

Office for  
**Budget  
Responsibility**

## **Forecast evaluation report**

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October 2015

# **Office for Budget Responsibility**

## Forecast evaluation report

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October 2015



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# 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 forecasts for the economy and the public finances over the coming five years 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 cost or yield estimates for new policy measures.

Notwithstanding 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. 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 to make only those 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.

## Foreword

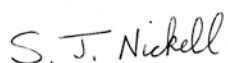
In judging our own performance – and in assessing the relative performance of different forecasters – it is important to remember that the current outturn data represent a relatively early draft of economic history. The stories we have told in previous reports look different after subsequent data revisions. 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 there continue to be significant revisions to the history of the late 2000s recession and the ongoing recovery.

We have continued the approach used in past 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



Sir Stephen Nickell



Graham Parker CBE

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 anything approaching precision, forecasts are surrounded by significant uncertainty and will inevitably prove to be wrong in many 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 has been growing at close to historical average rates for the past couple of years, after a period when it repeatedly disappointed relative to forecast;
  - a labour market that has continued to be stronger than expected in employment terms, but weaker in terms of earnings and productivity growth; and
  - year-on-year falls in public sector borrowing as a share of national income that have gathered pace again after the deficit reduction slowed in 2012-13.

## What questions does this report seek to answer?

- 1.4 Our past three *FERs* have sought to answer relatively big questions that flowed from significant errors in some elements of our forecast:
- in 2012, we considered why borrowing had come in relatively close to forecast despite the significant disappointment of real GDP growth in the early years of the recovery;
  - in 2013, we looked at why the deficit reduction stalled in 2012-13 in the context of further disappointment at the pace of real GDP growth; and
  - last year, we asked why real GDP growth had then picked up more strongly than our latest forecasts, but yet the budget deficit had not fallen more rapidly in 2013-14.

- 1.5 This year, the focus of our report is 2014-15.<sup>1</sup> Relative to our first forecast in June 2010, GDP growth was close to forecast, but only after an extended period of disappointment – so the level of real GDP was significantly lower than we had forecast in 2010. We therefore focus on how that cumulative growth shortfall and other factors help explain the extent to which borrowing overshot the level that was forecast in June 2010. Relative to our more recent forecasts in March 2013 and March 2014, the errors in our predictions of GDP growth and borrowing have been smaller. We therefore focus on the detail of errors within specific elements of the receipts, spending and debt forecasts to highlight issues that have been addressed in recent forecasts and new lessons that can be applied to future forecasts.

## Explaining our errors for 2014-15

- 1.6 Real GDP growth picked up in early 2013 and has averaged 2.6 per cent on an annualised basis over the past two and a half years. That was broadly in line with our June 2010 forecast for that period, reflecting the fact that this is only a little above the average historical growth rate to which we would expect the economy to tend in the medium term if the Bank of England is pursuing its inflation target. But of course there was a significant shortfall in real GDP growth over the previous three years leaving the level of GDP around 2¼ per cent lower in 2014-15 than we had forecast in 2010. Real GDP growth has also been close to our March 2014 forecast in the year and a half since it was published. But it has been stronger over the past two and a half years than we expected in March 2013, which was our most pessimistic forecast for the pace of recovery.
- 1.7 Nominal GDP growth has been close to our March 2013 and March 2014 forecasts, but over the past two and a half years it has fallen short of our expectations in June 2010 because whole economy inflation has been weaker than we expected even as real GDP growth has recovered. Employment has risen – and unemployment has fallen – faster than expected in any of those forecasts, while growth in average earnings and productivity has fallen short of expectations.
- 1.8 We continue to believe that the most important factors underlying our real GDP forecast errors – in both directions – have been the occurrence or absence of shocks to credit and confidence, in particular those emanating from developments in the euro area. The magnitude, composition and profile of the errors we have made mean it is unlikely – though of course not impossible – that underestimating the effect of the Coalition’s fiscal consolidation on UK growth was a material explanatory factor, either in the unexpected weakness of GDP growth through to 2012 or its unexpectedly rapid pick-up thereafter.
- 1.9 Reflecting the cumulative shortfall in nominal GDP growth, and differences in the composition of national income and expenditure relative to our expectations, our June 2010 borrowing forecast has been subject to errors that have increased year by year. By 2014-15 it underpredicted the deficit by £60 billion. The main sources of that error were:

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<sup>1</sup> Due to significant definitional changes affecting the public finance statistics that were implemented by the ONS in 2014, we have restated our earlier forecasts to make them as comparable as possible with the latest outturn data.



- a £32.9 billion shortfall in income tax. That largely reflected lower wages and salaries and self-employment income, as well as lower effective tax rates on that income. Dividend and interest income also fell short, and national insurance contributions (NICs) were £11.3 billion below forecast;
- an £8.0 billion shortfall in North Sea oil and gas receipts, which came in at only around a fifth of our June 2010 forecast. That reflected lower than expected production and higher than expected operating and capital expenditure, which are fully tax deductible, in addition to the more recent fall in oil prices;
- a £7.3 billion shortfall in onshore corporation tax receipts. That was due to weaker profits and lower effective tax rates as firms – particularly in the financial sector – carried forward more losses than expected to offset tax liabilities. The Government also cut the main rate of corporation tax further and faster than it planned to in June 2010;
- a £6.2 billion shortfall in fuel duties, in large part due to policy decisions to cut and then freeze duty rates; and
- £10.8 billion of lower spending that partly offset our overoptimism on receipts. A number of spending items were higher than expected, but those errors were more than offset by debt interest coming in £19.3 billion lower than forecast – due to much lower interest rates on government bonds and lower inflation in the year reducing the cost of servicing index-linked bonds.

1.10 As well as moving further away from the June 2010 forecast, the deficit also narrowed by slightly less in 2014-15 than the roughly £12 billion, or 1.0 per cent of GDP, forecast in both March 2013 and March 2014. That reflected various factors, including:

- the unexpected strength in the economy led to receipts performing more strongly in 2013-14 than forecast in March 2013, as higher income tax, VAT, onshore corporation tax and stamp duty land tax more than offset lower North Sea oil and gas receipts. But some of that surplus unwound in 2014-15, as self-assessment (SA) receipts fell well below forecast and oil and gas receipts continued to disappoint, offsetting continued momentum in other receipts;
- 2013-14 spending was also lower, mainly due to lower debt interest payments. But total spending was back in line with the March 2013 forecast by 2014-15, as further reductions in debt interest were offset by other changes, including higher EU contributions and capital spending;
- nominal GDP growth came in closer to our March 2014 forecast, but receipts fell as a share of GDP in contrast to a broadly flat projection. SA and oil and gas receipts were again key sources of error. Having risen strongly in 2013-14, growth in stamp duty land tax was more muted in 2014-15; and

- spending was lower than expected in March 2014. Our debt interest errors were of a similar magnitude across the March 2013 and 2014 forecasts. But our errors on EU contributions and capital spending were smaller by March 2014 (EU contributions were slightly below), although local authority spending came in above forecast.

## Lessons learnt

1.11 The key lessons highlighted in recent *FERs* – and the in-depth analysis of welfare spending forecast errors in our first *Welfare trends report* – have been reinforced this year. These include:

- the greater importance for fiscal forecasts of developments in the cash value – and composition – of national income and expenditure;
- the need for central forecasts to reflect the pattern of departmental underspending relative to limits set by the Treasury, to understand the extent to which local authorities will continue to add to reserves despite tighter finances, and to recognise that many new government lending schemes start more slowly than planned; and
- the fact that major reforms to the incapacity and disability benefits systems have been subject to delivery problems that have significantly reduced savings relative to initial estimates.

1.12 This year, the lessons we have identified – not just in this report, but also in the three *EFOs* we have published since last year's *FER* – include:

- conclusions from the significant volume of work that has been undertaken on the cash forecast. This converts the accruals based forecast of public sector net borrowing into the cash metrics that drive public sector net debt and the Government's financing requirement. Our forecasts had overestimated the cash deficit for a given level of accrued borrowing. In exploring these forecast errors, we identified corrections that were required to a number of accruals adjustments and how the reclassification of Network Rail to central government affected cash measures of the deficit. The analysis – described in Box 4.3 of our July 2015 *EFO* – has left around £2 billion of difference unexplained, which we suspect may reflect relatively small sources of receipts that are not recorded in the accrued measures of public sector current receipts. We are working with the Treasury and Office for National Statistics to try to verify this hypothesis and, if confirmed, address it; and
- in exploring the cause of a persistent source of overpessimism in the VAT forecast, we have identified an assumption in the VAT receipts model that was inconsistent with other parts of our fiscal forecast. Correcting that in November will, other things equal, increase our VAT receipts forecast by around £3 billion by the end of the forecast period. That this inconsistency has been present in our and previous Treasury forecasts for some years has highlighted a lack of transparency in the forecasting model that we will be addressing with HMRC for future forecasts.

## Comparison with past official forecasts

- 1.13 We also compare the size of our forecast errors against past official forecast errors (in 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 12 forecasts so far, the sample is still relatively small. This is particularly true at longer time horizons – we can compare only three of our forecasts at a 4-year horizon and just one at a 5-year horizon. 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);
- shows how monetary policy has differed from market expectations at the time of our forecasts (from paragraph 2.14) and how other market-derived assumptions (from paragraph 2.17) and fiscal policy (from paragraph 2.21) have evolved;
- assesses developments in the composition of GDP (from paragraph 2.29) and individual sectors of the economy (from paragraph 2.38); and
- considers the behaviour of the labour market and therefore productivity (from paragraph 2.62) and potential output (from paragraph 2.68).

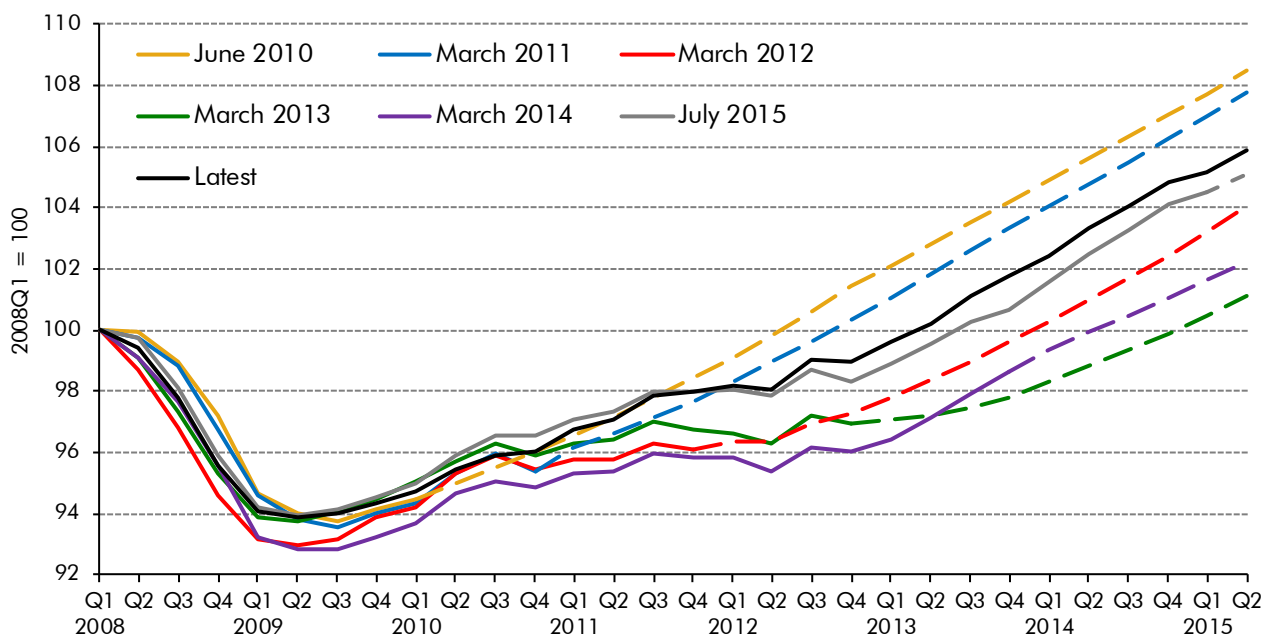
### The level and growth of GDP

#### Real GDP

- 2.2 The latest data from the Office for National Statistics (ONS) suggest that real GDP fell by 6.1 per cent from its peak in the first quarter of 2008 to its trough in the middle of 2009, since when it has increased by a cumulative 11.8 per cent over the subsequent six years. The annual growth rate has now returned to roughly its historical average rate of between 2 and 3 per cent, but without the period of significantly above-average growth that is typical of a post-recession recovery. Consequently the level of GDP remains well below the level that would have been recorded had activity made up sufficient lost ground to return to its pre-crisis trend.
- 2.3 As Charts 2.1 to 2.4 illustrate, our forecasts have evolved not merely to reflect new information and judgements regarding the future outlook, but also to take account of the rewriting of past history by the ONS. Net upward revisions to the estimated level of GDP over the last five years – and especially over the last two – have reduced the depth of the recession and have made the recovery look stronger.
- 2.4 The cumulative impact has been substantial and it has significantly reduced the apparent errors in our earlier over-optimistic forecasts. For example, the latest outturn data suggest that GDP was 5.9 per cent above its pre-crisis peak in the second quarter of 2015. This is a

lot closer to our June 2010 prediction that it would be 8.5 per cent above the previous peak than to our March 2013 prediction that it would be 1.1 per cent above it (Chart 2.1).

Chart 2.1: Forecasts and outturns for real GDP from 2008Q1



Source: ONS, OBR

Note: Solid lines represent the outturn data that underpinned the forecasts at the time (the dashed lines).

2.5 The revisions have also made the path of the recovery look more even-paced. Earlier vintages of data suggested a relatively robust recovery through to late 2010, which then stalled for two years until growth resumed at a reasonable pace through 2013. In our forecasts at the time we failed to foresee the slowdown and the sudden pick-up, as did many other forecasters. This motivated the two main questions that we have asked in previous *FERs*: why did the budget deficit continue to shrink at a steady pace when the growth rate slowed and why did it not shrink more rapidly when growth picked up again?

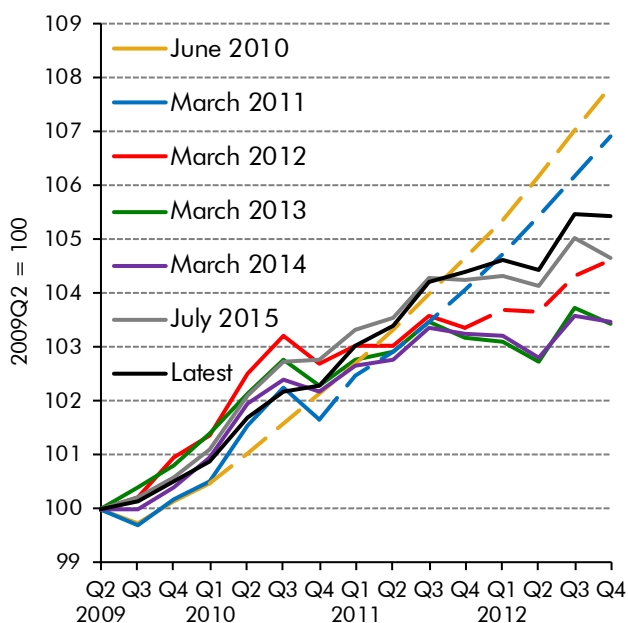
2.6 But in the latest vintage of the National Accounts, these three phases – while still identifiable – are now much less distinct. As Chart 2.4 illustrates, the data available at the time of our March 2013 and 2014 forecasts suggested that the economy had not grown at all between the spring of 2011 and the spring of 2012. But the latest figures show growth of 1 per cent. This ‘smoothing out’ echoes the revisions to the data for the recovery phase in the 1990s.<sup>1</sup>

2.7 The annual rate of growth has now recovered to around the rates we forecast in June 2010 (and many of our other forecasts). This reflects the fact that this is roughly the average historical growth rate to which we would expect the economy to tend in the medium term if the Bank of England is pursuing its inflation target. But of course there was a significant shortfall in real GDP growth over the previous three years. This has left the level of GDP around 2½ per cent lower in the second quarter of 2015 than we had forecast in 2010.

<sup>1</sup> See, for example, Box 2.1 in our 2013 *Forecast evaluation report* and also Box 2.1 in our 2014 *Forecast evaluation report*.

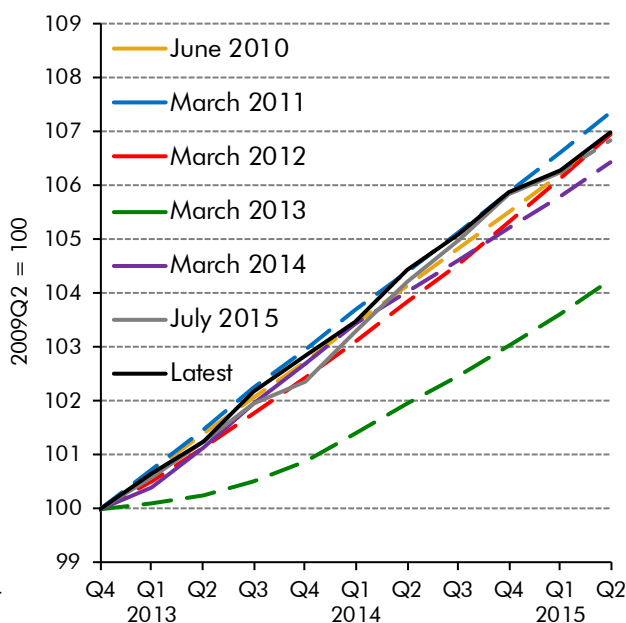
2.8 We can expect the rewriting of history to continue for many years to come. So any judgements reached today regarding the performance of forecasts made over the recent past, and related questions about what has driven the forecast errors, remain provisional.

Chart 2.2: Forecasts and outturns for real GDP from 2009Q2 to 2012Q4



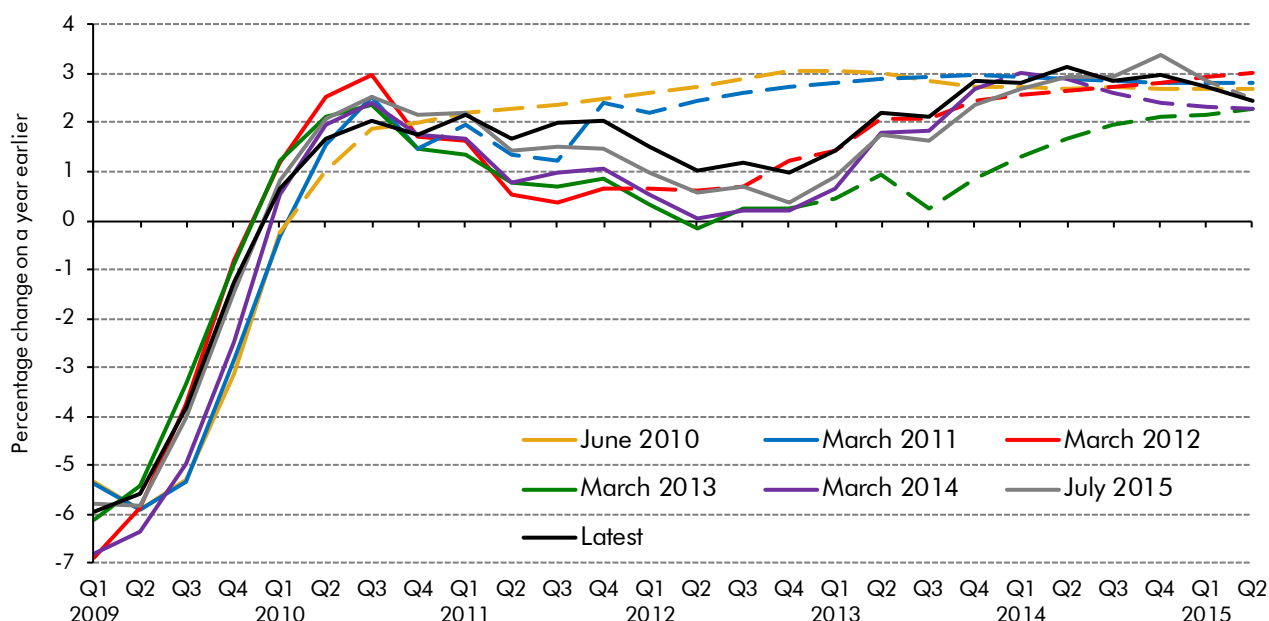
Source: ONS, OBR

Chart 2.3: Forecasts and outturns for real GDP from 2012Q4



Source: ONS, OBR

Chart 2.4: Forecasts and outturns for real GDP growth

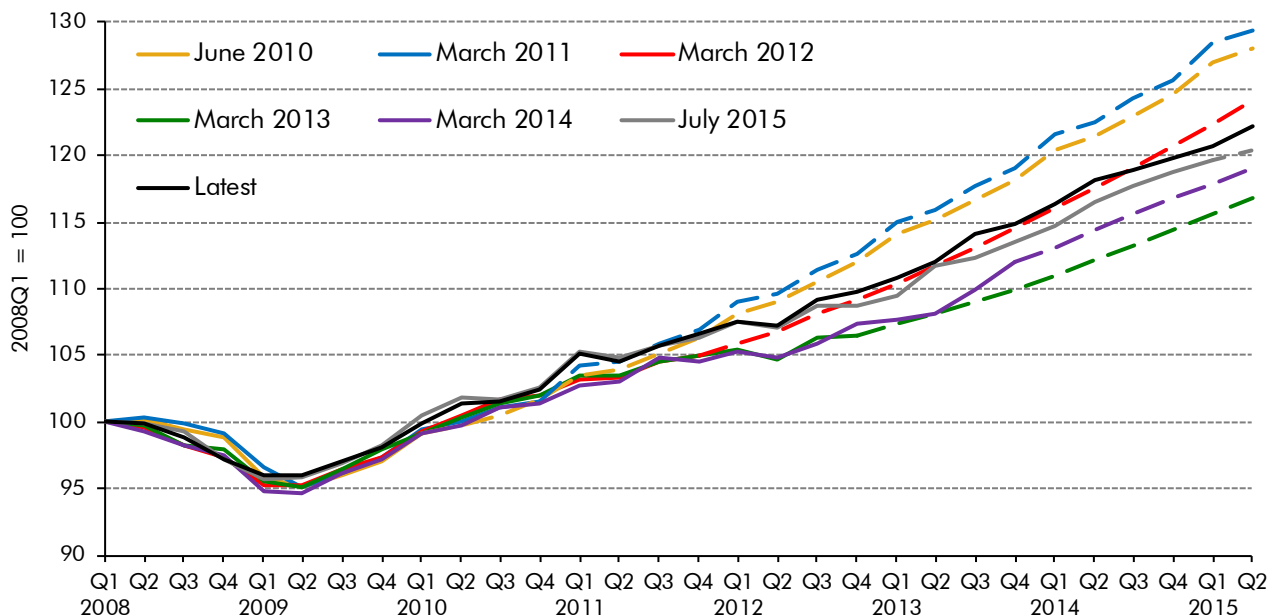


Source: ONS, OBR

## Nominal GDP

- 2.9** 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 for 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, grants and administration) or linked to consumer price inflation (benefits and tax credits).
- 2.10** The latest ONS estimates show that nominal GDP fell by 4.0 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.
- 2.11** With whole economy inflation initially coming in higher than expected, we raised our nominal GDP forecast slightly in March 2011, only to revise it down again over the subsequent two years as real output disappointed (Chart 2.5). We have since revised our nominal GDP forecasts up more gradually than those for real output, as whole economy inflation has slowed. Although real growth rates have returned to around the levels we would expect in normal times, nominal growth rates have slowed in recent quarters, and remain some way below pre-crisis norms (Chart 2.6).

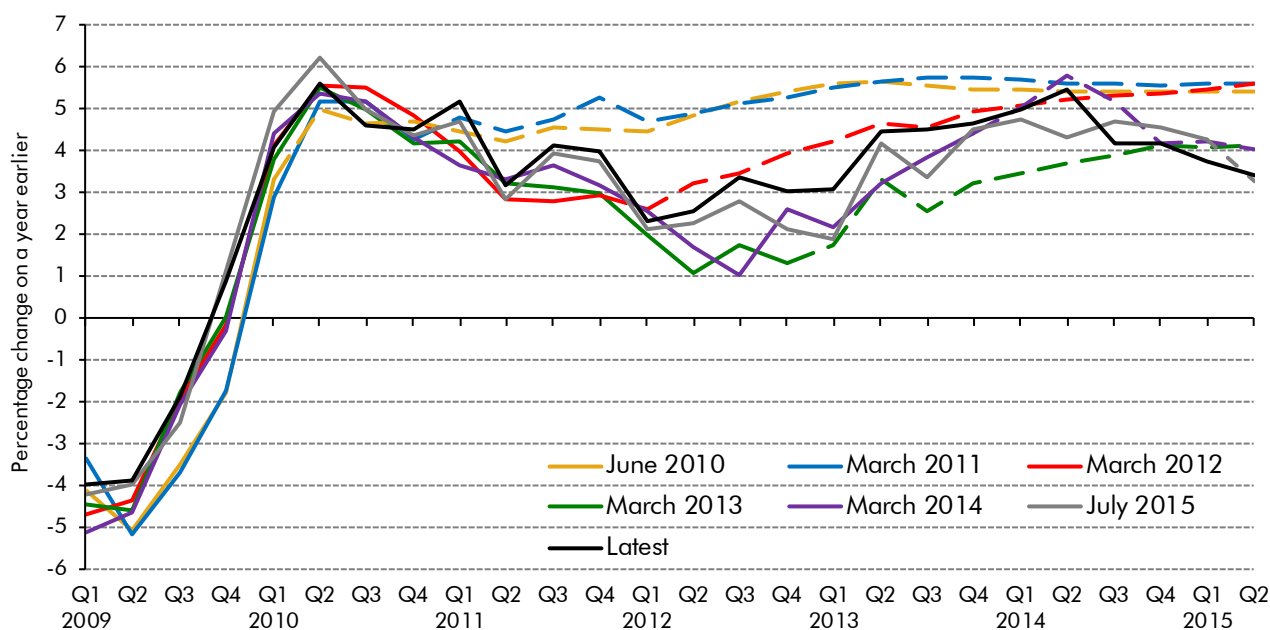
Chart 2.5: Forecasts and outturns for nominal GDP from 2008Q1



Source: ONS, OBR



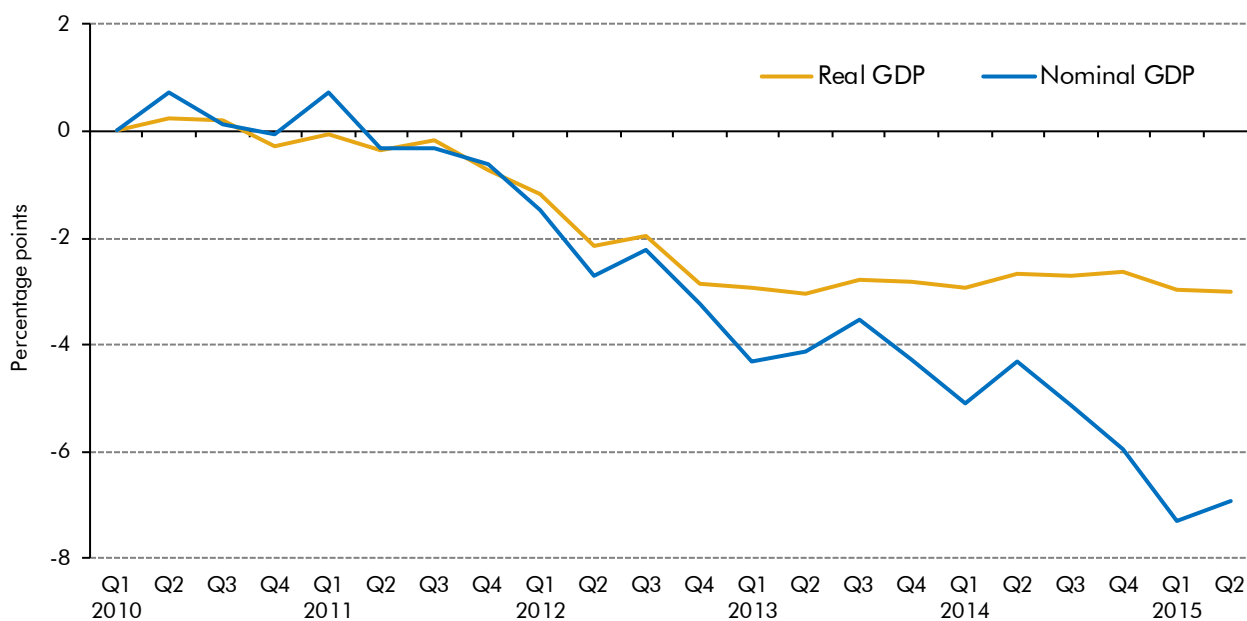
Chart 2.6: Forecasts and outturns for nominal GDP growth



Source: ONS, OBR

- 2.12** Chart 2.7 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 late-2011, as the recovery slowed rather than gathering pace as in most previous recoveries. But it then stabilised at around 3 per cent from the end of 2012, as growth picked up again.
- 2.13** Nominal GDP growth has underperformed our forecasts to a greater extent, and by around 7 per cent over the period as a whole. Our real and nominal growth errors initially tracked each other, but the two paths then diverged at the point where our real errors stopped increasing. This is because whole economy inflation then came in weaker than expected, which pulled nominal GDP further below forecast. Both cumulative errors are smaller than they were previously estimated to be, thanks to the upward revisions to real GDP described above.

