FIVE YEARS OF THE UK'S LONG-TERM PUBLIC FINANCE REPORT: HAS IT MADE ANY DIFFERENCE?

Frank Eich[*]

This paper is about the experiences HM Treasury has gained over the years publishing the Long-term Public Finance Report. *The paper argues that there have been many, often subtle and at launch unexpected, benefits from publishing a long-term economic and fiscal assessment on a regular basis. For example, the regular publication has kept long-term fiscal issues alive in the policy debate and has allowed government to develop a better understanding of future trends than it would probably otherwise had done.*

1 Introduction

1 Since 2002 HM Treasury has been publishing a *Long-term Public Finance Report*, with which it provides an assessment of the long-term sustainability of the public finances. This paper is about the experiences HM Treasury has gained over the years publishing this report. It is not about the technical aspects of analysing long-term economic and public finance trends.

2 While HM Treasury's experiences have obviously to be seen in a UK context, the paper argues that some of the lessons learnt are worth sharing more widely as they are of a more general nature. One of the key lessons is that many of the benefits of publishing the report were not even considered when the report was launched back in 2002 – they materialised over time and they themselves have made the effort worthwhile.

3 The paper is structured as follows. Section 2 provides some background and context, which explains why HM Treasury decided to publish a fiscal sustainability report in the first place. Section 3 discusses the structure of the report and provides a summary of what it has covered over the years. Section 4 then presents what has been achieved, for example in which way the report and its underlying analysis has made a difference to the policy debate, and what the main benefits from publishing this report have been. These benefits are sometimes subtle and in many cases had not even been considered when the decision to publish the first report was made. Section 5 provides an overview of those issues that have not been so successful and presents a few ideas on how the report might evolve in the future. Section 6 provides some concluding comments.

2 Background and context: why a *Long-term Public Finance Report*?

2.1 The Government's economic policy objectives

4 The Government's objective is to build a strong economy and a fair society, in which there is opportunity and security for all. The Government laid the foundations for achieving this through a series of fundamental reforms to the macroeconomic framework, the public spending framework and the tax and benefit system.

5 The Government's macroeconomic framework is designed to maintain long-term economic stability. Stability allows business, individuals and the Government to plan more effectively for

[*] UK Treasury.

the long term, improving the quality and quantity of investment in physical and human capital and helping to raise productivity.

6 Within this, HM Treasury's overarching aim is to "raise the rate of sustainable growth and achieve rising prosperity and a better quality of life, with economic and employment opportunities for all". To achieve this aim, HM Treasury has eight objectives, including:

- *Objective I*: Maintain a stable macroeconomic environment with low inflation and sound public finances in accordance with the *Code for Fiscal Stability*.
- *Objective II*: Increase the productivity of the economy and expand economic and employment opportunities for all.
- *Objective IV*: Promote a fair, efficient and integrated tax and benefit system with incentives to work, save and invest.

2.2 The Government's fiscal framework

7 Objective I refers to the *Code for Fiscal Stability*. The UK's fiscal framework is central to achieving the Government's objective of high and stable long-term economic growth. The framework facilitates transparent, long-term decision-making in both the public and private sectors. The fiscal framework is guided by the above-mentioned *Code for Fiscal Stability*, which sets out a commitment to managing the public finances in the long-term interests of Britain. The five key principles of the Code – transparency, stability, responsibility, fairness and efficiency – also support a long-term focus in the policy-making process.

8 Fiscal policy is set with consideration for the short, medium and long terms. The Code requires the Government to state its objectives and the fiscal rules by which fiscal policy is operated. The Government's objectives for fiscal policy are:

- over the medium term, to ensure sound public finances and that spending and taxation impact fairly both within and between generations; and
- over the short term, to support monetary policy; and, in particular, to allow the automatic stabilisers to help smooth the path of the economy.

9 In the long run, fiscal policy supports the Government's long-term goals by ensuring that the public finances are sustainable, contributing to a stable environment that promotes economic growth. This environment is important for achieving the Government's objective of building a stronger, more enterprising economy and a fairer society, extending economic opportunity and supporting those most in need to ensure that rising national prosperity is shared by all.

10 The Government has formulated two fiscal rules through which the objectives for fiscal policy are implemented, which also reflect the commitments to fiscal sustainability and generational fairness. They are:

- the golden rule: over the economic cycle, the Government will borrow only to invest and not to fund current spending; and
- the sustainable investment rule: public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level. Other things being equal, net debt will be maintained below 40 per cent of GDP over the economic cycle.

2.3 Reporting on the long term

11 The Government's fiscal framework puts great emphasis on the long term. This can also be seen by the fact that the Code requires the Government to publish illustrative long-term fiscal projections as part of the *Economic and Fiscal Strategy Report* (*EFSR*), which usually forms part of the *Budget* document. These have been published since 1998.

12 Mainly due to domestic policy developments but partly also in response to increased interest in long-term public finance issues on the international level (e.g. OECD and European Commission), HM Treasury decided in 2002 to complement the illustrative projections with a more detailed analysis of long-term economic and fiscal trends. It was decided that this should be a comprehensive analysis, using state-of-the-art techniques, and thus would require its own stand-alone publication. The *Long-term Public Finance Report* was born.

13 HM Treasury did not have to build up the modelling framework from scratch: it could use a modified version of a long-term projection model, which had been created by academics at an earlier stage for the purposes of creating the UK's generational accounts.[1] HM Treasury had co-financed this academic work and thus had the ties to make rapid progress once the decision to publish such a report had been made.

14 Even though the *Long-term Public Finance Report* was not made formally part of the Code (which would have required statutory changes), the report was nonetheless seen as a major step forward, raising transparency of the fiscal reporting framework. In the same spirit, the Government also launched the *End of Year Fiscal Report* (*EYFR*) in 2002.[2] The *EYFR* is central to the Government's retrospective reporting and analysis of fiscal issues and builds on the information already published in the *Pre-budget Report* and the *Budget*. The report looks at trends in the public finances and fiscal policy over the recent past, setting these in an historical context. The report analyses performance against the fiscal rules and fiscal policy objectives, and differences between forecast and fiscal out-turn for the year-ahead forecasts published in previous *Budgets*.

15 Both the *LTPFR* and the *EYFR* were well received, for example by the International Monetary Fund and the OECD, with the latter arguing that: "*… the best course would be to report on the long-term prospect in a separate document, but to summarize key findings in a supporting schedule that is included in the budget. This is the tact taken by the United Kingdom*".[3] It also represented something like an international benchmark in their respective areas when launched. For example, at the time of the first publication, only a handful of other finance ministries had published substantial analysis on long-term public finance trends, including Australia and New Zealand.[4]

---

1 Cardarelli, R., J. Sefton and L.J. Kotlikoff (2000), "Generational Accounting in the UK", *Economic Journal*, Vol. 110.

