

Office for
**Budget
Responsibility**

Economic and fiscal outlook

November 2017



Office for Budget Responsibility: Economic and fiscal outlook

Presented to Parliament by
the Exchequer Secretary to the Treasury by
Command of Her Majesty

November 2017



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Foreword

The Office for Budget Responsibility (OBR) was established in 2010 to provide independent and authoritative analysis of the UK's public finances.

In this *Economic and fiscal outlook (EFO)* we set out forecasts to 2022-23. We also assess whether the Government is on course to meet the medium-term fiscal objectives that it has set itself. The forecasts presented in this document represent the collective view of the three independent members of the OBR's Budget Responsibility Committee (BRC). We take full responsibility for the judgements that underpin them and for the conclusions we have reached.

We have, of course, been hugely supported in this by the staff of the OBR. We are enormously grateful for the hard work, expertise and professionalism that they have brought to the task. Given the highly disaggregated nature of the fiscal forecasts we produce, we have also drawn heavily on the work and expertise of officials across government, including in HM Revenue and Customs, the Department for Work and Pensions, HM Treasury, the Department for Communities and Local Government, the Department for Business, Energy and Industrial Strategy, the Department for Education, the Oil and Gas Authority, the Office for National Statistics, the UK Debt Management Office, the Scottish Government and Scottish Fiscal Commission, the Welsh Government, the Social Security Agency in Northern Ireland, Transport for London and the various public service pension schemes. We are very grateful for their time and patience. We have also had useful exchanges with staff at the Bank of England regarding their latest forecasts, for which we are very grateful.

Given the legal requirement for the OBR to produce its forecasts on the basis of current Government policy, we once again asked the Government to provide us with any detail on post-Brexit policies in relation to trade, migration and EU finances. The Government directed us to the Prime Minister's Florence speech from September and a Department for International Trade white paper: '*Preparing for our future UK trade policy*'. These set out further detail on the Government's objectives with regard to an 'implementation period' and the principles of future trade policy. But the outcomes will depend on further policy development by the UK authorities and on the continuing negotiations with the EU. We were not provided with any information that is not in the public domain.

As in our previous two forecasts, we have not therefore been able to forecast on the basis of fully specified Government policy in relation to the UK's exit from the EU, so we have retained the same broad-brush conditioning assumptions. These are set out in Chapter 3 (economy) and Chapter 4 (fiscal) of this document. The remaining forecast process for this *EFO* has been as follows:

- In September, the Treasury requested that we finalise the Autumn Budget 2017 forecast on a 'pre-scorecard' basis (i.e. before incorporating the effect of new policy announcements that are listed in the Treasury's 'scorecard' table of policy decisions) around two weeks ahead of the Chancellor's statement in order to provide him with a stable base for his final policy decisions.

- We began the forecast process with the preparation by OBR staff of a revised economy forecast, drawing on data released since our previous forecast in March and with our preliminary judgements on the outlook for the economy. This preparation overlapped with finalising our *2017 Forecast evaluation report*, in which we discussed some of the key forecast judgements that we expected to make and that are detailed in this report. We sent our first economic forecast to the Chancellor on 6 October.
- Using the economic determinants from this forecast (such as the components of nominal income and spending, unemployment, inflation and interest rates) we then commissioned new forecasts from the relevant government departments for the various tax and spending streams that in aggregate determine the state of the public finances. We discussed these in detail with the officials producing them, which allowed us to investigate proposed changes in forecasting methodology and to assess the significance of recent tax and spending outturns. In many cases, the BRC requested changes to methodology and/or the interpretation of recent data.
- We sent our first fiscal forecast (including a provisional judgement on progress towards meeting the fiscal targets) on 18 October. We provided the Chancellor with these early forecasts in order to inform his policy choices for the Budget.
- As the forecasting process continued, we identified the key judgements that we would have to make in order to generate our full economy forecast. Where we thought it would be helpful, we commissioned analysis from the relevant experts in the Treasury to help inform our views. The BRC then agreed the key judgements, allowing the production by OBR staff of a second full economy forecast.
- This provided the basis for a further round of fiscal forecasts. Discussion of these with HMRC, DWP and other departments gave us the opportunity to follow up our requests for further analysis, methodological changes and alternative judgements made during the previous round. We provided our second economy and fiscal forecast to the Chancellor on 30 October. We met the Chancellor to discuss these forecasts on 3 November.
- We then produced a third economy and fiscal forecast, which allowed us to take on latest data, including fully incorporating updated ONS population projections, and to ensure that our judgements on the fiscal forecast had been reflected. We completed this final pre-policy-measures forecast and sent it to the Chancellor on 9 November. At this point we reflected the reclassification of English housing associations, which the ONS had publicly indicated would follow the passage of regulations that had at that point completed the Committee stage of the necessary Parliamentary process and were subsequently passed on 15 November.
- Meanwhile, we were also scrutinising the costing of tax and spending measures that were being considered for announcement in the Budget. The BRC requested a number of changes to the draft costings prepared by HMRC, DWP and other departments. We have endorsed all the tax and annually managed expenditure costings in the scorecard as reasonable and central estimates of the measures themselves. We have continued our fuller discussion and calibration of the uncertainties that surround these policy costings, which is presented in Annex A of this *EFO* and in our annex to the Treasury's *Autumn Budget 2017 policy costings document*.

- During the week before publication we produced our final forecast, incorporating the final package of Budget policy measures. We were provided with final details of policy decisions with a potential wider impact on the economy forecast on 14 November. On 17 November the Treasury provided revised details of the Government's planned path of public spending in 2018-19 and 2019-20 that would have had a small effect on our economy forecast had they been provided in time. This has meant that in this *EFO* unfortunately our economy and fiscal forecasts are not fully consistent.
- At the Treasury's written request, and as provided for in the Memorandum of Understanding (MoU) between us, we provided the Chancellor and an agreed list of his special advisers and officials with a near-final draft of the *EFO* on 17 November. This allowed the Treasury to prepare the Chancellor's statement and documentation. We also provided a full and final copy 24 hours in advance of publication.

During the forecasting period, the BRC held around 60 scrutiny and challenge meetings with officials from other departments, in addition to numerous further meetings at staff level. We have been provided with all the forecast information and analysis that we requested. We have come under no pressure from Ministers, advisers or officials to change any of our conclusions as the forecast has progressed. A full log of our substantive contact with Ministers, their offices and special advisers can be found on our website. This includes the list of special advisers and officials that received the near-final draft of the *EFO* on 17 November.

Our non-executive members Lord Burns and Sir Christopher Kelly provide additional assurance over how we engage with the Treasury and other departments by reviewing any correspondence that OBR staff feel either breaches the MoU requirement that it be confined to factual comments only or could be construed as doing so. That review will take place over the next two weeks and any concerns our non-executive members have will be raised with the Treasury's Permanent Secretary or the Treasury Select Committee, if they deem that appropriate.

We would be pleased to receive feedback on any aspect of the content or presentation of our analysis. This can be sent to feedback@obr.gsi.gov.uk.



Robert Chote



Sir Charles Bean



Graham Parker CBE

The Budget Responsibility Committee

1 Executive summary

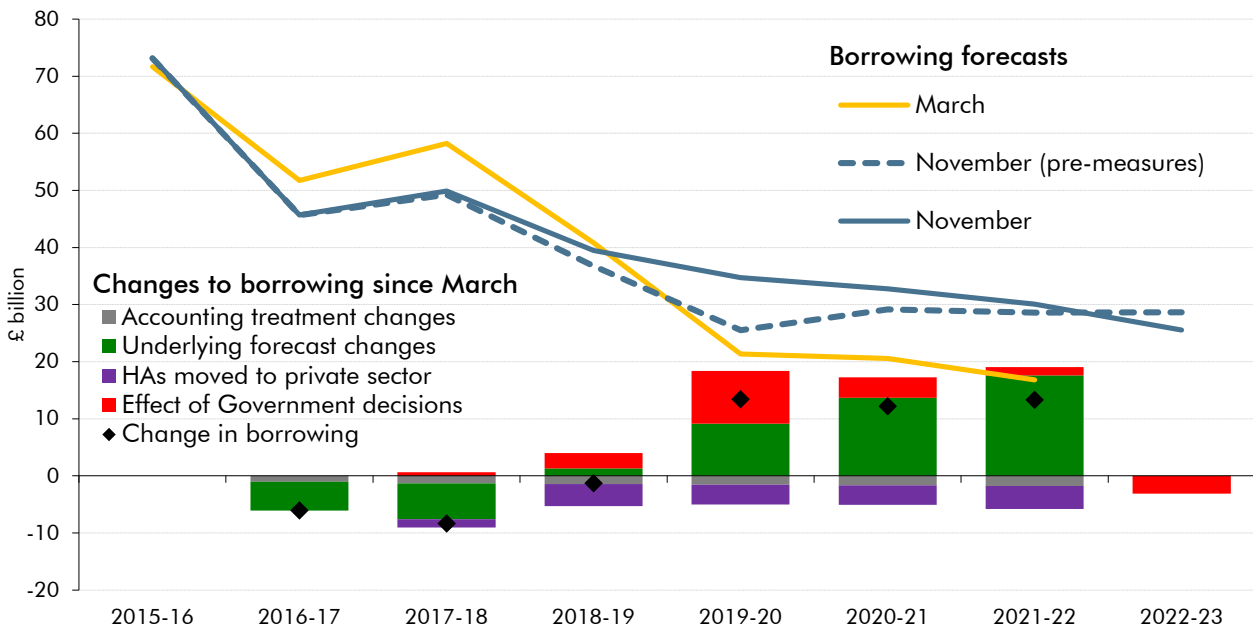
Overview

- 1.1 The UK economy has slowed this year as households' real incomes and spending have been squeezed by higher inflation. GDP growth has been a little weaker than we expected in March, but once again we have been more surprised by the strength of employment growth and the corresponding weakness of productivity growth. The persistence of weak productivity growth does not bode well for the UK's growth potential in the years ahead.
- 1.2 That said, the public finances have performed better than expected. The ONS has revised borrowing in 2016-17 sharply lower, relative to its initial estimate and our March forecast. And the deficit has continued to fall in the first half of 2017-18. We have revised borrowing down by £8.4 billion to £49.9 billion for the full year, but this is still slightly up on 2016-17 because timing effects boosted receipts last year and will lower them later this year.
- 1.3 We have lowered our real GDP forecast in every year. We now expect growth to average 1.4 per cent a year over the next five years, slowing a little over the next two (as public spending cuts and Brexit-related uncertainty weigh on the economy) and picking up modestly thereafter as productivity growth quickens. The main reason for lowering our GDP forecast since March is a significant downward revision to potential productivity growth, reflecting a reassessment of the post-crisis weakness and the hypotheses to explain it.
- 1.4 The combined effects of a better fiscal position now, but weaker prospects looking forward, have led us to revise up our forecast for the budget deficit by increasing amounts over the next five years, even before accounting for the Budget measures. In the Government's fiscal target year of 2020-21, our underlying upward forecast revision of £13.7 billion absorbed roughly half the headroom against the 'fiscal mandate' shown in our March forecast.
- 1.5 Faced with a weaker outlook for the economy and the public finances, and growing pressures on public services following years of cuts, the Government has chosen to deliver a significant near-term fiscal giveaway. This adds £2.7 billion to borrowing next year and a larger £9.2 billion (0.4 per cent of GDP) in 2019-20. The package includes net tax cuts (to fuel duty, inevitably, and stamp duty for first-time buyers), a significant easing in previously planned cuts to current departmental spending and a boost to capital spending. Together they provide a modest boost to GDP growth in the years we expected it to be weakest. Consistent with the pattern of many past fiscal events, the policy easing is then scaled back in future years, with a small fiscal tightening ultimately pencilled in for 2022-23 in the form of further cuts in public services spending as a share of GDP.

1.6 Despite the deterioration in our underlying forecast, the tax and spending giveaway, and extra lending through Help to Buy, the Government has ensured that net debt still falls fractionally as a share of GDP in 2018-19 and by more beyond. It has achieved this largely by announcing fresh sales of RBS shares and by passing regulations that ease local and central government control over housing associations in England. In response, the Office for National Statistics has announced that it will treat them as private sector entities from the point at which the regulations take effect. This has reduced our borrowing forecast by around £3¾ billion a year and reduced our debt forecast by between £67 and £81 billion. But housing associations’ role as providers of a public service means that this accounting change has no material effect on the underlying health and riskiness of the public finances – if the sector faced serious financial difficulties in the future, it seems equally likely that the Government of the day would choose to stand behind it whatever its statistical classification.

1.7 Chart 1.1 shows how the different factors have affected our borrowing forecast since March. Our underlying forecast changes and the Government’s fiscal loosening generally push the deficit higher while statistical changes have reduced it more modestly. Absent Budget measures, borrowing would have troughed in 2019-20 and fluctuated thereafter. Once Government decisions are factored in, the deficit declines more smoothly over time.

Chart 1.1: Public sector net borrowing



Source: ONS, OBR

1.8 On this basis, our central forecast implies that the Government’s fiscal mandate – for cyclically adjusted borrowing to lie below 2 per cent of GDP in 2020-21 – would be met by a margin of 0.7 per cent of GDP, down by just under half relative to our March forecast. This measure of the deficit falls below 2 per cent in 2018-19. Public sector net debt falls by 3.0 per cent of GDP in 2020-21, meeting the supplementary debt target too. And the subset of spending covered by the welfare cap remains below the stipulated level in 2021-22. A new welfare cap – the fourth to be announced in four years – has been set in this Budget.

Economic developments since our previous forecast

- 1.9 As expected, real GDP growth has slowed noticeably this year. The fall in the pound that followed the EU referendum has pushed up consumer price inflation and squeezed households' real incomes and spending. But the slowdown started slightly earlier than we expected in March. As a result, the 0.9 per cent increase in real GDP between the end of 2016 and the third quarter of 2017 was 0.2 percentage points weaker than we expected.
- 1.10 This is a relatively small difference, but the breakdown of that GDP increase between employment and productivity growth has diverged from our forecast more significantly. Employment increased by around 230,000 over the three quarters, more than twice as fast as expected, while average hours worked per person were broadly flat rather than falling as we had expected. As a result, total hours worked rose by 0.7 per cent rather than the 0.1 per cent we had forecast, while output per hour rose by 0.3 per cent rather than 1.1 per cent. This pattern of weaker productivity growth and stronger employment growth than we had been expecting has been a consistent feature of our forecasts for some time.
- 1.11 The slowdown in UK GDP growth so far this year contrasts with a pick-up in other advanced economies. Real GDP growth averaged 0.3 per cent a quarter in the UK in the first three quarters of 2017, down from 0.5 per cent in the second half of 2016. In the euro area, US, Canada and Japan, quarterly growth so far this year has been stronger than in the second half of 2016 and stronger than in the UK. Sterling's fall has seen inflation pick up more rapidly in the UK than in the other major economies, contributing to weaker real growth.
- 1.12 Meanwhile, data revisions since our previous forecast have changed some aspects of the National Accounts significantly. In particular, the ONS has revised households' dividend income up hugely, with an offsetting downward revision to retained corporate profits. This now better reflects the rising number of people working as owner-managers of incorporated firms (and taking income as dividends) rather than as employees or unincorporated sole proprietors. This has boosted measured household income and raised the saving ratio, although the latter is still estimated to have fallen sharply in recent years. The ONS has also made significant revisions to the balance of payments, with interest income earned by foreign owners of UK corporate bonds revised up substantially. As a result, the current account deficit is now estimated to have widened to almost 6 per cent of GDP in 2016.

The economic outlook

- 1.13 Parliament requires us to produce our forecasts on the basis of stated Government policy, but not necessarily assuming that particular policy objectives are achieved. With complex negotiations over the UK's exit from the EU still underway, this is not straightforward.
- 1.14 The Prime Minister set out further detail of the UK's position in her speech in Florence in September and the Government has published a number of papers on aspects of post-Brexit policy. But there is still no meaningful way to predict the precise end-point of the negotiations upon which to base our forecast. There is also considerable uncertainty about the economic and fiscal implications of different potential outcomes, including the impact of

any monetary policy response that might accompany them. So we have retained the same broad-brush assumptions on productivity, trade and migration that underpinned our March forecast (as set out in Chapter 3). These are consistent with a range of possible outcomes.

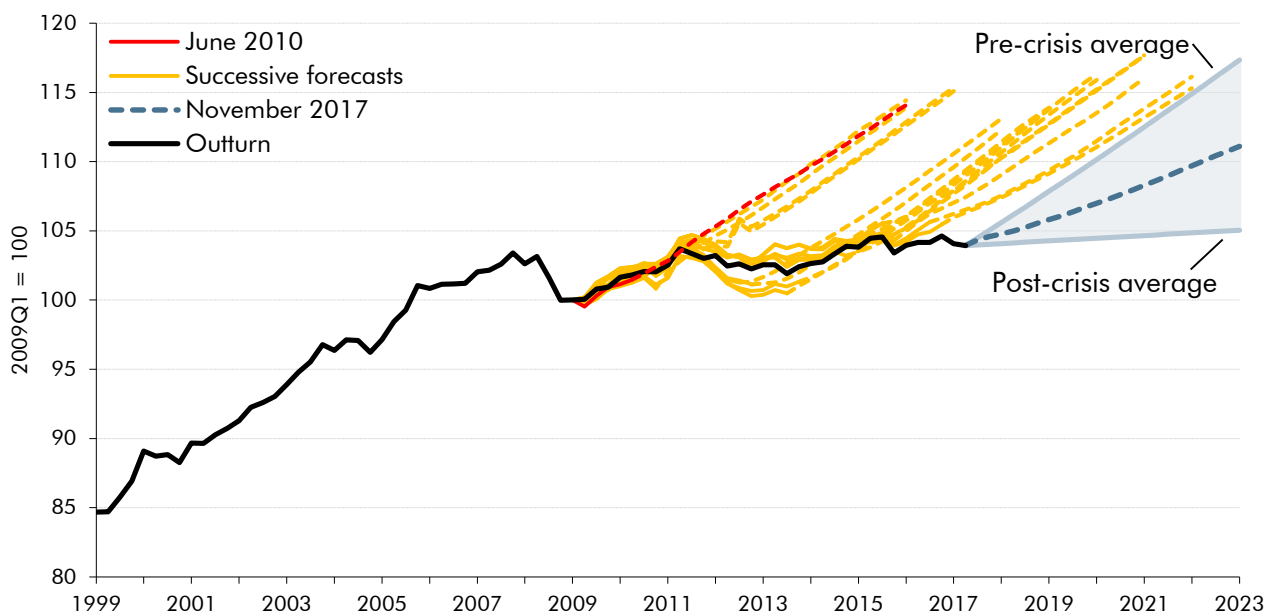
1.15 The most significant changes to our underlying pre-measures forecast since March relate to the outlook for the economy's supply potential, which determines how much real GDP can grow in total over the next five years consistent with the Bank of England setting monetary policy to achieve its inflation target. Our potential output growth judgement has five elements. Four relate to the total number of hours that can be worked sustainably without putting upward or downward pressure on inflation: the number of adults; the proportion participating in the labour market; the proportion of those that can be sustained in employment; and the average number of hours that they are willing and able to work. The fifth and most important judgement over the medium term is potential growth in productivity – the amount of output that can be produced sustainably from each hour worked.

1.16 We have revised each component of our potential output forecast since March:

- **Population growth:** we use the ONS's 'principal' population projection to underpin our forecast. New projections were published in October, with net inward migration now expected to decline steadily to 165,000 a year by 2023, down from 185,000 by 2021 in the previous projection. More importantly, net inward migration among working-age adults has been revised down more than the total, while mortality rates have been revised up. Together with slightly weaker outturns than we expected, this implies a smaller adult population, reducing potential output in 2021-22 by 0.2 per cent.
- **Participation rates:** we expect the whole-economy participation rate to decline as the ageing of the population outweighs the upward trend in labour market participation rates at specific older ages. Thanks to the latest population projections and labour market data, the expected decline in the overall participation rate is a little slower than we predicted in March, raising potential output in 2021-22 by 0.2 per cent.
- **Sustainable unemployment:** unemployment has continued to fall without much sign of wage pressures building. This suggests that our March assumption that the economy could sustain unemployment at 5 per cent was too high, so we have revised it down to 4.5 per cent. We still expect it to rise a little over the next few years as the National Living Wage prices some workers out of employment. Relative to March, this raises the level of potential output by 0.5 per cent in all years. This does not affect potential output growth over the forecast, but provides greater scope for actual output growth.
- **Average hours:** average hours worked per person have risen since the financial crisis, but to date we have assumed that the long-run downward trend will reassert itself over the forecast horizon. However, this has not yet happened, probably because workers have been trying to offset some of the impact of weak productivity and earnings growth on their incomes. Given the further downward revision to expected productivity growth in this *EFO*, we now assume a flat path for average hours rather than a 0.2 per cent a year decline. This raises potential output in 2021-22 by 0.9 per cent.

- Productivity growth:** the largest change we have made to our economy forecast in this *EFO* has been to revise down trend or potential productivity growth, as foreshadowed in our *Forecast evaluation report* in October. As the remarkable period of post-crisis weakness extends – and as various explanations pointing to a temporary slowdown become less compelling – it seems sensible to place more weight on recent trends as a guide to the next few years. But huge uncertainty remains around the diagnosis for recent weakness and the prognosis for the future. We have assumed that productivity growth will pick up a little, but remain significantly lower than its pre-crisis trend rate throughout the next five years. On average, we have revised trend productivity growth down by 0.7 percentage points a year. It now rises from 0.9 per cent this year to 1.2 per cent in 2022. This reduces potential output in 2021-22 by 3.0 per cent. The ONS estimates that output per hour is currently 21 per cent below an extrapolation of its pre-crisis trend. By the beginning of 2023 we expect this to have risen to 27 per cent.

Chart 1.2: Productivity growth (output per hour) – forecasts and outturns



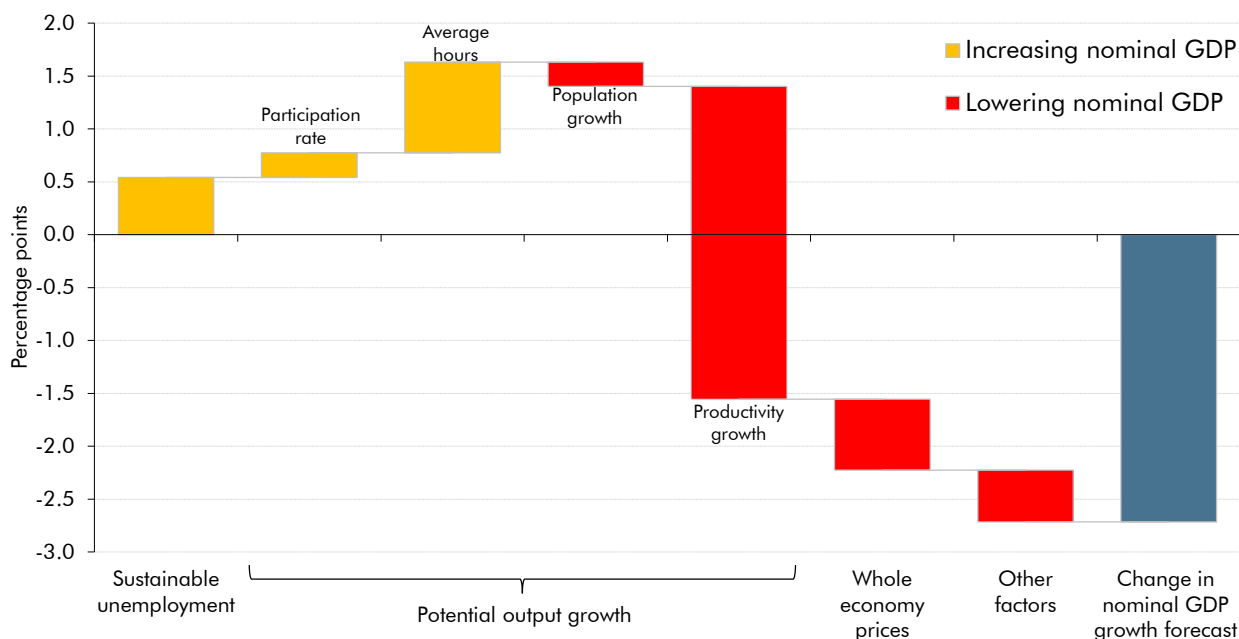
Note: Solid lines represent the outturn data that underpinned the forecast.

Source: ONS, OBR

- 1.17 The net effect of these revisions is to reduce the estimated level of potential output in 2021-22 by 2.1 per cent compared to our March forecast. Growth in potential still picks up over the forecast – from 1.3 per cent in 2018 to 1.5 per cent in 2022 – but the average rate through to 2021 is now just 1.4 per cent a year, down 0.5 percentage points since March.
- 1.18 Increasing the current level of potential output, but reducing the rate at which it grows thereafter, leads us to revise down our forecast for *actual* GDP growth by 0.4 percentage points a year relative to March. We now expect real GDP to grow by 5.7 per cent between 2017-18 and 2021-22 – down from 7.5 per cent in March. Whole economy inflation is also expected to be weaker than we thought in March, largely because we changed our modelling of import prices to make it more consistent with our forecast for consumer prices. Taking the two sets of judgements together, GDP in nominal or cash terms is expected to

grow by 12.6 per cent by 2021-22, down from 15.3 per cent in March. This implies slower growth in all the major sources of tax revenue. (The breakdown of this 2.7 percentage point downward revision to nominal GDP growth is illustrated in Chart 1.3.)

Chart 1.3: Sources of revision to nominal GDP growth from 2017-18 to 2021-22



Source: OBR

- 1.19 Looking at the year-by-year profile, we expect real GDP growth to slow from 1.5 per cent this year to 1.4 per cent in 2018 and 1.3 per cent in 2019, as public spending cuts intensify and Brexit-related uncertainty continues to bear down on activity. The gentle improvement in underlying productivity growth and a small cyclical boost as spare capacity is brought back into use are expected to deliver slightly higher GDP growth in 2021 and 2022. The short-term fiscal loosening announced in this Budget boosts growth by 0.1 percentage points in 2018 and 2019, but its withdrawal then reduces it by the same amounts in the following two years. The uncertainty around the central projection is clearly very large.
- 1.20 We expect CPI inflation to peak in the current quarter and then fall back to – and for a while slightly below – the Government’s 2 per cent target over the subsequent year and a half, easing the squeeze on households’ finances. Interest rates are expected to rise slowly, with markets expecting Bank Rate to reach 1¼ per cent in five years’ time, implying only three further quarter-point rises following the one announced earlier this month by the Monetary Policy Committee. House price inflation is expected to average just over 3 per cent a year.
- 1.21 The unemployment rate has fallen by 0.5 percentage points over the past year, despite real GDP growth slowing. We expect the rate to trough at 4.3 per cent of the labour force – its current rate – in the second half of this year, and then to edge up as GDP growth slows a little further and the National Living Wage prices some workers out of employment. Relative to our March forecast, we have revised unemployment down in every year. But we have also revised earnings growth down in line with the weaker outlook for productivity. We now

expect it to pick up slowly from 2.3 per cent this year to 3.1 per cent by 2022. Real earnings growth is forecast to average just 0.6 per cent a year in the six years to 2022.

Table 1.1: Overview of the economy forecast

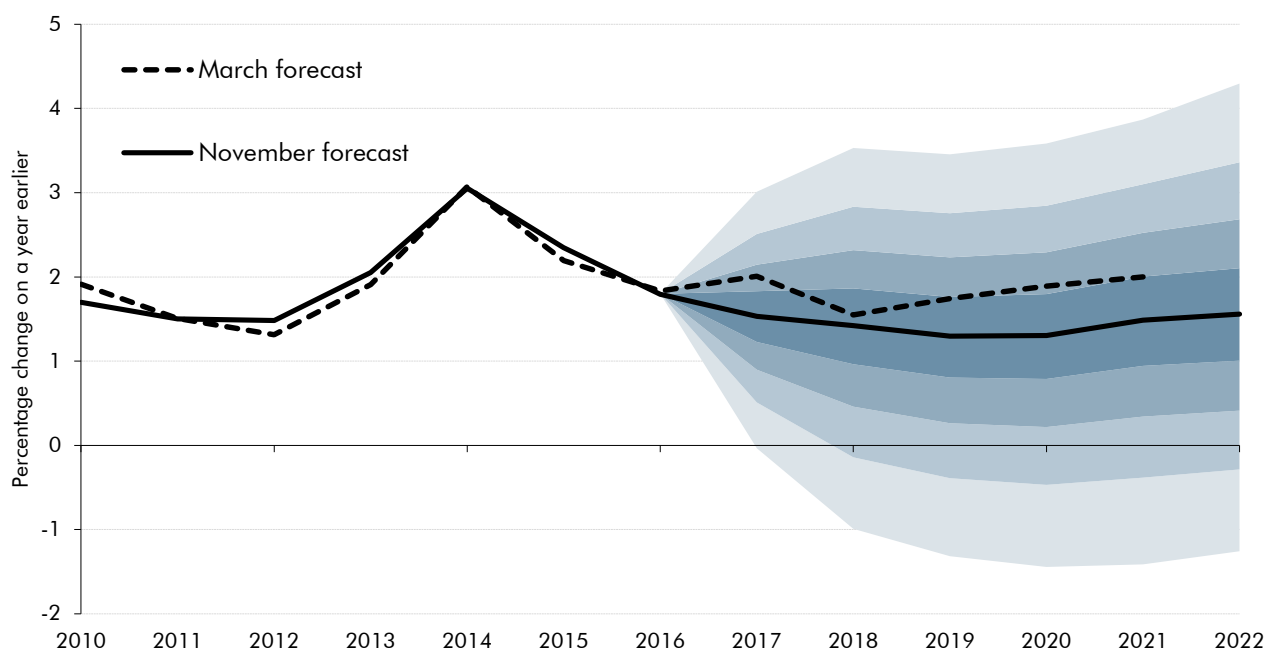
	Percentage change on a year earlier, unless otherwise stated						
	Outturn	Forecast					
	2016	2017	2018	2019	2020	2021	2022
Output at constant market prices							
Gross domestic product (GDP)	1.8	1.5	1.4	1.3	1.3	1.5	1.6
GDP per capita	1.0	0.9	0.8	0.7	0.7	0.9	1.0
GDP levels (2016=100)	100.0	101.5	103.0	104.3	105.7	107.2	108.9
Output gap	-0.2	-0.2	-0.1	-0.2	-0.2	-0.1	0.0
Expenditure components of real GDP							
Household consumption	2.8	1.5	0.8	1.2	1.2	1.5	1.6
General government consumption	1.1	0.3	1.0	0.7	0.5	1.0	1.0
Business investment	-0.4	2.5	2.3	2.3	2.4	2.4	2.4
General government investment	1.5	2.4	1.4	2.3	6.2	1.1	0.9
Net trade ¹	-0.9	0.4	0.2	0.0	0.0	0.0	0.0
Inflation							
CPI	0.7	2.7	2.4	1.9	2.0	2.0	2.0
Labour market							
Employment (millions)	31.7	32.1	32.3	32.4	32.5	32.6	32.7
Average earnings	2.8	2.3	2.3	2.3	2.6	3.0	3.1
LFS unemployment (rate, per cent)	4.9	4.4	4.3	4.4	4.6	4.6	4.6
Changes since March forecast							
Output at constant market prices							
Gross domestic product (GDP)	0.0	-0.5	-0.1	-0.4	-0.6	-0.5	
GDP per capita	-0.1	-0.4	-0.1	-0.4	-0.5	-0.4	
GDP levels (2016=100)	0.0	-0.5	-0.6	-1.0	-1.6	-2.1	
Output gap	-0.2	-0.4	0.0	-0.1	-0.1	-0.1	
Expenditure components of real GDP							
Household consumption	-0.2	-0.3	-0.1	-0.5	-0.5	-0.4	
General government consumption	0.2	-0.8	0.3	0.3	-0.4	-0.3	
Business investment	1.1	2.5	-1.4	-1.9	-1.4	-1.2	
General government investment	0.1	2.3	0.2	0.2	0.2	-2.7	
Net trade ¹	-0.6	0.1	-0.1	0.0	0.0	0.1	
Inflation							
CPI	0.0	0.3	0.0	-0.1	0.0	0.0	
Labour market							
Employment (millions)	0.0	0.2	0.2	0.2	0.2	0.2	
Average earnings	0.6	-0.3	-0.4	-0.6	-0.8	-0.6	
LFS unemployment (rate, per cent)	0.0	-0.5	-0.8	-0.7	-0.6	-0.5	

¹ Contribution to GDP growth.

1.22 The future is, of course, uncertain and no central forecast will be fulfilled in every respect. One way of illustrating the uncertainty around our GDP growth forecast is shown in Chart 1.4. This presents our central forecast together with a fan showing the probability of different outcomes based on past errors on official forecasts. The solid black line shows our median forecast, with successive pairs of lighter shaded areas around it representing 20 per

cent probability bands. These are not subjective judgements about the extent of uncertainty, which for the reasons discussed above are greater than usual at present. The chart shows that the change in our central growth forecast since March, though material, is small relative to the uncertainty around either forecast implied by past forecast performance.

Chart 1.4: Real GDP growth fan chart



Source: ONS, OBR

The fiscal outlook

- 1.23** Public sector net borrowing has fallen from its post-crisis peak of 9.9 per cent of GDP (£152.5 billion) in 2009-10 to 2.3 per cent of GDP (£45.7 billion) in 2016-17, a smaller deficit than we forecast in March. With little spare capacity in the economy, we judge that the 2016-17 structural deficit (which excludes the effects of the economic cycle) was close to the headline deficit at 2.2 per cent of GDP. On both measures, the deficit is expected to rise fractionally in 2017-18 before falling steadily thereafter.
- 1.24** Table 1.2 shows that on current policy – including the decisions announced in this Budget and our assumptions regarding the UK’s exit from the EU – we expect the deficit to move below 2 per cent of GDP next year and to fall slowly over the four years to 2022-23. Our central forecast is for a structural deficit of 1.3 per cent of GDP in 2020-21, below the 2 per cent of GDP ceiling set in the Chancellor’s ‘fiscal mandate’.

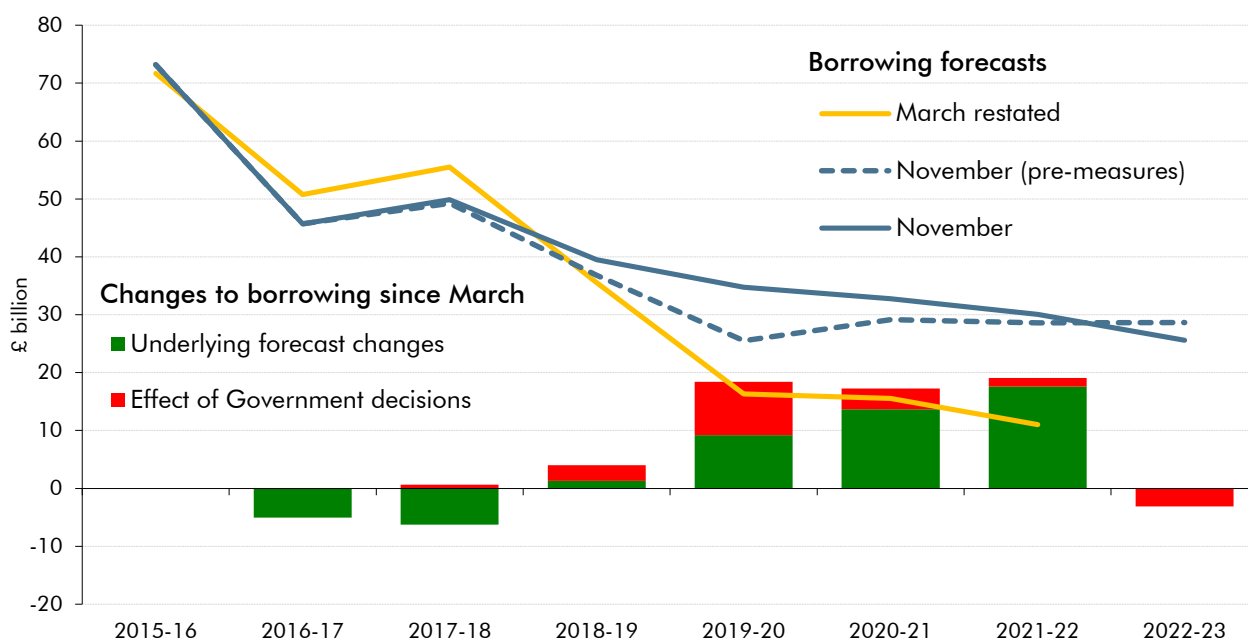
Table 1.2: Fiscal forecast overview

	Per cent of GDP						
	Outturn	Forecast					
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Revenue and spending							
Public sector current receipts	36.7	36.5	36.6	36.7	36.7	36.6	36.7
Total managed expenditure	39.0	38.9	38.5	38.3	38.2	37.9	37.7
Deficit: Current and previous fiscal mandate measures							
Cyclically adjusted net borrowing	2.2	2.3	1.8	1.5	1.3	1.2	1.1
Public sector net borrowing	2.3	2.4	1.9	1.6	1.5	1.3	1.1
Cyclically adjusted current budget deficit	0.2	0.3	0.0	-0.5	-1.1	-1.1	-1.3
Debt: Supplementary target							
Public sector net debt	85.8	86.5	86.4	86.1	83.1	79.3	79.1
	£ billion						
Revenue and spending							
Public sector current receipts	726.7	745.4	769.8	792.0	817.2	841.6	871.3
Total managed expenditure	772.4	795.3	809.3	826.7	849.9	871.7	896.8
Deficit: Current and previous fiscal mandate measures							
Cyclically adjusted net borrowing	43.0	48.0	37.9	32.3	29.7	28.1	25.0
Public sector net borrowing	45.7	49.9	39.5	34.7	32.8	30.1	25.6
Cyclically adjusted current budget deficit	4.3	6.2	0.0	-11.8	-24.0	-25.4	-29.9
Debt: Supplementary target							
Public sector net debt	1727	1791	1840	1885	1879	1853	1909

Changes in public sector net borrowing

- 1.25** Public sector net borrowing is expected to rise by £4.2 billion year-on-year in 2017-18 to £49.9 billion (2.4 per cent of GDP). It then falls both in cash terms and as a share of GDP in each subsequent year. The rise this year is largely due to timing effects that boosted receipts at the end of 2016-17 and should depress them at the end of 2017-18. The reclassification of English housing associations reduces PSNB from 2017-18 onwards as their own-account borrowing will now be recorded within the private sector.
- 1.26** As Chart 1.5 shows, borrowing is lower in 2017-18 but higher in each subsequent year relative to our March forecast restated on a comparable basis to our latest forecast – namely by excluding English housing associations from the public sector throughout and incorporating the various other ONS classification and methodological changes. On a pre-measures basis, borrowing would have troughed in 2019-20 and fluctuated in a narrow range thereafter. Thanks to the familiar pattern of Budget measures increasing borrowing in the near term but promising to reduce it by the end of the forecast, our post-measures forecast shows a smoother downward path for borrowing over the next five years.

Chart 1.5: Public sector net borrowing on a consistent definition



Source: ONS, OBR

1.27 Table 1.3 breaks down the changes in our borrowing forecast since March. First, it restates our March forecast consistent with current and prospective classification and methodological changes affecting the public finances data. Second, it breaks down our underlying forecast revisions into those due to recent public finances data and those that flow from our updated economy forecast and other factors. And third, it summarises the effect of Government decisions on borrowing, including those reported on the Treasury’s Budget scorecard and other decisions that the Treasury chooses not to present that way.

ONS classification and methodological changes

1.28 Two sources of change to the public finances data since March have affected our forecast. Restating our March forecast to be consistent with these changes involves:

- **Removing English housing associations’ own-account borrowing** from the point at which the reclassification takes effect. This results in a £1.4 billion downward revision in 2017-18 – a part-year effect – and average reductions of £3.7 billion a year from 2018-19 onwards. Central and local government grants to housing associations now count against public borrowing rather than being transfers within the public sector.
- **Factoring in Blue Book 2017 and other methodological and classification changes** that were reflected in the ONS’s September public finances release. This reduces borrowing by £1.5 billion a year on average across the forecast period, largely due to changes to imputed pensions spending associated with various funded pension schemes.

Underlying forecast revisions

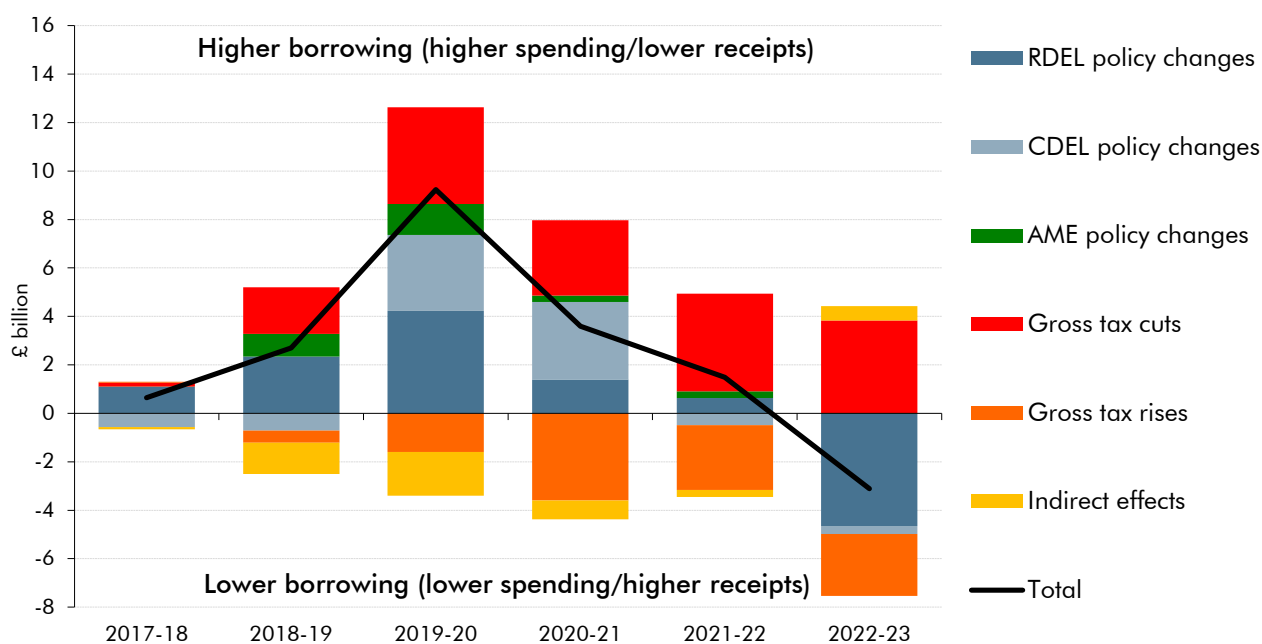
- 1.29 On a like-for-like basis, and before factoring in the effect of Government decisions, the revision to our borrowing forecast since March can be thought of in two parts. Recent data point to lower borrowing this year than we expected in March, which provides a more favourable starting point for the forecast. But the downward revision to our economy forecast provides a progressively less favourable path for borrowing thereafter.
- 1.30 As regards the recent data, borrowing in 2016-17 is now estimated to have been lower than our March forecast – by £6.1 billion in total and by £5.0 billion on a like-for-like basis. Borrowing in the first half of 2017-18 has also been lower than would be consistent with our March forecast. We still expect borrowing to rise this year, relative to 2016-17, but we have revised it down by £5.6 billion on a like-for-like basis.
- 1.31 The downward revision to borrowing in 2017-18 reflects:
- **PAYE income tax and NICs receipts** having been revised up by £1.9 billion. Receipts were £2.1 billion higher than expected last year, reflecting stronger-than-expected bonuses in the financial and business services sectors at the end of 2016-17. We have not changed our assumptions about bonus growth, so this feeds through to a higher level of bonuses this year and throughout the forecast.
 - **Departmental spending** having been revised down by £3.2 billion in 2017-18. This largely reflects greater-than-expected underspending against departments' plans. But one year's underspending does not necessarily provide a guide to what will happen in the next. We have not made large changes to our assumptions for 2018-19 onwards.
 - **Other receipts** having been revised up by £1.3 billion. This largely reflects a higher 2016-17 starting point, including for VAT, excise duties and interest and dividend receipts. Around £1 billion of the 2016-17 income tax surplus reflected a one-off income tax accounting charge so has not affected future years.
 - **Various annually managed expenditure lines** – including state pensions and tax credits in welfare spending, and EU contributions and tax litigation payments – having been revised down by £4.7 billion in total. The welfare spending effects are assumed to persist, but the EU and tax litigation revisions are largely timing effects.
- 1.32 Partly offsetting those factors, we have raised our 2017-18 forecast for self-financed spending by **local authorities** by £5.0 billion. Spending was £2.9 billion higher than expected in 2016-17, largely due to greater-than-expected use of prudential borrowing. We have assumed that this is repeated this year and that local authorities also draw down more heavily on reserves to finance current spending. These effects diminish thereafter.
- 1.33 Taken together, we have assumed that the majority of the downside borrowing surprise in 2017-18 will persist, reducing our deficit forecast from 2018-19 onwards.

- 1.34 As regards borrowing beyond 2017-18, underlying forecast revisions mean it falls by £23.8 billion less between 2017-18 and 2021-22 than on our restated March forecast, leaving an upward revision of £17.6 billion in 2021-22. The change in 2021-22 reflects our new judgement regarding the path of potential output. In particular:
- We have revised **productivity growth** down by 0.6 percentage points a year on average in the four years to 2021-22. This depresses growth in GDP and in the major tax bases, raising borrowing by £25.8 billion.
 - Partly offsetting that, we have revised up **average hours worked**, assuming a flat rather than a declining trend. This raises GDP growth, reducing borrowing by £7.4 billion.
 - We have revised down our estimate of the **sustainable unemployment rate**, which implies greater scope for GDP growth. This reduces borrowing by £3.3 billion.
 - The new **ONS population projections** assume slower growth in the working-age population (depressing the tax base), but also higher mortality at older ages (reducing spending on pensioner benefits). The net effect of these changes raises borrowing by £0.7 billion. These effects are set out in more detail in Box 4.1.
- 1.35 Other changes that flow from our revised economy forecast reduce borrowing in the short term but are largely offsetting by the end of the forecast. In the near term, they reflect the strength of growth in tax bases despite much weaker productivity growth than expected this year. Most significantly, growth in wages and salaries has actually been revised up by 0.5 percentage points in 2017-18, thanks to stronger-than-expected employment growth and a jump in the labour share as earnings have held up relative to productivity, squeezing profit margins in the process. Lower RPI inflation also reduces accrued interest on index-linked gilts. The largest fiscal forecast judgements relate to welfare spending, where we have revised up disability benefits and revised down expected savings from universal credit.

Government decisions

- 1.36 Budget measures and other Government decisions increase borrowing in all but the final year of our forecast. In the near term, net tax giveaways and a significant easing in the pace of spending cuts add £2.7 billion to borrowing in 2018-19 and a larger £9.2 billion in 2019-20 (0.4 per cent of GDP). In 2020-21 and 2021-22 the extent of the fiscal easing diminishes, while in 2022-23 the Government has pencilled in a cut in departmental resource spending as a share of GDP. The profile of these policy decisions means that while our pre-measures borrowing forecast troughs in 2019-20 and is uneven thereafter, our post-measures forecast shows borrowing falling relatively smoothly over the forecast period.

Chart 1.6: The effect of Government decisions on borrowing



Source: OBR

1.37 The key features of the Budget policy package include:

- **Higher departmental resource spending:** a temporary boost to the NHS and for Brexit preparations eases the pace of cuts previously planned for the next two years. The Government has also scaled back the ambition of its 2019-20 'efficiency review'.
- **Higher departmental capital spending:** NHS capital spending and various housing schemes have been expanded. The largest increases are in 2019-20 and 2020-21.
- **Net tax giveaways:** two large tax giveaways – the inevitable one-year freeze in fuel duty rates plus the introduction of a permanent stamp duty relief for first-time buyers of properties worth less than £500,000 – and a number of smaller ones are only partly offset by a raft of new anti-avoidance and evasion measures (focused on additional resources for HMRC) and freezing indexation allowance in the corporation tax regime (raising the effective tax rate companies actually pay relative to the headline rate).
- **Promised fiscal tightening in 2022-23:** the Government has pencilled in departmental spending totals for 2022-23 that would allow capital spending rise broadly in line with GDP, but hold current spending flat in real terms – thereby cutting it as a share of GDP and by 0.5 per cent in real per capita terms.

Table 1.3: Changes to public sector net borrowing since March

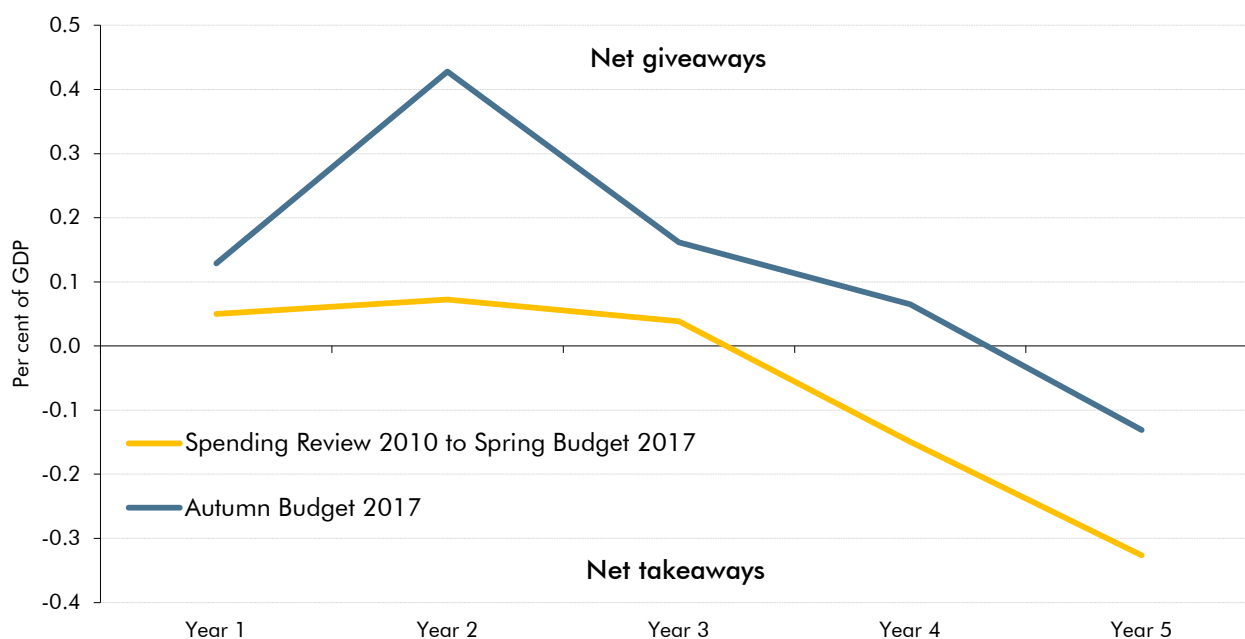
	£ billion						
	Outturn		Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
March forecast	51.7	58.3	40.8	21.4	20.6	16.8	
Reclassification of English HAs		-1.4	-3.9	-3.5	-3.4	-4.1	
Other ONS changes	-1.0	-1.3	-1.4	-1.5	-1.6	-1.7	
March forecast restated	50.7	55.5	35.5	16.3	15.5	11.0	
November forecast	45.7	49.9	39.5	34.7	32.8	30.1	25.6
Like-for-like difference	-5.0	-5.6	4.0	18.4	17.3	19.1	
Underlying forecast revisions	-5.0	-6.3	1.3	9.2	13.7	17.6	
of which:							
Latest data	-5.0	-6.3	-4.1	-5.7	-6.1	-6.6	
Productivity revision		9.0	14.6	18.3	22.8	25.8	
Average hours revision		-2.5	-4.1	-5.1	-6.3	-7.4	
Sustainable unemployment revision		-0.7	-1.6	-2.1	-2.7	-3.3	
Population projection changes		0.1	0.2	0.4	0.5	0.7	
Other economy forecast changes		-5.9	-3.4	-1.0	1.2	2.9	
Fiscal modelling and other factors		0.0	-0.3	4.3	4.3	5.4	
Total effect of Government decisions		0.7	2.7	9.2	3.6	1.5	-3.1
of which:							
Scorecard receipts measures		0.1	1.4	2.3	-0.6	1.3	1.1
Scorecard AME measures		0.0	0.2	1.4	0.4	0.4	0.1
Total RDEL policy changes ¹		1.1	2.3	4.2	1.4	0.6	-4.7
Total CDEL policy changes ¹		-0.6	-0.7	3.1	3.2	-0.5	-0.3
Non-scorecard receipts and AME measures		0.1	0.8	0.0	0.0	0.0	0.1
Indirect effects		-0.1	-1.3	-1.8	-0.8	-0.3	0.6
<i>Memo: November pre-measures forecast</i>	<i>45.7</i>	<i>49.2</i>	<i>36.8</i>	<i>25.5</i>	<i>29.2</i>	<i>28.6</i>	<i>28.7</i>
Overall change since March	-6.1	-8.4	-1.3	13.4	12.2	13.3	

¹ The change in 2022-23 is relative to a baseline that assumes DEL would otherwise have remained constant as a share of GDP.

Note: This table uses the convention that a negative figure means a reduction in PSNB, i.e. an increase in receipts or a reduction in spending will have a negative effect on PSNB.

1.38 Governments often announce Budget policy packages that deliver a net giveaway in the near term but promise a net takeaway in the longer term. This Budget has followed suit. Chart 1.7 shows how it compares to the average across all fiscal events since the 2010 Spending Review. The profile of loosening followed by tightening across the forecast period is the same, but with policy looser every year this time than the average. This ‘Augustinian’ profile is also reflected in the fact that fiscal policy was tightened for 2018-19 in the Autumn Statements of 2013 and 2014, but has been loosened at every subsequent fiscal event.

Chart 1.7: The average effect of Government decisions on borrowing



Source: OBR

Changes to public sector net debt

- 1.39 In March we expected public sector net debt (PSND) to peak at 88.8 per cent of GDP in 2017-18. We continue to expect it to peak this year, but at a lower 86.5 per cent of GDP. Most importantly, this reflects the reclassification of English housing associations to the private sector, which reduces PSND by 3.2 per cent of GDP. Partly offsetting that, we now expect the Bank of England's Term Funding Scheme (TFS) to lend £130 billion to banks by the end of February, up from the £90 billion we assumed in March. That adds 1.9 per cent of GDP to PSND at the end of 2017-18 relative to our March forecast.
- 1.40 We expect the debt-to-GDP ratio to fall by 0.1 percentage points between 2017-18 and 2018-19 – but only 0.03 percentage points on an unrounded basis. That reflects the precise calibration of Budget measures affecting borrowing, lending and asset sales, and the further increase in the TFS indemnity announced ahead of the Budget. Thereafter debt continues to fall as a share of GDP, with the largest falls in 2020-21 and 2021-22 due to the repayment of TFS loans at their 4-year term and the associated drop in Bank of England liabilities.
- 1.41 Beyond the effects of housing associations and TFS loans, the changes in our debt-to-GDP ratio forecast are driven by revisions to the path of GDP and our pre-measures fiscal forecast plus Government decisions announced in this Budget and since March. These are decomposed in Table 1.4, which shows that:
- **Nominal GDP** is higher in the near term, but lower from the middle of the forecast reflecting a weaker outlook for productivity growth and whole economy prices. That reduces the debt-to-GDP ratio in 2017-18, but raises it from 2019-20 onwards.

- Changes to our **pre-measures borrowing forecast** reduce debt up to 2019-20, thanks to the lower-than-expected outturn in 2016-17 and downward revision to 2017-18. But they increase it in the final two years as the cumulative effect of higher borrowing from 2018-19 onwards eventually offsets the more favourable starting point.
- Delayed **UKAR asset sales** increase debt in 2017-18, but with the sales moved into 2018-19 reduce debt in that year. As this delay was due to issues encountered in the sales process, we treat this as a forecast rather than a policy change. The Government has also announced plans to sell all UKAR's mortgage assets, which puts further downward pressure on debt. This is treated as a policy change.
- The effect of **gilt premia** has been revised down due to a slightly higher real yield curve reducing the extent of expected premia in future index-linked gilt auctions.
- A **variety of smaller forecast revisions** have generally reduced PSND. For example, exchange movements increase the value of the unhedged currency reserves in the near term, reducing net debt, but that then dissipates over the forecast.
- **Government decisions** push debt higher in all years and by increasing amounts. In terms of decisions affecting both borrowing and debt, the Government has announced a significant spending increase and smaller net tax giveaways. The cumulative effect adds £18 billion to debt by 2021-22. In terms of public sector lending, which affects net debt directly, the latest expansion of the Help to Buy equity loan scheme and other smaller measures, rolled forward in line with the Treasury's CDEL totals beyond the Spending Review period, add another £19 billion to debt by 2021-22. But the Government has partly offset this by announcing plans to sell RBS shares and to accelerate UKAR asset sales, cutting net debt by £20 billion.

Performance against the Government's fiscal targets

- 1.44 The *Charter for Budget Responsibility* requires the OBR to judge whether the Government has a greater than 50 per cent chance of achieving its fiscal targets under existing policy. The *Charter* has been updated a number of times in recent years as the Government has revised its fiscal targets. The latest version was approved by Parliament in January 2017.
- 1.45 The *Charter* states that the Government's objective for fiscal policy is to "return the public finances to balance at the earliest possible date in the next Parliament". At the time, this was expected to be the period from 2020 to 2025. Given the early General Election in 2017, it could now be interpreted as the period from 2017 to 2022. We consider it on both bases.
- 1.46 The *Charter* also sets out targets for borrowing, debt and welfare spending that require:
- The **structural deficit** (cyclically adjusted public sector net borrowing) to lie below 2 per cent of GDP by 2020-21.
 - **Public sector net debt** to fall as a percentage of GDP in 2020-21.
 - Welfare spending (excluding the state pension and payments closely linked to the economic cycle) to be below a **welfare cap** that was set for 2021-22, in line with our November 2016 forecast for that year. The Government set a 3 per cent margin for error above the cap, so the effective cap on spending is higher. It has also set out a methodology by which the effect of changes in our inflation forecast relative to November 2016 must be stripped out of the formal assessment of performance against the cap. That assessment must be made at the start of each Parliament, so following the early General Election we assess performance formally in this *EFO*.
- 1.47 Our central forecast implies that all three of these targets are on course to be met:
- **Fiscal mandate:** the structural deficit declines slowly from 2.3 per cent of GDP in 2017-18 to 1.3 per cent in 2020-21, thanks largely to current departmental spending being cut as a share of GDP (albeit by less than was planned in March). This means that the Government meets its target with a margin of 0.7 per cent of GDP. But this is 0.5 per cent of GDP smaller than we estimated in March – so the Government has lost slightly less than half its future room for manoeuvre, but with slightly less time left for things to go awry. This is despite the 0.2 per cent of GDP reduction in borrowing due to the Government's success in persuading the ONS to reclassify English housing associations out of the public sector. On a like-for-like basis, including the effect of other ONS revisions to the public finances data since March, the margin is 0.7 per cent of GDP smaller than it was in our previous forecast – losing half its future room for manoeuvre. This reflects a 0.5 per cent of GDP deterioration in our underlying forecast for the structural deficit and a 0.2 per cent of GDP fiscal loosening.
 - **Supplementary target:** public sector net debt falls by 3.0 per cent of GDP in 2020-21, down from 3.9 per cent in March due largely to the higher deficit forecast for that

year. The repayment of loans issued under the Bank's Term Funding Scheme at the end of their four-year term contributes 2.4 per cent of GDP to the year-on-year fall. The policy changes in the Budget and since March have little impact on the change in debt in that year. The same is true of the reclassification of housing associations.

- **Welfare cap:** the relevant welfare spending is forecast to be £1.0 billion higher than the cap in 2021-22 but £2.5 billion below the cap-plus-margin once the small adjustment for changes in our inflation forecast since November 2016 has been applied. On that basis, our formal assessment is that the terms of the cap are met. The policy changes in the Budget and since March have little material impact.

1.48 Achieving the broader balanced budget fiscal objective, interpreted as applying to 2025-26, looks challenging (although this lies beyond our formal forecasting horizon). In particular, it is a period in which population ageing will continue to exert upward pressure on spending, and more so than in recent years when the State Pension age has been rising. Interpreted as applying to 2022-23, the objective would be missed. That year lies within our forecast horizon, at which point we forecast a headline budget deficit of 1.1 per cent of GDP.

1.49 The uncertainties around our central forecast reflect those regarding the outlook for the economy and those regarding the performance of revenues and spending in any given state of the economy. We assess the robustness of our judgements in three ways:

- First, by looking at **past forecast errors**. If our central forecasts are as accurate as official forecasts were in the past, then there is a roughly 65 per cent chance that the structural deficit would be below 2 per cent of GDP in 2020-21.
- Second, by looking at the **sensitivity of the deficit to key features of the economy forecast**. The 0.7 per cent of GDP margin relative to the 2 per cent structural deficit ceiling would fall to zero if potential output were 1.3 per cent lower, if the effective tax rate were 0.7 per cent of GDP lower for structural reasons, or if the planned spending cuts – which reduce RDEL by 0.7 per cent of GDP between 2017-18 and 2020-21 – were not implemented.
- Third, by looking at **alternative economic scenarios**. We have considered the implications of two different paths for trend productivity growth – one in which it reverts to the average rate of 2.1 per cent a year that prevailed over the 35 years before the crisis and another in which it continues at its post-crisis average rate of just 0.2 per cent a year. As in our central forecast, we have assumed that the trend in average hours worked is inversely linked to productivity growth, so it is higher in the weak productivity scenario and lower in the strong one. We have assumed that the divergence from our central forecast of GDP in each scenario is concentrated in business investment and that house prices are geared to changes in household income. These scenarios have the expected fiscal consequences, with the deficit and debt higher in the weak productivity scenario and lower in the strong one. In terms of the fiscal targets, in the weak productivity scenario the fiscal mandate would be missed by 0.1 per cent of GDP but the supplementary debt target would still be met.

2 Developments since the last forecast

2.1 This chapter summarises:

- the main **economic and fiscal data** developments since our last forecast in March 2017 (from paragraph 2.2); and
- recent **external forecasts** for the UK economy (from paragraph 2.17).

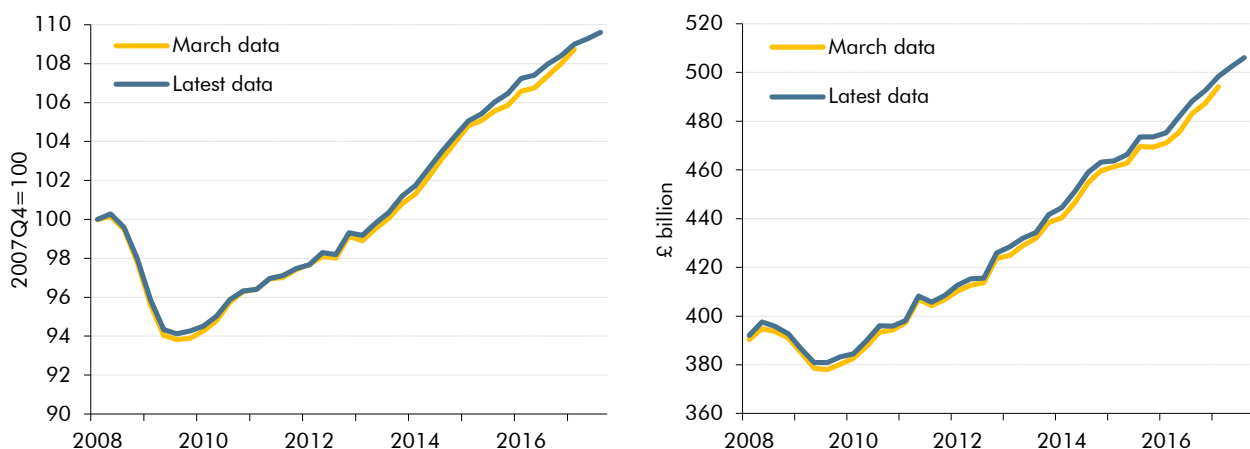
Economic developments

Data revisions and Blue Book 2017 changes

2.2 Each year, the publication of the Blue Book provides the Office for National Statistics (ONS) with an opportunity to make methodological changes to the National Accounts, on top of the normal quarterly process of incorporating new information into its estimates of GDP growth. A full list of this year's changes can be found in Blue Book 2017.

2.3 This year's changes had little overall effect on the paths of real and nominal GDP. As the left panel of Chart 2.1 shows, neither the peak-to-trough fall in real GDP during the recession nor the cumulative growth since have been revised significantly from the estimates available at the time of our March forecast. As the right-hand panel shows, the same is true of nominal GDP, although the cumulative effect of small revisions over the period has left the level 0.9 per cent higher by the end of 2016 than the estimate available in March.

Chart 2.1: Real and nominal GDP since the pre-crisis peak

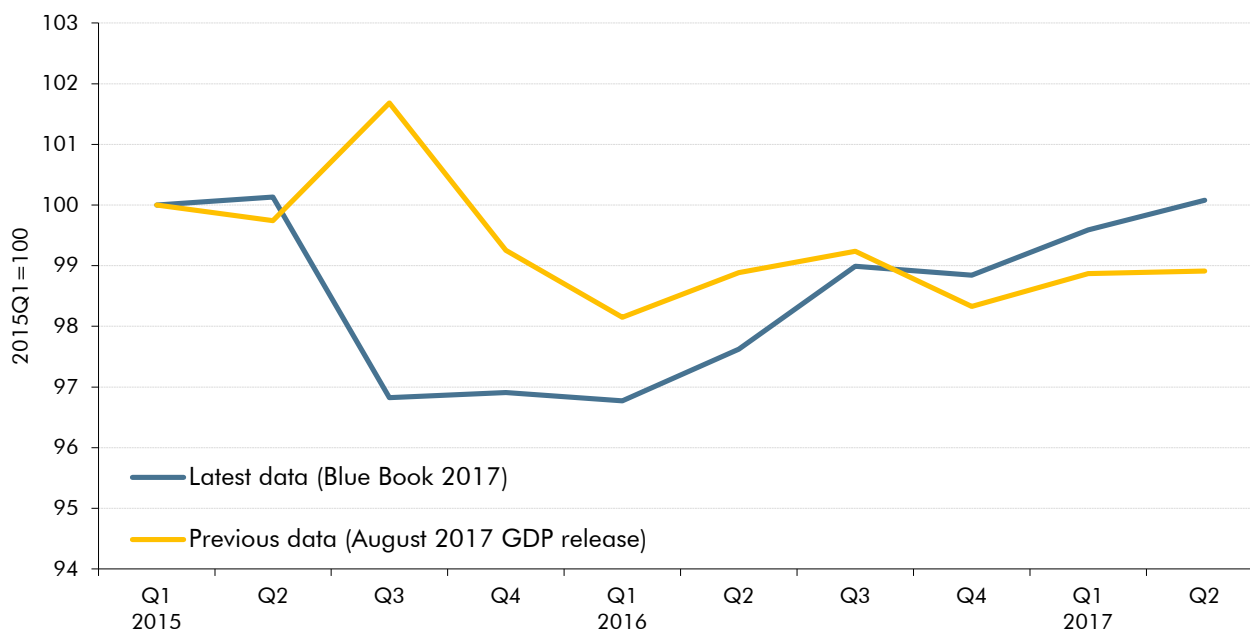


Source: ONS

2.4 More significant revisions related to the composition of expenditure and income:

- On the expenditure side, the path of **business investment** in the run-up to and after the referendum has been revised. Previous data suggested that business investment fell by just under 1 per cent in the year to the second quarter of 2016 and remained broadly flat over the subsequent four quarters. The latest data show it falling 2½ per cent in the year before the referendum then rising 2½ per cent in the year since (Chart 2.2). But the frequency and size of past revisions to the business investment data suggest that little weight should be placed on the precise quarterly path. Much of the increase in business investment in 2016Q3, for example, reflects investment in aircraft where the lags between orders and delivery are long. Furthermore, the strength in more recent quarters appears to be partly attributable to stronger commercial property investment, which could be partly related to the fall in the exchange rate.

Chart 2.2: Real business investment

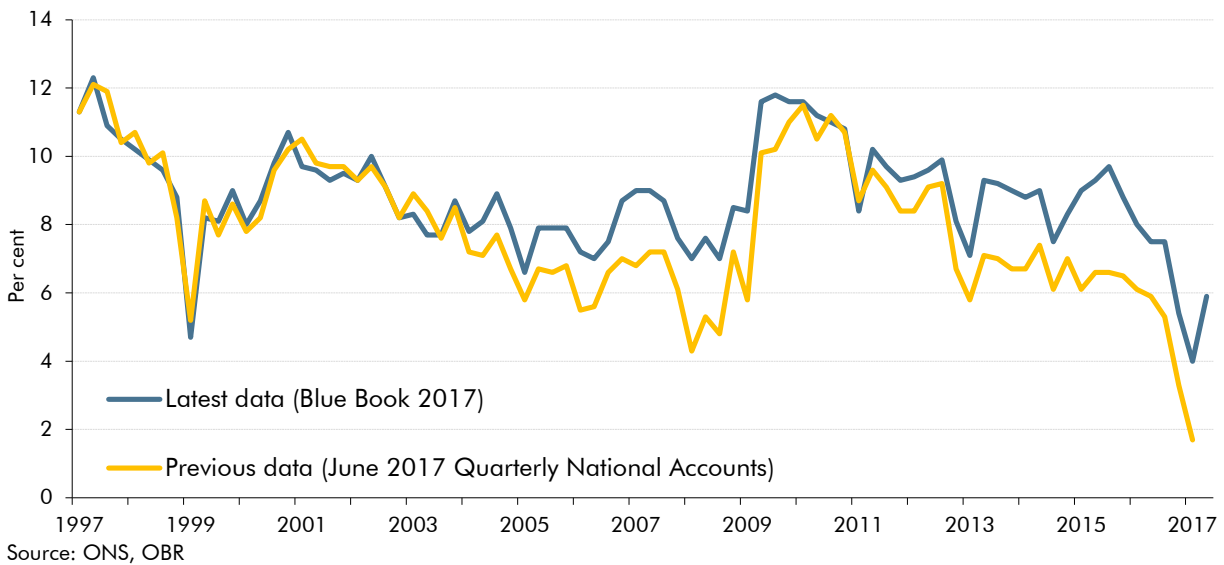


Source: ONS

- On the income side, the ONS has significantly revised up **dividend income received by households**. In recent years there has been an upward trend in the number of people setting themselves up as single-director companies ('incorporating').¹ One consequence is that households have received a growing share of their income as dividends from their own business rather than as wages and salaries or as self-employment income, but this had not been reflected in previous ONS estimates. The Blue Book revisions better capture this trend and show a much higher level of household dividend income than previously estimated (over five times higher in 2016 at £66 billion). Since these revisions affect income, but not household consumption, they have also led to upward revisions to the saving ratio (Chart 2.3).

¹ We set out the fiscal implications of the trend in incorporations in Box 4.1 of our November 2016 EFO.

Chart 2.3: Household saving ratio

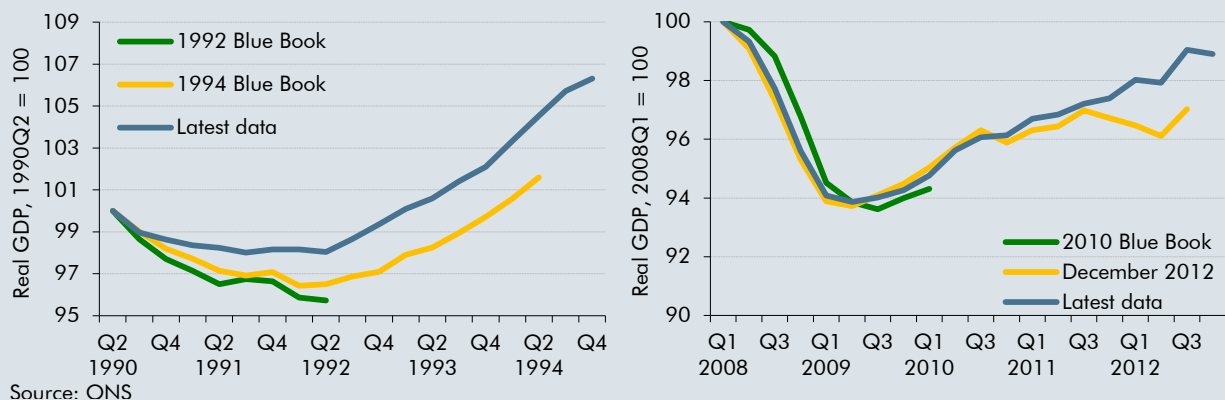


Box 2.1: Rewriting recent history: real GDP revisions

It is important to remember that the published GDP data for the past few years represent relatively early drafts of economic history and that the ONS may still be making significant revisions due to new information or the use of new methodologies many years later.⁹

Chart A sets out estimates of real GDP during and after the 1990-92 and 2008-09 recessions, comparing the latest available data with earlier data vintages. The path of GDP during and following the 1990-92 recession has been revised up significantly over time, with the peak-to-trough fall being revised down and the pace of the recovery revised up. Growth between the first quarter of 1992 and the second quarter of 1994 now stands at 6.5 per cent – around 1 percentage point faster than the estimates produced in 1994. Unlike the 1990-92 recession, the peak-to-trough fall in the 2008-09 recession has not (so far) been revised significantly. But the strength of the subsequent recovery has been revised up, as after the 1990-92 recession (although somewhat later in the recovery). The latest data show real GDP growth of 5.5 per cent between the second quarter of 2009 and third quarter of 2012 – around 2 percentage points faster than the estimates produced at the end of 2012.

Chart A: The changing profiles of the 1990s and 2000s recessions

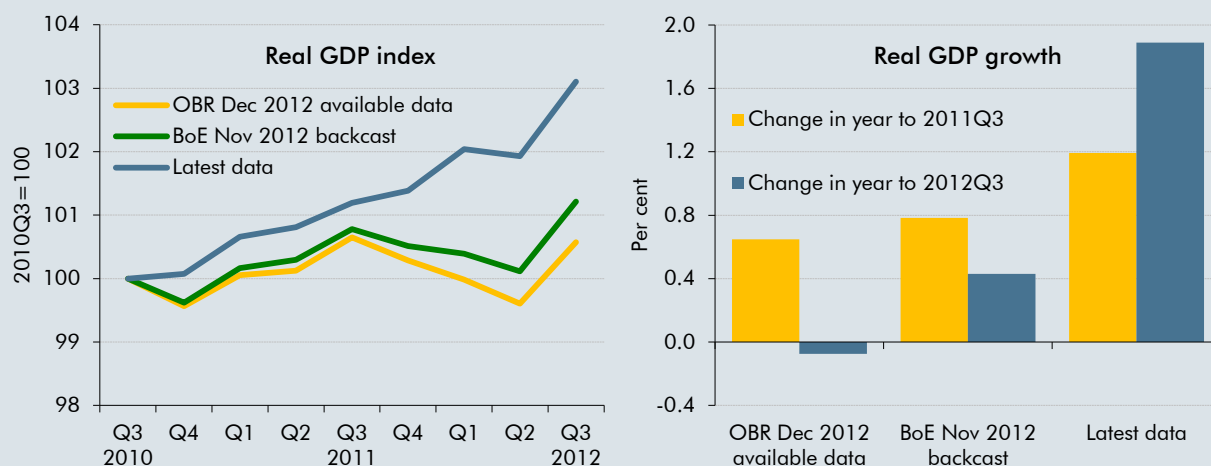


It is instructive to focus on the two-year period that preceded our December 2012 forecast, in which we made the second largest downward revision to our forecast for future GDP growth in any of our 16 EFOs to date. This was a period in which the Treasury and the Bank of England launched a number of schemes to support an apparently flat-lining economy against a backdrop of an intensifying euro area debt crisis that eventually prompted the President of the European Central Bank (ECB) to state that the ECB would do “whatever it takes to preserve the euro”.

Chart B compares the latest GDP data with the vintage available at the time of our December 2012 forecast and with the Bank of England’s November 2012 ‘backcast’ of how they were likely to be revised subsequently based on survey information, evidence from past revisions and the time series properties of the data.^b They show that:

- On the **available data**, GDP in the third quarter of 2012 was just 0.6 per cent higher than two years earlier and growth in the year to that quarter was negative.
- **The Bank’s backcast** suggested that output would be revised up, so that in the third quarter of 2012 GDP would be 1.2 per cent up on two years earlier and growth in the year to that quarter would be positive. However, the backcast still suggested that four-quarter growth had slowed compared with the year to the third quarter of 2011.
- But on the **latest data**, GDP in the third quarter of 2012 was 3.1 per cent up on two years earlier, with four-quarter growth having picked up from 1.2 per cent in the year to the third quarter of 2011 to 1.9 per cent over the subsequent year. The upward revisions have been broadly based across the private expenditure components of demand.

Chart B: Real GDP from 2010Q3 to 2012Q3



Source: Bank of England, ONS, OBR

^a We have produced a number of boxes that analyse recent revisions to economic data. A compendium of these can be found on the ‘box sets’ page of our website under the category ‘economic data revisions’.

^b Further details on how the Bank of England produces its backcast are set out in Cunningham, A. and Jeffrey, C., *Extracting a better signal from uncertain data*, Bank of England Quarterly Bulletin 2007Q3, September 2007.

GDP growth since our March 2017 forecast

- 2.5** Since our previous forecast, the ONS has published full National Accounts data for the first two quarters of 2017 and its preliminary GDP estimate for the third quarter. The second estimate for the third quarter, which contains a first estimate of nominal GDP and the expenditure composition of both real and nominal GDP, will be published on 23 November. We did not have pre-release access to those estimates for this *EFO*.
- 2.6** Our March 2017 forecast assumed that real GDP growth would slow in the second quarter of 2017 as higher inflation squeezed real incomes. The latest ONS data indicate that this slowdown came in the first quarter – one quarter earlier than we assumed in March, but one quarter later than we assumed in our November 2016 forecast. Real GDP growth was therefore slightly weaker over the first half of 2017 than we expected in March. As Table 2.1 shows, government investment and net trade were stronger than forecast. This was more than offset by weaker growth in private investment and government consumption, and a more negative contribution from stockbuilding. The preliminary estimate of growth in the third quarter was 0.4 per cent, slightly above our March forecast.

Table 2.1: Contributions to real GDP growth from 2016Q4 to 2017Q2

	Percentage points						GDP growth, per cent
	Private consumption	Government consumption	Government investment	Private investment	Net trade	Stocks	
March forecast	0.4	0.2	0.0	0.6	-0.2	-0.1	0.9
Latest data	0.4	0.1	0.0	0.3	0.0	-0.2	0.5
Difference ¹	0.0	-0.1	0.1	-0.3	0.2	-0.1	-0.3

¹ Difference in unrounded numbers, rounded to one decimal place.

Note: Components may not sum to total due to rounding and the statistical discrepancy. The statistical discrepancy is -0.1 percentage points for the latest data.

- 2.7** GDP deflator growth in the first half of 2017 was 0.2 percentage points higher than we forecast in March as stronger contributions from the terms of trade (reflecting both faster growth in export prices and slower growth in import prices) offset weaker growth in the consumption deflator. The downside surprise in the consumption deflator comes despite CPI inflation being a little higher than forecast, which is partly attributable to lower-than-expected growth of imputed rent.

Table 2.2: Contributions to GDP deflator growth from 2016Q4 to 2017Q2

	Percentage points							Deflator inflation, per cent
	Private consumption	Government consumption	Government investment	Private investment	Exports	Imports	Stocks	
March forecast	0.9	0.2	-0.1	0.2	0.2	-0.6	0.0	0.7
Latest data	0.6	0.1	0.0	0.2	0.5	-0.4	0.0	1.0
Difference ¹	-0.3	0.0	0.1	0.0	0.3	0.2	0.0	0.2

¹ Difference in unrounded numbers, rounded to one decimal place.

Note: Components may not sum to total due to rounding, the statistical discrepancy, and changing weights. Contributions are calculated on a fixed weight basis, except the stocks contribution which includes the effects of price and volume changes.

Developments since the last forecast

- 2.8 Nominal GDP growth in the first half of 2017 was in line with our March forecast, as weaker than expected real GDP growth was offset by higher GDP deflator inflation. Weaker growth in private and government consumption was offset by a stronger contribution from net trade, largely due to the stronger terms of trade. Contrary to our forecast, net trade added to nominal GDP growth in the first half of the year as the trade deficit narrowed by £0.8 billion rather than widening by £3 billion.

Table 2.3: Contributions to nominal GDP growth from 2016Q4 to 2017Q2

	Percentage points						GDP growth, per cent
	Private consumption	Government consumption	Government investment	Private investment	Net trade	Stocks	
March forecast	1.3	0.3	-0.1	0.8	-0.6	-0.1	1.6
Latest data	1.0	0.2	0.0	0.5	0.2	-0.3	1.5
Difference ¹	-0.3	-0.2	0.1	-0.4	0.8	-0.1	0.0

¹ Difference in unrounded numbers, rounded to one decimal place.

Note: Components may not sum to total due to rounding and the statistical discrepancy.

Conditioning assumptions

- 2.9 The increase in dollar oil prices between the end of 2016 and third quarter of 2017 was slightly lower than implied by futures prices at the time we finalised our March forecast. Despite this, actual and futures prices for the final quarter of 2017 now suggest the dollar oil price will average 3 per cent above our March assumption (Table 2.4). Our conditioning assumption for the sterling effective exchange rate in the fourth quarter is slightly higher than in March. Sterling is stronger relative to the dollar but weaker relative to the euro. The FTSE all-share equity price index has risen slightly more than we assumed in March. Mortgage interest rates this year have fallen by slightly more than we expected in March, as lenders' implied margins have narrowed.

Table 2.4: Conditioning assumptions in 2017Q4

	Oil price (\$ per barrel)	US\$/£ exchange rate	€/£ exchange rate	ERI exchange rate (index)	Equity prices (FTSE all-share index)	Mortgage interest rates (%) ¹
March forecast	56.8	1.25	1.16	77.1	4022	2.65
Latest assumption	58.4	1.32	1.13	77.7	4121	2.53
Per cent difference	3.0	5.5	-3.1	0.7	2.5	-0.12

¹ Difference is in percentage points.

Labour market

- 2.10 In the third quarter of 2017, unemployment was lower and employment higher than we forecast in March. Average hours worked were slightly higher than we expected. Taken together, total hours worked increased by 0.9 per cent in the year to the third quarter of 2017, compared with our March forecast of just 0.4 per cent growth. As real GDP growth in this period was weaker than expected, productivity growth was significantly weaker than

expected: output per hour increased by only 0.6 per cent between the third quarter of 2016 and the third quarter of 2017 rather than rising by 1.5 per cent as we forecast in March.

- 2.11 Whole economy average earnings growth in the year to the second quarter was 2.0 per cent, somewhat weaker than the 2.4 per cent growth we forecast in March. The National Accounts measure of earnings we use is not yet available for the third quarter, but average weekly earnings shows 2.2 per cent annual growth, slightly stronger than our forecast.

Inflation

- 2.12 CPI inflation moved above the Bank of England's 2 per cent target at the start of the year as the fall in the pound fed through to higher import price inflation. Annual CPI inflation for the third quarter of 2017 was 2.8 per cent, 0.2 percentage points higher than our March forecast. CPI inflation was 3.0 per cent in October, unchanged from September.

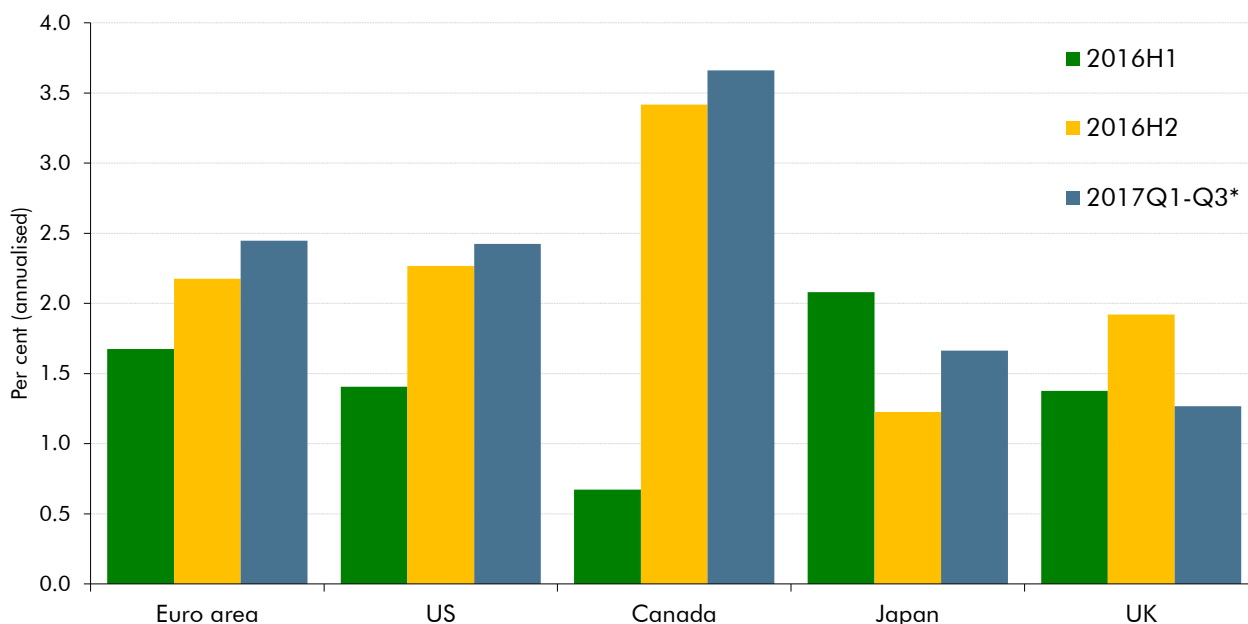
Housing market

- 2.13 Since our March forecast the ONS has revised down its estimates of house price inflation in 2016. The latest estimate suggests that it averaged around 6 per cent in the second half of 2016, down from an estimate of around 7 per cent at the time of our March forecast. Annual house price inflation slowed in the first half of 2017, picking up slightly to 5 per cent in the third quarter, a little lower than we expected in March. We had only two months' data for the third quarter when our pre-measures forecast was closed, which explains the 0.2 percentage point difference between our forecast and the outturn. Major lenders report slightly lower house price inflation. In the year to October, the Halifax index was up 3.6 per cent, while the Nationwide index was up 2.5 per cent. Property transactions have been weaker than we expected in March, with just over 610,000 transactions recorded in the first half of 2017, just over 3 per cent lower than we expected in March.

The global economy

- 2.14 GDP in the euro area grew at an annualised rate of 2.4 per cent in the first three quarters of 2017, up slightly from the 2.2 per cent pace in the second half of 2016 and significantly higher than the 1.7 per cent in the first half of 2016. Growth in the US has also picked up, with annualised growth of 1.4 per cent in the first half of 2016, 2.3 per cent in the second half of 2016 and 2.4 per cent in the first three quarters of 2017. Growth in Canada has risen sharply from the subdued rates seen in the first half of 2016, while growth in Japan picked up in the first three quarters of 2017 compared to the second half of 2016. The pattern of strengthening growth across the other major advanced economies this year contrasts with the slower pace of growth in the UK (Chart 2.4). Inflation in the major advanced economies has fallen back after peaking in the first quarter of 2017 as energy price inflation eased.

Chart 2.4: Recent real GDP growth in the major advanced economies



*Jan-Aug 2017 for Canada
Source: Datastream, Statistics Canada

2.15 GDP growth in the larger emerging economies has been mixed. In China, GDP was reported to have risen by 6.8 per cent in the year to the third quarter of 2017 – broadly in line with previous quarters. Growth has slowed in India, with output in the second quarter up 6.8 per cent on a year earlier, compared with 7.6 per cent in the year to the second quarter of 2016. By contrast, Brazil emerged from recession in the second quarter of 2017.

Fiscal developments

2.16 Public sector net borrowing (PSNB) in the first six months of 2017-18 was £2.5 billion lower than in the corresponding period last year, while borrowing in 2016-17 is currently estimated to be £5.0 billion lower than we expected in March (on a like-for-like basis). As described in Box 3.1 of our 2017 *Forecast evaluation report*, the surprise in 2016-17 almost entirely reflected downward revisions to borrowing since the first ONS estimate was published in April. These were broadly based, with receipts revised up and central government spending revised down. The fall in borrowing in the first half of 2017-18 – relative to a lower-than-expected base in 2016-17 – implies a more favourable fiscal position this year than assumed in March, although, as discussed in Chapter 4, not all that good news is expected to carry through into future years.