Chart 2.7: Cumulative errors in June 2010 GDP forecasts since 2010Q1



Source: ONS, OBR

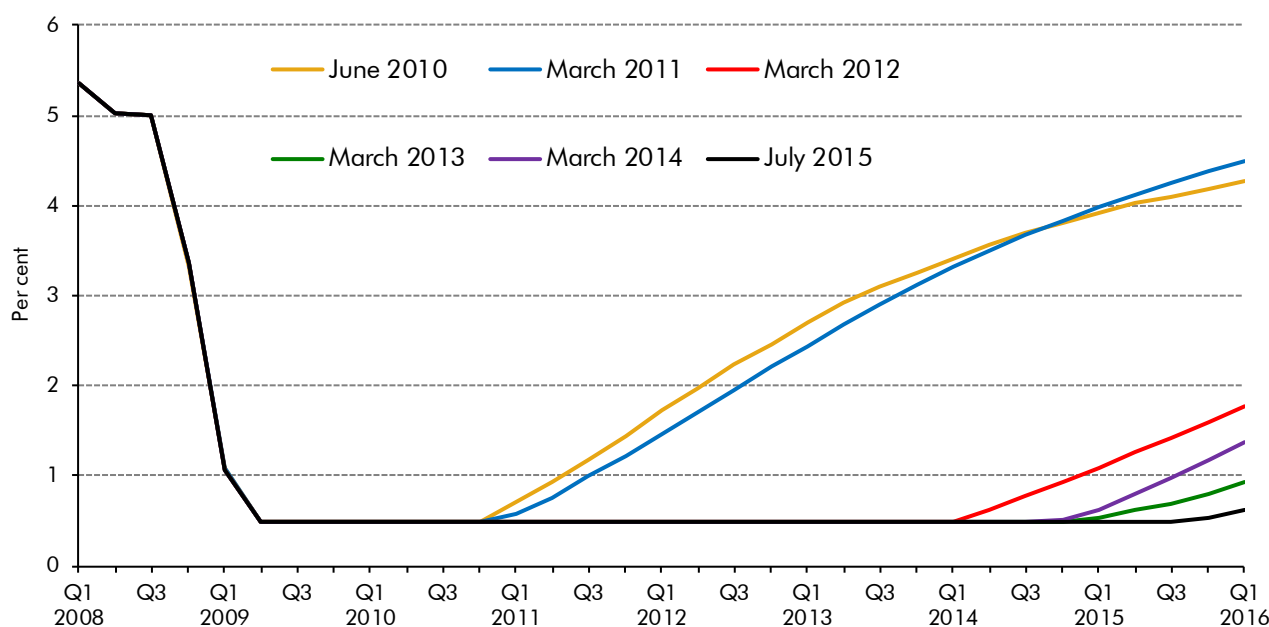
## Forecast conditioning assumptions

### Monetary policy

- 2.14** 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 that Bank Rate was expected to rise within a year and increase steadily thereafter, up to around 4 per cent by mid-2015. Subsequently expectations of interest rate increases were pushed out significantly as data available at the time suggested that the recovery had stalled. The first Bank Rate rise is now expected in 2016 – five years later than anticipated in June 2010 and a year later than anticipated in March 2014.
- 2.15** 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.
- 2.16** Low interest rates have predominantly helped existing, lower-risk borrowers. They have helped keep corporate failures low, while large businesses with access to capital markets have benefitted from lower corporate bond yields. The drop in banks’ wholesale funding costs has also been associated with lower rates on new loans, particularly for mortgages at lower loan-to-value ratios. But the supply of new credit has remained subdued, and

although lending to households continues to pick up, bank lending to businesses remains weak, having generally fallen year-on-year since the financial crisis.

Chart 2.8: Successive projections for Bank Rate



Source: Bank of England, OBR

## Other conditioning assumptions

- 2.17** Our economic forecasts are 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 for the second quarter of 2015.
- 2.18** 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. The price then settled at above \$100 a barrel for over three years, only to fall sharply in the second half of 2014, more than reversing the earlier rise. The latest drop is considered to reflect both demand and supply factors.<sup>2</sup>
- 2.19** Safe-haven demand for UK government bonds, falling Bank Rate expectations and additional QE all served to push the yield on gilts to all-time lows. The weighted average conventional gilt rate of 2.0 per cent in the second quarter of 2015 was over 1 percentage point below the projection a year earlier, and 3 percentage points below the assumption underpinning our June 2010 forecast.
- 2.20** The sterling effective exchange rate index (ERI) has steadily appreciated over the recent past, in part reflecting better relative growth prospects for the UK compared to many other major developed economies, particularly in the euro area. Equity prices have continued to

<sup>2</sup> See Box 2.1 of our March 2015 *Economic and fiscal outlook* for a fuller discussion.

## The economy

fluctuate, but on the back of an improving economic outlook, the overall change between the end of 2012 and mid-2015 was broadly in line with earlier assumptions, although below the March 2014 projections (equity markets have since fallen further over the summer – a period that extends beyond the outturn economy data that we assess in this report).

Table 2.1: Other conditioning assumptions for 2015Q2

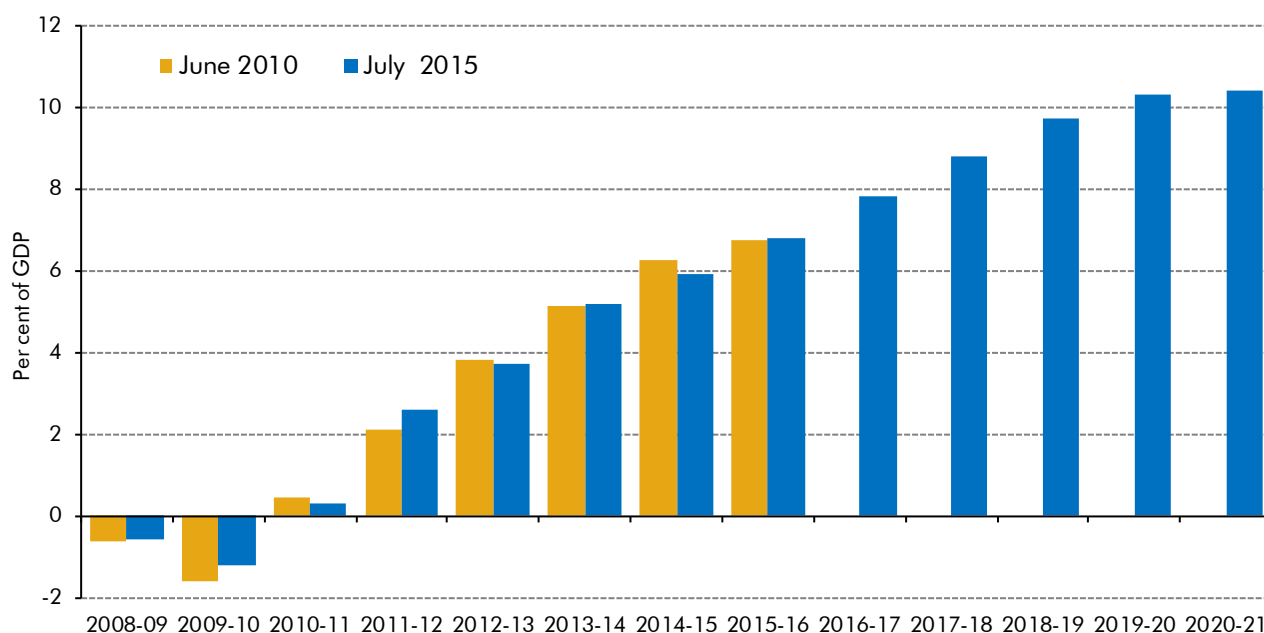
	Oil price (\$ per barrel)	Equity prices (growth since 2012Q4)	Gilt rate (per cent)	ERI exchange rate (index)
June 2010 forecast	89.5	14.3	5.1	77.5
March 2013 forecast	101.3	17.4	3.2	79.2
March 2014 forecast	102.7	24.1	3.2	86.0
2015Q2 average	62.1	15.4	2.0	91.3
Difference <sup>1</sup>				
June 2010	-27.4	1.1	-3.1	13.7
March 2013	-39.2	-2.0	-1.2	12.1
March 2014	-40.6	-8.7	-1.2	5.3

<sup>1</sup> Difference in unrounded numbers.

## Fiscal policy

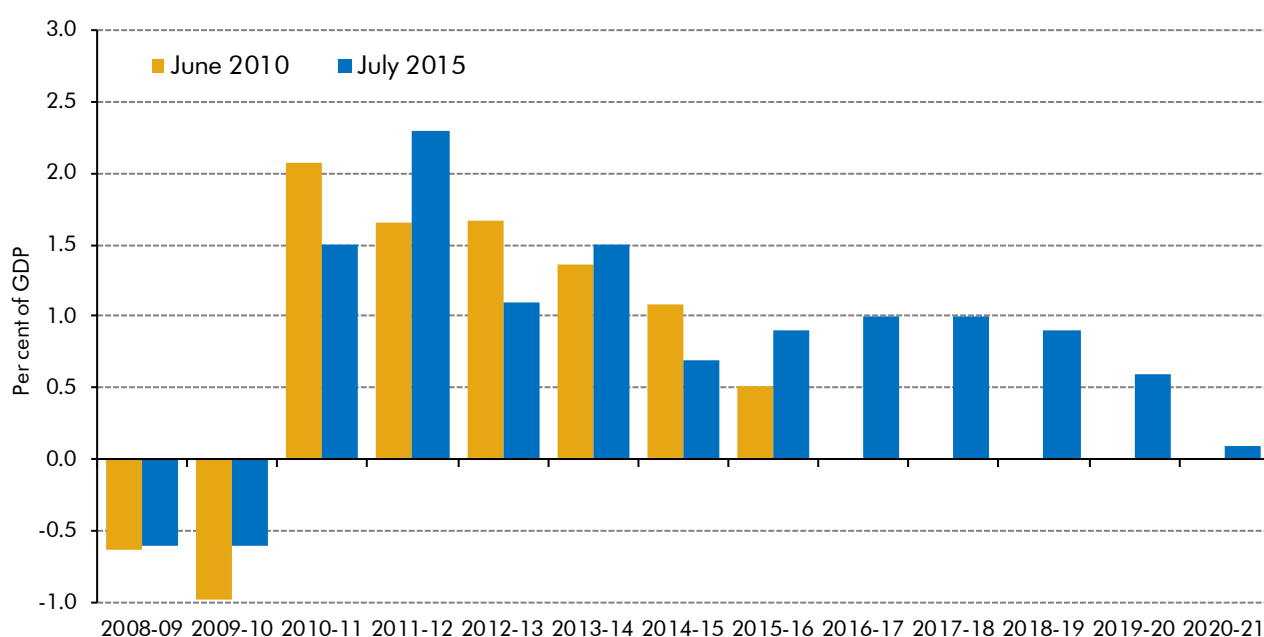
- 2.21 Over the past five years there has been a large discretionary fiscal tightening in the UK. Chart 2.9 shows the discretionary tightening or loosening in each fiscal year, relative to a Budget 2008 baseline, based on the definition used by the Institute for Fiscal Studies (IFS). The chart shows the plans for fiscal consolidation as set out in the June 2010 Budget, together with the IFS's estimates produced after the July 2015 Budget.
- 2.22 The IFS's July 2015 estimates of the fiscal consolidation up to 2014-15 are broadly unchanged from those described in our 2014 *FER*. They suggest that the degree of fiscal tightening between 2009-10 and 2010-11 was slightly smaller than originally planned (mainly due to more forestalling in 2009-10 as a result of the 50p rate of income tax being introduced), while the additional tightening in 2011-12 was larger than expected, as departments underspent relative to plans. The degree of tightening was then slightly smaller than expected in the subsequent three years as a whole.

Chart 2.9: Fiscal consolidation relative to Budget 2008 baseline



Source: IFS

Chart 2.10: Additional fiscal tightening or loosening each year



Source: IFS

**2.23** So to what extent might the path of fiscal consolidation – or any changes to it – have contributed to our GDP forecast errors? In June 2010, the interim OBR estimated the impact that the additional fiscal tightening announced in the June 2010 Budget would have on growth by using ‘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 such that ultimately fiscal consolidation did not reduce long-term potential output.

- 2.24 In last year's *FER* we set out estimates of the effect of the fiscal tightening on real GDP, by applying these fiscal multipliers to the existing estimates of the consolidation. With little revision to the IFS's estimates of the consolidation over the past five years, the implied effect of the consolidation on GDP over this period remains broadly unchanged from the estimates set out in our 2014 report – suggesting that the fiscal consolidation may have reduced the level of real GDP in 2014-15 by around 1.2 per cent. The estimated effect on growth in 2014-15 is a small positive of around 0.3 percentage points because the -0.4 percentage point effect of new consolidation in the year was more than offset by the +0.7 percentage point effect of previous years' consolidation effects unwinding.
- 2.25 The latest ONS data continue to suggest that growth in 2011 and particularly 2012 was weaker than expected in our June 2010 forecast, and it remains possible that the larger-than-expected fiscal tightening in these years could have helped to explain the weakness of growth in these years. It is also possible that the unexpected strength of growth in 2014, relative to our March 2013 forecast, can partly be explained by the smaller than expected tightening in 2014-15: the latest IFS estimates imply a tightening of 0.7 per cent of GDP between 2013-14 and 2014-15; this compares to an estimated tightening of 1.0 per cent of GDP at the time of our March 2013 forecast.
- 2.26 But the size of the changes in the path of fiscal consolidation would be too small to explain the scale of our errors over the forecast period, as well as the timing. The fiscal multipliers would therefore need to have been significantly larger than assumed to account fully for our growth errors, and unwound more gradually over time.
- 2.27 An alternative way to consider the fiscal policy stance is by assessing changes in the estimated structural deficit from one year to the next. But one drawback of these measures is that they depend heavily on estimates of the cyclical position of the economy – and therefore on estimates of the economy's underlying potential. Revisions to estimates of potential output can therefore bring about large changes in the apparent path of fiscal consolidation, even in the absence of discretionary policy measures. The structural deficit will also be affected by underlying changes to taxes and spending that are not directly related to policy (e.g. the downward trend in North Sea oil production has led to lower oil and gas receipts, which would be treated as a fiscal loosening under this methodology).
- 2.28 Over the three years from 2012-13 to 2014-15, the structural deficit is now estimated to have narrowed by just 1.0 per cent of GDP rather than the 4.3 per cent of GDP expected in June 2010. But as Chart 2.10 showed, little of this difference results from changes in the path of discretionary fiscal policy decisions. Rather, our revision to potential output growth through 2012-13 (Chart 2.28) now implies a much smaller improvement in the structural deficit in that year, and errors in forecasting effective tax rates have led to smaller improvements in the structural deficit across a number of years, and 2014-15 in particular (Table 3.16). We therefore do not think this approach provides convincing evidence that changes in the pace of fiscal tightening have been the most important explanation of the

errors in our real GDP forecasts. And, given the factors set out here, consider this approach to be less useful than the IFS methodology over the 2010-2014 period.

## The composition of GDP

**2.29** The composition of nominal GDP is as important for the public finances as its overall level, since the effective tax rates on the different components of income and spending vary widely. So in order to assess our budget deficit errors, it is helpful to examine how the different components of GDP have evolved over time.

## The expenditure composition of GDP

### Expenditure growth from 2010Q1 to 2012Q4

**2.30** The outturn data available a year ago suggested that our June 2010 forecast errors up to the end of 2012 were larger for nominal GDP than they were for real GDP. Both sets of outturn data have since been revised up, but nominal GDP has been revised up by more than real GDP, so that the two sets of errors are now broadly comparable. In summary:

- 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 subtracted a little from growth over the whole period, although for net trade this reflected positive contributions through 2011 and negative contributions through 2012, the period of greatest uncertainty in the euro area. Changes in stocks have been volatile, but generally positive;
- our largest error in overestimating real growth came from net trade, followed by business investment and then relatively small errors in private consumption and residential investment. Only real government spending surprised on the upside. The ordering of these errors is unchanged from last year's report, but upward revisions to private consumption have opened up the gap between it and investment and net trade as key sources of error; and
- in nominal terms our errors were concentrated in investment, followed by net trade and then private consumption and stocks. The upward revisions to nominal GDP have

been confined to private consumption and stocks, with small downward revisions to other components.

Table 2.2: Contributions to real GDP growth from 2010Q1 to 2012Q4

	Percentage points						GDP
	Private consumption	Business investment	Residential investment	Total government	Net trade	Stocks and statistical discrepancy	
June 2010 forecast (a)	2.7	2.4	0.9	-1.7	2.3	0.8	7.4
FER 2014 data (b)	1.6	1.3	0.3	0.1	0.2	0.1	3.5
Latest data (c)	2.3	1.0	0.6	-0.1	-0.2	0.9	4.5
Revision to data (c-b) <sup>1</sup>	0.8	-0.3	0.3	-0.2	-0.3	0.7	1.0
Difference (c-a) <sup>1</sup>	-0.3	-1.4	-0.3	1.6	-2.5	0.1	-2.9

<sup>1</sup> Difference in unrounded numbers.

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

	Percentage points					GDP
	Private consumption	Private investment	Total government	Net trade	Stocks and statistical discrepancy	
June 2010 forecast (a)	7.7	4.2	0.0	0.5	0.7	13.1
FER 2014 data (b)	6.5	2.5	0.1	0.1	-1.2	8.1
Latest data (c)	7.4	2.3	0.0	-0.1	0.2	9.9
Revision to data (c-b) <sup>1</sup>	0.9	-0.2	-0.2	-0.3	1.4	1.7
Difference (c-a) <sup>1</sup>	-0.3	-1.9	0.0	-0.6	-0.4	-3.2

<sup>1</sup> Difference in unrounded numbers.

Table 2.4: Growth in National Accounts deflators from 2010Q1 to 2012Q4

	Per cent					GDP
	Private consumption	Private investment	Total government	Exports	Imports	
June 2010 forecast (a)	7.4	7.7	7.2	1.2	7.4	5.3
FER 2014 data (b)	7.7	6.4	0.3	7.3	7.1	4.4
Latest data (c)	7.7	5.0	0.5	8.3	7.6	5.1
Revision to data (c-b) <sup>1</sup>	0.1	-1.4	0.2	1.0	0.5	0.7
Difference (c-a) <sup>1</sup>	0.3	-2.7	-6.6	7.1	0.1	-0.2

<sup>1</sup> Difference in unrounded numbers.

## Expenditure growth since 2012Q4

- 2.31 Real GDP contracted in the final quarter of 2012 – partly a legacy of Olympics-related spending boosting GDP in the previous quarter. It has since picked up relatively strongly. Growth over the past two and half years has been roughly in line with our June 2010 forecast, but from a much lower base reflecting our over-optimism for the preceding period. That over-optimism – particularly against data available at the time – led us to revise down our growth forecasts in March 2013, only to revert back to a similar medium-term growth profile by March 2014.



2.32 Nominal GDP growth has recovered alongside real GDP. But it continues to underperform relative to our June 2010 forecast – although that still represents stronger growth than we forecast in March 2013. Our March 2014 GDP errors have been relatively small in both real and nominal terms. The following charts and tables summarise these three sets of forecasts, and the implied errors. They show that:

- our June 2010 forecast (top of Chart 2.13) 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 the private sector components of spending in our forecasts, and by March 2013 had halved the real contributions from private consumption and business investment and cut the net trade contribution by around two-thirds (middle of Chart 2.13). Partially offsetting these changes, we gradually reduced the drag from real government spending towards zero as we learnt more about how public spending restraint interacted with the methodology for measuring the price of government consumption in the National Accounts. Private consumption and investment prices were also expected to grow at a slower rate;
- by the following year (bottom of Chart 2.13), as confidence and credit conditions improved, we had revised up real private consumption and investment, with smaller upward revisions to nominal spending. Private consumption growth had been brought back in line with our June 2010 forecast, but investment still lagged behind. Government spending was now expected to add to real GDP growth, reflecting a fall in implied prices rather than higher cash spending by departments. We also downgraded our forecasts for net trade in real terms, but movements in the projected terms of trade implied a more positive contribution to nominal GDP growth (Chart 2.15). Stocks were also forecast to subtract from both real and nominal GDP growth;
- the latest outturns show steady contributions from private consumption and investment in both real and nominal terms (Charts 2.11 and 2.12). Government spending has provided modest support, particularly over more recent quarters. Contributions from net trade and stocks have been erratic, with both generally dragging down GDP growth, although that reversed for net trade in the latest quarter (and stocks turned even more negative);
- headline real GDP growth in this period has been in line with our June 2010 forecast, but this masks weaker investment, stocks and net trade contributions being offset by stronger real government spending (top of Chart 2.14). Private consumption has also been stronger than expected over the period as a whole, although this has largely shown up in the most recent couple of quarters. But prices have risen more slowly for all elements of spending. Our nominal GDP errors are concentrated within private consumption (more than explained by lower prices) and investment (reflecting a mix of lower volumes and prices) (top of Chart 2.16);

## The economy

- the upward surprise in real growth since March 2013 can largely be explained by stronger real private consumption (middle of Chart 2.14). Errors within other components appear to be broadly offsetting, with stronger government spending offsetting weaker stocks and (up to the latest quarter) net trade. But domestic prices were again weaker than expected across the board, partly offset by an improvement in the terms of trade, so nominal GDP has been closer to forecast. The errors on the nominal side have been more evenly split, across private consumption, government spending and (in the latest quarter) net trade (middle of Chart 2.16); and
- real GDP growth has generally been close to, but a little above, the forecast we made in March 2014 (bottom of Chart 2.14). Stocks and investment have come in weaker, while there have not been any persistent errors on the upside. The latest positive contributions relate to net trade and both private and government consumption. The nominal GDP forecast also appears to be broadly on track, as slightly weaker prices have offset the real growth errors (bottom of Chart 2.16). In particular, the latest picture for mid-2015 points to positive news on real private consumption that is more than explained by lower prices, with nominal consumer spending remaining below forecast.

Chart 2.11: Contributions to real GDP growth from 2012Q4: outturns

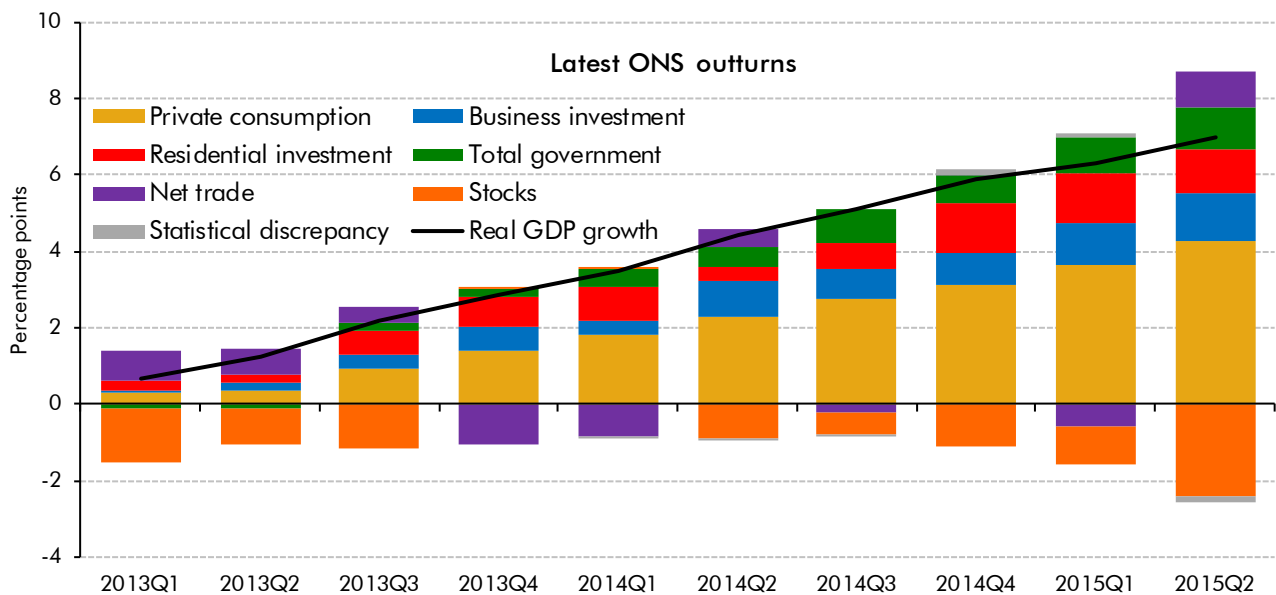
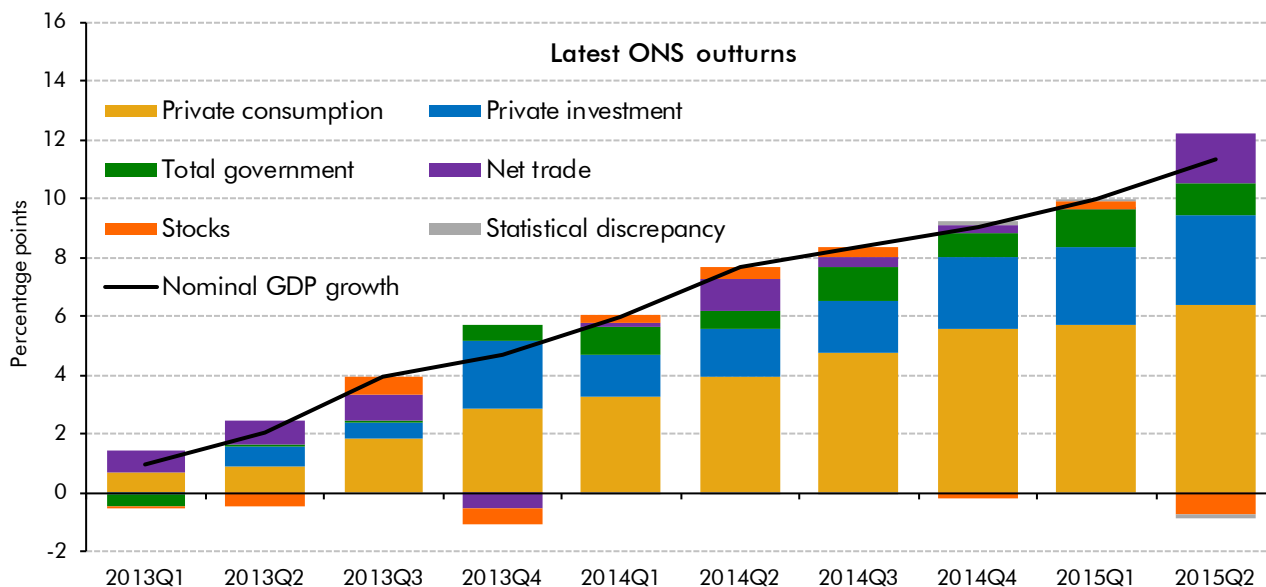
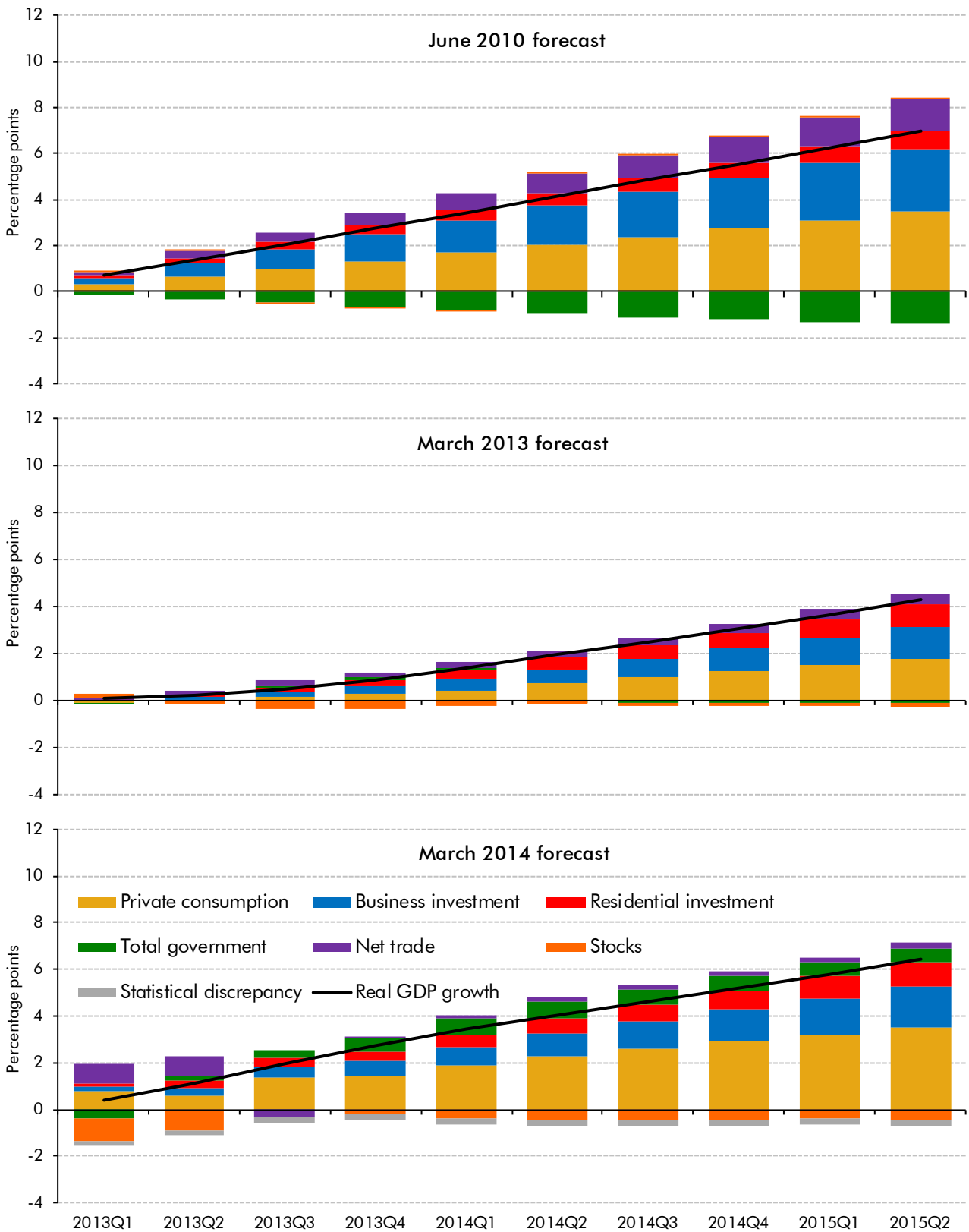


