Government
Office for Science

Science & Analysis Assurance Review of Her Majesty's Treasury

Government Office for Science

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Foreword

By the Government Chief Scientific Adviser

As Government Chief Scientific Adviser, I have a responsibility to ensure and maintain the quality of the science and engineering used in all government departments. This report includes the results of the last of a series of reviews of main Whitehall departments that supports this role. These reviews provide a benchmark for how effectively departments use scientific and analytical evidence in policy-making and strategies. The review highlights good practice as well as presenting recommendations to support departments in developing their capability.

This review of the Treasury was carried out following a substantial restructuring exercise, and its findings reflect the changes that have taken place since. The review looked at all of HMT's analytical activities, in particular economic, statistical and operational research & analysis. Advisers from the Government Economic Service, the Government Statistical Service and Government Social Research worked alongside the Government Office for Science's independent panel and review team.

This report highlights the intellectual calibre within HMT and its emphasis on the use of analytical evidence to inform policy decisions. The report also identifies areas where there is scope to extend or enhance existing practice to further strengthen the Department's effective use of evidence and analysis.

Many of the findings, recommendations and good practice identified in this report will have relevance for other areas of government. As Government Chief Scientific Adviser, I urge other departments to consider the review findings within their own context.

Finally, I would like to thank the members of the independent expert panel and the analytic advisers who have worked with us to identify key issues for the review, to collect and analyse evidence and to develop its conclusions. I would also like to thank all of those who contributed evidence to the review.

Professor Sir John Beddington

Executive Summary

As one of a series of departmental reviews, the Government Office for Science (GO-Science) has managed a review of analysis and the use of evidence in Her Majesty's Treasury (the Treasury), led by a panel of independent experts. This report presents the findings of the review and recommendations on how the Department can further strengthen its capability in this area.

The Treasury is the UK's economics and finance Ministry. The strength of its analytical capability affects the quality of its policy advice to Ministers, and consequently the Department's capacity to deliver its broad aims: macroeconomic and financial sector stability, sustainable growth, sustainable tax receipts and public spending control.

This GO-Science review focuses on three areas of the Treasury's business:

- Macroeconomic analysis and advice;
- Distributional analysis of tax, benefit and public spending; and
- Value for money in public spending.

In the course of the Review, two cross-cutting issues were identified as being of particular current significance to the Department's capability:

- staff turnover; and
- stakeholder engagement.

The Review Panel's recommendations in each of these five areas are detailed below.

The Treasury's analytical strengths

This report highlights the intellectual calibre within the Treasury and the emphasis put on the use of analytical evidence to inform policy decisions. The report also identifies areas where there is scope to extend or enhance existing practice to further strengthen the Department's effective use of evidence and analysis. The Treasury's internal 2010 Strategic Review identified what it considered to be the Department's principal organisational strengths:

- The Treasury is a coherent organisation with distinct and unchanging goals;
- Responsibility within the Department is effectively delegated and distributed;
- The calibre and talent of the workforce is exceptional;
- The Department promotes freedom from bureaucracy;
- The Department cultivates an informal and friendly atmosphere.

These findings were echoed by the Department's 2012 Capability Review, which assessed its capability in leadership, strategy and delivery. Drawing on evidence from internal and external sources, it found that overall, the Treasury continues to perform well, despite facing unprecedented challenges. The Review highlighted the Treasury's strengths in setting strategy, defining priorities and moving resources to the right place at the right time. It also observed that staff are highly engaged, and this continues to be reflected in the Department's positive annual staff survey results.

These assessments of the Treasury's strengths resonate with the findings of this Review.

Macroeconomic Analysis

As an economics Ministry, the Treasury seeks to promote macroeconomic stability and maintain confidence in the macro policy framework, as well as promote financial market stability and sustainable economic growth. A well embedded annual business planning process sets specific Departmental commitments under each of the Department's economics and finance Ministry objectives, through dialogue between the Executive Management Board and Directors and allocates resources accordingly. Corollary quarterly performance reporting and monthly risk management processes keep analytical priorities under review.

The Treasury's macroeconomic objectives and activities have changed in light of the Government's creation of the Office for Budget Responsibility (OBR) in 2010, which provides independent analysis of the UK economy and public finances. Whilst the OBR produces the independent economic and fiscal forecasts, the Treasury's macroeconomics teams still model the impact of budget options and carry out scenario analysis.

The OBR retains complete discretion over the version of the macroeconomic model it uses to produce its economic forecast, but the model is jointly developed and maintained by the Treasury and OBR. Incremental development work on the model appears to be methodical and sound, though it is based on a conventional understanding of the factors affecting the economy. Some external commentators have questioned how major changes may be proposed and assessed. However, this concern is not confined to critique of Treasury capability, reflecting as it does wider concern over macroeconomic capability within the UK and points to the importance of greater international engagement.

Recommendation 1 – The Treasury and Office for Budget Responsibility work to develop the macroeconomic model of the economy is welcomed. Such work should be a high priority and should include thinking about radical innovation and alternative approaches as well as incremental refinements to improve the predictive performance of the current model.

Distributional Analysis

Distributional analysis at the Treasury is produced to help understand how government policy decisions affect the living standards of different groups in society. Much of this analysis is done at or around fiscal events to help policy makers compare policy options. It is also used throughout the year, providing a less reactive service to inform longer term policy development. The analysis supports policy teams across much of the department. In the run up to fiscal events (Budgets or Autumn Statements), the distributional analysis team interacts with central teams at the Treasury to provide advice to Ministers on the distributional impacts of options reflected in fiscal event 'scorecards'. At regular intervals, of one to two weeks, the team provides Ministers with distributional analysis on the impacts of these measures. This includes an assessment of the cumulative or individual impact of measures on specific income groups. This analysis thus directly supports decision-making.

Treasury distributional analysts report that they regularly review their models and the assumptions reflected in them. Internal work is subject to “proportionate” Quality Assurance (QA) arrangements, which means that QA becomes progressively more formal and rigorous as the work relates to more sensitive or high-cost issues. Work going to Ministers is always signed-off by a senior Treasury manager. The publication of Treasury distributional analysis associated with fiscal events has led to much more engaged quality assurance and sign-off than was previously required. Outputs for publication at fiscal events are checked systematically, with quality assurance processes logged and signed off personally at Director General level. The final set of analysis for publication is carried out in parallel by two analysts, with outputs being compared and all differences investigated and understood.

The Distributional Analysis team has an individual dedicated to model development, to identify, scope and deliver new models and developments to their existing modelling capability. The goal is to ensure that policy development is informed on an ongoing basis by high-quality and highly relevant analysis, and that Treasury’s distributional analysis modelling capability is future-proof. Thanks to this programme of model development,

Treasury work in distributional analysis currently provides leading edge research for the UK. This approach may be of relevance to macroeconomics teams, as they seek to identify further opportunities for macro-model development. However, while the Treasury’s distributional analysis model development work is seen as a strength, there is a risk inherent in having a single, time-limited, post having responsibility for development work. The Treasury could lose this advantage if the work is not retained beyond the tenure of the current post holder.

Recommendation 2 – The Treasury needs to actively plan to ensure that its current strong distributional analytical capability, including micro-simulation model development, is maintained at the level of the best.

Public Spending Control

The Public Spending teams are broadly organised to mirror the spending departments, and work more closely with departments than the macroeconomic and distributional analysis teams tend to. Spending teams work with departments to ensure that expenditure is being effectively managed and to quality assure proposals for additional resources. Teams are smaller now than they have been in the past and are more reliant on departments for data and analysis. Work in the spending teams is prioritised according to the likely fiscal and economic impact, risk to the Reserve, departmental capacity and willingness to manage risk, political sensitivity and Ministerial demands. This is because spending teams are not resourced or set up to check and challenge everything in detail.

The Treasury’s “Green Book” sets out processes, frameworks and techniques for appraisal and quantifying value. However, across both the Treasury and government more broadly, appraisal techniques are inconsistently applied and evaluation has not typically been carried out or followed-up.

Recommendation 3 – In the light of smaller spending teams and a changed role, the Treasury needs to think about when, where and how it should conduct analyses on its own initiative as a means of challenging departments, as against the reactive responses that necessarily constitute its ‘normal’ mode of interaction with departments’ spending.

Spending team staff do not typically have a deep working knowledge of the areas of responsibility for the departments that they oversee, though they learn quickly in the job. Work seen in the course of the review suggests that there is generally sufficient ability to challenge cases on face value, but little evidence of a deep understanding of policy history. With reducing staff numbers and high turnover, the Treasury needs to ensure that effective expertise, whether internal or externally sourced, is available.

The need for balance between depth of knowledge and ability to bring fresh insight and challenge is recognised by the Department, but in the view of a number of stakeholders, the current balance has gone too far towards 'flexibility' and away from experience.

Recommendation 4 – The Treasury should review whether it has adequate capacity in key specialist knowledge areas - including Green Book project appraisal, management accounting and the microeconomics of key areas of public spending – to ensure that it can be confident of effective and cost-effective decisions on expenditure in departmental policy areas.

Staff Turnover and Institutional Memory

Turnover is a term that means several different things, only some of which are represented in official measures and none of which are measured consistently over more than a few years. Treasury staff turnover in the sense of permanent exits from the department is high in comparison with other Government departments, second only to that of the Cabinet Office and more than double that of other departments responsible for policy delivery. The positive side of this turnover rate, coupled with the high capability of applicants, is seen by the Department as a high rate of 'refreshment' of ideas and thinking. Despite this advantage, however, the Department recognises that the rate is higher than is desirable and work is underway to reduce it.

A risk introduced by the rate of turnover, and relative inexperience of many staff, is poor institutional memory. Such a risk can be mitigated by a good knowledge management system, but the Treasury systems appear to be variable in quality. In particular, the main records management system is seen as being difficult to search, so information may be stored but can be hard to retrieve. This results in more ad hoc systems arising to circumvent difficulties with the formal system. In the absence of staff continuity, the lack of systematic institutional knowledge management makes the Department vulnerable to missing key evidence or replicating previous mistakes. The Department is in the process of up-grading its electronic records management system, and we support its intention to improve systematic information availability.