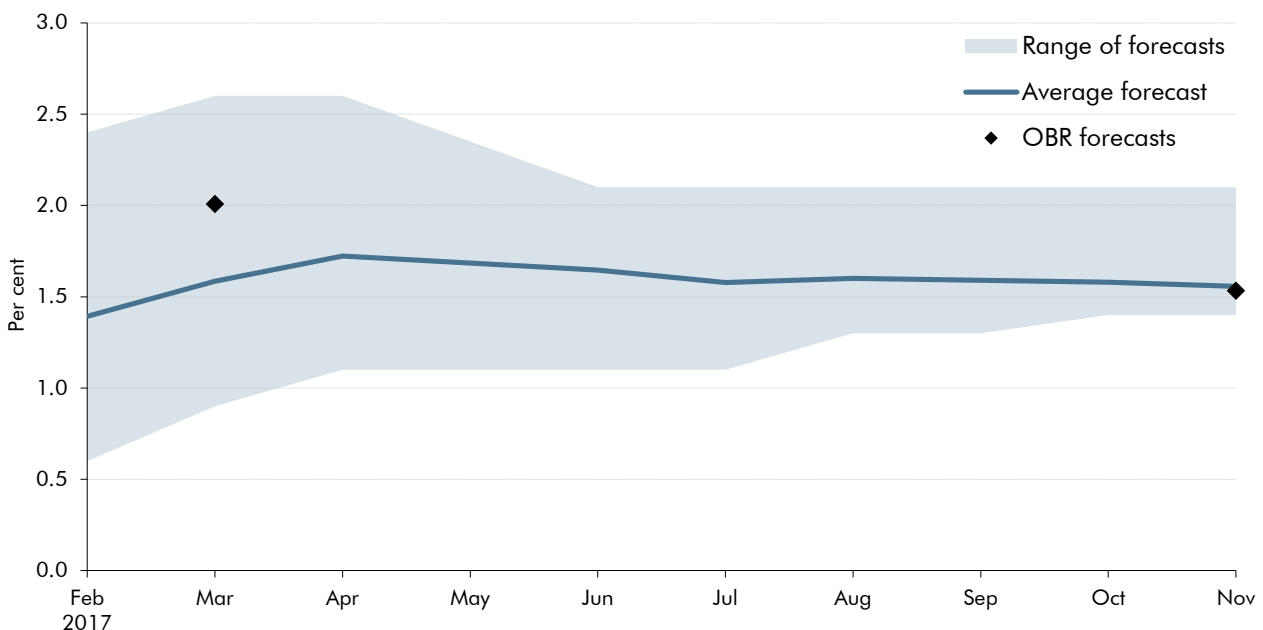
Developments in outside forecasts

2.17 Many private sector, academic and other outside organisations produce forecasts for the UK economy.² This section sets out some of the movements in these forecasts since our March *EFO*. When interpreting the average of outside forecasts, it is important to bear in mind that different analysts forecast different variables and the average across these forecasts does not necessarily provide an internally coherent story.

Real GDP growth

2.18 Expectations for GDP growth in 2017 have stabilised at 1.6 per cent since June, having picked up earlier in the year (Chart 2.5). The average forecast for 2017 of 1.6 per cent is slightly higher than our current forecast of 1.5 per cent, which we have revised down by 0.5 percentage points since March. The narrowing of the range of forecasts for 2017, and the limited variation in average growth forecasts for 2018 (Chart 2.6), is likely to reflect the relative stability of quarterly growth outturns to date in 2017. The average forecast for GDP growth in 2018 is equal to our latest forecast at 1.4 per cent.

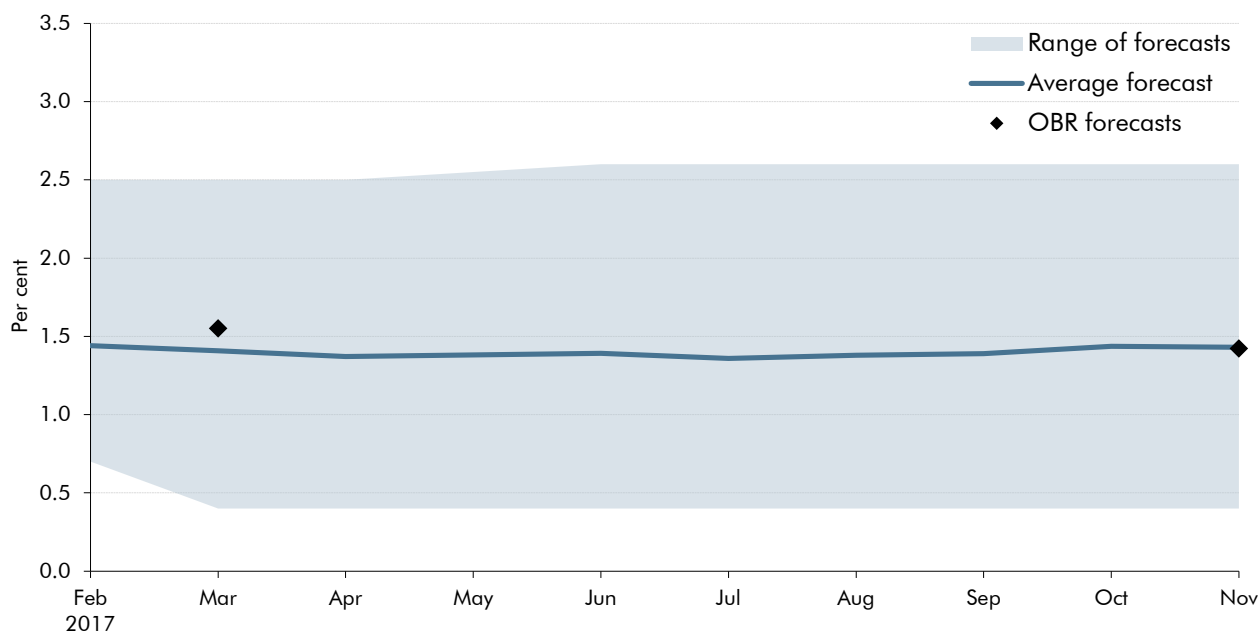
Chart 2.5: Forecasts for real GDP growth in 2017



Source: HM Treasury, OBR

² See HM Treasury, November 2017, *Forecasts for the UK economy: a comparison of independent forecasts*. A full list of contributors is available at the back of the Treasury publication. A number of financial reporting services also monitor average or consensus figures.

Chart 2.6: Forecasts for real GDP growth in 2018



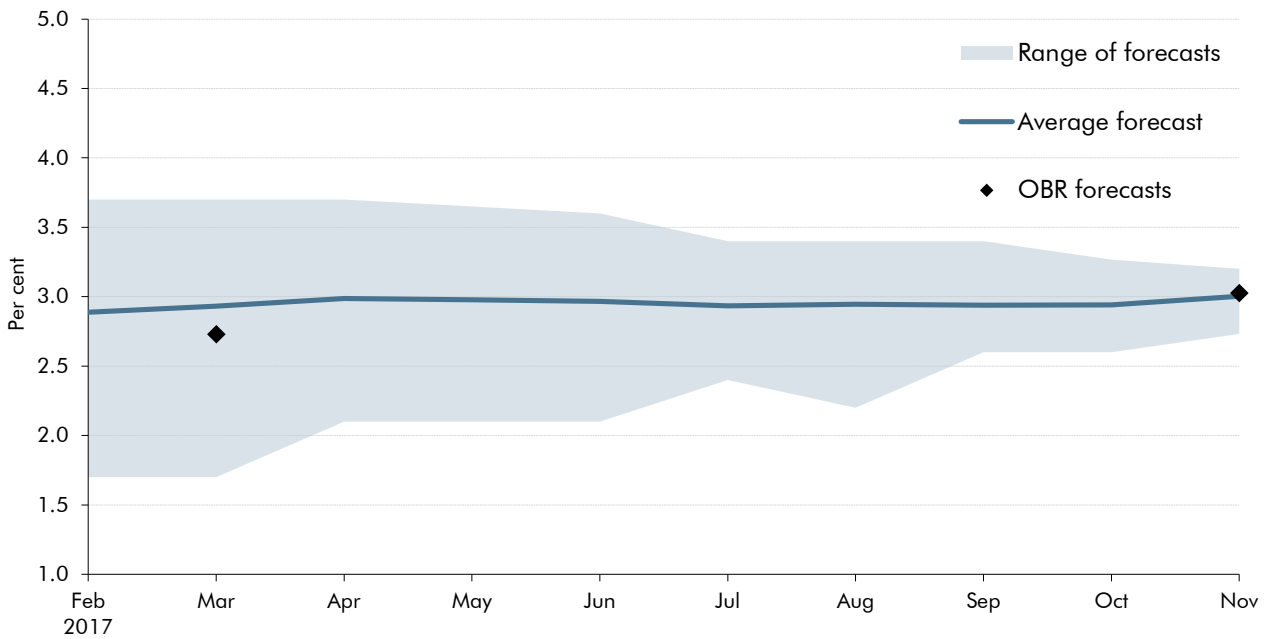
Source: HM Treasury, OBR

2.19 The smaller sample of medium-term forecasts indicates a similar outlook for GDP growth in 2019 and 2020 to that outlined in our March *EFO*. The average forecast for 2019 has fallen from 1.8 to 1.7 per cent, while the average for 2020 remains unchanged at 2.0 per cent. Since March we have revised down our forecasts for GDP growth in both years to 1.3 per cent. This has moved our forecasts further below the average.

Inflation

2.20 The latest average forecast for CPI inflation in the fourth quarter of 2017 has risen to 3.0 per cent, having stood at 2.9 per cent between July and October (Chart 2.7). Our current forecast is in line with the average, having been revised up by 0.3 percentage points relative to our March forecast.

Chart 2.7: Forecasts for CPI inflation in 2017Q4

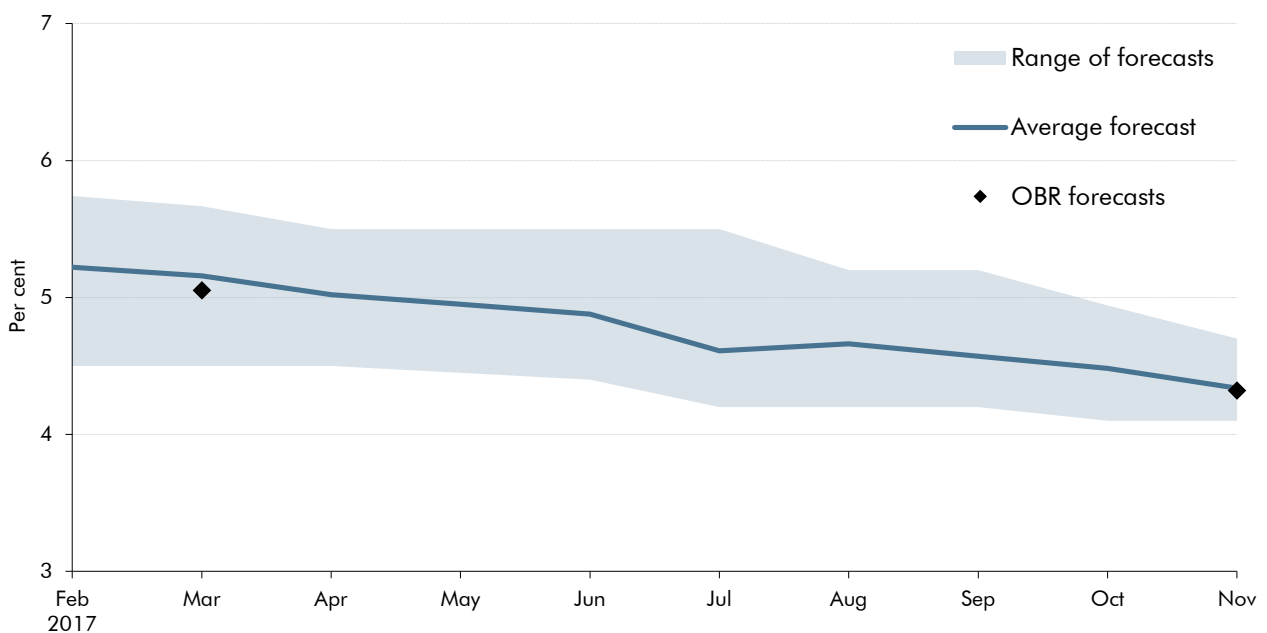


Source: HM Treasury, OBR

Labour market

2.21 The latest average forecast for the unemployment rate in the fourth quarter of 2017 is 4.3 per cent, down from 5.2 per cent in March (Chart 2.8). Our latest forecast has also been revised down significantly since March, from 5.1 to 4.3 per cent, reflecting the continuing downward trend in the outturn data. We expect employment growth of 1.1 per cent in 2017, in line with the average forecast and up from the 0.6 per cent we forecast in March.

Chart 2.8: Forecasts for the unemployment rate in 2017Q4



Source: HM Treasury, OBR

Public finances

- 2.22 The latest average forecasts for PSNB in 2017-18 and 2018-19 have fallen since March to £54.6 billion and £45.7 billion respectively, no doubt reflecting the downward revisions to ONS estimates of borrowing in 2016-17 and the continued year-on-year falls seen so far this year. It is unlikely that any of these forecasts yet reflect the reclassification of English housing associations to the private sector. Relative to March, on a like-for-like basis that excludes the reclassification effect, our central forecast for borrowing in 2017-18 is lower but our forecast for 2018-19 is higher – largely due to the effects of Budget measures.
- 2.23 The average of the smaller sample of medium-term forecasts suggests that borrowing will fall materially in 2019-20 but stabilise thereafter. On a pre-measures basis, our current forecast would show a similar path. But after factoring in the effect of Budget policy decisions, it shows a steadier downward path over the next five years.
- 2.24 As well as reflecting differences in views about the economic outlook, external forecasts may base their judgements on what they consider to be the most likely path of fiscal policy. Parliament requires us to base our forecasts solely on the Government's stated current policies and we therefore do not consider alternative policy paths. Outside forecasters may also have made different assumptions about the fiscal consequences of Brexit, beyond those captured by their views on what Brexit will mean for the economy – for example about contributions to the EU after March 2019 and any offsetting spending on other priorities.

3 Economic outlook

Introduction

3.1 This chapter:

- describes the assumptions that we have made in respect of **the UK's forthcoming exit from the EU** and assesses our post-referendum judgements against the early evidence on how the economy has performed since the vote (from paragraph 3.2);
- sets out our estimates of the amount of **spare capacity** in the economy and our judgement regarding the **growth in the economy's productive potential** that underpin our forecasts for actual GDP growth (from paragraph 3.7);
- describes the key **conditioning assumptions** for the forecast, including monetary policy, fiscal policy and the world economy (from paragraph 3.31);
- sets out our short- and medium-term **real GDP growth forecasts** (from paragraph 3.51) and the associated outlook for **inflation** (from paragraph 3.61) and **nominal GDP** (from paragraph 3.73);
- discusses recent developments and prospects for the household, corporate, government and external **sectors of the economy** (from paragraph 3.76); and
- outlines **risks and uncertainties** (from paragraph 3.149) and compares our central forecast with those of selected external organisations (from paragraph 3.151).

Assumptions regarding the UK's exit from the EU

Brexit assumptions

3.2 The OBR is required by legislation to produce its forecasts on the basis of current government policy (but not necessarily assuming that particular objectives will be met). With negotiations over the UK's exit from the EU ongoing, this is not straightforward. We asked the Government if it wished to provide any additional information on its current policies in respect of Brexit that would be relevant to our forecasts. As set out in the Foreword, it directed us to the Prime Minister's Florence speech from September and a white paper on trade policy published in February. These include the Government's proposal for a time-limited implementation period to follow the UK's exit from the EU in March 2019. But as with other elements of the exit process, whether such an implementation period is secured depends on the outcome of the negotiations.

3.3 Given the uncertainty regarding how the Government will respond to the choices and trade-offs it faces during the negotiations, we still have no meaningful basis on which to form a judgement as to their final outcome and upon which we can then condition our forecast. Moreover, even if the outcome of the negotiations were predictable, considerable uncertainty would remain regarding their associated economic and fiscal consequences and whether a particular outcome would prompt any changes to monetary policy. We have therefore maintained the same broad-brush assumptions regarding Brexit that underpinned our November 2016 and March 2017 forecasts. Specifically, as regards the economy forecast, we assume that:

- **The UK leaves the EU in March 2019** – two years after Article 50 was invoked.
- **The negotiation of new trading arrangements with the EU and others slows the pace of import and export growth over the 10 years following the referendum.** We calibrated this slowdown on the basis of a range of external studies of different possible trade regimes and assumed offsetting impacts from exports and imports on GDP growth.
- **The UK adopts a tighter migration regime following departure from the EU than that currently in place,** but not sufficiently tight to reduce net inward migration to the desired ‘tens of thousands’.

3.4 These assumptions will, of course, be updated once more information about the outcome of the negotiations becomes available.

Post-referendum forecast judgements

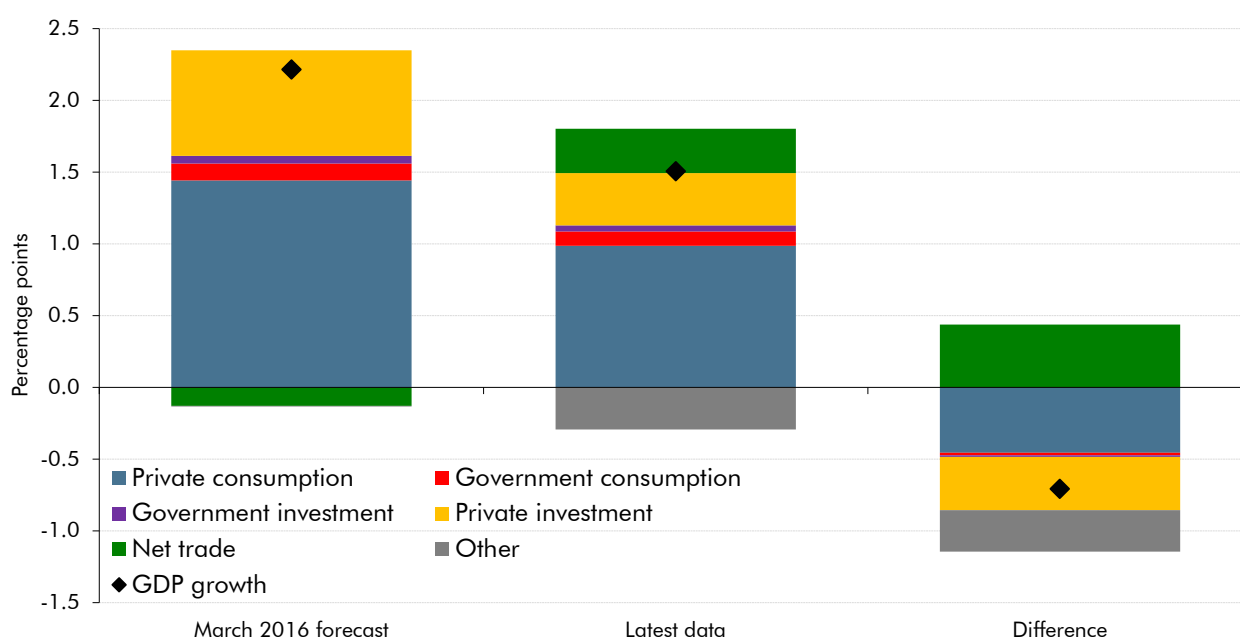
3.5 As well as these broad-brush assumptions about the Brexit process, our recent forecasts have incorporated specific judgements regarding the impact of the referendum result on the UK economy in the short term, some of which can now be compared to outturns:

- The vote to leave the EU would be associated with lower **net inward migration**, partly due to weaker ‘pull factors’, such as a fall in the value of UK wages in prospective immigrants’ home currencies due to the depreciation of the pound. The latest data do suggest that net inward migration has slowed, consistent with the expected weakening of pull factors. The ONS has revised down medium-term net migration slightly in the latest projections it published in October (see paragraph 3.18 for more details).
- The fall in the pound prompted by the vote would raise inflation, squeezing both real incomes and real **consumer spending**. This judgement seems broadly on track, with CPI inflation well above our March 2016 forecast and higher even than our upwardly revised November 2016 forecast. But real consumption appears to have held up slightly better than expected as household saving has fallen back.
- The referendum result would raise uncertainty surrounding future demand conditions, especially in internationally tradable sectors, leading to some **investment** projects being postponed or cancelled. Business investment has indeed been much weaker than our

March 2016 forecast, although slightly above our November 2016 forecast according to the latest data. The quarterly profile shows it falling slightly in the year before the referendum but rising slightly thereafter. However, recent outturns appear to be affected by unusually large contributions from investment in aircraft, where the lags between orders and delivery are long, as well as strong growth in commercial property activity. More generally, the business investment data are both highly volatile and liable to significant revision so it is unwise to place too much weight on the precise quarterly path shown in any particular vintage of the data.

- The depreciation of sterling would boost **net trade**. The contribution to growth of net trade has indeed risen, but the boost has been more modest than we expected in our November 2016 forecast – in part because domestic demand (and therefore import) growth has been stronger than we expected. In March 2016, we had expected net trade to drag on GDP growth.
- As we expected in our November 2016 forecast, the boost to net trade has been insufficient to offset the slowdown in domestic demand growth and **real GDP growth** overall has come in below our pre-referendum March 2016 forecast (Chart 3.1).

Chart 3.1: Contributions to real GDP growth between 2016Q2 and 2017Q2

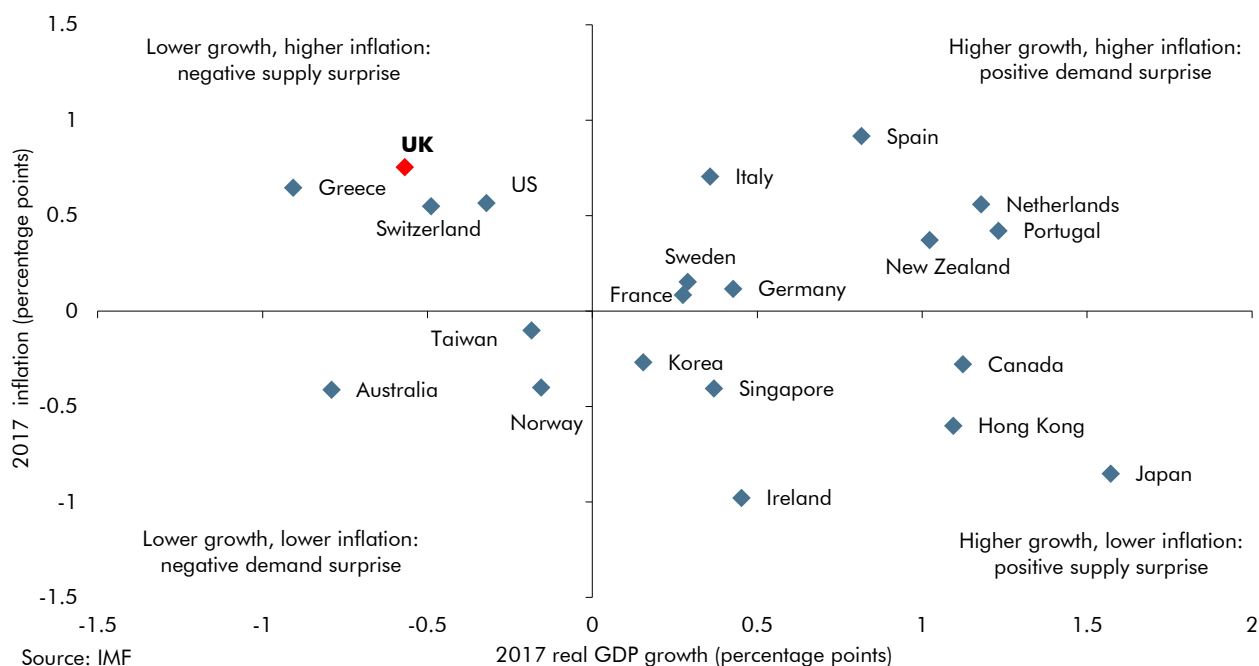


Source: ONS, OBR

3.6 The pattern of inflation and GDP growth since the referendum is consistent with an adverse shock to the economy's future capacity to supply goods and services – i.e. inflation is higher than expected, even though demand and GDP growth are both weaker. Among advanced economies, this pattern of forecast revisions is unusual for this year. Chart 3.2 shows how the IMF revised its forecasts for GDP growth and inflation in 2017 across 21 advanced economies between its April 2016 and October 2017 *World Economic Outlooks*. Two thirds of countries have seen growth revised up, with a broadly even split between those where

inflation has also been revised up (mainly in Europe) and where inflation has been revised down (mainly in Asia). Only four countries, of which the UK is one, have seen growth revised down while inflation has been revised up.

Chart 3.2: IMF forecast revisions for 2017: October 2017 versus April 2016



The output gap and potential output

3.7 Judgements about the margin by which economic activity currently exceeds or falls short of its sustainable level (the 'output gap') and about the future growth rate of potential output provide the foundations of our forecast. Together they determine the scope for growth in GDP over the next five years when the Bank of England is pursuing an inflation target. GDP growth is a key driver of the overall budget deficit and the path of public sector debt.

3.8 Estimating the output gap allows us to judge the size of the structural budget deficit – in other words, the deficit that would be observed if the economy were operating at its sustainable level.¹ When the economy is running below potential, part of the headline deficit will be cyclical, and would therefore be expected to diminish as the output gap closes and above-trend growth boosts revenues and reduces spending. The Government has a target – the 'fiscal mandate' – for the structural deficit in 2020-21.

3.9 In this section, we first describe a change to our assessment of the degree of spare capacity in the labour market. This forms part of our assessment of the gap between the current level of economic output and the economy's potential. We then consider the pace at which potential output is likely to grow in the future. Next, we describe our central forecast for the path that actual output is likely to take, relative to its potential over the next five years. These estimates relate to output excluding the small but volatile oil and gas sector so, lastly, we have to add on a forecast for oil and gas production to complete our GDP forecast.

¹ The methodology we use is described in Helgadottir et al (2012): OBR Working Paper No.3: *Cyclically adjusting the public finances*.

Spare capacity in the labour market

- 3.10 In this forecast, we have reviewed our judgement about the degree of slack or overheating in the labour market. In March 2017, we reduced our estimate of the equilibrium rate of unemployment at the start of the forecast period to 5.0 per cent of the labour force, rising to 5.1 per cent by the end of the period as the National Living Wage (NLW) rises faster than productivity growth.² The downward revision reflected the fact that unemployment had fallen below our previous estimate of the equilibrium rate with little apparent impact on wage growth. Unemployment has continued to fall since then and wage growth has remained subdued. On this basis, we have lowered our estimate of the sustainable rate to 4.5 per cent. We continue to assume that the planned increases in the NLW will raise it a little between now and 2020, so at the end of our forecast the rate is 4.6 per cent.
- 3.11 There are other possible explanations – not mutually exclusive – for why the ‘Phillips curve’ relationship between lower unemployment and higher wage inflation may have changed. The Phillips curve could have flattened so that recent tightening in the labour market generates little upward pressure on wage growth. If the curvature of the Phillips curve has changed, then falls in the unemployment rate could still have a significant impact on wage pressures, but only when unemployment is sufficiently low. Or the Phillips curve could have shifted for reasons other than a change in the NAIRU – for example, a change in the ‘target’ wage – so that a given level of unemployment is now consistent with a lower level of wage growth. A flattening of the curve would imply that monetary policy would need to work harder to control inflation – moving interest rates by more to achieve a desired outcome. A shift in the curve would be consistent with the economy adjusting to a lower level of potential productivity growth by accepting lower rates of real pay growth.³

The latest estimates of the output gap

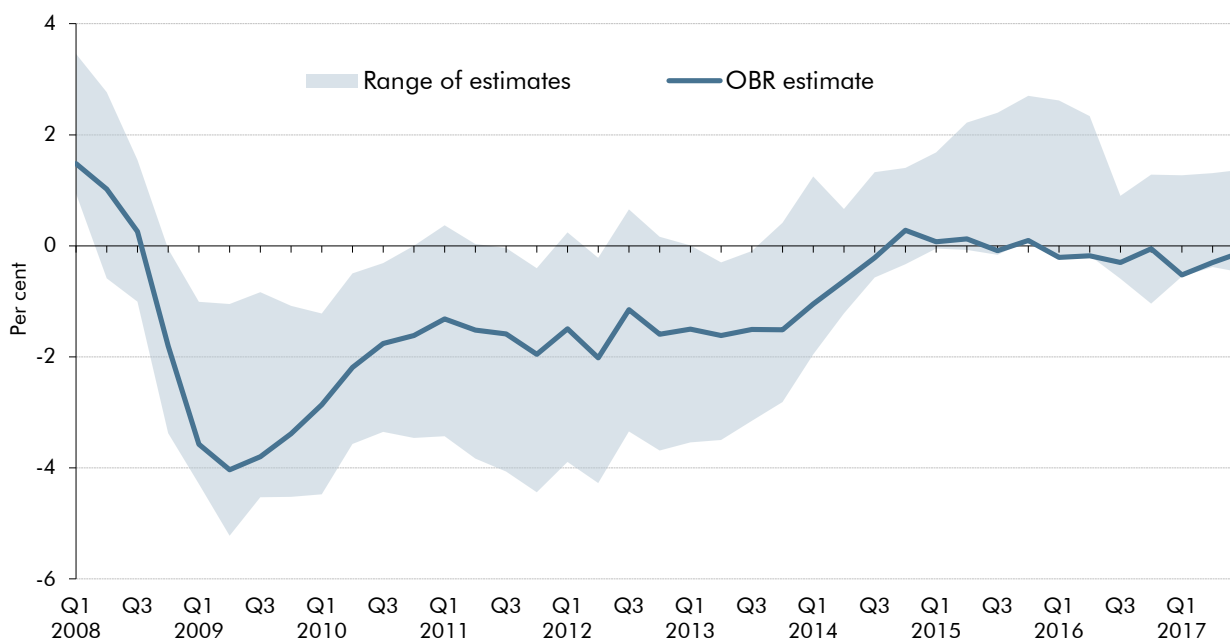
- 3.12 One of the first steps in our forecast is to assess how economic activity compares with the sustainable level consistent with stable inflation in the long term (‘potential output’). Potential output cannot be observed directly, but various techniques can be used to infer it indirectly, including cyclical indicators based on surveys, statistical filters and production functions. Every method has its limitations and none avoids the need to exercise judgement. We therefore consider a broad range of evidence afresh at each forecast. Since our December 2014 *EFO*, we have looked at estimates of the output gap implied by nine different techniques in order to inform our judgement and particularly the path of those indicators upon which we place most weight. The swathe implied by these estimates is shown in Chart 3.3 and methodological details, along with some of the strengths and weaknesses of each approach, were set out in *Working Paper No.5: Output gap measurement: judgement and uncertainty*, available on our website. We sense-check our judgement by considering the profile it implies against output growth and the unemployment rate.

² See Annex B of our July 2015 *Economic and fiscal outlook* for more details on the economic impact of the NLW.

³ See speech by Sir Jon Cunliffe, 14 November 2017, *The Phillips curve: lower, flatter or hiding?*, for more details on possible explanations for a change in the relationship between unemployment and pay growth.

3.13 We have revised our historical estimate of the output gap since March, particularly for the period since 2013. This was driven by revisions to non-North Sea GVA, which show markedly stronger growth in 2014 than earlier vintages of data. For this period, we have based our estimates on the production function model, where we have imposed a NAIU that falls gradually from 2011, as the economy began to recover from the post-crisis recession, possibly related to the unwinding of post-crisis hysteresis effects or employment-friendly reforms to welfare spending. The NAIU reaches 4.5 per cent in the latest quarter, consistent with our wider judgement discussed above. The revised profile involves the output gap narrowing more sharply in 2014 than was assumed in March. We judge that the economy was operating slightly below potential in the second quarter of 2017 – by 0.3 per cent. This represents more spare capacity than we expected in March, by 0.5 per cent, consistent with the downward revision to the NAIU. The estimate lies towards the bottom of the swathe of indicators shown in the chart.

Chart 3.3: Range of output gap model estimates



Source: OBR

3.14 In the third quarter of 2017, output growth was slightly stronger than our March forecast and some of the survey indicators also suggest that some further slack has been eroded. This was reflected in a number of our output gap models:

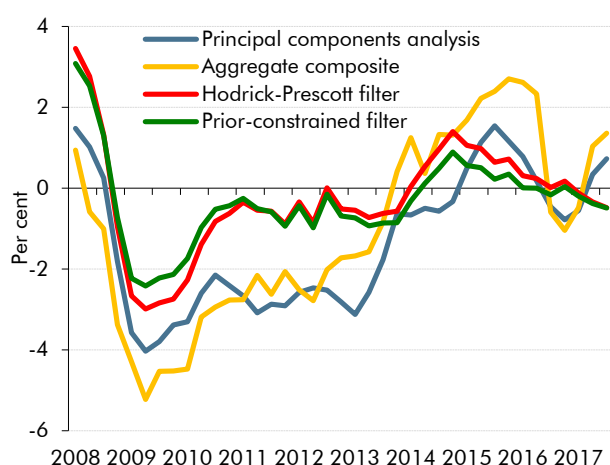
- Within our cyclical indicator models, the **'aggregate composite' (AC)** estimate has been boosted by stronger survey data so far in 2017, with a pickup in reported recruitment difficulties in particular. Similarly, the **'principal components analysis' (PCA)** has narrowed since late-2016. Both now indicate a small positive output gap in the third quarter of 2017.⁴ The two **'statistical filters'** that utilise output data alone imply that the economy is currently operating slightly below potential. We place least

⁴ More details on these methodologies are set out in our *Briefing Paper No.2: Estimating the output gap* and in Pybus (2011): *OBR Working Paper No.1: Estimating the UK's historical output gap*.

weight on these measures because the estimate of potential output for the most recent past can be overly influenced by the recent movements in actual output (the so-called ‘end-point problem’) and can be revised substantially as new output data become available. Results from this group of models are shown in Chart 3.4.

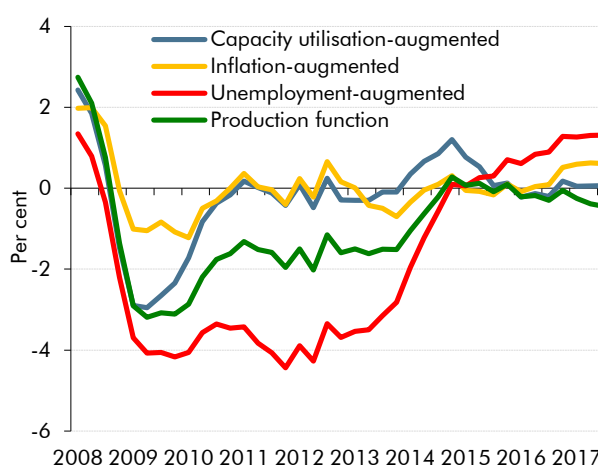
- Our models that augment the output data with other information reflecting the economy’s cyclical position, such as inflation and indicators of capacity utilisation tell a broadly consistent story of an economy operating close to potential. The ‘**inflation-augmented**’ and ‘**capacity utilisation**’ measures point to output slightly above trend. Our ‘**unemployment-augmented**’ measure points to a slightly larger positive output gap, as unemployment has continued to fall, whereas our ‘**production function**’ approach indicates a small amount of spare capacity. Some of these models use a filter-based estimate of the equilibrium unemployment rate (NAIRU), which currently points to a somewhat higher NAIRU than we assume in our forecast. Chart 3.5 shows results from this group of models.

Chart 3.4: Cyclical indicators and filter-based estimates of the output gap



Source: OBR

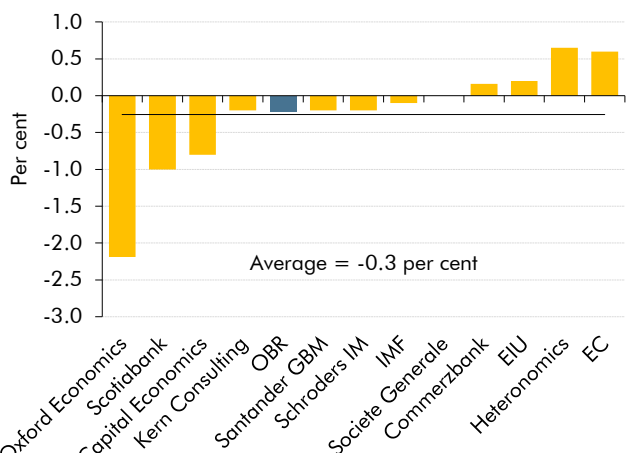
Chart 3.5: Multivariate filter-based estimates of the output gap



3.15 Overall, the estimates vary between -0.5 and +1.4 per cent. This points to little evidence either of much spare capacity or of much overheating, suggesting that the economy is operating near potential and that the output gap is small. Our central estimate is that the output gap was -0.1 per cent in the third quarter of 2017, again indicating more spare capacity than in March, but by just 0.2 per cent.

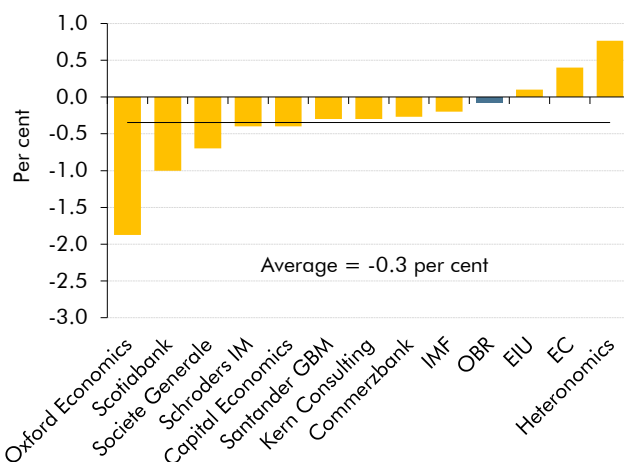
3.16 Charts 3.6 and 3.7 compare our estimates of the output gap for 2017 and 2018 to those of other forecasters, as set out in the Treasury’s November *Comparison of independent forecasts*. These may vary not only as a result of differences of judgement, but also because of differences in the concept of potential output against which actual output is being compared. The average estimate of the output gap is -0.3 per cent in both 2017 and 2018, only marginally wider than our estimates of -0.2 per cent and -0.1 per cent respectively.

Chart 3.6: Output gap estimates: 2017



Source: HM Treasury

Chart 3.7: Output gap estimates: 2018



The path of potential output

3.17 Our forecast for the size of the economy in five years' time is in large part derived from our judgement regarding the prospective path for potential output, as a sustained positive or negative output gap would be incompatible with the MPC achieving its medium-term inflation objective. There is always considerable uncertainty around this judgement and the UK's exit from the EU only adds to it. With no meaningful basis upon which to predict the final outcome of the exit negotiations, we have made the judgement – in line with a range of external studies – that most outcomes are likely to depress investment, at least temporarily, leading to lower productivity growth. Productivity growth could also be affected by a lower trade and FDI intensity of UK economic activity than would otherwise have been the case – though, of course, this depends crucially on the nature of any final deal over the future trading relationship with the rest of the EU and any trade arrangements subsequently reached with other countries. We have not made any direct adjustment for these effects. Most outcomes are also expected to result in lower net inward migration than would otherwise have been the case. Together, these lower the prospective path for potential output but the precise impact will remain highly uncertain, even in retrospect.

Growth in potential total hours worked

3.18 There are four elements to our forecast for the potential total number of hours worked in the economy: the number of adults in the country; the proportion of them participating in the labour market; the proportion of those that could find employment; and the average number of hours that they, in turn, would be willing and able to work. All of these judgements have been revised since March:

- **Adult population growth.** The ONS published updated population projections in October. With actual net migration over the past year tracking the downward path assumed in the current and previous ONS projections, we continue to base our forecast on the ONS 'principal' population variant. A key element of this is the assumption the ONS makes about net inward migration, which falls to 165,000 a year by 2023. This has been revised down slightly relative to the previous assumption of

185,000. The age composition of these immigrants also looks different from the previous projections, with more under 18 (around a third of the total, up from just a quarter), but fewer between 18 and 34 (a little under half, down from close to two thirds). This shift in age composition has fiscal implications, which are discussed further in Box 4.1. The latest projections also assume slightly higher mortality rates. Taken together, the adult population is expected to be 0.4 per cent smaller in 2022 than in the previous projection. That corresponds to 202,000 fewer adults, with 66,000 due to lower net migration and 136,000 to other factors.

- **Participation rate.** We forecast the participation rate using the same cohort-based labour market model that underpins our long-term projections. By projecting age-specific participation rates, this model captures the consequences of an ageing population and the effect on labour market activity rates of the ongoing rises in the state pension age.⁵ Overall, it implies a participation rate that is relatively stable over the first half of the forecast period, but falling in the second half as the compositional effect of population ageing outweighs the effect of rising participation by older people. We have revised up the equilibrium participation rate modestly since March, consistent with the latest labour market data and population projections.
- **Employment rate.** The proportion of those active in the labour force that would be able to find employment sustainably is governed by our NAIRU judgement. As described in paragraph 3.10 above, we have revised this down since March, but continue to expect it to increase slightly over the forecast period due to the effects of the NLW. The contribution to output growth from the equilibrium unemployment rate is determined by its profile rather than its level, so there is little change to our forecast for this component of potential output growth since March.
- **Average hours worked.** The number of hours that people work on average has risen in recent years, contrary to our judgement in previous forecasts that the underlying long-term trend decline would reassert itself. This could be related to the recent weakness in productivity growth, with people choosing to work more hours to support growth in their incomes in the face of weak real earnings growth. Weakness in savings income in a low-interest rate environment may also have played a role. As discussed below, we have lowered our forecast for productivity growth. We have therefore revised up our forecast for the underlying trend in average hours worked and now assume that it remains broadly flat over our forecast period. This adds around 0.2 percentage points a year to potential output growth, relative to the decline we assumed in March.

Growth in potential output per hour worked

- 3.19 The outlook for potential or trend productivity is the most important, yet most uncertain, element of potential output growth and, indeed, of our forecast in general. Up until March 2016, we assumed that growth in potential output per hour worked (hourly productivity) would return to its pre-crisis average (2.2 per cent between 1972 and 2007) by the final

⁵ Annex A of our July 2014 *Fiscal sustainability report* discusses our longer-term approach to labour market modelling in more detail.

year of that forecast. (Revisions in the 2017 Blue Book mean that that average is now 2.1 per cent.) In March 2016, faced with yet another shortfall in productivity growth relative to our then latest forecast, we decided to place more weight on the consistently weak post-crisis performance. We assumed that growth in potential hourly productivity would rise back only to 2.0 per cent by the end of that forecast period.

3.20 In November 2016, we revised our potential productivity forecast down again – this time on the grounds that the Brexit vote and the UK’s subsequent departure from the EU were likely to create greater uncertainty over investment returns and that this would lead some firms to cancel or postpone some productivity-enhancing capital investment projects (i.e. a slowing in ‘capital deepening’). On this basis, we revised growth in potential hourly productivity down to 1.8 per cent by the final year of the forecast period. But we did not assume that this effect would persist over the longer term, maintaining a 2.0 per cent growth assumption beyond the medium term in our January 2017 *Fiscal sustainability report*.

3.21 At the time of our March 2017 forecast, the latest data suggested that hourly productivity had grown by 0.4 per cent per quarter on average in 2016 and was up 1.5 per cent on a year earlier by the final quarter of the year. Calendar year growth in 2016 was lower – at 0.5 per cent – because of the base effect from the sharp fall recorded at the end of 2015. But after revisions in Blue Book 2017, productivity growth in the 2016 calendar year has been revised down to 0.2 per cent and productivity fell in the first half of 2017. The latest data, published after we closed our forecast, showed that productivity did rise in the third quarter of 2017. But even after that pickup, hourly productivity has grown by less than 1 per cent since the end of 2014. Indeed, it is only 1.4 per cent above the level reached at the end of 2007, before the onset of the financial crisis.

3.22 In our recent *Forecast evaluation report (FER)*, we noted several potential explanations for the weakness in productivity growth since around the time of the financial crisis, including:

- **Labour hoarding.** In the early post-crisis period, it seemed plausible that firms might be holding onto labour (at the expense of maintaining productivity) in the face of the temporary extreme weakness in demand and output.
- **Weak investment.** The fall in investment by businesses in physical and intangible assets during and after the financial crisis slowed the pace of capital deepening. The recovery in investment since the crisis has been noticeably weaker than after previous recessions.
- **The state of the financial system.** During and after the crisis, some banks may have been reluctant to acknowledge under-performing loans, even though it might simultaneously have limited their capacity to extend new loans to more promising enterprises. Consequently the banking system was for a while less efficient in reallocating capital from weak, low productivity firms to strong, high-productivity businesses.

- **Labour market slack.** Following the crisis, there was a lot of spare labour input that firms could employ at a relatively low cost in order to expand output. This put less pressure on firms to use their existing workforce efficiently.
- **Highly accommodative monetary policy.** Although in normal circumstances looser monetary policy could be expected to stimulate investment and productivity growth, the prolonged period of very low interest rates may have slowed productivity growth by making it easier for a tail of highly-indebted, low productivity firms to survive.

3.23 Other potential explanations that we did not cover in the *FER* include:

- The possibility that **real output growth has been understated**, either because new activities – especially those connected with the digital economy – are not properly captured or because price deflators do not fully reflect the impact of new technologies.⁶ While these may have important implications for measures of productivity and living standards, it is not clear that they would have significant implications for our fiscal forecasts, since we do not observe unexplained increases in tax revenue that would imply the under-measurement of nominal GDP and tax bases.
- Recent **employment growth appears to have been skewed** towards low productivity jobs and industries. That will have dragged down average productivity growth in the economy, as well as providing a partial explanation for the recent weakness in average earnings growth. This compositional effect is unlikely to be sufficiently large to explain the whole of the productivity shortfall since the financial crisis, though it may account for a good part of the weakness in UK productivity growth relative to other advanced economies. If future employment growth becomes more balanced, then productivity growth could also be expected to increase.

3.24 The various explanations that we placed most weight on in past forecasts implied transient, rather than sustained, weakness in productivity growth. But some, such as labour hoarding and the impairment of the banking system, seem less relevant today than in the past. And we also expected a tightening labour market to exert progressively more pressure on businesses to raise productivity. Productivity growth has nevertheless shown little signs of recovering, though of course investment remains weak compared to past recoveries while interest rates remain at abnormally low levels. It is possible that as some factors have waned in importance, others may have emerged to take their place. The renewed weakness of productivity growth over the first half of 2017, for example, will almost certainly have been exacerbated by the Brexit vote – notably by the effect of uncertainty on business investment and the hit to real consumption from the inflationary impact of the fall in the pound.

3.25 The sustained weakness of productivity growth, however, raises the possibility that it may prove more durable, especially since it appears to be a common phenomenon across the advanced economies. In particular, some commentators have argued that the advanced economies have entered an era of more or less permanently subdued productivity growth

⁶ For more details, see Chapter 3 of *Independent Review of UK Economic Statistics*, Professor Sir Charles Bean, March 2016.

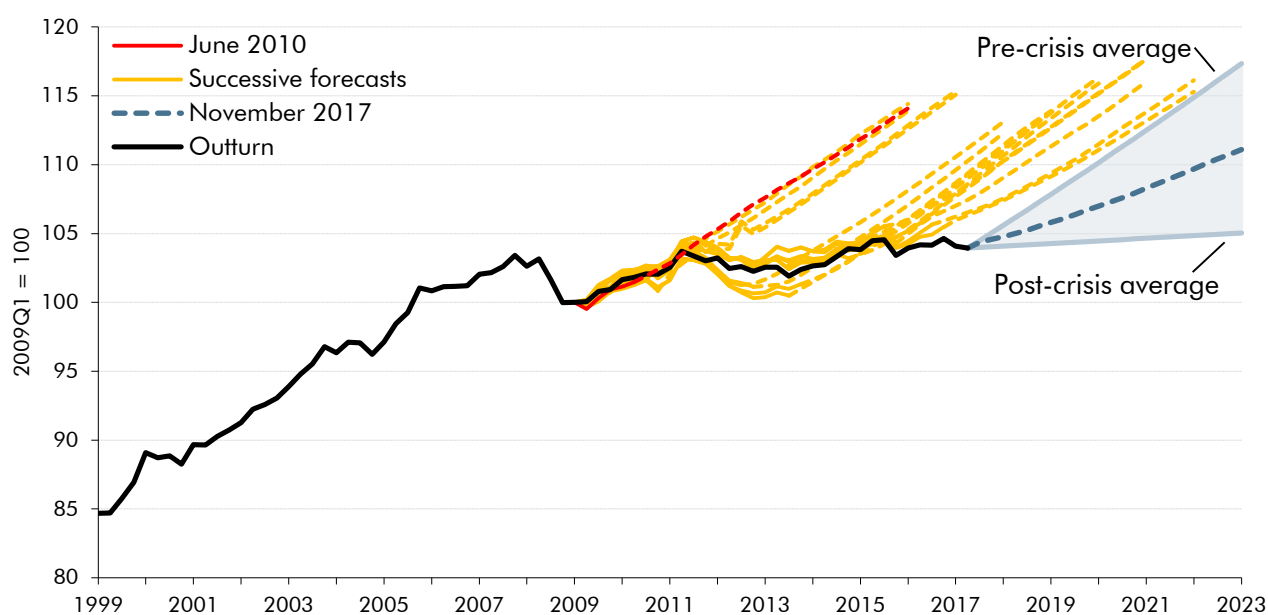
for essentially structural reasons.⁷ While we do not find that particular thesis altogether convincing, recent experience, allied to the prospect of continued subdued investment and historically-low interest rates, has led us to judge that some of the recent weakness will indeed prove more enduring, at least within our forecast horizon.

- 3.26 Even so, we still expect some acceleration. Our conditioning assumption for monetary policy still involves some increase in Bank Rate over the forecast period. We also expect the current tightness of the labour market to prompt some firms to prioritise productivity-enhancing measures over increasing employment. And, while business investment growth is likely to remain subdued relative to past recoveries, by the end of our forecast period, we still expect the level of business investment to be around 60 per cent above its post-crisis trough.
- 3.27 Taking all these factors into account, we therefore still expect a gradual rise in the rate of growth in hourly productivity, but it now reaches only 1.3 per cent in 2022. The average rate of 1.1 per cent that we expect from 2018 to 2022 lies roughly half way between the pre-crisis and post-crisis averages. There is, of course, considerable uncertainty around that judgement. This uncertainty is discussed further in paragraph 3.149 and illustrated in two alternative scenarios; in one productivity growth recovers quickly to pre-crisis rates, whereas in the other the post-crisis rate of growth is maintained throughout the forecast period.
- 3.28 This new assumption represents a significant reduction in our judgement regarding growth in trend output per hour. The cumulative increase in potential hourly productivity between the final quarter of 2016 and the first of 2022 has been revised down from 9.0 per cent in March to 5.1 per cent, with downward revisions for the period that has passed since the March forecast explaining 0.2 percentage points of the difference and lower cumulative growth from now onwards explaining the remaining 3.7 percentage points.
- 3.29 It is important to stress that this revision has been driven neither by the most recent outturns, nor by a detailed re-evaluation of the likely impact of Brexit. Rather it is a response to the repeated tendency throughout the post-crisis period for productivity growth to disappoint relative to expectations (Chart 3.8) and by the continued unusual weakness of productivity growth in many other advanced economies.⁸

⁷ For example, see 'The Rise and Fall of American Growth', by Robert J. Gordon, and 'US Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound', by Lawrence H. Summers.

⁸ See Chapter 2 of our 2017 *Forecast evaluation report* for more information on recent productivity growth in other G7 countries.

Chart 3.8: Productivity growth (output per hour) – forecasts and outturns



Note: Solid lines represent the outturn data that underpinned the forecast.
Source: ONS, OBR

3.30 Table 3.1 summarises our potential output growth forecast and how it has been revised since March. It shows that the large downward revision to growth in output per hour worked more than accounts for the 0.5 percentage point average downward revision to annual potential output growth. Around a third is offset by the upward revision to the projected path for average hours. Other sources of revision have been small by comparison.

Table 3.1: Potential output growth forecast

	Percentage change on a year earlier, unless otherwise stated					
	Potential population ¹	Equilibrium employment rate ¹	Equilibrium average hours	Potential productivity ²	Potential output ³	memo: NAIRU (per cent)
November forecast						
2017	0.6	0.0	0.0	0.9	1.6	4.5
2018	0.5	0.0	0.0	0.7	1.3	4.5
2019	0.5	0.0	0.0	0.9	1.4	4.6
2020	0.5	-0.1	0.0	1.0	1.4	4.6
2021	0.5	-0.2	0.0	1.1	1.5	4.6
2022	0.6	-0.3	0.0	1.2	1.5	4.6
Changes since March						
2017	0.0	0.0	0.2	-0.5	-0.4	-0.5
2018	-0.1	0.0	0.2	-0.7	-0.5	-0.5
2019	-0.1	0.1	0.2	-0.7	-0.4	-0.5
2020	-0.1	0.1	0.2	-0.8	-0.6	-0.5
2021	-0.1	0.0	0.2	-0.7	-0.6	-0.5

¹ Corresponding to those aged 16 and over.

² Output per hour.

³ Components may not sum to total due to rounding.

Key economy forecast assumptions

3.31 We condition our economy forecasts on a number of assumptions. Among them, we assume that domestic and international interest rates, the exchange rate, equity prices and oil prices move in line with market expectations, taking the 10-day average to 31 October. We also base our forecasts on the Government's current stated policies on taxes, public spending and financial transactions, as required by Parliament. And we continue to adopt broad-brush assumptions about the effects of Brexit, as described in paragraph 3.3. The risks to our forecasts are discussed later in the chapter.

Monetary policy and government bond yields

3.32 Our forecast assumes that the Bank of England will bring CPI inflation back to the 2 per cent target over the medium term, consistent with the Chancellor's remit to the Monetary Policy Committee (MPC). In the November meeting, the Committee voted to raise Bank Rate by 25 basis points, to 0.5 per cent – the first increase in 10 years – but did not change any of its non-conventional monetary policy measures. The decision to raise Bank Rate reflected the MPC's view that *"the steady erosion of slack has reduced the degree to which it is appropriate for the MPC to accommodate an extended period of inflation above target... In line with the framework set out at the time of the referendum, the MPC now judges it appropriate to tighten modestly the stance of monetary policy in order to return inflation sustainably to target"*. In its accompanying November 2017 *Inflation Report*, the MPC's central projection was for CPI inflation to peak at 3 per cent in the final quarter of this year before falling back towards the 2 per cent target over its three-year forecast horizon.

3.33 The market assumptions that our forecasts are conditioned on were taken two days before the *Inflation Report* and the MPC decision. The forward curves at the time suggested that the increase in Bank Rate was almost fully priced in and that market participants expected Bank Rate to continue to rise, but only gradually, over the next five years, reaching just 1.24 per cent by the end of our forecast period (Chart 3.9). This implies only three further 25 basis point increases over the forecast period. This path has not changed significantly following the rate-setting decision on 2 November.

3.34 Gilt rate expectations and global bond yields are both slightly lower than at the time of our March forecast, as shown in Chart 3.10. This is partly due to a fall in bond yields in the middle of the year, perhaps driven by domestic political factors and global factors such as delays in the loosening of US fiscal policy.

Chart 3.9: Bank Rate

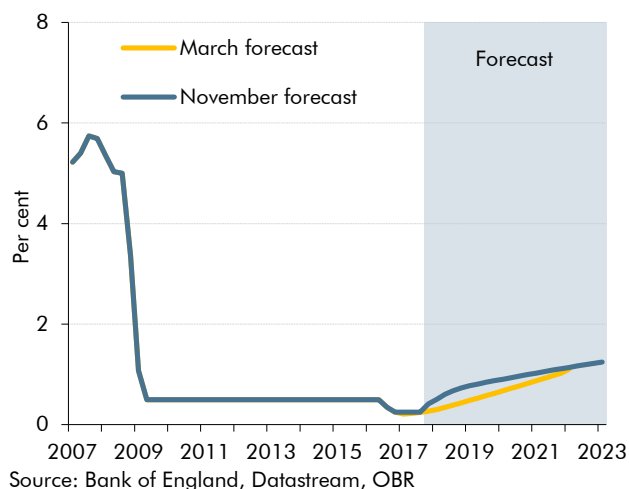
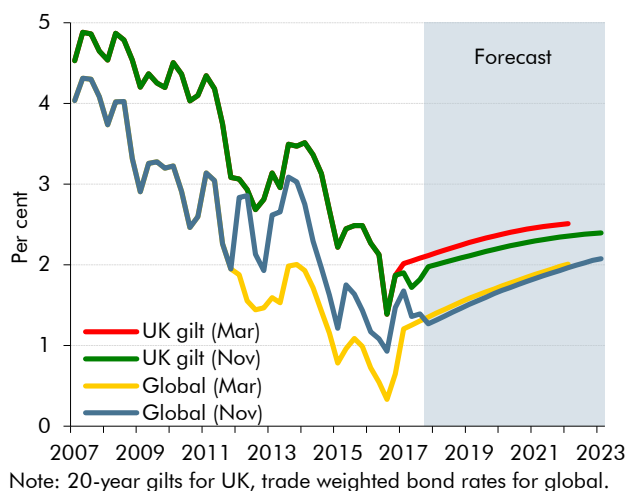


Chart 3.10: Global bond yields



Macprudential policy

- 3.35 The Bank of England's Financial Policy Committee (FPC) has statutory responsibility for *"the identification of, monitoring of, and taking action to remove or reduce systemic risks with a view to protecting and enhancing the resilience of the UK financial system"*.
- 3.36 Following the referendum last year, the FPC reduced the countercyclical capital buffer from 0.5 per cent to 0 per cent of banks' UK exposure to relax the regulatory constraints on the financial system. In its June 2017 *Financial Stability Report*, the FPC judged that risks to financial stability had returned to a *"standard level"* and put the buffer back to 0.5 per cent, with the expectation that it would be increased to 1 per cent at its November meeting, consistent with its stated policy for a standard risk environment.⁹ But risks to stability remain: in light of rapid growth in consumer credit over the past year, the FPC has brought forward the assessment of stressed losses on consumer credit lending in the Bank's 2017 annual stress test. The results will be published on 28 November and used to set regulatory capital buffers. Other risks being monitored by the FPC include those pertaining to: the UK mortgage market; rapid growth in credit in China; the relatively low profitability of some European banks; and whether asset valuations properly reflect the degree of associated risk.

Credit conditions

- 3.37 Since our March forecast, average mortgage rates have fallen by 0.15 percentage points, reaching 2.53 per cent in the third quarter. This was partly due to lower bank funding costs, which have fallen steadily since the start of 2016. The falls in funding costs since August 2016 will have reflected the cut in Bank Rate and the introduction of the Term Funding Scheme (TFS). Narrower margins have also contributed to the decrease in mortgage rates. We expect effective mortgage rates to rise gradually over the coming years in response to the lagged effect of higher Bank Rate. By the first quarter of 2022, we expect mortgage

⁹ The countercyclical capital buffer is set to reflect prevailing economic and financial market conditions. A high capital buffer is designed to protect the banking sector from periods of excess aggregate credit growth when risks are deemed to be higher than usual. A reduction in the buffer would increase capacity for lending to households and businesses.

rates to reach 2.6 per cent, lower than we forecast in March, as the recent fall in overall funding costs outweighs the higher profile for Bank Rate.

- 3.38 Net lending to individuals continued to grow strongly in 2017, increasing by 4 per cent in the year to September. Growth in consumer credit lending has eased slightly over the year, but the annual rate still remained relatively high at 9.9 per cent in the year to September. Net mortgage lending in the third quarter of 2017 was up 3.2 per cent on a year earlier. We expect mortgage debt to rise over the forecast period at a slightly slower pace than we assumed in March, reflecting the weaker outlook for house prices and property transactions discussed later in the chapter.
- 3.39 Bank lending to non-financial businesses grew by 2.6 per cent in the year to September. Growth in lending to small and medium-sized enterprises (SMEs) slowed from 1.3 per cent in the year to January to 0.6 per cent in the year to September. By contrast, growth in lending to large businesses picked up, reaching 6.3 per cent in the year to July before falling back slightly in the latest data. Responses to the Bank of England's latest *Credit Conditions Survey* suggest that the weaker growth in lending to SMEs was due to lower demand for unsecured loans from small businesses.

Fiscal policy and Budget measures

- 3.40 Our forecast is conditioned on current government policy and announced plans for spending and taxes. Reductions in government spending mean that the structural deficit is expected to narrow gradually over the forecast period. Chapter 4 sets out our fiscal forecasts, while Box 3.1 sets out how this economy forecast has been affected by fiscal and other policy changes announced in this Budget.

Box 3.1: The economic effects of policy measures

This box considers the possible effects on the economy of the policy measures announced in this Budget and since our previous forecast in March. Further detail about each Budget measure is set out in the Treasury's documents. Our assessment of their fiscal implications can be found in Chapter 4 and Annex A.

The Government has loosened **fiscal policy** materially in the near term, reflecting both net tax giveaways and a significant easing in the pace of departmental spending cuts. To estimate the effect on GDP growth we have applied the same 'multipliers' we have used in previous forecasts. (The shorter the period between a policy's announcement and its subsequent implementation, the larger the multiplier.) Together, the near-term loosening boosts real GDP growth by around 0.1 percentage points in 2018 and 2019, but dampens it by a similar amount in the subsequent two years as the effects of the loosening taper off. After we had closed our economy forecast, the Treasury revised the planned path of public spending in 2018-19 and 2019-20 in a way that would have had a small effect on the profile of our GDP forecast had we been notified in time, although not sufficient to move real GDP growth rates to 1 decimal place.

We have adjusted our **inflation** forecast for a number of policy measures, including the traditional freeze to fuel and alcohol duties for the coming year; a new vehicle excise duty supplement for diesel cars; the reinstatement of the tobacco duty ‘escalator’ of RPI inflation plus 2 per cent (the previous escalator having expired at the end of the previous Parliament); and a freeze in the maximum tuition fee charged in England announced in September. Together, we estimate that these measures will reduce CPI inflation by a little under 0.1 percentage points in 2018-19. The Government has introduced a draft bill to cap energy prices for certain households in Great Britain. The level of the cap will be determined by the regulator and is subject to consultation, so we have not made any adjustment for that at this stage.

The Government has announced a number of measures that are likely to affect the **housing market**. These include a permanent stamp duty land tax relief for first-time buyers. First-time buyers purchasing a property below £500,000 will now be subject to a marginal stamp duty rate of zero per cent up to £300,000 and a rate of 5 per cent between £300,000 and £500,000 – compared to current marginal rates of 2 per cent between £125,000 and £250,000 and 5 per cent between £250,000 and £500,000. First-time buyers purchasing a property over £500,000 will not be eligible for this relief, and will therefore face the same marginal stamp duty rates on the first £500,000 as before. We expect this to increase house prices by 0.3 per cent, an estimate consistent with our published price elasticities for stamp duty changes.^a Most of this effect is expected to occur in 2018.

We have made small adjustments to our forecasts of transactions and house prices for the extension to the Help to Buy equity loans scheme, on the assumption that a small proportion of the associated lending will add to total mortgage lending rather than displacing lending that would otherwise have taken place.

The Government has announced a number of policies aimed at facilitating greater **housing supply**, including changes to the planning system and public spending measures. In recent years, Governments have announced a number of initiatives aimed at overcoming housing supply constraints – including, for example, those set out in the 2012 National Planning Policy Framework, which included a ‘presumption in favour of sustainable development’.^b Our forecast for housing supply uses a top-down approach relating housing starts to the outlook for a number of macroeconomic variables – such as interest rates and property transactions. While there has been some recovery in the pace of housing starts in recent years, it is difficult to distinguish the effect of changes in the planning system from the more general recovery in housing market activity – and housing starts remain below their pre-2008 levels. Given this, we have not made any further adjustments to our forecasts at this stage. We will keep these judgements under review as the policies are delivered and new evidence becomes available.

^a *Supplementary forecast release: Residential SDLT elasticities*, October 2017.

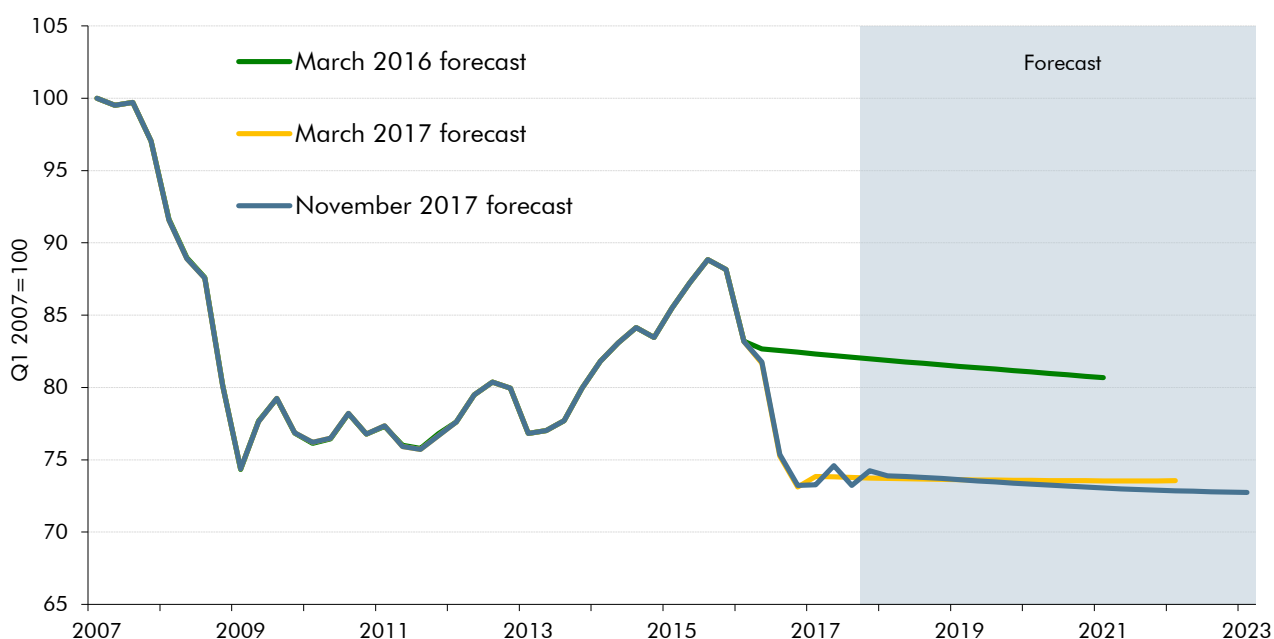
^b DCLG, *National Planning Policy Framework*, March 2012.

Sterling effective exchange rate

3.41 The sterling effective exchange rate drifted down from the third quarter of 2015 as market participants started to factor in a possible vote to leave the EU. It then fell sharply after the referendum result last year. This is likely to reflect market participants' expectations that a weaker pound will be necessary to offset the loss of competitiveness resulting from a less open trading relationship between the UK and the EU. Investors may also be more pessimistic about the future returns on UK assets and/or attach a higher risk premium to them. Sterling has fallen further relative to the assumption underpinning our March forecast. Comparing the 10-day average to 31 October that underpins this forecast with the recent peak in the third quarter of 2015, sterling was down 15 per cent against the US dollar and 20 per cent against the euro.

3.42 From its current level, we assume that the exchange rate will follow the path implied by uncovered interest parity: namely that it will move to reflect the difference between UK and overseas interest rates so as to equalise the expected return to investing at home and abroad. Sterling is expected to depreciate slightly further over time, as UK forward interest rates lie a touch above an average of the corresponding forward interest rates in our major trading partners (shown in Chart 3.10 above). On average over the forecast period, our latest sterling effective exchange rate assumption is 0.4 per cent below our March 2017 assumption, and around 10 per cent below our March 2016 assumption (Chart 3.11). The effective exchange rate has fallen a further 0.2 per cent on average across the forecast period since we took our market assumptions for this forecast on 31 October, mainly reflecting market reaction to the Bank of England's *Inflation Report* on 2 November.

Chart 3.11: Sterling effective exchange rate assumptions

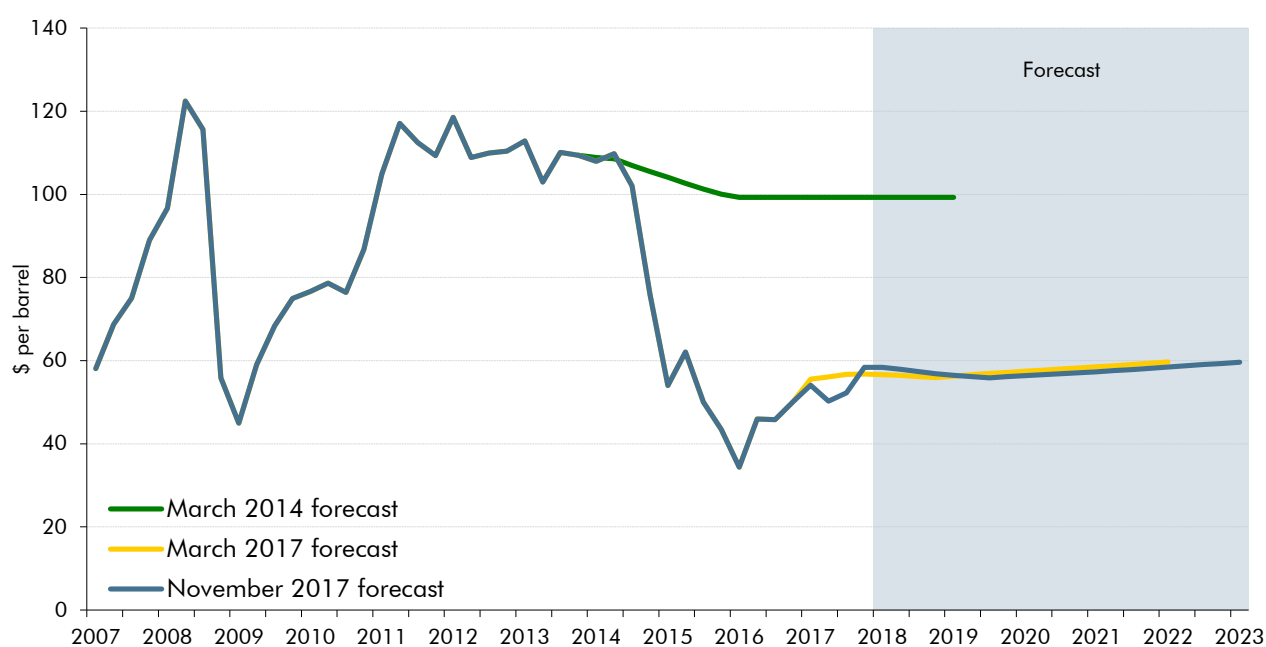


Source: Bank of England, Bloomberg, OBR

Oil prices

3.43 As Chart 3.12 shows, oil prices have fluctuated over the year, reflecting supply factors. US oil production initially rose, offsetting production cuts by OPEC and Russia in the first half of the year, but subsequently dropped following Hurricane Harvey. Extension of the OPEC production cut agreement to March 2018, together with stronger global demand, has fuelled higher prices more recently. Our assumption for the fourth quarter of 2017 – based on the futures curve – is little changed from that used in March, but remains 41 per cent lower than the assumption in our March 2014 EFO. Since we took our market assumptions on 31 October, oil prices have risen and are now on average around 5 per cent above the assumption underpinning our forecast.

Chart 3.12: Oil price assumptions



Source: Datastream, IMF, OBR

World economy

3.44 World GDP is estimated to have increased by 3.2 per cent in 2016, revised up from 3.1 per cent at the time of our March forecast. We have used the IMF's October 2017 *World Economic Outlook (WEO)* to inform our own forecasts for this EFO. In the latest WEO, the IMF revised up its forecast for world GDP growth between 2017 and 2020 by an average of 0.1 percentage points per annum relative to the forecasts available in March. We have followed suit, since the global economy appears to have gathered momentum in recent quarters. We expect world GDP growth to rise gradually over the forecast period, from 3.6 per cent in 2017 to 3.8 per cent in 2021. This modest pick-up is driven mainly by stronger growth in the emerging economies.

3.45 Euro area GDP is estimated to have grown by 1.8 per cent in 2016, up from the 1.7 per cent estimated in March. The IMF has increased its forecast for 2017 from 1.6 to 2.1 per

cent, as quarterly growth exceeded expectations at the end of 2016 and beginning of 2017. The IMF revised up growth by smaller amounts in 2018, 2019 and 2020. In line with these revisions, we now expect the euro area economy to grow by 2.1 per cent in 2017, followed by a gradual slowing back towards its potential growth rate of 1.5 per cent by 2021. Euro area GDP growth averages 1.7 per cent a year between 2017 and 2022 – slightly higher than our UK GDP growth forecast of 1.4 per cent a year.

3.46 US GDP is estimated to have risen 1.5 per cent in 2016. The IMF expects growth to pick up to 2.2 and 2.3 per cent in 2017 and 2018 respectively. This reflects supportive financial conditions and robust business and consumer confidence. Growth is then expected to moderate towards its potential rate of 1.8 per cent by 2020. The IMF's latest forecasts adopt a baseline assumption of no change in fiscal policy, whereas earlier forecasts assumed that tax cuts would deliver a fiscal stimulus to growth.

World trade and UK export market growth

3.47 World trade is now estimated to have grown by 2.7 per cent in 2016, above the 1.9 per cent estimate in our March forecast. World trade growth picked up sharply around the start of 2017; although it has slowed subsequently, we still expect growth of 5.0 per cent for 2017 as a whole. Beyond 2017, we expect world trade growth to ease to around 4 per cent a year in the medium term, rates more in line with world GDP growth.

3.48 Growth in UK export markets was in line with world trade growth in 2016 at 2.7 per cent. Much of the pick-up in world trade growth around the beginning of 2017 was driven by emerging economies. These generally have a lower weight in UK export markets than in world trade overall, so we expect growth in UK exports markets to be lower than world trade at 4.4 per cent in 2017. However, this is significantly stronger than the 3.1 per cent that we forecast in March. Over the medium term, we expect growth in UK export markets of around 4 per cent a year – broadly in line with world trade growth. This is slightly lower than in March – consistent with the IMF's large downward revisions to US import growth and smaller downgrades to expected EU import growth.

Summary

3.49 To summarise, the key assumptions underpinning our central forecast are that:

- **the UK leaves the EU in March 2019**, that the trading regime will be less open than before and that the UK will adopt a tighter migration regime;
- **monetary policy** remains highly accommodative, although slightly less so than we assumed in March;
- there will be little change in **credit conditions** given macroprudential policy;
- **fiscal policy** has been loosened relative to March in the near term – providing a small boost to GDP growth in 2018 and 2019 that is reversed in 2020 and 2021. But fiscal consolidation is still set to continue throughout the forecast period;

- **sterling** is slightly lower than was assumed in March 2017 and around 10 per cent below what we assumed in our pre-referendum forecast in March 2016;
- dollar **oil prices** are little changed from what we assumed in March. Beyond the two-year horizon, they are assumed to remain constant in real terms; and
- **global GDP and the demand for UK exports** increases fairly steadily. UK export markets grow more quickly than we expected in March in the near term, but slightly slower over the medium term.

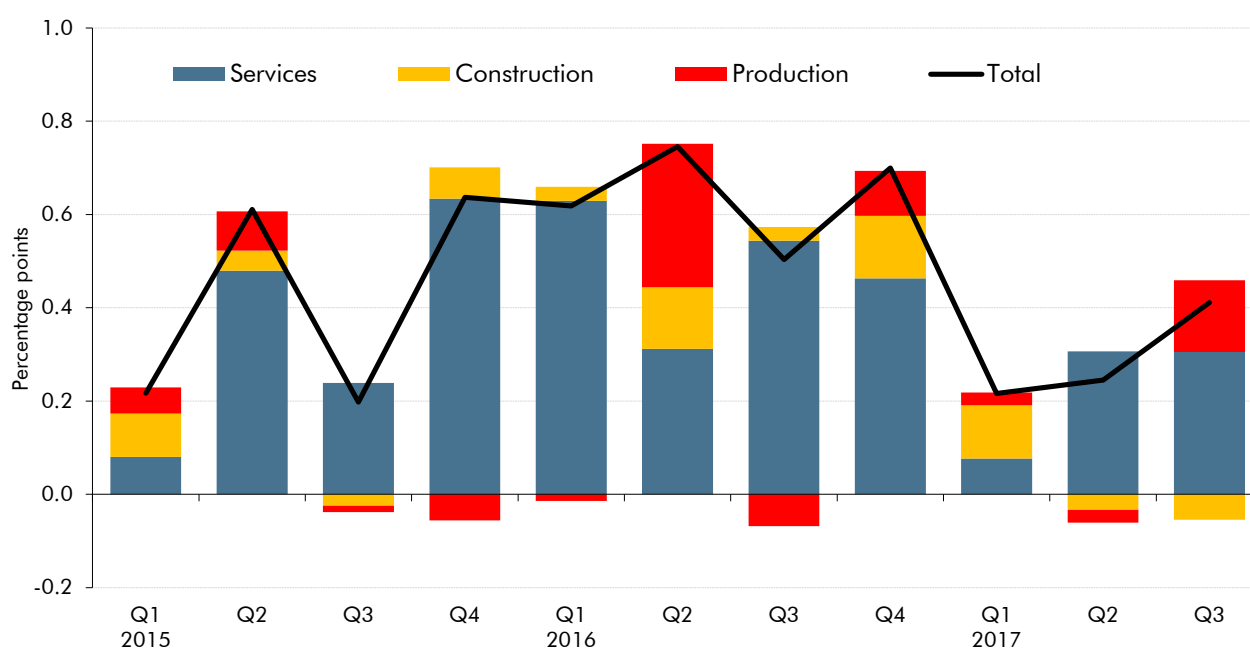
3.50 Risks and uncertainties associated with these assumptions and other facets of the forecast are discussed later in the chapter.

Prospects for real GDP growth

The short-term outlook for GDP

3.51 The services sector held up well in the immediate aftermath of the EU referendum, with annualised growth of 2.6 per cent in the second half of 2016 – in line with the average since the start of 2013. But it then slowed to an annualised rate of 1.2 per cent in the first three quarters of 2017, mainly as the inflationary impact of the post-referendum fall in the pound fed through to growth in consumer-facing services. The other sectors account for smaller shares of overall output, but they tend to be more volatile and so, in some cases, have had significant effects on recent quarterly GDP growth (Chart 3.13). The construction sector experienced strong growth over 2016, but output fell in the second and third quarters of 2017. Manufacturing output has been extremely volatile recently, although growth does appear to have picked up since the referendum, with production up 2.1 per cent over the past five quarters compared to 0.7 per cent in the preceding five quarters.

Chart 3.13: Contributions to quarterly output growth



Source: ONS

- 3.52 Real GDP growth in the second half of 2016 was revised down from an annualised rate of 2.6 per cent at the time of our March forecast to 1.9 per cent currently. On a quarterly basis, growth then slowed from 0.6 per cent in the final quarter of 2016 to 0.3 per cent in the first quarter of 2017, whereas our March forecast assumed the slowdown in growth would occur in the second quarter. Growth remained at 0.3 per cent in the second quarter and edged up slightly to 0.4 per cent in the third quarter, with both figures close to our March forecasts. Real GDP is now estimated to have grown by 1.9 per cent in the five quarters since the referendum, compared with 2.4 per cent in the five quarters prior to it. The difference appears mainly to reflect a deceleration in real consumer spending as higher inflation following the depreciation of the pound squeezed real household incomes.
- 3.53 We expect growth to remain at 0.4 per cent in the final quarter of 2017, reflecting the solid monthly growth rates at the end of the third quarter and survey indicators of activity so far in the fourth quarter. This would result in growth of 1.5 per cent for calendar year 2017. This is below our March forecast of 2.0 per cent, reflecting the downward revisions to the data for the second half of 2016 and a weaker-than-expected first quarter in 2017.
- 3.54 Thereafter, we expect quarterly GDP growth to ease back to 0.3 per cent in 2018 (Table 3.2). We expect the boost to the contribution from net trade from the fall in the pound to begin to fade. The depreciation of sterling since late 2015 has been substantial, but we judge that the total boost to net trade will nevertheless be relatively modest in historical terms, consistent with the relatively weak response of net trade to the substantial depreciation of sterling that took place during the financial crisis (see paragraph 3.125). So far, the judgement of even a modest boost to net trade has proved to be on the optimistic side.
- 3.55 We also expect real consumption growth to remain subdued as the past depreciation of sterling continues to boost inflation, weighing on household real incomes, and as household saving begins to stabilise after the drop over the past two years. Cuts in public spending should also weigh on GDP growth. Business investment growth is expected to remain subdued in the face of Brexit-related uncertainty, after the modest growth experienced since the referendum. This is despite the current investment-friendly conditions created by, for example, historically low borrowing costs and improved profitability in the export and import-competing sectors after the fall in sterling.
- 3.56 We expect calendar year GDP growth of 1.4 per cent in 2018, down slightly from 1.6 per cent in our March forecast. This partly reflects a downward revision to business investment growth as the weaker outlook for productivity growth lowers the expected return on capital. We also expect inflation to peak a little bit higher in the near term than we did in March (see paragraph 3.66) and have revised down real consumption growth in 2018 correspondingly.

Table 3.2: The quarterly GDP profile

	Percentage change on previous quarter											
	2016				2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
November forecast ¹	0.2	0.5	0.4	0.6	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
March forecast ²	0.2	0.6	0.6	0.7	0.6	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Change³	0.0	-0.1	-0.2	-0.1	-0.3	0.0	0.1	0.1	-0.1	-0.1	-0.1	-0.1

¹ Forecast from fourth quarter of 2017.

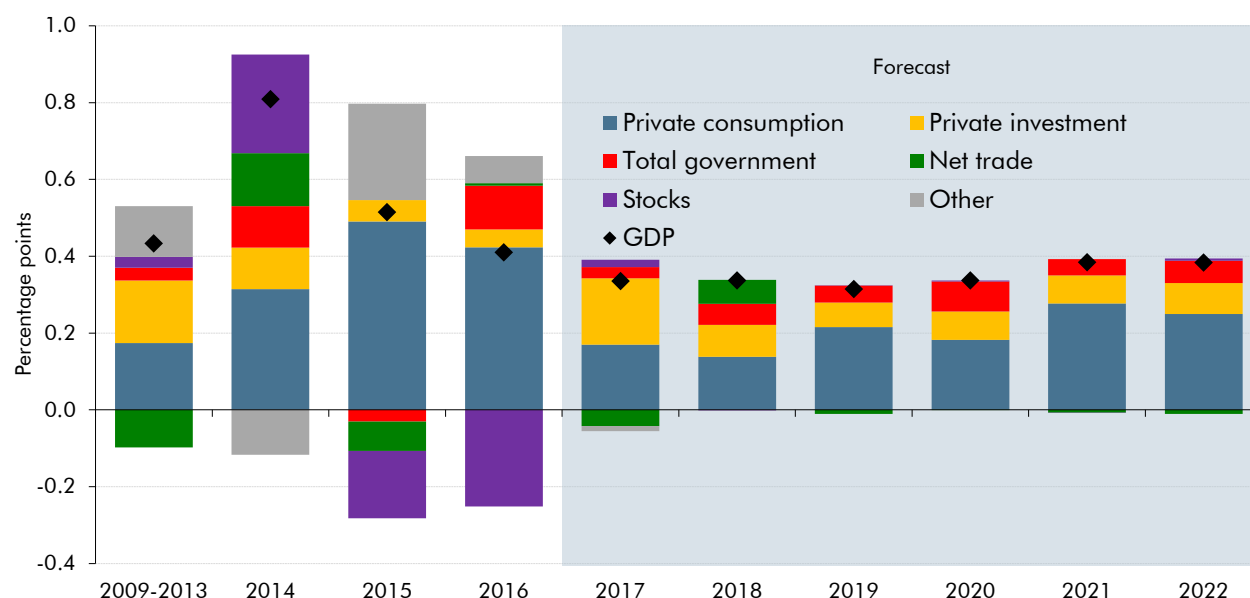
² Forecast from first quarter of 2017.

³ Changes may not sum due to rounding.

The medium-term outlook for GDP

3.57 Beyond 2018, we expect GDP growth initially to remain a little below potential. The continued weakness reflects the forthcoming fiscal tightening (notwithstanding the Budget measures) and uncertainty surrounding Brexit continuing to weigh on business investment. The small boost to GDP growth from net trade should also be waning by then, while we expect only a modest increase in consumption growth as productivity and real wage growth remain subdued (Chart 3.14). GDP growth is expected to pick up a little from 2021, as the effects of the fiscal consolidation subside and the uncertainty surrounding Brexit is assumed to dissipate. Faster productivity growth also begets a modest acceleration in real wages and consumption. GDP growth is expected to average 1.4 per cent a year in the three years to 2022, enough to bring the remaining spare capacity back into productive use.

Chart 3.14: Contributions to average quarterly GDP growth



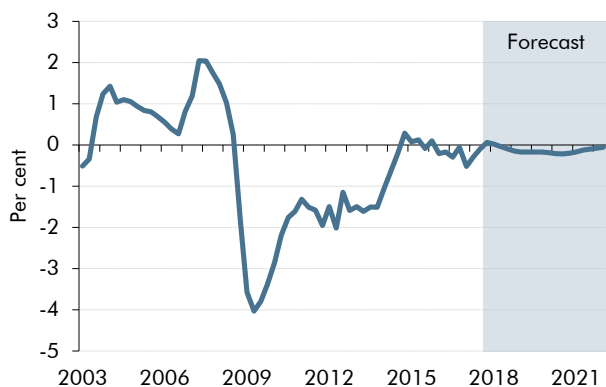
Note: 'Other' category includes the statistical discrepancy and the residual between GDP and the expenditure components prior to the base year (2015).

Source: ONS, OBR

3.58 Relative to our March forecast, we expect lower GDP growth in each year of the forecast, consistent with the weaker outlook for potential output growth. The effect on cumulative GDP growth is modestly offset by our judgement that there was slightly more spare capacity

in the economy at the start of 2017 than previously assumed. We expect the output gap to remain small throughout the forecast period, widening a little through to 2020 and then narrowing so that it closes fully by the middle of 2022 (Charts 3.15 and 3.16). But given how small the output gap is at any point in our forecast, judgements about the pace at which it closes are not material to our overall GDP growth forecast.

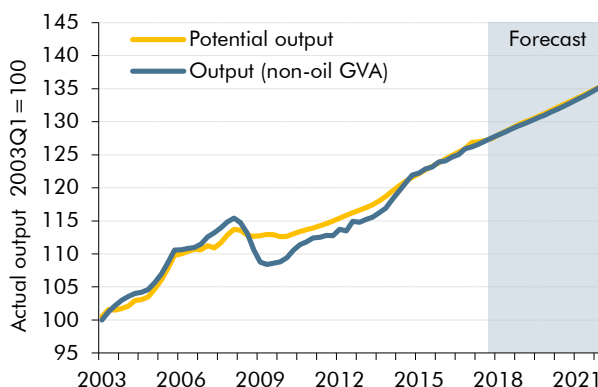
Chart 3.15: The output gap



Note: Output gap estimates on a quarterly basis, based on the latest National Accounts data and expressed as actual output less trend output as a percentage of trend output (non-oil basis).

Source: OBR

Chart 3.16: Actual and potential output



Source: ONS, OBR

3.59 Table 3.3 summarises the expenditure composition of our GDP forecast. Chart 3.17 shows how the contributions of the different components to cumulative GDP growth have changed since our March forecast. (We have revised our forecast for cumulative growth between the first quarter of 2017 and the first quarter of 2022 from 9.2 to 7.2 per cent, giving the total downward revision of 2.0 percentage points shown at the far right of the chart.) We have lowered our forecasts for consumer spending, residential investment and business investment significantly. These changes are explained from paragraph 3.76 onwards.

