Office for Budget Responsibility: Economic and fiscal outlook

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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 2021-22. We also assess whether the Government is on course to meet the medium-term fiscal objectives that it has set itself, including the proposed new targets that it has set out in this Autumn Statement. 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 Northern Ireland Social Security Agency, Transport for London and the various public sector 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 asked the Government in September for "*a formal statement of Government policy as regards its desired trade regime and system of migration control, as a basis for our projections*". The Government directed us to two public statements by the Prime Minister that it stated were relevant:

> *"we will seek the best deal possible as we negotiate a new agreement with the European Union. I want that deal to reflect the kind of mature, cooperative relationship that close friends and allies enjoy. I want it to include cooperation on law enforcement and counter-terrorism work. I want it to involve free trade, in goods and services. I want it to give British companies the maximum freedom to trade and operate in the Single Market and let European businesses do the same here. But let me be clear. We are not leaving the European Union only to give up control of immigration again. And we are not leaving only to return to the jurisdiction of the European Court of Justice";*[1] and

[1] Prime Minister's speech to the Conservative Party conference, 2 October 2016.

> *"There are opportunities for us once Brexit is complete and I'm absolutely clear that we are going to take those opportunities. We're going to make a success and people will see a difference. What I said about my government is that it will be a government that will work with everyone. I want to see an economy that works for everyone and a society that works for everyone in the U.K. And that's about spreading the benefits of economic growth across the country and among people. And there's a number of ways in which we will do that. I think leaving the European Union, with the opportunities it gives us for the trading relationships around the rest of the world, will be an important part of that."*[2]

Having established that we would not be able to forecast on the basis of fully specified Government policy in relation to the UK's exit from the EU, we made a number of 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 Statement 2016 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 the last published forecast in March 2016 and with our preliminary judgements on the outlook for the economy.

- 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 economic forecast to the Chancellor on 6 October and 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 Autumn Statement.

- 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.

[2] Prime Minister's radio interview in the US on NPR *Morning Edition*, 21 September 2016.

- This provided the basis for a further round of fiscal forecasts. Discussion of these forecasts with HMRC, DWP and the 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 the second round economy and fiscal forecast to the Chancellor on 31 October, and we met with him and Treasury officials to discuss it on 4 November.

- We then produced a third economy and fiscal forecast, which allowed us to take on latest data and to ensure that our judgements on the fiscal forecast had been incorporated. We finalised this forecast and sent it to the Chancellor on 9 November. Given the timing of the Autumn Statement and the request to close the pre-scorecard forecast two weeks in advance of it meant that our forecast did not reflect the latest data releases on inflation and house prices (released on 15 November) the labour market (on 16 November), or the full detail of the public sector finances release (on 22 November), though we did have access to some important aspects of the October receipts data via administrative sources. Similarly, we did not have pre-release access to the second estimate of third quarter GDP that will be published on 25 November.

- Meanwhile, we were also scrutinising the costing of tax and spending measures that were being considered for announcement in the Autumn Statement. 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 Statement 2016 policy costings document*.

- During the week before publication we produced our final forecast, incorporating the final package of Autumn Statement policy measures. We were provided with final details of policy decisions with a potential wider impact on the economy forecast on 14 November. These were incorporated into our final economy forecast.

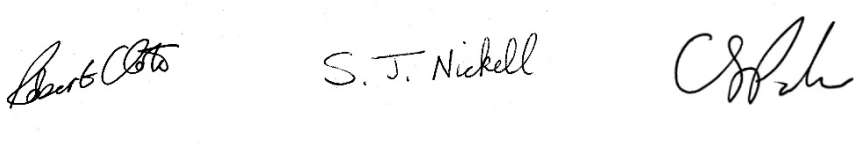
- At the Treasury's written request, and in line with pre-release access arrangements for data releases from the ONS, we provided the Chancellor and an agreed list of his special advisors and officials with a near-final draft of the *EFO* on 18 November. This allowed the Treasury to prepare the Chancellor's 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 55 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. However, at each forecast we also ask the Treasury to detail any newly created contingent liabilities that might pose a risk to our forecast. On this occasion we asked specifically whether any contingent liabilities had been created in respect of assurances provided to Nissan and the Treasury declined to say. 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 advisors can be found on our website. This includes the list of special advisors and officials that received the near-final draft of the *EFO* on 18 November.

Since November 2015, our non-executive members Lord Burns and Dame Kate Barker have provided additional assurance over how we engage with the Treasury and other departments by reviewing any correspondence that OBR staff feel either breaches the Memorandum of Understanding 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 to be appropriate.

The Memorandum of Understanding itself has been reviewed by all signatory departments, consistent with the recommendations of the Ramsden Review of the OBR and the Treasury Select Committee's report on that review. Some aspects of that review will need to be considered again in light of the Government's updated draft *Charter*, but the terms of engagement on pre-release access to OBR reports were agreed in September 2016 and used in this forecast.[3]

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



Robert Chote Sir Stephen Nickell Graham Parker CBE

The Budget Responsibility Committee

[3] An exchange of letters between the OBR's Chairman and the Chair of the Treasury Select Committee on this subject is available on our website. The updated Memorandum of Understanding will also be published on our website in due course.

1 Executive summary

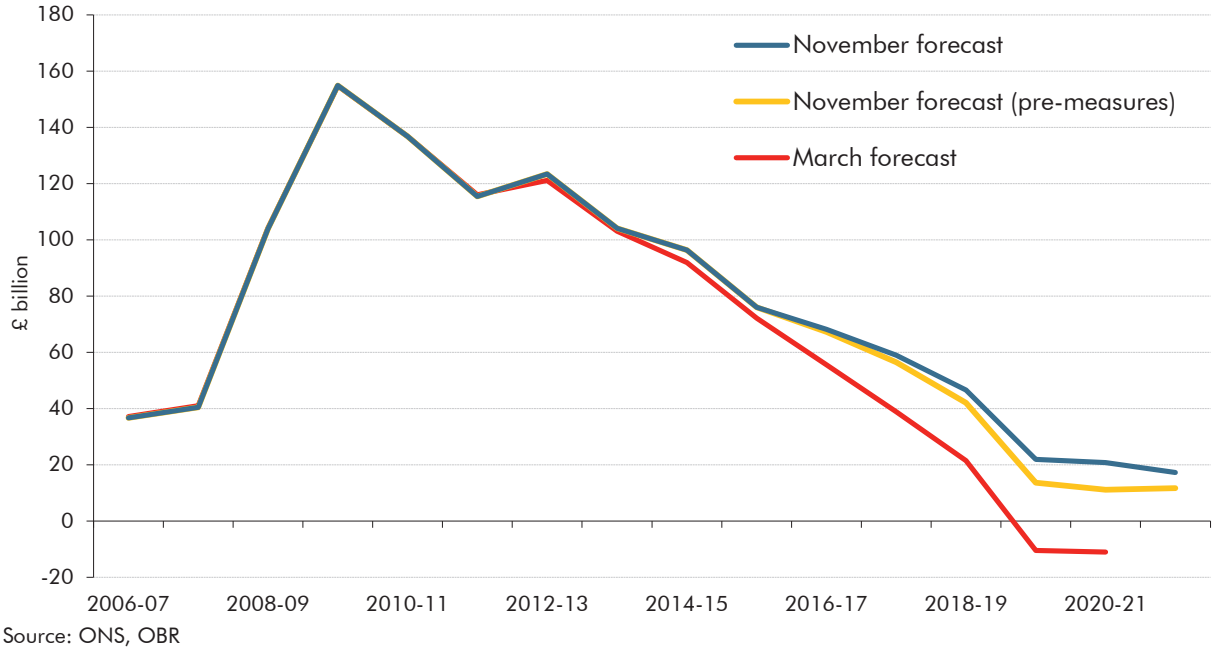
Overview

1.1 The Government is no longer on course to balance the budget during the current Parliament and has formally dropped this ambition in a significant loosening of its fiscal targets. Public sector net borrowing is now expected to fall more slowly than we forecast in March, primarily reflecting weak tax receipts so far this year and a more subdued outlook for economic growth as the UK negotiates a new relationship with the European Union.

1.2 Confronted by a near-term economic slowdown and a structural deterioration in the public finances, the Government has opted neither for a large near-term fiscal stimulus nor for more austerity over the medium term. Instead the Chancellor has proposed a much looser 'fiscal mandate' that gives him scope for almost 2½ per cent of GDP (£56 billion) more structural borrowing in 2020-21 than his predecessor was aiming for in March.

1.3 Forecast revisions have absorbed 0.9 per cent of GDP (£20 billion) of this extra room for manoeuvre and the Chancellor has given away 0.4 per cent of GDP (£9½ billion), mostly in infrastructure spending. This leaves 1.2 per cent of GDP (£26½ billion) spare, in case the structural outlook is worse than we think or he wants to announce more giveaways. (He can also run a bigger deficit if the cyclical slowdown is more severe.) But, if the Chancellor did borrow more, his aim to balance the budget as early as possible in the next Parliament would become even more challenging, especially given age-related spending pressures.

Chart 1.1: Public sector net borrowing



Source: ONS, OBR

1.4 The OBR is required by legislation to produce its forecasts on the basis of current stated Government policy (but not necessarily assuming that specific objectives will be met). In the current context of looming Brexit negotiations, this is far from straightforward. Quite appropriately, we have been given no information regarding the Government's goals or expectations for the negotiations that is not already in the public domain.

1.5 Given the uncertainty surrounding the choices and trade-offs that the Government may have to make, and the consequences of different outcomes, we have not attempted to predict the precise end result of the negotiations. Instead we have made a judgement – consistent with most external studies – that over the time horizon of our forecast any likely Brexit outcome would lead to lower trade flows, lower investment and lower net inward migration than we would otherwise have seen, and hence lower potential output. In time the performance of the economy will also be affected by future choices that the Government makes about regulatory and other policies that are currently determined at the European level. These could move in either a growth-enhancing or a growth-impeding direction.

1.6 In the near term, as the negotiations get under way, we assume that GDP growth will continue to slow into next year as uncertainty leads firms to delay investment and as consumers are squeezed by higher import prices, thanks to the fall in the pound. But we do not assume that firms shed jobs more aggressively or that consumers increase precautionary saving, both of which are downside risks if the path to Brexit is bumpy. Our forecasts are currently somewhat less pessimistic than those in the Bank of England's November *Inflation Report* and the Treasury's published pre-referendum analysis, but in current circumstances the uncertainty around them is even greater than it would be in normal times.

1.7 The negotiations will also determine the scope and scale of any ongoing financial flows between the UK and the EU. Again we do not know enough about the Government's preferences, or its chances of achieving them, to make a precise forecast. Instead we produce a 'no referendum' counterfactual for our transfers to the EU – a forecast of the flows we would expect to see if the UK had not voted to leave the EU – and make the fiscally neutral assumption that any reduction would be recycled into extra domestic spending.

1.8 On the basis of these assumptions, our central forecast suggests:

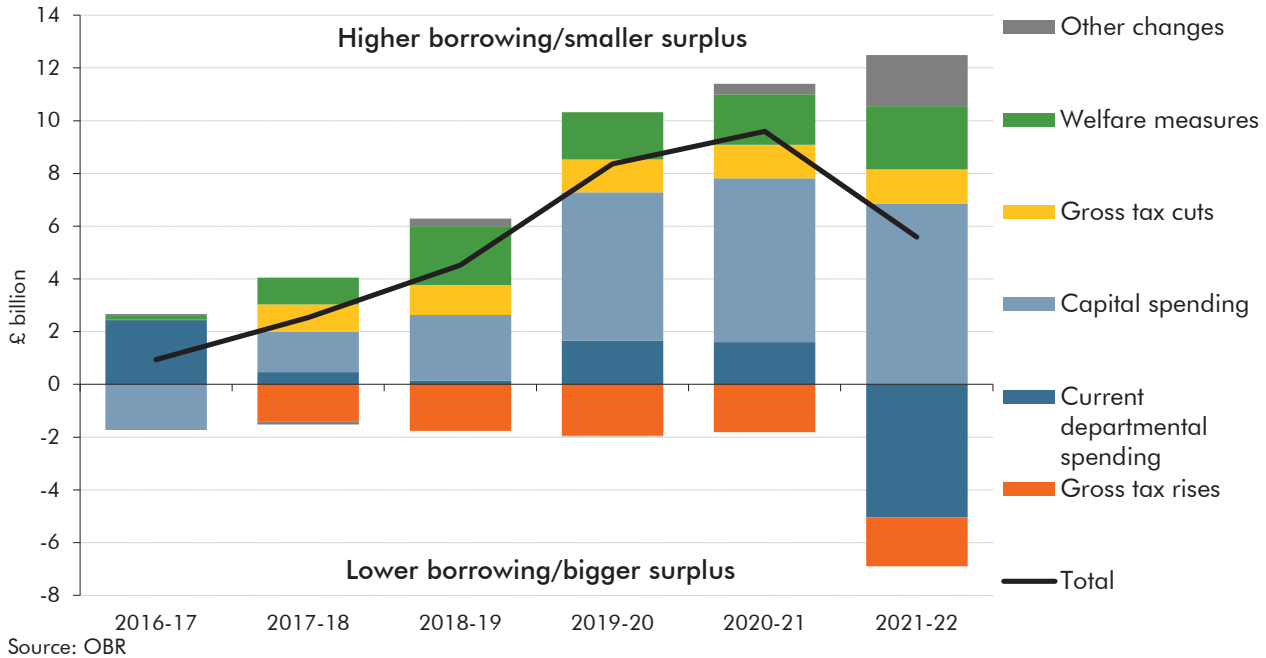
- the **economy** will grow more slowly than we expected in March, with GDP growth in 2017 revised down from 2.2 to 1.4 per cent and cumulative growth over the whole forecast revised down by 1.4 percentage points. A weaker outlook for investment and therefore productivity growth is the main cause. Inflation is forecast to peak at 2.6 per cent and unemployment to rise modestly to 5.5 per cent during 2018. Subdued earnings growth and higher inflation mean that real income growth stalls in 2017;

- the **budget deficit** has been revised up by £12.7 billion this year, thanks primarily to weakness in income tax receipts that largely pre-dates the referendum. The weaker growth outlook means that our pre-policy-measures forecast revision rises to £18.1

billion by 2020-21. Again, weaker income tax receipts are the biggest factor, reflecting the downward revision we have made to productivity and earnings growth; and

- on top of that, **Autumn Statement policy decisions** add to the deficit in every year. As Chart 1.2 shows, capital spending has been increased by rising amounts across the Spending Review years to 2020-21 and into 2021-22. The Government has also announced a small net tax increase. Tax rises include another increase in the insurance premium tax and more anti-avoidance measures. These outweigh the tax cuts, notably freezing fuel duty next year for the sixth year in a row. Welfare spending is higher after the disability benefit cuts announced in the March Budget were abandoned and because of a decision to taper away universal credit awards less aggressively. Departmental resource spending plans have been increased in 2019-20 and 2020-21, but held flat in real terms in 2021-22. So in that year they fall in real per capita terms and as a share of GDP. Taking forecast changes, classification changes and policy measures into account, we now forecast a deficit of £20.7 billion (0.9 per cent of GDP) in 2020-21, compared to an £11.0 billion surplus in March.

Chart 1.2: The effect of Autumn Statement decisions on public sector net borrowing



Source: OBR

1.9 With our underlying borrowing forecast higher – and policy decisions pushing the deficit up further – the Government's three existing fiscal targets would all be missed by considerable margins. The current fiscal mandate requires a budget surplus in 2019-20, but we now forecast a deficit of £21.9 billion. The 'supplementary target' requires debt to fall relative to national income every year, but we now expect it to rise sharply this year and next – partly due to the measured effect of August's monetary policy changes. And the 'welfare cap' requires a subset of welfare spending to be held below a cash limit set in July 2015, but we now expect this to overshoot by more than 7 per cent by 2020-21. These rules do not apply

in the event of a 'significant negative shock', on the Government's definition, but with our growth forecast remaining above 1 per cent this escape clause is not triggered.

1.10 The Government has proposed new fiscal targets in a draft *Charter* alongside the Autumn Statement. These are much less constraining than the existing ones. The new fiscal mandate requires a structural deficit – i.e. borrowing unrelated to temporary weakness in the economy – below 2 per cent of GDP in 2020-21, which would mean halving it in this Parliament. Separately, net debt must fall relative to GDP in 2020-21. The new welfare cap only applies in 2021-22 and is only to be assessed at the start of the next Parliament.

1.11 Our central forecast shows the new targets all being met. But given the uncertainty around any fiscal forecast at that horizon, the chance of any being missed is significant. For the fiscal mandate, past forecast performance suggests that there is a 35 per cent chance of the new target being missed despite £26.6 billion of headroom.

Economic developments since our last forecast

1.12 GDP growth – and consumer spending in particular – has held up since our last forecast. It was stronger than expected in the second quarter and in line with our March forecast in the third. But growth has slowed since the referendum and business investment is falling. Employment growth has been a little stronger than expected, while productivity and earnings growth have been a little weaker. Inflation has picked up as expected.

1.13 Since the referendum, the value of the pound has fallen significantly. While it has picked up somewhat from the multi-year lows seen in October, the assumption that underpins our forecast is around 13 per cent weaker than that used in March. With dollar oil prices having also risen since March, upward pressure on inflation has built.

1.14 Survey indicators of economic activity fell sharply after the referendum, but have since picked up. One factor that may have supported sentiment was the package of monetary stimulus measures announced by the Bank of England in August. As well as cutting Bank Rate to 0.25 per cent, the Bank announced purchases of government bonds, corporate bonds and a scheme to provide cheap funding to banks to ensure that the cut in Bank Rate is passed on to the interest rates paid by people and firms.

1.15 Most forecasters have revised down their expectations for GDP growth – particularly in 2017. As with the activity surveys, forecasts were first revised down sharply before being revised back up a little. The latest average of external forecasters' predictions for GDP growth in 2017 is somewhat more pessimistic than our forecast in this *EFO*.

The economic outlook

1.16 As noted above, our economy forecast is not based on a precise prediction of the outcome of the Brexit negotiations, but rather on broad-brush judgements consistent with a range of possible outcomes. We have been given no information about the Government's goals and

expectations for the negotiations that is not already in the public domain. And we would not in any event wish to base our forecast on assumptions we could not be transparent about.

1.17 Our central forecast assumes:

- **that the UK leaves the EU in April 2019** – two years after the date by which the Prime Minister has stated that Article 50 will be invoked;

- **that the negotiation of new trading arrangements with the EU and others slows the pace of import and export growth for the next 10 years.** We have calibrated this on the basis of a range of external studies of possible trade regimes; and

- **that the UK adopts a tighter migration regime than that currently in place**, but not sufficiently tight to reduce net inward migration to the desired 'tens of thousands'.

1.18 Reflecting these assumptions, and in light of the reaction in financial markets since the referendum, our updated economy forecast has been built around five key judgements:

- **the referendum result and forthcoming post-Article 50 negotiations have generated uncertainty for firms that will lead to some investment being postponed or cancelled.** We have revised business investment down relative to our March forecast in all years, which also reduces trend productivity growth due to slower capital deepening;

- **the fall in the pound will squeeze households' real incomes by pushing up import prices.** We expect the pound's fall to add almost 2 per cent to the level of consumer prices over the next two years, relative to our March assumption. Real earnings growth will consequently fall close to zero next year. That squeeze is expected to hold back real private consumption growth in 2017 and 2018;

- **the depreciation of sterling will boost net trade in the short term.** The pound has fallen 14 per cent relative to the assumption that underpinned our March forecast. That is expected to boost net trade over the next two years, with UK exports more competitive in overseas markets and imports to the UK less attractive relative to domestically produced goods and services. That will provide a temporary boost to GDP growth. Net trade will also be boosted as weaker domestic demand reduces imports growth;

- **exiting the EU will reduce growth in exports and imports during the transition to a less trade-intensive economy.** We have not modelled the effect of specific post-exit trading regimes, but have instead drawn on a range of external studies to calibrate a downward adjustment to exports and imports that we assume would be complete by 2025. We have assumed that exports and imports are similarly affected, so that the effect on net trade and GDP growth is broadly neutral. We have not revised trend productivity growth lower explicitly to reflect lower trade intensity (as the Treasury did in its pre-referendum analysis) given the lack of certainty around this link; and

- **exiting the EU will be associated with lower net migration than would otherwise have been the case.** Once again we have not modelled the effects of a specific post-exit migration control regime, but we do assume that it will be tighter than the current system. In addition, pull factors attracting migrants to the UK may be less powerful than previously. Our forecast uses the same net inward migration assumption as in March, but we would have revised it up to levels closer to recent outturns in the absence of the referendum result.

1.19 There have also been policy changes since the referendum – including in this Autumn Statement – that have a bearing on our forecast:

- the **monetary policy** easing announced by the Bank of England in August is likely to have reduced the impact of post-referendum uncertainty on GDP growth. This implies a faster effect on the economy than is typical in economic models, but is consistent with the Bank having acted to head off a drop in activity before signs of it appeared in actual data. This effect was not factored into some pre-referendum predictions of the short-term hit to growth from a vote to leave; and

- the Government has eased the pace at which **fiscal policy** will be tightened. Relative to the path of consolidation underpinning our March forecast, it has loosened policy between 2017-18 and 2020-21, largely reflecting increases in capital spending. This has small effects on the profile of real GDP growth, adding 0.1 percentage points in 2017-18 and subtracting less than 0.1 percentage points a year thereafter.

1.20 Reflecting these assumptions and judgements we have:

- revised down **potential output growth** by 0.3 percentage points a year on average between 2017 and 2020 relative to March (due to lower trend productivity growth). Our forecast is a further 0.2 percentage points a year lower than it would have been had we revised up net inward migration in the absence of the referendum vote. Cumulative potential output growth between 2016 and 2021 is around 1.5 per cent lower than in March and around 2.4 per cent lower than it would have been if we had incorporated the assumption of higher net inward migration;

- revised down **actual GDP growth**. We expect growth to slow further, reaching a trough of 0.2 per cent a quarter in the second quarter of 2017. Growth then picks up gradually in the second half of 2017 and through 2018. We expect the economy to be running 0.7 per cent below full capacity by the end of 2017 (compared to 0.2 per cent in the third quarter this year), with above-trend growth then closing this output gap by mid-2021. At this stage we have not assumed any further uncertainty-related hit to growth in 2019 when the UK's exit from the EU is assumed to be completed;

- revised up **CPI inflation** as the weaker pound pushes up import prices and therefore consumer prices. CPI inflation is forecast to rise from 0.9 per cent in October to above 2 per cent in early 2017, then to rise further before peaking at 2.6 per cent in mid-2018. We assume that it will return slowly to target over the following two years;

- assumed that the short-term slowing in GDP growth is driven by **business investment**, after which **private consumption** becomes a more significant source of weakness due to the squeeze on real incomes from higher inflation. **Net trade** offsets some of that weakness, thanks to the boost from a weaker currency and to the knock-on effects of weaker business investment and consumer spending on imports; and

- revised up **unemployment** over the next two years, as slower growth in real GDP generates spare capacity in the economy. Unemployment is expected to peak at 5.5 per cent of the labour force in mid-2018, up around 0.3 percentage points (or around 100,000 people) relative to our March forecast. We do not, at this stage, forecast that Brexit-related uncertainty will prompt more aggressive job-shedding. Average **earnings growth** has been revised down. Combined with higher inflation, this means that real earnings are expected to fall year-on-year in the second half of 2017.

1.21 Risks to our central forecast include the concurrence of large fiscal and current account deficits, the alternative trading arrangements that will ultimately replace EU rules and the effect of sterling depreciation on export market share, import substitution and consumer prices. For this and subsequent forecasts, there are numerous risks and uncertainties associated with the period leading up to and following the UK's exit from the EU, related to policy setting and the response of households and firms, with little by way of precedent to guide the assumptions in this forecast. But it is important to remember that Brexit has not supplanted, but has rather increased, the main uncertainty already surrounding the outlook for UK economy, namely the prospects for productivity growth.

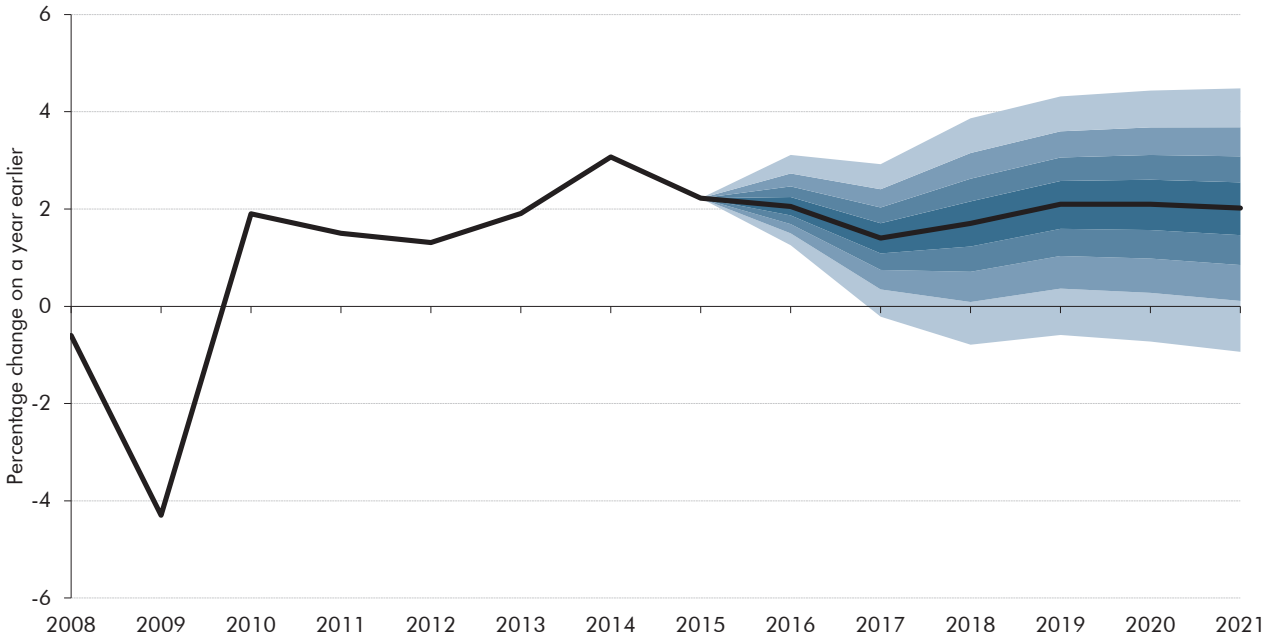
1.22 One way of illustrating the uncertainty around our GDP growth forecast is shown in Chart 1.3. This presents our central forecast with a fan that represents the probability of different outcomes based on past official forecast errors. The solid black line shows our median forecast, with successive 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 could be greater than usual at present.

Table 1.1: Overview of the economy forecast

	Percentage change on a year earlier, unless otherwise stated						
	Outturn	Forecast					
	2015	2016	2017	2018	2019	2020	2021
Output at constant market prices							
Gross domestic product (GDP)	2.2	2.1	1.4	1.7	2.1	2.1	2.0
GDP per capita	1.4	1.3	0.7	1.0	1.4	1.4	1.4
GDP levels (2015=100)	100.0	102.1	103.5	105.2	107.4	109.7	111.9
Output gap	-0.3	-0.2	-0.6	-0.6	-0.3	-0.1	0.0
Expenditure components of real GDP							
Household consumption	2.5	2.8	1.2	1.1	2.1	2.0	2.0
General government consumption	1.5	1.0	0.6	0.5	0.3	0.6	0.8
Business investment	5.1	-2.2	-0.3	4.1	5.3	4.1	3.6
General government investment	-2.0	2.3	3.3	2.1	1.9	8.8	3.3
Net trade[1]	-0.4	-0.2	0.3	0.3	-0.1	-0.1	-0.1
Inflation							
CPI	0.0	0.7	2.3	2.5	2.1	2.0	2.0
Labour market							
Employment (millions)	31.3	31.7	31.8	31.9	32.0	32.2	32.3
Average earnings	1.8	2.2	2.4	2.8	3.3	3.6	3.7
LFS unemployment (rate, per cent)	5.4	5.0	5.2	5.5	5.4	5.4	5.4
Claimant count (millions)	0.80	0.76	0.82	0.87	0.86	0.86	0.87
	Changes since March forecast						
Output at constant market prices							
Gross domestic product (GDP)	0.0	0.1	-0.8	-0.4	0.0	0.0	
GDP per capita	0.0	0.1	-0.8	-0.4	0.0	0.0	
GDP levels (2015=100)	0.0	0.1	-0.7	-1.2	-1.1	-1.1	
Output gap	0.0	0.0	-0.6	-0.7	-0.3	-0.1	
Expenditure components of real GDP							
Household consumption	-0.4	0.4	-1.0	-1.0	0.1	0.1	
General government consumption	-0.2	0.8	0.0	0.0	0.1	-0.1	
Business investment	0.3	-4.7	-6.3	-1.8	-0.2	-0.3	
General government investment	-4.1	2.2	1.4	2.3	2.1	2.3	
Net trade[1]	0.1	0.2	0.4	0.4	0.0	0.0	
Inflation							
CPI	0.0	0.0	0.7	0.5	0.1	0.0	
Labour market							
Employment (millions)	0.1	0.2	0.1	0.0	0.1	0.1	
Average earnings	-0.5	-0.4	-1.1	-0.7	-0.1	0.0	
LFS unemployment (rate, per cent)	0.0	0.0	0.2	0.3	0.1	0.0	
Claimant count (millions)	0.00	0.02	0.04	0.03	0.01	0.00	

[1] Contribution to GDP growth.

Chart 1.3: Real GDP growth fan chart



Source: ONS, OBR

The fiscal outlook

1.23 Public sector net borrowing peaked at 10.1 per cent of GDP (£154.9 billion) in 2009-10 as the late 2000s recession and financial crisis dealt the public finances a significant blow. Fiscal consolidation and economic recovery then reduced the deficit to 4.0 per cent of GDP (£76.0 billion) by 2015-16.[1] We estimate that the economy was operating just below full capacity in that year, so the structural deficit – which is adjusted to remove the effects of the economic cycle – was slightly smaller at 3.8 per cent of GDP.

1.24 Table 1.2 shows that on current policy – including the decisions announced in this Autumn Statement and the assumptions that we have made about the UK's exit from the EU – we expect the deficit to continue falling, but more slowly than we forecast in March. By 2019-20, when the Government previously sought to achieve a surplus, we now expect a deficit of £21.9 billion. In 2020-21, when the Government now seeks to bring the *structural* deficit below 2 per cent of GDP, we expect a structural deficit of 0.8 per cent of GDP.

[1] Our forecast and this document have been produced on the basis of the September 2016 public sector finances data published by the Office for National Statistics on 21 October. We did not have pre-release access to the October 2016 data released on 22 November (the day before this publication), although we were able to consider administrative data on most tax receipts for the month.

Table 1.2: Fiscal forecast overview

	Per cent of GDP						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Revenue and spending							
Public sector current receipts	36.1	36.4	36.9	36.9	37.0	37.0	37.1
Total managed expenditure	40.1	39.9	39.8	39.1	38.0	38.0	37.8
Deficit: Fiscal mandate measures							
Public sector net borrowing	4.0	3.5	2.9	2.2	1.0	0.9	0.7
Cyclically adjusted net borrowing	3.8	3.3	2.6	1.8	0.8	0.8	0.7
Cyclically adjusted current budget deficit	2.0	1.4	0.5	-0.1	-1.1	-1.5	-1.6
Debt: Supplementary target							
Public sector net debt	84.2	87.3	90.2	89.7	88.0	84.8	81.6
	£ billion						
Revenue and spending							
Public sector current receipts	679.8	710.6	738.0	768.0	801.8	834.8	869.2
Total managed expenditure	755.8	778.8	797.0	814.5	823.7	855.6	886.4
Deficit: Fiscal mandate measures							
Public sector net borrowing	76.0	68.2	59.0	46.5	21.9	20.7	17.2
Cyclically adjusted net borrowing	71.6	64.9	51.4	37.9	16.6	18.5	16.7
Cyclically adjusted current budget deficit	38.2	27.5	10.7	-1.9	-23.9	-33.4	-38.0
Debt: Supplementary target							
Public sector net debt	1610	1725	1840	1904	1945	1950	1952

Changes in public sector net borrowing and net debt

Expected borrowing in 2016-17

1.25 We expect borrowing to fall from £76.0 billion in 2015-16 to £68.2 billion this year, a £12.2 billion upward revision from March (on a like-for-like basis). Most of that revision is explained by two developments. First, income tax and national insurance receipts from pay-as-you-earn have fallen far short of our March forecast, prompting a £10.5 billion downward revision for 2016-17 as a whole. Second, spending – particularly local authority spending – was higher than expected in 2015-16, which we assume will persist this year.

1.26 On a like-for-like basis – removing the impact of ONS classification decisions that have been announced but not yet implemented – our forecast for borrowing in 2016-17 implies a 10.9 per cent fall year-on-year. That is a little faster than we have seen over the year to date, even though we expect the economy to slow further. We expect the improvement in the deficit to accelerate over the remainder of the year because:

- policy measures – notably forestalling ahead of the dividend tax rate increase this April – are expected to boost **self-assessment income tax** receipts at the end of the year;
- strong **onshore corporation tax** receipts in October boost our receipts estimate for the full year. We had access to administrative data before closing our forecast; and

- two timing effects related to **net transfers to the EU** reduce spending in the second half of the year relative to 2015-16. They relate to the profile of total EU budget spending across the multi-year framework that underpins it and the timing of payments and rebates associated with implementing the 2014 Own Resources Decision.

Forecast borrowing from 2017-18 onwards

1.27 Our forecast from 2017-18 onwards reflects the assumptions we have made about the UK's exit from the EU. As well as those regarding future trading arrangements and the migration regime that are most relevant to our economy forecast, the assumptions most relevant to our fiscal forecast include that:

- **the UK leaves the EU in April 2019** – two years after the date by which the Prime Minister has stated that Article 50 will be invoked;

- any reduction in **expenditure transfers to EU institutions** is recycled fully into extra domestic spending. This assumption is fiscally neutral; and

- 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). We will return to these assumptions when any details become clear.

1.28 Table 1.3 shows how classification changes, our underlying forecast judgements and the Government's policy decisions have affected our forecast for borrowing:

- in order to compare the forecasts on a like-for-like basis, we have restated our March forecast for the effects of two ONS **classification changes** – the reclassification of Scottish, Welsh and Northern Irish housing associations into the public sector[2] (bringing them into line with last year's reclassification of most English housing associations) and the decision to record corporation tax receipts on a time-shifted accruals basis rather than a cash basis. The latter is only partly reflected in this forecast – we have removed the effect of the Budget 2016 payment dates policy measure in 2019-20 and 2020-21, since that only affected the timing of cash receipts. It will be fully reflected in our next forecast;[3]

- we have revised down our **pre-measures receipts forecast** significantly (which raises borrowing and therefore shows as positive figures in this table). The overall revision reaches £15.3 billion in 2020-21, which is more than explained by weaker income tax and NICs receipts. These are down £23.1 billion in 2020-21, as the weakness this year is compounded by the downward revision to our productivity and earnings growth forecasts and our belief that more people than we previously thought will incorporate over coming years, which lowers their tax bills. Stronger corporation tax receipts – both onshore and from the North Sea – offset some of this latter change;

[2] ONS, *Statistical classification of registered providers of social housing in Scotland, Wales and Northern Ireland*, September 2016.
[3] ONS, *Public sector finances statistical bulletin (Recent events and forthcoming methodological changes)*, November 2016.

