Office for
**Budget Responsibility**

# Forecast evaluation report

October 2014

# Office for Budget Responsibility

## Forecast evaluation report

Presented to Parliament pursuant to
Section 8 of the Budget Responsibility
and National Audit Act 2011

October 2014



This publication is available at www.gov.uk/government/publications

Any enquiries regarding this publication should be sent to us at obrenquiries@obr.gsi.gov.uk

Print ISBN 9781474111256
Web ISBN 9781474111263

Printed in the UK by the Williams Lea Group on behalf of the Controller of Her Majesty's Stationery Office

ID 06101411 10/14 43474 19585

Printed on paper containing 75% recycled fibre content minimum

# Contents

# Foreword

The Office for Budget Responsibility (OBR) was created in 2010 to provide independent and authoritative analysis of the UK public finances. Twice a year – at the time of each Budget and Autumn Statement – we publish a set of five-year-ahead forecasts for the economy and the public finances in our *Economic and fiscal outlook (EFO)*. We use these forecasts to assess the Government's progress against the fiscal objectives that it has set itself.

In each *EFO*, we stress the uncertainty that lies around all such forecasts. We compare our central forecasts to those of other forecasters. We point out the confidence that should be placed in our central forecast given the accuracy of past official forecasts. We use sensitivity and scenario analysis to show how the public finances could be affected by alternative economic outcomes. And we highlight uncertainties in how the public finances will evolve, even if one were to know with confidence how the economy was going to behave – for example, because of the uncertain costing of particular policy measures.

Notwithstanding all these uncertainties – and the fact that no one should expect any economic or fiscal forecast to be right in its entirety – we believe that it is important to spell out our central forecast in considerable quantitative detail and then to examine and explain after the event how it compares to subsequent outturn data. And that is what we endeavour to do in this report.

We believe that it is important to publish the detail of our forecasts for two main reasons. The first is transparency and accountability: the whole rationale for contracting out the official fiscal forecast to an independent body is to reassure people that it reflects dispassionate professional judgement rather than politically motivated wishful thinking – even if people disagree with the particular conclusions we have reached. The best way to do that is to 'show our working' as clearly as we can. The second is self-discipline: the knowledge that you are going to have to justify your forecast in detail forces you only to make judgements you are willing to defend. You cannot hide them in the knowledge that no one will ever know.

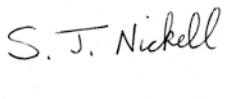
Assessing the performance of our forecasts after the event is also important for transparency and accountability – and for helping users to understand how they are made and revised. Identifying and explaining forecast errors also helps improve our understanding of the way in which the economy and public finances behave and hopefully allows us to improve our judgements and forecast techniques for the future. This may be particularly important at a time when the economy is recovering from large shocks that have had unexpectedly persistent consequences.

It is worth noting that when we use the word 'errors' in this paper we are simply referring to the arithmetic difference between the forecast and the outturn. We are not implying that it would have been possible to avoid them given the information available at the time the forecast was made – differences with outturns may reflect unforeseeable developments after the forecast was made.

In judging our own performance – and in assessing the relative performance of different forecasters – it is important to remember that the current outturn data represent a relatively early draft of economic history. The stories we have told in previous reports look different after subsequent data revisions. So what appear to have been accurate or inaccurate forecasts today may look very different in the wake of inevitable and often large statistical revisions. This was certainly the experience of the recession and recovery of the 1990s and we have seen significant revisions this year to the history of the late 2000s recession and the ongoing recovery.

We have continued the approach used in the past three reports of trying to understand the underlying stories that have driven our forecast errors. But, as in previous reports and the *End of year fiscal reports* by the Treasury that preceded them, we also present the detailed decomposition of specific fiscal year forecasts. We would be very grateful for feedback on this report and for suggestions to improve future ones.

The forecasts we publish represent the collective view of the three independent members of the OBR's Budget Responsibility Committee (BRC). Our economic forecast is produced entirely by OBR staff working with the BRC. For the fiscal forecast, given its highly disaggregated nature, we also draw heavily on the help and expertise of officials from across Government, most notably in HM Revenue and Customs and the Department for Work and Pensions. We are very grateful for this work and for the work that officials in government departments have contributed to the production of this report. However, the BRC takes full responsibility for the judgements underpinning the forecasts and for the errors presented in this report.




Robert Chote Steve Nickell Graham Parker

The Budget Responsibility Committee

# 1 Executive summary

1.1 Forecasts provide an essential basis for setting policy. But since the future can never be known with precision, forecasts are surrounded by significant uncertainty and will inevitably prove to be wrong in at least some respects.

1.2 We stress these uncertainties in every *Economic and fiscal outlook (EFO)*, presenting fan charts around our main forecasts, sensitivity analysis of key assumptions and the fiscal implications of different economic scenarios. And once a year, in our *Forecast evaluation report (FER)*, we compare the latest outturn data for the economy and public finances to our earlier forecasts and try to explain the inevitable differences. (We refer to the arithmetic difference between these forecasts and outturns as 'errors', but this does not necessarily mean that they could have been avoided given the information available at the time.)

1.3 The backdrop to this report is:

- a real economy that, having grown unexpectedly slowly until early 2013, has since picked up more strongly than more recent forecasts predicted;
- a labour market that has continued to be stronger than expected in employment terms, but weaker in terms of earnings and productivity growth; and
- a fall in public sector borrowing as a share of national income that was more substantial in 2010-11 and 2011-12 than it was in 2012-13 and 2013-14.

## What questions does this report seek to answer?

1.4 Last year we asked why our economy forecasts had consistently under-predicted GDP growth but that shortfall had only fed through to significantly higher-than-expected budget deficits from 2012-13. We review that question again in the light of new data from the Office for National Statistics that has again significantly rewritten recent economic history.

1.5 But the focus of our report this year is on 2013-14, a year that saw GDP growth pick up strongly and the budget deficit narrow further. In particular, we ask why it was that in our more recent forecasts we under-estimated the pick-up in growth from early 2013. And, given the strength of the recent recovery, why did the budget deficit not fall more rapidly?

1.6 Our economy forecasts are considered in Chapter 2 and our public finance forecasts in Chapter 3.

## Explaining our forecast errors up to 2012-13

1.7 Last year, we concluded that our June 2010 borrowing forecasts had remained on track in 2010-11 and 2011-12 because, despite real and nominal GDP falling short of our forecast, the composition of the shortfall had been relatively favourable for the public finances. In income terms, the shortfall was concentrated in corporate profits, which are taxed more lightly than labour income. In expenditure terms, it was concentrated in private investment, much of which is tax deductible. What shortfall there had been in receipts was broadly offset by central government departments and local authorities spending less than expected.

1.8 In 2012-13, borrowing also started to under-perform our June 2010 forecast. Labour income fell short of forecast and asset markets and North Sea oil and gas production were weaker than expected. Higher-than-expected inflation in 2011 also increased welfare spending in 2012-13 as the values of most benefits and tax credits are uprated by inflation.

1.9 Following substantial revisions to GDP data this year, the detailed composition of our forecast errors has changed. But the broad assessment we made last year still holds. The shortfall in nominal GDP relative to the first two years of the June 2010 forecast was concentrated in areas that are relatively lightly taxed – despite upward revisions to private investment and corporate profits. The path of asset markets, of North Sea revenues and the implications of inflation for welfare spending have not been affected by data revisions.

## Explaining our forecast errors for 2013-14

1.10 Real GDP growth from early 2013 to date has been much in line with our June 2010 forecast – though from a much lower base than expected, given the shortfall that had built up by that point. And growth has been significantly stronger than our March 2013 forecast.

1.11 So what changed in 2013? Looking at our June 2010 forecast errors over time, the biggest difference between 2013 and earlier years was the lack of an external shock to knock the economy off track. In 2011, high commodity prices ate into disposable incomes and the euro area crisis damaged credit and confidence. In 2012, the euro area crisis intensified again. In 2013, credit conditions eased and confidence rebounded as the European Central Bank reduced tail risks in the euro area and the Bank of England's Funding for Lending Scheme reduced bank funding costs in the UK. The effect of these changes can be seen most clearly in household spending, which picked up in absolute terms and relative to incomes. Consumer confidence rebounded, accompanied by a drop in the saving ratio. Our March 2013 forecast was produced just as confidence was turning and we under-estimated the extent to which confidence and spending would subsequently pick up.

1.12 An easing in the pace of fiscal consolidation – and the lagged effects of prior years' consolidation – also reduced the drag on growth from fiscal policy in 2013-14. But that looks to have been of secondary importance relative to confidence and credit channels.

1.13 While some developments in 2013 were a departure from recent trends, several themes from previous years persisted. Most importantly, GDP growth was far more employment-rich

than we expected, with productivity and earnings growth lagging even our March 2013 forecast. And the strength in real GDP growth was not fully matched in nominal GDP growth, which is more important for the public finances. This meant that the public finances did not improve as rapidly as might have been expected given the pace of GDP growth.

1.14 Reflecting these developments, our forecasts for the year-on-year change in public sector net borrowing in 2013-14 have been subject to the following errors:

- in June 2010, we expected the deficit to narrow by around £30 billion in 2013-14 (to £60 billion), with receipts rising by around £40 billion and spending by just over £10 billion. The latest outturns show receipts increasing by only half that amount. The rise in cash spending was much closer to forecast; and

- receipts rose by a little more than we expected in March 2013. But nominal GDP growth outstripped our forecast by a bigger margin, so that the receipts-to-GDP ratio came in lower than expected. That in part reflected the composition of labour income and further falls in North Sea oil production. Spending also came in lower than expected, both in cash terms and as a share of GDP.

1.15 Our June 2010 forecast had also been subject to errors in previous fiscal years, which meant that the overall 2013-14 borrowing forecast was out by a bigger margin of £48 billion. Around two-thirds of that error can be directly linked to errors in the economy forecast, with the remaining third largely explained by detailed fiscal forecasting errors, many closely associated with the economy errors. The main sources of error were:

- a £25.0 billion shortfall in income tax. That reflected: lower wages and salaries and a lower effective tax rate on that income; lower self-employment income and the effect of income shifting related to the reduction of the additional rate of income tax to 45p; and lower dividend and interest income. National Insurance contributions were also £7.4 billion below forecast;

- an £8.5 billion shortfall in onshore corporation tax receipts. That was due to weaker profits and a lower effective tax rates as firms – particularly in the financial sector – carried forward more losses than expected to set off against tax liabilities. The Government has also cut the main rate of corporation tax faster than it planned to in June 2010;

- a £5.9 billion shortfall in North Sea oil and gas receipts, which came in at less than half our June 2010 forecast. That reflected lower than expected production and higher than expected operating and capital expenditure, which are fully tax deductible; and

- spending was £4.8 billion lower than expected, slightly offsetting the receipts error on borrowing. That reflected a number of spending items being slightly higher than expected, but those errors were more than offset by debt interest coming in £10.4 billion lower than forecast due to much lower interest rates on government bonds.

1.16 Our March 2013 borrowing forecast error for 2013-14 was a £12.1 billion over-estimate compared with the latest outturn. The main sources of error were:

- receipts were £9.2 billion higher than forecast due to positive surprises of £3.1 billion in income tax, £3.1 billion in VAT, £2.1 billion in onshore corporation tax and a number of smaller upside surprises. These in part reflected the unexpected strength in the economy. A shortfall of £2.1 billion in North Sea oil and gas receipts – due once again to lower production and higher expenditure – partly offset the positive errors elsewhere in the receipts forecast; and

- spending was £2.9 billion lower than expected. Departmental spending was £2.9 billion lower than forecast, but mostly due to classification changes. Our view on departmental underspending – a source of error in previous forecasts – was reasonably accurate. Debt interest was £2.1 billion lower than forecast as RPI inflation added less than expected to the cost of index-linked government bonds. But contributions to the EU were £2.5 billion higher than forecast as contributions reflect the relative performance of the UK and other EU economies – and we did not expect the UK economy to outperform the remainder of the EU to the extent that it did.

1.17 Combining our analysis of the errors we made in our borrowing forecasts with the changes we have made to our judgements about potential output – the underlying structural capacity of the economy – and the resulting gap between the actual and potential level of GDP shows that:

- the large underestimate of borrowing in our June 2010 forecast for 2013-14 was more than explained by the structural component of borrowing – that element that will remain after the economy fully recovers – being higher than expected; and

- the smaller overestimate of borrowing in our March 2013 forecast for 2013-14 was almost entirely explained by the cyclical component of borrowing being lower than expected, in other words the element that will disappear as the economy recovers.

## Lessons learnt

1.18 A number of lessons from previous *FERs* have been reinforced this year. Most obviously, the importance of the cash value – and composition – of national income and expenditure for the public finances. Our broad conclusion from last year still holds, that it has been difficult to calibrate the precise extent to which significant post-crisis challenges will affect the economy. It is clear that shocks to credit and confidence have damaged the economy and particularly productivity. But it remains difficult to judge when the economy will fully recover from this post-crisis hangover. Even the stronger GDP growth of the past year and a half has been unusually lacking in productivity growth.

1.19 Another important lesson relates to the composition of labour income – the source of over 40 per cent of tax revenues. Employment-driven growth is less tax rich because a given amount of labour income attracts a larger number of tax-free personal allowances,

reducing the effective tax rate. This suggests that recent increases in the income tax personal allowance will have been more costly than they otherwise would have been. And slow earnings growth reduces fiscal drag – the positive effect on receipts of earnings rising faster than tax thresholds and allowances. As the trend of employment-driven growth has continued in 2014-15, we will be working closely with HM Revenue & Customs to explore further the issue of effective tax rates in general – and the implied cost of personal allowance measures in particular – to inform our December *EFO* forecast of income taxes. Our forecast judgements about the composition of labour income are driven by our view on productivity growth, which remains a source of great uncertainty.

1.20 There are other areas where changes in effective tax rates are likely to remain important for future forecasts. Corporation tax has been affected by firms carrying forward past losses to set against tax liabilities – particularly in the financial sector. Stamp duty land tax receipts have been boosted as the average house price has moved above the 3 per cent threshold. Changes in the VAT gap – the difference between theoretical and actual VAT receipts – have been a source of error in the VAT forecast. And North Sea oil and gas receipts have disappointed not only because of production shortfalls, but also because tax deductible expenditure has been higher than expected. We will continue to focus on these issues and work on how best to model their expected effects on the public finances in future years.

1.21 Finally, looking back at two of the lessons we identified in previous reports – the need to take into account underspending against plans by central government departments and to forecast local authorities' additions to their reserves – we have seen smaller errors in those areas of our spending forecast in 2013-14, which is encouraging. But this will remain a challenging area to forecast, especially as budget settlements for both central and local government get progressively tighter as public spending is cut further.

## Comparison with past official forecasts

1.22 We also compare the size of our forecast errors against past official forecast errors (see Annex B). The exercise has obvious limitations as a guide to relative forecast performance. Most fundamentally, we are not comparing like with like. And, as the OBR has only produced nine forecasts so far, the sample is still small, especially beyond the shortest time horizons. For what it is worth, given the limitations of such comparisons, the errors in our real GDP and borrowing forecasts have, more often than not, been smaller than the average errors in official forecasts over the past 20 years.

# 2 The economy

## Introduction

2.1 This chapter:

- explains how real and nominal GDP growth have evolved relative to our forecasts since June 2010 (from paragraph 2.2), including the effect of substantial data revisions published by the Office for National Statistics this year (Box 2.1);
- shows how monetary policy has differed from market expectations at the time of our forecasts (from paragraph 2.12) and how other market-derived assumptions (from paragraph 2.15) and fiscal policy (from paragraph 2.20) have evolved;
- assesses developments in the composition of GDP (from paragraph 2.30) and individual sectors of the economy (from paragraph 2.46); and
- considers the behaviour of the labour market and therefore productivity (from paragraph 2.67) and potential output (from paragraph 2.75).

## The level and growth of GDP

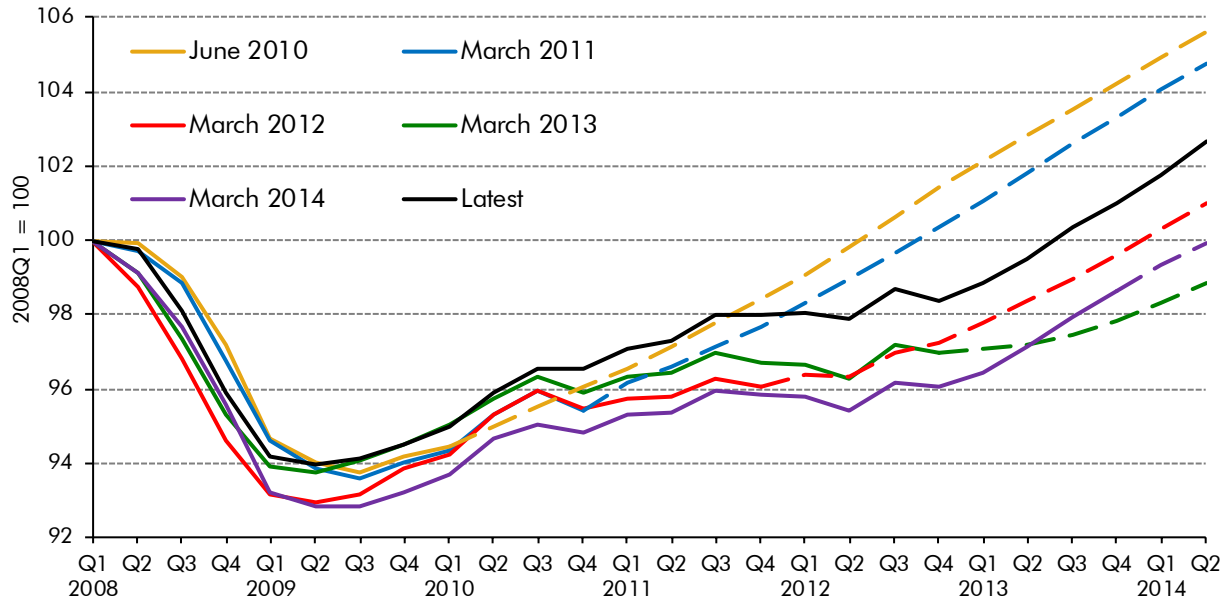
### Real GDP

2.2 The latest data from the ONS suggest that UK GDP fell by 6.0 per cent from its peak in the first quarter of 2008 to its trough in the middle of 2009. The recovery began steadily enough, gathering pace until mid-2010. But growth then slowed and output was essentially flat through 2011 and the first half of 2012, only picking up noticeably in early 2013.

2.3 We under-predicted growth through 2010 and over-predicted it in 2011 and 2012. Growth has subsequently recovered to the rates we forecast in June 2010, but only after we had significantly revised our growth forecasts for this period lower. Our most pessimistic forecast was in March 2013, around the time at which the pace of growth began to pick up.

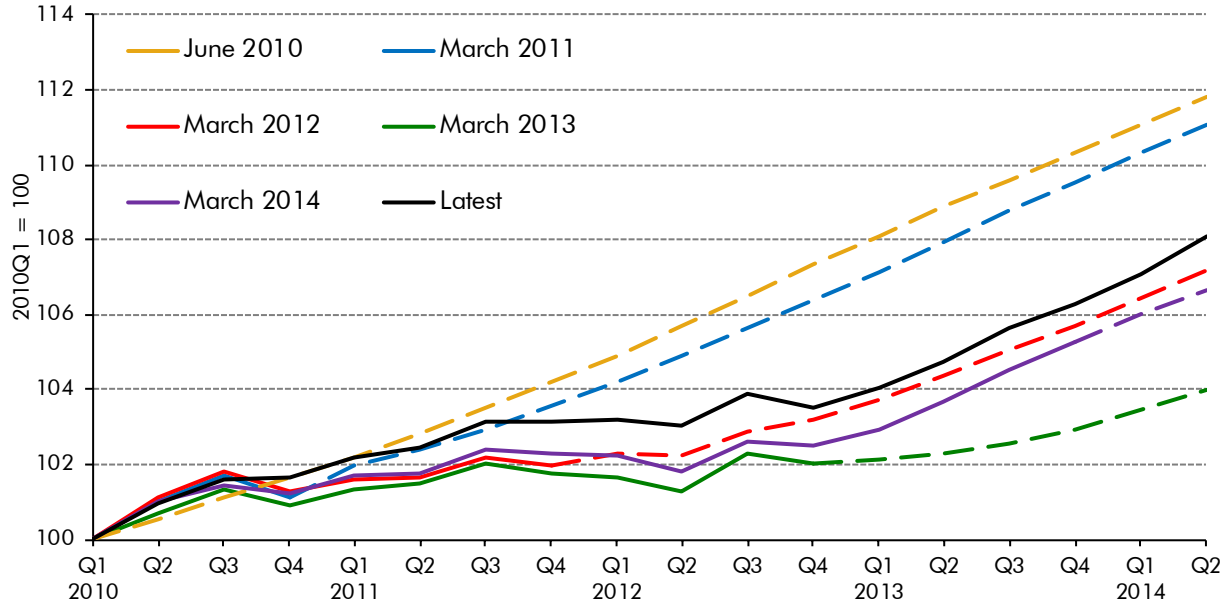
2.4 At the same time that we have been revising our forecasts for GDP in the future, the ONS has been revising its estimates of GDP in the past (Chart 2.1). The recession is now thought to have been shallower than the official data suggested at the time of our most recent forecast in March 2014 – and more in line with the picture the official data were painting in June 2010. The first phase of the recovery also appears a little stronger (Chart 2.2), with GDP now thought to have surpassed its pre-crisis peak in the third quarter of 2013 – a year earlier than we predicted in our March 2014 forecast.

## Chart 2.1: Successive forecasts and outturns for real GDP from 2008Q1




Source: ONS, OBR

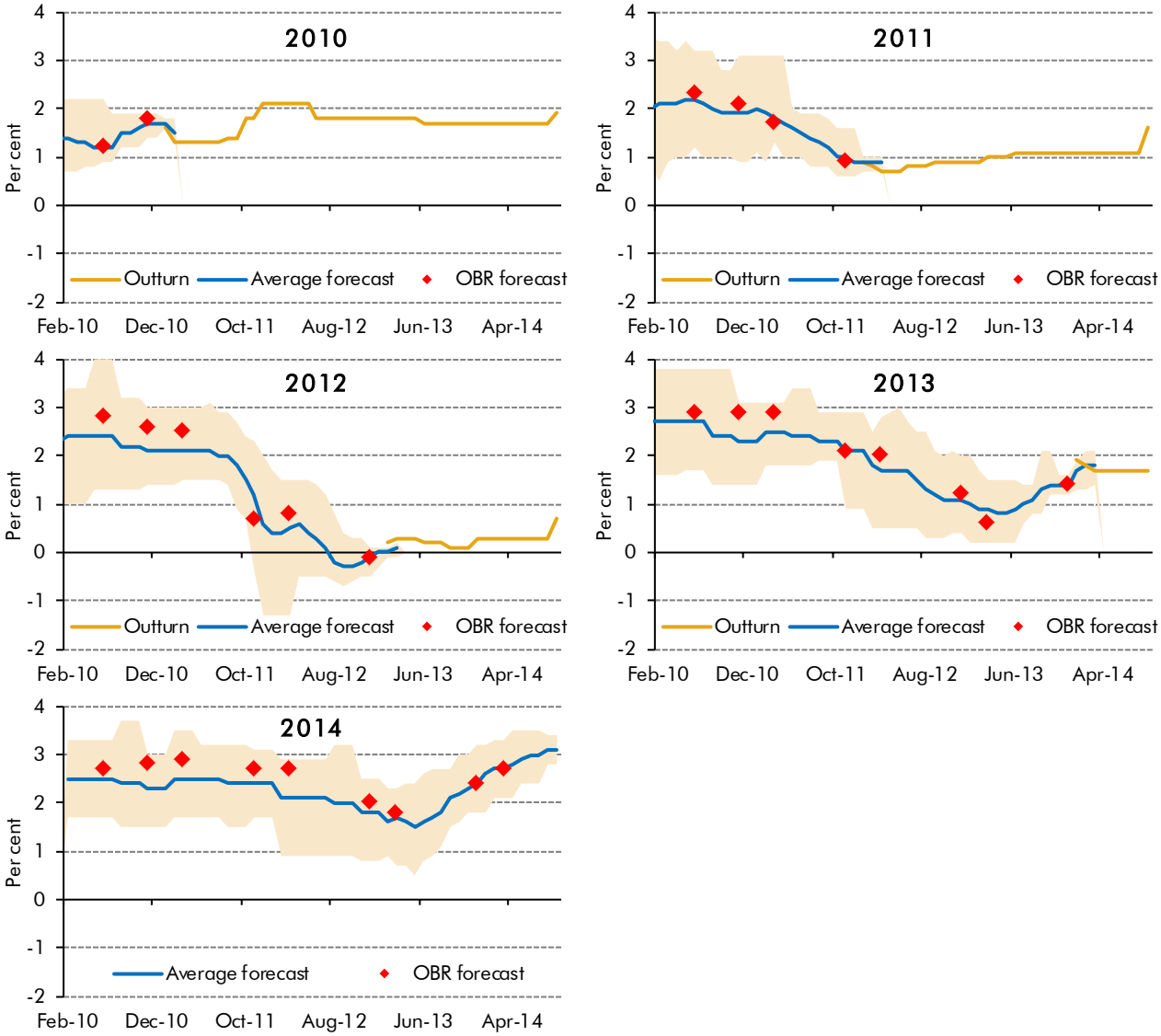
## Chart 2.2: Successive forecasts and outturns for real GDP from 2010Q1




Source: ONS, OBR

2.5 Our forecast errors have been similar to those of most outside forecasters. Chart 2.3 shows that the initial strength of the recovery in 2010 surprised many forecasters, only for the consensus to shift down consistently through 2011, 2012 and the first half of 2013. Even by August 2013, no forecaster polled by the Treasury was expecting growth in calendar year 2013 to be as strong as the ONS's latest estimate of 1.7 per cent. Currently, no external forecaster expects growth in 2014 to be as low as the 2.7 per cent we forecast in March.

## Chart 2.3: Successive forecasts and outturns for real GDP growth in 2010 to 2014




2.6 The level of output moving into the recession has been revised up in recent Blue Books. The changes in the 2014 Blue Book, including alignment of the National Accounts with updated international guidance, are discussed in Box 2.1. Judging from the experience of the recession and recovery in the early 1990s, we can expect the rewriting of economic history to continue for many years to come. So any judgements made today regarding the performance of any economic forecast made over the recession and recovery, and related questions about what has driven the forecast errors, remain provisional.

## Box 2.1: Rewriting history: Blue Book 2014

The economic data underpinning this report are consistent with the latest Blue Book, to be published on 31 October. In addition to the regular annual updates to a number of data sources (such as full-year tax data) and rebasing the figures (now to 2011), the ONS has also aligned the National Accounts to the latest international guidance, as set out in the European System of Accounts 2010 (ESA10), and taken on board a number of other methodological changes.

Spending on research and development (R&D) and some military equipment is now classified as investment (which contributes to GDP) rather than intermediate consumption (which does not). These changes have raised the level of GDP, but have not greatly affected its profile.

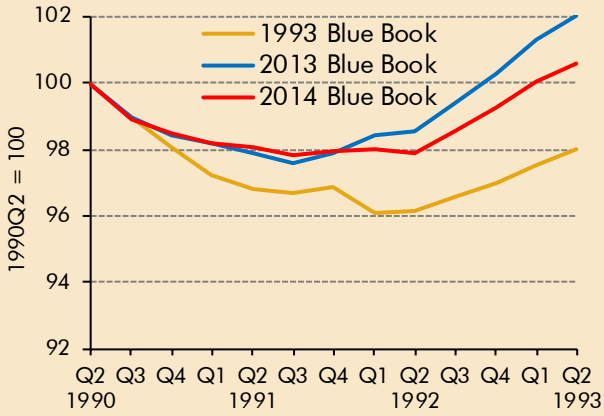
Consistent with ESA10, the treatment of pension liabilities has also changed. These largely affect particular sectors in equal and offsetting ways, so have little effect on GDP overall. Household pension saving is now determined by the promised pension benefits from pension schemes, rather than the actual contributions paid into the scheme. This raises the measured saving ratio as households' incomes are notionally higher, but consumption is unaffected.

Methodological changes unrelated to ESA10 have also generally raised GDP and have affected its path over time. These include: the inclusion of illegal activities; updates to the data and compilation process for estimating investment, inventories and imputed rent; using a new source for data on non-profit institutions serving households (NPISH); and changing the way financial intermediation services indirectly measured (FISIM) and spending on new cars are measured.

In total, the changes have raised nominal GDP by around 4 per cent in recent years. The average real growth rate has been revised down by 0.1 percentage points on average each year from 1998 to 2007 and up by 0.4 percentage points on average each year from 2008 to 2013.

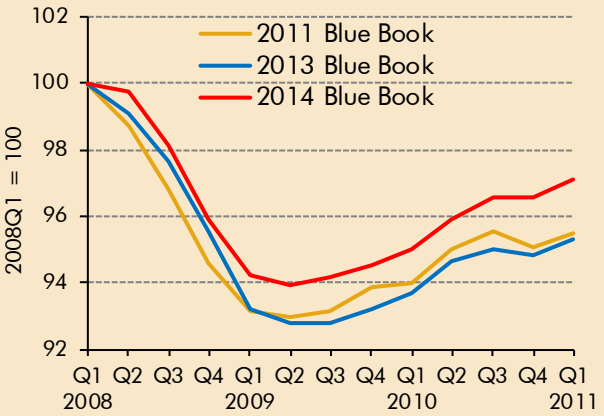
Charts A and B show the impact of revisions to Blue Book data on the path of real GDP during the recessions that started in 1990 and 2008 respectively. Between 1993 and 2013, the net effect of revisions to the estimated path of GDP over the three years following the pre-recession peak in the second quarter of 1990 was to make the earlier recession shorter, shallower and followed by a stronger economic recovery. This year's Blue Book revisions have had a similar impact on the path of the more recent recession and recovery since 2008. Ironically, this year's Blue Book revisions have also delayed and slowed the estimated recovery in the early 1990s. But the latest data still suggest that the earlier recession was only half as deep as initial estimates suggested and that all of the loss of GDP had been recouped by the second quarter of 1993, while the National Accounts published at the time suggested that only half had been.

Chart A: The changing profile of the 1990s recession and recovery




Source: ONS

Chart B: The changing profile of the latest recession and recovery

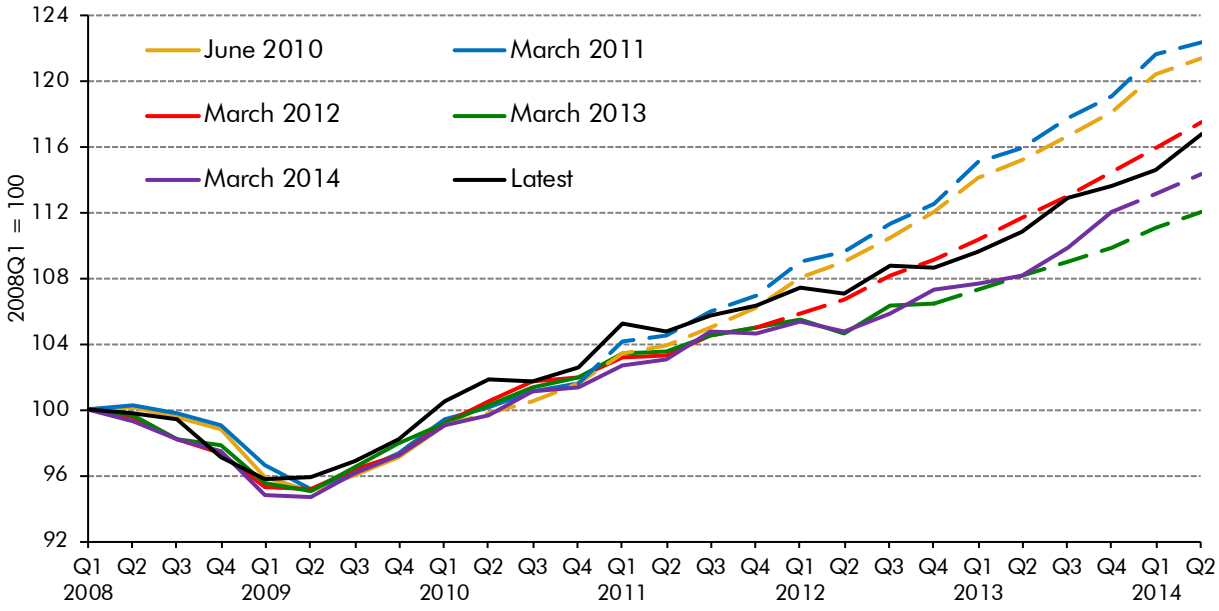



Source: ONS

## Nominal GDP

2.7 Public discussion of economic forecasts tends to focus on real GDP – the volume of goods and services produced in the economy. But the nominal or cash value is more important to the behaviour of the public finances. Tax receipts are driven more by nominal GDP and so is the share of GDP devoted to public spending, when a large proportion of that spending is set out in multi-year cash plans (public services and administration) or linked to consumer price inflation (benefits and tax credits). Chart 2.4 shows the evolution of forecasts and outturns for nominal GDP since the pre-recession peak in the first quarter of 2008.