Chart 2.12: Contributions to nominal GDP growth from 2012Q4: outturns



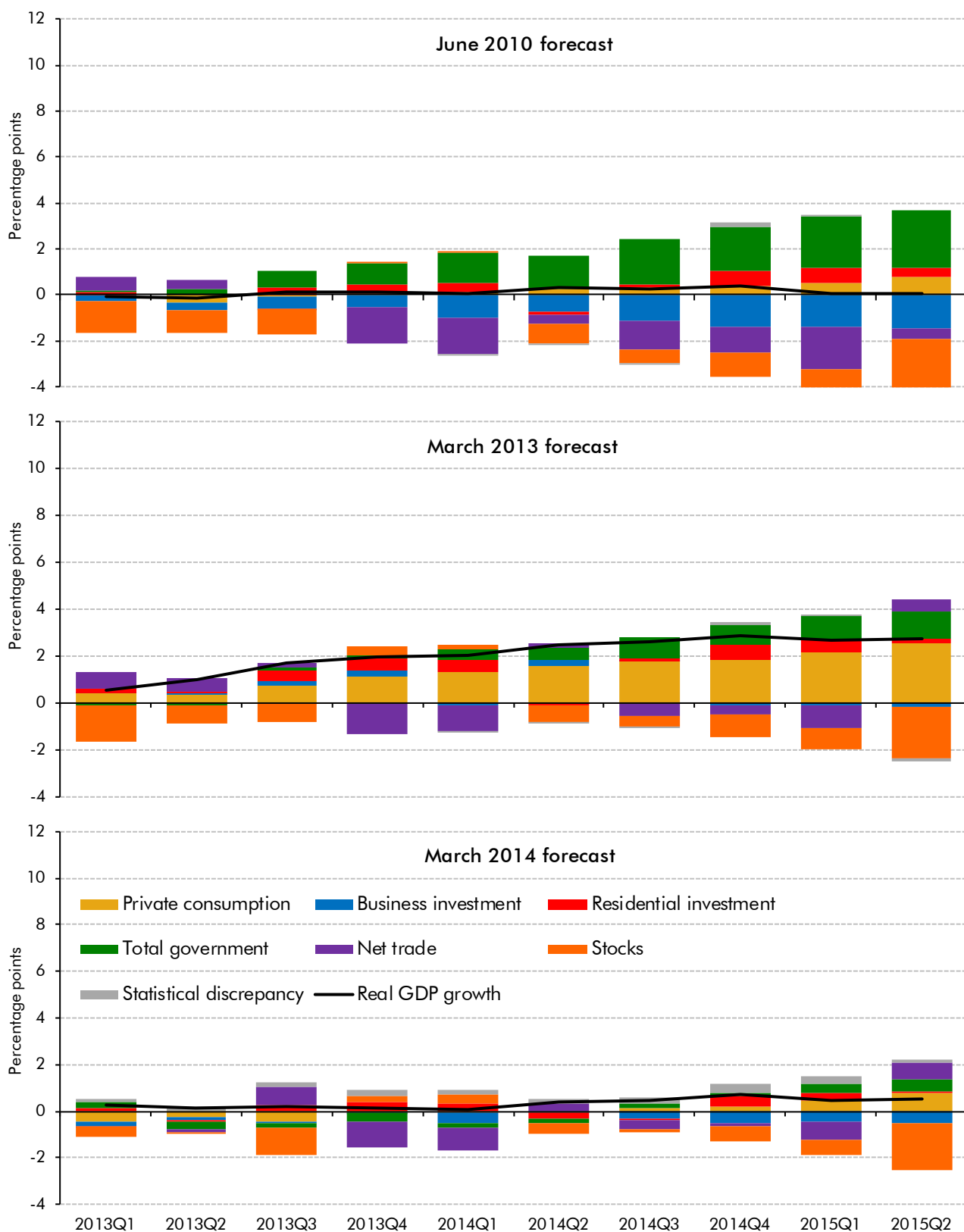
Source: ONS, OBR

Chart 2.13: Contributions to real GDP growth from 2012Q4: forecasts



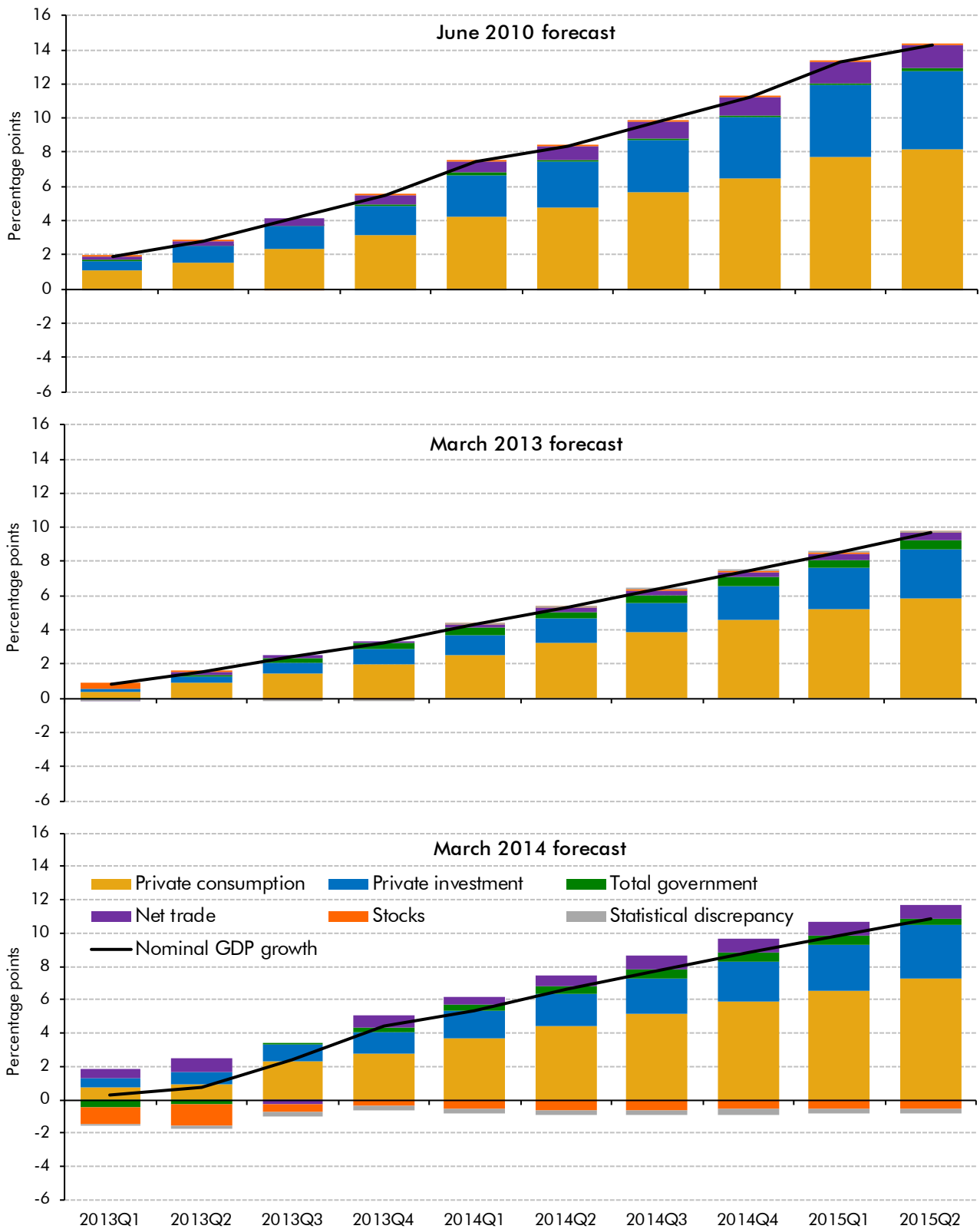
Source: ONS, OBR

Chart 2.14: Contributions to real GDP growth from 2012Q4: errors



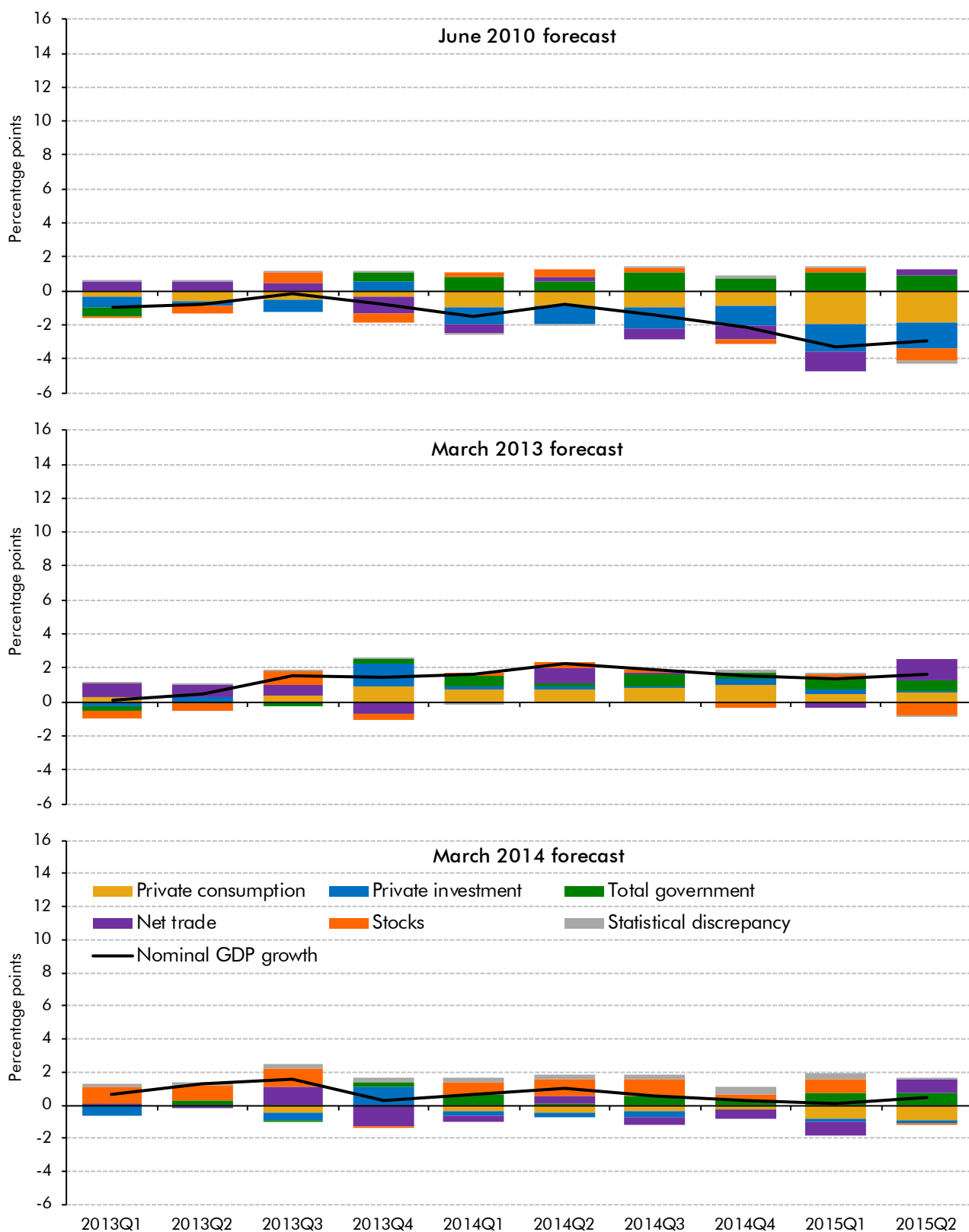
Source: ONS, OBR

Chart 2.15: Contributions to nominal GDP growth from 2012Q4: forecasts



Source: ONS, OBR

Chart 2.16: Contributions to nominal GDP growth from 2012Q4: errors



Source: ONS, OBR

Table 2.5: Contributions to real GDP growth from 2012Q4 to 2015Q2

	Percentage points						GDP
	Private consumption	Business investment	Residential investment	Total government	Net trade	Stocks and statistical discrepancy	
June 2010 forecast	3.5	2.7	0.8	-1.4	1.4	0.0	6.9
March 2013 forecast	1.8	1.4	0.9	-0.1	0.4	-0.2	4.3
March 2014 forecast	3.5	1.8	1.1	0.6	0.2	-0.7	6.4
Latest data	4.3	1.2	1.1	1.1	0.9	-1.7	7.0
Difference <sup>1</sup>							
June 2010	0.8	-1.5	0.3	2.5	-0.4	-1.7	0.0
March 2013	2.5	-0.2	0.2	1.2	0.5	-1.5	2.7
March 2014	0.8	-0.5	0.1	0.5	0.7	-1.0	0.5

<sup>1</sup> Difference in unrounded numbers.

Table 2.6: Contributions to nominal GDP growth from 2012Q4 to 2015Q2

	Percentage points					GDP
	Private consumption	Private investment	Total government	Net trade	Stocks and statistical discrepancy	
June 2010 forecast	8.2	4.6	0.2	1.3	0.0	14.3
March 2013 forecast	5.9	2.9	0.5	0.4	0.0	9.7
March 2014 forecast	7.3	3.2	0.4	0.9	-0.9	10.9
Latest data	6.4	3.0	1.1	1.7	-0.9	11.3
Difference <sup>1</sup>						
June 2010	-1.8	-1.5	0.9	0.4	-0.9	-2.9
March 2013	0.5	0.1	0.6	1.3	-0.9	1.6
March 2014	-0.9	-0.2	0.7	0.8	0.0	0.5

<sup>1</sup> Difference in unrounded numbers.

Table 2.7: Growth in National Accounts deflators from 2012Q4 to 2015Q2

	Per cent					GDP
	Private consumption	Private investment	Total government	Exports	Imports	
June 2010 forecast	6.9	7.3	7.4	4.3	4.3	6.9
March 2013 forecast	5.9	5.2	2.4	5.1	4.7	5.2
March 2014 forecast	5.3	3.3	-0.8	-0.9	-2.8	4.2
Latest data	3.0	4.1	0.0	-1.3	-3.4	4.1
Difference <sup>1</sup>						
June 2010	-3.8	-3.2	-7.5	-5.6	-7.7	-2.8
March 2013	-2.9	-1.1	-2.4	-6.4	-8.2	-1.2
March 2014	-2.3	0.8	0.8	-0.4	-0.7	-0.1

<sup>1</sup> Difference in unrounded numbers.



## The income composition of nominal GDP

**2.33** 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.

### Income growth from 2010Q1 to 2012Q4

**2.34** 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. Both the profits of non-oil private non-financial corporations (non-oil PNFCs) and taxes on products and production – namely those that create a wedge between expenditure and private sector income (such as VAT) – were expected to rise as shares of income; profits were forecast to bounce back following the recession, with the January 2011 VAT rate rise increasing tax receipts.

**2.35** The data available at the time of last year's *FER* suggested that a shortfall in corporate profits explained over half of the error in forecasting income growth, but that compensation of employees and other incomes were also weaker. Corporate incomes have been revised up, but other income even more so, with employee incomes broadly unchanged. Other incomes are now stronger than forecast, although the upward revision predominantly relates to ONS estimates of 'concealed' income, which by definition would not have been taxed.

**Table 2.8: Contributions to GDP income growth from 2010Q1 to 2012Q4**

	Percentage points					GDP	Statistical discrepancy
	Compensation of employees	Corporations' gross operating surplus	Other income	Taxes on products and production			
June 2010 forecast (a)	4.0	4.3	2.0	2.8	13.1	0.0	
FER 2014 data (b)	3.2	1.5	1.2	2.1	8.1	0.0	
Latest data (c)	3.1	2.0	2.4	2.3	9.9	0.0	
Revision to data (c-b) <sup>1</sup>	-0.1	0.5	1.2	0.1	1.7	0.0	
Difference (c-a) <sup>1</sup>	-0.9	-2.3	0.4	-0.5	-3.2	0.0	

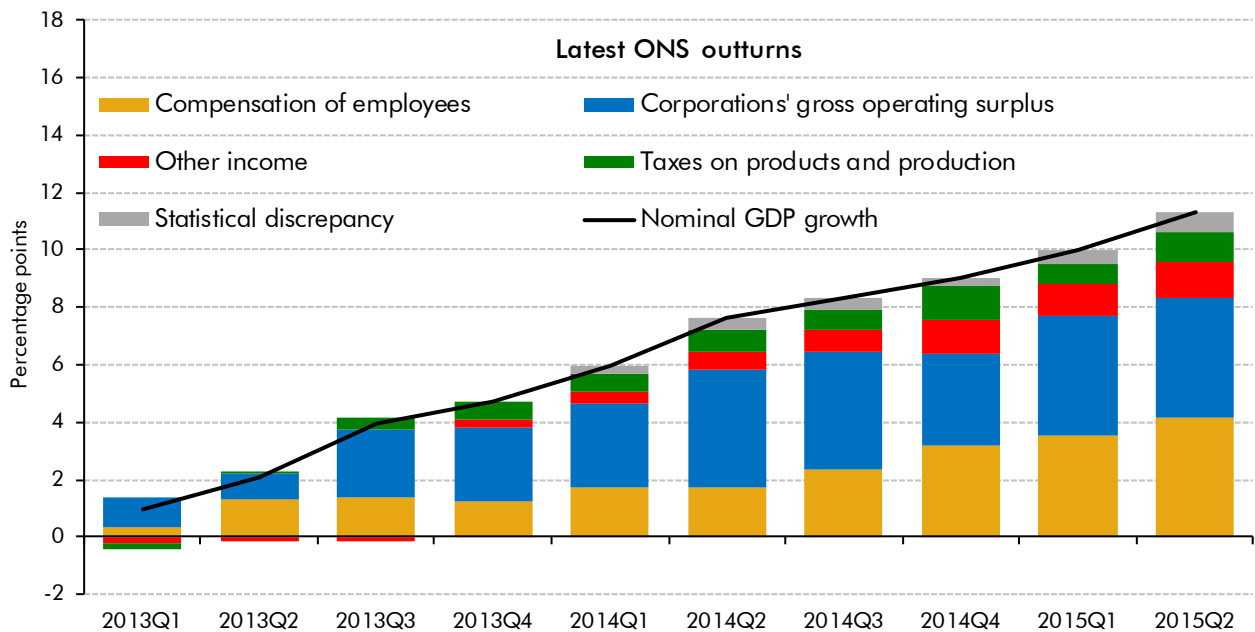
<sup>1</sup> Difference in unrounded numbers.

### Income growth since 2012Q4

**2.36** In June 2010, we expected a further pick-up in compensation of 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, with small drags from other incomes and taxes on production.

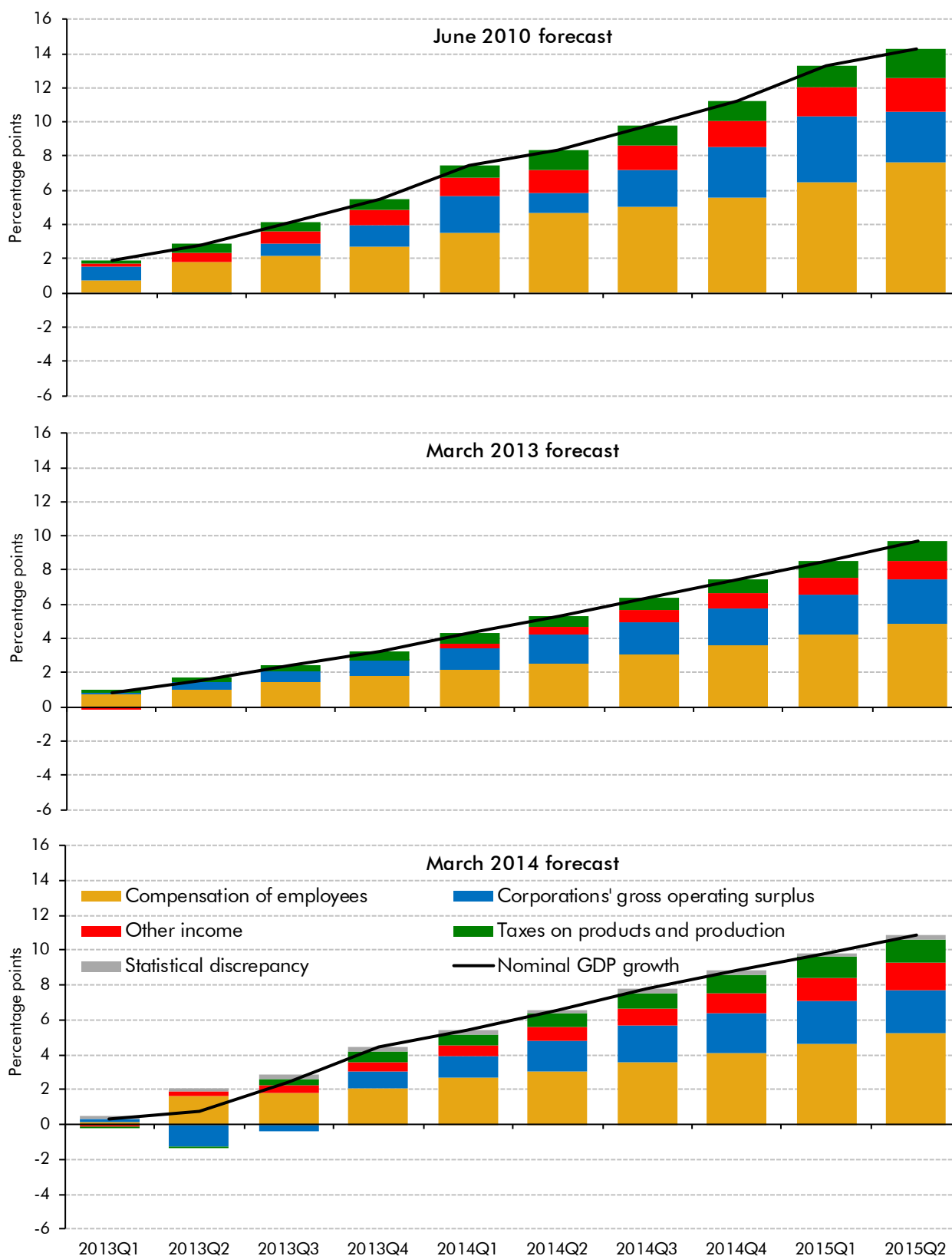
2.37 We had revised both compensation of employees and profits growth down by March 2013, with these forecasts broadly unchanged in March 2014 (although within employee compensation growth, we revised the contribution from employment growth up and from average earnings growth down). Corporate incomes originally rose by more than expected, and have since grown broadly in line with forecast. Growth in compensation of employees has gathered pace, but sits just below our forecasts. Other incomes have been more erratic in both our forecasts and the latest outturns.

Chart 2.17: Contributions to GDP income growth from 2012Q4: outturns



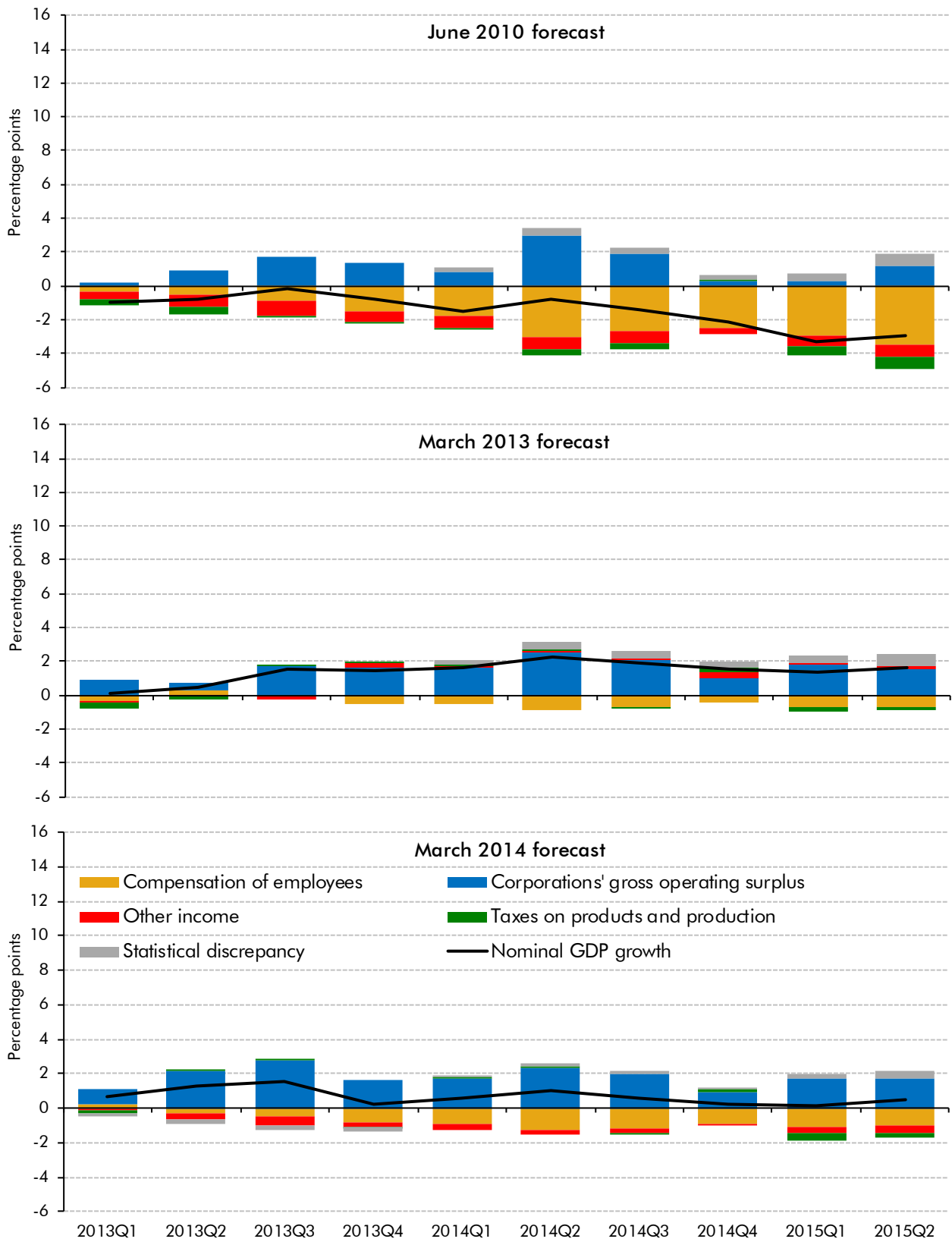
Source: ONS, OBR

Chart 2.18: Contributions to GDP income growth from 2012Q4: forecasts



Source: ONS, OBR

Chart 2.19: Contributions to GDP income growth from 2012Q4: errors



Source: ONS, OBR

Table 2.9: Contributions to GDP income growth from 2012Q4 to 2015Q2

	Percentage points						Statistical discrepancy
	Compensation of employees	Corporations' gross operating surplus	Other income	Taxes on products and production	GDP		
June 2010 forecast	7.6	3.0	2.0	1.7	14.3	0.0	
March 2013 forecast	4.9	2.6	1.1	1.2	9.7	0.0	
March 2014 forecast	5.2	2.5	1.6	1.4	10.9	0.2	
Latest data	4.2	4.2	1.2	1.0	11.3	0.7	
Difference <sup>1</sup>							
June 2010	-3.5	1.2	-0.7	-0.7	-2.9	0.7	
March 2013	-0.7	1.6	0.2	-0.1	1.6	0.7	
March 2014	-1.0	1.7	-0.4	-0.3	0.5	0.5	

<sup>1</sup> Difference in unrounded numbers.

## Developments by sector

### Households

- 2.38** Nominal private consumption has moved more closely in line with labour income<sup>3</sup> than with the broader measure of household disposable income. Other sources of net income (e.g. employers' contributions to working-age households' pensions) are generally not as closely monitored by households as labour income, so changes are unlikely to have influenced spending and saving decisions to the same degree.
- 2.39** Labour income initially held up (in part due to lower-than-expected employee social contributions), but has subsequently failed to pick up as expected. As we discuss further below, weaker average earnings growth has more than offset stronger employment growth. But nominal consumption has been closer to expectations since the end of 2012, as the household saving ratio has fallen by more than we previously forecast. The decline coincides with a pick-up in consumer confidence. The headline saving ratio has been further clouded by changes that are associated with passive saving through pension funds.

Table 2.10: 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)	Adjusted saving ratio <sup>1</sup>
June 2010 forecast	13.1	8.3	11.9	7.4	5.3	4.1	0.9	1.1
Latest data	8.5	11.2	11.6	7.7	0.8	3.6	-4.5	-2.6
Difference <sup>2</sup>	-4.6	2.8	-0.3	0.3	-4.5	-0.6	-5.4	-3.7

<sup>1</sup> Change in the saving ratio, excluding the adjustment for pensions (per cent).

<sup>2</sup> Difference in unrounded numbers.

<sup>3</sup> Here we define labour income as wages and salaries plus mixed income less households' social contributions.

Table 2.11: Income and consumption growth from 2012Q4 to 2015Q2

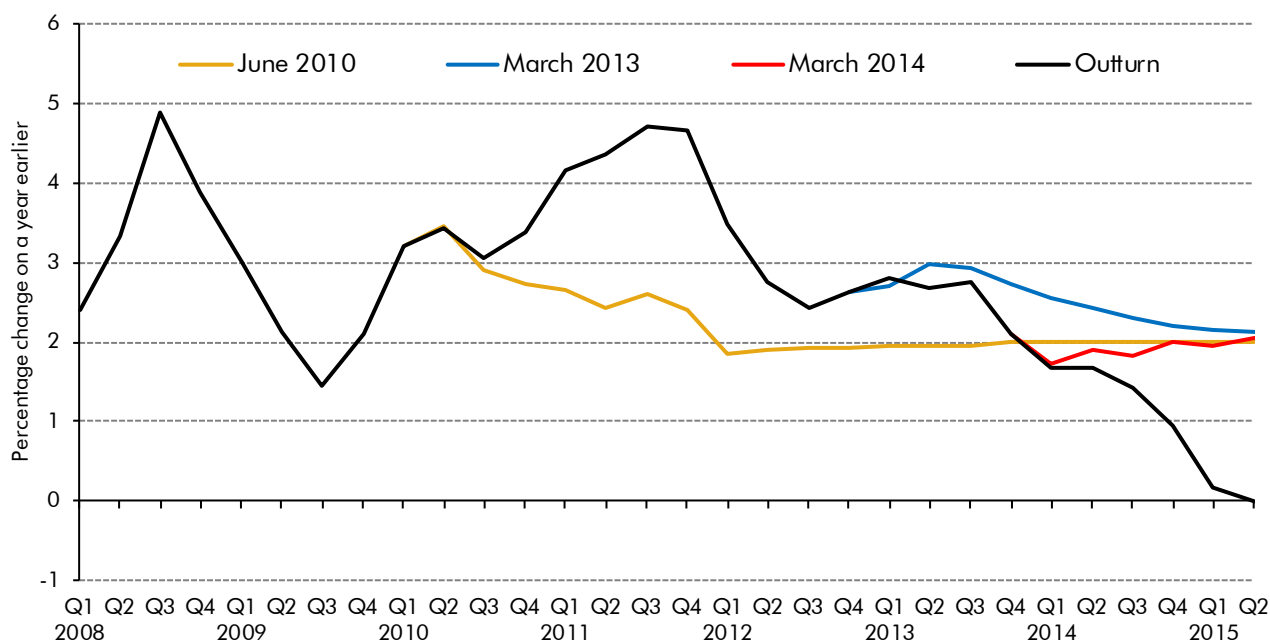
	Per cent, unless otherwise stated							
	Nominal disposable income	Labour income	Nominal consumption	Increase in price level	Real disposable income	Real consumption	Saving ratio (change, per cent)	Adjusted saving ratio <sup>1</sup>
June 2010 forecast	12.2	15.2	12.8	6.9	5.0	5.5	-0.1	-0.5
March 2013 forecast	8.5	8.7	8.9	5.9	2.5	2.8	-0.1	-0.3
March 2014 forecast	9.1	9.8	11.0	5.3	3.6	5.4	-0.8	-1.6
Latest data	5.7	7.5	9.8	3.0	2.6	6.6	-2.6	-3.7
Difference <sup>2</sup>								
June 2010	-6.5	-7.7	-3.0	-3.8	-2.3	1.1	-2.5	-3.2
March 2013	-2.8	-1.3	0.9	-2.9	0.1	3.8	-2.5	-3.4
March 2014	-3.4	-2.3	-1.2	-2.3	-1.0	1.2	-1.8	-2.1

<sup>1</sup> Change in the saving ratio, excluding the adjustment for pensions (per cent).  
<sup>2</sup> Difference in unrounded numbers.

**2.40** CPI inflation increased unexpectedly in 2011, largely due to global commodity price shocks leading to higher import prices. Our June 2010 forecast for the broader consumption spending deflator has held up to the end of 2012. Some of this reflects a methodological change – the ONS switched from using the RPI to calculate the consumption deflator to the (slower growing) CPI in 2011. Some also reflects lower inflation in the parts of the National Accounts measure of consumption that are not in the CPI, including in particular imputed rents. Although these issues remain relevant, CPI inflation has also subsequently fallen, supporting real consumption, which has been stronger than expected even as nominal consumption has been close to (or below) our forecasts.