Recommendation 5 – The Treasury should consult with other high-turnover organisations in the UK and internationally, to explore practical ways to maximise institutional memory in high-turnover environments.

Culture, Transparency and Engagement

Both this and previous reviews of the found that the Treasury does not manage its approach to external engagement systematically. Instead, teams and Groups tend to take a tailored approach, dependent on the policy area, Government interests, and the stakeholder community – joining up with departmental colleagues where appropriate. Stakeholders interviewed generally consider Treasury to be better at listening to what others have to say rather than truly engaging in discussion or debate.

Senior managers interviewed as part of this Review have been able to share Treasury's high-level strategic interests and challenges, and described how this influences policy team engagement with their stakeholders. Interviews suggest that when academics are engaged it is generally to discuss specific ideas and seek advice on policy options rather than routine engagement in developing policy issues. Treasury staff do seek relevant information, but given the time constraints and the specificity of policy demands they typically work with a sufficient rather than robust information base.

External networks described to this review are generally limited to a number of critical and trusted 'partner' organisations and ad hoc contacts. Relying on a small number of trusted organisations and individuals is understandable given the political sensitivity of some issues being considered, but does introduce a risk for the Treasury that the department is not exposed to a sufficiently wide range of thinking to support and underpin its analysis.

Recommendation 6 – In following up recommendations one to five, the Chief Economic Advisor and Chief Scientific Advisor should consider ways to safely and more systematically encourage external engagement to ensure that Treasury benefits from the maximum feasible exposure to outside analysis and expertise, both within and outside its normal 'comfort zone'.

1. Science and Analysis Review of The Treasury

Objectives of this Review

1.1 The Government Office for Science has carried out a series of departmental reviews assessing the quality of processes by which evidence and analysis are used in business strategy and policy decision making. This report sets out the findings of the review of the Treasury's capability, making recommendations on how the Department can further strengthen its use of appropriate evidence and resources. This review is jointly owned by the Government Chief Scientific Adviser (GCSA) and the Treasury Permanent Secretary and is focused on three significant areas of Treasury business:

- Macroeconomic advice (but not forecasting, which is now the responsibility of the Office for Budget Responsibility);
- Distributional analysis of tax, benefit and public spending changes in the Budget, Autumn Statement and Spending Review; and
- Value for money in public spending (including the Green Book and assessment of business cases for major projects).

HM Treasury's objectives

1.2 Her Majesty's Treasury is the UK's economics and finance Ministry. Its objectives, as articulated in 2012/13, were:

As an economics Ministry, to:

- Promote macro-economic stability and maintain confidence in the macro-policy framework.
- Promote stability, fairness, efficiency and competitiveness in financial markets.
- Promote sustainable economic growth.

And as a finance Ministry, to:

- Ensure effective control of, and value for money for, public expenditure.
- Ensure stable and sustainable tax receipts to fund government spending in the least distortive way.

(HM Treasury C, 2012)

Departmental reform context

1.3 While overseeing a broad portfolio of responsibilities, the Treasury, like other departments, is subject to current budget pressures and the necessity of making cost savings. The Spending Review 2010 settlement required the Treasury to make cost savings of one third of its administration budget by March 2015. Having started the period with just under 1,400 full-time equivalent (FTE) staff, the Department currently has just under 1,135 FTE staff[1] and aims to reduce this number to 1,000 FTE over the course of the Spending Review period to 2014/15.

1.4 These resource reductions could potentially challenge the Department's analytical capacity at a time when, as finance Ministry, it needs to deliver similar reductions across public spending, while securing its broader economics Ministry objectives. The Department currently employs approximately 250 members of the Government Economic Service, 20 members of the Government Statistical Service and two Government Social Researchers.

1.5 In order to meet this level of resource reduction, while maintaining its ability to deliver its core business objectives, the Treasury launched its (internal) 2010 Strategic Review. This identified what the Department saw as its principal organisational strengths:

- A coherent organisation with distinct and unchanging goals.
- Effective delegation and distribution of responsibility.
- A workforce of exceptional calibre and talent.
- An internal culture that is relatively free from bureaucracy.
- An informal and friendly atmosphere.

1.6 The Department's Strategic Review also recommended a number of structural and cultural reforms to enable the Department to make the best use of its resources, through:

- Pursuing a core functions strategy – focusing on its core economics and finance Ministry objectives.
- Defining its strategic priorities in dialogue with Ministers – which is now achieved through an annual business planning process.
- Moving to a structure of Director-led Groups of around 70 FTE – which enable Directors to manage resources flexibly.
- Investing in, and better deploying, the skills and knowledge of Treasury staff.

The Department reports that it has taken forward all the Strategic Review recommendations and continues to embed its reforms.

[1] Unpublished Treasury management information, December 2012

1.7 The Strategic Review's findings were echoed by the Department's 2012 Capability Review, which assessed its capability in leadership, strategy and delivery. Drawing on evidence from internal and external sources, it concluded that overall the Treasury was continuing to perform well despite facing unprecedented challenges. The Capability Review highlighted the Treasury's strengths in setting strategy, defining priorities and moving resources to the right place at the right time. It also observed that staff are highly engaged; a finding which continues to be reflected in HMT's positive staff survey results.

1.8 The consequent Capability Action Plan is now being implemented, and steps are being taken to improve:

- Stakeholder management and the use of external insight in policymaking.
- Succession planning and emphasis on management in appraisals and reward.
- The management of high turnover.

1.9 The significance of these changes for senior managers is that while Directors have become more responsible for resource management, Directors General have become less involved in the day-to-day working of the Department, focusing more on the strategic agenda, supporting Ministers and overall Departmental leadership. These structural changes, along with the creation of the Office for Budget Responsibility (OBR) in 2010, have necessarily led to reprioritisation of activities and new ways of working for the Department.

1.10 Structural changes have also led to the creation of the Economics Group, consisting of around 50 staff headed by the Chief Economic Advisor. This group contains the majority of the macroeconomists in the Treasury, although there are also significant numbers in the Fiscal Group, headed by the Chief Microeconomist/Chief Scientific Advisor, and in the International and European group.

Report structure

1.11 The following sections set out the key findings and conclusions of the review. Sections 2, 3 and 4 set out this review's findings and conclusions in the three focus areas of macroeconomic advice, distributional analysis and public spending control. Sections 5 and 6 discuss additional, department wide, observations on issues that appear to influence or affect overall analytical capability – its staff turnover and organisational transparency.

2. Macroeconomic Analysis

Articulating priorities

2.1 The following sections set out the key findings and conclusions of the review. Sections 2, 3 and 4 set out this review's findings and conclusions in the three focus areas of macroeconomic advice, distributional analysis and public spending control. Sections 5 and 6 discuss additional, department wide, observations on issues that appear to influence or affect overall analytical capability – its staff turnover and organisational transparency.

2.2 Identification of these areas was the product of an annual Departmental business planning round. This enabled the Executive Management Board (EMB) to set priorities, articulated in its annual Work Programme, and to allocate resources. The Group-level Strategic and Resource plans that inform this process identify the key policy commitments to be delivered over the course of the year by the Director-led Groups. A quarterly reporting and engagement process keeps the Executive Management Board appraised of Groups' progress in delivering these commitments and ensures the Department continues to meet its strategic objectives.

2.3 Interviews with macro-economic analysts indicated that there was no annual process specifically to identify macroeconomic issues for research, given that they arise more regularly through routine activity. Rather, there was a strongly embedded business planning process that was considered by interviewees to provide sufficient scope for regular review of departmental priorities and information needs, enabling macroeconomists to flag significant issues.

Managing analytical demands

2.4 On a day to day basis, macroeconomic activity was reported to be driven by:

- Fiscal events and analysis of policy options and economic trends.
- Ad hoc Ministerial questions and requests for information.
- Issues moving up the agenda – mostly arising from data monitoring, such as inflationary pressures, weak productivity or credit allocation.
- Data surveillance provided to, and requests for analysis from, the cross-Departmental Economic and Fiscal Risk Groups – meeting monthly to analyse risk indicators, assess trends, explore salient issues and agree forward looking areas for analysis.
- Regular in-depth surveillance by the International Monetary Fund (IMF) and Organisation for Economic Co-operation and Development (OECD).

2.5 The Economics Group management team also reviews the macroeconomic work programme undertaken by the Group's staff on a monthly basis, re-prioritising work if considered necessary. When issues of strategic significance to the Department emerge they are discussed with the EMB, which meets weekly, as well as with Ministers.

Drawing on data

2.6 The Treasury was reported to receive good domestic economic data from the ONS, as well as international data from the OECD, IMF and EU Commission. It also draws on external macroeconomic analysis, principally from the Bank of England, ONS and internal organisations, as well as doing its own. Different teams were reported to focus on the global economy, including effects of UK policy in an international context and implications for the UK of international developments, notably the emergence of global markets. The Department also draws on a range of other data from the Bank of England and its own monitoring of a wide range of surveys which inform the Group's understanding of GDP forecasts and the macroeconomy.

2.7 Available historical information was reported to be used to interpret variations in contemporary global conditions and different international impacts of events to help understand how the UK could be affected and to inform policy advice. For example, historical records were reportedly being used to understand the potential effects of Quantitative Easing (QE), the impact and characteristics of deleveraging following previous financial crises, as well as historical trends in productivity. International data has been used to assess the potential impact of different national economic policies on subsequent bond yields.

The role and impact of the OBR

2.8 The Office for Budget Responsibility (OBR) was established in 2010 to provide independent analysis of the UK economy and public finances (Office for Budget Responsibility, 2011). In the run up to a fiscal event, the OBR invites the Treasury to present its thinking on the economy – five or six roundtables (each with five or six Treasury officials) are usually held in the run up to discuss selected economic issues. These help to inform the evidence base for the OBR's forecast. Discussion is open and exploratory. The OBR judged Treasury input to lead to stimulating and useful discussions. The Treasury presents its Budget advice to the Chancellor based on OBR forecasts; the OBR does not see this advice. The Treasury also provides the Chancellor with scenario analysis, usually in preparation for OBR forecast rounds.