Chart 2.4: Successive forecasts and outturns for nominal GDP from 2008Q1




Source: ONS, OBR

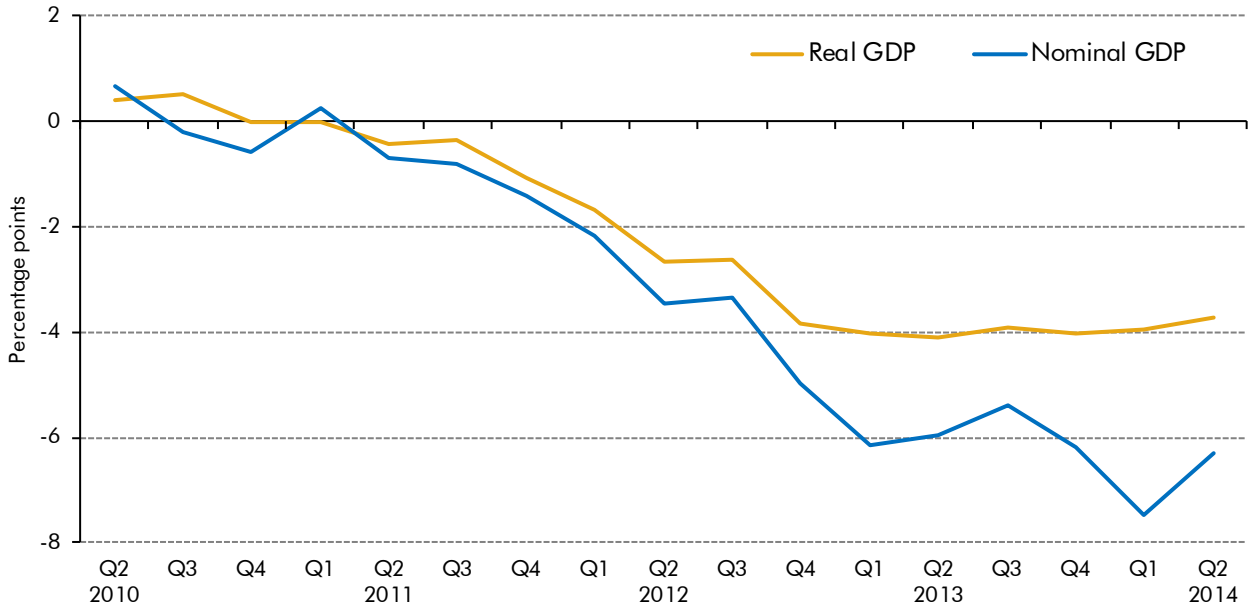
2.8 The latest estimates show that nominal GDP fell by 4.2 per cent between its pre-crisis peak and its trough in the first quarter of 2009, before recovering to its previous peak by early 2010. As with real GDP, this represents a smaller fall and a swifter recovery than implied by previous data releases.

2.9 With whole economy inflation initially coming in higher than expected, we raised our nominal GDP forecasts slightly in March 2011, only to revise them down again over the subsequent two years as real output disappointed. We have since revised our forecasts up for nominal GDP more gradually than those for real output, as inflation has slowed.

2.10 Chart 2.5 shows our June 2010 real and nominal GDP growth forecast errors since the beginning of 2010. Our error in forecasting the level of real GDP increased from mid-2011, as the recovery stalled rather than gathering pace as in most previous recoveries. But it then stabilised at around 4 per cent from the end of 2012, as growth resumed once more.

2.11 Nominal GDP growth has underperformed to a greater extent, and by more than 6 per cent over the period as a whole. Our nominal growth error tracked our real growth error over the first half of the period, but the two paths then diverged as whole economy inflation came in weaker than expected, pulling nominal GDP further below forecast.

## Chart 2.5: Cumulative errors in June 2010 GDP forecasts since 2010Q1



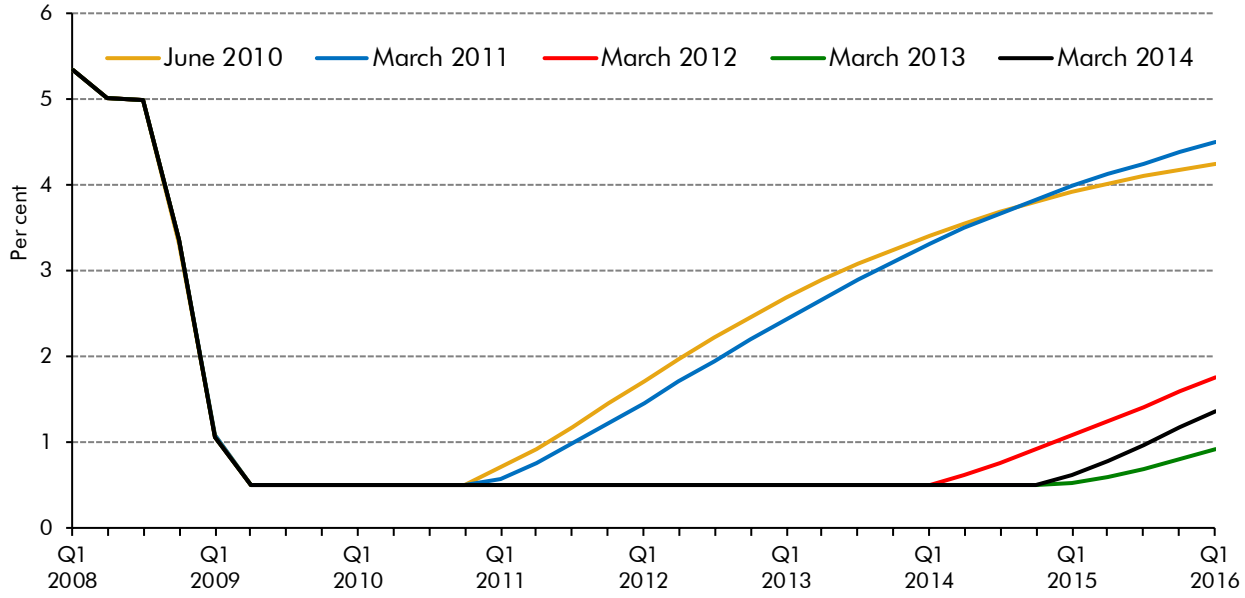

Source: ONS, OBR

# Forecast conditioning assumptions

## Monetary policy

2.12 The Bank Rate projections underpinning our forecasts are based on market expectations at the time of each forecast, derived from the price of interest rate swaps. At the time of our June 2010 forecast, these implied an initial rise in rates within a year and steady increases thereafter, up to around 3½ per cent by mid-2014 (Chart 2.6). Subsequently expectations of rate increases were pushed out significantly as the recovery stalled. The first Bank Rate rise is now expected in early 2015 – slightly earlier than anticipated a year ago.

### Chart 2.6: Successive projections for Bank Rate




Source: Bank of England, OBR

2.13 Non-traditional monetary policy tools have also been deployed, through further quantitative easing (QE) and – in mid-2012 – the launch of the Funding for Lending Scheme (FLS), which provides relatively cheap funding to banks lending to the real economy. At around the same time, the European Central Bank created its Outright Monetary Transactions (OMT) facility, removing significant tail risks from euro markets (even though the facility has not been used). UK banks' wholesale funding costs have since fallen significantly.

2.14 Low interest rates over the period have predominantly helped existing, low-risk borrowers. They have helped keep corporate failures low, while large businesses with access to wholesale markets have benefitted from a large drop in corporate bond yields. The supply of new credit has remained tight, and growth in the stock of lending to households and private non-financial corporations remains weak. But the drop in wholesale funding costs has been associated with lower rates offered on new loans, particularly for mortgages.

## Other conditioning assumptions

2.15 The economic forecast is conditioned on a number of other market-derived assumptions, including oil, equity and government bond prices. These are important fiscal determinants. Table 2.1 compares these assumptions to subsequent outturns up to the end of 2012, and Table 2.2 over the period since. These comparisons should be considered in the context of the substantial volatility in global asset prices in the aftermath of the financial crisis, driven particularly by developments in the euro area.

2.16 Oil prices increased substantially through 2010 and early 2011, lifted by strong emerging market demand to a level well above our June 2010 forecast assumption. But the price fell back slightly as global growth slowed, and has since levelled off. Safe-haven demand for gilts, falling Bank Rate expectations and additional QE all served to push the yield on gilts to all-time lows. In June 2010, market rates implied a weighted average conventional gilt rate of 4½ per cent by the end of 2012, almost 3 percentage points above the eventual outturn.

2.17 Equity prices initially oscillated above and below our assumptions, but have since moved significantly higher on the back of an improving economic outlook. Gilt yields have risen gradually, but remain low. The sterling effective exchange rate (ERI) has appreciated over the period, in part reflecting better relative growth prospects for the UK compared to other major developed economies.

2.18 Tables 2.1 and 2.2 also compare our forecasts and outturns for house prices and residential property transactions. Our house price assumptions have in the past been based on the independent consensus over the short term and average earnings growth over the longer term, although we moved to using our own house price model in December 2013.[1] Our forecast for property transactions over the short term is also heavily guided by our assumptions on credit conditions.

2.19 House prices continued to decline through 2010, and were essentially flat through 2011. Prices began to recover in 2012, but it was not until 2013 that they gathered real momentum. House prices have now caught up with our June 2010 forecast, but transactions remain some way below. Conversely, prices have been much stronger than anticipated in more recent forecasts, but property transactions closer.

### Table 2.1: Other conditioning assumptions from 2010Q1 to 2012Q4

| | Percentage growth, unless otherwise stated | | | | | |
|---|---|---|---|---|---|---|
| | Oil price ($ at 2012Q4) | Equity prices | Gilt rate (per cent at 2012Q4) | ERI exchange rate (index at 2012Q4) | House prices | Property transactions (rise, '000s) |
| June 2010 forecast | 88.9 | 1.7 | 4.5 | 78.6 | 7.6 | 41.8 |
| Latest data | 114.2 | 6.3 | 1.7 | 83.6 | 2.8 | 6.6 |
| Difference[1] | 25.4 | 4.6 | -2.8 | 5.0 | -4.8 | -35.2 |

[1] Difference in unrounded numbers.

[1] Further details can be found in our *Working paper No.6: Forecasting house prices*.

## Table 2.2: Other conditioning assumptions from 2012Q4 to 2014Q2

| | Percentage growth, unless otherwise stated | | | | | |
|---|---|---|---|---|---|---|
| | Oil price ($ at 2014Q2) | Equity prices | Gilt rate (per cent at 2014Q2) | ERI exchange rate (index at 2014Q2) | House prices | Property transactions (rise, '000s) |
| June 2010 forecast | 91.2 | 8.4 | 4.9 | 78.0 | 6.8 | 16.4 |
| March 2012 forecast | 109.8 | 7.7 | 3.1 | 80.9 | 2.3 | 24.7 |
| March 2013 forecast | 110.8 | 12.7 | 2.8 | 79.2 | 2.0 | 13.2 |
| Latest data | 113.6 | 16.4 | 2.3 | 86.9 | 12.1 | 24.0 |
| Difference[1] | | | | | | |
| June 2010 | 22.3 | 8.0 | -2.6 | 8.9 | 5.3 | 7.6 |
| March 2012 | 3.8 | 8.7 | -0.7 | 6.0 | 9.8 | -0.7 |
| March 2013 | 2.8 | 3.7 | -0.4 | 7.7 | 10.1 | 10.8 |

[1] Difference in unrounded numbers.

## Fiscal policy

2.20 The past four financial years have seen a large discretionary fiscal tightening implemented in the UK. It is natural to ask what role this may have played in explaining our GDP growth forecast errors – either because the policy path differed from initial plans or because a given amount of tightening had a different impact on growth.

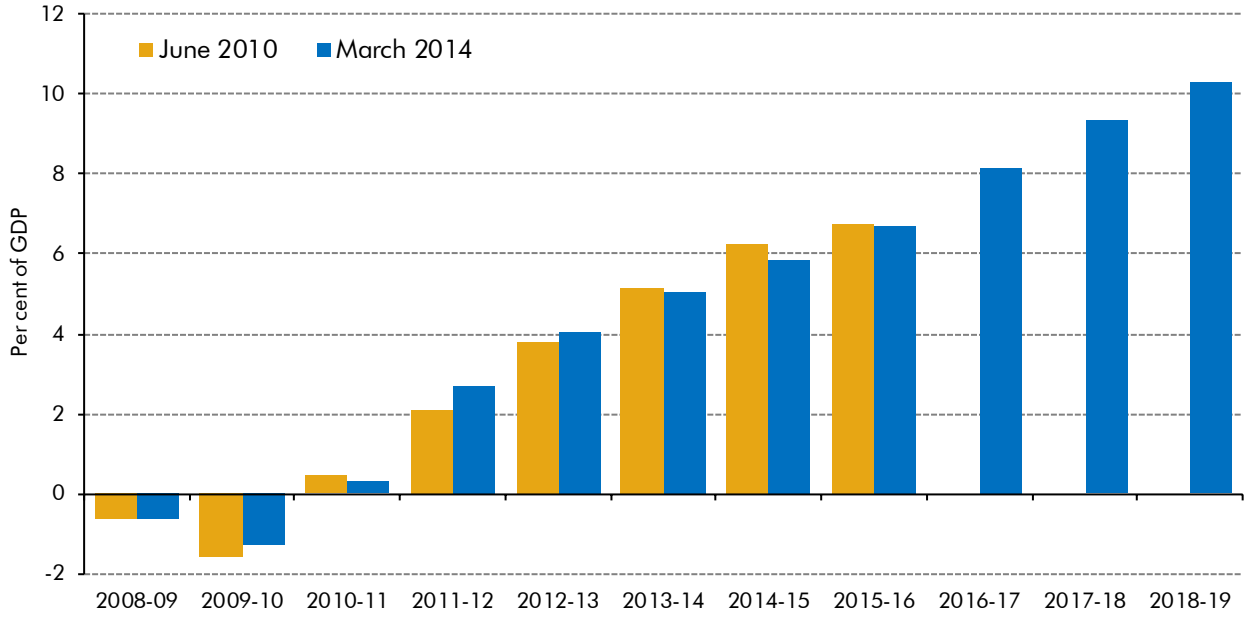
2.21 In answering the latter question, we are concerned with the aggregate impact of different types of fiscal tightening on GDP, not just the direct contribution that government investment and consumption of goods and services makes to the expenditure measure of GDP.

2.22 For simplicity, we adopt the definition of the tightening used by the Institute for Fiscal Studies (IFS).[2] Chart 2.7 shows the discretionary fiscal tightening or loosening in each fiscal year, relative to a Budget 2008 baseline, as planned in June 2010 and as estimated after the March 2014 Budget. Chart 2.8 shows the changes from year to year. They show that:

- the discretionary tightening between 2009-10 and 2010-11 (mainly the withdrawal of temporary stimulus measures) was slightly smaller than originally planned, mainly due to the 50p rate of income tax prompting more forestalling in 2009-10 and hence also less revenue in 2010-11 than had been expected at the time;
- the additional discretionary tightening in 2011-12 was larger than expected, as departments under-spent relative to their budget allocations; and
- the tightening through 2012-13 to 2014-15 is smaller than we thought in June 2010 – with less through investment and more through welfare measures, partly offset by some tax cuts. But this will be followed with bigger spending cuts in subsequent years.

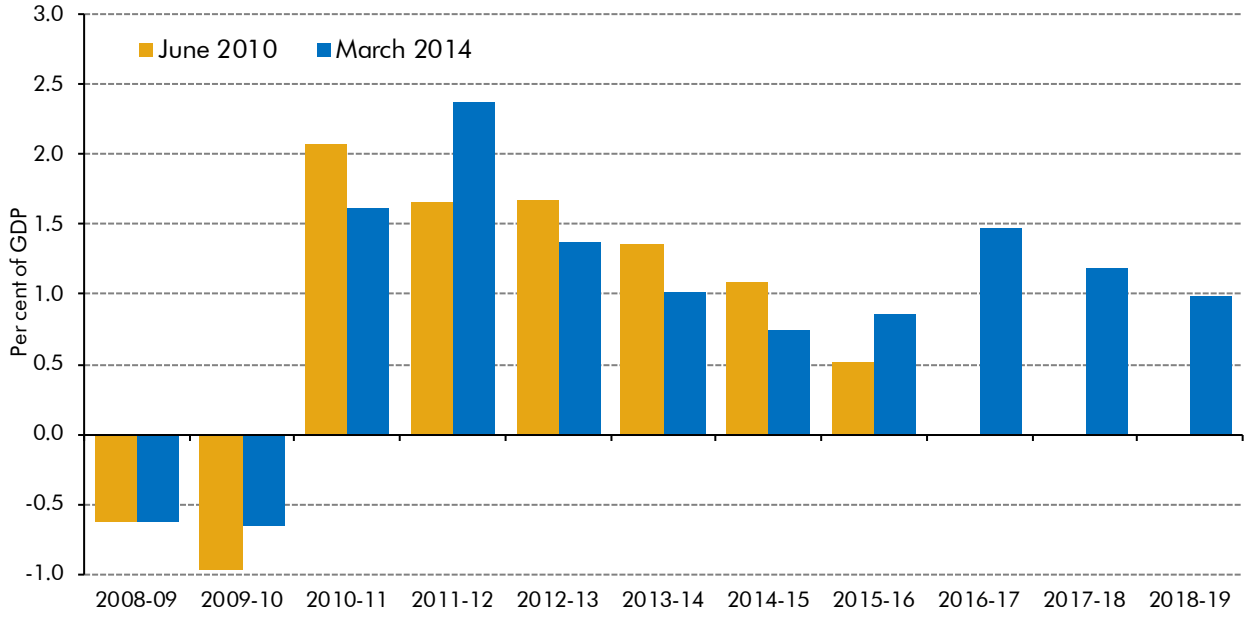
[2] Box 3.5 of our *Working paper No. 7: Crisis and consolidation in the public finances* considers the challenges in quantifying the amount of consolidation.

## Chart 2.7: Fiscal consolidation relative to Budget 2008 baseline




Source: IFS

## Chart 2.8: Additional fiscal tightening or loosening each year

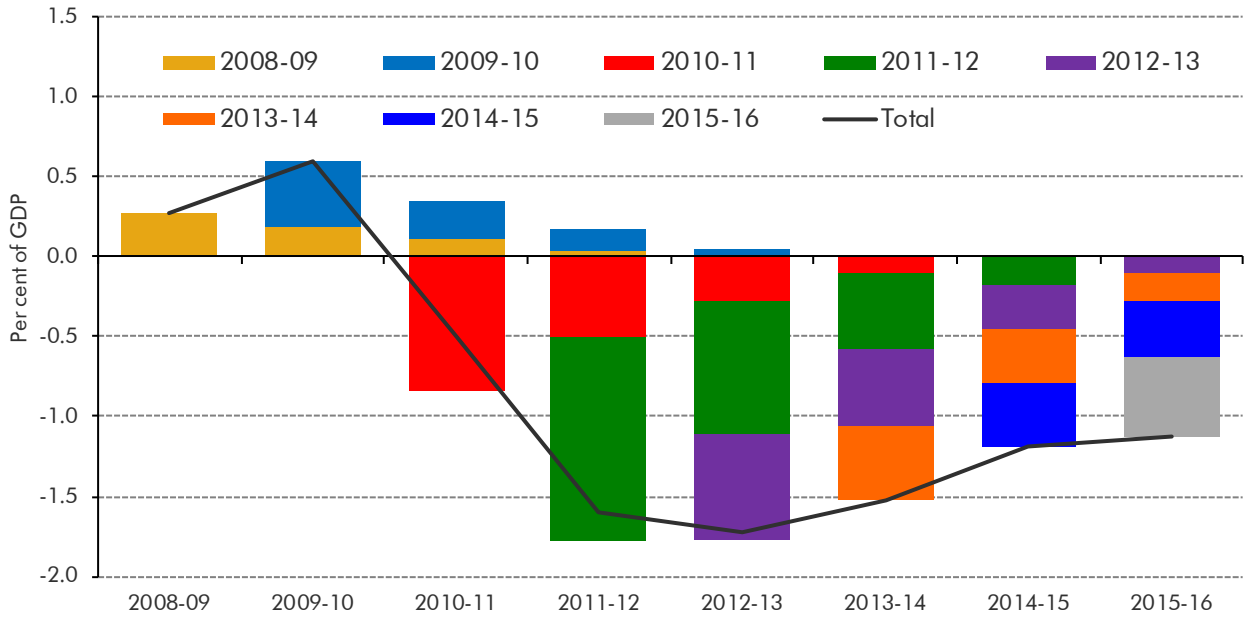



Source: IFS

2.23 In June 2010, the interim OBR estimated the impact that the additional fiscal tightening announced in the Coalition's first Budget would have on growth through the use of 'fiscal multipliers'. These implied that a discretionary tightening of 1 per cent of GDP would reduce output by between 1 per cent (in the case of investment cuts) and 0.3 per cent (for income tax and NICs increases) in the first instance, with the impact unwinding over time.

2.24 The implied impact of the latest estimate of the multi-year fiscal tightening on the level of GDP is shown in Chart 2.9. This identifies the effects of policies by the year in which they affect net borrowing, rather than when they were announced. For example, the green bars show the effects of the fiscal tightening implemented in 2011-12, both for GDP in that year, and its diminishing effect subsequently as the initial 'impact multiplier' reduces over time.

## Chart 2.9: Implied impacts of discretionary fiscal policy on the level of GDP

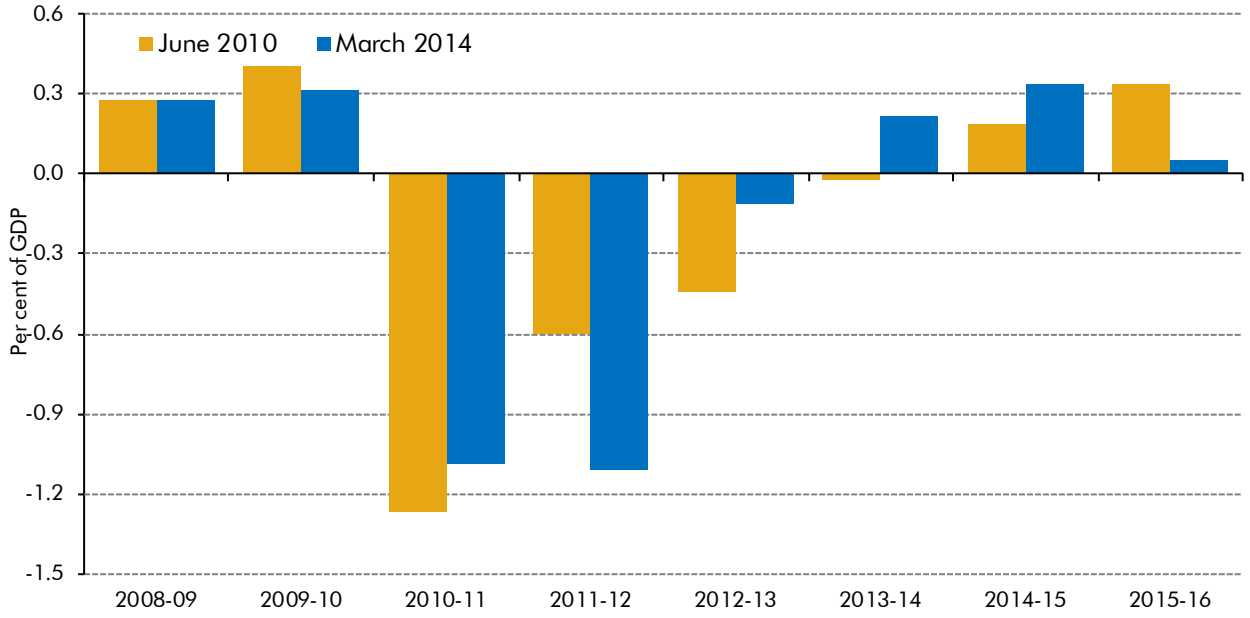



Source: OBR

2.25 The implications for growth in any particular year depend not just on how large an immediate impact new measures have, but also how quickly the lagged effects of previous policies fade. Taking the set of multipliers we used in June 2010 at face value would suggest that the consolidation reduced GDP growth by around 1.1 percentage points in both 2010-11 and 2011-12, with small effects (negative, then positive) in later years.

2.26 The drag on growth appears larger in 2011-12, and smaller in 2012-13, than we assumed in June 2010 and compared to the estimates we presented in last year's report. This reflects updates to the IFS's year-by-year quantification of the consolidation, relating to under-spending by departments relative to their own plans and to the limits set for them by the Treasury, and changes to its costing of the decision to uprate many benefits and tax credits with CPI rather than RPI. (Under-spending was larger in absolute terms in 2012-13 than 2011-12, while the narrower-than-expected gap between RPI and CPI inflation in those years will have changed the size and profile of estimated savings from the change to indexation arrangements that was announced in Budget June 2010). The growth uplift in 2013-14 and 2014-15 also appears to be marginally greater.

## Chart 2.10: Implied impacts of discretionary fiscal policy on GDP growth




Source: OBR

2.27 Relative to our June 2010 forecast, GDP growth was slightly stronger than expected in 2010-11, then weaker than expected in 2011-12 and lower still in 2012-13. The fact that the additional consolidation in 2011-12 now appears to have been significantly larger than we expected in June 2010 – and somewhat larger than the IFS estimated a year ago – could help to explain the weakness of GDP growth in that year, relative to our June 2010 forecast. But even if the consolidation had a permanent level effect on GDP, which did not fade over time, it would still be too small to explain the scale of our errors over the whole period.

2.28 The fiscal multipliers would therefore need to have been significantly bigger than we assumed to fully explain our growth errors over that period – and they would also need to have tailed off more quickly if we also want them to explain the unexpected pick-up in GDP growth from early 2013. Some economists believe that this is indeed the case, but if the multipliers were much larger than we assumed, then growth should also have been much weaker than we forecast in June 2010 in 2010-11. But the opposite was the case.

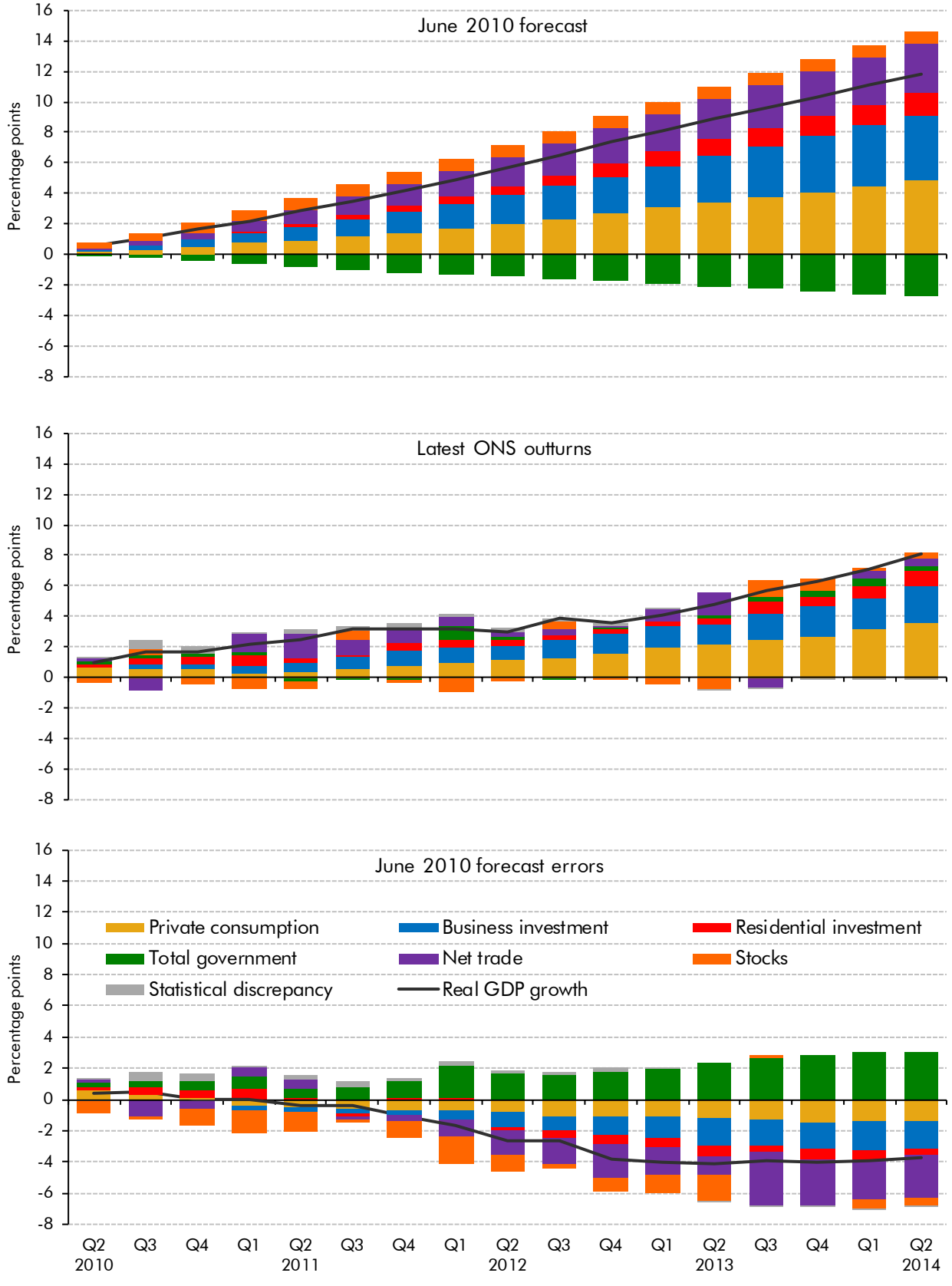
2.29 Needless to say there is huge uncertainty around the timing, size and persistence of the multipliers. We cannot rule out the possibility that the fiscal consolidation helps explain our growth forecast errors over the recent past – not simply because the consolidation appears to have been larger than originally expected in the early years of the recovery, but also because a given amount of consolidation may have been more harmful than we assumed. But, as discussed, the latter seems hard to square with the size and direction of our forecast errors early in the recovery. We might also have expected a different pattern of errors in our forecasts for the composition of spending, with a greater impact on nominal consumption than on other types of expenditure. We turn to the composition of our growth errors next.

# The composition of GDP

## The expenditure composition of GDP

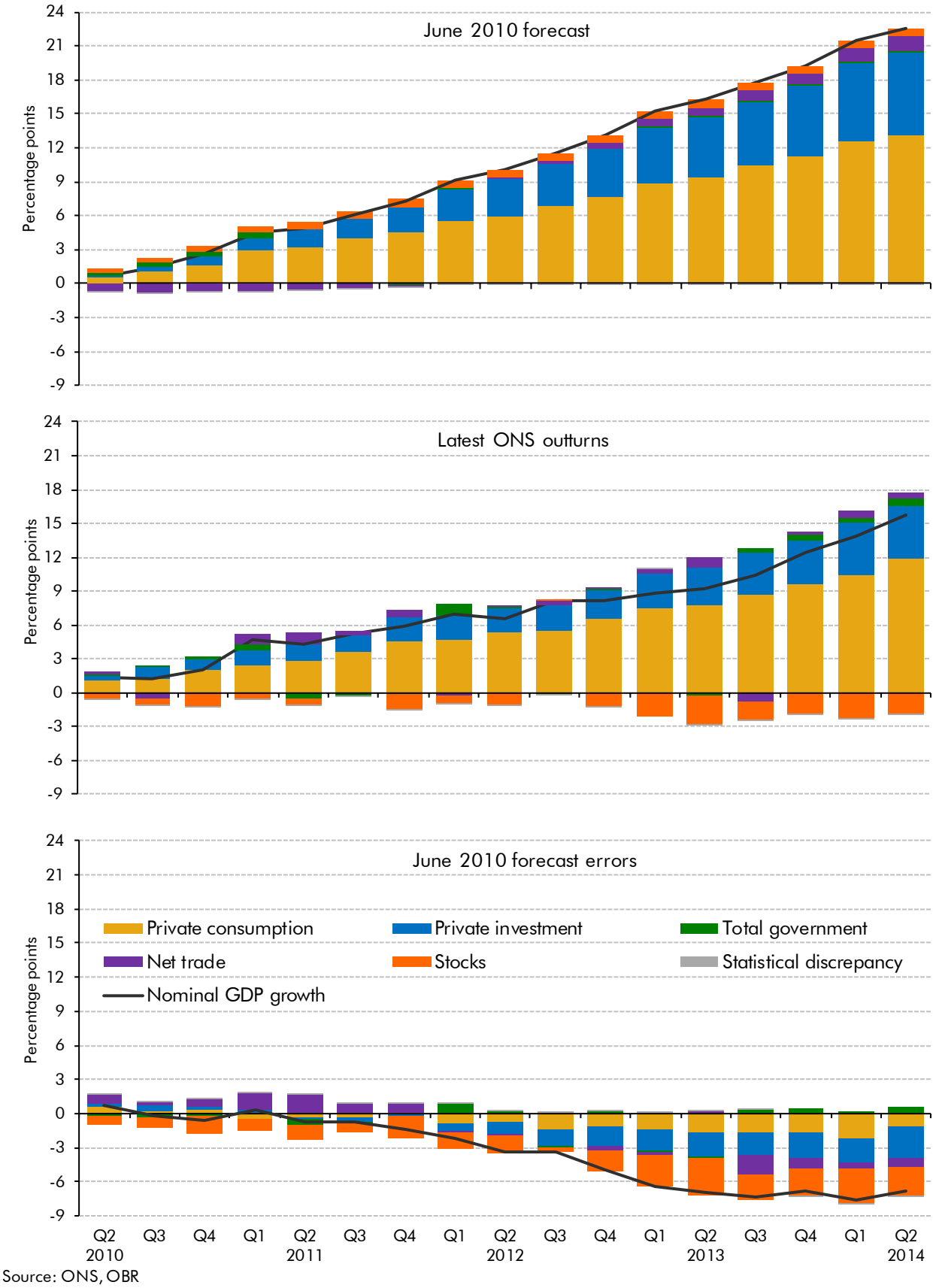
2.30 In order to understand why GDP growth was initially much slower than expected, and then why it surprised us again by snapping back to stronger rates, it is helpful to examine how the different components of GDP have evolved over time. The composition of nominal GDP is as important for the public finances as its overall level, as the effective tax rates on the different components of income and spending vary widely. Charts 2.11 and 2.12 show our June 2010 forecasts for real and nominal GDP growth since the first quarter of 2010, along with the latest set of outturns and the implied errors.

