were held at 2 percent for 19 years.[21] A similar pattern has been observed since the financial crisis, when interest rates have been at historical lows. Indeed, it has been argued that US interest rates were, prior to the current round of increases which began in December 2015,[22] at "the lowest levels in the 5,000 years of civilisation".[23]

Sustainability of the UK Public Finances

It is sometimes queried whether the recent fiscal position is 'sustainable'.[24] Based on historic analysis, it could be argued that it is.[25] This argument might run as follows: the UK has never previously defaulted on its debt;[26] as shown above, the current debt level is below its long run average (and significantly below record levels); debt interest payments are also near historic lows; and, finally, the debt is predicted to fall from the current level of 85 percent to 78 percent in 2022/23, the end of the OBR's formal forecasting period[27] (although the Institute for Fiscal Studies notes that this fall is largely due to Bank of England transactions; stating that, excluding these, "the profile is virtually flat over the forecast period").[28] The Government is still aiming to have a balanced budget "by the middle of the next decade".[29]

However, the Office for Budget Responsibility is specifically tasked with considering sustainability as part of its remit,[30] and in doing so it takes a different, forward-looking perspective.

In doing so, it has produced the following definition:

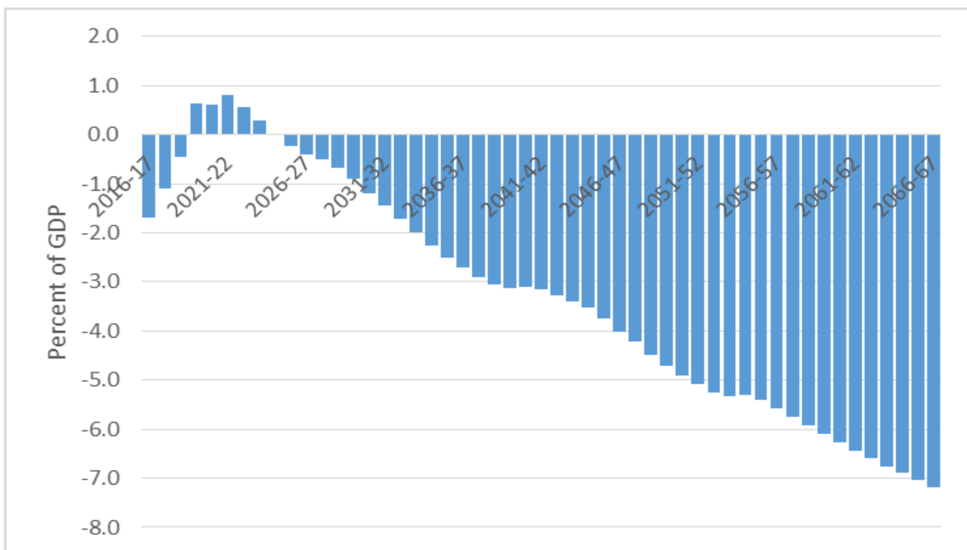
> Broadly speaking, the fiscal position is unsustainable if the public sector is on course to absorb an ever-growing share of national income simply to pay the interest on its accumulated debt. This notion of sustainability can be quantified in a number of ways.[31]

Such an approach requires projections of government finances into the future. The OBR therefore makes, and publishes, long-range illustrations of future borrowing and debt—currently, going as far as 2066/67. These make a number of assumptions, and the OBR states "it is important to emphasise that, given the huge range of uncertainty around the issues and timescales covered in this report, the figures presented should be treated as illustrative projections, not precise forecasts".[32] The OBR produces both a central projection and some ranges around these. It concludes:

> On these measures, the central projection in each of our reports—since the first was published in 2011—has pointed to an unsustainable fiscal position over the long-term.[33]

What causes this result? As Figure 3 shows, the OBR's central projections suggest that the primary budget balance (a measure of borrowing which it calls "the key to the public sector's debt dynamics"),[34] although improving to +0.8 percent of GDP in 2021/22, then falls steadily to an annual deficit of 7.2 percent of GDP in 2066/67.