- our **debt interest forecast** is lower from 2017-18 onwards, having been pushed up by higher RPI inflation in 2016-17. That reflects lower interest rates, which more than offset the upward pressure on debt interest from higher inflation and borrowing;

- **other spending** has been revised up. The bigger changes include higher expected local authority spending and significant further upward revisions to incapacity and disability benefits spending. This revision also includes the effects of weaker sterling on our forecast for transfers to the EU from 2018-19 onwards, given our assumption that any future reduction in those transfers after leaving the EU will be recycled into extra domestic spending; and

- the **policy decisions** increase the deficit in every year. Capital spending plans have been increased by rising amounts across the Spending Review years to 2020-21 and into 2021-22. Gross tax rises (including another rise in the insurance premium tax and more anti-avoidance measures) outweigh its gross tax cuts (notably freezing fuel duty once again). Welfare spending is higher due to the decision shortly afterwards to abandon disability benefit cuts announced in the March Budget and the Autumn Statement decision to taper universal credit awards more slowly. Departmental resource spending has been boosted in 2019-20 and 2020-21, but has been held flat in real terms in 2021-22, thereby falling in real per capita terms and as a share of GDP. Other policy effects pushing up the deficit include a change in the policy assumption that the Government provided in relation to Network Rail capital spending beyond 2018-19 and the debt interest costs associated with higher borrowing.

1.29 Abstracting from classification changes, the cumulative increase in borrowing over the five years from 2016-17 to 2020-21 is equivalent to 1.1 per cent of GDP. Of this, 0.8 per cent of GDP reflects the revision to our pre-measures forecast, which makes it the third largest such revision we have made (after November 2011 and December 2012).

Table 1.3: Changes to public sector net borrowing since March

	£ billion						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	**72.2**	**55.5**	**38.8**	**21.4**	**-10.4**	**-11.0**	
Classification changes		0.5	0.4	0.5	6.4	4.1	
March forecast post-classification change[1]	**72.2**	**56.0**	**39.2**	**21.9**	**-4.1**	**-6.9**	
Total forecast changes	**3.9**	**11.2**	**17.2**	**20.1**	**17.7**	**18.1**	
of which:							
Receipts	2.0	6.7	9.3	13.1	15.2	15.3	
CG debt interest spending	-0.7	0.8	-0.8	-3.4	-4.5	-4.3	
Other spending	2.5	3.7	8.7	10.4	6.9	7.0	
November forecast pre-policy decisions	**76.0**	**67.2**	**56.4**	**42.0**	**13.6**	**11.2**	**11.6**
Total effect of Government decisions	**0.0**	**0.9**	**2.5**	**4.5**	**8.4**	**9.6**	**5.6**
of which:							
Scorecard receipts measures	0.0	0.0	-0.4	-0.6	-0.7	-0.6	-0.6
Scorecard AME spending measures	0.0	0.2	2.3	3.3	2.7	2.2	2.4
Changes to RDEL spending[2]	0.0	2.4	0.5	0.1	1.7	1.6	-5.0
Changes to CDEL spending[2]	0.0	-1.7	0.3	1.6	3.5	4.8	5.8
Non-scorecard measures	0.0	0.0	-0.3	0.0	0.9	0.9	0.9
Indirect effect of Government decisions	0.0	0.1	0.1	0.1	0.3	0.7	2.1
November forecast	**76.0**	**68.2**	**59.0**	**46.5**	**21.9**	**20.7**	**17.2**
Memo items:							
Overall change since March	*3.9*	*12.7*	*20.2*	*25.1*	*32.4*	*31.8*	
Overall like-for-like change since March	*3.9*	*12.2*	*19.8*	*24.6*	*26.0*	*27.7*	

[1] 2015-16 reflects outturn data and has not been adjusted for ONS classification decisions that have been announced but not yet implemented.
[2] The change in 2021-22 is relative to a baseline that assumes spending by departments would otherwise have remained constant as a share of potential 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.

1.30 Table 1.4 presents an alternative decomposition of the changes in our forecast since March, highlighting the assumed impact of the referendum result. This should be regarded only as illustrative, as we have to make simplifying assumptions about the degree to which movements in economic determinants and fiscal outturns since our last forecast can be attributed to the referendum result. Our approach is set out in Annex B. It is subject to considerable uncertainty, since we cannot be sure what would have happened in the absence of the vote and because movements in receipts and spending ahead of the referendum might have been affected by anticipation of the result.

1.31 After adjusting for classification changes and excluding the impact of measures, the table shows that our 'no referendum' counterfactual borrowing forecast would have been weaker than in March even though the economy forecast would have been stronger. Specifically:

- higher-than-projected **net inward migration** in the year to March would have prompted us to revise up our migration assumption for later years. This would have reduced borrowing up to 2018-19 and increased the surplus from 2019-20 onwards; but

- **receipts were lower and spending higher** than we forecast in March, even before the referendum. This suggests that the public finances were in a structurally weaker position than we thought, more than offsetting the effect of higher GDP growth; and

- **other fiscal forecast changes** would have been small and uneven from year to year. These would have included the boost to North Sea revenues from the higher oil price and the latest upward revision to spending on incapacity and disability benefits.

1.32 Relative to that illustrative 'no referendum' counterfactual, we have revised borrowing up significantly. That reflects a number of factors that we consider mostly referendum-related:

- **lower migration**. We have used the same migration assumption as in March, so this reverses the improvement that would have been in the counterfactual;

- **lower trend productivity growth**. This feeds through to weaker growth in earnings, profits and consumer spending, all of which reduce receipts. But it also feeds through to weaker growth in business investment, which boosts receipts by reducing the use of capital allowances. This effect builds steadily over the forecast period;

- **the cyclical slowdown in GDP growth**. This affects borrowing along the same channels as weaker trend productivity growth, but the effect is concentrated at the start of the forecast when we expect a negative output gap to open up;

- **higher inflation**. After stripping out the effect of higher dollar oil prices, we assume that most of the remaining upward revision to inflation in this forecast is predominantly referendum-related via the weaker pound. This pushes up borrowing via debt interest, public sector pensions, those elements of welfare spending that are not subject to the uprating freeze, and the cost of indexation in the tax system. That is only partly offset by the boost to excise duties where rates rise with inflation;

- **lower interest rates**. This reduces borrowing as the beneficial effect on debt interest spending more than offsets the loss of interest income on government assets; and

- **other factors**, including the fall in the pound, reduced activity in the property market, the effect on debt interest spending of the Bank's August monetary stimulus package and the strength of the stock market, push the deficit down in most years.

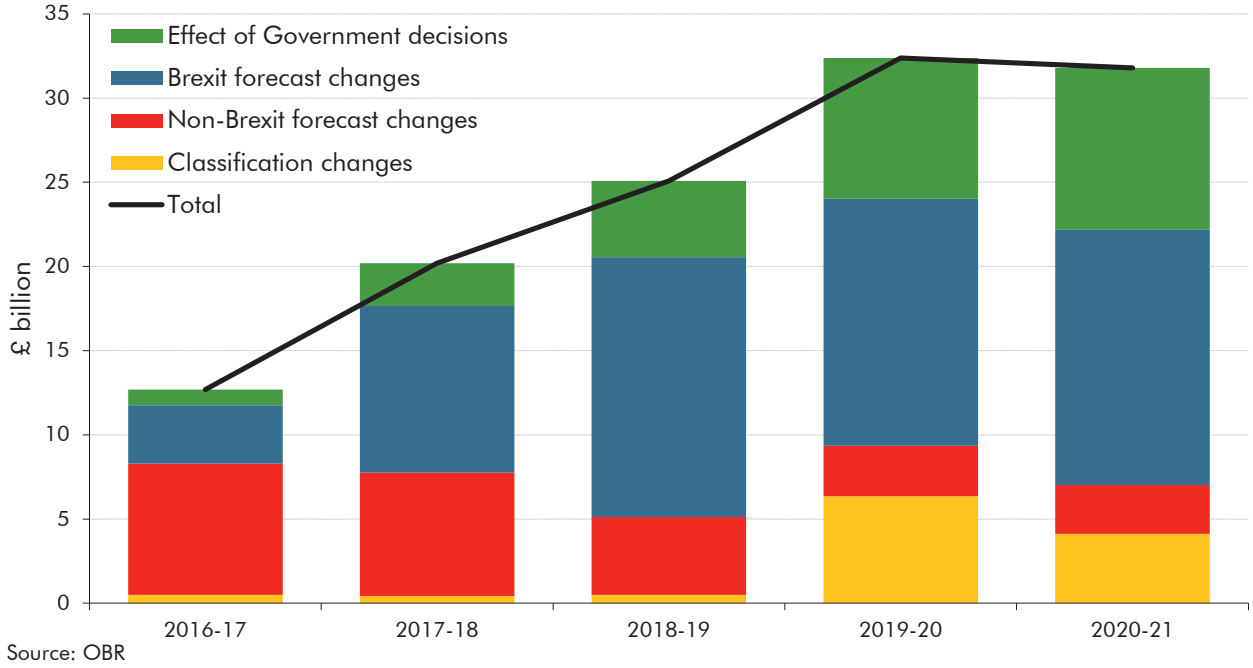
Table 1.4: Alternative decomposition of pre-measures borrowing forecast changes

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	**55.5**	**38.8**	**21.4**	**-10.4**	**-11.0**
Classification changes	0.5	0.4	0.5	6.4	4.1
March forecast post-classification change	**56.0**	**39.2**	**21.9**	**-4.1**	**-6.9**
Changes unrelated to the referendum result and exiting the EU	**7.8**	**7.3**	**4.6**	**3.0**	**2.9**
of which:					
Higher migration and GDP growth	-0.8	-1.9	-3.0	-4.4	-5.9
Weaker in-year receipts	4.5	4.6	4.8	5.0	5.3
Higher in-year spending	2.9	2.9	2.9	2.9	2.9
Other factors	1.2	1.7	-0.1	-0.6	0.6
November counterfactual	**63.8**	**46.5**	**26.6**	**-1.1**	**-4.0**
Changes related to the referendum result and exiting the EU	**3.5**	**9.9**	**15.4**	**14.7**	**15.2**
of which:					
Lower migration	0.8	1.9	3.0	4.4	5.9
Lower trend productivity growth	0.0	1.2	4.2	5.5	7.2
Cyclical slowdown	2.3	7.6	8.6	5.4	2.3
Higher inflation	0.9	2.7	2.3	2.0	2.2
Lower interest rates	-0.5	-1.1	-1.3	-1.6	-1.8
Other factors	0.0	-2.5	-1.5	-1.1	-0.6
November forecast pre-policy decisions	**67.2**	**56.4**	**42.0**	**13.6**	**11.2**
Total effect of Government decisions	0.9	2.5	4.5	8.4	9.6
November forecast	**68.2**	**59.0**	**46.5**	**21.9**	**20.7**

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.

1.33 Chart 1.4 illustrates the relative importance of these factors and how they build or diminish over the forecast period. Classification changes are concentrated at the end of the period. Revisions between our restated March forecast and the no referendum counterfactual add to borrowing by diminishing amounts as the borrowing overshoot this year is gradually eroded by assuming higher migration. Revisions associated with the referendum and exiting the EU build over time due to the effect of lower productivity growth. Finally, the Government has added to borrowing in every year via Autumn Statement policy decisions.

Chart 1.4: Sources of changes to public sector net borrowing since March



Source: OBR

1.34 In March we expected public sector net debt (PSND) to have peaked as a share of GDP in 2015-16 (at 83.7 per cent) and that it would fall thereafter. Changes to our forecasts for borrowing and asset sales since March would be sufficient to push the peak year back to 2016-17, but once the effects on PSND of the August monetary policy package are added on top, the peak year in this forecast moves back further to 2017-18 at 90.2 per cent.

1.35 Table 1.5 decomposes the changes in our PSND forecast since March. It shows that:

- **weaker nominal GDP growth** at the start of the forecast pushes the debt-to-GDP ratio up in 2016-17 and particularly 2017-18;
- **higher borrowing** adds increasing amounts across the forecast period. The cumulative upward revision to our pre-measures borrowing forecast adds £100 billion to the level of PSND by 2020-21. The Government has added a further £26 billion to that with the policy decisions announced in the Autumn Statement;
- **lower asset sales proceeds** mean that PSND is not reduced by the amounts assumed in our March forecast. Absent any policy changes, lower share prices for Lloyds and particularly RBS would have reduced the forecast by £6 billion. But the biggest effect comes from the Government's decision that now is not the right time to sell RBS shares. That adds a further £12 billion to our PSND forecast relative to March;
- the Bank's **August monetary policy package** and other APF-related changes add over £100 billion to PSND by 2017-18. This includes £85 billion of TFS usage, £17 billion due to gilts being purchased at a premium (rising in future years as redemptions are

rolled over at greater premiums) and £10 billion of corporate bond purchases. The TFS effect unwinds after four years, reflecting the term of the funding provided;

- much higher **gilt premia,** due to the fall in market interest rates, are the only factor that reduces our forecast. In particular, index-linked gilts are sold with a minimum coupon of +0.125 per cent, but real yields at all maturities are currently negative by significant margins generating large premia on new issuance; and

- **other factors** include the small upward revision associated with the reclassification of Scottish, Welsh and Northern Irish housing associations into the public sector and the effect of sterling's fall on the unhedged portion of the foreign currency reserves.

Table 1.5: Changes to public sector net debt since March

	Per cent of GDP					
	Estimate	Forecast				
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	83.7	82.6	81.3	79.9	77.2	74.7
November forecast	84.2	87.3	90.2	89.7	88.0	84.8
Change	**0.5**	**4.7**	**8.9**	**9.8**	**10.8**	**10.1**
of which:						
Change in nominal GDP[1]	-0.5	0.3	0.9	0.9	0.8	1.0
Change in cash level of net debt	1.0	4.4	8.0	8.9	10.0	9.2
	£ billion					
March forecast	1591	1638	1677	1715	1725	1740
November forecast	1610	1725	1840	1904	1945	1950
Change in cash level of net debt	**19**	**86**	**163**	**189**	**220**	**210**
of which:						
Pre measures borrowing changes	4	16	33	54	78	100
Effect of Government decisions on borrowing	0	1	3	8	16	26
Pre measures asset sales changes	0	13	5	6	8	8
Effect of Government decisions on asset sales	0	6	8	7	11	11
APF Term Funding Scheme	0	33	85	85	85	52
APF gilt holdings	-1	13	17	20	23	22
APF corporate bond holdings	0	3	10	10	10	10
Gilt premia	1	-8	-11	-14	-18	-24
Other factors[2]	16	10	12	13	9	6

[1] Non-seasonally-adjusted GDP centred end-March.

[2] Includes the estimated impact of the reclassification of Scottish, Welsh and Northern Irish housing associations to the public sector.

Performance against the Government's fiscal targets

1.36 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 existing policy. The *Charter* has been updated a number of times in recent years. The last version was approved by Parliament in October 2015. The Government has presented a new draft *Charter* alongside the Autumn Statement that will be voted on in due course.

1.37 The current version of the *Charter* sets out targets for borrowing, debt and welfare spending that are assessed in this forecast:

- the **fiscal mandate**, which requires a surplus on public sector net borrowing by the end of 2019-20 and in each subsequent year;
- the **supplementary target**, which requires public sector net debt to fall as a percentage of GDP in each year to 2019-20; and
- the **welfare cap**, a limit on a subset of welfare spending, at cash levels set out by the Treasury for each year to 2020-21 in the July 2015 Budget.

1.38 The new draft *Charter* states that the Government's objective for fiscal policy is now to "*return the public finances to balance at the earliest possible date in the next Parliament*". It also sets out proposed 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 in 2020-21;
- **public sector net debt** to fall as a percentage of GDP, but only by 2020-21 rather than in every year from now; and
- a subset of welfare spending to be below a new **welfare cap** that has been set for 2021-22 only and in line with our latest forecast, with no formal assessment to be made until the start of the next Parliament.

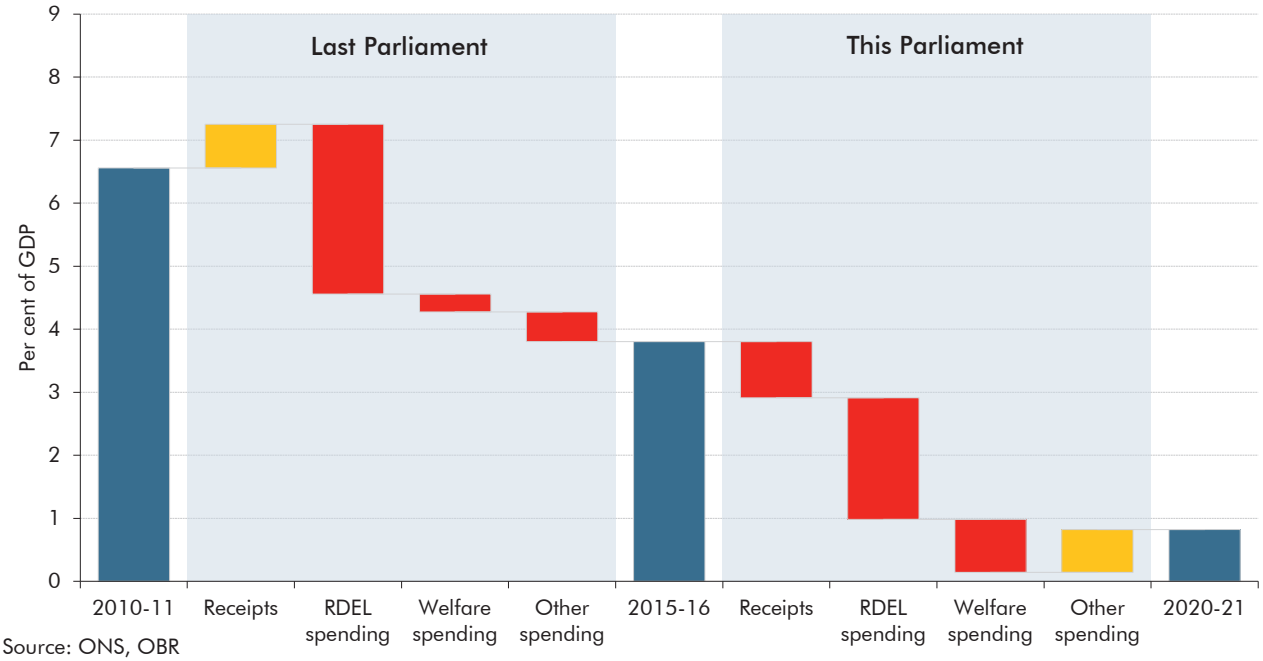
1.39 With our underlying borrowing forecast higher – and policy decisions pushing the deficit up further – the Government's existing fiscal targets would all be missed by considerable margins. The 'fiscal mandate' requires a budget surplus in 2019-20, but we now forecast a deficit of £21.9 billion. The 'supplementary target' requires debt to fall relative to national income every year, but we now expect it to rise sharply this year and next – partly due to August's monetary policy changes. And the 'welfare cap' requires a subset of welfare spending to be held below a cash limit set in July 2015, but we now expect this to overshoot by more than 7 per cent by 2020-21. These rules do not apply in the event of a 'significant negative shock' on the Government's definition, but with our growth forecast remaining above 1 per cent this escape clause is not triggered.

1.40 The Government has proposed new targets in a draft *Charter* alongside the Autumn Statement. These are less constraining than the existing ones. The structural deficit must be below 2 per cent of GDP in 2020-21, which would be met by halving the structural deficit in this Parliament. Debt must fall relative to national income in 2020-21. The new welfare cap only applies in 2021-22 and is only to be assessed at the start of the next Parliament.

1.41 Chart 1.5 shows the factors that contribute to the 3.0 per cent of GDP reduction in the structural deficit over this Parliament – up to the target year of 2020-21 – and how that compares with the 2.8 per cent reduction in the last Parliament. Structural reductions in

public spending are most important in both periods, with cyclically adjusted receipts actually falling by 0.7 per cent of GDP in the last Parliament and rising by only 0.9 per cent in this one. Within spending, cuts to day-to-day departmental spending dominate both periods – 2.7 per cent of GDP in the last Parliament and 1.9 per cent in this – while cuts to welfare spending have also been significant – 0.3 and 0.8 per cent respectively. Day-to-day departmental spending is set to fall 6.4 per cent in real per capita terms in this Parliament.

Chart 1.5: Sources of changes to the structural deficit over two Parliaments



Source: ONS, OBR

1.42 On current policy the structural deficit would narrow significantly in 2019-20 (reflecting the relatively steep spending cuts for that year set out in the March Budget), but is broadly flat over the following two years. This sets the platform for the Government's aim of returning the public finances to balance at the earliest possible date in the next Parliament, which will also take place against a backdrop of significant fiscal headwinds from an ageing population. We will consider this in more detail when we update our long-term fiscal projections later this fiscal year. But these headwinds are evident from our 2015 *Fiscal sustainability report*, which showed that demographic pressures on health, long-term care and state pensions spending would cause the fiscal balance to deteriorate by 0.8 per cent of GDP between 2020-21 and 2025-26.

1.43 Focusing on state pensions, extending our latest spending forecast to 2025-26 shows how much faster the caseload is expected to rise in the next Parliament than in this and the last. Further ageing of the population is one factor, but the biggest difference is that caseload growth has been held down by the ongoing process of equalising the male and female state pension ages at age 65 (due to be completed in November 2018) and then increasing them to 66 for both men and women (scheduled to take place between December 2018 and October 2020). The state pensions caseload increased by 3.0 per cent in the last Parliament

and is expected to fall 2.6 per cent in this Parliament, but in the next it is projected to jump 9.1 per cent. That alone would push state pensions spending up by 0.3 per cent of GDP.

1.44 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. So we test the robustness of our judgement 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 only a roughly 35 per cent chance that the headline budget balance would be in surplus (as the existing fiscal mandate requires), but a 65 per cent chance that the structural deficit would be below 2 per cent of GDP (as the less constraining proposed fiscal mandate requires);

- second, by looking at its **sensitivity to key features of the economy forecast**. The 1.2 per cent of GDP margin relative to the 2 per cent target could fall to zero if potential output was 2.4 per cent lower, if the effective tax rate was 1.2 per cent of GDP lower for structural reasons or if the planned spending cuts – which reduce RDEL by 1.7 per cent of GDP between 2016-17 and 2020-21 – fell short by around three-quarters; and

- third, by looking at **alternative economic scenarios**. We have considered the implications of higher or lower productivity growth – the most important uncertainty in our (and most people's) forecast. The fiscal implications of these scenarios are largely driven by receipts. Changes in productivity growth affect earnings growth (and thus income tax and NICs receipts), consumer spending (VAT), profits (corporation tax) and business investment (the capital allowances that firms set against corporation tax liabilities). In the weak productivity scenario, all the existing targets are missed – as in our central forecast – but so is the proposed fiscal mandate, narrowly. In the strong productivity scenario, all the proposed targets are met – as in our central forecast – but the existing mandate would be met, with the budget moving into surplus in 2019-20.

2 Developments since the last forecast

2.1 This chapter summarises:

- the main **economic and fiscal data** developments since our last forecast in March 2016 (from paragraph 2.2); and
- recent **external forecasts** for the UK economy (from paragraph 2.21).

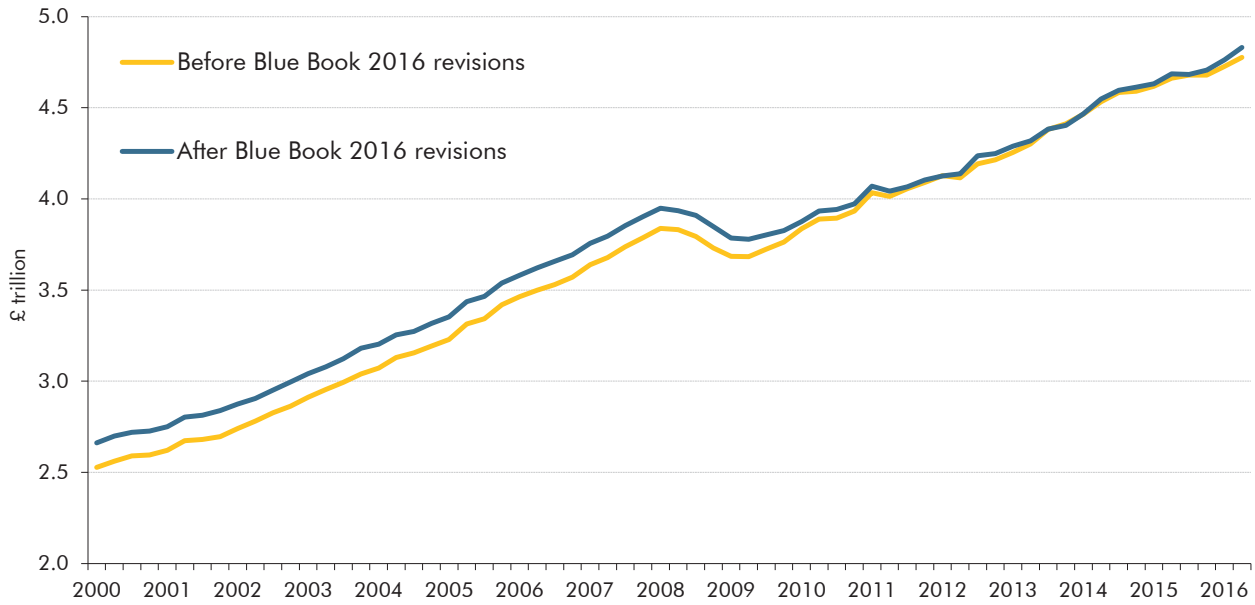
Economic developments

Data revisions and Blue Book 2016 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 data into its estimates of GDP growth. A full list of this year's changes can be found in Blue Book 2016.

2.3 The most significant change this year was to the method for estimating imputed rent for owner-occupied properties. (Owner-occupiers are assumed in the National Accounts to be paying themselves rent so that the flow of services from rental and owner-occupied properties are treated consistently.) This raised the level of nominal GDP in all years, but by proportionately more in earlier years and significantly less from 2010 onwards (Chart 2.1). For example, the new estimate increased nominal GDP by 5.4 per cent in the first quarter of 2000, 2.7 per cent in the first quarter of 2009 and 0.6 per cent in the fourth quarter of 2015. The profile of these changes mean that nominal GDP *growth* has been revised down – by 0.3 percentage points a year on average over the past 15 years. This has affected our economy forecast (discussed in Chapter 3), where we have revised down future growth of imputed rent and therefore nominal GDP. But this imputed element of nominal GDP is not taxed, so it has little direct bearing on our fiscal forecasts (detailed in Chapter 4).

Chart 2.1: Nominal GDP revisions in Blue Book 2016



Source: ONS, OBR

2.4 Real GDP was not affected materially by the new estimates of imputed rent, which largely affected nominal GDP via the deflator. As Table 2.1 shows, cumulative real GDP growth between the trough in the second quarter of 2009 and the end of 2015 is unchanged relative to the data available when we produced our March forecast. Downward revisions to private consumption, government spending and stocks were offset by a small upward revision to private investment, a smaller negative contribution from net trade and a larger statistical discrepancy between the output and expenditure measures of GDP.

Table 2.1: Contributions to real GDP growth from 2009Q2 to 2015Q4

	Percentage points						
	Private consumption	Government consumption	Government investment	Private investment	Net trade	Stocks	GDP growth, per cent
March data	7.5	1.8	0.0	4.6	-2.0	0.9	13.6
Latest data	6.7	1.5	-0.1	4.8	-1.3	0.4	13.6
Difference[1]	-0.8	-0.2	-0.1	0.2	0.7	-0.4	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. The statistical discrepancy is composed of the difference between the estimate of GDP led by the output approach and the expenditure estimate. The statistical discrepancy is 0.8 and 1.5 percentage points for March and latest data respectively.

2.5 Reflecting changes to imputed rent inflation, GDP deflator growth has been revised down in most years. This has reduced cumulative growth since the mid-2009 trough in output by 2.3 percentage points. That is almost entirely down to weaker growth in the private consumption deflator, where imputed rents account for around three quarters of the downward revision.

Table 2.2: Contributions to GDP deflator growth from 2009Q2 to 2015Q4

	Percentage points							
	Private consumption	Government consumption	Government investment	Private investment	Exports	Imports	Stocks	Deflator growth, per cent
March data	10.8	0.6	0.2	0.7	1.3	0.0	-1.0	11.8
Latest data	8.6	0.8	0.3	0.4	1.1	0.0	0.1	9.6
Difference[1]	-2.2	0.3	0.1	-0.3	-0.3	0.0	1.0	-2.3

[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. The error resulting from the statistical discrepancy and changing weights is -0.7 percentage points for the March data and -1.7 percentage points for the latest data. Contributions are calculated on a fixed weight basis, except the stocks contribution which includes the effects of price and volume changes.

2.6 Since the changes to real GDP growth net to zero over the period since mid-2009, revisions in nominal terms are driven entirely by changes to the GDP deflator. The net effect has been a downward revision to cumulative nominal GDP growth of 2.5 percentage points. A significantly weaker contribution from private consumption was partly offset by a stronger contribution from stocks and a smaller negative contribution from net trade.

Table 2.3: Contributions to nominal GDP growth from 2009Q2 to 2015Q4

	Percentage points						
	Private consumption	Government consumption	Government investment	Private investment	Net trade	Stocks	GDP growth, per cent
March data	19.3	2.4	0.2	6.0	-0.8	-0.1	27.0
Latest data	16.0	2.4	0.1	5.7	-0.4	0.6	24.5
Difference[1]	-3.3	0.0	0.0	-0.2	0.4	0.7	-2.5

[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 in both March and the latest data.

GDP growth since our March 2016 forecast

2.7 Since our last forecast, the ONS has published full National Accounts data for the first two quarters of 2016 and its preliminary GDP estimate for the third quarter. Its 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 25 November. We did not have pre-release access to those estimates for this *Economic and fiscal outlook (EFO)*.

2.8 Real GDP growth over the first half of 2016 was close to our March forecast, but there were some differences in its composition. As Table 2.4 shows, private consumption, government spending and stocks were stronger than forecast. This was partly offset by weaker growth in private investment and a negative contribution from net trade. The ONS's preliminary estimate of real GDP growth in the third quarter was 0.5 per cent, in line with our March forecast. The expenditure breakdown is not yet available, but the output breakdown indicates that services sector growth was strong, but construction and manufacturing output both fell in the quarter. A 16 per cent quarterly jump in output of the film and TV production

sector, which makes up just 0.6 per cent of the economy, accounted for around a fifth of the 0.5 per cent quarterly GDP growth.

Table 2.4: Contributions to real GDP growth from 2015Q4 to 2016Q2

	Percentage points						
	Private consumption	Government consumption	Government investment	Private investment	Net trade	Stocks	GDP growth, per cent
March forecast	0.7	-0.2	0.0	0.4	0.0	0.0	1.0
Latest data	1.1	0.1	0.2	0.1	-0.8	0.2	1.1
Difference[1]	0.3	0.2	0.1	-0.3	-0.8	0.2	0.1

[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 0.3 percentage points for the latest data.

2.9 GDP deflator growth in the first half of 2016 was 0.5 percentage points higher than we forecast in March because of stronger-than-expected growth in the private consumption, investment and stocks deflators. The depreciation of sterling helped push up exports and imports deflator growth. Since the imports deflator contributes inversely to the whole economy deflator, these effects broadly offset.

Table 2.5: Contributions to GDP deflator growth from 2015Q4 to 2016Q2

	Percentage points							
	Private consumption	Government consumption	Government investment	Private investment	Exports	Imports	Stocks	Deflator growth, per cent
March forecast	0.1	0.2	0.0	0.1	0.8	-0.7	0.5	1.0
Latest data	0.3	0.1	-0.1	0.2	1.3	-1.0	0.7	1.6
Difference[1]	0.2	-0.2	-0.1	0.2	0.4	-0.3	0.2	0.5

[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. The error resulting from the statistical discrepancy and changing weights is 0.1 percentage points for the latest data. Contributions are calculated on a fixed weight basis, except the stocks contribution which includes the effects of price and volume changes.

2.10 With real GDP and the deflator both growing more strongly than we expected, nominal GDP growth in the first and second quarters of 2016 was 0.6 percentage points higher than expected. This was driven by stronger growth in private and government consumption, as well as a more positive contribution from stocks. Contrary to our forecast, net trade subtracted from nominal GDP growth in the first half.

Table 2.6: Contributions to nominal GDP growth from 2015Q4 to 2016Q2

	Percentage points						
	Private consumption	Government consumption	Government investment	Private investment	Net trade	Stocks	GDP growth, per cent
March forecast	0.8	0.1	0.1	0.5	0.2	0.5	2.0
Latest data	1.3	0.2	0.1	0.4	-0.4	0.9	2.7
Difference[1]	0.6	0.1	0.0	-0.1	-0.6	0.4	0.6

[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 0.3 percentage points for the latest data.

Conditioning assumptions

2.11 Since we finalised our March forecast, dollar oil prices have risen well above the level implied by futures prices at that time. Actual and futures prices for the fourth quarter of 2016 now suggest the dollar oil price will average 32 per cent above our March assumption (Table 2.7). Our conditioning assumption for the sterling effective exchange rate is much lower than in March, reflecting the sharp depreciation against both the US dollar and the euro. During October, sterling reached a 31-year low against the dollar while the sterling effective exchange rate fell to its lowest on record. The FTSE all-share stock market index has risen, partly due to the weaker pound raising the sterling value of multinational firms' overseas earnings. Our latest assumption for the fourth quarter of 2016 is 12.9 per cent higher than our March assumption. Mortgage interest rates this year have fallen broadly in line with our March assumption, with the level now assumed for the fourth quarter just 0.1 percentage points higher than March.

Table 2.7: Conditioning assumptions in 2016Q4

	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	38.5	1.43	1.28	86.2	3361	2.6
Latest assumption	50.8	1.23	1.12	74.4	3796	2.7
Per cent difference	32.1	-14.2	-12.8	-13.7	12.9	0.1

[1] Difference is in percentage points.

Labour market

2.12 Lower-than-expected unemployment and higher-than-expected participation both contributed to the level of employment in the second quarter of 2016 being 213,000 higher than we forecast in March. Average hours also surprised on the upside, leaving growth in total hours worked over the year 0.5 percentage points higher than we forecast. Despite reasonably strong growth in non-oil output in the second quarter, that higher-than-expected growth in total hours left productivity-per-hour up only 0.4 per cent on a year earlier, weaker than our March forecast.

2.13 Labour market data for the third quarter were released after we had closed our pre-measures economy forecast on 3 November. This means that the labour market figures for the third quarter of 2016 in our forecast are slightly different to the outturn data. Relative to our estimate, employment was as expected, but that reflected the offsetting effects of lower-than-expected unemployment and higher-than-expected inactivity. Average and total hours were slightly higher than we expected, implying lower hourly productivity.

2.14 Whole economy average earnings growth in the year to the second quarter was 2.3 per cent, a little weaker than our March forecast. The National Accounts measure of earnings that we use is not yet available for the third quarter, but the average weekly earnings series shows 2.3 per cent annual growth, slightly weaker than we had forecast.