## Chart 2.11: Contributions to real GDP growth from 2010Q1: June 2010 forecast, outturns, and errors




Source: ONS, OBR

## Chart 2.12: Contributions to nominal GDP growth from 2010Q1: June 2010 forecast, outturns, and errors




Source: ONS, OBR

## Expenditure growth from 2010Q1 to 2012Q4

2.31 Tables 2.3 and 2.4 summarise the above charts up to the final quarter of 2012, and Table 2.5 shows the main deflators over the same period (similar tables by calendar year can be found in Annex A). They also show the outturn data available at the time of last year's report, and revisions since.

2.32 The outturn data available a year ago suggested that our errors for real and nominal GDP growth were broadly comparable. Both sets of outturn data have since been revised up, but real GDP has been revised up more than nominal GDP. In summary:

- upward revisions have been concentrated in business investment, which is now thought to have risen from early 2010 to late 2012 rather than falling as in earlier outturn data;
- the net trade contribution is smaller in real terms over this period than it appeared last year, but now positive in nominal terms, reflecting revisions to the terms of trade;
- real private consumption is broadly unchanged from last year, but the consumption deflator – and therefore nominal consumer spending – has been revised down, mainly relating to changes in estimates of imputed rents;
- real government spending is also unchanged since last year, but price growth now appears to be marginally positive, rather than negative; and
- there have been relatively large downward revisions to growth contributions from stocks, particularly in nominal terms following changes to the deflation methodology.

### Table 2.3: Contributions to real GDP growth from 2010Q1 to 2012Q4

| | Percentage points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Private consumption | Business investment | Residential investment | Total Government | Net trade | Stocks | GDP | Statistical discrepancy |
| June 2010 forecast (a) | 2.7 | 2.4 | 0.9 | -1.7 | 2.3 | 0.8 | 7.4 | 0.0 |
| FER 2013 data (b) | 1.7 | -0.8 | 0.4 | 0.1 | 0.4 | 0.6 | 2.1 | -0.2 |
| Latest data (c) | 1.6 | 1.3 | 0.3 | 0.1 | 0.2 | -0.1 | 3.5 | 0.2 |
| Revision to data (c-b)[1] | -0.1 | 2.2 | -0.1 | 0.0 | -0.3 | -0.7 | 1.4 | 0.4 |
| Difference (c-a)[1] | -1.1 | -1.1 | -0.6 | 1.8 | -2.1 | -0.9 | -3.8 | 0.2 |

[1] Difference in unrounded numbers.

## Table 2.4: Contributions to nominal GDP growth from 2010Q1 to 2012Q4

| | Percentage points | | | | | | |
|---|---|---|---|---|---|---|---|
| | Private consumption | Private investment | Total Government | Net trade | Stocks | GDP | Statistical discrepancy |
| June 2010 forecast (a) | 7.7 | 4.2 | 0.0 | 0.5 | 0.7 | 13.1 | 0.0 |
| FER 2013 data (b) | 7.6 | -0.3 | 0.0 | -0.3 | 0.8 | 7.6 | -0.2 |
| Latest data (c) | 6.5 | 2.5 | 0.1 | 0.1 | -1.2 | 8.1 | 0.0 |
| Revision to data (c-b)[1] | -1.0 | 2.8 | 0.1 | 0.4 | -2.0 | 0.5 | 0.2 |
| Difference (c-a)[1] | -1.2 | -1.7 | 0.1 | -0.4 | -1.9 | -5.0 | 0.0 |

[1] Difference in unrounded numbers.

## Table 2.5: Growth in National Accounts deflators from 2010Q1 to 2012Q4

| | Per cent | | | | | |
|---|---|---|---|---|---|---|
| | Private consumption | Private investment | Total Government | Exports | Imports | GDP |
| June 2010 forecast (a) | 7.4 | 7.7 | 7.2 | 1.2 | 7.4 | 5.3 |
| FER 2013 data (b) | 9.1 | 1.8 | -0.3 | 5.7 | 7.8 | 5.4 |
| Latest data (c) | 7.7 | 6.4 | 0.3 | 7.3 | 7.1 | 4.4 |
| Revision to data (c-b)[1] | -1.4 | 4.6 | 0.6 | 1.6 | -0.8 | -1.0 |
| Difference (c-a)[1] | 0.2 | -1.3 | -6.8 | 6.1 | -0.4 | -0.9 |

[1] Difference in unrounded numbers.

2.33 The charts and tables also show that:

- our June 2010 real GDP growth forecast assumed a smooth pick-up in private expenditure, with business investment and net trade contributing almost as much as private consumption. Restocking and a recovery in residential investment were also expected to contribute to real GDP growth, with the direct effect of government spending cuts the only drag;

- around 60 per cent of the increase in nominal GDP was expected to come through higher nominal consumer spending, with another third through investment, and smaller amounts from net trade and stocks. Nominal government spending was expected to be broadly flat;

- the latest outturns show private consumption to be the largest contributor to both real and nominal GDP growth, rising gradually over the period, followed by business investment. Net trade and government spending added little to growth over the whole period, although for net trade this masked positive contributions through 2011 and negative contributions through 2012, the time of greatest uncertainty in the euro area. Changes in stocks have been erratic, but generally negative – particularly in nominal terms;

- our largest error in overestimating real growth came from net trade, followed by business investment and private consumption, and then stocks and residential investment. Only real government spending surprised on the upside. At the time of last

year's report, business investment appeared to be the biggest drag, followed by net trade and consumption; and

- in nominal terms our errors were concentrated in investment and stocks, followed by private consumption, with net trade and government spending contributing smaller and offsetting amounts. Last year's set of data suggested that our error was largely confined to investment, with private consumption holding up.

## Expenditure growth since 2012Q4

2.34 Real GDP contracted in the final quarter of 2012 – partly a legacy of Olympics-related spending boosting GDP the previous quarter. But it has since picked up relatively strongly. Growth has been roughly in line with our June 2010 forecast, but from a much lower base reflecting our over-optimism for the earlier period. That over-optimism also led us to revise down our growth forecasts for 2013 and beyond.

2.35 Tables 2.6 and 2.7 show our real and nominal growth errors over this more recent period to mid-2014 for the June 2010, March 2012 and March 2013 forecasts. Table 2.8 compares our forecasts for the deflators. They show that:

- our June 2010 forecast was for medium-term growth to be led by private consumption and business investment, with the contribution from net trade slowing and government spending remaining a drag in real terms, albeit rising slightly in nominal terms;

- we progressively revised down our forecast for real private consumption, taking it further away from the latest estimated outturn. But consumer prices have been lower than we expected in all three forecasts;

- our expectations for private investment also became steadily more pessimistic over time. Business investment is estimated to have come in below our June 2010 forecast, but closer to our March 2012 forecast and above our March 2013 forecast;

- our forecasts for the contribution from net trade have narrowed between forecasts, but have been a relatively small part of the overall error over this horizon – unlike the earlier period;

- real government spending has surprised on the upside. This mainly reflects weaker growth in implied prices, rather than higher cash spending by departments. We gradually revised our forecasts closer to the eventual outturn; and

- changes in stocks – which include an ONS alignment adjustment in the National Accounts – have added to growth by more than expected in each forecast.

## Table 2.6: Contributions to real GDP growth from 2012Q4 to 2014Q2

| | Percentage points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Private consumption | Business investment | Residential investment | Total Government | Net trade | Stocks | GDP | Statistical discrepancy |
| June 2010 forecast | 2.0 | 1.7 | 0.5 | -1.0 | 0.8 | 0.0 | 4.1 | 0.0 |
| March 2012 forecast | 1.9 | 1.1 | 0.9 | -0.6 | 0.6 | 0.0 | 3.8 | 0.0 |
| March 2013 forecast | 0.7 | 0.6 | 0.5 | 0.0 | 0.3 | -0.2 | 1.9 | 0.0 |
| Latest data | 1.9 | 1.1 | 0.7 | 0.2 | 0.3 | 0.4 | 4.4 | -0.3 |
| Difference[1] | | | | | | | | |
| June 2010 | -0.1 | -0.6 | 0.2 | 1.2 | -0.6 | 0.4 | 0.2 | -0.3 |
| March 2012 | 0.0 | 0.0 | -0.1 | 0.9 | -0.3 | 0.4 | 0.6 | -0.3 |
| March 2013 | 1.2 | 0.5 | 0.3 | 0.3 | 0.0 | 0.6 | 2.4 | -0.3 |

[1] Difference in unrounded numbers.

## Table 2.7: Contributions to nominal GDP growth from 2012Q4 to 2014Q2

| | Percentage points | | | | | | |
|---|---|---|---|---|---|---|---|
| | Private consumption | Private investment | Total Government | Net trade | Stocks | GDP | Statistical discrepancy |
| June 2010 forecast | 4.8 | 2.7 | 0.1 | 0.8 | 0.0 | 8.4 | 0.0 |
| March 2012 forecast | 4.3 | 2.5 | 0.1 | 0.7 | 0.1 | 7.7 | 0.0 |
| March 2013 forecast | 3.2 | 1.4 | 0.4 | 0.2 | 0.1 | 5.4 | 0.0 |
| Latest data | 3.6 | 2.0 | 0.5 | 0.5 | 1.2 | 7.5 | -0.3 |
| Difference[1] | | | | | | | |
| June 2010 | -1.2 | -0.7 | 0.4 | -0.3 | 1.2 | -0.8 | -0.3 |
| March 2012 | -0.7 | -0.5 | 0.4 | -0.2 | 1.2 | -0.1 | -0.3 |
| March 2013 | 0.4 | 0.6 | 0.1 | 0.3 | 1.2 | 2.2 | -0.3 |

[1] Difference in unrounded numbers.

## Table 2.8: Growth in National Accounts deflators from 2012Q4 to 2014Q2

| | Per cent | | | | | |
|---|---|---|---|---|---|---|
| | Private consumption | Private investment | Total Government | Exports | Imports | GDP |
| June 2010 forecast | 4.0 | 4.0 | 4.7 | 2.5 | 2.5 | 4.1 |
| March 2012 forecast | 3.6 | 4.3 | 3.2 | 1.0 | 0.7 | 3.7 |
| March 2013 forecast | 3.7 | 3.0 | 1.9 | 4.3 | 4.2 | 3.3 |
| Latest data | 2.5 | 1.2 | 1.1 | -1.7 | -2.2 | 3.0 |
| Difference[1] | | | | | | |
| June 2010 | -1.6 | -2.8 | -3.6 | -4.2 | -4.7 | -1.0 |
| March 2012 | -1.1 | -3.2 | -2.1 | -2.7 | -2.9 | -0.7 |
| March 2013 | -1.2 | -1.9 | -0.7 | -5.9 | -6.4 | -0.3 |

[1] Difference in unrounded numbers.

2.36 So while real GDP growth over this period has been close to our original forecast in June 2010, nominal GDP growth has drifted further away. Notably, private consumption growth has been weaker in nominal terms, but close to forecast in real terms, and government spending has been close to forecast in cash terms, but much stronger in volumes.

2.37 By March 2012, we had reduced our forecast for real GDP growth slightly, but our forecast for nominal growth rather more. Our real growth error therefore appears a little larger, but nominal spending was close to forecast.

2.38 Our forecast for growth over the last two years reached its most pessimistic in March 2013. Both real and nominal GDP growth have come in over 2 percentage points stronger than that forecast:

- private consumption accounts for half of the real growth error. With the exception of net trade, which was close to forecast, all other have components surprised on the upside; and

- we overestimated consumer prices, so our nominal consumption error was smaller. Investment and net trade were also stronger than expected, but stocks currently appear to explain more than half of our overall error.

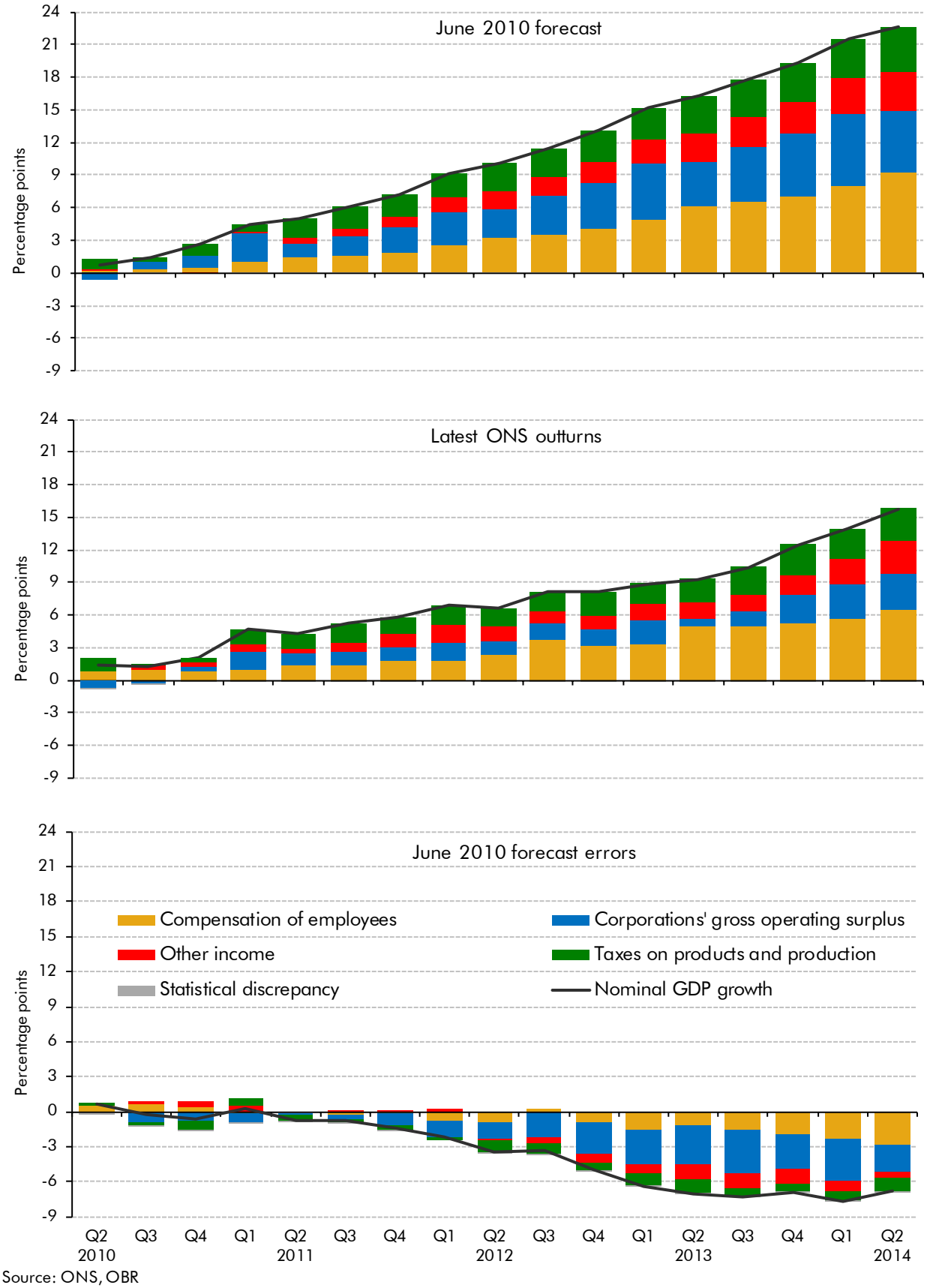
## The income composition of nominal GDP

2.39 In addition to breaking down changes in GDP between different categories of expenditure, we can also break them down between different categories of income. This is even more important for the public finances, given the amount of revenue raised from taxes on labour income, savings income and profits. As with expenditure, the composition of nominal income matters because different components face different effective tax rates. Later in this chapter we also look at the composition of labour income, which has further implications for the tax take.

2.40 Chart 2.13 shows an income-based breakdown of our June 2010 nominal GDP growth errors over time, and Tables 2.9 and 2.10 split the picture into the periods before and after the final quarter of 2012.

2.41 In June 2010, we forecast that growth in compensation of employees, which accounts for just over half of GDP, would pick up, but that it would fall as a share of national income. The growth we expected in corporations' gross operating surplus (GOS) was forecast to come almost entirely from the profits of non-oil private non-financial corporations (non-oil PNFCs), with little movement in the other components. Taxes on products and production that contribute to GDP – namely those that create a wedge between expenditure and private sector income (such as VAT) – and other incomes were also expected to rise over time.

## Chart 2.13: Contributions to nominal GDP growth from 2010Q1: June 2010 forecast, outturns, and errors




Source: ONS, OBR

## Table 2.9: Contributions to nominal GDP growth from 2010Q1 to 2012Q4

| | Percentage points | | | | | |
|---|---|---|---|---|---|---|
| | Compensation of employees | Corporations' gross operating surplus | Other income | Taxes on products and production | GDP | Statistical discrepancy |
| June 2010 forecast (a) | 4.0 | 4.3 | 2.0 | 2.8 | 13.1 | 0.0 |
| FER 2013 data (b) | 3.5 | -0.3 | 2.0 | 2.4 | 7.6 | 0.0 |
| Latest data (c) | 3.2 | 1.5 | 1.2 | 2.1 | 8.1 | 0.0 |
| Revision to data (c-b)[1] | -0.3 | 1.8 | -0.8 | -0.2 | 0.5 | 0.0 |
| Difference (c-a)[1] | -0.8 | -2.7 | -0.8 | -0.7 | -5.0 | 0.0 |

[1] Difference in unrounded numbers.

## Table 2.10: Contributions to nominal GDP growth from 2012Q4 to 2014Q2

| | Percentage points | | | | | |
|---|---|---|---|---|---|---|
| | Compensation of employees | Corporations' gross operating surplus | Other income | Taxes on products and production | GDP | Statistical discrepancy |
| June 2010 forecast | 4.7 | 1.2 | 1.4 | 1.2 | 8.4 | 0.0 |
| March 2012 forecast | 3.6 | 1.6 | 1.5 | 1.0 | 7.7 | 0.0 |
| March 2013 forecast | 2.6 | 1.7 | 0.5 | 0.6 | 5.4 | 0.0 |
| Latest data | 2.3 | 2.4 | 1.5 | 0.9 | 7.5 | 0.4 |
| Difference[1] | | | | | | |
| June 2010 | -2.4 | 1.2 | 0.2 | -0.2 | -0.8 | 0.4 |
| March 2012 | -1.3 | 0.9 | 0.0 | 0.0 | -0.1 | 0.4 |
| March 2013 | -0.2 | 0.8 | 1.0 | 0.3 | 2.2 | 0.4 |

[1] Difference in unrounded numbers.

### Income growth from 2010Q1 to 2012Q4

2.42 The data available at the time of last year's report suggested that corporations' GOS had remained virtually flat, with a small rise in non-oil PNFC profits offset by declining profits in the financial and oil and gas sectors. This appeared to explain the bulk of our error in forecasting incomes.

2.43 The latest data now suggest a more discernable rise in corporations' GOS, mainly through non-oil PNFC profits, but that compensation of employees and other incomes were weaker. Our forecast errors now seem more evenly split, but lower corporate incomes still account for more than half the overall error, a proportionately much larger shortfall than for wages and salaries.

### Income growth since 2012Q4

2.44 In June 2010, we expected a further pick-up in compensation for employees, as productivity and therefore average earnings gathered pace. But average earnings growth has remained weak, more than explaining the shortfall in compensation and the overall GDP income error. Growth in corporate incomes has been stronger than expected over this period.

2.45 By March 2012 we had revised employee compensation down and profits up. But total compensation of employees continued to disappoint, and profits came in higher. Employees' incomes have performed closer to our March 2013 forecast, and corporate incomes still above, but the biggest upside surprise has come through other income, and in particular mixed income. This mainly consists of self-employment earnings. It is subject to considerable revisions over time as early estimates are replaced with data from tax returns.

## Developments by sector

### Households

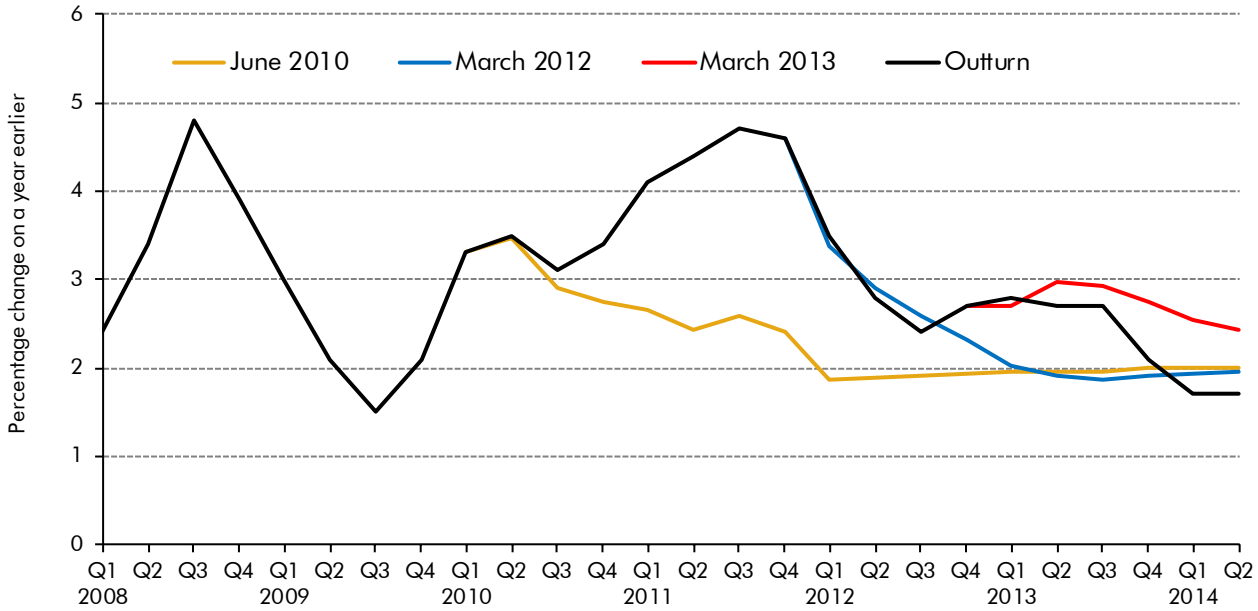
2.46 Nominal disposable income has been weaker than expected both up to the end of 2012 and since. Weaker disposable income growth up to the final quarter of 2012 was more than explained by lower net property income, as profits and therefore dividend income disappointed. But such payments are generally not as closely monitored by households as labour income, so changes are less likely to influence spending and saving decisions.

2.47 Labour income initially held up (in part due to lower-than-expected employee social contributions), but has subsequently failed to pick up as expected in June 2010 or in our more recent forecasts. As we discuss further below, employment growth has proved to be stronger than expected, but average earnings growth even weaker.

2.48 CPI inflation increased unexpectedly in 2011, largely due to higher import prices arising from global commodity price shocks. Our June 2010 forecast for the broader consumption spending deflator appears to have held up out to the end of 2012. Some of this is a statistical artefact – the ONS switched from using the RPI for calculating the consumption deflator to the (slower growing) CPI in 2011. And some reflects lower inflation in the parts of consumption not in the CPI, including in particular imputed rents. Although these other factors remain relevant, underlying inflation has also been weak in more recent quarters.

2.49 CPI inflation fell below the Bank of England's two per cent target in the first quarter of 2014. A number of factors have contributed, including lower rises in retail electricity and gas prices, weak food commodity prices, and the appreciation of sterling. Weaker-than-expected wage growth has also resulted in less pressure from unit labour costs.

## Chart 2.14: CPI inflation

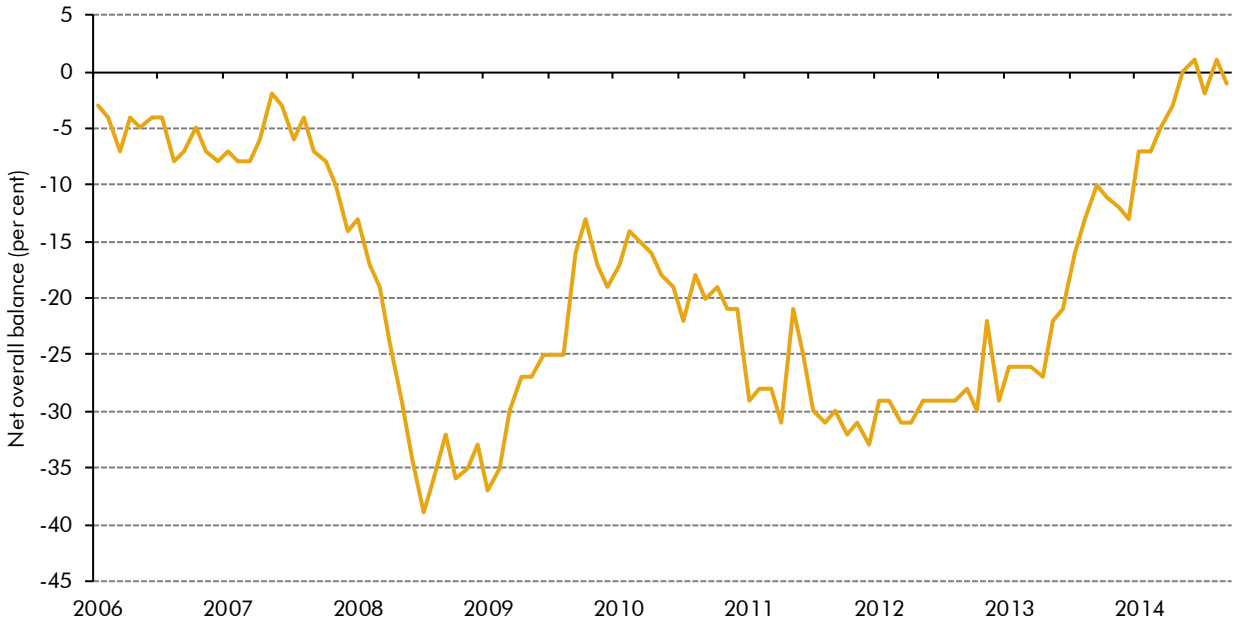



Source: ONS, OBR

2.50 As Chart 2.15 shows, consumer confidence remained depressed in the period leading up to our March 2013 forecast, but rebounded very soon after. At the time, we expected that consumption would move in line with disposable incomes. Income growth has been weaker than expected, but consumption growth stronger – particularly on more discretionary items, notably cars.[3] Typically, we would expect this to lead to a declining household saving ratio, but passive saving through pension funds also increased (having fallen significantly through 2012), partly a reflection of Blue Book changes (see Box 2.1).

[3] See Box 3.4 in our December 2013 *Economic and fiscal outlook*.

## Chart 2.15: Consumer confidence




Source: GfK

## Table 2.11: Income and consumption growth from 2010Q1 to 2012Q4

| | Per cent, unless otherwise stated | | | | | | |
|---|---|---|---|---|---|---|---|
| | Nominal disposable income | Labour income | Nominal consumption | Increase in price level | Real disposable income | Real consumption | Saving ratio (change, per cent) |
| June 2010 forecast | 13.1 | 8.3 | 11.9 | 7.4 | 5.3 | 4.1 | 0.9 |
| Latest data | 7.3 | 10.5 | 10.2 | 7.7 | -0.3 | 2.4 | -4.7 |
| Difference[1] | -5.8 | 2.2 | -1.7 | 0.2 | -5.6 | -1.7 | -5.6 |

[1] Difference in unrounded numbers.

## Table 2.12: Income and consumption growth from 2012Q4 to 2014Q2

| | Per cent, unless otherwise stated | | | | | | |
|---|---|---|---|---|---|---|---|
| | Nominal disposable income | Labour income | Nominal consumption | Increase in price level | Real disposable income | Real consumption | Saving ratio (change, per cent) |
| June 2010 forecast | 7.3 | 9.3 | 7.4 | 4.0 | 3.1 | 3.2 | 0.1 |
| March 2012 forecast | 5.2 | 6.9 | 6.7 | 3.6 | 1.6 | 3.0 | -1.1 |
| March 2013 forecast | 4.9 | 4.3 | 4.9 | 3.7 | 1.2 | 1.1 | 0.1 |
| Latest data | 4.0 | 4.1 | 5.5 | 2.5 | 1.5 | 2.9 | 0.3 |
| Difference[1] | | | | | | | |
| June 2010 | -3.3 | -5.2 | -1.9 | -1.6 | -1.6 | -0.3 | 0.2 |
| March 2012 | -1.3 | -2.8 | -1.2 | -1.1 | -0.1 | -0.1 | 1.4 |
| March 2013 | -1.0 | -0.2 | 0.6 | -1.2 | 0.3 | 1.8 | 0.2 |

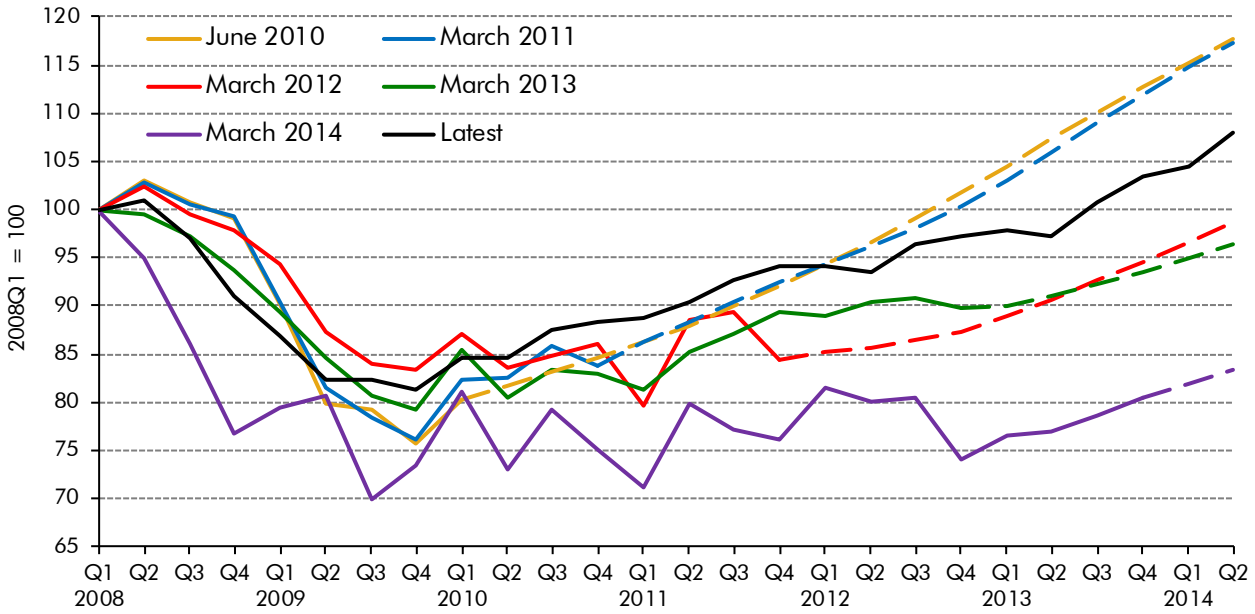
[1] Difference in unrounded numbers.

2.51 The weakness in underlying saving meant there was less new money flowing into household sector balance sheets, to be spent on new assets or retiring existing debt. However, this has been more than outweighed by a concurrent rise in asset prices, as housing – roughly half of households' gross wealth – and equities have seen prices rise much more quickly than expected. On the liability side of household balance sheets, the resurgence of the housing market has been driven far less by additional debt than would normally be expected, implying less offset to growth in net wealth.

## Corporations

2.52 Business investment growth has been revised up heavily since last year's report. Chart 2.16 shows that the previous vintage suggested a roughly flat – albeit very volatile – profile through 2009 to 2012, with investment beginning to pick up more steadily in early 2013, but ending the year still 20 per cent below its pre-crisis peak. The latest estimates now suggest steady growth from the end of 2009, with investment passing its pre-crisis peak in the third quarter of 2013 and then accelerating further.