**2.41** CPI inflation fell below the Bank of England’s 2 per cent target in the first quarter of 2014, and is currently close to zero. A number of factors have contributed, principally the fall in global commodity prices, but also the appreciation of sterling and lower unit labour costs, consistent with weaker-than-expected wage growth.

Chart 2.20: Forecasts and outturns for CPI



Source: ONS, OBR

- 2.42** Our house price assumptions were initially based on the independent consensus over the short term and on average earnings growth thereafter. We moved to using our own house price model in December 2013.<sup>4</sup> House prices continued to decline through 2010, and were little changed in 2011. Prices began to pick up in 2012, but it was not until 2013 that they gathered real momentum, prompting a large error in our March 2013 forecast in particular.
- 2.43** Residential property transactions have continued to lag behind our forecasts. Having declined steeply during the financial crisis, by June 2010 we were forecasting a short-term recovery in transactions, to some extent linked with our assumption of easing credit conditions. But the persistence of euro area-related subdued confidence and tight credit conditions meant property transactions under-performed until the middle of 2013 when those factors began to ease. Our March 2014 forecast assumed that the recovery over the preceding months would continue, but transactions instead fell slightly. That slowdown may have been policy-induced, reflecting tighter constraints on mortgage lending following the implementation of the Mortgage Market Review (MMR).

<sup>4</sup> Further details can be found in our *Working paper No.6: Forecasting house prices*.

Table 2.12: Housing market indicators

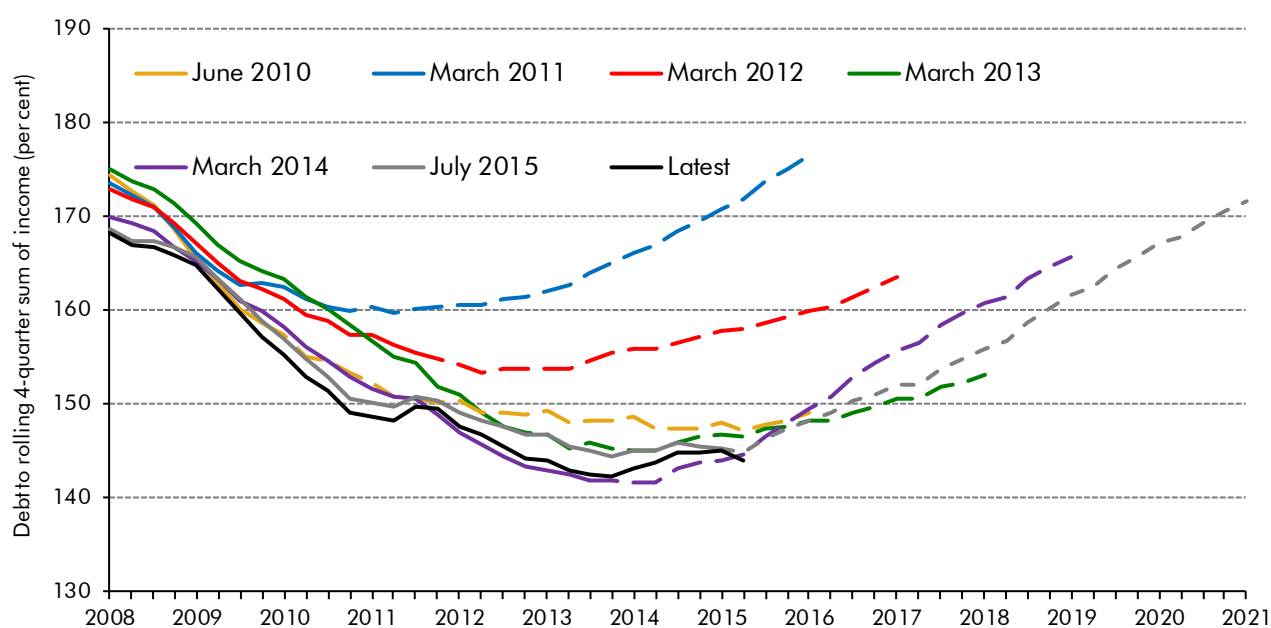
	House price growth (per cent)		Property transactions (change, 000s)	
	2010Q1 to 2012Q4	2012Q4 to 2015Q2	2010Q1 to 2012Q4	2012Q4 to 2015Q2
June 2010 forecast	7.6	11.6	128	54
March 2013 forecast		5.0		57
March 2014 forecast		19.2		112
Latest data	2.8	18.4	19	65
Difference <sup>1</sup>				
June 2010	-4.8	6.8	-109	11
March 2013		13.4		8
March 2014		-0.7		-47

<sup>1</sup> Difference in unrounded numbers.

- 2.44** The weakness in underlying saving has meant that there has been less new money flowing into household sector balance sheets to be spent on new assets or retiring existing debt. A concurrent rise in asset prices has boosted the asset side of balance sheets. Our forecast for household debt is decomposed into two components: secured debt – mortgage debt secured on dwellings – and other, unsecured debt. Our forecast for secured debt is constructed using our forecast for mortgage supply, which is related to house prices and transactions among other factors. The path of unsecured debt is determined by our forecasts for households' net lending position and the growth of household assets.
- 2.45** In June 2010, we expected household debt to decline relative to incomes in the near term, before levelling out from 2012. The latest outturns have been broadly consistent with that forecast, although household debt declined at a slightly faster rate in 2012 than we anticipated – thanks largely to weaker than expected growth of secured debt.
- 2.46** In subsequent forecasts we expected the household debt to income ratio to rise (Chart 2.21), largely because we expected an increase in the accumulation of secured debt. In the event, a slower accumulation of secured debt has meant a lower path.
- 2.47** These errors are consistent with weaker than expected housing market activity. But debt has also been lower than expected for a given amount of activity. In part this reflects a greater proportion of cash transactions, but changes to bank lending behaviour may also have had more of an effect: a shift toward higher deposit requirements will have reduced the rate of secured debt accumulation relative to the growth of transactions.
- 2.48** The overall path of unsecured debt relative to income has evolved broadly as expected. The majority of our forecasts have assumed a stable or gradually declining ratio of unsecured debt to income up to 2015, and outturns have followed a similar trajectory. Unsecured debt has picked up since the beginning of 2014, partly reflecting strength in debt-financed new car purchases. This would be consistent with a deterioration in household saving. Our recent forecasts have assumed that households' net lending position remains negative through the forecast period. Taken together with our forecasts for household assets, this implies further accumulation of unsecured debt in the future.



Chart 2.21: Forecasts and outturns for household gross debt to income



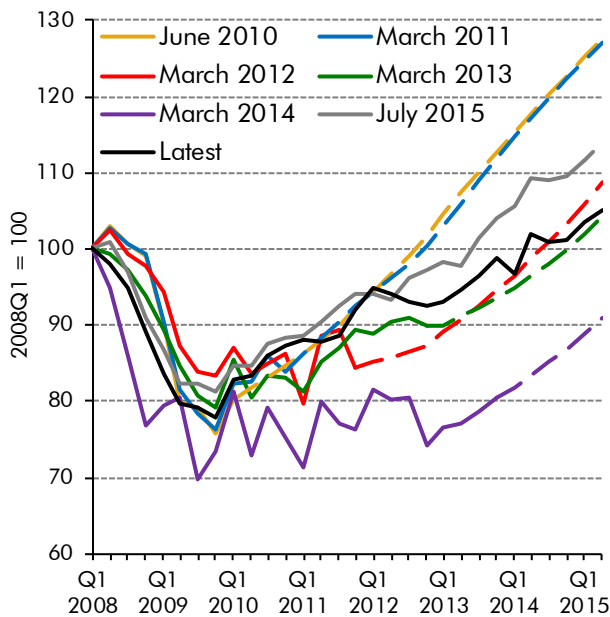
Source: ONS, OBR

## Corporations

- 2.49** The latest ONS estimates suggest steady investment growth from the end of 2009, with the pace accelerating from mid-2013 (with the exception of the second half of 2014, when it appears to have been broadly flat). We tended to revise our near-term business investment forecasts down as data 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 recover, especially as the data are volatile and subject to substantial revisions – often bigger than our forecast errors. For example, the latest estimates now suggest investment was close to its pre-crisis peak by the end of 2013 – but initial estimates suggested it was still 20 per cent below its pre-crisis peak at that time.
- 2.50** Over-optimism in our June 2010 business investment forecast up to the end of 2012 coincided with a significant shortfall in corporate profits relative to forecast. Lower than expected profits (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. Profits and investment have picked up as the recovery has become more established, but investment growth has been below our March 2013 and 2014 forecasts despite stronger profits growth.
- 2.51** 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. The pick-up in business investment was pre-dated by a

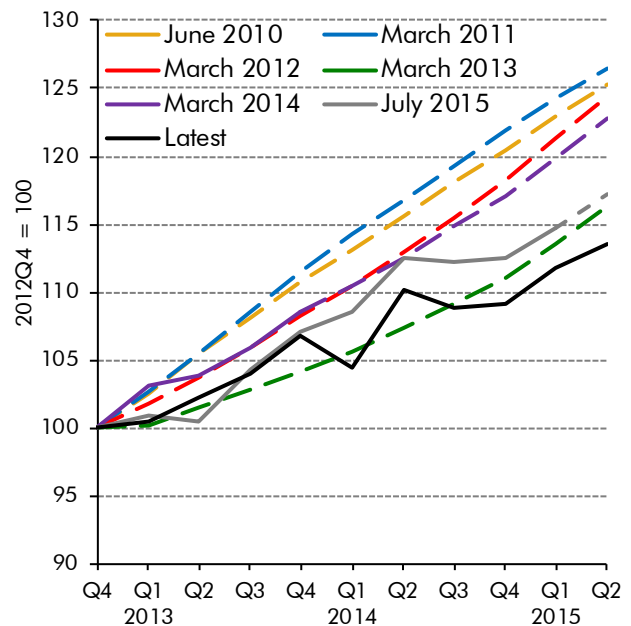
couple of quarters of firm GDP growth and a fall in indicators of uncertainty. Domestic credit conditions have also eased, with fewer firms citing lack of external finance as a factor limiting investment.

Chart 2.22: Forecasts and outturns for business investment from 2008Q1



Source: ONS, OBR

Chart 2.23: Forecasts and outturns for business investment from 2012Q4



Source: ONS, OBR

2.52 Our errors for residential investment have followed the same broad pattern, and for similar reasons, as those for our forecasts of the housing market. 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		Total
	Business	Other private	
June 2010 forecast	26.7	24.9	26.2
Latest data	11.7	16.2	13.1
Difference <sup>1</sup>	-15.0	-8.7	-13.1

<sup>1</sup> Difference in unrounded numbers.

Table 2.14: Growth in real private investment from 2012Q4 to 2015Q2

	Per cent			Total
	Business	Other private		
June 2010 forecast	25.3	18.7		23.5
March 2013 forecast	16.3	21.6		18.1
March 2014 forecast	22.8	26.9		24.2
Latest data	13.6	26.8		17.7
Difference <sup>1</sup>				
June 2010	-11.7	8.1		-5.8
March 2013	-2.7	5.1		-0.4
March 2014	-9.2	-0.2		-6.5

<sup>1</sup> Difference in unrounded numbers.

## The external sector and net trade

- 2.53** Net trade initially contributed more to real GDP growth than expected in June 2010, but the positive error soon faded, and instead a shortfall built up. We had expected UK exporters to increase their market share modestly as a result of the substantial depreciation of sterling in 2007 and 2008. It now seems 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.
- 2.54** Our June 2010 forecast assumed that trade volumes would continue to pick up over the medium term, but that the net trade contribution would diminish over time. We progressively revised down our forecasts for both export and import growth, along with the overall net trade contribution. The latest vintage of data suggests that exports grew relatively strongly in the latest quarter, and that imports fell sharply. But trade data are volatile, and the broader picture has been of limited net trade contributions to GDP growth over the recent past.

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

	Per cent, unless otherwise stated			
	Exports	Imports	Net trade contribution (ppts)	Trade balance in 2012Q4 <sup>1</sup>
June 2010 forecast	16.5	7.0	2.3	-1.8
Latest data	8.2	8.0	-0.2	-2.5
Difference <sup>2</sup>	-8.4	1.0	-2.5	-0.7

<sup>1</sup> Trade in nominal terms, as a per cent of GDP.

<sup>2</sup> Difference in unrounded numbers.

Table 2.16: Growth in trade from 2012Q4 to 2015Q2

	Per cent, unless otherwise stated			
	Exports	Imports	Net trade contribution (ppts)	Trade balance in 2015Q2 <sup>1</sup>
June 2010 forecast	15.3	10.3	1.4	-0.5
March 2013 forecast	11.3	9.3	0.4	-1.8
March 2014 forecast	7.9	6.8	0.2	-1.2
Latest data	8.6	5.0	0.9	-0.7
Difference <sup>2</sup>				
June 2010	-6.6	-5.3	-0.4	-0.3
March 2013	-2.6	-4.4	0.5	1.1
March 2014	0.8	-1.8	0.7	0.4

<sup>1</sup> Trade in nominal terms, as a per cent of GDP.

<sup>2</sup> Difference in unrounded numbers.

**2.55** One approach to understanding weaker-than-expected export performance is to decompose our nominal exports forecasts into four components:

- weighted global GDP, with greater weight placed on countries that import more UK goods and services;
- the import intensity of GDP in these countries. Together with weighted GDP, this determines the size of UK export markets;
- the UK share of these export markets. This can be combined with our estimates of UK export markets to produce our real exports forecast; and
- export prices. The product of this and real exports generates our forecast for nominal exports.

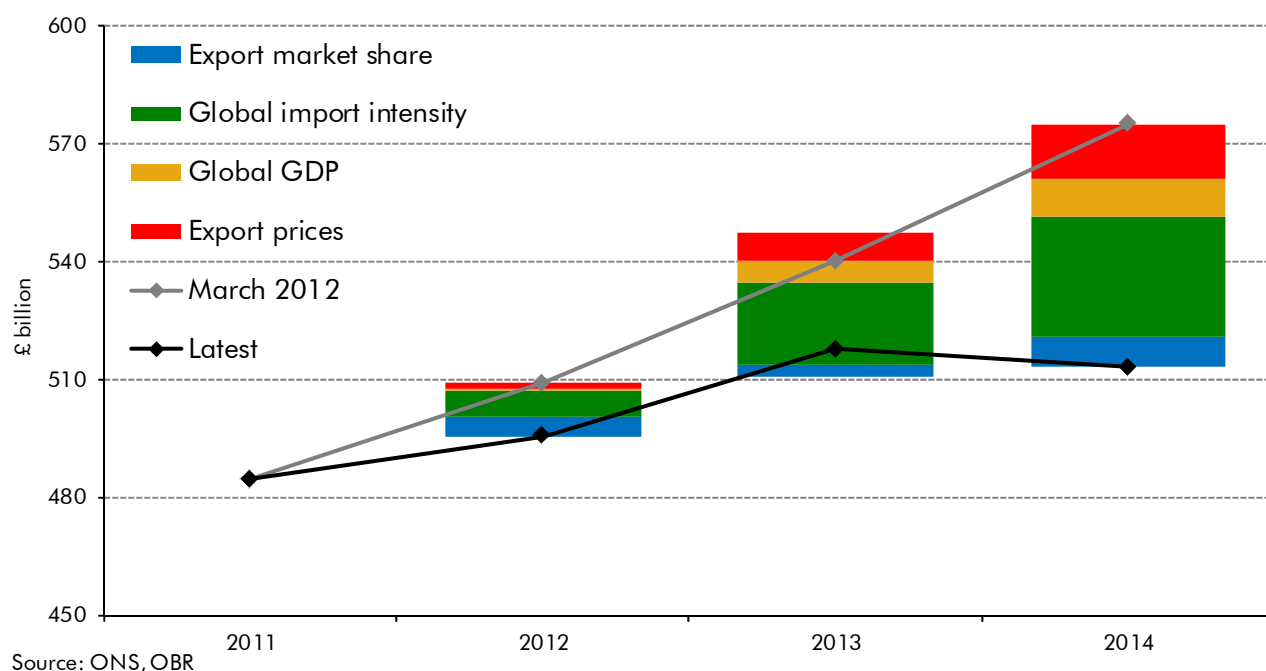
**2.56** We can look at the errors on these components in turn to understand how external conditions – and the performance of UK exporters given those conditions – contributed to our overall forecast error. Chart 2.24 does that for our March 2012 forecast, which coincided with the Government’s announcement of an aspiration for the cash value of total exports of goods and services to double to £1 trillion by 2020 (which implied faster export growth than our forecast). It shows that:

- GDP in the UK’s major export markets has been weaker than expected, most notably in the euro area. But this has not in itself been a large contributor to our overall error;
- imports have been significantly weaker than expected for a given level of global GDP. This has been common to many geographic regions,<sup>5</sup> and accounts for around 60 per cent of our forecast error for real exports in 2014 and half our nominal exports error;

<sup>5</sup> Recent trends in the trade intensity of global GDP are discussed in Box 1.2 of the IMF’s April 2015 *World economic outlook*.

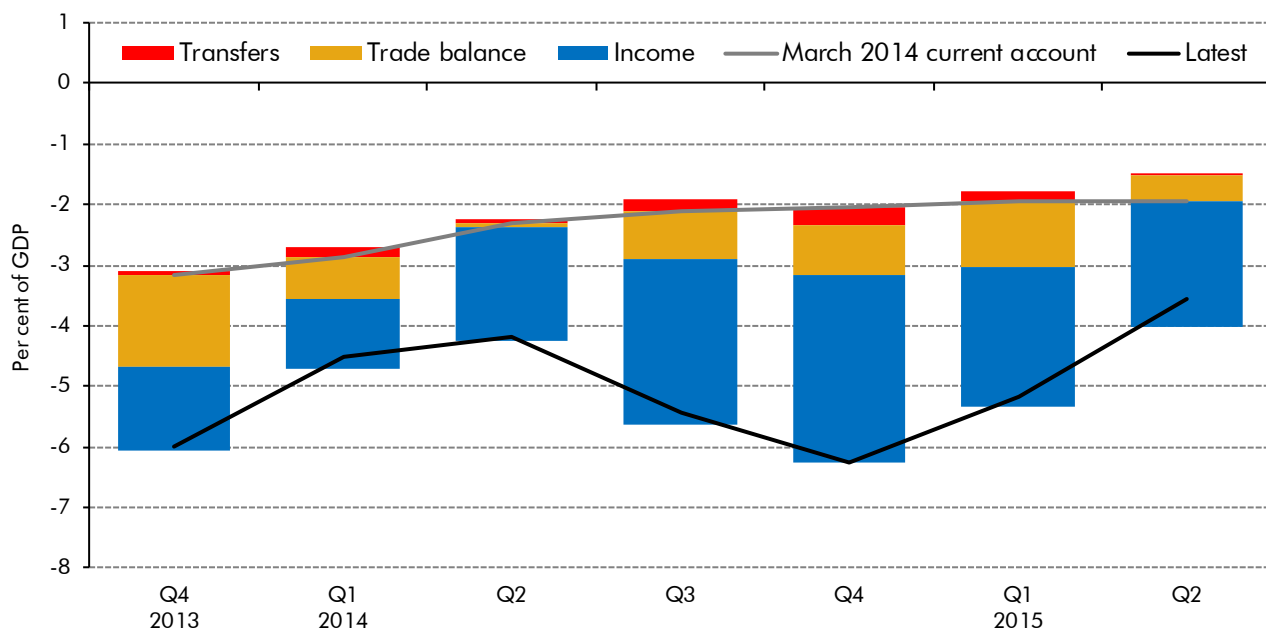
- UK exporters' market share has resumed its longer-term downward trend at a marginally quicker rate than projected in 2012; and
- export prices have fallen rather than rising as forecast at the time, contributing around a fifth of the shortfall in nominal exports by 2014. Weak export markets growth and sterling appreciation may both have constrained firms' pricing power.

Chart 2.24: Decomposition of March 2012 nominal exports errors



2.57 The nominal trade deficit has generally been wider than we forecast in June 2010, but narrower than we projected in subsequent forecasts. But the current account deficit has nonetheless overshoot because net income flows have turned negative. Although very volatile, this has led to errors of around 2 to 3 per cent of GDP in our March 2014 forecast for the current account balance in recent quarters, as the deficit reached a record of 6.3 per cent of GDP in the fourth quarter of 2014. This in part reflects methodological revisions that have reduced net income over the past. Much of the remaining weakness and volatility has been due to net foreign direct investment (FDI) earnings. Net FDI earnings by private non-financial corporations have been especially weak, which is likely to be related to weakness in the euro area economy and to the large overseas fines levied on UK firms in the financial and extraction sectors.

Chart 2.25: March 2014 current account forecast errors



Source: ONS, OBR

## Government

- 2.58** Our June 2010 forecast assumed that real government spending would remain a drag on GDP growth throughout the forecast period, but current data suggest that government spending has continued to add to real GDP.
- 2.59** Both government investment and consumption were stronger than expected in real terms up to the end of 2012. For consumption, weaker than expected 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.
- 2.60** 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. We have increased our adjustments for this over time, and our errors for real spending have been correspondingly smaller across forecasts. But it appears to have been compounded since 2012 by slightly stronger growth in cash spending on goods and services.
- 2.61** Nominal investment spending has also been stronger than projected. On the basis of the fiscal errors discussed in Chapter 3, this is likely to relate to higher investment by local authorities, rather than central government departments. Both cash and real investment spending (and therefore implied prices) are however volatile – suggesting we should not place too much weight on quarterly paths for either – and are subject to significant revision.

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	2.5	2.6	-19.5	-16.8	-0.6	-0.1
Difference <sup>1</sup>	6.3	-1.4	10.5	16.1	6.1	-0.1

<sup>1</sup> Difference in unrounded numbers.

Table 2.18: Growth in general government consumption and investment from 2012Q4 to 2015Q2

	Per cent					
	Consumption		Investment		Total	
	Real	Nominal	Real	Nominal	Real	Nominal
June 2010 forecast	-6.5	1.0	-2.9	-2.2	-6.2	0.8
March 2013 forecast	-1.0	1.3	7.1	11.1	-0.3	2.1
March 2014 forecast	1.7	1.1	10.2	7.5	2.4	1.6
Latest data	4.0	3.7	11.0	12.6	4.8	4.7
Difference <sup>1</sup>						
June 2010	10.5	2.7	13.9	14.8	11.0	3.9
March 2013	4.9	2.4	4.0	1.5	5.1	2.6
March 2014	2.2	2.6	0.8	5.2	2.3	3.1

<sup>1</sup> Difference in unrounded numbers.

## The labour market and productivity

- 2.62** 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 did not fall – the surprise is that it did not rise further.
- 2.63** Labour market participation and hence employment both increased by more than we expected over that period. Some of this was due to stronger population growth, but it mainly reflected a higher participation rate. Increased participation will in part have been linked to unexpectedly weak incomes. If households interpreted 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 people nearing retirement age to work for longer. But there have also been effects that may be more structural in nature – for example the default retirement age has been removed and the state pension age for women has been raised.
- 2.64** Unemployment remained broadly flat between mid-2012 and mid-2013. Our March 2013 forecast was for a small initial rise in the unemployment rate and for it then to remain stable

until 2015. But the picture since has been one of unemployment on a steady downward path. The falls through 2013 prompted us to revise down our unemployment forecast in March 2014, but we underestimated the pace of decline. We have also been surprised that the claimant count has tended to fall proportionately more than the LFS measure of unemployment.<sup>6</sup> Our unemployment errors since the end of 2012 have been matched by stronger than expected employment growth, with relatively small errors in forecasting participation over the period as a whole.

2.65 Labour market statistics are however yet to be fully aligned with the latest migration data, which would be expected to raise the adult population and employment levels (and also to affect the other labour market variables) when factored in. But since early GDP estimates are based on surveys of firms' sales turnover that will implicitly have already been affected by changes in migration, any revisions to employment are, other things equal, more likely to lead to correspondingly lower productivity per worker than to higher GDP.

Table 2.19: Labour market indicators from 2010Q1 to 2012Q4

	Change in thousands, unless otherwise stated						
	Total employment	Unemployment (LFS)	Activity	Population	Average hours (per cent)	Total hours worked (per cent)	Claimant count
June 2010 forecast	453	-177	276	913	0.1	1.7	-214
Latest data	897	3	899	1,057	1.1	4.2	-6
Difference <sup>1</sup>	444	180	623	144	1.0	2.5	208
Memo: 2012Q4 levels	29,910	2,529	32,438	51,100	31.9	953	1,572

<sup>1</sup> Difference in unrounded numbers.

Table 2.20: Labour market indicators from 2012Q4 to 2015Q2

	Change in thousands, unless otherwise stated						
	Total employment	Unemployment (LFS)	Activity	Population	Average hours (per cent)	Total hours worked (per cent)	Claimant count
June 2010 forecast	749	-379	370	692	-0.3	2.2	-241
March 2013 forecast	299	82	381	692	-0.9	0.1	33
March 2014 forecast	844	-354	490	878	0.0	2.9	-424
Latest data	1,125	-677	449	839	0.8	4.5	-775
Difference <sup>1</sup>							
June 2010	376	-298	79	147	1.1	2.3	-534
March 2013	826	-759	68	147	1.7	4.5	-808
March 2014	281	-323	-41	-39	0.7	1.7	-351
Memo: 2015Q2 levels	31,035	1,852	32,887	51,939	32.1	996	798

<sup>1</sup> Difference in unrounded numbers.

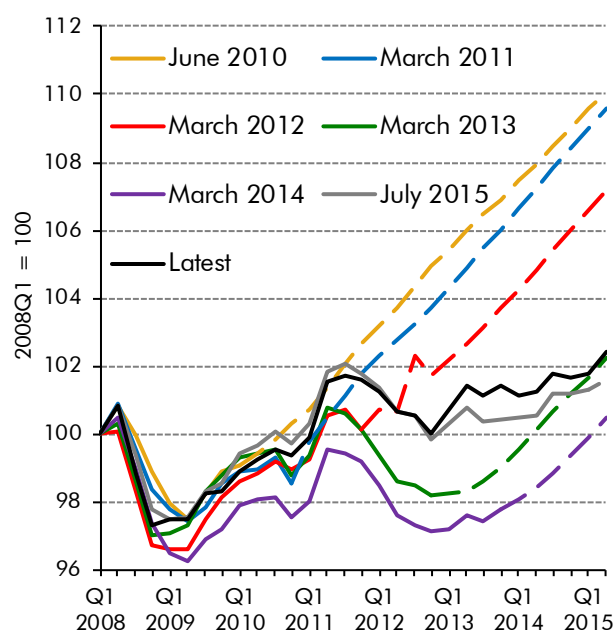
2.66 Taken together, the recovery in GDP and the unexpected strength of the labour market have been consistent with productivity – output per person or per hour worked – having fallen short of our forecasts. The latest estimates for productivity have been revised up, but it is still

<sup>6</sup> We discussed this issue in Box 8.1 of our 2014 *Welfare trends report*.



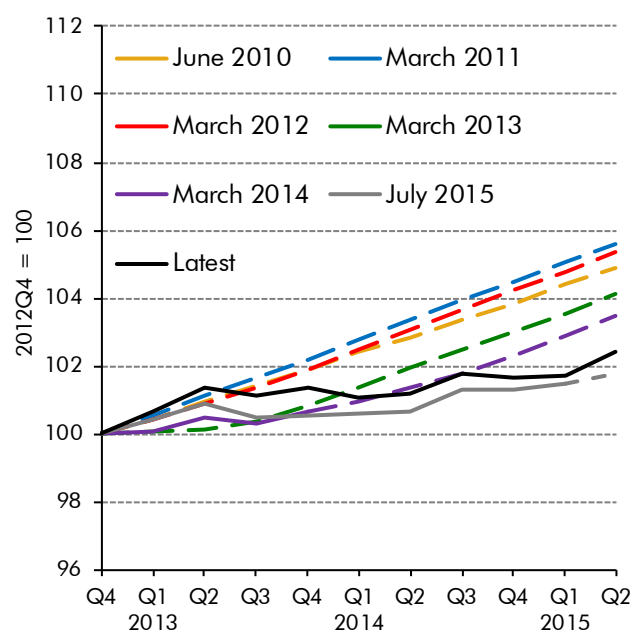
thought to have fallen through 2012 and to have remained very weak since (although the latest estimate for the second quarter of 2015 implies strong productivity growth in that quarter). This is very unusual by historical standards – at this stage of the recovery we would typically expect productivity growth to be consistently strong.<sup>7</sup>

Chart 2.26: Forecasts and outturns for hourly productivity from 2008Q1



Source: ONS, OBR

Chart 2.27: Forecasts and outturns for hourly productivity from 2012Q4



Source: ONS, OBR

2.67 As with productivity, average earnings growth has been weaker than forecast. Real income growth (as measured by the real consumption wage, which deflates earnings by consumer price inflation) was further below forecast in 2011 and 2012, as inflation surprised on the upside. Lower than expected inflation over the more recent past has supported real income growth, offsetting our more recent errors in forecasting nominal earnings – although that is still outweighed by the weakness in productivity since June 2010.

Table 2.21: Earnings, productivity and real wage growth from 2010Q1 to 2012Q4

	Per cent			
	Average earnings	Productivity per worker	Real product wage	Real consumption wage
June 2010 forecast	6.1	6.0	1.5	-1.5
Latest data	4.1	2.2	-0.7	-3.9
Difference <sup>1</sup>	-2.0	-3.8	-2.2	-2.4

<sup>1</sup> Difference in unrounded numbers.

<sup>7</sup> For an 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.