Table 3.3: Expenditure contributions to real GDP

	Percentage points, unless otherwise stated						
	Outturn	Forecast					
	2016	2017	2018	2019	2020	2021	2022
GDP growth (per cent)	1.8	1.5	1.4	1.3	1.3	1.5	1.6
Main contributions							
Private consumption	1.8	1.0	0.5	0.8	0.8	1.0	1.1
Business investment	0.0	0.2	0.2	0.2	0.2	0.2	0.2
Dwellings investment ¹	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Government ²	0.2	0.1	0.2	0.2	0.3	0.2	0.2
Change in inventories	-0.2	-0.4	0.1	0.0	0.0	0.0	0.0
Net trade	-0.9	0.4	0.2	0.0	0.0	0.0	0.0
Other ³	0.7	0.0	0.1	0.0	0.0	0.0	0.0

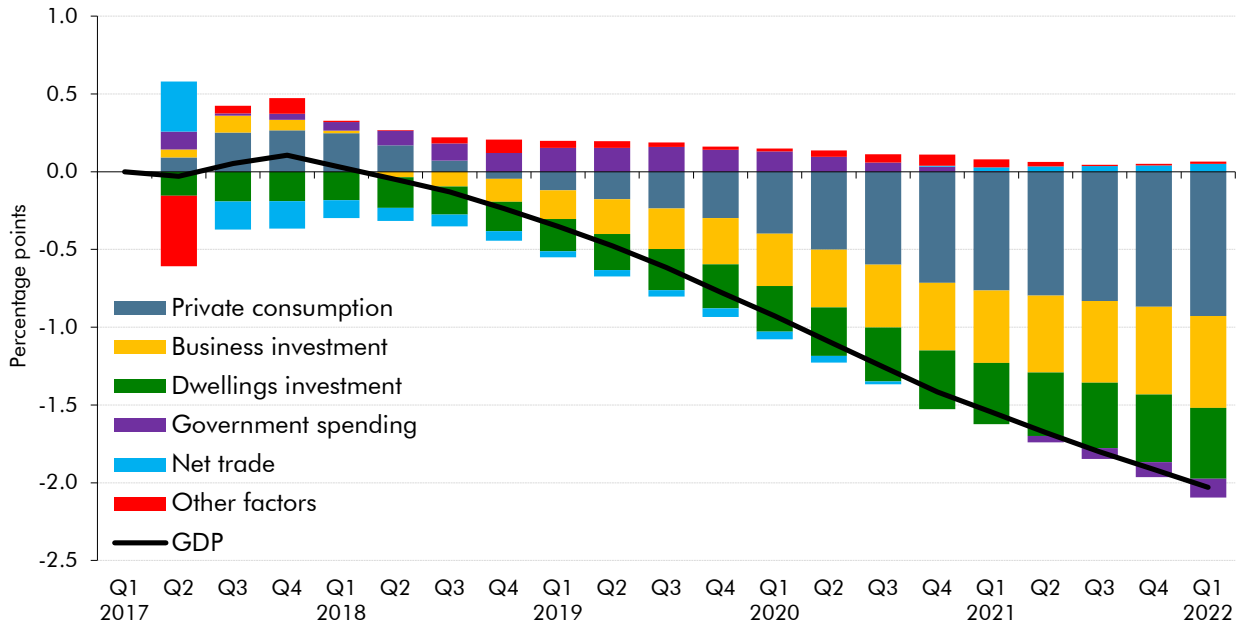
¹ The sum of public corporations and private sector investment in new dwellings, improvements to dwellings and transfer costs.

² The sum of government consumption and general government investment.

³ Includes the statistical discrepancy and net acquisition of valuables.

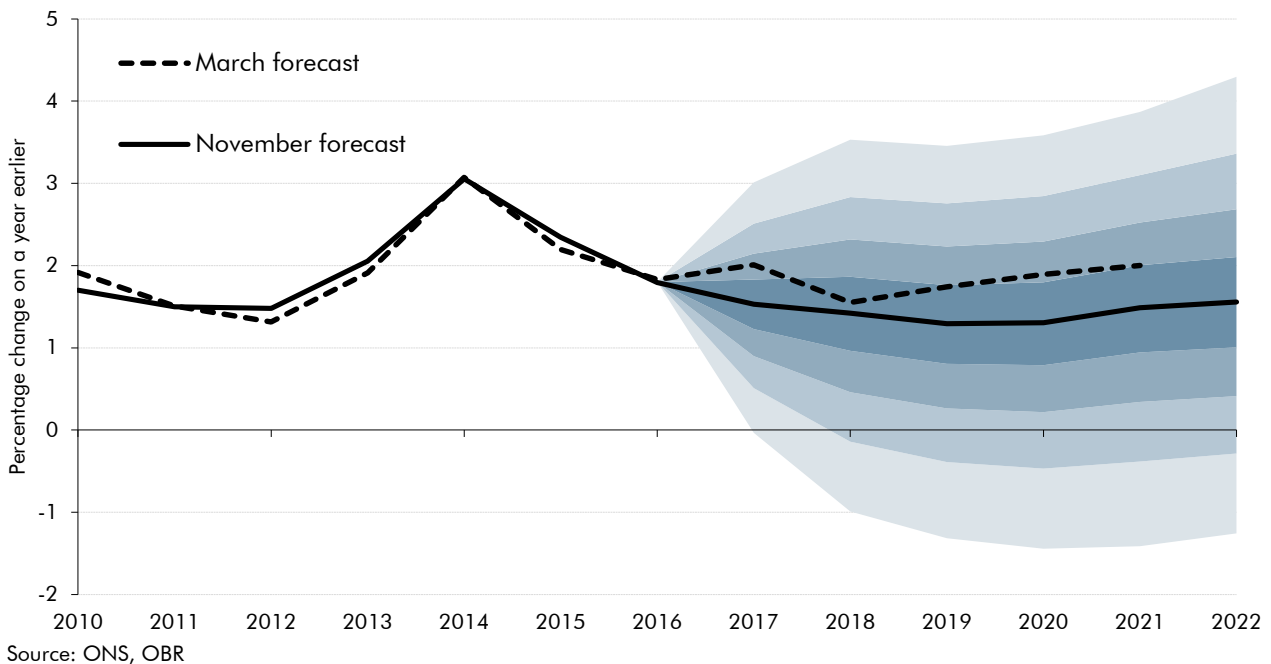
Note: Components may not sum to total due to rounding.

Chart 3.17: Change in cumulative contributions to GDP growth since March



3.60 This analysis relates to our central GDP growth forecast, but there is of course significant uncertainty around this forecast. Chart 3.18 shows the probability distribution of different outcomes surrounding the central forecast based purely on past forecast performance. The solid black line shows our median forecast, with successive pairs of lighter shaded areas around it representing 20 per cent probability bands. (The chart implies a roughly one-in-four chance that the economy will shrink in calendar year 2018 or 2019.) These estimates are based on the historical distribution of official forecast errors. They do not represent a subjective measure of the distribution of risks and uncertainties around our central forecast. Such risks and uncertainties are discussed at the end of the chapter.

Chart 3.18: Real GDP growth fan chart



Prospects for inflation

- 3.61 In assessing the outlook for the economy and the public finances, we are interested in several measures of inflation, principally the Consumer Prices Index (CPI) and the Retail Prices Index (RPI). The source information is the same for both indices, although there are a number of differences in coverage and methodology (see Box 3.3 of the March 2015 *EFO* for details). We also need to forecast the GDP deflator and its components, which are required to generate a projection for nominal GDP.
- 3.62 CPI and RPI inflation affect the public finances in several ways. The Government uses the CPI to index many tax allowances and thresholds, and to uprate benefits and public sector pensions. The RPI is no longer a National Statistic, because it falls short of agreed international statistical standards, but the Government still uses it to calculate interest payments on index-linked gilts, student loan payments and the revalorisation of excise duties. The ONS also publishes several other inflation measures – most notably CPIH, a measure of CPI that includes housing costs and is now its main headline measure – but as these do not currently affect the public finances, we do not forecast them.

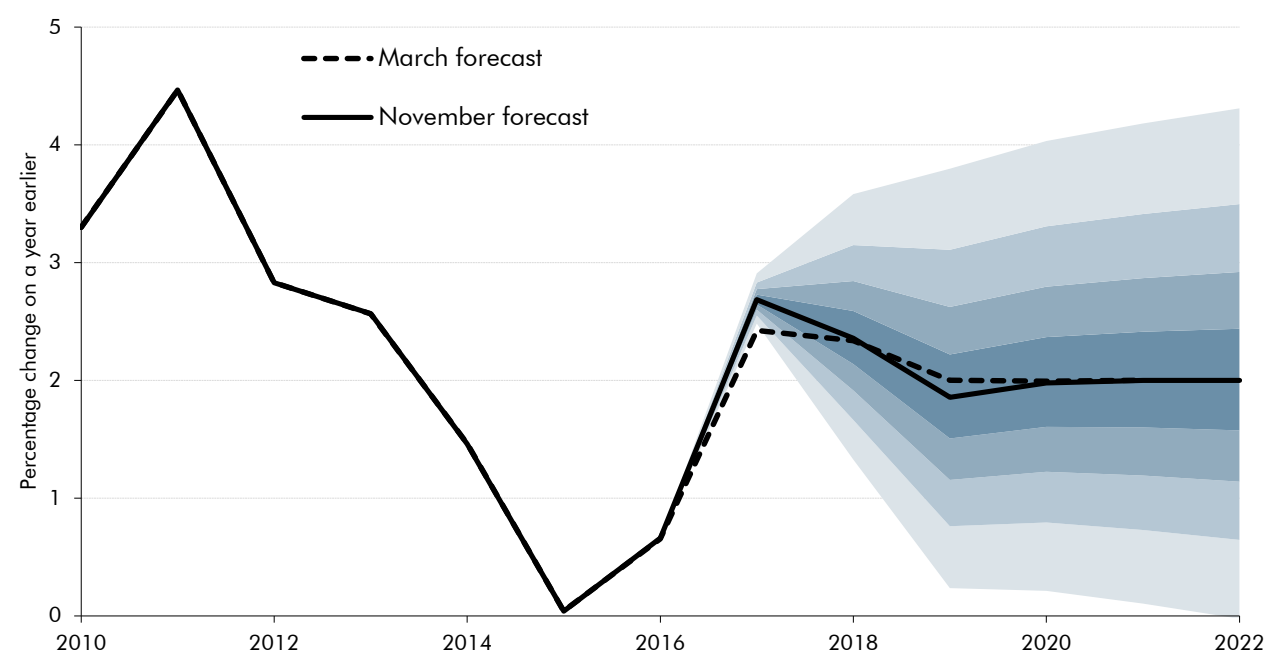
CPI inflation

- 3.63 The annual rate of CPI inflation has picked up sharply since our March forecast, reaching 2.8 per cent in the third quarter – 0.2 percentage points above the March forecast. This was driven by the continued pass through of higher import prices, caused by the depreciation in sterling and rising global commodity prices. (The latter pushed up food prices in particular.) The latest monthly data show that headline CPI inflation was 3.0 per cent in October. Our economy forecast was closed on a pre-policy-measures basis before the October inflation data were released, although they would not have had a material effect on our forecast.
- 3.64 CPI inflation has been running above the Bank of England's 2 per cent target since February and is expected to continue to do so in the near term as the impact of sterling's earlier depreciation on import prices continues to pass through into consumer prices. The MPC's modest tightening of monetary policy on 2 November was mostly priced in when we took our market assumptions in the 10 days to 31 October. Since then, market interest rates have not moved significantly, and imply almost three further 25 basis point Bank Rate rises over our forecast period. In the Bank's central forecast, this gradual and limited tightening of monetary policy is sufficient to bring inflation back towards the 2 per cent target once the effects of sterling's depreciation dwindle and domestic price pressures start to rise.
- 3.65 Our forecast is consistent with this path. We do not expect inflation to rise further and expect the rate to decline gradually through 2018 and 2019 as the effects of the fall in the pound around the time of the referendum begin to fade. Inflation is expected to settle close to the 2 per cent target around the middle of 2020.
- 3.66 Since March, the main developments affecting our central inflation forecast include:

- Across the forecast period, **sterling** is now 0.3 per cent lower than assumed in our March forecast, raising import prices a little and boosting near-term CPI inflation.
- **Oil prices** are assumed to be 3.2 per cent higher in the first quarter of 2018 than in March. However, the oil futures curve, on which our forecast is conditioned, is downward sloping in the near term. Compared to March, oil prices are 2.0 per cent lower in 2021, which means fuel prices are expected to contribute slightly less to CPI inflation over the forecast period. Market assumptions taken two weeks after our economy forecast was closed for new data show that oil prices would be around 7 per cent higher in the near term but slightly less in the medium term. Mechanically adjusting our forecast for this information suggests that the rate of CPI inflation would be around 0.2 percentage points higher over the next year and down marginally thereafter.
- We have also made adjustments for several **policies** announced in this Budget. These include the reinstatement of the tobacco duty 'escalator' of RPI inflation plus 2 per cent for the duration of the new Parliament; freezes to fuel duty, alcohol duties and tuition fees in 2018-19; and a change to vehicle excise duty for new diesel cars. The total effect of these changes has been to lower CPI inflation in 2018-19 by around 0.1 percentage points relative to our pre-measures forecast.

3.67 Chart 3.19 shows our latest forecast in a fan chart that has been produced using the same methodology as that underpinning the GDP fan chart (Chart 3.18 above). It illustrates the range of possible outcomes one would expect if past official forecast errors were a reasonable guide to the future. It also shows that the revisions to our inflation forecast since March are small in comparison to historical differences between forecasts and outturns.

Chart 3.19: CPI inflation fan chart



Source: ONS, OBR

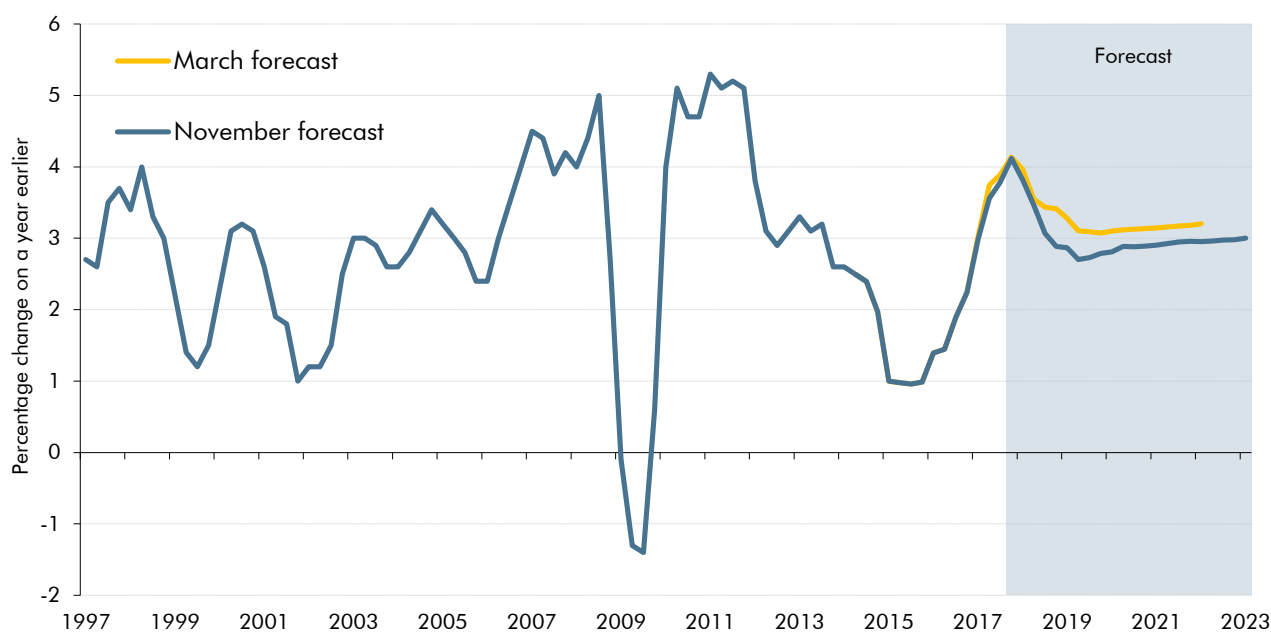
RPI inflation

3.68 The definition of RPI inflation falls short of agreed international statistical standards,¹⁰ but we nevertheless need to forecast it as an input into our fiscal forecasts – notably as a determinant of the interest paid on the large and growing stock of index-linked gilts.

3.69 RPI inflation averaged 3.8 per cent in the third quarter of 2017, 0.1 percentage points below our March forecast (Chart 3.20). We compile our RPI inflation forecast by adding a wedge to our CPI inflation forecast for differences in measurement, coverage and weights. We have revised this wedge down since March due largely to:

- a lower **house price inflation** forecast, which feeds into the housing depreciation component of RPI inflation; and
- a lower path for growth in the **mortgage interest payments** component of RPI inflation, due to lower paths for mortgage rates and mortgage debt.

Chart 3.20: RPI inflation



Source: ONS, OBR

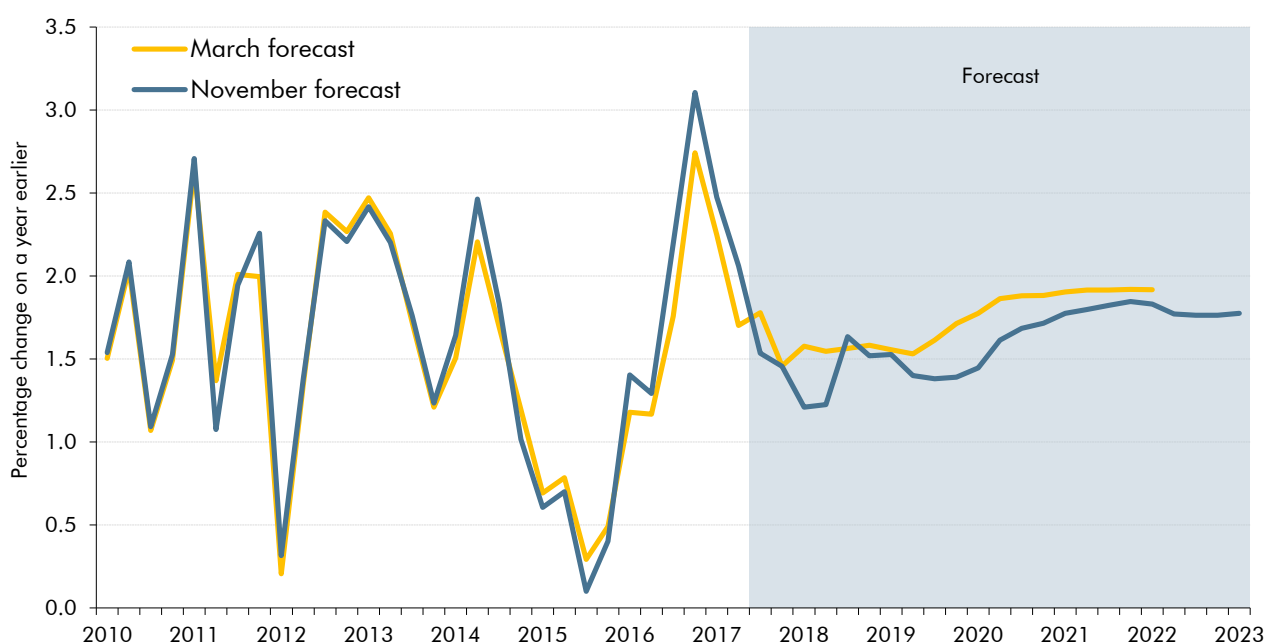
The GDP deflator

3.70 GDP deflator inflation is the broadest measure of inflation in the domestic economy. It reflects changes in the prices of all the goods and services that comprise GDP, including movements in the prices of private and government consumption, investment and in the relative price of exports to imports – the terms of trade.

¹⁰ ONS, *Response to the National Statistician's consultation on options for improving the Retail Prices Index*, February 2013.

- 3.71 Relative to the corresponding quarter a year earlier, the GDP deflator rose by 2.5 and 2.1 per cent in the first and second quarters of 2017 respectively, above our March forecasts but down from a peak of 3.1 per cent in the fourth quarter of 2016. In the near term, we expect GDP deflator inflation to fall a little further as CPI inflation falls back towards target and growth in the terms of trade falls. The volatility in GDP deflator inflation over 2018 and 2019 mainly reflects government spending plans (Chart 3.21). Relative to March, the lower near-term path is mostly because we expect import prices to rise more strongly to be consistent with our forecast for consumer prices.
- 3.72 Over the medium term, we expect annual GDP deflator inflation of a little under 2 per cent as consumer prices rise in line with the MPC's 2 per cent target but the fiscal consolidation dampens government consumption deflator inflation.

Chart 3.21: GDP deflator



Source: ONS, OBR

Prospects for nominal GDP

- 3.73 Most public discussion of economic prospects focuses on real GDP – the volume of goods and services produced in the economy. But the nominal or cash value – and its composition by income and expenditure – is more important for understanding the behaviour of the public finances. Taxes are driven more by nominal than real GDP. So too is the share of GDP devoted to public spending, as a large proportion of that spending is set out in multi-year cash plans (public services, grants and administration, and capital spending) or linked to measures of inflation (including benefits, tax credits and interest on index-linked gilts).
- 3.74 Nominal GDP growth picked up in 2016, with annual growth of 3.8 per cent, compared to 2.8 per cent in 2015. Much of this pick-up was concentrated in private and government consumption on the expenditure side, and labour income and profits on the income side.

Recent data indicate that nominal GDP growth slowed at the start of this year, with quarterly growth averaging 0.8 per cent in the first two quarters, compared to an average of 1.2 per cent in 2016. . This slowdown appears broadly based across components of expenditure, with the growth in nominal consumption, investment and government consumption all easing. As a result, we expect calendar year nominal GDP growth to slow slightly in 2017.

- 3.75 We expect nominal GDP growth to moderate further in 2018 and 2019 as household saving stabilises and growth in private consumption falls back. Nominal growth is then expected to rise gradually from 2020 as a modest increase in productivity growth supports a pick-up in wage growth and hence also consumer spending. From 2021, annual nominal GDP growth settles just under 3½ per cent, somewhat weaker than our March medium-term growth forecast of just under 4 per cent. We now expect growth of 15.0 per cent between the second quarter of 2017 and the first quarter of 2022, down from 18.2 per cent in March with this revision largely accounted for by weaker potential output growth, as well as a downward revision to near-term GDP deflator inflation (see paragraph 3.71).

Prospects for individual sectors of the economy

- 3.76 This section covers our forecasts for the household sector (including the labour market), the corporate sector, the government sector and the rest of the world (including the current account balance).

The household sector

- 3.77 The household sector dominates income and spending in the economy. In 2016, household disposable income made up 68 per cent of nominal GDP by income and consumer spending made up 65 per cent of nominal GDP by expenditure.

Labour market

- 3.78 The unemployment rate stood at 4.4 per cent of the labour force in the second quarter of 2017. Based on the monthly data available when we closed our economy forecast, it had fallen to 4.3 per cent in the three months to August 2017. On the latest data, it remained at that level in the third quarter, the joint lowest unemployment rate since 1975. As discussed in paragraph 3.10 we have revised down our assumption for the equilibrium unemployment rate in this forecast. We expect the actual unemployment rate to remain broadly flat over the coming quarters before rising slowly towards that equilibrium. The unemployment rate therefore reaches 4.6 per cent in 2020 and remains there for the rest of the forecast. On average over the forecast, unemployment is just over 200,000 lower than in March.
- 3.79 Due to the distorting effects of the rollout of universal credit on the claimant count measure of unemployment, the ONS no longer considers that it merits classification as a 'National Statistic'. We have also ceased forecasting it, although we continue to forecast the caseloads necessary to produce our welfare spending forecast (see Chapter 4).

- 3.80 We currently judge the participation rate to be close to its underlying equilibrium rate. The participation rate is expected to remain broadly flat up to 2020, declining subsequently as the population share of older people rises. The 0.7 million rise in employment over the forecast is therefore more than accounted for by population growth. The ONS population projections underpinning our forecast imply that around half the expected population growth over the forecast period is associated with net inward migration but, since inward migrants are disproportionately of working age (albeit less so than in the previous projections), that around three-quarters of the projected rise in employment is accounted for by net inward migration.
- 3.81 In recent years, the number of self-employed workers has grown more rapidly than the number of employees, possibly reflecting a desire for more flexible working patterns as well as differences in the way that different forms of income are taxed. We expect that trend to continue and the self-employment share to rise by 0.1 percentage points a year over the forecast period. In Blue Book 2017, the ONS revised its estimates of dividend income received by households to capture better the incomes of those people working as single-director companies ('incorporations') and paying themselves dividends as opposed to wages and salaries or self-employment income. This is discussed further in Chapter 2.

Average earnings

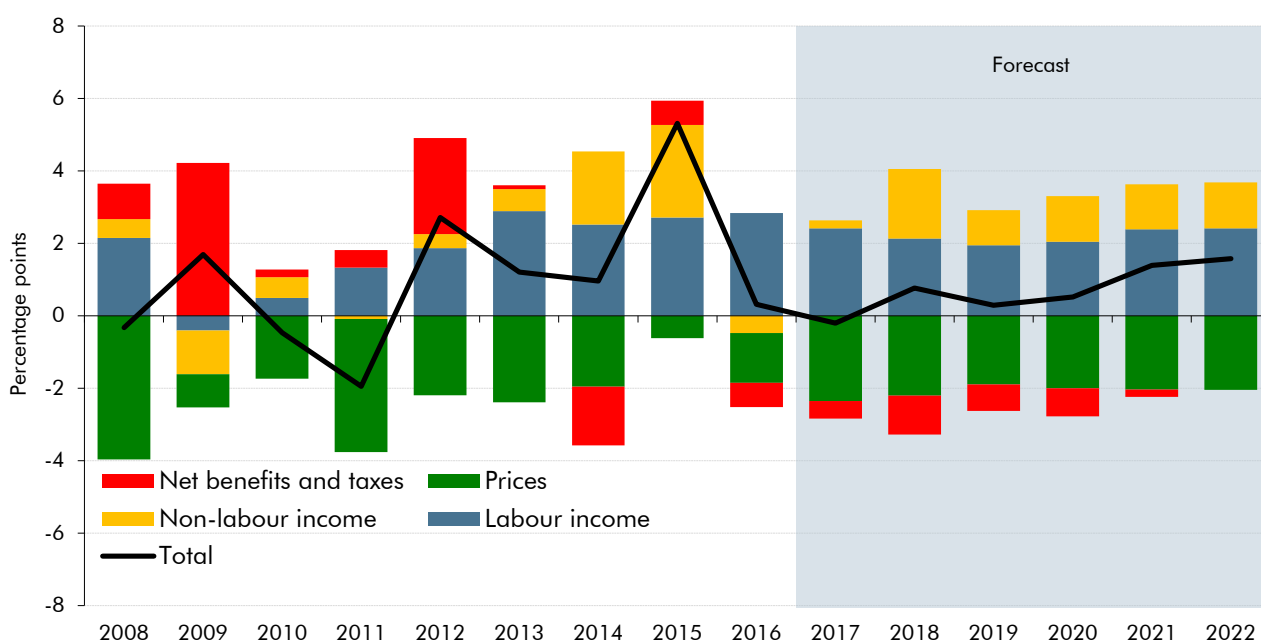
- 3.82 Our forecast uses an implied measure of average earnings constructed by dividing the National Accounts measure of wages and salaries by the number of employees (rather than the official ONS measure of average weekly earnings (AWE)). On our measure, average earnings growth was 2.4 per cent in the first half of 2017, 0.3 percentage points lower than in our March forecast. Wages and salaries data are not yet available for the third quarter, but the AWE measure showed subdued annual growth of 2.2 per cent.
- 3.83 We expect average earnings growth of 2.3 per cent between 2017 and 2019. We then expect it to pick up to 3.1 per cent by 2022, in line with our forecast for a modest rise in productivity growth and as the impact of the government policies discussed below fade. Average earnings growth remains below the rates typical before the financial crisis over the entire forecast period.
- 3.84 Compared to our March forecast, we expect lower productivity growth to be reflected in weaker earnings growth. We have also revised down whole economy inflation in this forecast, which we also expect to be reflected in more subdued earnings growth. On average across the four years to 2021, our latest earnings growth forecast is 0.6 percentage points lower than in March.
- 3.85 Some of the weakness in our central earnings growth forecast reflects judgements about the impact of various government policies. We assume that the burden of these interventions is ultimately borne by workers, with wages lower than would otherwise be the case. The most significant are the introduction of the apprenticeship levy and the continued rolling out of auto-enrolment into workplace pensions, which we estimate will reduce average earnings by 0.3 and 0.4 per cent respectively by 2021. Some of these impacts will already be reflected

in the outturn data, but the largest effects are assumed to occur in 2018 and 2019. Over the forecast period we expect these policies to lower earnings by a further 0.4 per cent.

Household disposable income

- 3.86 Real household disposable income picked up sharply in 2015, partly reflecting the large amount of dividend income shifting that occurred ahead of the dividend tax rise in April 2016. Real household disposable income growth subsequently slowed in 2016 as dividend income fell back and inflation picked up slightly.
- 3.87 Relatively weak nominal earnings growth, together with above-target CPI inflation, means that real household disposable income is expected to fall in 2017 (Chart 3.22). We expect real household disposable incomes to rise in 2018, as dividend income picks up and CPI inflation eases. Thereafter, gradual increases in nominal earnings growth support real household disposable income growth, although by less than we assumed in March. The contribution of other sources of household income also rises – partly due to increases in actual and imputed pension contributions, reflecting greater auto-enrolment and higher pension contribution rates. However, the freeze in most working-age benefits and tax credits, together with fiscal drag in the income tax system, continues to weigh on household income growth.
- 3.88 We factor in the changing composition of household income due to incorporations in our fiscal forecast rather than our economy forecast. The greater granularity of the fiscal forecast allows us to capture the effects of incorporations on individual tax receipts more accurately – in particular, the incentive to incorporate changes along the income distribution which affects the size of the adjustment that needs to be made to our tax forecasts.

Chart 3.22: Contributions to real household income growth



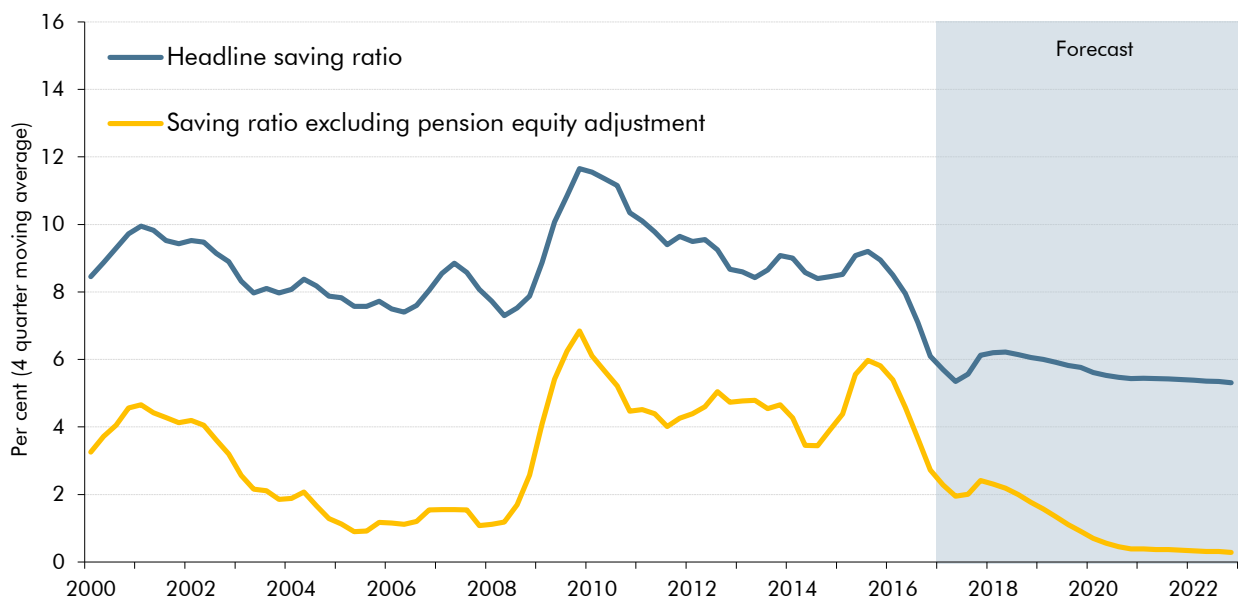
Source: ONS, OBR

The saving ratio

- 3.89 ONS data revisions in this year's Blue Book – largely reflecting improvements to the measurement of dividend income received by households – mean that estimates of the household saving ratio have been revised up significantly since our March forecast. The latest data now indicate that the ratio averaged around 9 per cent between 2011 and 2015 – compared to just under 7½ per cent based on the data available at the time of our March forecast. In general, revisions to more recent years have been larger than those to earlier years, reflecting a significant increase in the number of people setting themselves up as single-director companies ('incorporations'). This implies an upward trend in the share of dividend income in overall household income over time.¹¹
- 3.90 These revisions mean that the downward trend in the saving ratio since 2010 is now somewhat less steep than previously thought, although recent estimates have been affected by large amounts of income shifting ahead of the pre-announced rise in dividend taxes in April 2016. That raised household income in the 2015-16 tax year and reduced it subsequently. Household income is also reduced by the tax levied on this income, which is generally paid with a lag of around a year. This tax is recorded in the National Accounts when paid, rather than accruing at the date when the income was received. This timing difference is a key factor behind the fall in the saving ratio to almost 4 per cent in the first quarter of 2017 and its subsequent recovery to nearly 6 per cent in the second quarter.
- 3.91 We expect the downward trend in household saving since 2010 to continue in the near term, particularly once pension saving is excluded (Chart 3.23). We expect consumption growth to outpace household income growth slightly, supported by historically-low interest rates and relatively low levels of unemployment, although underlying saving is expected to fall at a more gradual pace in the next two years than in the recent past. The saving ratio cannot continue falling indefinitely and we expect it to stabilise over the medium term. Alternative paths for household saving are a key risk to the forecast.
- 3.92 As well as the data-driven changes to the level of housing saving, we have revised down cumulative pension saving over the forecast period. Our previous approach to forecasting employee pension contributions – in particular, the imputed elements that are calculated by combining the stock of pension liabilities with gilt rates – had been over-forecasting outturns. Correcting for these errors lowers our forecast for the headline saving ratio, but does not have significant consequences for our judgement about household consumption growth, where we focus on the measure excluding pension saving.

¹¹ See Box 2.1 of our October 2017 *Forecast evaluation report* for more details on these revisions.

Chart 3.23: The household saving ratio



Note: Both series show four-quarter moving averages. The estimate of the saving ratio excluding the pension equity adjustment is calculated as household disposable income less consumption, as a proportion of household disposable income.

Source: ONS, OBR

Real consumer spending

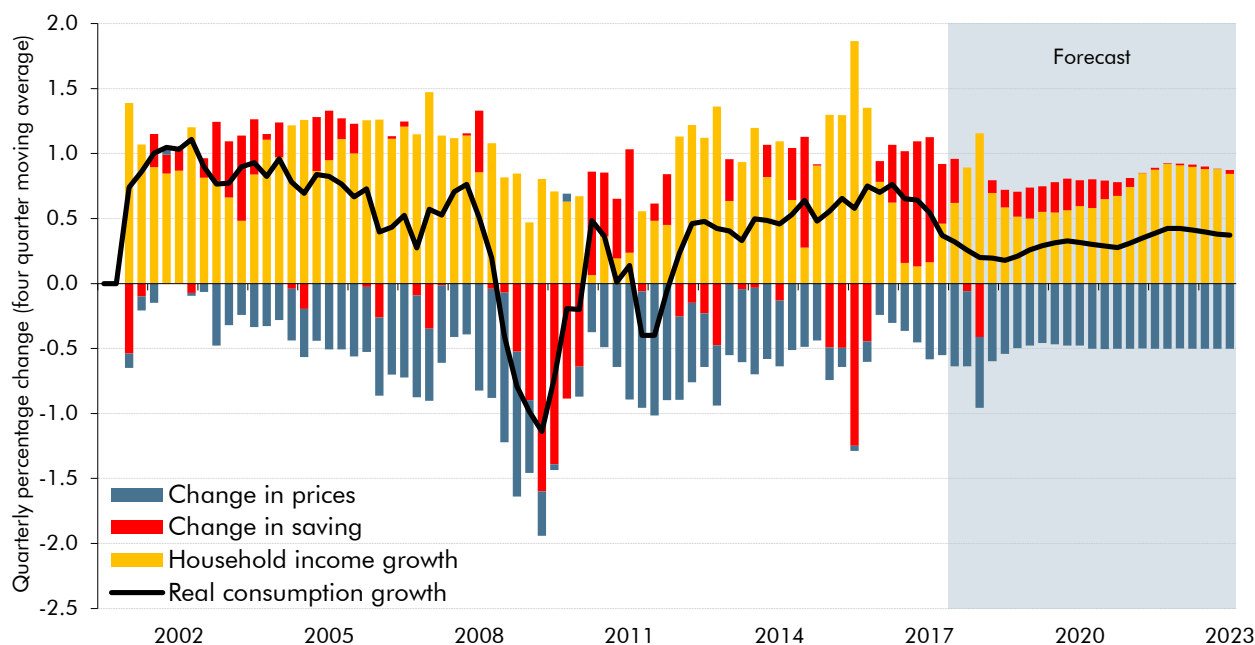
3.93 Real consumption grew by 2.8 per cent in 2016, revised down slightly from the 3.0 per cent estimate at the time of our March forecast but still the strongest annual growth since 2005. That strength was associated with a fall in the household saving ratio, in part perhaps reflecting a delayed response of spending to the strong growth in real incomes in the preceding year. Private consumption growth slowed significantly in the second half of 2016 and first half of 2017 as the rise in inflation that followed the referendum-related fall in sterling squeezed real household income. But real consumption growth did not slow as sharply as real income growth, perhaps because households were slow to take on board the consequences of the depreciation for their future living standards. Pre-referendum surveys generally suggested that the majority of households did not think that a leave vote would have a negative impact on their personal finances.¹² Following the referendum, consumer confidence held up fairly well as sentiment regarding households' own finances did not deteriorate significantly, despite big falls in sentiment regarding the economic outlook.

3.94 Chart 3.24 decomposes our forecast for real consumption growth into its main components: household income growth, changes in saving, and changes in consumer prices. In the near term, the squeeze on household incomes from the pass-through of the fall in sterling into consumer prices continues to weigh on consumer spending. However, as mentioned above, we expect consumption to continue growing slightly faster than household disposable incomes in the near term. Over the medium term, we assume that the saving ratio stabilises, so that consumption grows in line with incomes.

¹² For example see YouGov/Times poll number 160233 from 24 February 2016.

- 3.95 On this basis, we expect consumption growth to slow from 2.8 per cent in 2016 to 1.5 per cent in 2017. That is lower than in our March forecast as a result of the downward revisions to growth at the end of 2016 and weaker-than-expected growth at the start of 2017. From mid-2018, we expect quarterly real consumption growth to edge up as inflation falls back and the gradual recovery in productivity growth raises nominal household income growth.

Chart 3.24: Contributions to real consumption growth



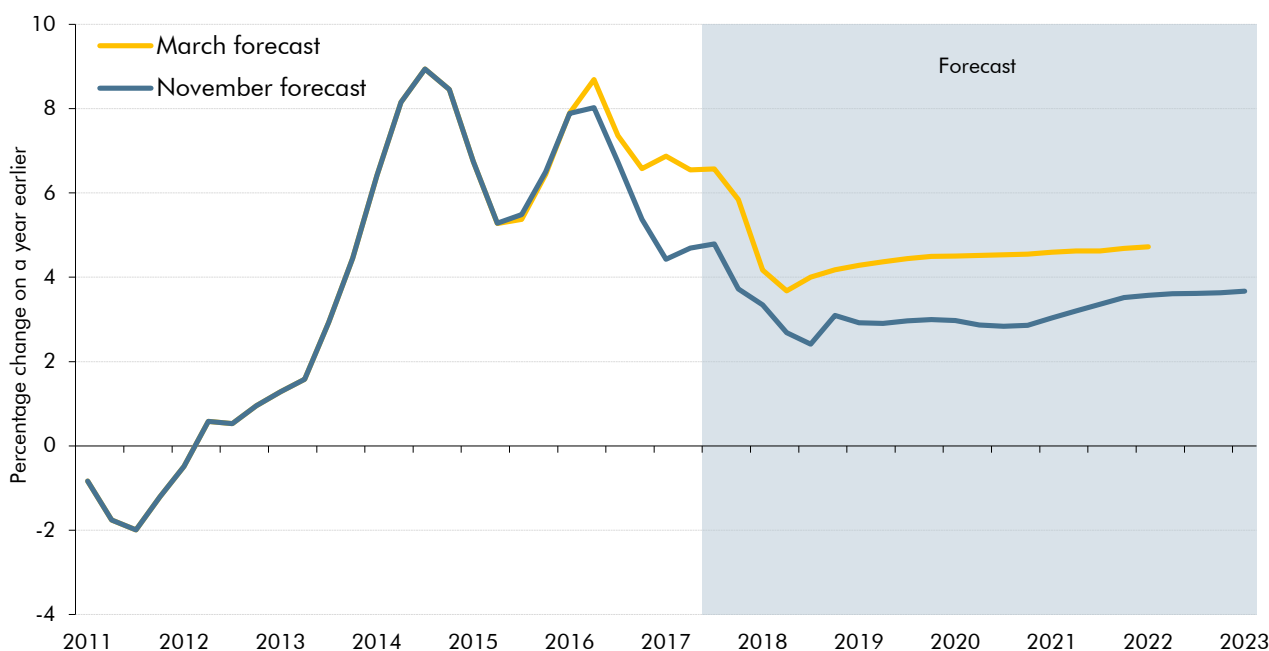
- 3.96 Our forecast for consumer spending growth in the medium term is significantly lower than in March, with cumulative growth between the first quarter of 2017 and first quarter of 2022 down from 7.7 per cent in March to 6.2 per cent in this forecast. This reflects the impact of the weaker productivity profile on household disposable income growth.

The housing market and residential investment

- 3.97 House price inflation slowed in the first half of 2017, averaging 4.6 per cent on an annual basis, down from an average of 7.0 per cent in 2016. We expect annual house price inflation to slow further in the coming quarters, reaching a low of 2.4 per cent in mid-2018 (Chart 3.25). The major lenders' measures – which are timelier than the ONS measure – have also slowed in recent months. Annual house price inflation in October was 4.5 per cent on the Halifax measure and 2.5 per cent on the Nationwide measure.
- 3.98 Compared to our March forecast, the near-term path for house prices is lower because of downward revisions to the data that were discussed in Chapter 2. Our forecast for the third and fourth quarters of 2017 draws on a variety of indicators of housing market activity, including survey data from the Royal Institution of Chartered Surveyors (RICS) and mortgage data from the Bank of England. Most of these are consistent with a slowing housing market.

- 3.99 The main influence on house prices is growth in real incomes, as this drives demand for housing while the overall supply of housing generally rises only relatively slowly. The near term fall in real wages resulting from the fall in sterling means that we expect house price growth to slow further in 2018. A rise in real income growth then drives a pick-up in house price inflation from 2021. The downward revision to our real income forecast since March is the main driver of our lower house price inflation forecast in the medium term. House prices are expected to rise by 15 per cent between the second quarter of 2017 and the first quarter of 2022, compared to 22 per cent in March.
- 3.100 Other factors are expected to have smaller effects on house price growth. We expect the housing stock to grow slightly faster than the population over the forecast, providing a small drag on house price inflation. Relative to March, this drag is slightly greater due to weaker population growth. We also expect that a rise in mortgage rates will weigh on house price inflation in the medium term.
- 3.101 The Bank’s Financial Policy Committee (FPC) has the power to set macroprudential policies that could also influence house prices. For example, in June 2014, the FPC directed mortgage lenders not to extend more than 15 per cent of new lending at loan-to-income multiples of greater than 4.5. That was not expected to bind in the central forecast, but limited the scope for upside surprises to mortgage lending and therefore house prices. The FPC also has powers to set limits on loan-to-value, debt-to-income and interest-coverage ratios in the owner-occupier and buy-to-let mortgage markets.
- 3.102 In the five years since the recovery in house prices began in 2012, the ratio of average house prices to average annual earnings has risen about 16 per cent, returning to around its pre-crisis level. We have revised down our forecasts for both earnings and house prices, so we still expect the ratio to rise over the next five years (by around 2 per cent).

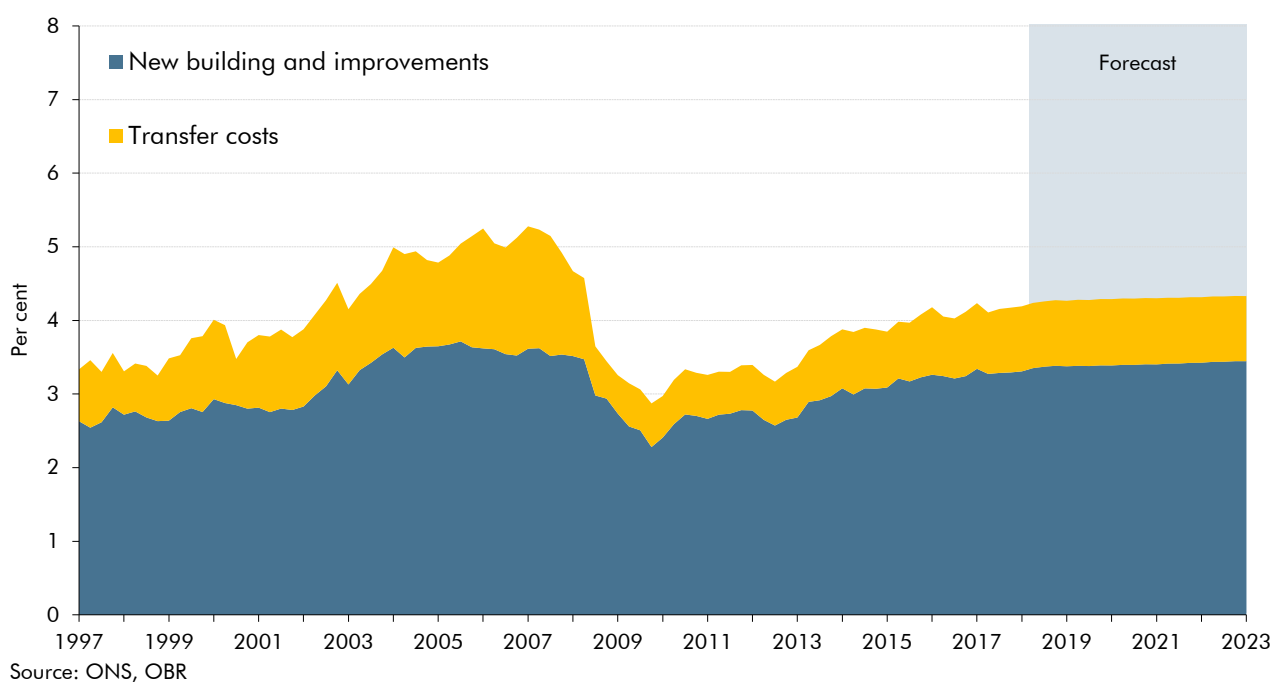
Chart 3.25: House price inflation forecast



Source: ONS, OBR

- 3.103 Residential property transactions in 2017 have been marginally weaker than our March forecast at a little over 300,000 per quarter. The share of transactions undertaken by non-mortgaged buyers has continued to rise and now stands at around a third. Over the medium term, we continue to assume that transactions will increase gradually to a level that is consistent with the housing stock turning over around once every 22 years – informed by the average turnover experienced prior to the pre-crisis housing boom.
- 3.104 Nominal residential investment grew by 7.1 per cent in 2016, revised up since March. In line with our forecasts for house prices and property transactions, we expect relatively subdued growth in residential investment over the forecast period. Near-term growth in housebuilding is expected to slow due to low turnover in the housing market and modestly higher interest rates. Residential investment is expected to grow more slowly than in March due to the downward revisions we have made to our house price and transaction forecasts. As a share of GDP, total private residential investment is expected to remain below its pre-crisis peak throughout the forecast period (Chart 3.26).

Chart 3.26: Residential investment as a share of nominal GDP



- 3.105 We have incorporated the macroeconomic effects of policy changes in our forecasts for the housing market and residential investment:
- An additional £10 billion for the **Help to Buy equity loan scheme** was announced in October. We expect only a small proportion of the associated lending to add to total mortgage lending rather than displacing lending that would otherwise have taken place anyway. Overall, we have made a small upward adjustment to the stock of dwellings to capture the effect on new house building and a small increase in the level of house prices to reflect the effect of additional demand. We have also made a small adjustment to the transactions costs element of residential investment to reflect the

effect of this policy on residential property transactions. As the Help to Buy scheme is temporary, these effects fade when the scheme ends in 2021.

- The permanent **Stamp Duty Land Tax relief for first time buyers** announced in this Budget is expected to boost the level of house prices by around 0.3 per cent throughout the forecast. This estimate is consistent with our published price elasticities for stamp duty changes and most of the effect is expected to occur in 2018.

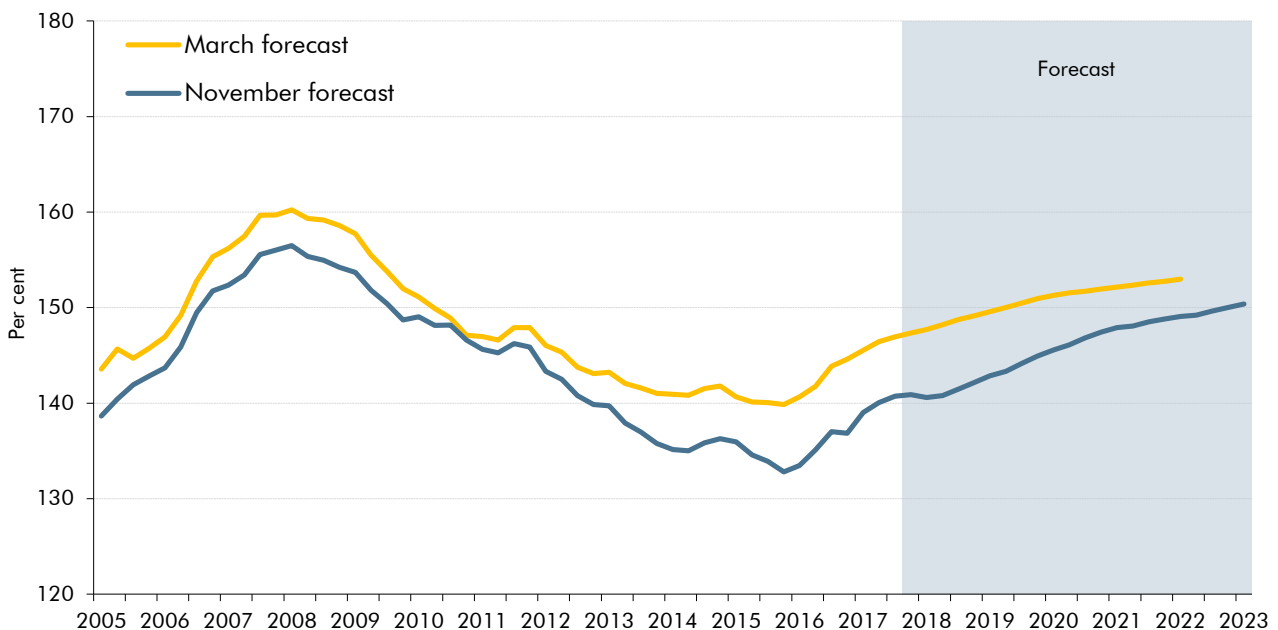
Net lending and the household balance sheet

3.106 Our forecast for the household balance sheet is built up from the accumulation of household assets and liabilities, constrained to be consistent with our forecast for households’ net lending.

3.107 Household debt – which includes both mortgage and unsecured debt – has risen gradually as a share of disposable income since the end of 2016 and we expect this to continue, increasing to around 150 per cent by the start of 2023. This remains slightly below the 2008 peak. The rise reflects both an increase in mortgage debt – as house price growth outpaces nominal disposable income – and an increase in unsecured debt as nominal consumption growth outpaces nominal disposable income over the forecast period.

3.108 Relative to our March forecast, we expect a lower household debt-to-income ratio (Chart 3.27). This largely reflects upward revisions to the past level of household disposable income. We have also revised down the accumulation of secured debt over the forecast, consistent with a weaker house price growth. Table 3.4 decomposes these changes.

Chart 3.27: Household gross debt to income



Source: ONS, OBR

Table 3.4: Sources of change to the household debt forecast since March

	Per cent of household disposable income ¹				
	2017	2018	2019	2020	2021
March forecast	147.3	149.1	151.0	152.0	152.7
November forecast	140.9	142.2	144.9	147.4	148.8
Change (percentage points)	-6.4	-7.0	-6.0	-4.5	-3.9
of which:					
Change in household debt	-0.5	-1.2	-1.4	-1.6	-1.6
Change in household disposable income ²	-5.9	-5.8	-4.6	-2.9	-2.3
	£ billion ³				
March forecast	1934	2020	2107	2199	2296
November forecast	1928	2003	2086	2176	2272
Change	-7	-17	-21	-23	-25
of which:					
Revision to starting point	-1	-1	-1	-1	-1
Revision to accumulation of secured debt	-5	-9	-14	-19	-25
Revision to accumulation of unsecured debt	-1	-7	-6	-3	2

¹ Level of household debt in fourth quarter of calendar year divided by household disposable income in calendar year.

² Positive values indicate a downward revision to household disposable income.

³ Level of household debt in fourth quarter of calendar year.

The corporate sector

3.109 The corporate sector contributes to the expenditure measure of GDP through business investment and stockbuilding and to the income measure in the form of profits. Much corporate spending is tax-deductible, while corporate profits are taxed less heavily than most forms of household income.

Business investment and stockbuilding

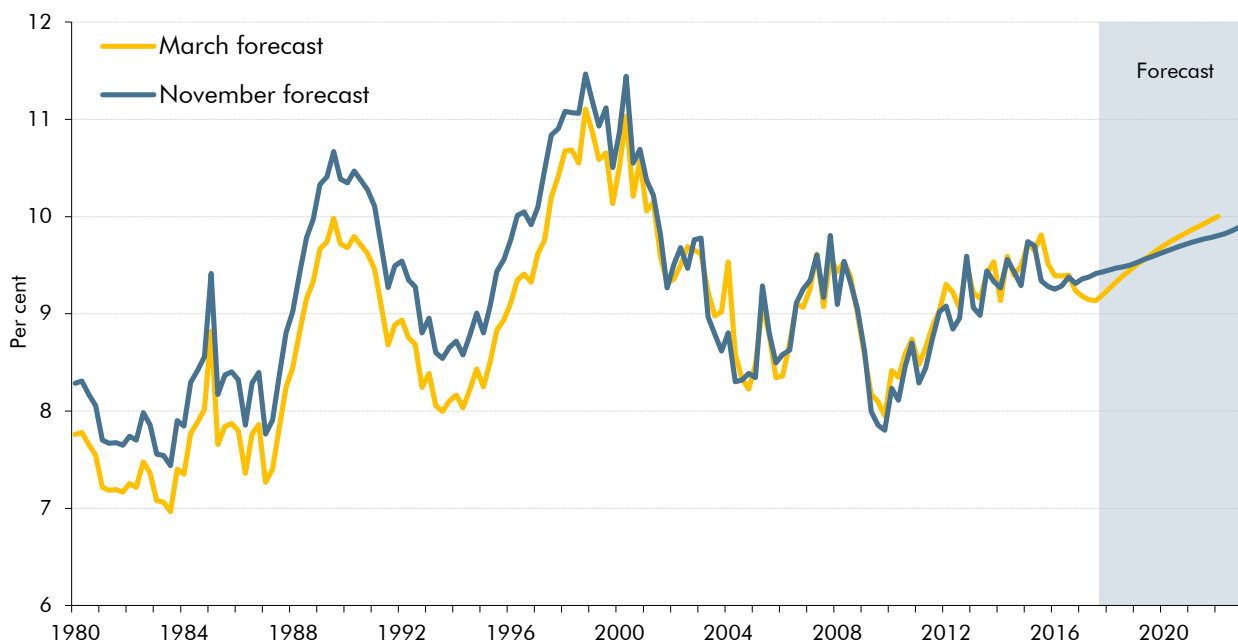
3.110 In Blue Book 2017, the path of business investment in the run-up to and after the referendum was revised significantly. The previous vintage of data showed it falling by around 1 per cent in the year to the second quarter of 2016 and flat in the year to the second quarter of 2017. The latest data show it falling 2.5 per cent in the year before the referendum, and rising 2.5 per cent in the year since. This illustrates once again that business investment estimates are both volatile and prone to significant revisions.

3.111 The most recent estimates are slightly at odds with the investment intentions surveys which suggested that the referendum was weighing on spending decisions and informed our initial post-referendum forecasts.¹³ A significant factor in the latest data revisions was the path of investment in aircraft, where use of a new data source suggests a sharp fall in purchases in 2015 and a sharp rise in 2016. Given the long lags between ordering and taking delivery of aircraft, this is likely to reflect investment decisions made long before the referendum. Commercial property activity has also been strong following the referendum. But, even on the revised data, business investment has been significantly weaker than our pre-referendum forecasts. Growth in business investment between the end of 2015 and the second quarter of 2017 was 5.5 per cent lower than we expected in March 2016.

¹³ For example, see *The CFO Survey*, Deloitte Q1 2016.

3.112 Chart 3.28 shows that we expect a slight rise in business investment as a share of real GDP, but less than would be typical at this stage of an economic recovery. This is in part because we assume that business investment will be dampened by uncertainty regarding the UK’s new relationship with the EU and our future trading relationships with other countries. Uncertainty of this sort generally makes firms wary of engaging in larger investment projects, which might prove difficult or expensive to reverse if outcomes disappoint.

Chart 3.28: Real business investment as a share of real GDP



Source: ONS, OBR

3.113 We now expect business investment to rise by around 12 per cent between the first quarter of 2017 and the first quarter of 2022, significantly lower than the 19 per cent expected in March. This downward revision reflects the weaker outlook for productivity growth lowering the expected return on capital.

3.114 The latest data suggest that stockbuilding acted as a drag on growth in 2016 and will act as a drag on growth in 2017. We expect it to make a small positive contribution to GDP growth in 2018 and then be broadly neutral across the rest of the forecast period.

Corporate profits

3.115 Corporate profit growth has slowed in recent quarters. Non-oil corporate profits are estimated to have been broadly flat in the year to the second quarter of 2017, following growth of just under 8 per cent in 2016. This reduces our forecast for profit growth in 2017. We now expect profits to grow by 0.3 per cent this year, revised down from our March forecast of just over 3 per cent. We expect profit growth to pick up slightly to 1.3 per cent in 2018, growing slightly less quickly than nominal GDP as the economy slows. As the output gap closes we assume a small cyclical rise in the ratio of profits to GDP from 2020. We expect profits to grow broadly in line with nominal GDP by 2022.

The government sector

3.116 Total public spending amounted to 39 per cent of GDP in 2016-17.¹⁴ But not all contributes directly to GDP. Spending on welfare payments and debt interest, for example, merely transfers income from some individuals to others. The government sector contributes directly to GDP through its production of goods and services. In terms of expenditure, government consumption and investment accounted for 21 per cent of GDP in 2016-17.

Nominal government consumption

3.117 Nominal government consumption grew by 2.2 per cent in 2016, revised up from the 1.4 per cent estimate available at the time of our March forecast. Outturn data and the Government's updated fiscal plans imply that it should grow by 1.4 per cent in 2017, down from the 2.4 per cent expected in March, and 2.1 per cent in 2018, up from 1.5 per cent in March. Growth is expected to slow over the next two years, reaching just 1.0 per cent in 2020, before picking up again in the last two years of the forecast. This revised path implies that nominal government consumption falls from 18.9 per cent of GDP in 2016 to 17.5 per cent of GDP in 2021, slightly higher than in March but still the lowest since 2001.

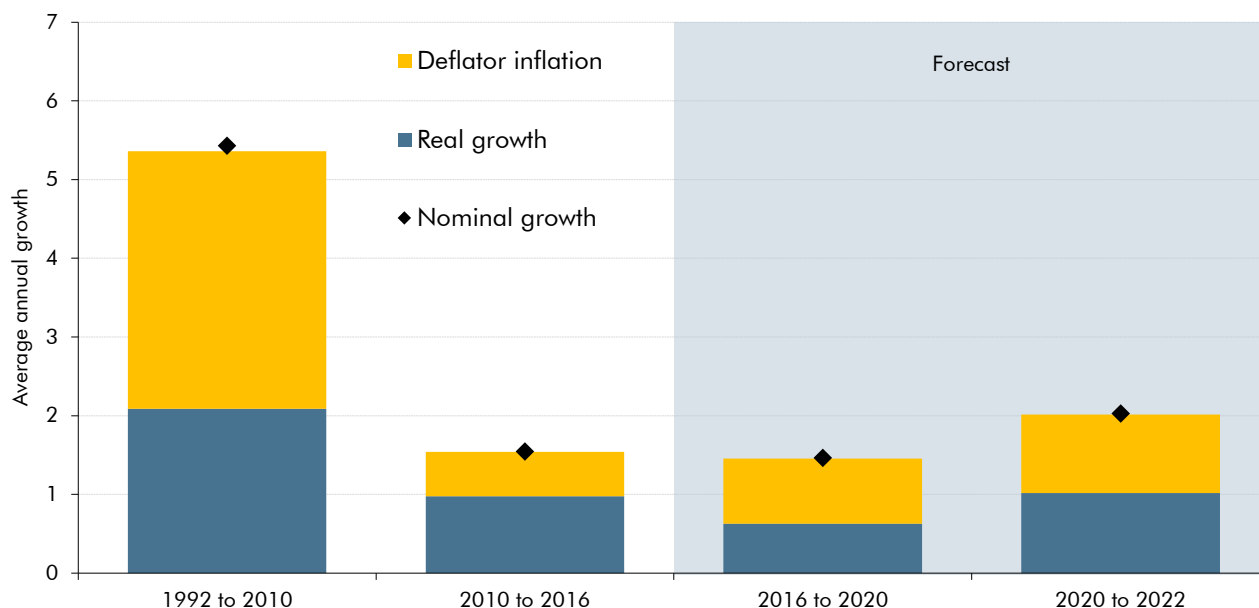
Real government consumption

3.118 Real government consumption grew by 1.1 per cent in 2016, higher than the 0.8 per cent estimate at the time of our March forecast. Quarterly growth was fairly subdued in the first half of 2017 and we expect growth of only 0.3 per cent for calendar year 2017 and 1.0 per cent for 2018.

3.119 For any given forecast for nominal government consumption growth, we assume that roughly half will be reflected in real growth and half in price changes. On this basis, real government consumption growth is expected to slow to 0.5 per cent in 2020. We then expect growth to rise to 1.0 per cent in 2022, reflecting the Government's plans for a pick-up in nominal spending growth (Chart 3.29).

¹⁴ Total managed expenditure (TME).

Chart 3.29: General government consumption



Note: Deflator inflation and real growth do not sum to nominal growth due to compounding.

Source: ONS, OBR

General government employment

- 3.120** In the absence of specific workforce plans, we project general government employment based on some simple assumptions. We begin by assuming that the total paybill will grow in line with a relevant measure of current government spending. We then forecast government sector wage growth separately, taking into account recent data, stated government policy and whole economy earnings growth. We then combine the two to derive an implied projection for general government employment.
- 3.121** In September, the Government announced that the 1 per cent cap on public sector pay rises would be lifted in 2018-19, two years earlier than previously planned. We have therefore assumed that general government earnings growth will converge on the whole economy average more quickly than previously – over the next three years. In response we assume that employers would switch some procurement spending into paybill, which would still imply some loss of employment. But the Government has also increased current departmental spending in this Budget, particularly in the near term, which we assume would increase both paybill and non-paybill spending and allow some additional employment.
- 3.122** The net effect of these changes is that we expect a larger fall in general government employment than in our previous forecast – a cumulative 170,000 between the first quarter of 2017 and the first quarter of 2022, up from 120,000 in our March forecast. This implies a total fall in government employment from early 2011 of just over half a million, more than offset by the expected rise in market sector employment.¹⁵

¹⁵ These estimates exclude a classification change introduced in the second quarter of 2012, which moved around 196,000 employees from the public to the private sector. Further details about the assumptions for public sector wages and employment can be found in the supplementary economy tables available on our website.

The external sector

3.123 The external sector contributes to the expenditure measure of GDP through net trade. Other income flows into and out of the UK also have fiscal implications. For example, the UK's contribution to the EU Budget is partly based on Gross National Income which includes an adjustment for the net income earned by the UK on overseas assets. These income flows are captured as part of the current account.

The impact of the EU referendum result on trade flows

3.124 Our general assumptions regarding the ways in which the EU referendum result and its subsequent implementation affect trade flows are unchanged since our November 2016 and March 2017 forecasts.

3.125 We expected the sharp depreciation of sterling to support net trade in the near term. But we believed that the boost would prove relatively modest by historical standards because the warranted expansion in export supply as a result of the more favourable exchange rate was likely to require some businesses to undertake associated investment, which would be depressed by the heightened uncertainty following the referendum result. Furthermore, the greater openness of the UK economy and the internationalisation of supply chains means that more firms now import a large fraction of their inputs. As a consequence, an exchange rate depreciation boosts export revenues but also raises production costs more than it used to. The effect of a weaker currency is thus diluted.¹⁶ This is consistent with the unexpectedly weak pick-up in net trade following the sterling depreciation in 2007-08.

3.126 Slower growth in business investment and private consumption was also expected to reduce demand for imports. We expected the uncertainty created by the referendum to weigh on business investment and the inflationary impact of the fall in the pound to crimp private consumption. This would reduce demand for the imported components of these types of expenditure and so provide an offsetting boost to net trade. Both business investment and, to a lesser extent, private consumption have held up better than we forecast in November 2016.

3.127 So far, the boost to net trade has been even weaker than the rather modest contribution we expected in our November 2016 forecast. Export growth has been slightly stronger than anticipated, but import growth has been much higher than expected – at least in part due to stronger domestic demand growth. As a result, the total near-term contribution of net trade to GDP growth has been revised down.

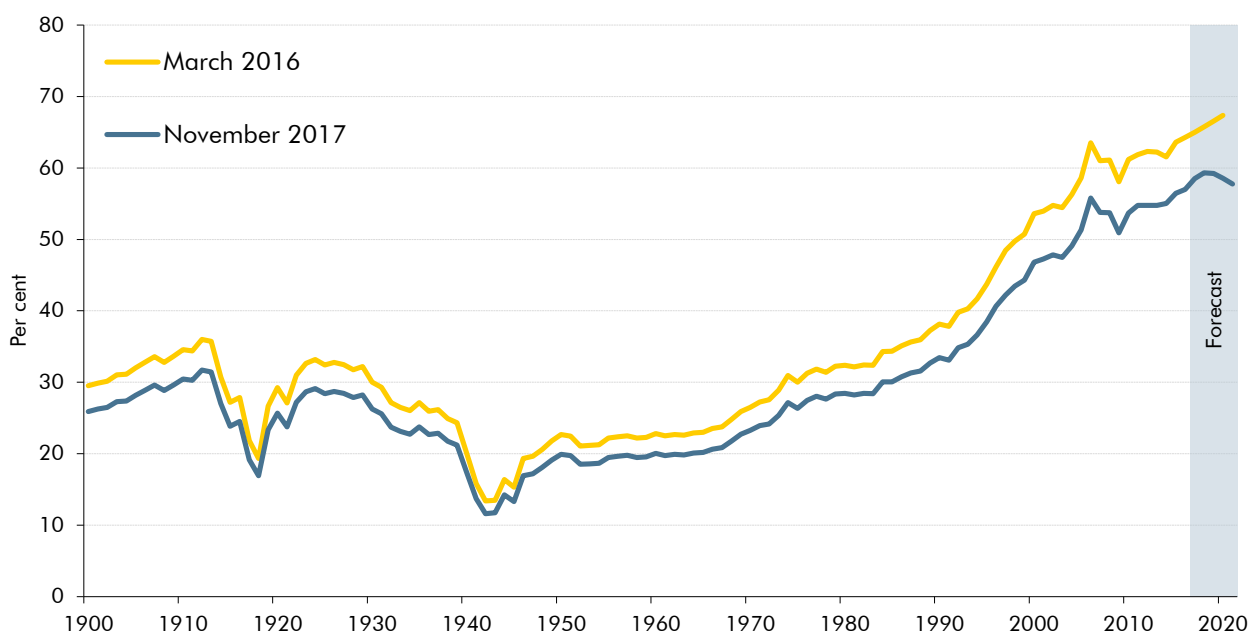
3.128 Finally, at least over the forecast period, the process of leaving the EU and negotiating new trading arrangements is assumed to be associated with a lower trade intensity of UK economic activity. Trade intensity has been on an upward path since the Second World War, but has risen less rapidly since the financial crisis (Chart 3.30). In our March 2016 forecast,

¹⁶ See: Mary Amiti, Oleg Itskhoki and Jozef Konings, "Importers, Exporters, and Exchange Rate Disconnect", *American Economic Review*, July 2014; and Maciej Albinowski, Jan Hagemeyer, Stefania Lovo and Gonzalo Varela, *The Role of Exchange Rate and Non-Exchange Rate Related Factors in Polish Firms' Export Performance*, World Bank working paper 7899, November 2016.

we expected the upward trend to reassert itself. In our November 2016 forecast we moved to expecting it to reverse for a period. We did not make any assumptions about the specific arrangements to be put in place after the UK leaves the EU, since there was no basis on which to predict the precise outcome of the negotiations and other trading arrangements. Instead, we calibrated the size of the trade effect of leaving the EU by averaging the results of three major external studies.¹⁷ Those studies expect the full trade consequences to take many years to materialise and make different assumptions about the speed at which the effect comes through. We assumed that the full effect would take at least a decade to be felt, and that it would reduce exports and imports symmetrically so that the effect on net trade would be broadly neutral.

3.129 It is far too early to judge whether our earlier assumption remains valid. Moreover, we have no further information about the future trading relationship between the UK and the EU. We have therefore maintained our earlier assumption in this forecast, pending further information.

Chart 3.30: Sum of UK exports and imports as a share of GDP



Source: Bank of England, OBR

Export growth

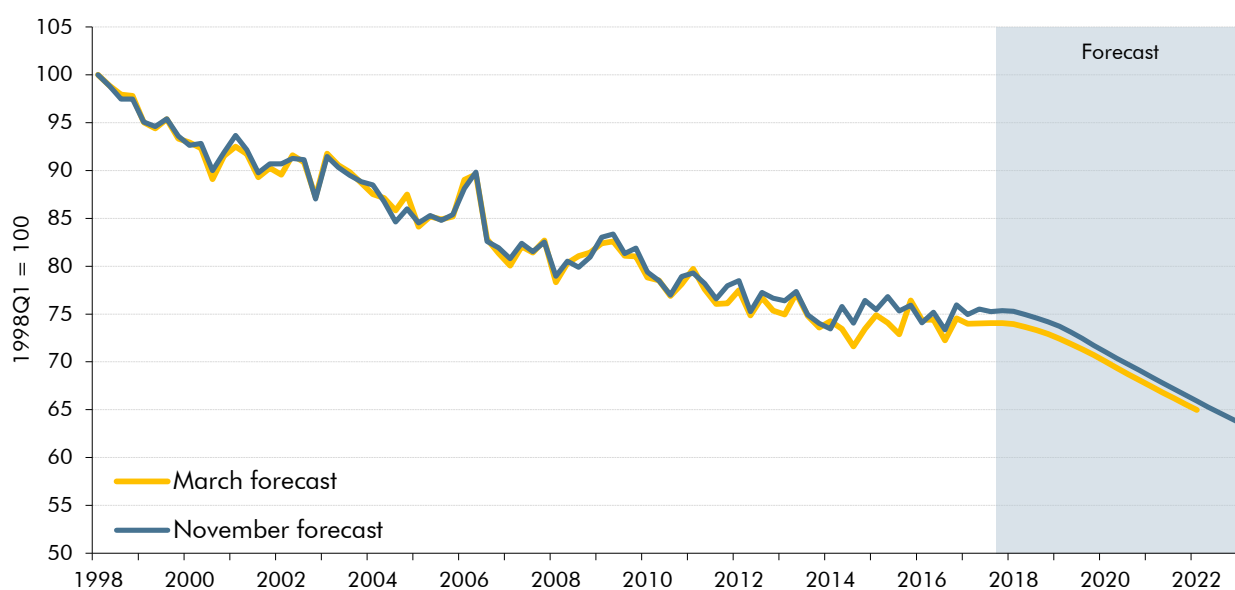
3.130 Export growth in 2016 has been revised down to 1.1 per cent from the 1.4 per cent estimated at the time of the March forecast. Recent volatility in reported quarterly export growth has made interpreting the recent path of export growth difficult. This volatility has been associated with offsetting movements in the net acquisition of valuables, which comprises various items including 'non-monetary gold'. This relates to cross-border

¹⁷ Here we have taken the average estimated effect from studies by NIESR (*The long-term economic impact of leaving the EU*, National Institute Economic Review no. 236, May 2016), the OECD (*The economic consequences of Brexit: A taxing decision*, OECD policy paper no. 16, April 2016) and LSE/CEP (*The consequences of Brexit for UK trade and living standards*, March 2016). Again, these represent a subset of the many studies that were presented before the referendum.

transactions in gold bullion in the London bullion market. Those transactions have only recently been incorporated into the ONS trade and GDP data, and have generated significant volatility from quarter to quarter. Looking through this volatility, export growth appeared to pick up at the end of 2016 and start of 2017, setting a strong base for calendar year growth in 2017, which we now expect to be 5.2 per cent.

- 3.131 We expect export growth to then slow to 3.4 per cent in 2018, as the effect of the fall in sterling starts to fade, and then to 0.1 per cent in 2020 to 2022 as leaving the EU leads to a lower trade intensity of UK economic activity.
- 3.132 Our 2017 export growth forecast is significantly higher than in March due to higher-than-expected outturn data. Our 2018 forecast is slightly higher as a result of an increase in expected growth in UK export markets in that year. Our forecasts for 2019 onwards are slightly lower as a result of expectations for a lower trade intensity of the UK's main export markets. Our assumption that Brexit will result in a lower UK share of EU markets is unchanged (Chart 3.31).

Chart 3.31: UK export market share



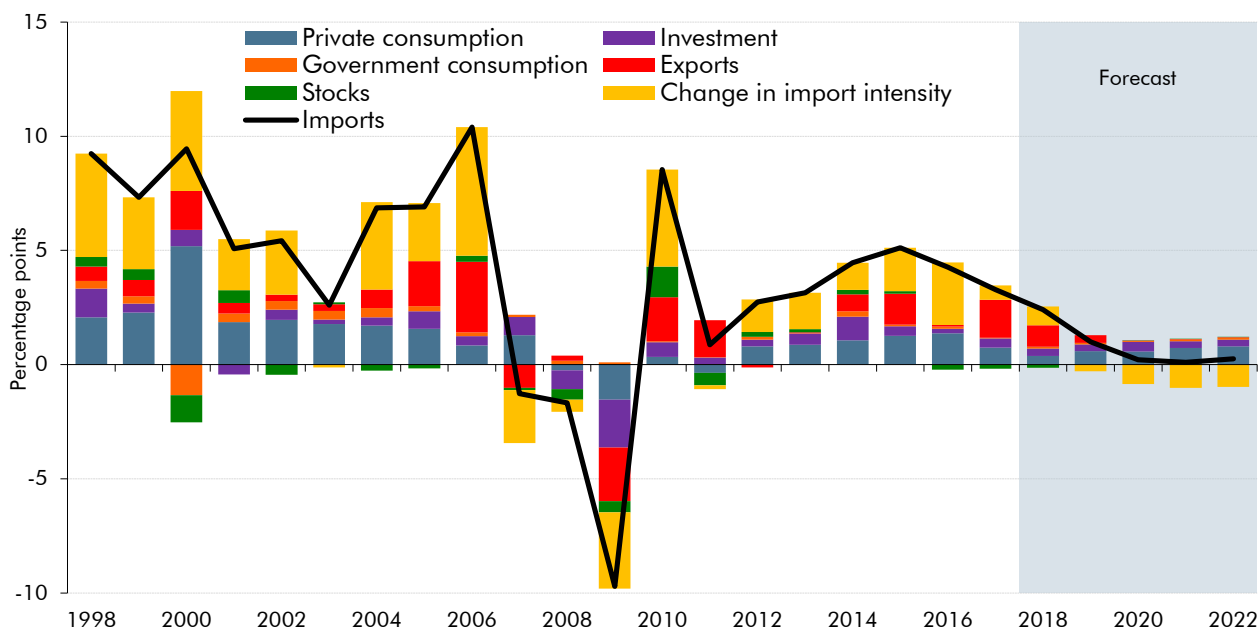
Note: UK export share defined as exports divided by UK export markets, where exports series have been adjusted to account for the effect of VAT Missing Trader Intra Community (MTIC) fraud, although there is uncertainty around MTIC data prior to 2007.
Source: OECD, ONS, OBR

Import growth

- 3.133 Imports grew by 4.3 per cent in 2016, well above the 2.5 per cent estimate available at the time of our March forecast. Import growth appeared to slow slightly in the first half of 2017 and we expect growth of 3.3 per cent for the 2017 calendar year as a whole.
- 3.134 We expect import growth to slow further to 2.4 per cent in 2018 as the impact of the depreciation continues to lower the import intensity of demand. We then forecast import growth to slow further to 0.2 per cent in 2020 as Brexit leads to a lower trade intensity of UK economic activity (Chart 3.32).

3.135 We have revised up our imports forecast in 2017 and 2018 in line with higher-than-expected outturn data. With our assumptions regarding the impact of new trading arrangements resulting from Brexit little changed, revisions to our imports forecast over the medium term are driven primarily by changes to import-weighted domestic demand. We have lowered our import forecasts for 2019 to 2021 in line with downward revisions to private consumption, business investment and residential investment growth.

Chart 3.32: Contributions to import-weighted domestic demand and import growth



Source: ONS, OBR

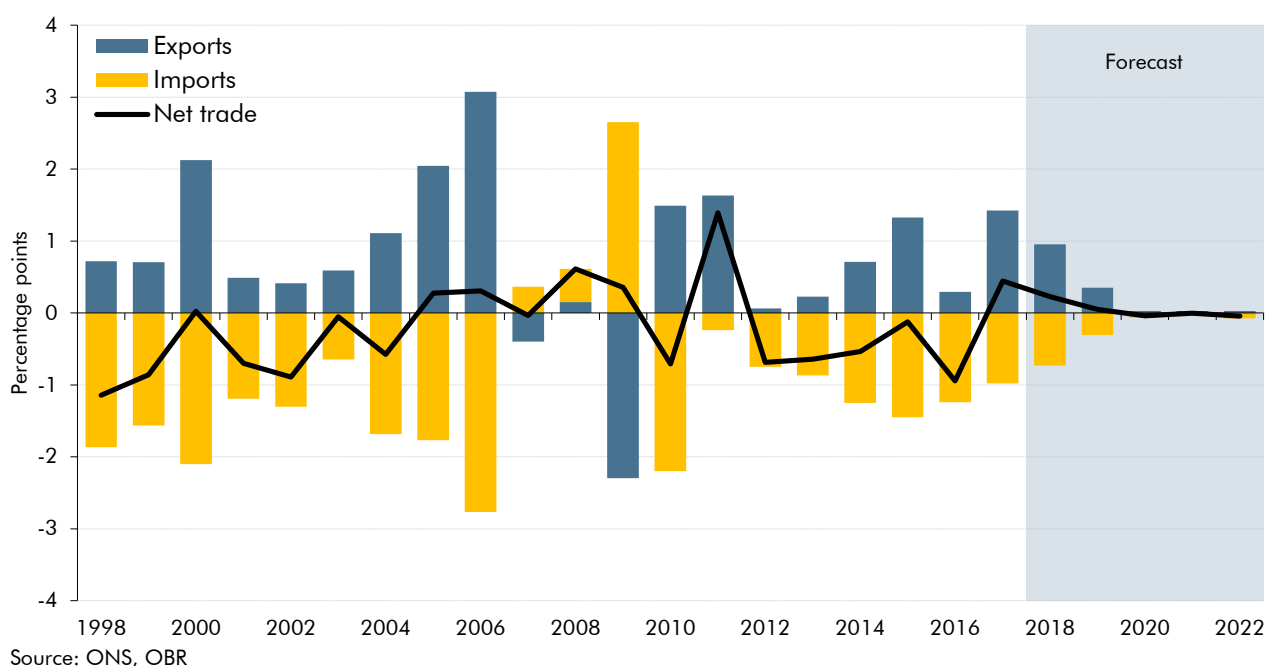
Net trade

3.136 Net trade is estimated to have reduced GDP growth in 2016 by 0.9 percentage points, a significantly greater drag than we expected in our March forecast. This reflected a small downward revision to exports and a large upward revision to imports. However, net trade added slightly to GDP growth in the second half of 2016 and first half of 2017, so we now expect a positive contribution of 0.4 percentage points in calendar year 2017 as a whole.

3.137 We expect the net trade contribution to GDP growth to fall to 0.2 percentage points in 2018, and to zero from 2019 to 2022, as the boost from the fall in the pound begins to fade and UK export market growth slows (Chart 3.33).

3.138 Our forecast for the net trade contribution to GDP growth in 2017 is higher than in March, although not sufficiently to offset the downward revision in 2016. Our medium term forecasts for net trade are little changed, as the effect of lower domestic demand growth on imports is offset by the effect of weaker growth in UK export markets on export volumes.

Chart 3.33: Net trade contributions to real GDP

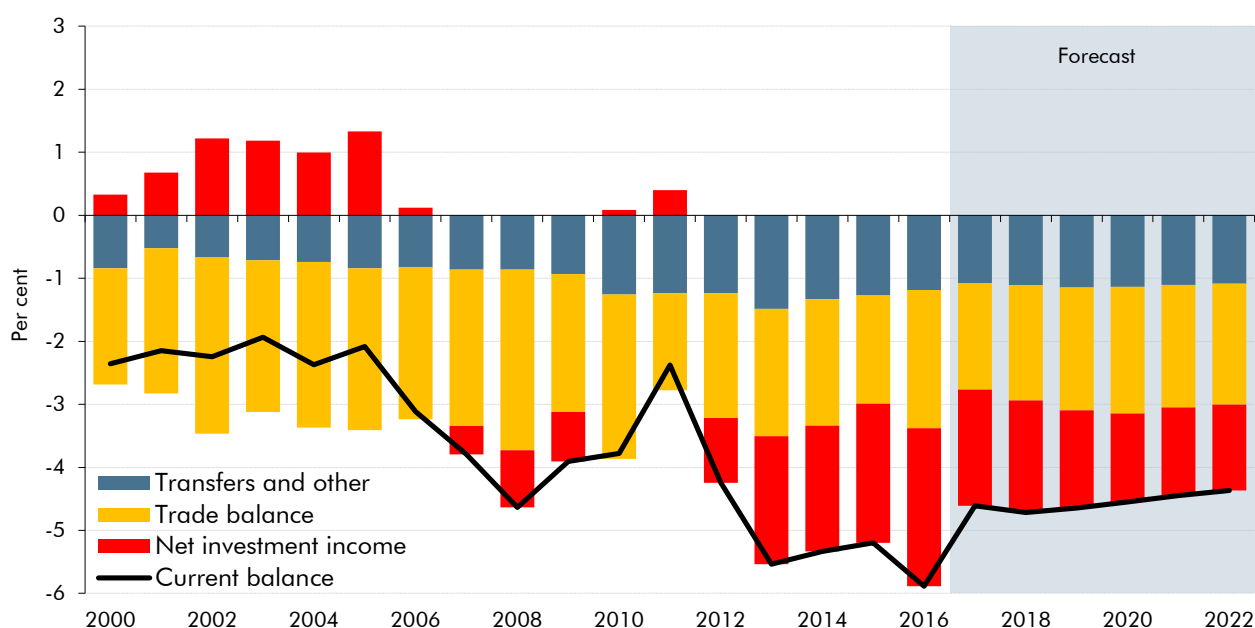


The current account balance

- 3.139** Recent revisions have meant that the current account deficit is now somewhat wider than reported at the time of our March forecast. The average deficit between 2010 and 2015 now stands at 4.4 per cent of GDP, compared to the previous estimate of 3.6 per cent. This largely reflects upward revisions to the interest paid to overseas' holders of UK corporate bonds. This reduces net investment income relative to previous estimates.
- 3.140** These revisions do not change the picture that the current account deficit has widened significantly in recent years, largely due to a worsening in the net investment income balance. Having averaged a small surplus of 0.4 per cent of GDP in the decade prior to 2012, the net investment income balance has since moved into deficit, reaching 2.5 per cent of GDP in 2016.
- 3.141** Despite recent quarterly data showing a narrower current account deficit, it remains large by historical standards. The deficit narrowed from 5.9 per cent of GDP in calendar year 2016 to close to 4½ per cent of GDP in the first half of 2017. This may partly reflect the effects of the weaker pound. The exchange rate depreciation mechanically increases the sterling value of the income earned on the UK's foreign-currency assets, resulting in a narrowing in the investment income deficit. While the trade balance has been volatile, there is some evidence that the trade deficit has also narrowed slightly since the middle of 2016, averaging 1.5 per cent of GDP in the past three quarters – compared to 2.4 per cent of GDP in the first three quarters of 2016.
- 3.142** We continue to expect a small improvement in the income account balance over the forecast period (Chart 3.34), consistent with the continued recovery in rates of economic growth in the rest of the world relative to the UK. Some of the factors behind the recent

deterioration in the balance should prove temporary – for example, the effects of relatively weak euro area growth on foreign earnings and the effect of large cross-border fines and compensation recently paid by UK firms abroad. But we expect a more gradual recovery in the net rate of return than in previous forecasts. There is little sign that the income account is set to return to balance, with the implicit net rate of return still some way below the pre-2012 position. Indeed, outturns for net income have typically been weaker than we expected, although frequent data revisions make it more difficult to compare forecasts that are based on different vintages of data. Changes to the ONS measurement of corporate bond interest also imply a wider income account deficit in the forecast.

Chart 3.34: Current account balance as a share of GDP



Source: ONS, OBR

3.143 Together with the wider starting point for the deficit, this implies a significant downward revision to our forecast of the income account balance relative to our March forecast. As discussed earlier, we expect the trade deficit to be broadly stable over the forecast period. With little change to our forecasts of the trade or transfers deficits,¹⁸ this means that the current account deficit is expected to be somewhat larger than we anticipated in March (Table 3.5). We now project the current account to narrow only slightly and to remain above 4 per cent of GDP over the forecast period. A current account deficit of this size and persistence could pose a risk to the outlook (see paragraph 3.150 for more details).

¹⁸ Our forecast of the transfers balance does not incorporate any future changes in transfer flows between the UK and the EU associated with Brexit. These will be incorporated once a clearer idea of their likely magnitude is available.