2.9 Two months before a Budget the OBR develops an initial draft economic and fiscal forecast based on the previous fiscal event forecast, current big issues affecting the economy and new data and information. This is then shared with various departments that have major input; HMRC on tax, DWP on spending commitments, DMO on debt interest and others such as DECC and DCLG on major policy implications and, of course, the Treasury. International trends are typically taken from IMF forecasts. There are normally three or four iterations of the forecast, during which time key questions and issues that are likely to be important are set out. These might include, for example; trade performance and the output gap, the world economy and UK structural issues.

2.10 Prior to the creation of the OBR, the Macroeconomics Prospects team (now the Economic Assessment Team) was responsible for preparing forecasts for pre-Budget Reports and Budget Statements, using the 'Treasury Model'[2]. While forecasting responsibility has been transferred to the OBR (along with some staff with experience of forecasting and working with the Treasury Model), the Treasury has remained responsible for risk management and policy development. Economics Group staff, including macroeconomic analysts, regularly provide advice to the Economics Risk Group and Fiscal Risk Groups on likely consequences of potential Budget options and wider economic issues. The Macroeconomics Prospects team works closely with HMRC and DWP for tax and benefit analysis in support of this.

2.11 The creation of the OBR and its consequences for Treasury was viewed positively by staff we interviewed in this review. It had allowed greater challenge of the forecast and Budgetary policy costings assumptions and more time to consider different economic scenarios. The relationship with the OBR in budget forecast and option challenge was reported by Treasury macroeconomists to have made the Budget process appear more robust and defensible than had been the case previously. There remains a risk, however, that the new arrangements may weaken the appeal of the Treasury to bright young macroeconomists.

Development of Budget policy options

2.12 Internal Treasury working groups are used to explore Budget issues and develop potential policy options. For instance, macroeconomists may analyse the factors and trends thought to influence a specific sector (such as housing or labour markets) to build an understanding of its impact on economic output. Both internal debate and external challenge were said to be sought when considering risks (examples of which included testing labour market assumptions or impacts of the banking crisis).

2.13 This information is then shared with OBR as they work to produce forecasts. Such activity was a growing part of the macroeconomics team's work following the transfer of forecasting responsibility. It enabled the Treasury macroeconomics team to focus on supporting policy teams, helping development of fiscal advice to inform Ministerial policy decisions.

2.14 Following the production of OBR forecasts the macroeconomic teams also carry out secondary analysis, assessing the potential impacts of different policy options on the forecasts such as the impact of corporate and personal tax cuts on overall taxation levels and wider economic consequences.

Other Macroeconomics Activity

2.15 Macroeconomic analysts engage with a set of well-known and trusted external bodies, such as the Bank of England, OECD, OBR, key academics and the IMF. Primary internal customers are mainly Treasury policy teams, who work closely with the macroeconomics teams, drawing on their modelling and interpretation of policy

[2] The Treasury Model is a structural econometric model of factors influencing the UK economy.

development. The macroeconomic teams work regularly with growth, tax and welfare groups in the Department, and steering groups review their work using internal peer review for quality assurance.

2.16 Policy interventions are monitored to provide feedback that could help further refine and manage risks. Policy groups receive advice from HMRC but the Economics group (in which macroeconomics is situated) adds value by assessing the wider economic impact of specific policies. Macro-economics teams carry out both longer-term think pieces and reactive or short-term analysis. Sight of papers during the course of this review setting out development of this work showed it to be sound, incremental work, building logically on the economic relationships embodied in the current Treasury model.

Quality Assurance of Macro-analysis

2.17 A strong culture of internal challenge provides an important mechanism of quality of analysis for this work. Depending upon the sensitivity of the work, macroeconomic staff might just review colleagues work, or analysis might be run in parallel with output and assumptions compared. Where it is deemed appropriate or necessary there are also strong formal mechanisms available for internal challenge. Before analysis reaches the Economic Risk Group it is subjected to rigorous challenge by the wider Economics Group. In addition to internal 'peer' review, the OBR provides quality assurance (QA) for policy focused costings. The OBR's Terms of Reference require it to 'certify' Treasury costings. This external element of independent assurance was seen to provide additional credibility to the analysis.

2.18 Treasury officials interviewed reported that processes involving independent peer review are difficult to set up for analytical work because:

- Analysts do not have a long lead time for work.
- Most work requires rapid assessment and "thinking on feet".
- The focus of work is on rational argument and clarity of presentation rather than full and detailed analysis.

2.19 External interviewees thought, however, that the internal focus served to reduce visibility, and thus credibility, of Treasury's quality assurance processes. Although this review does not make a formal recommendation for greater external involvement in quality assurance in this area, the Treasury may wish to consider options such as framework arrangements for overnight external QA for high risk (cost or reputation) issues, or conducting retrospective peer review to inform future analytical work. Indeed such an approach might be considered for other areas of Treasury analysis – such as distributional analysis and public expenditure – as well.

Macroeconomic Staff Capability

2.20 The macroeconomics teams were seen by some in the Treasury as being reliant on a small number of economists with deep expertise. This pattern contrasts with the general staff profile in the Department discussed later. Economics group staff interviewed report that they are working to ensure that macroeconomic expertise can be flexibly deployed across the policy groups, enabling focused support and facilitating inter-group working.

2.21 Some external stakeholders interviewed for this review thought that macroeconomic capability in the Treasury had reduced over time, especially relative to that of the Bank of England. To a large extent, this reflects changes in the responsibilities of the Treasury as monetary policy has been delegated to an independent Bank of England and forecasting is now undertaken by OBR. It would, however, be unfortunate if budgetary pressures were to further reduce the scope of macroeconomic analysis. This review notes that the Treasury recognises a need to develop a stronger research capability in the macro area and this is being actively pursued, rightly in our view.

2.22 Although there is considerable external engagement with the Bank of England, IMF, OBR, OECD and the academic world by senior staff, it may be desirable for there to be more exposure of junior staff to outside thinking and for more research to be commissioned from outside, particularly with a view to developing forward-looking work with a longer-term perspective.

The Treasury Model

2.23 Since 2010 the “Treasury Model” has been jointly developed and maintained by the Treasury and the OBR. OBR and Treasury staff regularly discuss the model – many of the assumptions and issues discussed during forecasting were reported to this review to be represented within the structure of the model. The Treasury and OBR have agreed a Memorandum of Understanding (MoU) to commit resources to the maintenance and development of the macro-model and the Treasury has created a dedicated “Model Unit”, reporting to the Chief Economic Advisor, to fulfil its responsibilities under the MoU.

2.24 The nature and structure of the Model itself is mainly discussed between fiscal event forecasts – typically in the summer, since there is a larger gap between forecasts than over the winter period. It is then that specific issues such as income or household balance sheet information represented in the model are updated. A good working relationship on maintenance and development was reported. According to those we interviewed, development of the model has been incremental and no significant changes have been made to the model.

2.25 The current macro-model has properties that not everybody is comfortable with. While methodologically sound, it is based on a ‘conventional’ understanding of the factors affecting the economy, which were thought not to be sufficiently challenged. Some stakeholders interviewed felt that the macro-model is limited in its relevance to a period of recession, since it tended to reflect an economy “at or near capacity, with near full employment”, and which works to centre trends – so if the market is under trend the model seeks to raise it, and if it is over trend the model looks to depress it.

2.26 This potential weakness, common to other UK and international institutional models, is compounded, in the view of one senior stakeholder interviewed, by the observation that he felt young Treasury staff, schooled in orthodox economics, lack the tools and experience to understand the current economic environment. There remains a question in the minds of external interviewees about the Treasury’s capability to propose major change – this question is part of a wider concern over UK macro capability and the need for international engagement, though it is noted that Treasury and OBR are working together to address these issues.

2.27 It was noted during interviews with Treasury staff and stakeholders that the recent OBR forecasting error of growth, in common with the forecasting errors of most institutions, was large and that the Treasury and OBR needed to improve their understanding of the macro-model. The precise outputs of the model are seen by both Treasury and OBR staff as less important than the knowledge and assumptions represented within the detail of the model, and judgement in how to present forecasts. The model is helpful for exploring the nature of "what if's" given different policy choices rather than for the veracity of model outputs (see also Smith, 1998).

2.28 Macroeconomic forecasting is an inherently speculative activity and there will be limitations to the effectiveness of any model. Treasury and OBR officials were clear that macro-economic forecasting has been challenging, particularly in the current economic conditions and they acknowledged the concerns raised by stakeholders. They also pointed out that for all the limits of the current approach, no alternative economic modelling approach is yet mature and that OBR forecasting, albeit inaccurate, has been no worse than that of Central Banks.

Recommendation 1 – The Treasury and Office for Budget Responsibility work to develop the macroeconomic model of the economy is welcomed. Such work should be a high priority and should include thinking about radical innovation and alternative approaches as well as incremental refinements to improve the predictive performance of the current model.

3. Distributional Analysis

3.1 Much of this analysis is done at or around fiscal events to help policy makers compare policy options. It is also used throughout the year, providing a less reactive service to inform longer term policy development. The analysis supports policy teams across much of the department. The most commonly used approach to analysis of this kind is a disaggregation of average impacts by household groups such as income deciles. However, where appropriate, complementary analysis is also produced using other breakdowns, such as looking at how impacts are felt across the expenditure distribution.

Drivers of Work

3.2 Much of this analysis is done at or around fiscal events to help policy makers compare policy options. It is also used throughout the year, providing a less reactive service to inform longer term policy development. The analysis supports policy teams across much of the department. The most commonly used approach to analysis of this kind is a disaggregation of average impacts by household groups such as income deciles. However, where appropriate, complementary analysis is also produced using other breakdowns, such as looking at how impacts are felt across the expenditure distribution.