### Chart 2.16: Successive forecasts and outturns for business investment

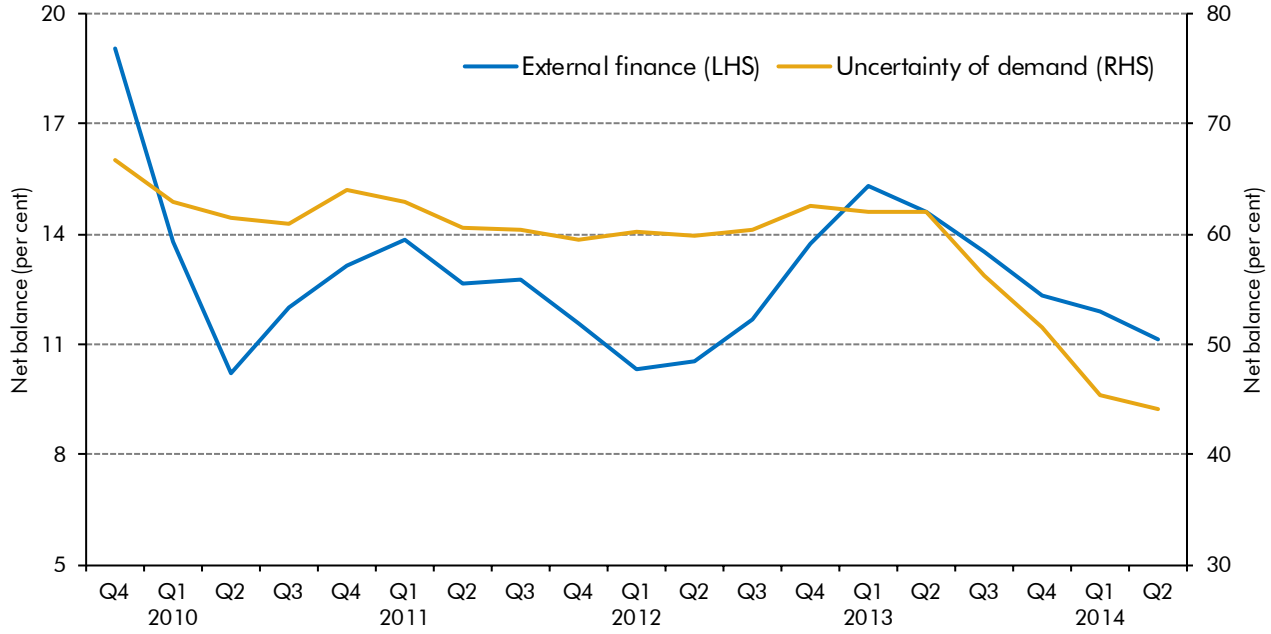



Source: ONS, OBR

2.53 Despite the upward revisions, business investment growth was still some way short of our June 2010 forecast through 2012 and early 2013. In last year's report we attributed what then appeared to be a much larger shortfall in investment to a number of factors. Lower than expected profits (which have also since been revised up) and very low productivity growth may have led firms to revise down their expectations of future profits and so scale back their investment plans. Lower profits also imply smaller flows of internal finance to fund investment, which may have been particularly important for small firms facing binding credit-constraints – although such firms account for a small share of overall investment. More broadly, prolonged demand uncertainty may also have made firms wary of engaging in larger investment projects, which might prove difficult or expensive to reverse if the economy did not perform as hoped.

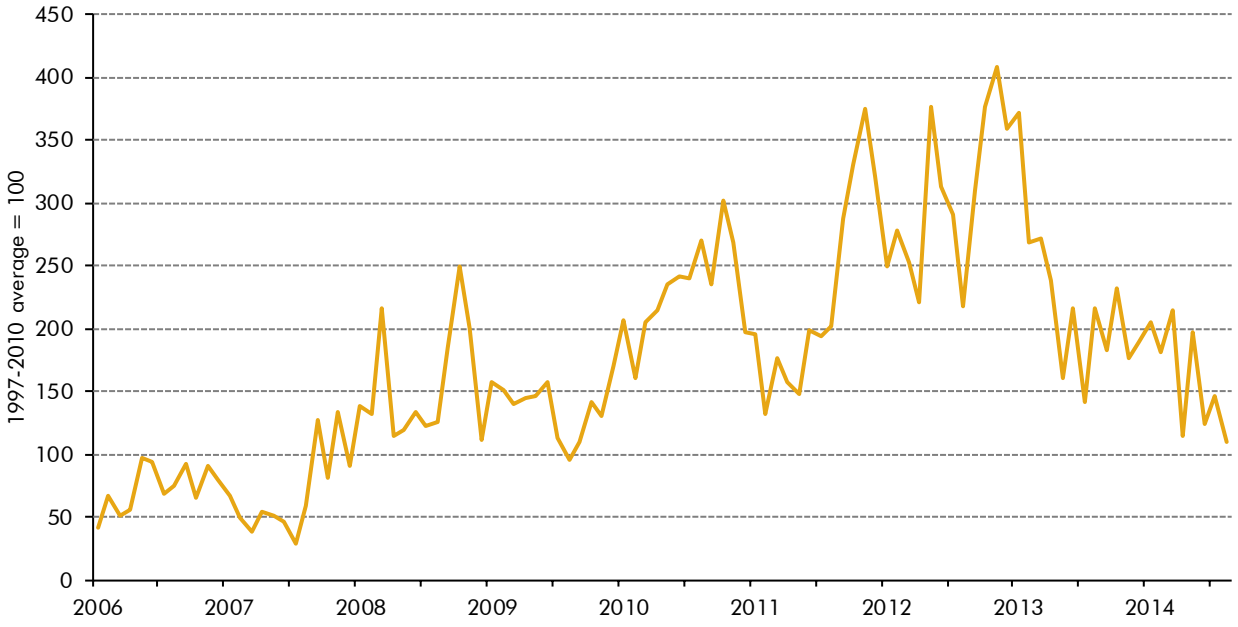
2.54 These factors have begun to unwind since early 2013, going some way to explaining why investment growth has since picked up further. Profits have been stronger than expected. Domestic credit conditions have eased, with fewer firms citing lack of external finance as a factor limiting investment (see Chart 2.17). And other indicators of uncertainty (see Chart 2.18 for an example) have fallen since early 2013, as financial market volatility has settled and the recovery has slowly become more entrenched.

## Chart 2.17: Factors limiting investment




Source: CBI

## Chart 2.18: Index of policy uncertainty




Source: www.policyuncertainty.com

2.55 We have tended to revise our near-term business investment forecasts down as data have disappointed, but we generally continued to expect robust growth in the medium term – bringing the flows of investment relative to the capital stock back to historically more normal levels. It was always going to be difficult to judge precisely when business investment would accelerate, especially as the data are volatile and subject to large revisions.

2.56 Our errors for residential investment have followed the same broad pattern, for similar reasons, followed by the recovery in the housing market. But, owing to its small share of GDP, this explains less of our overall forecast errors than other components of demand.

### Table 2.13: Growth in real private investment from 2010Q1 to 2012Q4

| | Per cent | | |
|---|---|---|---|
| | Business | Other private | Total |
| June 2010 forecast | 26.7 | 24.9 | 26.2 |
| Latest data | 14.9 | 7.5 | 12.7 |
| Difference[1] | -11.8 | -17.5 | -13.6 |

[1] Difference in unrounded numbers.

### Table 2.14: Growth in real private investment from 2012Q4 to 2014Q2

| | Per cent | | |
|---|---|---|---|
| | Business | Other private | Total |
| June 2010 forecast | 15.7 | 12.7 | 14.8 |
| March 2012 forecast | 12.9 | 19.0 | 15.1 |
| March 2013 forecast | 7.4 | 11.0 | 8.6 |
| Latest data | 11.0 | 18.2 | 13.1 |
| Difference[1] | | | |
| June 2010 | -4.6 | 5.6 | -1.8 |
| March 2012 | -1.9 | -0.7 | -2.0 |
| March 2013 | 3.6 | 7.3 | 4.5 |

[1] Difference in unrounded numbers.

## The external sector and net trade

2.57 Net trade initially contributed more to real GDP growth than expected in June 2010, but the positive error soon faded, and instead an aggregate shortfall built up.

2.58 We had expected UK exporters to respond to the substantial depreciation of sterling in 2007 and 2008 with a moderate increase in market share. It now seems that some of this appeared in the run-up to our first forecast, but also that exporters chose to boost profits more by marking prices to market than by increasing volumes. This may have reflected a lack of credit to expand or limited confidence in export prospects. Meanwhile imports were stronger than expected, despite weaker domestic demand.

2.59 Our June 2010 forecast assumed that trade volumes would continue to pick up over the medium term, but that the net trade contribution would taper over time. We had revised our forecasts down by March 2013, but still expected positive growth. Both export and import

volumes have instead fallen since the end of 2012. The net position however remains close to our March 2013 forecast, and only a little further away from our June 2010 forecast.

2.60 Demand from the UK's major export markets, most notably in the euro area, remains weak. In addition, UK exporters' market share has resumed its longer-term decline, with sterling gradually appreciating. Recent import growth has also been surprisingly weak, with the implied import content of output down by almost 5 per cent since the end of 2012.

## Table 2.15: Growth in trade from 2010Q1 to 2012Q4

| | Per cent, unless otherwise stated | | | |
|---|---|---|---|---|
| | Exports | Imports | Net trade contribution (ppts) | Trade balance in 2014Q2[1] |
| June 2010 forecast | 16.5 | 7.0 | 2.3 | -1.8 |
| Latest data | 9.9 | 8.6 | 0.2 | -2.0 |
| Difference[2] | -6.6 | 1.6 | -2.1 | -0.2 |

[1] Trade in nominal terms, as a per cent of GDP.
[2] Difference in unrounded numbers.

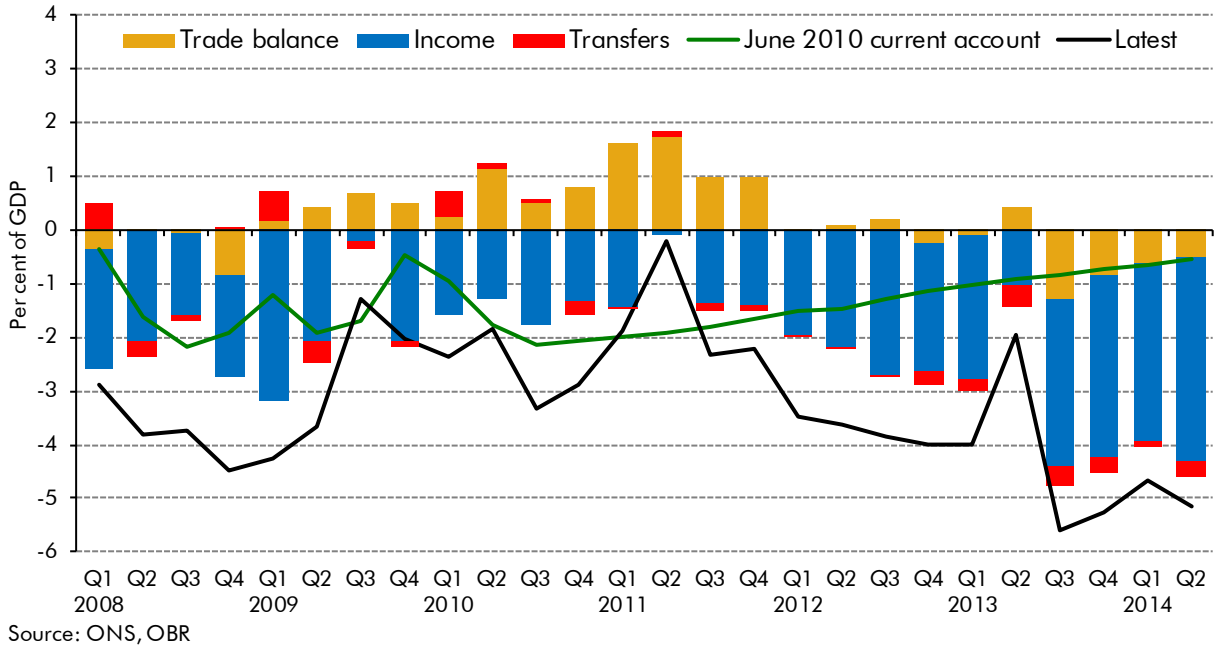
## Table 2.16: Growth in trade from 2012Q4 to 2014Q2

| | Per cent, unless otherwise stated | | | |
|---|---|---|---|---|
| | Exports | Imports | Net trade contribution (ppts) | Trade balance in 2014Q2[1] |
| June 2010 forecast | 9.0 | 5.9 | 0.8 | -0.9 |
| March 2012 forecast | 8.6 | 6.7 | 0.6 | -0.5 |
| March 2013 forecast | 5.9 | 4.7 | 0.3 | -2.1 |
| Latest data | -0.6 | -1.5 | 0.3 | -1.4 |
| Difference[2] | | | | |
| June 2010 | -9.6 | -7.4 | -0.6 | -0.5 |
| March 2012 | -9.3 | -8.2 | -0.3 | -1.0 |
| March 2013 | -6.6 | -6.2 | 0.0 | 0.7 |

[1] Trade in nominal terms, as a per cent of GDP.
[2] Difference in unrounded numbers.

2.61 The nominal trade balance has remained relatively close to our June 2010 forecast. But the current account deficit has nonetheless overshot because net income flows have turned negative. Although very volatile, this has led to errors of around 3 to 4 per cent of GDP in our current account balance forecasts in recent quarters. Much of this volatility and weakness has been due to net foreign direct investment (FDI) earnings. Net FDI earnings by private non-financial corporations have been especially weak.

## Chart 2.19: June 2010 current account forecast errors




Source: ONS, OBR

## Government

2.62 Our June 2010 forecast assumed that real government spending would remain a drag on GDP growth throughout the forecast period. Current data suggest that government spending has instead added to real GDP over the period to date.

2.63 It is important to note that these estimates represent only the direct contribution to GDP from government investment and consumption of goods and services. They do not capture indirect effects from other government spending, such as on social security benefits and tax credits, that do not contribute directly to GDP but affect activity via household incomes.

2.64 Both government investment and consumption were stronger than expected up to the end of 2012. For consumption, weaker than anticipated cash expenditure was dwarfed by even weaker implied prices – leaving real government consumption far higher than expected. For investment, the error lay in stronger than expected cash spending, partly reflecting policy.

2.65 As we have discussed in our *EFOs*, real estimates for most categories of government consumption are based on direct output measures (for example the number of hospital operations or school pupils) rather than deflating a nominal measure with a price index. These measures of output are not quality-adjusted. So if nominal spending growth falls, but the particular direct output measures used do not, then implied inflation will fall. Although we have tried to reflect this, the effect has been larger than we allowed for in past forecasts. This appears to have been compounded in recent quarters by stronger cash spending on goods and services, although this reflects an early vintage of data, containing relatively little hard information at this stage.

2.66 Cash (and real) investment spending tends to be volatile between quarters, and is also subject to revision, but it appears recently to have fallen by more than anticipated. This partly reflects departments under-spending against their plans and Treasury limits, but also lower capital spending by local authorities' Housing Revenue Accounts.

### Table 2.17: Growth in general government consumption and investment from 2010Q1 to 2012Q4

| | Per cent | | | | | |
|---|---|---|---|---|---|---|
| | Consumption | | Investment | | Total | |
| | Real | Nominal | Real | Nominal | Real | Nominal |
| June 2010 forecast | -3.9 | 4.0 | -30.0 | -32.9 | -6.7 | 0.0 |
| Latest data | 2.8 | 2.7 | -17.9 | -14.7 | 0.2 | 0.5 |
| Difference[1] | 6.6 | -1.3 | 12.1 | 18.3 | 6.9 | 0.6 |

[1] Difference in unrounded numbers.

### Table 2.18: Growth in general government consumption and investment from 2012Q4 to 2014Q2

| | Per cent | | | | | |
|---|---|---|---|---|---|---|
| | Consumption | | Investment | | Total | |
| | Real | Nominal | Real | Nominal | Real | Nominal |
| June 2010 forecast | -4.2 | 0.7 | -5.2 | -4.9 | -4.2 | 0.3 |
| March 2012 forecast | -2.5 | 0.8 | -3.6 | -2.0 | -2.6 | 0.5 |
| March 2013 forecast | -0.4 | 1.3 | 4.3 | 7.7 | 0.0 | 1.8 |
| Latest data | 2.2 | 3.2 | -9.3 | -6.4 | 1.0 | 2.2 |
| Difference[1] | | | | | | |
| June 2010 | 6.4 | 2.5 | -4.2 | -1.5 | 5.3 | 1.9 |
| March 2012 | 4.7 | 2.4 | -5.8 | -4.4 | 3.6 | 1.6 |
| March 2013 | 2.6 | 1.9 | -13.7 | -14.1 | 1.1 | 0.4 |

[1] Difference in unrounded numbers.

## The labour market and productivity

2.67 Labour income generates almost half of all tax receipts and the level of unemployment directly influences welfare spending, so it is not surprising that developments in the labour market are crucial in determining the outlook for the public finances. But it is not just the number of people in work that matters. Whole-economy wages tend to be more tax rich if they are taken home by a smaller number of higher paid workers than if they are earned by a larger number of lower-paid workers. This reflects the existence of a tax-free personal allowance and the progressive nature of the tax system.

2.68 In June 2010, we forecast that unemployment would rise a little before falling steadily as the recovery became established and spare capacity in the economy was taken up. Unemployment initially rose more than we expected to peak in the final quarter of 2011, and by the end of 2012 it had returned to roughly the level seen in early 2010. Given the weakness of GDP growth, it is hardly surprising that unemployment had not fallen – the

surprise is that it did not rise much further. And labour market participation and employment both increased by more than we expected.

2.69 Unemployment remained broadly flat between the middle of 2012 and mid-2013. Our March 2013 forecast was for a small initial rise in the unemployment rate and for it to then remain stable until the end of 2014. But the picture since has been one of unemployment on a steady downward path.

2.70 Having fallen by more than expected until the end of 2012, general government employment has since been stable, rather than continuing to decline as expected – and so it is currently close to our June 2010 forecast overall. All of the upward surprise on employment relative to that forecast – and most of the surprise relative to later forecasts – is accounted for by employment growth in the market sector.

2.71 The rise in employment since the end of 2012 has been evenly split between higher activity and lower unemployment. We have under-forecast both trends, and unemployment in particular in our more recent forecasts. We have also been surprised that the claimant count has tended to fall proportionately more than the LFS measure of unemployment. There are now fewer than 1 million people claiming jobseeker's allowance; our March 2014 forecast assumed this would not occur until 2017.

## Table 2.19: Changes in labour market indicators between 2010Q1 and 2012Q4

| | Thousands | | | | | |
|---|---|---|---|---|---|---|
| | Market sector employment | General government employment | Total employment | Unemployment (LFS) | Activity | Claimant count |
| June 2010 forecast | 577 | -124 | 453 | -177 | 276 | -214 |
| Latest data[1] | 1274 | -330 | 944 | -9 | 934 | -6 |
| Difference[2] | 697 | -206 | 491 | 168 | 658 | 208 |
| Memo: 2012Q4 levels | *24,515* | *5,236* | *29,751* | *2,503* | *32,254* | *1,572* |

[1] Latest data has been adjusted so that employment in English colleges is outside the general government sector (and therefore in the market sector) in all periods.

[2] Difference in unrounded numbers, rounded to nearest thousand.

## Table 2.20: Changes in labour market indicators between 2012Q4 and 2014Q2

| | Thousands | | | | | |
|---|---|---|---|---|---|---|
| | Market sector employment | General government employment | Total employment | Unemployment (LFS) | Activity | Claimant count |
| June 2010 forecast | 705 | -230 | 475 | -237 | 238 | -155 |
| March 2012 forecast | 455 | -155 | 300 | -191 | 109 | -132 |
| March 2013 forecast | 365 | -229 | 136 | 111 | 247 | 62 |
| Latest data | 872 | -26 | 846 | -426 | 420 | -494 |
| Difference[1] | | | | | | |
| June 2010 | 166 | 204 | 371 | -189 | 182 | -339 |
| March 2012 | 417 | 129 | 546 | -235 | 311 | -362 |
| March 2013 | 507 | 203 | 710 | -537 | 173 | -556 |
| Memo: 2014Q2 levels | *25,387* | *5,210* | *30,597* | *2,077* | *32,674* | *1,078* |

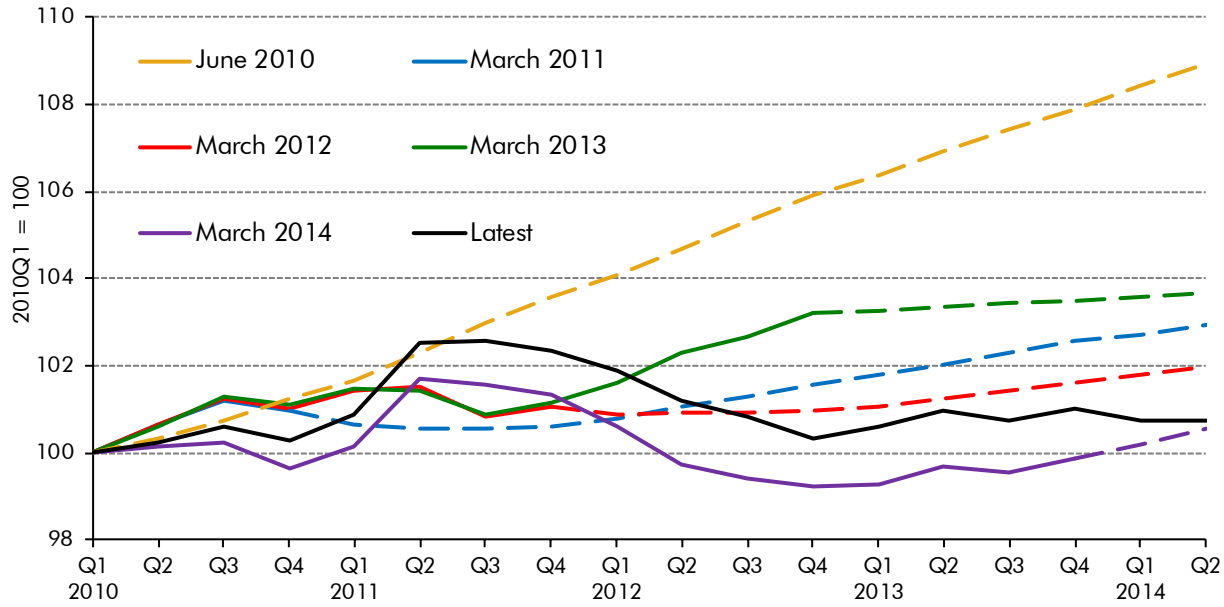
[1] Difference in unrounded numbers, rounded to nearest thousand.

2.72 Taken together, the recovery in GDP and the unexpected strength of employment growth have been consistent with productivity – output per person or per hour worked – having fallen well short of our June 2010 forecast (Chart 2.20). The latest estimates for productivity in 2011 have been revised up, but it is still thought to have fallen through 2012 and to have remained very weak since.[4]

2.73 Stronger than expected GDP growth since our March 2013 forecast can be entirely explained by a steeper rise in employment, rather than stronger productivity. And despite GDP growth coming in above our March 2014 forecast over the first half of this year, productivity has continued to fall. This is very unusual by historical standards – at this stage of the recovery we would typically expect productivity growth to be strong.

[4] For a recent overview of the 'productivity puzzle' and some of the possible explanations of its size and persistence, see '*The UK productivity puzzle*', Bank of England 2014Q2 Quarterly Bulletin.

Chart 2.20: The level of productivity (output per hour)




Source: ONS, OBR

2.74 As with productivity, average earnings growth has been much weaker than forecast. The strength of employment meant that our June 2010 forecast for total wages and salaries initially held up, but the composition was less tax rich. With earnings growth failing to pick up, both the level and the mix of labour income have been less favourable for the public finances. We discuss this in more detail in Chapter 3.

## Potential output

2.75 The amount of spare capacity in the economy (the 'output gap') and the growth rate of potential output are key judgements in our forecast. Together, they determine the scope for actual growth as activity returns to a level consistent with stable inflation in the long term. The size of the output gap also determines how much of the fiscal deficit at any given time is cyclical and how much structural. In other words, how much will disappear automatically as the recovery boosts revenues and reduces some categories of spending, and how much will be left when economic activity has returned to its full potential. The narrower the output gap, the larger the proportion of the deficit that is structural, and the less margin the Government will have against its fiscal mandate, which is set in structural terms.

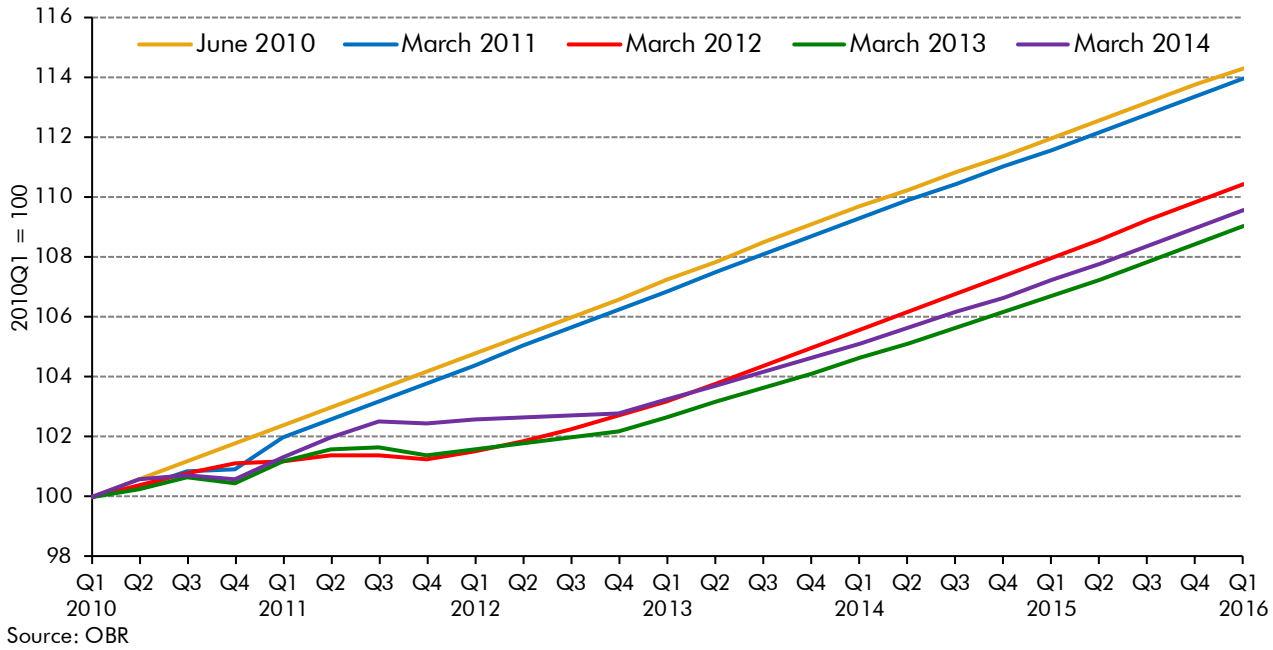
2.76 The previous section identified a significant shortfall of the latest data relative to the productivity growth forecast in June 2010. A key forecast judgement over the past few years has been to decide how much productivity will recover as demand conditions improve and how much the shortfall reflects structural weakness that will not come back (at least, not within the 5-year horizon over which the Government has determined we should forecast). Since potential output is unobserved, there is no outturn against which we can compare our forecasts and the answer to this question will remain uncertain even in the fullness of time.

2.77 We reduced the level of potential output at the end of our November 2011 forecast period by around 3½ per cent, relative to the March 2011 forecast. As Chart 2.21 shows, the level of potential output at the forecast horizon has been broadly unchanged since, with some adjustments to its path over successive forecasts as new data have become available. Our estimate of trend productivity growth in the near term has also been lowered a little.

2.78 Chart 2.22 shows that the revision is more than accounted for by weaker potential productivity. The potential size of the labour force is now thought to be slightly larger. A small fraction is explained by a bigger population, as net inward migration has been higher than assumed, but it mainly reflects higher participation rates – particularly among older age groups.

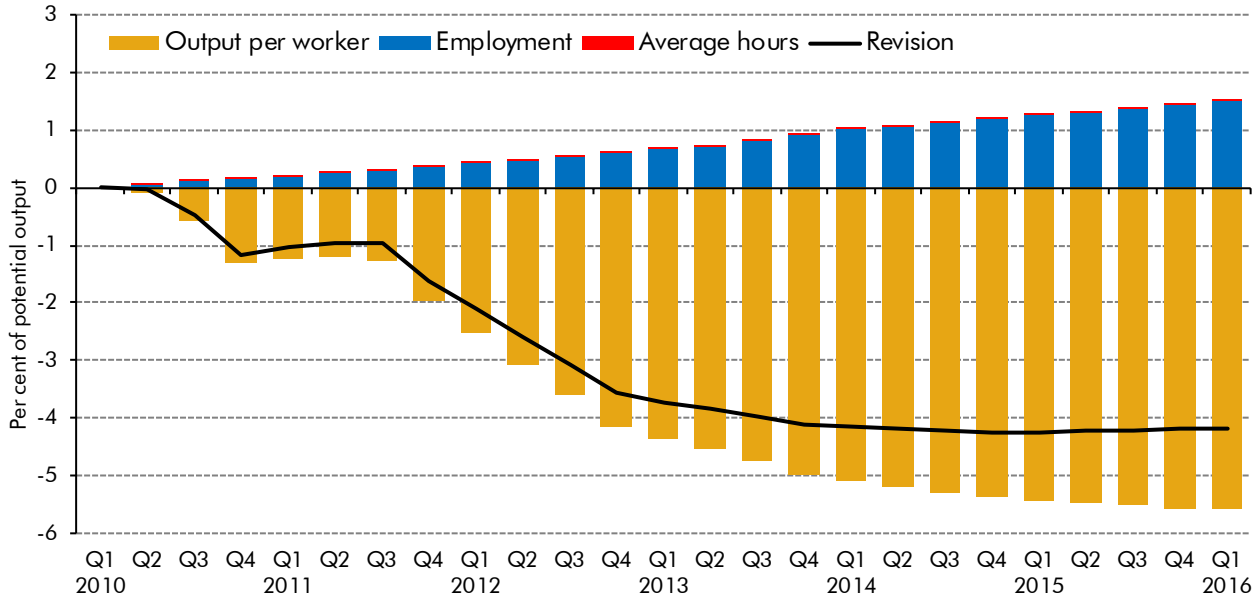
2.79 The strong rise in labour market participation will in part be linked to unexpectedly weak incomes. If households interpret the income shortfall relative to their expectations as being permanent, more may have been encouraged to work or to continue working for longer. Likewise the weakness of savings income may have persuaded some nearing retirement age to work for longer. But there have also been effects that may be more structural in nature – the default retirement age has been removed and the state pension age for women has been raised, while raising the income tax personal allowance and reducing the generosity of some working-age welfare may have incentivised greater labour market participation.

## Chart 2.21: Successive potential output forecasts




Source: OBR

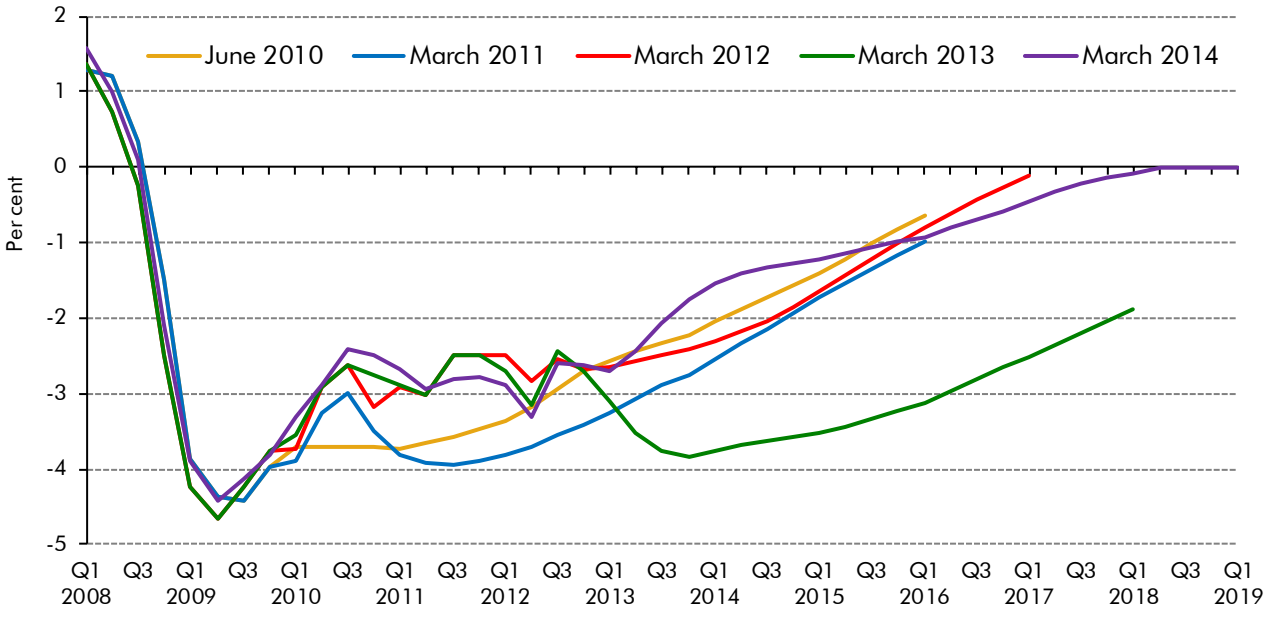
## Chart 2.22: Revisions to potential output between June 2010 and March 2014




Source: OBR

2.80 Viewed against the stable path for potential output in recent forecasts, the unexpectedly strong recovery in recent quarters is judged to have been largely cyclical, rather than structural. Weak productivity growth is consistent with very slow underlying total-factor-productivity growth, and the fall in the unemployment rate also suggests less spare capacity, rather than faster growth in supply. Our March 2014 forecast showed the output gap closing in the first quarter of 2018, much earlier than we forecast a year earlier (Chart 2.23).

## Chart 2.23: Successive output gap forecasts




Source: OBR

2.81 One way to cross-check our analysis of forecast errors and the changes we have made to our judgements on potential output is to consider how different economic models would suggest that the economy might have evolved in the face of a large fiscal consolidation. As discussed in Box 2.2, computable general equilibrium (CGE) models are one option.

## Box 2.2: CGE modelling of the impact of policy changes

The Government is publishing a series of analyses of the major tax cuts that it has announced since the 2010 election, using a technique known as 'computable general equilibrium' (CGE) modelling. It has already published papers on its cuts in corporation tax and fuel duty rates, and the Chancellor has suggested that increases in the income tax personal allowance would be another area to analyse. But it has not yet published similar analyses of the much larger tax increases and public spending cuts that pay for them and deliver the fiscal consolidation.