Table 3.5: Change to the current account since March

	£ billion					
	Outturn		Forecast			
	2016	2017	2018	2019	2020	2021
March forecast	-84.8	-69.6	-66.2	-56.6	-48.1	-46.9
November forecast	-115.5	-93.5	-98.4	-99.5	-100.4	-101.4
Change	-30.7	-23.9	-32.2	-42.9	-52.3	-54.5
<i>of which:</i>						
Trade balance	-6.2	0.8	-2.2	-4.7	-8.0	-8.8
Volumes	-4.5	-1.8	-2.9	-2.1	-1.9	-0.7
Prices	-1.7	2.5	0.7	-2.6	-6.2	-8.0
Investment income balance	-23.9	-26.4	-34.5	-41.2	-47.3	-49.6
Transfers and other	-0.6	1.7	4.5	3.0	3.0	3.9

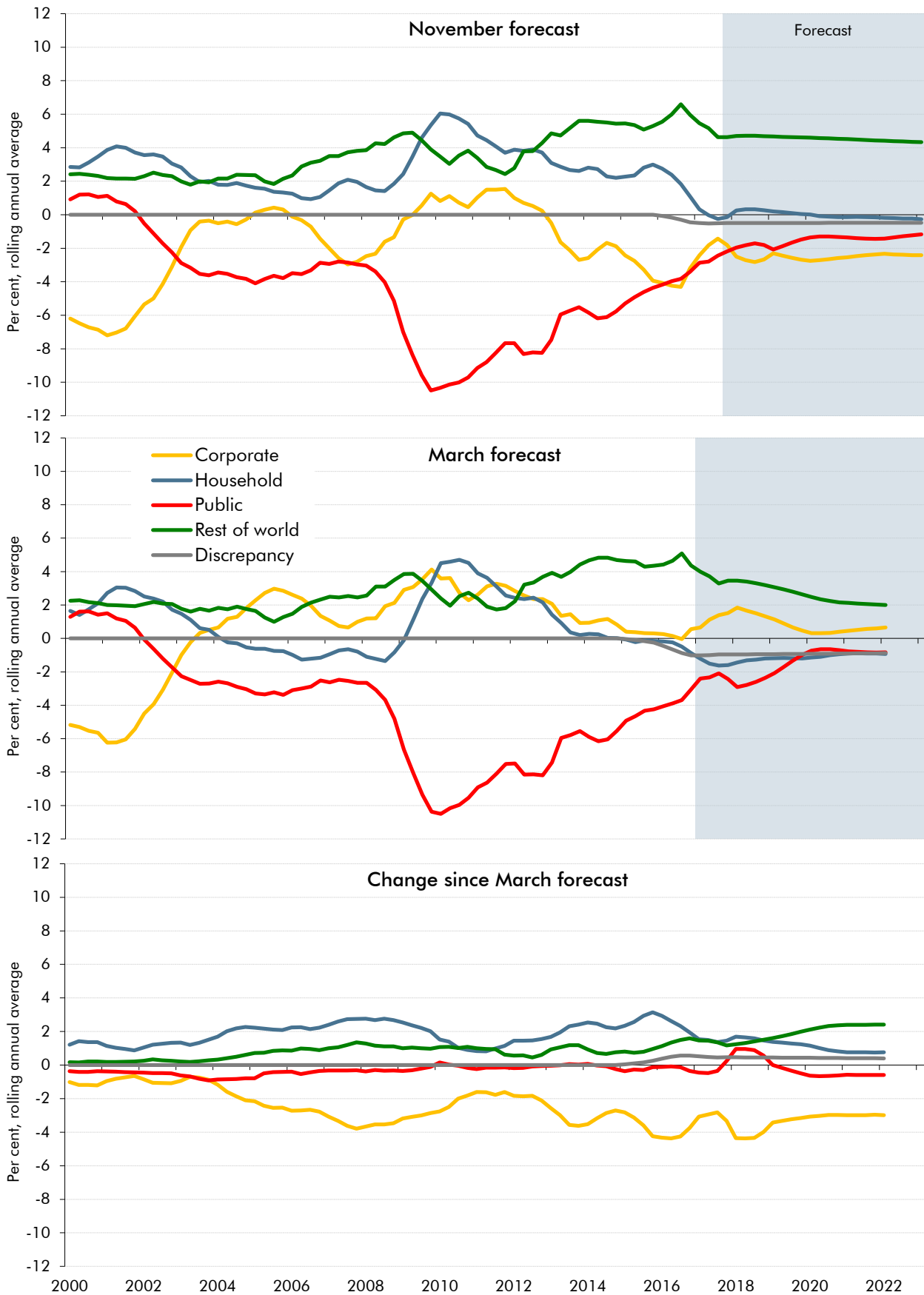
Sectoral net lending

- 3.144 In the National Accounts framework that underpins our economic forecast, the income and expenditure of the different sectors imply a path for each sector's net lending to, or borrowing from, the others. In principle, these sum to zero – for each pound borrowed, there must be a pound lent. In practice, ONS estimates of sector net lending do not sum precisely to zero, reflecting differences between the income and expenditure measures of GDP (the 'statistical discrepancy'). Our standard practice is to assume that this difference remains broadly flat over the forecast period.
- 3.145 For any given sector, a negative net lending position need not imply that its stock of debt is increasing. Net lending represents the difference between a sector's income and its expenditure over a particular period. But a deficit does not necessarily correspond to the amount of debt accumulated, as the sector could instead run down its assets (or some combination of the two). Equally, if a sector is in surplus, this could be consistent with it paying down debt, increasing its stock of assets, or both. In addition, changes in a sector's stock of assets or liabilities over time will reflect not only their net accumulation of new assets or liabilities, but also changes in the valuation of existing ones. For example, asset valuation changes could result from equity prices changes, while liability changes could result from the effect of exchange rate fluctuations on liabilities held in foreign currency.
- 3.146 In the first half of 2017, it appears that the household sector was close to balance, the rest of the world sector was in surplus (i.e. lending to the UK) and the public and corporate sectors were in deficit (Chart 3.35). This is a somewhat different picture than that painted at the time of our March forecast. Estimates available then suggested a household sector deficit of just under 1 per cent in 2016, while the latest data indicate a surplus of just over 1 per cent in the same year. This change is mainly due to the upward revisions to estimates of household saving (see paragraphs 3.89 for more details) and has been offset primarily by a downward revision to corporate net lending.
- 3.147 The contribution from the statistical discrepancy is now somewhat less negative than in March, reflecting revisions to outturn data: at the time of our March forecast, the latest

National Accounts data incorporated an unusually large divergence between the different measures of GDP, which resulted in a large negative net lending discrepancy. Following the latest revisions, the current data indicate a rather smaller gap between the different measures of GDP, resulting in smaller statistical discrepancy in net lending.

- 3.148 On current government policy, including the delivery of planned further public spending cuts, we expect the public sector deficit to narrow – offset by a small narrowing in the rest of the world surplus (i.e. a narrowing current account deficit) and a widening of the corporate sector deficit. We expect household net lending to remain broadly flat over the forecast period, consistent with the outlook for household saving, whereas in our March forecast we expected household net lending to fall further into deficit. Offsetting this change, we expect the current account deficit to narrow much more slowly.

Chart 3.35: Sectoral net lending



Source: ONS, OBR

Risks and uncertainties

3.149 As always, we emphasise the uncertainties that lie around our central forecast for the economy, and the implications that these can have for the public finances (see Chapter 5). Some risks and uncertainties are common to all forecasts: conditioning assumptions may prove inaccurate; unexpected shocks may hit the economy; and previously stable relationships describing behaviour may shift.

3.150 Specific risks that we would highlight at the present juncture include:

- The outlook for **productivity growth** remains hugely uncertain. Despite the large downward revision to our productivity growth forecasts, we still expect some recovery over the next few years from the very weak rates seen since the financial crisis. That recovery may not occur, or take longer to materialise, so productivity could still surprise on the downside. Alternatively, productivity could surprise on the upside if, for example, business investment were to grow more strongly than we currently expect. The consequences of either risks crystallising would have major consequences for the outlook. We explore the impact of these differences through scenarios in Chapter 5.
- Leading up to and following the UK's exit from the EU, **policies and regimes will evolve to supersede those presently associated with EU membership**. These policies, and the response of households and businesses to them, are subject to great uncertainty and there is little by way of precedent on which to base any forecast assumptions.
- The **current account deficit** remains large by historical standards and we do not anticipate much narrowing over the forecast period. Overseas investors are consequently acting as significant net lenders to the UK, which could pose risks if their confidence in the UK economy were to be damaged by uncertainty regarding the economic and political outlook or changes in policy – including if there were a disorderly transition to the UK's new trading relationship with the EU. That could lead to a sharp fall in sterling, bringing about a more abrupt demand-led narrowing of the current account deficit and a subsequent spike in inflation. It is worth noting that, while the current account deficit remains large, the UK's net international investment liabilities are only modest as a share of GDP, mitigating this risk somewhat.
- **Private consumption growth has outpaced income growth** in recent years. We expect this to continue, although at a more gradual pace, over the next couple of years as consumption is supported by historically low interest rates and relatively low unemployment. Over the medium term, we expect consumption to begin to grow in line with incomes. This could pose a risk to our forecast, either because consumption continues to grow faster than incomes, reducing the saving ratio further, or because households cut back their spending growth by more than we expect to maintain saving. Our March *EFO* contained scenarios under different paths for the saving ratio.
- **Sterling** is now around 11 per cent lower than we assumed in March 2016. The ongoing effects on the UK's export market share, import substitution and transfer of

resources between different sectors of the economy are subject to significant uncertainty, as is the speed and extent to which it continues to pass through into consumer prices and affects real consumer spending.

- The IMF believes medium-term risks to the **global economy** are skewed to the downside. As examples of downside risks, it cites: the build-up of debt in China; a potential retreat from cross-border economic integration; geopolitical tensions; and a tightening of global financial conditions.
- In the 61 years that the ONS has published consistent quarterly real GDP data, there have been seven recessions – suggesting that the chance of a **recession** in any five-year period is around one in two.¹⁹ So the probability of a cyclical shock occurring sometime over our forecast horizon is fairly high. Despite the first rise in Bank Rate in over a decade on 2 November, interest rates are near the **zero lower bound**. Relative to interest rates, the impact of unconventional monetary policy is still uncertain. So if the UK was to be hit by a negative demand shock, monetary policy probably has less scope to respond than in the past.

Comparison with external forecasters

3.151 In this section, we compare our latest projections with those of selected outside forecasters. The differences between our forecast and those of external forecasters are generally small compared with the uncertainty that surrounds any one of them.

Comparison with the Bank of England's *Inflation Report* forecast

3.152 Alongside its November 2017 *Inflation Report*, the Bank of England published additional information about its forecast that can be compared against our own (see Table 3.6). This included the Bank staff's forecasts for the expenditure composition of GDP, consistent with the MPC's central forecasts for GDP, CPI inflation and the unemployment rate.

3.153 Broadly speaking, we are somewhat less optimistic than the Bank both about the supply potential of the economy and the strength of demand over the three years in which our forecasts overlap, leaving us with broadly the same assessment of spare capacity. We expect weaker earnings growth, both in absolute terms and relative to productivity growth, than the Bank, implying less upward pressure on unit labour costs and domestic inflation.

3.154 The MPC's modal forecast for GDP growth is 1.6 per cent in 2017 and 2018, then 1.7 per cent in 2019 and 2020. On average, this is 0.3 percentage points higher per year than our forecast. The difference between the GDP forecasts can be fully explained by growth in output per hour. The MPC's forecast for employment growth is stronger than ours, but its forecast for average hours worked is weaker.

¹⁹ See Chapter 3 our 2017 *Fiscal risks report* for more details.

3.155 In terms of the expenditure composition of GDP, the Bank expects slightly higher private consumption and business investment growth. It also expects a much larger contribution from net trade to GDP growth, mainly due to weaker import growth.

Table 3.6: Comparison with the Bank of England's forecast and projections

	Per cent			
	2017 ²	2018	2019	2020
Bank of England November Inflation Report forecast¹				
Household consumption	1½	1	1¼	1½
Business investment	2½	2¾	3	3
Housing investment ^{3,4}	4	1¼	¼	½
Exports	4¾	2	1¼	½
Imports	3	¼	-¼	-¼
Employment ⁵	1	¾	½	¾
Unemployment rate ⁶	4.2	4.2	4.2	4.3
Productivity ⁷	¼	1¼	1½	1¼
Average weekly earnings ^{4,5}	2¼	3	3¼	3¼
Difference from OBR forecast				
Household consumption	0.0	0.2	0.1	0.3
Business investment	0.0	0.5	0.7	0.6
Exports	-0.5	-1.4	0.0	0.4
Imports	-0.3	-2.2	-1.2	-0.5
Employment ⁵	-0.1	0.2	0.2	0.4
Unemployment rate ⁶	-0.1	-0.1	-0.3	-0.3
Productivity ⁷	0.2	0.4	0.5	0.1

¹ Percentage change, year on year, unless otherwise stated.

² 2017 estimates contain a combination of data and projections.

³ Whole economy measure. Includes transfer costs of non-produced assets.

⁴ We have not shown a comparison for housing investment and average weekly earnings as the particular measures we use are not directly comparable.

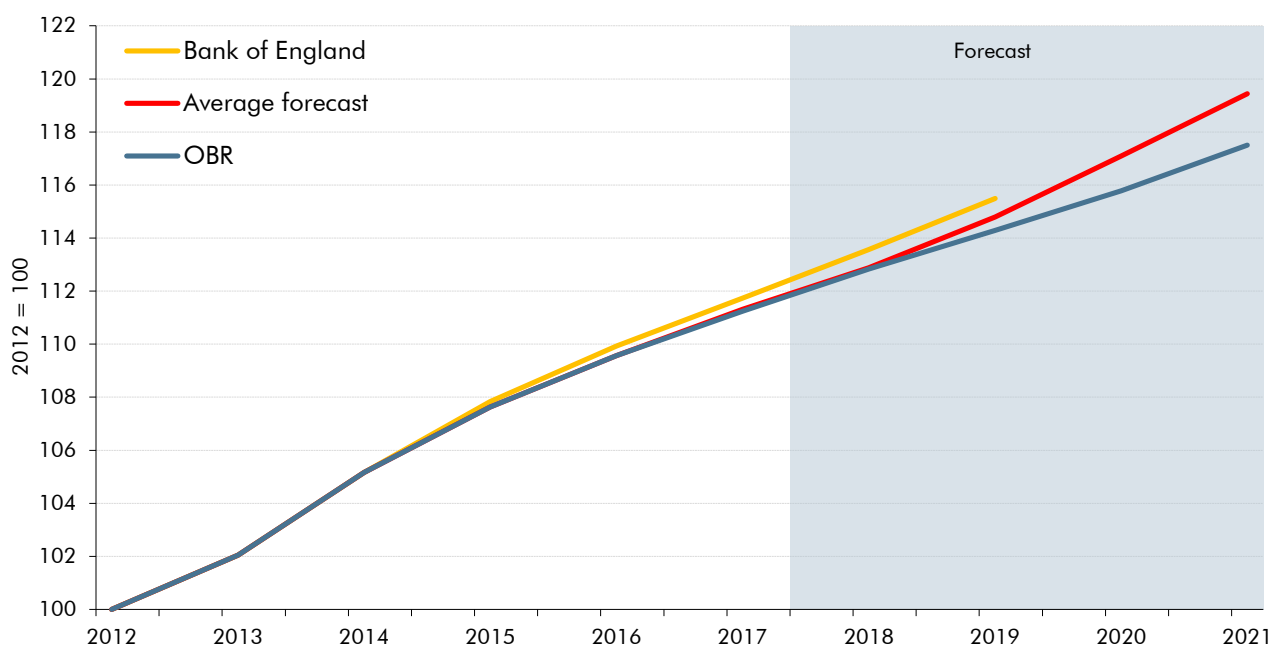
⁵ Four-quarter growth rate in Q4.

⁶ LFS unemployment rate in Q4.

⁷ Output per hour.

3.156 Chart 3.36 shows the Bank's forecast for the level of GDP is also somewhat higher than the average external forecast. This reflects the higher starting point implied by the Bank's 'backcast' of GDP as well as the stronger forecast. Our GDP forecast is somewhat weaker than the average external forecast over the medium term, likely reflecting a lower forecast for productivity growth.

Chart 3.36: Comparison of forecasts for the level of GDP projections



Source: Bank of England, HM Treasury, ONS, OBR

Comparison with other external forecasters

3.157 Table 3.7 presents a range of external forecasts. It shows that:

- **Oxford Economics** is forecasting growth of 1.5 per cent in 2017, in line with our latest forecast. However, looking past 2017, Oxford Economics are forecasting higher rates of growth each year up to 2021, predicting stronger growth of domestic demand and a greater contribution from net trade, compared to our latest forecast.
- The **European Commission's** forecast for GDP growth is identical to ours in 2017 and only 0.1 percentage points lower in 2018. They predict broadly similar contributions to growth from domestic demand and net trade as we do.
- In its November *Economic Review*, the **National Institute for Economic and Social Research (NIESR)** forecast higher rates of GDP growth for each year between 2017 and 2022 than our central forecast, by an average of 0.3 per cent. This is largely driven by NIESR's expectation that both net trade and investment will make significantly larger contributions to growth than we are currently predicting.
- The **OECD's** forecast for growth in 2017 is similar to our own but its 2018 forecast is significantly below ours. The OECD's forecast for the change in the output gap in that year is similar to our forecast, implying that it anticipates weak potential growth next year. The OECD is particularly concerned about the impact of Brexit, both because of the uncertainty the referendum result has created and its assumption that the trading relationship between the UK and EU will become much less open.

- In its most recent *World Economic Outlook*, the **IMF's** forecasts for GDP growth were on average 0.2 percentage points higher per annum than our central forecast between 2017 and 2022. This is despite a similar output gap profile, suggesting that it believes that potential growth in the UK is higher than we expect it to be. In terms of the expenditure composition of GDP, the IMF expect consumption to play a markedly stronger role in driving growth in 2017 and 2018.

Table 3.7: Comparison with external forecasts

	Per cent					
	2017	2018	2019	2020	2021	2022
OBR (November 2017)						
GDP growth	1.5	1.4	1.3	1.3	1.5	1.6
CPI inflation	2.7	2.4	1.9	2.0	2.0	2.0
Output gap	-0.2	-0.1	-0.2	-0.2	-0.1	0.0
Oxford Economics (November 2017)						
GDP growth	1.5	1.5	1.6	2.0	2.1	
CPI inflation	2.7	2.2	1.6	1.8	1.8	
Output gap	-2.2	-1.9	-1.6	-1.2	-0.8	
Bank of England (November 2017)^{1,2}						
GDP growth (mode)	1.6	1.6	1.7	1.7		
CPI inflation (mode) ³	3.0	2.4	2.2	2.1		
European Commission (November 2017)						
GDP growth	1.5	1.3	1.1			
CPI inflation	2.7	2.6	2.1			
Output gap	0.6	0.4	0.2			
NIESR (November 2017)¹						
GDP growth	1.6	1.7	1.7	1.6	1.6	
CPI inflation	2.8	2.7	2.1	2.0	2.0	
OECD (June 2017)⁴						
GDP growth	1.6	1.0				
CPI inflation	2.8	2.7				
Output gap	0.4	0.4				
IMF (October 2017)						
GDP growth	1.7	1.5	1.6	1.7	1.7	1.7
CPI inflation	2.6	2.6	2.2	2.1	2.0	2.0
Output gap	-0.1	-0.2	-0.2	-0.1	0.0	0.0

¹ Output gap not published.

² Forecast based on market interest rates and the Bank of England's 'backcast' for GDP growth.

³ Fourth quarter year-on-year growth rate.

⁴ The OECD has since published its September 2017 *Interim Economic Outlook*. For the UK, GDP growth was unrevised in both 2017 and 2018.

Table 3.8: Detailed summary of forecast

	Percentage change on a year earlier, unless otherwise stated						
	Outturn	Forecast					
	2016	2017	2018	2019	2020	2021	2022
UK economy							
Gross domestic product (GDP)	1.8	1.5	1.4	1.3	1.3	1.5	1.6
GDP per capita	1.0	0.9	0.8	0.7	0.7	0.9	1.0
GDP level (2016=100)	100.0	101.5	103.0	104.3	105.7	107.2	108.9
Nominal GDP	3.8	3.4	2.8	2.7	2.9	3.3	3.4
Output gap (per cent of potential output)	-0.2	-0.2	-0.1	-0.2	-0.2	-0.1	0.0
Expenditure components of GDP							
Domestic demand	2.1	0.9	1.2	1.2	1.3	1.5	1.6
Household consumption ¹	2.8	1.5	0.8	1.2	1.2	1.5	1.6
General government consumption	1.1	0.3	1.0	0.7	0.5	1.0	1.0
Fixed investment	1.3	2.6	2.1	2.0	2.7	1.9	1.9
Business	-0.4	2.5	2.3	2.3	2.4	2.4	2.4
General government ²	1.5	2.4	1.4	2.3	6.2	1.1	0.9
Private dwellings ²	5.5	3.0	1.9	1.3	1.2	1.5	1.5
Change in inventories ³	-0.2	-0.4	0.1	0.0	0.0	0.0	0.0
Exports of goods and services	1.1	5.2	3.4	1.2	0.1	0.1	0.1
Imports of goods and services	4.3	3.3	2.4	1.0	0.2	0.1	0.2
Balance of payments current account							
Per cent of GDP	-5.9	-4.6	-4.7	-4.6	-4.6	-4.4	-4.4
Inflation							
CPI	0.7	2.7	2.4	1.9	2.0	2.0	2.0
RPI	1.7	3.6	3.3	2.8	2.9	2.9	3.0
GDP deflator at market prices	2.0	1.9	1.4	1.4	1.6	1.8	1.8
Labour market							
Employment (millions)	31.7	32.1	32.3	32.4	32.5	32.6	32.7
Productivity per hour	0.2	0.0	0.9	1.0	1.2	1.3	1.3
Wages and salaries	3.8	3.4	2.9	2.6	2.7	3.2	3.3
Average earnings ⁴	2.8	2.3	2.3	2.3	2.6	3.0	3.1
LFS unemployment (% rate)	4.9	4.4	4.3	4.4	4.6	4.6	4.6
Household sector							
Real household disposable income	0.3	-0.2	0.8	0.3	0.5	1.4	1.6
Saving ratio (level, per cent)	7.1	5.6	6.1	5.8	5.5	5.4	5.4
House prices	7.0	4.4	2.9	2.9	2.9	3.3	3.6
World economy							
World GDP at purchasing power parity	3.2	3.6	3.7	3.7	3.7	3.8	3.8
Euro area GDP	1.8	2.1	1.9	1.7	1.6	1.5	1.5
World trade in goods and services	2.7	5.0	4.0	3.9	3.8	3.9	4.0
UK export markets ⁵	2.7	4.4	4.1	4.0	3.9	3.9	4.0

¹ Includes households and non-profit institutions serving households.

² Includes transfer costs of non-produced assets.

³ Contribution to GDP growth, percentage points.

⁴ Wages and salaries divided by employees.

⁵ Other countries' imports of goods and services weighted according to the importance of those countries in the UK's total exports.

Table 3.9: Detailed summary of changes to the forecast

	Percentage change on a year earlier, unless otherwise stated					
	Outturn	Forecast				
	2016	2017	2018	2019	2020	2021
UK economy						
Gross domestic product (GDP)	0.0	-0.5	-0.1	-0.4	-0.6	-0.5
GDP per capita	-0.1	-0.4	-0.1	-0.4	-0.5	-0.4
GDP level (2016=100) ¹	0.0	-0.5	-0.6	-1.0	-1.6	-2.1
Nominal GDP	0.2	-0.4	-0.3	-0.6	-0.8	-0.6
Output gap (per cent of potential output)	-0.2	-0.4	0.0	-0.1	-0.1	-0.1
Expenditure components of GDP						
Domestic demand	0.5	-0.6	-0.1	-0.5	-0.6	-0.6
Household consumption ²	-0.2	-0.3	-0.1	-0.5	-0.5	-0.4
General government consumption	0.2	-0.8	0.3	0.3	-0.4	-0.3
Fixed investment	0.9	1.9	-1.0	-1.3	-1.2	-1.5
Business	1.1	2.5	-1.4	-1.9	-1.4	-1.2
General government ³	0.1	2.3	0.2	0.2	0.2	-2.7
Private dwellings ³	0.7	0.5	-1.0	-1.1	-1.6	-1.5
Change in inventories ⁴	0.3	-0.4	0.0	0.0	0.0	0.0
Exports of goods and services	-0.4	1.8	0.4	-0.3	-0.6	-0.4
Imports of goods and services	1.8	1.2	0.6	-0.4	-0.6	-0.5
Balance of payments current account						
Per cent of GDP	-1.5	-1.2	-1.5	-2.0	-2.4	-2.4
Inflation						
CPI	0.0	0.3	0.0	-0.1	0.0	0.0
RPI	0.0	-0.1	-0.3	-0.4	-0.3	-0.2
GDP deflator at market prices	0.3	0.1	-0.2	-0.2	-0.2	-0.1
Labour market						
Employment (millions)	0.0	0.2	0.2	0.2	0.2	0.2
Productivity per hour	-0.3	-1.6	-0.6	-0.6	-0.7	-0.6
Wages and salaries	0.6	0.4	-0.2	-0.6	-0.9	-0.7
Average earnings ⁵	0.6	-0.3	-0.4	-0.6	-0.8	-0.6
LFS unemployment (% rate)	0.0	-0.5	-0.8	-0.7	-0.6	-0.5
Household sector						
Real household disposable income	-1.2	-0.2	0.0	-0.8	-1.1	-0.4
Saving ratio (level, per cent)	1.5	1.0	0.9	0.4	-0.3	-0.5
House prices	-0.6	-2.1	-1.1	-1.4	-1.6	-1.4
World economy						
World GDP at purchasing power parity	0.1	0.2	0.2	0.0	0.0	0.0
Euro area GDP	0.1	0.5	0.3	0.3	0.1	0.1
World trade in goods and services	0.8	2.0	0.3	-0.1	-0.2	-0.1
UK export markets ⁶	0.5	1.3	0.3	-0.2	-0.4	-0.4

¹ Per cent change since March.² Includes households and non-profit institutions serving households.³ Includes transfer costs of non-produced assets.⁴ Contribution to GDP growth, percentage points.⁵ Wages and salaries divided by employees.⁶ Other countries' imports of goods and services weighted according to the importance of those countries in the UK's total exports.

4 Fiscal outlook

Introduction

4.1 This chapter:

- describes the assumptions that we have made in respect of **the UK's forthcoming exit from the EU** (from paragraph 4.4);
- sets out the key **economic and market determinants** that drive the fiscal forecast (from paragraph 4.7);
- explains the **effects of new policies** announced in this Budget – and since the Spring Budget – on the fiscal forecast (from paragraph 4.10);
- describes the **outlook for public sector receipts**, including a tax-by-tax analysis explaining how the forecasts have changed since March (from paragraph 4.28);
- describes the **outlook for public sector expenditure**, focusing on spending covered by departmental expenditure limits and the components of annually managed expenditure, including those subject to the 'welfare cap' (from paragraph 4.94);
- describes **the outlook for government lending to the private sector and other financial transactions**, including asset sales (from paragraph 4.186);
- describes the **outlook for the key fiscal aggregates**, including headline and structural measures of the budget deficit, and public sector net debt (from paragraph 4.208);
- summarises **risks and uncertainties** (paragraph 4.239); and
- compares our forecasts to those of **international organisations** (from paragraph 4.240).

4.2 Further breakdowns of receipts and expenditure and other details of our forecast are provided in supplementary tables on our website. The forecasts in this chapter start from the October vintage of 2016-17 outturn data as we did not have pre-release access to the latest public finances data published on 21 November.¹ We then present an in-year estimate for 2017-18 that makes use of published Office for National Statistics (ONS) outturn data for April to September and some administrative receipts data for October. Finally, we present forecasts for 2018-19 to 2022-23.

¹ Outturn data for 2016-17 are consistent with the *Public Sector Finances September 2017 Statistical Bulletin* (released in October) published by the ONS and HM Treasury.

4.3 As in previous *Economic and fiscal outlooks (EFOs)*, this fiscal forecast:

- **Represents our central view** of the path of the public finances, conditioned on the current policies and policy assumptions of the Government, including some broad-brush assumptions that we have needed to make about the future policy settings in respect of the UK's forthcoming exit from the EU. On that basis, we believe that, in the absence of future policy or classification changes, the outturns would be as likely to be above the forecast as below it.
- Is **based on announced Government policy** on the indexation of rates, thresholds and allowances for taxes and benefits, and incorporates certified costings for all new policy measures announced by the Chancellor in the Budget.
- **Focuses on official 'headline' fiscal aggregates** that exclude public sector banks.

Assumptions regarding the UK's exit from the EU

4.4 The OBR is required by legislation to produce its forecasts on the basis of current Government policy (but not necessarily assuming that particular policy objectives will be met). With negotiations over the UK's exit from the EU ongoing, this is not straightforward. We have again asked the Government for any additional information that it wished to provide on its current policies that would be relevant to our forecasts. As set out in the Foreword, it directed us to the Prime Minister's Florence speech from September and a white paper on trade policy published in February. These include the Government's proposal for a time-limited implementation period to follow the UK's exit from the EU in March 2019. If the Government were to secure this, it could have implications for our forecast.

4.5 The Prime Minister also said that "*The UK will honour commitments we have made during the period of our membership*" and that "*as we move forwards, we will also want to continue working together in ways that promote the long-term economic development of our continent*" and "*to make an ongoing contribution to cover our fair share of the costs involved.*" Honouring financial commitments and making ongoing contributions would affect our spending forecast. But as with other elements of the exit process, the precise outcome is dependent on negotiations that are ongoing.

4.6 Given the uncertainty regarding how the Government will respond to the choices and trade-offs raised during the negotiations, there is no meaningful basis for predicting the precise end-point of the negotiations upon which to base our forecast. There is also considerable uncertainty about the economic and fiscal implications of different outcomes, even if they were predictable. So we have retained the same assumptions that underpinned our November 2016 and March 2017 forecasts, which are consistent with a range of possible outcomes. Specifically, as regards the fiscal forecast, we assume that:

- **The UK leaves the EU in March 2019** – two years after Article 50 was invoked.

- Any reduction in **expenditure transfers to EU institutions** would be recycled fully into extra domestic spending. This assumption is fiscally neutral.
- No allowance for **any one-off or ongoing EU exit-related payments** – the ‘divorce settlement’ – can be made until more information becomes available.
- There are no changes to the structure or membership of **tax systems for which there are common EU rules** (such as VAT and the EU emissions trading scheme or the customs duties that are deemed to be collected on behalf of the EU).

Economic determinants of the fiscal forecast

4.7 Our fiscal forecasts are based on the economy forecast presented in Chapter 3. Most economic forecasts focus on the outlook for real GDP, but it is nominal GDP – affected by prices as well as volumes – that matters most when forecasting the public finances. Forecasts of tax receipts are particularly dependent on the profile and composition of economic activity. On the income side, labour income is generally taxed more heavily than company profits. On the expenditure side, consumer spending is subject to VAT and other taxes while business investment attracts capital allowances that reduce corporation tax receipts in the short term. And while around half of public sector spending is set out in multi-year cash plans, large elements (such as social security and debt interest payments) are linked to developments in the economy – notably inflation, interest rates and the labour market.

4.8 Table 4.1 sets out some of the key economic determinants of the fiscal forecast. Table 4.2 shows how these have changed since our March forecast. Detailed descriptions of these forecasts and changes are provided in Chapter 3. In summary:

- Cumulative **nominal GDP** growth between 2017-18 and 2021-22 has been revised down by 2.8 percentage points, largely reflecting our downward revision to real GDP growth given the weaker outlook for productivity. Growth in the GDP deflator is also lower, reflecting changes in our forecast for the terms of trade. As a result nominal GDP is £41 billion lower in 2021-22 than in our March forecast at £2299 billion.
- On the income side of GDP, **wages and salaries** are forecast to grow by 2.9 per cent a year on average between 2017-18 and 2021-22, down by 0.4 percentage points from March. This largely reflects weaker earnings growth. Non-oil, non-financial **profits** were weaker than expected in 2016 and growth has been revised down from 2017 onwards. Weaker growth in both wages and salaries and profits are consistent with the weaker outlook for productivity growth.
- On the expenditure side, **nominal consumer spending** is forecast to grow 3.3 per cent a year on average between 2017 and 2021, down 0.4 percentage points on March due to the productivity-driven reduction in household income growth.

- The CPI measure of **inflation** has been revised up in the near term, reflecting the small upside surprise in recent months' outturns. The RPI measure has been revised down across the forecast, largely reflecting weaker house price inflation and a downward revision to our forecast for mortgage interest payments.
- **House price inflation** is forecast to average 3.2 per cent a year between 2017-18 and 2021-22, down by 1.5 percentage points on our March forecast. That reflects weaker outturns, plus the effects of weaker household income growth and lower population growth. **Residential property transactions** are lower in the near term, reflecting the latest outturn data.
- **Commercial property prices** are expected to rebound in 2017-18, relative to very weak average price growth in 2016-17. Prices remain weak in the near term, reflecting a weak consensus outlook from the IPF.² Our **commercial property transactions** forecast is weaker in 2017-18, reflecting the latest HMRC information.
- Market-derived assumptions for **equity prices, interest rates and oil and gas prices** reflect average prices in the 10 days to 31 October. Equity prices have been revised up and sterling oil prices have been revised down since March in line with recent outturns. Market expectations of interest rates have risen a little since March, while Bank Rate was increased from 0.25 to 0.5 per cent on 2 November.
- Our **oil and gas production** forecasts are informed by the central projections published by the Oil and Gas Authority (OGA). Production has been revised up across the forecast, reflecting stronger-than-expected growth in recent months. Our UK oil and gas expenditure forecasts are also informed by the central projections published by the OGA. We have revised expenditure up, reflecting a methodological change in the deflator used to convert the OGA's real-terms forecast into the cash figures we need for our receipts forecast.
- Our forecast for **financial company profit growth** is higher in 2017, reflecting the strong performance of financial sector corporation tax receipts so far this year. This is supported by City analysts' expectations of strong pre-tax profit growth at major UK financial institutions. HMRC outturn data are only available with a long lag – the 2017 data will only become available in summer 2019. We now assume that financial company profits will grow more slowly than the rest of the economy during the four years from 2019-20, reflecting our assumption that the financial and business services sectors could be more adversely affected than other sectors by the UK leaving the EU.
- The **output gap** – which we use to estimate the structural health of the public finances – is assumed to be slightly negative in 2017-18, relative to our assumption of +0.1 per cent in March. We have also revised our estimates of the output gap over the recent past, which affects our estimate of the cyclical component of borrowing this year. We

² *Investment property forum UK consensus forecast, Summer 2017.*

expect a small amount of spare capacity to open up over the next two years, before the output gap closes slowly through the second half of the forecast.

- 4.9 As explained in Chapter 3, we no longer forecast the claimant count measure of unemployment, since the rollout of universal credit means that it is no longer a meaningful measure of unemployment. The relevant benefit caseload is now produced in the same manner as other lines of our welfare spending forecasts, but is constrained to follow a profile consistent with our forecast for unemployment on the Labour Force Survey measure.

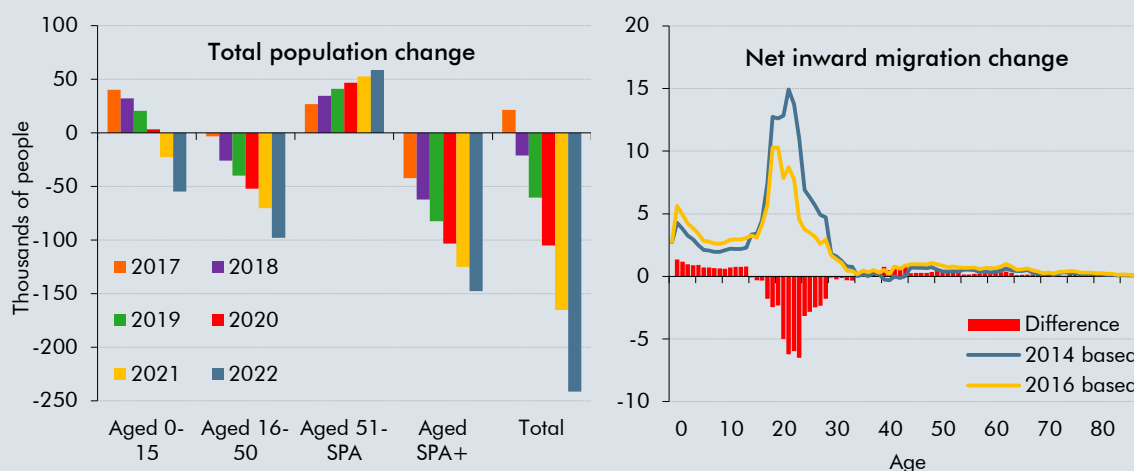
Box 4.1: New UK population projections

The Office for National Statistics (ONS) published new UK population projections in October 2017. These are based on 2016 population estimates and updated assumptions for fertility, mortality and net migration. We have based our forecast on the ‘principal’ projection. This box compares the latest projections with the previous 2014-based principal projections that underpinned our March forecast and summarises their effects on our fiscal forecast. The effects on our economy forecast were described in Chapter 3.

Chart A shows, first, how the population size has been revised at different ages across our 5-year forecast and, second, the change in the assumed age structure of net inward migration, which has been the main driver of the overall changes for some age groups. The total population in 2022 has been revised down by 0.4 per cent. This reflects:

- For **children aged 0-15**: an upward revision to begin with, but a downward revision in 2021 and 2022. Net inward migration of children is higher across the period. This is increasingly (and eventually more than) offset by fewer births, with the long-term fertility rate revised down from 1.89 to 1.84 births per woman. By 2022, the population in this group is 0.4 per cent lower than previously assumed.
- For **younger adults aged 16 to 50**: a downward revision that increases in size over the next five years, reflecting lower net inward migration. By 2022, the population in this group is 0.3 per cent lower than previously assumed.
- For **older working-age adults aged 51 to the state pension age (SPA)**: an upward revision due to higher net migration. By 2022, the population in this group is 0.5 per cent higher than previously assumed.
- For **adults aged above the SPA**: a large downward revision due to higher mortality rates at older ages than previously assumed. Total deaths for this age group average 502,000 a year in the new projections, up from 476,000 previously. This is consistent with life expectancy increasing less than projected since mid-2014. By 2022, the population in this age group is 1.2 per cent lower than previously assumed.

Chart A: Changes to the age structure in the latest population projections



Note: Both charts show differences between the 2016-based population projections and the 2014-based projections that preceded them.

Source: ONS

Table A summarises the effect of these changes on our fiscal forecast. The largest is the negative effect on receipts due to the combination of a less favourable age structure of net inward migration and more deaths. These combine to reduce growth in the adult population and therefore GDP, employment and house prices. This is partly offset by the reduction in spending on pensioner benefits and higher inheritance tax receipts that results from a higher number of deaths. We will consider the long-term implications of the new population projections in our 2018 *Fiscal sustainability report*. In broad terms, they would put downward pressure on education, health and welfare spending for children and on health, welfare and long-term care spending for the elderly. In policy terms, higher mortality at older ages might also affect the Government's decisions about when the SPA will rise in future.^a

Table A: Summary of effects on our net borrowing forecast

	£ billion				
	2017-18	2018-19	2019-20	2020-21	2021-22
Effect on PSNB	0.1	0.2	0.4	0.5	0.7
<i>of which:</i>					
Welfare spending	-0.1	-0.3	-0.5	-0.8	-1.2
Receipts	0.2	0.5	0.9	1.4	1.9
<i>of which:</i>					
GDP, employment and house prices	0.3	0.7	1.2	1.6	2.2
Inheritance tax	-0.1	-0.2	-0.2	-0.3	-0.3

Note: This table uses the convention that a negative figure means a reduction in PSNB, i.e. the reduction in receipts has a positive effect on PSNB and the reduction in welfare spending has a negative effect on PSNB.

^a For more detail on how changes in projected longevity might affect such decisions, see 'State Pension age review: final report', Department for Work and Pensions, July 2017.

Table 4.1: Determinants of the fiscal forecast

	Percentage change on previous year, unless otherwise specified						
	Outturn	Forecast					
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
GDP and its components							
Real GDP	1.8	1.5	1.4	1.3	1.3	1.5	1.5
Nominal GDP ¹	4.2	3.1	2.8	2.7	3.1	3.4	3.3
Nominal GDP (£ billion) ^{1,2}	1981	2043	2100	2158	2224	2299	2376
Nominal GDP (centred end-March £bn) ^{1,3}	2013	2072	2129	2189	2261	2337	2415
Wages and salaries ⁴	4.0	3.3	2.6	2.7	2.8	3.3	3.2
Non-oil PNFC profits ^{4,5}	7.8	0.3	1.3	2.9	3.6	3.7	3.4
Consumer spending ^{4,5}	4.2	3.9	3.0	3.1	3.2	3.5	3.7
Prices and earnings							
GDP deflator	2.3	1.6	1.5	1.4	1.7	1.8	1.8
RPI ⁶	2.1	3.8	3.1	2.8	2.9	2.9	3.0
CPI (September) ⁷	1.1	3.0	2.2	1.8	2.0	2.0	2.0
Average earnings ⁸	2.9	2.3	2.2	2.4	2.7	3.1	3.1
'Triple-lock' guarantee (September)	2.5	3.0	2.6	2.5	2.5	3.0	3.1
Key fiscal determinants							
Employment (millions)	31.8	32.1	32.3	32.5	32.5	32.6	32.7
Implied VAT gap (per cent) ⁹	9.3	9.2	9.0	8.7	8.5	8.4	8.4
Output gap (per cent of potential output)	-0.3	-0.1	-0.1	-0.2	-0.2	-0.1	0.0
Financial and property sectors							
Equity prices (FTSE All-Share index)	3700	4090	4224	4339	4472	4622	4777
HMRC financial sector profits ^{1,5,10}	3.8	6.0	2.7	1.3	1.6	1.7	1.7
Residential property prices ¹¹	6.1	4.1	2.8	3.0	2.9	3.4	3.6
Residential property transactions (000s) ¹²	1156	1230	1263	1287	1310	1328	1349
Commercial property prices ¹²	-12.3	1.1	-0.7	1.3	1.8	1.8	1.8
Commercial property transactions ¹²	6.5	-0.9	1.5	1.2	1.5	1.6	1.6
Oil and gas							
Oil prices (\$ per barrel) ⁵	44.0	53.8	57.7	56.2	56.8	57.8	58.9
Oil prices (£ per barrel) ⁵	32.5	41.7	43.4	41.9	41.9	42.2	42.6
Gas prices (p/therm) ⁵	34.6	43.9	46.1	44.9	45.8	46.6	47.5
Oil production (million tonnes) ⁵	47.4	47.4	48.9	48.9	46.4	44.1	41.9
Gas production (billion therms) ⁵	14.1	14.3	13.6	12.9	12.3	11.7	11.1
Interest rates and exchange rates							
Market short-term interest rates (%) ¹³	0.4	0.4	0.8	1.0	1.2	1.3	1.4
Market gilt rates (%) ¹⁴	1.2	1.3	1.5	1.7	1.8	2.0	2.1
Euro/Sterling exchange rate (€/£)	1.19	1.13	1.11	1.10	1.09	1.08	1.08
¹ Non-seasonally adjusted.	⁷ Q3 forecast used as a proxy for September.						
² Denominator for receipts, spending and deficit forecasts as a per cent of GDP.	⁸ Wages and salaries divided by employees.						
³ Denominator for net debt as a per cent of GDP.	⁹ Adjusted for timing effects.						
⁴ Nominal.	¹⁰ HMRC Gross Case 1 trading profits.						
⁵ Calendar year.	¹¹ Outturn data from ONS House Price Index.						
⁶ Quarterly forecasts are available in our supplementary economy tables on our website.	¹² Outturn data from HMRC information on stamp duty land tax.						
	¹³ 3-month sterling interbank rate (LIBOR).						
	¹⁴ Weighted average interest rate on conventional gilts.						

Table 4.2: Changes in the determinants of the fiscal forecast

	Percentage change on previous year, unless otherwise specified				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
GDP and its components					
Real GDP	-0.3	-0.2	-0.5	-0.6	-0.5
Nominal GDP ¹	-0.2	-0.5	-0.7	-0.8	-0.6
Nominal GDP (£ billion) ^{1,2}	14	5	-10	-27	-41
Nominal GDP (centred end-March £bn) ^{1,3}	11	-1	-19	-34	-49
Wages and salaries ⁴	0.5	-0.5	-0.7	-0.9	-0.6
Non-oil PNFC profits ^{4,5}	-2.9	-0.9	-1.4	-0.5	-0.3
Consumer spending ^{4,5}	-0.4	-0.2	-0.6	-0.5	-0.4
Prices and earnings					
GDP deflator	-0.1	-0.1	-0.3	-0.2	-0.1
RPI ⁶	-0.1	-0.3	-0.3	-0.2	-0.2
CPI (September) ⁷	0.4	-0.1	-0.1	0.0	0.0
Average earnings ⁸	-0.3	-0.6	-0.6	-0.8	-0.6
'Triple-lock' guarantee (September)	0.4	-0.1	-0.4	-0.9	-
Key fiscal determinants					
Employment (millions)	0.2	0.2	0.2	0.2	0.2
Implied VAT gap (per cent) ⁹	-0.2	0.0	0.2	0.2	0.2
Output gap (per cent of potential output)	-0.2	0.0	-0.1	-0.1	-0.1
Financial and property sectors					
Equity prices (FTSE All-Share index)	80	86	57	25	0
HMRC financial sector profits ^{1,5,10}	4.3	1.1	-0.4	-0.4	-2.3
Residential property prices ¹¹	-1.6	-1.3	-1.5	-1.6	-1.3
Residential property transactions (000s) ¹²	-50	-31	-18	-5	5
Commercial property prices ¹²	3.9	-2.3	-0.3	-0.1	-0.1
Commercial property transactions ¹²	-2.6	-0.1	-0.5	-0.5	-0.4
Oil and gas					
Oil prices (\$ per barrel) ⁵	-2.5	1.4	-0.6	-1.1	-1.2
Oil prices (£ per barrel) ⁵	-3.3	-1.2	-2.5	-2.8	-2.7
Gas prices (p/therm) ⁵	-4.2	-0.1	-2.4	-2.4	-2.5
Oil production (million tonnes) ⁵	0.0	1.5	1.5	1.4	1.3
Gas production (billion therms) ⁵	0.5	0.5	0.5	0.4	0.4
Interest rates and exchange rates					
Market short-term interest rates ¹³	0.0	0.2	0.2	0.2	0.1
Market gilt rates ¹⁴	-0.2	-0.2	-0.2	-0.2	-0.2
Euro/Sterling exchange rate (€/£)	-0.03	-0.04	-0.05	-0.05	-0.06
¹ Non-seasonally adjusted.	⁷ Q3 forecast used as a proxy for September.				
² Denominator for receipts, spending and deficit forecasts as a per cent of GDP.	⁸ Wages and salaries divided by employees.				
³ Denominator for net debt as a per cent of GDP.	⁹ Adjusted for timing effects				
⁴ Nominal.	¹⁰ HMRC Gross Case 1 trading profits.				
⁵ Calendar year.	¹¹ Outturn data from ONS House Price Index.				
⁶ Quarterly forecasts are available in our supplementary economy tables on our website.	¹² Outturn data from HMRC information on stamp duty land tax.				
	¹³ 3-month sterling interbank rate (LIBOR) (percentage points).				
	¹⁴ Weighted average interest rate on conventional gilts (percentage points).				

Policy announcements, risks and classification changes

4.10 The Government publishes estimates of the direct impact on the public finances of selected tax and spending policy decisions in its ‘scorecard’. It also shows some changes within departmental spending. We discuss the costing of each measure in detail with officials and, if we were to disagree with any of the final numbers that the Government chooses to publish, we would state this transparently and use our own estimates in our forecast. (We do not scrutinise individual changes within departmental spending, but rather make a judgement on the extent to which the Government’s overall resource and capital spending limits will be over- or underspent.) We are also responsible for assessing any indirect effects of policy measures on our economy forecast.³ These are discussed in Box 3.1 in Chapter 3. We note as risks to the fiscal forecast any significant policy commitments that are not quantifiable, as well as any potential statistical classification changes.

The effect of new policy announcements on the public finances

4.11 We consider the effects of all policy announcements that affect the public finances, so long as they can be quantified with reasonable accuracy and assigned to specific years. This includes the direct effects of policies presented on the Treasury’s scorecard and other policies that it chooses not to present that way. It also includes our estimate of their indirect effects on the public finances – for example, changing the rate of VAT would affect inflation, which would have knock-on effects on the cost of servicing index-linked gilts.

4.12 All these effects are summarised in Table 4.3, which follows the Treasury convention of showing costs that raise borrowing as negative and savings that reduce it as positive. Overall, the Budget announces a significant short-term fiscal giveaway, driven by higher departmental spending and a more modest net tax giveaway.

4.13 The key features of the Budget policy package include:

- **Higher departmental resource spending:** a temporary boost to the NHS and for Brexit preparations eases the pace of cuts previously planned for the next two years. The Government has also scaled back the ambition of its 2019-20 ‘efficiency review’.
- **Higher departmental capital spending:** NHS capital spending and various housing schemes have been expanded. The largest increases are in 2019-20 and 2020-21.
- **Net tax giveaways:** two large tax giveaways – the inevitable one-year freeze in fuel duty rates plus the introduction of a permanent stamp duty relief for first-time buyers of properties worth less than £500,000 – and a number of smaller ones are only partly offset by a raft of new anti-avoidance and evasion measures (focused on additional

³ In March 2014, we published a briefing paper on our approach to scrutinising and certifying policy costings, and how they are fed into our forecasts, which is available on our website: *Briefing paper No 6: Policy costings and our forecast*.

resources for HMRC) and freezing indexation allowance in the corporation tax regime (raising the effective tax rate companies actually pay relative to the headline rate).

- **Promised fiscal tightening in 2022-23:** the Government has pencilled in departmental spending totals for 2022-23 that would allow capital spending to rise by slightly less than GDP, but hold current spending flat in real terms – thereby cutting it as a share of GDP and by 0.5 per cent in real per capita terms.

4.14 The small indirect effects of Government decisions largely reflects the changes to our economy forecast from these decisions (described in Box 3.1) and that because some of the higher departmental spending will take the form of public sector pay, we assume that it will increase contributions to public service pensions, reducing net expenditure there.

4.15 We discuss the effects of policy decisions in more detail in Annex A, where we also set out our assessment of the degree of uncertainty associated with each costing that we have certified. Annex A also provides an update on various previous measures.

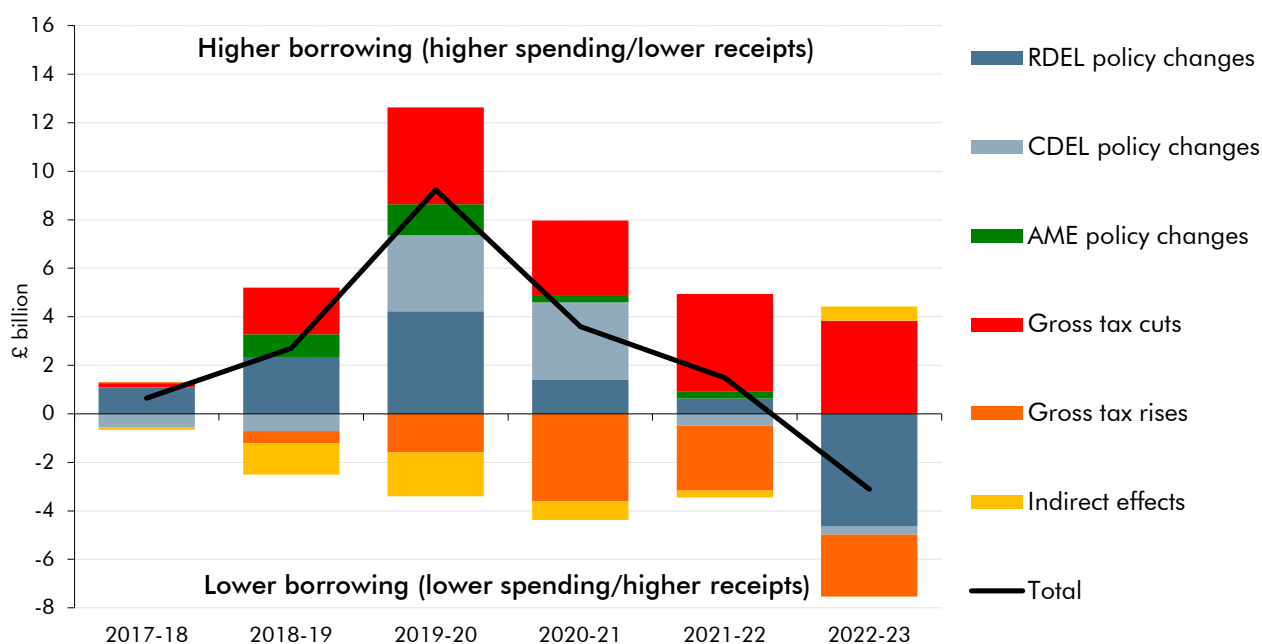
Table 4.3: Summary of the effect of Government decisions on the budget balance

	£ billion					
	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Total effect of Government decisions	-0.7	-2.7	-9.2	-3.6	-1.5	3.1
Direct effect of policies on the scorecard	-0.2	-6.0	-9.9	-3.3	-3.0	-2.5
<i>of which:</i>						
Receipts	-0.1	-1.4	-2.3	0.6	-1.3	-1.1
AME	0.0	-0.2	-1.4	-0.4	-0.4	-0.1
RDEL	0.6	-3.6	-4.1	-0.9	-0.9	-1.0
CDEL	-0.7	-0.9	-2.1	-2.6	-0.4	-0.4
Direct effect of non-scorecard policies	-0.5	2.1	-1.1	-1.1	1.2	6.2
<i>of which:</i>						
Receipts	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
AME	0.0	-0.8	0.1	0.1	0.1	0.1
RDEL	-1.7	1.3	-0.1	-0.5	0.3	5.6
CDEL	1.3	1.6	-1.1	-0.6	0.9	0.7
Indirect effect of Government decisions	0.1	1.3	1.8	0.8	0.3	-0.6
Total effect of Government decisions	-0.7	-2.7	-9.2	-3.6	-1.5	3.1
<i>of which:</i>						
Gross tax increases	0.0	0.5	1.6	3.6	2.7	2.6
Gross tax cuts	-0.2	-1.9	-4.0	-3.1	-4.0	-3.8
Total RDEL policy changes ¹	-1.1	-2.3	-4.2	-1.4	-0.6	4.7
Total CDEL policy changes ¹	0.6	0.7	-3.1	-3.2	0.5	0.3
Total AME policy changes	0.0	-0.9	-1.3	-0.3	-0.3	0.0
Indirect effects	0.1	1.3	1.8	0.8	0.3	-0.6

¹ The change in 2022-23 is relative to a baseline that assumes DEL would otherwise have remained constant as a share of GDP.

Note: The full Treasury scorecard can be found in Annex A. This table uses the Treasury scorecard convention that a positive figure means an improvement in PSNB, PSNCR and PSND. The supplementary tables on our website shows how each measure is attributed between receipts, AME and DEL.

Chart 4.1: The effect of Budget decisions on public sector net borrowing



Source: OBR

Box 4.2: Near-term giveaways and long-term takeaways

One reason our borrowing forecasts change in each *Economic and fiscal outlook* is that we incorporate the impact of the policy decisions announced in the Chancellor's Budget or other fiscal statement (the 'fiscal event'). These include the tax and spending decisions reported on the Treasury's 'scorecard' plus other changes – typically to departmental spending – that it chooses not to report in this way. There are typically lots of giveaways and takeaways in each event, the net effect of which is to raise or reduce borrowing in specific years and on average over the five years of the forecast – in other words to loosen or tighten fiscal policy.

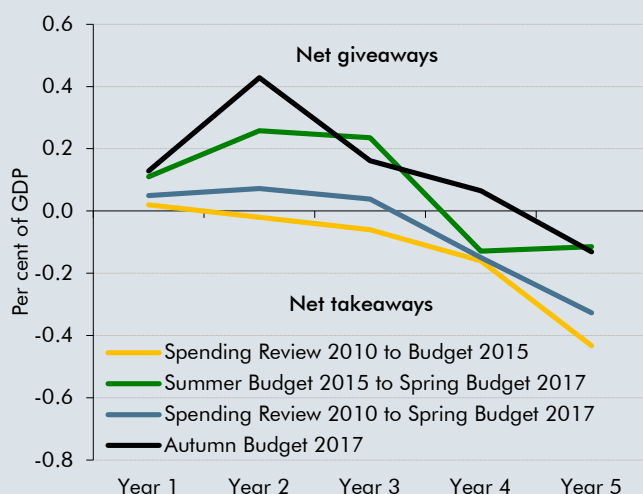
One pattern in the 16 fiscal events since the OBR's first forecast at the Coalition Government's June 2010 Budget is the 'Augustinian' tendency for governments to announce giveaways in the near term, but with the promise that the cost will be recouped by takeaways in the later years. Chart B shows the average tightening or loosening by year in all fiscal events from Spending Review 2010, and separately for each of the two previous Parliaments and this Autumn Budget. The pattern of early giveaways and later takeaways became clearer under the Conservative Government in the previous Parliament and has been repeated more forcefully in this Budget.

Chart C shows how the pattern of medium-term tightening followed by near-term loosening affects a given year as it draws closer and the early promises are superseded. When 2018-19 first entered the forecast window in December 2013, the Coalition Government pencilled in further cuts to spending as a share of GDP in that year. In the nine fiscal events since then, policy has been loosened in all but one. In cumulative terms, all the initial tightening had been offset by Autumn Statement 2016, with further loosening announced in both Budgets this year.

This switch from takeaways to giveaways did not occur because the underlying forecast for the public finances had improved in such a way that the earlier takeaways had proved unnecessary.

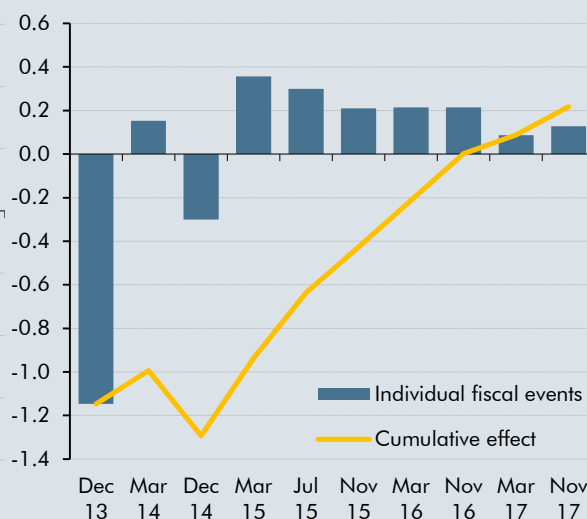
Rather the Government has become less ambitious for net borrowing. In Autumn Statement 2013 the Coalition had set its spending plans consistent with achieving a structural budget surplus of 0.3 per cent of GDP in 2018-19. In this Budget the Government has loosened policy to the extent that the structural deficit is expected to be 1.8 per cent of GDP in that year.

Chart B: The average effect of Government decisions on borrowing



Source: OBR

Chart C: The effect of Government decisions on borrowing in 2018-19



Policy risks

4.16 Parliament requires that our forecasts only reflect current Government policy. As such, when the Government or governing party sets out ‘ambitions’ or ‘intentions’ we ask the Treasury to confirm whether they represent firm policy. We use that information to determine what should be reflected in our forecast. Where they are not yet firm policy, we note them as a source of risk to our central forecast. Abstracting from the wider policy uncertainty associated with the forthcoming negotiations on leaving the EU, for this forecast we note:

- Commitments on **income tax allowances**: the Government is committed to increasing the personal allowance to £12,500 and the higher rate threshold to £50,000. These objectives are specified in terms of the levels being targeted and by when, but the Government has not set out how it would get from the current level to £12,500. As such, we are not able to quantify the effect in each year of achieving this goal. The Government’s policy assumption is that these thresholds are uprated in line with CPI inflation in years for which it has not set specific parameters, so in our forecast the personal allowance rises to £11,850 in 2018-19, £12,110 by 2019-20 and £12,340 by 2020-21. Modestly higher than expected inflation could therefore close this gap. On the same basis, the higher rate threshold is expected to reach £48,340 in 2020-21, a larger gap from the commitment. We estimate that closing the remaining gaps relative to both in 2020-21 would cost around £1.4 billion.
- The intention to **localise all business rates** and to provide some additional discretion to local authorities in setting them, while also shifting some new spending responsibilities

to local authorities. There are elements of this prospective package that could be quantified now, but it would be misleading to include only part of it in our central forecast when the Government has stated that when fully specified it will be fiscally neutral as a whole. When the package is fully specified, we will include it in the forecast and judge whether we do indeed expect it to be fiscally neutral.

- The **intention to expand right-to-buy to tenants of housing associations**. An initial pilot scheme ran from January 2016 to July 2017 and an expanded pilot is due to begin in July 2018. The Housing and Planning Act was passed in May 2016, but the Treasury has informed us that the secondary legislation detailing how the policy will work is pending. Until these details are specified and the implementation timetable is sufficiently clear, we cannot estimate the effects of this policy on a year-by-year basis.
- The Department for Work and Pensions and Department of Health issued a **consultation on work, health and disability** that closed in February 2017. We have been told that the two departments will be issuing a response soon. The Government's response could lead to changes to work capability assessments in employment and support allowance – or other changes – with implications for our welfare spending forecast. Until the Government takes any decisions on the basis of this consultation, we note it as a risk to our central forecast.
- The **intention to ban additional fees charged by private letting agents**, announced in Autumn Statement 2016. Specific details about timing and implementation remain outstanding, so we have not adjusted our forecast. Nevertheless it is possible that a ban on fees would be passed through to higher private rents. If this was the case, it could affect our housing benefit spending forecast.
- The **incentives for landlords that offer tenancies of at least 12 months**. The Government has announced this intention but has not specified what these incentives will be or when they will take effect.
- In October, the Government issued a consultation on reducing maximum stakes for **'fixed-odds betting terminals' (FOBTs)** from £100 to between £50 and £2. As this is a consultation, we have not incorporated an effect into this forecast. Machine games duty raised £0.7 billion in 2016-17, of which FOBTs accounted for the majority. We will factor in the effects of any post-consultation policy changes once they are known.
- The **devolution of corporation tax to Northern Ireland**. The Corporation Tax (Northern Ireland) Act received Royal Assent in March 2015, with devolution originally due to begin in April 2018. The Northern Ireland Executive has previously announced its intention to set a 12.5 per cent rate, to match that in the Republic of Ireland. While legislation has been passed, final devolution is subject to agreement between the UK Government and the Northern Ireland Executive. This has not yet been reached, so we have not included the effect of the proposed tax cut in our central forecast.

- The **devolution of air passenger duty to the Scottish Government**. The Scotland Act 2016 included provisions for the devolution of air passenger duty (APD) and the Scottish Government has since announced it will be replaced by an air departure tax (ADT) from April 2018. The Scottish Government has previously said it intends to reduce ADT rates to half those of APD. At the time of closing our forecast we were informed that the precise timing of the devolution of APD had not yet been finalised so we have not included it, or the effect of the proposed rate cut, in our central forecast.

4.17 Uprating policy presents some risks to our forecast. For example, the Government's stated assumption is that fuel duty will rise in line with RPI inflation each year. But in practice it has overridden that assumption repeatedly and fuel duty has been frozen since 2010-11. RPI-based uprating explains all the £2.7 billion rise in fuel duty receipts over the forecast period. The same pattern has been seen with some smaller taxes too: aggregates levy has been frozen since 2009-10 and vehicle excise duty for heavy-goods vehicles since 2001.

Contingent liabilities

4.18 We have asked the Treasury to identify any changes to future contingent liabilities as a result of policy announcements since March. A number have been reported to Parliament, but we do not consider any of these to be fiscally significant.

4.19 Three developments worth noting are:

- The Treasury will set an £8 billion ceiling on new **housing guarantees** over the period to 2022-23. These guarantees will include support for private sector housebuilding. Detailed proposals on how this will be utilised have not yet been established, so we will keep this under review.
- **UK Export Finance** (UKEF) has entered into a significant guarantee: a £2 billion loan guarantee for Saudi Aramco. This falls within the £50 billion maximum commitment limit that was set for UKEF at Autumn Statement 2013. As of March 2017, £23.5 billion has been used. In this Budget, the Treasury has also announced a new supply-chain product that UKEF will be able to provide to exporters. Use of this could run into the hundreds of millions of pounds.
- The Government's contingent liability in relation to **tax litigation** cases will have been reduced following HMRC's victory at the Supreme Court in the case brought against it by Littlewoods. This case was subject to a number of follower cases. The precise effect on the contingent liability will likely run into billions of pounds.

Classification changes

4.20 In October 2015, the ONS reclassified English housing associations – strictly 'private registered providers' of social housing – from the private to the public sector. Following changes to Government legislation, the ONS has announced that English housing

associations will be reclassified back to the private sector. This will remove their revenue, spending, borrowing and debt from the public sector fiscal aggregates that we forecast.

- 4.21 The ONS has implemented a number of other methodological and classification changes since our last forecast.⁴ These changes reduce our PSNB forecast by around £1.5 billion a year, the largest of which reflects changes to imputed pensions spending associated with various funded pension schemes. This also includes a change to the classification of local authority parking fine income, which raises receipts and spending by around £0.5 billion a year and has no effect on overall net borrowing.
- 4.22 The ONS publishes a forward workplan for those classifications planned for the coming year. The decision that could have the largest impact on borrowing and debt concerns the Pension Protection Fund, where a decision is expected soon. The ONS could also decide to reclassify Welsh and Scottish housing associations following legislation relinquishing government controls. We have not anticipated decisions in these areas.
- 4.23 On occasion we need to pre-empt an ONS decision. Where this is the case we rely on advice from the Treasury's classification experts. In this forecast we have assumed that the newly created BBC Studios will be treated as a public corporation; that certain Network Rail asset sales will reduce the deficit (where Treasury advice was reversed too late to be reflected in this forecast) and that joint ventures set up between local authorities and the private sector for estates regeneration will be off-balance sheet.

Financial sector interventions

- 4.24 The Government undertook a number of interventions in the financial sector in response to the financial crisis and the subsequent recession of the late 2000s. In each *EFO* we update the estimated net direct effect of them on the public finances. Table 4.4 summarises the position as at the end of October 2017.⁵ This is an estimate of the direct effect of these interventions and the financing associated with them. It is not an attempt to quantify their overall effect on the public finances relative to a counterfactual where the Government had not intervened to support the banking system as the financial crisis unfolded and where the economic and fiscal impact of failing to do so would likely have been considerable.
- 4.25 In total, £137 billion was disbursed by the Treasury during and following the crisis. By the end of October 2017, principal repayments on loans, proceeds from share sales and redemptions of preference shares amounted to £83.2 billion. That is up from the £66.8 billion we reported in March, reflecting £14.0 billion proceeds from UKAR (including £11.0 billion via its FSCS liabilities) and £2.4 billion from selling the Government's remaining

⁴ These reflect changes that the ONS included in the Public Sector Finances Statistical Bulletin released in September 2017, as part of wider revisions included in Blue Book 2017. In some cases the distinction between whether these revisions were methodological or classification changes, or other forms of data changes is not clear cut.

⁵ The RBS share price is based on the average price for the 10 days to 31 October, meaning it is consistent with the market-derived assumptions used in the rest of our fiscal forecast.

holdings in Lloyds. In total, the Treasury has also received a further £21.2 billion in other fees and interest, leaving a net cash shortfall of £32.2 billion.

- 4.26 As of the end of October, the Treasury was still owed £11.7 billion from loans (almost entirely by UKAR, since the remaining £4.7 billion FSCS loan also relates to UKAR). The value of the shares it retained in RBS had risen to £23.7 billion, up from £19.7 billion in March. The Treasury's holdings in UKAR had an equity book value of around £8.1 billion.
- 4.27 If the Treasury were to receive all loan payments in full, and sold its remaining shares at their end-October values, it would realise an overall cash surplus of £11.3 billion. That is £4.1 billion higher than in March, with the change largely explained by the increase in the RBS share price. But that estimate excludes the costs to the Treasury of financing these interventions. If all interventions were financed through gilts at the market rates that prevailed at the time, the Treasury estimates that the additional debt interest costs would have amounted to £33.1 billion by the end of October, mainly due to the costs associated with RBS and UKAR. Together this implies an overall cost of £21.8 billion to the Government, £1.7 billion lower than we estimated in March.

Table 4.4: Gross and net cash flows of financial sector interventions

	£ billion								Change since March EFO ⁵
	Lloyds	RBS	UKAR ¹	FSCS ²	CGS ³	SLS ⁴	Other	Total	
Cash outlays	-20.5	-45.8	-44.1	-20.9	0.0	0.0	-5.3	-136.6	0.0
Principal repayments	21.1	3.8	36.8	16.2	0.0	0.0	5.3	83.2	16.4
Other fees received ⁶	3.2	4.2	4.4	2.7	4.3	2.3	0.2	21.2	0.1
Net cash position	3.8	-37.8	-3.0	-1.9	4.3	2.3	0.2	-32.2	16.6
Outstanding payments	0.0	0.0	6.9	4.7	0.0	0.0	0.1	11.7	-14.1
Market value ⁷	0.0	23.7	8.1	0.0	0.0	0.0	0.0	31.8	1.6
Implied balance	3.8	-14.1	12.0	2.7	4.3	2.3	0.3	11.3	4.1
Exchequer financing	-3.8	-12.1	-11.0	-7.0	1.0	0.2	-0.5	-33.1	-2.4
Overall balance	0.0	-26.2	1.1	-4.2	5.2	2.5	-0.2	-21.8	1.7
<i>Memo: change in overall balance since March⁵</i>	-0.1	3.0	-0.8	-0.5	0.1	0.0	0.0	1.7	

¹ Holdings in Bradford & Bingley and Northern Rock Asset Management plc are now managed by UK Asset Resolution.

² Financial services compensation scheme.

³ Credit Guarantee Scheme.

⁴ Special Liquidity Scheme.

⁵ March EFO figures were consistent with 16 February 2017 data.

⁶ Fees relating to the asset protection scheme and contingent capital facility are included within the RBS figures.

⁷ UKAR is book value of equity derived from its accounts published 4 July 2017 (value up to date to 31 March 2017).

Public sector receipts

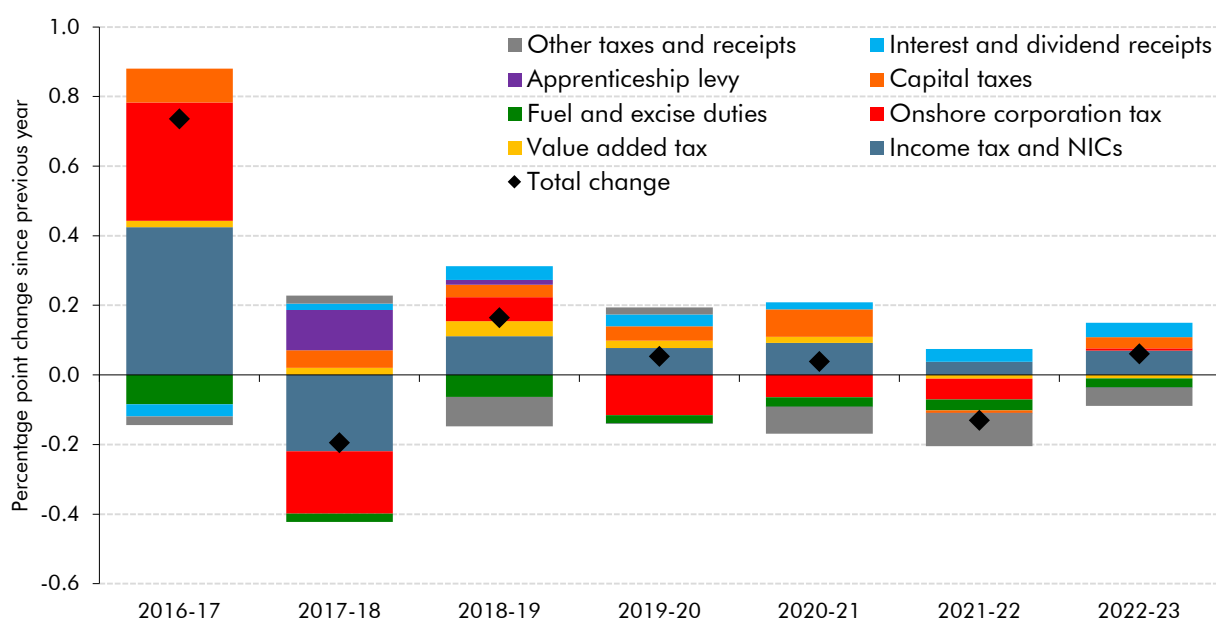
- 4.28 Table 4.5 summarises our receipts forecast as a share of GDP. As shown in Chart 4.2, the receipts-to-GDP ratio rose by 0.7 per cent of GDP in 2016-17, reflecting strong growth in onshore corporation tax, income tax and NICs. Box 3.2 of our 2017 *Forecast evaluation report (FER)* set out the drivers of this increase in more detail, which included the boost from dividend income being brought forward before the April 2016 rise in dividend tax took

effect. The unwinding of this timing effect is one reason why the receipts-to-GDP ratio falls this year. The ratio rises again in 2018-19, and is relatively flat thereafter. The drop in 2021-22 partly reflects a £0.9 billion fall in bank levy receipts, as the main rate is cut and its scope is narrowed to cover only UK (rather than global) balance sheets. Capital tax receipts are also affected by a policy measure that changes the timing of CGT payments.

Table 4.5: Major receipts as a share of GDP

	£ billion						
	Outturn	Forecast					
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Income tax and NICs	15.3	15.1	15.2	15.3	15.4	15.4	15.5
Value added tax	6.1	6.2	6.2	6.2	6.2	6.2	6.2
Onshore corporation tax	2.7	2.5	2.6	2.5	2.4	2.4	2.4
Fuel duties	1.4	1.4	1.3	1.3	1.3	1.3	1.3
Business rates	1.5	1.4	1.5	1.5	1.4	1.4	1.4
Council tax	1.5	1.6	1.6	1.6	1.6	1.6	1.6
Excise duties	1.0	1.0	1.0	1.0	1.0	0.9	0.9
Capital taxes	1.5	1.5	1.6	1.6	1.7	1.7	1.7
UK oil and gas receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other taxes	2.9	3.2	3.3	3.3	3.2	3.2	3.1
National Accounts taxes	34.0	33.9	34.2	34.2	34.3	34.1	34.1
Interest and dividend receipts	0.3	0.3	0.4	0.4	0.4	0.5	0.5
Other receipts	2.4	2.2	2.0	2.0	2.0	2.0	2.0
Current receipts	36.7	36.5	36.6	36.7	36.7	36.6	36.7

Chart 4.2: Year-on-year changes in the receipts-to-GDP ratio



Source: ONS, OBR

Sources of changes in the tax-to-GDP ratio

4.29 Movements in the tax-to-GDP ratio arise from two sources:

- changes in the **composition of GDP** can lead to specific tax bases growing more or less quickly than the economy as a whole; and
- the **effective tax rate paid on each tax base** can change due to policy or other factors.

Change in the tax-to-GDP ratio over the forecast period

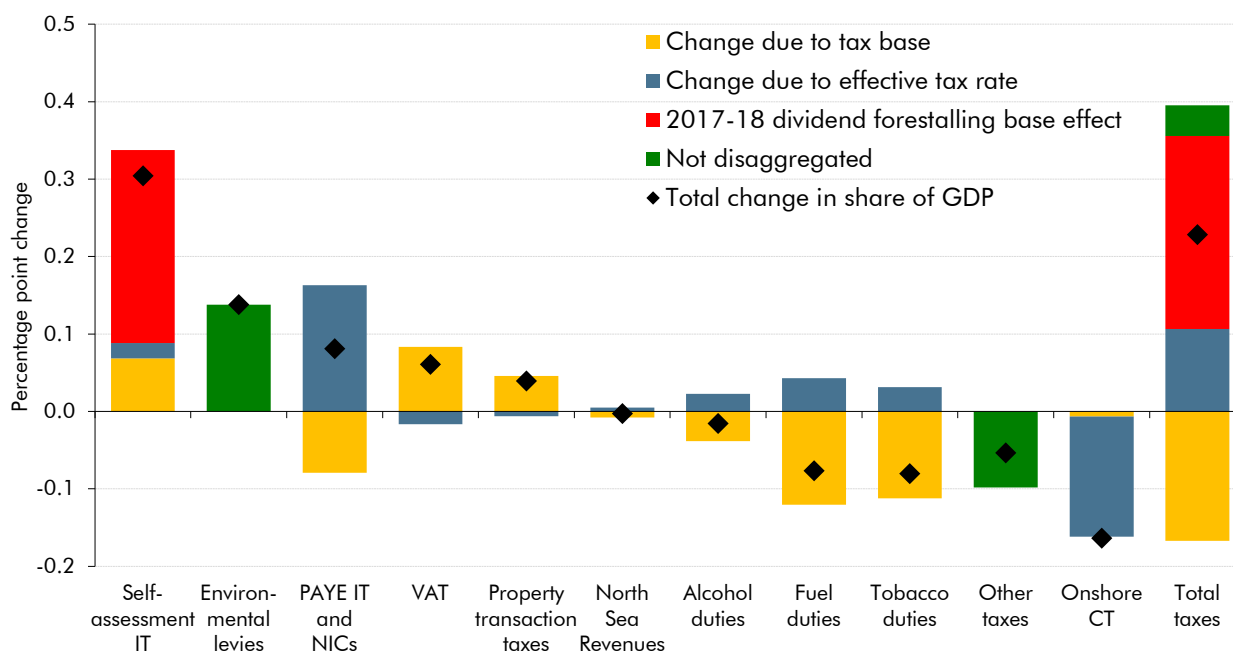
4.30 Chart 4.3 shows that the main sources of the overall 0.2 percentage point rise between 2017-18 and 2022-23 are:

- A 0.3 per cent of GDP rise in **self-assessment (SA) income tax**. Over half of this rise occurs in 2018-19, from a 2017-18 base depressed by the unwinding of dividend income forestalling effects. Abstracting from that effect, the rise over the forecast is explained by a rising effective tax rate, which in turn reflects policy measures on dividends, landlords' deductions and compliance. In the final years of the forecast, there is an effect from 'fiscal drag' as productivity and real earnings growth pick up (to still historically subdued rates), dragging more income into higher tax brackets.
- A 0.1 per cent of GDP rise in **environmental levies**. The biggest driver is from levies within the 'levy control framework' that are scored as both tax and spending and are therefore neutral for borrowing overall. The rise over the forecast is driven by growth in renewable electricity generation.
- A 0.1 per cent of GDP rise in **PAYE IT and NICs** receipts. This is more than explained by a rise in the effective tax rate in the final three years of the forecast. As with SA, this is due to 'fiscal drag' as productivity and real earnings growth pick up.

4.31 Partly offsetting these rises are:

- A 0.2 per cent of GDP fall in **excise duties**. This is explained by declining tax bases, due to trends in alcohol and tobacco consumption and rising fuel efficiency. These are only partly offset by rises in duty rates based on the Government's stated policy assumptions, which raise the effective tax rate.
- A 0.2 per cent fall in **onshore corporation tax** receipts. This is driven by a falling effective tax rate – as the main corporation tax rate will be cut to 17 per cent in April 2020. The tax base also contributes negatively because we expect financial company profits to grow more slowly than the whole economy from 2019-20 onwards, reflecting our assumption that the financial and business services sectors could be more adversely affected than other sectors by the UK leaving the EU.

Chart 4.3: Sources of changes in the tax-to-GDP ratio (2017-18 to 2022-23)



Source: OBR

Detailed current receipts forecast

4.32 Our detailed receipts forecasts and changes since March are presented in Tables 4.6 and 4.7. Further detailed breakdowns are available in supplementary fiscal tables on our website. Our forecasts for Scottish and Welsh devolved taxes are discussed in our separate *Devolved tax forecasts* publication.

Table 4.6: Current receipts

	£ billion						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Income tax (gross of tax credits) ¹	177.2	177.2	184.7	191.2	198.9	206.0	214.3
of which: Pay as you earn	149.7	154.5	158.0	162.4	168.4	174.8	180.7
Self assessment	28.5	25.5	29.9	31.8	33.5	34.4	36.8
National insurance contributions	125.9	131.0	134.4	138.3	142.8	148.0	153.2
Value added tax	121.6	125.8	130.3	134.3	138.8	143.2	147.8
Corporation tax ²	54.1	52.8	55.4	54.4	54.6	55.1	57.2
of which: Onshore	53.5	51.5	54.4	53.4	53.6	54.0	56.0
Offshore	0.6	1.3	1.0	1.0	1.0	1.0	1.1
Petroleum revenue tax	-0.7	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4
Fuel duties	27.9	27.9	28.0	28.6	29.2	29.9	30.6
Business rates	29.2	29.3	30.5	31.3	31.7	32.2	33.6
Council tax	30.4	32.2	33.8	35.1	36.2	37.2	38.3
VAT refunds	13.8	14.1	14.5	14.5	14.8	15.1	15.3
Capital gains tax	8.4	8.8	9.9	10.9	12.6	12.5	13.3
Inheritance tax	4.8	5.3	5.4	5.7	5.9	6.2	6.5
Stamp duty land tax ³	11.9	13.2	13.2	13.7	14.4	15.1	15.8
Stamp taxes on shares	3.7	3.4	3.5	3.6	3.7	3.9	4.0
Tobacco duties	8.7	9.4	9.2	9.2	9.1	9.0	9.0
Spirits duties	3.3	3.5	3.5	3.6	3.7	3.8	3.9
Wine duties	4.2	4.3	4.3	4.5	4.6	4.8	5.0
Beer and cider duties	3.6	3.7	3.7	3.8	3.9	4.0	4.1
Air passenger duty	3.2	3.3	3.5	3.6	3.8	3.9	4.0
Insurance premium tax	4.9	5.8	6.0	6.0	6.0	6.0	6.0
Climate change levy	1.9	1.8	1.9	2.2	2.3	2.3	2.3
Other HMRC taxes ⁴	7.4	7.3	7.3	7.5	7.6	7.6	7.7
Vehicle excise duties	5.8	6.0	6.2	6.2	6.3	6.5	6.8
Bank levy	3.0	2.6	2.6	2.5	2.1	1.2	1.3
Bank surcharge	1.6	1.8	1.7	1.8	1.8	1.8	1.9
Apprenticeship levy	0.0	2.7	2.7	2.8	2.9	3.0	3.1
Licence fee receipts	3.2	3.2	3.3	3.4	3.4	3.5	3.6
Environmental levies	5.2	8.6	10.5	11.7	12.3	12.9	13.3
EU ETS auction receipts	0.4	0.4	0.6	0.6	0.4	0.4	0.5
Scottish and Welsh taxes ⁵	0.6	0.7	1.0	1.0	1.1	1.1	1.2
Diverted profits tax	0.1	0.2	0.3	0.3	0.2	0.1	0.0
Soft drinks industry levy	0.0	0.0	0.3	0.3	0.3	0.3	0.3
Other taxes	7.2	7.0	6.8	7.2	7.4	7.7	7.8
National Accounts taxes	672.7	692.8	718.6	739.0	762.0	783.7	811.0
Less own resources contribution to EU	-3.4	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5
Interest and dividends	6.5	7.1	8.1	9.1	9.8	11.0	12.4
Gross operating surplus	47.2	45.5	43.1	44.0	45.4	47.1	48.8
Other receipts	3.7	3.5	3.4	3.4	3.5	3.4	2.7
Current receipts	726.7	745.4	769.8	792.0	817.2	841.6	871.3
Memo: UK oil and gas revenues ⁶	0.0	0.7	0.5	0.5	0.4	0.5	0.7

¹ Includes PAYE, self assessment, tax on savings income and other minor components.

² National Accounts measure, gross of reduced liability tax credits.

³ Includes SDLT for England, Wales (up to 2018-19) and Northern Ireland.

⁴ Consists of landfill tax (excluding Scotland and Wales, from 2018-19), aggregates levy, betting and gaming duties and customs duties.

⁵ Consists of devolved property transaction taxes and landfill taxes but not the Scottish rate of income tax or aggregates levy.

⁶ Consists of offshore corporation tax and petroleum revenue tax.

Table 4.7: Changes to current receipts since March

	£ billion					
	Outturn	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Income tax (gross of tax credits) ¹	2.5	2.2	1.1	-0.6	-1.6	-5.2
of which: Pay as you earn	1.2	1.2	0.1	-1.8	-3.3	-5.5
Self assessment	-0.2	0.7	0.7	0.6	1.0	-0.1
National insurance contributions	0.9	0.7	-0.1	-1.7	-3.4	-4.4
Value added tax	0.9	0.4	-0.5	-1.9	-2.8	-3.5
Corporation tax ²	0.6	-1.3	-0.1	-0.5	0.7	0.4
of which: Onshore	0.7	-1.2	0.2	-0.1	1.2	0.7
Offshore	-0.1	-0.1	-0.3	-0.4	-0.4	-0.4
Petroleum revenue tax	0.0	-0.1	0.0	0.0	-0.1	0.0
Fuel duties	0.1	0.4	0.0	0.1	0.0	-0.1
Business rates	0.4	-0.3	-0.5	-0.9	-1.3	-1.5
Council tax	0.0	0.1	0.2	0.2	0.2	0.2
VAT refunds	0.0	0.3	0.5	0.6	0.5	0.4
Capital gains tax	-0.3	-0.3	-0.1	-0.9	1.5	-0.3
Inheritance tax	0.1	0.3	0.2	0.2	0.1	0.0
Stamp duty land tax ³	0.3	0.2	-0.7	-1.1	-1.5	-1.9
Stamp taxes on shares	0.1	0.0	0.0	0.0	0.0	0.0
Tobacco duties	0.0	0.5	0.3	0.2	0.1	0.1
Spirits duties	0.0	-0.1	-0.2	-0.2	-0.2	-0.2
Wine duties	0.1	-0.1	-0.2	-0.4	-0.4	-0.5
Beer and cider duties	0.0	0.0	-0.1	-0.2	-0.1	-0.1
Air passenger duty	0.0	0.0	0.0	0.0	-0.1	-0.1
Insurance premium tax	-0.1	0.1	0.0	0.0	0.0	-0.1
Climate change levy	0.1	0.0	0.0	0.0	0.1	0.1
Other HMRC taxes ⁴	-0.1	0.1	-0.1	-0.1	-0.1	-0.1
Vehicle excise duties	0.0	0.0	0.0	-0.1	-0.3	-0.3
Bank levy	0.0	-0.2	-0.2	-0.2	-0.1	-0.1
Bank surcharge	0.1	0.4	0.3	0.3	0.3	0.3
Apprenticeship levy	0.0	0.0	0.0	0.0	0.0	-0.1
Licence fee receipts	0.0	0.0	0.0	0.0	0.0	0.0
Environmental levies	-1.8	0.0	-0.2	-0.2	-0.3	-0.5
EU ETS auction receipts	-0.1	0.0	0.1	0.2	0.1	0.1
Scottish and Welsh taxes ⁵	0.0	0.0	0.3	0.3	0.2	0.2
Diverted profits tax	0.0	0.1	0.1	0.2	0.1	0.0
Soft drinks industry levy	0.0	0.0	-0.1	-0.1	-0.1	-0.1
Other taxes	0.0	-0.5	-0.5	-0.6	-0.6	-0.7
National Accounts taxes	4.0	2.5	-0.6	-7.7	-9.2	-18.2
Less own resources contribution to EU	-0.1	0.0	0.0	0.0	0.0	-0.1
Interest and dividends	1.0	1.1	0.5	0.0	-0.5	-0.8
Gross operating surplus	-0.7	-3.9	-8.0	-8.4	-9.3	-10.4
Other receipts	1.5	1.5	1.4	1.5	1.5	1.5
Current receipts	5.6	1.3	-6.6	-14.5	-17.6	-27.9
Memo: UK oil and gas revenues ⁶	-0.2	-0.2	-0.3	-0.5	-0.5	-0.4

¹ Includes PAYE, self assessment, tax on savings income and other minor components.

² National Accounts measure, gross of reduced liability tax credits.

³ Includes SDLT for England, Wales (up to 2018-19) and Northern Ireland.

⁴ Consists of landfill tax (excluding Scotland and Wales, from 2018-19), aggregates levy, betting and gaming duties and customs duties.

⁵ Consists of devolved property transaction taxes and landfill taxes but not the Scottish rate of income tax or aggregates levy.

⁶ Consists of offshore corporation tax and petroleum revenue tax.

Changes in the receipts forecast since March

4.33 We present changes in this section on a like-for-like basis, excluding the reclassification of English housing associations and other ONS methodological changes. The largest effects of these on receipts come from removing housing associations' gross operating surplus, which averaged £6.7 billion a year from 2018-19 onwards in our March forecast.

4.34 On a like-for-like basis we have revised our pre-measures forecast in 2017-18 up by £3.2 billion, but have revised down *growth* in receipts from 2017-18 to 2021-22 by £24.8 billion. Receipts in 2021-22 are therefore £21.6 billion lower than we forecast in March. As Table 4.8 shows, the largest source of revisions are the changes to our forecast for the economy's underlying growth potential, which reflect:

- The **downward revision to underlying productivity growth** more than explains the downward revisions to the income and expenditure components of our nominal tax base forecasts. In particular, weaker earnings growth reduces income tax and NICs receipts, weaker household consumption growth reduces VAT receipts and weaker profits growth reduces onshore corporation tax receipts.
- The **upward revisions to our average hours and employment rate forecasts** (the latter largely reflecting the downward revision to our assumption of the sustainable unemployment rate) partly offset the impact of lower productivity growth.
- A smaller **adult population** reduces growth in the major tax bases, reducing tax receipts. It also reduces tax on pensions income. This is partly offset by the effect of higher mortality rates on inheritance tax receipts. See Box 4.1 for more detail.

4.35 In the near term, other GDP-related revisions reflect the strength of growth in tax bases despite much weaker productivity growth than expected this year. Most significantly, growth in wages and salaries has actually been revised up by 0.5 percentage points in 2017-18, thanks to stronger-than-expected employment growth and a jump in the labour share as earnings have held up relative to productivity, squeezing profit margins in the process.