Inflation

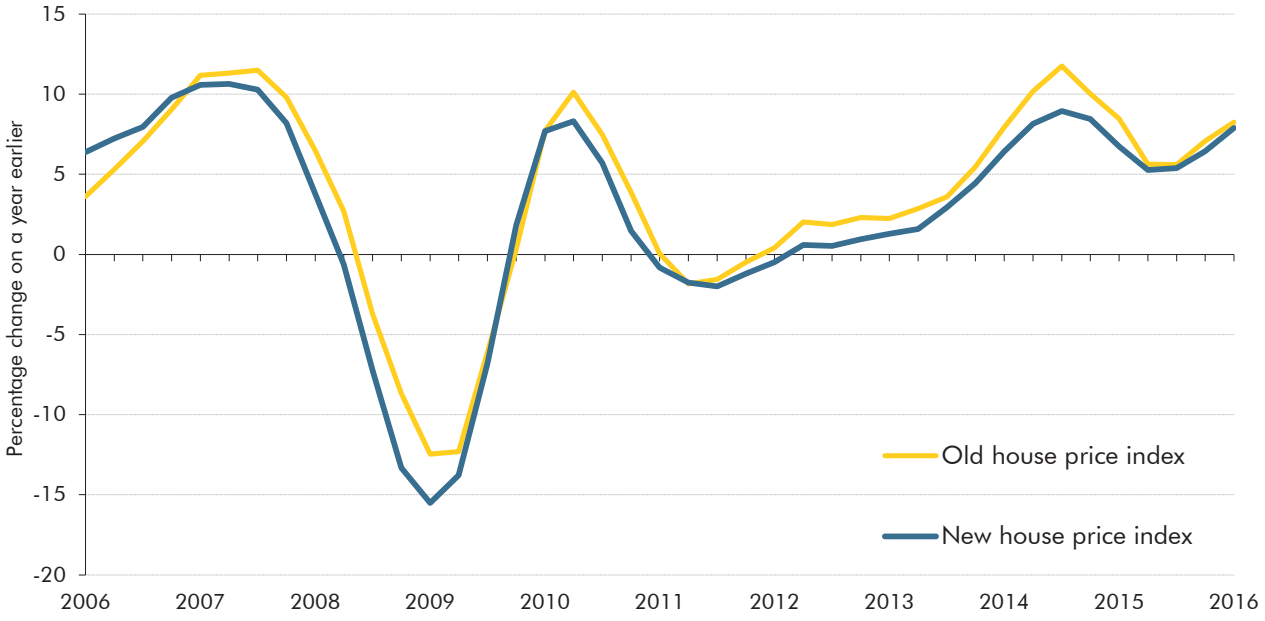
2.15 Annual CPI inflation for the third quarter of 2016 was 0.1 percentage points higher than our March forecast at 0.7 per cent. The sharp fall in sterling during that period is unlikely to have passed through to consumer prices to any material extent yet. CPI inflation was 0.9 per cent in October, slightly down from September. It has been below the Bank of England's 2 per cent target for almost three years, but we and most other forecasters now expect it to move above target during 2017 as the effects of the weaker pound feed through to import prices and on to consumer prices.

Housing market

2.16 Our forecast for house price inflation is based on the ONS house price index. Since our March forecast, the Land Registry and ONS have published a new UK index that incorporates data from a wider range of sources and a new methodology for calculating average prices.[1] The differences in annual growth of the two indices are shown in Chart 2.2. On average over the decade to 2016, the old index reported house price inflation of 3.8 per cent a year. The new index shows a lower rate of 2.7 per cent. Given these differences, our March house price forecast is not directly comparable with the latest outturns.

[1] For more information on the new house price index, see recent ONS *House price index statistical bulletins*.

Chart 2.2: Comparison of house price indices



Source: ONS, OBR

2.17 According to the latest data, annual house price inflation was 7.8 per cent in the third quarter of 2016. We had only two months data for the third quarter when our pre-measures forecast was closed, which explains the 0.4 percentage point difference between our forecast and the outturn. Major lenders report somewhat slower house price inflation. In the year to October, the Halifax index was up 6.1 per cent and Nationwide up 4.7 per cent.

2.18 In March we expected 639,000 property transactions in the first half of 2016, around 3 per cent lower than reported in the latest data. We expected transactions in the second quarter to be 12,000 lower than in the first due to forestalling ahead of the introduction of a 3 per cent stamp duty surcharge on purchases of additional properties. In the event, forestalling activity was much greater than expected. Transactions in the first quarter were 21 per cent higher than expected, while in the second quarter they were 16 per cent lower.[2]

The global economy

2.19 GDP growth in advanced economies picked up in the third quarter of 2016. It was in line with our March forecast in the US, slightly below it in the euro area and significantly above it in Japan. In Canada, GDP fell in the second quarter due to lower crude petroleum output. In the US and Canada, inflation remained stable in the third quarter. It turned positive in the euro area following deflation in the second quarter. In Japan, deflation persisted. China's GDP was 6.7 per cent higher in the third quarter than a year earlier, as in the previous two quarters. India's economy slowed in the second quarter, up 7.1 per cent on a year earlier.

[2] See Mathews (2016): *OBR Working paper No.10: Forestalling ahead of property tax changes* for analysis of the fiscal effects of property transactions forestalling.

Fiscal developments

2.20 Public sector net borrowing (PSNB) in the first six months of 2016-17 was £2.3 billion lower than the same period last year.[3] In March, we forecast a £16.7 billion full-year drop between 2015-16 and 2016-17. Given the first-half data, meeting our March forecast would require a fall of £20.5 billion for 2016-17 as a whole compared to 2015-16. Overall receipts growth has been somewhat below our March forecast, with income tax and stamp duty land tax receipts in particular falling short of expectations. By contrast, growth in corporation tax has been stronger than our full-year forecast. Our latest fiscal forecast – including the upward revision to borrowing in 2016-17 – is discussed in Chapter 4.

Developments in outside forecasts

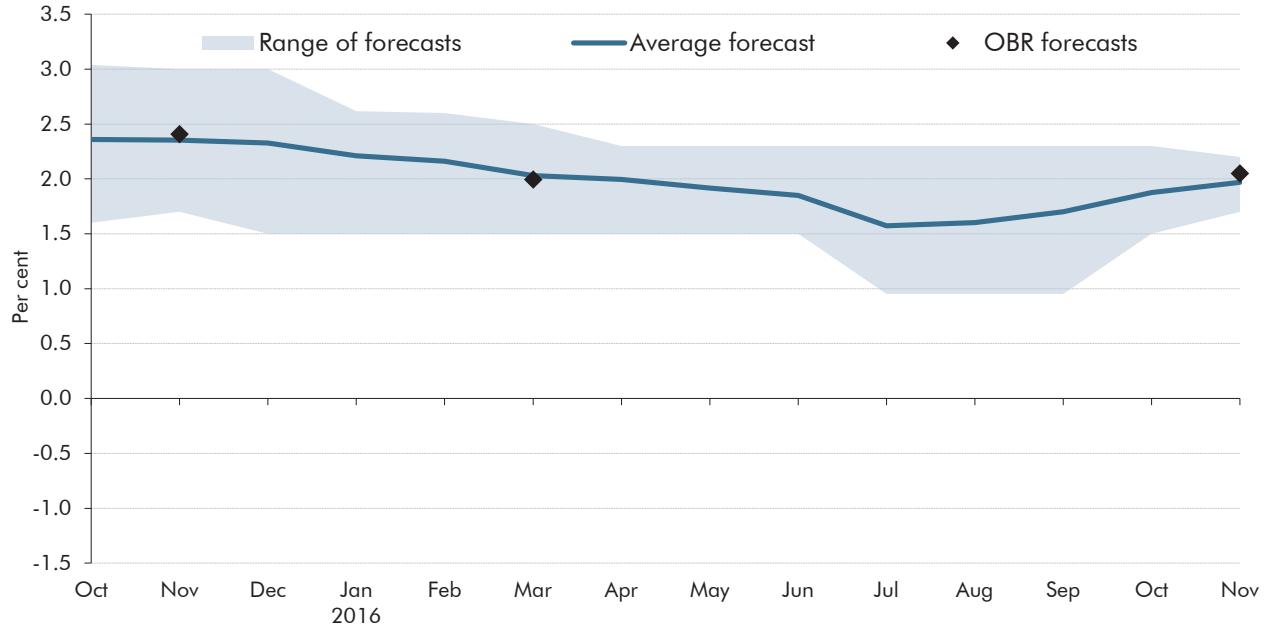
2.21 Many private sector, academic and other outside organisations produce forecasts for the UK economy.[4] This section sets out some of the movements in these forecasts since our March *EFO*. When interpreting the average of outside forecasts, it is important to bear in mind that different analysts forecast different variables and the average forecast is not constrained to paint an internally consistent picture.

Real GDP growth

2.22 Most forecasters revised down their expectations for GDP growth in 2016 immediately after the EU referendum, but some have raised them in light of only a modest slowing in quarterly growth reported by the ONS. The latest average is close to our current forecast at 2.0 per cent, unchanged from March (Chart 2.3). The average forecast for GDP growth in 2017 has fallen by 1.0 percentage points since March to 1.1 per cent, 0.3 percentage points below our current forecast (Chart 2.4).

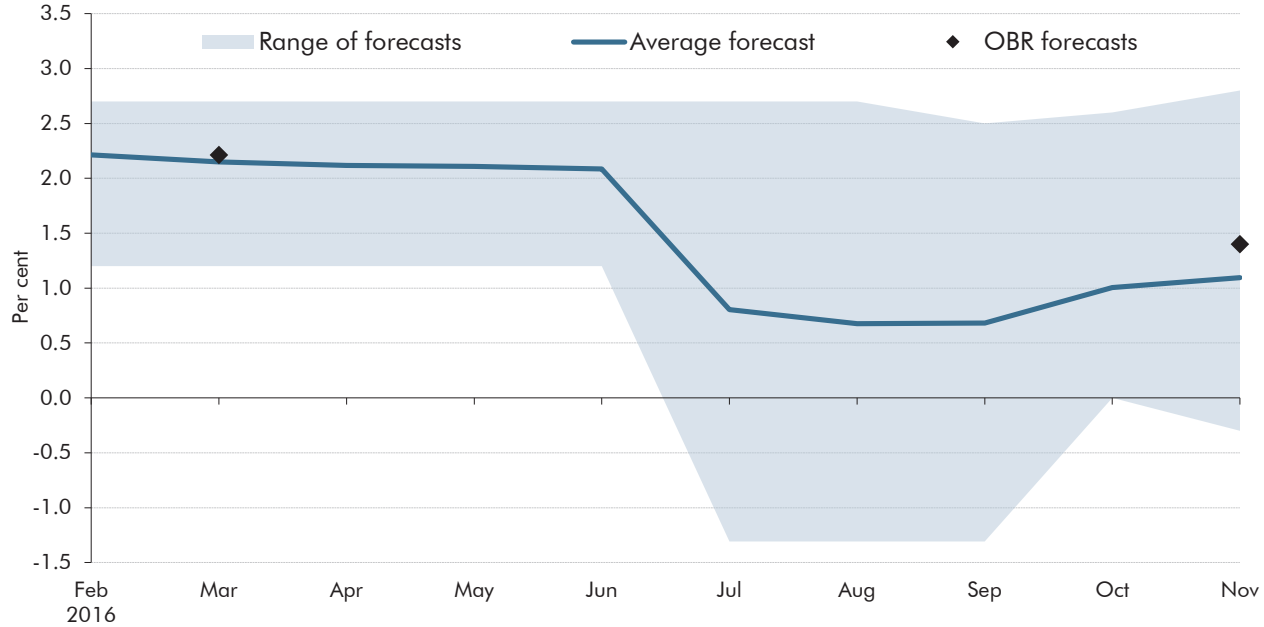
[3] The ONS and HM Treasury will have released their estimates of the public sector finances in October 2016 by the time this report is published, but we did not have pre-release access to those estimates for this *Economic and fiscal outlook*.
[4] See HM Treasury, November 2016, *Forecasts for the UK 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 2.3: Forecasts for real GDP growth in 2016



Source: HM Treasury, OBR

Chart 2.4: Forecasts for real GDP growth in 2017



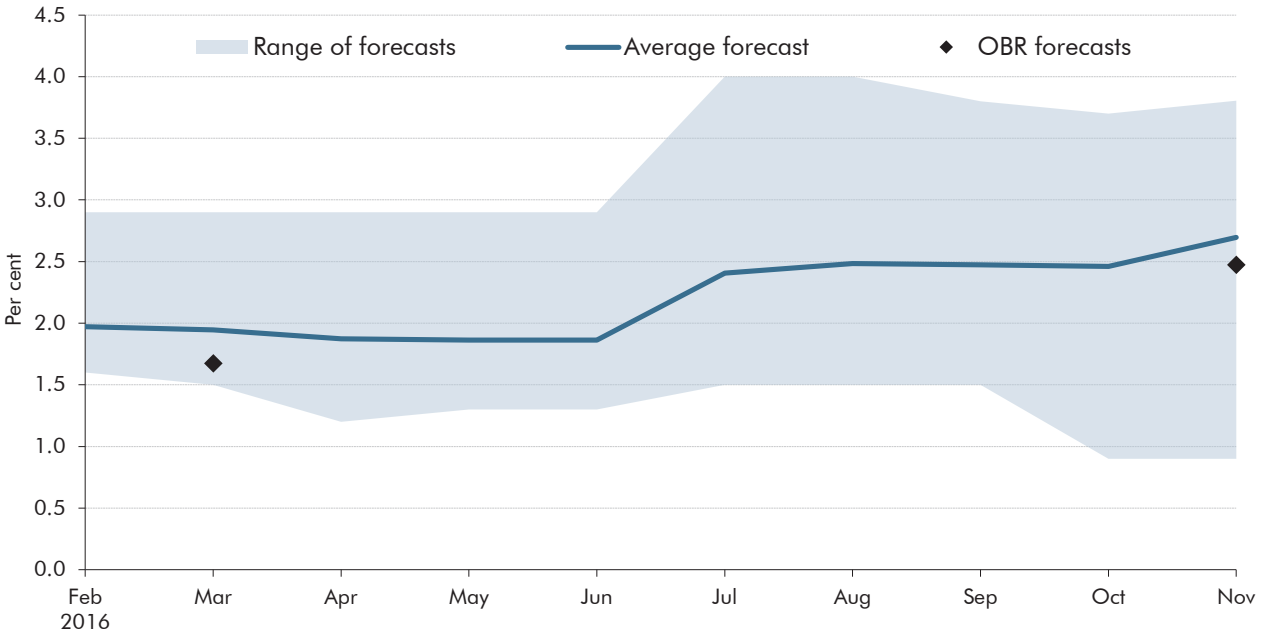
Source: HM Treasury, OBR

2.23 Looking at the smaller sample of medium-term forecasts, the average forecasts for GDP growth in 2018 and 2019 have fallen by 0.9 and 0.7 percentage points respectively since March. They now stand at 1.4 and 1.6 per cent, 0.3 and 0.5 percentage points lower than our forecast. This could reflect more pessimistic views on underlying potential output growth or that our forecast factors in some above-trend growth as the output gap is assumed to close, which may not be a feature of some forecasters' approaches.

Inflation

2.24 The average forecast for CPI inflation in the fourth quarter of 2016 has increased slightly since March. The latest average is 1.3 per cent, 0.1 percentage points below our forecast in this *EFO*. All forecasters expect inflation to remain below the Bank of England's 2 per cent target at the end of this year. By contrast, the average forecast for the fourth quarter of 2017 is significantly higher at 2.7 per cent, reflecting sterling depreciation since the referendum and forecasters' assumptions about how that will pass through to CPI inflation via higher import prices. This is 0.2 percentage points higher than our forecast (Chart 2.5).

Chart 2.5: Forecasts for CPI inflation in 2017Q4

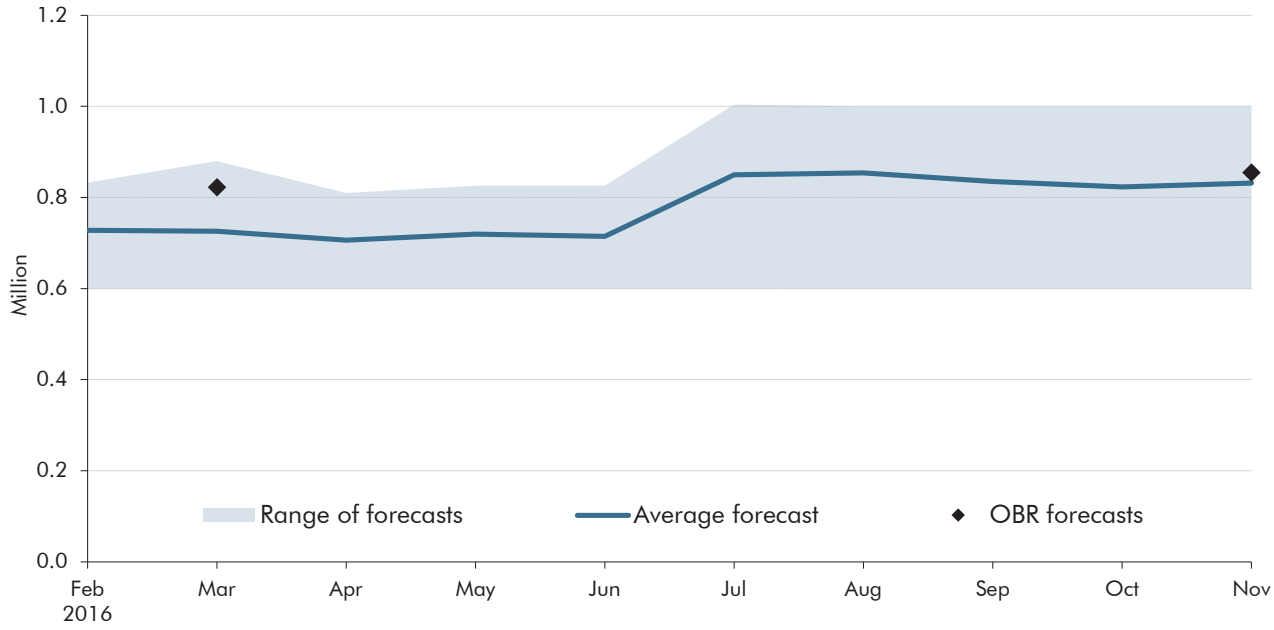


Source: HM Treasury, OBR

Labour market

2.25 The average forecast for claimant count unemployment in the final quarter of 2017 has been revised up since March. It now stands at 0.83 million, below our current forecast. The average forecast for employment growth in 2017 is 0.1 per cent, in line with our forecast. Average earnings growth in 2017 is now expected to be 2.3 per cent, having been revised down 0.9 percentage points since March.

Chart 2.6: Forecasts for the claimant count in 2017Q4



Source: HM Treasury, OBR

Public finances

2.26 The average forecasts for PSNB in 2016-17 and 2017-18 have risen significantly since our March forecast, to £70 billion and £69 billion respectively. Both are higher than our latest forecast. Medium-term forecasts now suggest PSNB will fall only to £53 billion in 2018-19, also up significantly from expectations in March. As we described in Box 3.2 of our 2016 *Forecast evaluation report*, while these upward revisions will reflect forecasters' updated views about prospects for GDP growth, they will also reflect different judgements about the extent to which the public finances are affected by changes in the economy. In statistical terms, it shows that only around 40 per cent of the variation in forecasters' revisions to borrowing in 2017-18 could be explained by revisions to their 2017 GDP growth forecasts.

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** (from paragraph 3.2);
- sets out our estimates of the amount of **spare capacity** in the economy and the likely growth in its productive potential (from paragraph 3.4);
- describes the key **conditioning assumptions** for the forecast, including monetary policy, fiscal policy and the world economy (from paragraph 3.29);
- sets out our short- and medium-term real GDP **growth forecasts** (from paragraph 3.53) and the associated outlook for **inflation** (from paragraph 3.64) and nominal GDP (from paragraph 3.77);
- discusses recent developments and prospects for the household, corporate, government and external **sectors of the economy** (from paragraph 3.81); and
- outlines **risks and uncertainties** (from paragraph 3.129) and compares our central forecast with those of selected external organisations (from paragraph 3.132).

Assumptions regarding the UK's exit from the EU

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 policy objectives will be met). In the current context of looming negotiations over the UK's exit from the EU this is not straightforward. As set out in the Foreword to this *EFO*, we asked the Government for "*a formal statement of Government policy as regards its desired trade regime and system of migration control, as a basis for our projections*". The Government directed us to two public statements by the Prime Minister that it stated were relevant to our request.

3.3 Perhaps understandably, the Government's response leaves us little the wiser as regards the choices and trade-offs that the Government might make during the negotiations – which will depend in part of course on the approach taken by those with whom it is negotiating. Given this – and the considerable uncertainty surrounding the economic and fiscal implications of different outcomes – we have not attempted to predict the precise end-point of the negotiations. Instead we have made judgements consistent with a range of possible

outcomes that we can keep under review in future forecasts. Specifically, as regards the economy forecast, we assume that:

- **the UK leaves the EU in April 2019** – two years after the date by which the Prime Minister has stated that Article 50 will be invoked;
- **the negotiation of new trading arrangements with the EU and others slows the pace of import and export growth for the next 10 years.** We have calibrated this slowdown on the basis of a range of external studies of different trade regimes; and
- **the UK adopts a tighter migration regime than that currently in place**, but not sufficiently tight to reduce net inward migration to the desired 'tens of thousands'.

Potential output and the output gap

3.4 Judgements about the amount of spare capacity in the economy (the 'output gap') and the 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 as activity returns to a level consistent with maintaining stable inflation in the long term. GDP growth is an important driver of trends in the overall budget deficit and the path of public sector debt.

3.5 Estimating the output gap allows us to judge how much of the budget deficit at any time is cyclical and how much is structural.[1] In other words, how much will disappear automatically as above-trend growth boosts revenues and reduces spending, and how much will be left when economic activity has returned to its full potential. The narrower the output gap, the larger the proportion of the deficit that is structural, and the less margin the Government will have against its proposed new fiscal mandate, which is set in structural terms.

3.6 In this section, we first assess how far from potential the economy is currently before considering the pace at which potential output will grow in the future. This will be determined, in part, by assumptions about whether and how leaving the EU will affect the economy's long-run growth potential. The channels along which such effects might occur – as discussed in a number of external studies – are summarised in Box 3.1.

3.7 Our estimates of potential output and the output gap are based on national output excluding the small and volatile oil and gas sector. We then add on a forecast for oil and gas production to complete our GDP forecast.

The latest estimates of the output gap

3.8 The first step in our forecast is to assess how the current level of activity in the economy compares with the potential level consistent with stable inflation in the long term. We cannot measure the supply potential of the economy directly, but various techniques can be used to

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

estimate it indirectly, including cyclical indicators, statistical filters and production functions. Every method has its limitations and no approach avoids the need for judgement. We therefore consider a broad range of evidence afresh at each forecast.

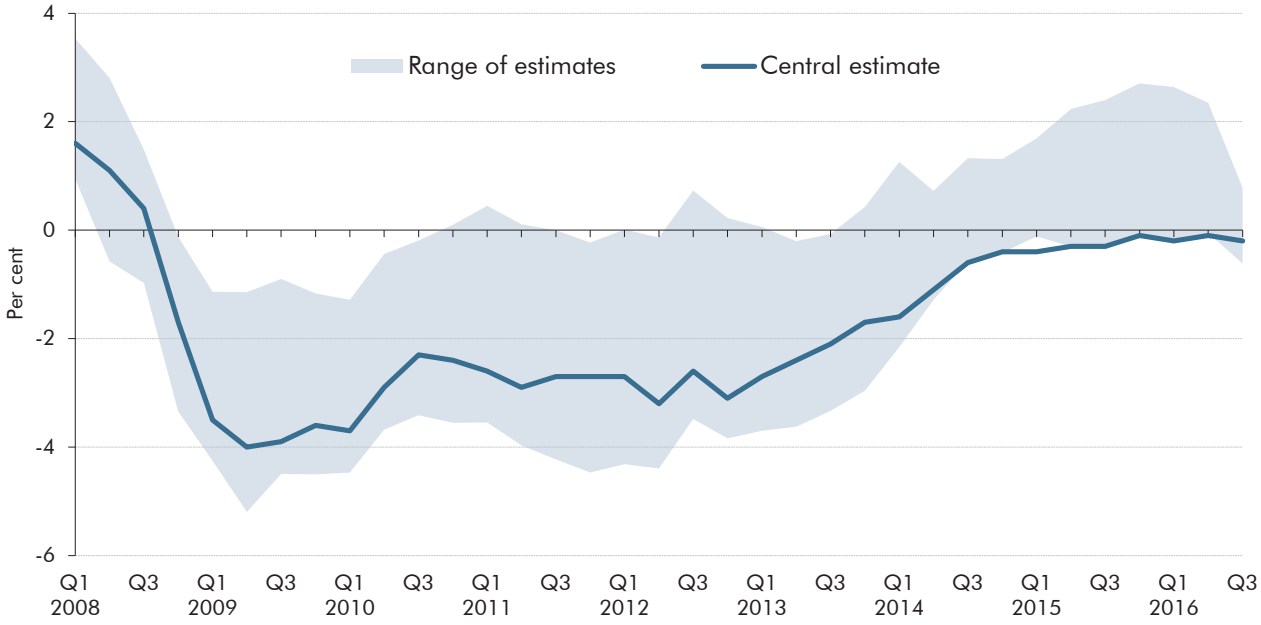
3.9 Since our December 2014 forecast, we have used estimates of the output gap implied by nine different techniques to inform our judgement. These produce a range that is shown in Chart 3.1 along with our own latest central estimate. The range has been relatively wide over the past year and half, although it narrowed significantly in the third quarter of this year as one measure moved from the top to the bottom of the range. The estimates currently vary between -0.6 and +0.8 per cent.

3.10 This is likely to understate the true degree of uncertainty around spare capacity at present, as estimates of this type are likely to change as new data become available and as past data are revised. For example, the range of estimates for the first quarter of 2015 has moved from -0.5 to +1.8 per cent in our March forecast to -0.1 to +1.7 per cent now. In March, the unemployment-augmented filter was the lowest of our range of estimates for that quarter. Recent strong labour market data has seen it revised up over the past, while in the latest quarter it is has moved to the top of the range.

3.11 To varying degrees, all the techniques are prone to revision because the cyclical position of the economy at any point in time will in part be informed by the subsequent path of output, which is unknown at the time. Revisions to historic data and changes to the sample mean and variance that are used to standardise the model estimates can also lead to revisions in the back series.[2] Our judgement-based central estimate typically lies within the swathe of model-based estimates, but in the first quarter of 2015 – when non-oil output growth was only 0.2 per cent – that would imply a narrowing of the output gap that we consider implausible. In most other quarters since mid-2014 our central estimate is close to or at the bottom of the range.

[2] The individual output gap estimates are included in the supplementary economy tables available on our website. The approaches – and the uncertainties associated with them – are discussed in Murray (2014): *OBR Working Paper No.5: Output gap measurement: judgement and uncertainty*. This working paper also discusses 'end-point uncertainty' and other causes of revisions to output gap estimates.

Chart 3.1: Range of output gap model estimates



Source: OBR

3.12 The cyclical indicator approaches are shown in Chart 3.2:

- the **'aggregate composite' (AC)** estimate implies that output moved above its sustainable level towards the end of 2013 and that by the second quarter of 2016 it was far above trend. In the third quarter it fell sharply to imply that output was below its sustainable level, reflecting the big fall in the British Chamber of Commerce services sector survey; and

- the **'principal components analysis' (PCA)** estimate has been positive since 2015. It began to narrow by the end of that year and fell below zero in the latest quarter.[3]

3.13 The two statistical filters we use that consider output data alone imply that the economy is currently operating close to its potential level. That picture has been similar for the past year. Both fell marginally in the third quarter of this year.

3.14 Chart 3.3 shows estimates that augment the output data with other information. In the latest quarter, these four measures tell somewhat different stories. Taking each in turn:

- **capacity utilisation** indicators suggest firms are operating slightly below their potential level, having been operating above for the previous two years;

- **CPI inflation** has picked up in recent months but remains historically low, which in principle could suggest more slack in the economy. We do not consider that likely, since low inflation in recent years largely reflects lower food and petrol prices, and the

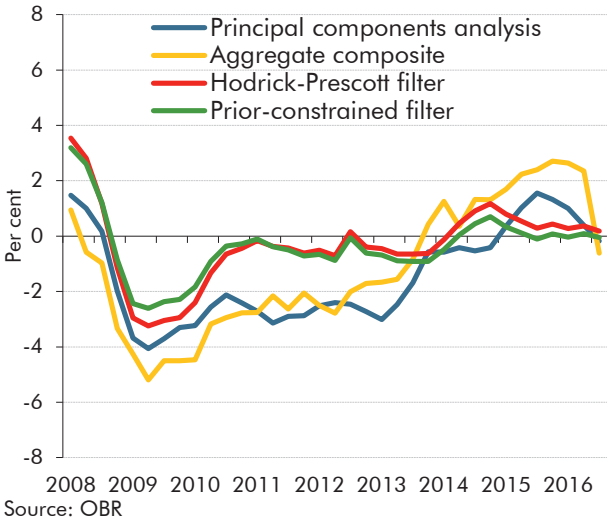
[3] More details on these methodologies are set out in our *Briefing Paper No.2: Estimating the output gap* and in Pybus (2011): *OBR Working Paper No.1: Estimating the UK's historical output gap*.

lagged effects of past sterling appreciation. The inflation measure that underpins our filters is adjusted for the direct influence of food and oil costs, but changes in these costs also have indirect effects on other prices. This may explain why this measure gives a slightly more negative measure of the output gap. It is likely to be affected by sterling-driven rises in inflation over the coming year;

- the **unemployment** rate has continued to fall. Complementing output data with a filter-based structural unemployment estimate (informed by changes in real wages and productivity) would suggest that the output gap was close to zero in 2015 and is now positive; and

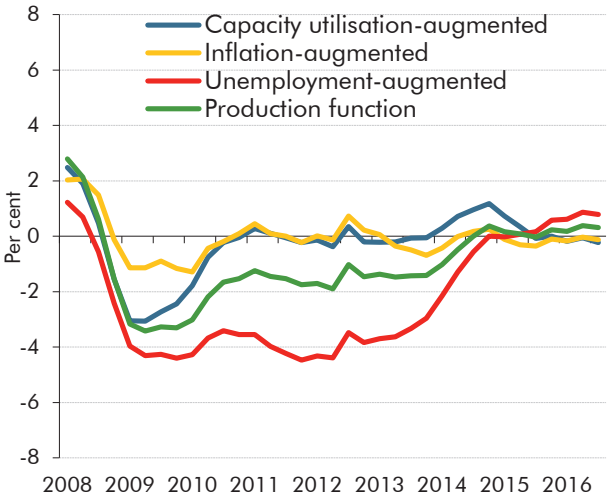
- a **production function**, which applies filters to the individual components of production, suggests that output has been slightly above potential over the past year and a half.

Chart 3.2: Cyclical indicators and filter-based estimates of the output gap



Source: OBR

Chart 3.3: Multivariate filter-based estimates of the output gap



3.15 GDP growth was in line with our March forecast in the third quarter, although on a non-oil basis it was slightly weaker than expected at 0.4 per cent on the previous quarter and 2.3 per cent on a year earlier. Employment growth has remained strong, with the level up 0.2 per cent on the quarter and 1.5 per cent over the year. The unemployment rate fell to 4.8 per cent – below our estimate of its sustainable level – and the inactivity rate has remained broadly stable. Finally, average hours were slightly higher in the third quarter, meaning total hours worked were up 0.3 per cent on the quarter and 2.0 per cent on a year earlier. As a result, hourly productivity – non-oil output produced per hour worked in the economy – has been slightly weaker than we forecast in March.

3.16 Full labour market data for the third quarter were released after we closed our pre-policy-measures economy forecast. There were small differences from the numbers we assumed for this forecast: the unemployment rate was slightly lower, due to higher inactivity rather than higher employment, and average hours were slightly higher. But it would not have made a material difference to our forecast if we had access to these latest data.

3.17 The latest evidence paints a reasonably consistent picture of the change in the output gap in the latest quarter – either narrowing slightly where the indicators were above trend or widening slightly where they were below trend. That contrasts with our March forecast that the negative output gap would continue to narrow in the second half of 2016. The low unemployment rate continues to suggest that there is little spare capacity in the labour market. But it does not yet seem to be overheating, given relatively subdued wage growth. That said, until very recently there have been signs of excess demand in the construction sector, where wage growth reached 8.6 per cent in the three months to June.

3.18 Considering the balance of evidence, we have judged that the output gap was -0.2 per cent of potential output in the third quarter of this year, slightly wider than the -0.1 per cent we forecast in March and the -0.1 per cent we estimate for the second quarter. This is towards the lower end of the swathe of estimates in Chart 3.1, but closer to those to which we attach more weight. That has now been the case for the past two years. We have attributed most of the current output gap to productivity lying below potential.

3.19 Charts 3.4 and 3.5 compare our central output gap estimates for 2016 and 2017 to those produced by other forecasters, as set out in the Treasury's November *Comparison of independent forecasts*. The average estimate is -0.5 per cent in 2016 and -0.9 per cent in 2017, slightly wider than our estimates of -0.2 and -0.6 per cent for those years. The estimates in 2017 range from -3.5 to +0.3. That is an indicator of uncertainty around this judgement, but also of the variety of different views taken by forecasters about the effect of the referendum result and any fiscal policy response that they might expect.

Chart 3.4: Estimates of the output gap in 2016

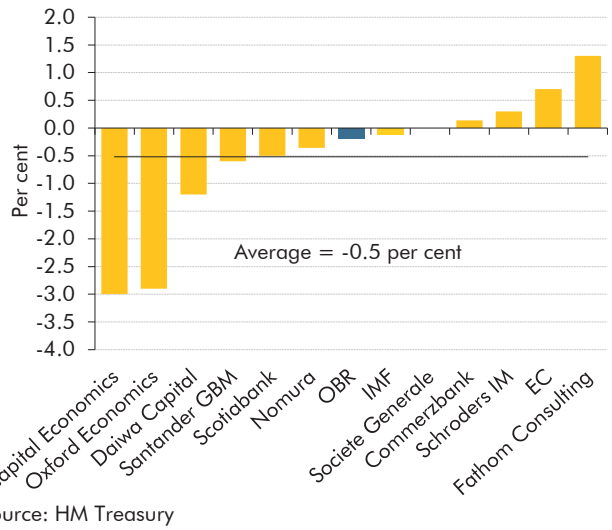
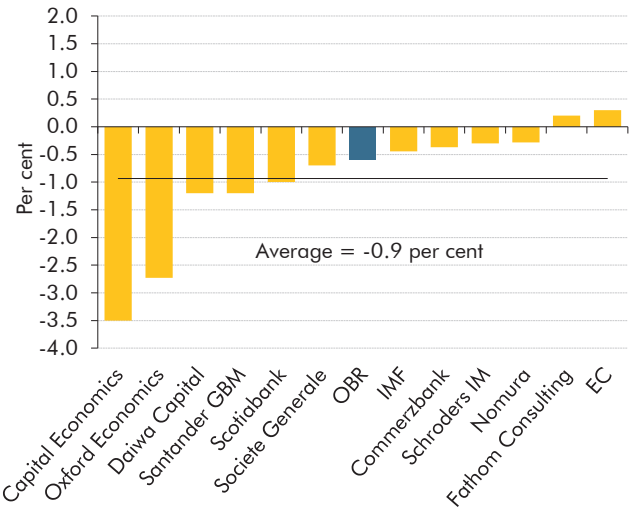


Chart 3.5: Estimates of the output gap in 2017



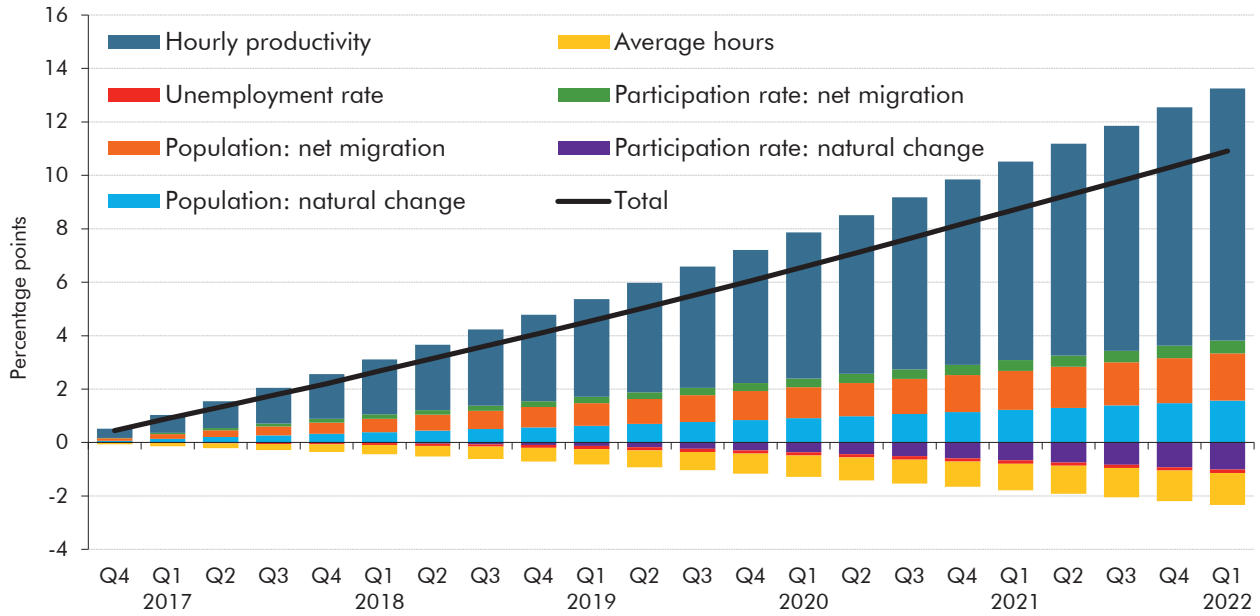
Source: HM Treasury

The path of potential output

3.20 The most important factor in our forecast for the size of the economy in the long run is the judgement we make about the path of potential output. As described in Box 3.1, the UK's exit from the EU – and the uncertainty that is likely while post-exit policy settings are

negotiated and settled – are likely to affect the economy's growth potential. We have not conditioned this forecast on a precise expected outcome from the negotiations. Rather we have made the judgement – in line with a range of external studies – that any likely outcome would lead to lower investment and lower net inward migration than would otherwise have been the case, which together reduce prospective potential output.