Figure 3: Projected Primary Budget Balance 2016/17 to 2066/67[35]



According to the OBR, the main factors contributing to this are:

> [T]he effects of an ageing population and further upward pressure on health spending from factors such as technological advancements and the rising prevalence of chronic health conditions.[36]

The deterioration from a surplus of 0.8 percent to a deficit of 7.2 percent of GDP is equivalent to around £156 billion per year in today's terms.[37] Moreover, each annual deficit implies additional borrowing, and the interest costs on this extra debt would also have an impact on the deficit. Indeed, the OBR projects that Public Sector Net Borrowing would rise from around 2.2 percent[38] of GDP today to 16.6 percent in 2066/67.[39]

The cumulative effect of these deficits over 50 years on the level of debt would be substantial. On the OBR's assumptions, Public Sector Net Debt would rise from 84 percent of GDP today to 234 percent of GDP in 2066/67—close to the historic peak after the Second World War—and would still be on a rising trend at that point.[40]

A similar pattern would be seen in interest payments, as Figure 4 below illustrates:

Figure 4: Projected Debt Interest Payments, 2016/17 to 2066/67[41]

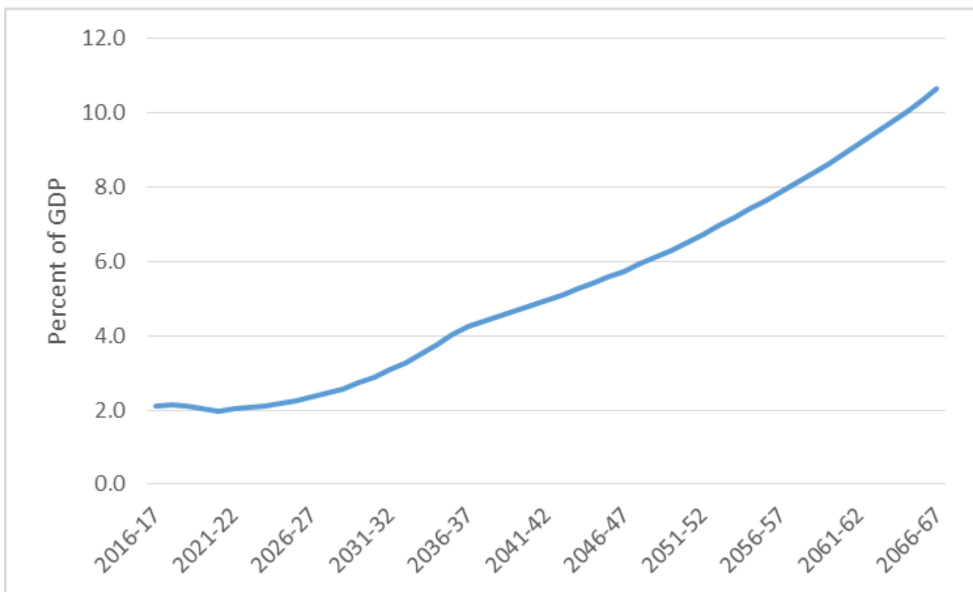


Figure 4 shows that debt interest payments would continue to rise indefinitely, as a proportion of national income. This explains why the OBR concludes that the long-term fiscal position is "unsustainable"; its measure is whether interest payments represent an ever-growing source of national income, and its analysis summarised in Figure 4 suggests that it is. However, it should be emphasised that these illustrations have a great deal of uncertainty—in both directions. Over the long-term, small variations from the assumptions (and there are many) could make significant differences. To take just two examples identified by the OBR and the IFS:

> If GDP and receipts grew just 0.1 percentage points more slowly than projected over the next 50 years, but spending growth was unchanged, the debt-to-GDP would end up around 50 percentage points higher.[42]
>
> If the Bank of England base rate goes up by 1 percentage point more than what is forecast, that would add £5 billion per year to debt interest spending and therefore to the deficit.[43]

Potential Impact of Brexit

Brexit also constitutes an additional short- and long-term uncertainty factor. The Institute for Fiscal Studies identifies that there may be a direct benefit from reduced contributions to the EU budget, which it estimates at "up to £3 billion in 2020/21 rising to £5.8 billion in 2022/23 […] rising further thereafter".[44] However, the OBR's estimate is that GDP will be 2 percent lower as a result of Brexit, which could have an adverse £15 billion per year effect on the Government's budget.[45] The Government's cross-Whitehall analysis suggested a potential 1.6 to 7.7 percent smaller economy in the long-run, depending on the exit scenario.[46] In these circumstances, the IFS suggests "the public finance impact of a weaker economy is highly likely to dominate […] The [estimated] £15 billion hit is

much bigger than any saving from the fiscal flows to the EU".[47] Similarly, the OBR concludes:

> A lot of attention focuses on the possible 'divorce bill', but, while some numbers mooted for it are very large, a one-off hit of this sort would not pose a big threat to fiscal sustainability. More important are the implications of whatever agreements are reached with the EU and other trading partners for the long-term growth of the UK economy.[48]

However, others believe there will not be a negative impact from Brexit on the economy and public finances. For example, Patrick Minford of Economists for Free Trade argues that a 'hard' Brexit (on his definition) would result in:

> A total gain in UK welfare and GDP of around 4 percent from free trade and another 2 percent from improved regulation, a total gain to GDP of 6 percent. On top of this there are gains from regaining our net EU budget contribution (0.6 percent of GDP) and removing the taxpayer subsidy to unskilled immigration (0.2 percent of GDP). There will also be longer term gains to growth through enhanced innovation and entrepreneurial activity.[49]

Implications and Conclusions

From its long-range projections, the OBR concludes:

> The main lesson of our analysis is that future governments are likely to have to undertake some additional fiscal tightening beyond the current consolidation planned for the next five years in order to address the fiscal costs of an ageing population and upward pressures on health spending […]. Our findings should not be taken to imply that the Government needs to achieve a bigger tightening over the next five years than already planned. Rather, policymakers and would be policymakers will need to think carefully about the long-term consequences of any policies they introduce in the short-term. And they should give thought too to the policy choices that will confront them once the current planned consolidation is complete.[50]

Looking at projections over a shorter-term, the Institute for Fiscal Studies has stated that even to meet the Government's target of a balanced budget by the mid-2020s, while keeping spending as a constant proportion of national income, will require tax increases of around £30 billion per year; the IFS "very much doubts" that this will be possible "unless the economy does much better than expected".[51]

The Institute for Economic Affairs (IEA) has proposed the use of a 'fiscal rule' to attempt to improve the sustainability of public finances. The IEA states that:

> Just as no fiscal rule can be perfect, no measure of sustainability can be perfect either. That does not mean that structural deficits are not our best rule of thumb metric for how sustainable a government's choices are.[52]

The IEA explores the various 'rules' which have been applied by UK governments to limit borrowing, and, in particular, the 'Golden Rule' introduced by Gordon Brown in 2008 which stated that: "over the economic cycle the Government will borrow only to invest, and that current spending will be met from taxation".[53] The IEA concludes that the rule "failed" and proposes instead that the UK should balance the structural budget every year, a system similar to Switzerland's.[54] It suggests that: "no fiscal rule can predict the future or guarantee sustainability of the public finances. However, they remain a useful tool to counter the myopic priorities of politicians and voters".[55]

Further Information

- House of Commons Library, *The Public Finances: A Historical Overview*, 20 March 2018
- House of Lords, 'Written Statement: OBR Fiscal Sustainability Report 2017', 17 January 2017, HLWS419