4.36 Other sources of change since March include:

- A downward revision to public sector **gross operating surplus** that reflects our lower forecast for central government depreciation. This is offset by lower spending, so is neutral for borrowing overall.
- **Higher-than-expected receipts in 2016-17** are largely pushed through the forecast. In particular, income tax and NICs receipts from bonuses were higher than expected in February and March. We have assumed they will be higher in future years too. VAT receipts were also higher than expected, some of which is assumed to persist.
- We have revised up our forecasts for **fuel and tobacco clearances**. For fuel, this reflects analysis of persistent upside surprises relative to recent forecasts, partly reflecting the

recent strong growth in traffic from light goods vehicles. For tobacco, it reflects updated analysis of the 2016-17 shortfall in receipts, more of which now appears to reflect timing factors rather than something that will persist.

- 4.37 The effect of Government decisions reduces receipts in most years as the gross tax cuts (dominated by freezing fuel duty again and a new stamp duty relief for first-time buyers) outweigh the gross tax rises (dominated by the latest package of measures to tackle avoidance and evasion). The net effect of the Budget measures boosts receipts in only one year: 2020-21, the year in which the Government's main fiscal target applies. Scorecard measures add £0.6 billion in that year, reflecting the decision to delay the introduction of the 'CGT payment window' by a year from 2019-20 to 2020-21. This flatters receipts in one year only by bringing forward the timing of payments. It was introduced in Autumn Statement 2015, boosting receipts in 2019-20; the fiscal target year then was 2019-20.
- 4.38 The indirect effects of Government decisions boost receipts in each year to 2021-22, mostly reflecting the modest boost to GDP growth from the overall fiscal loosening, which boosts the major tax bases. Policy decisions not presented on the Treasury's scorecard are generally small, while some are neutral for borrowing because they have an offsetting effect on spending. The most significant change relates to the approach to the indexation of excise duties, where the precise period over which RPI inflation is calculated to set the level of indexation has been changed and the timing of tobacco duty and alcohol duty increases has been brought forward. The only material effect on our receipts forecast relates to fuel duty, where it has added £0.1 billion a year. Of course, the change would be moot if the new approach to indexing fuel duty were implemented as frequently as the previous one.

Table 4.8: Sources of change to the receipts forecast since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	744.2	776.4	806.5	834.8	869.5
Reclassification of English HAs	-2.8	-6.5	-6.4	-6.8	-7.2
Other ONS changes	0.8	0.9	0.9	0.9	0.9
March forecast restated	742.3	770.7	801.1	828.9	863.3
November forecast	745.4	769.8	792.0	817.2	841.6
Like-for-like change	3.2	-0.9	-9.1	-11.7	-21.6
Total change to underlying forecast	3.1	-0.4	-8.4	-13.0	-20.6
of which:					
Total effect of economic determinants	-1.3	-5.6	-11.1	-16.7	-21.6
Productivity revision	-9.3	-14.6	-18.1	-22.8	-26.5
Average hours revision	2.6	4.1	5.1	6.4	7.6
Sustainable unemployment revision	0.5	1.2	1.7	2.4	3.0
Population projection changes	-0.2	-0.5	-0.9	-1.4	-1.9
Other GDP and house price revisions	5.7	4.8	2.1	-0.1	-2.3
Property transactions	-0.4	-0.3	-0.2	-0.1	0.0
RPI and CPI inflation	-0.1	-0.8	-1.1	-1.0	-1.1
Equity prices	0.1	0.5	0.5	0.4	0.2
Oil and gas prices	-0.3	-0.1	-0.3	-0.4	-0.3
Interest rates	0.2	0.1	0.0	-0.1	-0.2
Other determinants	-0.2	0.1	0.2	0.0	-0.1
Other assumptions	4.4	5.2	2.7	3.8	1.0
IT and NICs receipts and modelling	1.6	2.6	1.7	2.9	2.8
Corporation tax receipts and modelling	-0.7	0.9	0.7	1.5	1.6
Incorporations modelling	0.2	0.3	0.4	0.5	0.5
VAT receipts and modelling	1.0	0.9	0.2	0.3	0.3
CGT outturn and modelling	-0.3	-0.3	-0.2	0.2	-0.7
Excise duties outturn and modelling	0.9	0.6	0.7	0.8	0.9
SDLT outturn and modelling	1.3	1.2	1.1	1.0	0.9
Interest and dividend outturn and modelling	0.7	0.3	0.2	0.1	0.1
Business rates modelling	-0.3	-0.2	-0.3	-0.7	-1.0
Gross operating surplus	-1.4	-1.7	-2.0	-2.6	-3.3
Other judgements and modelling	1.5	0.8	0.2	-0.2	-1.1
Total effect of Government decisions	0.0	-0.5	-0.7	1.2	-1.0
of which:					
Scorecard measures	-0.1	-1.4	-2.3	0.6	-1.3
Non-scorecard measures	-0.1	-0.1	-0.1	-0.1	-0.1
Indirect effects of Government decisions	0.3	0.9	1.7	0.8	0.3
<i>Memo: November pre-measures forecast</i>	<i>745.4</i>	<i>770.3</i>	<i>792.7</i>	<i>815.9</i>	<i>842.7</i>

Receipts in 2017-18

4.39 On a like-for-like basis, receipts in 2016-17 were £6.6 billion higher than we expected in March. As detailed in Box 3.2 of our October *FER*, most of that difference was explained by higher income tax, NICs, corporation tax and VAT receipts and almost all of it reflected

revisions between the first ONS estimate published in April and the October estimate underpinning this forecast. We have revised up our forecast for receipts in 2017-18 by £3.2 billion, as we do not expect all the 2016-17 surplus to be repeated this year.

4.40 Over the first six months of the year, National Accounts taxes were up by 3.8 per cent on the first half of 2016-17. But as Table 4.9 shows, we expect receipts growth to slow in the second half of 2017-18. This reflects:

- **Self-assessment income tax:** we expect SA receipts to be £3.1 billion lower in 2017-18 than in 2016-17. Income shifting ahead of the April 2016 dividend tax rise boosted SA receipts by £4 billion in 2016-17, while the unwinding of this is expected to depress them by £5 billion this year. We expect this effect to be seen when the balancing payment on 2016-17 liabilities is made at the end of January 2018.
- **PAYE IT and NICs:** receipts growth is expected to be slightly weaker in the second half of the year. Higher bonuses in 2016-17 means that a higher proportion of receipts were paid during bonus season at the end of last year. We expect bonuses to grow in line with earnings this year, making the profile of receipts relatively less back-loaded.
- **Property transactions taxes:** the year-on-year profile has been flattered by the unwinding of forestalling at the start of 2016-17, after the April 2016 introduction of the stamp duty surcharge on additional properties. A weaker outlook for the property market in the second half of the year also depresses the year-on-year growth rate.
- **VAT:** receipts growth is expected to be weaker over the second half of the year, reflecting our revised forecast for nominal household consumption growth.
- **Onshore corporation tax:** receipts growth is also expected to be weaker, reflecting the April 2017 cut in the main rate of corporation tax to 19 per cent as well as our revised forecast for non-financial companies' profit growth over the rest of the year.

Table 4.9: Tax receipts in 2017-18

	£ billion			Percentage change on 2016-17		
	Outturn	Forecast		Outturn	Forecast	
	Apr-Sep	Oct-Mar	Full year	Apr-Sep	Oct-Mar	Full year
Income tax and NICs	144.4	163.7	308.2	3.2	0.3	1.7
<i>of which:</i>						
PAYE and NICs	136.6	148.9	285.5	3.7	3.5	3.6
Self assessment	9.4	16.1	25.5	5.6	-18.1	-10.7
Value added tax	61.5	64.4	125.8	3.7	3.2	3.5
Onshore corporation tax ¹	28.3	25.2	53.5	-1.2	-5.3	-3.2
Fuel duties	14.2	13.7	27.9	0.2	-0.6	-0.2
Capital gains tax	0.0	8.8	8.8	n/m	5.0	4.9
Inheritance tax	2.8	2.5	5.3	16.4	3.0	9.7
Property transaction taxes ²	7.0	6.7	13.8	17.5	5.0	11.0
Tobacco duties	4.4	4.9	9.4	8.8	7.2	7.9
Alcohol duties	5.7	5.8	11.5	4.5	2.3	3.4
Business rates	15.0	14.3	29.3	2.0	-0.8	0.6
Council tax	16.1	16.1	32.2	6.0	6.1	6.0
Other ³	32.3	32.3	64.6	8.3	8.1	8.2
National Accounts taxes³	331.8	358.5	690.3	3.8	1.6	2.6

¹ Includes onshore corporation tax, diverted profits tax and the bank surcharge.

² Includes SDLT for England, Wales and Northern Ireland, Scottish LBTT and ATED.

³ We have adjusted these figures for differences between our forecasts and ONS outturns that stem from classification decisions the ONS has taken but not yet implemented, which we anticipate in our forecasts. These items include feed-in tariffs, the warm home discount and a number of other items. Full details are available in a supplementary fiscal table on our website.

Tax-by-tax analysis

PAYE income tax and NICs

- 4.41 Receipts of PAYE income tax and NICs have been revised up by around £2 billion in 2017-18 relative to our March forecast. In all subsequent years, we have revised the forecast down since March. By 2021-22, receipts are expected to be £9.9 billion lower than in March due to the productivity-related downward revisions to our earnings growth forecast.
- 4.42 Higher receipts in 2017-18 largely reflect our assumption that the £2 billion higher-than-expected receipts in 2016-17 will carry through to this year. Bonuses in both the financial and non-financial sectors were larger than expected. We have not changed our assumption about bonus growth this year, so this boosts receipts in 2017-18. Receipts so far this year have been in line with our March forecast, with the effect of weaker-than-expected earnings growth offset by stronger employment growth. For the whole financial year, we expect higher employment to add £2.0 billion to receipts while lower earnings growth take off £1.3 billion. Receipts growth has been strongest in the business services sector. In contrast, PAYE and NICs receipts from the financial sector have only risen modestly, in contrast to the strength in corporation tax receipts from the sector. Tax from occupational pensions has been weaker than expected, with tax from pension flexibility withdrawals flat on a year earlier, around £0.5 billion lower than our March estimate. This may reflect individuals spreading their withdrawals over a shorter period than we had previously assumed.

- 4.43 We have revised earnings growth down by an average of 0.6 per cent a year between 2017-18 and 2021-22. This primarily reflects our lower productivity growth assumption, but also lower whole economy inflation. By 2021-22, weaker earnings growth reduces receipts by £12.5 billion relative to our March forecast. This is the largest single contribution to the upward revision we have made to the budget deficit in 2021-22.
- 4.44 Growth in PAYE and NICs receipts is expected to slow in 2018-19 as real earnings fall, causing 'fiscal drag' to go into reverse. Tax thresholds for income tax and NICs will rise by 3 per cent in April 2018 (in line with September 2017 CPI inflation), nearly 1 percentage point higher than earnings growth. This means that a higher proportion of earnings will be taxed at lower rates. We expect earnings and tax thresholds to rise at a similar pace in 2019-20. Thereafter, we expect real wage growth to resume, although more slowly than we assumed in March. This will push more income into higher tax bands and boost receipts growth.
- 4.45 There are a number of other factors that we expect to restrain growth in PAYE and NICs receipts over the forecast. For example, we expect earnings growth to be skewed towards the bottom of the income distribution, given the commitments to raise the National Living Wage. This will limit receipts growth given the level of the personal allowance. With high-paying sectors such as financial and business services potentially more adversely affected than other sectors by the UK leaving the EU, we have assumed that earnings growth for the top 10 per cent of the distribution will be around ¼ percentage points lower than the average for four years from 2019-20. The upward trend in incorporations will also reduce receipts as more employees are assumed to shift to being company owner-managers.

Table 4.10: Key changes to the PAYE income tax and NICs forecast since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	283.7	292.4	304.3	317.8	332.6
November forecast	285.5	292.4	300.7	311.2	322.7
Change	1.9	0.0	-3.6	-6.7	-9.9
Total	1.8	-0.4	-4.0	-6.4	-9.6
<i>(by economic determinant)</i>					
Average earnings	-1.3	-4.0	-6.8	-9.9	-12.5
Employee numbers	2.0	2.4	2.2	2.2	2.2
Inflation	0.0	-0.4	-0.4	-0.3	-0.3
Other economic determinants	0.0	-0.1	-0.2	-0.4	-0.5
<i>(by other category)</i>					
Outturn PAYE receipts	1.2	1.1	1.2	1.2	1.2
Outturn NICs receipts	0.5	0.5	0.5	0.5	0.6
Incorporations modelling	0.2	0.3	0.4	0.4	0.5
Recostings of previous measures	-0.5	0.1	-0.5	0.3	0.0
Other modelling and receipts changes	-0.3	-0.3	-0.4	-0.5	-0.6
Scorecard measures	0.0	0.0	-0.4	-0.4	-0.3
Indirect effects of Government decisions	0.1	0.4	0.9	0.1	0.0

Self-assessment (SA) income tax

- 4.46 SA income tax is expected to fall by £3.1 billion in 2017-18 from a year earlier. This can be more than explained by the unwinding of the income shifting ahead of the April 2016 dividend tax rise that was announced in advance of its implementation. With SA income tax receipts up £0.5 billion in the first half of 2017-18 from a year earlier, we expect a fall of £3.6 billion on a year earlier in the second half of the year. This would primarily be seen in January and February when the balancing payment on 2016-17 SA liabilities is due.
- 4.47 Box 4.3 in our March 2017 *EFO* detailed our estimate of the amount of dividend income that was shifted in order for it to be taxed at a lower rate and the effect that this would have on SA receipts. The original costing of the dividend tax measure assumed that £7.6 billion of income would be brought forward into 2015-16. We revised this estimate up to £10.7 billion in March in light of HMRC's early analysis of 2015-16 SA returns, which were received shortly before our forecast was closed. This estimate has been revised up further to £13.2 billion in light of the latest SA data and allowing for taxpayers that file their returns late. We have also revised the estimated effect of this on SA receipts. HMRC information indicates that while big dividend payers made large balancing payments on 2015-16 liabilities in January 2017, they also reduced their payments on accounts for 2016-17 liabilities (paid in January and July 2017). This suggests that the balancing payment for 2016-17 liabilities will be depressed by less than we had previously assumed. The net effect of these changes has been to increase slightly the hit to SA receipts this year, from £4.8 to £5.0 billion, with little change to subsequent years.
- 4.48 Abstracting from the dividend forestalling, we expect policy measures to boost SA income tax receipts over time. In 2017-18, the higher rate of dividend tax (on a temporarily lower level of dividend income) raises over £2 billion, while reforms to savings tax mean that much of the remaining liabilities from savings income will be collected via SA. This is expected to boost receipts by £1.0 billion in 2017-18 and somewhat less thereafter. Further out, we expect the April 2018 reduction in the dividend allowance to £2,000 and the restrictions on residential landlords' deductions from taxable income to boost receipts.
- 4.49 The SA income tax forecast is higher than we forecast in March in each year from 2017-18 onwards. An accounting charge of £0.8 billion was recorded in HMRC's accounts and reflected in ONS outturns lowering 2016-17 SA receipts, but was offset in other income tax receipts as it was a provision rather than an actual payment. Abstracting from this, SA receipts were around £0.6 billion higher in 2016-17 and this is pushed through the forecast. This and a positive effect from lower growth in incorporations help offset negative effects from weaker self-employment and dividend income growth over the forecast period.

Table 4.11: Key changes to the SA income tax forecast since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	24.8	29.1	31.2	32.5	34.5
November forecast	25.5	29.9	31.8	33.5	34.4
Change	0.7	0.7	0.6	1.0	-0.1
Total	0.7	0.7	0.5	0.8	0.9
<i>(by economic determinant)</i>					
Non-savings, non-dividend income	0.1	-0.2	-0.3	-0.5	-0.8
Dividend income	-0.3	-0.5	-0.6	-0.7	-0.8
Savings income	0.0	-0.1	-0.1	-0.1	-0.2
Other economic determinants	0.0	0.1	0.2	0.3	0.5
<i>(by other category)</i>					
Incorporations modelling	0.2	0.3	0.4	0.5	0.6
Recostings of previous measures	0.0	0.0	-0.4	0.2	0.3
Other modelling and receipts changes	0.7	1.1	1.2	1.2	1.3
Scorecard measures	0.0	0.0	0.1	0.1	-1.0
Indirect effects of Government decisions	0.0	0.0	0.0	0.0	0.0

VAT

4.50 Relative to March, we have revised our VAT forecast up by £0.4 billion in 2017-18, but down in all future years. The reduction reaches £3.5 billion in 2021-22. Table 4.12 sets out the key drivers of the change. It shows that:

- Changes to our forecast for the level and composition of **household spending** dominate the overall revision. The level of spending is lower, reflecting the productivity-driven downward revision to household income growth. As regards composition, weaker real income and consumption growth is assumed to hit durable goods consumption (such as cars) harder than consumption as a whole. As these tend to be taxed at the standard rate of VAT, this reduces the effective tax rate on total consumption. Together these factors reduce VAT receipts by £3.1 billion in 2021-22.
- Downward revisions to **other components of nominal GDP** reduce VAT receipts by a further £1.2 billion. Non-household sectors make up just over a quarter of the theoretical VAT liability. We assume that the tax bases for these sectors grow in line with the relevant components of our economy forecast (i.e. VAT receipts related to housing repairs and extensions are assumed to grow in line with housing investment).
- Partly offsetting these changes, we have raised our **forecast for 2017-18**. This largely reflects receipts in 2016-17, which were £0.9 billion higher than expected. We have only assumed that part of that surplus persists into this year, given our forecast for weaker consumer spending over the second half of the year.

4.51 The 'implied VAT gap' in Table 4.1 at the start of this chapter is the difference between the theoretical total VAT receipts produced by the HMRC forecast model that we use and actual VAT receipts. It is also adjusted for timing factors. The implied gap falls this year by 0.1 percentage points which may reflect real-world movements in non-compliance, the effect of recent policy changes or measurement errors in estimating the theoretical total. The fall in the VAT gap over the rest of the forecast reflects the expected impact of HMRC operational and compliance measures.

Table 4.12: Key changes to the VAT forecast since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	125.4	130.8	136.2	141.6	146.7
November forecast	125.8	130.3	134.3	138.8	143.2
Change	0.4	-0.5	-1.9	-2.8	-3.5
Total	0.3	-0.6	-2.3	-3.2	-4.0
<i>of which:</i>					
Household spending	-0.3	-0.5	-1.1	-1.5	-2.0
Standard rated share	-0.2	-0.6	-0.9	-1.1	-1.1
Other economic determinants	-0.1	-0.3	-0.5	-0.9	-1.2
Recostings of previous measures	0.1	0.0	-0.3	-0.4	-0.4
Outturn receipts and modelling	0.8	0.8	0.5	0.7	0.7
Scorecard measures	0.0	0.0	0.2	0.4	0.4
Indirect effects of Government decisions	0.1	0.1	0.2	0.1	0.0

Onshore corporation tax

4.52 Onshore corporation tax (CT) in 2017-18 is expected to fall by around £2.0 billion from a year earlier.⁶ The cut in the main rate of CT to 19 per cent from April 2017 is expected to reduce receipts in 2017-18 by around £2 billion on the time-shifted accruals basis used in the public finances statistics. Two factors that boosted receipts in 2016-17 have reversed in 2017-18. First, the tax take from life assurance companies was boosted last year by the post-referendum rise in bond prices, but has since fallen back. Second, the 45 per cent withholding tax on litigation payouts scores as CT and boosted receipts in 2016-17 when HMRC made a large interim payment ahead of a final court ruling. As HMRC subsequently won the case in question, the payment and tax have been repaid.

4.53 We have revised down receipts from industrial and commercial companies in all years of the forecast. Non-oil, non-financial profits have slowed by more than we expected in March. Profits were flat in the year to the second quarter of 2017, after growth of almost 8 per cent in 2016. The combination of this and the cut in the main rate of CT has largely offset the yield from the Budget 2016 measures to restrict the use of trading losses and the

⁶ The outturn for 2016-17 will be revised in light of the updated forecast for cash CT receipts from small companies in 2017-18 (which relates to activity in the previous year and will be accrued back). This is likely to lower 2016-17 CT by £0.6 billion, which would mean that the year-on-year drop in CT receipts in 2017-18 would be around £1.4 billion.

deductibility of corporate interest expenses. Lower profit growth takes around £1.7 billion off receipts by 2021-22. This is only partly offset by the effect of the weaker outlook for investment, which lowers the use of capital allowances that are deducted from liabilities. A further partial offset is the announcements in the Budget that the indexation allowance will be frozen from January 2018 and that non-resident companies with property income will be moved from the income tax to the corporation tax regime.

- 4.54 Relative to our March forecast, we expect slower growth in incorporations, which boost CT received from small companies. This reflects changes in the latest outturn data. Our March forecast allowed for the effect of the Class 4 NICs rises announced in March which would have reduced the incentive to incorporate, but this effect has now been removed as the measure was dropped soon after that Budget.
- 4.55 In contrast to industrial and commercial companies, receipts from the financial sector have been stronger than expected. Cash receipts picked up strongly in the second half of 2016-17 and remained strong in the first half of 2017-18. In the 12 months to September 2017 they were up 38 per cent on the previous 12 months. As recorded in the public finances data, much of this accrues back to 2016-17. This strong growth is consistent with the better profit results posted by many banks this year. This is likely to reflect a reduction in funding costs and lower costs related to past misconduct fines (although the latter are not deductible for tax purposes). Previous measures to restrict the use of trading losses by banks has also helped boost receipts from the sector.
- 4.56 We expect onshore CT receipts to fall from 2.5 per cent of GDP in 2017-18 to 2.4 per cent by 2022-23. The further cut in the main rate to 17 per cent in April 2020 takes around £3 billion off receipts by 2022-23. In particular, we expect corporation tax from the financial sector to peak next year and then fall back over the remainder of the forecast. This reflects the combination of the rate cut and our assumption that profit growth in the financial sector will be weaker than the whole economy average from 2019-20 onwards given the sector is likely to be disproportionately affected by the UK's exit from the EU.

Table 4.13: Key changes to the onshore corporation tax forecast since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	52.7	54.2	53.5	52.5	53.3
November forecast	51.5	54.4	53.4	53.6	54.0
Change	-1.2	0.2	-0.1	1.2	0.7
Total	-1.2	-0.1	-0.6	-0.2	-0.6
<i>of which:</i>					
Industrial and commercial company profits	-0.4	-0.8	-1.2	-1.5	-1.7
Industrial and commercial company investment	0.1	0.2	0.3	0.4	0.6
Other economic determinants	0.0	0.0	-0.1	-0.2	-0.5
Litigation repayment	-0.5	0.0	0.0	0.0	0.0
Outturn receipts and modelling	-0.4	0.5	0.4	1.1	1.0
Scorecard measures	0.0	0.3	0.5	1.3	1.3
Indirect effects of Government decisions	0.0	0.0	0.1	0.0	0.0

UK oil and gas revenues

4.57 We have revised down our forecast for UK oil and gas revenues by £0.4 billion a year on average since March. That largely reflects:

- A lower outlook for **sterling oil prices** (due to a lower dollar oil price in most years and a stronger pound) and weaker gas prices reduce revenues by £0.3 billion a year.
- Moving to a new **UK oil and gas model** has reduced our forecast by around £0.1 billion a year. As set out in our recent *FER*, over the past year we have been working with HMRC to build a more transparent and effective model. One major issue that this work revealed was corrected in our March forecast. The remaining change reflects various smaller methodological improvements, such as the way in which the underlying survey data are reflected in the microsimulation model.

4.58 Revisions to our forecasts for oil and gas production and expenditure have a broadly offsetting effect on receipts. We have revised our forecast for production up across the forecast, based on the latest projections published by the Oil and Gas Authority (OGA). We have also increased our expenditure forecast, reflecting both the latest projections published by the OGA and a methodological change in the way we convert their real-terms expenditure forecast into nominal values. We now expect UK oil and gas input costs to be more closely tied to changes in the oil price, meaning that cost pressures are likely to be slightly greater in the near term.

4.59 UK oil and gas revenues were close to zero in 2016-17 and are expected to reach just £0.7 billion in 2017-18, despite the move from losses into profits reported by many companies in the industry over the past year. Revenues have been boosted by a £9 a barrel rise in the price of oil between 2016 and 2017, while costs have been reduced by lower capital expenditure. However, the high level of trading losses accumulated within the industry in

recent years means that these can be used to offset future profits. This will be a drag on receipts throughout the forecast period. With the PRT rate set to zero, we expect PRT repayments to be between £0.4 and £0.6 billion a year over the forecast period. For future years, this primarily reflects repayments associated with decommissioning costs.

Property transaction taxes

- 4.60 The UK Government has devolved powers over property transactions taxes to Scotland and Wales. In Scotland, stamp duty land tax was replaced by the land and buildings transactions tax in April 2015. In Wales, it will be replaced by a new land transactions tax from April 2018. As these taxes are all similar in design, we have combined them in this section.
- 4.61 Relative to March we have revised our forecast for property transactions taxes up in the near term, but down by the end of the forecast. Table 4.14 sets out the key drivers:
- **Lower house price** inflation, due to weaker household income growth and slower population growth, reduces receipts by £1.5 billion in 2021-22. This more than explains the overall revision to property transaction tax receipts on a pre-measures basis since March.
 - **Lower property transactions** reduce receipts in the shorter term.
 - **Receipts in recent months have been stronger than expected.** This may reflect the composition of the tax base, as more expensive properties pay a proportionally higher effective tax rate. We have assumed that this compositional effect will persist.
 - **Modelling changes** reduce the forecast by 2021-22. This largely reflects new HMRC analysis of behavioural responses to fiscal drag that we presented in our *Forecast evaluation report* in October.
- 4.62 Measures announced in the Budget scorecard reduce receipts by £0.6 billion in 2021-22. This reflects the decision to provide a stamp-duty relief for first-time buyers. Box 4.3 sets out the measure in more detail.

Table 4.14: Key changes to the property transactions taxes forecast since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	13.6	14.6	15.5	16.6	17.8
November forecast	13.8	14.0	14.6	15.3	16.1
Change	0.2	-0.5	-0.9	-1.3	-1.6
Total	0.3	-0.1	-0.4	-0.8	-1.1
<i>of which:</i>					
House prices	-0.4	-0.7	-0.9	-1.3	-1.5
Residential property transactions	-0.3	-0.2	-0.1	0.0	0.1
Commercial property market	-0.2	-0.3	-0.4	-0.4	-0.5
Outturn receipts and modelling	1.3	1.2	1.1	1.0	0.9
Scorecard measures	-0.1	-0.5	-0.6	-0.6	-0.6
Indirect effects of government decisions	0.0	0.1	0.1	0.1	0.1

Note: Includes SDLT for England and Northern Ireland, Scottish LBTT, Welsh LTT and ATED. More detail on LBTT and LTT can be found in the *Devolved tax forecasts* publication on our website.

Box 4.3: A new tax relief for first-time buyers

The Government will introduce a new permanent relief for certain first-time buyers (FTBs) that will reduce stamp duty land tax (SDLT) to zero on properties up to £300,000. A rate of 5 per cent will be charged on the value between £300,001 and £500,000. But FTBs buying a property for £500,001 or more will not benefit from the relief at all, so a purchase at that price would be liable to £5,000 more in SDLT than one at £500,000. Eligibility criteria match those of the post-crisis ‘stamp duty holiday’, although then the relief stopped at £250,000. HMRC published an evaluation part way through that holiday. It concluded that the majority of the value of relief had fed through to higher house prices and that it “has not had a significant impact in terms of improving the affordability of residential property for FTBs. It is estimated that most of the buyers who benefitted from the relief would have purchased property in its absence anyway (i.e. are deadweight).”^a Confirmation that the relief would end was announced alongside the evaluation.

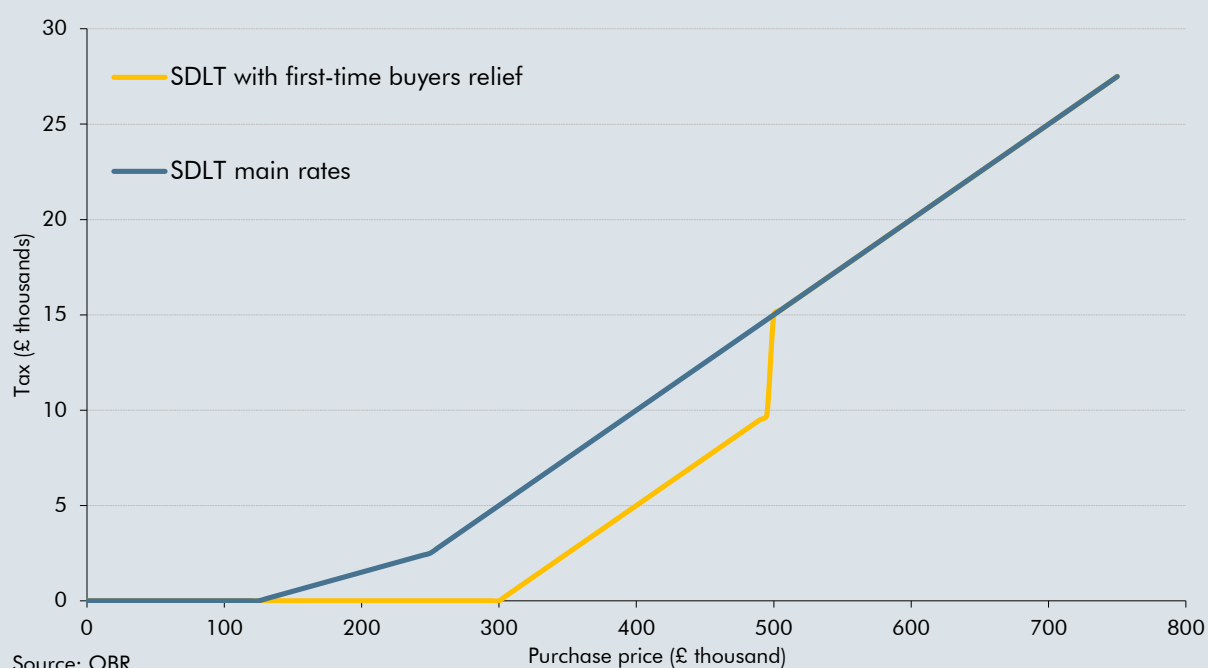
The costing of this measure uses recent mortgage data on FTBs. The proportion of FTBs in all new mortgage lending recently jumped from around 40 to over 45 per cent of all mortgages. This coincided with the introduction of the SDLT surcharge on additional property purchases in April 2016. As with the post-crisis holiday, we have assumed that the consequence of introducing the relief will be to increase house prices – in this case by around 0.3 per cent (see Box 3.1). The effect on prices of a permanent relief should be greater than a temporary one of equivalent value because it will benefit future FTBs of a property, not just those who buy during the window in which the temporary relief is available. The effect of this reduction in future SDLT costs would be expected to feed through into house prices – to be ‘capitalised’ – relatively quickly. Since the relief frees up FTBs’ savings to put towards higher deposits, these higher prices can be paid.

We assume that a temporary relief would feed one-for-one into house prices, but a permanent one will have twice that effect. On this basis, post-SDLT prices paid by FTBs would actually be higher with the relief than without it. Thus the main gainers from the policy are people who

already own property, not the FTBs themselves. For some potential FTBs with smaller deposits, who are constrained by loan-to-value lending criteria, the relief will enable them to borrow a multiple of their SDLT saving, allowing them to buy properties that they otherwise could not afford – but more expensively.

There are two other behavioural effects on the public finances that are worth noting. First, the relief will distort the housing market at prices around £500,000. Chart D shows the jump in the effective tax rate at that price. This will reduce receipts as FTB transactions bunch below the threshold. Second, it is likely that some FTB purchases will displace purchasers who would have paid more SDLT on the equivalent purchase.

Chart D: SDLT liability at different house prices: with and without FTB relief



^a Bolster (2011): HMRC Evaluating the impact of Stamp Duty Land Tax First Time Buyer's Relief.

Taxes on capital

4.63 Capital gains tax (CGT) receipts are geared to changes in asset prices (as the tax is paid on the gain rather than the value of the asset sale). For example, our forecast model, estimated on data from the past 15 years, assumes that a 1 per cent rise in equity prices generates a 2.8 per cent rise in CGT receipts from listed and unlisted shares. With equity prices assumed to rise in line with the economy, we therefore expect faster growth in CGT receipts, which rise 59 per cent from £8.4 billion in 2016-17 to £13.3 billion in 2022-23.

4.64 Relative to March, our forecast is lower in most years:

- The effect of a weaker outlook for the **property market** is broadly offset by higher **equity prices** than we assumed in March. The boost from higher equity prices

diminishes over the forecast period due to lower nominal GDP growth, which results in lower equity price growth because of our forecast assumption.

- **Receipts in 2016-17** were around £0.3 billion lower than we expected in March. Our forecast model applies a growth rate to this base year, so this reduces receipts in each year of the forecast. We have also corrected an error in how the Autumn Statement 2015 measure to change the payment window for residential property disposals was captured in the forecast model. On a pre-measures basis, this has increased receipts by £0.4 billion in 2020-21 and reduced receipts by around £0.5 billion in 2021-22.
- The Government has announced that the introduction of **the new CGT payment window will be delayed** from April 2019 to April 2020. Relative to March, this reduces receipts by £1.2 billion in 2019-20 and boosts them by £0.9 billion in 2020-21.

4.65 Our forecast for stamp duty on shares is little changed since March. The effect of higher equity prices in the near-term has been partly offset by weaker-than-expected receipts so far this year, which we assume will persist over the forecast.

4.66 Inheritance tax (IHT) receipts are expected to remain relatively flat as a share of GDP over the forecast, after rising slowly over the past seven years. That largely reflects the introduction of the residence nil rate band in 2017-18, which is expected to reduce the share of estates that are liable to IHT.⁷ Relative to March, we have revised our forecast up in the near term, but is similar by the end of the forecast period. That reflects:

- Weaker **house price inflation** has reduced receipts by around £0.2 billion a year. This is partly offset by higher **equity prices**.
- **Receipts at the start of 2017-18** were boosted as taxpayers anticipated the sharp rise in probate fees (especially for high-value estates) due to take effect in May 2017. In the event, this rise did not take place (see Annex A for more detail).
- **New ONS population projections** have boosted receipts by around £0.2 billion a year, reflecting higher expected mortality rates. Box 4.1 provides further detail.

Fuel duties

4.67 Our fuel duties forecast is subject to the clear risk that the Government's stated policy to uprate fuel duty in line with inflation has not in fact been implemented at all this decade (as shown in Chart 4.4). In this Budget, the Government has retained the default link to RPI inflation, but has altered the time period used to calculate it. As usual, it has also decided not to implement the default increase in the first year, cancelling the April 2018 rate rise.

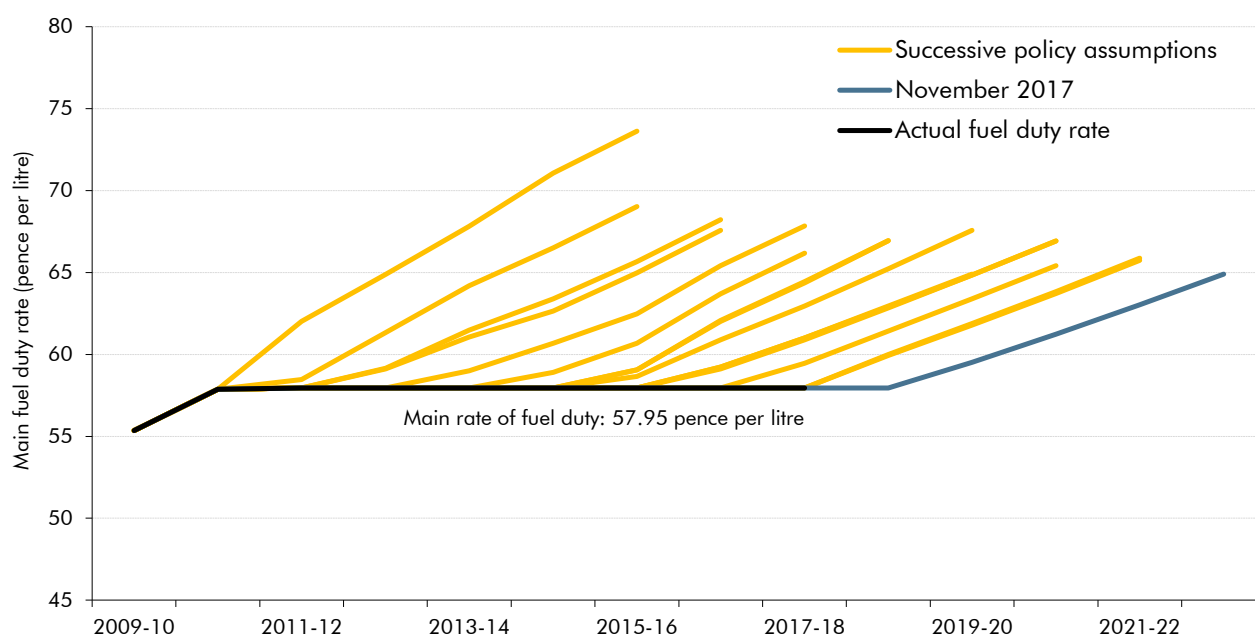
4.68 Conditioned on the Government's stated indexation policy, fuel duty receipts are forecast to rise from £27.9 billion in 2017-18 to £30.6 billion in 2022-23. Of the £2.7 billion rise over that period, £3.3 billion is explained by RPI-linked increases in duty rates.

⁷ See Table 2.12 of our supplementary fiscal tables online.

4.69 Relative to our March forecast, there have been a number of relatively large but broadly offsetting sources of revision:

- All else equal, the weaker outlook for **real GDP growth** reduces our forecast for miles driven, taking £0.3 billion off receipts in 2021-22. A lower **RPI inflation** forecast reduces the duty rate each year, taking a further £0.4 billion off receipts in 2021-22.
- Changes to **modelling assumptions** have boosted receipts by £1.0 billion in 2021-22, of which £0.3 billion reflects higher-than-expected receipts so far this year. This largely reflects analysis of persistent upside surprises relative to recent forecasts, which suggest that fuel clearances have been rising more strongly than our model and the assumptions fed into it would predict (particularly from light commercial vans). We have also assumed that the trend towards diesel cars in recent years will slow in line with evidence from car sales over the past year. The latest SMMT data shows that so far in 2017, diesel cars made up 43 per cent of all registrations (down from 48 per cent last year), relative to 53 per cent for petrol cars and less than 5 per cent for alternatively fuelled vehicles (AfVs). This reduces the average fuel efficiency assumption we apply to our miles driven forecast, as new petrol cars are less fuel efficient than new diesel ones on average. This change only has a significant impact on receipts with a long lag, given that total fuel consumption reflects the overall stock of vehicles. Our 2017 *Fiscal risks report* set out the longer term implications of rising efficiency on fuel duty receipts in more detail. Overall, we have revised fuel clearances growth in the four years to 2021-22 up by 2.1 percentage points on a pre-measures basis, despite having revised real GDP growth down by 1.9 percentage points.
- The latest **fuel duty rate freeze** lowers receipts by between £0.8 and £0.9 billion a year on average over the forecast period.

Chart 4.4: Successive Government fuel duty rate assumptions



Source: HMRC, OBR

Alcohol and tobacco duties

- 4.70 **Alcohol duties** at the end of 2016-17 were £0.1 billion higher than our March forecast, reflecting stronger-than-expected clearances ahead of the 3.9 per cent rise in the main duty rates in March 2017. Clearances were weak at the start of 2017-18, suggesting that we underestimated the level of forestalling ahead of this rate rise. Abstracting from that, our forecasts for weaker consumption growth and lower RPI inflation reduce receipts by around £0.2 billion by 2021-22. Overall we expect alcohol duty receipts to rise by 13 per cent over the next five years to reach £13.0 billion in 2022-23.
- 4.71 The Government has brought the timing of duty rate rises forward from late March to February 1st each year. This change would have boosted receipts by around £35 million this year. But the government has instead decided to freeze all duty rates in February 2018, rather than raising them in line with RPI. This reduces receipts by around £0.2 billion a year. In our 2017 *Fiscal risks report* we highlighted that the risk associated with non-implementation of alcohol uprating assumptions.
- 4.72 **Tobacco duties** fell by 4.7 per cent in 2016-17, despite a 3.7 per cent rise in the specific duty rate in March 2016. In our March forecast, we assumed that around two thirds of this unexpected weakness would persist, while also highlighting the uncertainty generated by recent regulatory changes such as plain packaging and restrictions on minimum pack sizes. The latest HMRC data show stronger-than-expected tobacco receipts in the first half of 2017-18, suggesting that last year's weakness was largely a timing effect caused by the regulatory changes. In light of this, we have increased our forecast for 2017-18 by £0.5 billion. This higher starting point raises our forecast in each subsequent year. Beyond that, lower RPI inflation reduces receipts while a weaker pound-euro exchange rate raises them by reducing the incentive for cross-border shopping.
- 4.73 The Government has made a number of changes to tobacco duty indexation in this Budget, only some of which are presented on the Treasury's scorecard of policy measures. The early General Election meant that the existing RPI plus 2 per cent duty escalator expired in June 2017 rather than May 2020 as assumed in our March forecast. This reduced receipts in each year, and by £35 million in 2021-22. The timing of duty rate rises has also been changed to align it with the Autumn Budget timetable. This change adds around £10 million to receipts this year. Finally, reinstating the escalator for this Parliament raises receipts in each year, and by £35 million in 2021-22.

Business rates

- 4.74 Business rates are calculated by multiplying the rateable value of non-domestic property by the multiplier, which is uprated by inflation. The Autumn Budget announces that the switch from using the RPI to the CPI measure of inflation will occur two years earlier than previously planned. This will mean uprating of 3.0 per cent (rather than 3.9 per cent) in 2018-19 and, on our latest inflation forecasts, 2.2 per cent in 2019-20 (rather than 3.1 per cent). With each 1 percentage point change in inflation worth between £250 and £300 million on

receipts from business rates, this change reduces receipts by around £0.5 billion a year from 2019-20 onwards.

- 4.75 The Government has also announced that it will take steps to reverse the effect on business rates of the Supreme Court ruling on how units of property were assessed in multi-occupied buildings (sometimes described as the 'staircase tax'). In doing so, it intends to reinstate the previous practice of the Valuation Office Agency. Relative to taking no action, this will cost around £40 million a year. We have treated this as a non-scorecard policy measure.
- 4.76 Our business rates forecast remains subject to considerable uncertainty in relation to the ultimate effect of the 2017 revaluation. The Government is obliged to design the revaluation and the transitional relief scheme to be fiscally neutral. At revaluation, the multiplier is set to include headroom for future changes to the rating list (e.g. from successful appeals) so that the yield remains constant in real terms after the estimated loss of rateable value from these changes. Our forecast allows for the erosion of yield from this source. On transitional relief, the Government's modelling took account of the 40 per cent deficit on the 2010 scheme. Our forecast assumes that the 2017 scheme will be fiscally neutral by 2021-22. We do not yet have evidence upon which to base a revised judgement, but will need to update our assumptions over the coming years.

Other taxes

- 4.77 **Council tax** receipts have been revised up by £0.2 billion a year on average, largely reflecting a higher council tax base. This is explained in more detail in the local authority expenditure section of this chapter. We assume that council tax receipts are spent by local government, so they are neutral for borrowing in our forecast.
- 4.78 **Environmental levies** include levy-funded spending policies such as the renewables obligation (RO), contracts for difference (CfD), feed-in tariffs (FITs), the capacity market scheme and the warm home discount. We also include receipts from the 'CRC energy efficiency scheme' (formerly known as the carbon reduction commitment) until its abolition from the end of the 2018-19 compliance year. Receipts rise from £8.6 billion in 2017-18 to £13.3 billion in 2022-23. This relates mainly to the CfD scheme that is designed to boost renewable energy and the capacity market scheme that focuses on security of supply. Other schemes remain broadly flat in real terms.
- 4.79 Our forecast for environmental levies has been revised down by £0.2 to £0.3 billion a year between 2018-19 and 2020-21 and then by £0.5 billion in 2021-22, reflecting lower RO and CfD spending. Lower CfD spending reflects a higher projection for wholesale energy prices and the fact that the clearing prices in the second CfD auction, announced in September, were lower than expected (affecting 2021-22 and 2022-23).
- 4.80 **Insurance premium tax (IPT)** receipts jumped by 31 per cent in 2016-17 as the standard rate was increased from 6 per cent in October 2015 to 10 per cent in October 2016. Receipts are expected to rise by another 19 per cent this year, reflecting another rise in the standard rate to 12 per cent in June 2017. From 2019-20 onwards, receipts are relatively

flat. Our forecast includes a small boost from the Government's February 2017 decision to reduce the personal injury discount rate, as set out in Box 4.2 of our March *EFO*. The Government is consulting on revising this rate again, with the expectation that it will be raised in the future. The effect of any change will be factored into our forecast once it becomes firm Government policy.

- 4.81 **Air passenger duty** (APD) receipts are expected to rise slightly as a share of GDP over the forecast, reflecting continued growth in passenger numbers and RPI-linked duty rate rises. Our pre-measures forecast is £0.2 billion lower by the end of the forecast, reflecting the weaker outlook for GDP growth and therefore passenger numbers. Lower RPI inflation also reduces the effective duty rate paid. The freeze in the reduced 'band B' rate reduces receipts, but is more than offset by a rise in the standard and higher band B rates. The net effect is to boost receipts by around £25 million a year.
- 4.82 **Vehicle excise duty** (VED) is levied annually on road vehicles and is expected to rise from £5.8 billion in 2016-17 to £6.8 billion in 2022-23. On a pre-measures basis, our forecast is £0.3 billion lower by 2021-22 relative to March, reflecting lower RPI inflation and new data on the stock of vehicles. In this Budget, the Government has announced a VED surcharge on diesel vehicles which do not meet certain efficiency standards. This measure raises £0.1 billion in 2018-19 but diminishes thereafter, in line with our underlying assumption that vehicle efficiencies will rise over time.
- 4.83 Receipts from the **climate change levy** (CCL) and the **carbon price floor** (CPF) are little changed from March forecast. The rise of electricity generation from renewables and gas at the expense of coal continues to put downward pressure on CPF receipts over the forecast period. Higher CCL rates from 2019-20 boost receipts in the final years of the forecast.
- 4.84 **Bank surcharge** receipts this year have shown similar strength to CT receipts from the financial sector. Compared with March, we have revised receipts up by £0.4 billion in 2017-18 and by £0.3 billion in each subsequent year. Receipts are expected to be broadly flat from 2018-19 onwards. As with financial sector CT, this largely reflects our assumption that profitability in the financial sector will be weaker than the whole economy average from 2019-20 as the sector could be disproportionately affected by the UK's exit from the EU.
- 4.85 In contrast to both financial sector CT and the bank surcharge, **bank levy** receipts are expected to fall in 2017-18 and have been revised down since our March forecast. The fall this year partly reflects the cut in the full bank levy rate from 0.18 to 0.17 per cent, but also that the tax base – specific types of bank equity and other liabilities – has continued to shrink. Further cuts in the bank levy rate explain the gradual fall in receipts over the next three years. Receipts then fall sharply in 2021-22 as the full rate is cut from 0.14 to 0.10 per cent and UK banks are taxed on their UK rather than global equity and other liabilities.
- 4.86 **Customs duties** comprise the majority of 'traditional own resources' or TOR-based UK contributions to the EU. Box 4.4 of our March 2017 *EFO* set out the treatment of customs duties in the public finances and the approach we have taken in our forecasts in the absence of firm details about policy in this area after the UK leaves the EU. We have revised

customs duties receipts up in line with our imports forecast, which is partly offset by a downward adjustment to capture the effect of the Comprehensive Economic and Trade Agreement between Canada and the EU. In 2016, the UK accounted for 42 per cent of EU goods imports from Canada, but 61 per cent of those UK imports were gold – related to London’s position as the global centre for bullion trading. These were not liable for customs duty before the agreement, so will not be affected by it. We expect the agreement to reduce customs duties by less than £0.1 billion a year.

- 4.87 **VAT refunds** to central and local government are neutral for borrowing, as they are offset within spending. The forecast for VAT refunds largely reflects the path of government procurement and investment. Relative to March, our forecast is higher by around £0.5 billion a year, reflecting the latest outturn data as well as the upward revisions we have made to our forecast for local authority capital spending. Government decisions to raise the overall level of departmental spending in the near-term raise refunds by £0.3 billion a year relative to March.
- 4.88 We have once again revised down receipts from the **soft drinks industry levy**, which is now expected to raise just £0.3 billion a year from 2018-19 onwards. The latest change reflects a large downward revision to the historical data on soft drinks consumption that underpins the forecast. These data are produced by Mintel, which pointed to the ‘on-premises trade’ – i.e. soft drinks sold in pubs, restaurants and cafes – as the source of the revision. It means the levy is expected to affect a smaller tax base. Our latest forecast is almost half the level of the initial estimate from Budget 2016, reflecting both the lower tax base estimate as well as upward revisions to our reformulation assumption.
- 4.89 **Licence fee** receipts have been revised down due largely to a lower assumption for the licence fee itself. Changes are explained in the BBC spending section later in this chapter.

Other receipts

- 4.90 **Interest and dividend receipts** include interest income on the government’s stock of financial assets, which includes student loans and holdings related to the previous financial sector interventions. Compared with March, receipts are higher in the short term but lower from 2020-21 onwards. The 2016-17 outturn was £1 billion higher than we assumed in March and some of this is pushed through to future years. Following the reclassification of English housing associations, their interest income has been removed from our forecast (partly in 2017-18 and fully from 2018-19 onwards). Accrued student loan interest has been revised down due to our lower RPI inflation forecast and the Government’s changes to student loans policies. The freeze on tuition fees in the 2018-19 academic year and the increase in the thresholds that affect the interest rates charged reduce accrued interest by around £350 million a year by 2022-23. In cash terms, this interest is not actually paid until further into the future and some of it will be written off after 30 years so not be paid at all.
- 4.91 Interest and dividend receipts almost double from £6.5 billion in 2016-17 to £12.4 billion in 2022-23. Even after the changes described above, around £4.1 billion reflects the rise in

accrued interest on the fast-growing stock of student loans. The modest rise in interest rates over the forecast period also raises the return on the government's stock of financial assets.

4.92 We have revised down our public sector **gross operating surplus (GOS)** forecast by £8.0 billion in 2018-19 and by £10.4 billion by 2021-22. This largely reflects the reclassification of English housing associations back to the private sector, which means that their rental and other income net of non-interest running costs no longer add to GOS. This accounts for an average of £6½ billion a year of the downward revision. Much of the remainder is due to changes in our forecasts for general government depreciation (which is neutral for borrowing, being directly offset in the spending forecast), as discussed later in this chapter.

4.93 Changes to **other receipts** largely reflect ONS methodological and classification changes since our last forecast. See paragraph 4.20 for more information.

Public sector expenditure

Definitions and approach

4.94 This section explains our forecast for public sector expenditure, which is based on the National Accounts aggregates for public sector current expenditure (PSCE), public sector gross investment (PSGI) and total managed expenditure (TME), which is the sum of PSCE and PSGI. In our forecast, we combine these National Accounts aggregates with the two administrative aggregates used by the Treasury to manage public spending:

- **Departmental expenditure limits (DELs)**⁸ – mostly covering spending on public services, grants, administration and capital investment, which can be planned over extended periods. Our fiscal forecast therefore shows PSCE in resource DEL and PSGI in capital DEL. We typically assume (in line with historical experience) that departments will underspend the limits that the Treasury sets for them, so – unless otherwise stated – when we refer to PSCE in RDEL and PSGI in CDEL (or RDEL and CDEL for simplicity) we are referring to the net amount that we assume is actually spent.
- **Annually managed expenditure (AME)** – categories of spending less amenable to multi-year planning, such as social security spending and debt interest. Again, our fiscal forecast shows PSCE in current AME and PSGI in capital AME.

Summary of the expenditure forecast

4.95 Table 4.15 summarises our latest forecast for public spending. TME is expressed as a share of GDP, but not all public spending contributes directly to GDP – benefit payments, debt interest and other cash transfers merely transfer income from some individuals to others. The table also shows how TME is split between DEL spending (which is on a declining trend

⁸ Our presentation of expenditure only shows those components of RDEL, CDEL and AME that are included in the fiscal aggregates of PSCE and PSGI. For budgeting purposes, the Treasury also includes other components in DEL and AME such as non-cash items and financial transactions, which are discussed later in this chapter.

thanks to planned cuts in RDEL as a share of GDP) and AME (which is broadly stable as a share of GDP, thanks to broadly offsetting upward and downward trends in components).

Table 4.15: TME split between DEL and AME

	Per cent of GDP						
	Outturn		Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
TME	39.0	38.9	38.5	38.3	38.2	37.9	37.7
<i>of which:</i>							
TME in DEL	18.1	17.9	17.9	17.9	17.9	17.6	17.4
<i>of which:</i>							
PSCE in RDEL	15.8	15.5	15.4	15.2	14.8	14.6	14.4
PSGI in CDEL	2.3	2.4	2.5	2.8	3.1	3.0	3.0
TME in AME	20.9	21.1	20.6	20.4	20.3	20.3	20.4
<i>of which:</i>							
Welfare spending	10.9	10.8	10.7	10.6	10.4	10.4	10.5
Debt interest net of APF	1.8	2.0	1.9	1.8	1.8	1.8	1.9
Locally financed current expenditure	2.3	2.3	2.4	2.3	2.3	2.3	2.3
Net public service pension payments	0.6	0.6	0.6	0.6	0.6	0.7	0.7
Other PSCE in AME	3.6	3.7	3.8	3.9	3.9	3.8	3.8
PSGI in AME	1.7	1.7	1.3	1.2	1.3	1.3	1.3

Note: The forecasts reflect the reclassification of English housing associations to the private sector, effective from November 2017. This increases PSGI in CDEL and reduces PSCE and PSGI in AME. For further detail, see Table 4.35.

4.96 Tables 4.16 and 4.17 detail our latest spending forecast and the changes since March.

Table 4.16: Total managed expenditure

	£ billion						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Public sector current expenditure (PSCE)							
PSCE in RDEL	312.5	316.8	323.3	327.1	330.3	336.2	342.2
PSCE in AME	380.5	395.7	406.9	413.0	422.1	436.7	452.9
<i>of which:</i>							
Welfare spending	216.9	219.8	224.5	228.0	231.8	239.6	248.5
<i>of which:</i>							
Inside welfare cap	118.7	119.3	120.9	122.1	123.8	126.9	130.1
Outside welfare cap	98.3	100.4	103.6	105.9	108.0	112.7	118.4
Company and other tax credits	3.0	3.7	3.9	4.1	4.3	4.4	4.5
Net public service pension payments	11.2	11.9	13.2	12.5	13.6	15.0	16.6
National lottery current grants	1.4	1.2	1.2	1.2	1.2	1.3	1.3
BBC current expenditure	3.7	4.0	3.8	3.8	3.6	3.6	3.7
Network Rail other current expenditure ¹	0.5	0.6	0.7	0.7	0.7	0.8	0.8
Other PSCE items in departmental AME	0.5	0.7	0.8	0.8	0.7	0.7	0.8
Expenditure transfers to EU institutions	8.8	9.9	12.5	-	-	-	-
Assumed domestic spending in lieu of EU transfers ²	-	-	-	13.8	14.0	13.6	13.6
Locally financed current expenditure	45.2	47.8	50.2	49.3	50.4	52.0	53.7
Central government debt interest, net of APF ³	35.5	40.9	39.8	39.9	40.4	42.2	44.3
Public corporations' debt interest	3.8	2.7	0.7	0.7	0.7	0.8	0.8
General government depreciation	29.9	30.6	31.7	32.8	34.1	35.3	36.6
Current VAT refunds	12.0	12.3	12.7	12.8	12.9	13.1	13.3
Environmental levies	5.2	8.8	10.8	12.2	13.4	14.1	14.4
General government imputed pensions	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Other National Accounts adjustments	1.4	-0.4	-0.9	-1.1	-1.2	-1.3	-1.3
Total public sector current expenditure	693.0	712.5	730.2	740.1	752.4	772.9	795.1
Public sector gross investment (PSGI)							
PSGI in CDEL	46.1	48.2	52.6	59.7	68.3	68.2	70.6
PSGI in AME	33.2	34.6	26.5	26.9	29.3	30.6	31.1
<i>of which:</i>							
Tax litigation	0.0	0.0	0.2	1.0	2.7	2.9	2.9
Network Rail capital expenditure	6.6	6.5	5.5	6.3	6.5	6.6	6.9
Other PSGI items in departmental AME	1.2	1.1	1.2	1.3	1.6	1.8	1.9
Locally financed capital expenditure	9.1	11.1	10.3	9.4	9.0	9.5	9.6
Public corporations' capital expenditure	17.5	15.8	10.4	10.3	10.5	10.7	10.7
Other National Accounts adjustments	-1.1	0.0	-1.0	-1.4	-1.0	-0.9	-0.8
Total public sector gross investment	79.4	82.8	79.1	86.6	97.6	98.8	101.8
Less public sector depreciation	-40.7	-41.1	-41.2	-42.5	-43.9	-45.3	-46.8
Public sector net investment	38.6	41.8	37.9	44.1	53.7	53.5	55.0
Total managed expenditure	772.4	795.3	809.3	826.7	849.9	871.7	896.8

¹ Other than debt interest and depreciation, which are included in totals shown separately in this table.

² As we do not have sufficient detail about the Government's negotiation preferences, or the chances of achieving them, we are not able to forecast how spending will be affected after the UK leaves the EU. We therefore make the fiscally neutral assumption that any reduction in transfers to the EU would be recycled into extra domestic spending. See the section on this below.

³ Includes reductions in debt interest payments due to the APF. For further detail, see Table 4.32.

Table 4.17: Changes to total managed expenditure since March

	£ billion					
	Outturn 2016-17	Forecast				
		2017-18	2018-19	2019-20	2020-21	2021-22
Public sector current expenditure (PSCE)						
PSCE in RDEL	-0.5	-1.5	2.5	4.4	1.7	0.9
PSCE in AME	-1.7	-5.5	-3.2	-3.5	-6.5	-10.2
<i>of which:</i>						
Welfare spending	-1.0	-1.4	0.1	1.2	-0.1	-0.7
<i>of which:</i>						
Inside welfare cap	-0.6	-0.3	0.9	2.1	1.4	1.8
Outside welfare cap	-0.4	-1.1	-0.7	-0.9	-1.5	-2.5
Company and other tax credits	-0.2	0.2	0.3	0.4	0.4	0.3
Net public service pension payments	-0.3	-0.2	-0.5	-0.7	-0.6	-0.7
National lottery current grants	0.2	-0.1	-0.1	-0.1	-0.1	-0.1
BBC current expenditure	-0.1	0.0	0.1	0.1	0.0	0.0
Network Rail other current expenditure ¹	-0.2	-0.1	0.4	0.8	1.0	1.1
Other PSCE items in departmental AME	-0.2	-0.1	0.0	0.0	-0.1	-0.1
Expenditure transfers to EU institutions	0.0	-1.6	0.0	-	-	-
Assumed domestic spending in lieu of EU transfers ²	-	-	-	1.2	0.9	-0.1
Locally financed current expenditure	1.4	1.2	1.5	0.3	0.0	0.0
Central government debt interest, net of APF ³	-0.5	-0.5	0.7	-0.2	-0.6	-1.7
Public corporations' debt interest	0.0	-1.3	-3.4	-3.5	-3.5	-3.6
General government depreciation	-0.6	-1.4	-1.7	-2.0	-2.6	-3.3
Current VAT refunds	0.0	0.1	0.4	0.5	0.4	0.3
Environmental levies	-1.7	0.0	-0.2	-0.2	-0.3	-0.5
General government imputed pensions	-0.8	-0.9	-1.0	-1.1	-1.2	-1.3
Other National Accounts adjustments	2.3	0.6	0.1	0.0	0.0	-0.1
Total public sector current expenditure	-2.1	-7.0	-0.7	0.9	-4.8	-9.4
Public sector gross investment (PSGI)						
PSGI in CDEL	-0.1	-0.8	0.4	4.4	4.0	0.5
PSGI in AME	1.7	0.7	-7.6	-6.4	-4.6	-5.7
<i>of which:</i>						
Tax litigation	0.0	-1.6	-1.4	-0.6	1.2	1.4
Network Rail capital expenditure	0.0	0.8	-0.2	-0.1	-0.1	0.0
Other PSGI items in departmental AME	0.2	-0.2	-0.4	-0.6	-0.8	-0.8
Locally financed capital expenditure	1.4	3.9	3.9	3.5	4.0	3.9
Public corporations' capital expenditure	0.4	-2.7	-8.7	-7.9	-8.1	-9.3
Other National Accounts adjustments	-0.2	0.5	-0.6	-0.8	-0.8	-0.9
Total public sector gross investment	1.7	-0.1	-7.2	-2.1	-0.6	-5.3
Less public sector depreciation	0.4	1.8	3.2	3.5	4.1	4.8
Public sector net investment	2.1	1.7	-4.0	1.4	3.5	-0.4
Total managed expenditure	-0.4	-7.1	-7.9	-1.2	-5.4	-14.6

¹ Other than debt interest and depreciation, which are included in totals shown separately in this table.

² As we do not have sufficient detail about the Government's negotiation preferences, or the chances of achieving them, we are not able to forecast how spending will be affected after the UK leaves the EU. We therefore make the fiscally neutral assumption that any reduction in transfers to the EU would be recycled into extra domestic spending. See the section on this below.

³ Includes reductions in debt interest payments due to the APF. For further detail, see Table 4.32.

4.97 Table 4.18 summarises the main sources of changes to our forecast since March on a like-for-like basis, after restating for the reclassification of English housing associations and other ONS statistical changes. It shows that:

- Despite the weaker outlook for GDP growth, **economy forecast changes** reduce spending in cash terms only by an average of £1.8 billion a year. In particular, lower RPI inflation reduces the cost of servicing index-linked gilts. Weaker productivity growth has a much smaller effect on spending in cash terms than it does on receipts – and it reduces state pensions spending via its effect on earnings growth and the triple lock. But it does mean spending is higher as a share of GDP. Other factors that have influenced our GDP forecast have reduced spending. For example, the new population projections assume higher mortality at older ages, reducing the cost of pensioner benefits, and our lower assumption for sustainable unemployment reduces the cost of out-of-work benefits.
- Spending by **local authorities and public corporations** has been revised up significantly, particularly in 2017-18 and 2018-19. The largest changes reflect our assumptions that local authorities will carry out more capital spending financed by prudential borrowing (as they did in 2016-17). This assumption increases spending in each year, and by particularly large amounts in the earlier years. Lower proceeds from asset sales increase net capital expenditure. And in the short term we assume greater drawdowns from local authorities' reserves to finance their current expenditure.
- We have significantly increased the amount by which we expect central government departments to **underspend** their budgets in 2017-18.
- The profile of **tax litigation** payments has changed significantly, reducing spending in the near term, largely reflecting HMRC's Supreme Court victory over Littlewoods, but adding to spending from 2020-21 onwards.
- Changes to **expenditure transfers to EU institutions** are relatively large and uneven in the near term, which reflects changes to the assumed timing of payments in calendar year 2018, which moves spending from 2017-18 into 2018-19.
- **Network Rail current spending** is higher, particularly from 2019-20 onwards due to lower expected track access charge income, which nets off current spending. Capital spending is also up by £0.8 billion in 2017-18, due mostly to a reduction in expected asset sales.
- **National Accounts adjustments** are significantly lower in most years. Largely these revisions are the offsets to changes in other parts of the spending forecast, for example higher private sector capital grants received by local authorities, which finance higher local authority capital spending.

- **General government depreciation** has been revised down significantly, but this affects the split between the current budget deficit and net investment and is neutral for borrowing as a whole.
- **The Government's Budget measures** raise spending in all years. The largest changes are in 2019-20 and 2020-21, where spending is up by £8.6 billion and £4.8 billion respectively. This largely reflects higher departmental spending, focused on health and on preparations for Brexit. As some of this higher spending will take the form of public sector pay, we assume that it will also increase contributions to public service pensions, reducing net expenditure there. We have also revised up our assumptions on departmental underspends in the years where the Budget has eased some of the previously planned squeeze.

Table 4.18: Sources of changes to the spending forecast since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	802.4	817.2	827.9	855.4	886.4
Reclassification of English HAs	-4.2	-10.4	-9.9	-10.2	-11.3
Other ONS changes	-0.5	-0.6	-0.6	-0.7	-0.8
March forecast restated	797.7	806.2	817.4	844.4	874.3
November forecast	795.3	809.3	826.7	849.9	871.7
Like-for-like change	-2.4	3.1	9.3	5.5	-2.6
Forecast changes since March	-3.1	0.9	0.8	0.7	-3.0
<i>of which:</i>					
Economic determinants	-1.6	-1.2	-1.6	-1.8	-2.7
<i>of which:</i>					
Productivity revision	-0.3	0.0	0.2	-0.1	-0.7
Average hours revision	0.1	0.0	-0.1	0.0	0.2
Sustainable unemployment revision	-0.2	-0.4	-0.3	-0.3	-0.3
Inflation changes	-1.5	-0.2	-0.9	-0.8	-1.0
Population projection changes	-0.1	-0.3	-0.5	-0.8	-1.2
Other	0.3	-0.3	0.1	0.2	0.3
Market assumptions: interest rates	0.4	1.4	1.1	0.5	-0.1
Other assumptions and changes	-1.9	0.8	1.3	2.0	-0.3
<i>of which:</i>					
DEL forecast changes ¹	-3.2	0.1	0.2	0.3	0.3
Other welfare changes	-1.1	0.0	0.3	0.6	0.9
Expenditure transfers to EU institutions ²	-1.8	0.3	1.1	0.8	-0.2
Locally financed current expenditure	1.2	0.9	0.5	0.2	0.3
Locally financed capital expenditure	4.4	3.3	2.8	3.1	3.0
Network Rail	0.8	0.3	1.0	1.1	1.3
Other net debt interest changes	0.3	0.4	0.2	0.1	-0.4
Tax litigation	-1.6	-1.4	-0.6	1.2	1.4
General government depreciation	-1.4	-1.7	-2.0	-2.6	-3.3
Other PSGI items in departmental AME	-0.2	-0.4	-0.6	-0.8	-0.8
Other National Accounts adjustments	0.6	-1.1	-1.4	-1.4	-1.6
Other	0.2	0.1	-0.1	-0.6	-0.9
	Effect of Government decisions				
Total effect of Government decisions	0.7	2.2	8.6	4.8	0.5
<i>of which:</i>					
AME scorecard measures	0.0	0.2	1.4	0.4	0.4
AME non-scorecard measures	0.0	0.8	-0.1	-0.1	-0.1
RDEL changes ¹	1.1	2.3	4.2	1.4	0.6
CDEL changes ¹	-0.6	-0.7	3.1	3.2	-0.5
Indirect effects of Government decisions	0.2	-0.4	-0.1	0.0	0.1

¹ Excludes changes to DELs that are forecast or classification changes.

² This shows changes in our forecast on a 'no referendum' basis, which has been produced as a baseline forecast. We have then made the fiscally neutral assumption that any reduction in these transfers after the UK leaves the EU will be recycled into higher domestic spending. As a result, only changes to the baseline forecast contribute to the revision to our spending forecast since March.

Expenditure in 2017-18

- 4.98 On a like-for-like basis, we have revised expenditure in 2017-18 down by £3.1 billion relative to our March forecast. The largest contributions come from greater departmental underspending than we assumed in March, lower-than-expected spending on state pensions and tax credits, a change in the assumed timing of EU contributions in 2018 and no final tax litigation payments being expected this year.
- 4.99 Monthly spending data are only available for central government. Table 4.19 compares the growth in central government spending over the first half of 2017-18 with our latest forecast for the full year. The official data for April to September that underpin this forecast show spending up 3.0 per cent on the same period last year. Our forecast implies growth of 2.3 per cent in the rest of the year. This mainly reflects the profile of debt interest payments and central government transfers to local government, as well as slightly lower EU contributions.
- 4.100 The differences in growth rates between the two halves of the year reflect a number of timing effects. These often mean that the monthly profile of spending is neither smooth through the year nor consistently uneven across years. That makes it difficult to distinguish news from noise in year-on-year comparisons. In 2017-18 they reflect:
- Differences in the monthly path of RPI inflation and the associated effect on **debt interest payments**. Changes in RPI inflation affect spending associated with index-linked gilts with a lag of three to eight months. Allowing for these lags, we expect the relevant RPI increases to be relatively front-loaded this year compared to last and so expect growth in debt interest spending to reduce in the second half of the year.
 - Changes in **grants paid by central government to local authorities** through the year are affected by the ongoing conversion of schools (locally financed via grants) into academies (centrally financed). This switches spending between grants to local authorities and other central government spending, but the monthly profile need not match one-for-one. The rollout of universal credit moves spending from housing benefit (locally financed via grants) to the housing element of universal credit (centrally financed). This switches spending between grants to local authorities and net social benefits, but again the monthly profile of each may change in the process.
 - Timing effects related to **VAT and GNI based EU contributions net of abatement**. The EU budget – and the Commission’s requests for contributions to it – operates on a calendar year basis, so any movements between the first and second quarters of the calendar year shifts spending between fiscal years in the UK. Expected changes in this pattern mean that overall growth is high in 2017-18 compared to 2016-17 and that it is front-loaded. These changes are discussed in the EU net transfers section below.

Table 4.19: Central government expenditure in 2017-18

	Spending in 2017-18 (£ billion)			Percentage change on 2016-17		
	Outturn	Forecast ¹		Outturn	Forecast ¹	
	Apr-Sep	Oct-March	Full Year	Apr-Sep	Oct-March	Full Year
Total current expenditure	342.9	336.8	679.7	3.0	2.3	2.7
<i>of which:</i>						
Net social benefits	104.3	104.9	209.2	1.5	3.1	2.3
Debt interest	29.9	24.8	54.7	15.7	8.6	12.4
Current grants to local authorities	59.4	53.5	112.9	-0.2	-2.5	-1.3
VAT and GNI based EU contributions net of EU abatement	5.5	5.1	10.6	20.0	2.6	11.0
Other	143.8	148.5	292.4	5.1	5.7	5.4
Total (gross) capital spending	26.3	32.2	58.6	1.7	8.1	5.1
<i>of which:</i>						
Capital grants to local authorities	5.6	5.0	10.6	-11.4	9.0	-2.8
Other	20.7	27.2	47.9	5.9	8.0	7.1
Total central government expenditure in TME	369.2	369.0	738.2	2.9	2.8	2.9

¹ Forecast data has been adjusted to be consistent with the latest National Accounts definitions of central government spending. One of our supplementary fiscal tables, available on our website, shows the items included in our forecasts that ONS have not yet included in outturn. The items shown in that table have been excluded from our forecast above, so that the above table compares outturn to date and our forecast for the full year on a comparable basis.

Spending within departmental expenditure limits

DEL spending and changes since March

4.101 In this section, we use 'RDEL spending' and 'CDEL spending' to refer to PSCE in RDEL and PSGI in CDEL. The basis of our latest forecasts includes:

- **departments' final plans for 2017-18 to 2019-20 as published in *Public expenditure statistical analyses (PESA) 2017***, plus policy changes announced in this Autumn Budget and our assumptions regarding likely underspending against the new plans; and
- **the Government's latest provisional total DELs for 2020-21, 2021-22 and 2022-23**, where the departmental allocation will not be finalised until the next Spending Review, with the exception of capital DELs and RDELs for the NHS, Ministry of Defence and the Security Intelligence Agencies in 2020-21, which were set in Spending Review 2015.

4.102 Table 4.20 shows our forecasts for resource (RDEL) and capital (CDEL) spending and overall changes relative to our restated March forecast. (The sources of these changes are set out in Table 4.21.) Table 4.20 shows that:

- Actual **resource spending** has been revised down by £1.5 billion in 2017-18, mainly reflecting the change in our underspending assumption explained below. RDEL is then higher in all subsequent years, as the Government has chosen to ease the planned squeeze on resource spending. This is particularly true in 2018-19 and 2019-20,

where previously planned cuts were steepest. We have increased our underspend assumptions in those years in response to the less challenging spending profile.

- Actual **capital spending** revisions are uneven across years, having been reduced in some but increased in others. The downward revisions in 2017-18 reflect both net reductions from Government policy decisions and our higher underspend assumption. The reductions in 2018-19 mainly reflect 'reprofiling', where the new plans for affordable housing switch spending into the next two years, and other policy changes have pushed capital spending from 2018-19 into 2019-20. We have increased our underspend assumption in 2019-20 in response. We were informed of some of the shifting of DEL plans between 2018-19 and 2019-20 too late to be able to include their effects in our economy forecast. These would have been small, but not negligible. The spending movements were sufficient in size to mean that our forecast for net debt falls from 86.5 to 86.4 per cent of GDP between 2017-18 and 2018-19 – although by only 0.03 per cent of GDP in unrounded terms – rather than being flat.

Table 4.20: RDEL and CDEL spending and total changes since March

	£ billion					
	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
PSCE in RDEL						
March forecast						
Limits	319.1	321.6	323.5	329.8	336.6	
Assumed underspend ¹	-0.8	-0.8	-0.8	-1.3	-1.3	
Actual spending	318.3	320.8	322.8	328.6	335.3	
November forecast						
Limits	319.5	324.6	328.4	331.5	337.5	343.4
Assumed underspend ¹	-2.8	-1.3	-1.3	-1.3	-1.3	-1.3
Actual spending	316.8	323.3	327.1	330.3	336.2	342.2
Changes						
Limits	0.5	3.0	4.9	1.7	0.9	
Assumed underspend ¹	-2.0	-0.5	-0.5	0.0	0.0	
Actual spending	-1.5	2.5	4.4	1.7	0.9	
PSGI in CDEL						
March forecast restated²						
Limits	50.9	55.1	58.7	70.6	72.7	
Assumed underspend ¹	-1.5	-1.8	-2.1	-5.4	-4.0	
Actual spending	49.4	53.3	56.6	65.1	68.7	
November forecast						
Limits	50.1	54.3	62.1	73.8	72.2	74.6
Assumed underspend ¹	-1.9	-1.8	-2.3	-5.4	-4.0	-4.0
Actual spending	48.2	52.6	59.7	68.3	68.2	70.6
Changes on a like-for-like basis						
Limits	-0.8	-0.7	3.4	3.2	-0.5	
Assumed underspend ¹	-0.4	0.0	-0.2	0.0	0.0	
Actual spending	-1.2	-0.7	3.1	3.2	-0.5	
Per cent of GDP						
PSCE in RDEL (actual spending)						
March forecast	15.7	15.3	14.9	14.6	14.3	
November forecast	15.5	15.4	15.2	14.8	14.6	14.4
Change	-0.2	0.1	0.3	0.3	0.3	
PSGI in CDEL (actual spending)						
March forecast, restated ²	2.4	2.5	2.6	2.9	2.9	
November forecast	2.4	2.5	2.8	3.1	3.0	3.0
Change	-0.1	0.0	0.2	0.2	0.0	

¹ Underspends are measured against the plans set out in PESA 2017 and are net of amounts carried forward from previous years under Budget Exchange.

² March forecast restated for the reclassification of English housing associations, effective from November 2017.

4.103 Table 4.21 details the changes that we have included in our latest forecast, and breaks them down between our underlying forecast judgements (which mostly relate to the current year) and the Government's decisions (which have large effects in most years).

4.104 The main changes to our forecast judgements since November relate to underspending in 2017-18, which we expect to be significantly larger against RDEL plans (up £2¾ billion from our March forecast of just £¾ billion) and modestly larger against CDEL plans (up £½

billion from £1½ billion in March). This is informed by departments' provisional spending outturns over half of the year and the Treasury's latest information on departmental spending pressures.

- 4.105 In March, we revised up underspends in 2016-17 and considered doing so in 2017-18 too, but judged it likely that any additional underspending would be offset by additional spending pressures transferred from 2016-17, including via 'budget exchange'. We now know that underspends were even larger in 2016-17 than we expected in March, and that £1.6 billion of the large underspend happened because, unusually, the Treasury did not exhaust its current reserves. The picture emerging so far this year suggests that any spending pressures transferred from 2016-17 have been absorbed, and that, overall, departments are already expecting significant underspends in their latest in-year forecasts. We have also assumed, as has happened in previous years, that actual spending will fall further away from these latest in-year forecasts.
- 4.106 As Table 4.21 shows, in 2017-18 the Government has increased RDEL limits and reduced CDEL limits. This reflects a number of scorecard and other changes that shift spending between resource and capital, particularly for health. The scorecard records a £1 billion boost to NHS spending, split £0.4 billion for current spending and £0.6 billion for capital. The Treasury has also allowed the Department of Health to switch £1 billion from CDEL to RDEL (as it did last year). The net effect to total DEL is therefore a £0.4 billion switch from capital to current. The Government's announcement on affordable housing, not reported on the scorecard, moves £0.4 billion of capital spending from 2017-18 to later years. In light of all these changes, we have reduced our post-measures underspend assumptions by £¾ billion for RDEL and £0.1 billion for CDEL.
- 4.107 In September, the Government announced that the 1 per cent cap on public sector pay rises would be lifted in 2018-19, two years earlier than planned. We have assumed that this will lead to higher average pay growth, bringing it into line with the whole economy average by 2020-21. But we have assumed that the cost will be met by squeezing non-pay spending and by reducing the workforce rather than reducing the already small degree of underspending we assume relative to RDEL budgets from 2018-19 onwards.
- 4.108 From 2018-19 onwards, the Government has increased RDEL in all years and CDEL on average. These include measures reported on the Treasury scorecard, which increase spending by £1.7 billion a year on average, and a number of other DEL changes that have not been reported on the scorecard.
- 4.109 Of the scorecard RDEL measures, the largest increases relate to 2018-19 and 2019-20, where a cumulative £3 billion has been allocated to Brexit preparation and another £3 billion for the NHS. The 2019-20 'efficiency review' announced in Budget 2016 has also been scaled back. These measures explain most of the total increase in RDEL spending in those years. From 2020-21 onwards, increases to RDEL plans are more modest.
- 4.110 The largest CDEL scorecard measures relate to the NHS and various housing schemes, including the Housing Infrastructure Fund, which has been extended.

4.111 There are also several DEL changes that are not reported on the Treasury scorecard:

- The Treasury has added £1 billion to the **RDEL reserve** from 2019-20 onwards.
- Changes announced to **affordable homes programme** switch capital spending out of 2017-18 and 2018-19 and into 2019-20 and 2020-21. The £2 billion of spending announced by the Prime Minister in October has been financed by reducing spending on ‘accelerated construction’ and ‘starter homes’ across the four years from 2017-18 to 2020-21. The measures in 2019-20 and 2020-21 include additional capital grants to housing associations that, following their reclassification to the private sector, now add to public spending because they leave the public sector. Under the previous treatment, these would have further raised capital spending, since housing associations typically borrow against the grants to finance higher spending.
- **‘Reprofiling’ £0.7 billion of capital spending** from 2018-19 into 2019-20.
- RDEL has been reduced by £0.8 billion in 2018-19 due to the **expansion of the pilot for business rates retention** in London, which is now planned to cover all the London boroughs as well as the Greater London Authority. This RDEL reduction is offset by an increase in local authorities’ self-financed current expenditure.
- RDEL has been reduced by £0.3 billion a year on average because we have reversed the increase in relation to higher **probate fees** and their assumed reclassification as a tax that we factored into our *March EFO*. This was due to take effect in May, but the necessary statutory instrument on the proposed increases has not completed its passage through Parliament. The Treasury has informed us that Ministers are still considering how they wish to proceed, so in the absence of firm Government policy in this area we have removed the assumed effects from our tax and spending forecasts.
- The ONS has announced that it will classify the new **immigration and skills charge** as a tax not a fee (since its size is unrelated to the cost of the service it nominally covers). This adds to receipts and reduces negative spending, thereby increasing RDEL.
- **Other changes** are generally small. These mostly reflect switches between non-fiscal and fiscal spending, as set out in departments’ spending plans in PESA.⁹

4.112 In light of these policy changes, we have revised our post-measures underspend assumptions. These are largest in terms of RDEL. Underspends in 2018-19 and 2019-20 have been revised up by £½ billion in each year as the level of spending has been increased significantly and the steep cuts implied by previous plans have been eased, especially in 2018-19. We have also increased our 2019-20 CDEL underspend assumption.

⁹ A variety of items in departments’ DEL plans are not treated as public spending in the National Accounts – for example, lending schemes in CDEL plans. These items are referred to as ‘non-fiscal’ DEL because they do not affect the PSNB fiscal aggregate. They do affect PSND.

Table 4.21: Sources of changes to DELs since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
PSCE in RDEL					
March forecast	318.3	320.8	322.8	328.6	335.3
November forecast	316.8	323.3	327.1	330.3	336.2
Change	-1.5	2.5	4.4	1.7	0.9
<i>of which:</i>					
Forecast changes	-2.6	0.1	0.2	0.3	0.3
Assumed underspend	-2.8	0.0	0.0	0.0	0.0
Net increases in Scottish and Welsh Governments' self-financed spending	0.1	0.1	0.2	0.3	0.3
Effect of Government decisions	1.1	2.3	4.2	1.4	0.6
Scorecard measures	-0.6	3.6	4.1	0.9	0.9
Business rates retention additional pilots	0.0	-0.8	0.0	0.0	0.0
DH capital/current switch	1.0	0.0	0.0	0.0	0.0
Probate fees increase and reclassification from March 2017 unwound	-0.2	-0.3	-0.3	-0.3	-0.3
Immigration and skills charge reclassification	0.1	0.1	0.1	0.1	0.1
Additional non-scorecard policy changes	0.0	0.3	1.0	0.7	-0.1
Assumed underspend (indirect effect)	0.8	-0.5	-0.5	0.0	0.0
Other	0.1	-0.1	-0.1	0.0	0.0
PSGI in CDEL					
March forecast	49.0	52.2	55.4	64.3	67.7
<i>Reclassification of English HAs</i>	<i>0.4</i>	<i>1.1</i>	<i>1.2</i>	<i>0.8</i>	<i>0.9</i>
March forecast restated	49.4	53.3	56.6	65.1	68.7
November forecast	48.2	52.6	59.7	68.3	68.2
Change on a like for like basis	-1.2	-0.7	3.1	3.2	-0.5
<i>of which:</i>					
Forecast changes	-0.6	0.0	0.0	0.0	0.0
Assumed underspend	-0.5	0.0	0.0	0.0	0.0
Other	-0.1	0.0	0.0	0.0	0.0
Effect of Government decisions	-0.6	-0.7	3.1	3.2	-0.5
Scorecard measures	0.7	0.9	2.1	2.6	0.4
DH capital/current switch	-1.0	0.0	0.0	0.0	0.0
Affordable housing	-0.4	-0.8	0.6	0.5	0.0
Assumed underspend (indirect effect)	0.1	0.0	-0.3	0.0	0.0
Additional non-scorecard policy changes	0.0	0.0	0.0	0.0	-0.9
Reprofiling of spending	0.0	-0.7	0.7	0.0	0.0
Other	0.0	-0.1	-0.1	0.1	0.0

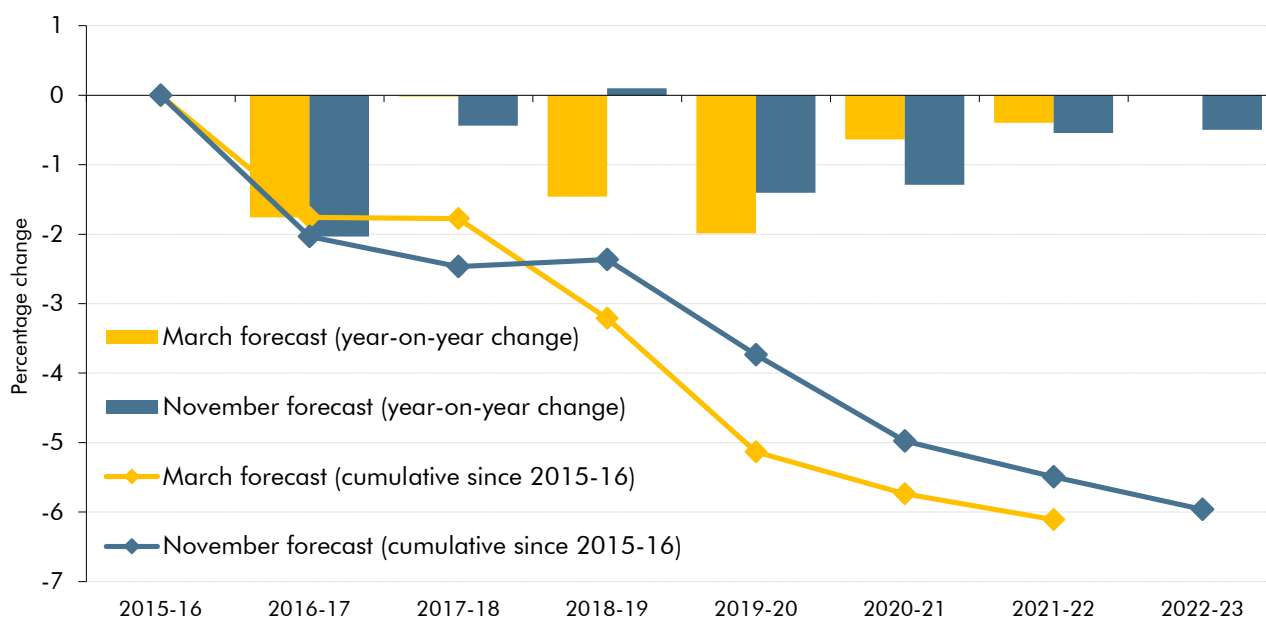
The path of resource and capital DEL spending over the forecast period

4.113 The Government has boosted departmental resource spending by around £2.0 billion a year on average from 2017-18 (excluding the effects of the extension of business rates pilots, which switch spending from DEL to AME). The largest increases are in 2018-19 and 2019-20, where Government decisions increase spending by £3.1 and £4.2 billion (again abstracting from business rates pilots changes).

4.114 The combined effect of a large expected underspend in 2017-18 and the extra spending in 2018-19 is to reverse the significant real per person spending cut previously planned for that year. We expect RDEL spending to rise by 2.1 per cent in cash terms in 2018-19, sufficient to show a small rise in real spending per person. Despite higher spending in 2019-20 than planned in March, there is still a relatively steep year-on-year fall in real spending per person (1.4 per cent) in that year, though it is less steep than the drop seen in 2016-17.

4.115 Resource spending per person is now forecast to fall by 4.0 per cent in real terms between 2016-17 and 2022-23, with these cuts no longer planned to start until 2019-20 (see Chart 4.5). As a result, while the 2018-19 pressure shown in our March forecast has been eased, the sizeable falls thereafter mean that future spending plans remain challenging. Beyond the Spending Review period in 2021-22 and 2022-23, the Government’s policy assumption is for overall resource spending to rise in line with whole economy prices. It therefore falls by an average of 0.5 per cent a year in real per capita terms due to population growth. These falls will take place against a backdrop of upward pressure on spending – particularly health spending – from an ageing population.