2 HM Treasury (2002), *End of Year Fiscal Report*, November, available at: http://www.hm-treasury.gov.uk/media/B/E/adendfiscal02-299kb.pdf

3 OECD (2005), *Sustainable Budget Policy: Concepts and Approaches*, p. 11, May.

4 For example, the Australian Treasury published its first so-called Intergenerational Report in May 2002, available at: http://www.budget.gov.au/2002-03/bp5/html/index.html. The New Zealand Treasury had been publishing long-term fiscal projections for a number of years at that point but only published its first assessment of long-term public finance sustainability in 2006, available at: http://www.treasury.govt.nz/government/longterm/fiscalposition. Obviously this does not imply that other finance ministries or other institutions did not conduct any long-term fiscal analysis. For example, in the United States the Congressional Budget Office has a long history of publishing high-quality analysis on a wide range of issues, including long-term fiscal trends. See http://www.cbo.gov/publications/bysubject.cfm?cat=3

3 Structure and content of the report

16 When the report was launched in 2002 it was not clear that it would become an annual publication to be published alongside the *Pre-budget Report*. Nonetheless the first report established the overall structure, which has been maintained ever since. Within this overall structure, the report has evolved gradually over time, focussing on policy themes relevant at the time (e.g., reforms of the state pension system in 2005 and 2006). It is likely – and in fact intended – that the report will continue to evolve in the future, partly to reflect refinements in modelling and understanding but also to keep it relevant to the policy debate.

17 The focus of the report has always been on an assessment of the long-term sustainability of the public finances. The report does that by presenting long-term spending and revenue projections, expressed as a share of GDP, and by providing a quantitative assessment of sustainability based on the established concepts of "intertemporal budget constraint" and "fiscal gaps", which have been discussed in detail elsewhere. These projections are based on "current policies". Up to 2005 the report also reported on the "inter-generational gap"; a measure developed as part of the UK's generational accounts to capture the degree of inter-generational fairness of current policies. Section V provides more information on our experiences with the generational accounts.

3.1 Complementary projections

18 The projections presented in the *LTPFR* and the illustrative long-term fiscal projections are generated using very different approaches. This could at least in theory lead to confusion, so we had to be careful to explain the differences very clearly. While the long-term spending and revenue projections presented in the *Long-term Public Finance Report* are generated using a so-called bottom-up approach, the illustrative long-term fiscal projections are generated using a so-called top-down approach. Both approaches have their respective strengths and weaknesses, and focus on different potential aspects of the future. As such the two approaches complement each other and together provide the policy makers with a richer picture of what the challenges and opportunities might be in the future than what could be provided by a single approach. As an example, the table opposite shows the bottom-up projection results for spending, as a share of GDP, as published in the 2006 *Long-term Public Finance Report*.

19 The bottom-up approach projects the path of individual spending and revenue items into the future, without any constraints on the fiscal aggregates. Bottom-up projections can take into account a wide range of factors including demographic developments, cost and demand drivers, and investment requirements but, by ignoring any fiscal constraints, are also potentially detached from reality. In reality future Governments will ensure that the aggregate of spending and revenue will evolve in a controllable fashion. To achieve this, future Governments will have to make policy changes to adapt to a changing social, economic and political environment and will have to prioritise some policy areas over other areas. This is one of the key functions a government performs.

20 The top-down approach captures this reality into the long-term projections by introducing a set of high-level constraints on the future evolution of spending and revenue. For example, explicit assumptions could be made regarding the future evolution of government spending – a number of countries pursue such a policy. Or it could be assumed that a government will maintain a fixed debt to GDP ratio over time, which will tell the government what primary balance it will need to run to achieve its objective. For the UK, the two obvious fiscal constraints to impose are the Government's two fiscal rules. The top-down illustrative long-term fiscal projections therefore

Table 5.1

Spending Projections
(percent of GDP)

	2005-06	**2015-16**	**2025-26**	**2035-36**	**2045-46**	**2055-56**
Education	5.5	5.3	5.3	5.3	5.2	5.2
State pensions(1)	5.1	5.1	5.4	6.2	6.4	6.8
Health(2)	7.4	7.6	8.3	9.1	9.5	9.9
Long-term care(3)	1.2	1.2	1.4	1.6	1.8	2.0
Public-service pensions	1.5	1.8	1.9	2.0	1.9	2.0
Total age-related spending	**20.8**	**21.0**	**22.3**	**24.3**	**24.8**	**25.8**
Other spending	20.2	19.7	19.6	19.6	19.2	18.9
Total spending(4)(5)	**40.9**	**40.7**	**41.9**	**43.8**	**43.9**	**44.7**

(1) State pension spending is defined as the sum of the basic State Pension, State Second Pension, Pension Credit, Winter Fuel Payments, Over 75 TV licences, and Christmas Bonus.
(2) Gross NHS spending.
(3) Excluding long-term care provided within the NHS which is accounted for under Health.
(4) Total spending including gross investment but excluding interest and dividends payments.
(5) Totals may not sum due to rounding.
Source: HM Treasury.

assume that the Government will meet its golden rule in every year after the medium term and will meet its sustainable investment rule over a 30-year time horizon. With the golden rule met by assumption every year beyond the medium term, the Government will only borrow to investment and hence the evolution of the net debt to GDP ratio depends on the net investment rate (which hence becomes a policy variable). The only other fiscal aggregate that needs to be "anchored" then is revenue (equivalent to current spending) as a share of GDP. It is assumed that this will remain constant beyond the medium term.

21 The top-down approach therefore answers the question what resources are available for future spending, assuming that the fiscal rules are met and revenue remains constant as a share of GDP beyond the medium term, while the bottom-up projections identify where spending and revenue pressures might arise in the future. The two approaches together present a good picture what challenges the Government might face in the future and what might have to be done to meet the fiscal rules in the future. They should not be understood as contradicting but rather as complementing each other.

22 The New Zealand Treasury comes to a similar conclusion regarding the usefulness of these two approaches, arguing that: "*…both bottom-up and top-down approaches have much to commend them. The particular attraction of a top-down approach is that it is closer to what happens in the actual budget-setting processes that governments have…Another strength of the top-down approach is that it starts from the proposition that governments will operate with some fiscal objectives in mind…While there will always be demographic and other pressures on the government to increase spending faster than taxes, there are limits. This is known in economics as Stein's Law: if something cannot go on forever, it will stop. A top-down approach assumes that*

Stein's Law applies. An advantage of a bottom-up approach is that it may allow richer details of the individual drivers of all spending and revenue to be examined. The disadvantage is that by construction, a bottom-up approach looks at individual spending and taxation items in isolation from everything else the government is doing. There can thus be an element of unreality in the combined picture of all spending and revenue".[5]

23 In 2008 the decision was taken to move the top-down illustrative long-term fiscal projections into the *2008 LTPFR*. This was made possible by the fact that the report was published alongside the *Budget* rather than the *Pre-budget Report*. To compensate for the loss of these illustrative long-term fiscal projections within the *EFSR* and to meet the requirements of the Code for fiscal stability, the section on long-term fiscal trends in Chapter 2 *Maintaining macroeconomic stability* of the *EFSR* in the *Budget* was enhanced.