Chart 3.6: Contributions to potential output growth from 2016Q3



Note: We implicitly assume that, conditioned on age and gender, migrants are as likely to be employed as the broader population.
Source: OBR

3.21 As ever, the outlook for trend productivity is the most important and most uncertain judgement in our (and most people's) economic forecast. Needless to say, there is greater-than-usual uncertainty around any judgements about the path of potential output when post-exit policy settings are not known. But even when those arrangements become clearer, their impact on potential output growth will remain highly uncertain.

3.22 In March we revised down our productivity growth assumption, as we put slightly more weight on the post-crisis period of weak productivity growth relative to the pre-crisis historical average. Nothing in the recent data would lead us to change that judgement about the rate of trend productivity growth that the economy can ultimately return to. But we do expect uncertainty to reduce investment and productivity growth in the run-up to – and in the transition phase after – the UK's exit from the EU. We have therefore made a further downward adjustment to trend productivity growth over the next five years.

3.23 Our judgement has been guided by the likely effect of lower business investment on the growth rate of the capital stock. Indeed, business investment in the first half of 2016 was lower than in the second half of 2015 – suggesting that the uncertainty associated with the referendum was already taking effect before the result was known. Relative to our March forecast, we have revised down cumulative business investment growth from 2015 to 2020 by around 15 per cent – equivalent to reducing the level of real business investment in 2020

by £27 billion. The Government has announced higher capital spending in this Autumn Statement, adding around £5½ billion to cash spending in 2020-21 (or just under £5 billion in real terms, based on our GDP deflator forecast). Further details of our business and government investment forecasts are set out in paragraphs 3.99-3.101 and 3.107. We expect trade intensity to fall as a result of leaving the EU, but have not made an explicit adjustment for the less-well-understood link between that and total factor productivity.

3.24 Relative to March, the trend hourly productivity growth revision averages 0.3 percentage points a year. By 2020, we assume that trend hourly productivity growth will reach 1.8 per cent, down from 2.0 per cent in March. As set out in the long-term economic assumptions published alongside this *EFO*, which will underpin our forthcoming long-term fiscal projections, we expect it to return to 2.0 per cent over the next decade.

3.25 We base our population growth assumptions on ONS population projections, choosing the variant that fits best with recent data and our judgements on prospects. (The details underlying the ONS projections are important inputs to our fiscal forecasts.) The 'principal' ONS variant that we used in March projects net migration falling to 232,000 in 2017, then trending down to 185,000 a year by 2021. The latest data for the year to March 2016 suggest that net migration has remained around 330,000 a year, with no sign of falling. Based on this, absent the referendum result we would have moved to the high variant, which would have increased population growth by 80,000 a year and added around 0.2 percentage points a year to our potential output growth assumptions.

3.26 While the Government has not specified its post-exit migration policies in detail, it has expressed a desire to control immigration more tightly. Given this, and the likelihood that the UK will become a less attractive destination for potential inward migrants, we have chosen to use the 'principal' ONS population projection in this forecast. That is unchanged from March, but lower than would otherwise have been the case. In the absence of more policy detail and evidence on how much weaker the 'pull' effect will be, we do not think it would be central to move to a lower assumption now.

3.27 We have not made any adjustments to the other components of potential output. We continue to expect the long-term decline in average hours to reassert itself as productivity growth recovers, and that rises in the 'National Living Wage' will put upward pressure on structural unemployment. Our modelling of the trend participation rate includes the implications of an ageing population and state pension age increases from year to year using the cohort model that informs our long-term projections.[4] This implies a participation rate that is relatively stable over the first half of the forecast, and falling in the second half.

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

Table 3.1: Potential output growth forecast

	Percentage change on a year earlier, unless otherwise stated				
	Potential productivity[1]	Potential average hours	Potential employment rate[2]	Potential population[2]	**Potential output[3]**
2016	1.3	0.0	0.0	0.7	2.0
2017	1.4	-0.2	0.0	0.6	1.8
2018	1.5	-0.2	0.0	0.6	1.8
2019	1.6	-0.2	-0.1	0.6	1.9
2020	1.8	-0.2	-0.2	0.6	2.0
2021	1.8	-0.2	-0.2	0.6	2.0

[1] Output per hour.
[2] Corresponding to those aged 16 and over.
[3] Components may not sum to total due to rounding.

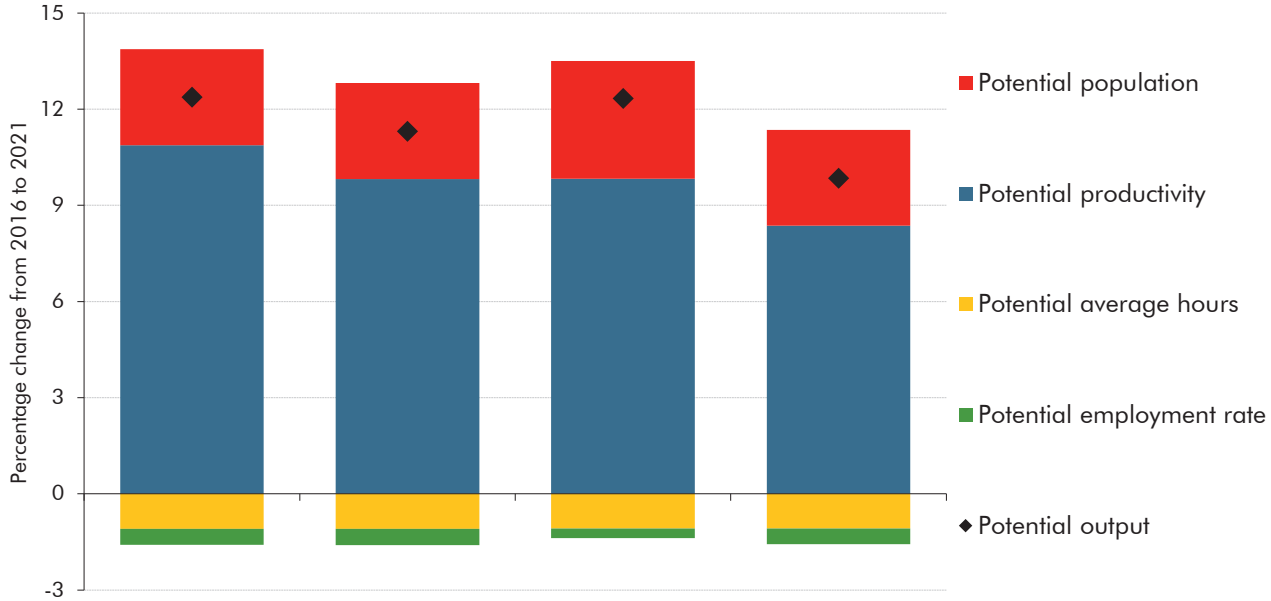
3.28 The difference between our March and latest potential output assumptions reflects two sets of judgements – the changes that we would have made in the absence of the referendum result and the UK's forthcoming exit from the EU, and those that we have made relative to that alternative path. Chart 3.6 shows cumulative growth in potential output between 2016 and 2021 – and the contributions to that growth – on these three bases. For context, we also show our November 2015 forecast, which assumed that trend productivity growth would return to its pre-crisis average of 2.2 per cent by 2020. We have extended the two older forecasts to 2021 to aid comparison, assuming that the contributions of all but trend productivity growth would have been the same as our latest forecast and that productivity growth would have been unchanged in 2021 relative to 2020. The chart shows that:

- **in the absence of the referendum result** we would have revised up cumulative potential output growth by 1.0 percentage point due to higher net migration. On a per capita basis, cumulative growth would have been 0.3 percentage points higher because net migration adds proportionately more to the working-age population than to the total population, thereby boosting the employment rate too;

- reflecting our assumptions about **the effect of leaving the EU on business investment and net migration**, we have revised cumulative potential output growth down by 1.5 percentage points relative to March and 2.4 percentage points relative to where it would otherwise have been (1.4 and 1.7 percentage points respectively on a per capita basis); and

- **the downward revision since March** is of a similar magnitude to the 1.1 percentage point downward revision we made between November 2015 and March 2016. It is smaller than the reduction in potential output growth in our November 2011 forecast, which was 2.7 percentage points over the five years to 2015-16, and of course much smaller than the roughly 17 per cent shortfall that has built up relative to pre-crisis estimates of potential output growth.

Chart 3.7: Successive forecasts for cumulative potential output growth



Source: OBR

Box 3.1: Possible effects on potential output of the UK leaving the EU

Ahead of the referendum in June this year, various institutions estimated the impact on the economy of a decision to leave the EU, relative to the outlook if we remained a member.[a] These studies identified a number of channels through which this impact might be felt. Among them:

- **capital deepening**: firms will be less likely to invest during periods of heightened uncertainty. Lower business investment reduces growth in the stock of capital and therefore the amount of capital available for each unit of labour (worker or hour worked). That would reduce labour productivity growth and therefore potential output growth;
- **net migration**: stricter controls and/or a reduction in the attractiveness of the UK as a destination could reduce net inward migration. That would reduce growth in potential output via lower population growth. Depending on the age- and skill-characteristics of the prevented or deterred migrants, it could also positively or negatively affect the employment rate or productivity growth;
- **openness**: a less open economy – in terms of trade and/or foreign direct investment – could reduce labour productivity via 'total factor productivity' (the amount of output an economy can produce from a given level of labour and capital inputs). For example, less trade may slow the process of specialisation in the activities where firms are most productive. It could also reduce the extent to which firms are able to adopt or adapt techniques and processes from overseas trading partners;
- **research and development**: as with business investment, greater uncertainty could reduce investment in R&D. That would affect potential output growth via total factor productivity, potentially with a longer lag than slower capital deepening; and

- **adjustment costs**: during the transition to new trading arrangements with the EU, some firms may need to focus resources on creating new products or entering new markets. That could reduce productivity temporarily as firms use some resources for adjustment rather than producing output. This process could involve a greater turnover of firms closing and new firms being set up. As new firms tend to be less productive initially, this could have a temporary compositional effect on productivity.

These channels reflect the relatively direct consequences of leaving the EU on flows of goods, services, investment and people across the UK's borders. But some studies have also looked at how policy settings in the UK could change after leaving the EU, including trade agreements with non-EU countries or the removal of regulations associated with EU membership. If such policy changes generate new productive opportunities, they could increase productivity along similar channels. That said, there is no guarantee that policy would move in this direction.

The weight placed on these different channels is largely a matter of judgement. Most studies assume some effect via capital deepening, although the scale varies. Only the OECD study attempted to quantify a migration effect. There is a degree of consensus that leaving the EU will reduce openness, although the scale depends on what trading arrangements are assumed to prevail afterwards. There is much less agreement on whether that will affect productivity – this channel was an important element of the Treasury's analysis, but NIESR chose not to include it. The effect from other channels is typically estimated to be quite small.

There are, of course, huge uncertainties associated with any estimates of the effect of leaving the EU, since it is not something that has happened before. The sources of uncertainty include what will ultimately replace EU rules in terms of trade, investment and migration, as well as any knock-on effects to regulatory or other policies. The latter are less relevant to our analysis, as we are required to forecast on the basis of current policy rather than to predict how governments might choose to exploit the opportunity to change policies in the future.

For any future policy setting, there is then uncertainty about the extent to which the economy might be affected along the channels identified here or in other ways. And, for a 5-year forecast like ours, there is additional uncertainty about the timeframe over which any effects will take place and how much of it will occur within the forecast horizon. Finally, because we cannot observe potential output directly, or know with confidence what would have happened otherwise, the true scale of any effects will never be known with certainty.

[a] Here we have considered analysis from NIESR (*The long-term economic impact of leaving the EU*, National Institute Economic Review No. 236, May 2016), the IMF (*Macroeconomic implications of the United Kingdom leaving the European Union*, June 2016), the OECD (*The economic consequences of Brexit: A taxing decision*, OECD policy paper No. 16, April 2016) and HM Treasury (*The long-term economic impact of EU membership and the alternatives*, April 2016). These represent a subset of the many studies that were presented before the referendum and none of them was a particular outlier in terms of expecting a notably bigger or smaller effect from leaving the EU. Studies predicting a bigger GDP loss from leaving the EU include the London School of Economics' Centre for Economic Performance (*The impact of Brexit on foreign investment in the UK*, Dhingra et al, March 2016). At the opposite end of the spectrum the Economists for Brexit study (*The economy after Brexit*, April 2016) predicted GDP would be boosted by leaving the EU.

Key economy forecast assumptions

3.29 Our economic forecasts are conditioned 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 Parliament requires. While the Government has set out some objectives for what it wishes to achieve when the UK leaves the EU, it has not set out detailed policies at this stage. The assumptions we have therefore needed to make were described in paragraph 3.3. The risks to our forecasts are discussed later in the chapter.

Monetary policy and credit conditions

3.30 Our forecast assumes that the Bank of England will try to bring inflation back to target over the medium term, consistent with the remit the Chancellor has set the Monetary Policy Committee (MPC). In its November *Inflation Report*, the MPC forecast CPI inflation above the 2 per cent target at its 3-year forecast horizon, noting that "*monetary policy should balance the speed with which inflation is returned to the target with support for real activity*".

3.31 Bank Rate was set at 0.5 per cent for more than seven years after being cut to that level in March 2009. In August, following the referendum result, the MPC cut it to 0.25 per cent – an all-time low. Markets expect Bank Rate to remain very low over the next five years, reaching just 0.9 per cent by the end of our forecast period (Chart 3.8).

3.32 As well as cutting Bank Rate, the MPC announced that it would introduce a package of measures designed to provide additional monetary stimulus. These will be implemented through the Asset Purchase Facility (APF) and include:

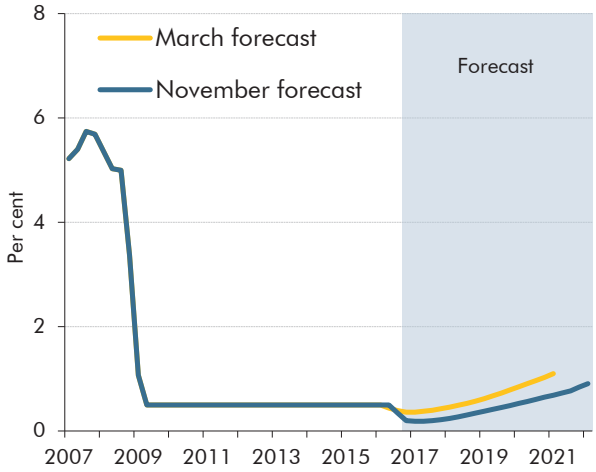
- a **Term Funding Scheme** (TFS) that will provide up to £100 billion of funding for banks at interest rates close to Bank Rate. This is designed reinforce the transmission of the reduction in Bank Rate to interest rates paid by households and firms;

- an additional £60 billion of **gilt purchases**. This is designed to impart monetary stimulus by lowering the yields on securities that are used to determine the cost of borrowing for households and businesses; and

- the purchase of up to £10 billion of **UK corporate bonds**. The MPC judged that this could provide somewhat more stimulus than the same amount of gilt purchases. In particular, given that corporate bonds are higher-yielding instruments than government bonds, investors selling corporate debt to the Bank could be more likely to invest the money received in other corporate assets than those selling gilts.

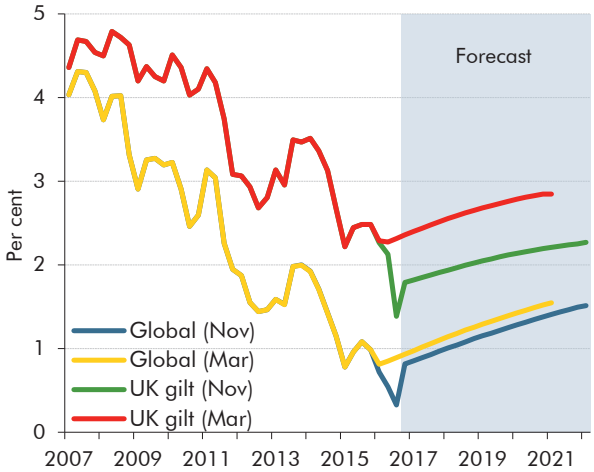
3.33 Gilt rate expectations and global bond yields are both lower than our March forecast, as shown in Chart 3.9.

Chart 3.8: Bank Rate



Source: Bank of England, Datastream, OBR

Chart 3.9: Global bond yields



Note: 20-year gilts for UK, trade weighted bond rates for global.

Macroprudential policy

3.34 Since 2013, the Bank of England's Financial Policy Committee (FPC) has held responsibility for "*the identification of, monitoring of, and taking of action to remove or reduce systemic risks with a view to protecting and enhancing the resilience of the UK financial system*". In its latest *Financial Stability Report*, the FPC identified several areas where the referendum vote could increase risks to financial stability. It cited a variety of possible channels, including financing the current account deficit, various property market channels (particularly the commercial real estate market) and fragilities in financial markets.

3.35 The FPC noted the high degree of uncertainty regarding the transition to a new relationship with the EU and that some risks – for example in commercial real estate – had started to materialise. The FPC made no new recommendations, but reaffirmed its previous decision to keep the countercyclical capital buffer at 0 per cent of banks' UK exposure.[5]

3.36 The FPC has previously determined that mortgage lenders should not extend more than 15 per cent of new owner-occupier mortgages at loan-to-income multiples at or greater than 4.5, and that lenders should apply an interest rate stress test of 3 percentage points above the rate at origination. The FPC has also introduced a framework that assigns a minimum leverage ratio of 3 per cent for UK financial institutions, supplemented by an additional component that is set in relation to the economic and financial climate at the time and a further buffer for firms that are considered to be of systemic importance. In addition, from early 2017, the FPC will have powers of direction over loan-to-value ratios and debt-to-income ratios in the buy-to-let lending market. The direction of these policies contributes to our judgements about credit conditions and prospects for mortgage debt (see Box 3.3).

[5] The countercyclical capital buffer is set to reflect prevailing economic and financial market conditions. A high capital buffer is designed to give banks greater access to liquidity during times where risks are deemed to be higher than usual. A reduction in the buffer would increase capacity for lending to households and businesses.

Credit conditions

3.37 Bank funding spreads continued to widen in the first two quarters of 2016, reaching levels not seen since 2013. Despite this, average mortgage rates continued to fall steadily in the first half of 2016, largely reflecting falls in average fixed rates as maturing contracts moved on to lower rates. We expect effective mortgage rates to fall to 2.5 per cent in the third quarter of 2017. We expect them to remain around that level before picking up gradually toward the end of the forecast. This path is lower than our March forecast, reflecting the lower expected path for Bank Rate.

3.38 Lending to individuals picked up steadily through 2015 and 2016, supported by growth in net mortgage lending and lending for car purchases. In the year to September, lending to individuals increased at 4.0 per cent. Mortgage debt is expected to rise over the forecast period, albeit more slowly than we forecast in March.

3.39 Bank lending to both large businesses and small and medium-sized enterprises (SMEs) started to rise in 2016 after a long period of weakness. Business lending growth also dipped following the referendum before picking up again in September. Growth in lending to large businesses has picked up more in recent months than lending to SMEs – reaching 3.6 and 2.1 per cent respectively in the year to September. Small firms are more reliant on bank lending than larger firms that can access non-bank forms of finance (e.g. issuing bonds).

Fiscal policy and Budget measures

3.40 Our forecast is conditioned on current Government policy and the ongoing fiscal consolidation. Reductions in government spending and increases in tax receipts mean that the structural deficit is expected to narrow between 2016-17 and 2019-20, before stabilising. But it is no longer expected to move into surplus within our forecast horizon. Chapter 4 sets out fiscal forecasts, while Box 3.2 sets out how this economy forecast has been affected by fiscal and other policy changes announced in this Autumn Statement.

Box 3.2: The economic effects of policy measures

This box considers the possible effects on the economy of the policy measures announced in this Autumn Statement. More details of each measure are 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 between 2017-18 and 2020-21, largely reflecting increases in departmental current and capital spending. To reflect these changes in our economy forecast we have applied the same **'multipliers'** we have used in previous forecasts. These are larger the shorter the period between a policy being announced and implemented. The multipliers applied to specific fiscal years are weighted to reflect the fact that these changes are being announced two-thirds of the way through 2016-17. They imply small effects on the profile of real GDP growth, adding 0.1 percentage points in 2017-18 and subtracting less than 0.1 percentage points a year thereafter.

The Autumn Statement includes a number of policies that are likely to affect **housebuilding and residential investment**. Dropping the requirement for housing associations to move to a shared-ownership model and abandoning plans to force higher rents on some tenants will both reduce the cash inflows available for housebuilding. Partly offsetting that, additional grant funding and other smaller measures will increase cash inflows and boost housebuilding. The net effect is to reduce cumulative housebuilding by housing associations by around 13,000 over the forecast period, with a boost next year becoming a drag by 2019-20. Our housing associations forecast is set out in Chapter 4.

The Government has also announced additional funding to bring forward the construction of homes on surplus public sector land. While it is unclear whether this measure will result in additional housebuilding in the long term, we expect it to bring around 10,000 units forward into the forecast period. Taken together with the effect on housing associations, the overall effect is small, reducing residential investment growth by an average of 0.2 percentage points a year.

The Government has announced a number of policies that we expect to affect **inflation**. The latest freeze in fuel duty takes effect in April 2017, while the latest rise in insurance premium tax from 10 to 12 per cent takes effect in June 2017. These have small and partly offsetting effects, reducing CPI inflation by less than 0.1 percentage points in 2017-18.

The Government has also announced its intention to ban additional fees charged by private letting agents. 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 is the case, it would also affect measured inflation, as CPI and RPI inflation both include rents but do not include the additional fees charged by letting agents. We will return to the implications of this policy for inflation once firm details are available.

World economy

3.41 In its latest *World Economic Outlook*, which informs our global forecast, the IMF made a small downward revision to each year of its forecast for world GDP growth. We have also revised down our forecast since March. We now expect world growth of 3.1 per cent in 2016, rising to 3.4 per cent in 2017. Thereafter we expect a slower pick-up than in March.

3.42 In the third quarter of 2016, euro area GDP was up 1.6 per cent on a year earlier, unchanged from the previous quarter. It was up 1.7 per cent in Germany, 1.1 per cent in France and 0.9 per cent in Italy, but was again higher in Spain, at 3.2 per cent. Euro area GDP growth in 2015 has been revised up since March, which has contributed to a small upward revision to our forecast for 2016.

3.43 We have revised down our euro area growth forecast in 2017. The IMF made a similar revision in the *WEO*, expecting weaker investment due to heightened uncertainty following the result of the referendum. Our forecast for 2018 is unchanged, but is slightly lower from 2019 onwards. As with our UK forecast, this is consistent with lower investment in the near term resulting in lower capital stock growth in the medium term, which would be expected to result in lower growth in productivity and trend output.

3.44 In previous *EFO*s, we have cited deflation in the euro area as a risk to the global and UK outlook. Euro area inflation was 0.5 per cent in October, continuing its steady upward trend since returning to positive territory in June. Previous falls in energy prices have acted as less of a drag on headline inflation in recent months. Core inflation (which excludes energy, as well as food, alcohol and tobacco) was 0.8 per cent in October, lower than at the start of the year. The European Central Bank announced a loosening of monetary policy in March, which would also be expected to have put upward pressure on euro area inflation. Unemployment was 10.0 per cent in September, unchanged since June after steadily declining over the previous months.

3.45 US GDP is estimated to have increased by 0.7 per cent in the third quarter of 2016, higher than in the previous two quarters. This was a result of positive contributions from private consumption, net trade and stocks. We closed our economy forecast before the recent US election. Any significant changes to the policy path initiated by the new administration could affect the prospects for US GDP growth, although at this stage it is not possible to predict what those effects might be.

World trade and UK export market growth

3.46 Since March, world trade growth has been revised up in 2015. We estimate that it reached 2.8 per cent in that year. Trade growth in the first half of 2016 has been weaker than we forecast in March. We now expect it to slow to 2.3 per cent this year. Our forecast is also lower than in March from 2017 onwards, as we have assumed a gradual return to the historical relationship with world GDP growth. Our world trade forecast continues to imply a lower trade intensity of world GDP growth compared with the latest IMF forecast.

3.47 We have revised down growth in UK export markets in each year of our forecast to reflect the downward revision to world trade growth since March. In 2016 we expect export markets to grow by 2.9 per cent. While lower than in March, the downward revision is smaller than that to world trade growth, implying that the weakness in recent trade data has been concentrated in markets that account for a lower proportion of UK exports. We expect export markets to grow by 3.7, 4.0 and 4.3 per cent respectively in 2017, 2018 and 2019.

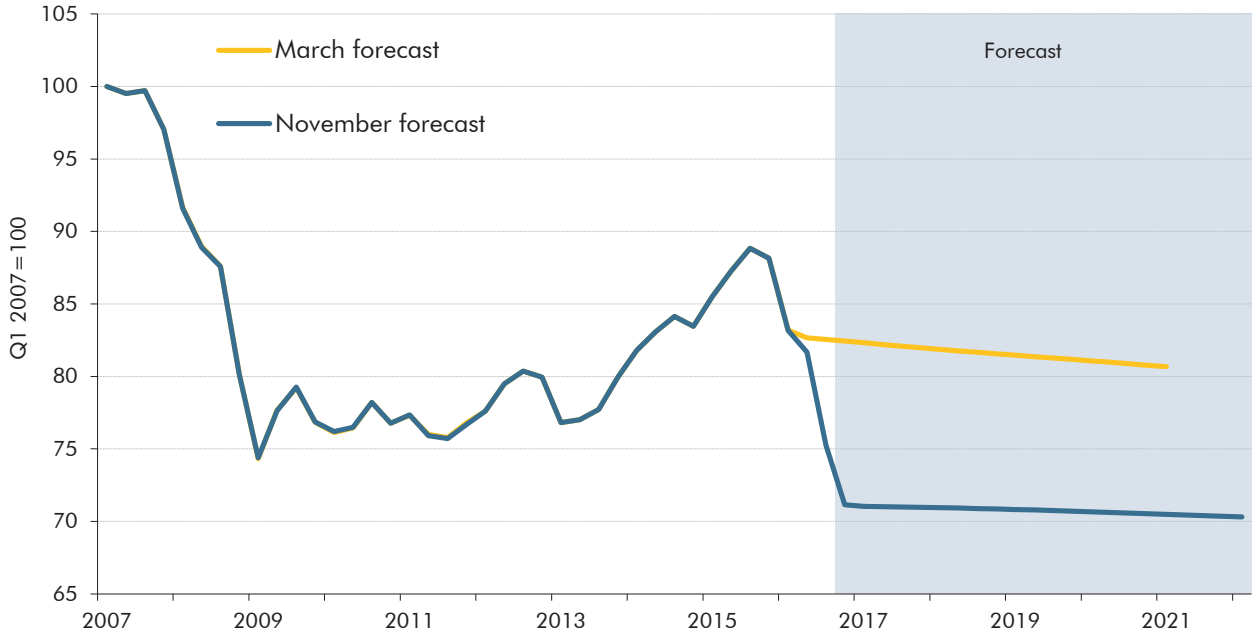
Sterling effective exchange rate

3.48 Sterling has fallen sharply since the referendum in June. This is likely to reflect market participants lowering their expectations for returns on UK assets. It could also represent foreign investors attaching a higher risk premium to UK assets. In its November *Inflation Report*, the Bank of England reported that market contacts had attributed recent falls in UK-focused equity prices, higher borrowing costs and a further sterling depreciation largely to "*perceptions that the United Kingdom's future trading arrangements with the EU might be less open than previously anticipated, requiring a lower real exchange rate to improve competitiveness and support activity*".

3.49 Comparing the 10-day average to 31 October that underpins this forecast with the levels on 23 June, sterling was down 18 per cent against the US dollar and 14 per cent against the

euro. From its current level, we assume that the exchange rate will follow the path implied by the uncovered interest parity condition: namely that the exchange rate will move to reflect the differential between UK and overseas interest rates so as to equalise the expected return to investing at home and abroad. In the fourth quarter of 2016, our latest assumption for the sterling effective exchange rate is 13.7 per cent lower than our March assumption (Chart 3.10). It is expected to depreciate slightly further over time as the forward UK interest rate curve is above the average of the UK's major trading partners (shown in Chart 3.9 above).

Chart 3.10: Sterling effective exchange rate assumptions

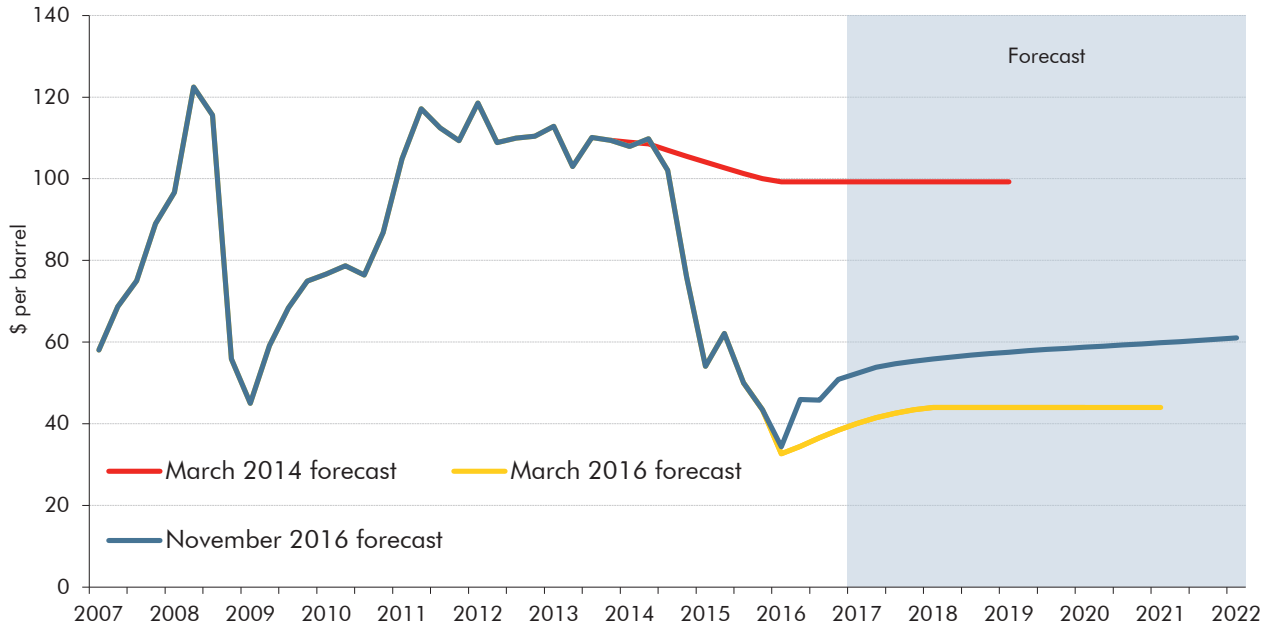


Source: Bank of England, Bloomberg, OBR

Oil prices

3.50 In the 10 days to 31 October, oil prices averaged $50.8 a barrel, 32 per cent higher than our March assumption for the final quarter of the year, but still 49 per cent lower than our March 2014 assumption (Chart 3.11). We have reviewed the methodology we use to generate this assumption and made one change. While we continue to use the first two years of the futures curve, beyond two years we now hold prices flat in real terms (using a price index based on major countries' CPI inflation, which in turn is informed by IMF forecasts). We previously held prices flat in nominal terms. Both approaches would have been subject to very large forecast errors over the past, but having reviewed the evidence again we now judge that 'flat real' is likely to perform slightly better than 'flat nominal'.

Chart 3.11: Oil price assumptions



Source: Datastream, IMF, OBR

Summary

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

- **the UK leaves the EU in April 2019**, that the trading regime will be less open than before and that the UK adopts a tighter migration regime than is currently in place;
- **monetary policy** is more accommodative than we assumed in March, reflecting the package of measures announced in August and lower Bank Rate expectations;
- **credit conditions** and the financial system continue on a path of gradual normalisation, despite a period of increased uncertainty related to the UK leaving the EU;
- **fiscal policy** has been loosened relative to the path set out in March, although fiscal consolidation is set to continue throughout the forecast period;
- **sterling** is significantly weaker than was assumed in March;
- **global GDP and the demand for UK exports** increases steadily over the forecast period, albeit slightly more slowly than expected in March; and
- dollar **oil prices** are 32 per cent higher than assumed in March. Beyond the two-year horizon they are assumed to remain constant in real terms.

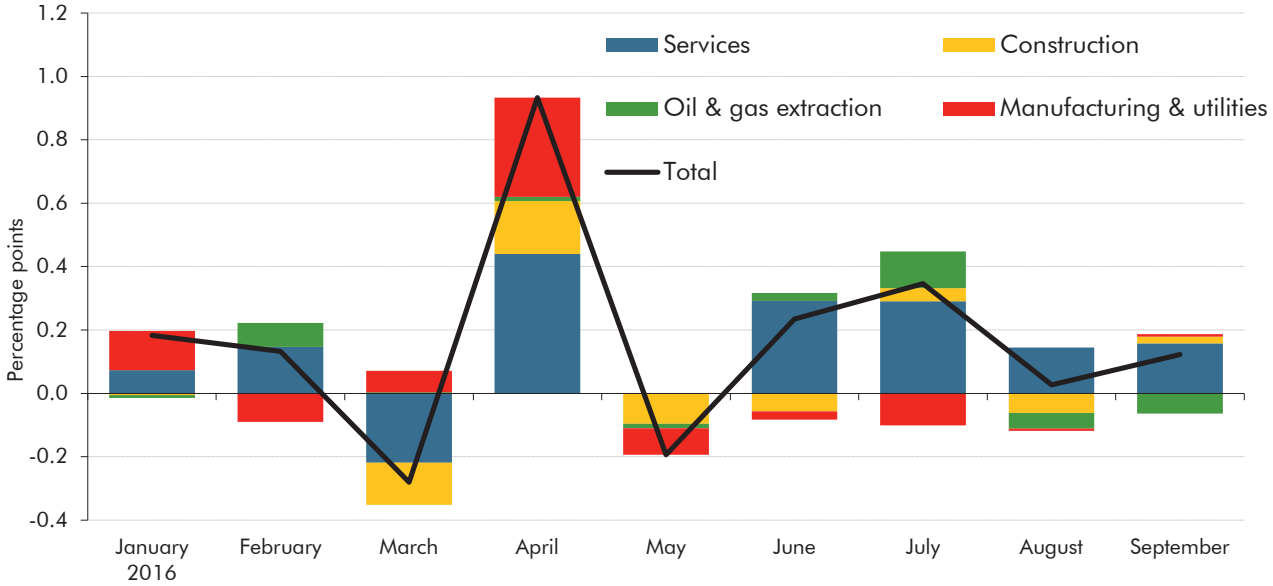
3.52 Risks and uncertainties associated with these assumptions and other facets of the forecast are discussed later in the chapter.