3.3 Much of the distributional analysis team's more routine work is in response to questions from others, mostly from within the Treasury. Work of the team over recent years has included:

- Analysis of changes to taxation, both direct (e.g. income tax) and indirect (e.g. VAT).
- Analysis of welfare reforms.
- Analysing the household impact of Spending Review changes to resource Departmental Expenditure Limits spending on public services: a discrete model building project is underway to extend and improve analysis in this area.
- Funding, and contributing to building, a model of long-term "lifetime" incomes in partnership with the National Institute for Economic and Social Research.

3.4 The team seeks to actively engage policy teams early in policy development to properly understand policy issues rather than just providing analyses requested with no understanding of the purpose or context. The core customers are generally the welfare teams and the tax teams, each absorbing around half of routine resource. During Spending Reviews, however, core customers also include the General Expenditure Policy Team (which runs Spending Review processes) and spending teams.

3.5 In the run up to fiscal events (Budgets or Autumn Statements) the distributional analysis team interacts with central teams at the Treasury to provide advice to ministers on the distributional impacts of options recorded in 'scorecards' (which are used to keep account of the fiscal impact of measures under consideration at a given point in time). At regular intervals, of one to two weeks, the team provides ministers with distributional analysis on the impacts of these measures. This includes an assessment of the cumulative or individual impact of measures on specific income groups. This analysis thus directly supports decision-making.

Collaborative working

3.6 Treasury analysts have close links with HMRC (Knowledge Analysis and Intelligence team - KAI) on tax analysis – and indeed share resources – and with DWP on welfare and labour market policy. HMRC and DWP colleagues manage their own specialist models, looking at taxation and welfare respectively, which are methodologically similar in construction to the Treasury's model. Sharing of modelling knowledge and discussion of model development progress across the three departments is common.

3.7 HMRC analysts have strong links with the Treasury's distributional analysis team – one third of KAI resources were dedicated to supporting Treasury and OBR at the time of our inquiry. Specialised welfare analysis is carried out within DWP. However, the distributional analysis teams were able to provide Treasury policy teams with welfare analysis, on occasions working alongside DWP analysts while at other times providing a challenge to their work.

3.8 The model development team in HM Treasury also has a comprehensive strategy for stakeholder engagement and collaborative working across Whitehall and beyond. The team holds regular inter-departmental meetings at working analytical level and senior analytical level to discuss model development progress, and to seek challenge to, and discussion of, key modelling questions. The team also engages external stakeholders, for example drawing on expertise from the Institute for Fiscal Studies (IFS) and the National Centre for Social and Economic Modelling in Australia, and works closely with the National Institute for Economic and Social Research (NIESR) as part of its lifetime incomes model-building project.

Quality Assurance

3.9 Treasury distributional analysts reported that they regularly review their models and the assumptions made or reflected in them. During a recent review, model code was tidied, simplified and redundant sections removed. As with other analytical work, distributional analysis is routinely discussed and checked internally by colleagues.

3.10 Internal work is subject to "proportionate" QA arrangements, which means that QA becomes progressively more formal and rigorous as the work relates to more sensitive or high-cost issues. When developing new modelling code, analysts cross check with policy teams and departments as necessary to ensure that any assumptions made are valid and that the policy is properly understood. Methods and subsequent analyses were reported to be assessed by senior analysts, and where appropriate cross-departmental analysts. Work going to ministers is always signed-off by a senior Treasury manager.

3.11 The publication of Treasury distributional analysis associated with fiscal events has led to much more engaged quality assurance and sign-off than was previously required. Outputs for publication at fiscal events are checked systematically, with quality assurance processes logged and signed off personally at Director General level. The final set of analysis for publication is carried out in parallel by two analysts, with outputs being compared and all differences investigated and understood.

3.12 In between fiscal events, the team particularly seeks to engage external stakeholders who carry out modelling. The Institute for Fiscal Studies (IFS) shares various analytical interests with the Treasury, and consequently, the Treasury distributional analysis team meets several times each year to compare notes on modelling approaches and assumptions, exploring any differences.

3.13 Given the close working relations with DWP and HMRC, in some instances quality assurance work is carried out to compare the outputs of their microsimulation models. Discrepancies and similarities are discussed and reasons and possible model improvements identified. Comparison of models tends to focus on assumptions and outputs, rather than a detailed comparison of inputs.

Model Development

3.14 Model development had been part of the role of the distributional analysis team in the past. Departmental structural changes and resource reduction meant that the priority for distributional analysis was seen for some time as policy support and the modelling of policy impacts, both for policy development and fiscal events. Consequently routine model development activity was reduced. The need for model development remained, however, and the publication of distributional analysis raised the profile of modelling and introduced a reputational risk to the department.

3.15 Mitigation of this risk necessitated the reallocation of resource for development work and quality assurance. Treasury recognised the need to keep abreast of current thinking and ensure that its modelling was at least as good as, or better than, other organisations. This was essential in order to be able to provide quality analysis and support for policy development in the future. The Treasury needed to be able to rise to a number of challenges:

- Reflect changes and advances in models over time, in order to better support policy development.
- Do innovative work, adding capability or doing analysis or not done before.
- Maintain its position or lead the field, through engagement with best practice.

3.16 Given this need, a new post was created in 2011 to lead on model development work. This was a time-limited post, running until October 2013. The post holder went back to fundamentals, systematically establishing a range of potential model developments. The post holder engaged with the analytical community to fully scope current best practice and the cutting edge of microsimulation. At the same time, the post holder engaged policy and spending teams across HM Treasury, asking:

“What do you want to know about the distributional impact of policies that is not known at present?”

“How would this new analysis make a difference to policy development in your field?”

3.17 This engagement has led to the identification of many potential analytical requirements, including analysis of longer term impacts of policy, analysis by longer term incomes as well as current incomes, inclusion of behavioural impacts in distributional analysis, and regional distributional analysis. Given resource constraints, these options have been prioritised, with criteria including meeting a recognised demand and potential impact in supporting policy development. The project to extend modelling capacity in distributional analysis of public spending, and the “lifetime income” model building project, have been identified as immediate priorities and were under way at the time of our inquiry. Both of these projects are at the cutting edge of distributional analysis model development, and have the potential to improve Treasury’s distributional analysis capabilities beyond those of other organisations.

3.18 To ensure longer-term continuity, part of the development work includes consideration of arrangements or resources required to maintain progress on an on-going basis. Cutting edge analytical models such as the lifetime incomes model, which accounts for behavioural change, introduce additional complexity and necessitate very specialist staff skills which require investment to develop.

Ensuring Distributional Analytical Capability

3.19 This review considers that Treasury work in Distributional Analysis represents good practice, and indeed in some cases seems further advanced than other micro-simulation modelling undertaken in the UK. However, while the Model Development work is seen as a strength there is a risk inherent in a time limited post having sole responsibility for development, and Treasury could lose this advantage if the work (rather than the post) was not somehow retained into the future.

3.20 Although the Treasury now publishes the results of its distributional analysis of fiscal events in detail, we think the Treasury could do more to engage systematically with external stakeholders with an interest in micro-simulation in discussions about methods. It could consider, for example, taking ownership of the now-defunct Micro-simulation Seminar series which used to be coordinated by the Department for Work and Pensions, or present its work at national or international micro-simulation conferences.

Recommendation 2 – Treasury needs to actively plan to ensure that its currently strong Distributional Analytical capability, including micro-simulation model development, is maintained at the level of the best.

4. Public Spending Control

HM Treasury public spending objectives and organisation

4.1 As well as its responsibility as an economics Ministry, the Treasury is a finance Ministry, responsible for public expenditure. Departmental Objective 4 is “to ensure effective control of and value for money in public spending”. In 2012/13, the Department’s focus under this objective has been to “ensure value for money in departmental expenditure while implementing deficit reduction in a fair and responsible way”.

4.2 The Public Spending teams are broadly organised on the so-called “porthole principle”, as they have been since the early 1960’s (that is, mirroring groups of spending departments), and work more closely with departments than do the macroeconomic and distributional analysis teams. Treasury teams work with departments to ensure that expenditure is being effectively managed, that proposals are quality assured and that value for money is secured in public policy. In the recent past Treasury teams have taken a relatively directive role in policy development. At the time of our inquiry, the spending teams were reduced in size and more reliant on departments to provide direction, identification of issues to be addressed, data and analysis. This point was made by most of the public spending team staff we interviewed.

Public spending approach to prioritisation

4.3 Treasury engagement with departments includes both strategic, forward looking, activity and budget planning as part of the Spending Review process. Regular exchanges with departments provide challenge to departmental business cases for budget change and new expenditure. Evidently public spending teams do not have sufficient resources and capability to provide challenge “across the whole waterfront”, on a project by project basis. They do, however, always aim to challenge large projects, drawing on the internal network of economists as necessary.

4.4 Data collection and analysis were reported to be routine for the Treasury spending teams, not separate processes as might be found in other departments. The work of the public spending teams, like most Treasury work, is deadline-driven, typically involving tight time-scales, delivering analysis as required to meet specific requirements. It is a central part of the public spending teams’ job to be aware of, and remain in touch with, key influences and current thinking in the areas for which they are responsible.

4.5 One senior official we interviewed argued that the spending teams ought to be more proactive, advising more on Public Sector reform needs for departments. However, the Treasury’s role in spending control has changed since the creation of the Cabinet Office Efficiency and Reform Group in 2010, and the transfer of the Implementation Unit (previously the Performance and Reform Unit) from the Treasury to the Cabinet Office in 2012. The Treasury now prioritises spending control (core work as the Government’s finance Ministry), providing challenge on value-for-money. To this end it contributes to, rather than drives, the reform agenda. Given increasing resource constraints the Treasury has to take a rigorous approach to prioritisation even within this role.

4.6 We paid keen attention to how Treasury uses its straitened analytic resources in public spending control, how it selects the necessarily few cases in which it embarks on proactive analysis and in-depth challenge, as against the less fundamental and more reactive approach that is inevitable most of the time. It appeared from our interviews with Treasury staff that the balance between proactive and reactive response is something that needed careful management, and is dictated in part by the willingness of departments to engage constructively with the Treasury. In the words of a senior official we interviewed, the Treasury role is now to make departments think harder, and sometimes to move them to a different position.