3.2 The advantages of keeping it simple

24 Since the launch in 2002 we have resisted the temptation to make the bottom-up long-term projections ever more sophisticated and "real". We are very clear about the fact that we publish projections and not forecasts – one cannot produce forecasts for the next few decades. Our projections show what would happen if the assumptions used turned out to be correct – nothing more, nothing less. We do this because we think that keeping things simple has more advantages than disadvantages.

25 We think that ever more sophisticated models could suggest a precision which does not exist and as a result could be misleading. We are not engaged in an exact science. In any case, by not over-complicating our models our projections provide a useful baseline, which most people can understand and accept and which most people are happy with to use as a starting point for discussions, further policy analysis etc. A "black box wonder model" would not achieve this. More is not necessarily better for all purposes.

26 Having said all this, we obviously have refined our modelling techniques over the years when we felt that they would represent a genuine improvement. For example, we improved our modelling of long-term employment trends and introduced the concept of "death-related costs" in the context of long-term health spending. Overall, we think we have found an acceptable compromise between economic and analytical rigor and usefulness of our results.

27 Perhaps surprisingly, defining "current policy" has not always been straightforward. For example, should one model fiscal drag for income tax in long-term projections, or gender and age-specific tax take or the overall burden as a share of GDP? All these interpretations are valid but what is appropriate for an assessment of long-term sustainability? Is a policy announcement that has only been made explicitly for the duration of the current parliament "current" policy forever in the absence of any other explicit announcement to the contrary?

28 Equally, deciding on the appropriate time horizons over which long-term fiscal sustainability ought to be assessed has not always been straightforward. Should one calculate the so-called fiscal gaps over a 30, 40, 50 or even longer time horizon? Should one lock in the fiscal balance in 2050 or 2100 or some other year as a "steady state", with which to calculate the intertemporal budget gap, which after all requires the present discounted value of all future primary balance up to infinity? Indeed, how useful is it in the real world to calculate fiscal imbalances over an infinite horizon? Do

---

5 www.treasury.govt.nz/government/longterm/fiscalposition/2006/ltfp-06-pt1of3.pdf, pp. 29-30.

policy makers really care about this? Do economists risk not being taken seriously if they present their results based on "infinity"?

29 Any decision comes with its own set of advantages and disadvantages, and one can argue about the appropriate trade-offs to be made. For example a time horizon of, say, 20 years has greater policy relevance and the uncertainties are probably smaller than for a time horizon of 50 years. Equally though, a 20-year time horizon misses important developments, including some which are relatively certain (e.g. ageing of the baby boomers). There is therefore not one "best" approach. Because of this, the *Long-term Public Finance Report* shows results on a range of assumptions and time horizons.

30 One aspect that is worth pointing out is that from its outset, the report was not meant to develop or even comment on specific Government policies. The Government does that through other means. By limiting its judgement on the overall sustainability of the public finances and thereby providing a framework *within* which policies could be developed, the report maintains its deliberately neutral and analytical nature.

3.3 A focus on demographic change and their impact on the public finances

31 As with most other studies on the long-term public finances, the report has focused on demographic change and its potential impact on the public finances. This does not mean that other trends, e.g. climate change, are not likely to have an impact on the public finances in the future and future reports might address some of these issues. Indeed, other studies such as the Stern Review on the Economics of Climate Change[6] have already addressed related issues.

32 However, attention in the UK over the last few years, as in many other developed countries, has very much been on reforming the welfare system to prepare the country for the fiscal implications arising from an ageing population. In addition, one has to admit that it is relatively easy to project future spending and revenue trends based on population projections, as long as one trusts the latter. How should one project the impact of climate change on future spending and revenue? Little work has been done in these important areas. Peter Heller's book *Who will pay?*, published in 2003, remains one of the few publications that addresses a much wider range of issues.

33 The first *long-term Public Finance Report* concluded that the UK's public finances were long-term sustainable. Subsequent reports confirmed this initial finding, though the *2007 Pre-budget Report* (page 186) further develops this conclusion by stating that: "*the public finances are long-term sustainable in the light of demographic change, which puts the Government in a strong position to deal with the potential financial implications arising from other long-term trends, such as climate change*".

34 This deliberate change in tone reflects the fact that our assessment of long-term fiscal sustainability is entirely based on an analysis of demographic change. As such it merely states the obvious; however, it also opens up the opportunity to innovate in this area in the future: the Government is dealing with the issues it knows about but cannot deal with the issues it does not know about. We think that this is a fair point to make.

35 The *2008 LTPFR*, published in March 2008 alongside the 2008 Budget, in addition explicitly links the conclusions to the Government's fiscal rules. It states that: "*As is widely recognised, there will be a number of opportunities and challenges arising from demographic change over the*

---

6 http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm

coming decades – such as increases in life expectancy and the ageing of the 1960s baby-boom generation. While these developments will have profound socio-economic impacts, the analysis in this Report focuses on the effect that they might have on the public finances. A wide-ranging assessment of the current fiscal position as well as future pressures on the public finances shows that the UK is well equipped to deal with the fiscal challenges arising from demographic change over the coming decades. The Government will continue to be in a position to meet its fiscal rules in the long term, ensuring that the long-term public finances remain sustainable. The UK will therefore be well placed to deal with the potential fiscal impacts arising from other long-term trends”.[7]

36 Using different assumptions and a different approach to thinking about sustainability, it is possible to derive at different conclusions. Indeed, it is possible to derive at different conclusions with the same assumptions and the same approaches. Who after all defines what “sustainable” really means? Regardless how technical and sophisticated it might be – any assessment will remain ultimately subjective in nature.

37 The European Commission, for example, concludes that the UK’s public finances are at medium risk over the long term. Its assessment is based on different assumptions regarding the medium-term public finances but also future trends in revenue. For example, while HM Treasury’s *LTPFR* takes the Government’s medium-term public finance forecast as a given (as it is current policy), the European Commission runs its long-term projections off the actual fiscal position. As the starting position is a major factor affecting the long-term public finance projections, it is obvious that the results ought to be different. In addition, HM Treasury’s long-term projections also cover the revenue side. Changes to the composition of the labour force and population more generally should not only affect government spending but also revenue. By contrast, the European Commission assumes that revenue remains unchanged as a share of GDP. However, this might change in the future: the European Union’s Economic Policy Committee (EPC) has an ECOFIN mandate to investigate the usefulness of projecting long-term revenue trends as part of their latest (2009) round of long-term projections. As the European Commission is using the EPC’s long-term spending projections for its assessment of fiscal sustainability in EU Member States, it would make sense for the Commission to use the EPC’s long-term revenue projections too should the latter decide that this is indeed useful.