Table 2.22: Earnings, productivity and real wage growth from 2012Q4 to 2015Q2

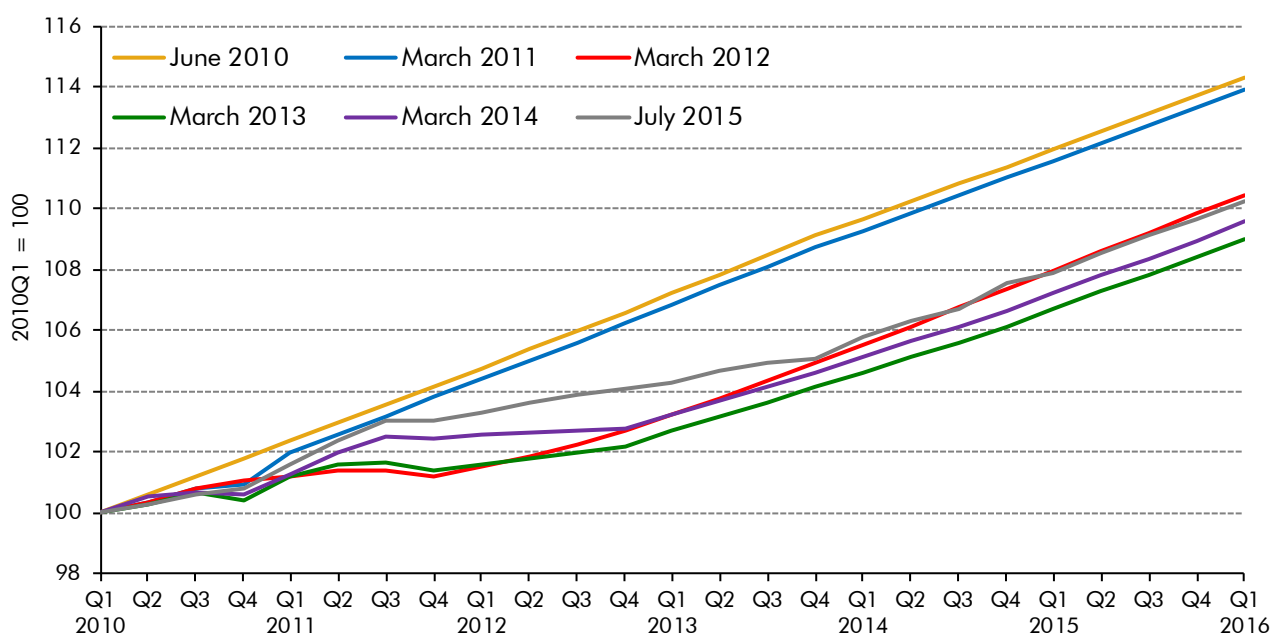
	Per cent			
	Average earnings	Productivity per worker	Real product wage	Real consumption wage
June 2010 forecast	12.1	4.5	4.6	4.8
March 2013 forecast	7.3	3.1	2.5	1.9
March 2014 forecast	7.1	3.5	2.9	1.8
Latest data	4.7	3.2	0.5	1.6
Difference <sup>1</sup>				
June 2010	-7.5	-1.3	-4.1	-3.1
March 2013	-2.7	0.1	-1.9	-0.3
March 2014	-2.5	-0.3	-2.4	-0.1

<sup>1</sup> Difference in unrounded numbers.

## Potential output

- 2.68** The previous section identified a significant shortfall in productivity growth relative to our early forecasts. 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.
- 2.69** 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. 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. We begin each forecast round with a judgement on the existing degree of spare capacity, so any revisions to historic data (such as the upward revisions over the recent past) feed through directly into estimates of potential output over that period – and to subsequent estimates for a given growth path. Our estimate of trend productivity growth in the near term has also been lowered a little.

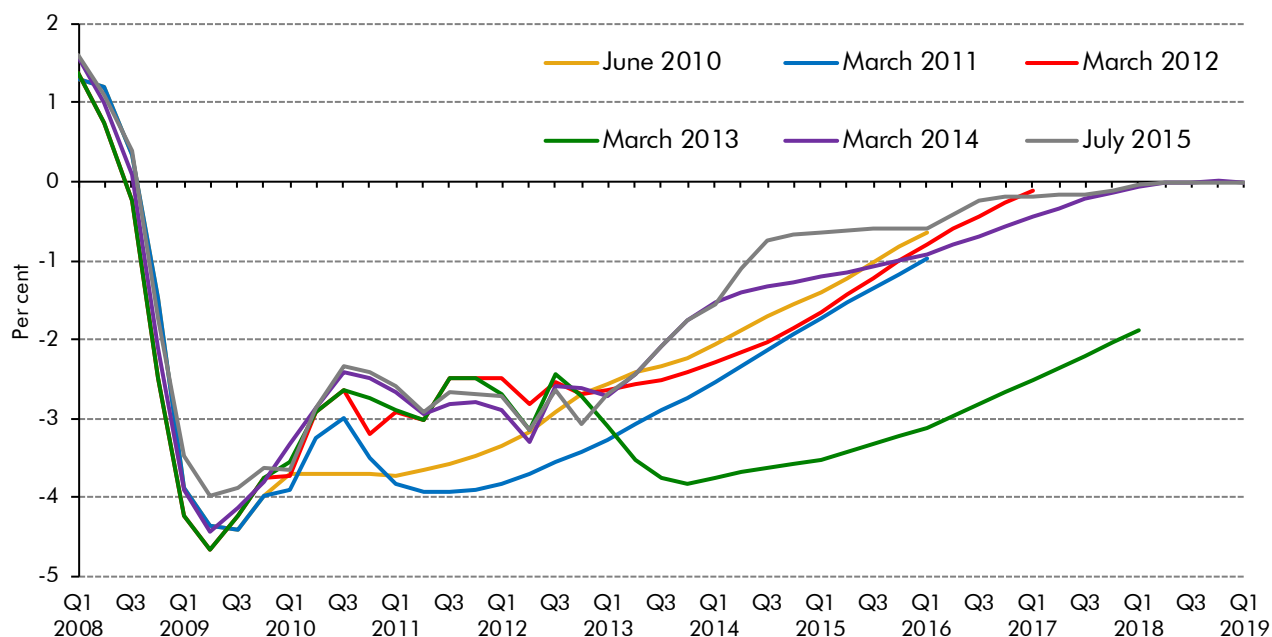
Chart 2.28: Successive potential output estimates and forecasts



Source: OBR

2.70 Viewed against the stable path for potential output in recent forecasts, the recovery in GDP growth since early 2013 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 2013 forecast was consistent with a negative output gap of almost 2 per cent of potential output five years later – we now expect the output gap to have closed by that point.

Chart 2.29: Successive output gap estimates and forecasts



Source: OBR



# 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 3.10) and spending (paragraph 3.35) sides of the fiscal forecast that underlie the PSNB forecast; and
- assesses the errors in our forecasts of some of the other main fiscal aggregates (from paragraph 3.52).

3.2 In this *Forecast evaluation report (FER)*, we assess our forecasts made in June 2010, March 2013 and March 2014 against the latest outturn data for the 2014-15 financial year. Due to significant definitional changes affecting the public finance statistics that were implemented by the Office for National Statistics (ONS) in 2014, we have restated our earlier forecasts to make them as comparable as possible with the latest outturn data.

## Public sector net borrowing

3.3 In September 2014, the ONS aligned the public sector finance statistics with the 2010 European System of Accounts (ESA10), as well as implementing other changes following its own review of the statistics.<sup>1</sup> The ONS's headline measure is now 'public sector net borrowing excluding public sector banks'. Our forecasts have since been produced on that basis, but the forecasts we are reviewing in this chapter were for 'public sector net borrowing excluding financial sector interventions' under the 1995 European System of Accounts. So to ease comparability across forecasts and outturns, we have restated our earlier forecasts to bring them in line with the current definitions.<sup>2</sup>

3.4 Some of the changes require us to produce new receipts and spending lines (for example the reclassification of Network Rail into the public sector). We have assumed that past forecasts for these would have been in line with the latest forecasts and outturns, so they do not affect the analysis of forecast errors presented in this report. We assume the same for flows relating to the Asset Purchase Facility (APF), as some past forecasts included projections for these, but others did not. Even when we did forecast these flows in the past, we focused in our analysis and discussion on an 'underlying' measure of borrowing that

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<sup>1</sup> Chapter 4 of our December 2014 *Economic and fiscal outlook* detailed the effect of these changes on our fiscal forecasts.

<sup>2</sup> Annex A shows the effects of restating our past forecasts.

## The public finances

excluded them, since the treatment at the time distorted the path of borrowing across some years. We also excluded the effects of transferring Royal Mail's historic pension fund to the public sector for the same reason.

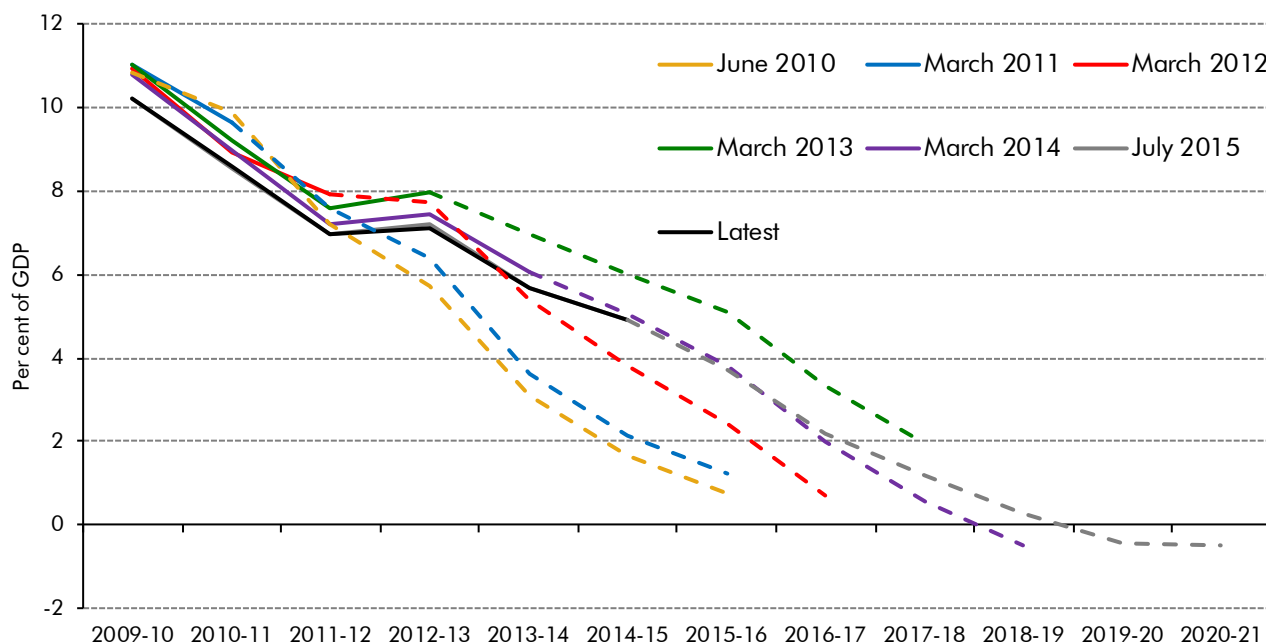
- 3.5 The classification changes tend to reduce estimates of borrowing in each year relative to that underlying measure. Table 3.1 shows the restated June 2010 forecast, highlighting differences of around 0.2 to 0.4 per cent of GDP over the period.
- 3.6 Estimates of nominal GDP have also been revised up over time, mainly in the 2014 Blue Book that took on changes to bring the National Accounts into line with ESA10. Revisions to the level of GDP do not greatly affect our interpretation of how the public finances have evolved. The larger changes over the recent past have been in areas that are either unlikely to be taxed (the spending and income of charities or illegal and other concealed activities) or that are tax-deductible (research and development). But the revisions do reduce the ratios of fiscal measures expressed as a share of national income. Had these subsequent revisions already been factored in, our June 2010 forecast for net borrowing would have been 0.6 per cent of GDP lower in 2010-11, with smaller effects in later years as the deficit has fallen.

Table 3.1: Original and restated June 2010 PSNB forecast

	Per cent of GDP						
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Published	11.0	10.1	7.5	5.5	3.5	2.1	1.1
Restated for ESA10/PSF review	10.8	9.9	7.2	5.7	3.1	1.7	0.8
Also adjusted for GDP revisions	10.2	9.2	6.8	5.3	2.9	1.6	0.7

- 3.7 Chart 3.1 shows that the deficit has not narrowed as quickly as we originally forecast:
- PSNB fell by 3.2 per cent of GDP in the two years to 2011-12, a little less than the 3.6 per cent of GDP decline that we forecast in June 2010 (on a comparable basis);
  - deficit reduction then slowed significantly in 2012-13, falling by 0.4 per cent of GDP when the one-off transfer of Royal Mail's historic pension fund is excluded and otherwise rising by 0.2 per cent of GDP;
  - the 0.9 per cent of GDP decline in 2013-14 (from a 2012-13 level that excludes Royal Mail) was larger than we anticipated at the beginning of the financial year in March 2013, but less than we had projected in earlier forecasts; and
  - PSNB has fallen at a similar pace of 0.8 per cent of GDP in the most recent year, 2014-15, almost half the rate forecast in June 2010.

Chart 3.1: Restated forecasts and outturns for public sector net borrowing



Source: ONS, OBR

**3.8** In cash terms, the deficit was £3 billion below the June 2010 forecast for 2011-12, but the gap reversed and widened to £27 billion higher in 2012-13, and increased further to £60 billion higher by 2014-15. The main sources of the error in 2014-15 were:

- a £32.9 billion shortfall in income tax. That largely reflected lower wages and salaries and self-employment income, as well as lower effective tax rates on that income. Dividend and interest income also fell short, and national insurance contributions (NICs) were £11.3 billion below forecast;
- an £8.0 billion shortfall in North Sea oil and gas receipts, which came in at only around a fifth of our June 2010 forecast. That reflected lower than expected production and higher than expected operating and capital expenditure, which are fully tax deductible, in addition to the more recent fall in oil prices;
- a £7.3 billion shortfall in onshore corporation tax receipts. That was due to weaker profits and lower effective tax rates as firms – particularly in the financial sector – carried forward more losses than expected to offset tax liabilities. The Government also cut the main rate of corporation tax faster than it had announced it would in June 2010;
- a £6.2 billion shortfall in fuel duties, in large part due to policy decisions to cut and then freeze duty rates; and
- £10.8 billion of lower spending that partly offset our over-optimism on receipts. A number of spending items were higher than expected, but those errors were more than offset by debt interest coming in £19.3 billion lower than forecast due to much lower

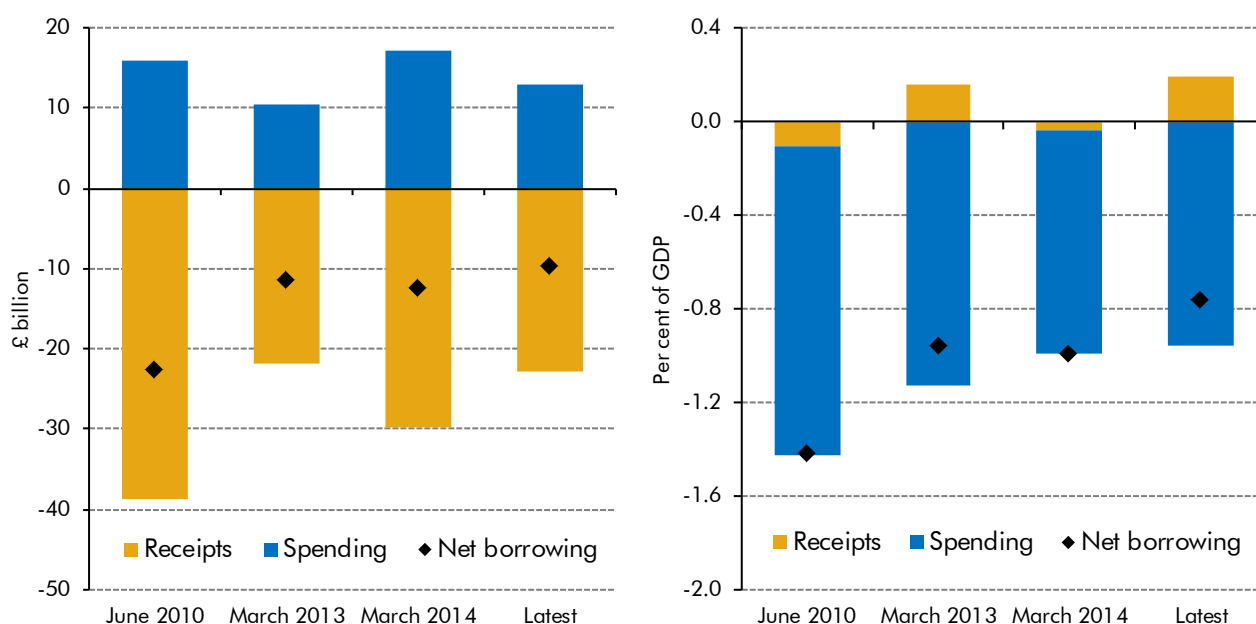
interest rates on government bonds and lower inflation in the year reducing the cost of servicing index-linked bonds.

3.9 As well as moving further away from the June 2010 forecast, the deficit also narrowed by slightly less in 2014-15 than the roughly £12 billion, or 1.0 per cent of GDP, forecast in both March 2013 and 2014. That reflected various factors, including:

- the unexpected strength in the economy led to receipts performing more strongly in 2013-14 than forecast in March 2013, as higher income tax, VAT, onshore corporation tax and stamp duty land tax more than offset lower North Sea oil and gas receipts. But some of that net over-performance unwound in 2014-15, as self-assessment (SA) receipts fell well below forecast and oil and gas receipts continued to disappoint, offsetting continued momentum in other receipts;
- 2013-14 spending was also lower, mainly due to lower debt interest payments. But total spending was back in line with the March 2013 forecast by 2014-15, as further reductions in debt interest were offset by other changes, including higher EU contributions and capital spending;
- nominal GDP growth came in closer to our March 2014 forecast, but receipts fell as a share of GDP in contrast to a broadly flat projection. SA and oil and gas receipts were again key sources of error. Having risen strongly in 2013-14, growth in stamp duty land tax was more muted in 2014-15; and
- spending was lower than expected in March 2014. Our debt interest errors were of a similar magnitude across the March 2013 and 2014 forecasts. But our errors on EU contributions and capital spending were smaller by March 2014 (EU contributions were slightly below), although local authority spending came in above forecast.



Chart 3.2: Contributions to the change in net borrowing in 2014-15



Source: ONS, OBR

Source: ONS, OBR

Table 3.2: 2014-15 receipts, spending and net borrowing forecast errors

	£ billion								
	Receipts			Spending			Net borrowing		
	June 10	March 13	March 14	June 10	March 13	March 14	June 10	March 13	March 14
Forecast	718.7	638.1	653.2	748.7	737.9	740.0	30.0	99.8	86.8
Outturn	647.8	647.8	647.8	737.9	737.9	737.9	90.1	90.1	90.1
Error	-70.9	9.7	-5.3	-10.8	0.0	-2.1	60.1	-9.7	3.2

## Receipts

**3.10** Our June 2010 receipts errors have been dominated by economic factors and compounded by fiscal forecasting errors often indirectly related to developments in the economy. The weakness in nominal GDP alone would have implied a £36 billion shortfall in receipts by 2014-15. But receipts were another £35 billion below forecast as the receipts-to-GDP ratio fell by 0.1 per cent of GDP between 2009-10 and 2014-15, rather than rising by the 2.3 per cent of GDP forecast at the time.

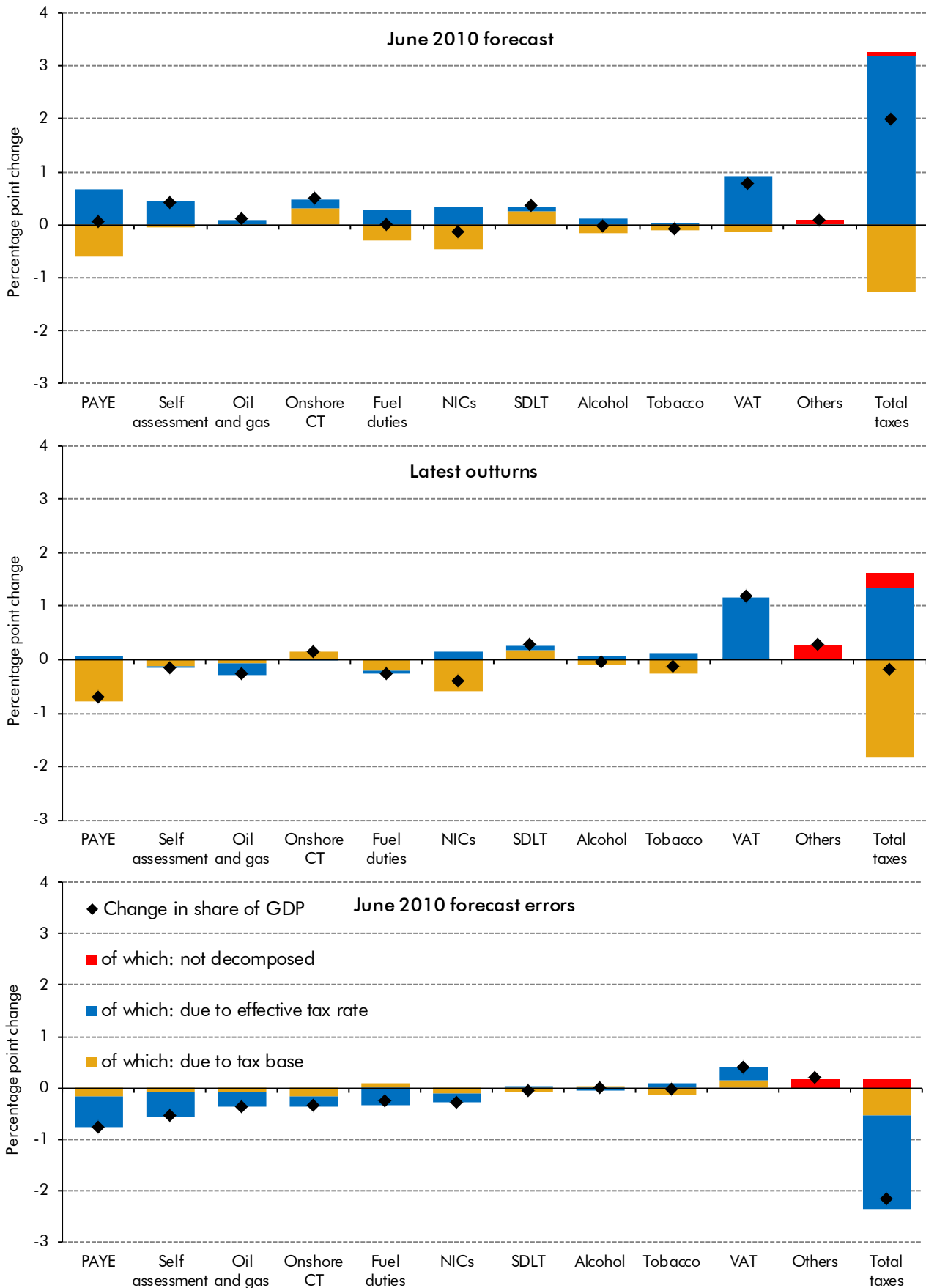
**3.11** Chart 3.3 shows that the composition of GDP accounted for around a quarter of the additional error. Household consumption actually held up relative to GDP, but both labour income and profits were weaker. The error has largely been due to individual taxes underperforming relative to their tax bases:

- the mix of labour income growth, with more through employment and less through earnings, was less favourable for pay as you earn (PAYE) income tax, SA and NICs receipts than expected. Tax thresholds were also higher relative to earnings, initially due to higher inflation but then also policy measures – in particular further rises in the

personal allowance. The distribution of incomes, notably for new workers and among the self-employed, has also been skewed towards the lower end. These lower effective tax rates account for 1.3 per cent of GDP – just over half – of the total error;

- oil and gas receipts were only 0.1 per cent of GDP, compared with the 0.5 per cent of GDP forecast. Receipts were depressed by lower production (tax base) and higher tax-deductible costs (effective tax rate);
- onshore corporation tax (CT) receipts were 0.3 per cent of GDP below forecast, due to both a lower profits share and more carrying forward of losses relative to forecast;
- lower-than-expected fuel duty rates took 0.3 per cent of GDP off receipts, partly offset by fuel consumption holding up. Duty rates were cut by 1p a litre in Budget 2011 and have since been frozen, whereas the June 2010 forecast assumed they would be updated in line with inflation each year; and
- VAT receipts provided the main offset, rising by an additional 0.4 per cent of GDP, in part due to the consumption share of GDP being higher than expected, but also to the VAT gap (described below) closing by more than we had assumed.

Chart 3.3: Sources of changes in the tax-to-GDP ratio (2009-10 to 2014-15)



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- 3.12** Our March 2013 and March 2014 errors for 2014-15 have been far smaller than our June 2010 errors. Receipts were around £10 billion above the March 2013 forecast, with positive surprises spread across a number of receipts. But oil and gas receipts, self-assessment and interest and dividends receipts on the government's stock of financial assets underperformed.
- 3.13** Oil and gas receipts were closer to, albeit still below, the March 2014 forecast, but the negative errors in SA receipts and interest and dividends persisted. And although stronger than expected in March 2013, stamp duty land tax also came in weaker than our March 2014 forecast. In total, receipts were around £5 billion below forecast, as only onshore CT was significantly above forecast, with PAYE income tax, NICs and VAT much closer.

**Table 3.3: 2014-15 receipts forecast errors**

	£ billion						
	Forecast			Outturn	Error		
	June 2010	March 2013	March 2014		June 2010	March 2013	March 2014
Income tax (gross of tax credits)	196.6	165.5	166.5	163.7	-32.9	-1.8	-2.8
<i>of which:</i>							
Pay as you earn (PAYE)	158.4	137.7	140.2	140.0	-18.4	2.3	-0.2
Self assessment (SA)	35.1	27.4	27.2	23.6	-11.5	-3.7	-3.5
National insurance contributions	121.6	108.6	110.0	110.3	-11.3	1.7	0.3
Value added tax	107.6	107.2	110.7	111.2	3.6	4.0	0.5
Onshore corporation tax	48.3	33.7	38.9	40.9	-7.3	7.2	2.1
UK oil and gas revenues	10.1	6.1	3.7	2.2	-8.0	-3.9	-1.5
Capital taxes	23.1	21.0	25.1	23.2	0.0	2.1	-1.9
Fuel and excise duties	54.3	47.1	47.1	46.9	-7.5	-0.2	-0.3
Interest and dividends	9.6	6.6	6.9	5.8	-3.8	-0.7	-1.1
Other receipts	147.5	142.3	144.4	143.8	-3.7	1.4	-0.6
<b>Current receipts</b>	<b>718.7</b>	<b>638.1</b>	<b>653.2</b>	<b>647.8</b>	<b>-70.9</b>	<b>9.7</b>	<b>-5.3</b>

## Income tax and NICs

- 3.14** Although it has picked up recently, average earnings growth has continued to be weaker than expected, depressing PAYE income tax and NICs receipts. Employment growth has surprised on the upside, but has not been sufficient to offset the effect of slower growth in average earnings.
- 3.15** Given both our earnings and employment errors, income tax and NICs receipts were weaker than expected in June 2010, but slightly above our March 2013 and 2014 forecasts. The June 2010 errors in part reflected higher tax thresholds (due to both higher inflation and policy measures), as well as the composition of employment gains, which have been concentrated in lower paid industries and age groups, where a larger proportion of each individual's earnings will be subject to the tax-free personal allowance. But relatively stronger 2014-15 earnings in the more tax-rich financial and business services sectors as

well as higher than expected non-financial sector bonuses have supported receipts relative to our more recent forecasts.

- 3.16** The pre-announced cut in the additional rate of income tax to 45p in April 2013 will have led some individuals to shift income from 2012-13 (on which SA tax will have been paid in 2013-14) to 2013-14 (on which SA tax was paid in 2014-15) to take advantage of the lower tax rate. An initial analysis of SA returns suggests that income shifting related to the reduction in the additional rate of income tax boosted receipts to roughly the extent that we expected.
- 3.17** But total SA receipts came in well below forecast. The main shortfalls appear to have been in tax on self-employment and savings income. That fits with evidence that the growth in self-employment has generally been at the lower end of the income distribution, and that returns on savings have fallen by even more than we expected.
- 3.18** Matching the actual SA receipts bases with proxies consistent with the National Accounts – and then projecting them forward – presents a considerable forecasting challenge. For example, dividends subject to SA are more likely to have been paid by unlisted businesses, rather than the large public companies that dominate the aggregate data. And ONS estimates for self-employment income only become consistent with the tax data after long lags. This complicates any attempt to split out our SA errors into economic factors and broader fiscal forecasting errors.

**Table 3.4: 2014-15 income tax and NICs forecast errors**

	£ billion					
	Forecast	Outturn	Error	of which:		
				Economic factors	Fiscal forecasting errors	Policy changes
<b>March 2013 forecast</b>						
Income tax (gross of tax credits)	165.5	163.7	-1.8	-3.5	0.4	1.2
<i>of which:</i>						
Pay as you earn (PAYE)	137.7	140.0	2.3	-0.7	2.4	0.6
Self assessment (SA)	27.4	23.6	-3.7	-2.5	-1.7	0.5
National insurance contributions	108.6	110.3	1.7	-1.6	2.8	0.5
<b>March 2014 forecast</b>						
Income tax (gross of tax credits)	166.5	163.7	-2.8	-4.2	1.4	0.0
<i>of which:</i>						
Pay as you earn (PAYE)	140.2	140.0	-0.2	-2.1	1.9	0.0
Self assessment (SA)	27.2	23.6	-3.5	-1.8	-1.7	0.0
National insurance contributions	110.0	110.3	0.3	-0.9	1.2	0.0

## VAT

- 3.19** Nominal household consumption growth was stronger than expected in March 2013, but below our March 2014 forecast. Abstracting from this (and other elements of the tax base), VAT receipts have surprised on the upside.

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- 3.20** The composition of household spending has played a small role, with the share of spending subject to the standard rate – notably new car sales – holding up. And on the basis of the latest available estimates, the implicit VAT gap – the difference between theoretical and actual gross VAT receipts – has narrowed more quickly, also contributing to the error.
- 3.21** Further investigation of the remaining component has revealed an error in the way that we have been forecasting VAT deductions. All our (and previous Treasury) forecasts have projected deductions based on the continuation of past trends. But, due to public spending cuts, deductions relating to the government sector have not in fact risen as quickly as past trends would suggest, so we have been over-forecasting deductions (and thus under-forecasting net VAT receipts). This error has built up as the fiscal consolidation has continued. We will correct this in our next fiscal forecast on 25 November. All else equal, this will raise the VAT forecast by around £3 billion by the end of the forecast period.

**Table 3.5: 2014-15 VAT forecast errors**

	£ billion					
	Forecast	Outturn	Error	of which:		
				Economic factors	Fiscal forecasting errors	Policy changes
March 2013 forecast	107.2	111.2	4.0	0.7	3.3	0.0
March 2014 forecast	110.7	111.2	0.5	-1.0	1.5	0.0

## Onshore corporation tax

- 3.22** We revised down our forecasts for onshore CT receipts repeatedly between June 2010 and March 2013. That reflected weak profits growth over that period and our underestimation of losses being carried forward by firms (notably in the financial sector) that can be used to offset future liabilities. Policy measures to lower the main rate of corporation tax further and faster than planned in June 2010 also reduced receipts.
- 3.23** Receipts have since rebounded by more than expected. This initially reflected a pick-up in profits, particularly within the industrial and commercial sectors, and corrections to how the effects of some policy measures were factored into the forecast. But the underlying momentum has persisted, and spread to the financial sector, leading to further positive errors in March 2014.
- 3.24** At this stage, without finalised CT returns data for the year (which will not be available until next autumn), it is difficult to pin this to particular factors. It could be that we have now overestimated the amount of losses that firms use up each year, but it could equally be that other deductions (such as group relief) have been lower or that repayments relating to earlier periods have been lower than assumed (in which case these errors would be unlikely to continue). It is also possible that the data on which we base our forecasts of the tax base and some deductions – e.g. company profits and business investment – will be revised. These are elements of GDP that are often subject to substantial revision over time.