4.7 In more buoyant economic times the focus of Treasury engagement with departments had been on ensuring that extra resources were spent effectively (and it will be important for Treasury to be able to regain such capacity in times of economic recovery). At the time of our inquiry the emphasis was much more heavily on the equally demanding challenge of crafting policy and administrative measures to contain costs. We were not given a systematic account of how Treasury chose between proactive and reactive approaches, and between in-depth or more routine responses, but the strategy chosen for individual departments appeared to reflect a range of factors, including:

- Size of budgets involved.
- Political interest from Ministers.
- Judgements on departmental ability.
- Potential downside risk involved in policy decisions.
- The extent to which a given policy decision was likely to impact the economy.

4.8 Departments are largely relied upon to have checked the economic and non-economic aspects of feasibility in their analysis (for example, social impacts, scientific capability and technical deliverability). We were told by Treasury officials interviewed that it would be impossible to have the relevant expertise to challenge all non-economic aspects of bids in Treasury and (according to our interviewees) it would be undesirable to duplicate expertise anyway. On this line of argument, Treasury's role is to make certain that departments have processes for ensuring that they get all aspects of evidence correct, not routinely second-guessing their judgements. We fully take this general point, which is entirely consistent with the fundamental principles of control theory. We nevertheless note the 'duplication of expertise' argument did not prevent Treasury from working on macroeconomic modelling along with OBR (as shown earlier), and we saw several cases of Treasury public spend teams taking the initiative to mount proactive reviews, but are not clear exactly what the criteria were for using the Treasury's scarce resources in that way.

Recommendation 3 – In the light of smaller spending teams and a changed role, the Treasury needs to think systematically about when, where and how it should conduct proactive analyses on its own initiative as a means of challenging departments, as against the reactive responses that necessarily constitute its 'normal' mode of interaction with department's spending.

Spending team expertise and experience

4.9 Members of the public spending teams are not typically recruited for their specific prior expertise in the departmental policy areas in which they find themselves working. They typically face a steep learning curve on joining a spending team, and need to know how to get information and advice on interpreting data and underlying assumptions. Staff do build up expertise in their areas, but typically do not stay in any given post for very long, with the effect that many of the analysts in the public spending teams, while highly intelligent and well motivated, are relatively inexperienced in the policy domains they are concerned with. That meant that the nature of the relationship developed with departments is critical to success in achieving the Treasury's goals over public spending mentioned earlier, and that heavy reliance is consequently laid on departments getting their analyses right (at a time when departments themselves are subject to cuts in both core staff and consultancy expenditure).

4.10 Given the patterns of movement within the Treasury, most experience tends to reside higher up the chain of command. Senior managers remain in post longer (standard requirements being a minimum of 4-5 years on standard postings) than more junior staff (a minimum of 1.5 to 2.5 years), so are able to provide support and experience. Internal networking and support was reported by several Treasury interviewees. Staff are encouraged to take the initiative and to contact colleagues who have been in a post or area previously to ask for advice or to sound out ideas. (See also section 5 on staff dynamics and knowledge management).

4.11 We have suggested that the lack of detailed working knowledge of technical matters by Treasury spending team staff in the departmental areas they oversee is inevitable, given the role of the Treasury as a finance Ministry with far fewer staff resources than the spending departments. However, it is also deliberate. Indeed, moving intelligent young staff through a number of posts, rather than keeping them in one position to accumulate knowledge in depth of any one policy domain, is a very long-standing Treasury tradition and is seen as a good way of stimulating challenge and fresh thinking in policy development. In the view of a number of external stakeholders interviewed the balance had gone too far towards 'flexibility' and away from experience at the time of our inquiry. They tended to take the view that credible challenge required a degree of subject knowledge, at least on occasion. The need for this balance is recognised by the department, however, and has been actively considered through the annual business process.

4.12 An area of specialist knowledge of which the Treasury could make more use, mentioned in our interviews with both Treasury staff and outside stakeholders, was management accountancy. We were told that understanding of management accountancy is not only important for assessment of departmental expenditure control but also functions as an important data source for macro-analysis.

Appraisal, Evaluation and the Green and Magenta Books

4.13 The Treasury is responsible for appraising the quality of departmental business cases. The appraisal process includes an assessment of evidence quality in a case, including review of information sources to consider their credibility. It was reported by several staff and stakeholders that the Treasury do spot problems in cases and analysis, typically weak or poorly evidenced arguments, and challenge departments to make a better case.

4.14 For economic appraisal, the so-called Green Book[3] sets out processes, frameworks and permissive techniques for analysis. Economic work on costs of various aspects of public welfare can be peer reviewed through the Chief Economist's appraisal group. Interviews with Treasury spending team staff, in several different areas of responsibility, indicated that the Green book principles were not consistently applied by departments in their business cases. Further, they reported that despite guidance on evaluation being provided in the Green Book, and separately in more detail in the Magenta Book[4], that evaluation rarely appeared to be considered by departments in any detail. However, no Treasury staff interviewees mentioned requesting or requiring post-implementation evaluation feedback to inform future investment decisions and several of our external interviewees thought that Treasury did not communicate the need for evaluation strongly enough across government as a whole.

4.15 While Treasury has a small, and highly experienced, team dedicated specifically to training and support in assessing and challenging complex business cases using the Green Book methodology, this capability (like the development role in distributional analysis commented on earlier) is a thinly-stretched resource and we were told that the Civil Service in general and Treasury in particular lacked the capability to effectively analyse business cases *systematically and consistently*. Given that the Treasury needs to rely heavily on the quality of analysis coming from departments, it would appear that there needs to be more systematic training of civil servants to assess cases and the quality of the evidence being presented effectively. This is not just a technical box-ticking skill, but one that calls for experience and position to lead on good practice in appraisal and evaluation in Government planning and decision-making.

Internal challenge environment and external engagement

4.16 Although departments are generally relied upon for getting technical information right, we were told that Treasury officials do question business cases and constructively challenge assumptions in impact evaluations. While Treasury challenge was seen as effective by most people we interviewed, we were also told by some external interviewees that there were areas in which Treasury is not challenging enough, especially when the ideas are driven internally or from No. 10, and indeed over the course of our inquiry there were severe adverse policy outcomes in departments which suggested greater challenge would have been valuable. While external and internal interviewees agreed that effective expertise needed to be available to Treasury, there was less consensus on what constituted sufficient internal expertise. External stakeholder views of Treasury's need for depth of expertise ranged from the view that the department did not need significant knowledge as long as it had good access to

[3] The Green Book is HM Treasury guidance for Central Government, setting out a framework for the appraisal and evaluation of all policies, programmes and projects. It sets out the key stages in the development of a proposal from the articulation of the rationale for intervention and the setting of objectives, through to options appraisal and, eventually, implementation and evaluation.
[4] The Magenta Book is HM Treasury guidance on evaluation for Central Government, useful for all policy makers, including in local government, charities and the voluntary sectors. It sets out the key issues to consider when designing and managing evaluations, and the presentation and interpretation of evaluation results. It describes why thinking about evaluation before and during the policy design phase can help to improve the quality of evaluation results without needing to hinder the policy process.

external expertise through to the argument that senior detailed subject specialists were needed in each sector being overseen in order to challenge spending effectively.

4.17 As far as access to external sources of expertise is concerned, some of our external interviewees reported that senior Treasury officials regularly engage with academia and industry. We were told, though, that more junior staff working on detailed domain-specific analysis are less likely to have the time or the contacts to access external sources of policy expertise during routine exchanges with departments, making the internal QA and information networks all the more important.

4.18 While Treasury's library offered a full literature search capability, we were told that it is not as well used as it might be. As officials do not get, or do not seek, dedicated support from library or information professionals they tended to rely on ad hoc, rapid internet (Google) searches rather than anything more sophisticated or systematic – although officials do also have access to academic resources such as the Centre for Competitive Advantage in the Global Economy (CAGE). There are obvious disadvantages to a general internet search strategy when economic cycles are long and irregular, such that the relevant data (such as from the slump in the 1930's or the deep spending cuts of the 1920's) go back long before the internet, Google-search, era.

4.19 There are a number of internal fora and networks for sharing knowledge on public finances, public spending and economic issues. The Strategy, Planning and Budget Group was said to "perform an invaluable service" in synthesising key new publications from think tanks, academic bodies and other groups and circulating these. As well as regular contact with 'their' departments, spending teams evidently interact to some extent with other teams across the Treasury. Teams also facilitate discussion amongst Finance Directors of the largest departments (the Finance Leadership Group). The Finance Leadership Group also manages the Government Finance Profession, which distributes information and runs events enabling knowledge sharing.

4.20 Some selected examples of challenge with Department for Education work that were helpfully provided for us in the course of this review show an intelligent approach to challenge, numerate assessment and logical probing of assumptions. The 'routine' cases that we saw typically involved two or three rounds of interaction between the Treasury and the relevant department over a period of six weeks to two months. These cases typically showed Treasury asking for further relevant data, analysis and justification of policy and spending plans, but they did not show evidence of the Treasury marshalling relevant evidence from its own experience with cognate issues in other spending areas, and there was no evidence that the front-line staff involved had a deep understanding of the policy history of the domain they were monitoring.

4.21 When we asked for examples of more significant or fundamental challenge to departments, we were shown two further cases where the Treasury had initiated analyses rather than reacting to proposals. We were partially reassured to find that there were some cases where Treasury was capable of conducting independent analysis rather than relying exclusively on what departments produced. Both of the cases showed commendable capacity to identify, marshal and analyse relevant data in an innovative way that offered a rational challenge to traditional policy practice, even though they were not steeped in in-depth understanding of the policy history of the relevant domains.