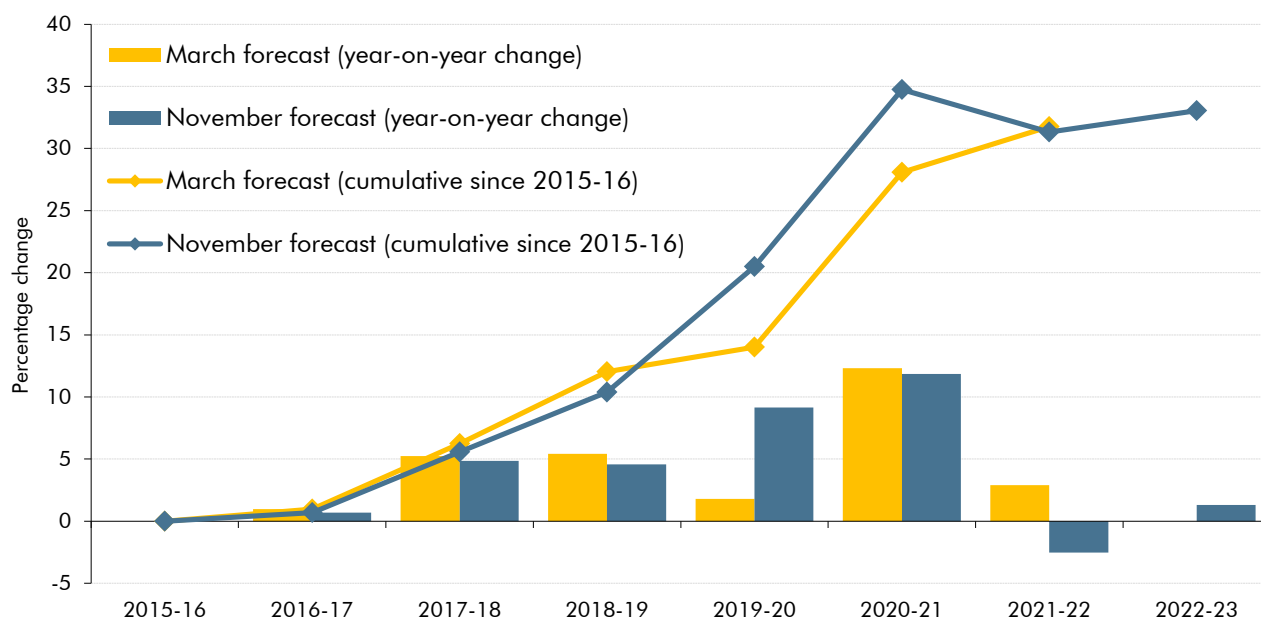
Chart 4.5: Change in real RDEL spending per capita from 2015-16



Note: 2017-18 and 2018-19 exclude the effects of business rates pilots. All other figures adjusted for consistency with the latest forecast. Source: OBR

4.116 In contrast to resource spending, the Government plans to ramp up departmental capital spending in the coming years. As Chart 4.6 shows, in real per capita terms, this translates into 33.8 per cent growth between 2016-17 and 2020-21. Beyond the Spending Review period it broadly stabilises on this metric. Changes to the path of departmental capital spending since March mainly reflect Government decisions to increase spending in 2019-20 and 2020-21. The very sharp rise planned for 2020-21 remains in place (currently a 11.8 per cent rise in real per capita terms), although not all of this jump has yet been allocated to individual departments.

Chart 4.6: Change in real CDEL spending per capita from 2015-16



Note: 2017-18 and 2018-19 exclude the effects of business rates pilots. All other figures adjusted for consistency with the latest forecast. Source: OBR

Annually managed expenditure

Welfare spending

- 4.117 Total welfare spending in our forecast refers to AME spending on social security and tax credits. The Government's 'welfare cap' – which excludes state pensions and payments sensitive to the ups and downs of the economic cycle – covers around half of this total. Performance against the cap is assessed in Chapter 5.
- 4.118 Table 4.22 shows that total welfare spending is forecast to increase by 13.1 per cent over the forecast period, reaching £248 billion in 2022-23. Spending on items subject to the cap is projected to rise by 9.0 per cent, a 1.4 per cent fall in real terms relative to CPI inflation. By contrast, spending on items outside the cap – which is dominated by state pensions – is expected to rise by 17.9 per cent or 7.5 per cent in real terms.
- 4.119 Relative to the size of the economy, welfare spending is forecast to fall by 0.3 per cent of GDP between 2017-18 and 2022-23, with spending falling by 0.4 per cent inside the welfare cap and rising by 0.1 per cent outside. Spending inside the cap is on a falling trend as freezes and inflation uprating reduce the value of benefits relative to earnings and GDP per head. In contrast, spending outside the cap rises thanks to the ageing population and triple lock uprating (offset by the rising State Pension age up to 2020-21).

Table 4.22: Welfare spending forecast overview

	£ billion						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Total welfare spending	216.9	219.8	224.5	228.0	231.8	239.6	248.5
<i>of which:</i>							
Inside welfare cap	118.7	119.3	120.9	122.1	123.8	126.9	130.1
Outside welfare cap	98.3	100.4	103.6	105.9	108.0	112.7	118.4
	Per cent of GDP						
Total welfare spending	10.9	10.8	10.7	10.6	10.4	10.4	10.5
<i>of which:</i>							
Inside welfare cap	6.0	5.8	5.8	5.7	5.6	5.5	5.5
Outside welfare cap	5.0	4.9	4.9	4.9	4.9	4.9	5.0

4.120 Table 4.23 sets out our detailed welfare spending forecasts for 2016-17 to 2022-23 on a pre-scorecard basis, plus the total effect on welfare spending of policy decisions announced in this Budget. A detailed post-measures forecast for each line is available in a supplementary fiscal table on our website. Our post-measures forecast for the marginal effect of universal credit on welfare spending is described in the next section.

Table 4.23: Welfare spending

	£ billion						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Welfare cap							
DWP social security	76.5	77.9	78.5	78.9	80.6	82.9	85.3
of which:							
Housing benefit (not on JSA) ¹	21.3	20.4	20.9	20.4	20.7	21.2	21.7
Disability living allowance and personal independence payments	16.7	17.7	19.0	20.2	21.2	22.1	23.1
Incapacity benefits ²	15.2	15.1	16.1	15.9	16.2	16.5	16.8
Attendance allowance	5.5	5.6	5.8	6.0	6.3	6.5	6.8
Pension credit	5.7	5.4	5.0	4.8	4.6	4.6	4.7
Carer's allowance	2.7	2.9	3.2	3.4	3.6	3.7	3.9
Statutory maternity pay	2.4	2.5	2.6	2.6	2.7	2.8	2.8
Income support (non-incapacity)	2.3	2.2	2.0	2.1	2.2	2.2	2.4
Winter fuel payments	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Universal credit ³	0.5	1.9	-0.4	-0.8	-1.1	-1.0	-1.2
Other DWP in welfare cap	2.2	2.3	2.3	2.3	2.3	2.3	2.3
Personal tax credits	27.4	26.1	26.6	26.2	26.6	27.0	27.3
Child benefit	11.6	11.6	11.6	11.6	11.8	12.0	12.3
Tax free childcare	0.0	0.0	0.3	0.6	0.7	0.8	1.0
NI social security in welfare cap	3.4	3.5	3.5	3.7	3.9	4.0	4.0
Paternity pay	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Budget measures	0.0	0.0	0.2	1.0	0.1	0.1	0.1
Indirect effects	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total welfare cap⁴	118.7	119.3	120.9	122.1	123.8	126.9	130.1
Welfare spending outside the welfare cap							
DWP social security	96.1	98.0	101.1	103.3	105.4	109.9	115.6
of which:							
State pension	91.6	93.6	96.3	98.5	100.3	104.8	110.4
Jobseeker's allowance	1.9	1.6	2.5	2.6	2.7	2.7	2.8
Housing benefit (on JSA)	1.6	1.4	2.3	2.3	2.4	2.5	2.6
Universal credit ³	1.1	1.4					
NI social security outside welfare cap	2.3	2.4	2.5	2.6	2.6	2.7	2.9
Budget measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Indirect effects	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2
Total welfare outside the welfare cap⁴	98.3	100.4	103.6	105.9	108.0	112.7	118.4
Total welfare	216.9	219.8	224.5	228.0	231.8	239.6	248.5
<i>Memo: welfare cap as proportion of total welfare</i>	<i>54.7</i>	<i>54.3</i>	<i>53.9</i>	<i>53.5</i>	<i>53.4</i>	<i>53.0</i>	<i>52.3</i>

¹ Housing benefit (not on jobseeker's allowance) is made up of a number of claimant groups. The main claimant groups are pensioners, those on incapacity benefits, lone parents, and housing benefit only claimants.

² Incapacity benefits includes incapacity benefit, employment and support allowance, severe disablement allowance and income support (incapacity part).

³ Universal credit actual spending for 2016-17 and 2017-18. Spending from 2018-19 onwards represents universal credit additional costs not already included against other benefits (i.e. UC payments that do not exist under current benefit structure).

⁴ Total welfare outturn inside and outside of the welfare cap in 2016-17 is sourced from OSCAR, consistent with PESA 2017. For 2016-17 only, the components reflect departments' own outturns, which may not be on a consistent basis to OSCAR. For this year the components may not sum to the total for this reason.

- 4.121 Table 4.24 sets out the changes to our welfare spending forecast since March. It shows that – before the effects of policy measures – we have revised total welfare spending down in most years, with downward revisions to spending outside the cap more than offsetting upward revisions to spending inside the cap in most years.
- 4.122 In 2016-17, welfare spending was £1.0 billion lower than we expected in March. Most of this difference appears to reflect the reconciliation of different sources of spending data and is likely to be offset elsewhere in our overall spending forecast. But we have not yet got to the bottom of these issues, so this remains a source of uncertainty.
- 4.123 From 2017-18 onwards, changes due to economy forecast revisions broadly offset until 2019-20. Thereafter they reduce spending by £0.7 billion in 2020-21 and £1.5 billion in 2021-22. The largest changes relate to the new ONS population projections (see Box 4.1). In particular, higher mortality rates among older people reduce spending on the state pension (outside the cap) and other pensioner benefits (inside the cap). For welfare cap spending, higher inflation increases spending by increasing the uprating of those awards not subject to freezes, while lower earnings growth reduces the proportion of means-tested entitlements tapered away with income. Outside the cap, lower unemployment also reduces spending on jobseeker’s allowance and associated housing benefit. Higher inflation in the short-term and lower earnings growth in later years means the Government’s triple-lock on state pension uprating leads first to higher, then to lower, cash spending.
- 4.124 We have made a number of other changes to our pre-measures forecast. Our forecast for 2017-18 is now produced on an ‘actual cost’ basis for universal credit (UC), rather than estimating a counterfactual for the legacy benefits and the marginal effect of UC relative to that. For ease of comparison, Table 4.24 puts our March forecast on the same basis. On this like-for-like basis in 2017-18:
- **Tax credits** spending has been revised down £0.6 billion, as spending so far this year has continued to surprise on the downside. In the first six months of 2017-18, spending was down 5.0 per cent on a year earlier. We expect it to fall 4.8 per cent in the year as a whole. The unexpected weakness of tax credit spending relative to recent forecasts mainly reflects fewer new claims than expected. Possible explanations include our underestimating growth in earnings among the population eligible for tax credits, where our assumptions about the effects of the National Living Wage are subject to considerable uncertainty, or the rollout of UC, the effects of which are difficult to track because the available administrative data do not contain the information necessary to estimate what UC recipients might otherwise have claimed under the legacy system.
 - **Tax-free childcare** spending has been revised down £0.4 billion (90 per cent) as the number of people claiming so far this year has been far lower than assumed in March. Our forecast then was consistent with the caseload reaching 415,000 by October, but in fact it has only reached 30,000. The Government has pushed the start date for older children back once more. We have also assumed that the pace of take-up thereafter will be slower than we assumed in March.

4.125 From 2018-19 onwards, the main sources of revision since March include:

- **Disability benefits** spending has been revised up by progressively larger amounts, reaching £1.9 billion in 2021-22. We have changed the way we forecast this spending, drawing more heavily on a model that focuses on age-specific trends in the share of the population claiming disability benefits rather than the previous ‘operational model’ that focused on the flow of claims onto the personal independence payment (PIP) and the outcomes of those claims. The new approach is less reliant on predicting the performance of DWP’s contractors, although monitoring this will remain an important part of our forecast process. The new model aims to capture recent growth in age-specific claim rates, overlaid with assumptions informed by the evolution of spending on disability living allowance (DLA) at a similar stage of its life. We hope that this will help to address our consistent under-estimation of disability benefits spending. It is now less important to focus on contractor performance as the rollout of PIP has now reached the stage where it no longer achieves savings relative to DLA. This has also meant that DWP’s decision to push back the expected completion of the PIP rollout by nine months to June 2019 has had no significant impact on our forecast.
- The marginal saving from **universal credit** is £0.7 billion smaller in 2021-22. This reflects the initial responses to a wide-ranging review of the UC forecast as part of our forthcoming *Welfare trends report*. The reasons, which include a number of large but mostly offsetting changes, are explained in the next section.
- **Incapacity benefits** spending has been revised up £0.6 billion in 2018-19 – around two thirds of which reflects DWP identifying around 75,000 underpayments associated with the reassessment of incapacity benefits cases. It plans to make good those underpayments next year. There is expected to be an ongoing cost from this of around £0.1 billion a year, reducing over time, as some claimants are entitled to higher awards. The remaining third reflects the knock-on effect of higher spending on PIP.
- **State pensions** spending is £0.5 billion lower in 2021-22. This reflects lower outturns and slightly more deferrals than expected among those reaching the State Pension age who are entitled to the new single-tier state pension. As the benefits of deferral are much lower in the new system, we had assumed a lower rate of deferrals than has been the case.

4.126 The effect of Budget measures include:

- **Changes affecting universal credit**, including removing the 7-day wait, extending advances to 100 per cent and a run-on payment for housing benefit recipients. The Government has also chosen to push back the rollout of UC once more (discussed in the next section). Together these cost around £0.3 billion a year.
- **Dropping the planned application of local housing allowance caps in the social-rented sector**, plus an increase in the targeted affordability fund. These changes involve relatively large switches between DEL and AME spending, but abstracting from that result in a net reduction in welfare spending of around £0.2 billion a year.

Table 4.24: Sources of changes to welfare spending since March

	£ billion					
	Outturn	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Total welfare spending						
March forecast	217.9	221.1	224.4	226.8	231.9	240.3
November forecast	216.9	219.8	224.5	228.0	231.8	239.6
Change	-1.0	-1.4	0.1	1.2	-0.1	-0.7
Welfare spending inside the welfare cap						
March forecast	119.3	119.6	120.0	120.0	122.4	125.1
November forecast	118.7	119.3	120.9	122.1	123.8	126.9
Change	-0.6	-0.3	0.9	2.1	1.4	1.8
<i>of which:</i>						
Economic determinants	0.0	-0.1	0.1	0.3	0.2	0.2
<i>of which:</i>						
Population projections	0.0	0.0	-0.1	-0.1	-0.2	-0.4
CPI inflation	0.0	0.0	0.2	0.2	0.1	0.1
Average earnings	0.0	-0.1	0.0	0.2	0.3	0.4
Other	0.0	0.0	0.0	0.0	0.0	0.1
Estimating/modelling changes	-0.1	-0.3	0.5	0.8	1.2	1.5
<i>of which:</i>						
Disability benefits ¹	0.0	0.3	0.9	1.3	1.7	1.9
Universal credit	0.0	-0.4	0.1	0.3	0.4	0.7
Incapacity benefits ²	0.0	0.1	0.6	0.2	0.1	0.0
Tax-free childcare	0.0	-0.4	-0.5	-0.3	-0.2	-0.2
Housing benefit	-0.1	0.3	-0.3	-0.4	-0.4	-0.4
Personal tax credits	0.0	-0.6	-0.6	-0.8	-1.0	-1.2
Other	0.0	0.2	0.3	0.5	0.6	0.7
Budget measures	0.0	0.0	0.2	1.0	0.1	0.1
Indirect effects	0.0	0.0	0.0	0.0	0.0	0.0
Other	-0.5	0.0	0.0	0.0	0.0	0.0
Welfare spending outside the welfare cap						
March forecast	98.6	101.5	104.3	106.8	109.5	115.2
November forecast	98.3	100.4	103.6	105.9	108.0	112.7
Change	-0.4	-1.1	-0.7	-0.9	-1.5	-2.5
<i>of which:</i>						
Economic determinants	0.0	-0.2	-0.2	-0.4	-0.9	-1.7
<i>of which:</i>						
Population projections	0.0	-0.1	-0.2	-0.4	-0.6	-0.8
CPI inflation	0.0	0.0	0.1	0.2	0.1	0.1
Claimant count unemployment	0.0	-0.2	-0.4	-0.4	-0.3	-0.3
Triple lock	0.0	0.0	0.3	0.2	-0.1	-0.7
Other	0.0	0.0	0.0	0.0	0.0	0.0
Estimating/modelling changes	-0.2	-0.8	-0.5	-0.5	-0.6	-0.6
Budget measures	0.0	0.0	0.0	0.0	0.0	0.0
Indirect effects	0.0	0.0	0.0	0.0	0.0	-0.1
Other	-0.2	0.0	0.0	0.0	0.0	0.0

¹ Disability benefits refers to disability living allowance and personal independence payment.

² Incapacity benefits includes incapacity benefit, employment and support allowance, severe disablement allowance and income support (incapacity part).

Universal credit

- 4.127 Our welfare spending forecast is constructed by estimating a counterfactual in which the existing 'legacy' benefits system continues as though universal credit (UC) did not exist, and then subtracting from it an estimate of the marginal saving associated with rolling out UC. This allows us to base the forecast on as much administrative data as possible, but it does not directly reflect the real world fall in spending on the legacy benefits as spending on UC rises. As the UC rollout proceeds, the real world and marginal saving approaches will diverge further. For the year in progress, we forecast on an 'actual cost' basis, since the counterfactual and marginal effects cannot be observed in the monthly flow of administrative data. As soon as is practical, we will switch to forecasting UC in all years on this actual cost basis rather than a marginal cost basis.
- 4.128 This is the first year in which UC spending has reached material levels, at an estimated £3.4 billion. Next year it is expected to reach £10.5 billion, which would approach the scale of spending on child benefit. Ultimately it is expected to reach around £60 billion a year, larger than all but the state pension. Forecasting the effects on spending of the shift from the legacy system to UC is complex, with many operational and policy differences between the two and constant changes to them both. This section illustrates this complexity by setting out our 2017-18 'in-year' forecast and the changes we have made to our estimate of the marginal effect of UC since March.
- 4.129 Table 4.25 sets out estimates for actual spending in 2017-18 on UC and the legacy benefits and tax credits that it is replacing, how this relates to a 'no UC' legacy benefits counterfactual less the marginal saving from UC, and how both of these calculations have changed relative to the estimates we presented in March. It shows that:
- **Income-based jobseeker's allowance** is £0.9 billion (39 per cent) lower in actual terms than in the 'no UC' counterfactual. This is the legacy benefit for which the real world has diverged from the counterfactual most significantly. Judging the level of the counterfactual this year from which to generate the rest of our forecast is a challenge. Actual spending this year has been revised down by £0.2 billion relative to March.
 - **Income-based employment and support allowance** is £0.5 billion (4 per cent) lower in actual terms than in the counterfactual. Actual spending has been revised up £0.2 billion since March.
 - **Income support (non-incapacity)** is £0.1 billion (5 per cent) lower in actual terms than in the counterfactual. Actual spending has been revised up £0.2 billion since March.
 - **Tax credits spending** (including both working and child tax credit) is £0.9 billion (3 per cent) lower in actual terms than in the counterfactual. We have revised both actual spending (by £0.7 billion) and the counterfactual down since March, reflecting lower inflows (as described above). We have also revised down the extent to which the tax credits caseload is assumed to have moved onto UC, as we have attempted to align the evidence from DWP and HMRC administrative systems. This has been difficult and

remains subject to significant uncertainty. On the available information, it is simply not possible to estimate with any confidence how these two systems are affecting caseloads and spending. Given how large they are, this is a significant concern.

- **Housing benefit** is £1.4 billion (8 per cent) lower in actual terms than in the counterfactual. Actual spending has been revised up £0.3 billion since March. This is another area where we have revised the difference between actual and counterfactual spending since March, but unlike for tax credits this can be done with reasonable confidence because the administrative data flag cases in receipt of the housing element of UC. But there is still uncertainty over the extent to which take-up differs under the two systems. For some cases it may be higher, where the single claim under UC means all aspects of entitlement are taken into account. For others it may be lower, for example lower value claims where the potential recipient chooses not to subject themselves to UC conditionality for relatively little financial gain.
- **Actual expenditure on UC** is estimated to be £3.4 billion, £0.3 billion less than the sum of the differences between actual and counterfactual spending on the legacy benefits and £0.5 billion lower than our estimate in March. The marginal saving reflects the fact that UC is less generous on average than those benefits it replaces – particularly for tax credits equivalent cases and those who would have received disability premiums in the legacy system. The downward revision since March reflects a slower-than-expected build-up of the caseload.

Table 4.25: Universal credit and the legacy benefits in 2017-18

	£ billion		Per cent difference
	March presentation ¹	Actual costs presentation ²	
Legacy benefits			
Jobseeker's allowance	2.2	1.4	-39
Employment and support allowance	10.8	10.4	-4
Income support (non-incapacity)	2.3	2.2	-5
Tax credits	27.0	26.1	-3
Housing benefit	17.8	16.4	-8
Universal credit	-0.3	3.4	
Total	59.8	59.8	
Changes since March			
Legacy benefits			
Jobseeker's allowance	-0.3	-0.2	
Employment and support allowance	0.2	0.2	
Income support (non-incapacity)	0.3	0.2	
Tax credits	-0.6	-0.7	
Housing benefit	-0.1	0.3	
Universal credit	-0.2	-0.5	
Total	-0.7	-0.7	

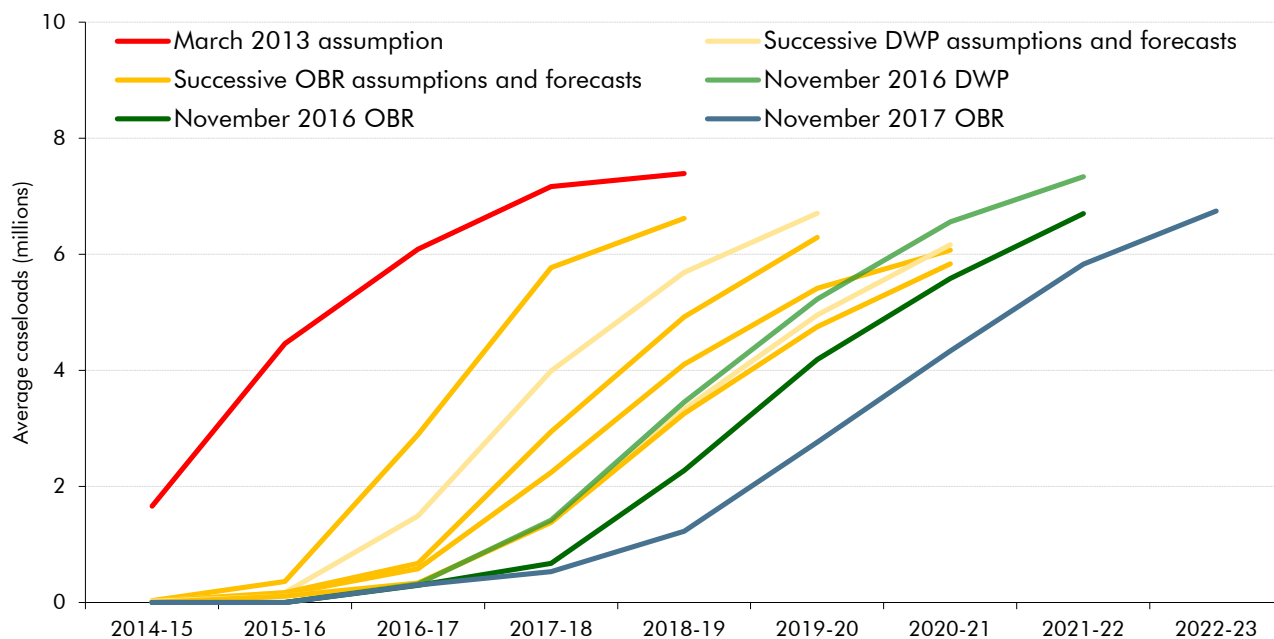
¹ March forecast presentation: legacy benefits on a counterfactual basis with the marginal saving from UC subtracted.

² Current presentation: actual payments on each welfare item.

4.130 Relative to our March forecast we have revised down the marginal saving from UC in every year. The revision reaches £1.1 billion in 2021-22. As shown in Table 4.26, this reflects the largely offsetting effects of a number of significant changes. Those that have raised spending and reduced the marginal saving include:

- We have recosted **four previously announced policy measures by incorporating them into the main 'policy simulation model' (PSM)**, resulting in smaller combined savings than the previous 'off-model' estimates. The saving from limiting entitlement to the first two children and abolishing the family premium for most families has been revised down by £0.8 billion in 2021-22. Around half of this is offset by a downward revision to housing benefit spending as the total savings have been apportioned across UC, tax credits and housing benefit more accurately. The other half is due to more granular modelling of the pace at which larger families move on and off benefits, which matters because the policies only apply to new claims. Bringing the estimated savings arising from UC not including disability premia into the PSM also highlighted an error in the base for PIP spending in the off-model costing. Correcting this reduces savings by around £0.2 billion in 2021-22. Bringing the costing of the savings from local housing allowance caps inside PSM increased 2021-22 savings by around £0.1 billion.
- We have **revised down the expected UC caseload** in every year, prior to the further delays announced in this Budget (Chart 4.7). This reflects lower-than-expected outturns so far this year combined with the lower tax credits counterfactual forecast. Since UC is less generous on average than the legacy system, a lower caseload reduces the aggregate saving from UC. A slower rollout also implies more cases being migrated at DWP's discretion later in the process. These attract transitional protection if their UC award is lower than their legacy award. The 13 per cent lower caseload in 2021-22 than assumed in March reduces the marginal saving by £0.3 billion.
- We have **revised down the savings associated with abolishing the tax credits income disregards** in line with the revisions to our counterfactual forecast for tax credits spending. This reduces the UC marginal saving by £0.1 billion in 2021-22, partly offsetting the £1.2 billion downward revision to tax credits in that year.
- We have also **revised the savings associated with savings from fraud and error under UC**. Updating with the latest HMRC estimates of tax credits error and fraud rates increases savings but this is offset by lower tax credits volumes.
- **Budget policy measures**, including a consequential further delay in order to allow IT systems to be amended, reduce the marginal saving by £0.2 billion in 2021-22.

Chart 4.7: Successive revisions to the universal credit rollout assumption



Source: DWP, OBR

4.131 Changes that have reduced spending and raised the marginal saving include:

- Lower **take-up assumptions**, which have reduced the cost associated with higher take-up by £0.4 billion by 2021-22. The main source of change comes from assuming that some of those currently claiming all their legacy benefit entitlement, but who would receive low UC awards, will be deterred from claiming UC by the greater conditionality in the new regime than in parts of the legacy system.
- The **survey data used in the model that estimates most of the effects of UC has been updated** to the 2015-16 Family Resources Survey (FRS). The net effect was to increase the marginal saving by around £0.3 billion. Lower entitlements save an additional £0.6 billion while higher numbers of FRS cases with disability premia in the legacy system increase the savings from UC's removal of disability premia by £0.1 billion. This was partly offset by a lower estimate for the savings from the 'minimum income floor' (MIF) for the self-employed, which fell from £1.5 to £1.1 billion in 2021-22. This 30 per cent drop illustrates the volatility of an estimate that is based on just over 350 sample cases in the FRS. The losses per family – as high as £6,000 on average for young single parents with school-age children – are so large that there are bound to be knock-on effects that are not yet captured in the modelling.

Table 4.26: The marginal effect of UC on welfare spending and changes since March

	£ billion					
	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Marginal effect on welfare spending		-0.2	-0.6	-0.9	-0.8	-1.0
<i>of which:</i>						
Gross cost		1.2	2.7	4.6	6.7	8.0
<i>of which:</i>						
Gross cost of higher take-up ¹		0.5	1.2	1.9	2.5	2.9
Gross cost where entitlement is higher ²		0.7	1.5	2.4	3.2	3.8
Transitional protection where entitlement is lower		0.0	0.0	0.3	1.0	1.3
Gross saving		-1.6	-3.6	-5.6	-7.7	-9.2
<i>of which:</i>						
Gross saving where entitlement is lower ³		-0.8	-2.2	-3.5	-4.7	-5.5
Gross saving of abolishing the disregards		-0.1	-0.3	-0.5	-0.7	-0.8
Gross saving from reductions in fraud and error		-0.2	-0.5	-0.9	-1.2	-1.5
Gross saving from the minimum income floor		-0.2	-0.4	-0.7	-1.0	-1.2
Gross saving from other factors		-0.2	-0.2	-0.1	-0.1	-0.1
Budget scorecard measures		0.2	0.2	0.2	0.2	0.2
		Changes since March				
Marginal effect on welfare spending	-0.4	0.3	0.6	0.8	1.1	
<i>of which:</i>						
Economic determinants	0.0	0.0	0.1	0.1	0.2	
Modelling changes	-0.4	0.1	0.3	0.4	0.7	
<i>of which:</i>						
Recastings of measures		0.1	0.4	0.7	0.9	
Updated volumes		0.1	0.2	0.2	0.3	
Revised income disregard modelling		0.0	0.0	0.1	0.1	
Revised fraud and error modelling		0.0	0.0	0.0	0.0	
Updated FRS data to 2015-16		0.0	-0.2	-0.3	-0.3	
In-year modelling	-0.4					
Lower take-up		-0.1	-0.2	-0.3	-0.4	
Other factors		0.0	0.0	0.0	0.1	
Budget scorecard measures		0.2	0.2	0.2	0.2	

¹ Includes both the change in entitlement and take-up for groups where take-up has increased.

² Entitlement for those who fully take-up their entitlement in the legacy system.

³ Net entitlement and take-up impacts from those households who have lower entitlements.

4.132 The gross upward and downward revisions in 2021-22 sum to £2.0 billion, but the net effect on spending is limited because they are largely offsetting. But the size of the gross changes illustrates the enormous uncertainty around our UC forecast, which is exacerbated by the fact that administrative data across the legacy and UC systems permit only broad-brush assessments of the marginal effects of moving from one system to the other.

4.133 Some sources of revision will always have offsetting effects, at least in part, because they affect both the gross costs and savings driven by the size of the caseload. But others need not be offsetting, which could lead to large revisions to total welfare spending in future forecasts as we learn more about how the real-world rollout of UC matches the huge number of assumptions necessary to produce the forecast. This includes potential

behavioural effects in the labour market, where we do not yet have sufficiently firm evidence to adjust our forecasts for employment, hours worked, earnings or productivity. Early evidence points to positive labour market effects for certain types of UC claimant, but it is not clear whether these results would still hold when applied across the all types of UC recipient or when scaled up to the whole economy.

4.134 Preparing this forecast has highlighted a number of issues in the underlying modelling of UC that we will be working with DWP to address. The modelling is very complicated, which reflects both the complexity of the policy change but also the fact that the modelling is used for both forecasting and operational purposes. The latter requires much more detailed outputs so that DWP can manage the allocation of resources across jobcentres and centrally. Unfortunately this additional complexity means that it takes DWP's analysts weeks to update the forecast fully, which has meant that the estimates presented here are not fully consistent with all other aspects of our economy and fiscal forecasts. We will need to be able to revise forecast judgements in light of emerging evidence as UC is rolled out, and its rising share in actual spending will only make this more important over time. At present, neither the in-year administrative data nor the forecasting infrastructure allow us to do this efficiently. For such a large programme, that creates serious risks to our forecast. The latest rollout delay announced on the scorecard at this Budget means the UC rollout is now around five years behind the original schedule.

Public service pensions

4.135 Our public service pensions forecast covers net expenditure on benefits paid less employer and employee contributions received. (The corresponding spending on employer contributions is included within our departmental spending forecast.) It includes central government pay-as-you-go schemes and locally administered police and firefighters' schemes.¹⁰ A breakdown of spending and income for the major schemes we cover is included in the supplementary fiscal tables on our website.

4.136 Table 4.27 details the changes to our public service pensions forecast since March. We have revised spending down by between £0.2 and £0.7 billion a year across the forecast period. Gross spending is up, partly due to higher inflation, but this is more than offset by higher receipts, largely stemming from departmental spending.

4.137 Underlying forecast changes since March reflect:

- **Higher gross expenditure** of around £0.3 billion a year from 2018-19 onwards. Higher CPI inflation accounts for around a third of the increase, with the other two thirds due to a variety of scheme-specific factors. We have reflected some emerging findings from actuarial valuations that are expected to be concluded in 2018. The largest change so far was in the civil service pension scheme, reflecting detailed modelling of cuts to the active workforce in recent years. Early retirements have also been higher than expected, while new bulk transfers into the scheme have raised

¹⁰ The police and firefighters' pension schemes are administered at a local level, but pensions in payment are funded from AME, along with other public service pension schemes. They are therefore included in our pensions forecast.

spending. We have also taken account of emerging evidence that members of the teachers' pension scheme are delaying retirement. Revisions to other schemes' spending reflect the latest outturn data.

- Our underlying forecast for receipts has been revised up due to higher **pensionable paybill** growth. This reflects a number of factors, including changes to workforce plans since the 2015 Spending Review, for example stronger-than-expected growth in the NHS workforce and the civil service, bulk transfers into the civil service pension scheme and the 2 per cent increase in the statutory minimum and maximum of the main teachers' pay range from 2017-18. Beyond the Spending Review period, we continue to assume that pensionable paybills grow in line with our forecasts for departmental spending in the absence of firm plans.
- Updated assumptions about the **effects of past policies**. In particular, we have removed a forecast adjustment in respect of the abolition of the NICs contracting out rebate from 2016-17 (a Budget 2015 measure), which should now be reflected in actual departmental spending and schemes' receipts.

4.138 In September, the Government announced that the 1 per cent cap on public sector pay rises would be lifted in 2018-19, two years earlier than planned, and that police pay in 2017-18 would be increased by 2.0 per cent in September 2017 and prison officers' pay by 1.7 per cent backdated to April 2017.¹¹ Total increases in resource DEL spending announced in the Budget average £1.9 billion from 2017-18 onwards, of which we have assumed around half will be spent on pay. This implies an average increase in schemes' receipts of £0.4 billion over that period.

4.139 The precise effects will depend on the recommendations by the public sector Pay Review Bodies and how employers respond. In estimating the effect of higher departmental spending and the removal of centrally dictated pay policy, we have assumed that average earnings growth in the public sector will converge on whole economy earnings growth by 2020-21.

¹¹ Written statement: HCWS127.

Table 4.27: Key changes to public service pensions since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
Net public service pensions					
March forecast	12.1	13.7	13.2	14.2	15.7
November forecast	11.9	13.2	12.5	13.6	15.0
Change	-0.2	-0.5	-0.7	-0.6	-0.7
Expenditure					
March forecast	41.1	42.9	44.7	46.4	48.4
November forecast	41.1	43.2	45.0	46.7	48.7
Change	0.0	0.3	0.3	0.3	0.3
of which:					
CPI inflation	0.0	0.1	0.1	0.1	0.1
Scheme-specific factors	0.0	0.2	0.1	0.2	0.2
Income					
March forecast	-29.0	-29.2	-31.5	-32.2	-32.7
November forecast	-29.2	-30.0	-32.5	-33.0	-33.6
Change	-0.3	-0.8	-1.0	-0.9	-0.9
of which:					
Forecast changes	-0.1	-0.4	-0.3	-0.4	-0.6
TPS salary increase assumptions	0.0	0.0	0.0	-0.1	-0.2
CSPS transfers and workforce changes	-0.1	-0.2	-0.2	-0.2	-0.1
NHS paybill growth	0.0	0.0	-0.1	-0.1	-0.1
Other	0.0	0.0	0.1	-0.1	-0.2
Indirect effects of Government decisions	-0.1	-0.4	-0.7	-0.5	-0.3

Net expenditure transfers to EU institutions and possible substitute spending

4.140 Annex B provides greater detail on the UK's contributions to the EU's finances and how we forecast them, including for our 'no Brexit' counterfactual. It also describes the fiscally neutral post-Brexit approach we take in this forecast. This is unchanged from our previous post-referendum forecasts. We assume that, when the UK leaves the EU, any reductions in the UK's net expenditure transfers to the EU would be fully recycled into extra domestic spending. That recycled domestic spending could include:

- any additional spending to meet other **domestic spending priorities**;
- any **payments made to private or public sector recipients** to compensate them for the loss of EU funding; and
- any **payments made to the EU** after the UK exits, if the Government agreed to make such payments. For instance, the Government's February white paper stated that *"There may be European programmes in which we might want to participate. If so, it is reasonable that we should make an appropriate contribution."*¹²

¹² See paragraph 8.51 of *'The United Kingdom's exit from and new partnership with the European Union'*.

4.141 In Box 4.4 of our November 2016 *EFO*, we summarised various issues that external commentators had been discussing in respect of possible future financial flows between the UK and the EU. While there has been further discussion of these issues, there have not been any developments that would allow us to make meaningful assumptions about future one-off or ongoing transfers to the EU.

Table 4.28: Expenditure transfers to EU institutions and possible substitute spending

	£ billion						
	Outturn		Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
'No-referendum' counterfactual	8.8	9.9	12.5	13.8	14.0	13.6	13.6
<i>Which is reflected in our forecast as:</i>							
Expenditure transfers to EU institutions	8.8	9.9	12.5	-	-	-	-
Assumed domestic spending in lieu of EU transfers	-	-	-	13.8	14.0	13.6	13.6

4.142 Table 4.29 summarises the main changes to our forecast since March, which include:

- A **weaker euro-sterling exchange rate** has an uneven effect at the start of the forecast due as it affects the sterling value of the rebate with a lag, but then adds £0.2 billion a year on average from 2019-20 onwards as it increases the sterling value of euro-denominated contributions by more than it reduces the UK's share in the euro-denominated bases used to calculate those contributions.
- **Downward revisions to UK growth** in this forecast, alongside upward revisions to growth in the rest of the EU in the IMF's latest *World Economic Outlook*, reduces spending by around £0.3 billion a year from 2018-19 onwards.
- Lower-than-expected **EU budget implementation**, reflecting slow progress in structural and investment funds spending. We have increased our forecast for the resulting surplus on the 2017 budget, which means more money is expected to be returned to Member States during 2018. This repeats the pattern of the previous year. We assume that relatively low implementation rates will persist in 2018, but then be followed by higher spending in later years of the current Multiannual Financial Framework period, which leads to higher expenditure transfers in our 'no Brexit' counterfactual.
- A change to **the expected pattern of payments in 2018**. Until 2016, the Commission tended to draw forward the maximum five months' worth of full annual contributions into the first quarter of the calendar year. In 2016 and 2017, lower spending prompted the Commission to draw forward 4.3 months' worth in 2016 and 3 months' worth in 2017. In light of this we assume a draw-forward of four rather than five months in 2018, which moves £1 billion of 2018 calendar year expenditure from 2017-18 into 2018-19.
- **Other factors** include the Commission's revisions to contribution bases agreed in May, which have raised spending in 2017-18 and reduce it in 2018-19.

Table 4.29: Key changes to expenditure transfers to EU institutions on a 'no referendum' counterfactual basis

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	11.5	12.6	12.7	13.1	13.7
November forecast	9.9	12.5	13.8	14.0	13.6
Change	-1.6	0.0	1.2	0.9	-0.1
<i>of which:</i>					
Sterling-euro exchange rate	0.2	-0.1	0.2	0.3	0.3
UK and EU growth forecasts	0.9	-1.0	-0.5	-0.6	-0.6
EU budget implementation	-1.6	-0.2	1.3	1.1	0.1
2018 draw-forward assumption	-1.0	1.0	0.0	0.0	0.0
Other factors	0.0	0.1	0.1	0.1	0.1

Note: Annex B and the supplementary fiscal tables on our website show details of our latest forecasts for our GNI and VAT payments and the rebate, and the various annual adjustments to those transactions that are assumed within our forecast. They also include a table that shows our assumptions about the EU annual budgets, and the adjustments to budget ceilings under the various flexibilities allowed in the 2014-2020 Multiannual Financial Framework, and our assumptions about implementation rates against the adjusted ceilings.

Locally financed current expenditure

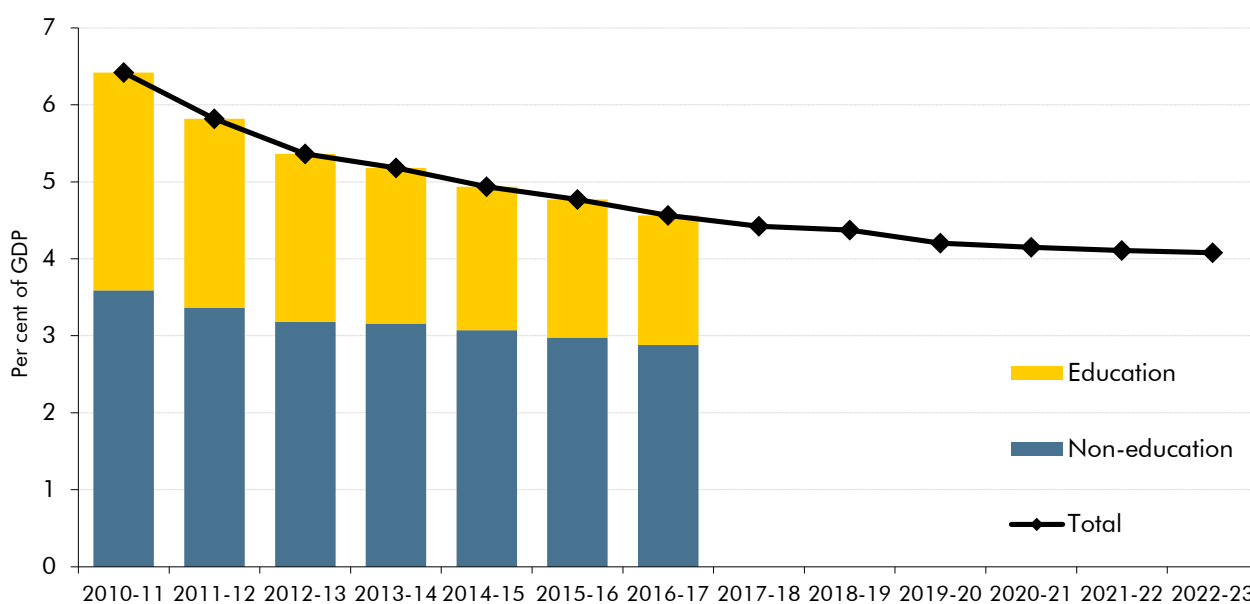
- 4.143 We forecast local authority spending by forecasting the sources of income that local authorities use to finance their spending – including grants from central government and local sources of finance – and the extent to which authorities will spend more or less than that income through changes to their reserves or borrowing. Our forecast therefore encompasses spending financed by grants, which are mostly in DELs, and local authority self-financed expenditure (LASFE), which is in AME. Tables 4.30 and 4.31 focus on LASFE, which has been the largest source of upward revision to our public spending forecast since March. Further detail is available in supplementary tables on our website.
- 4.144 There are a number of important policy developments and associated uncertainties affecting this forecast. Converting schools into academies switches grant-financed local authority spending into central government spending, which affects all years of our forecast, but with uncertain speed and magnitude. The rollout of universal credit, also uncertain in speed and magnitude, switches grant-financed local authority spending on housing benefit into central government spending. In our forecast presentation, this only affects 2017-18, because of the way universal credit is treated in our welfare spending forecast (described earlier in this section). But in reality it will affect all years. There is also uncertainty around the 100 per cent business rates retention policy, which will raise LASFE and reduce central government spending. The legislation through which this was to be implemented has not been laid in Parliament and the Government has not set out when it will be.
- 4.145 Table 4.30 summarises the main changes to our current LASFE forecast. When looking at these changes, it is important to distinguish between those related to council tax and business rates – which have offsetting effects on our receipts forecast and are therefore neutral for borrowing – and those related to the net use of current reserves or changes in the amounts set aside to repay debt – which affect our borrowing forecast.

- 4.146 Our March forecast assumed that English local authorities would underspend against their current budgets by £2.5 billion in 2016-17 and that they would draw £1.3 billion from their reserves to finance higher spending. Provisional outturn data point to smaller underspends (only £1.2 billion), with half the difference from our March forecast reflected in current LASFE and half in central government grants. Local authorities drew down a net £1.5 billion from their reserves to finance higher spending, which is significantly larger than any of the drawdowns seen over the last decade. Even so, local authorities in England still had significant reserves outstanding at the end of 2016-17. The extent to which these are used over the forecast period is an important source of uncertainty in our borrowing forecast. Recent trends are discussed in Box 4.4.
- 4.147 We have revised up our forecast for how much English local authorities will draw down from their reserves over the next three years. This reflects:
- **Outturn data:** local authorities have drawn down reserves in 2015-16 and 2016-17. The amount drawn down last year was higher than in 2015-16 and higher than we had assumed in our March forecast.
 - **Scope for reserves drawdown:** English local authorities' stocks of reserves have risen from £16.3 billion in 2010-11 to a peak of £24.8 billion in 2014-15 and stood at £23.1 billion in 2016-17. Relative to their current expenditure (excluding housing benefit), local authorities' stock of reserves have risen from 15.9 to 25.5 per cent between 2010-11 and 2016-17 (although some of the rise is attributable to schools funding moving to central government through 'academisation'). We assume that these reserves have been accumulated for a purpose and that they will be used to ease the intensifying pressures on spending.
 - **Increasing pressures from social care responsibilities:** despite the additional funding for adult social care announced in March, local authorities remain under pressure as demand and costs for both adult and children's social care rise. In 2016-17, English local authorities with social care responsibilities drew down £1.4 billion from their reserves while those without such responsibilities (excluding the Greater London Authority) increased them by £0.2 billion.
 - **Other pressures:** higher inflation and the knock-on effects for local authorities of changes in public sector pay policy create further pressures within the context of real-terms budget cuts.
- 4.148 We now expect English local authorities to draw down £1.7 billion in total between 2017-18 and 2019-20, compared to our March forecast of £0.9 billion over that period. The largest drawdown (£1 billion) is expected in 2017-18. This is smaller than in 2016-17, which was the toughest year of the latest Local Government Finance Settlement, with a 4.3 per cent year-on-year real terms cut in core spending power. From 2020-21 onwards, we assume no net addition to or drawdown of reserves. We have assumed similar paths for Scottish and Welsh local authorities' use of reserves.

4.149 Charts 4.8 and 4.9 update the analysis we presented in March of two of the trends that inform our forecast judgement on local authorities' use of reserves. Respectively, they show:

- The **downward trend in local authorities' current spending as a share of GDP**. This includes spending financed by grants from central government as well as locally financed spending. Some of the decline reflects the 'academisation' of schools, but non-education spending has been on a declining path, too.¹³
- Recent trends in **local authority under- and over-spending against specific budget areas**. Data published since March show that the trends we noted in our previous *EFO* intensified in 2016-17. Spending on children's social services has exceeded budgets since 2010-11, and by increasing amounts since 2013-14, while spending on adult social care has exceeded plans by increasing amounts since 2014-15. Authorities also overspent against their total non-education budgets in 2016-17 for the first time since the financial crisis, in contrast to previous years when underspends in other areas outweighed overspends on social care.

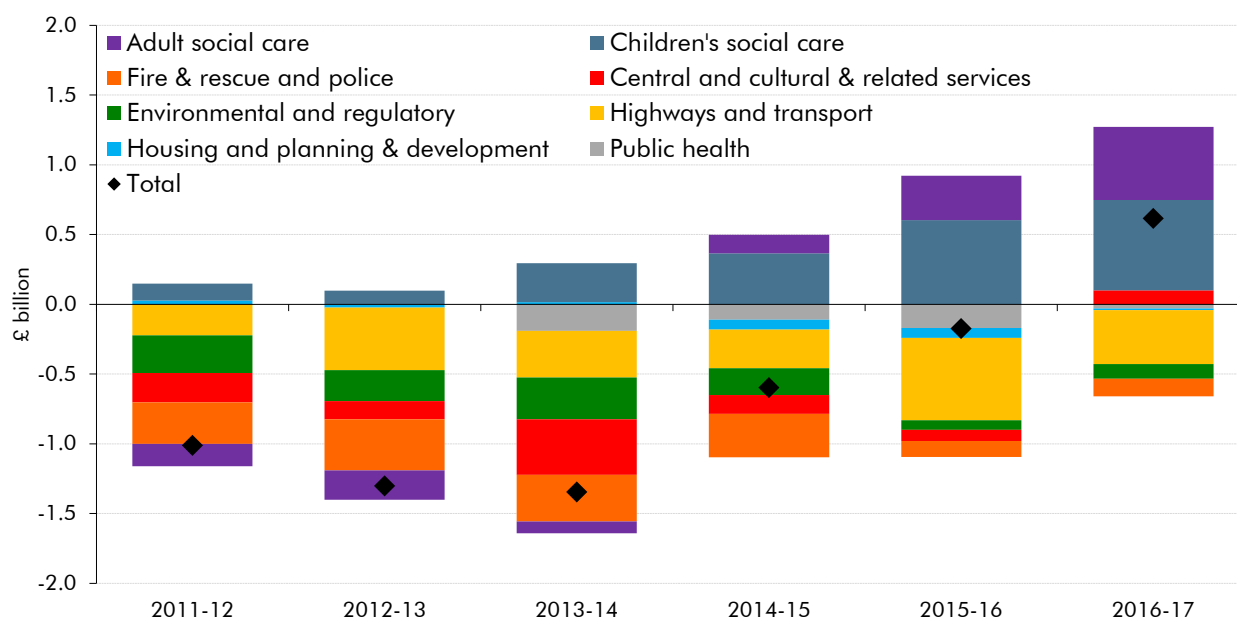
Chart 4.8: Local authority current spending (England)



Note: Responsibility for spending on public health was transferred to local authorities from 2013-14, so numbers in previous years are not directly comparable. Figures exclude housing benefit, as the rollout of universal credit creates a discontinuity in the series.
Source: DCLG, OBR

¹³ The chart below shows local authority total service expenditure as this excludes spending on housing benefit, the series for which is subject to the discontinuity discussed above in this section.

Chart 4.9: English local authority under- and over-spends against revenue budgets by service area



Note: Excludes spending on education and 'other' spending (which has not been allocated to one of the service areas listed). Housing services covers general fund revenue account (GFRA) spending only. Responsibility for spending on public health was transferred to local authorities from 2013-14, so numbers in previous years are not directly comparable.

Source: DCLG, OBR

4.150 Much recent focus of social care analysis – including our own – has been on the pressures from ageing and the National Living Wage on adult social care spending. But as Chart 4.9 shows, pressures are apparent on children's social care spending too, which are likely to reflect a combination of both demand and unit cost factors. This is an issue we plan to consider more fully in due course. Developments that could influence demand include trends in the prevalence of factors known to reduce parental capacity to meet their children's needs (e.g. poor mental health, substance abuse, alcohol abuse and domestic abuse), the response to newly identified needs (such as child sexual exploitation, increased recognition of the vulnerability of adolescents and trends in deprivation levels) and general population growth. Costs per intervention could be influenced by changes in the complexity and duration of need and the availability of suitably qualified staff.

4.151 We have incorporated the effects of two policy changes:

- One that the Treasury has chosen not to report on its scorecard: **the extension of 100 per cent business rates retention pilots to London boroughs in 2018-19**. This policy is neutral for spending (and borrowing) but increases current LASFE.
- One that is reported on the Treasury's scorecard: **bringing forward the switch from RPI to CPI indexation for business rates to 2018-19** (the receipts effects of which are described earlier in this chapter). This reduces current LASFE spending financed by retained business rates by an average of £0.2 billion a year from 2018-19, but the effect on total local authority spending is offset by higher DEL grants so that the full cost is borne by the Exchequer.

Box 4.4: Local authorities' use of reserves

In 2015-16 and 2016-17, English local authorities drew down from their stock of reserves by £0.4 and £1.5 billion respectively. This reversed the post-crisis build-up of reserves, which saw them rise by an average of just under £2 billion a year between 2010-11 and 2014-15.

We had expected the squeeze on local authority finances to prompt reserves drawdowns much earlier than has been the case, but the corner does now seem to have been turned. This may reflect budget pressures finally reaching the point at which authorities use reserves to maintain current levels of spending, although it is also possible that the reserves had been earmarked for use on specific projects that have now commenced. Prior to 2015-16, English local authorities last drew down from their reserves in 2009-10 (by £0.3 billion).

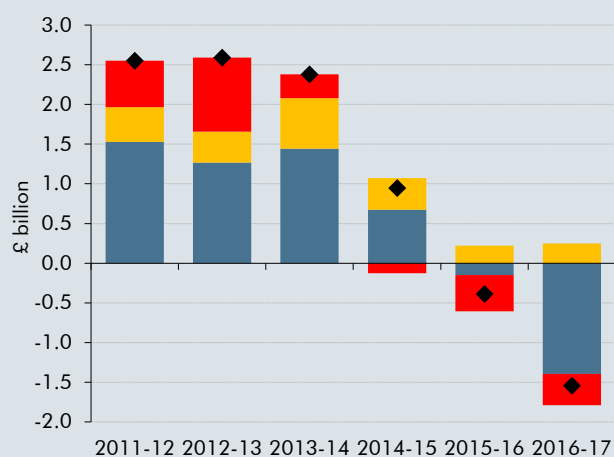
One striking feature of the net reserves drawdown last year was the difference in behaviour between local authorities with and without social care responsibilities. While the behaviour of individual authorities differed across years, Charts E and F show that within broad categories:

- The stock of reserves increased **between 2011-12 and 2014-15** for each of the three identified categories of local authority identified – with the only exception being the Greater London Authority (GLA) in 2014-15.
- **This trend was reversed in 2015-16**, when local authorities with upper-tier responsibilities, including education and social care, and the GLA both drew down from their reserves (by £0.2 and £0.5 billion respectively). Other authorities, without upper-tier responsibilities, added £0.2 billion to their stocks of reserves. In total, English local authorities drew down £0.4 billion in net terms from reserves in 2015-16.
- **In 2016-17**, upper-tier authorities drew down again, and by more than in 2015-16 (£1.4 billion). The GLA once again drew down from reserves (by £0.4 billion), while other authorities added further to their stock of reserves (by £0.2 billion).
- **In terms of outstanding reserves**, this has left the total stock in 2016-17 £4.2 billion (22.0 per cent) higher than in 2011-12. For upper-tier authorities, the stock was £1.9 billion (13.9 per cent) higher, for the GLA it was £0.3 billion (16.2 per cent) higher and for other authorities it was £2.0 billion (53.2 per cent) higher.

Local authorities with upper-tier responsibilities also set aside less to repay debt in 2016-17, whereas other authorities increased their voluntary provisions for repayment of principal.

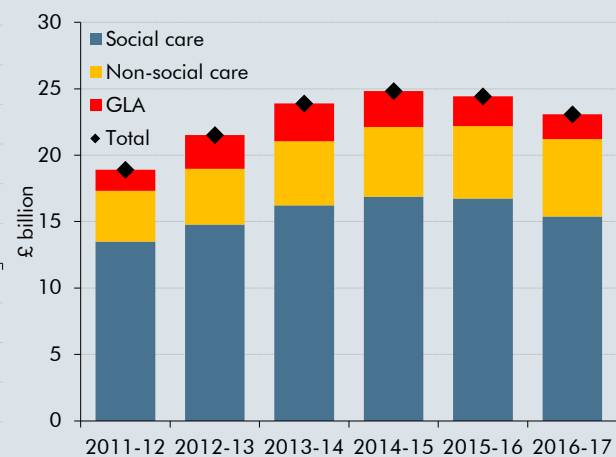
Looking ahead, despite the £2.0 billion of additional funding for social care announced in March, we assume that local authorities' budgets remain under pressure as the demand for both adult and children's social care continues to rise. As authorities are under statutory obligations to balance their budgets, we assume some of these drawdowns eventually (by 2020-21) taper off to zero. This is a key assumption in our forecast and is subject to significant uncertainty, not least because recent trends have tended to contrast with local authorities' own budget plans.

Chart E: Net addition to reserves by local authority type (England)



Source: DCLG, OBR

Chart F: Stock of reserves by local authority type (England)



4.152 The remaining changes to our forecast for current LASFE include:

- Small increases to the spending that can be financed by **council tax** receipts, mostly due to upward revisions to our council tax base forecast. Compared to our March forecast, outturn data also revealed that a slightly higher proportion of authorities with social care responsibilities took up an additional flexibility announced in December 2016 to increase council tax by up to 3 per cent in 2017-18. This sees more frontloading of receipts in 2017-18 and 2018-19, with offsetting reductions from 2019-20 onwards.
- Small downward revisions to the **locally retained share of business rates** that reflect similar revisions to our business rates forecast, discussed in the receipts section above.
- Small upward revisions to **other items** (by an average of £0.2 billion a year), largely reflecting upward revisions to our forecast of interest receipts.

Table 4.30: Key changes to locally financed current expenditure since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	46.6	48.7	49.1	50.5	52.0
November forecast	47.8	50.2	49.3	50.4	52.0
Change	1.2	1.5	0.3	0.0	0.0
<i>of which, changes in sources of local finance:</i>					
Forecast changes	1.2	0.9	0.5	0.2	0.3
<i>of which:</i>					
Council tax	0.2	0.2	0.2	0.2	0.2
Retained business rates	0.1	0.0	-0.1	-0.1	0.0
Net use of current reserves	0.5	0.3	0.3	0.0	0.0
Other	0.4	0.4	0.1	0.1	0.0
Effect of Government decisions	0.0	0.6	-0.2	-0.2	-0.2
<i>of which:</i>					
Scorecard measures	0.0	-0.2	-0.2	-0.2	-0.2
Non-scorecard policy change: business rates pilots extension	0.0	0.8	0.0	0.0	0.0

Locally financed and public corporations capital expenditure

4.153 Our latest forecasts for locally financed capital expenditure (capital LASFE) and public corporations' capital spending are shown in Table 4.31. These are net of asset sales, forecasts for which are shown in the supplementary tables on our website. Capital LASFE is measured net of capital spending by local authorities' Housing Revenue Accounts (HRAs) and the Transport for London (TfL) subsidiaries that are treated as public corporations in the National Accounts.¹⁴ All these items are switched out of capital LASFE in AME and included in our forecast for public corporations' capital expenditure to ensure it is consistent with the National Accounts.

4.154 We combine the changes for LASFE and public corporations' capital spending so that any changes to the switches net out and do not obscure the changes that affect TME. Abstracting from the reclassification of English housing associations, spending has been revised up by £4.4 billion in 2017-18 and by £3.3 billion a year on average thereafter. Over 60 per cent of the change over the full forecast period relates to local authorities' capital spending financed by 'prudential borrowing' – i.e. borrowing under the 'Prudential Code' that imposes certain conditions on local authorities. This reflects a much higher starting point, which increases spending in each year, and by particularly large amounts in the earlier years. These judgements reflect:

- A higher-than-expected **2016-17 outturn for local authority capital spending financed by prudential borrowing** – of £8.5 billion versus our March forecast of £6.0 billion.

¹⁴ These TfL transport subsidiaries trade under the company name 'Transport Trading Ltd' (TTL). The ONS currently classifies all the TTL subsidiaries as public corporations apart from Crossrail, which is classified as part of the local authority sector.

- The **latest in-year spending position** reported by local authorities up to the second quarter of 2017-18 suggests that higher capital spending.
- The **favourable terms on which local authorities can** borrow, for example from the Public Works Loan Board (PWLB), a statutory body that makes loans from the National Loans Fund (a central government entity) to local authorities in England, Scotland and Wales. New borrowing does not affect TME until it is actually spent on capital projects. Local authority capital spending in a given year can be financed by new borrowing or from capital reserves, which will reflect previous years' borrowing. So there is no straightforward relationship between existing stocks of debt and the expected level of capital spending financed by prudential borrowing in a particular year.
- An assumption that local authorities in aggregate will continue to engage in **commercial activity** at levels similar to those seen in 2016-17 over the next couple of years. Some local authorities may also use prudential borrowing to meet the costs of upgrading social housing following the Grenfell disaster.

4.155 Other like-for-like changes include:

- Downward revisions to our forecast of **asset sales**, which net off gross capital spending, has increased net capital expenditure by £0.5 billion a year on average. This is driven by lower-than-expected 2016-17 and year-to-date outturn data.
- Small downward revisions averaging £0.1 billion a year to reflect assumed **slippage on TfL capital spending**, related to its expected use of capital reserves and net lending to Crossrail. The largest change is in 2017-18, but this is neutral for total spending as it reduces the accounting adjustment related to local authority net lending by an equivalent amount. Accounting adjustments are discussed later in this chapter.
- Upward revisions to capital spending on **artistic originals**, aligning our forecast with the latest outturn data and ONS Blue Book 2017 revisions. Artistic originals' expenditure is neutral for borrowing as it is directly offset in public corporations' GOS (part of our receipts forecast).
- Other increases to **public corporations' capital spending** largely reflect the latest outturn data and Blue Book 2017 revisions, but we have also incorporated the latest capital spending plans for Scottish Water.¹⁵
- **Budget policy decisions** increase local authority housing-related capital spending by £0.3 billion a year on average from 2019-20 onwards.

¹⁵ See Scottish Water's delivery plan update, 2017.

Table 4.31: Key changes to locally financed capital expenditure and public corporations' capital expenditure since March

	£ billion				
	2017-18	2018-19	Forecast		
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	25.7	25.6	24.1	23.6	25.5
<i>Reclassification of English HAs</i>	-3.2	-8.1	-7.6	-7.5	-8.6
March forecast restated	22.5	17.5	16.4	16.1	16.9
November forecast	26.9	20.7	19.6	19.5	20.2
Change on a like-for-like basis	4.4	3.3	3.2	3.4	3.3
<i>of which:</i>					
Forecast changes	4.4	3.3	2.8	3.1	3.0
<i>of which:</i>					
Prudential borrowing	3.8	2.3	1.7	1.7	1.6
Other local authority spending	-0.2	0.0	0.2	0.3	0.3
OBR timing adjustment for TfL spending	-0.5	-0.1	-0.1	0.1	0.0
Less local authority asset sales	0.5	0.5	0.5	0.5	0.5
Artistic originals	0.3	0.3	0.3	0.3	0.4
Other public corporations' spending	0.5	0.3	0.2	0.2	0.2
Scorecard measures	0.0	0.0	0.4	0.3	0.3

Central government debt interest

4.156 Central government debt interest payments are forecast by applying appropriate interest rates to the corresponding stocks of conventional and index-linked gilts outstanding at different maturities and other debt, such as NS&I products and Treasury bills. Financial market expectations are used to derive relevant interest rates (for example, coupons on newly issued conventional gilts), while our inflation forecast is used for index-linked gilts and other index-linked debt.¹⁶ Flows associated with the Bank of England's Asset Purchase Facility (APF) similarly apply appropriate market-derived interest rates to the stocks of the APF's loan liability and to its gilt, corporate bond and loan assets.

4.157 Central government debt interest payments (net of APF) are expected to remain broadly flat as a per cent of GDP over the forecast period as projected increases in interest rates broadly offset the impact of net debt falling as a share of GDP in most years. In 2017-18, the impact of higher RPI inflation on accrued payments on index-linked gilts raises spending on debt interest. Thereafter, higher gilt yields – including real yields on the burgeoning stock of index-linked gilts – drive up central government debt interest payments in cash terms.

4.158 Table 4.32 shows that we have revised our forecast down since March. This reflects:

- Following the model review we reported in our 2017 FER, we have changed **the methodology we use to estimate the interest paid on new index-linked gilts**. The previous approach did not correctly capture some of the real-world effects of negative

¹⁶ Our forecasting approach was explained in Box 4.4 of our March 2015 EFO and discussed in the "in depth" section of our website. We publish a supplementary fiscal table on our website that presents the different stocks, flows and effective interest rates that make up our debt interest forecast.

real interest rates and the associated large premia on issuance. This reduces spending in all years by increasing amounts that reach £0.9 billion in 2021-22.

- **Market interest rate expectations** have fallen for gilt yields, but have risen for Bank Rate, which was increased from 0.25 to 0.5 per cent on 2 November. The net effect adds to spending, largely via the higher cost of financing the APF loan.
- Lower **RPI inflation** reduces payments on index-linked gilts in all years.
- Changes from the **pre-measures financing requirement** add to debt interest payments in each year, reaching £1.1 billion in 2021-22.
- **Government decisions** announced in this Budget add to spending in most years.

Table 4.32: Key changes to central government debt interest since March

	£ billion					
	Outturn	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast (net of APF)	36.0	41.5	39.1	40.1	40.9	44.0
November forecast (net of APF)	35.5	40.9	39.8	39.9	40.4	42.2
Change	-0.5	-0.5	0.7	-0.2	-0.6	-1.7
March forecast (gross of APF)	49.1	55.8	52.3	52.2	51.9	53.7
November forecast (gross of APF)	48.7	54.7	51.5	50.6	50.1	51.3
Change	-0.5	-1.1	-0.7	-1.6	-1.7	-2.4
<i>of which:</i>						
Interest rates	0.0	-0.1	0.1	-0.1	-0.3	-0.6
Inflation	0.0	-1.5	-0.9	-1.7	-1.3	-1.4
Financing	0.0	0.2	0.4	0.4	0.6	1.1
Modelling	-0.1	-0.1	-0.1	-0.3	-0.4	-0.9
Other forecast changes (including outturn)	-0.4	0.1	-0.1	-0.1	-0.5	-0.8
Effect of Government decisions	0.0	0.3	-0.2	0.3	0.1	0.2
Changes from the Asset Purchase Facility						
March forecast	-13.1	-14.3	-13.2	-12.0	-10.9	-9.7
November forecast	-13.2	-13.7	-11.8	-10.7	-9.7	-9.1
Change	0.0	0.5	1.4	1.4	1.2	0.7
<i>of which:</i>						
Interest rates	0.1	0.5	1.3	1.2	0.8	0.4
Other	-0.1	0.1	0.1	0.2	0.3	0.2

Other AME

4.159 Spending on **company tax credits** has been revised up by an average of £0.3 billion a year over the forecast. That is split between higher-than-expected outturn spending and an increase in the rate of R&D tax relief for large companies announced in this Budget.

4.160 Our forecast for **BBC licence fee income** has been revised down slightly since March reflecting the lower-than-expected licence fee set for 2017-18 (of £147.00 rather than the £149.50 we had assumed). The fee was set ahead of the March Budget but the

Government did not inform us of that in time for us to include it in our forecast. For the remainder of the forecast period, we continue to assume that the licence fee rises in line with our forecast for CPI inflation. Our **BBC current spending forecast** is little changed overall since March, but now reflects the Treasury's advice that they expect the ONS is most likely to treat BBC Studios as a public corporation, after it was launched as a wholly-owned commercial subsidiary of the BBC in April 2017.

- 4.161 Our forecast for **Network Rail** current spending is up by an average of £0.6 billion a year on March and by increasing amounts from 2018-19 onwards. This mostly reflects downward revisions to the forecast for Network Rail income from track access charges, which nets off current spending. The changes to Network Rail capital spending in 2017-18 and 2018-19 reflect the latest information provided to us by the Treasury on planned asset sales before we closed our pre-measures forecast. We were told that no sales were expected in 2017-18, but £1.2 billion in 2018-19 (compared to £0.7 and £0.8 billion at our March forecast). We were also advised that the majority of these sales were expected to be treated as negative capital spending (reducing both debt and borrowing) rather than financial transactions (reducing debt but not borrowing). But this advice was reversed too late to include in this forecast, so our forecast of Network Rail capital spending in 2018-19 is lower than it would otherwise have been. We will correct this in our next forecast and will be changing the processes underpinning the production of the forecast, which is unusual in that it falls under the AME heading in the Treasury's control framework, although the Treasury manages it as though it were DEL. Small changes from 2019-20 onwards reflect the Government's latest policy assumption for capital spending in the next control period.
- 4.162 Spending on **other PSCE in departmental AME** is a little lower than in March. We have revised down our forecast for **other PSGI in departmental AME** more significantly, by £0.2 billion in 2017-18 increasing to £0.8 billion in 2021-22. This largely reflects downward revisions to spending associated with the lifetime and Help to Buy ISAs. The factors driving these changes are described in Annex A.
- 4.163 We have reduced our forecast for growth in **general government depreciation**, which leads to progressively larger downward revisions in current spending over the forecast period and upward revisions to net investment spending. This reflects lessons drawn from analysis underpinning this year's *FER*, which showed that our depreciation model consistently over-predicted outturns, particularly for central government. Depreciation affects the current budget but is neutral for borrowing as a whole.
- 4.164 **VAT refunds** expenditure is neutral for borrowing, as it is offset in receipts. We have revised our forecast up in light of the latest outturn data and the effects of higher central and local government spending – the former largely due to Budget policy announcements, the latter due to our forecast judgements.
- 4.165 We have changed the way we forecast **imputed pensions** to bring them into line with the methodological and classification changes introduced in the ONS in September. New estimates in relation to local government funded pension scheme deficits are substantially lower than before, so we have reduced our forecast too – by around £2 billion a year

relative to March. We assume that imputed spending remains flat over the forecast period, but this is likely to change when the results of the triennial revaluation of the scheme become available next year. The ONS has also included imputed spending in relation to some schemes that it judges to be under the effective control of central government. Relevant data are limited and we have assumed that imputed spending in relation to these schemes will be flat at around £0.9 billion a year. The net effect of these revisions is to reduce imputed spending on general government funded pensions by £1.1 billion a year on average relative to our March forecast.

- 4.166 The profile of our **tax litigation** forecast has changed significantly since March. These payments only affect spending if they are deemed to be a 'final settlement', with any interim payments in effect treated as a loan to the claimant and therefore affecting debt but not spending. Our forecast is produced top-down, largely drawing on information published in HMRC's accounts. It has been revised down in the near term, with no final payments expected to take place in 2017-18. And following the Supreme Court's ruling in favour of HMRC in the landmark Littlewoods case, we have adjusted our forecast to be consistent with no further payments related to that case.
- 4.167 **Environmental levies** include levy-funded spending policies such as the renewables obligation (RO), contracts for difference (CfD), feed-in tariffs (FITs), the capacity market scheme and the warm home discount. Most are neutral for borrowing as they are directly offset by measured receipts. These forecasts and the revisions since March are explained in the receipts section.
- 4.168 Expenditure on **public corporations' debt interest** has been revised down significantly relative to our March forecast – by £1.3 billion in 2017-18 and by an average of £3.5 billion a year thereafter – but this reflects the reclassification of English housing associations to the private sector, as described in the housing associations section below. Like-for-like changes since March are small.
- 4.169 Our AME forecast includes a number of **National Accounts adjustments** that are included in the definitions for PSCE and PSGI. Table 4.17 shows that we have revised these up by £1.1 billion in 2017-18, split evenly between PSCE and PSGI. From 2018-19 onwards, revisions on the PSCE side are small but those on the PSGI side reduce capital spending by an average of £0.8 billion a year:
- The main changes to **adjustments affecting PSCE** include a £0.5 billion a year adjustment related to local authorities' parking fines income, which the ONS now treats as current receipts. From 2018-19 onwards this is offset by a change in the adjustment for local authorities' imputed equity injection into their Housing Revenue Accounts. This is offset in our public corporations' gross operating surplus (GOS) forecast (part of our receipts forecast) and is neutral for borrowing.
 - The main changes to **adjustments affecting PSGI** are more significant. The largest relates to net financial transactions within local authorities' capital spending, the reduction of which has increased our forecast of capital spending by £1 billion in

2017-18. This relates to TfL's financing of Crossrail construction, as noted in the local authority capital spending section above. The other material change relates to local authorities' receipts of capital grants from the private sector, which we have increased by an average of £0.7 billion a year, reducing PSGI. This reflects latest outturns and our updated forecasts for the relevant local authorities' capital spending.

Housing associations

Reclassifications

- 4.170 Unusually by international standards, the fiscal aggregates used to summarise developments in the UK public finances – and for which successive governments have set debt and deficit targets – encompass the entire public sector, including public corporations as well as central government and local authorities. This removes the incentive to hide governments' liabilities in public corporations, but in doing so creates a similar incentive in relation to the distinction between public and private corporations. In subjecting the public finances to scrutiny – and to be able to describe their evolution in a consistent way – it is therefore important to look closely at any government action or decision by the statistical authorities that moves bodies into or out of the public sector.
- 4.171 The Office for National Statistics decides whether to classify bodies to the public sector on the basis of the ESA10 international standards. As the ONS describes it: *"The fundamental question is 'does government exercise significant control over the general corporate policy of the unit?' The difference between the public and private sectors is determined by where control over the organisation lies, rather than by 'ownership' or whether or not the entity is financed from public funds."*¹⁷
- 4.172 On this basis, in October 2015 the ONS reclassified English housing associations – strictly 'private registered providers' of social housing – from the private to the public sector with effect from July 2008. This reflected the ONS's assessment of the control exerted over housing associations by local authorities and by central government through the Homes and Communities Agency. Its judgement reflected various pieces of legislation, including the Housing Regeneration Act 2008. Housing associations in the rest of the UK were later reclassified to the public sector too. Bringing housing associations into the public sector significantly increased measured public sector borrowing and debt, as discussed below.
- 4.173 Since this reclassification the Government has sought to reduce local and central government control over housing associations in England. The Housing and Planning Act 2016 has been followed by several further pieces of legislation, most recently a statutory instrument on *'The regulation of social housing (influence of local authorities) (England) Regulations 2017'*. Among other things, this restricts the percentage of officers that a local authority may nominate as board members of a housing association and removes a local authority's ability to hold voting rights.

¹⁷ONS, UK economic statistics sector and transaction classifications: the classification process.

- 4.174 This instrument was approved by Parliament on 15 November, at which point the Treasury formally “invited” the ONS to reconsider the statistical classification of English housing associations, having already sought a provisional view ahead of the regulations being passed. The ONS duly determined that “*local authority and central government influence in combination with the existence of nomination agreements does not constitute public sector control*” and announced that they would be reclassified to the private sector with immediate effect.¹⁸ Consequently we have prepared this forecast consistent with this reclassification.
- 4.175 Referring to the decision, the Secretary of State for Communities and Local Government said in a speech on 16 November 2017: “*And today we’re [sic] reclassifying housing associations, taking them out of the public sector and off the government’s balance sheet. I know it sounds like a piece of bureaucratic box-ticking. But the results be far-reaching. Freed from the distractions of the public sector, housing associations will be able to concentrate on developing innovative ways of doing their business, which is what matters most: building more homes*”.¹⁹
- 4.176 But in written evidence to the House of Lords Secondary Legislation Scrutiny Committee earlier in the autumn, his department earlier stated that: “*The only reason these regulations have been introduced is to seek ONS to reclassify housing associations to the private sector. In preparing [them], we have ensured that these only go as far as we have to, to reclassify housing associations... Local authorities remain able to influence housing associations through the various contracts and other agreements jointly negotiated.*”²⁰
- 4.177 Given the unusual candour with which the motivation for the change in regulations has been expressed, we have taken particular care in this *EFO* to set out as transparently as we can the impact of the reclassification on our forecast (see below) and on the Government’s performance against its formal and informal fiscal objectives (in Chapter 5 and the fiscal aggregates section of this chapter). We also note in paragraph 4.236 that the reclassification does not improve the underlying health or reduce the riskiness of the public finances if you believe that the Government would still feel constrained to intervene financially if one or more housing associations found itself in severe financial difficulty. We have not increased our residential investment forecast to reflect the reclassification.
- 4.178 The ONS’s decision only applies to housing associations in England, but developments in the devolved administrations could see it extended:
- **In Wales**, primary legislation – the Regulation of Registered Social Landlords (Wales) Bill – was laid on 16 October. The ONS has stated that if the legislation were passed in its current form, Welsh housing associations would be reclassified to the private sector. As this primary legislation is subject to amendment, the ONS judgement is preliminary. On this basis there is insufficient certainty about whether or when a reclassification would take effect for us to reflect it in this forecast.

¹⁸ ONS, *Statement on classification of English housing associations*, November 2017.

¹⁹ DCLG, *Sajid Javid’s speech on the housing market*, November 2017.

²⁰ House of Lords Secondary Legislation Scrutiny Committee, 6th Report of Session 2017-19, October 2017.

- **In Scotland**, primary legislation – the Housing (Amendment) Scotland Bill – was laid on 4 September. The ONS has committed to a further review of this sector if and when legislation is passed, but has not announced a preliminary judgement. Our forecast therefore continues to reflect Scottish housing associations as part of the public sector.
- **In Northern Ireland**, no legislation has been developed to date.

4.179 Given the legislative processes underway in Scotland and Wales, it seems likely that housing associations in both will be reclassified back to the private sector at some point. Should this happen, its effect on our forecast would be similar in nature, but smaller in size, to the reclassification of the English housing associations.

Changes to the forecast

4.180 The effect on our forecast of English housing associations moving outside the public sector is complicated. In Table 4.33 we restate our March forecast to be consistent with the reclassification. Transactions between housing associations and the private sector no longer affect PSNB or PSND because they take place between private sector entities. By contrast, grants from central and local government to housing associations no longer net out within the public sector, so now add to public spending, borrowing and debt.

4.181 The impact of the reclassification is therefore to reduce PSNB by the amount of housing associations' 'own-account' borrowing (i.e. that borrowing not financed by grants) and to reduce PSND by the stock of this borrowing. While this moves significant amounts across a statistical boundary, it does not materially affect fiscal sustainability or exposure to risk given the public policy role of housing associations and the resulting likelihood that governments would ultimately stand behind them if they were to suffer significant financial difficulties.

4.182 In order to restate our March forecast on the new basis ahead of the ONS doing so in the public finances data, we have assumed that the borrowing of English housing associations is even through the year, so the 2017-18 borrowing figure is based on seven months inside the public sector and five months outside it. From 2018-19 onwards, all own-account borrowing for English housing associations is removed. This reduces PSNB by £1.4 billion in 2017-18 and by an average of 3.7 billion a year from 2018-19 onwards.

4.183 As PSND is a measure of the stock of debt at the end of the year, a reclassification part-way through the year leads to its full effect being felt in the year in which it takes effect. All English housing associations' debt has therefore been removed from 2017-18 onwards when restating our March forecast. This produces a step change in PSND of £67 billion in 2017-18. The impact of the reclassification increases steadily over the forecast as further years of borrowing are excluded, with the debt impact rising to £81 billion in 2021-22.

4.184 Like-for-like changes to our forecast in 2017-18 mostly relate to England and largely reflect changes to ONS methodology following a review and a small amount of outturn data. From 2018-19 onwards, like-for-like changes relating to housing associations in Scotland, Wales and Northern Ireland average just £40 million a year. Given the much smaller effects of

housing associations on the public finances once English ones have been reclassified, we will consider them alongside other public corporations in future forecasts rather than discussing them separately as we have since our November 2015 EFO.

Table 4.33: Key changes to housing associations borrowing since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	3.9	4.3	3.9	3.9	4.5
Reclassification effect	-1.4	-3.9	-3.5	-3.4	-4.1
March forecast restated	2.5	0.4	0.4	0.4	0.5
November forecast	2.7	0.4	0.4	0.4	0.4
Like-for-like change	0.2	0.0	0.0	0.0	0.0

Table 4.34: Key changes to housing associations debt since March

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	73.6	77.8	81.6	85.4	89.8
Reclassification effect	-67.0	-70.7	-74.1	-77.4	-81.4
March forecast restated	6.7	7.1	7.5	8.0	8.4
November forecast	6.6	7.0	7.4	7.8	8.3
Like-for-like change	-0.1	-0.1	-0.1	-0.1	-0.2

4.185 Table 4.35 shows the individual lines of our spending and receipts forecasts that have been affected by the reclassification of English housing associations. The larger effects are discussed in the relevant sections of this chapter.

Table 4.35: Housing associations reclassification: detailed components

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	3.9	4.3	3.9	3.9	4.5
Reclassification effect	-1.4	-3.9	-3.5	-3.4	-4.1
<i>of which:</i>					
Current receipts	2.8	6.5	6.4	6.8	7.2
<i>of which:</i>					
Gross operating surplus	2.6	6.3	6.1	6.5	6.9
Interest and dividends	0.1	0.3	0.3	0.3	0.3
Total managed expenditure	-4.2	-10.4	-9.9	-10.2	-11.3
<i>of which:</i>					
PSCE in AME: Public corporations debt interest	-1.4	-3.4	-3.5	-3.5	-3.6
PSGI in CDEL	0.4	1.1	1.2	0.8	0.9
PSGI in AME: Local authority capital expenditure	0.3	0.9	0.7	0.9	1.0
PSGI in AME: Public corporations capital expenditure	-3.5	-9.0	-8.3	-8.4	-9.6

Note: This table uses the convention that a positive figure means an increase in PSNB (e.g. a reduction in receipts or increase in spending will have a positive effect on PSNB).

Loans and other financial transactions

4.186 Public sector net borrowing (PSNB) is the difference between total public sector receipts and expenditure each year, measured on an accrued basis. But the public sector's fiscal position also depends on the flow of financial transactions, such as loans and repayments between government and the private sector, and the sale of financial assets to the private sector. These do not directly affect PSNB, but they do lead to changes in the Government's cash flow position, its stock of debt and hence debt interest payments, which do affect PSNB.

4.187 The public sector net cash requirement (PSNCR) is the widest measure of the public sector's cash flow position in each year.²¹ It drives our forecast of public sector net debt (PSND), which is largely a cash measure. Estimating the PSNCR also allows us to estimate the central government net cash requirement (CGNCR), which in turn largely determines the Government's financing requirement – the amount it needs to raise from instruments including treasury bills, gilt issues and NS&I products.

4.188 Differences between the PSNCR and PSNB can be split into the following categories:

- **Loans and repayments:** loans that the public sector makes to the private sector do not directly affect PSNB, but the cash flows affect the PSNCR.
- **Transactions in other financial assets:** the public sector may acquire or sell financial assets such as loans, equity or corporate bonds. When it sells an asset for cash, the initial transaction does not affect PSNB, whereas the cash received will reduce the PSNCR. But both PSNB and the PSNCR will be higher in future years if the Government foregoes an income stream that flowed from the asset sold.
- **Monetary policy operations:** Bank of England policies that affect the PSNCR, such as lending under the Term Funding Scheme.
- **UK Asset Resolution:** we separately identify transactions relating to UKAR holdings, including asset sales and the natural rundown of loan books that the Government acquired during the financial crisis.
- **Accruals adjustments:** PSNB is an accruals measure of borrowing in which, where possible, spending and receipts are attributed to the year of the activity to which they relate. In contrast, PSNCR is a cash measure in which spending and receipts are attributed to the year in which the cash flow takes place. These timing differences need to be adjusted for.
- An **alignment adjustment** between PSNB and PSNCR accounts for other factors that are expected to persist.

²¹ Consistent with the measures of debt and deficit used in this forecast, PSNCR excludes the public sector banks.

Table 4.36: Reconciliation of PSNB and PSNCR

	£ billion					
	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Public sector net borrowing	49.9	39.5	34.7	32.8	30.1	25.6
Loans and repayments	21.6	24.4	25.3	25.3	26.4	26.4
<i>of which:</i>						
Student loans ^{1,2}	14.0	15.6	16.9	17.8	18.2	18.6
DFID ³	0.9	0.7	1.0	1.2	-	-
Green Investment Bank	0.1	0.0	0.0	0.0	-	-
Business Bank/Partnership	0.2	-0.1	0.2	-0.2	-	-
Help to Buy	3.6	4.6	5.1	5.6	-	-
UK Export Finance	0.7	0.5	0.9	0.6	-	-
Ireland	0.0	0.0	-1.6	-1.6	-	-
Other lending ⁴	2.9	3.4	3.3	2.5	8.7	8.4
Allowance for shortfall	-0.6	-0.4	-0.6	-0.6	-0.6	-0.6
Transactions in financial assets	-5.3	-5.6	-5.5	-5.4	-5.4	-3.0
<i>of which:</i>						
Student loan book	-2.4	-2.4	-2.4	-2.4	-2.4	0.0
Lloyds Banking Group share sales	-1.0	0.0	0.0	0.0	0.0	0.0
RBS share sales	0.0	-3.0	-3.0	-3.0	-3.0	-3.0
Green Investment Bank	-1.8	0.0	0.0	0.0	0.0	0.0
Other	-0.2	-0.2	-0.1	-0.1	0.0	0.0
Bank of England schemes	77.7	0.0	0.0	-53.5	-76.5	0.0
UKAR asset sales and rundown	-13.9	-11.7	-2.7	-1.9	0.0	0.0
Accruals adjustments	1.9	0.9	-4.4	11.6	2.1	10.9
<i>of which:</i>						
Student loan interest ^{1,2}	3.2	4.6	5.2	5.6	6.4	7.3
PAYE income tax and NICs	1.1	0.4	0.0	1.0	1.0	0.9
Indirect taxes	-0.2	1.0	0.6	0.6	0.6	0.6
Corporation tax and bank surcharge	0.0	1.7	-6.2	-4.0	0.9	1.5
Other receipts	2.8	3.0	3.4	2.9	2.8	2.3
Index-linked gilts ⁵	-10.4	-12.7	-10.9	1.7	-14.3	-7.1
All gilts	5.3	4.6	4.5	4.7	5.1	4.8
Network Rail	1.1	-0.2	0.5	0.7	0.9	0.9
Other expenditure	-1.0	-1.6	-1.6	-1.6	-1.2	-0.2
Other factors	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
<i>of which:</i>						
Alignment adjustment	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
Public sector net cash requirement	131.1	46.6	46.7	8.0	-24.2	59.1

¹ The table shows the net flow of student loans and repayments. This can be split out as follows:

Cash spending on new loans	16.7	18.3	19.7	20.9	21.6	22.4
Cash repayments	2.7	2.7	2.8	3.0	3.4	3.7

² Cash payments of interest on student loans are included within 'Loans and repayments' as we cannot easily separate them from repayments of principal. To prevent double counting the 'Student loan interest' timing effect therefore simply removes accrued interest.

³ DFID figures include loan disbursements, loan repayments and equity investments.

⁴ Other lending in 2021-22 and 2022-23 include an estimate of aggregate lending by a range of government schemes.

⁵ This reconciliation to the net cash requirement does not affect public sector net debt.

Table 4.37: Changes in the reconciliation of PSNB and PSNCR

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
Public sector net borrowing	-8.4	-1.3	13.4	12.2	13.3
Loans and repayments	0.5	2.7	3.6	3.4	2.6
<i>of which:</i>					
Student loans ^{1,2}	-0.5	-0.5	-0.5	-0.4	-0.5
DFID ³	-0.3	0.0	0.0	0.0	-
Green Investment Bank	-0.2	-0.2	-0.1	0.0	-
Business Bank/Partnership	0.0	0.0	0.0	0.0	-
Help to Buy	1.9	2.9	3.3	3.8	-
UK Export Finance	0.2	0.1	0.2	-0.2	-
Ireland	0.0	0.0	0.0	0.0	-
Other lending ⁴	-0.3	0.5	0.7	0.2	3.3
Allowance for shortfall	-0.3	-0.1	0.0	0.0	-0.3
Transactions in financial assets	1.1	-3.1	-3.0	-3.0	-5.4
<i>of which:</i>					
Student loan book	2.4	0.0	0.0	0.0	-2.4
Lloyds Banking Group share sales	0.4	0.0	0.0	0.0	0.0
RBS share sales	0.0	-3.0	-3.0	-3.0	-3.0
Green Investment Bank	-1.8	0.0	0.0	0.0	0.0
Other	0.1	-0.1	0.0	0.0	0.0
Bank of England schemes	35.2	0.0	0.0	-3.5	-36.5
UKAR asset sales and rundown	4.8	-6.6	-2.0	-1.1	0.7
Accruals adjustments	2.3	2.3	2.3	8.7	4.5
<i>of which:</i>					
Student loan interest ^{1,2}	0.2	0.1	-0.3	-0.6	-0.7
PAYE income tax and NICs	-0.6	-0.3	-1.4	-0.3	-0.5
Indirect taxes	-0.9	0.0	-0.2	0.0	0.0
Corporation tax and bank surcharge	-0.5	-0.1	-0.4	0.6	-0.4
Other receipts	-0.2	-0.1	0.1	0.0	-0.4
Index-linked gilts ⁵	2.9	2.2	3.1	7.7	4.0
All gilts	-0.1	0.0	-0.1	-0.3	0.5
Network Rail	-0.3	-0.7	0.0	0.0	0.0
Other expenditure	1.8	1.3	1.4	1.5	2.1
Other factors	0.0	0.0	0.0	0.0	0.0
<i>of which:</i>					
Alignment adjustment	0.0	0.0	0.0	0.0	0.0
Public sector net cash requirement	35.5	-5.9	14.3	16.6	-20.9

¹ The table shows the net flow of student loans and repayments. This can be split out as follows:

Cash spending on new loans	-0.3	-0.3	-0.5	-0.5	-0.7
Cash repayments	0.2	0.2	0.0	-0.1	-0.2

² Cash payments of interest on student loans are included within 'Loans and repayments' as we cannot easily separate them from repayments of principal. To prevent double counting the 'Student loan interest' timing effect therefore simply removes accrued interest.

³ DFID figures include loan disbursements, loan repayments and equity investments.

⁴ Other lending in 2021-22 includes an estimate of aggregate lending by a range of government schemes.

⁵ This reconciliation to the net cash requirement does not affect public sector net debt.