CGE models are large-scale stylised representations of the economy. They assume that the economy tends to a state of equilibrium, in which supply and demand for goods, services and factors of production in the economy are balanced (albeit with adjustment costs affecting use of labour and capital). The Government's model captures the baseline policy environment via a stylised representation of the tax and benefits systems. A series of interlocking equations then specifies the behaviour of the various sectors in the economy and how they adjust to policy changes. These equations embody available evidence and the modeller's beliefs about how firms and households respond to changes in incentives.[a] After a policy change, agents in the model adjust to price changes until equilibrium is restored. By comparing the baseline and policy scenarios, the modeller can evaluate the estimated impact of the policy change.

CGE models are designed to estimate medium and long-term level shifts in GDP caused by policy changes and to help users understand the mechanisms by which the policy effects flow through the economy. As with any model, CGE results reflect the particular parameters and assumptions embodied in the model, so are subject to uncertainty and open to challenge.

CGE models are not designed as forecasting models – they are normally based on trend growth assumptions, so they do not take into account any short-term fluctuations in spare capacity associated with the current economic cycle. Assumptions relating to monetary policy responses to changes in fiscal policy or economic conditions are at the discretion of the modeller. They are typically better suited to analysing specific tax, welfare or infrastructure spending changes. But in principle they can provide insight into how the economy might adjust to any policy shock.

The assumptions underpinning the Government's recent modelling of corporation tax and fuel duty cuts suggest corresponding increases in economic growth, which in turn reduces their apparent fiscal cost. Most taxes distort consumption, investment, production or saving decisions in some way, and so cutting them typically delivers economic benefits. This beneficial impact is enhanced when – as in the Government's studies – the modeller adopts a 'closure rule' that assumes that any loss of revenue is made up through the imposition of a non-distorting lump-sum poll tax that inflicts no economic damage. Some distortions created by the tax system are of course deliberate, even though they are 'costly' in a CGE framework. For example, fuel duty not only raises revenue, but also helps limit the welfare-reducing side effects of motoring. This closure rule assumption can bias CGE estimates upwards, particularly when tax cuts are financed

through a corresponding deficit reduction program. Downward biases are also possible. In the case of corporation tax cuts, there is evidence that points to longer-term positive productivity effects that were not fully captured in the Government's study. Since these tax cuts have coincided with a period in which actual and trend productivity have fallen short of our forecasts, this channel of adjustment would be difficult to observe in outturn data.

The Government's cuts in corporation tax and fuel duty and its increases in the income tax personal allowance are not in reality being financed by non-distorting lump sum taxes, but rather by other tax increases and cuts in spending on welfare and public services. The tax and spending measures announced by the current Government amount to a significant net fiscal tightening, on top of that put in place by the previous Government between 2008 and 2010.

Although CGE modelling is not designed as a specific forecasting tool, we thought it would be interesting to run a more representative package of measures – including the 'takeaways' as well as the 'giveaways' – through a CGE model. This might highlight some economic mechanisms we should take into account when preparing our forecasts – which aim to take into account the full economic and fiscal impact of any policy changes.

Unfortunately, the Government said that it was unable to resource this more comprehensive analysis. But we have engaged external consultants to help us understand some of the broad-brush conclusions that such an analysis might generate.[b] These include:

- not all recent tax measures are amenable to CGE modelling, for example the large number of anti-avoidance measures. But most measures can be modelled, including not just the cuts to corporation tax, income tax (via the personal allowance) and fuel duty, but also the cut in business rates and the offsetting increases in VAT, National Insurance contributions, various taxes on products (e.g. tobacco and alcohol) and the reductions in capital allowances. By 2018-19, the aggregate impact of these measures primarily changes the composition of the tax take rather than delivering a large change in the tax-to-GDP ratio. As a whole, CGE analysis suggests that these changes would have had a broadly neutral impact on the level of GDP. That is consistent with our recent judgements that when Budget giveaways and takeaways are broadly offsetting, there are unlikely to be large net effects on the economy;
- the model suggests that several of the Government's tax measures have reduced relatively inefficient taxes while increasing relatively efficient ones. That is true of cutting corporation tax and fuel duty and raising VAT. But it is not uniform across all changes. The model implies capital allowances are relatively efficiency enhancing, so reducing them will have offset some of the positive effects of reducing corporation tax rates. And it suggests increasing the personal allowance has relatively weak efficiency effects; and
- the impact of large reductions in social security and tax credits in the model would flow from the assumed labour supply responses of affected individuals. By reducin - work income relative to in-work income (which at lower incomes is also affec raising the personal allowance), the incentive to work is increased – and the resulting employment would then raise consumption. But for those who do no employment, the income effect of lower benefits would reduce consumption.

households affected are likely to have little saving and a high marginal propensity to consume. These expected channels of adjustment are consistent with stronger-than-expected employment and the evolution of our judgements about potential labour supply in recent years.

CGE models are less well suited to capturing the impact of sharp cuts in current spending on public services, since the efficiency effects of different types of spending would be difficult to capture. The main channels of adjustment that could be captured reflect the changing flows of income between the private and public sector – essentially, public services spending involves transfers to the private sector via public sector pay and procurement. One channel of adjustment to cuts in public services spending on the scale planned would be a large shift from public to private employment, which is consistent with experience in recent years.

The choice of 'closure rule' is also important. Assuming that any changes in the deficit from spending cuts are offset by non-distorting lump sum transfers would imply smaller GDP effects from spending cuts. If you assume that any net fiscal surplus associated with the policies modelled is used to pay down the deficit, this has the effect of transferring resources from the beneficiaries of public sector pay and procurement to the holders of government bonds. As bondholders are likely to be higher in the income distribution, this could shift resources to those with a lower propensity to consume. It is difficult to map this possible channel of adjustment to recent economic developments.

CGE modelling is a valuable tool for assessing the potential medium and long-term economic impact of policy changes in a relatively rounded way. But this exercise has confirmed to us that it is of limited value in making short-term direct adjustments to our economic and fiscal forecasts. We will therefore continue to look at a broader range of information when considering the potential effect of policy measures on the economy. But our examination has also confirmed that it is possible to use CGE models to explore the implications of a wider range of policy changes than the tax cuts that have so far been the subject of the Government's published analysis.

[a] *HMRC's CGE model documentation* (2013).

# 3 The public finances

## Introduction

3.1 This chapter:

- sets out how public sector net borrowing (PSNB) has evolved relative to our forecasts since June 2010 (from paragraph 3.3);
- discusses the errors in the receipts (from paragraph 3.11) and spending (paragraph 3.29) sides of the fiscal forecast that underlie the PSNB forecast;
- assesses the errors in our forecasts of some of the other main fiscal aggregates (from paragraph 3.41); and
- summarises the public finances data so far for the current financial year (from paragraph 3.49).

3.2 In this *Forecast evaluation report (FER)*, we assess our forecasts made in June 2010, March 2012 and March 2013 against the latest outturn data for the 2013-14 financial year.

## Public sector net borrowing

3.3 The ONS has now aligned the public sector finance statistics with the new 2010 European System of Accounts (ESA10) as well as implementing other changes following its own review of the statistics (see Box 3.1). The ONS's headline measure is now 'public sector net borrowing excluding public sector banks'. Our forecasts will in future be produced on this basis, but the forecasts we are reviewing in this chapter were for 'public sector net borrowing excluding financial sector interventions' (PSNB) under the 1995 European System of Accounts. So we compare our past forecasts against outturns on that basis.

3.4 The Government's decisions to transfer the Royal Mail's historic pension fund to the public sector and to transfer the excess cash balances from the Bank of England's Asset Purchase Facility (APF) to the Exchequer have affected the profile of net borrowing over time. We have published separate forecasts of net borrowing with and without the effect of these factors in recent *Economic and fiscal outlooks (EFOs)*. By publishing forecasts that remove these effects, we have been able to show measures that are more readily comparable between publications and across years. In this chapter, we compare forecasts and outturns of the headline measure on this 'underlying' basis – excluding the Royal Mail and APF transfers.

## Box 3.1: Classifications changes affecting the public finances data

Public finances data are subject to regular classification and methodological changes. But the most recent changes have been broader than usual in scope, with the ONS now having taken on board the conclusions of its review of the statistics and the implications of the new 2010 European System of Accounts (ESA10). It is important to stress that these are changes to the way the public sector's finances are measured, not changes to the underlying activities being measured. Our forthcoming December 2014 *EFO* will present forecasts on the new basis.

The headline measure of the deficit is now 'public sector net borrowing excluding public sector banks' – which removes the effect of the public sector banks from overall borrowing – rather than 'public sector net borrowing excluding financial interventions' – which also excluded the effects of other unusual operations deemed to result from the financial crisis, such as the Special Liquidity Scheme, but not the cash transfers to the Exchequer from the Asset Purchase Facility (APF) related to quantitative easing. These transfers cancel out in the new headline measure, as does the stream of gilt coupon payments the Exchequer makes on the gilts held by the APF.

The main changes following the alignment with ESA10 have been in the following areas:

- **Network Rail**: has been classified into the public sector, with its liabilities now adding to public sector net debt and PSNB;
- **Royal Mail Pension Plan:** the value of its future pension liability now increases PSNB in 2012-13. The assets were previously recognised upfront and the payments over time. Imputed revenues are now being added to offset the annual pension payments;
- **spectrum auction proceeds:** proceeds from the sale of 3G and 4G licences are now spread over the licence period, rather than reducing PSNB upfront;
- **local government pension schemes:** the underfunding of these schemes is now being added as imputed spending;
- **research and development** and most **single use military expenditure**: are now treated as capital rather than current spending. As capital assets, they will also attract depreciation. PSNB is unaffected, but the current budget deficit will generally be slightly lower;
- **tax write-offs**: council tax and business rate write-offs are now netted off receipts, rather than being treated as capital spending; and
- **VAT-based contributions to the EU** and **tax credits**: VAT contributions and (from next year) tax credits that are currently scored as negative tax will both be treated as spending, rather than being netted off tax, with no effect on measures of the deficit.

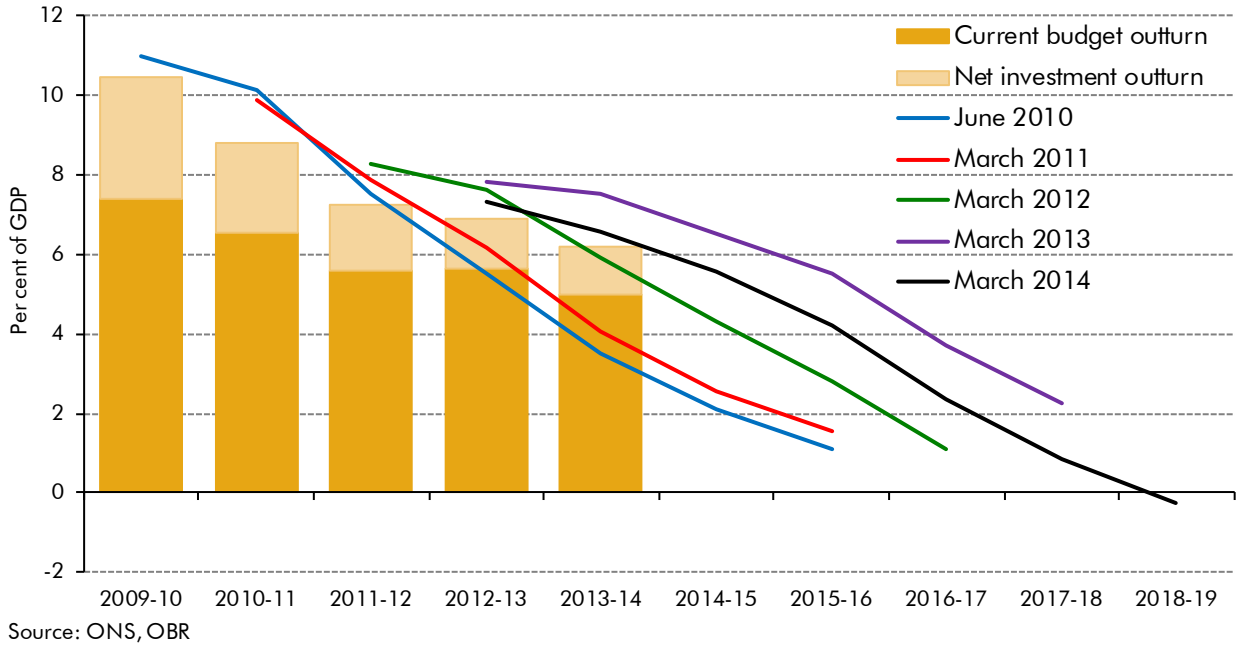
Of the ESA10-related changes, only the Network Rail reclassification affects public sector net debt. Net debt has also been raised due to the widening of the ex-measures boundary and the decision to treat bank shares bought by the government as illiquid rather than liquid assets (so that they no longer reduce net debt).

3.5 Chart 3.1 shows the underlying measure of net borrowing as a share of GDP. As discussed in Box 2.1, nominal GDP has been revised up in the latest Blue Book, which takes on changes to bring the National Accounts into line with ESA10. This has involved big revisions to the level of GDP, and smaller revisions to its profile over time. Changes to the level of GDP do not greatly affect our interpretation of how the public finances have evolved. The larger changes have been in areas that are either unlikely to pay tax – charities or illegal activities – or are tax-deductible – research and development. But the revisions do reduce the ratios of fiscal measures expressed as a share of national income. Reflecting this, net borrowing over recent years is now 0.3 to 0.5 per cent of GDP lower than previously estimated. But that does not significantly alter the bigger picture.

3.6 Viewed as a share of national income, current estimates suggest that underlying borrowing has fallen from its post-war peak of 10.5 per cent of GDP in 2009-10 to 6.2 per cent of GDP in 2013-14. Chart 3.1 shows that:

- PSNB fell by 3.2 per cent of GDP in the two years to 2011-12, a little less than the 3.5 per cent of GDP decline that we forecast in June 2010;
- in the following year, 2012-13, the deficit fell by only 0.4 per cent of GDP, much less than the 2.0 per cent of GDP decline we originally forecast, and also less than the 0.7 per cent of GDP fall we forecast in March 2012; and
- PSNB has continued to decline by less in the most recent year, 2013-14, than forecast in June 2010 and March 2012. But the 0.7 per cent of GDP reduction was slightly larger than expected in March 2013.

## Chart 3.1: Successive forecasts and outturns for public sector net borrowing




Source: ONS, OBR

## Public sector net borrowing in the three years to 2012-13

3.7 In last year's report we considered why our borrowing forecasts to 2011-12 had remained on track despite weak nominal GDP growth, but then disappointed in 2012-13 as the economy continued to under-perform. Estimates of borrowing over this period are relatively unchanged since our previous report (excluding the changes discussed in Box 3.1), with revisions less than £1 billion in any given year. And, as we discussed in Chapter 2, nominal GDP growth has been revised up a little and its composition now looks slightly different. But our broad assessment continues to hold:

- the shortfall in nominal GDP in the first two years was concentrated in those areas that are taxed relatively lightly – stocks and private investment (which is tax deductible) rather than private consumption, and corporate profits rather than labour income. Business investment and profits have been revised up, but they still explain large parts of our spending and income errors. Nominal consumption has been revised down, but mainly through lower estimates of imputed rents – which are not taxed;

- tax receipts were still somewhat lower than forecast in 2011-12, but this was offset as central government departments under-spent the Treasury's limits and local authorities spent less than we expected and so built up their reserves;

- nominal GDP growth in 2012-13 was weaker relative to our forecast than in the previous two years, with labour income in particular falling short of expectations as the weakness of average earnings outweighed continued positive surprises on employment. The June 2010 forecast had also assumed that by this stage in the recovery receipts would be boosted as asset prices and turnover returned to more normal levels, but that had yet to happen. Meanwhile, North Sea receipts suffered as production dropped sharply and tax-deductible expenditure increased; and

- higher than expected inflation fed through to welfare and public sector pension payments, as well as spending on index-linked gilts. But overall spending was significantly lower than expected, as the Government imposed an unprecedented squeeze on central government departmental spending towards the end of the year.

## Public sector net borrowing in 2013-14

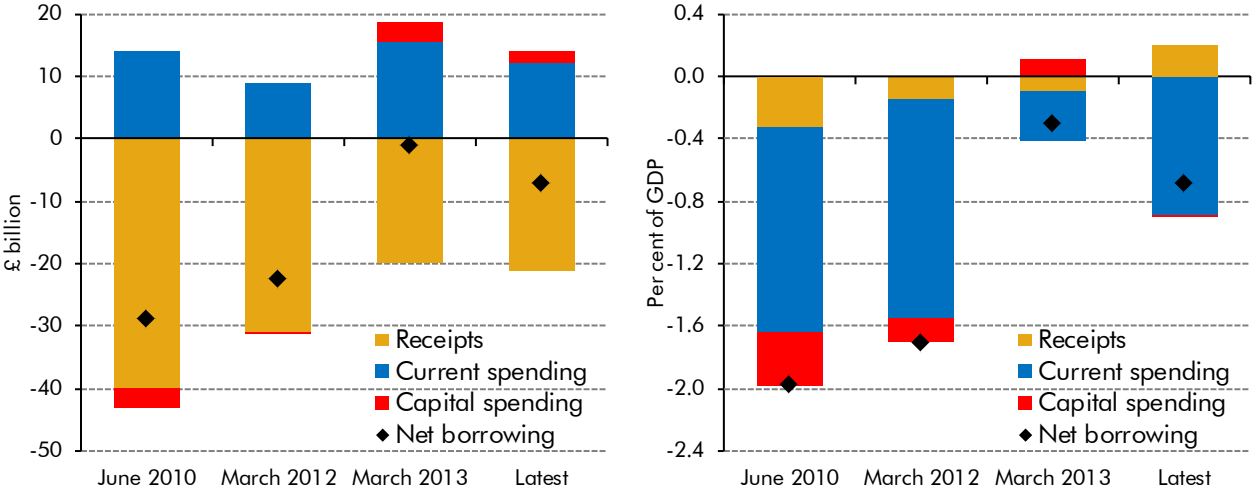
3.8 Chart 3.2 shows our forecasts for the changes in PSNB, and its major components, between 2012-13 and 2013-14, in cash terms and as a per cent of GDP, with the latest outturn:

- in June 2010 we expected borrowing to fall by around £30 billion in the year (to £60 billion), with receipts rising by around £40 billion and spending by just over £10 billion. The latest outturn shows receipts increasing by only half that amount. Public spending on investment rose a little more than expected, but the total cash increase in public spending was much closer to forecast – although it fell less than expected as a share of GDP thanks to slower nominal GDP growth;

- we made similar errors in our March 2012 forecast, albeit on a smaller scale – receipts were weaker, and cash spending was broadly in line with forecast, but higher than expected as a share of GDP; and

- receipts rose a little more in 2013-14 than we had forecast in March 2013. But nominal GDP growth outstripped our forecast by a bigger margin, so that the receipts-to-GDP ratio came in lower than expected. Spending also came in lower than expected, both in cash terms and as a share of GDP.

## Chart 3.2: Contributions to the change in net borrowing in 2013-14




Source: ONS, OBR

Source: ONS, OBR

3.9 Table 3.1 summarises our overall errors for 2013-14, also taking into account errors in preceding years that flowed through. It also decomposes these errors into their main explanatory factors,[1] with Table 3.2 further decomposing our economy-related errors.

3.10 Our receipts errors have been dominated by economic factors – and compounded by modelling errors often indirectly related to developments in the economy. Our spending forecast has been far more stable – and the errors much smaller – with both economic factors and policy leading to slightly lower spending than expected in past forecasts.

## Table 3.1: 2013-14 receipts, spending and net borrowing forecast errors

| | £ billion | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Receipts | | | Spending | | | Net borrowing | | |
| | June 10 | March 12 | March 13 | June 10 | March 12 | March 13 | June 10 | March 12 | March 13 |
| Economic factors | -44.6 | -7.2 | 0.6 | -4.9 | -2.2 | -3.6 | 39.7 | 4.9 | -4.2 |
| Fiscal modelling | -7.3 | -8.5 | 6.5 | -3.7 | -2.5 | -1.4 | 3.5 | 6.0 | -8.0 |
| Policy | -1.6 | -2.3 | 0.0 | -0.4 | -3.0 | -1.0 | 1.2 | -0.7 | -1.0 |
| Classification | 0.9 | 4.9 | 2.0 | 4.3 | 4.9 | 3.1 | 3.3 | 0.0 | 1.1 |
| Total | -52.5 | -13.2 | 9.2 | -4.8 | -2.9 | -2.9 | 47.7 | 10.3 | -12.1 |

[1] A detailed breakdown for individual receipts and spending streams is presented in Annex A.

Table 3.2: 2013-14 receipts and spending forecast errors due to economic factors

| | £ billion | | | | | |
|---|---|---|---|---|---|---|
| | Receipts | | | Spending | | |
| | June 2010 | March 2012 | March 2013 | June 2010 | March 2012 | March 2013 |
| **GDP components** | | | | | | |
| Wages and salaries | -13.3 | -2.1 | 1.2 | 1.1 | -1.2 | -1.3 |
| of which: | | | | | | |
| Employee numbers | -0.9 | 4.7 | 1.7 | 0.6 | -1.3 | -1.3 |
| Average earnings | -12.4 | -6.8 | -0.4 | 0.5 | 0.1 | 0.0 |
| Non-oil PNFC profits | -3.5 | -1.5 | 0.3 | | | |
| Financial profits | -3.8 | -0.1 | 0.0 | | | |
| Self assessment income | -5.7 | 0.1 | -1.4 | | | |
| Consumption | -1.5 | -0.3 | 0.2 | | | |
| Investment | 0.8 | -0.8 | -0.1 | | | |
| **North Sea** | **-7.1** | **-4.0** | **-1.8** | | | |
| Oil and gas prices | 1.7 | 0.3 | -0.6 | | | |
| Production | -5.4 | -3.0 | -1.2 | | | |
| Expenditure | -3.4 | -1.3 | 0.1 | | | |
| **Inflation** | **-1.2** | **0.7** | **-0.1** | **5.2** | **1.2** | **-1.9** |
| Index-linked gilts | | | | 0.1 | 2.0 | -1.9 |
| Other | -1.2 | 0.7 | -0.1 | 5.1 | -0.8 | 0.0 |
| **Interest rates** | **-2.3** | **-0.3** | **-0.3** | **-9.6** | **-1.3** | **0.2** |
| **Markets** | **-3.5** | **1.7** | **1.4** | | | |
| Property markets | -3.1 | 1.7 | 1.3 | | | |
| Equity markets | -0.4 | 0.0 | 0.1 | | | |
| **Other determinant effects** | **-3.6** | **-0.6** | **1.2** | **-1.7** | **-0.9** | **-0.6** |
| **Total** | **-44.6** | **-7.2** | **0.6** | **-4.9** | **-2.2** | **-3.6** |

# Receipts

3.11 Table 3.3 shows our forecast errors for total receipts and some of the main receipts streams. More than half of the overall shortfall of £52.5 billion against our June 2010 forecast – over £30 billion – can be explained by weaker income tax and national insurance contributions (NICs) receipts, with the continued weakness of earnings growth a key drag. Corporate tax receipts were around £14 billion lower than forecast, reflecting lower profits for onshore industrial and financial companies and sharp falls in oil and gas production accompanied by higher expenditure for offshore firms.

3.12 We made a much smaller – but still sizeable – error in our March 2012 forecast, more than explained by income tax and NICs receipts and oil and gas revenues continuing to disappoint. The wider recovery boosted most receipts streams in 2013-14 relative to our March 2013 forecast, but oil and gas revenues again came in lower than expected.

## Table 3.3: 2013-14 receipts forecasts, outturn and errors

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | | | Outturn | Error | | |
| | June 2010 | March 2012 | March 2013 | | June 2010 | March 2012 | March 2013 |
| Income tax (gross of tax credits) | 182.7 | 165.0 | 154.7 | 157.7 | -25.0 | -7.3 | 3.1 |
| *of which:* | | | | | | | |
| Pay as you earn (PAYE) | 147.6 | 141.1 | 133.7 | 135.5 | -12.1 | -5.7 | 1.8 |
| Self assessment (SA) | 32.5 | 22.9 | 20.3 | 20.9 | -11.7 | -2.1 | 0.5 |
| National insurance contributions | 114.7 | 111.3 | 106.7 | 107.3 | -7.4 | -4.0 | 0.6 |
| Value added tax | 103.5 | 106.1 | 103.3 | 106.5 | 3.0 | 0.4 | 3.1 |
| Onshore corporation tax | 45.2 | 37.3 | 34.6 | 36.7 | -8.5 | -0.6 | 2.1 |
| UK oil and gas revenues | 10.5 | 9.0 | 6.8 | 4.7 | -5.9 | -4.4 | -2.1 |
| Capital taxes | 20.7 | 18.5 | 19.1 | 19.8 | -0.8 | 1.3 | 0.7 |
| Interest and dividends | 9.0 | 5.0 | 6.7 | 6.7 | -2.3 | 1.7 | 0.0 |
| Other receipts | 175.5 | 170.1 | 168.4 | 170.0 | -5.5 | -0.1 | 1.6 |
| **Current receipts** | **661.9** | **622.5** | **600.2** | **609.3** | **-52.5** | **-13.2** | **9.2** |

## Income tax and NICs

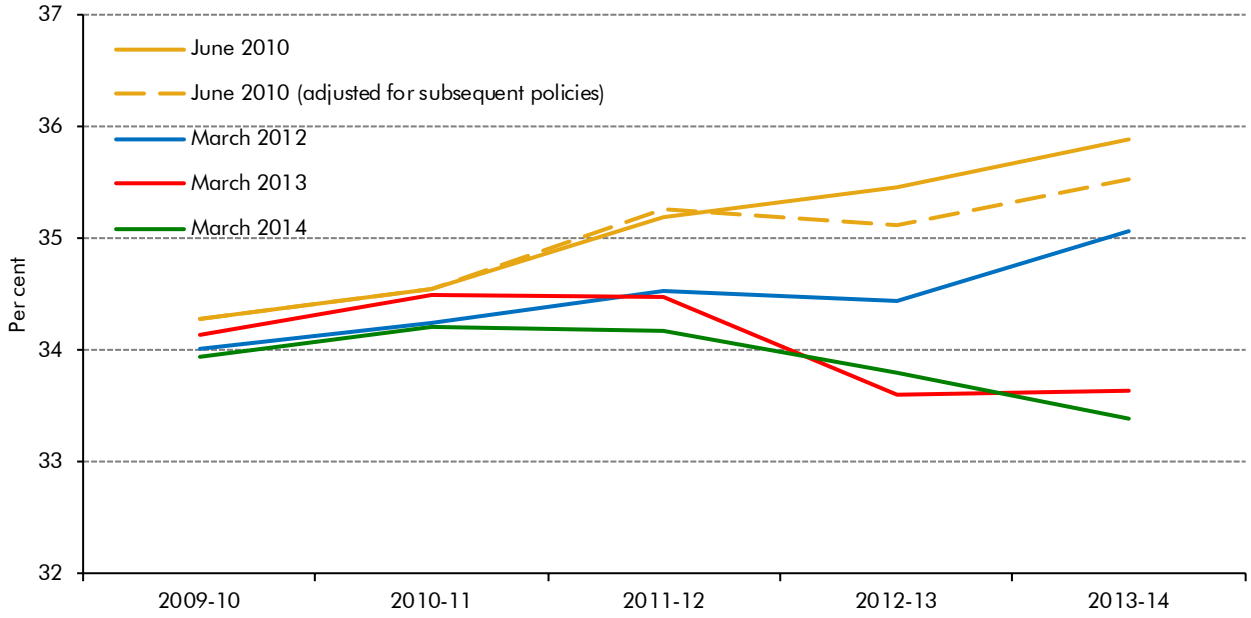
3.13 Average earnings growth has been weaker than expected in all three of the forecasts we consider here, depressing income tax and NICs receipts. Although employment growth has surprised on the upside over the recent past – and has been sufficient to offset the March 2013 error on average earnings – the effective tax rate has been lower than expected, particularly in relation to the June 2010 forecast.[2]

3.14 Chart 3.3 compares the June 2010 forecast with latest outturns. That forecast assumed a gradual rise in the effective tax rate over the forecast period, helped by the rises in NICs rates announced by the previous Government and the assumption that earnings growth would outpace inflation from 2013-14 onwards, generating positive fiscal drag. Instead, the effective tax rate for pay as you earn (PAYE) income tax and NICs fell between 2010-11 and 2013-14. Over and above errors directly attributable to weaker earnings growth:

- higher than expected inflation has raised NICs thresholds (particularly in 2012-13) by more than we forecast;
- policy measures, in particular further rises in the personal allowance, have lowered the effective tax rate further. The impact was partly offset by other measures: the change in the default indexation assumption to CPI; changes in age-related allowances; and a measure to discourage disguised remuneration; and
- the performance of the financial sector, which contains a significant proportion of high earners, has been weaker than expected. More broadly, employment gains have been concentrated in relatively lower paid industries and age groups.

[2] The effective tax rate is defined here as PAYE plus NICs as a proportion of wages and salaries.

## Chart 3.3: Effective tax rates for PAYE and NICs receipts




Source: ONS, HMRC, OBR

3.15 Self-assessment (SA) receipts were almost £12 billion lower than forecast in June 2010 – close to the error in PAYE income tax receipts – but the errors in our more recent forecasts have been much smaller. SA receipts paid in 2013-14 relate to incomes in 2012-13. Growth in self-employment income, dividends and savings income were all weaker than expected in June 2010, but the growth in related tax receipts has been weaker still.

3.16 The rise in the number of self-employed people has been stronger than expected. Information on self-employment incomes is only available with a long lag, but what is available indicates that growth in self-employment earnings has generally been at the lower end of the income distribution, which would reduce the effective tax rate:

- the proportion of the self-employed reporting incomes to HMRC below the personal allowance rose from 21 per cent in 2007-08 to 35 per cent in 2011-12; and
- the ONS has calculated that the average median income of the self-employed fell by 22 per cent between 2008-09 and 2012-13 (using the Family Resources Survey).

3.17 The June 2010 forecast error also partly reflects income shifting following the Budget 2012 measure to reduce the additional rate of income tax to 45p, as discussed in Box 3.2. Some taxpayers are likely to have shifted substantial amounts of their 2012-13 income (on which tax is paid in 2013-14) into 2013-14 (on which tax is paid in 2014-15). The March 2012 and 2013 forecasts anticipated this change.

3.18 Income tax on savings (TDSI) yielded less than half the amount we forecast in June 2010, as interest rates were much lower than expected. Receipts were a little higher than our March 2012 and March 2013 forecasts.

## Table 3.4: 2013-14 income tax and NICs forecast errors

| | £ billion | | | | | |
|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy changes |
| **June 2010 forecast** | | | | | | |
| Income tax (gross of tax credits) | 182.7 | 157.7 | -25.0 | -19.2 | -2.9 | -2.9 |
| *of which:* | | | | | | |
| Pay as you earn (PAYE) | 147.6 | 135.5 | -12.1 | -10.9 | 0.9 | -2.1 |
| Self assessment (SA) | 32.5 | 20.9 | -11.7 | -5.2 | -5.7 | -0.7 |
| TDSI | 4.2 | 1.9 | -2.3 | -3.1 | 0.8 | 0.0 |
| National insurance contributions | 114.7 | 107.3 | -7.4 | -5.7 | -2.8 | 1.1 |
| **March 2012 forecast** | | | | | | |
| Income tax (gross of tax credits) | 165.0 | 157.7 | -7.3 | -1.9 | -5.2 | -0.2 |
| *of which:* | | | | | | |
| Pay as you earn (PAYE) | 141.1 | 135.5 | -5.7 | -1.7 | -3.5 | -0.5 |
| Self assessment (SA) | 22.9 | 20.9 | -2.1 | -0.3 | -2.0 | 0.2 |
| TDSI | 1.3 | 1.9 | 0.6 | 0.2 | 0.5 | 0.0 |
| National insurance contributions | 111.3 | 107.3 | -4.0 | -0.3 | -3.7 | 0.0 |
| **March 2013 forecast** | | | | | | |
| Income tax (gross of tax credits) | 154.7 | 157.7 | 3.1 | -1.2 | 4.2 | 0.0 |
| *of which:* | | | | | | |
| Pay as you earn (PAYE) | 133.7 | 135.5 | 1.8 | 0.6 | 1.2 | 0.0 |
| Self assessment (SA) | 20.3 | 20.9 | 0.5 | -1.8 | 2.3 | 0.0 |
| TDSI | 1.7 | 1.9 | 0.2 | 0.0 | 0.2 | 0.0 |
| National insurance contributions | 106.7 | 107.3 | 0.6 | 0.8 | -0.2 | 0.0 |

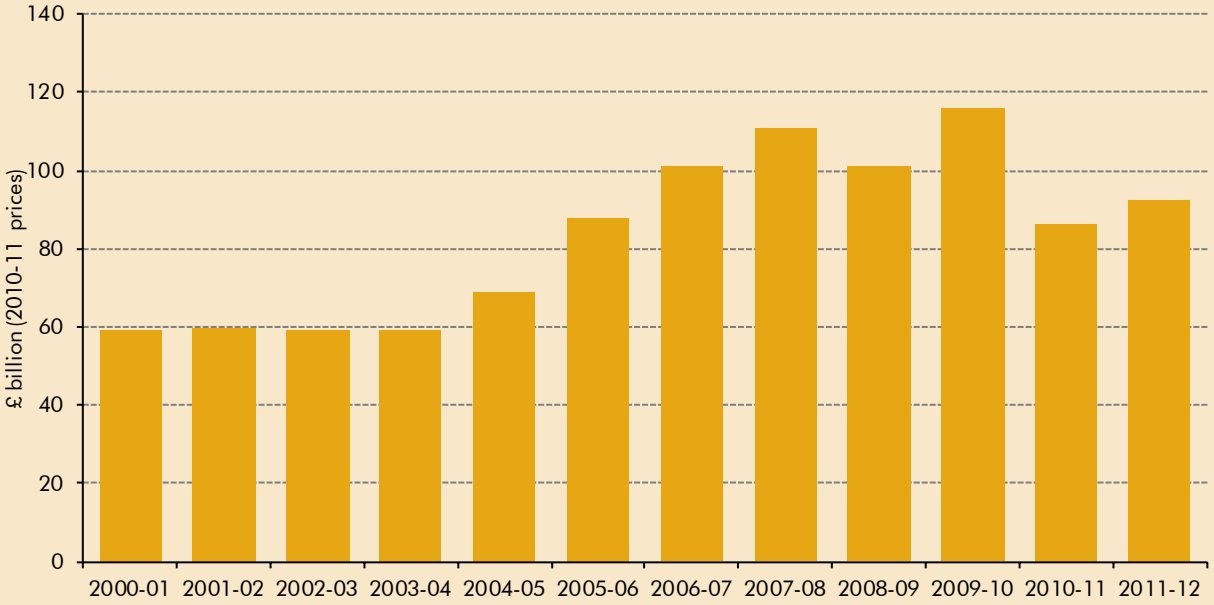
### Box 3.2: Effect of the additional rate of income tax on receipts

An additional rate of income tax of 50p for incomes over £150,000 was introduced in April 2010. Budget 2012 announced that this would be reduced to 45p from April 2013 onwards.