Cross-Cutting public spending issues

4.22 While public spending teams were reported by staff interviewees to do all they could to maintain sufficient knowledge and information in specific sectors, the Department faces greater organisational challenge in making comparisons or trade-offs in investment decisions across different areas. For example, in education there was said to be good understanding of factors that affect different primary schooling options, and those for secondary schooling, but less understanding of the links, impacts and trade-offs *between* primary and secondary schooling investments. (Staff 07)

4.23 In the past, the Treasury has carried out a number of large externally-led, Treasury supported, reviews such as those led by Kate Barker (Housing Supply), Sir Rod Eddington (Transport) and Sir Nick Stern (Climate Change). These reviews were considered by our internal interviewees as having been an effective way to address cross-cutting issues because they:

- Were led by respected economists.
- Were well resourced.
- Had time to develop a framework and to ‘market’ findings.
- Produced high quality public outputs.
- Some external interviewees, however, felt that they had limited impact on government policy making.

Recommendation 4 – the Treasury should review whether it has adequate capacity in key specialist knowledge areas - including Green Book project appraisal, management accounting, and the microeconomics of key areas of public spending – to ensure that it can be confident of effective and cost-effective decisions on expenditure in departmental policy areas.

5. Staff Turnover and Institutional Memory

5.1 The previous three chapters discussed analytical issues in each of the areas of work specifically identified for examination in this review. The remaining two sections cover cross-cutting issues affecting the analytical capability of the whole department. The first, addressed in this section, is staff turnover.

5.2 Staff turnover is a term that has a number of different meanings, all of which enter into discussions of continuity and memory, but only some of which are currently measured and none for which there appear to be consistent over-time measures or comparable data for other finance ministries around the world. We can, for example, distinguish between movement among postings within the Treasury, and movement between the Treasury and other organizations. Within this second category, we can distinguish between permanent movement and movements that are temporarily or eventually reversed. We can further distinguish movement between the Treasury and other departments, the Treasury and the wider public sector, and the Treasury and the private or independent sector. These different types of movement have different implications for the Treasury's memory and its access to experience and expertise.

5.3 The Treasury monitors turnover in two ways[5]; one, on the standard ONS definition, and the other focusing on a part of that measure in order to better identify and address the underlying causes of turnover. The first measure of turnover relates to the percentage of the workforce that permanently leaves the organisation during a year. This measure is the ONS definition of turnover and is a standard measure across government. It includes resignations of permanent staff, permanent transfers to other departments, end of fixed term appointments, retirement, voluntary exits and the exit of staff 'loaned' or 'seconded' from other organisations. It does not count Treasury staff temporarily loaned or seconded to other organisations. The second measure identifies the rate of permanent exits from the Treasury excluding loans and secondments returning to their home organisation. The Treasury monitors the 'non-loan/secondment' aspect of turnover in order to ensure that efforts to reduce overall turnover do not result simply in a reduction in loans and secondments (which are an important means by which this relatively small department develops its staff and obtains skills), but tackle also the other sources of high turnover. Alongside this second measure of 'non-loan/ secondment' turnover, the also Treasury monitors the percentage of staff in or out of the organisation on loan or secondment.

5.4 Treasury turnover[6] has been reported in previous reviews (GES, 2006, Treasury B, 2012), as being high and is still seen as being high by both departmental participants and external stakeholders in this review. Given the lack of a consistent data series over a decade or more we do not have documentary evidence of whether Treasury turnover, has gone up or down or stayed roughly constant over the medium or long term. The Treasury is, however, able to provide consistent data over the last six years on an ONS definition, and this shows that turnover has remained relatively stable over

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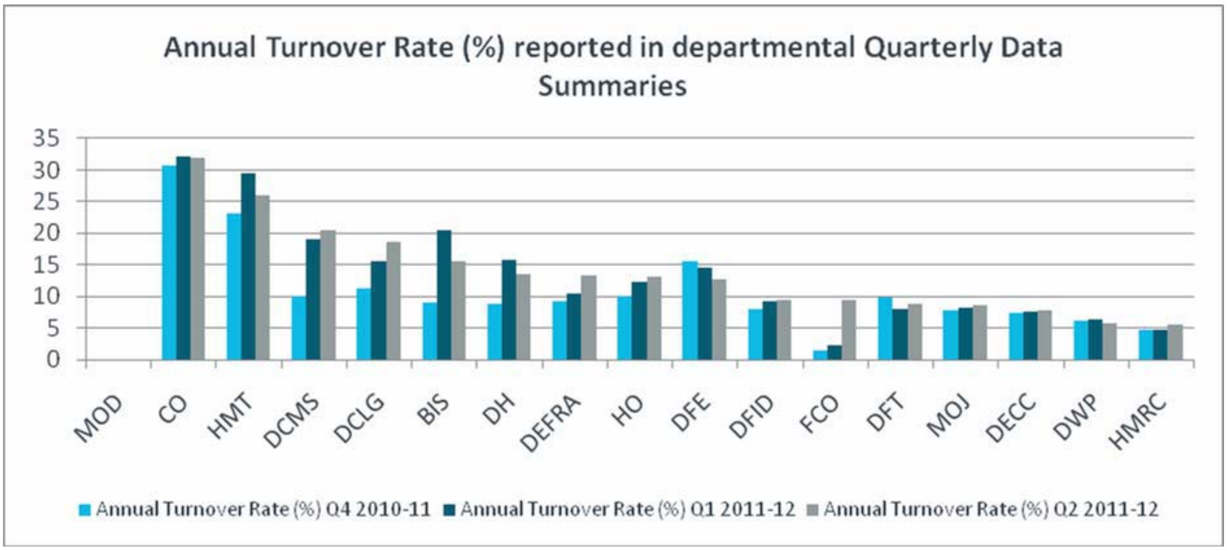
[5] Paragraph 5.3 and 5.4 were updated in September 2013, after publication of the original report, to clarify exactly what definitions and counts of staff turnover were being measured.

[6] Staff turnover is here used to refer to the percentage of the workforce that permanently leave an organisation during a year. This includes resignations of permanent staff and the exit of staff 'loaned' or 'seconded' from other organisations. It does not count an organisation's staff temporarily loaned or seconded to other organisations.

this time period. Moreover, interpretations of what a high level of turnover means for the department evidently differed, and both strengths and weaknesses of high turnover rate have been identified.

5.5 Treasury's data for the latest year available at the time of our enquiry (2012) showed the organisation's total annualised turnover (using the ONS definition that includes loans and secondments) at around 22%. For what such broad-brush comparisons are worth, these turnover rates were higher than the national average for all organisations (15%) However, while the comparator organisations may not have the practice of loans and secondments that the Civil Service has, the figure was still roughly double the average for the public sector (10%; CIPD/Hays 2012).

5.6 The Institute for Government published a paper on Whitehall turnover rates (using the definition of turnover noted above) in February 2012 (IFG, 2012) which showed Treasury having the second highest turnover of all departments for which data was available.



(IFG, 2012)

5.7 The Department recognised that this rate of turnover was higher than was desirable and aimed to manage it to between 15% and 20%. "The Executive Management Board considers this an appropriate level for an organisation like the Treasury that benefits from a heavy interchange of staff with other Government departments." (Source: internal management data).

5.8 Treasury HR staff interviewed reported using comparative data available to HR professionals (XpertHR online data) to assess Treasury staff dynamics and management issues. From this data, kindly provided to this review by Treasury HR, benchmark turnover figures are similar to the range that the Treasury Executive Management Board set for itself – Percentage turnover by sector, 2011:

- Private sector services – 18%
- Finance sector – 16.5%
- Not-for-profit – 15.1%
- Public services – 13%

(Souce: XpertHR, August 2012)

5.9 What is not measured, as noted above, is the rate of internal movement in the Department, but this rate is also said to be high. Although staff rotated around the Treasury are not lost to the organisation, such movement does inevitably serve to reduce the accumulation of experience in any particular role. We were told in interviews with Treasury HR staff that measures instituted to try to reduce internal turnover, such as minimum posting lengths, are starting to have an effect. The Department is also introducing changes to the grades where turnover tends to be highest to reward greater expertise and experience (see paragraph 5.18).

5.10 Sharon White looked in detail at the Treasury staff profile as part of her 2011 review of the "Treasury's management response to the financial crisis", published in early 2012 (White, 2012). In observing the rate of turnover she reported that "the Treasury attracts the highest calibre staff, but has difficulty retaining them". She noted that a proportion of this turnover reflects government officials on 'loan' or 'secondment' in the Treasury returning to their 'home' department. We were told by Treasury interviewees that the return of 'loaned' and 'seconded' staff is seen positively, as spreading understanding of Treasury methods and requirements to other government departments.

5.11 In her report, White also reported that "a significant minority of staff do not expect to have a long term career in the Treasury. The 2011 staff survey suggested that one third wanted to leave the department within a year" (p44, White, 2012). Using data on length of service White showed that:

- 95% of staff had joined the Treasury since 1985.
- 75% of staff joined in 2003 or more recently.
- 52% joined in the last four years – since 2008.

Workforce profile

5.12 This profile means that a sizeable proportion of staff had relatively limited experience of work in Treasury, and only a few had ever worked in the Treasury during a previous difficult economic period (this view was supported by both internal and external interviewees). When this information is combined with age data, it paints a picture of a young and dynamic workforce moving around quickly to develop their careers. White (2012) showed that the median age of Treasury staff (in 2010) was 32, compared with 45 in the rest of the Civil Service. 67 percent of treasury staff were aged between 20 and 39 years.

5.13 One external stakeholder noted that while "at junior levels the speed of turnover[7] is too high … affecting stakeholder interaction with the Treasury … at a senior level, Deputy Director and above, staffing is more consistent and people tend to remain in post for longer." While these staff dynamics apparently affect the whole department, not just analysts, they do appear to shape the perceived capability of the department.

5.14 Within Treasury, the rate of internal turnover and youthfulness of staff was often viewed positively, being seen as a strength – intelligent and capable people brought

[7] It is not clear whether this interviewee was referring to the rate of internal movement within the department or 'turnover' as officially measured.

innovation and challenge, reducing the risks of becoming set in a particular frame of mind. Staff from all areas of the department interviewed for this review reported such effects as the upside of high internal turnover and some indicated that it was a deliberate workforce management strategy.