Loans and repayments

Student loans

- 4.189 Net lending by the public sector to the private sector, in particular for student loans, raises the net cash requirement relative to net borrowing in each year of our forecast. Student loan reforms since 2010 have increased the size of the loans, with future repayments being made over a longer period. In our 2017 *Fiscal sustainability report (FSR)*, on the prevailing policy settings, we estimated that student loans would increase PSND by 11.1 per cent of GDP in the late-2030s before falling to 9.3 per cent of GDP by 2066-67.
- 4.190 Relative to March, we have revised down our forecast of student numbers in England.²² The most recent UCAS clearing data for September 2017 show that acceptances from UK- and EU-domiciled applicants to English institutions fell by 2 per cent, following slow growth in student application rates since 2015.²³ We expect this to continue, so have assumed slower growth in the student entry rate than we did in March. New ONS population projections assume slightly more 18 to 19 year olds than the previous projections that underpinned our March forecast, but this age group is still expected to shrink year-on-year until 2021. The combined effect of these changes reduces our student numbers forecast by 5,000 in 2017-18, rising to 26,000 in 2021-22. There remains significant uncertainty around our medium-term forecast as the UK exits the EU, including policy uncertainty related to EU students.
- 4.191 Compared to March, we have revised down our student loans outlays forecast by around £0.3 billion in 2017-18, growing to £0.9 billion in 2021-22, primarily due to the lower student numbers. This is offset slightly by the Government's decision to increase the number of clinical places available to nursing students. It aims to deliver approximately 5,000 extra clinical places, which we have assumed will be achieved within our forecast horizon. This increases our outlays forecast by £0.1 billion a year on average from 2018-19 onwards.
- 4.192 The Government has announced two changes to the post-2012 student loans regime that have a modest effect on our medium-term forecast, but that have more significant long-term implications for the public finances:
- **Raising the repayment threshold:** the threshold beyond which former students must start to repay their loans will rise from £21,000 in 2017-18 to £25,000 in 2018-19, and be adjusted in line with average earnings thereafter. The same changes have been made to the thresholds that determine the amount of interest charged on an individual's loan balance. Students subsequently earning between £21,000 and £25,000 will no longer make any repayments, and those earning above £25,000 will repay less than they otherwise would have. In 2022-23, these changes reduce our repayments forecast by £0.6 billion. Over the long run, this is expected to reduce total repayments by around 15 per cent, which in turn would increase the cost of writing off outstanding balances at the 30-year term of the loans.

²² Our student numbers forecast covers UK and EU domiciled HEFCE fundable full-time undergraduate entrants to English higher education institutions and further education colleges. Details are available in a supplementary fiscal table on our website.

²³ UCAS *daily clearing analysis 2017*, September 2017.

- **Freezing the maximum tuition fee cap:** rather than rising 3.2 per cent in line with RPIX inflation, tuition fees in 2018-19 will be capped at the 2017-18 levels (the most common being £9,250). They will continue to increase by RPIX inflation in future years. This reduces our outlays forecast by £0.2 billion in 2022-23. It would also reduce slightly the outstanding balances that would be written off after 30 years, but the effect would be negligible relative to the effect of raising the repayment threshold.

Other lending

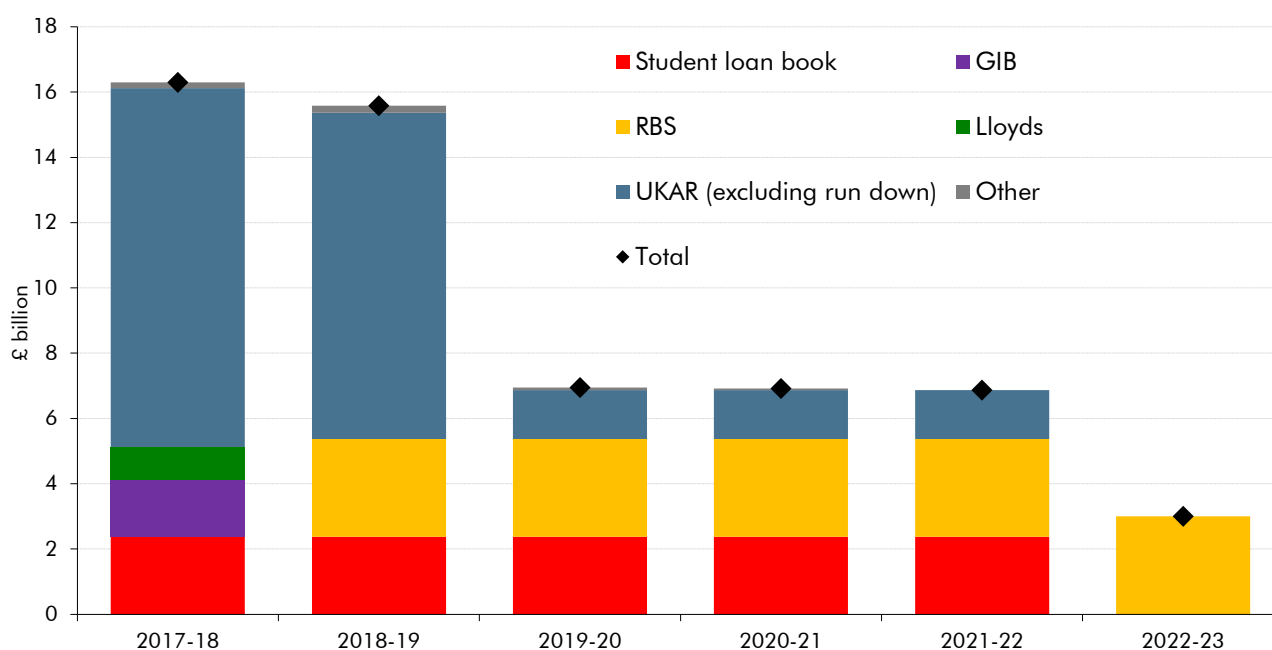
- 4.193 Other lending covers a range of Government schemes. We produce this forecast using information from the Treasury on planned lending by each institution or scheme, to which we apply a top-down adjustment for expected under-lending relative to those plans (or over-lending if thought appropriate). Relative to our March forecast planned lending has been reduced slightly across a number of schemes in 2017-18 including the removal of new lending from the Green Investment Bank which has been sold. We have also increased our top-down under lending assumption at the start and end of the forecast.
- 4.194 The Government has announced a further £10 billion extension to the Help to Buy equity loan scheme in England – a supposedly temporary scheme that has now been extended twice. It has also provided additional funding for devolved administrations of £2 billion. In 2016-17, loans extended under the scheme increased by £0.7 billion (43 per cent) on a year earlier. The Government expects similar increases in 2017-18 and 2018-19 and slower increases thereafter.
- 4.195 A number of smaller schemes have also been announced by the Government including schemes for estate regeneration and for charging infrastructure. Together these add £3.5 billion over the forecast.

Transactions in other financial assets

- 4.196 We only include financial asset sales and purchases in our forecasts when firm details are available that allow the effects to be quantified with reasonable accuracy and allocated to a specific year. There are a number of asset sales that currently meet these criteria. Chart 4.10 shows our latest forecast of major asset sales. All major asset sales are subject to uncertainty. We have assumed that there will be sufficient private-sector demand for the sales to take place and at a sufficiently attractive price for the transaction to go ahead. Selling most financial assets will produce an upfront benefit to PSND (and to PSNB via lower interest payments) but reduce future income, lowering interest and dividend receipts (affecting both PSNB and PSND).
- 4.197 Our latest forecast reflects:
- Since our March forecast, the Government has sold its last remaining shares in **Lloyds** and the majority of its stake in the **Green Investment Bank**. Together these yielded nearly £3 billion in 2017-18.

- On 31 October, the Government re-announced the first tranche of **sales of pre-2012 student loans** as part of its £12 billion programme of sales. In March we had expected two tranches to be sold in 2017-18, followed by one a year until 2020-21. The programme was then delayed by the General Election, so we now expect only one sale in 2017-18 and then one a year until 2021-22.
- The Government has also announced its intention to recommence the privatisation of RBS before the end of 2018-19 and to carry out over the forecast period a programme of sales expected to dispose of around £15 billion worth of shares. We have assumed that this will be spread evenly over the five years, generating £3 billion of proceeds a year. As the Government's announcement makes clear, sales will be subject to value-for-money considerations and prevailing market conditions, so there will always be a risk that sales do not take place – as happened when the previous programme of sales was put on hold after the EU referendum last year.

Chart 4.10: Proceeds from asset sales



Source: HM Treasury, OBR

Monetary policy interventions

4.198 Since March 2009, the Bank of England's Monetary Policy Committee (MPC) has deployed unconventional forms of monetary policy to support the economy. The purchase of gilts by the Asset Purchase Facility (APF) affects public sector net debt, but does not affect the flow measures of borrowing or the cash requirement. The interest payments and receipts associated with those gilts does affect borrowing.

4.199 In August 2016, the MPC announced a package of measures that included further gilt purchases and two new measures implemented through the APF: the 'Term Funding Scheme' (TFS) and the 'Corporate Bond Purchase Scheme' (CBPS). The MPC confirmed on

3 August 2017 that the drawdown period for the TFS would be closed on 28 February 2018. The overall usage of the TFS is determined by demand for the scheme and the Treasury provides an indemnity to cover TFS drawings. The indemnity has been increased to £140 billion ahead of the Budget, compared to £100 billion at the time of the Spring Budget. We had previously assumed that £90 billion of the then £100 billion indemnity would be utilised by the scheme's close in February 2018. We now assume that £130 billion of the £140 billion indemnity will be utilised. We continue to assume that all loans will have a term of four years and then be repaid. The TFS therefore adds £130 billion to the PSNCR cumulatively over 2017-18 and 2018-19 and it reduces it by that amount in 2020-21 and 2021-22.

UK Asset Resolution (UKAR) asset sales and rundown

- 4.200 The rundown of UKAR's Bradford & Bingley and NRAM plc (B&B and NRAM) loan books directly reduces the net cash requirement. In the meantime, the loans generate net interest that reduces net borrowing. As well as running down as mortgages are repaid, our March forecast reflected the government's decision to begin a major sale programme of B&B mortgages. The first tranche of these sales completed in April but the process leading up to the remaining sales that we had expected towards the end of 2017-18 was delayed by the General Election. We now expect these to be completed in early 2018-19.
- 4.201 Our March forecast also included further sales of UKAR assets. At this Budget the Government has announced its intention to sell all remaining UKAR assets by 2020-21. UKAR has historically met most of its sales plans, so our forecast reflects this being realised.

Accruals adjustments

- 4.202 To move from PSNB to PSNCR, it is necessary to adjust for the expected impact of timing differences between cash flows and accruals. For example, as taxes are generally paid in arrears, and if receipts are forecast to rise over time, the cash received each year will generally be lower than the accrued receipts. The timing difference is large for smaller firms' corporation tax.
- 4.203 A large component of the receipts timing adjustment relates to interest on student loans. This is included in the accrued measure of public sector current receipts from the point at which the loan is issued, but cash repayments do not begin until the former students' income rises above a specific threshold. This part of the forecast has been revised down marginally relative to March because of policy changes that reduce accrued interest receipts. Our forecast includes student interest payments related to all countries of the UK.
- 4.204 Similar timing adjustments are made for expenditure. The largest is for the timing of payments on index-linked gilts. This is very sensitive to RPI inflation, as well as to the uneven profile of redemptions from year to year. Positive RPI inflation raises the amount that governments will have to pay on index-linked gilts when they are redeemed. This commitment is recognised in PSNB as accrued debt interest spending each year, but the actual cash payments do not occur until redemption, which may be decades from now.

Since March, the downward revisions to RPI inflation in all years has reduced accrued debt interest in this year with an offsetting change in the accrual adjustment.

Alignment adjustment

4.205 Cash flows are usually more volatile than the underlying accrued position of the public finances, and reconciling borrowing and estimating the net cash requirement often proves difficult. The net cash requirement has come in lower than the bottom-up receipts, expenditure and financial transactions forecasts we use to project it would suggest.²⁴ We include a £1.1 billion a year ‘alignment adjustment’ for factors that we expect to persist.

Central government net cash requirement

4.206 The central government net cash requirement (CGNCR) is the main determinant of government’s net financing requirement. Table 4.38 reconciles CGNCR with PSNCR and Table 4.39 sets out the changes in this reconciliation since March. The reconciliation removes transactions associated with local authorities and public corporations from the PSNCR. Relative to March, the biggest change in this reconciliation relates to our revised assumptions regarding the Bank of England’s monetary policy operations, which affect public corporations’ net cash requirement at the start and end of the forecast period.

4.207 The classification of B&B and NRAM plc and Network Rail in the central government sector means that the CGNCR is no longer simply a measure of the cash required by the Exchequer to fund its operations, which forms the basis for the Government’s net financing requirement.²⁵ This has three effects:

- The **banks’ own cash requirements are included in the headline CGNCR**. Running down the banks’ loan books (including through asset sales) reduces the CGNCR by £13.9 billion in 2017-18, falling to zero by 2021-22, but this does not directly affect the Exchequer (this forecast is shown in Table 4.38).
- **Interactions between the Exchequer and these bodies net off** within the headline measure. The B&B and NRAM adjustment shows the difference between net cash received by UKAR and that transferred to central government.
- The Treasury now finances **Network Rail’s** new and maturing debt for a fee. Refinancing needs are projected at £1.5 billion in 2017-18, but decline over time.

²⁴ See Box 4.3 of our July 2015 EFO for a discussion of a number of changes we had made to our forecast as we explored the reasons for this discrepancy.

²⁵ The Government is publishing a revised financing remit for 2017-18 alongside the Budget. The OBR provides the Government with the forecast of the CGNCR for this purpose, but plays no further role in the derivation of the net financing requirement.

Table 4.38: Reconciliation of PSNCR and CGNCR

	£ billion					
	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Public sector net cash requirement (NCR)	131.1	46.6	46.7	8.0	-24.2	59.1
<i>of which:</i>						
Local authorities and public corporations NCR	89.2	5.1	2.0	-51.9	-78.7	2.8
Central government (CG) NCR own account	41.9	41.5	44.7	59.9	54.5	56.3
CGNCR own account	41.9	41.5	44.7	59.9	54.5	56.3
Net lending within the public sector	0.8	0.8	0.8	0.8	0.8	0.8
CG net cash requirement	42.7	42.3	45.5	60.7	55.3	57.1
B&B and NRAM adjustment	-0.3	2.1	1.9	1.9	0.1	0.1
Network Rail adjustment	1.0	1.0	-0.9	0.0	-0.8	-1.1
CGNCR ex. B&B, NRAM and Network Rail	43.4	45.4	46.5	62.6	54.6	56.0

Table 4.39: Changes in the reconciliation of PSNCR and CGNCR

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
Public sector net cash requirement (NCR)	35.5	-5.9	14.3	16.6	-20.9
<i>of which:</i>					
Local authorities and public corporations NCR	39.8	-1.0	-1.3	-5.7	-38.5
Central government (CG) NCR own account	-4.3	-4.9	15.6	22.3	17.6
CGNCR own account	-4.3	-4.9	15.6	22.3	17.6
Net lending within the public sector	0.0	0.0	0.0	0.0	0.0
CG net cash requirement	-4.3	-4.9	15.6	22.3	17.6
B&B and NRAM adjustment	0.2	0.5	2.0	1.5	-0.3
Network Rail adjustment	0.0	0.0	0.1	0.2	0.2
CGNCR ex. B&B, NRAM and Network Rail	-4.1	-4.3	17.7	24.0	17.5

Key fiscal aggregates

4.208 Our central forecast for the key fiscal aggregates incorporates the forecast for receipts, expenditure and financial transactions set out earlier in this chapter. In this section we explain the changes in a number of key fiscal aggregates:

- **Public sector net borrowing:** the difference between total public sector receipts and expenditure on an accrued basis each year. As the widest measure of borrowing, PSNB is a key indicator of the fiscal position. It was the fiscal mandate measure early in the last Parliament. We focus on it when explaining changes since our previous forecast.
- **Cyclically adjusted net borrowing:** public sector net borrowing adjusted to reflect the estimated impact of the economic cycle. It is an estimate of underlying or 'structural' net borrowing, in other words the borrowing we would expect to see if the output gap was zero. It is the target measure for the Government's fiscal mandate.

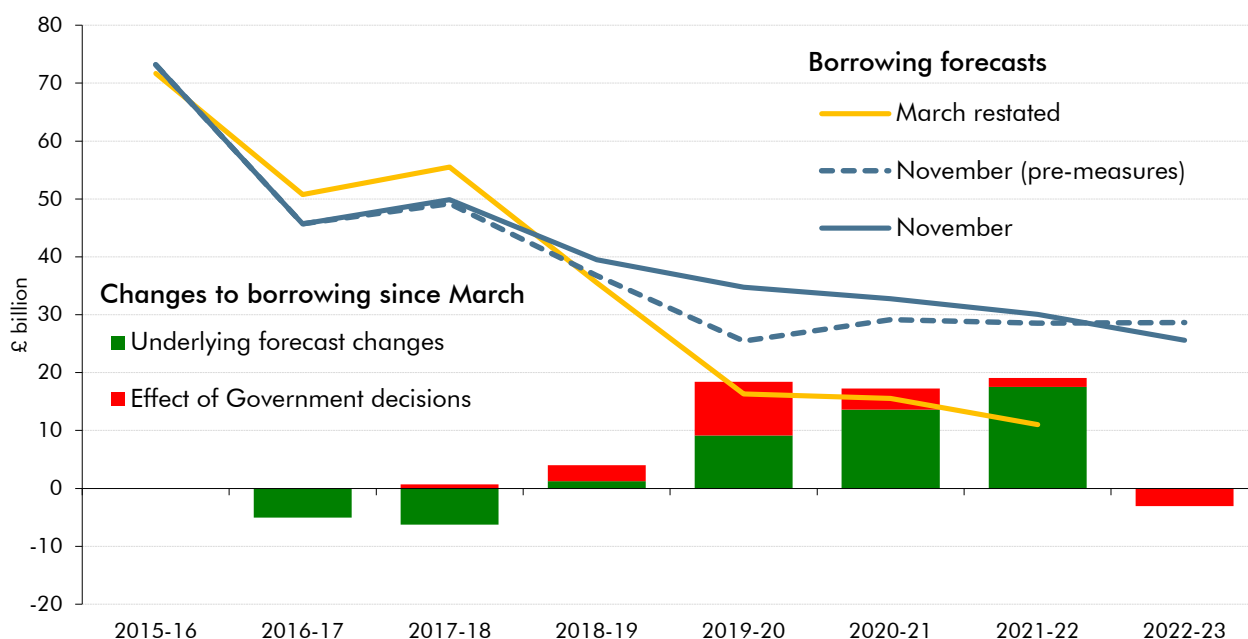
- The **current budget deficit**: the difference between receipts and public sector current expenditure each year. In effect, this is public sector net borrowing excluding borrowing to finance investment.
- The **cyclically adjusted current budget deficit**: the current budget adjusted to reflect the estimated impact of the economic cycle. It was the target measure for the Coalition Government's fiscal mandate between 2010 and 2015.
- **Public sector net debt**: a stock measure of the public sector's net liability position defined as its gross liabilities minus its liquid assets. In broad terms, it is the stock equivalent of public sector net borrowing, measured on a cash basis rather than an accrued basis. It is used for the Government's supplementary fiscal target.
- **Public sector net debt excluding the Bank of England**: by removing the Bank's balance sheet from the headline measure, this abstracts from the uneven effect across years of the Bank's August 2016 monetary policy stimulus measures.
- **Public sector net financial liabilities**: a broader balance sheet measure that includes all financial assets and liabilities recorded in the National Accounts.

Public sector net borrowing

4.209 Public sector net borrowing is expected to rise by £4.2 billion year-on-year in 2017-18 to £49.9 billion (2.4 per cent of GDP). It then falls both in cash terms and as a share of GDP in each subsequent year. The rise this year is largely due to timing effects that boosted receipts at the end of 2016-17 and should depress them at the end of 2017-18. The reclassification of English housing associations reduces PSNB from 2017-18 onwards as their own-account borrowing will now be recorded as private sector borrowing.

4.210 As Chart 4.11 shows, borrowing is lower in 2017-18 but higher in each subsequent year relative to our March forecast restated on a comparable basis to our latest forecast – namely by excluding English housing associations from the public sector throughout and incorporating the various other ONS classification and methodological changes. On a pre-measures basis, borrowing would have troughed in 2019-20 and fluctuated in a narrow range thereafter. Thanks to the familiar pattern of Budget measures increasing borrowing in the near term but promising to reduce it by the end of the forecast, our post-measures forecast shows a smoother downward path for borrowing over the next five years.

Chart 4.11: Public sector net borrowing on a consistent definition



Source: ONS, OBR

4.211 Table 4.40 breaks down the changes in our borrowing forecast since March. First, it restates our March forecast consistent with current and prospective classification and methodological changes affecting the public finances data. Second, it breaks down our underlying forecast revisions into those due to recent public finances data and those that flow from our updated economy forecast and other factors. And third, it summarises the effect of Government decisions on borrowing, including those reported on the Treasury's Budget scorecard and other decisions that the Treasury chooses not to present that way.

ONS classification and methodological changes

4.212 Two sources of change to the public finances data since March have affected our forecast. Restating our March forecast to be consistent with these changes involves:

- **Removing English housing associations' own-account borrowing** from the point at which the reclassification takes effect. This results in a £1.4 billion downward revision in 2017-18 – a part-year effect – and average reductions of £3.7 billion a year from 2018-19 onwards. Central and local government grants to housing associations now count against public borrowing rather than being transfers within the public sector.
- **Factoring in Blue Book 2017 and other methodological and classification changes** that were reflected in the ONS's September public finances release. This reduces borrowing by £1.5 billion a year on average across the forecast period, largely due to changes to imputed pensions spending associated with various funded pension schemes.

Underlying forecast revisions

- 4.213 On a like-for-like basis and before factoring in the effect of Government decisions, the revision to our borrowing forecast since March can be thought of in two parts. Recent data point to lower borrowing this year than we expected in March, which provides a more favourable starting point for the forecast. But the downward revision to our economy forecast provides a progressively less favourable path for borrowing thereafter.
- 4.214 As regards recent data, borrowing in 2016-17 is now estimated to have been lower than our March forecast – by £6.1 billion in total and £5.0 billion on a like-for-like basis. Borrowing in the first half of 2017-18 has also been lower than would be consistent with our March forecast. We still expect borrowing to rise this year, relative to 2016-17, but we have revised it down by £5.6 billion on a like-for-like basis.
- 4.215 The downward revision to borrowing in 2017-18 reflects:
- **PAYE income tax and NICs receipts** have been revised up by £1.9 billion. Receipts were £2.1 billion higher than expected last year, reflecting stronger-than-expected bonuses in the financial and business services sectors at the end of 2016-17. We have not changed our assumptions about bonus growth, so this feeds through to a higher level of bonuses this year and throughout the forecast.
 - **Departmental spending** having been revised down by £3.2 billion in 2017-18. This largely reflects greater-than-expected underspending against departments' plans. But one year's underspending does not necessarily provide a guide to what will happen in the next. We have not made large changes to our assumptions for 2018-19 onwards.
 - **Other receipts** having been revised up by £1.3 billion. This largely reflects a higher 2016-17 starting point, including for VAT, excise duties and interest and dividend receipts. Around £1 billion of the 2016-17 income tax surplus reflected a one-off income tax accounting charge so has not affected future years.
 - **Various annually managed expenditure lines** – including state pensions and tax credits in welfare spending, and EU contributions and tax litigation payments – having been revised down by £4.7 billion in total. The welfare spending effects are assumed to persist, but the EU and tax litigation revisions are largely timing effects.
- 4.216 Partly offsetting those factors, we have raised our 2017-18 forecast for self-financed spending by **local authorities** by £5.0 billion. Spending was £2.9 billion higher than expected in 2016-17, largely due to greater-than-expected use of prudential borrowing. We have assumed that is repeated this year and that local authorities also draw down more heavily on reserves to finance current spending. These effects diminish thereafter.
- 4.217 Taken together, we have assumed that the majority of the downside borrowing surprise in 2017-18 will persist, reducing our deficit forecast from 2018-19 onwards.

4.218 As regards borrowing beyond 2017-18, underlying forecast revisions mean it falls by £23.8 billion less between 2017-18 and 2021-22 than on our restated March forecast leaving an upward revision of £17.6 billion in 2021-22. The change in 2021-22 reflects our new judgement regarding the path of potential output. In particular:

- We have revised down **productivity growth** by 0.6 percentage points a year on average in the four years to 2021-22. This depresses growth in GDP and in the major tax bases, raising borrowing by £25.8 billion.
- Partly offsetting that, we have revised up **average hours worked**, assuming a flat rather than a declining trend. This raises GDP growth, reducing borrowing by £7.4 billion.
- We have revised down our estimate of the **sustainable unemployment rate**, which implies greater scope for GDP growth. This reduces borrowing by £3.3 billion.
- The new **ONS population projections** assume slower growth in the working-age population (depressing the tax base), but also higher mortality at older ages (reducing spending on pensioner benefits). The net effect of these changes raises borrowing by £0.7 billion. These effects are set out in more detail in Box 4.1.

4.219 Other changes that flow from our revised economy forecast reduce borrowing in the short term but are largely offsetting by the end of the forecast. In the near term, they reflect the strength of growth in tax bases despite much weaker productivity growth than expected this year. Most significantly, growth in wages and salaries has actually been revised up by 0.5 percentage points in 2017-18, thanks to stronger-than-expected employment growth and a jump in the labour share as earnings have held up relative to productivity, squeezing profit margins in the process. Lower RPI inflation also reduces accrued interest on index-linked gilts. The largest fiscal forecast judgements relate to welfare spending, where we have revised up disability benefits and revised down expected savings from universal credit.

Government decisions

4.220 Budget measures and other Government decisions increase borrowing in all but the final year of our forecast. In the near term, net tax giveaways and a significant easing in the pace of spending cuts add £2.7 billion to borrowing in 2018-19 and a larger £9.2 billion in 2019-20 (0.4 per cent of GDP). In 2020-21 and 2021-22 the extent of the fiscal easing diminishes, while in 2022-23 the Government has pencilled in a cut in departmental resource spending as a share of GDP. The profile of these policy decisions means that while our pre-measures borrowing forecast troughs in 2019-20 and is uneven thereafter, our post-measures forecast shows borrowing falling relatively smoothly over the forecast period.

Table 4.40: Changes to public sector net borrowing since March

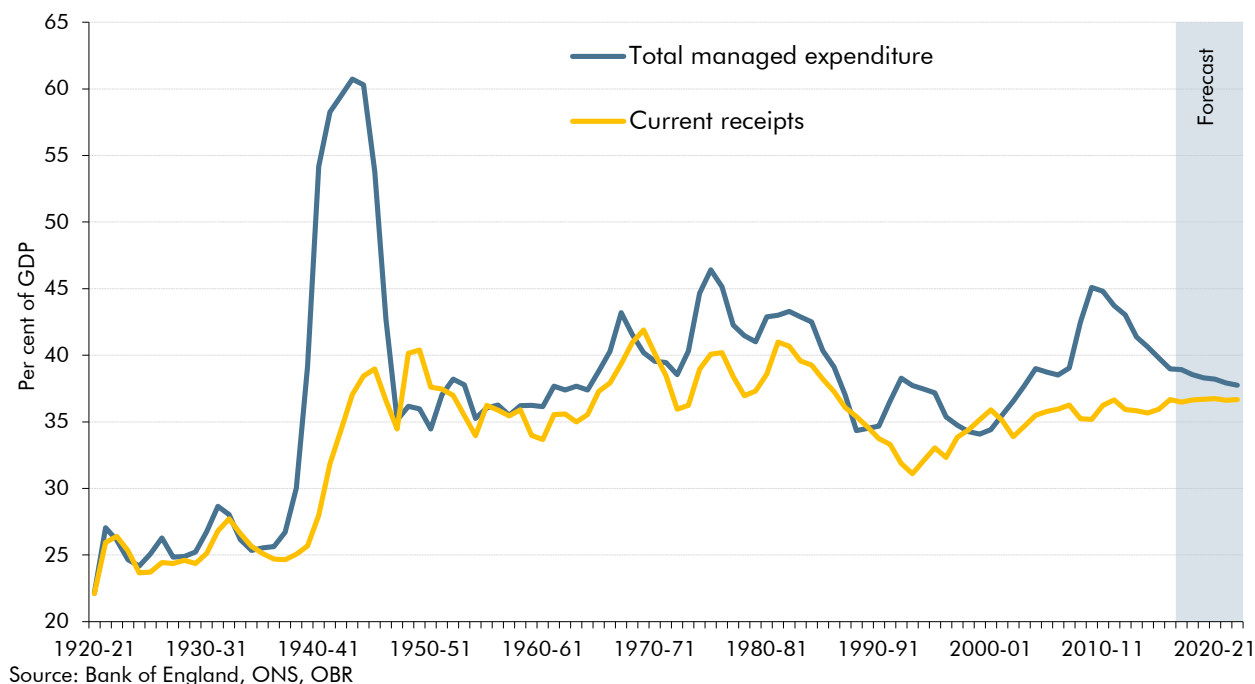
	£ billion						
	Outturn		Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
March forecast	51.7	58.3	40.8	21.4	20.6	16.8	
Reclassification of English HAs		-1.4	-3.9	-3.5	-3.4	-4.1	
Other ONS changes	-1.0	-1.3	-1.4	-1.5	-1.6	-1.7	
March forecast restated	50.7	55.5	35.5	16.3	15.5	11.0	
November forecast	45.7	49.9	39.5	34.7	32.8	30.1	25.6
Like-for-like difference	-5.0	-5.6	4.0	18.4	17.3	19.1	
Underlying forecast revisions	-5.0	-6.3	1.3	9.2	13.7	17.6	
of which:							
Latest data	-5.0	-6.3	-4.1	-5.7	-6.1	-6.6	
Productivity revision		9.0	14.6	18.3	22.8	25.8	
Average hours revision		-2.5	-4.1	-5.1	-6.3	-7.4	
Sustainable unemployment revision		-0.7	-1.6	-2.1	-2.7	-3.3	
Population projection changes		0.1	0.2	0.4	0.5	0.7	
Other economy forecast changes		-5.9	-3.4	-1.0	1.2	2.9	
Fiscal modelling and other factors		0.0	-0.3	4.3	4.3	5.4	
Total effect of Government decisions		0.7	2.7	9.2	3.6	1.5	-3.1
of which:							
Scorecard receipts measures		0.1	1.4	2.3	-0.6	1.3	1.1
Scorecard AME measures		0.0	0.2	1.4	0.4	0.4	0.1
Total RDEL policy changes ¹		1.1	2.3	4.2	1.4	0.6	-4.7
Total CDEL policy changes ¹		-0.6	-0.7	3.1	3.2	-0.5	-0.3
Non-scorecard receipts and AME measures		0.1	0.8	0.0	0.0	0.0	0.1
Indirect effects		-0.1	-1.3	-1.8	-0.8	-0.3	0.6
<i>Memo: November pre-measures forecast</i>	<i>45.7</i>	<i>49.2</i>	<i>36.8</i>	<i>25.5</i>	<i>29.2</i>	<i>28.6</i>	<i>28.7</i>
Overall change since March	-6.1	-8.4	-1.3	13.4	12.2	13.3	

¹The change in 2022-23 is relative to a baseline that assumes DEL would otherwise have remained constant as a share of GDP.

Note: This table uses the convention that a negative figure means a reduction in PSNB, i.e. an increase in receipts or a reduction in spending will have a negative effect on PSNB.

4.221 Chart 4.12 shows current receipts and total managed expenditure as a share of GDP since 1920-21, combining Bank of England and ONS data. Total spending reaches 37.7 per cent of GDP in 2022-23, while current receipts reaches at 36.7 per cent of GDP in 2020-21. This would be at its highest level since 1986-67. Box 3.2 of our November *Forecast evaluation report* sets out the key drivers in the receipts-to-GDP ratio since 1986-87.

Chart 4.12: Total public sector spending and receipts



Cyclically adjusted net borrowing (the structural fiscal position)

- 4.222 The structural deficit is estimated to stand at 2.3 per cent of GDP this year, from where it is expected to fall by 0.9 per cent of GDP in the two years to 2019-20 and then by 0.4 per cent of GDP over the three years to 2022-23. The Government's 'fiscal mandate' is set in terms of this measure, so its profile is discussed in more detail in Chapter 5.
- 4.223 As described in Chapter 3, we have revised down our estimate of the sustainable rate of unemployment and assumed that this implies higher potential output and therefore a slightly negative output gap in 2017-18 – rather than the slightly positive one we assumed in March. On an unchanged methodology for estimating the structural deficit via our estimates of the output gap, this means slightly more of the deficit this year is considered to be cyclical and that the downward revision to structural borrowing (£11.4 billion, including the effect of the housing associations reclassification) is greater than that to headline borrowing (£8.4 billion). The profile of revisions since March over the remainder of the forecast is similar to that for the headline deficit, but the cyclical component of borrowing remains greater than implied in March throughout the forecast period.

Current budget

- 4.224 We estimate that the current budget deficit, which excludes borrowing to finance net investment spending, moves into surplus in 2019-20, a year later than we assumed in March. The surplus rises to £29.4 billion (1.2 per cent of GDP) in 2022-23. As noted in paragraph 4.163, we have revised down our depreciation forecast, so our pre-measures upward revision to the current budget deficit is a little smaller than the revision to headline borrowing (and net investment is higher for a given amount of gross investment).

Cyclically adjusted current budget

4.225 We expect the cyclically adjusted current budget to move from a deficit of 0.3 per cent of GDP in 2017-18 to balance in 2018-19 and surplus thereafter. The surplus rises to 1.3 per cent of GDP in 2022-23. This measure was targeted by the Coalition Government during the 2010 to 2015 Parliament.

Balance sheet measures

Public sector net debt

4.226 In March we expected public sector net debt (PSND) to peak at 88.8 per cent of GDP in 2017-18. We continue to expect it to peak this year, but at a lower of 86.5 per cent of GDP. Most importantly, this reflects the reclassification of English housing associations to the public sector, which reduces PSND by 3.2 per cent of GDP. Partly offsetting that, we now expect the Bank of England's Term Funding Scheme (TFS) to lend £130 billion to banks by the end of February, up from £90 billion assumed in March. That adds 1.9 per cent of GDP to PSND at the end of 2017-18 relative to our March forecast.

4.227 We expect the debt-to-GDP ratio to fall by 0.1 percentage points between 2017-18 and 2018-19 – but only 0.03 per cent on an unrounded basis. That fall reflects the precise calibration of Budget measures affecting borrowing, lending and asset sales, and the further increase in the TFS indemnity announced ahead of the Budget. Thereafter debt continues to fall as a share of GDP, with the largest falls in 2020-21 and 2021-22 due to the repayment of TFS loans at their 4-year term and the associated drop in Bank of England liabilities.

4.228 Beyond the effects of housing associations and TFS loans, the changes in our debt-to-GDP ratio forecast are driven by revisions to the path of GDP and our pre-measures fiscal forecast plus Government decisions announced in this Budget and since March. These are decomposed in Table 4.41, which shows that:

- **Nominal GDP** is higher in the near term, but is lower from the middle of the forecast reflecting a weaker outlook for productivity growth and whole economy prices. That reduces the debt-to-GDP ratio in 2017-18, but raises it from 2019-20 onwards.
- Changes to our **pre-measures borrowing forecast** reduce debt up to 2019-20, thanks to the lower-than-expected outturn in 2016-17 and downward revision to 2017-18. But they increase it in the final two years as the cumulative effect of higher borrowing from 2018-19 onwards eventually offsets the more favourable starting point.
- Delays to **UKAR asset sales** increase debt in 2017-18, but with the sales moved into 2018-19 reduce debt in that year. As this delay was due to issues encountered in the sales process, we consider this to be a forecast rather than a policy change. The Government has also announced plans to sell all UKAR's mortgage assets, which puts further downwards pressure on debt. This is treated as a policy change.

2017-18 and growth in nominal GDP next year, net debt can only rise by a maximum of £49.4 billion this year if it is still to fall as a share of GDP (to at least one decimal place).

- 4.230 Starting from our March forecast of a £55.4 billion increase in debt next year, the Government received some good news in the form of ONS statistical changes and the effect of delayed asset sales helping in 2018-19 rather than 2017-18. But it also received some bad news in the form of the changes to our pre-measures forecast. Absent any further changes, debt would have fallen by 0.2 per cent of GDP. But the tax and spending measures in the Budget and the additional Help to Buy and other new lending measures add £5.8 billion to debt, so if that was the end of the story, net debt would rise by 0.1 per cent of GDP next year.
- 4.231 The Government's decision to announce additional sales of RBS shares lowers the debt increase by £3.0 billion and its success in meeting the requirements necessary for the ONS to reclassify English housing associations takes off a further £3.8 billion. Altogether, this reduces the debt increase to £48.9 billion, just sufficient to have the debt-to-GDP ratio fall by 0.1 per cent of GDP. In fact, it was last minute changes to the profile of public spending that got the Government over the line. As we note in the Foreword to this document, the Treasury told us too late to incorporate in our economy forecast that it wished to 'reprofile' part of the planned DEL spending increases from 2018-19 into 2019-20. The amount moved was sufficient to reduce the increase in debt in 2018-19 by £0.8 billion.

Alternative balance sheet measures and the underlying position

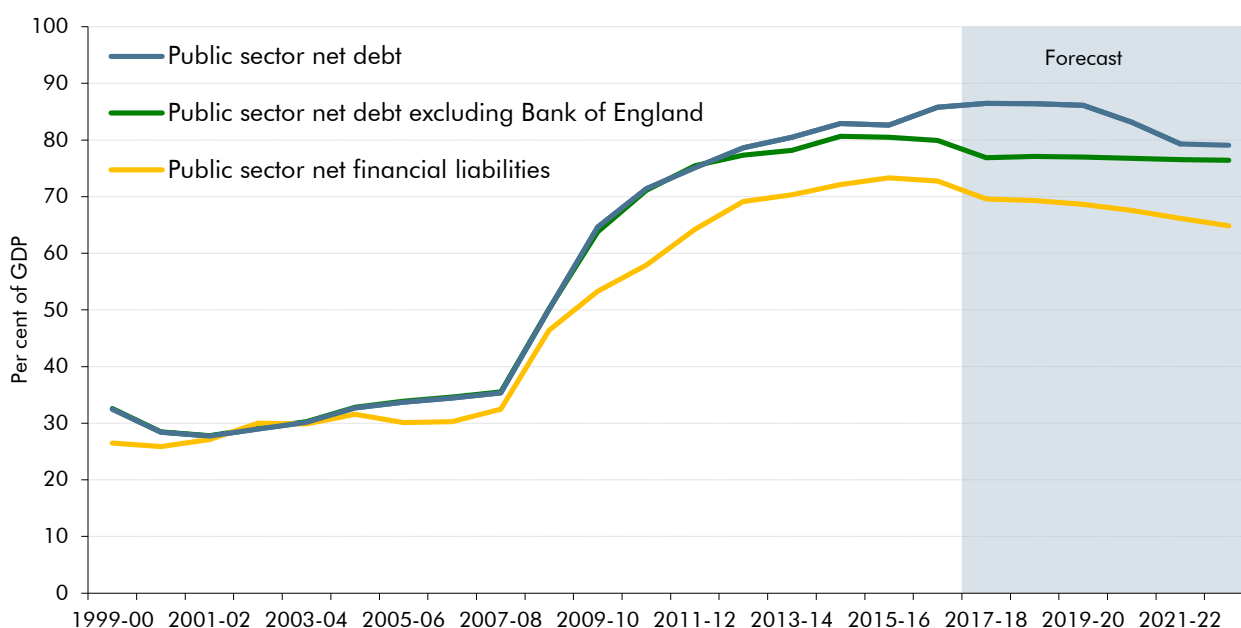
- 4.232 In our 2017 *Fiscal risks report* we discussed various ways in which PSND is not a reliable metric for assessing the underlying health of the public finances. It includes only a limited range of liabilities and an even smaller range of assets. This makes it susceptible to what the IMF terms 'fiscal illusions'. These occur when movements in a fiscal aggregate like PSND do not reflect true changes in the underlying health of the public finances.
- 4.233 There are three large changes to PSND in this forecast that could fall under this heading – two lowering PSND (the housing associations reclassification and RBS share sales) and one raising it (the TFS effect). None materially change the underlying fiscal position.
- 4.234 Asset sales do not generally improve the sustainability of the fiscal position as they simply exchange one asset for another: a long-term flow of receipts for an upfront lump sum. But this lump sum reduces PSND straight away and the loss of receipts only increases it gradually over time. (Of course, there may be other policy reasons to choose to sell RBS shares.) In the opposite direction, TFS lending raises PSND when issued and reduces it when it is repaid. This is because the loans are deemed to be illiquid and therefore do not net off PSND, but they are backed by collateral and are highly likely to be repaid.
- 4.235 Alternative metrics often do a better job than PSND of reflecting the underlying picture:

- **PSND excluding Bank of England** removes the distortions from the TFS. This provides a more informative underlying picture during the build-up (in 2016-17 and 2017-18) and run down (2020-21 and 2021-22) of the scheme.
- **Public sector net financial liabilities** (PSNFL) includes all financial assets and liabilities. As well as being unaffected by the TFS, this provides a more realistic picture of the effect of most asset sales. The main drawback of PSNFL is that the Government’s stock of student loan assets is valued at face value whereas the actual value is considerably lower because the loans are not expected to be repaid in full. Raising the earnings threshold above which student loans start to be repaid will increase this impairment.

4.236 PSND and these alternative debt metrics are all distorted by the reclassification of English housing associations from the public to the private sector (as described earlier in the chapter), since they use the same distinction between the public and private sectors. It is hard to argue that the change in statistical treatment reduces the *de facto* exposure of the Government to these organisations, were they to fall into financial difficulty nor does it alter their use as vehicles to deliver the Government’s social housing policies.

4.237 Chart 4.13 shows that the paths of both PSND excluding the Bank of England and PSNFL are much smoother than PSND, although both fall in 2017-18 due to the reclassification of housing associations. PSND remains essentially flat when the Bank of England is excluded, falling just 0.5 per cent of GDP between 2017-18 and 2022-23. PSNFL falls slowly across the forecast.

Chart 4.13: Public sector balance sheet measures



Source: ONS, OBR

Reconciliation of PSNCR and changes in PSND

4.238 Table 4.42 reconciles the PSNCR, a cash measure of borrowing, with the changes in PSND. PSND is for the most part, but not entirely, the stock equivalent of the PSNCR. The two differ in our forecast for the following reasons:

- The large **gilt premia** associated with low gilt yields. As PSND rises by the nominal value of gilts issued, rather than their market value, selling at a premium reduces the recorded impact on debt.
- **Index-linked gilts** are recorded at their uplifted nominal value in PSND, so positive RPI inflation adds to PSND each year but does not affect the PSNCR.
- Differences between the nominal and market value of **gilts held by the APF** add to net debt. This is small in most years except 2021-22 where a number of gilts redeem and we forecast to be rolled over for gilts of higher nominal value.
- Movements in sterling affect the value of the unhedged component of the **international reserves** that are netted off PSND.
- The **reclassification of English housing associations** causes a step change in 2017-18. In later years the reclassification affects PSNCR and PSND equally.

Table 4.42: Reconciliation of PSNCR and changes in PSND

	£ billion					
	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Public sector net cash requirement	131.1	46.6	46.7	8.0	-24.2	59.1
Gilt premia	-12.0	-10.6	-13.4	-12.5	-10.9	-10.6
Index-linked gilts	10.4	12.7	10.9	-1.7	14.3	7.1
APF	-0.7	0.1	0.4	0.5	-5.7	0.6
International reserves	1.1	0.2	0.1	0.1	0.2	0.2
Reclassification of English HAs	-65.5	0.0	0.0	0.0	0.0	0.0
Change in public sector net debt	64.3	48.9	44.7	-5.6	-26.3	56.4

Table 4.43: Fiscal aggregates

	Per cent of GDP						
	Outturn	Forecast					
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Receipts and expenditure							
Public sector current receipts (a)	36.7	36.5	36.6	36.7	36.7	36.6	36.7
Total managed expenditure (b)	39.0	38.9	38.5	38.3	38.2	37.9	37.7
of which:							
Public sector current expenditure (c)	35.0	34.9	34.8	34.3	33.8	33.6	33.5
Public sector net investment (d)	2.0	2.0	1.8	2.0	2.4	2.3	2.3
Depreciation (e)	2.1	2.0	2.0	2.0	2.0	2.0	2.0
Fiscal mandate and supplementary target							
Cyclically adjusted net borrowing	2.2	2.3	1.8	1.5	1.3	1.2	1.1
Public sector net debt ¹	85.8	86.5	86.4	86.1	83.1	79.3	79.1
Deficit							
Public sector net borrowing (b-a)	2.3	2.4	1.9	1.6	1.5	1.3	1.1
Current budget deficit (c+e-a)	0.4	0.4	0.1	-0.4	-0.9	-1.0	-1.2
Cyclically adjusted current budget deficit	0.2	0.3	0.0	-0.5	-1.1	-1.1	-1.3
Primary deficit	0.6	0.6	0.3	0.1	0.0	-0.1	-0.3
Cyclically adjusted primary deficit	0.5	0.5	0.2	0.0	-0.1	-0.2	-0.4
Financing							
Central government net cash requirement	3.4	2.1	2.0	2.1	2.7	2.4	2.4
Public sector net cash requirement	5.1	6.4	2.2	2.2	0.4	-1.1	2.5
Alternative balance sheet metrics							
Public sector net debt ex. Bank of England	79.9	76.9	77.1	77.0	76.8	76.5	76.4
Public sector net financial liabilities	72.7	69.6	69.3	68.6	67.6	66.2	64.9
Stability and Growth Pact							
Treaty deficit ²	2.3	2.4	2.0	1.8	1.6	1.6	1.2
Cyclically adjusted Treaty deficit	2.2	2.3	1.9	1.7	1.5	1.5	1.2
Treaty debt ratio ³	86.8	87.0	87.3	87.4	87.0	86.8	86.3
£ billion							
Public sector net borrowing	45.7	49.9	39.5	34.7	32.8	30.1	25.6
Current budget deficit	7.0	8.1	1.6	-9.4	-20.9	-23.4	-29.4
Cyclically adjusted net borrowing	43.0	48.0	37.9	32.3	29.7	28.1	25.0
Cyclically adjusted current budget deficit	4.3	6.2	0.0	-11.8	-24.0	-25.4	-29.9
Public sector net debt	1727	1791	1840	1885	1879	1853	1909
Memo: Output gap (per cent of GDP)	-0.3	-0.1	-0.1	-0.2	-0.2	-0.1	0.0

¹ Debt at end March; GDP centred on end March.

² General government net borrowing on a Maastricht basis.

³ General government gross debt on a Maastricht basis.

Risks and uncertainties

4.239 As always, we emphasise the uncertainties that lie around our central fiscal forecast. We expose our judgements to different sensitivities and scenarios in Chapter 5. In July, we published our first full *Fiscal risks report (FRR)*, in which we drew together and expanded on our analysis of fiscal risks. A number of key risks we highlighted there have crystallised in this central forecast, while others remain important sources of uncertainty around it:

- **Macroeconomic risks:** One of our most prominently discussed risks related to the sustainable rate of productivity growth in light of the persistent post-crisis weakness. In this forecast we have revised productivity growth down significantly. We also noted the roughly evens chance of a recession over any given five-year horizon. It is now around nine years since the previous one started.
- **Financial sector risks:** In this Budget the Treasury has announced the resumption of RBS share sales, the purchase of which was the largest intervention the Government undertook in the financial crisis. In Table 4.3 we estimate an overall Exchequer cost in relation to RBS of £26.2 billion at current market prices and including the costs to date of financing the share purchases.
- **Revenue-specific risks:** Beyond economy-driven risks to receipts, we highlighted policy risks to our medium-term forecasts, where Parliament requires them to be based on current government policy, which may of course change. This Budget has once again seen the fuel duty rises the Government claims to be its policy cancelled for next year.
- **Primary spending risks** (i.e. spending on everything other than debt interest): We noted how pressures can build and the risk of higher borrowing if they are accommodated. This Budget increases spending on health and Brexit preparations, but pressures are still apparent on local government finances and universal credit among others.
- **Balance sheet risks:** We highlighted the risk of ‘fiscal illusions’ when balance sheet measures do not provide a good guide to true fiscal health. This forecast provides a prime example, with the Government having changed regulation of housing associations in England with the stated goal of having the ONS reclassify them back into the private sector. Its success in this endeavour does nothing to reduce the underlying fiscal risk associated with a sector that in essence provides a public service.
- **Debt interest risks:** One area that remains favourable is the interest rate environment, with debt interest costs expected to be broadly flat over the medium term and the difference between growth and interest rates helping to reduce the debt-to-GDP ratio. Our FRR analysis showed that the public finances are now significantly more sensitive to changes in short-term interest rates (because so much debt is in effect financed at variable interest rates through the Bank of England) and RPI inflation (because the stock of index-linked gilts is now four times higher as a share of GDP than before the crisis). The risk of higher interest rates and/or higher RPI inflation is therefore material.

International comparisons

4.240 International organisations, such as the European Commission and the International Monetary Fund (IMF), produce forecasts of deficit and debt levels of different countries on a comparable basis. These are based on the narrower general government definitions of debt and borrowing than the public sector definition that we forecast on. They are also presented on a calendar year basis. To facilitate comparisons, Tables 4.44 and 4.45 convert our UK forecasts to a basis that is comparable with that used by these international organisations.

With both modelling and reporting of much tax and expenditure in the UK done primarily on a financial year basis, the calendar year forecasts are illustrative and have been derived by simply weighting our financial year forecasts.

Table 4.44: Comparison with European Commission forecasts

	Per cent of GDP					
	Treaty deficit ¹			Treaty debt ²		
	2017	2018	2019	2017	2018	2019
UK (November EFO)	2.4	2.1	1.9	86.9	87.2	87.4
UK (EC)	2.1	1.9	1.5	86.6	85.3	84.2
Germany	-0.9	-1.0	-1.1	64.8	61.2	57.9
France	2.9	2.9	3.0	96.9	96.9	96.9
Italy	2.1	1.8	2.0	132.1	130.8	130.0
Spain	3.1	2.4	1.7	98.4	96.9	95.5
Euro area	1.1	0.9	0.8	89.3	87.2	85.2

¹ General government net borrowing.

² General government gross debt.

Source: European Commission, *European Economic Forecast Autumn 2017*, OBR.

Table 4.45: Comparison with IMF forecasts

	Per cent of GDP					
	General government net borrowing			General government net debt		
	2017	2018	2022	2017	2018	2022
UK (November EFO)	2.4	2.1	1.3	77.8	78.0	78.0
UK (IMF)	2.9	2.3	1.2	89.5	89.7	85.6
Germany	-0.7	-0.8	-1.1	65.0	61.8	50.1
France	3.0	3.0	0.8	96.8	97.0	91.2
Italy	2.2	1.3	0.0	133.0	131.4	120.1
Japan	4.1	3.3	2.1	240.3	240.0	233.9
U.S	4.3	3.7	4.3	108.1	107.8	109.6

Source: IMF, *World Economic Outlook*, October 2017, OBR.

5 Performance against the Government's fiscal targets

Introduction

5.1 This chapter:

- sets out the Government's **medium-term fiscal targets** (from paragraph 5.2);
- examines whether the Government has a better than 50 per cent **chance of meeting them** on current policy, given our central forecast (from paragraph 5.6); and
- assesses how robust these judgements are to the **uncertainties** inherent in any fiscal forecast, by looking at past forecast errors, sensitivity to key parameters of the forecast and alternative economic scenarios (from paragraph 5.23).

The Government's fiscal targets

5.2 The *Charter for Budget Responsibility* requires the OBR to judge whether the Government has a greater than 50 per cent chance of hitting its fiscal targets under current policy. It has been updated a number of times in recent years as Governments have revised their fiscal targets. The latest version was approved by Parliament in January 2017.¹

5.3 The *Charter* states that the Government's objective for fiscal policy is to "return the public finances to balance at the earliest possible date in the next Parliament". At the time, this was expected to be the period from 2020 to 2025. Given the early General Election in 2017, it could now be interpreted as the period from 2017 to 2022. We consider it on both bases.

5.4 The *Charter* also sets out targets for borrowing, debt and welfare spending that require:

- the **structural deficit** (cyclically adjusted public sector net borrowing) to be below 2 per cent of GDP by 2020-21 – this is described as the 'fiscal mandate';
- **public sector net debt** to fall as a percentage of GDP in 2020-21 – this is the 'supplementary target'; and
- for welfare spending (excluding the state pension and payments closely linked to the economic cycle) to lie below a '**welfare cap**' that must be set at the first Budget of each Parliament. The cap was last set in November 2016, to apply in 2021-22. The

¹ The latest and previous versions are available on the 'legislation and related material' page of our website.

Government in effect set this cap 3 per cent above our November 2016 forecast for the relevant spending in that year, with the expected level of spending adjusted for changes in our inflation forecast on the basis of a methodology of its own choosing. As this is the first Budget of a new Parliament, another new welfare cap has been set. It applies in 2022-23 and has again been set with a 3 per cent margin above our latest forecast. It remains inflation-adjusted.

5.5 In this chapter, we assess the Government's performance against these fiscal targets, all of which are on course to be met under our central forecast. We also summarise what our latest forecast implies for performance against the various fiscal targets set out in previous versions of the *Charter*.

The implications of our central forecast

5.6 Table 5.1 shows our central forecasts for the fiscal aggregates relevant to the current and previous fiscal targets: cyclically adjusted public sector net borrowing (PSNB); headline PSNB; public sector net debt (PSND); spending subject to the welfare cap; and the cyclically adjusted current budget deficit (CACB). These forecasts are described in detail in Chapter 4. They should be interpreted as median forecasts, so we believe it is equally likely that outturns will come in above them as below them.

Table 5.1: Performance against the Government's fiscal targets

	Per cent of GDP						
	Outturn	Forecast					
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Fiscal mandate: Cyclically adjusted public sector net borrowing							
March forecast	2.6	2.9	1.9	0.9	0.9	0.7	
November forecast	2.2	2.3	1.8	1.5	1.3	1.2	1.1
Supplementary target: Public sector net debt							
March forecast	86.6	88.8	88.5	86.9	83.0	79.8	
November forecast	85.8	86.5	86.4	86.1	83.1	79.3	79.1
Spending subject to the welfare cap (£ billion)							
March forecast	119.3	119.6	120.0	120.0	122.4	125.1	
November forecast	118.7	119.3	120.9	122.1	123.8	126.9	130.1
Fiscal mandate (October 2015 to January 2017): Public sector net borrowing							
March forecast	2.6	2.9	1.9	1.0	0.9	0.7	
November forecast	2.3	2.4	1.9	1.6	1.5	1.3	1.1
Fiscal mandate (June 2010 to October 2015): Cyclically adjusted current budget deficit							
March forecast	0.8	0.9	-0.1	-1.1	-1.4	-1.6	
November forecast	0.2	0.3	0.0	-0.5	-1.1	-1.1	-1.3

The current fiscal targets

The fiscal mandate

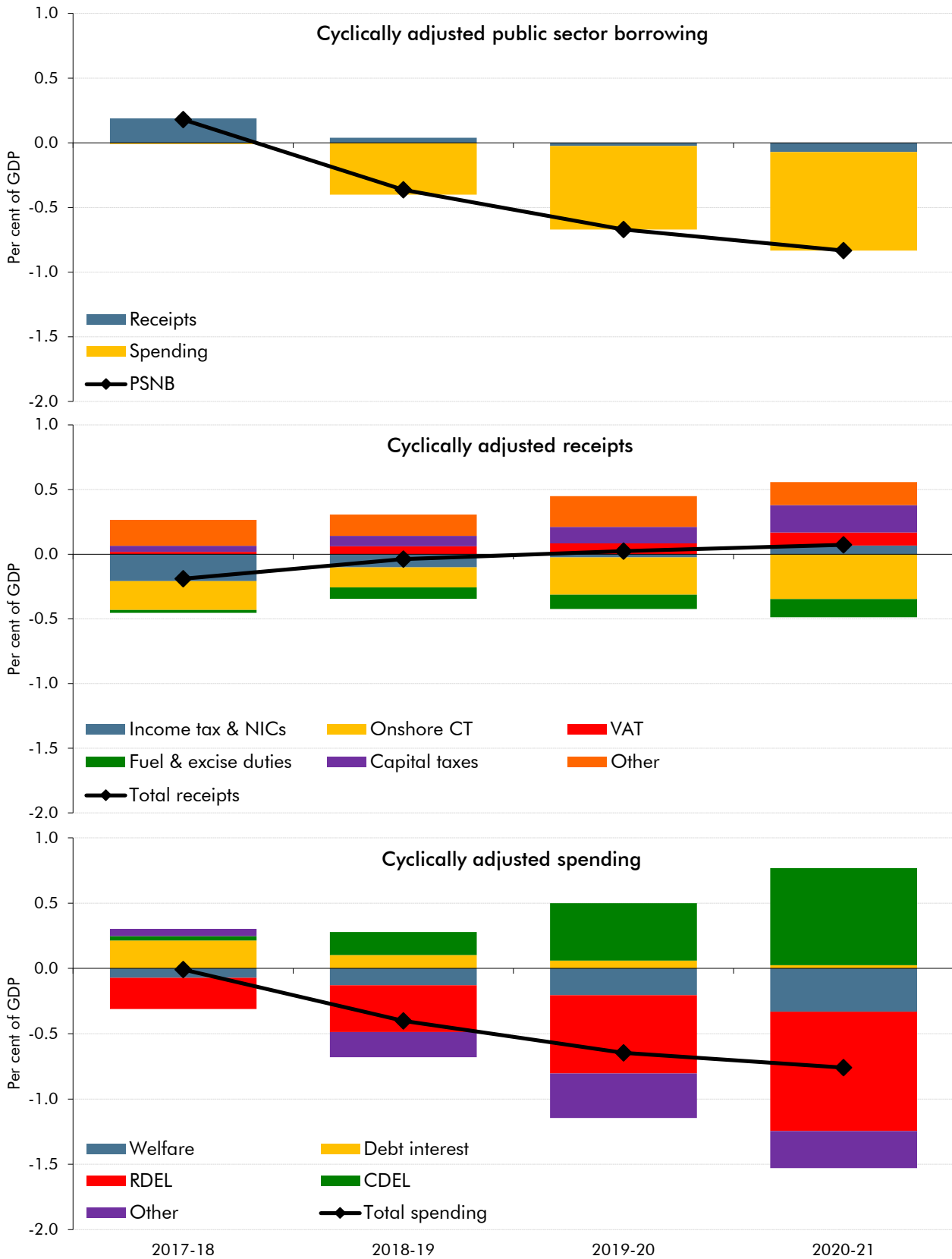
5.7 The Government's fiscal mandate requires it to reduce the structural deficit below 2 per cent of GDP by 2020-21. We estimate that the structural deficit in 2017-18 will be 2.3 per cent of GDP, so meeting this target requires a modest improvement in the structural balance of

just 0.1 per cent of GDP a year on average over the next three years. Our central forecast shows that on current policies the structural deficit will have fallen to 1.3 per cent of GDP in 2020-21, so the target is on track to be achieved with a margin of 0.7 per cent of GDP or £14.8 billion. The structural deficit moves below 2 per cent of GDP in 2018-19, two years ahead of the required date.

- 5.8 The margin by which the fiscal mandate is met is 0.5 per cent of GDP (£10.7 billion) smaller than we estimated in March – so the Government has lost slightly less than half its future room for manoeuvre, but with slightly less time left for things to go awry. This is despite the 0.2 per cent of GDP reduction in borrowing due to the reclassification of English housing associations back to the private sector. On a like-for-like basis, including the effect of other ONS revisions to the public finances data since March, the margin is 0.8 per cent of GDP smaller than it was in our previous forecast – losing slightly more than half its future room for manoeuvre. This reflects a 0.6 per cent of GDP deterioration in our underlying forecast for the structural deficit and a 0.2 per cent of GDP fiscal loosening.
- 5.9 Chart 5.1 uses cyclical-adjustment coefficients for different types of receipts and spending² to show how the structural deficit narrows in the run-up to the target year of 2020-21:
- **Structural borrowing** is expected to decline by 0.8 per cent of GDP between 2016-17 and 2020-21, almost entirely due to lower spending. The majority of the improvement comes in 2018-19 and 2019-20.
 - **Structural receipts** are expected to rise only slightly relative to 2016-17. In part, that is because 2016-17 receipts were boosted for temporary but non-cyclical reasons by income shifting ahead of the April 2016 dividend tax rise. But largely it reflects rises in capital tax receipts (due to rising house and equity prices) and other taxes (e.g. the introduction of the apprenticeship levy and higher environmental levies) being largely offset by the effect of cuts in the main rate of corporation tax.
 - **Structural spending** is expected to fall a further 0.6 per cent of GDP by the end of the current Spending Review period in 2019-20 and then to fall less sharply in 2020-21. By then, the drop in spending relative to 2016-17 is more than explained by cuts to departmental resource spending (RDEL), with cuts to welfare and other spending largely offset by higher capital departmental spending (CDEL). The 0.8 per cent of GDP fall in overall structural spending between 2016-17 and 2020-21 is down significantly from the 1.4 per cent of GDP shown in our March forecast. That reflects the combination of Budget measures – in particular the increase in CDEL in 2020-21 – and revisions to our welfare spending forecast – in particular higher spending on disability benefits and universal credit. Budget measures boost RDEL spending most in 2018-19 and 2019-20, thereby smoothing the profile of the total cut in structural spending as well as reducing its overall size.

² Further details can be found in Helgadottir *et al.* (2012), OBR Working Paper No.4: *Cyclically adjusting the public finances*.

Chart 5.1: Cumulative changes in the structural deficit from 2016-17



Source: OBR

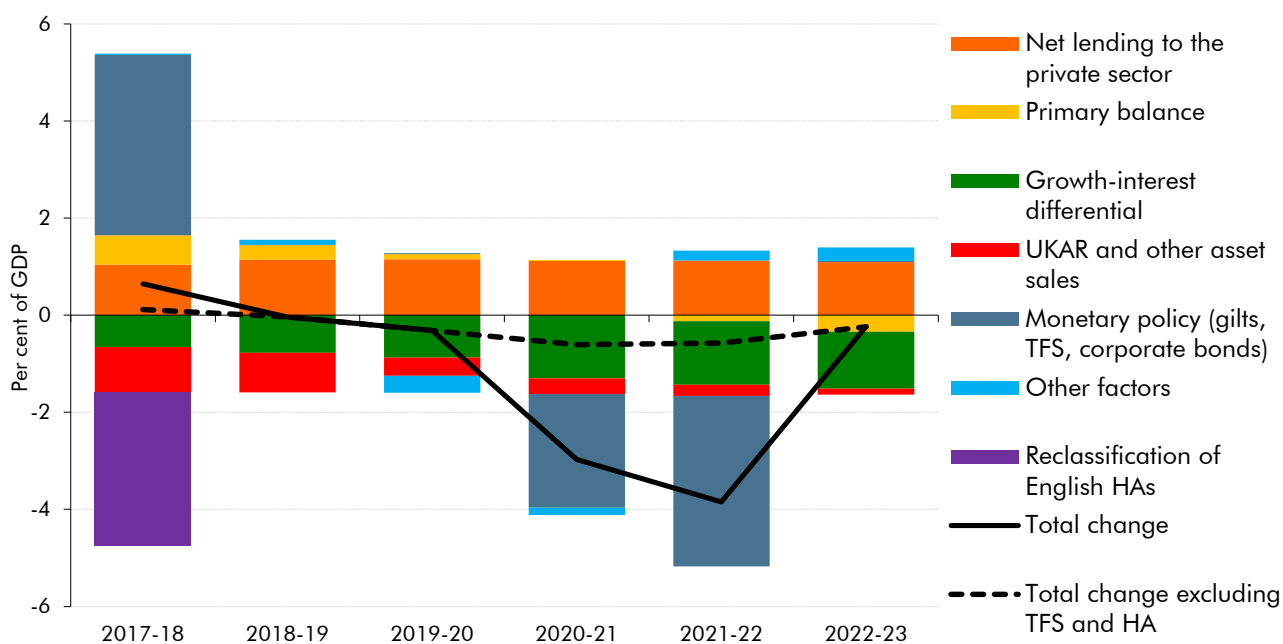
The supplementary debt target

- 5.10 The supplementary debt target requires PSND to fall as a percentage of GDP in 2020-21. The path of the debt-to-GDP ratio in the near term is affected by the reclassification of English housing associations to the private sector from November 2017. This reduces debt at the end of 2017-18 by 3.2 per cent of GDP relative to the end of 2016-17. We expect the debt-to-GDP ratio to peak in 2017-18 and to fall in each year of the forecast, so the Government is on course to meet its supplementary target.
- 5.11 Chart 5.2 decomposes year-on-year changes in the debt-to-GDP ratio over the forecast period into different drivers. It shows that:
- The **Bank's August 2016 monetary policy package** has had a material effect on the path of net debt, raising it by £62.3 billion (3.1 per cent of GDP) in 2016-17 and expected to raise it by a further £77.7 billion (3.7 per cent of GDP) in 2017-18. This reflects lending to commercial banks under the Term Funding Scheme (TFS), the scale of which has revised up significantly since March, and purchases of corporate bonds and of additional gilts at a premium to their nominal value. (Lending through the TFS is treated as the acquisition of an illiquid asset, and is therefore not netted off PSND. But it is secured against collateral and thus highly unlikely to generate losses for the public sector.) The repayment of TFS loans after four years reduces the debt ratio significantly in 2020-21 and 2021-22. Excluding the TFS effect, the path of the debt ratio would be smoother. Other APF-related factors, including premia paid when gilts mature and the proceeds are reinvested, add small amounts to debt in most years.
 - In 2017-18, the **reclassification of English housing associations** into the private sector more than offsets the upward effect on PSND from additional TFS lending.
 - The **primary balance** – a measure of the deficit excluding net debt interest spending – is in deficit until 2021-22, adding slightly to the debt-to-GDP ratio until then.
 - **Financial asset sales** – including the active sale and rundown of UK Asset Resolution (UKAR) assets, the sale of student loans and the resumption of RBS share sales – are expected to reduce PSND by 0.8 per cent of GDP in 2018-19 and by smaller amounts in subsequent years. (Financial asset sales usually leave the underlying fiscal position largely unaffected, as they typically bring forward cash that would otherwise have been received in later years as revenue, in the shape of mortgage repayments and dividends. So they only reduce debt temporarily).
 - **Nominal GDP growth is expected to exceed nominal interest rates** throughout the forecast, reducing the debt ratio every year and by large amounts from 2019-20 onwards. This differential is a key driver of public sector debt dynamics, especially over longer timeframes. We explored this issue in depth in our *2017 Fiscal risks report*.
 - **Net lending to the private sector** – mainly student loans, but also other lending schemes such as Help to Buy (which has been expanded again at this Budget) –

increases net debt in every year. As a financial transaction, the lending itself does not affect the deficit directly but it does so indirectly via its effects on interest income, write-off expenses and debt interest costs.

- **Other factors** are largely offsetting. Issuing debt at a premium to its nominal value reduces net debt over the forecast period, but this is ultimately only temporary and will unwind over the long term. Accrued receipts exceed cash receipts over the medium term, partly because some receipts are collected with a lag (including interest on student loans, where the lag can be many years).
- **Abstracting from the effect of the TFS and the reclassification of housing associations**, net debt is on a very modest downward trajectory over the forecast period as a whole. PSND excluding the TFS declines from 80.2 per cent of GDP in 2017-18 to 79.1 per cent of GDP in 2022-23. It rises by 0.1 per cent of GDP in 2018-19.

Chart 5.2: Year-on-year changes to the debt-to-GDP ratio



Source: OBR

5.12 Table 5.2 decomposes the changes in the profile of net debt since our March forecast. The largest relate to: the reclassification of English housing associations this year; additional TFS lending this year, which we assume is repaid at its 4-year term in 2021-22; the upward revisions to borrowing and downward revisions to GDP growth in this forecast; and the additional UKAR and RBS asset sales announced in the Budget.

Table 5.2: Changes in the profile of net debt since March

	Change in net debt as per cent of GDP on previous year				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	2.2	-0.3	-1.6	-3.9	-3.2
November forecast	0.6	0.0	-0.3	-3.0	-3.8
Change	-1.6	0.3	1.3	1.0	-0.7
<i>of which:</i>					
Reclassification of English HAs	-3.2	-0.1	-0.1	-0.1	-0.1
Nominal GDP ¹	0.1	0.5	0.7	0.5	0.4
Effects of Government decisions	0.0	0.3	0.5	0.2	0.1
Underlying forecast changes	-0.3	0.1	0.4	0.6	0.7
Greater use of the TFS	1.7	0.0	0.0	-0.2	-1.6
UKAR, RBS and other asset sales	0.3	-0.5	-0.2	-0.2	-0.2
Gilt premia	-0.1	0.1	0.0	0.0	0.0
Others	0.0	-0.1	0.0	0.1	0.0

¹ GDP is centred end-March.

The welfare cap

- 5.13 In Autumn Statement 2016, the Government changed the way that its welfare cap operates after the previous one was breached by a significant margin. It set a cap that applied in only one year – 2021-22 – preceded by a ‘pathway’ set in line with our November 2016 forecast plus an increasing margin for error that reached 3 per cent in the target year. When we judge performance against the cap, the *Charter* says that we should adjust our spending forecast to remove the impact of changes in inflation, according to a methodology of the Government’s choosing. Its chosen method is to use simplified ready-reckoners to remove the impact of changes in our inflation forecast since November 2016 on expected uprating.³
- 5.14 Table 5.3 shows our latest forecast for spending subject to the welfare cap and how it compares with the current welfare cap, pathway and margin. As this is the first forecast of a new Parliament, this comparison represents our formal assessment of the Government’s performance against the cap. It shows that we have revised up spending since the cap was set a year ago, so that it is above the cap and the pathway to it from 2018-19 onwards. But the terms of the target have been met, with spending below the cap or pathway plus margin in all years, with or without the small adjustments for revisions to our inflation forecast.

³ ‘Removing the impact of changes in inflation from the welfare cap’, HM Treasury, March 2017.

Table 5.3: Performance against the current welfare cap

	£ billion				
	Forecast				
	2017-18	2018-19	2019-20	2020-21	2021-22
Welfare cap					126.0
Welfare cap pathway	119.6	120.1	120.5	123.2	
Margin (per cent)	1.0	1.5	2.0	2.5	3.0
Margin	1.2	1.8	2.4	3.1	3.8
Welfare cap and pathway plus margin	120.8	121.9	122.9	126.3	129.7
Inflation adjustment	0.0	+0.2	+0.0	-0.3	-0.3
Latest forecast and update on performance against cap and pathway					
November forecast	119.3	120.9	122.1	123.8	126.9
November forecast with inflation adjustment	119.3	120.8	122.1	124.1	127.2
<i>Difference from:</i>					
Cap and pathway	-0.3	0.7	1.6	0.9	1.3
Cap and pathway plus margin	-1.5	-1.1	-0.8	-2.2	-2.5

5.15 As this is the first Budget of a new Parliament, the *Charter* requires the Government to set a new welfare cap. This is the third substantive change to the welfare cap since it was first set in March 2014. The Government has retained the approach used in Autumn Statement 2016 of setting a cap and pathway in line with our latest forecast, but applying a progressively larger margin above it to set the effective cap.

5.16 The new cap is higher than the one it replaces, reflecting the upward revisions to our spending forecast. As set out in Chapter 4, the largest contributors to higher spending in this forecast have been disability benefits – extending the pattern of recent years – and universal credit – an area of the forecast that remains subject to huge uncertainty.

Table 5.4: The new welfare cap and margin

	£ billion					
	Forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Welfare cap						130.1
Welfare cap pathway	119.3	120.9	122.1	123.8	126.9	
Margin (per cent)	0.5	1.0	1.5	2.0	2.5	3.0
Margin	0.6	1.2	1.8	2.5	3.2	3.9
Welfare cap and pathway plus margin	119.9	122.1	123.9	126.3	130.1	134.0

Fiscal objective for the next Parliament

5.17 According to the *Charter for Budget Responsibility*, the Government's fiscal objective is to "return the public finances to balance at the earliest possible date in the next Parliament". When this objective was set, the 'next Parliament' was expected to run to May 2025, so the 'earliest possible date' could have been anywhere up to 2025-26. The Conservative Party's 2017 manifesto similarly committed to "a balanced budget by the middle of the next decade". Our forecast horizon extends to 2022-23, so we cannot assess performance against this objective using a central forecast for 2025-26. But with our central forecast

showing the budget deficit still at 1.1 per cent of GDP (£25.6 billion) by 2022-23, meeting this objective appears challenging from a variety of perspectives. For example:

- If the deficit was **extrapolated to continue falling at the average pace that it falls beyond the Spending Review period** (i.e. the three years to 2022-23), it would reach balance in 2030-31. Among other things, that would require per capita departmental spending to continue to fall each year in real terms.
- Our 2017 *FSR*, produced on the basis of our November 2016 forecast, showed that if receipts and annually managed expenditure were **projected forward in line with the approach taken in our medium-term forecast**, but departmental spending was allowed to rise in line with the pressures of an ageing population and other non-demographic pressures on health spending, the deficit would remain roughly flat over the four years to 2025-26. Even holding the deficit constant in these circumstances would require the further fiscal tightening implied by linking tax thresholds and working-age benefits awards to inflation rather than earnings. This would push the receipts-to-GDP ratio up by a further 0.6 per cent of GDP in the four years to 2025-26 and reduce average working-age welfare payments by a further 10 per cent relative to earnings.
- Using **our central *FSR* projection** itself, the challenge looks even greater. Under that methodology, we assume that tax thresholds and working-age benefit awards move with earnings rather than inflation, in order to prevent receipts continually rising relative to GDP and the incomes of working-age benefit recipients continually declining relative to those of the rest of the population. Adding in the pressures on spending from an ageing population, non-demographic pressures specific to health spending and the cost of the triple lock on the uprating of state pensions, would put the deficit on a rising path. In our 2017 *FSR*, based on our November 2016 medium-term forecast, the deficit rose by 1.1 per cent of GDP in the four years to 2025-26.

5.18 If, given the early General Election this year, the fiscal objective in the *Charter* is interpreted as requiring the budget to be in balance by 2022-23 – five years from the election – as noted it would be missed on our central forecast by 1.1 per cent of GDP (£25.6 billion).

Previous fiscal targets

5.19 Since the OBR was established by the Coalition Government in 2010, we have assessed performance against three previous fiscal mandates, three previous supplementary debt targets and two previous welfare caps:

- The **fiscal mandate** has targeted different measures of the deficit at different horizons. In the 2010-2015 Parliament, it targeted a surplus on the cyclically adjusted current budget balance (i.e. PSNB excluding net investment spending) by the end of the rolling, 5-year forecast period. In December 2014, this was changed to the end of the third year of the rolling, 5-year forecast period. At the start of the 2015-2017 Parliament, it targeted a surplus on headline PSNB by the end of 2019-20.

- The **supplementary debt target** has always referred to year-on-year changes in the ratio of PSND to GDP, but the reference year has changed. In the 2010-2015 Parliament, it started by targeting a year-on-year fall in the fixed year of 2015-16. In December 2014 that was moved back to 2016-17. At the start of the last Parliament, the target was changed to year-on-year falls in every year from 2015-16 onwards.
- The **welfare cap** has always referred to the same subset of welfare spending, but its level has been changed. Abstracting from movements that related only to classification changes, there were two caps. In March 2014 the Coalition set the cap in line with our latest forecast at the time, then in July 2015 the current Government lowered the cap in line with our updated forecast, including the effects of the welfare cuts announced in its post-election Summer Budget.

5.20 The October 2015 version of the *Charter* stated also that *"These targets apply unless and until the Office for Budget Responsibility (OBR) assess, as part of their economic and fiscal forecast, that there is a significant negative shock to the UK. A significant negative shock is defined as real GDP growth of less than 1% on a rolling 4 quarter-on-4 quarter basis."* On our latest forecast, that escape clause would not be triggered. The January 2017 *Charter* maintains an escape clause set in terms of a 'significant negative shock', but has shifted the responsibility for assessing that to the Treasury and no longer specifies what such a shock would look like in terms of 4-quarter-on-4-quarter real GDP growth. This aligns the escape clause with the approach that the Government took after the referendum last year.

5.21 The latest outturn data and our current central forecast would imply:

- Meeting the **first and second Coalition fiscal mandates** of a surplus on the cyclically adjusted current budget by a margin of £29.9 billion in 2022-23 (the end of the forecast) and £24.0 billion in 2020-21 (the third year of the forecast).
- Missing the **first Conservative fiscal mandate** of a headline surplus in 2019-20 by a margin of £34.7 billion.
- Meeting the **first Coalition supplementary debt target** by a margin of 0.3 per cent of GDP in 2015-16 and missing the **second Coalition supplementary debt target** by a margin of 3.2 per cent of GDP in 2016-17.
- Missing the **first Conservative supplementary debt target** due to debt rising as a share of GDP in 2016-17 and 2017-18.
- Meeting the **March 2014 welfare cap** due to the relevant spending being within the cap-plus-margin in all four years of the capped period (which extended to 2018-19). In part that reflects the significant cuts to working-age welfare spending that were announced in the July 2015 Budget.

- Missing the **July 2015 welfare cap** by increasing margins, with the relevant spending exceeding the cap-plus-margin in all years. In part that reflected reversing some of the July 2015 welfare spending cuts before they had been implemented.

5.22 During the last Parliament and up to Budget 2016, the Government had an informal objective of looking for the budget to be in surplus by £10 billion in 2019-20 (over-achieving its balanced budget target by that precise amount). On our central forecast the budget is now heading for a deficit of almost £35 billion in that year.

Recognising uncertainty

5.23 The future is uncertain and the likelihood of unexpected economic and political developments means that the distribution of possible outcomes around any particular central forecast is large. Consequently there are significant upside and downside risks to our central forecasts for the public finances. These reflect uncertainty both about the outlook for the economy and about the level of receipts and spending in any given state of the economy. The ongoing Brexit negotiations – and the limited information about the policy settings and international trading arrangements thereafter – create additional uncertainty.

5.24 Given these uncertainties, it is important to stress-test our judgements about the Government's performance against its fiscal targets. We do this in three ways:

- by looking at the distribution of **past forecast errors**;
- by seeing how our central forecast would change if we altered individual **judgements and assumptions** that underpin it; and
- by looking at **alternative economic scenarios**.

Past performance

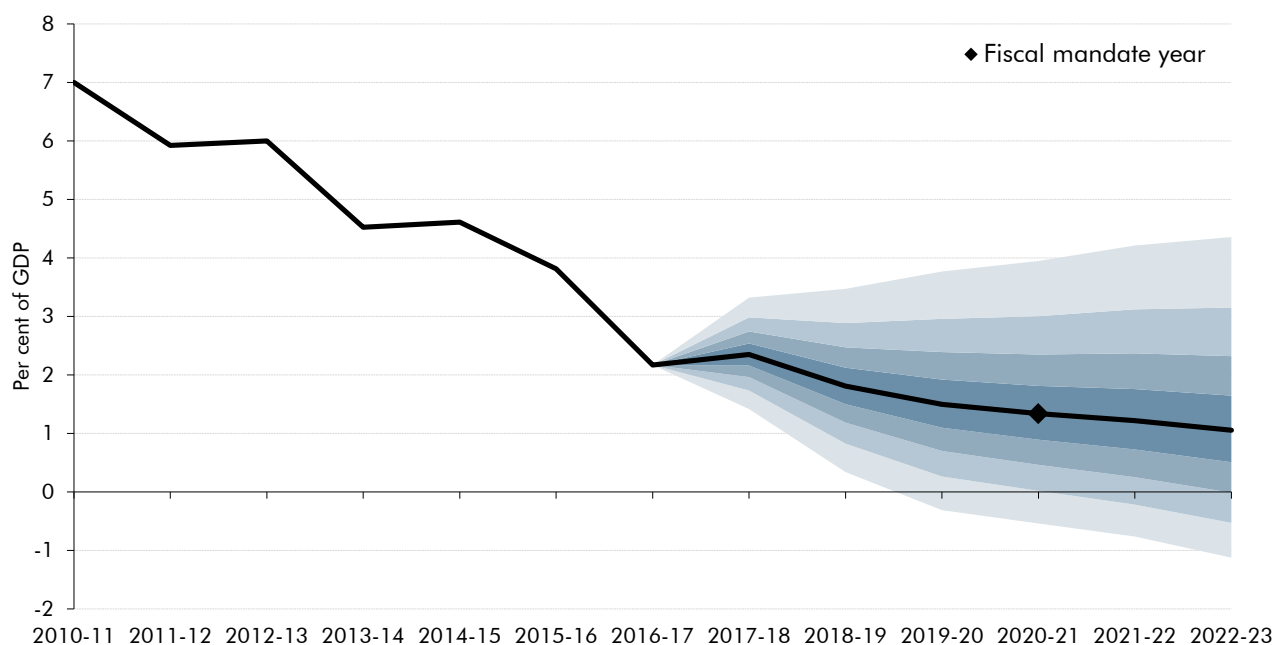
5.25 One relatively simple way to illustrate the uncertainty around our central forecast is to consider the accuracy of previous official public finance forecasts – both our own and the Treasury's that preceded them. This can be done using fan charts like that we presented for GDP growth in Chapter 3. The fan charts do not represent our assessment of specific risks to the central forecast. Instead they show the outcomes that someone might anticipate if they believed, rightly or wrongly, that the size and distribution of forecast errors in the past offered a reasonable guide to their likely size and distribution in the future.

5.26 It is important to note that the historical forecast errors that underpin our fan charts reflect both underlying forecast errors and the effects of any subsequent policy responses. That is likely to be one reason why the probability distributions around borrowing and other measures of the budget balance do not widen significantly at longer time horizons: when underlying forecast changes push borrowing significantly away from original plans, governments tend to change policy to try to bring it back on track. This was evident in the

analysis of past fiscal forecast errors and the fiscal policy response of governments presented in Annex B of our March 2016 *Economic and fiscal outlook (EFO)*.

5.27 The probability of the Government meeting its fiscal mandate can be assessed using the distribution of forecast errors that underpins a fan chart for cyclically adjusted PSNB. Chart 5.3 shows the fan chart around our central forecast. It shows that the Government is on course to meet the fiscal mandate by 2020-21. The probability of the structural deficit being below 2 per cent of GDP is around 65 per cent from 2019-20 onwards. This is little changed from March, because – although the deficit expected in the mandate year is now higher – the fan chart is narrower because the target date has moved one year closer.

Chart 5.3: Cyclically adjusted public sector net borrowing fan chart



Source: ONS, OBR

5.28 Unfortunately, we cannot estimate the probability of achieving the supplementary target as we do not have the joint distribution that would allow us to apply the same technique. But our central forecast shows the debt-to-GDP ratio falling in the target year, implying a more than 50-50 chance that target will be met in 2020-21. We do not have a sufficiently long disaggregated series of past welfare spending forecasts to produce a fan chart for the welfare cap projections either.

Sensitivity analysis

5.29 It is next to impossible to produce a full unconditional probability distribution for the Government’s target fiscal variables because they are affected by so many determinants – both economic and non-economic – many of which are also interrelated in complex ways. But we can go further than using evidence from past forecast errors by illustrating how sensitive the central forecast is to changes in individual parameters and judgements.

5.30 In thinking about the evolution of the public finances over the medium term, there are several parameters that have an important bearing on the forecast. Here we focus on:

- the **sensitivity of the fiscal mandate** to changes to the level of potential GDP, the effective tax rate, planned spending cuts, interest rates and inflation;
- the **sensitivity of the supplementary debt target** to differences in the level of debt or the growth rate of the economy, which both affect how debt changes from year-to-year as a share of GDP; and
- some of the circumstances in which **the supplementary target could be missed while still meeting the fiscal mandate.**

The fiscal mandate

5.31 As Chart 5.3 illustrated, on the basis of past forecast errors, we estimate that there is a roughly 35 per cent chance that the structural budget deficit will exceed 2 per cent of GDP in 2020-21. There are many reasons why this might happen. For example, the evolution of potential output could be less favourable than forecast or receipts or spending could turn out differently for a given state of the economy. And while our forecasts are conditioned on current Government policy, that is also likely to change, especially in respect of the policy settings and international trading arrangements that will apply once the UK has left the EU.

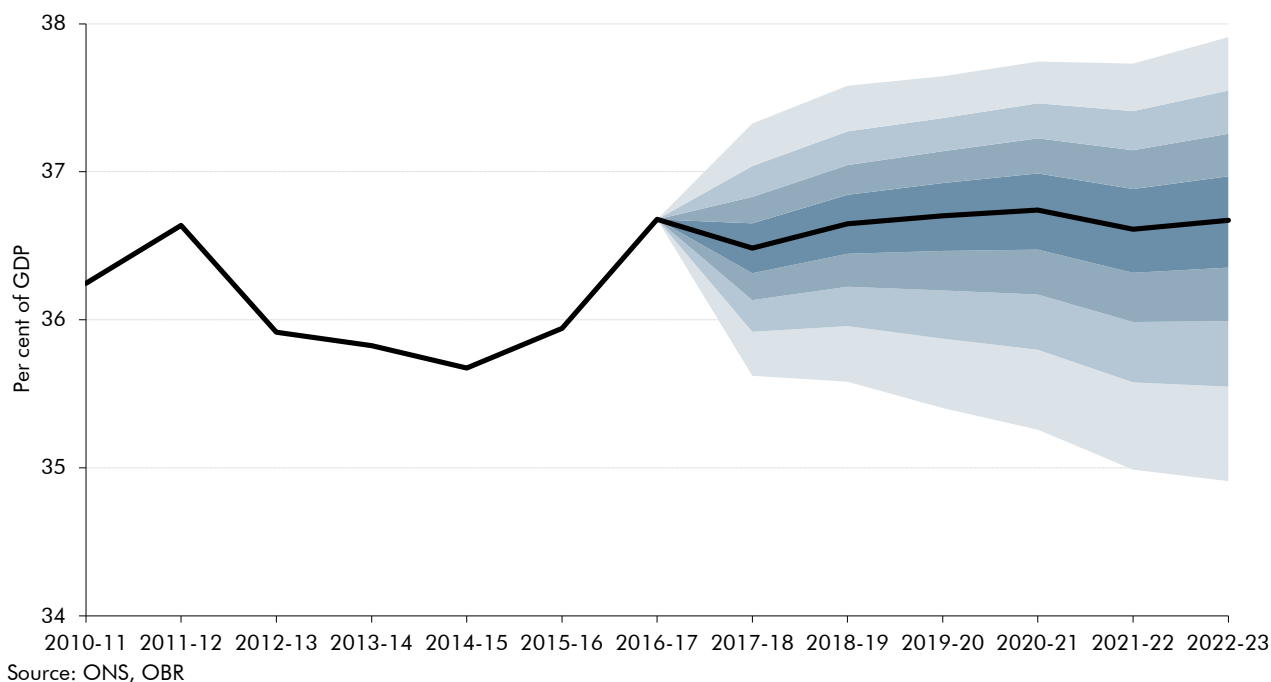
5.32 On our website we publish ready-reckoners that show how the public finances could be affected by changes in some of the determinants of our fiscal forecast. It is important to stress that these are stylised exercises that reflect the typical impact of changes in variables on receipts and spending. They are subject to significant uncertainty. But bearing those caveats in mind, we can use ready-reckoners to calibrate a number of possible adverse surprises relative to our central forecast that would be sufficient to push the structural deficit above 2 per cent of GDP in 2020-21.

5.33 This analysis shows that the 0.7 per cent of GDP margin relative to the 2 per cent target could fall to zero if:

- **Potential output** were 1.3 per cent lower. This would be broadly equivalent to the downward revision to potential output in 2020-21 that we have made in this forecast. But it is not large relative to the cumulative downward revisions made since the financial crisis and subsequent recession.
- The **effective tax rate** – as measured by the tax-to-GDP ratio – were 0.7 percentage points lower and the difference was a consequence of structural factors (recognising that unpicking the structural and cyclical elements of any changes in the tax-to-GDP ratio would be very difficult). Chart 5.4 presents a fan chart for receipts as a share of GDP, reflecting both cyclical and structural drivers of past errors. It suggests there is a 25 per cent chance that receipts could be 0.7 per cent of GDP lower than forecast.

- **Planned spending cuts** – which reduce RDEL by 0.7 per cent of GDP between 2017-18 and 2020-21 in our forecast – were not implemented.
- **Effective interest rates** on central government gross debt were 0.8 percentage points higher (relative to our central projection of 2.2 per cent). The fact that £371 billion of conventional gilts held in the APF are currently in effect financed at Bank Rate reduces the effective interest rate by 0.5 percentage points.
- Higher **RPI inflation** could increase accrued interest on index-linked gilts. Taken in isolation, if RPI inflation were 3.2 percentage points higher than expected in 2020-21, that alone would add 0.7 per cent of GDP to debt interest costs. Based on past forecast errors, the chance of that happening is small. And of course, this sort of shock to inflation would be likely to have other material effects on the public finances.