Table 3.6: 2014-15 onshore corporation tax forecast errors

	£ billion					
	Forecast	Outturn	Error	of which:		
				Economic factors	Fiscal forecasting errors	Policy changes
March 2013 forecast	33.7	40.9	7.2	3.8	3.1	0.3
March 2014 forecast	38.9	40.9	2.1	0.3	1.8	0.0

## UK oil and gas revenues

- 3.25** Oil and gas receipts in 2014-15 were much lower than expected: only around a fifth of the level we forecast in June 2010 and a third of the March 2013 forecast. We have continued to revise the forecast down since, and receipts have continued to underperform against even these more downbeat projections.
- 3.26** Higher expenditure, particularly on capital investment that can be offset against tax liabilities, reduced receipts relative to our June 2010 forecast, but this has not been a major source of error since March 2013. Weaker production explains a bigger part of both errors, although output has been much closer to our March 2014 forecast. None of these forecasts anticipated the steep drop in oil and gas prices that occurred during 2014-15, so they have all proved too optimistic, although prices were much closer to the June 2010 assumption (and so the contribution to the error correspondingly smaller) than more recent projections.

Table 3.7: 2014-15 UK oil and gas revenues forecast errors

	£ billion					
	Forecast	Outturn	Error	of which:		
				Economic factors	Fiscal forecasting errors	Policy changes
March 2013 forecast	6.1	2.2	-3.9	-4.5	0.6	0.0
March 2014 forecast	3.7	2.2	-1.5	-1.2	-0.3	0.0

## Capital taxes

- 3.27** House prices have risen broadly in line with the June 2010 forecast over the period as a whole, although this overall performance masks an initial period of weakness followed by strong growth. But property transactions have typically increased far more slowly than expected, depressing stamp duty land tax (SDLT) receipts. We allowed for subdued house prices and transactions in March 2013, but were surprised on the upside by transactions and by the strength in house prices. So we forecast a pick-up in both transactions and house prices in March 2014, only for transactions to stagnate.
- 3.28** The forecasts evaluated here were based on the old 'slab' structure for SDLT (under which buyers paid one rate on the whole property price, with fixed thresholds). In December 2014, the Government changed SDLT to a 'slice' system (where successive bands of the purchase price are taxed at increasing rates), generating a small net giveaway. Both systems are

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strongly geared to more expensive properties (the new system more so). The initial pick-up in house prices was particularly strong in London and the South East (regions with relatively higher house prices), contributing to positive errors relative to our March 2013 forecast, but the more recent drop in the number of expensive properties sold has worked the other way – particularly affecting the March 2014 forecast.

- 3.29** Capital gains tax (CGT) is strongly geared to changes in asset prices, and the number and timing of asset disposals, which have in the past been influenced by policy changes. CGT is paid in the financial year following an asset disposal, so receipts in 2014-15 will have been affected by strong growth in equity prices in 2013-14, although there are further lags before detailed information becomes available to confirm precisely what has driven receipts growth. CGT receipts accruing to 2012-13 and paid in 2013-14 were particularly weak, but this was not fully known at the time of our March 2013 forecast. Our March 2014 forecast, which took this lower starting level into account, was much closer to the outturn.
- 3.30** Stronger house price inflation led to higher inheritance tax receipts relative to the March 2013 forecast, but otherwise outturns have been close to expectations. This coincides with a period during which policy has been stable and the nil-rate band has been frozen. Looking forward, the July 2015 measure to introduce a new nil-rate transferable band for main residences introduces another source of forecast uncertainty.

**Table 3.8: 2014-15 capital taxes forecast errors**

	£ billion					
	Forecast	Outturn	Error	of which:		
				Economic factors	Fiscal forecasting errors	Policy changes
<b>March 2013 forecast</b>						
Capital taxes	21.0	23.2	2.1	3.8	-1.3	-0.3
<i>of which:</i>						
Stamp duty land tax	8.4	10.9	2.5	2.7	0.1	-0.3
Stamp duty on shares	2.7	2.9	0.2	0.4	-0.2	0.0
Capital gains tax	6.5	5.6	-0.9	0.4	-1.3	0.0
Inheritance tax	3.5	3.8	0.3	0.3	0.0	0.0
<b>March 2014 forecast</b>						
Capital taxes	25.1	23.2	-1.9	-0.5	-1.1	-0.3
<i>of which:</i>						
Stamp duty land tax	12.7	10.9	-1.8	-0.4	-1.1	-0.3
Stamp duty on shares	3.1	2.9	-0.2	0.0	-0.2	0.0
Capital gains tax	5.4	5.6	0.2	-0.1	0.2	0.0
Inheritance tax	3.9	3.8	0.0	0.0	0.0	0.0



## Fuel and excise duties

- 3.31** Although fuel duties have been significantly lower than forecast in June 2010, this mainly reflects a series of policy decisions to either freeze or cut rates. These were largely known by March 2013 (with just the one additional announcement affecting 2014-15). The underlying trend has been more positive, with receipts marginally above recent forecasts. The pick-up in real GDP will have supported demand for fuel, but we may also have overestimated the effect on fuel consumption of improvements in fuel efficiency over time.
- 3.32** Tobacco duties have been weaker than expected. As a result, we have revised our assumption for the downward trend in demand from 2 to 3 per cent a year and increased the assumed responsiveness of demand to price changes. In aggregate, alcohol duties have been close to our forecasts, with the Budget 2014 measures (including the 1p cut in beer duty and freeze on cider and spirits duties) explaining an error relative to our March 2013 forecast.

Table 3.9: 2014-15 fuel and excise duties forecast errors

	£ billion					
	Forecast	Outturn	Error	of which:		
				Economic factors	Fiscal forecasting errors	Policy changes
<b>March 2013 forecast</b>						
Fuel and excise duties	47.1	46.9	-0.2	0.4	0.1	-0.7
<i>of which:</i>						
Fuel duties	26.3	27.2	0.8	0.4	0.8	-0.4
Tobacco duties	10.2	9.3	-0.9	-0.1	-0.8	0.0
Alcohol duties	10.6	10.4	-0.1	0.1	0.1	-0.3
<b>March 2014 forecast</b>						
Fuel and excise duties	47.1	46.9	-0.3	0.2	-0.5	0.0
<i>of which:</i>						
Fuel duties	26.8	27.2	0.3	0.2	0.1	0.0
Tobacco duties	9.9	9.3	-0.7	0.0	-0.6	0.0
Alcohol duties	10.4	10.4	0.0	0.0	0.0	0.0

## Other receipts

- 3.33** **Interest and dividend receipts** have been depressed by lower than expected domestic and overseas interest rates. The latter has reduced the earnings on the stock of foreign reserves. The stocks of government-held financial assets predominantly attract short-term rates and/or are held for short periods. Data on these receipts are patchy and volatile, adding a further layer of modelling difficulty.
- 3.34** A number of the **environmental levies** that we forecast are yet to appear in ONS outturn data, but the larger ones have a neutral effect on the public finances (such as feed-in tariffs), increasing both receipts and spending by the same amounts.

## Spending

- 3.35 Our cash spending forecasts have been far more stable than our forecasts of receipts – and the aggregate errors smaller. In part that reflects the fact that much public spending is insulated from economic fluctuations over the short run. One key exception is debt interest, which is sensitive to changes in inflation and interest rates (even given the relatively long average maturity of gilts). Despite borrowing generally coming in higher than expected, lower interest rates – and the more recent drop in inflation – have seen debt interest fall significantly below forecast, more than explaining why total spending has tended to come in lower than expected.
- 3.36 The June 2010 forecast errors for departmental, local authority and welfare spending are obscured by a number of sizeable classification changes.<sup>3</sup> After allowing for these classification changes, lower spending on debt interest was partly offset by higher departmental expenditure limit (DEL) plans. Within welfare spending, additional spending from higher uprating and more claimants on some benefits was more than offset by measures in the 2010 Spending Review to cut welfare to pay for the DEL increases. But departments also underspent relative to their DEL plans, and local authorities added to reserves rather than running them down as assumed at the time, which reduced overall local authority spending.
- 3.37 Reflecting lessons identified in previous *FERs*, by March 2013 we assumed that central government departments would underspend against budgets and that local authorities would continue to build their reserves. This has reduced errors in both areas – although calibrating those assumptions remains a challenge. Lower debt interest has continued to offset higher spending across other items of spending. Total welfare spending has been broadly on track, although, as explained later, spending subject to the welfare cap has tended to come in above forecast and spending outside the cap below forecast.

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<sup>3</sup> Last year's *FER* contains further information about these classification changes.

Table 3.10: 2014-15 spending forecast errors

	£ billion						
	Forecast			Outturn	Error		
	June 2010	March 2013	March 2014		June 2010	March 2013	March 2014
PSCE in RDEL	322.1	317.2	317.8	317.6	-4.5	0.4	-0.2
Locally-financed current	30.0	38.0	35.1	36.5	6.5	-1.6	1.3
Welfare spending	218.5	214.5	213.8	213.7	-4.8	-0.9	-0.2
Debt interest	52.1	40.9	41.2	32.8	-19.3	-8.1	-8.4
EU contributions	11.3	8.2	10.8	10.4	-0.9	2.2	-0.3
Public service pensions	10.3	12.4	10.4	11.5	1.2	-0.9	1.1
Other current	54.8	55.7	56.3	59.7	4.9	3.9	3.3
<b>Current expenditure</b>	<b>688.7</b>	<b>674.6</b>	<b>675.0</b>	<b>670.6</b>	<b>-18.1</b>	<b>-4.0</b>	<b>-4.3</b>
PSGI in CDEL	33.6	36.6	37.1	37.3	3.7	0.7	0.2
Other capital	26.4	26.7	27.9	29.9	3.6	3.2	2.0
<b>Gross investment</b>	<b>60.0</b>	<b>63.3</b>	<b>65.0</b>	<b>67.2</b>	<b>7.2</b>	<b>3.9</b>	<b>2.2</b>
Less depreciation	34.3	33.9	34.3	37.0	2.6	3.1	2.7
<b>Net investment</b>	<b>25.7</b>	<b>29.4</b>	<b>30.7</b>	<b>30.3</b>	<b>4.6</b>	<b>0.8</b>	<b>-0.4</b>
<b>Total spending</b>	<b>748.7</b>	<b>737.9</b>	<b>740.0</b>	<b>737.9</b>	<b>-10.8</b>	<b>0.0</b>	<b>-2.1</b>

### Departmental expenditure limits (DELs)

- 3.38** Our June 2010 forecast was not based on explicit government plans for departmental spending beyond 2010-11, but on the Government's medium-term 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 underspent against these budgets, and we have included an allowance for these annual shortfalls over the Spending Review period since our December 2012 forecast.
- 3.39** Table 3.11 shows our errors in forecasting underspends, compared with final underspends measured against the plans set out in the Treasury's Public Expenditure Statistical Analyses (PESA) 2014 document. After allowing for the classification changes discussed below, any other changes in DEL plans between our initial forecasts and the final PESA plans are treated as policy changes. On that basis, DEL plans were increased after the March 2013 and March 2014 forecasts, although the amounts underspent against these higher plans were also slightly bigger than forecast. The net outcome (excluding classification changes) was £1.8 billion more DEL spending than forecast in March 2013, and £1.0 billion less spending relative to March 2014.
- 3.40** A number of classification changes have reduced resource DELs, including accounting changes following the move to a new spending database. Including spending on subscriptions to multilateral development banks in the National Accounts (which were previously treated as lending) has increased capital DELs.

Table 3.11: 2014-15 DEL forecast errors

	Forecast	Outturn	Error	£ billion			
				of which:			
				Economic factors	Fiscal forecasting errors	Policy changes	Classification changes
<b>March 2013</b>							
TME in DEL	354.1	355.2	1.2	0.0	-0.9	2.7	-0.6
PSCE in RDEL	317.2	317.6	0.4	0.0	-0.4	2.8	-2.0
PSGI in CDEL	36.6	37.3	0.7	0.0	-0.6	-0.1	1.4
SUME	0.3	0.3	0.1	0.0	0.1	0.0	0.0
<b>March 2014</b>							
TME in DEL	355.2	355.2	0.1	0.0	-1.4	0.4	1.1
PSCE in RDEL	317.8	317.6	-0.2	0.0	-0.7	0.7	-0.2
PSGI in CDEL	37.1	37.3	0.2	0.0	-0.8	-0.2	1.3
SUME	0.3	0.3	0.1	0.0	0.1	0.0	0.0

### Locally financed current expenditure

3.41 Given the way that we forecast it, there are two broad potential sources of error for self-financed local authority spending: errors in forecasting the income streams that finance this spending, such as council tax; and errors in our assumptions about how much authorities will adjust their current reserves (i.e. thereby spending a higher or lower proportion of their income). The first source of error does not directly affect net borrowing, since the errors on the income and spending are offsetting. However, any errors in our assumptions about movements in current reserves have a direct effect on net borrowing.

3.42 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. But they continued to surprise us by underspending against their budgets and adding to their reserves. Our March 2013 forecast assumed that local authorities would continue to do so, and by March 2014 we had increased the allowance for it. In the event, the actual accumulation of reserves fell somewhere in-between: the latest provisional outturn data for local authorities current spending in England shows that local authorities reduced their net additions to reserves quite markedly in 2014-15, compared with their larger net increases over the previous three years. So we over-forecast current spending in March 2013 and then under-forecast it a year later. Errors in other sources of income and expenditure widened the gap.

Table 3.12: 2014-15 locally financed current expenditure forecast errors

	Forecast	Outturn	Error	£ billion			
				of which:			
				Economic factors	Fiscal forecasting errors	Policy changes	Classification changes
March 2013	38.0	36.5	-1.6	0.0	-1.1	-0.5	0.0
March 2014	35.1	36.5	1.3	0.0	1.3	0.0	0.0

## Welfare cap and other welfare spending

- 3.43 Despite significant welfare cuts announced since June 2010, spending that is now subject to the welfare cap has been higher – not lower – than was forecast at the time. Higher-than-expected inflation between 2010 and 2013 increased the cash value of benefits and tax credits, with the higher levels knocking through to subsequent periods (although the uprating of most working-age benefits and tax credits was capped at 1 per cent for 2013-14 and 2014-15 in Autumn Statement 2012). But, over and above this, spending on incapacity and disability benefits and housing benefit were also higher than expected. The former reflects the fact that reforms to these benefits did not deliver the savings that were expected of them. The latter reflects falling rates of owner occupation and lower-than-expected wage growth.
- 3.44 The inflation shocks had been taken into account by March 2013 and 2014, but the housing and incapacity benefit caseloads have consistently come in higher than expected. Those errors have fallen within the welfare cap boundary. Spending on tax credits, the largest component within the cap, has performed close to expectations despite savings from operational measures coming in significantly lower than original estimates.
- 3.45 Outside the welfare cap, unemployment-related benefits have been lower than expected in June 2010 due to fewer claimants (reflecting both lower unemployment and a smaller share of the unemployed claiming the benefit). Spending on the state pension has also been higher-than-expected, due to the cost of the triple-lock guarantee on uprating. Spending on state pensions was marginally below the March 2013 forecast as the effect of inflation on the triple lock had been incorporated – and in line with the March 2014 forecast. These errors outside the cap have largely offset the errors within it, so that total welfare spending has appeared broadly on track since March 2013.
- 3.46 The risks and uncertainties associated with these forecasts – as well as sources of persistent error over the past – are discussed in our June 2015 *Welfare trends report*, which pre-dates the new Government's July 2015 measures to cut welfare spending further.

Table 3.13: 2014-15 welfare spending forecast errors

	Forecast	Outturn	Error	£ billion			
				of which:			
				Economic factors	Fiscal forecasting errors	Policy changes	Classification changes
<b>March 2013</b>							
Welfare spending	214.5	213.7	-0.9	-2.7	2.3	-0.5	0.0
of which:							
Welfare cap	115.2	118.7	3.5	0.4	3.4	-0.3	0.0
Non-welfare cap	99.4	95.0	-4.4	-3.0	-1.1	-0.2	0.0
<b>March 2014</b>							
Welfare spending	213.8	213.7	-0.2	-0.3	0.3	0.0	-0.2
of which:							
Welfare cap	117.7	118.7	0.9	0.3	0.8	0.0	-0.2
Non-welfare cap	96.1	95.0	-1.1	-0.6	-0.5	0.0	0.0

## Debt interest

3.47 Debt interest payments have been significantly lower than expected across our forecasts, much of which can be explained by errors in projecting the key underlying determinants. Interest rates – both short-term rates and longer-term gilt rates – have been lower than market expectations (on which we base our assumptions) at the time of each forecast. Lower RPI inflation over the recent past has also contributed to the errors by reducing the effective rate on index-linked gilts.

3.48 Issuance has also been more skewed towards relatively cheaper short-term debt and index-linked gilts, leading to even lower spending. We had assumed that the split of issuance would converge towards historic patterns, but now assume that it remains in line with the latest year’s financing remit. We also over-predicted the stock of debt due to an error in the way we modelled the refinancing of gilts at redemption. We corrected this in our December 2014 forecast, but it has contributed around £1 billion to the errors we assess here.<sup>4</sup>

Table 3.14: 2014-15 debt interest forecast errors

	Forecast	Outturn	Error	£ billion			
				of which:			
				Economic factors	Fiscal forecasting errors	Policy changes	Classification changes
March 2013	40.9	32.8	-8.1	-5.2	-4.5	0.0	1.6
March 2014	41.2	32.8	-8.4	-4.9	-3.6	0.0	0.1

<sup>4</sup> We published a detailed breakdown of the various changes to our debt interest forecast in December 2014 in a supplementary release ‘Debt interest changes since our March forecast – December 2014’.

## EU contributions

- 3.49 EU contributions are a difficult component of spending to forecast, given uncertainties around EU budgets and budget negotiations, and the implicit need to forecast gross national incomes for 27 other member states as well as the UK.
- 3.50 EU spending was higher than forecast in March 2013 and 2014 (but lower than our June 2010 forecast). Upward revisions to the UK's relative GNI over the past (following the 2014 Blue Book), led to the inclusion of a large one-off payment accrued to 2014-15, although abatements were also larger than expected. Our March 2013 forecast error also includes a classification component that was associated with the switch to a new spending database in the Treasury and was explained in our December 2013 *EFO*.

Table 3.15: 2014-15 EU contributions forecast errors

	£ billion						
	Forecast	Outturn	Error	of which:			
				Economic factors	Fiscal forecasting errors	Policy changes	Classification changes
March 2013	8.2	10.4	2.2	0.6	0.7	0.0	1.0
March 2014	10.8	10.4	-0.3	-0.2	-0.1	0.0	0.0

## Other spending

- 3.51 Other points of note in our analysis of spending errors include that:
- our forecasts for **public service pensions** have 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. We now tie contributions to our general government employment forecast, which in turn is tied to the expected path of departmental spending. Bulk transfers of Lighthouse Commission and House of Commons administrative staff also distorted spending relative to the March 2013 forecast;
  - our comparisons currently show substantial errors in **accounting adjustments**, particularly on current spending. This reflects large unallocated differences between the outturn estimates we are using for the various detailed components of spending, and the latest total spending outturns included in the September ONS public finances statistical release. This is likely to reflect temporary timing differences between the latest OSCAR and other source data and the data underlying the ONS statistical bulletin, but there could also be genuine underlying errors.<sup>5</sup> Given these uncertainties,

<sup>5</sup> OSCAR (the Online System for Central Accounting and Reporting) is the Treasury's database that contains departments' spending data. These residual timing differences are routinely shown for the most recent outturn year in a supplementary fiscal table on accounting adjustments that is published on our website alongside each *Economic and fiscal outlook*.

we will be working with the Treasury and ONS to understand the source of these differences so that any news can be factored into future forecasts;

- **local authorities' and public corporations' capital spending** have been around £3½ billion above our March 2013 and 2014 forecasts. The errors are largely attributable to higher capital expenditure financed from the revenue account (CERA), which reduces current spending and increases capital spending in an equal and offsetting way. Investment spending financed by CERA can fluctuate markedly, reflecting the timing of large capital projects, in particular by Transport for London (TfL). We now work closely with TfL to try to minimise these forecast errors; and
- we underestimated the amount of **depreciation** charged on public corporations' assets. Revisions in September 2014 raised annual depreciation by almost £3 billion a year on average since 1997-98. Our errors have been on a similar scale. This does not affect total spending or net borrowing, but does raise the current budget deficit.

## Other fiscal aggregates

**3.52** In this chapter we have focused our analysis on PSNB, the broadest accrued measure of borrowing. But the Government's fiscal targets, against which performance was assessed in these forecasts, were 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 these forecasts too.

### Cyclically adjusted current budget

**3.53** 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 negative output gap in 2014-15 of 0.8 per cent of potential output (as set out in our July 2015 *EFO*) is narrower than judged previously. This implies that our CACB forecast errors have been larger than our headline errors.

**3.54** In June 2010, we forecast that the CACB would be in surplus by 2014-15, a year ahead of the target year at the time. But downward revisions to potential output led us to revise this to a deficit in our November 2011 forecast. Our estimates of real potential output have not changed much since, but we have gradually raised our forecasts for the 2014-15 structural deficit. This is despite the structural deficit now appearing to have been smaller than we first thought at the beginning of each forecast period. That reflects ONS revisions (including to nominal GDP) rather than changes to our estimates of the output gap or the sensitivity of the public finances to the output gap.

**3.55** The June 2010 errors are explained more by weaker receipts – as effective tax rates have not risen by as much as forecast – than by spending – which is higher as a share of GDP due to lower potential output, but not in cash terms.

**3.56** The split between receipts and spending-induced errors was more balanced for our March 2013 forecast. Although cash receipts were above forecast, they failed to rise by as much as



would have been expected given the cyclical recovery in GDP. And spending was again higher than expected relative to potential output. (Although we have not revised our estimates for real potential output to a great extent, errors in forecasting the price level imply that the cash measure of potential output has been lower.) The error in our March 2014 forecast was confined to receipts.

Table 3.16: 2014-15 cyclically adjusted current budget deficit errors

	Per cent of GDP						
	Forecast	July 2015 estimate	Error	of which:			Memo: Revisions to headline
				Receipts	Spending	Revisions to earlier data	
June 2010	-1.0	2.4	3.4	2.2	1.3	-0.1	-0.2
March 2013	1.7	2.4	0.7	0.8	0.6	-0.6	-0.6
March 2014	2.2	2.4	0.2	0.4	0.0	-0.2	-0.2

## Public sector net debt

**3.57** The absolute level of public sector net debt has been revised up significantly over the recent past following a number of classification changes, including ESA10 changes and the reclassification of Bradford and Bingley (B&B) and Northern Rock Asset Management (NRAM) into central government. So here we focus on the year-on-year change in debt in 2014-15, rather than its level by the end of the year.

**3.58** Changes in public sector net debt are more closely associated with cash measures of the deficit than the headline accrued measure of net borrowing. One key cash measure is the central government net cash requirement (excluding B&B and NRAM, and Network Rail) (CGNCR(ex)), which, alongside redemptions of debt, determines how much the Exchequer needs to finance each year.

**3.59** In each forecast since March 2012 we have published a more detailed reconciliation of the net cash requirement and net borrowing than is currently obtainable from published outturn data (and the format also differs from the data that are available). Table 3.17 compares our March 2013 and 2014 forecasts against our latest estimates for the same reconciliation. It shows that:

- lending on student loans was higher than expected in March 2013, but lower than forecast in March 2014. The direction of these errors mainly reflects the Autumn Statement 2013 decision to remove the student numbers cap. This led to higher lending than anticipated in March 2013, but student numbers have risen by less than forecast in March 2014 – and so lending was below that forecast;
- lending through other Government schemes, such as the Green Investment Bank and British Business Bank, has continued to be lower than planned. In light of this trend, we introduced an allowance for shortfalls in our December 2014 forecast. The UK's subscriptions to multilateral development banks (principally through the Department for International Development (DfID)) are now classified as capital spending;

- the Government sold shares in Lloyds and Royal Mail and received further income (but not the whole payment) by retiring Royal Bank of Scotland's Dividend Access Share. We only include asset sales once firm details are available on both their scale and timing, and with that level of detail absent, these were not included in earlier forecasts;
- we made a large error in estimating accruals on index-linked gilts. Positive RPI inflation raises the amount government will have to pay on index-linked gilts when they are redeemed. This commitment is recognised in net borrowing each year, but the actual cash payments do not occur until redemption of the gilt, which may be many years in the future. Lower than expected RPI led to a smaller increase in borrowing and so a smaller deduction to arrive at the cash requirement. But that only explains part of the error, with the remainder due to us underestimating the amount of gilts redeemed in the year, due to a modelling error. This accruals adjustment is however added back when calculating net debt, so it has had no effect on our forecast for debt;
- other accruals adjustments also reduced the cash requirement by more than expected (and have affected net debt). That includes the one-off GNI-related EU contributions that were accrued in 2014-15 but paid in 2015-16;
- transfers from UK Asset Resolution (UKAR) to central government were larger than expected. The Government also took the decision to refinance Network Rail's maturing debt; and
- allowing for all of the above still leaves a gap between the cash requirement and net borrowing. Some of the error appears to relate to a rise in UKAR deposits held within the government's bank account. But we now believe that much of the difference is more likely to persist than to be a temporary timing effect, so our July 2015 forecast included a £2 billion adjustment in future years. We are currently working with the ONS and Treasury to identify the flows that underpin this.

Table 3.17: Reconciliation of 2014-15 central government net borrowing and net cash requirement(ex) forecast errors

	£ billion				
	Forecast		Estimates	Error	
	March 2013	March 2014		March 2013	March 2014
<b>CG net borrowing</b>	<b>97.9</b>	<b>86.2</b>	<b>89.9</b>	<b>-8.0</b>	<b>3.7</b>
<b>Lending</b>	<b>13.9</b>	<b>16.4</b>	<b>12.0</b>	<b>-1.9</b>	<b>-4.4</b>
<i>of which:</i>					
Student loans	8.6	10.7	9.9	1.3	-0.7
Green Investment Bank	0.9	1.0	0.2	-0.7	-0.8
British Business Bank	0.6	0.8	0.2	-0.4	-0.6
DfID	1.1	1.2	0.0	-1.1	-1.2
Other	2.7	2.7	1.7	-1.1	-1.0
<b>Asset sales</b>	<b>0.0</b>	<b>0.0</b>	<b>-2.7</b>	<b>-2.7</b>	<b>-2.7</b>
<b>Accruals adjustments</b>	<b>-1.2</b>	<b>-0.5</b>	<b>-1.2</b>	<b>0.0</b>	<b>-0.7</b>
<i>of which:</i>					
Index-linked gilts	-10.6	-10.4	-4.5	6.1	6.0
EU contributions	0.0	0.0	-2.1	-2.1	-2.1
Receipts	5.8	6.6	3.1	-2.8	-3.5
Other spending	3.6	3.3	2.3	-1.3	-1.0
<b>On-lending</b>	<b>-1.1</b>	<b>-1.7</b>	<b>-2.5</b>	<b>-1.3</b>	<b>-0.8</b>
<i>of which:</i>					
UKAR	-3.2	-2.8	-5.8	-2.5	-3.0
Network Rail	0.0	0.0	2.4	2.4	2.4
Other	2.1	1.1	0.9	-1.2	-0.2
<b>Other</b>	<b>0.3</b>	<b>0.3</b>	<b>-3.2</b>	<b>-3.5</b>	<b>-3.5</b>
<b>CG net cash requirement(ex)</b>	<b>109.9</b>	<b>100.7</b>	<b>92.3</b>	<b>-17.5</b>	<b>-8.4</b>

3.60 Net debt has not risen by as much as our net cash requirement 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.

3.61 Our March 2013 and 2014 forecasts assumed gilts would continue to be sold at a small premium, but that this would be more than offset by the historic premia on existing debt unwinding over time. Further falls in gilt yields have instead prompted a much more substantial increase in the premia on new gilts issued. The running down of UKAR's loan book reduced debt by less than forecast in March 2014 (despite an earlier than expected asset sale), although the fall happened to be similar to the March 2013 forecast.

Table 3.18: Errors in forecasting the change in public sector net debt in 2014-15

	£ billion					
	Forecast		Estimates	Error		
	March 2013	March 2014		March 2013	March 2014	
Net borrowing	99.8	86.8	90.1	-9.7	3.2	
Lending	14.9	17.3	13.2	-1.7	-4.2	
Asset sales	0.0	0.0	-2.7	-2.7	-2.7	
UKAR	-6.7	-10.7	-6.6	0.1	4.1	
Gilt premia	1.6	0.7	-7.8	-9.4	-8.5	
Other	2.3	2.8	-2.9	-5.2	-5.7	
<b>Change in net debt</b>	<b>111.9</b>	<b>97.0</b>	<b>83.3</b>	<b>-28.6</b>	<b>-13.7</b>	

## 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 Over the last Parliament, in our *Forecast evaluation reports (FERs)* and other publications we identified some important lessons to learn for producing a central fiscal forecast:

- one conclusion that has been shown repeatedly is that nominal trends in the economy are more important for the public finances than real trends if those measures of economic activity diverge. That was particularly true in our 2012 *FER* where despite significant overoptimism on real GDP growth, our borrowing forecasts had held up because nominal GDP growth had too;
- in each of our subsequent *FERs* we have also noted the importance of the composition of nominal income and expenditure given different effective tax rates on different types of activity. Last year, we focused too on the composition of labour income, noting that employment-driven growth had been less tax-rich than earnings-driven growth would have been;
- in our 2012 *FER* we identified two important adjustments that were required to our forecasts for central and local government spending, which had both proved too high. On the basis of that analysis, we introduced an ‘allowance for shortfall’ in our forecast of departmental spending to reflect underspending against departmental expenditure limits (DELs). Those DELs represent a maximum, not a central forecast, of such spending. We also stepped up our engagement with experts in local government finance to understand better how local authorities would respond to tighter financial settlements in terms of adding to their reserves while uncertainty over future finances remained significant;
- in our 2014 *FER* we noted that new government lending schemes had typically started much more slowly than initial estimates, leading to lower than expected additions to net debt from these sources. We therefore introduced an ‘allowance for shortfall’ in the lending forecast in our December 2014 *Economic and fiscal outlook (EFO)* to reflect ‘underlending’ that mirrors underspending against DELs; and

## Lessons to learn

- in our 2014 *Welfare trends report* we looked in detail at forecast errors in our tax credits and benefits forecasts. The most important lesson to learn was that the savings associated with major reforms of the incapacity and disability benefits systems had fallen short of expectations, due largely to challenges in delivering the reforms. That conclusion has been reinforced by the analysis presented in this report.