38 While the above differences have to do with different interpretations of current policy, another difference is of a more technical nature: whereas HM Treasury uses 2100 to calculate the intertemporal budget gap as we have the necessary projections to do so, the European Commission assumes that a steady state is reached in 2050, in other words the Commission assumes that every year looks the same as 2050 in terms of the fiscal position. However, cutting off the projections at 2050 potentially misses a number of important future developments, after all a newborn today would only be 45 years in 2050.

4 The benefits of publishing a *Long-term Public Finance Report*

39 Regardless of whether an assessment derives at a “sustainable”, “medium risk” or any other conclusion, publishing the *Long-term Public Finance Report* has had many benefits in its own right. Asking external think tanks to conduct similar work cannot yield these benefits.

---

7 HM Treasury (2008), *Long-term Public Finance Report: An Analysis of Fiscal Sustainability*, pp. 53-54, March.

40 The *2006 LTPFR* states that: "*…The publication of the* Long-term Public Finance Report *is motivated by the Government's belief that sustainable public finances are a prerequisite to achieving high and stable rates of long-term economic growth… It is therefore important for the Government to have a good understanding of potential future social and economic trends, and the fiscal implications of current policy for future generations…Moreover, additional information on long-term fiscal trends – particularly when updated on a regular basis – greatly improves fiscal transparency and credibility. The Government also hopes that the publication will help to stimulate a public discussion on the range of socio-economic issues that will have profound effects on society in the decades to come…*".[8]

4.1 Meeting the needs of different audiences

41 Right from the outset one challenge has therefore been to pitch the report in an appropriate way. The report is meant to inform policy makers, contribute to a public discussion (mainly through the media) but at the same time be rigorous enough to attract the attention and recognition from the academic community. How does one discuss for example the highly abstract concept of the intertemporal budget constraint, which uses the *present discounted value of all future primary balances into infinity*, in a general Government publication? The drafting and general presentation of the report has therefore been of utmost importance.

42 As a first step, ahead of the launch of the first *Long-term Public Finance Report*, HM Treasury therefore undertook a survey of how other finance ministries or institutions (e.g., OECD) had dealt with these issues. As stated, in 2002 the body of literature on these issues was far more limited than it is nowadays so there was perhaps not that much to learn from others. However, we have tried to keep up-to-date with developments around the world and have scrutinised similar publications. We have tried to incorporate into our own work aspects of other publications, which we found were particularly useful or interesting.

43 It could be argued that the report has been successful when judged against the criteria stated above. Being part of the PBR or Budget, the report has drawn media attention. The report has also created interest from academia and as a result HMT has been engaged in discussions with academics on a variety of topics going beyond the narrow issue of long-term public finance sustainability. Overall, it seems that we strike the right balance between rigor and readability.

44 Part of meeting the needs of different audiences has also been to present the report and its findings to these diverse groups. This pro-active approach has definitely played its share in getting our messages across and getting some of our stakeholders – for example other government departments – interested and engaged in the work we do.

45 The report's discussion of different accounting concepts (net debt, net worth and the accruals-based balance sheet) represents a good example. The *2003 Long-term Public Finance Report* introduced the concepts and illustrated them with the following charts.[9]

46 These charts present complex issues in a very simple and approachable way, making them useful for as many readers as possible. These simple charts also provided the foundation on which a more rigorous intellectual framework could be built, within which to discuss issues relating to the Government's whole of government accounts (WGA) programme. As part of this discussion, the

[8] HM Treasury (2006), *Long-term Public Finance Report: An Analysis of Fiscal Sustainability*, p. 1, December.

[9] HM Treasury (2003), *Long-term Public Finance Report: Fiscal Sustainability with an Ageing Population*, pp. 17-23, December.

