Impact case study (REF3b)

Institution: *London Business School*.

Unit of Assessment: *C19 — Business and Management Studies*.

Title of case study:

The Impact of Deficit Fluctuations on Long-Run Government Debt Dynamics.

1. Summary of the impact

Andrew Scott and co-authors have examined how government debt should respond to economic shocks. Their research shows incomplete debt markets should show large and long-lasting responses: a 3–4 year financial crisis should generate a swing in debt over 20–30 years. This work has impacted European governments, Finance Ministers and Permanent Secretaries of the G7, the UK Debt Management Office, and others. In summary: *cutting-edge research has impacted the contemporary thinking of policymakers as they formulate government debt management*.

2. Underpinning research

The underpinning research was conducted over the past decade, and key outputs have been published in scholarly journals. Andrew Scott is central to both the original research and the subsequent policy-relevant dissemination and impact of it. Over the relevant period his work has been based at London Business School where he is a Professor of Economics.

The central underpinning research was reported in the *Journal of Economic Theory*: "Debt and deficit fluctuations and the structure of bond markets." Albert Marcet and Andrew Scott showed that when a government pursues an optimal fiscal policy under complete markets, the value of debt has the same or less persistence than other variables. In contrast, and importantly, under incomplete markets debt shows more persistence than other variables and it increases in response to deficit-causing shocks. Data for US government debt reveal opposite results from those of complete markets, and those data are much more supportive of bond market incompleteness.

A further underpinning contribution was reported in the *Economic Journal*: "Fiscal insurance and debt management in OECD economies." Marcet, Scott, and Elisa Faraglia asked and answered these questions: (i) what indicators can be used to assess the performance of debt management? (ii) how well have historical debt management policies performed? (iii) how is performance affected by variations in debt issuance? Using OECD data between 1970 and 2000, they proposed performance indicators for debt management, and evaluated them using Monte Carlo analysis. Those based on the relative persistence of debt performed best. There is only limited evidence that debt management has helped insulate policy against unexpected fiscal shocks.

A third development was published in the *Journal of Monetary Economics*: "In search of a theory of debt management." It argues for a theory of debt management that incorporates market incompleteness. The complete-market approach recommends huge fluctuations in positions, enormous changes in portfolios for minor changes in maturities, and other volatile features. The fragility of

portfolios to small changes or the presence of transaction costs means that a balanced budget can outperform the large positions that the complete-markets approach recommends. Furthermore, the complete-market recommendations conflict with features that are integral to bond-market incompleteness, for example transaction costs, liquidity effects, robustness, and so on.

If adjustment occurs over the long run the issue is how is this achieved? The NBER paper by Chryssi Giannitsarou and Andrew Scott (2006, NBER) studies the G7 over the period 1965 to 2008 and finds that the adjustment comes from changes in the primary deficit.

Finally, research on the coordination between fiscal and monetary policies has been published very recently in the *Economic Journal*: "The impact of debt levels and debt maturity on inflation." Faraglia, Marcet, Scott, and Rigas Oikonomou showed that under coordination, inflation persistence and volatility depend on the sign, size and maturity of debt. Higher debt leads to higher inflation and longer maturity leads to more persistent inflation although inflation plays a minor role in achieving fiscal sustainability. Under an independent monetary authority, inflation is higher, more volatile and more persistent and plays a significant role in achieving fiscal solvency.

3. References to the research

"Debt and deficit fluctuations and the structure of bond markets," Albert Marcet and Andrew Scott, *Journal of Economic Theory* 144(2), March 2009, pp. 473–501.

dx.doi.org/10.1016/j.jet.2008.06.009

"Fiscal insurance and debt management in OECD economies," Elisa Faraglia, Albert Marcet, and Andrew Scott, *Economic Journal* 118(527), March 2008, pp. 363–386.

dx.doi.org/10.1111/j.1468-0297.2007.02125.x

"In search of a theory of debt management," Elisa Faraglia, Albert Marcet, and Andrew Scott, *Journal of Monetary Economics* 57(7), October 2010, pp. 821–836.

dx.doi.org/10.1016/j.jmoneco.2010.08.005

"Inflation implications of rising government debt," Chryssi Giannitsarou and Andrew Scott, *National Bureau of Economic Research* w.p. 12654, October 2006; also *NBER International Seminar on Macroeconomics*, (2006), pp. 393–439, University of Chicago Press ISSN 19328796.

http://www.nber.org/papers/w12654

"The impact of debt levels and debt maturity on inflation," Elisa Faraglia, Albert Marcet, Rigas Oikonomou, and Andrew Scott, *Economic Journal* 123(566), February 2013, pp. F164–F192.

dx.doi.org/10.1111/ecoj.12015

Evidence of quality. The *Journal of Monetary Economics* (JME) is the leading field journal in macroeconomics; the *Journal of Economic Theory* (JET) is the leading field journal in economic theory; and the *Economic Journal* (EJ) is a leading general-interest journal and also the UK's top

economics journal. All were rated as "4⋆" outlets by the ESRC-RES benchmarking review of UK Economics. In the Combes-Linnemer ranking, these outlets are "AA" rated, and rank at positions 7, 9, and 12. The fourth research output is disseminated by the prestigious *National Bureau of Economic Research*. All outputs listed here have been cited extensively.