Prospects for real GDP growth

The short-term outlook for GDP

3.53 Chart 3.12 shows that on a monthly basis, the services sector made positive contributions to GDP growth in six of the eight months for which data are available in 2016. The ONS estimate of GDP growth in the third quarter assumed that it contributed positively in September too. The other components each account for a smaller share of GDP, but were volatile during 2016, so in some cases had significant impacts on implied GDP growth. Manufacturing output has risen on average over 2016, having fallen in 2015.

Chart 3.12: Contributions to monthly output growth



Note: The contribution from the services sector in September is based on the ONS assumption in the preliminary estimate for GDP growth in 2016Q3.
Source: ONS

3.54 Real GDP increased by 0.5 per cent in the third quarter of 2016, in line with our March forecast. This was higher than average quarterly growth in 2015, but a slowdown relative to the second quarter, where growth was 0.2 percentage points stronger than we forecast in March. We expect growth to slow further in the fourth quarter, but the combined effect of past data revisions, differences between new data for the second and third quarters, and our new forecast for the fourth quarter (all shown in Table 3.2), has left the calendar year growth rate for 2016 slightly higher than we forecast in March at 2.1 per cent.

3.55 GDP growth is forecast to slow to 1.4 per cent in 2017. We forecast lower consumption growth, as higher inflation (largely caused by the sterling depreciation) weighs on household real incomes. We also expect continuing uncertainty following the EU referendum to depress business investment and GDP growth. These two effects are partly offset by a positive contribution from net trade, reflecting a temporary boost from the weaker exchange rate and the knock-on effects of weaker domestic demand. The fiscal loosening announced in the Autumn Statement adds 0.1 percentage points to growth in 2017.

Table 3.2: The quarterly GDP profile

	Percentage change on previous quarter											
	2015				2016				2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
November forecast[1]	0.3	0.5	0.3	0.7	0.4	0.7	0.5	0.4	0.3	0.2	0.3	0.4
March forecast[2]	0.4	0.6	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5
Change[3]	**-0.2**	**-0.1**	**-0.1**	**0.2**	**-0.1**	**0.2**	**0.0**	**-0.2**	**-0.3**	**-0.3**	**-0.2**	**-0.2**

[1] Forecast from fourth quarter of 2016.

[2] Forecast from first quarter of 2016.

[3] Changes may not sum due to rounding.

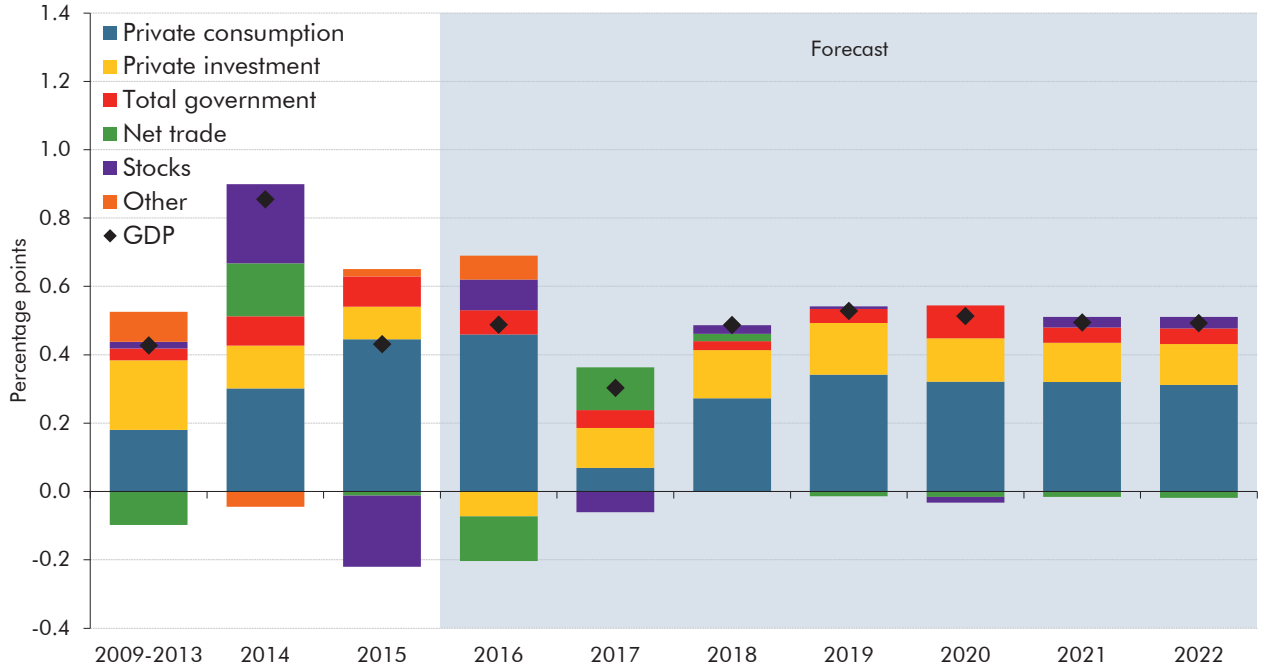
The medium-term outlook

3.56 Our forecasts for growth in the medium term are determined by the amount of spare capacity in the economy, and the speed with which we expect it to return to productive use. The conditioning assumptions discussed in the previous section all inform that judgement.

3.57 Based on the judgements we have made about growth in potential and actual GDP in 2017, we expect the output gap to widen to 0.7 per cent by the end of 2017.

3.58 After averaging 0.3 per cent a quarter in 2017, growth is expected to rise gradually from the start of 2018 as business investment recovers steadily, consumer spending picks up (as productivity and real wages increase and inflation eases) and net trade continues to contribute positively. That means the output gap begins to narrow in 2018. The contribution of net trade is expected to turn slightly negative from 2019 onwards, in line with our March forecast. As the effect of the sterling depreciation fades, exports and imports are both expected to be lower as a result of the UK's exit from the EU. But since the effect is assumed to be similar on both, the effect on net trade is broadly neutral.

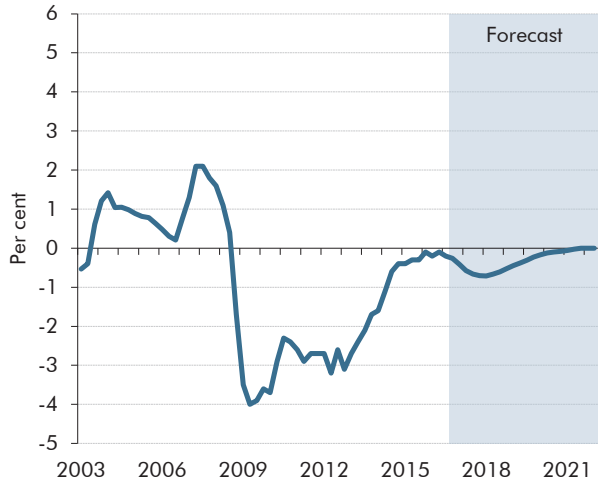
Chart 3.13: Contributions to average quarterly GDP growth



Note: 'Other' category includes the statistical discrepancy and the residual between GDP and the expenditure components prior to the base year (2013).
Source: ONS, OBR

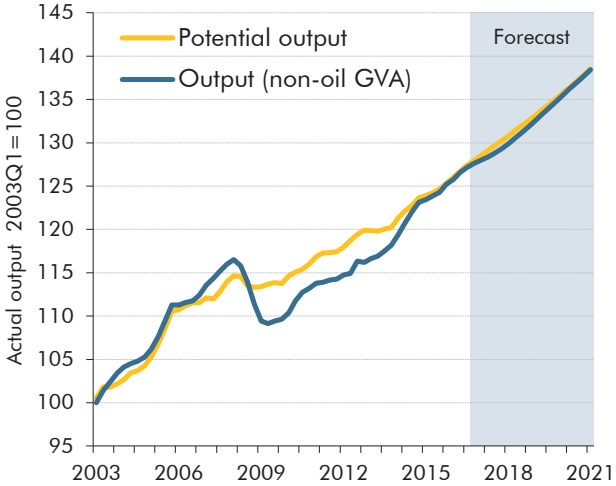
3.59 Charts 3.14 and 3.15 show our latest medium-term forecasts described above in terms of the output gap and the levels of actual and potential output.

Chart 3.14: 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 3.15: Projections of actual and potential output



Source: ONS, OBR

3.60 Table 3.3 summarises the expenditure composition of the GDP forecasts described above.

Table 3.3: Expenditure contributions to real GDP

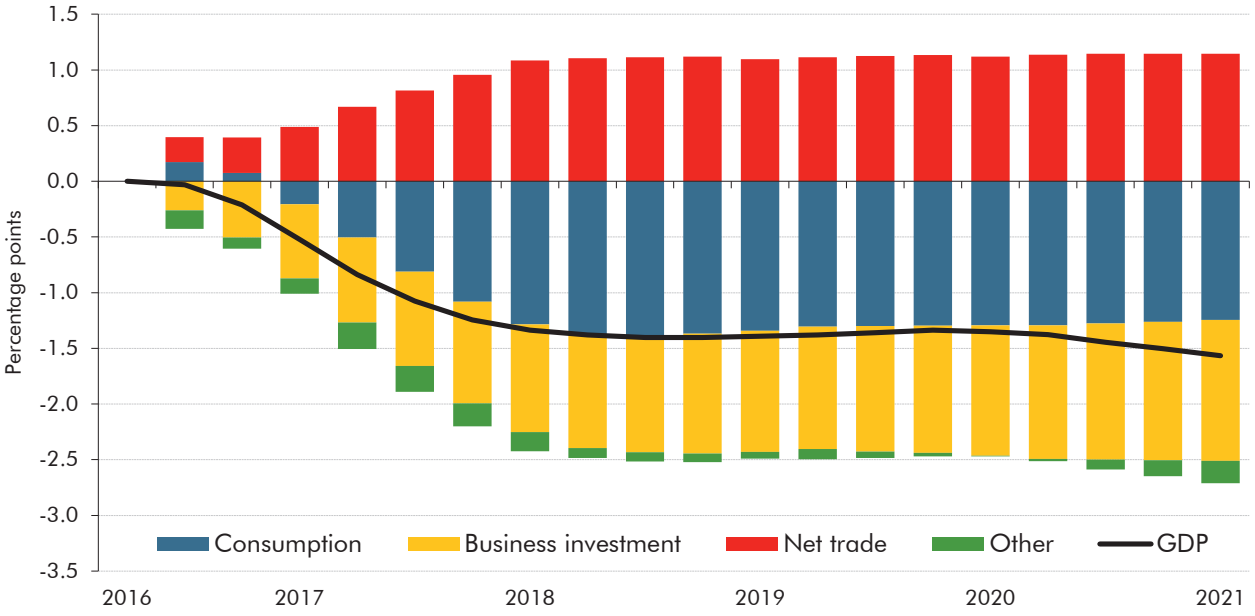
	Percentage points, unless otherwise stated						
	Outturn	Forecast					
	2015	2016	2017	2018	2019	2020	2021
GDP growth (per cent)	**2.2**	**2.1**	**1.4**	**1.7**	**2.1**	**2.1**	**2.0**
Main contributions							
Private consumption	1.6	1.8	0.8	0.7	1.4	1.3	1.3
Business investment	0.5	-0.2	0.0	0.4	0.5	0.4	0.3
Dwellings investment[1]	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Government[2]	0.2	0.3	0.2	0.2	0.1	0.4	0.2
Change in inventories	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
Net trade	-0.4	-0.2	0.3	0.3	-0.1	-0.1	-0.1

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

3.61 The downward revision to our forecast for potential growth means that we expect weaker GDP growth over the next five years as a whole. The cumulative increase in real GDP in this forecast is 9.7 per cent between 2016 and 2021 – 1.4 percentage points less than in March. As with potential output (Chart 3.7 above), this revision can be split into two components – the upward revision we would have made in the absence of the referendum due to a higher migration assumption (which would have added 0.9 percentage points to cumulative GDP growth) and the changes we have made relative to that (which subtract 2.3 percentage points). In per capita terms, the downward revision since March is -1.4 percentage points, split +0.2 and -1.5 percentage points for the two components.

3.62 Chart 3.16 shows expenditure contributions to the downward revision to cumulative real GDP growth since March. It shows how the near-term revision is dominated by uncertainty-related postponement of business investment, which more than accounts for the slowdown in the second half of 2016. Thereafter, the sterling-driven hit to real incomes and household consumption also takes hold. By the end of 2018, household consumption subtracts 1.4 percentage points and business investment subtracts 1.1 percentage points relative to March. Together these more than account for the overall reduction in GDP growth. Net trade offsets just under half the effect of all the other factors. That reflects the combination of a sterling-driven boost to exports growth in the near term and the direct effect on imports growth from weaker domestic demand.

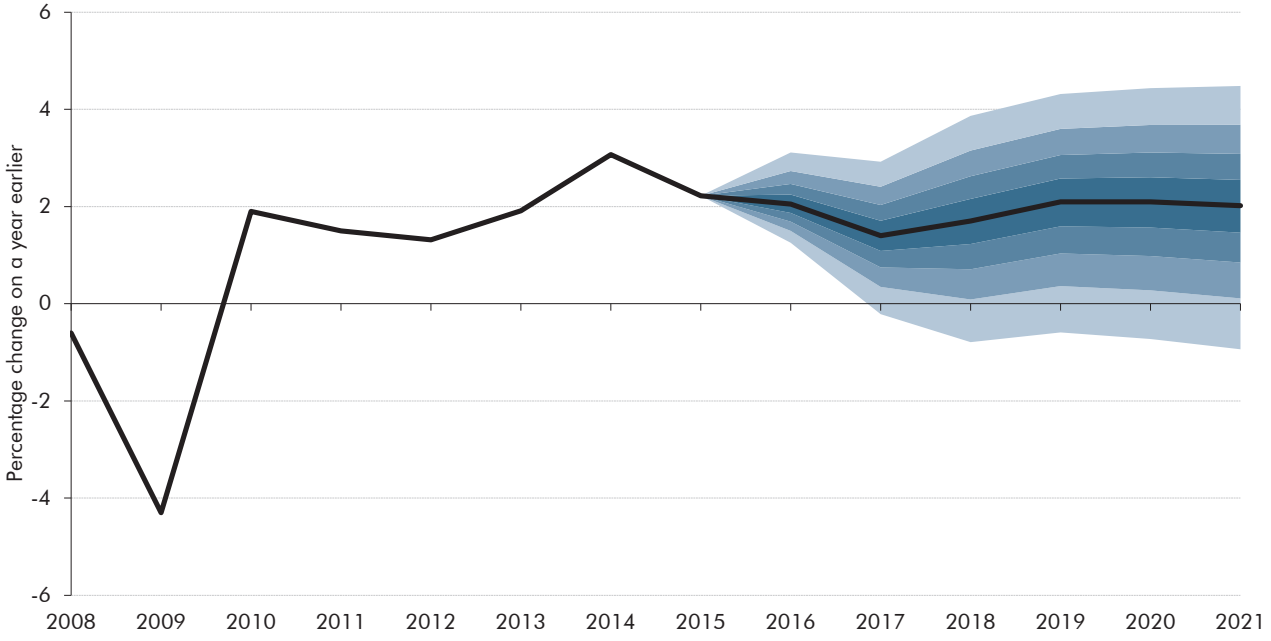
Chart 3.16: Expenditure contributions to the cumulative change in real GDP growth



Source: OBR

3.63 Our central GDP growth forecast is shown in Chart 3.17. The distribution surrounding the central forecast shows the probability of different outcomes based on past forecast accuracy. 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 based on the historical distribution of official forecast errors. They do not represent a subjective measure of the distribution of risks around our forecast. Such risks are discussed at the end of the chapter.

Chart 3.17: Real GDP growth fan chart



Source: ONS, OBR

Prospects for inflation

3.64 In assessing the outlook for the economy and the public finances, we are interested in a number of measures of inflation, including the Consumer Prices Index (CPI) and the Retail Prices Index (RPI). The basic measurement approach is the same in both indices, although there are a number of differences in coverage and the methods used to construct them (see Box 3.3 of our March 2015 *EFO* for details). We also forecast the GDP deflator and its components, which are used in generating our nominal GDP forecast.

3.65 The CPI and RPI measures of inflation are important because they affect our fiscal forecast. The Government uses the CPI for the indexation of many tax rates, allowances and thresholds, and for the uprating of benefits and public sector pensions. The RPI is used to calculate interest payments on index-linked gilts, student loan payments and the revalorisation of excise duties. The ONS publishes other inflation measures, but these do not currently affect the public finances, so we do not forecast them.

CPI inflation

3.66 Annual CPI inflation was 0.7 per cent in the third quarter of this year, 0.1 percentage points above our March forecast. The latest monthly data show that headline CPI inflation was 0.9 per cent in October, while 'core' inflation (which excludes volatile components such as energy and food) was 1.2 per cent. 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. Headline inflation has been below the 'core' measure since 2014, reflecting downward pressure from components such as food and energy prices and the pass-through of the past sterling appreciation. That is likely to reverse following the sharp fall in sterling in recent months.

3.67 In the absence of the referendum result, and the subsequent drop in the value of sterling, the main revisions to our CPI forecast would have come from changes in dollar oil prices, the effect of recent outturns and our updated estimate of the effect of the upcoming soft drinks industry levy being introduced in 2018-19. Specifically:

- the **latest data** show CPI inflation over the first and second quarters of 2016 was 0.3 percentage points below our March forecast;
- the **dollar oil price** assumption underpinning our current forecast is around 30 per cent higher on average than our March assumption. This adds around 0.3 percentage points to CPI inflation in 2016-17; and
- we have revised down our estimate of the effect of the **soft drinks industry levy** on CPI inflation from around a quarter of a percentage point to around an eighth of a percentage point. This corrects an overestimate of the weight of the affected items in the CPI (which was estimated using industry sources in March, but has now been mapped more precisely onto CPI input weights). This reduces our forecast of CPI inflation in 2018-19 by around 0.1 percentage points.

3.68 There have been a number of developments since the referendum that have affected our inflation forecast:

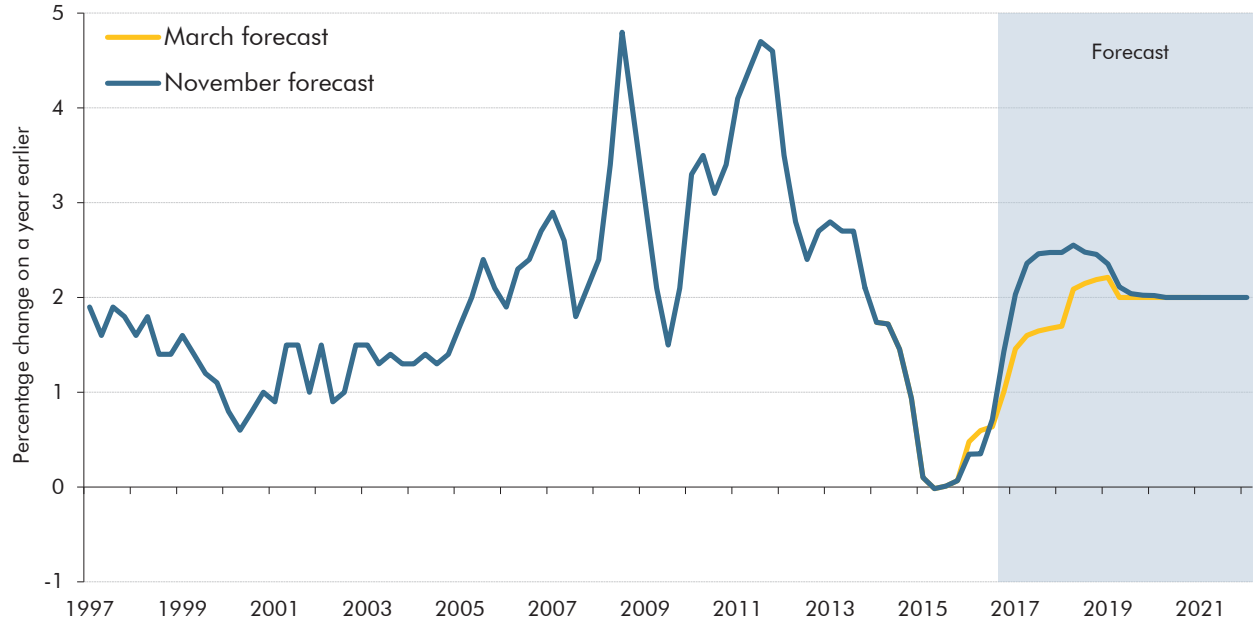
- across the forecast period **sterling** is around 13 per cent weaker than the assumption that underpinned our March forecast. That will raise the cost of imports and therefore increase consumer prices. It is likely to have the strongest effect on the prices of food and non-alcoholic beverages, import-intensive goods and services, and fuel. Our forecast is consistent with a top-down rule of thumb that around 80 per cent of movements in sterling feed through to import prices and around 20 per cent of changes in import prices feed through to CPI inflation. This implies that sterling's fall will add around 2.0 per cent to the level of the CPI in the medium term. We assume that it will take around two years for that full effect to pass through. We now expect food price inflation to turn positive again in the first quarter of 2017. Sterling depreciation will play a role, as roughly half the food consumed in the UK is imported (with around 60 per cent from the EU and 40 per cent from other countries); and

- we now expect **more spare capacity** to open up over the next year, which will dampen inflationary pressure. This effect is expected to be very small relative to the upward pressures from sterling depreciation and from movements in oil and food prices.

3.69 Finally, the Government has announced a number of policy measures in the Autumn Statement that will affect CPI inflation. These include another increase in insurance premium tax and freeze to fuel duty. The effects are small and partly offset each other, reducing CPI inflation by less than 0.1 percentage points in 2017-18.

3.70 CPI inflation is expected to move above the Bank of England's 2 per cent target early next year and to peak at 2.6 per cent in the second quarter of 2018. The Bank stated in its November *Inflation Report* that the effect of the sterling depreciation on CPI would be temporary and "*attempting to offset it fully with tighter monetary policy would be excessively costly in terms of foregone output and employment growth*". Consistent with that, we forecast that CPI inflation will remain above target until the third quarter of 2019. It is assumed to remain at target thereafter.

Chart 3.18: CPI inflation



Source: ONS, OBR

RPI inflation

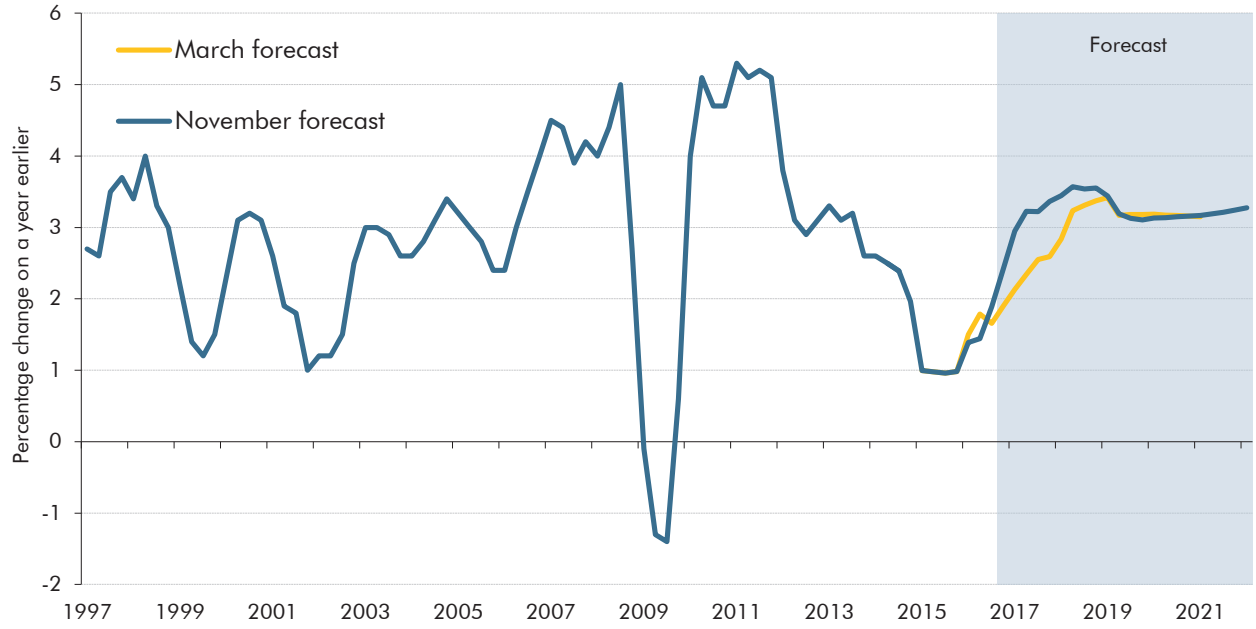
3.71 The calculation of RPI inflation in the UK does not meet international statistical standards,[6] but we continue to forecast it as an input in our fiscal forecasts – notably as a determinant of the interest paid on the large and growing stock of index-linked gilts.

3.72 RPI inflation was 1.9 per cent in the third quarter of this year, in line with our March forecast. In the short term we expect a narrowing of the wedge between RPI and CPI inflation as the easing of monetary policy feeds through to lower growth in mortgage interest payments (MIPs). Despite that, we expect RPI inflation to peak at 3.6 per cent in mid-2018, at the same time that we expect CPI inflation to peak.

3.73 The wedge between CPI and RPI inflation rises to 1.3 percentage points by the end of the forecast period, which is slightly above our estimate of the long-term steady state wedge because mortgage interest rates are expected to be rising at that point. Our MIPs forecast has also been affected by a downward revision to our forecast for mortgage debt (see Box 3.3), which reduces MIPs growth slightly.

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

Chart 3.19: RPI inflation



Source: ONS, OBR

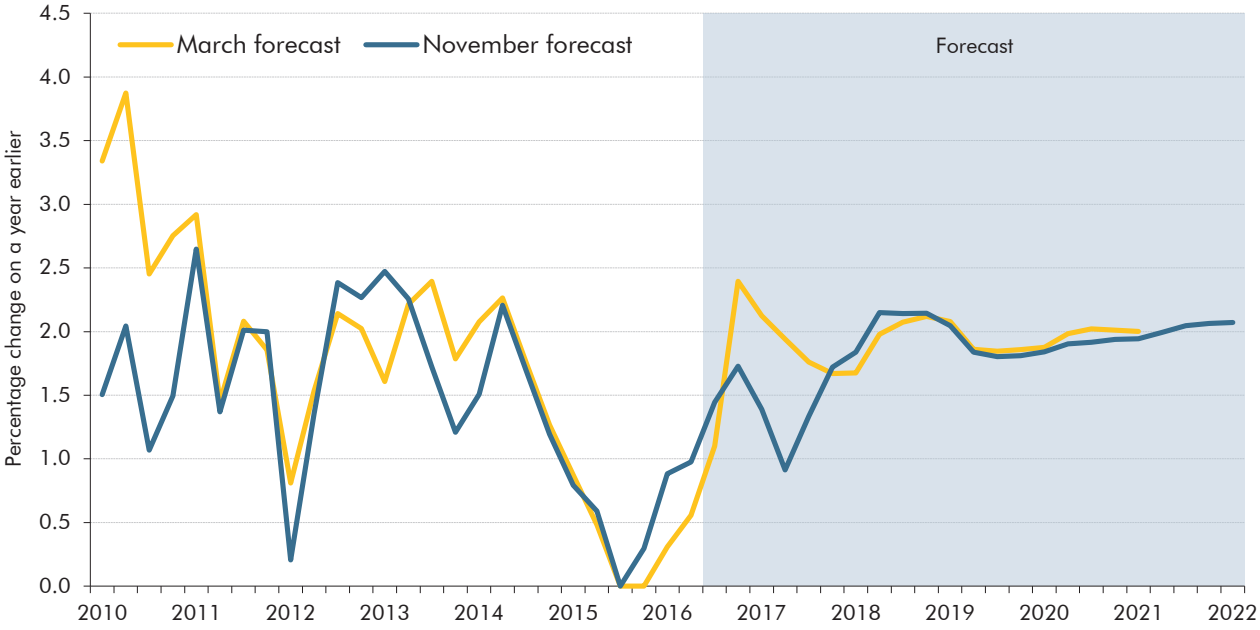
The GDP deflator

3.74 GDP deflator growth is the broadest measure of inflation in the domestic economy. It measures changes in the prices of the goods and services that make up GDP, including price movements in private and government consumption, investment and the relative price of exports and imports – the terms of trade.

3.75 GDP deflator growth is forecast to increase to 1.7 per cent by the end of 2016. This is driven by a higher forecast for the consumption deflator, which is linked to our CPI forecast. Following a temporary dip due to base effects, GDP deflator growth picks up further after the second quarter of 2017, largely driven by the consumption deflator and an increasing contribution from investment. The depreciation of sterling is expected to raise import and export deflator growth significantly in the fourth quarter of 2016. This effect is likely to wane over 2017, with both import and export deflator growth falling below 2 per cent by the second quarter of 2018. Sterling's depreciation will have a greater effect on import deflator growth, resulting in a deterioration in the terms of trade through to mid-2018, after which we expect the terms of trade to stabilise.

3.76 Since March, the publication of Blue Book 2016 has resulted in a downward revision to historical growth in the imputed rent deflator – a component of the consumption deflator – from more than 5 per cent to less than 2 per cent a year on average from 1997 to 2015. In light of this, we have reduced our forecast for imputed rent deflator growth. This has a small downward effect on the GDP deflator, offsetting some of the increase caused by higher inflation elsewhere in the forecast.

Chart 3.20: GDP deflator



Source: ONS, OBR

Prospects for nominal GDP

3.77 Most public discussion of economic forecasts 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 in 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 (benefits, tax credits and interest on index-linked gilts).

3.78 The latest data indicate that nominal GDP growth slowed to 2.6 per cent in 2015, down from 4.8 per cent in 2014. This slowdown was relatively broad-based across expenditure components, with consumption, investment and government consumption growth slowing relative to 2014, and the contribution of net trade falling back. Having outpaced household disposable income growth since 2012, nominal consumption growth of 2.8 per cent in 2015 was below household disposable income growth of 3.6 per cent. On the income side much of the relative weakness in 2015 was concentrated in profits. More recently, nominal GDP growth increased in the first half of 2016, with quarterly growth averaging 1.3 per cent, compared to an average of 0.5 per cent in 2015. Much of this pick-up has been concentrated in private consumption and stocks.

3.79 The strength at the start of the year means that we expect nominal GDP growth in 2016 to pick up to 3.3 per cent, broadly in line with our March forecast. As real growth slows further in 2017 – led by weaker business investment – we expect nominal GDP growth to fall back slightly, to 2.8 per cent. It then increases steadily from 2018 as business investment recovers

and productivity growth supports wage growth and consumer spending. From 2020 nominal GDP growth settles at around 4¼ per cent.

3.80 The revisions to the imputed rent deflator described above reduce nominal GDP growth by an average of 0.1 percentage points a year over the forecast. Together with lower potential output growth, this means that cumulative nominal GDP growth over the forecast has been revised down significantly. We now expect growth of 18.3 per cent between the second quarter of 2016 and the first quarter of 2021, down from our March forecast of 21.2 per cent. Of this 2.8 percentage point downward revision, 1.6 percentage points reflects weaker real GDP growth and 1.3 percentage points reflects weaker deflator growth.

Prospects for individual sectors of the economy

The household sector

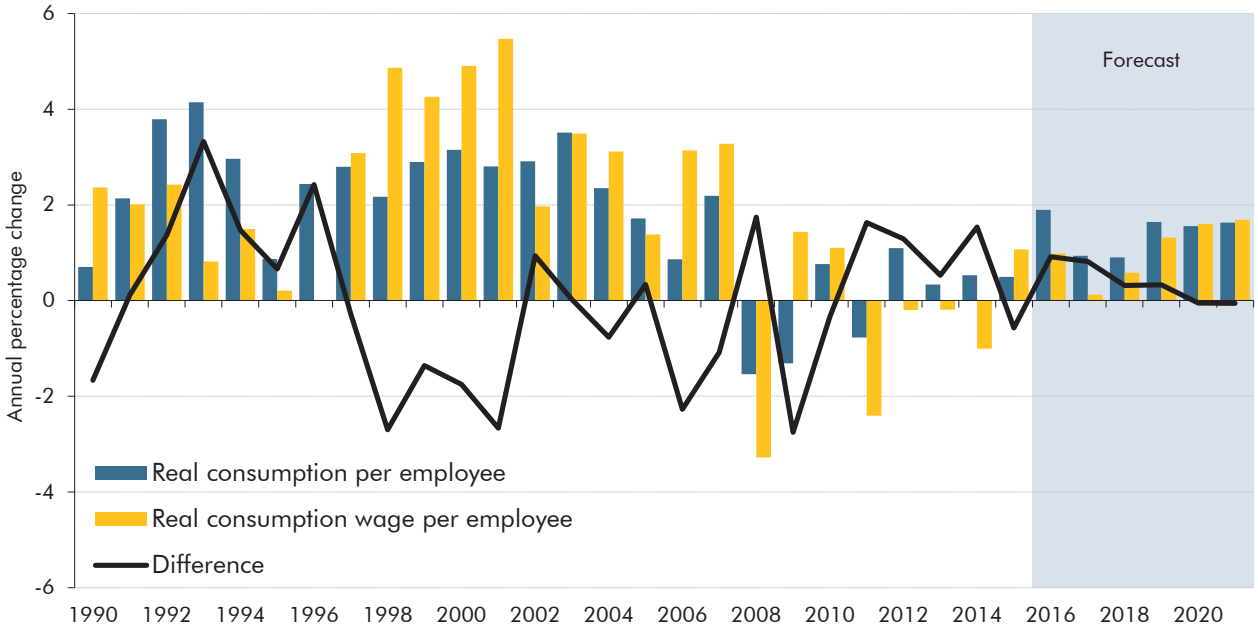
3.81 The household sector is the largest source of income and spending in the economy, with consumer spending making up 65 per cent of nominal GDP by expenditure and household disposable income making up 66 per cent of nominal GDP by income in 2015.

Real consumer spending

3.82 Real consumption growth has been strong in the first half of 2016 and as a result we expect it to grow by 2.8 per cent this year, higher than we forecast in March. We have not assumed that households will increase their precautionary saving following the referendum result, but we have revised down consumption growth to 1.2 per cent in 2017 and 1.1 per cent in 2018 because the depreciation of sterling since March is expected to increase inflation and reduce households' disposable incomes. Consumption growth is revised up to 2.1 per cent in 2019, when the effect of the sterling depreciation is expected to have unwound. It is then forecast to grow by 2.0 per cent in 2020 and 2021.