Chart 3.1

National Accounts Measure of Net Debt

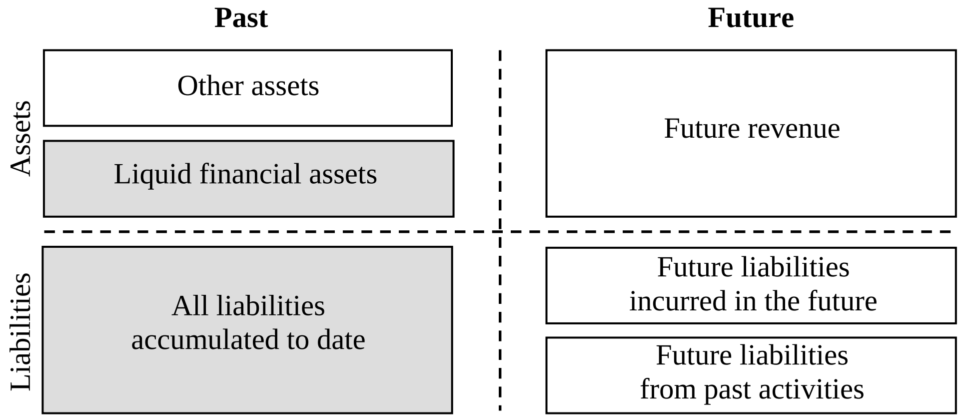


Chart 3.2

Accruals Based Balance Sheet

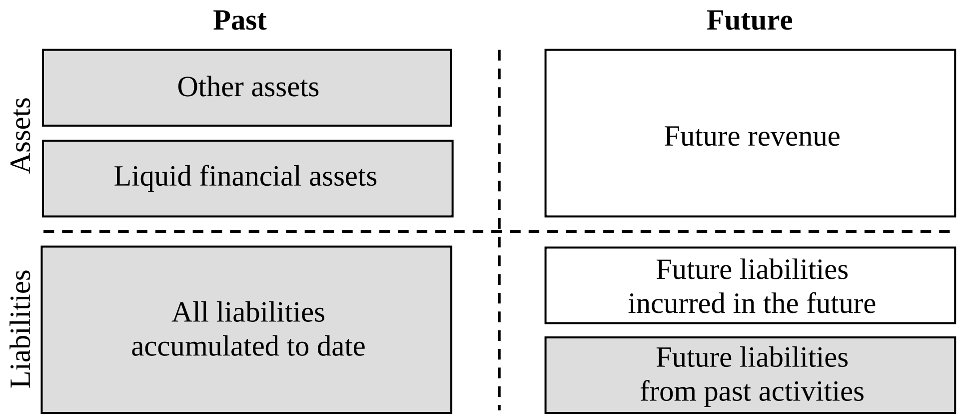
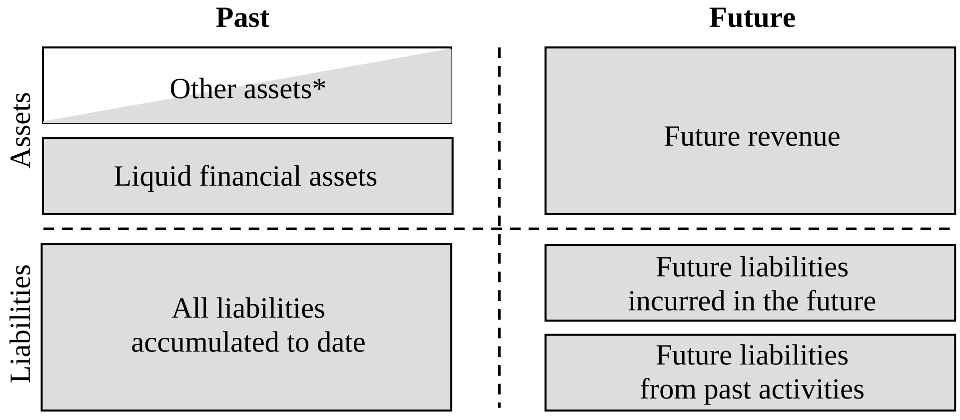


Chart 3.3

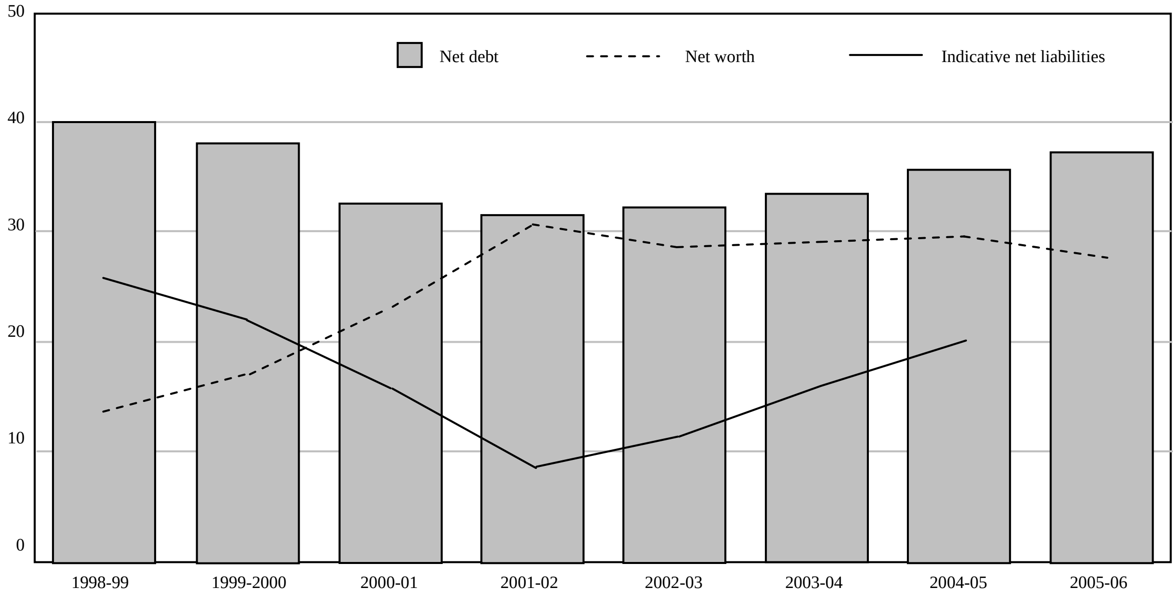
Comprehensive Projections



* Comprehensive projections usually only include financial assets.

Chart 5.1

Public Sector Net Debt, Net Worth and Indicative Net Liabilities[(a)]
(percent of GDP)



[(a)] Data for indicative net liabilities are not yet available for 2005-6. The exact figures for the indicative net liabilities are 25.7, 22.0, 15.8, 8.8, 11.5, 16.2, and 19.8 per cent of GDP respectively.
Source: HM Treasury.

2006 Long-term Public Finance Report, for example, presented updated estimates of public sector net debt, net worth and indicative net liabilities.

47 In the same vein, it also allowed us to put the Government's liability of unfunded public service pensions accruing from past activity into the appropriate long-term context. The Government's liability of unfunded public service pensions has attracted substantial media attention in the past, with a number of commentators arguing that this liability ought to be added to debt to show the "true" picture of the state of the public finances. The *Long-term Public Finance Report* has provided the framework and tools to counter these arguments. For example, the report allowed the Government to argue that the UK's debt measure was based on internationally recognised definitions and that a comprehensive assessment of the sustainability of the public finances ought to include past and future assets and liabilities. Within that, the liability arising from accrued public service pension entitlements only plays a minor role. In any case, with the liability being a stock, it is highly sensitive to assumptions of the discount rate and a more appropriate way is to look at future cash flows as a share of GDP. Because of this, HM Treasury commissioned in 2004 detailed long-term cash flow projections of public service pension spending from the Government Actuary's Department (GAD), which were for the first time shown in the *Long-term Public Finance Report*. These projections have in the meantime been refined further.[10]

[10] Government Actuary's Department (2006), *Unfunded Public Service Pension Schemes 2006 Cashflow Projections: Methodology, Assumptions and Data*.

48 Having said all that, it is sometimes important to get complex material out in the public domain and – despite our best efforts – we fail to present the issue in an easily digestible format. Rather than shying away from publishing then, the way we have dealt with this has been by presenting these issues in stand-alone annexes or boxes within the chapters, thereby ensuring that the main text and the logic of the analysis and conclusions remain accessible to all. It also means that interested readers can delve a little bit deeper if they so wish. Using this approach, we presented technical discussions on accounting or the treatment of current and capital spending in generational accounting in annexes to previous *Long-term Public Finance Reports*. In the *2006 LTPFR* we also discussed the real-world importance of interdependencies and feedback effects but that for modelling purposes, we decided to leave them out. Again, for most people these are complex issues – including to many "informed laymen" – and we tried to make the discussion as simple as possible. We also put the discussion into a box; which is replicated in the following page.

49 As stated above, the 2008 illustrative long-term fiscal projections were presented in the *2008 LTPFR* and not in Annex A of the *EFSR*. Up to 2007 though, the report also enabled HM Treasury to improve the quality of Annex A of the *EFSR* ("long-term illustrative fiscal projections"). Being part of the *Budget* document proper, the illustrative long-term fiscal projections arguably had a different target audience than the *Long-term Public Finance Report*. While remaining brief (the annex was less than ten pages long), the quality of the discussion improved substantially over the years.