At Budget 2012, HMRC provided an analysis of the yield from the introduction of the 50p rate, based on 2010-11 self-assessment tax returns. This concluded that the behavioural response to the increase in the additional rate had been greater than originally assumed by the previous Government. This conclusion was subject to significant uncertainty, because there was a very large forestalling effect as taxpayers brought forward incomes so that they were taxed at 40p rather than 50p. The estimated underlying yield for 2012-13 from the introduction of the 50p tax rate was also reduced from £2.6 billion to £0.6 billion.

Detailed data on personal incomes and income tax liabilities are only available with a long lag. Data for 2011-12 were published in January and April 2014. These indicate that total incomes for individuals with net incomes greater than £150,000 rose from £86 billion in 2010-11 to £94 billion in 2011-12. A lot of this rise is likely to be because 2010-11 incomes were depressed by the unwinding of the forestalling that took place in 2009-10 ahead of the 50p rate being introduced. Chart A indicates that total incomes over £150,000 – expressed in constant prices – remained lower in 2011-12 than in any other year – apart from 2009-10 – since 2005-06.

## Chart A: Total incomes for individuals with net incomes of more than £150,000




Source: HMRC

Note: Net of tax relief at 2010-11 prices.

Additional rate taxpayers paid £37.5 billion in tax in 2011-12, up from £34.5 billion in 2010-11. Again, a large part of that rise is likely to reflect incomes in 2010-11 being depressed by the unwinding of the forestalling. The tax collected from this group of taxpayers in 2011-12 was less than HMRC predicted in their April 2013 projections.

## Table A: Tax liabilities of additional rate taxpayers

| Publication Date | Tax liabilities of additional rate payers (£ billion) | | |
|---|---|---|---|
| | 2010-11 | 2011-12 | 2012-13 |
| January-April 2013 | 34.5 | 41.3[1] | 41.6[1] |
| January-April 2014 | 34.5 | 37.5 | 39.3[1] |

[1] Figures released in January-April 2013 were based on 2010-11 income data, and projected liabilities for 2011-12 and 2012-13. Figures released a year later were based on 2011-12 data, projecting into 2012-13.

Weaker-than-expected tax liabilities from additional rate taxpayers are not necessarily an indicator of an unexpectedly low yield from the 50p rate. Incomes for those earning above £150,000 could be depressed for other reasons. For example, high income earners are more likely to derive a higher proportion of income from savings, dividends and other investments – and these have been much weaker in recent years than employment income. In addition, the financial sector, which contains a relatively large proportion of high income earners, has struggled. To calculate the effect of the 50p rate requires a counterfactual, i.e. what would have happened in the absence of its introduction. That will always be very difficult to estimate because the 50p rate was pre-announced, leading to substantial forestalling. The latest data do not provide strong evidence to change the judgements made at Budget 2012.

It is too early to provide a meaningful reassessment of the costing of the reduction in the additional rate to 45p. Once again, because it was pre-announced, its biggest immediate effect was to prompt large amounts of income shifting by higher earners. Substantial amounts of PAYE

liabilities were deferred from the end of 2012-13 into the early part of 2013-14 in order to be taxed at 45p rather than 50p. We estimate that around £1.7 billion of tax was deferred from 2012-13. With the one-year payment lag for self-assessment income tax, SA receipts were weak at the end of 2013-14. We expect them to be boosted in January 2015 when the balancing payment on 2013-14 liabilities is made.

## VAT

3.19 VAT receipts have tended to surprise on the upside, despite nominal household consumption (and other elements of the VAT base) being lower than expected in either June 2010 or March 2012 and only slightly stronger than forecast in March 2013.

3.20 The composition of household spending does not appear to explain this error, with the share of spending subject to the standard rate falling by more than expected. Therefore implicitly, the VAT gap – the difference between theoretical and actual VAT receipts – has narrowed more quickly. Having risen during the recession, the June 2010 forecast assumed the gap would be 12.7 per cent by 2013-14, but the latest outturn suggests 10.3 per cent.

### Table 3.5: 2013-14 VAT forecast errors

| | £ billion | | | | | |
|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy changes |
| June 2010 forecast | 103.5 | 106.5 | 3.0 | -2.5 | 5.5 | 0.0 |
| March 2012 forecast | 106.1 | 106.5 | 0.4 | -2.2 | 2.6 | 0.0 |
| March 2013 forecast | 103.3 | 106.5 | 3.1 | 0.3 | 2.9 | 0.0 |

## Onshore corporation tax

3.21 We consistently revised down our forecasts for onshore corporation tax receipts between June 2010 and March 2013. This reflected weak profits growth over the period and that we initially under-estimated the amount of losses being carried forward by firms (notably in the financial sector) that can be used to offset future corporation tax liabilities. These errors were partly offset by lower investment, which boosts receipts through smaller capital allowances. Policy measures to further lower the main rate of corporation tax also reduced receipts.

3.22 Receipts were stronger than expected in March 2013 – and close to our forecast made a year earlier. This can be explained by a recovery in receipts from industrial and commercial companies. Growth in headline profits in these sectors has gathered pace, although receipts have been stronger than this pick-up would suggest alone.

### Table 3.6: 2013-14 onshore corporation tax forecast errors

| | £ billion | | | | | |
|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy changes |
| June 2010 forecast | 45.2 | 36.7 | -8.5 | -3.9 | -2.7 | -2.0 |
| March 2012 forecast | 37.3 | 36.7 | -0.6 | -1.2 | 0.8 | -0.2 |
| March 2013 forecast | 34.6 | 36.7 | 2.1 | 0.8 | 1.4 | 0.0 |

## UK oil and gas revenues

3.23 Oil and gas receipts were less than half the level we forecast in June 2010. We had revised our forecast down by almost £4 billion by March 2013, but receipts still came in more than £2 billion below it. The largest drag was a sharp fall in oil and gas production, which dropped by over 35 per cent between 2010 and 2013. The June 2010 forecast had assumed falls of around 4 to 5 per cent a year. While the industry continued to forecast a pick-up, we lowered our production forecast in March 2013. This, once again, proved too optimistic.

3.24 Higher expenditure, particularly on capital investment that can be offset against tax liabilities, reduced receipts even further relative to our June 2010 forecast, partially offset by higher oil and gas prices and the increase in the supplementary charge announced in Budget 2011. These changes were all anticipated by March 2013.

### Table 3.7: 2013-14 UK oil and gas revenues forecast errors

| | £ billion | | | | | |
|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy changes |
| June 2010 forecast | 10.5 | 4.7 | -5.9 | -5.6 | -1.4 | 1.2 |
| March 2012 forecast | 9.0 | 4.7 | -4.4 | -2.8 | -1.5 | 0.0 |
| March 2013 forecast | 6.8 | 4.7 | -2.1 | -1.1 | -0.9 | 0.0 |

## Other receipts

3.25 **Stamp duty land tax** accounted for the majority of the shortfall in the June 2010 capital taxes forecast as both property prices and transactions grew more slowly than expected over the period as a whole. The initial weakness had been factored into subsequent forecasts, but the rebound – in prices in particular – has since been more pronounced than expected. Given the 'slab' structure of the duty (under which buyers pay one rate on the whole property price, with fixed thresholds) and the fact that price growth has been particularly strong in London and the South East – regions with relatively higher house prices – the effective tax rate of stamp duty has also been higher than expected.

3.26 The **bank levy** was announced in June 2010, and the latest outturn has been a little higher than expected at the time. However, this masks offsetting effects. The tax base (specific types of bank liability) has fallen away more quickly than expected, but the levy rate has been increased six times since its introduction. In effect further rate rises have served to offset the loss of revenue from the unexpected weakness of the tax base rather than bringing in significantly more money than originally intended.

3.27 Proceeds from the **UK-Swiss tax agreement** have been much lower than originally expected. Of the £3.2 billion original estimate for Swiss capital tax (one-off payments relating to historical tax liabilities), around £850 million has been raised to date. We emphasised the uncertainty around this costing when it was certified in Autumn Statement 2012, given the lack of hard information about the value of UK individuals' financial assets in Switzerland and how these individuals would respond to the policy. The tax base was smaller than expected, while the behavioural response (for example through capital flight) was greater than expected. Box 4.3 in the December 2013 *EFO* provides greater detail on the lower estimate of receipts from the tax agreement.

3.28 We have begun, with HMRC, to look back at the anti-avoidance measures announced by the Coalition Government in recent years and for which some evidence on outturns is available. While the net error in the costings we certified for these measures is dominated by the Swiss capital tax, our preliminary assessment of the remaining measures points to both upside and downside surprises. We will present a more detailed assessment in our December *EFO*.

## Spending

3.29 Table 3.8 decomposes our headline spending errors into their main components. Our headline forecast was relatively stable, moving by only £2 billion between our June 2010 and March 2012 forecasts, and remaining unchanged a year later. And the overall error is modest in the context of the uncertainty that surrounds all such forecasts.

3.30 But the small change between June 2010 and March 2012 masked a large fall in our forecast for debt interest payments – mainly due to lower interest rates. This was offset in a number of other areas, including higher DEL plans and welfare payments (reflecting higher uprating and more claimants on some benefits, but itself partly masked by measures to cut welfare to pay for the DEL changes).

3.31 Abstracting from classification changes discussed further below, our earlier forecasts tended to underestimate the extent to which central government departments would underspend against their Treasury limits and to which local authorities would underspend their budgets and continue to build reserves. Our March 2013 forecast was closer in both respects, but over-forecast both unemployment and inflation, leading to lower welfare and debt interest payments. But we continued to under-forecast spending on housing benefit and incapacity benefits, and forecasting EU contributions has been particularly challenging.

## Table 3.8: 2013-14 spending forecasts, outturn and errors

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | | | Outturn | Error | | |
| | June 2010 | March 2012 | March 2013 | | June 2010 | March 2012 | March 2013 |
| PSCE in RDEL | 325.6 | 330.3 | 320.8 | 317.5 | -8.1 | -12.7 | -3.2 |
| Locally-financed current | 28.9 | 28.1 | 36.1 | 35.1 | 6.3 | 7.1 | -1.0 |
| Social security | 179.9 | 182.6 | 180.4 | 179.6 | -0.3 | -3.0 | -0.7 |
| Tax credits | 27.0 | 27.9 | 29.0 | 28.7 | 1.8 | 0.8 | -0.2 |
| Public service pensions | 8.7 | 12.2 | 11.1 | 10.9 | 2.3 | -1.3 | -0.2 |
| Debt interest | 57.8 | 46.1 | 49.5 | 47.4 | -10.4 | 1.3 | -2.1 |
| EU contributions | 7.7 | 6.9 | 6.5 | 9.0 | 1.3 | 2.1 | 2.5 |
| Other current | 43.1 | 39.5 | 39.5 | 40.7 | -2.5 | 1.2 | 1.2 |
| **Current expenditure** | **678.6** | **673.6** | **672.9** | **668.9** | **-9.7** | **-4.6** | **-4.0** |
| PSGI in CDEL | 30.2 | 33.9 | 33.7 | 34.2 | 4.0 | 0.3 | 0.5 |
| Other capital | 13.1 | 12.6 | 13.5 | 14.0 | 0.9 | 1.5 | 0.5 |
| **Gross investment** | **43.3** | **46.4** | **47.2** | **48.2** | **4.9** | **1.8** | **1.1** |
| Less depreciation | 23.4 | 23.1 | 23.0 | 26.5 | 3.1 | 3.4 | 3.5 |
| **Net investment** | **19.9** | **23.4** | **24.2** | **21.7** | **1.8** | **-1.7** | **-2.5** |
| **Total spending** | **722.0** | **720.0** | **720.0** | **717.1** | **-4.8** | **-2.9** | **-2.9** |

## Departmental expenditure limits (DELs)

3.32 Table 3.9 shows total DEL spending and its components. A number of classification changes have reduced DEL spending in aggregate. These include:

- the business rate retention scheme, which led to a switch out of DEL and into local authority spending of £10.6 billion (also shown in Table 3.10);
- recent accounting changes following the move to a new spending database (which reduced DEL spending by £1.7 billion, with offsets in EU contributions and accounting adjustments that are included as part of other current and capital spending); and
- council tax localisation (moving £4.3 billion from the social security forecast to DEL).

3.33 Our June 2010 forecast was not based on explicit government plans for departmental spending beyond 2010-11, but on the spending assumption applied at the time. Firm plans were set later that year, in Spending Review 2010, which included cuts to welfare to fund higher DELs. Departments have since under-spent against these budgets.

3.34 Table 3.9 shows our fiscal forecasting errors in forecasting underspends, compared with final underspends against plans set out in Public Expenditure Statistical Analyses (PESA) 2013, once adjusting for in-year policy changes announced in Autumn Statement 2013. This treats any remaining changes in plans set out in previous PESAs as policy changes (after allowing for the classification changes described above).

3.35 Our June 2010 and March 2012 forecasts did not assume any under-spending against actual or implied plans in 2013-14. However, the continuation of sizeable underspends, even after the introduction of the new 'Budget Exchange' procedures, led us to include allowances for underspends for each year of the Spending Review period in our December 2012 forecast. Our March 2013 forecast assumed a total underspend of £3.5 billion in 2013-14 – very close to the eventual underspend against final PESA plans.

## Table 3.9: 2013-14 DEL forecast errors

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy changes | Classification changes |
| **June 2010** | | | | | | | |
| **TME in DEL** | **362.2** | **356.2** | **-6.0** | **0.0** | **-3.4** | **5.4** | **-8.0** |
| PSCE in RDEL | 325.6 | 317.5 | -8.1 | 0.0 | -2.0 | 2.1 | -8.2 |
| PSGI in CDEL | 30.2 | 34.2 | 4.0 | 0.0 | -0.1 | 3.9 | 0.2 |
| SUME | 6.4 | 4.5 | -1.9 | 0.0 | -1.4 | -0.5 | 0.0 |
| **March 2012** | | | | | | | |
| **TME in DEL** | **369.9** | **356.2** | **-13.6** | **0.0** | **-3.4** | **-2.2** | **-8.0** |
| PSCE in RDEL | 330.3 | 317.5 | -12.7 | 0.0 | -2.0 | -2.6 | -8.2 |
| PSGI in CDEL | 33.9 | 34.2 | 0.3 | 0.0 | -0.1 | 0.2 | 0.2 |
| SUME | 5.7 | 4.5 | -1.2 | 0.0 | -1.4 | 0.2 | 0.0 |
| **March 2013** | | | | | | | |
| **TME in DEL** | **359.2** | **356.2** | **-2.9** | **0.0** | **0.1** | **-1.3** | **-1.7** |
| PSCE in RDEL | 320.8 | 317.5 | -3.2 | 0.0 | -0.8 | -0.5 | -1.9 |
| PSGI in CDEL | 33.7 | 34.2 | 0.5 | 0.0 | 1.2 | -0.9 | 0.2 |
| SUME | 4.7 | 4.5 | -0.2 | 0.0 | -0.4 | 0.2 | 0.0 |

## Locally-financed current expenditure

3.36 Our earlier forecasts assumed that local authorities would ease the downward pressure on their spending from tighter financial settlements by drawing down reserves. This was also the plan shown in local authorities' own budgets. In fact they continued to surprise us by underspending against their budgets and adding to their reserves. Previous *FERs* highlighted this as an area that required further attention, and, having gathered better information, by March 2013 we were assuming that English local authorities would continue to add to reserves by £1.3 billion. We then raised the expected addition to reserves to £2.3 billion in March 2014. The provisional outturn data, only available in September, suggest that they did indeed add that amount to reserves. We over-forecast locally-financed spending by £1 billion in March 2013 – a smaller error than in earlier forecasts.

## Table 3.10: 2013-14 locally-financed current expenditure forecast errors

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy changes | Classification changes |
| June 2010 | 28.9 | 35.1 | 6.3 | 0.0 | -3.9 | -0.4 | 10.6 |
| March 2012 | 28.1 | 35.1 | 7.1 | 0.0 | -3.3 | -0.2 | 10.6 |
| March 2013 | 36.1 | 35.1 | -1.0 | 0.0 | -1.0 | 0.0 | 0.0 |

## Social security and tax credits

3.37 Table 3.11 shows errors relating to the social security and tax credits forecasts. Annex A shows the underlying errors for particular benefits. The risks and uncertainties associated with these forecasts – as well as sources of persistent error over the past – are discussed in our first *Welfare trends report*, published alongside this report.

3.38 The aggregate error is relatively small, especially in our March 2013 forecast. Within it:

- council tax benefit moved to DEL following the localisation of the benefit (£4.3 billion against our June 2010 and March 2012 forecasts);
- policy measures announced since June 2010 – mainly in Spending Review 2010 – reduced spending by almost £6 billion against that forecast;
- the value of most benefits and tax credits rose with higher-than-expected inflation in 2012-13, knocking through to 2013-14. This raised spending by around £4½ billion against the June 2010 forecast (reflected in later forecasts), £2.6 billion of which was the result of 'triple lock' uprating of the basic state pension;
- the claimant count was higher than expected in June 2010, but lower than expected in March 2012 and 2013, reducing spending by £1.3 billion against those two forecasts;
- numbers claiming housing benefit (associated with falling rates of owner occupation) and incapacity benefit (during a period of reform to the system) have been persistently higher than expected. Spending in these areas combined came in around £4 billion above our June 2010 and March 2012 forecasts, and around £2 billion above our March 2013 forecast; and
- total spending on personal tax credits has tended to be lower than forecast, with lower-than-expected spending on the childcare element a particular source of error. But a greater proportion of total payments have been scored as spending rather than negative receipts. This has no effect on borrowing. From next year, all payments of tax credits will be treated as spending in all years, reflecting the latest treatment in the National Accounts under ESA10.

## Table 3.11: 2013-14 social security and tax credits forecast errors

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy changes | Classification changes |
| **June 2010** | | | | | | | |
| Social security | 179.9 | 179.6 | -0.3 | 4.6 | 2.0 | -2.7 | -4.3 |
| Tax credits (spending) | 27.0 | 28.7 | 1.8 | 1.0 | 3.0 | -2.2 | 0.0 |
| Tax credits (tax) | 5.8 | 2.8 | -3.1 | 0.4 | -3.0 | -0.5 | 0.0 |
| **March 2012** | | | | | | | |
| Social security | 182.6 | 179.6 | -3.0 | -1.8 | 2.6 | -0.1 | -3.7 |
| Tax credits (spending) | 27.9 | 28.7 | 0.8 | 0.1 | 1.1 | -0.4 | 0.0 |
| Tax credits (tax) | 4.2 | 2.8 | -1.5 | 0.0 | -1.5 | 0.0 | 0.0 |
| **March 2013** | | | | | | | |
| Social security | 180.4 | 179.6 | -0.7 | -1.2 | 0.4 | 0.0 | 0.0 |
| Tax credits (spending) | 29.0 | 28.7 | -0.2 | 0.0 | -0.2 | 0.0 | 0.0 |
| Tax credits (tax) | 2.8 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

## Debt interest

3.39 Debt interest payments were significantly lower than expected in June 2010. This and subsequent errors can largely be explained by errors forecasting the key underlying determinants (see also Table 3.2). Interest rates – both short-term rates and longer-term gilt rates – have been much lower than assumed in June 2010, but closer to our more recent forecasts. RPI inflation was higher than expected in March 2012, but lower than expected in March 2013. Other factors have been small and largely offsetting. Classification changes reflect the inclusion of interest payments on some PFI contracts and payments made by Bradford & Bingley and Northern Rock Asset Management (B&B and NRAM).

## Table 3.12: 2013-14 debt interest forecast errors

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy changes | Classification changes |
| June 2010 | 57.8 | 47.4 | -10.4 | -10.7 | -0.6 | 0.0 | 0.9 |
| March 2012 | 46.1 | 47.4 | 1.3 | 0.4 | 0.0 | 0.0 | 0.9 |
| March 2013 | 49.5 | 47.4 | -2.1 | -2.0 | -0.8 | 0.0 | 0.7 |

## Other spending

3.40 Other points of note include that:

- our errors in forecasting **EU contributions** for the year have tended to rise over time – we revised the forecast down, but spending was eventually higher than our first forecast. This is a difficult component to forecast, given uncertainties around EU

budgets and budget negotiations, and the implicit need to forecast gross national incomes for 27 different countries;

- our forecasts for **public service pensions** have also been volatile. Sources of error or uncertainty over the recent past include the modelling of paybill growth across schemes – especially in the June 2010 forecast when departmental budgets had not been set – and early retirements and redundancies; and

- we under-estimated the amount of **depreciation** charged on public corporations' assets. Recent revisions have raised annual depreciation by almost £3 billion on average since 1997-98. Our errors have been on a similar scale. This does not affect net borrowing, but does raise the current budget deficit.

# Other fiscal aggregates

3.41 In this chapter we have focused our analysis on PSNB, the broadest accrued measure of borrowing. But the Government's fiscal targets are defined in terms of the cyclically-adjusted current budget (CACB) and public sector net debt (PSND), so it is useful to consider the errors in our forecasts for these aggregates.

## Cyclically-adjusted current budget

3.42 Our errors in forecasting net investment have been relatively small, so our current budget deficit errors have been similar to our net borrowing errors. Our latest estimate of the output gap in 2013-14 of 2.0 per cent (as set out in our March 2014 *EFO*) is narrower than judged previously. This implies that our June 2010 and March 2012 errors in forecasting the cyclically-adjusted current budget deficit have been larger than our headline errors.

### Table 3.13: 2013-14 net borrowing, current budget and cyclically-adjusted current budget errors

| | Per cent of GDP | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | | | Outturn | Error | | |
| | June 2010 | March 2012 | March 2013 | | June 2010 | March 2012 | March 2013 |
| Net borrowing | 3.5 | 5.9 | 7.5 | 6.2 | 2.7 | 0.3 | -1.3 |
| Current budget balance | -2.3 | -4.5 | -6.0 | -5.0 | -2.6 | -0.5 | 1.0 |
| Cyclically-adjusted current budget | -0.7 | -2.7 | -3.6 | -3.4 | -2.8 | -0.7 | 0.1 |
| Memo: output gap (per cent) | -2.3 | -2.4 | -3.7 | -2.0 | 0.3 | 0.5 | 1.8 |

3.43 The June 2010 structural error mainly reflects our judgement that potential output growth has been weaker than originally expected over the recent past. But other underlying factors have contributed a similar amount, including errors in forecasting the price level (so an implied measure of cash potential is even lower than revisions to real potential output would suggest in isolation), effective tax rates on labour and corporate incomes, and lower North Sea oil and gas production. Policy measures – mainly the welfare cuts announced in Spending Review 2010 – have improved the position slightly.

3.44 Our estimates of potential output have not changed much since March 2012. But the same underlying factors that contributed to the June 2010 error also applied to the March 2012 forecast, albeit on a smaller scale. The output gap is also significantly narrower than in our March 2013 forecast, implying that although the headline deficit has been better than expected, the structural deficit has not improved to the same extent. The small structural improvement relative to that forecast, shown in Table 3.14, can be more than explained by upward revisions to the level of nominal GDP in Blue Book 2014.

## Table 3.14: 2013-14 cyclically-adjusted current budget errors

| | Per cent of GDP | | | | | |
|---|---|---|---|---|---|---|
| | Forecast | Estimate | Error | *of which:* | | |
| | | | | Policy | Potential output | Other |
| June 2010 | -0.7 | -3.4 | -2.8 | 0.2 | -1.6 | -1.4 |
| March 2012 | -2.7 | -3.4 | -0.7 | 0.1 | 0.0 | -0.8 |
| March 2013 | -3.6 | -3.4 | 0.1 | 0.0 | 0.0 | 0.1 |

## Public sector net debt

3.45 The absolute level of public sector net debt is significantly higher than in previous forecasts following a number of classification changes, including those discussed in Box 3.1 and the reclassification of Bradford and Bingley (B&B) and Northern Rock Asset Management (NRAM) into central government.

3.46 In last year's report we highlighted the fact that net debt had not risen by as much as our borrowing errors would suggest. This largely reflects the fact that net debt rises by the nominal value of gilts issued, rather than by their market value. Gilts have on average been issued at a premium to their nominal values, but we did not allow for this in our forecasts until December 2012. The premium on gilts sold in 2013-14 was, however, smaller than in earlier periods. And debt rose in the year by more than our borrowing errors would suggest (abstracting from transfers to the Exchequer from the APF).

3.47 The additional error mainly relates to a large redemption of index-linked gilts. This raised net debt, but was not in our forecasts. Lending on student loans was also higher than expected (due to higher take-up), and the Government lent additional money through the Help to Buy scheme (an extension was announced in Budget 2013). But lending through other schemes has been more muted. In particular, much less than the budgeted £1 billion for 2013-14 was released through the Green Investment Bank, and there was zero take-up of the export financing scheme announced in Autumn Statement 2012.

3.48 Although net debt has risen by more than expected, the net cash requirement – which measures the cash position and hence typically drives changes in debt – has risen by less than would be implied by our borrowing error. Cash flows are invariably more volatile than the underlying accrued position and reconciling our borrowing and net cash requirement forecasts has proved difficult over the recent past. We intend to review this part of the forecast in advance of our December *EFO*.

Table 3.15: Errors in forecasting the change in public sector net debt in 2013-14

| | £ billion | | | | | |
|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | *of which:* | | |
| | | | | Borrowing | APF | Other |
| June 2010 | 73 | 88 | 15 | 48 | -42 | 10 |
| March 2012 | 112 | 88 | -25 | 10 | -42 | 7 |
| March 2013 | 97 | 88 | -9 | -12 | -1 | 4 |

## The public finances so far in 2014-15

3.49 We conclude this chapter by summarising briefly how the public finances have evolved during 2014-15, compared to our latest forecast in March 2014. This was consistent with the 1995 European System of Accounts, so the recent changes to the public finances data (discussed in Box 3.1) make it difficult to draw direct inferences from the latest outturns.

3.50 For the first five months of 2014-15, PSNB was £2.6 billion higher than a year ago. This compares with a projected fall (on the old basis) in our March 2014 forecast of just over £12 billion between 2013-14 and 2014-15.

3.51 Receipts growth of just 2 per cent so far in 2014-15 is well below our forecast of close to 5 per cent for the whole of 2014-15. In particular, income tax receipts are down on a year earlier compared with a full year forecast of a 6.5 per cent rise. Some of this reflects the timing of receipts growth through the financial year. Last year's shifting of PAYE liabilities in response to the reduction in the additional rate of income tax depressed receipts growth in the early part of 2014-15. There is also likely to be a sizeable boost to SA receipts at the end of January 2015 when the balancing payment for 2013-14 is made, again reflecting the shifting of liabilities related to the additional rate. However, weaker-than-expected wage growth so far in 2014-15 also appears to be depressing PAYE and NICs receipts.

3.52 Of the other main receipts streams, growth in VAT of 4.6 per cent in the first five months of 2014-15 is slightly stronger than our full-year forecast. Growth in corporation tax receipts from onshore firms in 2014-15 is expected to more than offset further declines in offshore receipts. Data for the first five months of 2014-15, including July's first instalment on 2014 profits, suggests this has been the case. Growth in stamp duty land tax receipts, while strong, is a little weaker than our full-year forecast of 35 per cent. The Mortgage Market Review may be depressing property transactions by more than we expected.

3.53 Central government current spending in 2014-15 has so far grown by 1.3 per cent on a year earlier. This compares with a full-year forecast of 1.6 per cent. Lower payments of debt interest and current grants to local authorities have reduced spending over the first five months of the year, but this partly reflects timing differences on grants to local authorities, most of which we expect to unwind over the rest of the year.

3.54 Overall, at this stage of the year there remains significant uncertainty around the path for full-year borrowing. There are uncertainties regarding the extent to which receipts growth will rebound over the rest of the year and around the performance of the economy. In

addition, central government spending and – in particular – borrowing by local authorities and public corporations are prone to revisions in light of updated information. We will provide fresh public finance forecasts (on the new basis) in our December 2014 *EFO*.

# 4 Lessons to learn

4.1 We strive to provide the greatest possible transparency around our forecasts, in order to facilitate understanding and to ensure that we can be held to account for the judgements we make. Transparency also permits us to scrutinise our own forecasts in detail, examining and explaining the errors that inevitably occur. We hope that this will reassure users that our forecasts are based on impartial professional judgement rather than politically motivated wishful thinking, even if they disagree with our conclusions. The process also affords an opportunity to learn lessons that can be applied in future forecasts.

4.2 A number of lessons from previous *Forecast evaluation reports (FERs)* have been reinforced this year. Most obviously, the importance of the cash value – and composition – of national income and expenditure for the public finances. Our broad conclusion from last year still holds, that it has been difficult to calibrate the precise extent to which significant post-crisis challenges will affect the economy. It is clear that shocks to credit and confidence have damaged the economy and particularly productivity. But it remains difficult to judge when the economy will fully recover from this post-crisis hangover. Even the stronger GDP growth of the past year and a half has been unusually lacking in productivity growth.

4.3 Another important lesson relates to the composition of labour income – the source of around 40 per cent of tax revenues. Employment-driven growth is less tax rich because a given amount of labour income attracts a larger number of tax-free personal allowances, reducing the effective tax rate. This suggests that recent increases in the income tax personal allowance will have been more costly than they otherwise would have been. And slow earnings growth reduces fiscal drag – the positive effect on receipts of earnings rising faster than tax thresholds and allowances. As the trend of employment-driven growth has continued in 2014-15, we will be working closely with HM Revenue & Customs to explore further the issue of effective tax rates in general – and the implied cost of personal allowance measures in particular – to inform our December *EFO* forecast of income taxes. Our forecast judgements about the composition of labour income are driven by our view on productivity growth, which remains a source of great uncertainty.

4.4 There are other areas where changes in effective tax rates are likely to remain important for future forecasts. Corporation tax has been affected by firms carrying forward past losses to set against tax liabilities – particularly in the financial sector. Stamp duty land tax receipts have been boosted as the average house price has moved above the 3 per cent threshold. Changes in the VAT gap – the difference between theoretical and actual VAT receipts – have been a source of error in the VAT forecast. And North Sea oil and gas receipts have disappointed not only because of production shortfalls, but also because tax deductible expenditure has been higher than expected. We will continue to focus on these issues and work on how best to model their expected effects on the public finances in future years.

4.5 We have begun, with HM Revenue and Customs, to look back at the anti-avoidance measures announced by the Coalition Government in recent years and for which some evidence on outturns is available. While the net error in the costings we certified for these measures is dominated by the Swiss capital tax, our preliminary assessment of the remaining measures points to both upside and downside surprises. We will present a more detailed assessment in our December *EFO*.

4.6 On the spending side of our fiscal forecasts, this year's report finds significant errors in our forecasts for EU contributions. Over the past year we have taken steps to try to align our central forecast to the expected profile of actual spending – including, for example, forecasting when retrospective adjustments will be made once the new Own Resources Decision comes into effect. But this will remain a difficult component to forecast, given uncertainties around EU budgets and budget negotiations, and the implicit need to forecast gross national incomes for 27 different countries.

4.7 Finally, looking back at two of the lessons we identified in previous reports – the need to take into account underspending against plans by central government departments and to forecast local authorities' additions to their reserves – we have seen smaller errors in those areas of our spending forecast in 2013-14, which is encouraging. But this will remain a challenging area to forecast, especially as budget settlements for both central and local government get progressively tighter as public spending is cut further.

# A Supplementary economy and fiscal tables

A.1 This annex contains further details of our June 2010, March 2012 and March 2013 errors in forecasting the economy and public finances, including:

- our calendar year GDP growth forecast errors (Tables A.1 to A.4);
- errors in forecasting the key economic determinants that underpin the fiscal forecast (Tables A.5 to A.7); and
- errors for total receipts (Tables A.8 to A.10) and spending (Tables A.11 to A.13), broken down by economic and fiscal forecasting errors, and errors made as a result of subsequent policy or classification decisions. Our welfare spending forecasts are also broken down in the same way (Tables A.14 to A.16).