Chart 5.4: Receipts fan chart



The supplementary debt target

5.34 The supplementary debt target is focused on year-on-year changes in the debt-to-GDP ratio, with the target set for a fixed date of 2020-21. Table 5.5 shows how our central forecast for a 3.0 per cent of GDP fall in PSND in that year would be affected by two sources of sensitivity: differences in the level of debt in the preceding year and differences in growth in 2020-21. We use cyclical-adjustment coefficients to estimate the effect of GDP growth shocks on borrowing, but do not vary interest rates, so that differences in the assumed rate of GDP growth result in changes to the interest rate-growth rate differential. On that basis, the table shows that:

- In most cases, the extent to which debt falls in 2020-21 is inversely related to **the level of debt in the preceding year**. That counter-intuitive result is due to the low level of

interest rates assumed in our central forecast, which means that the effect of GDP growth on the denominator in the debt-to-GDP ratio is greater than the effect of interest rates on growth in the cash level of debt (via debt interest spending). The higher the starting level of debt, the more the denominator effect outweighs the interest rate effect. It is only the larger negative growth shocks that see the growth rate fall close to the interest rate. When they are similar (which would be the case if growth was around 2 percentage points lower), the two effects cancel out. If the growth rate was lower than the interest rate, the extent to which debt falls would be positively related to the level of debt in the preceding year.

- As expected, negative **shocks to GDP growth** reduce the extent by which debt falls as a share of GDP and positive shocks increase it. The year-on-year change in the debt-to-GDP ratio is more sensitive than the deficit to GDP shocks, because it is affected both by the deficit channel (which drives the accumulation of debt in that year) and by the denominator channel (which means the previous year's cash debt is divided by a different level of nominal GDP). More than half the fall in the debt-to-GDP ratio in 2020-21 reflects the assumed repayment of TFS loans at the end of their 4-year term. Excluding that effect, meeting the proposed target would be at risk to small negative shocks to GDP growth.

Table 5.5: Illustrative debt target sensitivities in 2020-21

		Year on year change in the PSND-to-GDP ratio in 2020-21					
		Difference in GDP growth in 2020-21 (percentage points)					
		-3	-2	-1	0	+1	+2
	-20	1.4	0.0	-1.3	-2.7	-4.0	-5.3
Difference in the level	-10	1.5	0.1	-1.4	-2.8	-4.2	-5.6
of PSND in 2019-20	+0	1.7	0.1	-1.4	-3.0	-4.5	-6.0
(per cent of GDP)	+10	1.8	0.1	-1.5	-3.1	-4.7	-6.3
	+20	2.0	0.2	-1.6	-3.3	-5.0	-6.7

5.35 The Government's fiscal targets only apply in the fixed year of 2020-21, but each is subject to different sensitivities. For example, holding all other elements of our central forecast constant, but assuming that structural borrowing in 2020-21 was 2 per cent of GDP, it would still be possible for the proposed supplementary target to be missed if:

- **TFS loans** issued in 2016-17 were rolled over rather than being repaid, as their repayment reduces debt by 2.4 per cent of GDP in 2020-21 in our central forecast.
- **Cyclical borrowing** caused the primary balance to deteriorate by more than 2.3 per cent of GDP. (It is close to zero in our central forecast).
- **Financial transactions** pushed cash borrowing up relative to PSNB by 2.3 per cent of GDP more than in our central forecast. That could happen if the Bank of England decided that a monetary policy stimulus of the type that was announced last August was necessary in that year.

- **Nominal GDP growth** were lower than 2.0 per cent in the year centred on end-March 2021 that is the denominator for the debt-to-GDP ratio in 2020-21 (relative to 3.3 per cent in our central forecast).

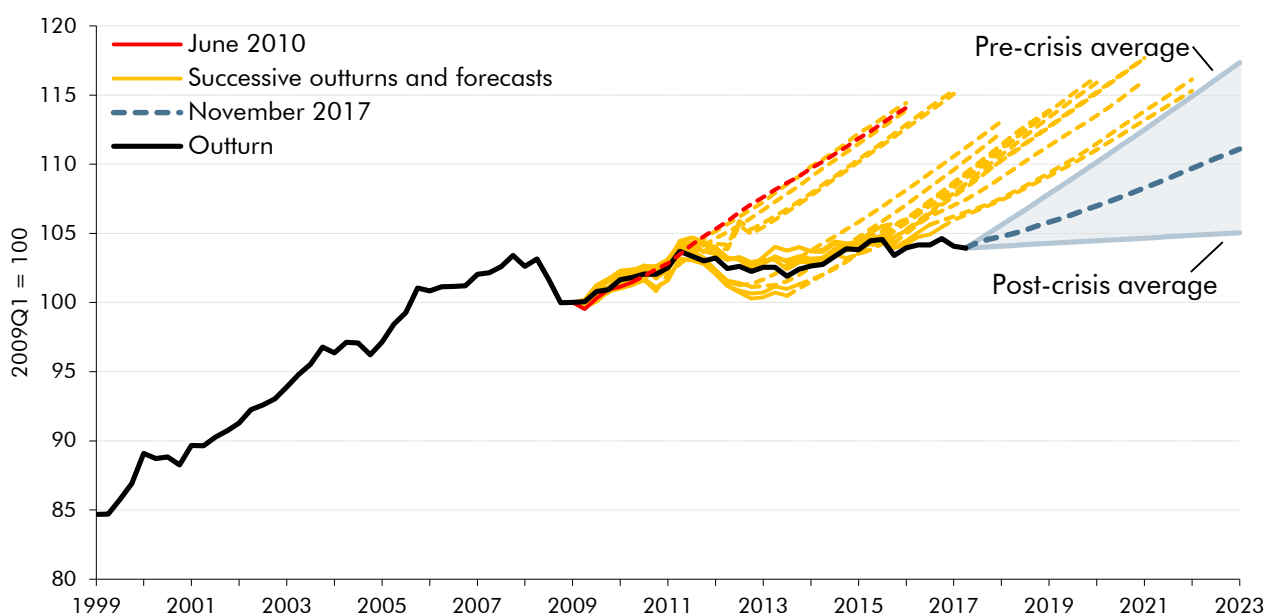
Scenario analysis

5.36 The sensitivity analysis discussed above focuses on ready-reckoned estimates of the impact of individual factors and therefore offers only a limited assessment of potential uncertainty. In this section, we set out the fiscal implications of illustrative alternative economic scenarios, designed to test how dependent our conclusions are on key judgements that are subject to debate in the forecasting community. We stress that these scenarios are not intended to capture all possible ways in which the economy might deviate from the central forecast and we do not attempt to attach particular probabilities to them occurring.

5.37 While much attention focuses on how our departure from the EU might affect the economy, there is little that we can add while remaining within the confines of the remit that has been set for us by Parliament. Instead we return to a subject that we considered in our December 2014 and November 2016 *EFOs*, and which has been the most quantitatively significant judgement in this forecast: prospects for growth in the productive potential of the economy.

5.38 Chart 5.5 shows the downward revision we have made to our forecast for hourly productivity in this *EFO* in the context of all our past forecasts and the latest outturns. The 1.1 per cent average growth over the forecast period sits within an illustrative range given by paths based on the pre-crisis average growth in output per hour (of 2.1 per cent a year between 1972 and 2007) and the average over the post-crisis years (of 0.2 per cent).

Chart 5.5: Productivity growth (output per hour) – forecasts and outturns



Note: Solid lines represent the outturn data that underpinned the forecast.

Source: ONS, OBR

5.39 We have explored the fiscal implications of weaker or stronger productivity growth, calibrating the scenarios to converge on the pre- and post-crisis average growth rates. These are broadly symmetric around our central forecast:

- The '**weak productivity**' scenario assumes that growth in potential output per hour averages 0.2 per cent a year over the next five years, in line with the post-crisis average. Productivity is 4 per cent lower than our central forecast by 2022. We assume that people increase the hours they work to offset in part the effect of weaker productivity growth on their incomes. As a result, average real GDP growth is 0.6 percentage points a year below our central forecast. In expenditure terms, investment is reduced proportionately more than private consumption to reflect a lack of capital deepening associated with the lower productivity and grows by 0.3 per cent a year on average. Lower productivity growth feeds through to weaker earnings growth, which averages just 2.1 per cent a year. That also implies lower house price inflation, which averages 1.7 per cent a year, 1.5 percentage points below our central forecast.
- The '**strong productivity**' scenario assumes that growth in potential output per hour picks up in the coming years and grows at 2.1 per cent in the final two years of the forecast, in line with the pre-crisis average. Productivity is 4 per cent higher than our central forecast by 2022. Average hours are assumed to return to their long-term historical downward trend in this case, so real GDP growth is 0.6 percentage points stronger than in our central forecast. Investment growth is assumed to be stronger, averaging 3.8 per cent a year. Earnings growth averages 3.3 per cent a year and house price inflation 4.5 per cent a year.

5.40 In both scenarios, the output gap profile is unchanged, so that trend and actual growth are adjusted in equal measure. CPI inflation, unemployment and interest rates are assumed to be unchanged from our central forecast.

5.41 On the basis of the assumptions above, Table 5.6 summarises the main fiscal implications of each scenario on the current fiscal targets:

- In the **weak productivity** scenario, lower growth in average earnings, profits, house prices and equity prices would lower receipts and increase borrowing and debt. Higher borrowing would increase debt interest spending, more than offsetting lower spending on means-tested benefits and tax credits. The triple lock provides a floor for state pension uprating, so that the lower earnings growth in the scenario only partly translates into lower spending on pensions. The fiscal mandate would be missed by 0.1 per cent of GDP (or £1.3 billion) in 2020-21. The debt target would still be met, as the debt-to-GDP ratio would continue to fall in 2020-21, but the ratio starts falling two years later and at a slower pace than in our central forecast.
- In the **strong productivity** scenario, higher receipts (for the opposite reasons as in the weak scenario) more than offset higher spending (mainly higher state pensions spending due to the triple lock). This reduces borrowing and debt. As a result, the fiscal mandate would be met with a larger margin of 1.4 per cent of GDP (versus a

margin of 0.7 per cent of GDP in our central forecast). The debt-to-GDP ratio would still peak in 2017-18 but thereafter it would fall faster than in our central forecast.

Table 5.6: Key economic and fiscal aggregates under alternative scenarios

	Per cent of GDP, unless otherwise stated					
	Central forecast					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Economic assumptions						
GDP growth (per cent on a year earlier)	1.5	1.4	1.3	1.3	1.5	1.5
Output gap (per cent of potential GDP)	-0.1	-0.1	-0.2	-0.2	-0.1	0.0
Nominal GDP (£ trillion) ¹	2.04	2.10	2.16	2.22	2.30	2.38
Fiscal aggregates						
Public sector current receipts	36.5	36.6	36.7	36.7	36.6	36.7
Total managed expenditure	38.9	38.5	38.3	38.2	37.9	37.7
Public sector net borrowing	2.4	1.9	1.6	1.5	1.3	1.1
Fiscal targets						
Cyclically adjusted public sector net borrowing	2.3	1.8	1.5	1.3	1.2	1.1
Public sector net debt	86.5	86.4	86.1	83.1	79.3	79.1
'High productivity' scenario						
Economic assumptions						
GDP growth (per cent on a year earlier)	1.5	1.6	2.0	2.1	2.3	2.3
Output gap (per cent of potential GDP)	-0.1	-0.1	-0.2	-0.2	-0.1	0.0
Nominal GDP (£ trillion) ¹	2.04	2.10	2.18	2.26	2.36	2.45
Fiscal aggregates						
Public sector current receipts	36.5	36.7	36.7	36.8	36.7	36.8
Total managed expenditure	38.9	38.5	38.0	37.6	37.0	36.6
Public sector net borrowing	2.4	1.8	1.3	0.8	0.3	-0.2
Fiscal mandate measures						
Cyclically adjusted public sector net borrowing	2.3	1.7	1.1	0.6	0.2	-0.2
Public sector net debt	86.5	86.2	85.0	80.7	75.4	73.5
'Low productivity' scenario						
Economic assumptions						
GDP growth (per cent on a year earlier)	1.4	0.9	0.8	0.7	0.8	0.7
Output gap (per cent of potential GDP)	-0.1	-0.1	-0.2	-0.2	-0.1	0.0
Nominal GDP (£ trillion) ¹	2.04	2.09	2.14	2.19	2.24	2.30
Fiscal aggregates						
Public sector current receipts	36.5	36.6	36.7	36.7	36.5	36.5
Total managed expenditure	38.9	38.7	38.7	38.9	38.9	39.0
Public sector net borrowing	2.5	2.1	2.1	2.2	2.3	2.5
Fiscal mandate measures						
Cyclically adjusted public sector net borrowing	2.4	2.0	1.9	2.1	2.3	2.4
Public sector net debt	86.5	87.1	87.7	85.9	83.5	85.2

¹ Not seasonally adjusted.

A Autumn Budget 2017 policy measures

Overview

- A.1 Our *Economic and fiscal outlook (EFO)* forecasts incorporate the expected impact of the policy decisions announced in each Budget or other fiscal statement. In the run-up to each one, the Government provides us with draft estimates of the cost or gain from each policy measure it is considering. We discuss these with the relevant experts and then suggest amendments if necessary. This is an iterative process where individual measures can go through several stages of scrutiny. After this process is complete, the Government chooses which measures to announce and which costings to include in its scorecard. We choose whether to certify the costings as ‘reasonable and central’, and whether to include them – or alternative costings of our own – in our forecast.
- A.2 In this forecast, we have certified as reasonable and central all the costings of tax and annually managed expenditure (AME) measures that appear in the Government’s main policy decisions scorecard. Table A.2 reproduces the scorecard alongside our subjective view of the uncertainty around each costing. There are further details in Chapter 4 and in the Treasury’s *Autumn Budget 2017 Policy costings document*, which briefly summarises the methodology used to produce each costing and the main areas of uncertainty within each.
- A.3 The costings process worked reasonably efficiently, despite the very large number of policy decisions made in this Budget. While the number submitted just before the deadline was lower than in some previous large Budgets, the sheer number under consideration – as many as we have ever previously received – made the scrutiny process more challenging.

Policy decisions not on the Treasury scorecard

- A.4 Our forecast includes the effect of a number of policy decisions that the Treasury has chosen not to present on its scorecard. These are reported in Table A.1. They include:
- **Excise duties uprating:** The Government has announced a change to the dates that RPI-linked duty rate rises will take place, aligning it with the new autumn timetable for Budgets. This affects the duties charged on fuel, alcohol and tobacco, as well as vehicle excise duty and air passenger duty. The changes were designed to be largely neutral for receipts. Absent other Budget measures, they would have increased receipts slightly due to the first-year effect of the changes, as shown in Table A.1. But the freeze in fuel and alcohol duties means that the vast majority of this effect on our pre-measures forecast was removed by the scorecard measures.

- **Probate fees:** In March we reported that the Government had announced plans to change the fees payable for an application for a grant of probate. From May 2017 the new rates were to increase to between £300 and £20,000, depending on the value of the estate. The structure of the fees was such that the Treasury expected the ONS to classify them as a tax in the National Accounts. We added around £0.3 billion to both our receipts and spending forecasts, as the new tax would be offset by lower negative spending in RDEL. We also lowered our inheritance tax forecast by around £30 million a year to reflect the incentive for individuals with estates valued close to the bottom of the thresholds in the new probate fee structure to reduce the value of their estates. But we did not sufficiently factor in forestalling ahead of the new fees being introduced, which boosted inheritance tax receipts. The legislation necessary to bring the new probate fees structure into effect has not yet been introduced into Parliament and the Government has not yet decided how or when to proceed. We have therefore removed the changes we made in our previous forecast in respect of this measure.
- **'Accelerated construction' and 'starter homes':** Changes announced to the affordable homes programme have moved capital spending out of 2017-18 and 2018-19 and into 2019-20 and 2020-21. The £2 billion of spending announced by the Prime Minister in October has been financed by reducing spending on 'accelerated construction' and 'starter homes' across the four years from 2017-18 to 2020-21.
- **'Staircase tax':** The Government has announced that it will take steps to reverse the effect on business rates of the Supreme Court ruling on how units of property were assessed in multi-occupied buildings (sometimes described as the 'staircase tax'). In doing so, it intends to reinstate the previous practice of the Valuation Office Agency. Relative to taking no action, this will reduce receipts by around £40 million a year. Half the effect would be offset by reduced local authority self-financed expenditure. We have treated this as a non-scorecard policy measure.
- **Immigration skills charge:** This charge was introduced in April 2017 and is levied on public sector bodies and companies that employ skilled migrant workers from outside the European Economic Area. The ONS has confirmed that the charge will be treated as a tax in the public finances statistics. The revenue it raises will be offset by a broadly equivalent increase in spending, where the charge was previously treated as negative spending. We show the gross and net effects in Table A.1.
- **100 per cent business rates retention pilots:** The Government has announced an expansion for 2018-19 of the pilot for business rates retention in London, which is now planned to cover all the London boroughs as well as the Greater London Authority. The full policy, the rollout of which is subject to considerable timing uncertainty, is intended to be fiscally neutral by transferring some spending responsibilities to local authorities. The pilots are fiscally neutral by definition because they allow the pilot authorities to retain an amount of business rates equal to the reduction in central government grant funding. Table A.1 shows how this affects our expenditure forecast. The Government is still committed to introducing the full policy but has not yet made decisions on the details we require to include it in our central forecast.

- **VAT exempt research:** Changes in the EU's 'Markets in Financial Instrument Directive' mean broker dealers will have to charge for the research they provide to asset managers. At the moment, this research is bundled with the buying and selling of financial instruments that broker dealers carry out for asset managers' funds. As a financial service, this is exempt from VAT. This measure, which takes effect from January 2018, makes the charge for this research subject to the standard rate of VAT and is expected to raise around £40 million a year.
- **Network Rail 'Control Period 6' changes:** Decisions affecting Network Rail capital spending from 2019-20 onwards are described in Chapter 4.
- **Other non-scorecard DEL changes:** The numerous spending changes that are not reported on Treasury's scorecard are described in Chapter 4. In some instances these are neutral for borrowing – e.g. where they switch spending between DEL and AME – but in others they affect spending and borrowing.

Table A.1: Costings for policy decisions not on the Treasury scorecard

	Head	£ million					
		2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Probate fees	Receipts	-235	-290	-310	-330	-350	-375
	RDEL	+235	+290	+310	+330	+350	+375
Immigration skills charge	Receipts	+85	+90	+105	+115	+115	+120
	RDEL	-85	-90	-105	-115	-115	-120
Staircase tax	Receipts	-40	-40	-45	-45	-45	-45
	Current AME	+20	+20	+20	+20	+25	+25
Excise uprating changes	Receipts	+45	+130	+120	+120	+115	+110
	RDEL	0	+775	0	0	0	0
Business rates pilots	Current AME	0	-775	0	0	0	0
	Capital AME	0	0	+95	+75	+50	+50
VAT exempt research	Receipts	+10	+40	+40	+40	+45	+45
Other non-scorecard DEL changes	RDEL	-1825	+275	-340	-675	+55	-250
	CDEL	+1280	+1615	-1050	-620	+925	0

Note: The presentation of these numbers is consistent with that in the scorecard shown in Table A.2, with negative signs implying an Exchequer loss and a positive an Exchequer gain.

Uncertainty

A.5 In order to be transparent about the potential risks to our forecasts, we assign each certified costing a subjective uncertainty rating, shown in Table A.2. These range from 'low' to 'very high'. In order to determine the ratings, we have assessed the uncertainty arising from each of three sources: the data underpinning the costing; the complexity of the modelling required; and the possible behavioural response to the policy change. We take into account the relative importance of each source of uncertainty for each costing. The full breakdown that underpins each rating is available on our website. It is important to emphasise that, where we see a costing as particularly uncertain, we see risks lying to both sides of what we nonetheless judge to be a reasonable and central estimate.

Table A.2: Treasury scorecard of policy decisions and OBR assessment of the uncertainty of costings

	Head	£ million						Uncertainty	
		2017-18	2018-19	2019-20	2020-21	2021-22	2022-23		
Housing and Homeownership									
1	Land Assembly Fund ³	Spend	0	0	-220	-355	-355	-355	N/A
2	Housing Infrastructure Fund: extend ³	Spend	0	0	-215	-710	-1,070	-1,185	N/A
3	Small sites: infrastructure and remediation	Spend	0	-275	-355	-120	0	0	N/A
4	Local Authority housebuilding: additional investment	Spend	0	0	-355	-265	-260	0	N/A
5	Stamp Duty Land Tax: abolish for First Time Buyers up to £300,000	Tax	-125	-560	-585	-610	-640	-670	High
6	Right to Buy for Housing Association tenants: pilot	Spend	0	0	-85	0	0	0	N/A
7	Council Tax: increase maximum empty home premium to 100%	Tax	0	0	0	0	+5	+5	Medium
National Health Service									
8	NHS: additional resource	Spend	-400	-1,900	-1,070	0	0	0	N/A
9	NHS: additional capital	Spend	-600	-420	-840	-1,020	-960	-360	N/A
Supporting families and working people									
10	Fuel Duty: freeze for 2018-19	Tax	0	-830	-825	-845	-865	-885	Medium-low
11	Alcohol Duties: freeze in 2018	Tax	-35	-225	-230	-230	-235	-240	Medium-low
12	Air Passenger Duty: freeze for long-haul economy flights and raise business class multiplier	Tax	0	0	+25	+25	+25	+30	Medium
13	Targeted Affordability Fund: increase	Spend	0	-40	-85	-95	-100	-110	Medium-low
14	Universal Credit: remove 7 day wait and extend advances to 100%	Spend	-20	-170	-205	-195	-160	-145	Medium-low
15	Universal Credit: run on payment for housing benefit recipients	Spend	0	-130	-125	-135	-110	-40	Medium-low
16	Universal Credit: in-work progression trials	Spend	*	*	*	-5	-5	0	N/A
17	Private rented sector access schemes: support for households at risk of homelessness	Spend	0	-10	-10	-	-	-	N/A
18	Disabled Facilities Grant: additional resource	Spend	-50	0	0	0	0	0	N/A
19	Relationship Support: continue programme	Spend	0	-5	-10	-	-	-	N/A

An economy fit for the future									
20	Domestic spending: preparing for EU Exit	Spend	0	-1,500	-1,500	0	0	0	N/A
21	National Productivity Investment Fund ³	Spend	0	0	0	0	0	-7,000	N/A
22	Research and Development: NPIF investment ³	Spend	0	0	0	0	-2,300	-	N/A
23	Research and Development: increase R&D expenditure credit to 12%	Spend	-5	-60	-170	-175	-170	-175	High
24	Oil and Gas: transferable tax history	Tax	0	+5	+20	+10	+10	+25	High
25	Patient Capital Review : reforms to tax reliefs to support productive investment	Tax	0	0	+45	+35	-15	-20	N/A
26	Innovation: Ultra Low Emission Vehicles: plug in car grant	Spend	0	-50	-50	0	0	0	N/A
27	Innovation: tech, AI, and geo-spatial data	Spend	0	-70	-75	-	-	-	N/A
28	Transport: accelerate capital investment for intra-city transport (Transforming Cities Fund)	Spend	0	-10	-240	-285	+525	-	N/A
29	Transport: additional investment in local roads	Spend	-55	0	0	0	0	0	N/A
30	Public Works Loan Board: new local infrastructure rate	Spend	0	*	-5	-5	-5	-5	N/A
31	Skills: National Retraining Scheme initial investment	Spend	0	-20	-45	-	-	-	N/A
32	Skills: investment in computer science teachers and maths	Spend	0	-30	-50	-	-	-	N/A
33	Skills: teacher premium pilot	Spend	0	-10	-15	-15	-5	0	N/A
34	Business Rates: bring forward CPI uprating to 2018-19	Tax	0	-240	-530	-525	-520	-520	Low
35	Business Rates: extend pubs discount to 2018-19	Tax	0	-30	0	0	0	0	Medium
36	Competition and Markets Authority: additional enforcement	Spend	0	-5	-5	+5	+15	+10	Medium
37	Aggregates Levy: freeze in 2018-19	Tax	0	-15	-10	-10	-10	-10	Low
38	HGV VED and Road User Levy: freeze in 2018-19	Tax	0	-15	-10	-15	-15	-15	Low
Avoidance, Evasion, Fraud and Error									
39	Avoidance and Evasion: additional compliance resource	Tax	-10	+10	+170	+585	+580	+740	Very high
40	Corporation Tax: tackle related party step up schemes	Tax	+15	+45	+45	+45	+45	+45	Very high
41	Corporation Tax: depreciatory transactions	Tax	+5	+10	+10	+10	+10	+10	Medium-high
42	Royalty payments made to low tax jurisdictions: withholding tax	Tax	0	0	+285	+225	+160	+130	High
43	Online VAT fraud: extend powers to combat	Tax	0	+10	+20	+40	+50	+45	Very high
44	Offshore Time Limits: extend to prevent non-compliance	Tax	0	*	*	*	+5	+10	High
45	Carried Interest: prevent avoidance of Capital Gains Tax	Tax	0	+20	+170	+165	+150	+145	High
46	Insolvency use to escape tax debt	Tax	0	-5	+70	+135	+150	+150	High
47	Dynamic coding-out of debt	Tax	0	0	+55	+30	+20	+20	Medium-high
48	Construction supply chain VAT fraud: introduce reverse charge	Tax	0	0	+90	+135	+105	+75	Very high
49	Waste crime	Tax	0	+30	+45	+45	+50	+45	High
50	Fraud, Error, and Debt: greater use of real-time information	Spend	0	+85	+75	+65	+40	+40	Medium-high

Autumn Budget 2017 policy measures

A fair and sustainable tax system									
51	Corporation Tax: freeze indexation allowance from January 2018	Tax	+30	+165	+265	+345	+440	+525	High
52	Capital Gains Tax: extend to all non-resident gains from April 2019	Tax	+5	+15	+35	+115	+140	+160	High
53	Non-resident property income: move from Income Tax to Corporation Tax	Tax	0	0	0	+690	-310	-25	Medium-high
54	Capital Gains Tax payment window reduction: delay to April 2020	Tax	0	0	-1,200	+950	+235	+10	Medium
55	VAT registration threshold: maintain at £85,000 for two years	Tax	0	+15	+55	+105	+145	+170	Medium-high
56	Tobacco Duty: continue escalator and index Minimum Excise Duty	Tax	+45	+35	+40	+45	+40	+35	Low
Other public spending									
57	Adjustments to DEL spending	Spend	+1,000	0	-1,135	0	0	0	N/A
58	Official Development Assistance: meet 0.7% GNI target	Spend	0	+375	0	0	0	0	N/A
59	Scotland police and fire: VAT refunds	Tax	0	-40	-40	-40	-45	-45	Medium-low
Air Quality									
60	Air Quality: increase Company Car Tax diesel supplement by 1ppt from April 2018	Tax	0	+70	+35	-30	+130	+90	Medium-high
61	Air Quality: First Year Rate increased by one VED band for new diesel cars from April 2018	Tax	0	+125	+50	+10	*	*	Medium-high
62	Air Quality: funding for Air Quality Plan and Clean Air Fund	Spend	-20	-180	-215	-80	-	-	N/A
Previously announced policy decisions									
63	Tuition Fees: raise threshold to £25,000 in April 2018	Tax	0	-50	-100	-175	-235	-295	Medium-low
64	Tuition Fees: freeze fees in September 2018	Tax	0	-5	-15	-25	-35	-45	Medium-low
65	Oil and Gas: funding for UK continental shelf exploration projects	Spend	0	-5	0	0	0	0	N/A
66	NICs: maintain Class 4 NICs at 9% and delay NICs Bill by one year	Tax	-10	-125	-645	-685	-565	-525	Medium-high
67	Making Tax Digital: only apply above VAT threshold and for VAT	Tax	*	*	-65	-245	-515	-585	High
68	City Deals: Swansea and Edinburgh	Spend	0	-30	-30	-30	-	-	N/A
69	Social rented sector: maintain current rent policy without Local Housing Allowance cap	Spend	0	0	-155	-205	-255	-320	Medium-high
TOTAL POLICY DECISIONS			-230	-6,045	-9,915	-3,315	-2,960	-2,520	

*negligible

¹ Costings reflect the OBR's latest economic and fiscal determinants.

² At Spending Review 2015, the government set departmental spending plans for resource DEL (RDEL) for the years up to and including 2019-20, and capital DEL (CDEL) for the years up to and including 2020-21. Where specific commitments have been made beyond those periods, these have been set out on the scorecard. Where a specific commitment has not been made, adjustments have been made to the overall spending assumption beyond the period.

³ These figures do not feed into the Total policy decisions line. In 2021-22 and 2022-23, funding for these measures has been allocated from the aggregate total for capital spending. This includes the National Productivity Investment Fund. The NPIF will extend into 2022-23 at £7bn in that year.

An example of assigning uncertainty rating criteria

A.6 Table A.3 shows the detailed criteria and applies them to a sample policy measure from this Budget: '**Research and Development: increase R&D expenditure credit to 12%**'. This measure increases the corporation tax relief that companies can claim on qualifying R&D expenditure by raising the rate of R&D expenditure credit from 11 to 12 per cent. This policy is expected to cost £60 million in 2018-19 and an average of £170 million a year from 2019-20 onwards. Against each uncertainty criterion:

- **Behavioural:** This is the most important source of uncertainty in this costing. Given the relatively small change in the relief rate, we have not adjusted our overall business investment forecast for this measure. But it is likely to induce higher qualifying R&D expenditure. Some of that is likely to be additional, while some may displace other investment or reflect efforts to get other investment badged as R&D. The behavioural estimate in the costing is based on a recent HMRC evaluation.¹ It notes that the central estimate lies within a wide range. We consider this a 'high' source of uncertainty.
- **Modelling:** Outturn qualifying expenditure has been relatively volatile in recent years, having been affected by both policy and real-world changes. These relationships cannot be easily modelled, so there are many factors that may not be captured in the costing. We consider this a 'high' source of uncertainty.
- **Data:** The main data for this costing are based on HMRC's corporation tax returns. The data give a broadly reliable indication of businesses' qualifying R&D expenditure, but are subject to two key sources of potential inaccuracy. Not all claims for relief are submitted via tax returns, which could underestimate R&D expenditure. But of those claims submitted through tax returns, some will ultimately not qualify for the relief, which could overestimate expenditure. These two effects work in opposite directions, but may not offset fully. We consider this a 'medium' source of uncertainty.

Taking all these judgments into account, we gave the costing an overall rating of 'high'.

¹ *Evaluation of Research and Development Tax Credit*, HM Revenue and Customs, 2015.

Table A.3: Assigning uncertainty rating criteria to 'Research and Development: increase R&D expenditure credit to 12%'

Rating	Modelling	Data	Behaviour
Very high	Significant modelling challenges Multiple stages and/or high sensitivity on a range of unverifiable assumptions	Very little data Poor quality	No information on potential behaviour
High	Significant modelling challenges Multiple stages and/or high sensitivity on a range of unverifiable assumptions	Little data Much of it poor quality	Behaviour is volatile or very dependent on factors outside the tax/benefit system
Medium-high	Some modelling challenges Difficulty in generating an up-to-date baseline and sensitivity to particular underlying assumptions	Basic data May be from external sources Assumptions cannot be readily checked	Significant policy for which behaviour is hard to predict
Medium	Some modelling challenges Difficulty in generating an up-to-date baseline	Incomplete data High quality external sources Verifiable assumptions	Considerable behavioural changes or dependent on factors outside the system
Medium-low	Straightforward modelling Few sensitive assumptions required	High quality data	Behaviour fairly predictable
Low	Straightforward modelling of new parameters for existing policy with few or no sensitive assumptions	High quality data	Well established, stable and predictable behaviour
Importance	Medium	Low	High
Overall		High	

A.7 Using the approach set out in Table A.3, we have judged 15 measures in the scorecard to have 'high' or 'very high' uncertainty around the central costing. Together, these represent 22 per cent of the scorecard measures by number and 20 per cent by absolute value (in other words ignoring whether they are expected to raise or cost money for the Exchequer). Of these highly uncertain measures, two have an Exchequer cost (which totals £3.9 billion over the forecast period) while 13 have an Exchequer yield (which totals £6 billion).

HMRC operational measures

A.8 The Government has announced a package of measures designed to generate additional revenue from HMRC compliance activity. The various components were combined into the single line of the scorecard: '**Avoidance and Evasion: additional compliance resource**'. As we have previously set out, the costing of these type of measures is often subject to a high degree of uncertainty. While we only certify measures that we judge to be reasonable and central, efforts to tackle avoidance and evasion have not always brought in the expected

yield.² The measures often target a subset of individuals or companies that are already actively changing their behaviour to avoid or evade tax. As a result there is typically a high degree of behavioural uncertainty. Similarly, since the measures are directed at uncollected tax, there is usually less reliable data available to inform the costing. And there are often uncertainties relating to the timely delivery of operational changes, especially when they rely on new IT systems (see paragraph A.20).

- A.9 Scrutinising this package of measures brought about some further challenges. The approach HMRC takes to measuring compliance yield does not map directly onto the National Accounts receipts definitions used in the Government's fiscal targets and that we therefore forecast. This makes it difficult to distinguish what is relevant to our forecast with any precision. Another challenge was determining whether the yield from this package would be additional to that already captured in previously announced measures. In particular the large July 2015 package of HMRC measures has yet to become fully effective, so we needed to assure ourselves that the yield in our baseline forecast in respect of previous measures was not being factored into these new measures too.
- A.10 To overcome some of these challenges we looked at HMRC's past compliance performance. For example, we considered the progression of HMRC's estimates of the tax gaps for the different taxes, groups of taxpayers and activities targeted by this package. This allowed us to consider top-down whether the expected yield from different elements of the package was reasonable relative to the types of activity the Government each seeks to tackle. We also looked at the returns to investment for the July 2015 package of measures and how they compared to the current package. For most, we expected to see diminishing returns from additional investment and challenged those costings where that had not been assumed. We required each costing to show that appropriate contingencies were in place for delays in recruitment and for training lags. Where staff were being redeployed from elsewhere within HMRC we asked for an appropriate opportunity cost to be incorporated.
- A.11 We assign this package of measures a 'very high' uncertainty rating, with each of data, behaviour and modelling also classed as 'high' or 'very high'. For some elements, such as those targeting the hidden economy or criminals, the level of uncertainty is very high. We will continue to evaluate the performance of these and previous anti-avoidance and evasion measures on a regular basis. This Budget has continued the recent pattern whereby the yield from revenue-raising measures is concentrated in these more uncertain areas while the cost of the tax giveaways is far more certain.
- A.12 The remaining measures subject to a 'very high' or 'high' uncertainty are:
- **'Corporation Tax: tackle related party step up schemes'**: This anti-avoidance measure seeks to address the use of 'step-up' schemes that enable a company to 'sell' or licence an intangible asset to a related company that 'pays' for the asset by issuing shares. As there has not been a transfer of legal ownership the seller does not have to

² See for example Chapter 5 in our 2017 *Fiscal risks report* and Johal, *Evaluation of HMRC anti-avoidance and operational measures*, OBR Working Paper No.11, both available on our website.

declare this as a taxable profit but the buyer can record it as an expense. This artificially suppresses their tax liability. The main uncertainty is around data, particularly the number and value of identified past cases that are used to project the relevant tax base. As with most anti-avoidance measures, there is also considerable uncertainty over the potential size of the behavioural response. We assign this costing a 'very high' uncertainty rating.

- **'Online VAT fraud: extend powers to combat'**: This measure applies to VAT due on online sales and follows a similar previous measure described in paragraph A.25. It makes online marketplaces 'jointly and severally liable' for unpaid VAT from sales that take place on their platform from both UK and overseas sellers. The costing allows for a large behavioural response. Many of the sellers that are affected are likely to be replaced by others, while some will restructure their operations through alternative countries or set up as new companies. As with most measures targeting uncollected tax, there is significant data uncertainty. The tax base cannot be precisely estimated and requires uncertain assumptions and judgement to reach a central estimate. The uncertainties over data and behaviour have meant the use of a multi-step modelling approach that has had to rely on a number of assumptions. Each aspect of this costing is uncertain and we assign it a 'very high' uncertainty rating overall.
- **'Construction supply chain VAT fraud: introduce reverse charge'**: This measure seeks to counter construction sector fraud by introducing a reverse VAT charge in the industry. This will prevent businesses in a supply chain from being able to charge VAT but abscond before paying it to HMRC. The reverse charge means that all but the final business customer in a supply chain are liable to account for the VAT rather than the supplier. The data underpinning this costing are highly uncertain. The estimate of the relevant tax base was derived from aggregate ONS data on the construction sector, relying on multiple uncertain assumptions and judgements that overlap with uncertainties around the modelling. There are some behavioural uncertainties and the costing allows for some attrition. Overall, we assign it a 'very high' uncertainty rating.
- **'Insolvency use to escape tax debt'**: When setting up a new business, individuals that HMRC deems to be at risk of declaring future insolvency as a means of avoiding tax can be asked to pay a security deposit to HMRC, which is returned subject to compliant behaviour. This measure extends those powers to corporation tax and the construction industry scheme. The behavioural response is particularly uncertain as it applies to individuals with a history of avoidance. Some of the yield is generated by encouraging more compliant behaviour by individuals faced with the potential loss of the deposit and subsequent legal action. This measure receives a 'high' uncertainty rating.
- **'Corporation Tax: freeze indexation allowance from January 2018'**: When businesses dispose of an asset corporation tax is due on any gain in its value. Indexation allowance reduces their liability by relieving gains accounted for by inflation. This measure freezes the allowance so that inflation-driven gains beyond January 2018 will not attract relief. The key uncertainty in this costing relates to the data, for which we assign a 'very high' rating. Indexation allowance is often not recorded in tax returns,

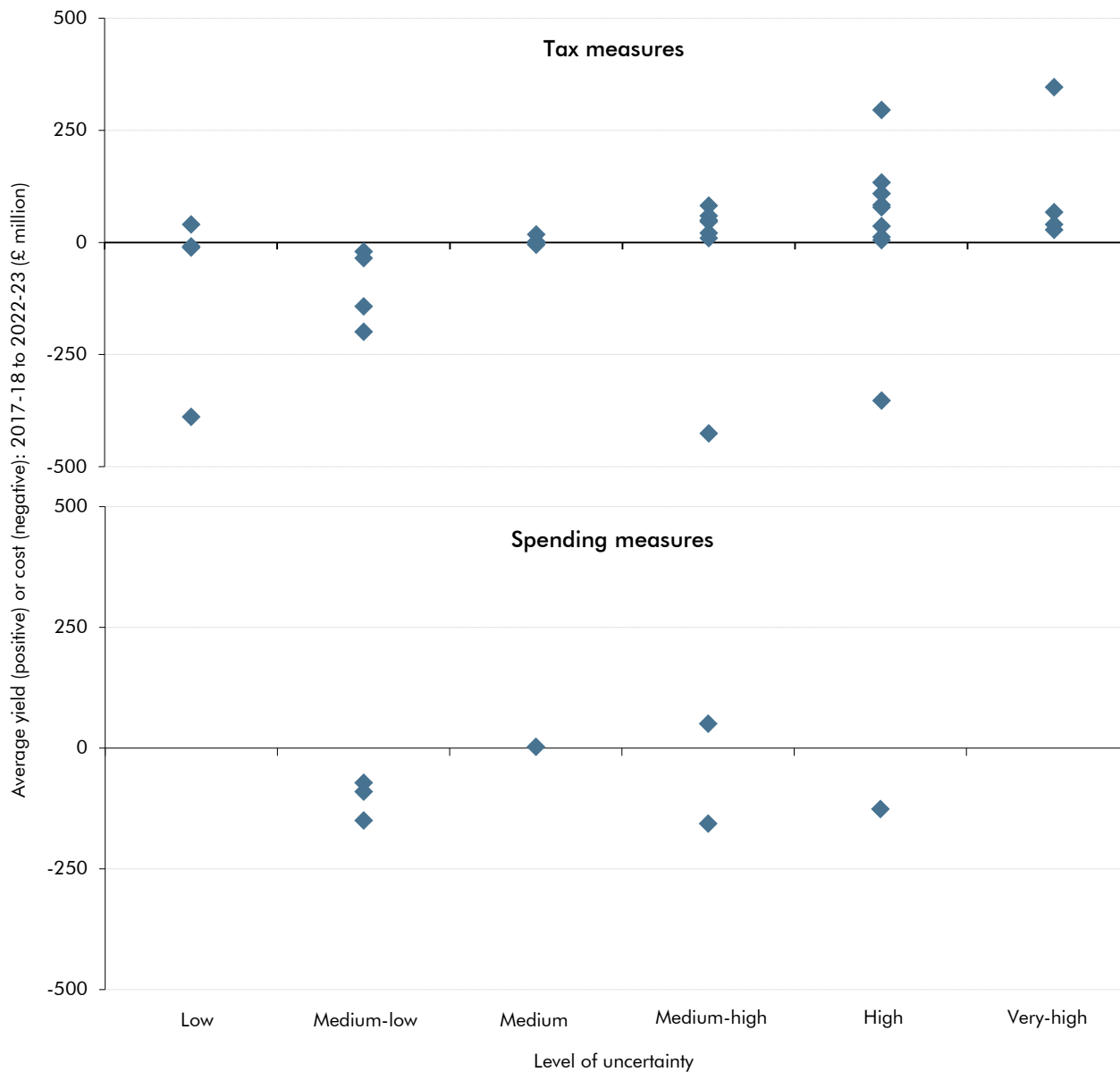
- so the costing relies on just those cases where it has been. This is a relatively small sample and there is a risk that it does not reliably reflect the wider use of the allowance. To try to overcome this, the costing required a number of assumptions that also increase the level of modelling uncertainty. Overall, this measure receives a ‘high’ uncertainty rating.
- **‘Waste crime’:** This measure provides additional powers and resources, to HMRC and the Environment Agency respectively, to collect tax from illegal waste sites and generate additional landfill tax and VAT receipts. The most uncertain element is the behavioural response. The yield depends on the effectiveness of additional operations against illegal waste site operators that have already shown they are willing to evade tax, so are likely to seek ways around these efforts to make them compliant. There is also, unsurprisingly, a ‘high’ level of uncertainty over the availability of data about these criminal activities. The measures are only expected to clear a small proportion of the existing stock of illegal waste. This receives a ‘high’ uncertainty rating.
 - **‘Stamp Duty Land Tax: abolish for First Time Buyers up to £300,000’:** This allows first-time buyers purchasing houses under £500,000 to claim a relief on their stamp duty land tax (SDLT) (see Box 4.3 for more detail). The main uncertainty is around behaviour, which we assign a ‘high’ rating. The costing assumes a small number of additional first-time buyer purchases (around 3,500) but that these will displace other purchases by those who would have bought and paid the main rate of SDLT and, in some cases, the additional properties surcharge. It is also possible that non-first-time buyers will abuse the relief. The measure is expected to increase house prices. It receives a ‘high’ uncertainty rating.
 - **‘Royalty payments made to low tax jurisdictions: withholding tax’:** This expands the scope of the existing royalty withholding tax rules to cover royalties and other similar payments that are connected with sales to UK customers. This responds to the difficulties encountered in a similar previous measure, as explained in paragraph A.23. There is particular uncertainty around both data and behavioural response. The data uncertainty is due to the small number of cases known to HMRC and the difficulty in identifying payments between two overseas entities that may be within scope of the measure. For behaviour, the costing assumes a high level of attrition to reflect the different ways that businesses may respond to reduce their withholding tax liability. We give this a ‘high’ uncertainty rating.
 - **‘Making Tax Digital: only apply above VAT threshold and for VAT’:** This measure delays the previously announced HMRC initiative around interacting digitally with taxpayers by introducing software that will design out record-keeping errors in tax returns. As with the original measure both the behavioural response and operational delivery are uncertain. In terms of behaviour, this relates to the extent to which the software will prevent errors by taxpayers. In terms of delivery, HMRC has told us that it was broadly on track to deliver to the original timetable, but given its scale, we still consider it to be challenging. This package receives a ‘high’ uncertainty rating.

- **‘Carried Interest: prevent avoidance of Capital Gains Tax’:** This measure responds to avoidance schemes designed to circumvent a previous measure described in paragraph A.23. It levies a CGT charge on the gains made by certain private equity and hedge fund managers. There is particular uncertainty around both the tax base and the behavioural response to the policy. The tax base has been imputed from external sources rather than HMRC administrative data. As we saw with the previous measure, this group of taxpayers has consistently shown a willingness to use aggressive avoidance strategies so the costing allows for a significant behavioural adjustment. Overall, we assign it a ‘high’ uncertainty rating.
- **‘Capital Gains Tax: extend to all non-resident gains from April 2019’:** This measure taxes gains made by non-UK residents disposing of UK immovable property, whether the disposal is made directly or indirectly via a non-trading company. It relies on projecting a highly uncertain tax base estimate, in particular indirect disposals via non-trading companies. These disposals are currently not captured in HMRC’s property transactions databases. There is also considerable uncertainty over behaviour, with a number of possible responses that affect the costing. This measure receives a ‘high’ uncertainty rating.
- **‘Oil and Gas: transferrable tax history’:** This measure provides extra decommissioning tax relief to some purchasers of North Sea oil and gas assets, by allowing some access to ring-fenced corporation tax history related to the asset. It is due to take effect in November 2018. The measure will increase the value of some assets, which should raise investment and eventually production in the North Sea. Given the lags between investment and production, the majority of any receipts effect would be expected to occur beyond our forecast horizon. The measure raises £25 million in 2022-23. The underlying tax base is volatile and the behavioural response to these relatively complex tax changes is uncertain. We have assigned this measure a ‘high’ uncertainty rating.
- **‘Offshore Time Limits: extend to prevent non-compliance’:** This measure extends the time that HMRC is permitted to assess tax in cases involving offshore income, assets and structures. As with most offshore evasion and avoidance measures, estimating the current amount of tax lost and predicting the behavioural response of a group that are already changing their behaviour to avoid paying tax is hugely uncertain. With little firm information available, modelling these effects can be highly complex. This measure receives a ‘high’ uncertainty ranking.
- **‘Research and Development: increase R&D expenditure credit to 12%’:** This is described in paragraph A.6.

A.13 We have judged 21 scorecard measures to have between ‘medium-low’ and ‘medium-high’ uncertainty around the central costing, with a further four having ‘low’ uncertainty. That means that 30 per cent of the Budget scorecard measures have been placed in the medium range (26 per cent by absolute value) and 6 per cent have been rated as low (just 4 per cent by absolute value).

A.14 Chart A.1 plots these uncertainty ratings relative to the amount each policy measure is expected to raise or cost. One feature of the distribution of measures by uncertainty is that the spending measures are typically assigned lower uncertainty ratings than the tax measures, while those measures cutting taxes typically have lower uncertainty ratings than those raising taxes. This is particularly true for the measures that aim to raise money from companies and from high income and wealth individuals that are already actively planning their affairs to reduce their tax liabilities. This pattern has been apparent in most recent fiscal events and, as we noted in our *Fiscal risks report*, is considered an ongoing fiscal risk.

Chart A.1: OBR assessment of the uncertainty of scorecard costings



Longer term uncertainties

A.15 For most policy costings, the five-year scorecard period is sufficient to give a representative view of the long-term cost or yield of a policy change. Typically, that effect is either zero – because the policy has only a short-term impact that has passed by the end of the scorecard

period – or it would be reasonable to expect the impact at the end of the forecast to rise broadly in line with nominal growth in the economy thereafter. Those with longer-term effects worth noting include:

- **‘Tuition Fees: raise threshold to £25,000 in April 2018’ and ‘Tuition Fees: freeze fees in September 2018’:** The largest effects on borrowing from these measures – in particular the change to the repayment threshold – will occur 30 years after loans are extended on the new terms. At this point, any outstanding balance is written off, adding to public spending. These effects are explained in Chapter 4.
- **‘Tobacco Duty: continue escalator and index Minimum Excise Duty’:** This measure reinstates the RPI plus 2 per cent escalator on tobacco duty and an additional 1 per cent rise in duty rates on hand-rolling tobacco. It also introduces an indexation element to the minimum excise tax for tobacco. While the measure is revenue raising as a whole, for cigarettes the costing suggests that future rate increases will actually reduce receipts, which would be consistent with the duty rate rising beyond its revenue-maximising level.

Small measures

A.16 The BRC has agreed a set of conditions that, if met, allow OBR staff to put an individual policy measure through a streamlined scrutiny process. These conditions are:

- the expected cost or yield does not exceed £40 million in any year;
- there is a good degree of certainty over the tax base;
- it is analytically straightforward;
- there is a limited, well-defined behavioural response; and
- it is not a contentious measure.

A.17 By definition, any costings that meet all these conditions will have a maximum uncertainty rating of ‘medium’.

A.18 A good example of a small measure announced in this Budget is the **‘HGV VED and Road User Levy: freeze in 2018-19’** measure. Vehicle excise duty rates are forecast to increase by RPI inflation, but the duty rate for heavy goods vehicles (HGVs) has remained frozen since 2001. This measure freezes vehicle excise duty rates for HGVs for another year. It is expected to cost around £10 million a year. The costing uses good quality data based on a stock of relevant vehicles. The modelling is straightforward and has been applied repeatedly. It involves multiplying the stock of HGVs by the difference between the current rate and the counterfactual rate if it were increased by RPI inflation. Behaviour is considered to have a negligible impact as the change in rate will make up a very small proportion of

the running costs for the full stock of HGVs. Given the regularity with which the freeze is extended each year, it is not considered a contentious measure.

Update on previous measures

A.19 We cannot review and re-cost all previous measures at each fiscal event (the volume of them being simply too great), but we do look at any where we are informed that the original (or revised) costings are under- or over-performing, and at costings that we have previously identified as subject to particular uncertainty.

HMRC digital initiatives

A.20 HMRC is pursuing a number of digital initiatives that are expected to have a bearing on our forecast. The largest of these is 'Making tax digital', for which we have so far only reflected those elements that we feel are sufficiently clearly specified to quantify in specific years. Estimating the yield from these measures involves a number of steps that are typically subject to high degrees of uncertainty, notably delivery schedules, the effectiveness of IT and the response of taxpayers to operational changes. Despite requiring evidence of contingency margins in delivery plans and seeking to squeeze out optimism bias before such costings are certified, we continue to be informed of delays and other issues that mean the yield from these policies will be lower and/or later than assumed. The latest include:

- **Making tax digital:** In Autumn Statement 2015 the Government announced an HMRC initiative to interact digitally with small businesses across income tax, corporation tax and VAT, working with the private sector to introduce software that will design out record-keeping errors in taxpayers' returns. This was expected to yield significant amounts from 2018-19 onwards. In our March *EFO* we highlighted two policy changes – a concession on the use of spreadsheets and a one-year delay (from April 2018 to April 2019) to the implementation of the self-assessed income tax element for businesses and landlords with a turnover below £83,000. At this Budget, the Government has delayed the mandated use for income tax further to at least April 2020. Table A.2 shows the cost of this delay across the forecast.
- **Putting inheritance tax online for customers and agents:** announced in Autumn Statement 2013 as part of 'HMRC: extending online services', this was originally expected to go live in October 2015, with full coverage from March 2016. It was first delayed until March 2017, then further to August 2017. HMRC has told us that phase 2 – the revenue generating phase – has been 'paused indefinitely'. We have removed all yield attributed to this measure from our forecast.
- **Allowing charities to register jointly with HMRC and the Charity Commission:** Another element of the 'HMRC: extending online services' measure, this was due to be implemented from 2015-16, but was delayed to April 2017. HMRC considers this to remain 'work in progress', but with no firm end date. Once again, we have removed all yield from this measure in our forecast.

- **Digital disclosure service:** Part of the July 2015 policy ‘hidden economy’, this was intended to allow taxpayers to disclose unpaid tax of any type. The yield-generating element has been scrapped and HMRC is looking into an alternative. This too has been revised down to zero yield.

Policy reversals

A.21 Our forecast reflects four previously announced policies that the Government has cancelled, three of which it has shown on its scorecard and one that we have recorded as a non-scorecard policy measure:

- **Class 4 NICs:** In the Spring Budget earlier this year the Government announced an increase to the main rate of Class 4 NICs from 9 to 10 per cent in 2018-19 and then to 11 per cent from 2019-20. This decision was reversed just days later, at an annual average cost to the Exchequer of £0.5 billion.
- **Local housing allowance caps:** The Government announced in Autumn Statement 2015 that it would reduce the eligibility to housing benefit and universal credit housing support for those in the social-rented sector by capping their awards to the local housing allowance rates that apply in the private sector. This was to take effect from April 2018 but was delayed by one year at Autumn Statement 2016. It has now been abandoned completely with the associated costs shown in Table A.2.
- **‘Accelerated construction’ and ‘starter homes’:** the changes to these spending commitments is set out in paragraph A.4.
- **Probate fees:** the decision not to proceed with the higher fees announced in February is described in paragraph A.4.

Policy delays

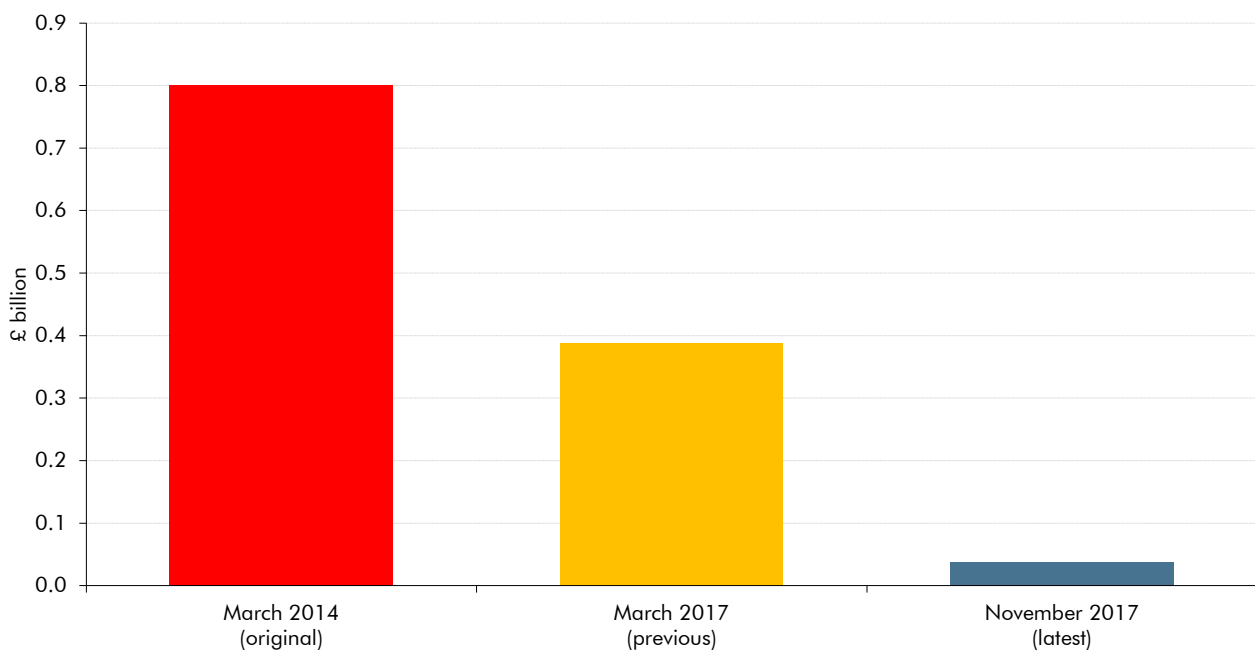
A.22 In order to certify costings as central, we need to estimate when – as well as by how much – measures will affect the public finances. As we have set out in previous *EFOs*, many of the Government’s announced policy measures do not meet the timetable factored into the original costings – even where we have required greater contingency margins before certifying the measure. This continues to pose a risk to our forecast. The policy delays we have been notified about in this Budget include:

- **Abolition of Class 2 NICs:** This measure, which affects the self-employed, was announced at Budget 2016 and was due to begin from April 2018. The relevant legislation was postponed due to the election, but has now been pushed back further. The Government has therefore announced that the abolition will not take effect until April 2019. The effect of this is a revenue gain of £0.4 billion in 2018-19.
- **NICs on termination payments:** This is part of another Budget 2016 measure “removing employer tax advantage” by applying NICs to termination payments over

- £30,000. It has been delayed by one year to April 2019. The effect of this is a revenue loss of £0.2 billion in 2018-19.
- Capital gains tax payment window for residential property:** This November 2015 measure changed the payment method for CGT due on residential property disposals. From April 2019, taxpayers would have had to pay within 30 days of a transaction taking place, instead of the existing requirement to pay through self-assessment, which is usually more than a year later. The original measure provided a one-off boost to receipts in 2019-20 and 2020-21. It has now been delayed by one year, meaning a larger boost to 2020-21 receipts of £1 billion, at the expense of receipts in 2019-20. In both cases there is no change to underlying tax liability. If the ONS were to choose to follow the approach it now takes to recording corporation tax receipts and record CGT receipts closer to an accruals rather than a cash basis, then the effect of these two measures would in effect be zero. This in turn would reduce headroom against the Government's fiscal target in 2020-21 by almost a tenth.
 - Manchester city deal:** In Spending Round 2013, the Coalition Government announced the 'Manchester city deal' with an expected cost of £300 million. This fiscal cost reflected the amount Greater Manchester was expected to borrow to finance transport projects and was spread across 2016-17 and 2017-18. The Government's latest estimate, which we have factored into this forecast, is that the cost will be much lower, just £80 million, and will occur much later, being completed in 2020-21.
 - Right to buy pilot for housing associations:** The Government has committed to expanding 'right to buy' to tenants of housing associations. A small pilot scheme was due to run from January to May 2016 but was delayed to July due to the process of applications taking longer than expected and there being a longer lag between issuing instructions to solicitors and completions being achieved. A larger pilot was announced in Autumn Statement 2016 and was due to begin in April 2017. This did not take place. It has instead been replaced by a new pilot announced at this Budget, due to run for one year from July 2018. The associated costing is shown in Table A.2.
 - Personal independence payment:** DWP has pushed back the point at which it expects to complete the rollout of personal independence payment by nine months to June 2019, nine years after the decision to "*introduce the use of objective medical assessments*" for disability benefits was announced and four years after it was initially planned to be fully rolled out. The latest delay was prompted by concerns about the capacity of DWP's two private contractors to deliver reassessments in a timely and consistent manner. It is expected to ease providers' capacity constraints but also to reduce the pace of new assessments. This has little effect on our forecast because the personal independence payment has not proved to reduce spending relative to disability living allowance that it is replacing.
 - Tax-free childcare:** Originally announced in Budget 2013, tax-free childcare (TFC) was to be launched in autumn 2015. The existing employer-supported childcare, which affects our income tax forecast, was due to close to new entrants at the same time. In

2015 the TFC launch was delayed by 18 months following a legal challenge to the Government’s decision to deliver the scheme through NS&I. At Budget 2016 the Government opted for a more gradual roll out. At the Spring Budget, it pushed the start date back further – to April 2017 – and we assumed that the pace of take-up would be slower than we had assumed previously. In the event, take-up so far this year has been even lower than we assumed in March – just a 30,000 caseload instead of 415,000 by October 2017. The Government has also decided to delay the start date for older children, so TFC will not be rolled out fully until April 2018. We have assumed a slower pace of take-up than we did in March. The effect of the latest changes on our welfare spending forecast are described in Chapter 4. When TFC was originally announced, our forecast extended to 2017-18 and TFC was expected to cost £0.8 billion in that year; our latest forecast is £37 million, as shown in Chart A.2.

Chart A.2: Forecast expenditure for tax-free childcare in 2017-18



Source: HMRC, OBR

A.23 We have also received updates on a number of other policies including:

- Alcohol fraud and evasion:** At Autumn Statement 2013 the Government announced ‘**alcohol fraud: wholesaler registration**’, which led to the alcohol warehouse registration scheme that came online in April 2017. This was followed in Summer Budget 2015 by ‘**tackling illicit tobacco and alcohol**’, which sought to enhance HMRC’s intelligence about criminal activity in these sectors and increase its operational capacity. For both measures, we highlighted the considerable uncertainties associated with estimating the level of illicit activity and anticipating potential behavioural responses. Collectively the measures were expected to yield £280 million in 2017-18, but this has been revised down to £145 million. The reduction is mainly due to HMRC data showing less illicit activity, both by wholesalers and organised crime groups, than was originally estimated. For the latter, HMRC believes this is largely due to its ongoing

operational activity deterring the supply of illicit alcohol by more than had been assumed. If that is the case then the reported yield from these measures may be understated as the benefit of that operational activity will be reflected in the outturn data that underpins our baseline forecast. We will revisit this issue in a future evaluation of these costings.

- Voluntary NICs:** In March 2014 the Government announced it was introducing a time-limited opportunity for eligible pensioners to buy extra units of state pension with lump-sum 'Class 3A' NICs, on a voluntary basis. It was open for 18 months from October 2015 to April 2017. The costing was heavily dependent on highly uncertain assumptions about take-up, as we highlighted in our *EFO* at the time. The original measure assumed take-up would be 265,000, with £870 million of NICs payments expected in total, leading to higher state pensions spending over the longer term. In the event, take-up was around 13,000, just 5 per cent of the original assumption. Even though the average payment of around £17,000 was much higher than the £3,200 assumed in the costing, only £225 million was received in NICs payments. We will carry out a fuller evaluation of the reasons for this large shortfall next year.
- Soft drinks industry levy:** This Budget 2016 measure was originally due to raise £520 million when introduced in 2018-19. This was subject to considerable uncertainty over the behavioural responses of both consumers and producers. Indeed, in our March *EFO* we explained that new industry data suggested producers had lowered the sugar content of their drinks at a faster pace than expected. This meant fewer producers would be subject to the higher rate of the levy and others would fall below the threshold for the lower rate. The drop in expected yield was partly offset by a policy change, but we reduced the expected yield in 2018-19 to £380 million. We have now been informed by HMRC that significant revisions to the data underpinning the estimated yield suggest the size of the tax base was considerably overestimated. These data are produced by Mintel, which pointed to the 'on-premises trade' – i.e. soft drinks sold in pubs, restaurants and cafes – as the source of the revision. We now expect the 2018-19 yield to be just £275 million.
- Help to buy equity loan:** Launched in April 2013, this scheme provides home buyers with a Government loan towards the purchase of an eligible new build home in England and Wales (worth up to 20 per cent of the purchase price outside London and 40 per cent in London). The loans are repayable only once the home is sold. The loan scheme was originally announced to run for three years to March 2016, but was extended to March 2020 in Budget 2014, and again to March 2021 in this Budget.
- Help to Buy ISA:** Announced at Budget 2015, this was launched in December 2015 and available until November 2019. It allowed first-time home buyers to benefit from a 25 per cent government top-up when purchasing a house with a price that does not exceed £250,000 outside London or £450,000 in London. Up to £200 a month could be saved, with a minimum of £1,600 required to receive the top-up and a maximum of £12,000 (so a maximum top-up of £3,000). Government contributions must be claimed by December 2030. In our March 2015 *EFO* we highlighted the high level of

behavioural uncertainty, including the numbers of savers that would choose to open an account and the amounts they would invest. The original costing estimated cumulative Government expenditure to reach nearly £700 million by the end of 2017-18. Take-up so far has been well below expectations and the total value of payments made in the first 20 months of the scheme – to June 2017 – were just £77 million. We have revised down our forecast for 2017-18 expenditure to £110 million and lowered subsequent years by an average of around 55 per cent a year, lowering cumulative spending by £1.6 billion across the forecast.

- **Lifetime ISA:** At Budget 2016, the Government announced the introduction of the lifetime ISA that allowed savers between the ages of 18 and 40 to invest up to £4,000 a year and receive a 25 per cent top-up from government. The full amount saved, including interest, could be withdrawn without charge for either a first-time house purchase (up to a value of £450,000) or for retirement income from the age of 60. Most other withdrawals would be subject to a charge. This costing was subject to the same types of behavioural uncertainties as the help to buy ISA, as we discussed in our March 2016 *EFO*. The measure took effect in April 2017 but, as with the help to buy ISA, the start has been sluggish, with very few accounts available to savers. As a result we have reduced our forecast for the cost to government by an average of around 40 per cent a year, lowering cumulative spending by £2.6 billion across the forecast.
- **Innovative Finance ISA:** This Budget 2014 announcement created a new ISA product for returns from investments made via peer-to-peer loan platforms. At the time we highlighted the significant uncertainty around what was a relatively new financial product. Amounts deposited in these types of ISAs to date have been far lower than originally expected – just £20 million from around 2,000 accounts according to HMRC statistics, compared to the £800 million allowed for in the original costing. This is despite continued growth in peer-to-peer lending since 2014. One likely reason for this shortfall is the subsequent Budget 2015 measure on the personal savings allowance, which allowed many investors to retain interest income tax-free without the need for an ISA. Both policies took effect in April 2016. A second reason for lower-than-expected take-up reflects some of the largest platform providers taking longer than expected to gain authorisation from the Financial Conduct Authority.
- **Creative sector tax reliefs:** Since 2012 the Government has brought in a number of tax reliefs designed to promote specific ‘creative’ activities – in ‘high-end’ television, children’s television, video games, animation production, theatre productions, museums and galleries, and orchestras – and it expanded the existing film tax relief. As we highlighted in March, outturn data show these reliefs have often cost more than initially expected. In this forecast we have revised the cost of these reliefs up further, by over £100 million a year, and expect their cost to continue to rise. The largest proportionate upward revisions in this forecast were to the video games tax relief (where the annual cost is roughly twice as much as expected in March) and high-end TV relief (roughly 50 per cent higher). By 2022-23 creative reliefs are expected to cost £0.9 billion a year.

- **‘Capital Gains Tax: avoidance by private equity and hedge funds’:** This July 2015 announcement levies a CGT charge on the gains made by certain private equity and hedge fund managers. At the time we stressed the very high uncertainty around this costing, in particular around the tax base and the behavioural response. The costing included a large allowance *“to reflect the established ability and willingness of these individuals to find new avenues of avoidance”*. But this may not have been large enough as HMRC considers the measure to have been less effective than it hoped, mostly due to the aggressive use of a loophole that was not identified at the time. The revised yield is now around £200 million or 30 per cent less than we included in our March forecast. In this Budget the Government has responded by closing the loophole, which is expected to yield around £150 million a year relative to the downwardly revised baseline. As with the original measure, we consider this to be subject to high uncertainty too (see paragraph A.12).
- **The ‘commercial and profitable’ test for tax credits:** This was announced in Autumn Statement 2014 and introduced in April 2015. The test requires self-employed individuals claiming working tax credit to *“show that they are trading on a commercial basis and their business is done with a view to achieving profits”*. Outturn data suggest the savings from this are broadly in line with expectations, but HMRC has told us that it plans to reduce staffing long before all claimants are due to have transferred to universal credit.
- **Royalties withholding tax:** This was announced at Budget 2016 as ‘corporation tax: withholding tax on royalties’ and was part of the Government’s contribution to the OECD’s base erosion and profit shifting (BEPS) initiative. The measure sought to counter the use of intra-group royalty payments by multinationals to shift profits from the UK to lower-tax countries. It widened the scope of royalty payments to include all intangible assets such as trademarks and brand names and broadened the rules on when royalties are regarded as having a UK source. HMRC has told us that the original costing overestimated the tax base and that very little of the £150 million a year income tax yield in the original costing is now expected, but that most would be subsequently be recouped via diverted profits tax (DPT). We accepted this analysis as central and revised our pre-measures income tax and DPT forecasts accordingly. In this Budget the Government has announced a further measure, which in broad terms aims to recoup income tax yield, but at the cost of the additional DPT yield we had factored into our pre-measures forecast. The measure was, and remains, subject to high uncertainty on our rankings.
- **Value added tax: tackling overseas trader evasion:** This Budget 2016 measure sought to secure unpaid VAT from purchases through online marketplaces sourced from overseas sellers. At the time we stressed that the underlying data and the behavioural response were subject to high uncertainty. The NAO investigated this costing in April, noting that before arriving at their original tax base estimate of £1.9 billion, HMRC had *“tested these assumptions for reasonableness internally with policy and operational teams”*, but that *“following OBR’s comments, HMRC revised its estimate to*

£1.3 billion”.³ In the event, even this downward adjustment proved inadequate. The original costing estimated a cumulative yield of £0.9 billion from 2017-18 to 2020-21, but this has been revised down to £0.4 billion. The shortfall is largely due to the tax base now being estimated at around half the size of the lower estimate we certified. In this Budget the Government has sought to tackle this type of fraud for a second time. We have assigned the new costing a ‘very high’ uncertainty rating.

- **Bank levy re-scoping:** In Summer Budget 2015, the Government announced a change to the scope of the bank levy, so that liabilities associated with the overseas activities of UK head-quartered banking groups would no longer be subject to the levy. Given that the measure was (and remains) due to take effect in 2021, it fell outside the scorecard period at the time. HMRC estimates that it will reduce bank levy receipts by £620 million in 2022-23. We have incorporated that estimate into our current forecast.

Departmental spending

A.24 We do not scrutinise costings of policies that reallocate spending within departmental expenditure limits (DELs) or the DEL implications of measures that affect receipts or AME spending. Instead, we include the overall DEL envelopes for current and capital spending in our forecasts, plus judgements on the extent to which we expect them to be over- or, more usually, underspent in aggregate. In this Budget the Government has increased resource DEL limits from 2017-18 to 2021-22, with the largest increases in 2018-19 and 2019-20 for the NHS and for Brexit preparations, and capital DEL limits in 2019-20 and 2020-21. These and other changes are set out in detail in Chapter 4.

Indirect effects on the economy

A.25 The Government has announced a number of policy changes in this Budget that we have judged to be sufficiently large to warrant adjustments to our central economic forecast (see Box 3.1 for more details). These include:

- **Real GDP growth** – the Government has loosened fiscal policy in the near term via significant spending increases and a more modest net tax giveaway. This boosts growth by around 0.1 percentage points in 2018 and 2019, but dampens it by a similar amount in the subsequent two years as the effects of the loosening taper off.
- **House prices** – we have assumed that the result of the Government’s introduction of a new permanent stamp duty relief for first-time buyers will be to increase house prices by around 0.3 per cent. The assumed effects of this measure are set out in Box 4.3.

³ See the NAO report: *Investigation into overseas sellers failing to charge VAT on online sales*.

B EU finances and our forecast

Introduction

- B.1 The UK's financial relationship with the European Union (EU) affects our forecasts in various and often complex ways. In each *Economic and fiscal outlook (EFO)* we explain our latest forecasts for the main element that affects the National Accounts measure of public sector net borrowing – 'net expenditure transfers to EU institutions'. In supplementary tables on our website we show the EU budget assumptions that drive this and how the National Accounts measure relates to other gross and net measures of the UK's EU contributions.
- B.2 In this annex we provide further information on how these forecasts are produced and the judgements that underpin them. We discuss:
- **the EU's finances** and the UK's contribution to them;
 - **our forecasts for the financial flows** between the UK and EU in a 'no Brexit' counterfactual – and how they affect our economy and fiscal forecasts; and
 - **the fiscally neutral approach we have taken to these flows after Brexit**, in the absence of a meaningful basis for predicting the precise end-point of the exit negotiations, and some of the uncertainties around these broad-brush assumptions.

The EU budget and UK contributions to financing it

- B.3 The EU determines its budget plans within Multiannual Financial Frameworks (MFF) that set out the EU's expenditure ceilings. The current MFF runs from 2014 to 2020, based on a profile that was agreed in 2013. This profile is progressively revised through Draft Amending Budgets (DABs), which are an important source of uncertainty in our forecasts. As with any budget, actual expenditure (the 'implemented budgets') invariably differs from the ceilings that have been set. Since it is actual expenditure that determines Member States' contributions, we have to make assumptions about the implementation rate.
- B.4 There is typically an implementation lag within an MFF period, which means that spending falls further below the ceilings early in the period than towards the end. In the previous MFF, which ran from 2007 to 2013, the implementation rate rose from 91.2 per cent of the ceiling in 2007 to 99.0 per cent in 2013. The EU can, subject to some limits, reallocate unused expenditure ceilings from early to later in the MFF period using the Global Margin for Payments (GMP). This provides another source of forecast uncertainty.

B.5 EU spending is largely financed by Member States' contributions, which are determined in accordance with the Own Resources Decision (ORD). The expenditure ceiling is capped at 1.20 per cent of aggregate EU Member States' gross national incomes (GNI). Contributions are calculated on the basis of three categories of 'own resources':

- **Traditional own resources (TOR):** this consists of customs duties and levies on sugar production within the EU. Member States retain a fixed proportion (currently 20 per cent) of these revenues to compensate for the costs of collecting them. We forecast this element by using our own forecasts for UK imports and customs duties, supplemented by IMF and other sources for other Member States' imports.
- **VAT-based resources:** for most Member States, this is set at 0.3 per cent of a 'harmonised VAT base' – i.e. a base calculated according to a common EU methodology, rather than Member States' own measures of the tax base in their own country. For Germany, the Netherlands and Sweden, in this MFF it is set at 0.15 per cent of the VAT base. The VAT base is capped at 50 per cent of each country's GNI. We forecast this element using our own forecast for UK VAT receipts, supplemented by IMF and other sources for other Member States' household consumption growth.
- **GNI-based resources:** a uniform percentage 'call rate' is applied to the GNI of each Member State each year. This finances any residual between EU expenditure and revenue from the other resources, so the rate varies from year to year. This is typically the largest source of financing for the EU budget. We forecast this element by estimating the EU's residual financing needs, via all other aspects of this forecast, and then applying an appropriate call rate to estimates of Member States' GNI that are derived from our own forecast for the UK and from IMF and other forecasts for other Member States. This element is subject to numerous sources of uncertainty.

B.6 There are a number of further adjustments relevant to the contributions of individual countries. Most relevant to our forecast is that the UK's contributions are reduced by two thirds of the difference between our VAT-based contribution and our receipts from the budget – both public and private sector – from the previous EU budget year. This rebate – the 'Fontainebleau abatement' – was agreed in 1984 and took effect in 1985. In 2005, the UK agreed that the rebate would not be applied to non-agricultural spending in Member States that acceded to the EU after 30 April 2004. This came into effect fully in 2010. The rebate is calculated using an agreed formula, but its complexity means there is uncertainty around our forecasts for it. Other countries have been granted temporary adjustments to their contributions, but the UK is alone in having a permanent rebate in place.

B.7 When the European Commission calculates Member States' contributions it has initially to rely on forecasts of both financing need and the various inputs to the calculations. As outturn data become available, these are inevitably subject to revision. We aim to forecast the final position, informed by the Commission's own estimates – produced by the Advisory Committee on Own Resources (ACOR) – and other sources, such as more timely IMF forecasts. Historical revisions to VAT and GNI bases can alter calculations for previous years leading to surcharges for the Member States involved. These are more difficult to forecast.

The UK was last subject to a significant surcharge in 2014, following large revisions to historical GNI data published by the Office for National Statistics (ONS) in Blue Book 2014.

- B.8** The EU budget operates on a calendar year basis and in euros. This generates further sources of uncertainty for our UK public finances forecast, as this operates on a fiscal year basis and in pounds. Shifts in the pattern of contributions within the calendar year can move large sums between financial years. Currency movements have more complicated effects. For example, the drop in the pound after the EU referendum raised the sterling value of the UK's contributions to the EU. This was because the reduction in the UK's share of the euro-denominated EU GNI and VAT bases was more than offset by the increase in the sterling value of euro-denominated payments, abatements and receipts.

Medium-term forecasts: the 'no referendum' counterfactual

- B.9** The first step in producing our expenditure forecast is to generate a forecast for UK contributions to the EU over the next five years for a counterfactual in which the UK does not leave the EU. This provides a baseline forecast that we can then adjust. As the final section of this annex describes, we have made a fiscally neutral adjustment to date.

The EU budget

- B.10** Our forecast starts by taking a view on how much the EU will spend each year, based on the latest information from the Commission, advice from the Treasury and our own judgements about budget implementation rates. We publish this information in a supplementary table alongside each forecast. Our latest forecast assumes that actual spending will fall well short of ceilings in 2017 and 2018, largely due to slow progress in implementing structural funds spending. Thereafter we assume that the GMP will be used to the full extent to increase expenditure ceilings later in the current MFF period.
- B.11** EU spending from 2021 onwards will be covered by the next MFF, for which plans have yet to be set. In their absence, we assume that the EU budget will rise broadly in line with the growth of the EU economy, but that implemented spending will follow the typical pattern of a boost to spending at the start of the MFF as remaining commitments from the current one are met, but then a slow start to spending related to commitments under the new MFF.
- B.12** Table B.1 shows our current forecast for implemented expenditure, which drives our contributions forecast, and how this compares with the original MFF ceilings and their adjusted levels after use of the GMP and other adjustments.

Table B.1: EU annual budget forecast assumptions

	€ billion									
	2014-20 Multiannual Financial Framework (MFF)						Post MFF assumption ⁴			
	Outturn			Forecast						
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Original ceiling	135.9	141.9	144.7	142.8	149.1	153.4	156.3	-	-	-
Adjustments ¹	3.2	0.1	0.0	-2.7	7.1	13.3	16.1	-	-	-
Adjusted ceiling	139.0	142.0	144.7	140.1	156.2	166.7	172.4	-	-	-
Implementation rate, per cent ^{2,3}	99.6	97.0	90.0	86.8	92.3	96.3	98.1	-	-	-
Implemented expenditure	138.4	137.8	130.2	121.7	144.2	160.5	169.1	166.8	166.4	167.4

¹ Adjustments under the flexibilities agreed as part of the 2014-2020 MFF. These include adjustments that transfer underspends against the ceiling in earlier years to later years of the MFF, and as such do not increase the total MFF ceiling. They are neutral over the whole MFF when calculated in 2011 prices.

² Implementation rate calculated in relation to the 'adjusted ceiling'.

³ Actual implementation for 2014, 2015 and 2016.

⁴ Assuming that implemented spending will grow in line with EU GNI, with higher spending pressures at the start of the MFF.

Non-contribution sources of EU budget financing

B.13 While Member States' contributions make up the majority of the EU's revenue, it also receives some income from other sources. And Member States' contributions are calculated after accounting for this income. The largest sources are fines that the Commission imposes on private sector companies when enforcing Single Market rules, interest on late payments and Commission staff pension contributions. Income from fines is volatile and is not closely related to any underlying determinants, such as economic growth. As such, we forecast this income using a three-year average of preceding years in cash terms, with adjustments if we think any recent years were outliers.

Table B.2: EU miscellaneous revenue

	£ billion									
	Outturn			Forecast						
	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Miscellaneous revenue	5.5	3.0	1.6	4.9	3.2	3.2	3.2	3.2	3.2	3.2

UK contributions

B.14 The amount of money flowing between the UK public sector and the EU can be thought of in three ways: a 'notional gross contribution' (not all of which ever leaves the UK public sector); an 'actual gross contribution' paid to the EU; and a 'net contribution' after some money comes back to the UK public sector from the EU:

- The UK's **notional gross contribution** comprises GNI, VAT and TOR-based contributions. For 2017-18 and 2018-19, our forecasts are largely based on the latest ACOR plans. Beyond that we use our own forecasts for the UK and draw on IMF forecasts for other Member States' contributions. For VAT and TOR-based contributions, we forecast the contributions themselves. For GNI-based contributions, we forecast the UK's share of the EU total, which determines the share of EU spending not financed by other sources of income that the UK will be required to finance. We

forecast this notional gross contribution to rise from £18.7 billion in 2017-18 to £22.4 billion in 2022-23. That 20 per cent rise primarily reflects growth in the EU budget. The UK's share of total contributions is projected to be broadly flat over the period.¹

- The UK's **actual gross contribution** is the notional gross value less the abatement and 20 per cent of the TOR contribution. As noted above, the abatement does not apply to non-agricultural spending in the 12 new Member States. To forecast the abatement we need to make assumptions about private sector receipts (which we assume will be a fixed proportion of our forecast for public sector receipts) and the spending that is not subject to the abatement. We assume the abatement will be broadly flat over the forecast period at £4.6 billion, so the UK's actual contributions to the EU are expected to rise from £13.4 billion in 2017-18 to £17.1 billion in 2022-23. This 28 per cent rise is slightly larger than the rise in the notional gross contribution because an increasing share of EU spending is assumed to be non-abatable as structural funds spending in the new Member States picks up through the MFF period.
- The UK's **net contribution** subtracts the UK public sector's receipts from the EU. (This has no overall impact on our fiscal forecast as we assume that all the money received is spent, but it is reflected in our forecast for the secondary income account of the balance of payments.) The largest source of public sector receipts is the Common Agricultural Policy, from which the UK received £3.1 billion in 2016-17. The Treasury provides a high-level breakdown of public sector receipts in its annual EU finances publication.² These receipts are forecast by extrapolating from historical averages of the UK's share of total EU expenditure.

Table B.3: Contributions to the EU on a 'no referendum' counterfactual basis

	£ billion						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
GNI based contribution (a)	11.4	12.2	14.7	15.9	16.2	15.8	15.5
VAT payments to the EU (b)	2.5	3.1	3.1	3.0	3.1	3.2	3.4
Traditional Own Resources (c)	3.4	3.5	3.5	3.5	3.5	3.5	3.5
Notional contribution (d)=(a+b+c)	17.3	18.7	21.3	22.4	22.8	22.5	22.4
TOR collection costs (e)	-0.4	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
UK abatement (f)	-4.8	-4.7	-4.6	-4.4	-4.6	-4.6	-4.6
Gross contribution (g)=(d+e+f)	12.2	13.4	16.0	17.3	17.5	17.2	17.1
Public sector receipts from the EU (h)	-4.1	-5.6	-5.8	-6.4	-6.5	-6.5	-6.6
Net contribution (i)=(g+h)	8.1	7.7	10.2	10.9	11.0	10.6	10.5

Elements that affect public sector net borrowing

B.15 Our spending forecast includes 'net expenditure transfers to EU institutions', which is made up of GNI and VAT-based contributions less the abatement and TOR collection costs. This is

¹ When reporting the 'gross contribution' the Treasury excludes the 20 per cent retention of TOR collection costs.

² See *European Union Finances 2016: statement on the 2016 EU Budget and measures to counter fraud and financial mismanagement*, HM Treasury, February 2017.

derived from the overall contributions forecast. Our receipts forecast includes two offsetting lines related to customs duties: a positive one accounting for the tax receipts and a negative one reflecting the fact that these are deemed to be taxes collected by the UK on behalf of the EU. As such only the 20 per cent of duties retained to cover collection costs affects PSNB, as described in Box 4.4 of our March 2017 *EFO*.

- B.16** The fiscal year profile of this spending is dependent on many factors, including when it is requested. The Commission can draw forward some payments into the first quarter of the calendar year (i.e. the final quarter of the preceding UK fiscal year). The maximum permitted draw-forward is five months' contributions. Typically it has drawn forward this maximum, but in the past two years, with the EU budget significantly underspent, it has requested only three months' contributions in the first quarter. We assume that this will rise to four months in 2018 and revert to the usual five months thereafter. But this is not certain.

Table B.4: EU-related flows in our fiscal forecast

	£ billion						
	Outturn	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Expenditure transfers within AME, TME	8.8	9.9	12.5	13.8	14.0	13.6	13.6
<i>of which:</i>							
GNI based contribution	11.4	12.2	14.7	15.9	16.2	15.8	15.5
VAT payments to the EU	2.5	3.1	3.1	3.0	3.1	3.2	3.4
UK abatement	-4.8	-4.7	-4.6	-4.4	-4.6	-4.6	-4.6
TOR collection costs	-0.4	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
PSCR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>of which:</i>							
Custom duties ¹	3.4	3.4	3.4	3.5	3.5	3.5	3.5
TOR contribution ¹	3.4	3.5	3.5	3.5	3.5	3.5	3.5
PSNB impact	8.8	9.9	12.5	13.8	14.0	13.6	13.6

¹ Custom duties and TOR contribution are slightly different because of timing and processing effects. These numbers will align when outturn is final, with no impact on PSCR.

Private sector receipts

- B.17** In addition to those receipts channelled via Government, the EU makes some payments directly to UK private sector entities. These are estimated to amount to around £1 billion a year and include EU-funded research carried out at UK universities. These do not affect PSNB directly, but do have an indirect effect on it as the UK's abatement is calculated on the basis of the total receipts of both the public and private sectors. These payments will also be captured in the current account of the balance of payments, although they are not separately identified by the ONS in the National Accounts.

Brexit-related fiscal assumptions and uncertainties

- B.18** In each *EFO* since the referendum we have made various broad-brush assumptions to reflect Brexit. The UK's financial contributions to the EU will clearly be affected – and could cease altogether – when the UK leaves the EU. But in the absence of a meaningful basis

upon which to adjust our forecasts bottom-up we take the fiscally neutral approach that, from 2019-20 onwards, any reduction in expenditure transfers to the EU would be recycled fully into extra domestic spending. The ‘no-referendum’ counterfactual forecast described above is used as our forecast for transfers to the EU up to 2018-19 and as an unspecified increase in domestic spending from 2019-20 onwards, when we assume the UK leaves. This is shown in Table B.5. Reality will no doubt differ from these assumptions, but they provide a baseline against which to consider developments as they materialise.

Table B.5: Expenditure transfers to EU institutions and possible substitute spending

	£ billion						
	Outturn			Forecast			
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
‘No-referendum’ counterfactual	8.8	9.9	12.5	13.8	14.0	13.6	13.6
Which is reflected in our forecast as:							
Expenditure transfers to EU institutions	8.8	9.9	12.5	-	-	-	-
Assumed domestic spending in lieu of EU transfers	-	-	-	13.8	14.0	13.6	13.6

B.19 There are many uncertainties around this possible substitute spending:

- **Ongoing contributions:** the Prime minister stated in her Florence speech in September that the UK intends to “*continue working together in ways that promote the long-term economic development of our continent ... in doing so, we would want to make an ongoing contribution to cover our fair share of the costs involved*”. It is not yet clear which programmes this would involve or what ongoing amounts this would entail.
- **The ‘divorce bill’:** the Prime Minister also stated that “*The UK will honour commitments we have made during the period of our membership*”. The spending implications of this will be subject to the ongoing negotiations. There has been much public debate about the possible size of such a divorce bill and whether it might be paid as a one-off or in instalments, as discussed in Chapter 6 of our 2017 *Fiscal risks report*. Some estimates have been as high as €60 billion³ or even €75 billion.⁴
- **Substitute spending:** the Government has promised to cover the loss of some payments currently received from the EU by entities in the UK. This includes guaranteeing the current level of agricultural funding under Common Agriculture Policy’s ‘Pillar 1’ up to 2020 and funding universities receive under the ‘Horizon 2020’ programme, so long as bids are submitted while the UK is still a member of the EU. The Government has not provided estimates of the cost of these commitments. As they would be less than the top-down amount we include in our forecast as possible substitute spending, we have not sought bottom-up information on these specific items.

³ Centre for European Reform, *The €60 billion Brexit bill: How to disentangle Britain from the EU budget*, February 2017.

⁴ Financial Times, *Brussels hoists gross Brexit ‘bill’ to €100bn*, 3 May 2017. The €100 billion was a gross figure, which translated to around €75 billion net of the abatement.

- **Overseas aid:** the UK has legislated to spend 0.7 per cent of GNI on official development assistance (ODA). In 2016, 7.3 per cent of this was achieved by attributing around £1 billion of EU ODA spending to the UK. On the basis that the UK will maintain its current ODA commitments, this expenditure would probably need to be replaced by domestic UK spending.
- **Other Brexit costs:** there is scope for further spending conditional on the type of arrangement the UK reaches with the EU in various areas. For example, HMRC has suggested that 3,000 to 5,000 additional staff may be required to manage post-Brexit customs demands.⁵ In this Budget, the Government has announced an extra £3 billion of departmental funding to prepare for Brexit across 2018-19 and 2019-20.

B.20 Customs duties are not currently treated as current receipts of the UK public sector. Consistent with our approach to EU expenditure transfers we have made the fiscally neutral assumption not to adjust our receipts forecast. We will reconsider this when we have more information about when and how the UK's post-Brexit customs regime will take effect and any changes to it relative to the existing duty structure. We also currently assume there are no changes to the structure or membership of EU-legislated taxes, the largest being VAT and the EU emissions trading scheme. These too could change after Brexit.

⁵ HMRC oral evidence to the Treasury Select Committee, 14 September 2017.

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