4.2 A rigorous framework, with which to contribute to the policy debate

50 Crucially, the report has provided very useful information and a rigorous framework for senior management and policy makers to think about long-term economic issues in general and public finance issues in particular. Perhaps the most prominent example is that of the reform to the state pension system, which took place between 2005 and 2007. The Government appointed an independent Pensions Commission in 2002 "to keep under review the regime for UK private pensions and long-term savings, and to make recommendations to the Secretary of State for Work and Pensions on whether there is a case for moving beyond the current voluntarist approach."[11]

51 From the outset it was clear to the Government that any potential pension reform proposals would have to be fiscally sustainable. The *Long-term Public Finance Report* provided a useful foundation on which HMT could base its own internal analysis. It also provided the macroeconomic context in which any pension reform decision would have to be taken and provided the necessary analysis that was required to argue the case that any reform must be long-term sustainable. To keep the public finances long-term sustainable, the Government, *inter alia*, announced to increase the State Pension age over coming decades in line with the projected increases in life expectancy.

52 Another example is that of the 2007 Comprehensive Spending Review. The underlying analysis conducted for the *Long-term Public Finance Report* proved useful for the Government publication "Five trends – challenges and opportunities", which was used to inform the 2007 spending review settlement.[12] In early 2008 the Long term unit contributed to the Cabinet Office's

---

[11] Department for Work and Pensions (2003), *Simplicity, Security and Choice: Working and Saving for Retirement*, p. 9, July.

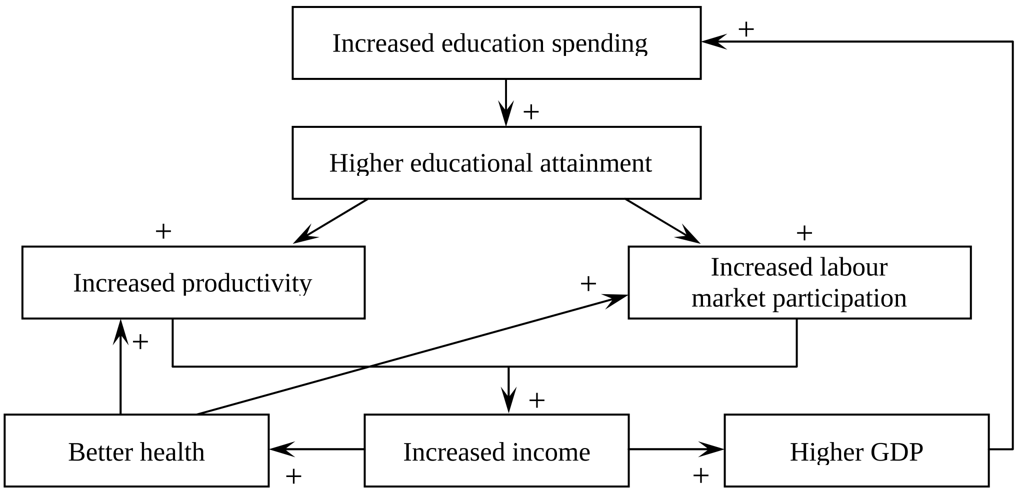
[12] HM Treasury (2006), *Long-term Opportunities and Challenges in the 2007 Comprehensive Spending Review*.

Box 5.4
Long-term projections and interdependencies

The model used in this Report has been chosen for its transparency and the ease of interpreting its results. However, it is clear that in the real world there are many interdependencies and feedback effects, which it does not capture.

This Report assumes that behaviour will remain constant over time. An example from the tax side is the implicit assumption that labour supply will not be affected by increases in productivity. In fact, productivity increases could have positive or negative effects on labour supply (through the substitution and income effects respectively) and consequently, positive or negative effects on income tax and National Insurance Contributions.

There are further examples on the spending side. Education spending in particular has been shown to rise with income: In the long term, it might then be reasonable to guess that demand for education will increase by more than demographic factors alone would imply. Further, it has been suggested that education can increase productivity and hence raise the sustainable rate of economic growth. Other studies have also suggested that increased levels of education lead to an increased likelihood of participating in the labour market – another channel through which education could also potentially affect health outcomes. Increased incomes have been linked to reductions in both mortality and morbidity at any given age. Through improved health, increasing incomes could have further positive effects on productivity and labour market participation, creating a second virtuous circle.



These interdependencies are a large source of uncertainty for long-term projections. Even if it were possible to incorporate them all into a model, the high degree of linkage between variables would mean that if just one of the assumptions were wrong then there would be implications for a large number of linked variables. Therefore, while recognising that interdependencies are a significant source of uncertainty, they are not modelled explicitly in this Report.[a]

---

[a] Others have attempted to model some of these interdependencies. See for example *Ageing and the Sustainability of Dutch Public Finances*, van Ewijk *et al.*, March 2006, which uses a general equilibrium approach to reflect the endogeneity of the behaviour of households, firms and pension funds.

Delivery Unit's work on strategic challenges facing the UK over the long term[13] and HM Treasury's own analysis of strategic challenges.[14]

53 On an international level, the analysis underlying the *Long-term Public Finance Report* has also been useful to inform the Government's views on, *inter alia*, the Stability and Growth Pact in general and the 2005 reforms in particular, which put greater emphasis on long-term public finance issues.

54 There are many other benefits, which were not considered at the time of the launch and which to some extent are of a "softer" nature. For example, the report not only provided the relevant information on the long term that has to be submitted annually as part of the UK's Convergence Programme,[15] it also provided a useful benchmark for other finance ministries, which were dealing with similar issues. As a result we have talked extensively to other finance ministries and have benefited substantially from these discussions.

55 Moreover, the *LTPFR* established in one step a rigorous framework in which to analyse many other important policy issues, which might otherwise not be covered or at least not be considered in a joined-up way. It also required the Treasury to build up the internal expertise to create such a report, which in turn has allowed it to engage constructively with academics and other external stakeholders on a wide range of relevant issues.

56 In 2005 we made this network more formal by establishing the Long-term economic issues group, which is meant to provide a forum in which Government officials and external experts from academia, think tanks or the private sector can exchange ideas and views on long-term trends, which might require policy action now or in the decades to come. These contacts have been very helpful but perhaps still not as much as we had hoped for initially. Is it the uncertain nature of the work we do, which keeps academics away from working on long-term issues? Or is it the inter-disciplinary dimension of our work? Whatever the answer to these questions, as a major consumer of academic work on long-term issues we have been keen to support new research projects, either by funding (minor) projects out of HM Treasury's own "Macroeconomic Research Budget" or by presenting our views on a number of research projects, which had been submitted to the Economic and Social Research Council (ESRC). The ESRC is the largest sponsor of academic work in the social sciences in the UK.