4.3 This year, the lessons we have identified – not just in this report, but also in the three *EFOs* we have published since last year's *FER* – include:

- conclusions from the significant volume of work that has been undertaken on the cash forecast. This converts the accruals based forecast of public sector net borrowing into the cash metrics that drive public sector net debt and the Government's financing requirement. Our forecasts had overestimated the cash deficit for a given level of accrued borrowing. In exploring these forecast errors, we identified corrections that were required to a number of accruals adjustments and how the reclassification of Network Rail to central government affected cash measures of the deficit. The analysis – described in Box 4.3 of our July 2015 *EFO* – has left around £2 billion of difference unexplained, which we suspect may reflect relatively small sources of receipts that are not recorded in the accrued measures of public sector current receipts. We are working with the Treasury and Office for National Statistics to try to verify this hypothesis and, if confirmed, address it; and
- in exploring the cause of a persistent source of overpessimism in the VAT forecast, we have identified an assumption in the VAT receipts model that was inconsistent with other parts of our fiscal forecast. Correcting that in November will, other things equal, increase our VAT receipts forecast by around £3 billion by the end of the forecast period. That this inconsistency has been present in our and previous Treasury forecasts for some years has highlighted a lack of transparency in the forecasting model that we will be addressing with HMRC for future forecasts.

4.4 We continually review our forecasting models, to ensure they remain fit for purpose. In line with the recommendations of the Treasury's Review of the OBR, published in September 2015, we plan to take a more systematic approach to following up analysis of fiscal forecasting errors and working with our partners across government on the development of fiscal forecasting models. The precise approach that will be taken will be dependent on available resources in the OBR and the departments that own and maintain the various models, but, subject to that caveat, Box 4.1 sets out some of the broad criteria that we intend to use to guide this work. We will report on the results of this work in next year's *FER*.

### Box 4.1: Assessing the performance of fiscal forecasting models

We use a large number of fiscal forecasting models to generate our bottom-up forecasts of the public finances. These models are typically owned and maintained by other parts of government. In particular, most tax forecasting models are maintained by HMRC while most benefit forecasting models are maintained by DWP. We also work with forecasters in the Treasury (e.g. on debt interest and EU finances), DECC (on environmental levies), BIS (on student loans) and CLG (on local authorities). And we have a number of models that we maintain ourselves (e.g. on VAT refunds). Separate models are often developed by departments and the Treasury to estimate the cost or yield of the Government's policy measures.

Models should be seen as a tool of the forecasting process, rather than the ultimate source of forecasts. The shape of any forecast a model produces ultimately reflects the assumptions and judgements that are fed into it by the forecaster. For our forecasts, while the models are typically operated outside the OBR, the assumptions and judgements that are fed into them are determined by the Budget Responsibility Committee.

Models are essential forecasting tools for a number of reasons. Models can:

- illustrate how receipts or spending have evolved in the past relative to other developments in the economy or policy regime, thereby providing a guide to future behaviour;
- be a framework for bringing together – in a consistent and systematic way – a large amount of information; and
- provide a representation of the structure of the tax or benefit system, allowing the forecaster to understand how developments in the economy might interact with the policy regime to influence receipts or spending.

Forecasting models take various different forms, including:

- **econometric equations** – e.g. using historical trends to estimate the demand for fuel that underpins our fuel duty forecasts;
- **microsimulation models** – taking a sample of individual tax or benefit records and projecting the distribution forward using assumptions about relevant factors;
- simple **spreadsheet models** – e.g. setting up a calculation that mimics calculations within the tax or benefit system; or
- a **combination of these approaches** – e.g. a microsimulation model might project forward the distribution using relationships estimated via econometric equations.

Forecasting models will inevitably be imperfect representations of the world, so we apply judgements to incorporate factors that are not captured. For example, we typically include the effect of policy announcements via off-model adjustments and utilise in-year information on tax receipts and benefits to adjust model outputs. Adjustments can also be made if we are aware of problems with particular models, but have not been able to find better modelling solutions.

In our future reporting on the performance of fiscal forecasting models, we will be considering their performance against a number of criteria. These will include:

- **accuracy – how well does the model match outturns?** Once outturn data are available for the inputs and outputs of a model, we can capture the extent to which errors reflect factors exogenous to the model – e.g. the economic determinants fed into the model, or any subsequent policy decisions or classification changes – or factors intrinsic to the model itself;
- **plausibility – how well do the model outputs align with theory and experience?** It is important that a model's results are intuitively plausible: do they respond broadly as expected to changes in economic determinants or other forecast inputs? If not, does the forecaster understand why – e.g. has the structure of the tax system changed in a way that means receipts will rise faster or slower for a given change in the tax base? This is particularly relevant for taxes that are highly geared to changes in the tax base, as is the case with stamp duty land tax or capital gains tax;
- **transparency – how easily can the model outputs be understood and scrutinised?** It is vital that we can readily explain changes in our forecasts and relate them to the drivers of the forecasts. It is therefore essential that the outputs of a model can be scrutinised to identify any developments that differ from the model's results and allow us to assess whether they are the result of issues with the assumptions being fed into the model or the structure of the model itself. We do that via diagnostic breakdowns of changes from forecast-to-forecast or from year-to-year. If a model cannot be scrutinised in this way, it becomes more difficult for a forecaster to respond appropriately to new information; and
- **effectiveness – how well does the model capture the tax or benefit system?** The complexity of a forecasting model is typically driven by the complexity of the tax or benefit system and the behavioural responses that it generates. Taxes such as self-assessment or corporation tax involve multiple income streams and/or reliefs and deductions. But the more complex a model, the greater the potential sources of forecast error. There is clearly some trade-off between capturing all the elements of a particular tax or benefit system and its usability as a forecasting tool.

Without pre-empting the result of a more comprehensive review of fiscal forecasting models, we can give some indication of likely conclusions from our experience of scrutinising forecasts at each *Economic and fiscal outlook* and in *Forecast evaluation reports*. Some forecasting models are likely to perform well against these criteria – e.g. alcohol and fuel duties, which are relatively transparent models of relatively simple taxes that have generally been subject to small fiscal forecasting errors. In contrast, in this report we have identified relatively large fiscal forecasting errors for self-assessment receipts in 2014-15. This is a complex tax where liabilities are paid long after the activity to which they relate. The forecast relies on inputs that may not be closely aligned with the true tax base – more likely to be a source of potential assumption or judgement errors rather than issues with the model itself. Self-assessment has also been subject to significant behavioural responses to policy changes in recent years (e.g. the shifting of income between years when the additional rate of income tax has been changed).



# A Detailed economy and fiscal tables

A.1 This annex contains further details of our June 2010, March 2013 and March 2014 errors in forecasting the economy and public finances, including:

- our calendar year GDP growth and deflator 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.6);
- errors for total receipts (Tables A.7 to A.9) and spending (Tables A.10 to A.12), broken down by economic and fiscal forecasting errors, and errors that result from subsequent policy or classification decisions. Our detailed welfare spending forecasts are also broken down in the same way (Tables A.13 to A.15); and
- restated forecasts and the adjustments required within the fiscal forecast to account for the ESA10 and public sector finances (PSF) review classification changes (Tables A.16 to A.17).

Table A.1: Contributions to real GDP growth

	Percentage points						GDP
	Private consumption	Business investment	Residential investment	Total Government	Net trade	Stocks and statistical discrepancy	
<b>Forecasts</b>							
<b>June 2010</b>							
2010	0.2	0.1	-0.2	0.3	-0.5	1.2	1.2
2011	0.8	0.8	0.3	-0.7	0.9	0.4	2.3
2012	1.1	1.0	0.4	-0.6	0.9	0.0	2.8
2013	1.3	1.1	0.4	-0.6	0.7	0.0	2.9
2014	1.4	1.1	0.3	-0.6	0.5	0.0	2.7
<b>March 2013</b>							
2013	0.3	0.2	0.1	0.2	0.1	-0.2	0.6
2014	0.8	0.5	0.4	-0.1	0.1	0.0	1.8
<b>March 2014</b>							
2014	1.4	0.6	0.4	0.5	-0.2	0.0	2.7
<b>Latest data</b>							
2010	0.0	0.5	0.1	0.1	-0.9	1.6	1.5
2011	0.1	0.4	0.0	-0.1	1.5	0.1	2.0
2012	1.2	0.5	0.1	0.2	-0.7	0.0	1.2
2013	1.2	0.2	0.6	0.0	-0.5	0.7	2.2
2014	1.7	0.4	0.3	0.6	-0.4	0.2	2.9
<b>Difference<sup>1</sup></b>							
<b>June 2010</b>							
2010	-0.2	0.4	0.4	-0.2	-0.4	0.4	0.4
2011	-0.7	-0.3	-0.3	0.6	0.7	-0.3	-0.4
2012	0.1	-0.5	-0.3	0.8	-1.6	-0.1	-1.7
2013	-0.1	-0.9	0.2	0.6	-1.2	0.7	-0.8
2014	0.3	-0.6	0.0	1.2	-0.9	0.2	0.2
<b>March 2013</b>							
2013	0.9	0.0	0.5	-0.2	-0.7	1.0	1.5
2014	0.9	-0.1	0.0	0.6	-0.5	0.2	1.2
<b>March 2014</b>							
2014	0.3	-0.2	0.0	0.1	-0.2	0.2	0.2

<sup>1</sup> 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
<b>Forecasts</b>							
<b>June 2010</b>							
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
2014	3.2	1.7	0.0	0.5	0.0	5.4	0.0
<b>March 2013</b>							
2013	2.2	0.3	0.3	0.0	-0.1	2.7	-0.1
2014	2.3	1.0	0.3	0.1	0.0	3.8	0.0
<b>March 2014</b>							
2014	3.0	1.1	0.5	0.2	0.2	5.0	-0.1
<b>Latest data</b>							
2010	2.9	0.5	0.4	-0.6	1.3	4.7	0.0
2011	2.5	0.8	0.0	1.1	-0.2	4.1	0.0
2012	2.4	0.7	0.2	-0.5	-0.1	2.8	0.0
2013	2.7	1.1	0.1	0.0	0.3	4.2	0.0
2014	2.7	0.9	0.8	0.0	0.3	4.7	0.0
<b>Difference<sup>1</sup></b>							
<b>June 2010</b>							
2010	0.1	0.4	-0.8	0.3	0.3	0.3	0.0
2011	-0.3	-0.6	0.1	0.9	-0.5	-0.3	0.0
2012	-0.4	-0.9	0.3	-1.1	-0.1	-2.2	0.0
2013	-0.4	-0.8	0.0	-0.6	0.3	-1.4	0.0
2014	-0.4	-0.8	0.8	-0.5	0.3	-0.7	0.0
<b>March 2013</b>							
2013	0.5	0.8	-0.2	-0.1	0.4	1.5	0.1
2014	0.4	-0.1	0.5	-0.1	0.2	0.9	0.0
<b>March 2014</b>							
2014	-0.3	-0.2	0.3	-0.2	0.1	-0.4	0.1

<sup>1</sup> Difference in unrounded numbers.

Table A.3: Growth in National Accounts deflators

	Per cent					
	Private consumption	Private investment	Total Government	Exports	Imports	GDP
<b>Forecasts</b>						
<b>June 2010</b>						
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	2.5	2.7	2.1	1.0	2.1	2.1
2013	2.7	2.5	2.9	1.5	1.6	2.6
2014	2.7	2.5	3.0	1.7	1.7	2.7
<b>March 2013</b>						
2013	2.9	0.2	0.6	2.9	3.0	2.1
2014	2.3	1.5	1.4	0.9	0.9	2.0
<b>March 2014</b>						
2014	2.4	1.1	0.3	-2.3	-3.3	2.3
<b>Latest data</b>						
2010	4.6	-1.1	1.2	5.4	3.9	3.1
2011	3.7	2.6	0.4	5.7	6.8	2.1
2012	1.8	1.3	0.3	0.2	-0.5	1.6
2013	2.3	2.1	0.4	2.6	0.9	2.0
2014	1.5	0.9	1.0	-2.9	-3.7	1.7
<b>Difference<sup>1</sup></b>						
<b>June 2010</b>						
2010	0.5	-3.2	-2.1	3.1	0.7	-0.1
2011	0.7	-0.1	-1.9	5.3	3.9	0.0
2012	-0.7	-1.4	-1.9	-0.8	-2.6	-0.5
2013	-0.4	-0.4	-2.5	1.1	-0.8	-0.6
2014	-1.2	-1.6	-2.0	-4.5	-5.4	-0.9
<b>March 2013</b>						
2013	-0.7	1.9	-0.2	-0.3	-2.1	-0.1
2014	-0.8	-0.6	-0.4	-3.8	-4.6	-0.3
<b>March 2014</b>						
2014	-0.8	-0.2	0.7	-0.6	-0.4	-0.6

<sup>1</sup> Difference in unrounded numbers.

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

	Percentage points					GDP	Statistical discrepancy
	Compensation of employees	Corporations' gross operating surplus	Other income	Taxes on products and production			
<b>Forecasts</b>							
<b>June 2010</b>							
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	
2014	2.8	1.4	0.7	0.6	5.4	0.0	
<b>March 2013</b>							
2013	1.4	0.3	0.4	0.6	2.7	0.0	
2014	1.6	1.2	0.6	0.4	3.8	0.0	
<b>March 2014</b>							
2014	1.9	2.0	0.7	0.6	5.0	0.0	
<b>Latest data</b>							
2010	1.6	-0.1	1.5	1.7	4.7	0.0	
2011	0.8	1.6	0.7	1.1	4.1	0.0	
2012	1.2	0.1	1.2	0.3	2.8	0.0	
2013	1.4	2.0	0.2	0.6	4.2	0.0	
2014	1.1	1.8	0.8	0.6	4.7	0.4	
<b>Difference<sup>1</sup></b>							
<b>June 2010</b>							
2010	0.5	-0.9	0.7	-0.1	0.3	0.0	
2011	-0.5	0.0	0.1	0.1	-0.3	0.0	
2012	-0.5	-1.3	0.2	-0.6	-2.2	0.0	
2013	-1.2	0.5	-0.7	-0.1	-1.4	0.0	
2014	-1.6	0.4	0.0	0.0	-0.7	0.4	
<b>March 2013</b>							
2013	0.0	1.7	-0.2	-0.1	1.5	0.0	
2014	-0.4	0.6	0.1	0.2	0.9	0.4	
<b>March 2014</b>							
2014	-0.7	-0.1	0.1	0.0	-0.4	0.3	

<sup>1</sup> Difference in unrounded numbers.

Table A.5: March 2013 fiscal determinants errors for 2014-15

	Percentage change on a year earlier, unless otherwise stated		
	Forecast	Outturn	Error
<b>GDP and its components</b>			
Real GDP	2.0	2.9	0.9
Nominal GDP (£ billion) <sup>1</sup>	1658	1829	171
Nominal GDP <sup>1</sup>	4.0	4.4	0.4
Wages and salaries <sup>2</sup>	3.3	3.4	0.1
Non-oil PNFC profits <sup>2, 3</sup>	5.8	10.3	4.5
Consumer spending <sup>2, 3</sup>	3.5	4.2	0.7
<b>Prices and earnings</b>			
GDP deflator	1.9	1.4	-0.5
RPI (September)	2.8	2.3	-0.5
CPI (September)	2.3	1.2	-1.1
Whole economy earnings growth	2.9	1.5	-1.4
<b>Other key fiscal determinants</b>			
Claimant count (millions) <sup>4</sup>	1.62	0.95	-0.7
Employment (millions)	29.9	30.9	1.0
VAT gap (per cent)	10.5	9.4	-1.1
<b>Financial and property sectors</b>			
Equity prices (FTSE All-share index)	3540	3580	40
HMRC financial sector profits <sup>1, 3, 5</sup>	2.3	4.4	2.1
Residential property prices <sup>6</sup>	1.9	10.1	8.2
Residential property transactions	1139	1204	65
Commercial property prices <sup>7</sup>	2.6	17.2	14.6
Commercial property transactions <sup>7</sup>	0.1	8.1	8.0
<b>Oil and gas</b>			
Oil prices (\$ per barrel) <sup>3</sup>	106.0	98.9	-7.1
Oil prices (£ per barrel) <sup>3</sup>	68.8	60.0	-8.8
Gas prices (p/therm)	68.0	50.2	-17.8
Oil production (million tonnes) <sup>3</sup>	44.3	39.7	-4.6
Gas production (billion therms) <sup>3</sup>	14.0	13.1	-0.9
<b>Interest rates</b>			
Market short-term interest rates (per cent) <sup>8</sup>	0.7	0.6	-0.1
Market gilt rates (per cent) <sup>9</sup>	2.7	2.3	-0.4
Euro/Sterling exchange rate	1.16	1.28	0.12
<sup>1</sup> Not seasonally adjusted.			
<sup>2</sup> Nominal.			
<sup>3</sup> Calendar year.			
<sup>4</sup> UK seasonally-adjusted claimant count.			
<sup>5</sup> HMRC Gross Case 1 trading profits.			
<sup>6</sup> Outturn data from ONS House Price Index.			
<sup>7</sup> Outturn data from HMRC information on stamp duty land tax.			
<sup>8</sup> 3-month sterling interbank rate (LIBOR).			
<sup>9</sup> Weighted average interest rate on conventional gilts.			

Table A.6: March 2014 fiscal determinants errors for 2014-15

	Percentage change on a year earlier, unless otherwise stated		
	Forecast	Outturn	Error
<b>GDP and its components</b>			
Real GDP	2.6	2.9	0.3
Nominal GDP (£ billion) <sup>1</sup>	1721	1829	108
Nominal GDP <sup>1</sup>	4.6	4.4	-0.2
Wages and salaries <sup>2</sup>	3.5	3.4	-0.1
Non-oil PNFC profits <sup>2, 3</sup>	10.7	10.3	-0.4
Consumer spending <sup>2, 3</sup>	4.5	4.2	-0.3
<b>Prices and earnings</b>			
GDP deflator	2.2	1.4	-0.8
RPI (September)	2.5	2.3	-0.2
CPI (September)	1.8	1.2	-0.6
Whole economy earnings growth	2.4	1.5	-0.9
<b>Other key fiscal determinants</b>			
Claimant count (millions) <sup>4</sup>	1.18	0.95	-0.2
Employment (millions)	30.4	30.9	0.5
VAT gap (per cent)	9.9	9.4	-0.5
<b>Financial and property sectors</b>			
Equity prices (FTSE All-share index)	3747	3580	-167
HMRC financial sector profits <sup>1, 3, 5</sup>	2.3	4.4	2.1
Residential property prices <sup>6</sup>	8.6	10.1	1.5
Residential property transactions	1357	1204	-153
Commercial property prices <sup>7</sup>	2.1	17.2	15.1
Commercial property transactions <sup>7</sup>	3.9	8.1	4.2
<b>Oil and gas</b>			
Oil prices (\$ per barrel) <sup>3</sup>	107.5	98.9	-8.6
Oil prices (£ per barrel) <sup>3</sup>	64.7	60.0	-4.7
Gas prices (p/therm)	60.2	50.2	-10.0
Oil production (million tonnes) <sup>3</sup>	39.2	39.7	0.5
Gas production (billion therms) <sup>3</sup>	12.8	13.1	0.3
<b>Interest rates</b>			
Market short-term interest rates (per cent) <sup>8</sup>	0.6	0.6	0.0
Market gilt rates (per cent) <sup>9</sup>	2.9	2.3	-0.6
Euro/Sterling exchange rate	1.22	1.28	0.06
<sup>1</sup> Not seasonally adjusted.	<sup>6</sup> Outturn data from ONS House Price Index.		
<sup>2</sup> Nominal.	<sup>7</sup> Outturn data from HMRC information on stamp duty land tax.		
<sup>3</sup> Calendar year.	<sup>8</sup> 3-month sterling interbank rate (LIBOR).		
<sup>4</sup> UK seasonally-adjusted claimant count.	<sup>9</sup> Weighted average interest rate on conventional gilts.		
<sup>5</sup> HMRC Gross Case 1 trading profits.			

Table A.7: Breakdown of June 2010 receipts errors for 2014-15

	£ billion			Total error (%)
	Forecast	Outturn	Error	
Income tax (gross of tax credits)	196.6	163.7	-32.9	-16.7
<i>of which:</i>				
Pay as you earn (PAYE)	158.4	140.0	-18.4	-11.6
Self assessment (SA)	35.1	23.6	-11.5	-32.7
National insurance contributions	121.6	110.3	-11.3	-9.3
Value added tax	107.6	111.2	3.6	3.4
Corporation tax	56.9	43.0	-13.8	-24.4
<i>of which:</i>				
Onshore	48.3	40.9	-7.3	-15.2
Offshore	8.6	2.1	-6.5	-75.8
Corporation tax credits	-0.8	-0.9	-0.1	12.6
Petroleum revenue tax	1.6	0.1	-1.5	-95.0
Fuel duties	33.4	27.2	-6.2	-18.7
Business rates	28.6	27.5	-1.1	-3.7
Council tax	29.3	27.9	-1.4	-4.7
VAT refunds	15.3	13.7	-1.6	-10.3
Capital gains tax	3.9	5.6	1.6	42.0
Inheritance tax	2.9	3.8	1.0	33.6
Stamp duties	16.4	13.8	-2.6	-15.7
<i>of which:</i>	0.0	0.0	0.0	0.0
Stamp duty land tax	12.5	10.9	-1.6	-12.8
Stamp duty on shares	3.9	2.9	-1.0	-25.0
Tobacco duties	9.9	9.3	-0.6	-6.4
Alcohol duties	11.1	10.4	-0.6	-5.6
Air passenger duty	3.5	3.2	-0.3	-9.1
Insurance premium tax	2.8	3.0	0.2	5.6
Climate change levy	0.7	1.6	0.9	139.6
Other HMRC taxes	6.8	6.6	-0.1	-1.9
<i>of which:</i>	0.0	0.0	0.0	0.0
Landfill tax	1.6	1.1	-0.5	-30.4
Aggregates levy	0.3	0.4	0.0	7.9
Betting and gaming duty	1.5	2.1	0.6	43.7
Customs duties	3.3	3.0	-0.3	-9.1
Vehicle excise duties	6.3	5.9	-0.4	-6.8
Bank levy	2.4	2.8	0.4	17.5
BBC licence fee receipts	3.5	3.1	-0.3	-9.2
Environmental levies	3.2	3.6	0.5	14.2
EU ETS auction receipts	2.2	0.6	-1.7	-74.7
Other taxes	6.3	7.0	0.7	11.1
<b>National accounts taxes</b>	<b>671.6</b>	<b>603.9</b>	<b>-67.7</b>	<b>-10.1</b>
less own resources EU contributions	-2.7	-3.0	-0.3	12.1
Interest & dividends	9.6	5.8	-3.8	-39.7
Gross operating surplus	39.1	38.1	-1.0	-2.6
Other receipts	1.1	3.1	1.9	-
<b>Current receipts</b>	<b>718.7</b>	<b>647.8</b>	<b>-70.9</b>	<b>-9.9</b>



Table A.8: Breakdown of March 2013 receipts errors for 2014-15

	£ billion							Total error (%)
	Forecast	Outturn	Error	of which				
				Economic factors	Fiscal forecasting errors	Policy and classification changes		
Income tax (gross of tax credits)	165.5	163.7	-1.8	-3.5	0.4	1.2	-1.1	
<i>of which:</i>								
Pay as you earn (PAYE)	137.7	140.0	2.3	-0.7	2.4	0.6	1.7	
Self assessment (SA)	27.4	23.6	-3.7	-2.5	-1.7	0.5	-13.6	
National insurance contributions	108.6	110.3	1.7	-1.6	2.8	0.5	1.5	
Value added tax	107.2	111.2	4.0	0.7	3.3	0.0	3.7	
Corporation tax	38.1	43.0	4.9	0.4	4.1	0.3	12.8	
<i>of which:</i>								
Onshore	33.7	40.9	7.2	3.8	3.1	0.3	21.3	
Offshore	4.4	2.1	-2.3	-3.4	1.1	0.0	-52.7	
Corporation tax credits	-0.9	-0.9	0.0	0.0	0.0	0.0	2.6	
Petroleum revenue tax	1.7	0.1	-1.6	-1.1	-0.5	0.0	-95.4	
Fuel duties	26.3	27.2	0.8	0.4	0.8	-0.4	3.1	
Business rates	27.8	27.5	-0.3	0.0	0.6	-0.9	-1.1	
Council tax	28.3	27.9	-0.4	0.0	-0.4	0.0	-1.3	
VAT refunds	14.6	13.7	-0.9	-0.3	-0.6	0.0	-6.0	
Capital gains tax	6.5	5.6	-0.9	0.4	-1.3	0.0	-14.0	
Inheritance tax	3.5	3.8	0.3	0.3	0.0	0.0	9.8	
Stamp duties	11.1	13.8	2.7	3.1	-0.1	-0.3	24.5	
<i>of which:</i>								
Stamp duty land tax	8.4	10.9	2.5	2.7	0.1	-0.3	29.8	
Stamp duty on shares	2.7	2.9	0.2	0.4	-0.2	0.0	8.3	
Tobacco duties	10.2	9.3	-0.9	-0.1	-0.8	0.0	-9.1	
Alcohol duties	10.6	10.4	-0.1	0.1	0.1	-0.3	-1.1	
Air passenger duty	3.0	3.2	0.2	0.1	0.1	0.0	5.5	
Insurance premium tax	3.1	3.0	-0.1	0.0	-0.2	0.0	-4.5	
Climate change levy	2.0	1.6	-0.3	0.0	-0.3	0.0	-17.4	
Other HMRC taxes	6.6	6.6	0.0	-0.2	0.2	0.0	-0.2	
<i>of which:</i>								
Landfill tax	1.1	1.1	0.0	0.0	0.0	0.0	-1.2	
Aggregates levy	0.3	0.4	0.1	0.0	0.1	0.0	31.6	
Betting and gaming duty	2.1	2.1	0.0	0.0	0.0	0.0	1.9	
Customs duties	3.2	3.0	-0.1	-0.3	0.1	0.0	-4.0	
Vehicle excise duties	5.7	5.9	0.2	0.0	0.2	0.0	3.7	
Bank levy	2.9	2.8	-0.1	0.0	-0.4	0.3	-3.2	
BBC licence fee receipts	3.2	3.1	0.0	0.0	0.0	0.0	-0.8	
Environmental levies	2.8	3.6	0.9	0.0	-0.4	1.3	30.8	
EU ETS auction receipts	0.7	0.6	-0.1	-0.1	-0.1	0.0	-20.9	
Other taxes	7.0	7.0	0.0	0.0	-0.1	0.1	0.1	
<b>National accounts taxes</b>	<b>596.0</b>	<b>603.9</b>	<b>7.9</b>	<b>-1.4</b>	<b>7.6</b>	<b>1.6</b>	<b>1.3</b>	
less own resources EU contributions	-2.6	-3.0	-0.4	0.3	-0.7	0.0	15.8	
Interest & dividends	6.6	5.8	-0.7	-0.3	-0.5	0.0	-11.4	
Gross operating surplus	36.7	38.1	1.4	0.0	0.8	0.6	3.7	
Other receipts	1.5	3.1	1.6	0.0	0.5	1.1	-	
<b>Current receipts</b>	<b>638.1</b>	<b>647.8</b>	<b>9.7</b>	<b>-1.4</b>	<b>7.7</b>	<b>3.3</b>	<b>1.5</b>	

Table A.9: Breakdown of March 2014 receipts errors for 2014-15

	£ billion							Total error (%)
	Forecast	Outturn	Error	of which				
				Economic factors	Fiscal forecasting errors	Policy and classification changes		
Income tax (gross of tax credits)	166.5	163.7	-2.8	-4.2	1.4	0.0	-1.7	
of which:								
Pay as you earn (PAYE)	140.2	140.0	-0.2	-2.1	1.9	0.0	-0.1	
Self assessment (SA)	27.2	23.6	-3.5	-1.8	-1.7	0.0	-13.0	
National insurance contributions	110.0	110.3	0.3	-0.9	1.2	0.0	0.3	
Value added tax	110.7	111.2	0.5	-1.0	1.5	0.0	0.5	
Corporation tax	41.4	43.0	1.6	-0.6	2.3	0.0	3.9	
of which:								
Onshore	38.9	40.9	2.1	0.3	1.8	0.0	5.3	
Offshore	2.5	2.1	-0.4	-0.9	0.5	0.0	-17.4	
Corporation tax credits	-0.9	-0.9	-0.1	0.0	-0.1	0.0	6.2	
Petroleum revenue tax	1.2	0.1	-1.1	-0.3	-0.8	0.0	-93.4	
Fuel duties	26.8	27.2	0.3	0.2	0.1	0.0	1.2	
Business rates	26.6	27.5	0.9	0.0	0.9	0.0	3.4	
Council tax	27.6	27.9	0.3	0.0	0.3	0.0	1.0	
VAT refunds	14.1	13.7	-0.4	0.1	-0.5	0.0	-2.8	
Capital gains tax	5.4	5.6	0.2	-0.1	0.2	0.0	3.5	
Inheritance tax	3.9	3.8	0.0	0.0	0.0	0.0	-0.7	
Stamp duties	15.8	13.8	-2.1	-0.4	-1.3	-0.3	-13.0	
of which:								
Stamp duty land tax	12.7	10.9	-1.8	-0.4	-1.1	-0.3	-14.6	
Stamp duty on shares	3.1	2.9	-0.2	0.0	-0.2	0.0	-6.6	
Tobacco duties	9.9	9.3	-0.7	0.0	-0.6	0.0	-6.7	
Alcohol duties	10.4	10.4	0.0	0.0	0.0	0.0	0.5	
Air passenger duty	3.2	3.2	0.0	0.0	0.0	0.0	0.3	
Insurance premium tax	3.2	3.0	-0.2	0.0	-0.2	0.0	-6.1	
Climate change levy	2.0	1.6	-0.4	0.0	-0.4	0.0	-17.8	
Other HMRC taxes	6.7	6.6	-0.1	0.1	-0.1	0.0	-0.9	
of which:								
Landfill tax	1.3	1.1	-0.2	0.0	-0.2	0.0	-14.1	
Aggregates levy	0.3	0.4	0.1	0.0	0.1	0.0	30.7	
Betting and gaming duty	2.3	2.1	-0.2	0.0	-0.2	0.0	-6.9	
Customs duties	2.8	3.0	0.2	0.1	0.1	0.0	7.0	
Vehicle excise duties	5.9	5.9	0.0	0.0	0.0	0.0	0.3	
Bank levy	2.7	2.8	0.1	0.0	0.1	0.0	2.7	
BBC licence fee receipts	3.2	3.1	0.0	0.0	0.0	0.0	-0.7	
Environmental levies	4.9	3.6	-1.3	0.0	-0.2	-1.1	-26.7	
EU ETS auction receipts	0.3	0.6	0.2	0.0	0.2	0.0	69.1	
Other taxes	6.9	7.0	0.1	0.0	0.1	0.1	1.7	
<b>National accounts taxes</b>	<b>608.4</b>	<b>603.9</b>	<b>-4.4</b>	<b>-7.2</b>	<b>4.2</b>	<b>-1.4</b>	<b>-0.7</b>	
less own resources EU contributions	-2.5	-3.0	-0.5	-0.1	-0.5	0.0	21.0	
Interest & dividends	6.9	5.8	-1.1	-0.3	-0.8	0.0	-16.0	
Gross operating surplus	39.0	38.1	-0.9	0.0	-1.5	0.6	-2.3	
Other receipts	1.4	3.1	1.6	0.0	0.5	1.1	-	
<b>Current receipts</b>	<b>653.2</b>	<b>647.8</b>	<b>-5.3</b>	<b>-7.5</b>	<b>1.9</b>	<b>0.3</b>	<b>-0.8</b>	