5.15 Some external stakeholders considered the workforce dynamics positively; one for instance noting that “officials always take information on board. Officials are capable of engaging and asking pertinent questions, being reasonably smart rather than having a depth of knowledge”. However, the same stakeholder also noted that “the downside of this flexibility is a lack of experience and depth of knowledge”. Another stakeholder, who had worked closely with the Department, noted that “if Treasury has a vulnerability it is around the youth and inexperience of the majority of the current staff.” They were considered to acquit themselves well in reading appropriate literature but we were told that too few had professional personal experience to draw upon. We were told that this applied to the experience of economists as well as those of Treasury staff more generally.

Workforce expertise

5.16 While workforce management as such is outside the scope of this review, it clearly has an important impact on the availability of analytical skills and experience. White noted in her review that “there was – and remains – no systematic recording of people’s skills and background within the Treasury”. Our interviews suggested that this problem remains. For whatever reasons, adequate management information is not available to effectively track trends in workforce changes over time and thus assess the possible impact on departmental analytical capability.

5.17 Several stakeholders noted that the Department really needs more talented economists at the top levels, but that the Department did not reward this. It was seen by such interviewees as good fortune that people such as Dave Ramsden and James Richardson were in post at the moment. Senior management involves a skill set somewhat different to that of analysis, and having strong senior managers does not equate to strong senior analysts, but in a cerebral organisation like the Treasury the management needs to be very close to the analysis.

5.18 One senior Treasury Official interviewed did observe that he discussed staff issues with international counterparts in an informal and ad hoc manner. He stated that while (UK) Departments were better placed to have staff with detailed policy and subject expertise, there was a risk that Treasury had gone too far in embracing flexibility and that there were areas where more expertise would be beneficial. He noted that while systematic data were not available, his discussions suggested that the UK Treasury staff turnover rate was at the high end, similar to that of Australia, New Zealand and Denmark, but faster than that of the Dutch and Germans who had lower rates of internal change.

5.19 Following the Financial Crisis Management Review, the Treasury is taking active steps to encourage retention and recognise depth and breadth of skills and expertise. From April 2013, the Treasury is introducing a new ‘E2’ grade (equivalent to Grade 6 in other Government Departments) and introducing pay restructuring for Range Ds to reward experience.

Institutional Memory

5.20 The current imbalance in length and depth of experience in the Department was seen by internal interviewees as being compounded by the lack of systematic institutional knowledge management, making the department vulnerable to missing key evidence or replicating previous mistakes. The formal knowledge management system was seen as a corporate weakness and although work is underway to improve information systems in the department, they are not well used.

5.21 As we have noted, many of the Treasury's staff moves are within the organisation, especially at junior levels (and so do not count as 'turnover' in the official measures), meaning that some information is hard to find rather than lost entirely. A range of methods for information *retention* and *sharing* are used in teams, including:

- Handover notes and on-job training.
- Documentation and filing of key information.
- Oral and written briefings.
- Informal networks of expertise (including remaining in contact with previous role holder).
- Structured meeting and events (such as the regular "State of the Economy" briefings) to share common understanding.
- The Corporate Records repository ("JIGSAW").

5.22 The Civil Service Reform Plan states that;

"To support a more flexible, open and pacier culture within the Civil Service, structures need to be flatter, with less focus on whether people are the right grade for the job, and more on whether they are the right people to do it. This means having the right people in the right jobs at the right time, taking into account the varying business needs and structures of different Government departments. Departments must improve workforce planning and ensure that talented people are recognised and deployed appropriately" (HM Government, 2012)

5.23 The Treasury appears to be at one end of a staff dynamic that Public Sector Reform is being instituted to tackle directly. In their report on Civil Service reform, Haldenby et al (2013) reported that high turnover (in the official sense) and short tenure within posts posed risks to the corporate memory of all government departments. They noted that Government itself recommended increasing the average length of posts and deploying specialist professionals in key roles. Treasury interviewees indicated that both of these issues were now being addressed.

5.24 According to one interviewee, the key issue for Treasury was not so much the ability to access information per se (since it is by its nature an information rich organisation), but the ability to do so systematically and in a timely manner. The common criticism of the formal records management system was the difficulty in *searching* for specific information. JIGSAW was described to us as ten years of electronic data that is hard to search. Although improvements are apparently being made, it is a challenging and time-consuming task to go back though such records to systematically identify what has been done in the past. The Department is in the process of up-grading its electronic records management system, and we support its intention to improve systematic information availability.

5.25 While the Treasury's external turnover rates appear to be high in Civil Service terms, they do not appear to be dissimilar to rates for other financial and private sector companies (see paragraph 5.8). The risk of knowledge loss that higher turnover rates inevitably introduce can be mitigated by effective institutional memory systems to temper the reduced personal experience of the workforce. Many of these other organisations (within and outside the UK, within and outside the public sector) have a similar need to retain and share critical corporate experience to maintain their core competencies. The Treasury could benefit from drawing on these organisations' experience of managing information and memory capacity in a high-turnover environment.

Recommendation 5 – The Treasury should consult with other high-turnover organisations in the UK and internationally, to explore practical ways to maximise institutional memory in high-turnover environments.

6. Transparency, Engagement and Capability Management

6.1 It is clear from staff interviews for this review, and assessment in previous reviews, that the Treasury considers its analytical capability and political sensibility as institutional strengths; a view shared by many of its external stakeholders. (GES 2006, White 2012, HM Treasury B, 2012, Allen 2012). However, this review, like previous reviews, also notes that the Treasury does not manage its approach to external engagement systematically. Instead, teams and Groups tend to take a tailored approach, dependent on the policy area, Government interests, and the stakeholder community – joining up with departmental colleagues where appropriate.

6.2 The question for the Treasury to consider is whether it loses out on potentially useful intelligence by the relatively unsystematic nature of its external engagement. For example, it was pointed out to us by one external interviewee that there was much complacency in the 2000s about the structural sources of tax revenues and whether these were sustainable. Good published analysis and engagement with outside experts would have been more conducive to prudence about the trend of the primary balance.

6.3 Similarly, although this review concludes that distributional analysis carried out by the Treasury appears in some cases to be further advanced than other micro-simulation modelling undertaken in the UK, our assessment is based primarily on information that is not in the public domain. A strategy of publishing details about its models and its approach to doing distributional analysis might help the Treasury to achieve a form of on-going external peer review of this work.

6.4 External networks, especially in the spending teams, generally appear to be limited to a small number of critical and trusted 'partner' organisations and ad hoc personal contacts - these latter being vulnerable to loss through staff turnover. Relying on a small number of trusted organisations is understandable given the political sensitivity of many of the issues that Treasury has to consider and its role as a Ministerial department rather than an independent public body such as the Bank of England. However, it does introduce the risk that Treasury is not exposed to a sufficiently wide range of thinking while developing options and identifying relevant evidence.

6.5 We certainly found evidence of proactive engagement between the Treasury and some other departments, notably on the growth agenda, the labour market and on housing. We also found evidence of wider engagement between Treasury and other bodies. A case in point is that of evidence seminars on labour market policy, held at intervals to engage policy makers in analytical issues. The 2012 seminar included practitioners, academics and think tanks discussing different perspectives: such as micro and macro economics, and operational research on topics which included labour market issues, geography and long term unemployment.

6.6 As a member of Economic and Social Research Council (ESRC), the Chief Economic Adviser shares Treasury's strategic interests, reflecting the government's big picture issues and challenges, the things that government struggles with, to help shape ESRC funding priorities. However, engagement was reported to this review to generally be at a high level and Treasury policy teams tend to have variable contact with academics.

The review was struck that while the Department produces some of the most significant pieces of distributional analysis in the UK, it does not see itself as having leadership or a high-profile role, within the community of micro-simulators in the UK or worldwide.

6.7 Consequently there may be gaps and missed opportunities in the Department's knowledge base. The Department has considered advisory committees in the past but has remained sceptical about the benefits of a small and static set of advisors given the range of issues and pace of the work. The preference is for a system that can operate flexibly without significant management or process overhead. It was pointed out to us that any benefit Treasury might derive from wider access to intelligence and analysis from more systematic engagement (within the obvious constraints imposed by the politically and market-sensitive nature of many of the Treasury's concerns), would have to be balanced against the extra time and effort that would be required from the Treasury's shrinking staff. We take this point, but we think the Treasury needs to keep under careful review the cost and benefit of such engagement, policy area by policy area.

Statistics, Social Research and Non-Economic Evidence

6.8 Public spending analysis is based on data collected from departments through the Combined Online Information System (COINS), now in the process of being replaced by a new system, the Online System for Central Accounting and Reporting (OSCAR). There are significant data quality and comparability issues that Treasury staff handle in using COINS data; variations in Departmental interpretation of data definitions (spending codes), comparability of data given structural changes in Departmental responsibilities and consistency of data over time due to frequent definitional changes.

6.9 Treasury produces three sets of National Statistics; *Public Sector Finance* (monthly, joint ONS and Treasury report on the public finances on a national accounts basis), *Official Reserves* (monthly) and *Public Expenditure Statistical Analysis* (PESA) (annual publication on government spending, along with quarterly updates). The capability of the teams producing the National Statistics was considered by most internal and external interviewees to be sufficient. However, it was reported that there is not enough statistical expertise across the wider department.

6.10 We were told that since the creation of the OBR, the need to understand data and its limitations had increased rather than reduced and an interviewee told us that the Treasury was currently thought to be overly dependent on HMRC for additional statistical capability. Given the importance of good statistics to the Treasury's analytical capability, we think the department should consider how adequately it is nurturing its skill base in this vital area.

6.11 There will always be times when data shows 'uncomfortable' trends, and as such there will always be a need for careful scrutiny, high data standards and an ability to defend figures produced. We were told that Treasury quality assurance systems broadly worked, but it was observed that the most senior statistician, and Head of Profession (HoP) for the Treasury was at Range E, the management grade below the Senior Civil Service grades. The post holder reported directly to the Chief Economic Advisor and was professionally responsible for overseeing quality standards and statistical competency, but was not well placed to make resource capacity and deployment decisions for the department. While there is no barrier to a statistician getting a more senior appointment if they were successful in application for a post – there is a free internal market – there are no dedicated senior Statistician roles.