4.3 Raising the profile of the "long term" in day-to-day policymaking

57 Perhaps the biggest benefit though is that the report has allowed different Treasury directorates and even government departments to work together more closely on issues, which otherwise might have been crowded out in the fast moving world of politics. In other words the report and the underlying analysis have helped to boost the importance of long-term economic issues in a world which is dominated by current affairs.

58 It was the report that allowed HMT to develop the intellectual framework to think about the Whole of Government Accounts programme and how this might sit in the macroeconomic framework. It was the report that provided the context in which the government could explain what

[13] http://www.cabinetoffice.gov.uk/strategy/work_areas/strategic_challenges0208.aspx

[14] HM Treasury (2008), *The UK Economy: Analysis of Long-term Performance and Strategic Challenges*, March.

[15] Under the provisions of the preventive arm of the Stability and Growth Pact (SGP), euro-area Member States prepare annually stability programmes and other EU Member States convergence programmes. These are submitted to the European Commission and the Council, with the aim to ensure more rigorous budgetary discipline through surveillance and coordination of budgetary policies within the euro area and EU.

the unfunded public service pension liabilities mean for long-term fiscal sustainability. Indeed, as mentioned, the report (2004) provided the motivation to commission from the GAD a set of long-term projections for public service pension spending. These did not exist before. The only information available was the value of the stock of unfunded liabilities accrued from past activity, which varies with changes in the discount rate and is not a useful measure to think about long-term fiscal sustainability.

59 As argued above, it was not clear *ex ante* that the report would become an annual publication though we hoped that it would. Initially we were asked why we wanted to publish such a report annually as there would surely not be enough to write about on such a frequent basis. However, it has turned out that there are plenty of issues to be discussed even in an annual publication, including those arising from updated population projections. More importantly perhaps though, the relatively high frequency of publication has meant that long-term issues remain "live" in the policy debate. It is these "soft" benefits, which are probably at least as important as any official statement in the publication itself.

60 Partly benefiting from the on-going work on the European level, the analysis provided in the *LTPFR* gradually improved. One example is the long-term employment projections, which since 2005 have been generated using the so-called cohort employment model. This model captures, *inter alia*, the potential effects that different cohorts might have on future employment rates. The model provided the framework within which HMT and the Department for Work and Pensions (DWP) could jointly analyse the potential labour-market effects of raising the state pension age (and which subsequently provided important analysis used in the Pensions Bill).[16] The model has since been used by Treasury colleagues working on trend growth and by economists in the Bank of England to complement the other approaches they use.

4.4 The benefits of working more closely together

61 The technical nature of much of the analysis has also allowed us to engage more closely with DWP's modelling department, which has developed a micro-simulation model to project social transfer spending (including on state pensions) into the future. Our long-term work has also led us to work more closely with ONS (on population assumptions), Home Office (economics of migration), Department of Health (health and long-term care trends) and the Scottish Executive. In addition, the report has brought together economists and social researcher who would not necessarily work together – though many issues they cover are of mutual interest.

62 The analysis underlying the *Long-term Public Finance Report* has been useful in other areas too. For example, the report provides a published set of official long-term growth assumptions – previously departments often came up with their own assumptions. As such the report has helped to increase modelling consistency across departments and policy areas.

63 Another major benefit has been that the report has supported a small but effective unit in the Treasury, which is working primarily on long-term economic issues. The unit is consulted on many issues that might have a long-term dimension, whether it is to provide modelling advice, discuss modelling assumptions or important policy issues and trends, or merely point towards relevant existing work either elsewhere in the Treasury or perhaps in other government departments. As such the unit acts as a port of first call for anything on long-term issues, which gives it great insights into the many topics under discussion, which it in turn can share again with anyone else

---

16 See Department for Work and Pensions at: www.dwp.gov.uk/pensionsreform/

working on other long-term issues. In addition, the *LTPFR* gives the motivation for macroeconomists in HM Treasury to engage in a wide range of issues, from labour market policies, to social care reforms etc.

64 The existence of the Long term unit, which publishes an annual report and organises, inter alia, a useful seminar series, has meant that there is now a greater recognition of the importance of the long term in many Treasury teams than there used to be. Overall, the publication of the *LTPFR* has provided the intellectual and policy anchor, which has brought together many minds (even across departments) and focus on issues that might otherwise not get the attention they deserve.

5 What has not been so useful, logistical and other challenges, and where next?

5.1 Some issues have been too complex to make an impact

65 As stated, until 2005 the *Long-term Public Finance Report* provided a discussion of the UK's generational accounts. Generational accounting was introduced in the second half of the 1990s in the USA and later on in other countries too to assess the degree of inter-generational fairness of current government policies. HM Treasury's long-term projection model is a generational accounting model so in principle it is straightforward to compute the so-called inter-generational balance of current policies.

66 In 2003 we refined the standard generational accounting framework by modelling investment spending in a different way to current spending. In the standard generational accounting framework capital and current spending benefit cohorts in the year the spending takes place. However, investment spending leads to a flow of services, which benefits current and future cohorts, until the capital is depreciated. The refinement made only a small difference to our calculations but made sense conceptually.

67 Despite this refinement, successive *Long-term Public Finance Reports* presented less and less on the generational accounts and in 2006 the discussion was dropped altogether. There were chiefly two reasons for this. First, we struggled to find up-to-date generational accounts for other developed countries to which we could compare our own numbers. This made it difficult to put our own calculations into any context. Second, and more importantly, we found it difficult to argue convincingly that the generational accounts had much policy relevance. One reason why the generational accounts are only of limited policy relevance is that they assess the degree of generational fairness by looking only at future cohorts. Clearly government spending and taxation affect those alive too but the generational accounts cannot answer the question, for example, how a 20-year old fares relative to a 30-year old today. However, this is what policy makers and others would like to know and not a theoretical and abstract discussion on those who have not even been born yet.[17]

5.2 Other challenges

68 A particular challenge for us has been to publish the report to a tight *Pre-budget Report* or *Budget* timetable. Given its comprehensive and analytical nature, achieving this required major efforts on our side but also close cooperation with our stakeholders, in particular those that contribute to the analysis (e.g. DWP with their social security projections).

---

[17] For an alternative approach, which captures lifetime transfers of earlier cohorts, see Hills (2004).

69 Another challenge has been how to respond to new assumptions. The *2008 Long-term Public Finance Report* illustrates this issue: the Office for National Statistics published its latest population projections in October 2007. These population projections are markedly different to previous official population projections, with all the underlying assumptions (regarding fertility, net migration and life expectancy) changed. For example, based on the latest population projections, the UK's population will rise from around 60 million now to 77 million by 2050 – the previous projections had shown a much more modest increase up to 69 million. The additional increase is mainly due to a higher net migration assumption, which is based on recently observed trends.