Table A.10: Breakdown of June 2010 spending errors for 2014-15

	£ billion			Total error (%)
	Forecast	Outturn	Error	
<b>Public Sector Current Expenditure (PSCE)</b>				
<b>PSCE in RDEL</b>	322.1	317.6	-4.5	-1.4
<b>PSCE in Annually Managed Expenditure</b>	366.6	353.0	-13.6	-3.7
<i>of which:</i>				
Social security benefits	185.6	183.9	-1.7	-0.9
Tax credits	33.0	29.9	-3.2	-9.6
Company & other tax credits	1.1	2.1	1.0	90.7
Net public service pension payments	10.3	11.5	1.2	11.8
National lottery current grants	0.7	1.4	0.6	91.4
BBC current expenditure	4.2	3.8	-0.4	-9.6
Network Rail other current expenditure	1.1	1.1	0.0	0.0
Other PSCE items in departmental AME	0.2	1.0	0.8	316.9
Expenditure transfers to EU institutions	11.3	10.4	-0.9	-7.9
Locally-financed current expenditure <sup>1</sup>	30.0	36.5	6.5	21.7
CG net debt interest	52.1	32.8	-19.3	-37.0
Depreciation	28.1	28.5	0.4	1.4
Current VAT refunds	13.5	11.5	-2.0	-14.5
R&D expenditure	-7.5	-7.5	0.0	0.0
Single use military expenditure	0.4	0.3	-0.1	-20.7
Environmental levies	3.7	3.2	-0.5	-12.9
Local authority imputed pensions	1.8	1.8	0.0	0.0
Other National Accounts adjustments	-3.0	0.9	3.8	-
<b>Total public sector current expenditure</b>	<b>688.7</b>	<b>670.6</b>	<b>-18.1</b>	<b>-2.6</b>
<b>Public sector gross investment (PSGI)</b>				
<b>PSGI in CDEL</b>	33.6	37.3	3.7	10.9
<b>PSGI in Annually Managed Expenditure</b>	26.4	29.9	3.6	13.5
<i>of which:</i>				
National lottery capital grants	0.6	0.5	0.0	-8.0
Network Rail capital expenditure	6.0	6.0	0.0	0.0
Other PSGI items in departmental AME	0.1	0.2	0.1	58.5
Locally-financed capital expenditure	4.4	7.6	3.2	72.4
Public corporations capital expenditure	8.0	7.5	-0.5	-5.9
R&D expenditure	7.5	7.5	0.0	0.0
Other National Accounts adjustments	-0.3	0.5	0.8	-
<b>Total public sector gross investment</b>	<b>60.0</b>	<b>67.2</b>	<b>7.2</b>	<b>12.0</b>
<i>Less depreciation</i>	-34.3	-37.0	-2.6	7.7
<b>Public sector net investment</b>	<b>25.7</b>	<b>30.3</b>	<b>4.6</b>	<b>17.8</b>
<b>Total managed expenditure</b>	<b>748.7</b>	<b>737.9</b>	<b>-10.8</b>	<b>-1.4</b>

<sup>1</sup> 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.11: Breakdown of March 2013 spending errors for 2014-15

	£ billion						
	Forecast	Outturn	Error	of which			Total error (%)
				Economic factors	Fiscal forecasting errors	Policy and classification changes	
<b>Public Sector Current Expenditure (PSCE)</b>							
<b>PSCE in RDEL</b>	317.2	317.6	0.4	0.0	-0.4	0.8	0.1
<b>PSCE in Annually Managed Expenditure</b>	357.4	353.0	-4.4	-7.7	-1.6	4.9	-1.2
<i>of which:</i>							
Social security benefits	184.4	183.9	-0.5	-2.9	2.5	-0.2	-0.3
Tax credits	30.2	29.9	-0.4	0.2	-0.5	-0.1	-1.2
Company & other tax credits	1.9	2.1	0.2	0.0	0.2	0.0	8.6
Net public service pension payments	12.4	11.5	-0.9	-0.1	-0.8	0.0	-7.1
National lottery current grants	1.3	1.4	0.0	0.0	0.0	0.0	2.6
BBC current expenditure	4.0	3.8	-0.2	0.0	-0.2	0.0	-4.9
Network Rail other current expenditure	1.1	1.1	0.0	0.0	0.0	0.0	0.0
Other PSCE items in departmental AME	0.9	1.0	0.1	0.0	0.1	0.0	10.8
Expenditure transfers to EU institutions	8.2	10.4	2.2	0.6	0.7	1.0	27.5
Locally-financed current expenditure <sup>1</sup>	38.0	36.5	-1.6	0.0	-1.1	-0.5	-4.1
CG net debt interest	40.9	32.8	-8.1	-5.2	-4.5	1.6	-19.9
Depreciation	28.5	28.5	0.0	0.0	-0.6	0.6	0.0
Current VAT refunds	12.3	11.5	-0.8	-0.3	-0.4	0.0	-6.1
R&D expenditure	-7.5	-7.5	0.0	0.0	0.0	0.0	0.0
Single use military expenditure	0.3	0.3	0.1	0.0	0.1	0.0	25.9
Environmental levies	2.1	3.2	1.2	0.0	-0.1	1.3	55.6
Local authority imputed pensions	1.8	1.8	0.0	0.0	0.0	0.0	0.0
Other National Accounts adjustments	-3.4	0.9	4.3	0.0	3.1	1.2	-
<b>Total public sector current expenditure</b>	<b>674.6</b>	<b>670.6</b>	<b>-4.0</b>	<b>-7.7</b>	<b>-2.0</b>	<b>5.7</b>	<b>-0.6</b>
<b>Public sector gross investment (PSGI)</b>							
<b>PSGI in CDEL</b>	36.6	37.3	0.7	0.0	-0.6	1.3	1.9
<b>PSGI in Annually Managed Expenditure</b>	26.7	29.9	3.2	0.0	3.4	-0.1	12.1
<i>of which:</i>							
National lottery capital grants	0.6	0.5	0.0	0.0	0.0	0.0	-3.7
Network Rail capital expenditure	6.0	6.0	0.0	0.0	0.0	0.0	0.0
Other PSGI items in departmental AME	0.9	0.2	-0.7	0.0	-0.7	0.0	-75.1
Locally-financed capital expenditure	6.3	7.6	1.4	0.0	1.4	0.0	22.0
Public corporations capital expenditure	5.9	7.5	1.6	0.0	1.6	0.0	27.0
R&D expenditure	7.5	7.5	0.0	0.0	0.0	0.0	0.0
Other National Accounts adjustments	-0.5	0.5	1.0	0.0	1.1	-0.1	-
<b>Total public sector gross investment</b>	<b>63.3</b>	<b>67.2</b>	<b>3.9</b>	<b>0.0</b>	<b>2.8</b>	<b>1.1</b>	<b>6.2</b>
Less depreciation	-33.9	-37.0	-3.1	0.0	-2.5	-0.6	9.2
<b>Public sector net investment</b>	<b>29.4</b>	<b>30.3</b>	<b>0.8</b>	<b>0.0</b>	<b>0.3</b>	<b>0.6</b>	<b>2.8</b>
<b>Total managed expenditure</b>	<b>737.9</b>	<b>737.9</b>	<b>0.0</b>	<b>-7.7</b>	<b>0.8</b>	<b>6.8</b>	<b>0.0</b>

<sup>1</sup> 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 2014 spending errors for 2014-15

	£ billion						
	Forecast	Outturn	Error	of which			Total error (%)
				Economic factors	Fiscal forecasting errors	Policy and classification changes	
<b>Public Sector Current Expenditure (PSCE)</b>							
<b>PSCE in RDEL</b>	317.8	317.6	-0.2	0.0	-0.7	0.5	-0.1
<b>PSCE in Annually Managed Expenditure</b>	357.2	353.0	-4.2	-5.3	1.4	-0.2	-1.2
<i>of which:</i>							
Social security benefits	184.3	183.9	-0.4	-0.5	0.2	-0.1	-0.2
Tax credits	29.6	29.9	0.2	0.2	0.0	0.0	0.7
Company & other tax credits	2.0	2.1	0.1	0.0	0.1	0.0	6.8
Net public service pension payments	10.4	11.5	1.1	0.0	1.1	0.0	10.5
National lottery current grants	1.4	1.4	0.0	0.0	0.0	0.0	-3.2
BBC current expenditure	3.8	3.8	0.0	0.0	0.0	0.0	0.4
Network Rail other current expenditure	1.1	1.1	0.0	0.0	0.0	0.0	0.0
Other PSCE items in departmental AME	1.3	1.0	-0.3	0.0	-0.3	0.0	-20.6
Expenditure transfers to EU institutions	10.8	10.4	-0.3	-0.2	-0.1	0.0	-2.9
Locally-financed current expenditure <sup>1</sup>	35.1	36.5	1.3	0.0	1.3	0.0	3.8
CG net debt interest	41.2	32.8	-8.4	-4.9	-3.6	0.1	-20.3
Depreciation	28.9	28.5	-0.4	0.0	-1.0	0.6	-1.5
Current VAT refunds	11.9	11.5	-0.3	0.1	-0.4	0.0	-2.8
R&D expenditure	-7.5	-7.5	0.0	0.0	0.0	0.0	0.0
Single use military expenditure	0.3	0.3	0.1	0.0	0.1	0.0	25.9
Environmental levies	4.4	3.2	-1.2	0.0	-0.1	-1.1	-27.5
Local authority imputed pensions	1.8	1.8	0.0	0.0	0.0	0.0	0.0
Other National Accounts adjustments	-3.5	0.9	4.3	0.0	4.0	0.3	-
<b>Total public sector current expenditure</b>	<b>675.0</b>	<b>670.6</b>	<b>-4.3</b>	<b>-5.3</b>	<b>0.7</b>	<b>0.2</b>	<b>-0.6</b>
<b>Public sector gross investment (PSGI)</b>							
<b>PSGI in CDEL</b>	37.1	37.3	0.2	0.0	-0.8	1.0	0.5
<b>PSGI in Annually Managed Expenditure</b>	27.9	29.9	2.0	0.0	2.0	0.0	7.3
<i>of which:</i>							
National lottery capital grants	0.5	0.5	0.0	0.0	0.0	0.0	9.0
Network Rail capital expenditure	6.0	6.0	0.0	0.0	0.0	0.0	0.0
Other PSGI items in departmental AME	0.5	0.2	-0.2	0.0	-0.2	0.0	-51.3
Locally-financed capital expenditure	6.2	7.6	1.4	0.0	1.4	0.0	22.5
Public corporations capital expenditure	7.0	7.5	0.5	0.0	0.5	0.0	7.7
R&D expenditure	7.5	7.5	0.0	0.0	0.0	0.0	0.0
Other National Accounts adjustments	0.2	0.5	0.3	0.0	0.3	0.0	-
<b>Total public sector gross investment</b>	<b>65.0</b>	<b>67.2</b>	<b>2.2</b>	<b>0.0</b>	<b>1.2</b>	<b>1.0</b>	<b>3.4</b>
Less depreciation	-34.3	-37.0	-2.7	0.0	-2.1	-0.6	7.8
<b>Public sector net investment</b>	<b>30.7</b>	<b>30.3</b>	<b>-0.4</b>	<b>0.0</b>	<b>-0.9</b>	<b>0.4</b>	<b>-1.4</b>
<b>Total managed expenditure</b>	<b>740.0</b>	<b>737.9</b>	<b>-2.1</b>	<b>-5.3</b>	<b>2.0</b>	<b>1.3</b>	<b>-0.3</b>

<sup>1</sup> 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 June 2010 welfare spending errors for 2014-15

	£ billion			Total error (%)
	Forecast	Outturn	Error	
<b>Welfare cap (introduced March 2014)</b>				
Incapacity benefits	12.8	14.1	1.3	10.1
Statutory maternity pay <sup>1</sup>	2.0	2.4	0.4	22.2
Income support (not incapacity)	2.5	2.5	0.0	0.8
Pension credit	7.0	6.5	-0.5	-7.8
DLA and PIP	13.4	15.3	1.9	14.4
Attendance allowance	6.2	5.4	-0.8	-12.5
Housing benefit (not unemployed)	18.3	21.4	3.1	17.0
Child benefit	12.6	11.6	-1.0	-8.2
Personal tax credits	33.0	29.7	-3.3	-9.9
NI social security in welfare cap	3.3	3.2	-0.1	-3.4
Other social security in welfare cap	6.8	6.6	-0.2	-3.0
<b>Total inside welfare cap</b>	<b>117.8</b>	<b>118.7</b>	<b>0.8</b>	<b>0.7</b>
<b>Welfare spending outside the welfare cap</b>				
Jobseeker's allowance	4.8	3.0	-1.8	-37.5
State pension (contributory and non-contributory)	84.6	86.5	1.9	2.3
Housing benefit (unemployed)	3.1	2.3	-0.8	-24.7
War pensions	1.0	0.8	-0.1	-12.1
NI social security outside welfare cap	2.4	2.3	-0.1	-3.4
Council tax benefit	4.8	0.0	-4.8	
<b>Total welfare spending outside the welfare cap</b>	<b>100.7</b>	<b>95.0</b>	<b>-5.7</b>	<b>-5.6</b>
<b>Total welfare</b>	<b>218.5</b>	<b>213.7</b>	<b>-4.8</b>	<b>-2.2</b>
<sup>1</sup> DWP accounts include past-year adjustments which reduce spending to £2.2 billion.				

Table A.14: Breakdown of March 2013 welfare spending errors for 2014-15

	£ billion						
	Forecast	Outturn	Error	of which			Total error (%)
				Economic factors	Fiscal forecasting errors	Policy and classification changes	
<b>Welfare cap (introduced March 2014)</b>							
Incapacity benefits	11.3	14.1	2.8	0.0	2.8	-0.1	24.5
Statutory maternity pay <sup>1</sup>	2.4	2.4	0.0	0.0	-0.1	0.0	-1.7
Income support (not incapacity)	2.3	2.5	0.1	0.0	0.2	-0.1	6.2
Pension credit	6.7	6.5	-0.2	0.1	-0.3	0.0	-3.6
DLA and PIP	14.1	15.3	1.2	0.0	1.2	0.0	8.5
Attendance allowance	5.7	5.4	-0.3	0.0	-0.3	0.0	-5.9
Housing benefit (not unemployed)	20.3	21.4	1.1	0.1	1.0	0.1	5.5
Child benefit	12.0	11.6	-0.4	0.0	-0.1	-0.2	-3.1
Personal tax credits	30.1	29.7	-0.4	0.2	-0.5	-0.1	-1.2
NI social security in welfare cap <sup>2</sup>	3.3	3.2	0.0	0.0	0.0	0.0	-1.0
Other social security in welfare cap	6.9	6.6	-0.4	0.0	-0.4	0.0	-5.2
<b>Total future welfare cap</b>	<b>115.2</b>	<b>118.7</b>	<b>3.5</b>	<b>0.4</b>	<b>3.4</b>	<b>-0.3</b>	<b>3.0</b>
<b>Welfare spending outside the welfare cap</b>							
Jobseeker's allowance	5.4	3.0	-2.4	-2.0	-0.2	-0.2	-44.1
State pension (contributory and non-contributory)	87.1	86.5	-0.6	-0.2	-0.5	0.0	-0.7
Housing benefit (unemployed)	3.6	2.3	-1.3	-0.9	-0.4	0.0	-35.5
War pensions	0.9	0.8	0.0	0.0	0.0	0.0	-4.3
NI social security outside welfare cap <sup>2</sup>	2.3	2.3	0.0	0.0	0.0	0.0	-1.0
<b>Total welfare spending outside the future welfare cap</b>	<b>99.4</b>	<b>95.0</b>	<b>-4.4</b>	<b>-3.0</b>	<b>-1.1</b>	<b>-0.2</b>	<b>-4.4</b>
<b>Total welfare</b>	<b>214.5</b>	<b>213.7</b>	<b>-0.9</b>	<b>-2.7</b>	<b>2.3</b>	<b>-0.5</b>	<b>-0.4</b>
<sup>1</sup> DWP accounts include past-year adjustments which reduce spending to £2.2 billion.							
<sup>2</sup> An allocation of error between categories is not available, so we assume all errors are fiscal forecasting errors.							

Table A.15: Breakdown of March 2014 welfare spending errors for 2014-15

	£ billion						
	Forecast	Outturn	Error	of which			Total error (%)
				Economic factors	Fiscal forecasting errors	Policy and classification changes	
<b>Welfare cap</b>							
Incapacity benefits	13.4	14.1	0.7	0.0	0.7	0.0	5.3
Statutory maternity pay <sup>1</sup>	2.4	2.4	0.0	0.0	0.0	0.0	-0.6
Income support (not incapacity)	2.6	2.5	-0.1	0.0	-0.1	0.0	-3.7
Pension credit	6.6	6.5	-0.2	0.0	-0.2	0.0	-2.4
DLA and PIP	14.8	15.3	0.6	0.0	0.5	0.0	3.7
Attendance allowance	5.5	5.4	-0.1	0.0	-0.1	0.0	-1.9
Housing benefit (not unemployed)	21.3	21.4	0.1	0.1	0.0	0.0	0.5
Child benefit	11.7	11.6	-0.1	0.0	-0.1	0.0	-1.1
Personal tax credits	29.5	29.7	0.3	0.2	0.1	0.0	0.9
NI social security in welfare cap <sup>2</sup>	3.2	3.2	0.0	0.0	0.0	0.0	0.0
Other social security in welfare cap	6.8	6.6	-0.2	0.0	0.0	-0.2	-3.0
<b>Total future welfare cap</b>	<b>117.7</b>	<b>118.7</b>	<b>0.9</b>	<b>0.3</b>	<b>0.8</b>	<b>-0.2</b>	<b>0.8</b>
<b>Welfare spending outside the welfare cap</b>							
Jobseeker's allowance	3.6	3.0	-0.6	-0.5	-0.1	0.0	-16.2
State pension (contributory and non-contributory)	86.5	86.5	0.0	0.0	0.0	0.0	0.0
Housing benefit (unemployed)	2.8	2.3	-0.5	-0.1	-0.4	0.0	-17.4
War pensions	0.9	0.8	0.0	0.0	0.0	0.0	-1.7
NI social security outside welfare cap <sup>2</sup>	2.3	2.3	0.0	0.0	0.0	0.0	0.0
<b>Total welfare spending outside the future welfare cap</b>	<b>96.1</b>	<b>95.0</b>	<b>-1.1</b>	<b>-0.6</b>	<b>-0.5</b>	<b>0.0</b>	<b>-1.1</b>
<b>Total welfare</b>	<b>213.8</b>	<b>213.7</b>	<b>-0.2</b>	<b>-0.3</b>	<b>0.3</b>	<b>-0.2</b>	<b>-0.1</b>
<sup>1</sup> DWP accounts include past-year adjustments which reduce spending to £2.2 billion.							
<sup>2</sup> An allocation of error between categories is not available, so we assume all errors are fiscal forecasting errors.							



Table A.16: Adjustments to forecasts for ESA10 and PSF review classification decisions

	£ billion								
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Receipts</b>									
June 2010	15.5	16.2	17.5	18.1	18.7	19.4			
November 2010	15.4	14.8	15.9	16.6	17.2	18.0			
March 2011	15.3	14.9	15.9	16.5	17.1	17.7			
November 2011		14.9	15.7	16.4	17.0	17.7	18.4		
March 2012		15.9	16.6	17.5	18.1	18.8	19.5		
December 2012			16.5	17.0	17.0	16.3	15.9	16.0	
March 2013			15.7	16.0	16.1	15.8	15.8	16.4	
December 2013				16.0	16.2	16.9	16.7	16.2	16.7
March 2014				15.8	16.6	17.0	16.8	16.3	16.8
<b>Spending</b>									
June 2010	11.8	11.6	20.7	10.7	11.2	13.5			
November 2010	11.6	10.2	19.1	9.2	9.7	12.0			
March 2011	11.5	10.3	19.1	9.2	9.6	11.8			
November 2011		10.3	18.9	9.1	9.5	11.8	12.6		
March 2012		10.2	18.8	9.0	9.5	11.7	12.6		
December 2012			18.7	8.5	8.3	9.2	9.0	10.4	
March 2013			17.8	7.5	7.5	8.8	8.9	10.8	
December 2013				7.5	7.6	9.9	9.8	10.7	11.5
March 2014				7.3	8.0	10.0	9.9	10.8	11.6
<b>Public sector net borrowing</b>									
June 2010	-3.7	-4.6	3.2	-7.4	-7.5	-5.9			
November 2010	-3.7	-4.6	3.2	-7.4	-7.5	-5.9			
March 2011	-3.7	-4.6	3.2	-7.4	-7.5	-5.9			
November 2011		-4.6	3.2	-7.4	-7.5	-5.9	-5.8		
March 2012		-5.6	2.2	-8.5	-8.7	-7.1	-6.9		
December 2012			2.2	-8.5	-8.7	-7.1	-6.9	-5.5	
March 2013			2.2	-8.5	-8.7	-7.1	-6.9	-5.5	
December 2013				-8.5	-8.7	-7.1	-6.9	-5.5	-5.1
March 2014				-8.5	-8.7	-7.1	-6.9	-5.5	-5.1
<b>Current budget deficit</b>									
June 2010	-9.4	-8.7	-12.8	-13.6	-12.6	-12.3			
November 2010	-8.1	-8.7	-12.8	-13.7	-12.6	-12.4			
March 2011	-8.0	-9.0	-12.4	-13.0	-11.2	-10.9			
November 2011		-9.0	-12.4	-13.0	-11.2	-11.1	-9.5		
March 2012		-9.2	-13.4	-14.1	-12.4	-11.8	-10.1		
December 2012			-12.7	-13.2	-11.9	-11.6	-9.9	-7.4	
March 2013			-12.4	-13.2	-11.5	-11.5	-9.7	-7.2	
December 2013				-13.3	-11.5	-11.1	-9.5	-6.8	-5.1
March 2014				-13.1	-11.5	-11.1	-9.4	-6.7	-5.1

Table A.17: Restated forecasts post-ESA10 and PSF review classification decisions

	£ billion									
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	
<b>Receipts</b>										
June 2010	563.2	600.4	639.4	680.0	718.7	756.4				
November 2010	565.0	601.1	636.2	675.7	715.1	752.6				
March 2011	563.8	603.5	635.5	676.8	714.5	752.3				
November 2011		590.4	610.0	640.0	674.4	711.2	753.5			
March 2012		586.3	608.1	640.0	676.5	710.8	754.8			
December 2012			598.9	625.3	649.4	679.7	715.4	750.2		
March 2013			596.0	616.2	638.1	665.0	703.8	737.9		
December 2013				622.7	650.7	682.3	721.9	756.5	793.5	
March 2014				623.5	653.2	685.2	724.9	759.2	794.4	
<b>Spending</b>										
June 2010	708.6	711.4	731.7	732.7	748.7	770.9				
November 2010	709.8	713.9	730.4	728.5	742.7	764.9				
March 2011	706.0	720.7	739.3	739.3	753.2	775.6				
November 2011		712.9	733.4	732.1	745.9	758.4	771.3			
March 2012		706.6	730.2	729.0	742.9	755.7	768.9			
December 2012			721.0	728.4	739.3	753.9	764.1	775.6		
March 2013			719.1	727.5	737.9	753.4	763.8	775.0		
December 2013				725.4	738.1	753.9	766.0	774.4	786.1	
March 2014				722.8	740.0	753.3	762.4	770.2	784.5	
<b>Public sector net borrowing</b>										
June 2010	145.4	111.0	92.3	52.7	30.0	14.5				
November 2010	144.8	112.9	94.2	52.8	27.6	12.3				
March 2011	142.2	117.2	103.8	62.5	38.7	23.4				
November 2011		122.5	123.4	92.2	71.4	47.2	17.8			
March 2012		120.4	122.1	89.0	66.4	44.9	14.1			
December 2012			122.1	103.0	89.9	74.2	48.7	25.4		
March 2013			123.1	111.3	99.8	88.5	60.0	37.1		
December 2013				102.7	87.4	71.6	44.1	17.9	-7.4	
March 2014				99.3	86.8	68.1	37.5	11.0	-9.9	
<b>Current budget deficit</b>										
June 2010	102.3	80.5	53.8	28.4	5.6	-9.3				
November 2010	98.3	78.6	52.5	25.1	-0.1	-14.7				
March 2011	96.8	80.9	60.4	33.0	10.7	-6.1				
November 2011		89.5	82.6	64.7	45.9	21.7	-6.6			
March 2012		88.9	81.9	60.0	39.5	18.4	-11.1			
December 2012			87.7	73.4	61.0	47.1	23.0	0.9		
March 2013			86.5	82.5	70.3	58.2	31.4	10.5		
December 2013				73.0	56.8	40.3	13.4	-9.9	-33.1	
March 2014				70.6	56.1	37.4	7.3	-16.3	-35.6	

## 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 12 forecasts so far, the sample is still relatively small. This is particularly true at longer time horizons – we can compare only three of our forecasts at a 4-year horizon and just one at a 5-year horizon.
- 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 for real GDP and net borrowing 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 slowed, 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 over 2011 and 2012, and the latest outturns are not as weak as the forecasts we produced at the end of those years (when early estimates for three quarters of data were available).

## Comparison with past official forecasts

**B.7** Real GDP growth since the end of 2012 has been roughly in line with our June 2010 forecast (although from a much lower base reflecting our overoptimism for the preceding period). But growth then picked up by more than expected at the time (and relative to a higher base following upward revisions to historic data), leading to larger than average errors across our December 2012 and March 2013 forecasts.

**Table B.1 Forecast errors for real GDP growth**

	Per cent				
	Calendar years ahead				
	In-year	One	Two	Three	Four
June 2010	0.3	-0.3	-1.6	-0.7	0.2
November 2010	-0.3	-0.1	-1.4	-0.7	0.1
March 2011	0.3	-1.3	-0.7	0.0	
November 2011	1.1	0.5	0.1	0.2	
March 2012	0.4	0.2	0.2		
December 2012	1.3	1.0	0.9		
March 2013	1.6	1.1			
December 2013	0.8	0.5			
March 2014	0.3				
December 2014	0.2				
Average absolute errors over the previous 20 years					
Spring/summer	0.8	1.1	1.2	1.1	1.2
Autumn	0.8	1.0	1.0	1.1	1.1
Key:					
Smaller than average absolute error					
Average sized error					
Bigger than average absolute error					

## Public sector net borrowing

**B.8** Estimates of nominal GDP have been revised up over the recent past. 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. These revisions make comparisons of forecasts expressed as a share of GDP hard to interpret. So, rather than present forecast errors in levels, in this annex we:

- compare cash borrowing (Table B.2) and spending (Table B.3) errors normalised by the latest GDP estimates; and
- 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.4).

**B.9** We have made sizeable three to five year-ahead forecast errors for borrowing in 2013-14 and 2014-15. 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.10** The largest relative errors in our PSNB forecasts mainly relate to our in-year forecasts for 2010-11 and 2011-12 (Table B.2). Our March 2011 and 2012 forecasts are around £7 billion above the latest outturns, although they were closer to the first estimates for each year (the March 2012 forecast was within £25 million).
- B.11** Revisions to local authority data account for around £4 billion of the error for each year. Local authorities added to their reserves rather than running them down as assumed at the time, but this only became apparent much later, once firm data became available. We now have access to more timely quarterly data, and have stepped up our engagement with representatives of local authorities to improve this part of the forecast. There are other reasons why estimates of PSNB are also revised well after the fiscal year has ended: cash receipts that are ultimately accrued back in time are received with a lag and firm data on departmental spending and public corporations are only available some months after the initial outturn estimates have to be made.
- B.12** Cash spending has generally fallen below our forecasts by relatively small amounts (Table B.3), although spending was notably lower than our March 2011 forecast in particular (when we raised our spending forecast). But our receipts errors have tended to be more substantial (Table B.4). Having only risen by 0.1 per cent of GDP in 2011-12, the receipts-to-GDP ratio has fallen in each subsequent year. Our earlier forecasts assumed a rise in the ratio over time, and even in our most pessimistic economy and fiscal forecast in March 2013 we expected the ratio to be flat. Our receipts – and spending – errors have since been much smaller.

Table B.2 Forecast errors for PSNB

	Per cent of GDP					
	Fiscal years ahead					
	In-year	One	Two	Three	Four	Five
June 2010 <sup>1</sup>	0.1	-0.7	0.2	1.6	2.7	3.3
November 2010	-0.6	0.0	1.5	2.7	3.4	
March 2011	-0.5	-0.2	0.9	2.1	2.8	
November 2011	-0.5	-0.2	0.4	1.0		
March 2012	-0.4	-0.1	0.6	1.3		
December 2012	-0.1	-0.2	0.0			
March 2013	-0.2	-0.7	-0.5			
December 2013	-0.2	0.1				
March 2014	0.0	0.2				
December 2014	-0.1					
March 2015	0.0					
Average absolute errors over the previous 20 years						
Spring/summer	0.2	0.9	1.9	2.8	3.2	3.6
Autumn	0.5	1.3	1.9	2.2	2.8	3.3

<sup>1</sup> 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.3 Forecast errors for spending

	Per cent of actual GDP					
	Fiscal years ahead					
	In-year	One	Two	Three	Four	Five
June 2010 <sup>1</sup>	0.4	-0.1	-0.2	-0.6	-0.4	-0.6
November 2010	-0.1	-0.4	-0.5	-0.2	-0.3	
March 2011	0.1	-0.8	-1.0	-0.8	-0.8	
November 2011	-0.3	-0.7	-0.4	-0.4		
March 2012	0.1	-0.5	-0.2	-0.3		
December 2012	0.1	-0.2	-0.1			
March 2013	0.2	-0.2	0.0			
December 2013	0.0	0.0				
March 2014	0.1	-0.1				
December 2014	0.0					
March 2015	0.0					
Average absolute errors over the previous 20 years						
Spring/summer	1.1	1.0	1.0	1.4	1.7	1.9
Autumn	0.9	0.7	0.7	1.0	1.6	2.1

<sup>1</sup> 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 errors for changes in receipts as a per cent of GDP

	Per cent of GDP					
	Fiscal years ahead					
	In-year	One	Two	Three	Four	Five
June 2010 <sup>1</sup>	-0.5	-0.3	-1.1	-2.1	-2.7	-3.0
November 2010	0.1	-0.3	-0.7	-1.0	-1.2	
March 2011	0.1	-0.6	-1.3	-1.8	-2.0	
November 2011	-0.4	-0.8	-1.1	-1.3		
March 2012	-0.1	-0.7	-1.1	-1.5		
December 2012	-0.6	-1.2	-1.2			
March 2013	-0.6	-0.9	-0.9			
December 2013	0.2	-0.1				
March 2014	0.2	-0.1				
December 2014	0.3					
March 2015	0.1					
Average absolute errors over the previous 20 years						
Spring/summer	0.5	0.9	1.2	1.4	1.6	1.8
Autumn	0.5	0.8	1.0	1.3	1.4	1.5

<sup>1</sup> 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

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