3.83 We expect real consumption wage growth to fall to 0.1 per cent in 2017, before increasing over the forecast period. As a result, we expect real consumption growth to remain weak in 2017 and 2018, although we continue to expect it to grow more strongly than real wages in those years, as was the case between 2011 and 2014. From 2019 onwards we forecast higher consumption growth, broadly in line with real wage growth in those years.

Chart 3.21: Real consumption wage and real consumption



Source: ONS, OBR

The labour market and household income

3.84 Unemployment stood at 4.8 per cent of the labour force in the third quarter of this year, the lowest rate since 2005. The labour market data for the third quarter were released after we had closed our economy forecast to changes other than the effects of policy decisions. The employment rate was as we expected, but unemployment was lower and participation higher than we expected. As GDP growth slows to below its trend rate, we expect the unemployment rate to rise in 2017 and to reach 5.5 per cent by the end of 2018. This relatively modest increase in the rate equates to around 200,000 more people unemployed. It is informed by the strength of the labour market in recent years, despite the subdued recovery of GDP. The headline rate is then expected to fall back to 5.4 per cent by the end of the forecast period – higher than the current rate in part due to an increasing 'National Living Wage' putting upward pressure on structural unemployment.[7]

3.85 We expect the claimant count to follow the broader measure of unemployment in most years. One exception to that is next year, when we expect it to rise a little faster as the lone parent obligation, which moves parents off income support and typically onto jobseeker's allowance in the first instance, is extended to lone parents of 3-year olds. The rollout of universal credit (UC) is expected to broaden the coverage of the claimant count. To prevent any double counting in our fiscal forecast, we continue to forecast the claimant count as if this change was not happening – focusing on those on jobseekers' allowance and equivalents in UC. Our forecast is therefore likely to be below the published ONS series.

[7] The level of the National Living Wage consistent with our forecast has been revised down since March – from £9.00 to £8.80 an hour in 2020. That reflects information from the 2016 Annual Survey of Hours and Earnings and the downward revision to our earnings growth forecast. The assumed annual path of the National Minimum Wage and National Living Wage consistent with our forecast are available in the supplementary economy tables on our website.

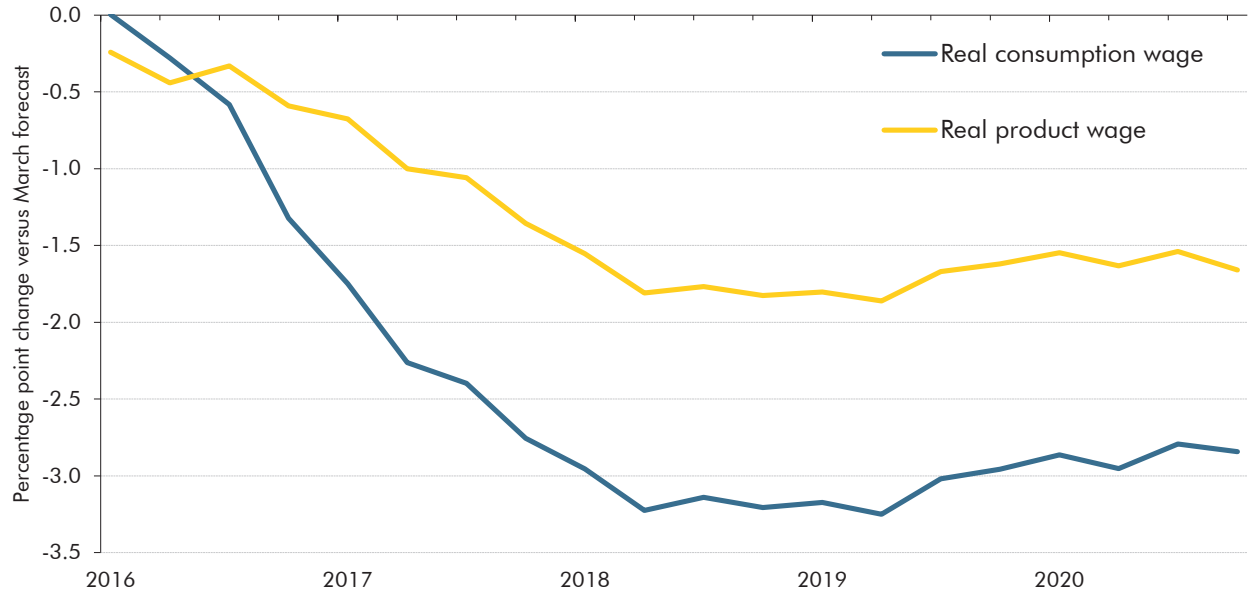
3.86 We currently judge the participation rate to be above trend and therefore expect a slight downward profile over the next few years as it returns to trend. The participation rate continues to fall later in the forecast as the population ages. The 0.6 million rise in employment over the forecast can therefore be explained by additional population growth. The ONS population projections that underpin our forecast imply that around half the expected population growth over the forecast period will come from net migration, but that, due to the concentration of migration among those of working age, around three-quarters of the increase in employment that we forecast would be accounted for by net migration.

3.87 Average earnings grew broadly in line with our March forecast in the second quarter of this year on the National Accounts measure we use. Average weekly earnings data for the third quarter were released after we had closed our economy forecast – and suggest slightly higher earnings growth than we expected. But the difference was not large enough that it would have changed our overall judgement to revise down average earnings growth by an average of 0.4 percentage points over the forecast period, reflecting lower productivity growth and greater labour market slack. Average earnings growth is expected to recover to 3.6 per cent in 2020. Some of the weakness in our earnings growth forecast reflects our judgement that the additional costs created for firms and workers by the introduction of the apprenticeship levy, ongoing auto-enrolment into workplace pensions and the levying of NICs on termination payments will largely be borne through lower wages.

3.88 The combination of weaker productivity growth and higher inflation means that we have revised real earnings growth down significantly. In thinking about wages, it is important to remember that employers and employees have different perspectives. Employers care about the 'real product wage' – the level of wages relative to the price of the output they sell. Employees care about the 'real consumption wage'– the level of labour income relative to the price of the things they consume.[8] As Chart 3.22 shows, both measures are weaker than in March, but the downward revision is greater for the real consumption wage. That reflects the source of the revision to inflation – the fall in sterling will raise the price of things people in the UK consume, but will have very little effect on the price of value added in the UK.[9] We expect average earnings growth to fall below CPI inflation in mid-2017.

[8] The real product and consumption wage are defined as total compensation of employees per hour worked, deflated by the price of gross value added and the price of consumption respectively.
[9] This repeats the pattern of weaker sterling squeezing real wages earlier in the decade, as described in Box 3.5 of our December 2013 *Economic and fiscal outlook*.

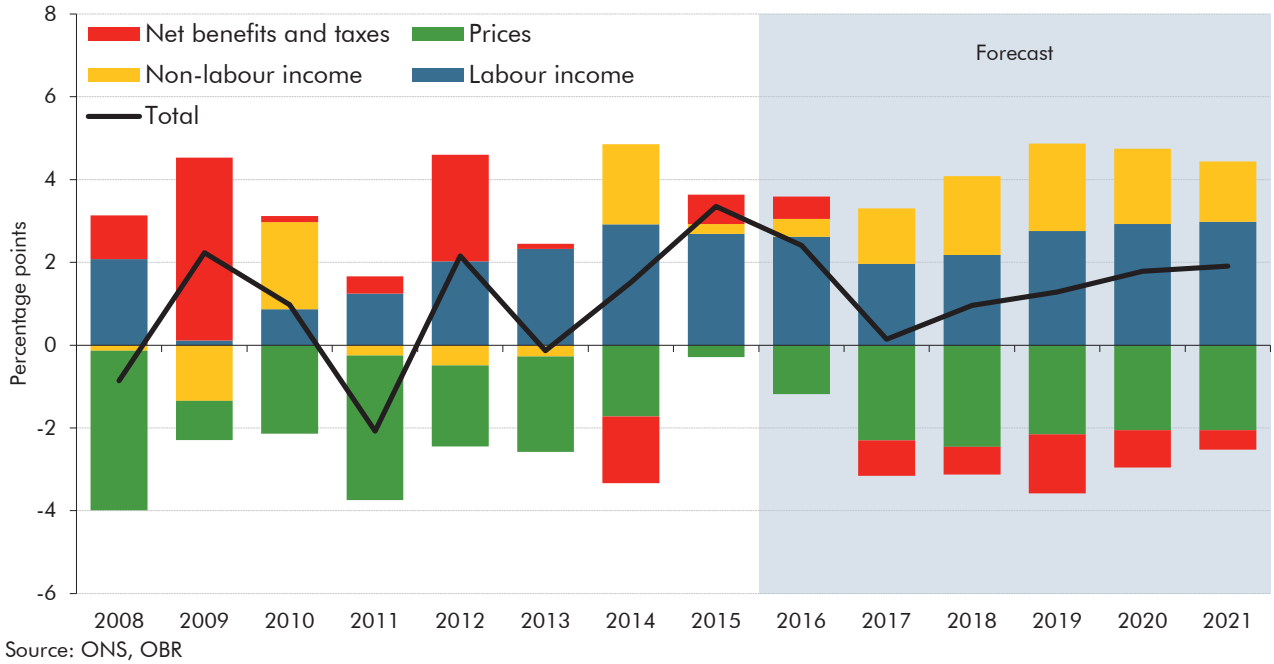
Chart 3.22: Revisions to cumulative real wage growth from the end of 2015



Note: Series are three quarter centred moving averages to abstract from volatility in the quarterly series.
Source: OBR

3.89 Chart 3.23 shows that real household income growth is expected to be very weak in 2017 and to recover gradually thereafter. The assumed pick-up in productivity growth supports labour income, while other sources of income pick up more strongly (for example imputed pension contributions – a component of non-labour income – are expected to rise as greater auto-enrolment coverage and higher contribution rates support pension saving). From 2017 onwards, the cash freeze on most working-age benefits and tax credits and fiscal drag in the tax system subtract from household income growth.

Chart 3.23: Contributions to real household income growth

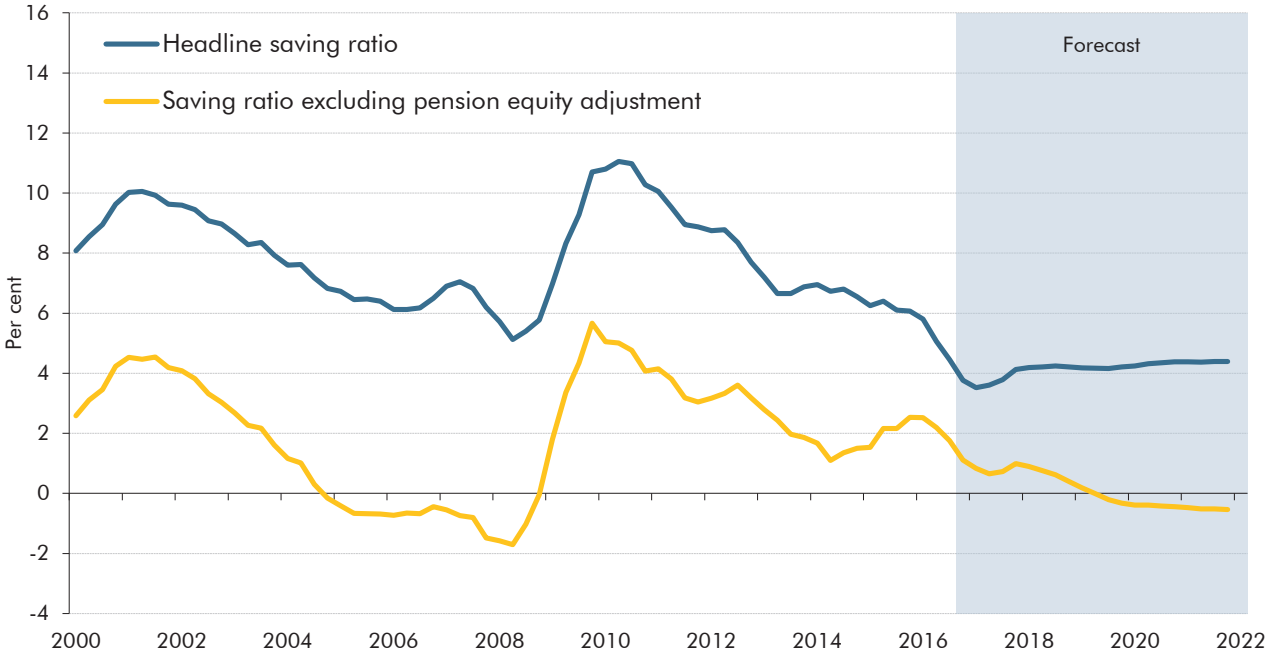


Source: ONS, OBR

The saving ratio

3.90 The latest National Accounts data indicate that the headline saving ratio fell from 8.3 per cent in 2012 to 6.1 per cent in 2015. Initially the fall largely reflected the strength of consumption relative to household disposable income, while recently it has also reflected lower measured pension saving. When pension saving is excluded, household saving is estimated to have picked up slightly in 2015 (Chart 3.24). Data for the first half of 2016 indicate a further fall in the saving ratio, with it reaching 5.1 per cent in the second quarter, as measured pension saving continued to decline. Over the forecast period we expect consumption to grow slightly faster than household disposable income, while greater auto-enrolment coverage and higher contribution rates support pension saving.

Chart 3.24: 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

The housing market and residential investment

3.91 As described in Chapter 2, the ONS has introduced a new house price index since our March forecast.[10] The new measure reports a somewhat bigger fall in house prices between pre-crisis peak and post-crisis trough and also less growth since that trough. House price inflation on the ONS measure reached 8.7 per cent in the second quarter of 2016 and fell to 7.8 per cent in the third quarter. This was 0.4 percentage points lower than the estimate we used in our forecast, which was closed before the September data had been released. Major lenders' indices point to some slowing, with house price growth in the year to October of 6.1 per cent on the Halifax measure and 4.7 per cent according to Nationwide.

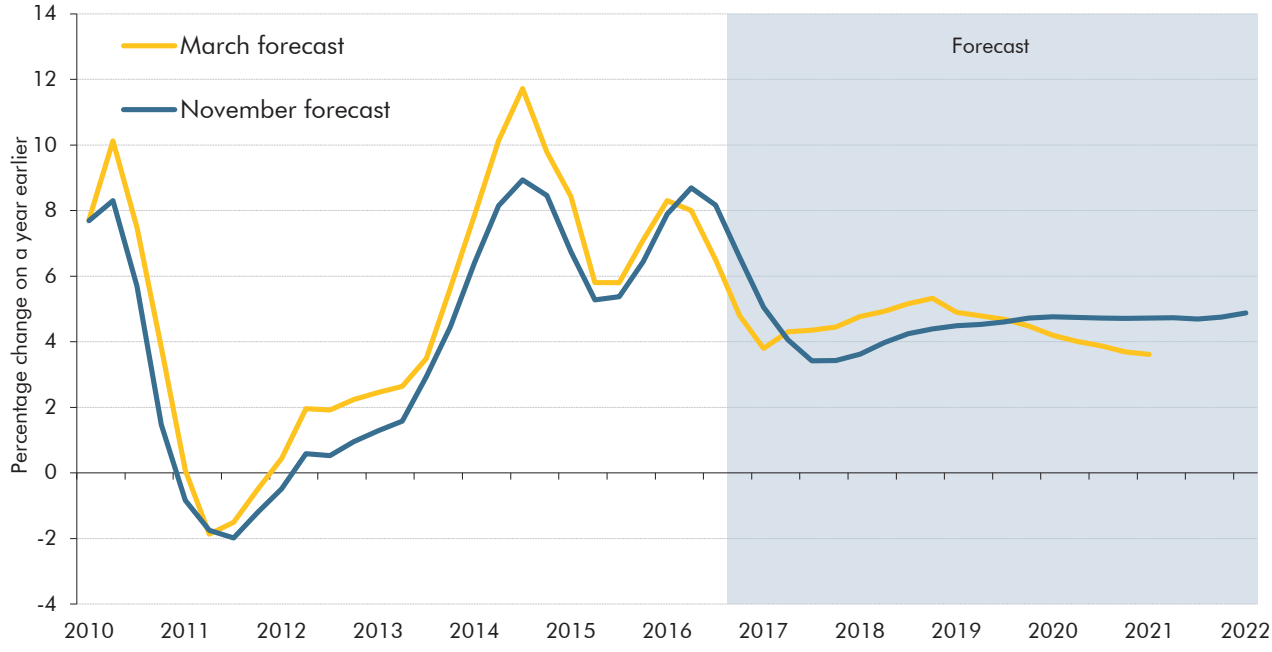
[10] For more information on the new house price index, see recent ONS *House price index statistical bulletins*

3.92 After the referendum, survey indicators from the Royal Institution of Chartered Surveyors and the Bank of England fell sharply, but have rebounded since. Our house price forecast for the next two quarters is based on a short-term indicator model. We expect house price inflation to slow to 6.6 per cent in the final quarter of 2016. Given the recent volatility of these indicators, there is greater uncertainty around the output of this model.

3.93 Given the new ONS house price index, and broader uncertainty around the fundamental drivers of house prices, we have not used our house price model in this forecast. Instead, we have based our medium-term forecast on the pre-crisis relationship between house price inflation and average earnings growth. On average between 1992 and 2007 – between the introduction of inflation targeting and the crisis hitting – house price inflation was around one percentage point above average earnings growth. We assume a relatively smooth transition between the short-term forecast and this medium-term assumption.

3.94 On that basis, we expect house price inflation to fall further, reaching 3.4 per cent in the year to the third quarter of 2017. It is then expected to rise steadily, reaching close to 5 per cent by the end of the forecast. Our forecast implies cumulative growth in house prices between the second quarter of 2016 and the first quarter of 2022 of 28.5 per cent (compared with average earnings growth over that period of 20.0 per cent).

Chart 3.25: House price inflation forecast

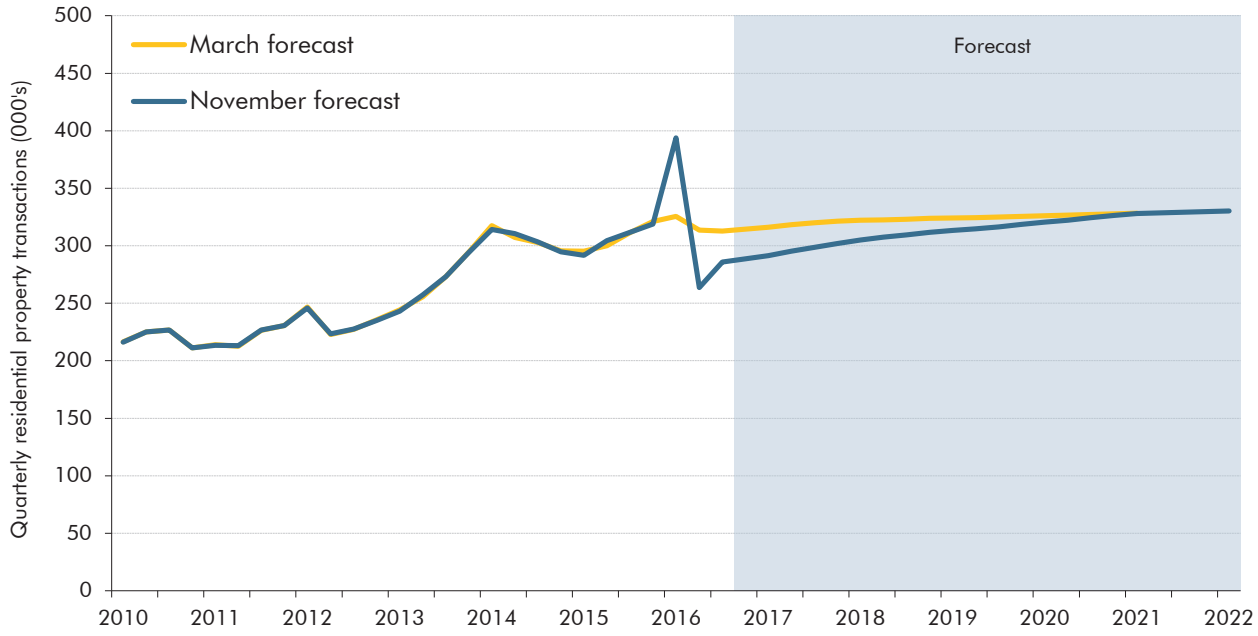


Source: ONS, OBR

3.95 Our March property transactions forecast underestimated the amount of forestalling that would occur in March ahead of the April introduction of a stamp duty surcharge on the purchase of additional properties (e.g. buy-to-let investments or second homes). While we allowed for some effect, in the event transactions in the first quarter were 21 per cent higher

than expected, while in the second quarter they were 16 per cent lower.[11] Our forecast is anchored to an assumed turnover rate in the medium term. This is unrevised since March, so weaker-than-expected outturns in the second and third quarters mean that we have revised the growth of transactions up so that the level returns to its assumed steady-state relative to the housing stock by 2020. Property transactions grow in line with the housing stock thereafter.

Chart 3.26: Residential property transactions forecast

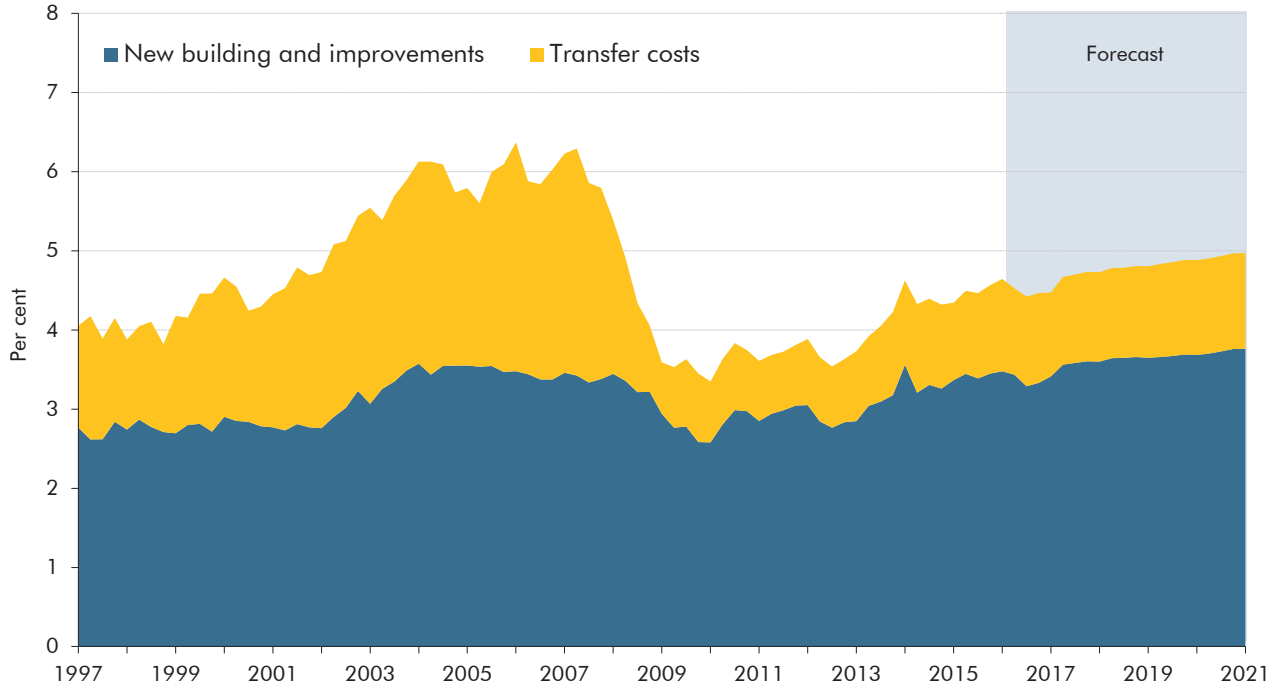


Source: ONS, OBR

3.96 The latest data show that residential investment grew by 2.8 per cent in 2015, lower than was estimated in March. We expect greater uncertainty following the referendum vote to affect house prices as well as transactions in the near term. This is expected to lower investment in new dwellings. Improvements to the existing housing stock account for a significant proportion of residential investment. We have revised that down in the near term, in line with the downward revision to private consumption growth. And we have reduced our forecast for transfer costs in line with property transactions. We have also adjusted our dwellings investment forecast to reflect a number of policy measures. Overall, we forecast growth of 2.9 per cent a year on average between 2016 and 2020, lower than in March. In 2021, it is forecast to grow by 3.0 per cent.

[11] See Mathews (2016): *OBR Working paper No.10: Forestalling ahead of property tax changes* for analysis of the fiscal effects of property transactions forestalling.

Chart 3.27: Residential investment as a share of nominal GDP



Source: ONS, OBR

Net lending and the household balance sheet

3.97 Our forecast for the household balance sheet is built up from a number of components:

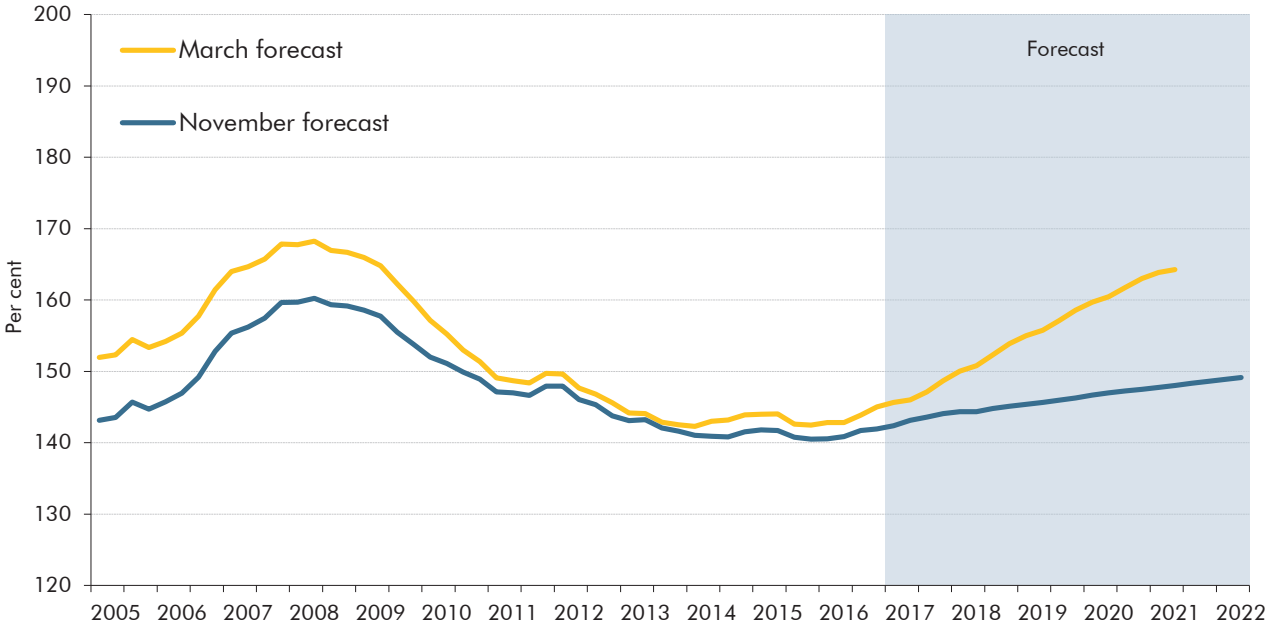
- the accumulation of household **assets**, such as deposits, pension and insurance assets, equity, and other assets;
- the accumulation of **liabilities**, which are decomposed into mortgage debt and unsecured debt; and
- these are constrained to be consistent with our forecast for households' **net lending** position, which determines the rate at which households acquire assets relative to liabilities (their 'net' asset accumulation). All else equal, positive net lending implies that households will accumulate more assets than liabilities and vice versa.

3.98 In recent forecasts we have typically assumed that the ratio of mortgage debt to income increases over the forecast period, consistent with credit conditions easing and house prices rising faster than earnings. But this assumption has systematically over-predicted the accumulation of secured debt. In light of this we have reviewed the assumptions underpinning our forecast, as set out in Box 3.3. We now assume that the ratio of secured debt falls relative to the value of the housing stock, at a similar rate to recent years and consistent with a broadly stable loan-to-value ratio on new lending. This seems consistent with recent bank lending behaviour and the macroprudential policy settings described from paragraph 3.34. As a result, we now expect gross household debt to reach 148 per cent of household disposable income by the start of 2021, revised down from an expected 164 per cent in March. The changes in our forecast since March reflect:

- in cash terms, **gross debt** is expected to be £212 billion lower by the start of 2021 than we forecast in March. This is explained by a £220 billion downward revision to the accumulation of secured debt over the forecast period and a £29 billion downward revision to the accumulation of unsecured debt, which more than offset the effect of a £38 billion upward revision to the starting point; and

- an upward revision to our forecast of the level of **household disposable income**, which is expected to be around 1.2 per cent higher than our March forecast by the start of 2021. That largely reflects revisions to household income in this year's Blue Book.

Chart 3.28: Household gross debt to income



Source: ONS, OBR

Box 3.3: Forecasting mortgage debt

In recent years our forecast for mortgage debt – also described as secured debt – has been based on forecasts for mortgage demand and supply determined by relationships in our house price model.[a] Mortgage demand was forecast based on its relationship with mortgage rates, house prices, disposable income and loan-to-value ratios. Mortgage supply was then derived by combining demand with an assumption about rationing. This approach systematically over-estimated the pace at which mortgage debt would rise relative to incomes (Chart A).

These previous forecasts were consistent with our house price and property transactions forecasts at the time. They were also based on an assumption that mortgage rationing would ease over the forecast period, thereby leading to a gradual increase in the ratio of secured debt to the value of the housing stock (Chart B).

In light of the systematic forecast errors, and since we have not used our house price model in this forecast, we have used a different approach in this *EFO*. The accumulation of mortgage debt is built up from its constituent parts. In a given time period, it is determined by:

- **borrowing for house purchases**, which is equal to the product of average transacted house prices, the number of property transactions and the average loan-to-overall-value (LTOV) ratio. The LTOV is a whole economy equivalent of an individual loan-to-value ratio, including the effect of cash buyers that adds to the value of house purchases but not to mortgage debt. We have assumed that this ratio remains flat over the forecast period, broadly consistent with its recent trend. Our assumption of easing credit conditions in previous forecasts would have been consistent with this ratio rising; less
- **net repayments made on mortgages and write-offs**. We have assumed a repayment rate of 2.0 per cent, in line with the average rate between 2011 and 2016, and a write-off rate of 0.005 per cent a quarter, based on historical trends.

The judgement that the LTOV ratio remains flat over the forecast period, together with our assumption about repayment rates, means that we now expect the ratio of secured debt to the housing stock value to fall over the forecast period, at a slightly slower pace than recent years (Chart B). This judgement – together with a downward revision to property transactions over the forecast period – means that we have revised down our secured debt forecast significantly. The ratio of secured debt to household disposable income is now expected to remain broadly flat over the forecast period (Chart A).

Using this approach in previous forecasts would not have eliminated the errors – for example, we would still have overestimated the number of property transactions – but it would have reduced them substantially.

Chart A: Secured debt to income ratio

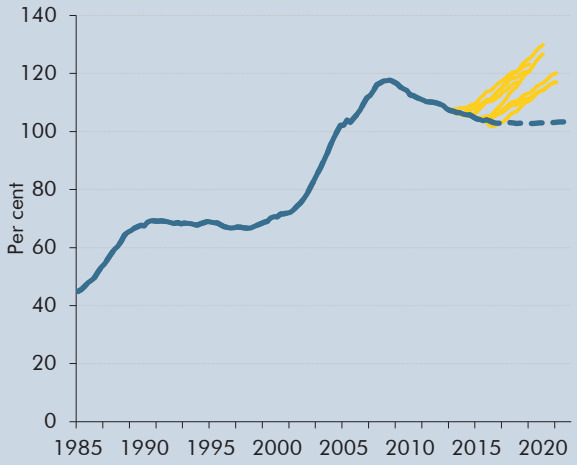
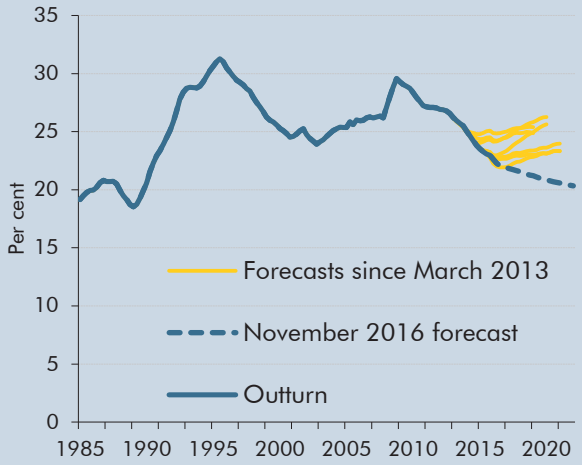


Chart B: Secured debt to gross housing wealth ratio



Note: These charts use the latest vintage of the household disposable income series, which has been revised since previous forecasts were produced.
Source: ONS, OBR

[a] See Auterson (2014): *OBR Working paper No.6: Forecasting house prices*.

The corporate sector

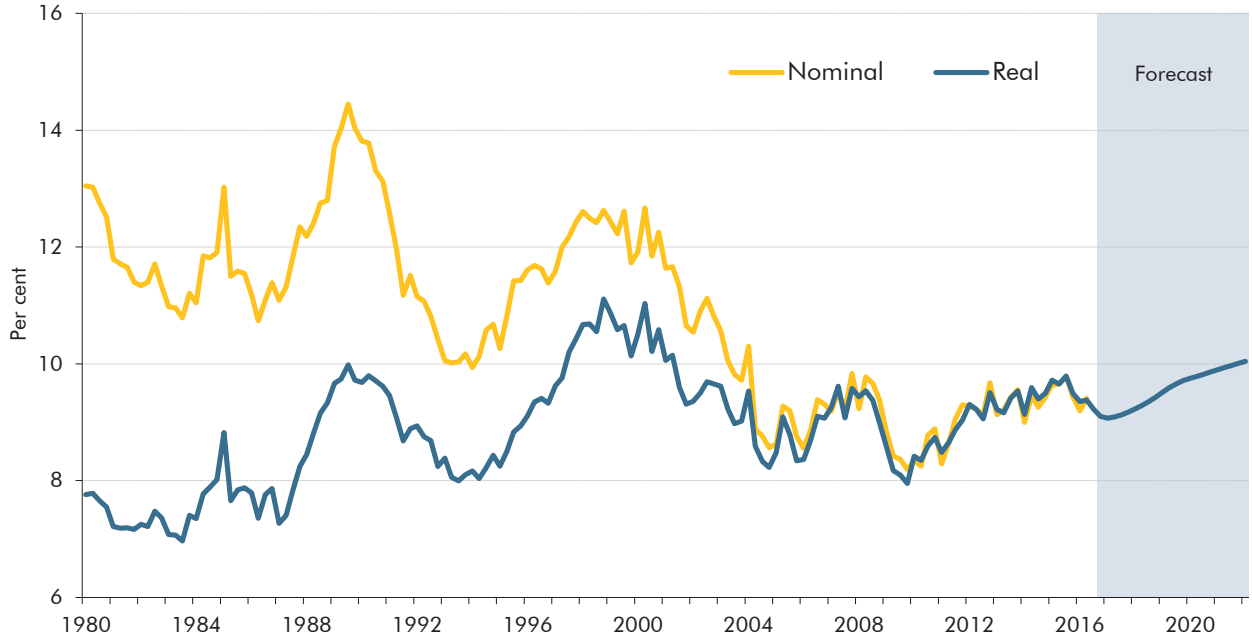
Business investment and stockbuilding

3.99 The latest data show that business investment in the first half of 2016 was down 1.4 per cent on a year earlier. We expect that weakness to continue, with heightened uncertainty following the EU referendum causing investment to fall further in the second half of 2016 and for growth to remain subdued in 2017. Overall, we expect business investment to fall 2.2 per cent in 2016 and 0.3 per cent in 2017, before annual growth returns in 2018.