4. Details of the impact

Context. An impact of the global financial crisis is that government debt will be high for decades to come, and this is seen as a serious problem. However, economic theory only relates the value of debt today to future primary surpluses; it does not necessarily say that debt is too high or that debt reduction should be a short-term priority. Rises in debt do reflect economic problems; but given the recent shocks, we might be better off with high debt for a longer period.

Relevant research findings. If bond markets are incomplete then debt should act as a buffer to help accommodate temporary shocks, and debt should show large and long-lasting swings: the underpinning research demonstrates that government debt should show decade-long shifts, and that optimal swings may even appear unsustainable—even though, by design, they are not. Furthermore, debt does not revert back to its previous level. Rather than abruptly raise taxation and cut government expenditure, fiscal policy should adjust over the long term. Fiscal adjustment in the short run is not enough to produce a surplus and so debt rises for a significant period.

Beneficiaries. The two beneficiaries are (a) government policymakers and (b) observers within the wider financial markets. Group (a) includes the UK Government, via the Office for Budget Responsibility; the wider group of European governments and policymakers; and the finance ministers of the G7. Group (b) includes financial market participants such as credit reference agencies.

Nature of the impact. The research findings have allowed beneficiaries in group (a) to understand that current debate places too much emphasis on rigid fiscal discipline, and has allowed beneficiaries in group (b) to understand that longer-lasting debt may be optimal.

(a). Governments should, of course, look at long-term solvency and articulate a plan for debt stability. But the imposition of hard numerical targets and dates is a mistake. If further shocks occur or the crisis continues it will optimal to revise these targets. Debt accommodates shocks—making policy change to meet previously fixed fiscal targets puts the cart before the horse.

(b). Markets, credit rating agencies, and deficit hawks need to recognise that government debt will and should remain at its elevated level for a long time and the required adjustment is for the long haul. Fiscal discipline and solvency is not inconsistent with decade-long shifts in debt. Widespread publicity has allowed this message to be received by such stakeholders.

The impact process. The research findings have achieved recent impact amongst government policymakers (the first group of beneficiaries) and have been publicised via the wider non-academic press (so impacting the second group of beneficiaries). The process of this impact has been directly from the key author of the research (Andrew Scott) to the beneficiaries.

Instances of the process and means through which the research had impact are as follows.

(i) *Europe*. The findings were promoted to governments throughout Europe. Andrew Scott was selected by the CEPR to give one of two policy briefings in Brussels to European policymakers. Relatedly, he presented his debt management work to the European Central Bank in May 2011.

(ii) *UK Treasury*. The United Kingdom Treasury invited Andrew Scott to give two presentations—one on fiscal policy, and one on debt management—in March and September 2011.

(iii) *UK Debt Management*. A seminar on debt management, which specifically communicated the research findings, was given to the United Kingdom Debt Management Office in June 2012.

(iv) *Bank of England*. The Bank of England arranged a special session (RES Session 47) "Interactions between Monetary and Fiscal Policy" conference, chaired by Charlie Bean (Deputy Governor, Monetary Policy) on debt management at the Royal Economic Society on 19 April 2011. Scott's work was presented at the request of the Bank; this session was assembled by Spencer Dale (Chief Economist, Bank of England).

(v) *G7*. This research was presented as part of a weekend with G7 Finance Ministers and their Deputies in Rome in June 2010, hence impacting key policymakers.

(vi) *OBR and FSA*. Andrew Scott directly used his research findings in policymaking: he is a member for the expert advisory panel of the UK's Office for Budget Responsibility; he was non-executive director of the Financial Services Authority (2009–13) and chair of the FSA Risk Committee. See:

- `http://budgetresponsibility.org.uk/about-the-obr/who-we-are/`
- `http://www.fsa.gov.uk/about/who/board`

The high level of sovereign debt and the significant amounts held by the European banking system is an obvious risk to the financial system. Andrew's research suggests that these problems would get even more serious in years to come and formed a direct input into this questioning of stress testing and risk scenarios at the FSA.

(vii) *General impact*. This research has achiever wider impact outside academic populations via publication in the general press and other outlets. For example, the key messages appeared in the *Financial Times* and were disseminated via `voxeu.org` and other channels. See:

- "A new watchdog would guard us from debt," *The Times*, 15 February 2010.
- "US and UK can handle decades of debt," *Financial Times*, 28 February 2010.
- "The long wave of government debt," `voxeu.org`, 11 March 2010.

5. Sources to corroborate the impact

Contact details for specific named personnel (in the Bank of England, HM Treasury, the International Monetary Fund, and the CEPR) who can corroborate the claims of (i)—(vi) are provided in the supplement to this case study. Those contacts include a current Monetary Policy Committee member and others at the very highest level of policymaking.