## Table A.1: Contributions to real GDP growth

| | Percentage points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Private consumption | Business investment | Residential investment | Total Government | Net trade | Stocks | GDP | Statistical discrepancy |
| **Forecasts** | | | | | | | | |
| **June 2010** | | | | | | | | |
| 2010 | 0.2 | 0.1 | -0.2 | 0.3 | -0.5 | 1.2 | 1.2 | 0.0 |
| 2011 | 0.8 | 0.8 | 0.3 | -0.7 | 0.9 | 0.4 | 2.3 | 0.0 |
| 2012 | 1.1 | 1.0 | 0.4 | -0.6 | 0.9 | 0.0 | 2.8 | 0.0 |
| 2013 | 1.3 | 1.1 | 0.4 | -0.6 | 0.7 | 0.0 | 2.9 | 0.0 |
| **March 2012** | | | | | | | | |
| 2012 | 0.3 | 0.1 | 0.0 | 0.0 | 0.4 | -0.1 | 0.8 | 0.0 |
| 2013 | 0.8 | 0.5 | 0.5 | -0.3 | 0.5 | 0.0 | 2.0 | 0.0 |
| **March 2013** | | | | | | | | |
| 2013 | 0.3 | 0.2 | 0.1 | 0.2 | 0.1 | -0.2 | 0.6 | -0.1 |
| **Latest data** | | | | | | | | |
| 2010 | 0.2 | 0.3 | 0.4 | 0.1 | -0.9 | 1.5 | 1.9 | 0.3 |
| 2011 | 0.1 | 0.5 | 0.1 | -0.2 | 1.4 | -0.2 | 1.6 | 0.0 |
| 2012 | 0.7 | 0.4 | -0.1 | 0.4 | -0.8 | 0.1 | 0.7 | 0.0 |
| 2013 | 1.1 | 0.5 | 0.1 | 0.0 | 0.0 | 0.3 | 1.7 | -0.2 |
| **Difference**[1] | | | | | | | | |
| **June 2010** | | | | | | | | |
| 2010 | 0.1 | 0.2 | 0.6 | -0.2 | -0.4 | 0.3 | 0.8 | 0.2 |
| 2011 | -0.8 | -0.2 | -0.2 | 0.5 | 0.5 | -0.5 | -0.7 | 0.0 |
| 2012 | -0.4 | -0.6 | -0.5 | 1.0 | -1.7 | 0.0 | -2.2 | 0.0 |
| 2013 | -0.3 | -0.7 | -0.3 | 0.6 | -0.7 | 0.3 | -1.2 | -0.2 |
| **March 2012** | | | | | | | | |
| 2012 | 0.4 | 0.3 | -0.1 | 0.3 | -1.2 | 0.2 | -0.1 | 0.0 |
| 2013 | 0.2 | -0.1 | -0.3 | 0.3 | -0.5 | 0.3 | -0.3 | -0.2 |
| **March 2013** | | | | | | | | |
| 2013 | 0.8 | 0.3 | 0.0 | -0.2 | -0.2 | 0.5 | 1.1 | -0.2 |

[1] Difference in unrounded numbers.

## Table A.2: Contributions to nominal GDP growth

| | Percentage points | | | | | | |
|---|---|---|---|---|---|---|---|
| | Private consumption | Private investment | Total Government | Net trade | Stocks | GDP | Statistical discrepancy |
| **Forecasts** | | | | | | | |
| **June 2010** | | | | | | | |
| 2010 | 2.8 | 0.2 | 1.2 | -0.8 | 1.1 | 4.4 | 0.0 |
| 2011 | 2.8 | 1.3 | -0.1 | 0.1 | 0.3 | 4.4 | 0.0 |
| 2012 | 2.8 | 1.7 | -0.1 | 0.6 | 0.0 | 5.0 | 0.0 |
| 2013 | 3.1 | 1.8 | 0.0 | 0.6 | 0.0 | 5.6 | 0.0 |
| **March 2012** | | | | | | | |
| 2012 | 2.5 | 0.5 | 0.2 | 0.4 | -0.3 | 3.3 | 0.0 |
| 2013 | 2.5 | 1.3 | 0.2 | 0.5 | 0.1 | 4.6 | 0.0 |
| **March 2013** | | | | | | | |
| 2013 | 2.2 | 0.3 | 0.3 | 0.0 | -0.1 | 2.7 | -0.1 |
| **Latest data** | | | | | | | |
| 2010 | 3.1 | 0.9 | 0.4 | -0.6 | 1.4 | 5.1 | 0.0 |
| 2011 | 2.2 | 1.0 | -0.2 | 0.8 | -0.1 | 3.8 | 0.0 |
| 2012 | 2.1 | 0.6 | 0.3 | -0.7 | -0.1 | 2.3 | 0.0 |
| 2013 | 2.3 | 0.8 | 0.0 | 0.1 | 0.4 | 3.5 | -0.2 |
| **Difference**[1] | | | | | | | |
| **June 2010** | | | | | | | |
| 2010 | 0.3 | 0.7 | -0.8 | 0.2 | 0.3 | 0.7 | 0.0 |
| 2011 | -0.6 | -0.4 | 0.0 | 0.7 | -0.4 | -0.6 | 0.0 |
| 2012 | -0.7 | -1.0 | 0.4 | -1.2 | -0.1 | -2.7 | 0.0 |
| 2013 | -0.8 | -1.0 | 0.0 | -0.4 | 0.4 | -2.1 | -0.2 |
| **March 2012** | | | | | | | |
| 2012 | -0.4 | 0.1 | 0.1 | -1.0 | 0.2 | -1.0 | 0.0 |
| 2013 | -0.2 | -0.5 | -0.2 | -0.4 | 0.4 | -1.1 | -0.2 |
| **March 2013** | | | | | | | |
| 2013 | 0.1 | 0.5 | -0.3 | 0.1 | 0.5 | 0.8 | -0.2 |

[1] Difference in unrounded numbers.

## Table A.3: Growth in National Accounts deflators

| | Per cent | | | | | |
|---|---|---|---|---|---|---|
| | Private consumption | Private investment | Total Government | Exports | Imports | GDP |
| **Forecasts** | | | | | | |
| **June 2010** | | | | | | |
| 2010 | 4.0 | 2.1 | 3.3 | 2.2 | 3.2 | 3.2 |
| 2011 | 3.0 | 2.7 | 2.4 | 0.5 | 2.9 | 2.0 |
| 2012 | 2.6 | 2.8 | 2.2 | 1.1 | 2.2 | 2.2 |
| 2013 | 2.8 | 2.6 | 3.0 | 1.6 | 1.7 | 2.7 |
| **March 2012** | | | | | | |
| 2012 | 3.4 | 3.7 | 0.9 | 2.1 | 2.3 | 2.6 |
| 2013 | 2.7 | 2.6 | 2.2 | 0.7 | 0.5 | 2.6 |
| **March 2013** | | | | | | |
| 2013 | 3.0 | 0.2 | 0.6 | 3.1 | 3.1 | 2.1 |
| **Latest data** | | | | | | |
| 2010 | 4.6 | 0.8 | 1.3 | 5.3 | 4.1 | 3.3 |
| 2011 | 3.5 | 2.2 | 0.3 | 6.0 | 7.3 | 2.2 |
| 2012 | 2.2 | 2.3 | 0.0 | -0.4 | -0.8 | 1.7 |
| 2013 | 2.0 | 1.3 | 0.3 | 1.6 | 1.0 | 1.8 |
| **Difference**[1] | | | | | | |
| **June 2010** | | | | | | |
| 2010 | 0.5 | -1.3 | -2.0 | 3.1 | 0.9 | 0.1 |
| 2011 | 0.5 | -0.5 | -2.1 | 5.6 | 4.5 | 0.2 |
| 2012 | -0.5 | -0.5 | -2.3 | -1.5 | -3.0 | -0.5 |
| 2013 | -0.8 | -1.3 | -2.7 | 0.1 | -0.7 | -0.9 |
| **March 2012** | | | | | | |
| 2012 | -1.2 | -1.4 | -0.9 | -2.5 | -3.1 | -0.9 |
| 2013 | -0.7 | -1.3 | -1.9 | 0.9 | 0.5 | -0.8 |
| **March 2013** | | | | | | |
| 2013 | -1.1 | 1.1 | -0.3 | -1.4 | -2.1 | -0.3 |

[1] Difference in unrounded numbers.

## Table A.4: Contributions to nominal GDP (income) growth

| | Percentage points | | | | | |
|---|---|---|---|---|---|---|
| | Compensation of employees | Corporations' gross operating surplus | Other income | Taxes on products and production | GDP | Statistical discrepancy |
| **Forecasts** | | | | | | |
| **June 2010** | | | | | | |
| 2010 | 1.1 | 0.8 | 0.7 | 1.8 | 4.4 | 0.0 |
| 2011 | 1.2 | 1.6 | 0.6 | 1.0 | 4.4 | 0.0 |
| 2012 | 1.7 | 1.4 | 1.0 | 0.9 | 5.0 | 0.0 |
| 2013 | 2.5 | 1.5 | 0.9 | 0.7 | 5.6 | 0.0 |
| **March 2012** | | | | | | |
| 2012 | 1.4 | 1.2 | 0.1 | 0.5 | 3.3 | 0.0 |
| 2013 | 2.0 | 1.3 | 0.7 | 0.6 | 4.6 | 0.0 |
| **March 2013** | | | | | | |
| 2013 | 1.4 | 0.3 | 0.4 | 0.6 | 2.7 | 0.0 |
| **Latest data** | | | | | | |
| 2010 | 1.7 | 0.3 | 1.4 | 1.7 | 5.1 | 0.0 |
| 2011 | 0.7 | 1.5 | 0.5 | 1.1 | 3.8 | 0.0 |
| 2012 | 1.3 | 0.1 | 0.6 | 0.3 | 2.3 | 0.0 |
| 2013 | 1.7 | 0.9 | 0.2 | 0.6 | 3.5 | 0.2 |
| **Difference**[1] | | | | | | |
| **June 2010** | | | | | | |
| 2010 | 0.6 | -0.5 | 0.7 | -0.1 | 0.7 | 0.0 |
| 2011 | -0.5 | -0.1 | 0.0 | 0.1 | -0.6 | 0.0 |
| 2012 | -0.4 | -1.3 | -0.5 | -0.6 | -2.7 | 0.0 |
| 2013 | -0.8 | -0.6 | -0.7 | -0.1 | -2.1 | 0.2 |
| **March 2012** | | | | | | |
| 2012 | 0.0 | -1.1 | 0.4 | -0.2 | -1.0 | 0.0 |
| 2013 | -0.2 | -0.4 | -0.5 | 0.0 | -1.1 | 0.2 |
| **March 2013** | | | | | | |
| 2013 | 0.3 | 0.6 | -0.2 | -0.1 | 0.8 | 0.2 |

[1] Difference in unrounded numbers.

## Table A.5: June 2010 fiscal determinants errors for 2013-14

| | Percentage change on a year earlier, unless otherwise stated | | |
|---|---|---|---|
| | Forecast | Outturn | Error |
| **GDP and its components** | | | |
| Real GDP | 2.8 | 2.2 | -0.6 |
| Nominal GDP (£ billion)[1] | 1710 | 1733 | 23 |
| Nominal GDP[1] | 5.5 | 4.2 | -1.3 |
| Wages and salaries[2] | 5.3 | 2.9 | -2.4 |
| Non-oil PNFC profits[2, 3] | 9.3 | 5.0 | -4.2 |
| Consumer spending[2, 3] | 4.8 | 3.6 | -1.2 |
| **Prices and earnings** | | | |
| GDP deflator | 2.6 | 1.8 | -0.8 |
| RPI (September) | 3.2 | 3.2 | 0.0 |
| CPI (September) | 2.5 | 2.7 | 0.2 |
| Whole economy earnings growth | 4.1 | 1.6 | -2.5 |
| **Other key fiscal determinants** | | | |
| Claimant count (millions)[4] | 1.26 | 1.33 | 0.07 |
| VAT gap (per cent) | 12.7 | 10.3 | -2.4 |
| *Financial and property sectors* | | | |
| Equity prices (FTSE All-share index) | 3106 | 3475 | 369 |
| HMRC financial sector profits[1, 3, 5] | 6.0 | 1.4 | -4.6 |
| Residential property prices[6] | 4.5 | 5.0 | 0.5 |
| Residential property transactions | 12.1 | 22.7 | 10.6 |
| Commercial property prices[7] | 6.5 | 18.0 | 11.5 |
| Commercial property transactions[7] | 5.4 | 8.4 | 3.0 |
| *Oil and gas* | 0.0 | 0.0 | 0.0 |
| Oil prices ($ per barrel)[3] | 86.6 | 108.8 | 22.2 |
| Oil production (million tonnes)[3] | 55.6 | 40.6 | -15.0 |
| Gas production (billion therms)[3] | 17.5 | 12.8 | -4.7 |
| *Interest rates* | 0.0 | 0.0 | 0.0 |
| Market short-term interest rates (per cent)[8] | 3.2 | 0.5 | -2.7 |
| Market gilt rates (per cent)[9] | 4.8 | 2.6 | -2.2 |

[1] Not seasonally adjusted
[2] Nominal
[3] Calendar year
[4] UK seasonally-adjusted claimant count
[5] HMRC Gross Case 1 trading profits
[6] Outturn data from ONS House Price Index
[7] Outturn data from HMRC information on stamp duty land tax
[8] 3-month sterling interbank rate (LIBOR)
[9] Weighted average interest rate on conventional gilts

## Table A.6: March 2012 fiscal determinants errors for 2013-14

| | Percentage change on a year earlier, unless otherwise stated | | |
|---|---|---|---|
| | Forecast | Outturn | Error |
| **GDP and its components** | | | |
| Real GDP | 2.3 | 2.2 | -0.1 |
| Nominal GDP (£ billion)[1] | 1652 | 1733 | 81 |
| Nominal GDP[1] | 4.8 | 4.2 | -0.6 |
| Wages and salaries[2] | 4.1 | 2.9 | -1.3 |
| Non-oil PNFC profits[2, 3] | 6.9 | 5.0 | -1.8 |
| Consumer spending[2, 3] | 3.9 | 3.6 | -0.4 |
| **Prices and earnings** | | | |
| GDP deflator | 2.5 | 1.8 | -0.6 |
| RPI (September) | 2.3 | 3.2 | 0.9 |
| CPI (September) | 1.9 | 2.7 | 0.8 |
| Whole economy earnings growth | 3.5 | 1.6 | -1.9 |
| **Other key fiscal determinants** | | | |
| Claimant count (millions)[4] | 1.61 | 1.33 | -0.28 |
| Employment (millions) | 29.3 | 30.1 | 0.8 |
| VAT gap (per cent) | 9.3 | 10.3 | 1.0 |
| *Financial and property sectors* | | | |
| Equity prices (FTSE All-share index) | 3290 | 3475 | 185 |
| HMRC financial sector profits[1, 3, 5] | 6.8 | 1.4 | -5.4 |
| Residential property prices[6] | 0.5 | 5.0 | 4.5 |
| Residential property transactions | 18.8 | 22.7 | 3.9 |
| Commercial property prices[7] | 4.5 | 18.0 | 13.5 |
| Commercial property transactions[7] | 1.8 | 8.4 | 6.6 |
| *Oil and gas* | | | |
| Oil prices ($ per barrel)[3] | 111.8 | 108.8 | -3.0 |
| Oil prices (£ per barrel)[3] | 70.2 | 69.6 | -0.6 |
| Gas prices (p/therm) | 63.5 | 66.9 | 3.4 |
| Oil production (million tonnes)[3] | 47.7 | 40.6 | -7.1 |
| Gas production (billion therms)[3] | 15.9 | 12.8 | -3.1 |
| *Interest rates* | | | |
| Market short-term interest rates (per cent)[8] | 0.8 | 0.5 | -0.3 |
| Market gilt rates (per cent)[9] | 2.8 | 2.6 | -0.2 |
| Euro/Sterling exchange rate | 1.2 | 1.2 | 0.0 |

[1] Not seasonally adjusted
[2] Nominal
[3] Calendar year
[4] UK seasonally-adjusted claimant count
[5] HMRC Gross Case 1 trading profits
[6] Outturn data from ONS House Price Index
[7] Outturn data from HMRC information on stamp duty land tax
[8] 3-month sterling interbank rate (LIBOR)
[9] Weighted average interest rate on conventional gilts

## Table A.7: March 2013 fiscal determinants errors for 2013-14

| | Percentage change on a year earlier, unless otherwise stated | | |
|---|---|---|---|
| | Forecast | Outturn | Error |
| **GDP and its components** | | | |
| Real GDP | 0.8 | 2.2 | 1.4 |
| Nominal GDP (£ billion)[1] | 1595 | 1733 | 138 |
| Nominal GDP[1] | 3.2 | 4.2 | 1.0 |
| Wages and salaries[2] | 2.4 | 2.9 | 0.5 |
| Non-oil PNFC profits[2, 3] | 1.8 | 5.0 | 3.2 |
| Consumer spending[2, 3] | 3.4 | 3.6 | 0.2 |
| **Prices and earnings** | | | |
| GDP deflator | 2.3 | 1.8 | -0.4 |
| RPI (September) | 3.3 | 3.2 | -0.1 |
| CPI (September) | 2.9 | 2.7 | -0.2 |
| Whole economy earnings growth | 1.8 | 1.6 | -0.2 |
| **Other key fiscal determinants** | | | |
| Claimant count (millions)[4] | 1.60 | 1.33 | -0.27 |
| Employment (millions) | 29.8 | 30.1 | 0.3 |
| VAT gap (per cent) | 10.5 | 10.3 | -0.2 |
| *Financial and property sectors* | | | |
| Equity prices (FTSE All-share index) | 3405 | 3475 | 69 |
| HMRC financial sector profits[1, 3, 5] | 1.4 | 1.4 | 0.0 |
| Residential property prices[6] | 0.9 | 5.0 | 4.0 |
| Residential property transactions | 1083 | 1140 | 57 |
| Commercial property prices[7] | -0.1 | 18.0 | 18.1 |
| Commercial property transactions[7] | -1.6 | 8.4 | 10.0 |
| *Oil and gas* | | | |
| Oil prices ($ per barrel)[3] | 113.4 | 108.8 | -4.6 |
| Oil prices (£ per barrel)[3] | 73.4 | 69.6 | -3.8 |
| Gas prices (p/therm) | 68.6 | 66.9 | -1.7 |
| Oil production (million tonnes)[3] | 44.4 | 40.6 | -3.8 |
| Gas production (billion therms)[3] | 14.1 | 12.8 | -1.3 |
| *Interest rates* | | | |
| Market short-term interest rates (per cent)[8] | 0.6 | 0.5 | -0.1 |
| Market gilt rates (per cent)[9] | 2.4 | 2.6 | 0.2 |
| Euro/Sterling exchange rate | 1.2 | 1.2 | 0.0 |

[1] Not seasonally adjusted
[2] Nominal
[3] Calendar year
[4] UK seasonally-adjusted claimant count
[5] HMRC Gross Case 1 trading profits
[6] Outturn data from ONS House Price Index
[7] Outturn data from HMRC information on stamp duty land tax
[8] 3-month sterling interbank rate (LIBOR)
[9] Weighted average interest rate on conventional gilts

## Table A.8: Breakdown of June 2010 receipts errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| Income tax (gross of tax credits) | 182.7 | 157.7 | -25.0 | -19.2 | -2.9 | -2.9 | -13.7 |
| *of which:* | | | | | | | |
| Pay as you earn (PAYE) | 147.6 | 135.5 | -12.1 | -10.9 | 0.9 | -2.1 | -8.2 |
| Self assessment (SA) | 32.5 | 20.9 | -11.7 | -5.2 | -5.7 | -0.7 | -35.9 |
| Income tax credits | -5.8 | -2.8 | 3.1 | -0.4 | 3.0 | 0.5 | -52.9 |
| National insurance contributions | 114.7 | 107.3 | -7.4 | -5.7 | -2.8 | 1.1 | -6.4 |
| Value added tax | 103.5 | 106.5 | 3.0 | -2.5 | 5.5 | 0.0 | 2.9 |
| Corporation tax | 54.1 | 40.3 | -13.8 | -8.9 | -4.0 | -0.9 | -25.5 |
| *of which:* | | | | | | | |
| Onshore | 45.2 | 36.7 | -8.5 | -3.9 | -2.7 | -2.0 | -18.8 |
| Offshore | 8.9 | 3.6 | -5.3 | -5.1 | -1.4 | 1.1 | -60.0 |
| Corporation tax credits | -0.8 | -1.0 | -0.2 | 0.0 | -0.2 | 0.0 | 21.1 |
| Petroleum revenue tax | 1.7 | 1.1 | -0.5 | -0.5 | -0.1 | 0.1 | -32.7 |
| Fuel duties | 31.8 | 26.9 | -4.9 | -0.8 | 0.5 | -4.6 | -15.5 |
| Business rates | 27.7 | 26.9 | -0.8 | 0.7 | -1.1 | -0.4 | -2.9 |
| Council tax | 28.1 | 27.4 | -0.8 | 0.0 | -0.8 | 0.0 | -2.7 |
| VAT refunds | 15.2 | 13.8 | -1.4 | -0.6 | -0.8 | 0.0 | -9.1 |
| Capital gains tax | 3.3 | 3.9 | 0.6 | 0.5 | 0.0 | 0.1 | 18.3 |
| Inheritance tax | 2.6 | 3.4 | 0.8 | -0.2 | 1.0 | 0.0 | 30.5 |
| Stamp duties | 14.7 | 12.5 | -2.2 | -3.6 | 1.2 | 0.2 | -15.2 |
| *of which:* | | | | | | | |
| Stamp duty land tax | 11.1 | 9.4 | -1.7 | -2.7 | 0.8 | 0.2 | -15.6 |
| Stamp duty on shares | 3.6 | 3.1 | -0.5 | -0.8 | 0.3 | 0.0 | -14.2 |
| Tobacco duties | 9.7 | 9.6 | -0.2 | 0.2 | -0.5 | 0.1 | -1.7 |
| Alcohol duties | 10.5 | 10.3 | -0.2 | 0.3 | -0.3 | -0.2 | -2.0 |
| Air passenger duty | 3.3 | 3.0 | -0.3 | -0.1 | -0.2 | 0.0 | -8.7 |
| Insurance premium tax | 2.8 | 3.0 | 0.2 | -0.1 | 0.3 | 0.0 | 8.5 |
| Climate change levy | 0.7 | 1.2 | 0.5 | 0.0 | -0.2 | 0.7 | 75.2 |
| Other HMRC taxes | 6.5 | 6.5 | 0.0 | -0.1 | -0.3 | 0.3 | -0.5 |
| *of which:* | | | | | | | |
| Landfill tax | 1.5 | 1.2 | -0.4 | 0.0 | -0.3 | 0.0 | -23.1 |
| Aggregates levy | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | -10.9 |
| Betting and gaming duty | 1.5 | 2.1 | 0.7 | 0.0 | 0.4 | 0.3 | 46.0 |
| Customs duties | 3.2 | 2.9 | -0.3 | 0.0 | -0.3 | 0.0 | -9.7 |
| Vehicle excise duties | 6.2 | 6.1 | -0.1 | 0.0 | -0.1 | 0.0 | -2.0 |
| Bank levy | 2.5 | 2.3 | -0.2 | 0.0 | -1.5 | 1.3 | -8.0 |
| BBC licence fee receipts | 3.4 | 3.1 | -0.2 | 0.0 | -0.2 | 0.0 | -7.3 |
| Environmental levies | 2.7 | 3.3 | 0.5 | 0.0 | -1.4 | 2.0 | 19.9 |
| Swiss capital tax | 0.0 | 0.9 | 0.9 | 0.0 | 0.0 | 0.9 | - |
| EU ETS auction receipts | 2.1 | 0.4 | -1.8 | 0.0 | -1.8 | 0.0 | -83.4 |
| Other taxes | 6.1 | 6.8 | 0.7 | -0.2 | 0.9 | 0.0 | 11.8 |
| **National accounts taxes** | 630.1 | 580.3 | -49.7 | -41.1 | -6.7 | -1.9 | -7.9 |
| less VAT and own resources EU contributions | -5.1 | -5.1 | 0.1 | 0.0 | 0.1 | 0.0 | -1.4 |
| Interest & dividends (ex. APF) | 9.0 | 6.7 | -2.3 | -3.5 | -1.2 | 2.3 | -25.9 |
| Gross operating surplus | 28.0 | 28.3 | 0.3 | 0.0 | 0.3 | 0.0 | 1.2 |
| Other receipts | -0.1 | -0.9 | -0.9 | 0.0 | 0.2 | -1.0 | - |
| **Current receipts (ex APF)** | 661.9 | 609.3 | -52.5 | -44.6 | -7.3 | -0.7 | -7.9 |
| APF Dividends | 0.0 | 12.2 | 12.2 | 0.0 | 0.0 | 12.2 | - |
| Current receipts | 661.9 | 621.5 | -40.3 | -44.6 | -7.3 | 11.5 | -6.1 |

## Table A.9: Breakdown of March 2012 receipts errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| Income tax (gross of tax credits) | 165.0 | 157.7 | -7.3 | -1.9 | -5.2 | -0.2 | -4.4 |
| *of which:* | | | | | | | |
| Pay as you earn (PAYE) | 141.1 | 135.5 | -5.7 | -1.7 | -3.5 | -0.5 | -4.0 |
| Self assessment (SA) | 22.9 | 20.9 | -2.1 | -0.3 | -2.0 | 0.2 | -9.0 |
| Income tax credits | -4.2 | -2.8 | 1.5 | 0.0 | 1.5 | 0.0 | -34.7 |
| National insurance contributions | 111.3 | 107.3 | -4.0 | -0.3 | -3.7 | 0.0 | -3.6 |
| Value added tax | 106.1 | 106.5 | 0.4 | -2.2 | 2.6 | 0.0 | 0.3 |
| Corporation tax | 44.8 | 40.3 | -4.6 | -3.7 | -0.6 | -0.3 | -10.2 |
| *of which:* | | | | | | | |
| Onshore | 37.3 | 36.7 | -0.6 | -1.2 | 0.8 | -0.2 | -1.7 |
| Offshore | 7.5 | 3.6 | -3.9 | -2.5 | -1.4 | 0.0 | -52.6 |
| Corporation tax credits | -1.0 | -1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| Petroleum revenue tax | 1.5 | 1.1 | -0.4 | -0.3 | -0.1 | 0.0 | -27.4 |
| Fuel duties | 28.1 | 26.9 | -1.3 | 0.3 | 0.6 | -2.1 | -4.5 |
| Business rates | 27.9 | 26.9 | -1.0 | 0.1 | -0.7 | -0.4 | -3.5 |
| Council tax | 27.9 | 27.4 | -0.5 | 0.0 | -0.5 | 0.0 | -1.9 |
| VAT refunds | 14.7 | 13.8 | -0.9 | -0.7 | -0.2 | 0.0 | -5.9 |
| Capital gains tax | 4.9 | 3.9 | -0.9 | 0.1 | -1.1 | 0.0 | -19.4 |
| Inheritance tax | 3.1 | 3.4 | 0.4 | 0.1 | 0.2 | 0.0 | 12.1 |
| Stamp duties | 10.6 | 12.5 | 1.9 | 1.4 | 0.4 | 0.0 | 17.6 |
| *of which:* | | | | | | | |
| Stamp duty land tax | 7.4 | 9.4 | 2.0 | 1.5 | 0.4 | 0.0 | 26.6 |
| Stamp duty on shares | 3.2 | 3.1 | -0.1 | -0.1 | 0.0 | 0.0 | -3.2 |
| Tobacco duties | 9.8 | 9.6 | -0.3 | 0.0 | -0.3 | 0.0 | -2.6 |
| Alcohol duties | 10.9 | 10.3 | -0.6 | 0.2 | -0.6 | -0.2 | -5.6 |
| Air passenger duty | 3.0 | 3.0 | 0.0 | 0.1 | -0.1 | 0.0 | -0.3 |
| Insurance premium tax | 3.0 | 3.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.8 |
| Climate change levy | 1.4 | 1.2 | -0.2 | 0.0 | -0.2 | 0.0 | -12.4 |
| Other HMRC taxes | 6.8 | 6.5 | -0.3 | -0.4 | 0.1 | 0.0 | -4.7 |
| *of which:* | | | | | | | |
| Landfill tax | 1.4 | 1.2 | -0.3 | 0.0 | -0.3 | 0.0 | -18.0 |
| Aggregates levy | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 |
| Betting and gaming duty | 2.0 | 2.1 | 0.2 | 0.0 | 0.2 | 0.0 | 8.6 |
| Customs duties | 3.2 | 2.9 | -0.2 | -0.4 | 0.1 | 0.0 | -7.6 |
| Vehicle excise duties | 5.8 | 6.1 | 0.3 | 0.0 | 0.2 | 0.0 | 4.5 |
| Bank levy | 2.7 | 2.3 | -0.4 | 0.0 | -0.9 | 0.5 | -15.0 |
| BBC licence fee receipts | 3.2 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | -1.1 |
| Environmental levies | 2.7 | 3.3 | 0.6 | 0.0 | -1.4 | 2.0 | 21.4 |
| Swiss Capital tax | 0.0 | 0.9 | 0.9 | 0.0 | 0.0 | 0.9 | - |
| EU ETS auction receipts | 1.5 | 0.4 | -1.2 | 0.0 | -1.2 | 0.0 | -76.7 |
| Other taxes | 7.2 | 6.8 | -0.3 | 0.4 | -0.7 | 0.0 | -4.8 |
| **National accounts taxes** | 598.8 | 580.3 | -18.4 | -6.7 | -12.0 | 0.2 | -3.1 |
| less VAT and own resources EU contributions | -5.7 | -5.1 | 0.6 | 0.0 | 0.6 | 0.0 | -10.8 |
| Interest & dividends (exc. APF) | 5.0 | 6.7 | 1.7 | -0.5 | -0.1 | 2.3 | 33.2 |
| Gross operating surplus | 25.3 | 28.3 | 3.0 | 0.0 | 3.0 | 0.0 | 11.9 |
| Other receipts | -0.9 | -0.9 | 0.0 | 0.0 | 0.0 | 0.0 | -0.4 |
| **Current receipts (exc. APF)** | 622.5 | 609.3 | -13.2 | -7.2 | -8.5 | 2.5 | -2.1 |
| APF Dividends | 0.0 | 12.2 | 12.2 | 0.0 | 0.0 | 12.2 | - |
| Current receipts | 622.5 | 621.5 | -1.0 | -7.2 | -8.5 | 14.7 | -0.2 |

## Table A.10: Breakdown of March 2013 receipts errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| Income tax (gross of tax credits) | 154.7 | 157.7 | 3.1 | -1.2 | 4.2 | 0.0 | 2.0 |
| *of which:* | | | | | | | |
| Pay as you earn (PAYE) | 133.7 | 135.5 | 1.8 | 0.6 | 1.2 | 0.0 | 1.3 |
| Self assessment (SA) | 20.3 | 20.9 | 0.5 | -1.8 | 2.3 | 0.0 | 2.6 |
| Income tax credits | -2.8 | -2.8 | 0.0 | 0.0 | 0.0 | 0.0 | -0.6 |
| National insurance contributions | 106.7 | 107.3 | 0.6 | 0.8 | -0.2 | 0.0 | 0.6 |
| Value added tax | 103.3 | 106.5 | 3.1 | 0.3 | 2.9 | 0.0 | 3.0 |
| Corporation tax | 39.3 | 40.3 | 1.0 | 0.6 | 0.4 | 0.0 | 2.6 |
| *of which:* | | | | | | | |
| Onshore | 34.6 | 36.7 | 2.1 | 0.8 | 1.4 | 0.0 | 6.2 |
| Offshore | 4.7 | 3.6 | -1.1 | -0.1 | -1.0 | 0.0 | -23.9 |
| Corporation tax credits | -1.0 | -1.0 | 0.0 | 0.0 | 0.0 | 0.0 | -1.1 |
| Petroleum revenue tax | 2.1 | 1.1 | -1.0 | -1.0 | 0.0 | 0.0 | -46.5 |
| Fuel duties | 26.1 | 26.9 | 0.8 | 0.1 | 0.6 | 0.0 | 2.9 |
| Business rates | 26.7 | 26.9 | 0.2 | 0.0 | 0.2 | 0.0 | 0.7 |
| Council tax | 27.4 | 27.4 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 |
| VAT refunds | 14.6 | 13.8 | -0.8 | -0.5 | -0.3 | 0.0 | -5.4 |
| Capital gains tax | 5.1 | 3.9 | -1.2 | 0.1 | -1.3 | 0.0 | -23.2 |
| Inheritance tax | 3.3 | 3.4 | 0.1 | 0.1 | 0.0 | 0.0 | 3.1 |
| Stamp duties | 10.7 | 12.5 | 1.8 | 1.3 | 0.5 | 0.0 | 16.8 |
| *of which:* | | | | | | | |
| Stamp duty land tax | 7.7 | 9.4 | 1.6 | 1.2 | 0.4 | 0.0 | 21.0 |
| Stamp duty on shares | 2.9 | 3.1 | 0.2 | 0.1 | 0.1 | 0.0 | 5.9 |
| Tobacco duties | 9.8 | 9.6 | -0.3 | 0.0 | -0.3 | 0.0 | -2.9 |
| Alcohol duties | 10.0 | 10.3 | 0.3 | 0.1 | 0.2 | 0.0 | 3.0 |
| Air passenger duty | 2.9 | 3.0 | 0.1 | 0.0 | 0.1 | 0.0 | 3.7 |
| Insurance premium tax | 3.1 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | -1.6 |
| Climate change levy | 1.5 | 1.2 | -0.3 | 0.0 | -0.3 | 0.0 | -18.1 |
| Other HMRC taxes | 6.3 | 6.5 | 0.2 | -0.2 | 0.4 | 0.0 | 3.2 |
| *of which:* | | | | | | | |
| Landfill tax | 1.0 | 1.2 | 0.1 | 0.0 | 0.1 | 0.0 | 13.4 |
| Aggregates levy | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 12.5 |
| Betting and gaming duty | 2.0 | 2.1 | 0.1 | 0.0 | 0.1 | 0.0 | 6.1 |
| Customs duties | 3.0 | 2.9 | -0.1 | -0.2 | 0.1 | 0.0 | -3.0 |
| Vehicle excise duties | 5.9 | 6.1 | 0.2 | 0.0 | 0.2 | 0.0 | 4.1 |
| Bank levy | 2.7 | 2.3 | -0.4 | 0.0 | -0.4 | 0.0 | -13.3 |
| BBC licence fee receipts | 3.1 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | -0.8 |
| Environmental levies | 2.3 | 3.3 | 1.0 | 0.0 | -1.0 | 2.0 | 43.8 |
| Swiss Capital tax | 3.2 | 0.9 | -2.3 | 0.0 | -2.3 | 0.0 | -72.9 |
| EU ETS auction receipts | 0.7 | 0.4 | -0.3 | 0.0 | -0.3 | 0.0 | -46.7 |
| Other taxes | 6.8 | 6.8 | 0.0 | 0.2 | -0.2 | 0.0 | 0.7 |
| **National accounts taxes** | 574.3 | 580.3 | 6.0 | 0.7 | 3.3 | 2.0 | 1.0 |
| less VAT and own resources EU contributions | -5.3 | -5.1 | 0.2 | 0.0 | 0.2 | 0.0 | -3.6 |
| Interest & dividends (exc. APF) | 6.7 | 6.7 | 0.0 | -0.1 | 0.1 | 0.0 | -0.4 |
| Gross operating surplus | 25.3 | 28.3 | 3.0 | 0.0 | 3.0 | 0.0 | 11.9 |
| Other receipts | -0.9 | -0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 |
| **Current receipts (exc. APF)** | 600.2 | 609.3 | 9.2 | 0.6 | 6.5 | 2.0 | 1.5 |
| APF Dividends | 12.2 | 12.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Current receipts | 612.4 | 621.5 | 9.2 | 0.6 | 6.5 | 2.0 | 1.5 |