3.100 Business investment is forecast to grow more strongly than GDP from 2018 onwards, as projects that were previously on hold begin to take place. It therefore rises as a share of GDP over the forecast period – as has been the case in our previous forecasts (Chart 3.29). The nominal share has tended to fall relative to the real share because investment goods price inflation tends to be lower than whole economy inflation.

3.101 As set out in Box 3.1, it is possible that foreign direct investment into the UK will be affected by the UK leaving the EU. If that meant lower foreign investment in greenfield projects in the UK that was not offset by domestic capital spending, this would reduce business investment.

Chart 3.29: Business investment as a share of GDP



Source: ONS, OBR

3.102 During previous economic slowdowns, inventories have typically acted as a drag on GDP growth,[12] as supply capacity typically falls faster than demand and accumulated stocks are used up as a result. We expect stocks to be neutral for growth in 2016, having forecast a positive contribution in March. They are also expected to be neutral thereafter.

Corporate profits

3.103 The latest data indicate that corporate profits have risen strongly in recent quarters. Non-oil corporate profits are estimated to have increased by around 7 per cent in the year to the second quarter of 2016. As a result we have revised up our forecast for profit growth in 2016 to 7.4 per cent, from 3.8 per cent in March. As GDP growth slows and the output gap widens, we expect profits to grow less quickly than nominal GDP, with annual profit growth slowing to 0.8 per cent in 2017 and 3.0 per cent in 2018. As the output gap closes we expect a cyclical improvement in the ratio of profits to GDP, so that profits grow slightly more quickly than GDP in 2019 and 2020.

The government sector

3.104 Total public spending amounted to 40.1 per cent of GDP in 2015-16.[13] But not all government spending 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 via its consumption of goods and services, and investment. These together accounted for 22.0 per cent of GDP in 2015-16.

[12] The late 2000s recession was an exception, perhaps because the sudden nature of the shock caused involuntary stockbuilding as demand fell more quickly than firms were able to reduce production.
[13] Total managed expenditure (TME).

Real government consumption

3.105 Real government consumption growth in the first half of 2016 was higher than our March forecast and we now expect it to grow by 1.0 per cent in 2016 as a whole. It then rises by 0.6 per cent in 2017 and 0.5 per cent in 2018, both unrevised since March. We forecast 0.3 per cent growth in 2019, slightly higher than in March, and 0.6 per cent growth in 2020, slightly lower than in March. In 2021, it is forecast to grow by 0.8 per cent. This forecast reflects the Government's decisions in this Autumn Statement, which add to departmental resource spending in 2019-20 and 2020-21 and set out for the first time the amount the Government expects to assign to departmental spending in 2021-22.

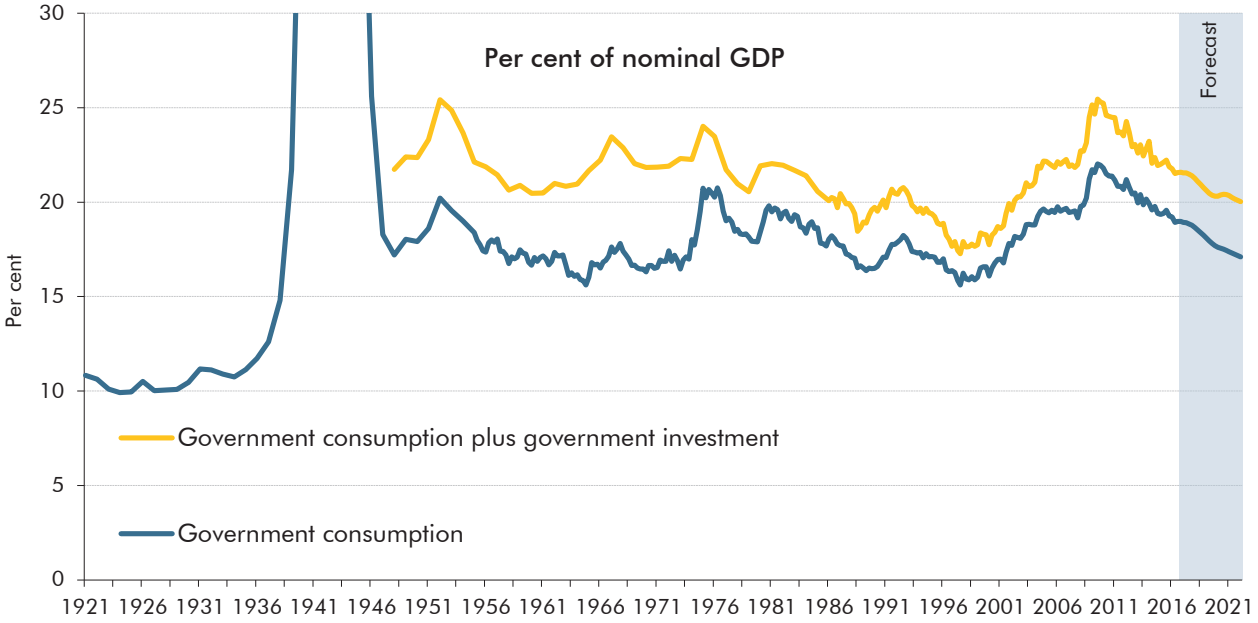
Nominal government consumption and investment

3.106 Our forecast for nominal government consumption growth in 2016 is higher because of higher than expected growth at the start of the year. We have also revised up our forecast for the second half of 2016. It is forecast to grow by 1.9 per cent in 2017, slightly lower than in March. Between 2018 and 2020, the Government's updated fiscal plans imply that nominal government consumption grows by 1.4 per cent a year on average, unchanged since March. In 2021, nominal government consumption is forecast to grow by 2.5 per cent. This revised path implies that it will fall from 19.4 per cent of GDP in 2015 to 17.5 per cent of GDP in 2020, slightly higher than in March due largely to lower nominal GDP. It is forecast to fall further to 17.3 per cent of GDP in 2021 (Chart 3.30).

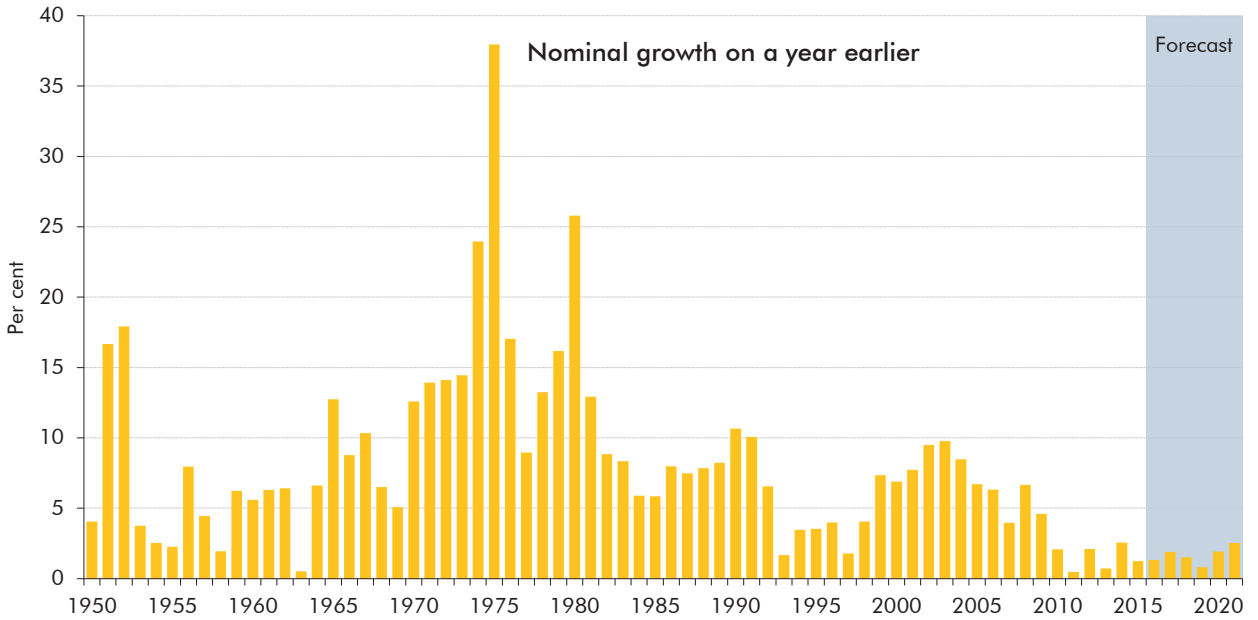
3.107 Real government investment as recorded in the expenditure measure of GDP is now expected to grow by 3.7 per cent on average up to 2020, higher than the 1.6 per cent we forecast in March.[14] We expect it to rise 3.3 per cent in 2021. The revisions reflect the element of Autumn Statement capital spending policy announcements that relate to central and local government. The announcements relating to housing associations have been reflected in our residential investment forecast.

[14] 'Real government investment' (as defined in the National Accounts) is similar to the concept of real capital departmental expenditure limits ('CDEL') spending, but there are a number of important differences between the two. One difference is coverage: 'government investment' includes capital expenditure that is self-financed by local authorities ('capital LASFE'), which is not included in CDEL. Another is the deflator used to convert nominal amounts into real terms: real government investment is derived by deflating nominal government investment using the price of government investment, whereas real CDEL is calculated by deflating CDEL using the GDP deflator.

Chart 3.30: Government consumption and investment



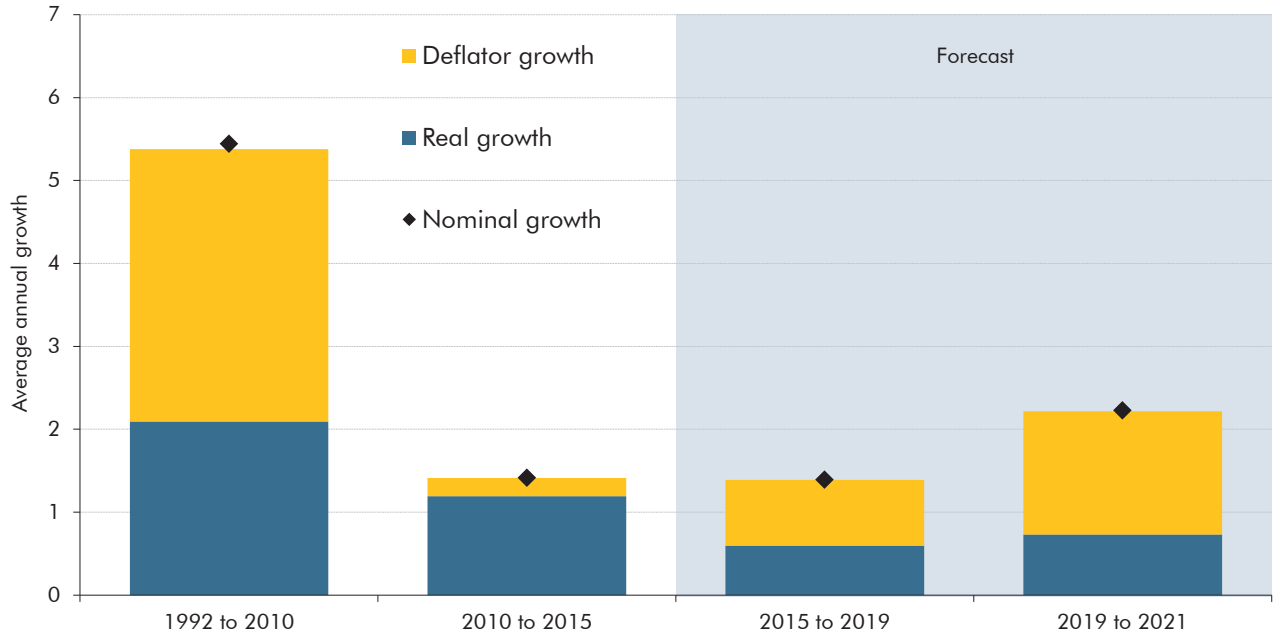
Note: Government consumption as a share of GDP is estimated to have peaked at 54.0 per cent of GDP in 1944.



Note: Government consumption plus government investment on a National Accounts basis.
Source: ONS, OBR

3.108 Growth in the implied price of government consumption – the ratio of nominal spending to real government consumption – has been subdued as cash spending growth has slowed. It is forecast to remain so over the period to 2019 (covered by the 2015 Spending Review) and to rise modestly thereafter (Chart 3.34). This largely reflects the way real government consumption is measured, as described in Box 3.3 of our March 2016 *EFO*.

Chart 3.31: General government consumption



Source: ONS, OBR

General government employment

3.109 In the absence of specific workforce plans, we project general government employment based on some simple and transparent assumptions. We begin by assuming that the total paybill will grow in line with a measure of current government spending. We also separately forecast government sector wage growth, taking into account recent data, stated government policy (such as limits on pay growth), historic rates of pay drift and whole economy earnings growth over the medium term. We then combine total and average pay growth to derive a projection of general government employment.

3.110 Slow growth in cash spending and low annual wage growth imply that general government employment will fall by 0.3 million between the first quarter of 2016 and the first quarter of 2022, leading to a total fall from early 2011 of 0.6 million.[15] We expect the fall to be more than offset by a rise in market sector employment.

The external sector

The impact of the EU referendum result on trade flows

3.111 We assume that the EU referendum result and its implementation will affect trade flows in three ways:

- in the near term, **the sharp depreciation of sterling since the referendum will support net trade**. To the extent that UK exports are priced in sterling, they have become less

[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.

expensive relative to foreign alternatives in export markets, which should boost export volumes. At the same time, imports have become more expensive relative to domestically produced goods and services, which should encourage UK firms and consumers to substitute away from imports where domestically produced alternatives are available. These effects are expected to boost net trade for around two years;

- **slower growth in business investment and private consumption** will reduce demand for imports. This should boost net trade most significantly over the next two years; but

- in the medium term, **leaving the EU and negotiating new trading arrangements** is assumed to reduce the trade intensity of UK economy activity. We have not made any assumptions about the specific arrangements to be put in place after the UK leaves the EU, since the Government has not specified its policies in detail. Instead we have calibrated the size of the trade effect by averaging the results of the three major external studies.[16] These typically assume that barriers to trade would be greater during the post-exit period while new arrangements are negotiated – and sometimes after that too. These assumptions are fed into models that factor in estimates of the impact of such barriers on trade flows. Since some of these effects are likely to take many years to materialise, some studies estimated them over horizons that extend well beyond our forecast, with various assumptions made about the rate at which these effects will occur. We have assumed that the total effect will occur by 2025 and that it will reduce exports and imports in a symmetric way, so that the implied impact on net trade is broadly neutral.

Exports growth

3.112 The latest National Accounts data revised up exports growth at the end of 2015, but data in the first half of 2016 have been weaker than we forecast in March. Monthly trade data available when we closed our economy forecast suggest that exports fell in the third quarter. Overall, we forecast exports growth of 2.3 per cent in 2016, lower than in March.

3.113 We have revised down our forecast for UK export markets growth, so we would have revised down our exports forecast somewhat even in the absence of the decision to leave the EU. We also expect the depreciation of sterling to support exports growth in the near term, revising up quarterly exports growth to reflect that. But this is not enough to offset the effect of weaker outturn data and lower export markets growth, so our forecast for 2017 has been revised down to 2.7 per cent.

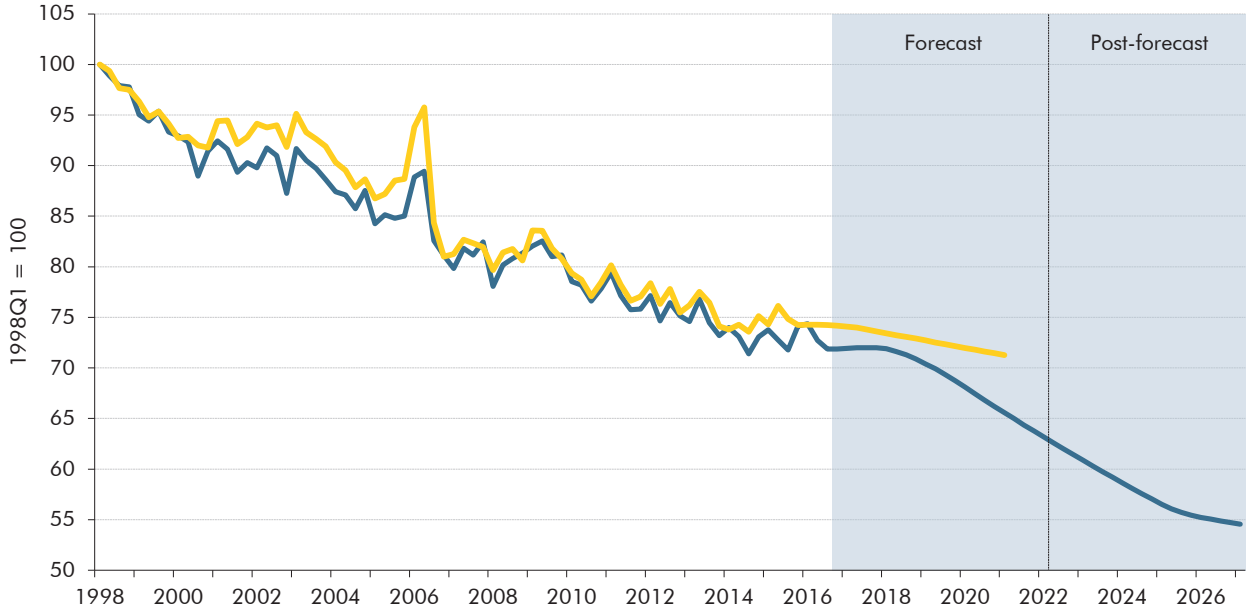
3.114 From 2018 onwards, exports growth has been revised down more significantly to reflect the adjustment to post-exit trading arrangements. By calibrating our forecast to external studies, we have not made assumptions about the effects of any specific changes to tariff or non-tariff factors influencing exports. But our forecast is consistent with assuming that the net

[16] 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.

effect of leaving the EU and establishing new trading arrangements with EU countries, plus any new trade agreements with non-EU countries, will be less favourable than existing arrangements, at least over our forecast horizon. It would also be consistent with assuming some effect from uncertainty about future trading arrangements, as these are likely to take some time to be negotiated and then implemented. Exports growth averages around 1 per cent a year from 2019 to 2021.

3.115 As the illustrative extension to the forecast in Chart 3.32 shows, the adjustment is assumed to have been completed by 2025. With the trend decline in the UK's export market share assumed to revert to its historical average thereafter, exports growth would return to historically more normal rates from then on.

Chart 3.32: 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

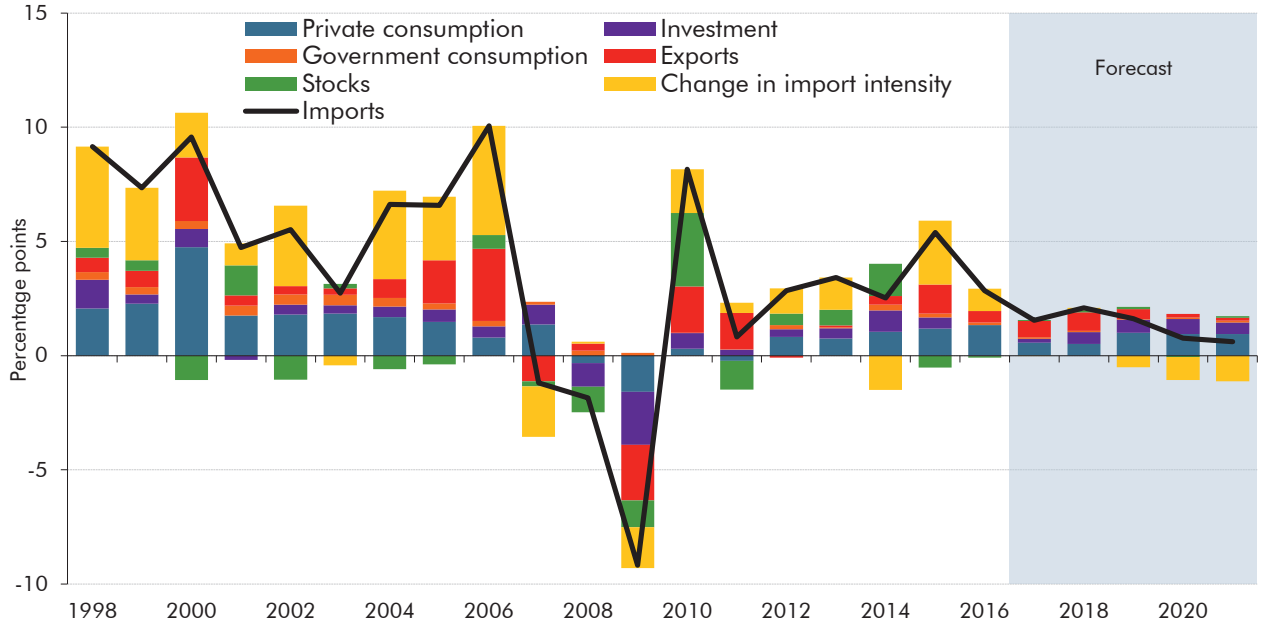
Imports growth

3.116 Imports growth in the first half of 2016 was slightly higher than we forecast in March, but monthly trade data suggest that imports fell in the third quarter. We have revised down our forecast for imports growth in 2016 as a whole.

3.117 In 2017 and 2018, we lowered our forecast to reflect lower domestic demand growth as well as the effects of sterling depreciation on import substitution. From 2018 onwards, our forecast has been revised down in a symmetrical way to the exports revision described above. This implies that the import intensity of domestic economic activity will fall during the adjustment phase that follows the UK's exit from the EU. As a result, imports growth also averages around 1 per cent a year from 2019 to 2021.

3.118 Our recent forecasts have assumed that the import intensity of domestic demand would rise over the forecast period, as for most of the past half century. The post-exit adjustment that we have calibrated on the basis of external studies, plus the effects of sterling depreciation on import substitution, implies that import intensity will fall until 2025. As Chart 3.33 shows, the contribution of rising import intensity to imports growth averaged 2.8 percentage points between 1998 and 2006. It then added a smaller 0.2 percentage points on average between 2007 and 2015. Our forecast assumes it will reduce imports growth by 0.3 percentage points a year on average between 2016 and 2021. Beyond 2025, when the adjustment phase is assumed to have passed, we would expect import intensity to resume its historical upward trend as cross-border integration and specialisation continues.

Chart 3.33: Contributions to import weighted domestic demand and imports growth

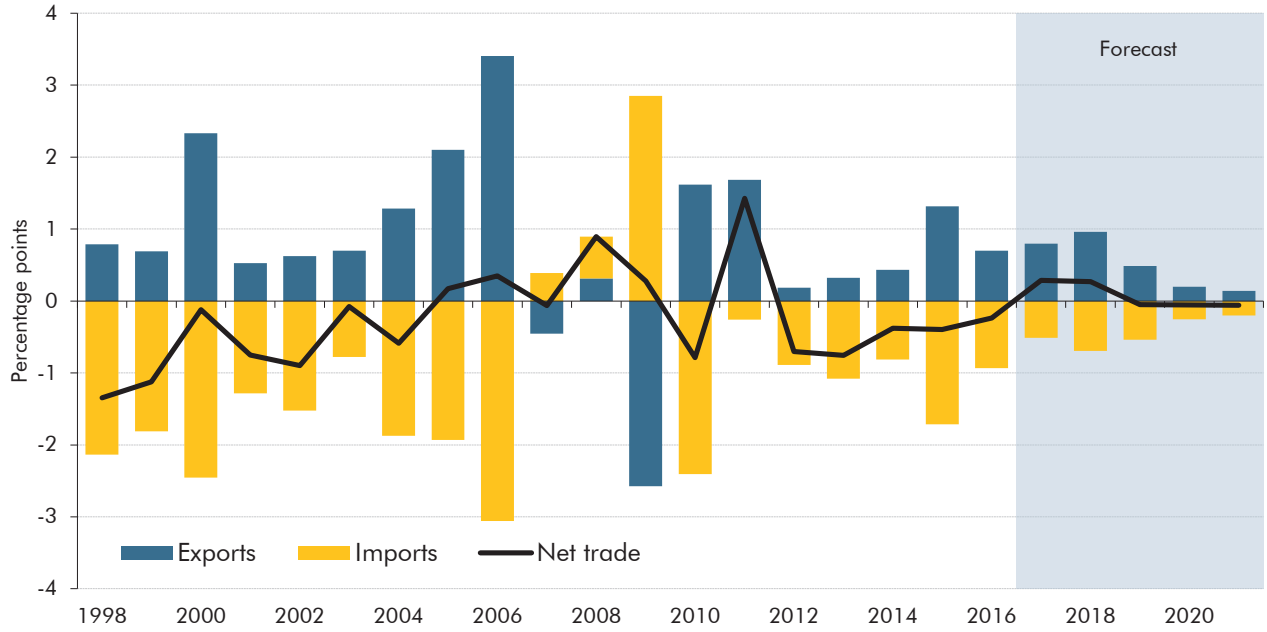


Source: ONS, OBR

Net trade

3.119 We expect net trade to subtract less from GDP growth in 2016 than we forecast in March due to lower imports growth. In 2017 and 2018 we expect it to boost GDP growth as sterling depreciation supports exports and reduces imports. From 2018 onwards, while we assume that leaving the EU will be associated with falling trade intensity during the extended adjustment phase, the effects are symmetrical on imports and exports so the effect on net trade is broadly neutral. As such, we continue to expect it to subtract 0.1 percentage points a year from GDP growth from 2019 onwards, unchanged from our March forecast.

Chart 3.34: Net trade contribution to real GDP



Source: ONS, OBR

Box 3.4: Recent trends in UK trade

Drivers of changes in exports as a share of GDP

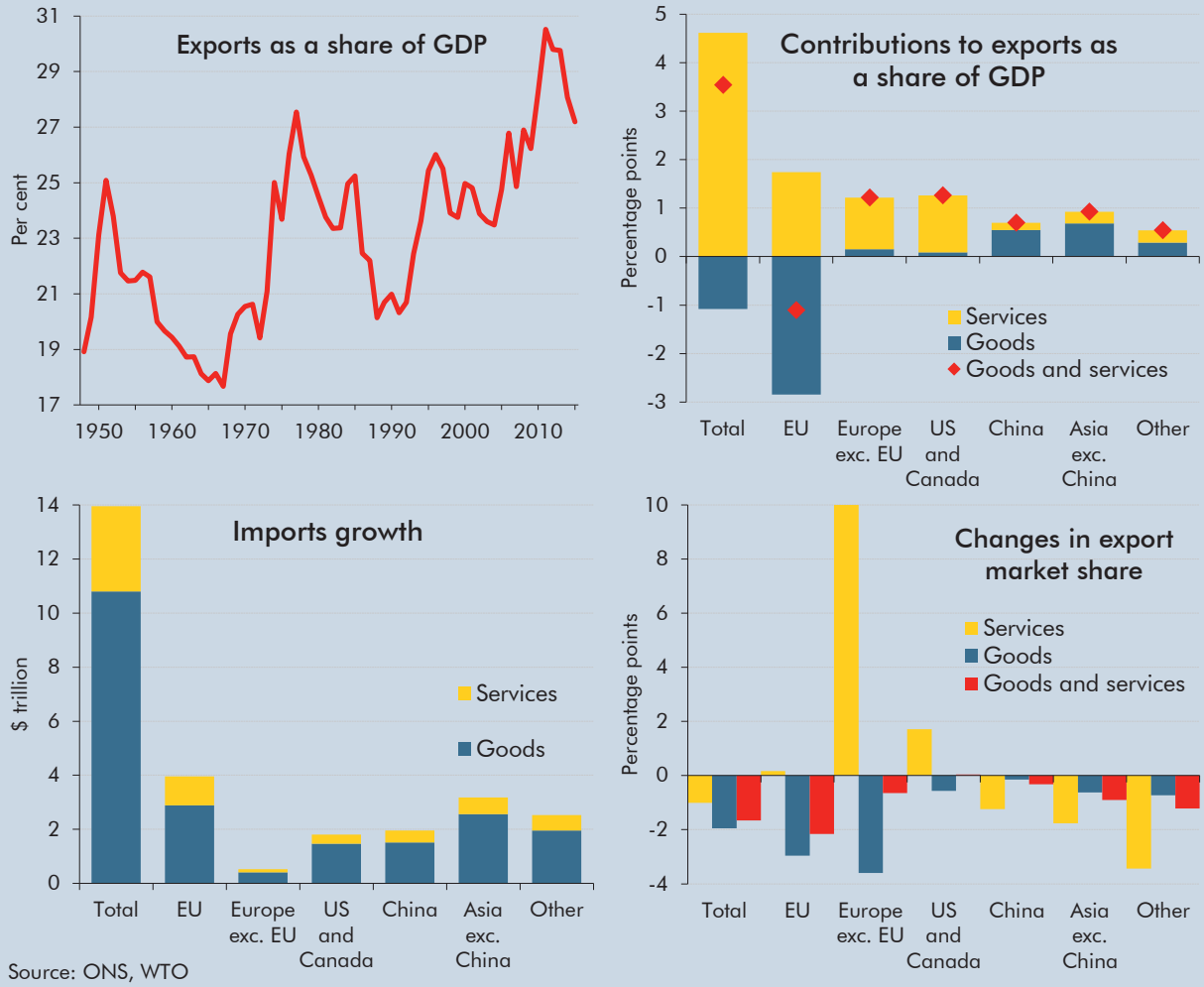
Given the importance of trade intensity in this forecast, we have looked at the geographic and goods versus services split of past changes in the exports-to-GDP ratio. Focusing on the period since 1999, for which detailed ONS data are readily available, the analysis shows that:

- the **trade intensity of the UK economy** has risen over most of the post-war period (top-left panel). Exports increased from 17.7 per cent of GDP in 1967 to a peak of 30.5 per cent in 2011. But by 2015, the ratio had fallen back to 27.2 per cent, driven in part by a post-crisis weakness in exports to the EU. This also coincided with a wider slowdown in the trade intensity of global GDP growth. The UK's export market share fell over that period. For goods trade, it fell sufficiently for the goods exports-to-GDP ratio itself to fall (the first column in the top-right panel);
- the **geographical breakdown** of UK exports shows that those to China increased nine-fold between 1999 and 2015, but the rise as a share of UK GDP was just 0.7 per cent (top-right panel). This contrasts with exports to the US and Canada, which little more than doubled, but rose by 1.3 per cent of GDP. This reflects that exports to China started at a much lower level than those to the US and Canada. Meanwhile, goods exports to the EU fell sharply as a share of GDP, reflecting weak demand growth in the EU;
- one driver of these trends will be the absolute size of the markets involved. **World imports** (i.e. the sum of all countries' imports from all other countries) have increased by $14 trillion since 1999, with almost a third of that increase explained by a rise in EU imports (bottom-left panel). China's total imports have increased almost eleven-fold, largely the result of a ten-fold rise in GDP, but also because of a rise in import intensity for services.

Again, total US and Canadian imports have a little more than doubled over the same period, but from a much higher starting point. Both regions accounted for around $2 trillion of world imports growth over the period; and

- another driver of these trends is how **the UK's share of individual countries' imports** has evolved (bottom-right panel). In 1999, the UK was the source of 6.8 per cent of EU goods imports, but by 2015, that had fallen to 3.8 per cent. The UK's falling market share in EU goods imports (including from non-EU economies) is the main reason for the UK's share of world goods trade falling. The UK's share of services trade in Europe has increased, particularly among non-EU countries, as well as in the US and Canada. But this is more than offset by a fall in the UK's market share in all other regions, so that overall, the UK's share of world services trade has fallen. UK exports accounted for 5.3 per cent of world trade in 1999, but by 2015 that had fallen to 3.7 per cent.

Chart C: UK exports and their drivers



Source: ONS, WTO

Some effects of trade on UK firms and households

The importance of trade to the UK economy means that changes to trading arrangements will have a number of economic effects. In 2015, 10.6 per cent of UK firms exported some of their output and 10.8 per cent of companies used imported goods and services in producing their

own output. Overall, 326,200 firms were involved in some form of international trade, which amounts to 15.1 per cent of all businesses.[a] But counting firms in this way does not reflect the fact that larger businesses are on average much more likely to be involved in international trade, so a small proportion of total firms will correspond to a higher proportion when weighted by turnover. Among large and medium-sized firms (those with more than 50 employees), 44.9 per cent are involved in international trade, compared with 14.5 per cent of small firms.

Beyond the businesses that are directly involved in international trade, others sell their goods or services into exporters' supply chains and are therefore indirectly reliant on international trade to some extent. Of the £509 billion exports in 2015, around two thirds is estimated to result from domestic primary inputs.

Consumers are also affected by international trade, with imported goods and services accounting for 12.5 per cent of household consumption. Adding the imported content of goods and services that are produced in the UK increases that share to 23.9 per cent.[b]

[a] ONS, Annual Business Survey: *Great Britain non-financial business economy exporters and importers, 2015 provisional results*, November 2016.
[b] ONS, Input-output analytical tables, 2010, February 2014.

The current account balance

3.120 The current account deficit in 2015 was large by historical standards at 5.4 per cent of GDP. On a quarterly basis the deficit widened through 2015, reaching 7.0 per cent in the final quarter. That was the largest quarterly deficit since quarterly records began in 1955, and the largest peacetime deficit in annual data going back to 1772. The deficit narrowed slightly to just under 6 per cent of GDP by the second quarter of 2016.

3.121 The widening current account deficit in recent years has been driven by a significant worsening in the net investment income balance as the net rate of return has deteriorated. In the decade to 2012, the income balance averaged a surplus of just over 1 per cent of GDP. It fell into deficit in 2012, reaching 1.9 per cent of GDP in 2015. Some of the factors behind that may be temporary – for example, relatively weak euro area growth or the possible effects of cross-border fines paid by UK firms abroad (although this is not verifiable from published data). But recent quarterly data report a bigger income deficit at the end of 2015 than we expected in March, reaching over 3 per cent of GDP in the final quarter. That deficit narrowed slightly in in the first half of 2016, but it remains wider than forecast, averaging 2.2 per cent of GDP compared to our March forecast of close to balance.