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[1] HM Treasury, 'Spring Statement 2018', 13 March 2018.
[2] Martin Ellison and Andrew Scott, *Managing the UK National Debt 1694–2017*, Centre for Macroeconomics Discussion Paper, September 2017, p 3.
[3] Bank of England, 'A Millennium of Macroeconomic Data for the UK', accessed 21 March 2018, sheet A29, col AO.
[4] Office for National Statistics, 'Public Sector Finances, UK: January 2018', 21 February 2018.
[5] House of Commons Library, *The Public Finances: A Historical Overview*, 20 March 2018, p 4.
[6] Bank of England, 'A Millennium of Macroeconomic Data for the UK', accessed 21 March 2018, sheet A29, col AP.
[7] Thomas Pope, 'Spring Statement 2018: The Lost Decade', Institute for Fiscal Studies, (video), contribution at 09:45.
[8] ibid.
[9] Office for Budget Responsibility, *Economic and Fiscal Outlook*, March 2018, Cm 9572, p 172.
[10] Office for Budget Responsibility, *A Brief Guide to the UK Public Finances*. 21 March 2018, p 7.
[11] House of Commons Library, *Rebalancing the Public Finances*, 7 July 2017, pp 2–3.
[12] House of Commons Library, *The Public Finances: A Historical Overview*, 20 March 2018, p 6.
[13] House of Commons Library, *Government Bank Rescues: Financial Consequences*, 1 December 2017, pp 18–19.
[14] Office for National Statistics, 'National Population Projections: 2016-Based Statistical Bulletin', 26 October 2017, s 6.
[15] Office for Budget Responsibility, *Fiscal Sustainability Report*, January 2017, p 3.
[16] Richard Howard, 'Cutting Road Transport Emissions Could Cost Billions in Lost Taxes', Policy Exchange, 26 June 2017.
[17] Fixed Income Investor, 'Types of Bonds', March 2010, accessed 23 March 2018.
[18] HM Treasury, 'Repayment of £2.6 Billion Historical Debt to be Completed by Government', 27 March 2015.
[19] Ed Conway, 'UK Government Issues Longest-Dated Bond Since 1937', Real Economy Blog, 7 June 2013.
[20] Bank of England, 'A Millennium of Macroeconomic Data for the UK', accessed 21 March 2018, sheet A27, col AV and sheet A21, col B.
[21] Larry Elliott, 'UK Interest Rates: A Brief History', *Guardian*, 3 March 2014.
[22] Federal Reserve, 'Open Market Operations', 21 March 2018, accessed 23 March 2018.
[23] Elena Holodny, 'The 5,000-year History of Interest Rates Shows Just How Historically Low US Rates Still Are Right Now'. Business Insider, 18 September 2015.
[24] HC *Hansard*, 17 January 2017, col 768.
[25] For example: HC *Hansard*, 13 March 2018, col 718.
[26] Martin Ellison and Andrew Scott, *Managing the UK National Debt 1694–2017*, Centre for Macroeconomics Discussion Paper, September 2017, p 5.
[27] Office for Budget Responsibility, *Economic and Fiscal Outlook*, March 2018, Cm 9572, p 176.
[28] Thomas Pope, 'Spring Statement 2018: The Lost Decade', Institute for Fiscal Studies, (video), contribution at 9:13.
[29] Conservative Party, *Conservative Party Manifesto 2017*, 2017, p 62.
[30] Budget Responsibility and National Audit Act 2011.
[31] Office for Budget Responsibility, *Fiscal Sustainability Report*, January 2017, p 1.
[32] ibid, p 19.
[33] ibid, p 1.
[34] ibid, p 9.
[35] ibid, pp 62–3.
[36] ibid, p 3.
[37] ibid, p 7.
[38] Office for Budget Responsibility, *Economic and Fiscal Outlook*, March 2018, Cm 9572, p 11.
[39] Office for Budget Responsibility, *Fiscal Sustainability Report*, January 2017, p 66.
[40] ibid, p 67.
[41] ibid, p 68.
[42] Office for Budget Responsibility, *Fiscal Risks Report*, July 2017, Cm 9459, p 5.
[43] Carl Emmerson, 'Spring Statement 2018: More Difficult Choices Ahead', Institute for Fiscal Studies, (video), contribution at 10:04.
[44] ibid, 07:45.
[45] Office for Budget Responsibility, *Economic and Fiscal Outlook: Annex B*, p 229.

[46] House of Commons Exiting the European Union Committee, *EU Exit Analysis: Cross Whitehall Briefing*, January 2018, p 16.
[47] Carl Emmerson, 'Spring Statement 2018: More Difficult Choices Ahead', Institute for Fiscal Studies, (video), contribution at 08:45.
[48] Office for Budget Responsibility, *Fiscal Risks Report*, July 2017, Cm 9459, p 5.
[49] Patrick Minford, *From Project Fear to Project Prosperity*, Economists for Free Trade, August 2017, p 2.
[50] Office for Budget Responsibility, *Fiscal Sustainability Report*, January 2017, p 90.
[51] Paul Johnson, 'Spring Statement 2018: Opening Remarks', Institute for Fiscal Studies, (video), contribution at 01:51.
[52] Jonathan Dupont and Kwasi Kwarteng, *Binding the Hands of Government—a Credible Fiscal Rule for the UK*, Institute for Economic Affairs, May 2012, p 21.
[53] HC *Hansard*, 2 July 1997, col 304.
[54] Jonathan Dupont and Kwasi Kwarteng, *Binding the Hands of Government—a Credible Fiscal Rule for the UK*, Institute for Economic Affairs, May 2012, p 4.
[55] ibid.

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