The Role of the Chief Scientific Advisor

6.12 In 'policy' departments the Chief Scientific Advisor role is crucial in ensuring that a range of relevant evidence is considered, and that key policy evidence is adequately challenged. Although the function of the Treasury is different from that of other policy Departments, it should have a strong interest in the place of science and technological evidence in promoting and supporting economic growth. From interviews carried out in this review it is clear that there is heavy reliance on departments to assume responsibility for the detailed rationale in public spending decisions. In the Treasury the roles of the Chief Economics Advisor and Chief Micro-economist are more prominent in providing analytical leadership, and are seen as more obviously relevant by senior Treasury officials.

6.13 The core role of the CSA in a policy department is to ensure that policies and decisions are informed by the best science and engineering evidence. In addition to offering advice directly to Ministers and colleagues, the CSA has oversight of processes for ensuring that relevant scientific and engineering evidence is taken account of, and provides independent challenge of the evidence base for departmental policies. The Treasury CSA should be able to seek advice on, provide challenge to, and assurance for behavioural and other non-economic aspects of policy development work. This will become more important as Treasury staff numbers fall.

6.14 Departmental CSAs operate as a network across Government (via the Chief Scientific Advisors Committee – CSAC[8]). CSAs support each other in developing and challenging advice, and collectively develop a relationship with relevant communities in academia and business. The Treasury CSA should use CSAC as a sounding board and source of advice on non-technical issues that might be expected to have an economic impact.

International Engagement

6.15 The Treasury was reported to engage actively on international issues and with international contacts, having routine contact with the FCO, DFID, IMF and OECD. For example, the International and Energy Policy team participated on the G20 Energy and Commodities Working Group, which considers matters such as fuel price volatility. There are also strong links with DECC and FCO which maintain bilateral and multilateral international agreements on oil and gas.

6.16 Treasury officials also engage with the FCO led Global Economics Risks group and the Global Futures Group, an informal GES sub-group that considers future economic issues such as macro-projections of the impacts of resource scarcity, the changing environment for exports or international capital flows. OECD engagement with the

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[8] Departmental CSAs interact as a group on the GCSA's Chief Scientific Advisers Committee (CSAC). CSAC meets four times a year and meetings allow CSAs to discuss and agree items of significance to the broad community and to hear from external stakeholders.

Treasury was reported by one interviewee as being positive. Treasury officials were said to regularly engage with OECD and member nations, asking for advice and seeking others' experience in possible policy interventions in a way that was generally professional and knowledgeable.

6.17 Further, Treasury was reported to be a good customer of information from FCO and overseas posts. It was reported in interview, for instance, that the outputs from the embassies in Washington and Beijing are used better by Treasury staff than by the Bank of England because the former have the necessary political understanding and position to know how to use the information, and sometimes ask sharper questions. We were also told that Treasury officials typically know what information they want and vigorously test and challenge what they receive. Sometimes they ask FCO to get information for them but more often than not they go directly to embassy contacts to get it.

6.18 That said, however, one very experienced external interviewee suggested to us that the Treasury could engage better with international initiatives and audiences, giving the example of engagement with IMF over Fiscal Transparency ROSCS (Reports on the Observance of Standards and Codes). The only UK fiscal ROSC undertaken to date was an experimental one carried out in 1999, and since then the UK government has not requested another one (involvement is not mandatory). While the UK would be likely to score highly on formal criteria of fiscal transparency[9], a ROSC would expose Treasury practice to rather more scrutiny, and this interviewee thought that "more engagement, with the 'right' attitude, would benefit the Treasury and also the reputation of the UK." We think the Treasury might well want to consider supporting its aspirations for greater fiscal transparency by inviting IMF to conduct a further ROSC to follow up the experimental one of 14 years ago.

Recommendation 6 – In following up recommendations one to five, the Chief Economic Advisor and Chief Scientific Advisor should consider ways to safely and systematically encourage external engagement to ensure that Treasury benefits from the maximum feasible exposure to outside analysis and expertise, both within and outside its normal 'comfort zone'.

[9] See for example, Alt, James E., Lassen, David Dreyer and Wehner, Joachim, 'Moral Hazard in an Economic Union: Politics, Economics, and Fiscal Gimmickry in Europe' (July 9, 2012). Available at SSRN: http://ssrn.com/abstract=2102334 or http://dx.doi.org/10.2139/ssrn.2102334

Annex A: List of interviews conducted

Treasury Staff

Executive and Strategic

Dave Ramsden (Director General Economics, Chief Economic Advisor), Executive Management Board
Edward Troup (Director General Tax & Welfare), Executive Management Board
James Richardson (Director Fiscal, Chief Scientific Advisor, Deputy Chief Economic Advisor and Chief Microeconomist)
Matthew Toombs (Deputy Director) Strategy, Planning and Budget
Sam Juthani (Range D) Assistant Economist, Strategy, Planning and Budget Group
Simon Dilly (Range E) Research Library Manager
Tom Orford (Range E) Statistician, Head of Profession for Statistics in Treasury
Ruth Appleton – Head of HR Strategy
Simon Acres – Head of Workforce Information

Macroeconomics

Andy Ross (Deputy Director) Head of the Government Economic and Social Research Unit
Nicholas Vaughan (Deputy Director) Head of Macroeconomics Prospects
Andrew Gurney (Deputy Director) Macroeconomics Analysis

Distributional Analysis

Harriet Wallace (Deputy Director) Labour Markets and Distributional analysis
Kate Mieske (Range E) Head of Model Development
James Arthur (Range E) Head of Distributional Analysis branch
Doug Rendle (Range E) Distributional Analysis of tax and welfare

Public Spending

Lindsey Fussell (Director) Public Services
Tamara Finkelstein (Director) Public Services
Tony Foot (Deputy Director) Education, Children and Culture.
Nicole Kett (Deputy Director) Welfare, spending and reform.
Matthew Styles (Deputy Director) Health and social care
Joseph Lowe (Range E) Head of Economics, Public Spending Group
Henry Baker (Range D) Statistician, Public expenditure statistical analysis
James Screen (Range E) Head of Energy Branch

Stakeholders – Treasury Review

Government

Gregor Irwin - FCO Chief Economist
Tera Allas – BIS (formerly DfT)
Amanda Rowlatt BIS (formerly DWP)
Jonathan Athow - HMRC KAI
Alex Beer - DWP, head of modelling
Paul Hollinshead - DECC
Peter Schofield - DCLG (formerly Treasury)
Michael Kell, NAO – Chief Economist
Stefan Dercon – DFID Chief Economist
Chris Witty – DFID CSA
Jil Matheson – Government Chief Statistician

Non-Government

Henry Overman - Geo-economist, LSE
Sir Brian Bender – London Metal Exchange (formerly DTI)
David Newbery – Economist, Cambridge
Tim Besley – Economist, LSE
Charles Bean - Bank of England
Paul Johnson – IFS
Carl Emmerson – IFS & OBR
Paul Boyle – ESRC
Lord Stern – LSE
John Llewellyn – OBR advisory Board and Principle, Llewellyn Consulting.
Dieter Helm – Oxford
Brian Collins – Prof of Engineering Policy, UCL
Christophe Andre – Head of UK and Finland desk, OECD
Robert Chote – Chief Executive, Office for Budget Responsibility
David Heald – Professor of Accountancy, University of Aberdeen

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Annex C: Methodology

Independent Expert Panel

A panel was appointed to provide independent advice and assessment of the Department's use of science and evidence. Internationally recognised learned societies and institutions were asked to provide nominations for this review. A mixture of expertise and experience was seen as favourable when forming the expert panel due to the wide remit of Treasury. The independent expert panel was selected and appointed by Professor Sir John Beddington, the GCSA.

Professor Nicholas Crafts
Professor of Economic History, University of Warwick.

Professor Christopher Hood
Gladstone Professor of Government, Oxford University.

Professor Peter Elias
Professor of Economics, University of Warwick.

Professor Mike Brewer
Professor of Economics, University of Essex.

Professor Sir Adrian Smith
Vice Chancellor, University of London.

As the review addressed the full range of Treasury analysis, and because the department does not commission or carry out scientific research in its own right, members of the government's analytical professions were also invited.

Analytical Professions

Carole Willis
Chief Scientific Advisor and Director of Analysis, Department for Education.

Dr Jenny Dibden
Joint Head of Government Social Research.

Richard Laux
Head of Monitoring and Assessment of Official and National Statistics, UK Statistics Authority.

Evidence Gathering

This SEA review gathered evidence through desk research, engagement with Treasury officials and key departmental stakeholders. Desk research was undertaken by GO-Science officials to gain an overview of Treasury activities, its structure and the way the Department works.

A total of 20 interviews were conducted with Treasury staff, selected to include senior staff and a range of staff at other levels representing a broad range of the department's work. The expert panel and GO-Science review team led the interviews. A semi-structured approach to interviews was taken, focusing on the decision-making processes and responsibility of officials being interviewed. Interview questions were developed using the SEA analytical framework, expert guidance, stakeholder feedback and relevant desk research.

Similarly, 25 interviews have been carried out with a number of key Treasury stakeholders and individuals who have experience of working with the department on analytical issues. A revised interview guide was developed, building on the issues identified in discussion with Treasury staff, and testing external perceptions of some of the same issues.

Analysis of Evidence

All the evidence collected was made available to the expert panel. The data were reviewed and assessed to draw out key emergent themes. An iterative process was undertaken to formulate and agree the recommendations for the final report, using the SEA analytical framework as a guide.

Follow-On Activity

The SEA reviews include a formal follow-up process for Departments after the completion of a review. This process includes contact with the GO-Science review team and the expert view of the GCSA to address the implementation of the recommendations, a summary of progress on actions in response to recommendations and a discussion of the impact of the review in the Department.

This publication is also available on our website at http://www.bis.gov.uk/go-science

Any enquiries regarding this publication should be sent to:

Department for Business, Innovation and Skills
1 Victoria Street
London SW1H 0ET
Tel: 020 7215 5000

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