## Table A.11: Breakdown of June 2010 spending errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| **Public Sector Current Expenditure (PSCE)** | | | | | | | |
| **PSCE in RDEL** | 325.6 | 317.5 | -8.1 | 0.0 | -2.0 | -6.1 | -2.5 |
| **PSCE in Annually Managed Expenditure** | 353.0 | 351.4 | -1.6 | -5.4 | -1.9 | 5.6 | -0.5 |
| *of which:* | | | | | | | |
| Social security benefits | 179.9 | 179.6 | -0.3 | 4.6 | 2.0 | -7.0 | -0.2 |
| Tax credits | 27.0 | 28.7 | 1.8 | 1.0 | 3.0 | -2.2 | 6.5 |
| Net public service pension payments | 8.7 | 10.9 | 2.3 | 0.8 | 1.3 | 0.2 | 26.1 |
| National lottery current grants | 0.7 | 1.2 | 0.5 | 0.0 | 0.5 | 0.0 | 64.0 |
| BBC domestic services current expenditure | 4.1 | 3.2 | -0.8 | 0.0 | -0.8 | 0.0 | -20.0 |
| Other PSCE items in departmental AME | 0.2 | 1.6 | 1.4 | 0.0 | -0.4 | 1.9 | 724 |
| Expenditure transfers to EU institutions | 7.7 | 9.0 | 1.3 | 0.0 | 0.4 | 0.9 | 16.3 |
| Locally-financed current expenditure[1] | 28.9 | 35.1 | 6.3 | 0.0 | -3.9 | 10.2 | 21.7 |
| CG gross debt interest | 57.8 | 47.4 | -10.4 | -10.7 | -0.6 | 0.9 | -18.0 |
| Depreciation | 17.3 | 18.1 | 0.7 | 0.0 | 0.3 | 0.4 | 4.2 |
| Current VAT refunds | 13.4 | 11.6 | -1.8 | -1.0 | -0.8 | 0.0 | -13.6 |
| Single use military expenditure | 6.4 | 4.5 | -1.9 | 0.0 | -1.4 | -0.5 | -29.4 |
| Environmental levies | 3.0 | 2.7 | -0.3 | 0.0 | -1.7 | 1.4 | -10.2 |
| Other National Accounts adjustments | -2.1 | -2.3 | -0.2 | 0.0 | 0.3 | -0.5 | 8.5 |
| **Total public sector current expenditure** | 678.6 | 668.9 | -9.7 | -5.4 | -3.9 | -0.5 | -1.4 |
| **Public sector gross investment (PSGI)** | | | | | | | |
| **PSGI in CDEL** | 30.2 | 34.2 | 4.0 | 0.0 | -0.1 | 4.1 | 13.2 |
| **PSGI in Annually Managed Expenditure** | 13.1 | 14.0 | 0.9 | 0.4 | 0.3 | 0.2 | 6.9 |
| *of which:* | | | | | | | |
| National lottery capital grants | 0.6 | 0.5 | -0.1 | 0.0 | -0.1 | 0.0 | -21.2 |
| Other PSGI items in departmental AME | 0.1 | -0.5 | -0.7 | 0.0 | -1.0 | 0.3 | |
| Locally-financed capital expenditure | 4.4 | 7.2 | 2.7 | 0.0 | 2.7 | 0.0 | 61.6 |
| Public corporations capital expenditure | 8.0 | 7.5 | -0.5 | 0.0 | -0.5 | 0.0 | -5.9 |
| Other National Accounts adjustments | 0.0 | -0.6 | -0.6 | 0.4 | -0.9 | -0.1 | |
| **Total public sector gross investment** | 43.3 | 48.2 | 4.9 | 0.4 | 0.2 | 4.3 | 11.3 |
| *Less* depreciation | -23.4 | -26.5 | -3.1 | 0.0 | -2.7 | -0.4 | 13.3 |
| **Public sector net investment** | 19.9 | 21.7 | 1.8 | 0.4 | -2.5 | 3.9 | 8.9 |
| **Total managed expenditure** | 722.0 | 717.1 | -4.8 | -4.9 | -3.7 | 3.8 | -0.7 |

[1] Local authority current spending outturns and accounting adjustments are provisional and subject to change. In particular, the amount of capital spending funded from revenue is not equal and offsetting and is likely to be corrected, which may affect the final outturn figure for locally financed current expenditure and be partly offset in accounting adjustments.

## Table A.12: Breakdown of March 2012 spending errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| **Public Sector Current Expenditure (PSCE)** | | | | | | | |
| **PSCE in RDEL** | 330.3 | 317.5 | -12.7 | 0.0 | -2.0 | -10.8 | -3.9 |
| **PSCE in Annually Managed Expenditure** | 343.3 | 351.4 | 8.1 | -2.5 | -1.4 | 12.0 | 2.4 |
| *of which:* | | | | | | | |
| Social security benefits | 182.6 | 179.6 | -3.0 | -1.8 | 2.6 | -3.8 | -1.6 |
| Tax credits | 27.9 | 28.7 | 0.8 | 0.1 | 1.1 | -0.4 | 2.9 |
| Net public service pension payments | 12.2 | 10.9 | -1.3 | -0.1 | -1.2 | 0.0 | -10.6 |
| National lottery current grants | 0.9 | 1.2 | 0.2 | 0.0 | 0.2 | 0.0 | 24.6 |
| BBC domestic services current expenditure | 3.4 | 3.2 | -0.2 | 0.0 | -0.2 | 0.0 | -5.0 |
| Fees associated with financial interventions | -0.3 | 0.0 | 0.3 | 0.0 | 0.3 | 0.0 | |
| Other PSCE items in departmental AME | 0.6 | 1.6 | 1.0 | 0.0 | 0.5 | 0.5 | 166 |
| Expenditure transfers to EU institutions | 6.9 | 9.0 | 2.1 | -0.1 | 1.3 | 0.9 | 30.2 |
| Locally-financed current expenditure[1] | 28.1 | 35.1 | 7.1 | 0.0 | -3.3 | 10.4 | 25.1 |
| CG gross debt interest | 46.1 | 47.4 | 1.3 | 0.4 | 0.0 | 0.9 | 2.7 |
| Depreciation | 17.6 | 18.1 | 0.5 | 0.0 | 0.1 | 0.4 | 2.7 |
| Current VAT refunds | 12.7 | 11.6 | -1.1 | -1.0 | -0.1 | 0.0 | -8.5 |
| Single use military expenditure | 5.7 | 4.5 | -1.2 | 0.0 | -1.4 | 0.2 | -20.8 |
| Environmental levies | 2.0 | 2.7 | 0.7 | 0.0 | -1.3 | 2.0 | 33.3 |
| Other National Accounts adjustments | -3.2 | -2.3 | 0.9 | 0.0 | 0.0 | 0.9 | -27.9 |
| **Total public sector current expenditure** | 673.6 | 668.9 | -4.6 | -2.5 | -3.4 | 1.2 | -0.7 |
| **Public sector gross investment (PSGI)** | | | | | | | |
| **PSGI in CDEL** | 33.9 | 34.2 | 0.3 | 0.0 | -0.1 | 0.4 | 0.9 |
| **PSGI in Annually Managed Expenditure** | 12.6 | 14.0 | 1.5 | 0.3 | 1.0 | 0.2 | 11.8 |
| *of which:* | | | | | | | |
| National lottery capital grants | 0.6 | 0.5 | -0.1 | 0.0 | -0.1 | 0.0 | -17.9 |
| Other PSGI items in departmental AME | 0.4 | -0.5 | -0.9 | 0.0 | -1.2 | 0.3 | |
| Locally-financed capital expenditure | 4.9 | 7.2 | 2.2 | 0.0 | 2.2 | 0.0 | 45.6 |
| Public corporations capital expenditure | 6.4 | 7.5 | 1.1 | 0.0 | 1.1 | 0.0 | 17.3 |
| Other National Accounts adjustments | 0.3 | -0.6 | -0.9 | 0.3 | -1.0 | -0.1 | |
| **Total public sector gross investment** | 46.4 | 48.2 | 1.8 | 0.3 | 0.9 | 0.6 | 3.8 |
| *Less* depreciation | -23.1 | -26.5 | -3.4 | 0.0 | -3.0 | -0.4 | 15.0 |
| **Public sector net investment** | 23.4 | 21.7 | -1.7 | 0.3 | -2.2 | 0.2 | -7.2 |
| **Total managed expenditure** | 720.0 | 717.1 | -2.9 | -2.2 | -2.5 | 1.8 | -0.4 |

[1] Local authority current spending outturns and accounting adjustments are provisional and subject to change. In particular, the amount of capital spending funded from revenue is not equal and offsetting and is likely to be corrected, which may affect the final outturn figure for locally financed current expenditure and be partly offset in accounting adjustments.

## Table A.13: Breakdown of March 2013 spending errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| **Public Sector Current Expenditure (PSCE)** | | | | | | | |
| **PSCE in RDEL** | 320.8 | 317.5 | -3.2 | 0.0 | -0.8 | -2.4 | -1.0 |
| **PSCE in Annually Managed Expenditure** | 352.1 | 351.4 | -0.7 | -3.6 | -2.5 | 5.3 | -0.2 |
| *of which:* | | | | | | | |
| Social security benefits | 180.4 | 179.6 | -0.7 | -1.2 | 0.4 | 0.0 | -0.4 |
| Tax credits | 29.0 | 28.7 | -0.2 | 0.0 | -0.2 | 0.0 | -0.8 |
| Net public service pension payments | 11.1 | 10.9 | -0.2 | 0.0 | -0.2 | 0.0 | -1.6 |
| National lottery current grants | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | -3.8 |
| BBC domestic services current expenditure | 3.5 | 3.2 | -0.3 | 0.0 | -0.3 | 0.0 | -7.5 |
| Fees associated with financial interventions | -0.3 | 0.0 | 0.3 | 0.0 | 0.0 | 0.3 | |
| Other PSCE items in departmental AME | 1.4 | 1.6 | 0.3 | 0.0 | 0.3 | 0.0 | 19.5 |
| Expenditure transfers to EU institutions | 6.5 | 9.0 | 2.5 | 0.1 | 1.5 | 0.9 | 37.5 |
| Locally-financed current expenditure[1] | 36.1 | 35.1 | -1.0 | 0.0 | -1.0 | 0.0 | -2.8 |
| CG gross debt interest | 49.5 | 47.4 | -2.1 | -2.0 | -0.8 | 0.7 | -4.3 |
| Depreciation | 17.7 | 18.1 | 0.4 | 0.0 | -0.1 | 0.4 | 2.1 |
| Current VAT refunds | 12.3 | 11.6 | -0.7 | -0.5 | -0.2 | 0.0 | -5.5 |
| Single use military expenditure | 4.7 | 4.5 | -0.2 | 0.0 | -0.4 | 0.2 | -4.0 |
| Environmental levies | 1.7 | 2.7 | 1.0 | 0.0 | -0.9 | 2.0 | 61.9 |
| Other National Accounts adjustments | -2.6 | -2.3 | 0.3 | 0.0 | -0.6 | 0.9 | -13.1 |
| **Total public sector current expenditure** | 672.9 | 668.9 | -4.0 | -3.6 | -3.3 | 2.9 | -0.6 |
| **Public sector gross investment (PSGI)** | | | | | | | |
| **PSGI in CDEL** | 33.7 | 34.2 | 0.5 | 0.0 | 1.2 | -0.7 | 1.5 |
| **PSGI in Annually Managed Expenditure** | 13.5 | 14.0 | 0.5 | 0.0 | 0.6 | -0.1 | 4.1 |
| *of which:* | | | | | | | |
| National lottery capital grants | 0.5 | 0.5 | -0.1 | 0.0 | -0.1 | 0.0 | -9.7 |
| Other PSGI items in departmental AME | 0.8 | -0.5 | -1.3 | 0.0 | -1.3 | 0.0 | |
| Locally-financed capital expenditure | 6.4 | 7.2 | 0.8 | 0.0 | 0.8 | 0.0 | 11.8 |
| Public corporations capital expenditure | 5.9 | 7.5 | 1.6 | 0.0 | 1.6 | 0.0 | 28.1 |
| Other National Accounts adjustments | -0.1 | -0.6 | -0.5 | 0.0 | -0.4 | -0.1 | 647 |
| **Total public sector gross investment** | 47.2 | 48.2 | 1.1 | 0.0 | 1.9 | -0.8 | 2.2 |
| *Less* depreciation | -23.0 | -26.5 | -3.5 | 0.0 | -3.1 | -0.4 | 15.3 |
| **Public sector net investment** | 24.2 | 21.7 | -2.5 | 0.0 | -1.2 | -1.2 | -10.2 |
| **Total managed expenditure** | 720.0 | 717.1 | -2.9 | -3.6 | -1.4 | 2.1 | -0.4 |

[1] Local authority current spending outturns and accounting adjustments are provisional and subject to change. In particular, the amount of capital spending funded from revenue is not equal and offsetting and is likely to be corrected, which may affect the final outturn figure for locally financed current expenditure and be partly offset in accounting adjustments.

## Table A.14: Breakdown of June 2010 welfare spending errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| **Future welfare cap** | | | | | | | |
| Incapacity benefits | 12.6 | 13.4 | 0.8 | 0.3 | 1.6 | -1.1 | 6.3 |
| Statutory maternity pay[1] | 1.9 | 2.3 | 0.3 | 0.0 | 0.3 | 0.0 | 18.3 |
| Income support (not incapacity) | 2.5 | 2.7 | 0.2 | 0.0 | 0.2 | -0.1 | 8.0 |
| Pension credit | 7.2 | 7.0 | -0.1 | -0.1 | 0.2 | -0.2 | -1.6 |
| DLA and PIP | 13.5 | 13.9 | 0.4 | 0.4 | 0.0 | 0.0 | 2.9 |
| Attendance allowance | 6.0 | 5.4 | -0.6 | 0.2 | -0.8 | 0.0 | -10.1 |
| Housing benefit (not unemployed) | 17.6 | 20.5 | 2.9 | 0.1 | 3.1 | -0.3 | 16.7 |
| Child benefit | 12.3 | 11.5 | -0.8 | 0.0 | -0.2 | -0.7 | -6.6 |
| Personal tax credits (AME spending) | 25.8 | 27.0 | 1.2 | 1.0 | 2.5 | -2.3 | 4.5 |
| NI social security in welfare cap[2] | 3.3 | 3.2 | -0.2 | 0.0 | -0.2 | 0.0 | -4.6 |
| Other social security in welfare cap | 6.5 | 6.3 | -0.1 | 0.1 | -0.4 | 0.2 | -1.7 |
| **Future welfare cap in AME** | **109.1** | **113.1** | **4.0** | **2.1** | **6.4** | **-4.5** | **3.7** |
| Personal tax credits (negative tax element) | 5.8 | 2.8 | -3.1 | 0.4 | -3.0 | -0.5 | -52.9 |
| **Total future welfare cap** | **114.9** | **115.9** | **0.9** | **2.5** | **3.4** | **-4.9** | **0.8** |
| **Welfare spending outside the future welfare cap** | | | | | | | |
| Jobseeker's allowance | 5.0 | 4.3 | -0.7 | 0.2 | -0.9 | 0.0 | -14.0 |
| State pension (contributory and non-contributory) | 80.5 | 83.1 | 2.6 | 2.6 | 0.0 | 0.0 | 3.2 |
| Housing benefit (unemployed) | 3.2 | 3.2 | 0.0 | 0.5 | -0.4 | 0.0 | 1.0 |
| War pensions | 1.0 | 0.9 | -0.1 | 0.0 | -0.1 | 0.0 | -10.7 |
| NI social security outside welfare cap[2] | 2.3 | 2.2 | -0.1 | 0.0 | -0.1 | 0.0 | -4.6 |
| Council tax benefit | 4.7 | 0.0 | -4.7 | 0.1 | -0.1 | -4.7 | |
| **Total welfare spending outside the future welfare cap** | **96.6** | **93.6** | **-3.0** | **3.5** | **-1.6** | **-4.8** | **-3.1** |
| **TOTAL Welfare** | **211.5** | **209.5** | **-2.0** | **6.0** | **1.7** | **-9.7** | **-1.0** |

[1] DWP accounts include past-year adjustments which reduce spending to £2.2 billion.

[2] An allocation of error between categories is not available, so we assume all errors are fiscal forecasting errors.

## Table A.15: Breakdown of March 2012 welfare spending errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| **Future welfare cap** | | | | | | | |
| Incapacity benefits | 11.2 | 13.4 | 2.2 | 0.0 | 2.2 | -0.1 | 19.6 |
| Statutory maternity pay[1] | 2.4 | 2.3 | -0.2 | 0.0 | -0.2 | 0.0 | -9.4 |
| Income support (not incapacity) | 2.7 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| Pension credit | 7.6 | 7.0 | -0.6 | -0.1 | -0.5 | 0.0 | -7.3 |
| DLA and PIP | 13.9 | 13.9 | 0.0 | -0.1 | 0.1 | 0.0 | 0.0 |
| Attendance allowance | 5.9 | 5.4 | -0.6 | 0.0 | -0.6 | 0.0 | -9.8 |
| Housing benefit (not unemployed) | 18.6 | 20.5 | 1.9 | 0.0 | 1.8 | 0.0 | 10.1 |
| Child benefit | 10.8 | 11.5 | 0.7 | 0.0 | 0.1 | 0.6 | 6.4 |
| Personal tax credits (AME spending) | 26.2 | 27.0 | 0.8 | 0.1 | 1.1 | -0.4 | 3.0 |
| NI social security in welfare cap[2] | 3.2 | 3.2 | -0.1 | 0.0 | -0.1 | 0.0 | -1.7 |
| Other social security in welfare cap | 6.6 | 6.3 | -0.2 | 0.0 | -0.2 | 0.0 | -3.6 |
| **Future welfare cap in AME** | **109.2** | **113.1** | **3.9** | **-0.1** | **3.8** | **0.2** | **3.6** |
| Personal tax credits (negative tax element) | 4.2 | 2.8 | -1.5 | 0.0 | -1.5 | 0.0 | -34.7 |
| **Total future welfare cap** | **113.5** | **115.9** | **2.4** | **-0.1** | **2.3** | **0.1** | **2.1** |
| **Welfare spending outside the future welfare cap** | | | | | | | |
| Jobseeker's allowance | 5.5 | 4.3 | -1.2 | -0.9 | -0.2 | 0.0 | -21.3 |
| State pension (contributory and non-contributory) | 83.5 | 83.1 | -0.4 | -0.3 | 0.0 | 0.0 | -0.4 |
| Housing benefit (unemployed) | 3.5 | 3.2 | -0.3 | -0.4 | 0.1 | 0.0 | -8.1 |
| War pensions | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | -4.6 |
| NI social security outside welfare cap[2] | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | -1.7 |
| Council tax benefit | 4.2 | 0.0 | -4.2 | 0.0 | 0.0 | -4.3 | |
| **Total welfare spending outside the future welfare cap** | **99.7** | **93.6** | **-6.1** | **-1.6** | **-0.2** | **-4.3** | **-6.1** |
| **TOTAL Welfare** | **213.2** | **209.5** | **-3.7** | **-1.7** | **2.2** | **-4.2** | **-1.7** |

[1]DWP accounts include past-year adjustments which reduce spending to £2.2 billion.
[2] An allocation of error between categories is not available, so we assume all errors are fiscal forecasting errors.

## Table A.16: Breakdown of March 2013 welfare spending errors for 2013-14

| | £ billion | | | | | | |
|---|---|---|---|---|---|---|---|
| | Forecast | Outturn | Error | of which | | | |
| | | | | Economic factors | Fiscal forecasting errors | Policy and classification changes | Total error (%) |
| **Future welfare cap** | | | | | | | |
| Incapacity benefits | 12.2 | 13.4 | 1.2 | 0.0 | 1.2 | 0.0 | 9.9 |
| Statutory maternity pay[1] | 2.4 | 2.3 | -0.2 | 0.0 | -0.2 | 0.0 | -8.2 |
| Income support (not incapacity) | 2.5 | 2.7 | 0.2 | 0.0 | 0.2 | 0.0 | 8.0 |
| Pension credit | 7.2 | 7.0 | -0.2 | 0.0 | -0.2 | 0.0 | -2.3 |
| DLA and PIP | 14.0 | 13.9 | 0.0 | 0.0 | 0.0 | 0.0 | -0.3 |
| Attendance allowance | 5.6 | 5.4 | -0.2 | 0.0 | -0.2 | 0.0 | -4.1 |
| Housing benefit (not unemployed) | 19.8 | 20.5 | 0.7 | 0.0 | 0.7 | 0.0 | 3.8 |
| Child benefit | 11.8 | 11.5 | -0.3 | 0.0 | -0.3 | 0.0 | -2.6 |
| Personal tax credits (AME spending) | 27.3 | 27.0 | -0.3 | 0.0 | -0.3 | 0.0 | -1.1 |
| NI social security in welfare cap[2] | 3.3 | 3.2 | -0.1 | 0.0 | -0.1 | 0.0 | -2.6 |
| Other social security in welfare cap | 6.6 | 6.3 | -0.2 | 0.0 | -0.2 | 0.0 | -3.1 |
| **Future welfare cap in AME** | **112.5** | **113.1** | **0.6** | **0.1** | **0.5** | **0.0** | 0.6 |
| Personal tax credits (negative tax element) | 2.8 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | -0.6 |
| **Total future welfare cap** | **115.3** | **115.9** | **0.6** | **0.1** | **0.5** | **0.0** | **0.5** |
| **Welfare spending outside the future welfare cap** | | | | | | | |
| Jobseeker's allowance | 5.2 | 4.3 | -0.9 | -0.8 | -0.1 | 0.0 | -17.6 |
| State pension (contributory and non-contributory) | 83.4 | 83.1 | -0.3 | 0.0 | -0.3 | 0.0 | -0.3 |
| Housing benefit (unemployed) | 3.5 | 3.2 | -0.3 | -0.5 | 0.1 | 0.0 | -9.8 |
| War pensions | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | -4.2 |
| NI social security outside welfare cap[2] | 2.2 | 2.2 | -0.1 | 0.0 | -0.1 | 0.0 | -2.6 |
| **Total welfare spending outside the future welfare cap** | **95.3** | **93.6** | **-1.6** | **-1.3** | **-0.3** | **0.0** | **-1.7** |
| **TOTAL Welfare** | **210.5** | **209.5** | **-1.0** | **-1.2** | **0.2** | **0.0** | **-0.5** |

[1]DWP accounts include past-year adjustments which reduce spending to £2.2 billion.

[2] An allocation of error between categories is not available, so we assume all errors are fiscal forecasting errors.

# B Comparison with past official forecasts

B.1 This annex compares the size of the errors in our forecasts for the public finances with the average errors in official forecasts over the past 20 years.

B.2 This exercise has obvious limitations as a guide to relative forecast performance. Most fundamentally, we are not comparing like with like. For example, we may be looking at periods in which the underlying behaviour of the public finances was inherently more or less predictable, in which the size and distribution of unforeseeable shocks was different, or in which policymakers responded differently when the public finances diverged from expectations. And, as the OBR has only produced nine forecasts so far, the sample is still small, especially beyond the shortest time horizons.

B.3 In addition to the public finances, we also undertake this comparison for our forecasts of real GDP growth. As we have emphasized throughout this report, real GDP is far from the most important economic determinant of the public finances, but it is the measure that most outside commentators focus on when judging the performance of macroeconomic forecasts.

B.4 For what it is worth, given the limitations of such comparisons, the errors in our forecasts have, more often than not, been smaller than the average errors in official forecasts over the past 20 years.

## Real GDP growth

B.5 Table B.1 shows our forecasting errors for real GDP growth. When comparing the absolute error between forecast periods, the expected error for forecasts two years out is greater than for one year ahead, and for one year ahead is greater than in-year estimates. You would expect forecasts to be more accurate at short horizons than long ones – the closer you are to the event, the more data become available and the easier it should be to forecast. And this intuition is borne out by the evidence from historical forecast errors. However, this information advantage can be complicated by data revisions, which are often substantial, multiple, and continue long after the event.

B.6 The errors in our forecasts for growth in 2012 have been larger than average, reflecting the fact that real GDP growth – while uneven from quarter to quarter – slowed in each of the first three calendar years of this recovery, rather than gathering pace as in most previous recoveries. Only by late 2011 did we (and other forecasters) revise down our expectations for 2012 GDP growth significantly. Growth has however been revised up, and the latest outturn is not as weak as the forecast we produced at the end of the year (when early estimates for three quarters of data were available).

B.7 Real GDP growth since the end of 2012 has been roughly in line with our June 2010 forecast, but from a much lower base reflecting our over-optimism for the preceding period. Despite the pick-up in growth through 2013, growth was weaker than expected for the calendar year as a whole because it was weaker at the end of 2012. The in-year forecast error from our March 2013 forecast also appears larger than average, but the error was in the other direction, as growth picked up more than expected at the time.

### Table B.1: Forecast errors for real GDP growth

| | Per cent | | | |
|---|---|---|---|---|
| | Calendar years ahead | | | |
| | In-year | One | Two | Three |
| June 2010 | 0.7 | -0.7 | -2.2 | -1.2 |
| November 2010 | 0.1 | -0.5 | -1.9 | -1.2 |
| March 2011 | -0.1 | -1.8 | -1.2 | |
| November 2011 | 0.7 | 0.0 | -0.4 | |
| March 2012 | -0.1 | -0.3 | | |
| December 2012 | 0.8 | 0.5 | | |
| March 2013 | 1.1 | | | |
| December 2013 | 0.3 | | | |
| Average absolute errors over the previous 20 years | | | | |
| Spring/summer | 0.9 | 1.2 | 1.3 | 1.2 |
| Autumn | 0.8 | 1.1 | 1.1 | 1.2 |
| Key: | | | | |
| Smaller than average absolute error | | | | |
| Average sized error | | | | |
| Bigger than average absolute error | | | | |

## Public sector net borrowing

B.8 We made sizeable three and four year-ahead forecast errors for 'underlying' borrowing (excluding the Royal Mail pension fund and APF transfers) for 2013-14. But forecasts over such horizons are subject to widening degrees of uncertainty, and our errors were in fact generally smaller than the average of past forecasts over comparable horizons.

B.9 The largest relative errors in our PSNB forecasts, shown in red and yellow in Table B.2, mainly relate to in-year forecasts. In large part these reflect the volatility of recent borrowing outturns. Estimates of PSNB continue to be revised well after the fiscal year has ended. Cash receipts that are ultimately accrued back in time are received with a lag, firm data on departmental spending is only available some months after the initial outturn estimates have to be made, and the lags for local authority and public corporation data are even longer.

## Table B.2: Forecast errors for PSNB as a per cent of GDP

| | Per cent of GDP | | | | |
|---|---|---|---|---|---|
| | Fiscal years ahead | | | | |
| | In-year | One | Two | Three | Four |
| June 2010[1] | -0.6 | -1.3 | -0.2 | 1.4 | 2.7 |
| November 2010 | -1.2 | -0.3 | 1.3 | 2.7 | |
| March 2011 | -1.1 | -0.6 | 0.7 | 2.1 | |
| November 2011 | -1.1 | -0.7 | 0.2 | | |
| March 2012 | -1.0 | -0.7 | 0.3 | | |
| December 2012 | -0.8 | -0.7 | | | |
| March 2013 | -0.9 | -1.3 | | | |
| December 2013 | -0.6 | | | | |
| Average absolute errors over the previous 20 years | | | | | |
| Spring/summer | 0.4 | 1.1 | 2.0 | 3.0 | 3.1 |
| Autumn | 0.8 | 1.4 | 2.0 | 2.1 | 2.9 |

[1] For comparability with other forecasts, 'in-year' is assumed to be 2009-10.

Key:

| |
|---|
| Smaller than average absolute error |
| Average sized error |
| Bigger than average absolute error |

B.10 Nominal GDP has been significantly revised up in the latest Blue Book, with the changes raising GDP by around 4 per cent in recent years. Changes to the level of GDP do not greatly affect our interpretation of how the public finances have evolved, but the revisions have reduced the ratios of fiscal measures expressed as a share of national income.

B.11 These revisions make comparisons of receipts and spending forecasts expressed as a share of GDP hard to interpret. (The consequences for net borrowing are on a much smaller scale, as the effects on receipts and spending shares are largely offsetting.) So, rather than present forecast errors in levels terms, in this annex we:

- present the errors we made in forecasting the *change* in receipts as a share of GDP over time, which abstracts from changes in the level caused by revisions to the denominator (Table B.3); and
- compare cash spending errors normalised by the latest GDP estimates (Table B.4).

B.12 Judged on these bases, our underlying receipts and spending forecasts have generally been more accurate than was the case on average in the past. But our June 2010 medium-term receipts errors were larger than average because the receipts-to-GDP ratio fell slightly in both 2012-13 and 2013-14, rather than rising as we expected at the time. Cash spending has generally fallen below our forecasts by relatively small amounts, but it was considerably lower than our March 2011 forecast in particular (when we raised our spending forecast).

## Table B.3: Forecast error for changes in receipts as a per cent of GDP

| | Per cent of GDP | | | | |
|---|---|---|---|---|---|
| | Fiscal years ahead | | | | |
| | In-year | One | Two | Three | Four |
| June 2010[1] | -0.6 | -0.4 | -1.0 | -1.5 | -2.0 |
| November 2010 | 0.3 | -0.2 | -0.6 | -1.0 | |
| March 2011 | 0.1 | -0.6 | -0.7 | -1.2 | |
| November 2011 | -0.3 | -0.3 | -0.5 | | |
| March 2012 | 0.0 | -0.1 | -0.5 | | |
| December 2012 | 0.0 | -0.5 | | | |
| March 2013 | -0.1 | -0.4 | | | |
| December 2013 | 0.2 | | | | |
| Average absolute errors over the previous 20 years | | | | | |
| Spring/summer | 0.5 | 0.8 | 1.1 | 1.4 | 1.5 |
| Autumn | 0.5 | 0.8 | 1.1 | 1.2 | 1.3 |

[1] For comparability with other forecasts, 'in-year' is assumed to be 2009-10.

Key:

| |
|---|
| Smaller than average absolute error |
| Average sized error |
| Bigger than average absolute error |

## Table B.4: Forecast error for cash spending

| | Per cent of GDP | | | | |
|---|---|---|---|---|---|
| | Fiscal years ahead | | | | |
| | In-year | One | Two | Three | Four |
| June 2010[1] | 0.3 | -0.1 | -0.3 | -0.4 | -0.3 |
| November 2010 | -0.2 | -0.5 | -0.5 | -0.1 | |
| March 2011 | 0.0 | -0.9 | -1.0 | -0.7 | |
| November 2011 | -0.4 | -0.7 | -0.3 | | |
| March 2012 | -0.1 | -0.5 | -0.1 | | |
| December 2012 | 0.1 | -0.1 | | | |
| March 2013 | 0.1 | -0.1 | | | |
| December 2013 | 0.0 | | | | |
| Average absolute errors over the previous 20 years | | | | | |
| Spring/summer | 0.7 | 0.8 | 0.9 | 1.3 | 1.6 |
| Autumn | 0.7 | 0.6 | 0.8 | 1.0 | 1.4 |

[1] For comparability with other forecasts, 'in-year' is assumed to be 2009-10.

Key:

| |
|---|
| Smaller than average absolute error |
| Average sized error |
| Bigger than average absolute error |

# Index of charts and tables

Chapter 2 The economy

ISBN 978-1-4741-1125-6