70 At least in theory it is possible that Government policies, which were judged to be sustainable one year, suddenly become unsustainable the next year when judged based on new population projections. Should one immediately conclude that the Government should change its policies to be sustainable again based on the new population projections? This is a tricky question, especially if there is a reason to believe that some of the underlying population assumptions are at least debatable in the context of long-term projections.

5.3 Should scenarios play a role in long-term public finance analysis?

71 In order to remain relevant, there can be no doubt that the report needs to continue to innovate. But what should future reports cover? Long-term projections give a useful guide to what might happen in the future but this future is inherently uncertain. How can one best illustrate this uncertainty and how can one best integrate this uncertainty in policy advice? Would it be useful to innovate by using scenarios? Good scenario modelling is an art form in itself and finance ministries do not necessarily have the capacity to do this well. So far we have not gone down this route but there might be some value in this. We have worked closely with the Government's Foresight programme,[18] which uses science-based methods to provide visions of the future, on a number of projects, including on future trends in obesity and its implications, and on mental capital. Trends in obesity and mental capital (the latter covering a wide range of issues from life-long learning to dementia) could have substantial economic and fiscal implications in the long term as it might affect labour market participation and productivity.

72 Foresight identifies potential risks and opportunities in relation to science and technology, which can enable policymakers to develop strategies to manage the future better. Is it time to move an assessment of long-term fiscal sustainability beyond that of demography – e.g. climate change?

6 Some concluding comments

73 Publishing the *Long-term Public Finance Report* has required major effort and stamina but the benefits of doing so have been worth it. Some of these benefits were intended – for example that the report would contribute to the policy debate on long-term economic issues – but others became obvious only with time, including the fact that the report supports a small and dedicated unit, which provides general advice on long-term economic issues to colleagues across Government departments. Without the report this unit would probably not exist and government departments would probably not be as "joined-up" as they are on a range of issues.

[18] http://www.foresight.gov.uk/

74 Perhaps surprisingly, we have had no problem publishing the *Long-term Public Finance Report* annually. At the outset we considered the possibility that we might run out of topics but this has so far not been the case. Importantly, publishing the report on a regular basis means that the topics remain “live” in internal policy discussions. All these benefits are only possible because the report is produced in house and published by HM Treasury.

75 One should not forget that projecting long-term spending and revenue trends and any assessment of long-term fiscal sustainability is not an exact science. Projections merely show what would happen if the assumptions used turned out to be correct. It is as likely that our assumptions turn out to be wrong than right. This makes it very important to state the assumptions and modelling techniques used as clearly as possible.

76 While it is obviously impossible to state conclusively that the report has made a difference to policy making – we do not have the counterfactual – there are many signs that the report has played a useful role shaping the policy context. As mentioned earlier, the pension reforms and the 2007 Comprehensive Spending Review are two areas where the report and the analysis, which goes with it, have made a useful contribution.

77 Given that we are not engaged in an exact science one should also be careful not to make things ever more sophisticated. The overall message can get easily lost the more complex and sophisticated the models become. The rigorous analyst might find it attractive to build ever more complex models but we should not forget what some of the key objectives of our analysis are: to contribute to the domestic policy debate and to give others a framework within which to think about long-term economic and public finance issues. These stakeholders might not have the economic background to follow a highly complex analysis and/or might not have the time to do so even though they could analytically. In any case, given the uncertainties involved, what would this really add? In fact, given the specialised subject matter and the often-abstract nature of the analysis, it could achieve exactly the opposite by intimidating key stakeholders such as policy makers. So more sophisticated projections might be less rather than more relevant and useful.

78 Last but not least, the right presentation is crucial to engage as many potential stakeholders as possible. There is little point doing excellent analytical work and then failing to get the message across. Deciding on the structure, layout and style of such a report should not be considered at the last minute but should form part of the overall development of such a product. In our view some attempts have been in this respect more successful than others.

REFERENCES

Australian Treasury (2002), *Intergenerational Report 2002-03*, Commonwealth of Australia, Budget Paper, No. 5, Canberra.

Cabinet Office (2008); *Future Strategic Challenges for Britain*, Cabinet Office, London, February 2008.

Cardarelli, R., L. Kotlikoff and J. Sefton (2000), "Generational Accounting in the UK", *The Economic Journal*, November.

Congressional Budget Office (various documents), available at http://www.cbo.gov/publications/bysubject.cfm?cat=3

Department for Work and Pensions (2003), *Simplicity, Security and Choice: Working and Saving for Retirement*, London, DWP.

——————(2007), *Pensions Bill*, and other related documents, London, DWP. Available at: www.dwp.gov.uk/pensionsreform/

European Commission (2007), *Public Finances in EMU 2007*, European Commission, Brussels.

——————(2006), "Long-term Sustainability of Public Finances in the European Union", *European Economy*, No. 4, Brussels.

Foresight (2007), *Tackling Obesities: Future Choices*, Foresight, London.

Government Actuary's Department (2006), *Unfunded Public Service Pension Schemes 2006 Cashflow Projections: Methodology, Assumptions and Data*, GAD, London.

Heller, P. (2003), *Who Will Pay? Coping with Aging Societies, Climate Change, and Other Long-term Fiscal Challenges*, International Monetary Fund, Washington (D.C.).

Hills, J. (2004), *Inequality and the State,* Oxford, Oxford University Press.

HM Treasury (1998), *Code for Fiscal Stability*, HM Treasury, London.

——————(2002), *2002 Long-term Public Finance Report*, HM Treasury, London.

——————(2003), *2003 Long-term Public Finance Report*, HM Treasury, London.

——————(2005), *Delivering the Benefits of Accruals Accounting for the Whole Public Sector*, HM Treasury, London.

——————(2006), *2006 Long-term Public Finance Report*, HM Treasury, London.

——————(2006), *Long-term Opportunities and Challenges in the 2007 Comprehensive Spending Review*, HM Treasury, London.

——————(2007), *2007 Pre-budget Report and Comprehensive Spending Review: Meeting the Aspirations of the British People*, HM Treasury, London.

——————(2008), *2008 Budget Stability and Opportunity: Building a Strong, Sustainable Future*, HM Treasury, London.

——————(2008), *2008 Long-term Public Finance Report*, HM Treasury, London.

——————(2008), *Analysis of Long-term Performance and Strategic Challenges*, HM Treasury, London.

New Zealand Treasury (2006), *New Zealand's Long-term Fiscal Position*, The Treasury, Wellington.

Pensions Commission (2006), *The Final Report*, Pensions Commission, London.

Stern Review (2006), *Stern Review on the Economics of Climate Change – The Final Report*, Stern Review, London.