3.122 We expect the income account to improve steadily over the forecast period, reaching a surplus of around 1 per cent from 2020. This reflects two factors:

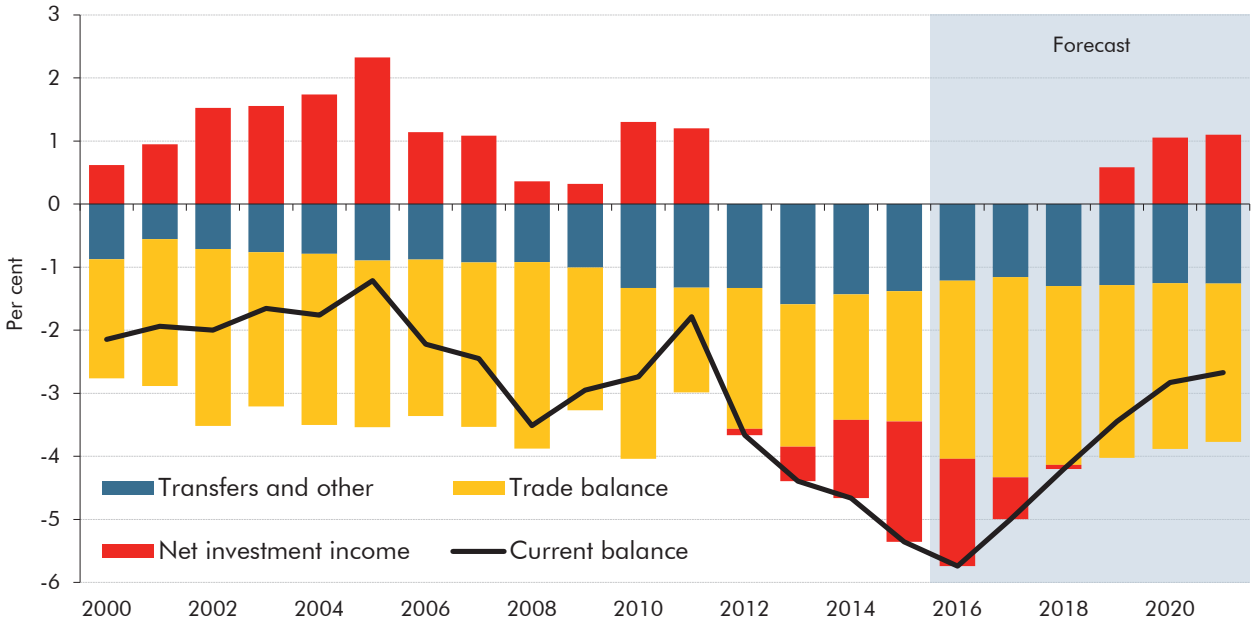
- our forecast is conditioned on the assumption that **rates of return** have been temporarily depressed and will therefore normalise over the forecast period, implying an improvement in the income balance. We assume that rates of return normalise by 2020 – a more gradual improvement than we expected in March; and

- the recent **depreciation of sterling** will increase the sterling value of UK assets held abroad, the majority of which are denominated in foreign currency. For a given rate of return, this will increase the sterling value of income earned on UK assets, improving the income balance. This will be partly offset by an increase in income earned by overseas investors on assets held in the UK that are also denominated in foreign currency. This direct effect of the depreciation – relative to the expected path of the exchange rate in our March forecast – is estimated to improve the income account by 0.8 per cent of GDP on average over the forecast period.

3.123 Relative to our March forecast, we expect the income deficit to be slightly wider between 2016 and 2018 as the effect of the exchange rate depreciation is more than offset by the assumption that rates of return normalise more gradually. Thereafter, the income surplus is slightly larger than we forecast in March, reaching around 1.1 per cent of GDP in 2020, compared to 0.3 per cent in our March forecast. With assumed rates of return broadly unchanged from March by this point, this upward revision entirely reflects the direct effect of sterling depreciation.

3.124 The income account is expected to move into surplus from 2020, but an ongoing trade deficit means that we expect the current account to remain in deficit throughout the forecast. Relative to our March forecast we expect a wider current account deficit in the near term, in part reflecting the weakness of recent outturn data. We expect a deficit of 5.7 per cent of GDP in 2016, compared to our March forecast of 4.2 per cent. We then expect it to narrow more quickly than we did in March, reaching 2.8 per cent of GDP by 2020, compared to our March forecast of 3.4 per cent.

Chart 3.35: Current account balance as a share of GDP



Source: ONS, OBR

3.125 Table 3.4 shows how our forecast of the current account has changed since March:

- relative to our March forecast, we expect the **current account deficit** to be wider in the near term. We then expect it to narrow more quickly over the forecast period, reaching a slightly smaller deficit by 2020;
- this change in the profile of the current account is almost entirely explained by changes to our forecast of the **income balance**, reflecting weaker-than-expected outturns plus judgements about rates of return and the effect of sterling depreciation on net income;
- the **trade deficit** is expected to be wider throughout the forecast, as a weaker terms of trade offsets the boost to net trade volumes from sterling depreciation and the effect of weaker domestic demand on imports; and
- the deficit on the **transfers balance** is expected to be slightly narrower than we forecast in March. This reflects weaker outturn data (related to household remittances sent abroad) that is assumed to persist across the forecast. This forecast has not been adjusted for any future changes in transfer flows between the UK and the EU once we have left the EU. We will adjust this once we have firmer details of what these post-exit flows will be. Box 4.4 in Chapter 4 discusses issues relating to our forecast for expenditure transfers to the EU.

Table 3.4: Changes to the current account since March

	£ billion					
	Outturn	Forecast				
	2015	2016	2017	2018	2019	2020
March forecast	-80.5	-80.3	-75.1	-77.0	-76.0	-76.1
November forecast	-100.2	-111.0	-99.3	-86.7	-73.9	-63.1
Change	**-19.6**	**-30.7**	**-24.2**	**-9.6**	**2.1**	**13.0**
of which:						
Trade balance	-2.4	-9.6	-16.0	-9.9	-10.5	-10.4
Volumes	-2.6	-0.1	6.7	13.1	12.8	12.6
Prices	0.2	-9.6	-22.7	-23.0	-23.3	-22.9
Investment income balance	-17.7	-30.5	-15.1	-4.5	7.8	17.5
Transfers and other	0.4	9.4	6.8	4.8	4.8	5.8

Sectoral net lending

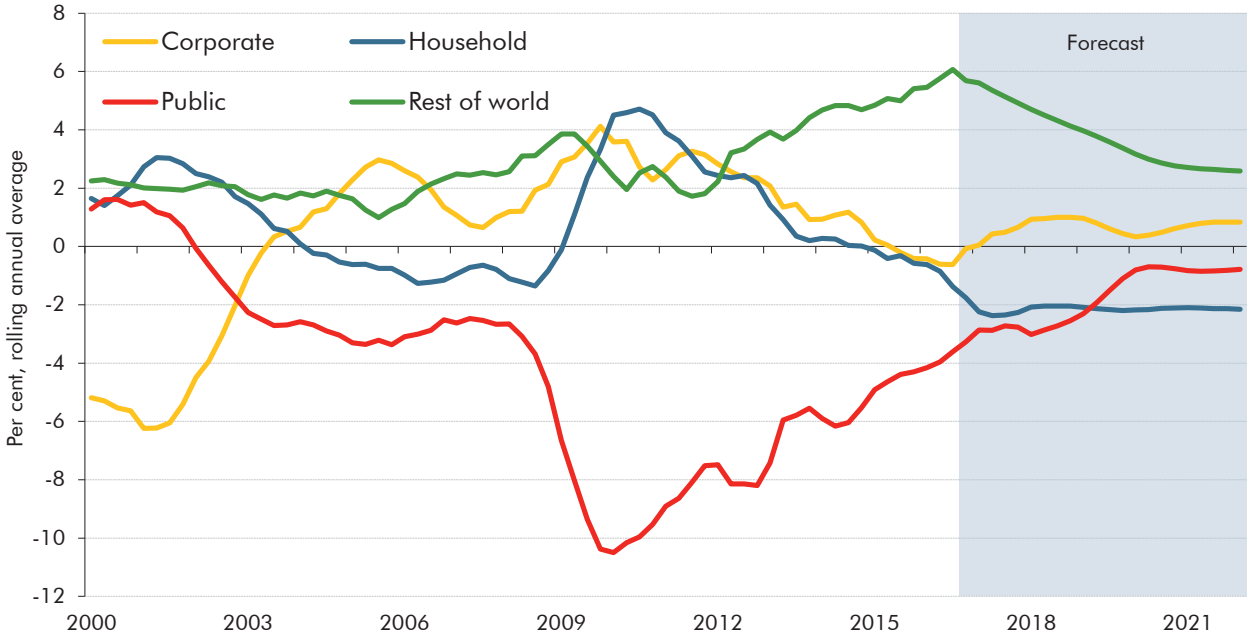
3.126 In the National Accounts framework that we use for our economic forecast, the income and expenditure of the different sectors imply a path for each sector's net lending or borrowing from others. By identity, these must sum to zero – for each borrower, there must be a lender. In 2016, for which two quarters of data are now available, we estimate that the public and household sectors are in deficit, the rest of world sector is in surplus and the corporate sector is close to balance(Chart 3.36).

3.127 On current government policy we expect the public sector deficit to narrow, offset by a narrowing of the rest of the world surplus (i.e. a narrowing current account deficit) and a

widening of the corporate deficit. The household deficit is expected to remain broadly stable at just over 2 per cent of GDP through the forecast. Relative to our March forecast, we expect the current account deficit to narrow more quickly, albeit from a wider starting point, while the public sector deficit is expected to narrow more gradually. The profile of the household deficit forecast is similar to March, but around 1 per cent of GDP smaller.

3.128 The persistence of a household deficit of the magnitude implied by our forecast would be unprecedented in the latest available historical data, which extend back to 1987. Other datasets extending back to 1963 also suggest little evidence of large and persistent household deficits, with the household surplus negative in only one year between 1963 and 1987.[17] A household deficit of the size and persistence we expect over the forecast period might be considered consistent with the unprecedented scale of the fiscal consolidation and the extremely accommodative monetary policy upon which our forecast is conditioned. It nevertheless demonstrates that the adjustment to the fiscal consolidation is subject to very significant uncertainty, and alternative adjustment paths are quite possible.

Chart 3.36: Sectoral net lending



Source: ONS, OBR

[17] Based on historical estimates of the personal sector surplus on an ESA95 basis, as set out in Thomas, R. and Nolan, L., *National Accounts articles: Historical estimates of financial accounts and balance sheets*, January 2016.

Risks and uncertainties

3.129 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). There are some risks and uncertainties common to all forecasts: conditioning assumptions may prove inaccurate; shocks may prove asymmetric; and previously stable relationships that have described the functioning of the economy may change.

3.130 For this and subsequent forecasts, there are numerous risks and uncertainties associated with the period leading up to and following the UK's exit from the EU. These relate to the policy setting that will evolve to replace that associated with EU membership and the response of households and firms to these changes. Both are subject to great uncertainty. There is little by way of precedent to guide the assumptions that have been factored into our forecast, so inevitably future forecasts will need to be revised as we learn more about how policy will change and how the economy will respond.

3.131 Some specific risks that we would highlight include:

- the **concurrence of large fiscal and current account deficits** has been a feature of the UK economy in recent years. This means that overseas investors are ultimately – if not directly – financing the UK's budget deficit. This could pose risks if those investors' confidence in the UK economy was damaged by uncertainty or changes in policy. That could lead to a sharper fall in sterling and a more abrupt demand-led narrowing of the current account deficit;

- it is difficult to predict what **trading arrangements** will replace EU rules and how they might affect the economy. We have based our forecast on an assumption that exports and imports will be affected in a similar way, with the size of the effect based on a range of external studies. Both the size and symmetry of this effect are uncertain;

- we have revised down our forecast for **productivity growth** to reflect lower business investment, but some studies predict that reduced trade intensity after the UK leaves the EU will reduce future productivity growth by more than is implied by our forecast. It is also important to remember that the outlook for productivity was very uncertain pre-referendum, reflecting the marked difference (not just in the UK) between the weak growth seen in recent years and the preceding decades of stronger performance; and

- the effects of **sterling depreciation** on the UK's export market share and import substitution, and the speed and extent to which it passes through to consumer prices and affects real consumer spending, are all subject to significant uncertainty.

Comparison with external forecasters

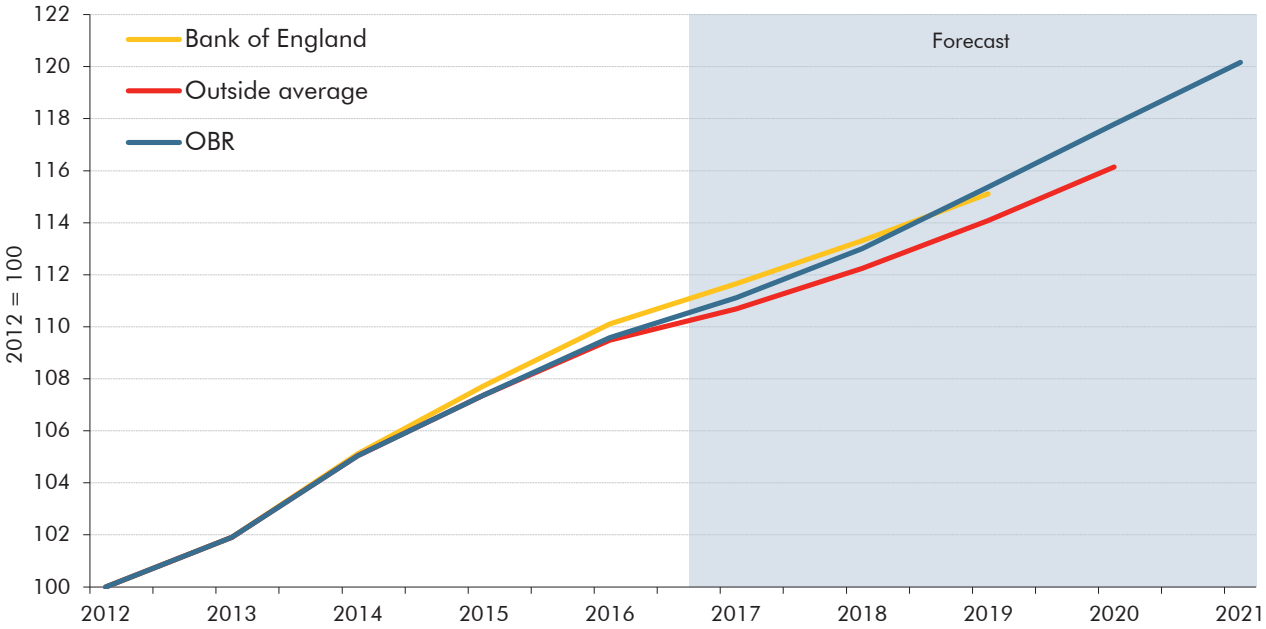
3.132 In this section, we compare our latest projections with those of selected outside forecasters. The differences between our forecast and those of external forecasters are generally small compared with the uncertainty that surrounds any one of them.

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

3.133 Alongside its November 2016 *Inflation Report*, the Bank of England published additional information about its forecast that we can compare against our own (see Table 3.5). This included the Bank staff's forecasts for the expenditure composition of GDP, consistent with the MPC's central forecasts of GDP, CPI inflation and the unemployment rate.

3.134 The MPC's modal forecast for GDP growth is 2.2 per cent in 2016, slightly higher than our forecast of 2.1 per cent. The Bank's forecast is in line with ours in 2017, but lower than ours in 2018 and 2019 because of weaker growth in private consumption and business investment. The Bank's unemployment forecast is very similar to ours despite forecasting weaker GDP growth. This would be consistent either with our assumption about the relationship between unemployment and GDP growth being less favourable or with our forecast for potential output growth being higher.

Chart 3.37: Comparison of forecasts for the level of GDP projections



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

Table 3.5: Comparison with the Bank of England's forecast and projections

	Per cent			
	2016[2]	2017	2018	2019
Bank of England November *Inflation Report* forecast[1]				
Household consumption	2¾	1¼	¾	1¼
Business investment	-2	-1¾	2	4
Housing investment[3,4]	4¾	¼	1¾	2
Exports	2¾	2	1	½
Imports	3¼	¼	-1	-¼
Employment[5]	1	0	¼	½
Unemployment rate[6]	4.9	5.4	5.6	5.6
Productivity[7]	1	1½	1½	1½
Average weekly earnings[4,5]	2½	2¾	3¾	3¾
Difference from OBR forecast				
Household consumption	-0.1	0.1	-0.3	-0.9
Business investment	0.2	-1.5	-2.1	-1.3
Exports	0.4	-0.7	-2.2	-1.1
Imports	0.4	-1.3	-3.1	-1.9
Employment[5]	0.1	-0.1	0.0	0.0
Unemployment rate[6]	-0.1	0.2	0.1	0.2
Productivity[7]	0.1	0.2	0.1	-0.3

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

[2] 2016 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 definitions of these variables differ and are therefore not directly comparable.

[5] Four-quarter growth rate in Q4.

[6] LFS unemployment rate.

[7] Output per hour.

Comparison with other external forecasters

3.135 Table 3.6 presents a range of external forecasts. It shows that:

- in its most recent *World economic outlook*, the **IMF** forecasts growth of 1.8 per cent in 2016 and 1.1 per cent in 2017, lower than our central forecast in both cases. Unlike us, the IMF does not expect GDP growth to top 2 per cent in any year;

- since publishing its most recent *Economic outlook*, the **OECD** has updated its short-term forecast for GDP growth. This forecast is below ours in 2016 and 2017. The IMF and OECD forecasts were both published before the preliminary estimate of third quarter GDP growth, which was stronger than most commentators had expected;

- in its November *Economic review*, the **National Institute for Economic and Social Research** (NIESR) forecast GDP growth of 2.0 per cent in 2016, slightly lower than our forecast. NIESR's forecast for 2017 is in line with ours, but the composition is different, with NIESR expecting net trade to contribute more than all the 1.4 per cent GDP

growth it is forecasting. NIESR's forecast is higher than ours from 2018 to 2020 and the same as ours in 2021; and

- the **European Commission**'s forecast for GDP growth is lower than ours in 2016 and is also lower in 2017 and 2018, due to weaker investment growth in both years.

Table 3.6: Comparison with external forecasts

	Per cent					
	2016	2017	2018	2019	2020	2021
OBR (November 2016)						
GDP growth	2.1	1.4	1.7	2.1	2.1	2.0
CPI inflation	0.7	2.3	2.5	2.1	2.0	2.0
Output gap	-0.2	-0.6	-0.6	-0.3	-0.1	0.0
Oxford Economics (November 2016)						
GDP growth	2.1	1.4	1.2	1.5	2.1	2.4
CPI inflation	0.7	2.7	2.2	2.0	2.0	2.0
Output gap	-2.9	-2.7	-2.7	-2.4	-1.8	-1.3
Bank of England (November 2016)[1,2]						
GDP growth (mode)	2.2	1.4	1.5	1.6		
CPI inflation (mode)[3]	1.3	2.7	2.7	2.5		
European Commission (November 2016)						
GDP growth	1.9	1.0	1.2			
CPI inflation	0.7	2.5	2.6			
Output gap	0.7	0.3	0.0			
NIESR (November 2016)[1]						
GDP growth	2.0	1.4	2.2	2.3	2.3	2.0
CPI inflation	0.7	3.5	3.5	2.6	2.2	2.0
OECD (June 2016)[4]						
GDP growth	1.7	2.0				
CPI inflation	0.4	1.6				
Output gap	0.1	0.5				
IMF (October 2016)						
GDP growth	1.8	1.1	1.7	1.8	1.9	1.9
CPI inflation	0.7	2.5	2.6	2.0	2.0	2.0
Output gap	-0.1	-0.4	-0.4	-0.3	-0.1	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 2016 *Interim economic outlook*. For the UK, GDP growth was revised down to 1.8 per cent in 2016 and 1.0 per cent in 2017.

Table 3.7: Detailed summary of forecast

	Percentage change on a year earlier, unless otherwise stated						
	Outturn	Forecast					
	2015	2016	2017	2018	2019	2020	2021
UK economy							
Gross domestic product (GDP)	2.2	2.1	1.4	1.7	2.1	2.1	2.0
GDP per capita	1.4	1.3	0.7	1.0	1.4	1.4	1.4
GDP level (2015=100)	100.0	102.1	103.5	105.2	107.4	109.7	111.9
Nominal GDP	2.6	3.3	2.8	3.8	4.0	4.0	4.1
Output gap (per cent of potential output)	-0.3	-0.2	-0.6	-0.6	-0.3	-0.1	0.0
Expenditure components of GDP							
Domestic demand	2.5	1.9	1.1	1.4	2.1	2.1	2.0
Household consumption[1]	2.5	2.8	1.2	1.1	2.1	2.0	2.0
General government consumption	1.5	1.0	0.6	0.5	0.3	0.6	0.8
Fixed investment	3.4	-0.1	1.2	3.6	4.0	4.5	3.3
Business	5.1	-2.2	-0.3	4.1	5.3	4.1	3.6
General government[2]	-2.0	2.3	3.3	2.1	1.9	8.8	3.3
Private dwellings[2]	2.8	2.8	2.8	3.7	2.4	2.9	3.0
Change in inventories[3]	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
Exports of goods and services	4.5	2.3	2.7	3.2	1.6	0.6	0.5
Imports of goods and services	5.4	2.8	1.5	2.1	1.6	0.8	0.6
Balance of payments current account							
Per cent of GDP	-5.4	-5.7	-5.0	-4.2	-3.4	-2.8	-2.7
Inflation							
CPI	0.0	0.7	2.3	2.5	2.1	2.0	2.0
RPI	1.0	1.8	3.2	3.5	3.2	3.1	3.2
GDP deflator at market prices	0.4	1.3	1.3	2.1	1.9	1.9	2.0
Labour market							
Employment (millions)	31.3	31.7	31.8	31.9	32.0	32.2	32.3
Productivity per hour	0.8	0.9	1.3	1.4	1.8	2.0	2.0
Wages and salaries	3.9	3.2	2.7	3.0	3.8	4.1	4.1
Average earnings[4]	1.8	2.2	2.4	2.8	3.3	3.6	3.7
LFS unemployment (% rate)	5.4	5.0	5.2	5.5	5.4	5.4	5.4
Claimant count (millions)	0.80	0.76	0.82	0.87	0.86	0.86	0.87
Household sector							
Real household disposable income	3.3	2.4	0.1	1.0	1.3	1.8	1.9
Saving ratio (level, per cent)	6.1	4.4	3.8	4.2	4.2	4.3	4.4
House prices	6.0	7.8	4.0	4.1	4.6	4.7	4.7
World economy							
World GDP at purchasing power parity	3.2	3.1	3.4	3.5	3.6	3.7	3.7
Euro area GDP	1.9	1.7	1.5	1.6	1.5	1.5	1.5
World trade in goods and services	2.8	2.3	3.4	3.7	4.0	4.1	4.1
UK export markets[5]	4.2	2.9	3.7	4.0	4.3	4.3	4.3

[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 3.8: Detailed summary of changes to the forecast

	Percentage change on a year earlier, unless otherwise stated					
	Outturn	Forecast				
	2015	2016	2017	2018	2019	2020
UK economy						
Gross domestic product (GDP)	0.0	0.1	-0.8	-0.4	0.0	0.0
GDP per capita	0.0	0.1	-0.8	-0.4	0.0	0.0
GDP level (2015=100)[1]	0.0	0.1	-0.7	-1.2	-1.1	-1.1
Nominal GDP	0.1	0.2	-1.4	-0.3	0.0	-0.1
Output gap (per cent of potential output)	0.0	0.0	-0.6	-0.7	-0.3	-0.1
Expenditure components of GDP						
Domestic demand	-0.2	-0.3	-1.2	-0.8	0.1	0.1
Household consumption[2]	-0.4	0.4	-1.0	-1.0	0.1	0.1
General government consumption	-0.2	0.8	0.0	0.0	0.1	-0.1
Fixed investment	-0.8	-3.1	-3.3	-0.5	0.0	0.2
Business	0.3	-4.7	-6.3	-1.8	-0.2	-0.3
General government[3]	-4.1	2.2	1.4	2.3	2.1	2.3
Private dwellings[3]	-0.7	-2.3	0.1	0.7	-0.6	0.0
Change in inventories[4]	0.1	-0.2	0.0	0.0	0.0	-0.1
Exports of goods and services	-0.5	-0.2	-0.7	-0.2	-1.9	-2.8
Imports of goods and services	-0.8	-0.7	-1.8	-1.2	-1.6	-2.5
Balance of payments current account						
Per cent of GDP	-1.0	-1.6	-1.2	-0.5	0.1	0.5
Inflation						
CPI	0.0	0.0	0.7	0.5	0.1	0.0
RPI	0.0	0.1	0.8	0.3	0.0	0.0
GDP deflator at market prices	0.1	0.2	-0.5	0.1	0.0	-0.1
Labour market						
Employment (millions)	0.1	0.2	0.1	0.0	0.1	0.1
Productivity per hour	0.0	-0.2	-0.4	-0.6	-0.3	0.0
Wages and salaries	-0.2	-0.4	-1.5	-0.9	0.0	0.1
Average earnings[5]	-0.5	-0.4	-1.1	-0.7	-0.1	0.0
LFS unemployment (% rate)	0.0	0.0	0.2	0.3	0.1	0.0
Claimant count (millions)	0.00	0.02	0.04	0.03	0.01	0.00
Household sector						
Real household disposable income	0.4	0.6	-1.8	-0.6	-0.2	0.3
Saving ratio (level, per cent)	1.9	1.1	0.2	0.6	0.3	0.5
House prices	-0.8	1.0	-0.2	-1.0	-0.1	0.8
World economy						
World GDP at purchasing power parity	0.1	-0.2	-0.1	-0.2	-0.2	-0.1
Euro area GDP	0.4	0.1	-0.1	0.0	-0.1	0.0
World trade in goods and services	0.4	-0.7	-0.3	-0.4	-0.3	-0.2
UK export markets[6]	0.1	-0.5	-0.2	-0.4	-0.2	-0.2

[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 Autumn Statement – and since the March Budget – on the fiscal forecast (from paragraph 4.9);
- describes the **outlook for public sector receipts**, including a tax-by-tax analysis explaining how the forecasts have changed since March (from paragraph 4.23);
- 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 4.156);
- describes the **outlook for the key fiscal aggregates**: headline and structural measures of public sector net borrowing and the current budget, and public sector net debt (from paragraph 4.182);
- summarises **risks and uncertainties** (paragraph 4.197); and
- compares our forecasts to those of **international organisations** (from paragraph 4.198).

4.2 Further breakdowns of receipts and expenditure and other details of our fiscal forecast are provided in the supplementary tables on our website. The medium-term forecasts for the public finances in this chapter start from outturn 2015-16 data.[1] We then present an in-year estimate for 2016-17 that makes use of published Office for National Statistics (ONS) outturn data for April to September. We did not have pre-release access to the October

[1] Outturn data for 2015-16 are consistent with the *Public Sector Finances September 2016 Statistical Bulletin* (released in October) published by the ONS and HM Treasury.

2016 data released on 22 November, but we were able to draw on some administrative receipts data for October. We then present forecasts for 2017-18 to 2021-22.

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 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 the outturns – which will be affected by any errors in our forecast assumptions or future Government policy changes – are 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 Autumn Statement; and

- **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). In the current context of looming negotiations over the UK's exit from the EU this is not straightforward. As set out in the Foreword to this *EFO*, we asked the Government for "*a formal statement of Government policy as regards its desired trade regime and system of migration control, as a basis for our projections*". The Government directed us to two public statements by the Prime Minister that it stated were relevant to our request.

4.5 Perhaps understandably, this leaves us little the wiser as regards the choices and trade-offs that the Government might make during the negotiations – which will depend in part of course on the approach taken by those with whom it is negotiating. Given this – and the considerable uncertainty surrounding the economic and fiscal implications of different outcomes – we have not attempted to predict the end-point of the negotiations. Instead we have made judgements consistent with a range of possible outcomes that we can keep under review in future forecasts. Specifically, as regards the fiscal forecast, we assume that:

- **the UK leaves the EU in April 2019** – two years after the date by which the Prime Minister has stated that Article 50 will be invoked;

- any reduction in **expenditure transfers to EU institutions** are recycled fully into extra domestic spending. This assumption is fiscally neutral; and

- 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). We will return to these assumptions when any details become clear.

4.6 We have not made any specific assumptions about UK financial sector passporting rights, but we have assumed that the financial and business services sectors could be more adversely affected than other sectors by the UK leaving the EU. We assume that financial company profits will grow more slowly than the rest of the economy for the four years from 2017-18 and that earnings growth at the top of the income distribution will weaker than the average across it. Further detail is set out in the relevant sections of this chapter.

Economic determinants of the fiscal forecast

4.7 Our fiscal forecasts are based on the economic forecasts presented in Chapter 3. Most economic forecasts focus on the outlook for real GDP, but it is nominal GDP – affected both by real GDP and prices – 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 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 2015-16 and 2020-21 has been revised down by 2.0 percentage points relative to our March forecast. This reflects both lower growth in real GDP, particularly in 2017-18, and Blue Book revisions to imputed rents that have lowered deflator growth (but should have no effect on the public finances);

- on the income side of GDP, **wages and salaries** are forecast to grow by 3.4 per cent a year on average between 2016-17 and 2020-21, down 0.5 percentage points from March. This reflects a downward revision to average earnings growth, consistent with a weaker outlook for productivity growth. Non-oil, non-financial **profits** have risen more strongly than expected this year, but growth has been revised down by 0.2 percentage points a year on average from 2017-18 onwards;

- on the expenditure side of GDP, **nominal consumer spending** is forecast to grow by 3.9 per cent a year on average between 2016 and 2020, down by 0.3 percentage points from our March forecast reflecting the productivity-driven reduction in household income growth;

- the CPI and RPI measures of **inflation** have been revised up since March, mainly reflecting the fall in the value of sterling and its knock-on effects on food and oil prices (also affected by higher dollar prices). CPI inflation remains above the Bank of England's 2 per cent target until 2019-20. We assume that RPI inflation will rise relative to CPI inflation due to the effect of mortgage interest payments on the RPI;

- **house price inflation** is forecast to average 4.9 per cent over the forecast period. The ONS house price index was replaced by a new measure in June 2016. Our November forecast is therefore not directly comparable to our March forecast (see Chapter 2 for discussion of this change). **Residential property transactions** have been revised down in the near term, reflecting greater than expected forestalling behaviour in April 2016, but are expected to recover by the end of the forecast period;

- we now expect **commercial property prices** to fall instead of rise in 2016-17 and 2017-18, reflecting developments at the top end of the market since the referendum. **Commercial property transactions** have been revised up since March due to strong growth in transactions at the lower end of the market in the year to date;

- market-derived assumptions for **equity prices**, **interest rates** and **oil and gas prices** reflect average prices in the 10 days to 31 October. Equity and oil prices have been revised up significantly since March in line with recent outturns. Market expectations of interest rates have fallen. Bank Rate was cut to 0.25 per cent in August;

- our **oil and gas production** forecasts are informed by the central projections published by the Oil and Gas Authority (OGA). We have revised our oil production forecast up, reflecting stronger-than-expected growth so far in 2016. We expect higher production to persist over the forecast, reflecting the high levels of investment in recent years; and

- the **output gap** – which we use to estimate the structural health of the public finances – was close to zero in all years of our March forecast. We now expect it to average -0.2 per cent in 2016-17, then a negative gap of -0.7 per cent to open in 2017-18 after which it is expected to narrow slowly. It is not expected to close until 2021-22.

Table 4.1: Determinants of the fiscal forecast

	Percentage change on previous year unless otherwise specified						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
GDP and its components							
Real GDP	2.0	2.0	1.3	1.9	2.1	2.1	2.0
Nominal GDP[1]	2.6	3.7	2.6	4.1	4.0	4.0	4.1
Nominal GDP (£ billion)[1,2]	1883	1951	2001	2083	2167	2253	2346
Nominal GDP (centred end-March £bn)[1,3]	1912	1976	2040	2123	2210	2298	2393
Wages and salaries[4]	3.4	3.4	2.5	3.3	3.9	4.1	4.1
Non-oil PNFC profits[4,5]	2.8	7.4	0.8	3.0	6.0	4.7	4.1
Consumer spending[4,5]	2.8	4.0	3.5	3.5	4.3	4.1	4.1
Prices and earnings							
GDP deflator	0.4	1.4	1.5	2.1	1.8	1.9	2.0
RPI (September)[6]	0.8	2.0	3.2	3.5	3.1	3.2	3.2
CPI (September)[6]	-0.1	1.0	2.5	2.5	2.0	2.0	2.0
Average earnings[7]	1.8	2.5	2.4	3.0	3.4	3.7	3.8
'Triple-lock' guarantee (September)	2.9	2.5	2.5	2.7	3.3	3.6	
Key fiscal determinants							
Claimant count (millions)	0.78	0.77	0.84	0.87	0.86	0.86	0.87
Employment (millions)	31.4	31.8	31.8	31.9	32.1	32.2	32.3
Implied VAT gap (per cent)	10.3	11.0	10.7	10.4	9.9	9.6	9.6
Output gap (per cent of potential output)	-0.2	-0.2	-0.7	-0.6	-0.3	-0.1	0.0
Financial and property sectors							
Equity prices (FTSE All-Share index)	3412	3676	3894	4051	4212	4382	4561
HMRC financial sector profits[1,5,8]	2.6	3.7	1.2	2.1	2.0	2.0	4.1
Residential property prices[9]	6.3	7.1	3.6	4.3	4.7	4.7	4.8
Residential property transactions (000s)[10]	1329	1130	1201	1242	1270	1301	1318
Commercial property prices[10]	11.9	-5.1	-3.2	2.1	1.8	1.9	2.0
Commercial property transactions[10]	4.7	6.7	1.3	1.9	2.1	2.1	2.0
Volume of stampable share transactions	12.5	-9.1	-1.1	0.0	0.0	0.0	0.0
Oil and gas							
Oil prices ($ per barrel)[5]	52.4	44.2	54.1	56.6	58.0	59.2	60.3
Oil prices (£ per barrel)[5]	34.3	32.7	44.0	45.7	46.6	47.1	47.7
Gas prices (p/therm)[5]	43.0	34.1	46.4	46.8	47.9	48.8	49.7
Oil production (million tonnes)[5]	45.3	47.1	47.1	47.1	47.1	44.8	42.5
Gas production (billion therms)[5]	14.0	14.0	13.3	12.6	12.0	11.4	10.8
Interest rates and exchange rates							
Market short-term interest rates (%)[11]	0.6	0.4	0.3	0.5	0.6	0.8	1.0
Market gilt rates (%)[12]	1.9	1.2	1.3	1.5	1.6	1.8	1.9
Euro/Sterling exchange rate (€/£)	1.37	1.17	1.11	1.11	1.10	1.09	1.09

[1] Not seasonally adjusted.
[2] Denominator for receipts, spending and deficit forecasts as a per cent of GDP.
[3] Denominator for net debt as a per cent of GDP.
[4] Nominal. [5] Calendar year.
[6] Q3 forecast used as a proxy for September.
[7] Wages and salaries divided by employees.
[8] HMRC Gross Case 1 trading profits.
[9] Outturn data from ONS House Price Index.
[10] Outturn data from HMRC information on stamp duty land tax.
[11] 3-month sterling interbank rate (LIBOR).
[12] 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					
	Outturn	Forecast				
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
GDP and its components						
Real GDP	-0.1	0.0	-0.9	-0.2	0.1	-0.1
Nominal GDP[1]	0.2	0.1	-1.4	-0.1	0.1	-0.2
Nominal GDP (£ billion)[1,2]	7	8	-19	-23	-23	-28
Nominal GDP (centred end-March £bn)[1,3]	12	-7	-23	-23	-24	-30
Wages and salaries[4]	-0.4	-0.5	-1.5	-0.7	0.1	0.0
Non-oil PNFC profits[4,5]	0.9	3.6	-2.7	-0.8	2.1	0.5
Consumer spending[4,5]	-0.4	0.4	-0.6	-0.9	0.0	-0.2
Prices and earnings						
GDP deflator	0.2	-0.2	-0.3	0.1	0.0	-0.1
RPI (September)[6]	0.0	0.3	0.7	0.2	-0.1	0.0
CPI (September)[6]	0.0	0.4	0.9	0.4	0.0	0.0
Average earnings[7]	-0.6	-0.5	-1.1	-0.5	0.0	-0.1
'Triple-lock' guarantee (September)	0.0	0.0	-1.1	-0.8	-0.2	0.2
Key fiscal determinants						
Claimant count (millions)	0.00	0.03	0.04	0.02	0.00	-0.01
Employment (millions)	0.1	0.2	0.1	0.0	0.1	0.1
Implied VAT gap (per cent)	-1.1	-0.5	-0.5	-0.5	-0.6	-0.6
Output gap (per cent of potential output)	0.0	-0.1	-0.7	-0.6	-0.2	-0.1
Financial and property sectors						
Equity prices (FTSE All-Share index)	12	339	423	434	452	464
HMRC financial sector profits[1,5,8]	0.2	0.2	-2.7	-2.0	-2.0	-2.4
Residential property prices[9]	-0.5	1.4	-0.8	-0.8	0.1	0.9
Residential property transactions (000s)[10]	71	-127	-81	-51	-31	-8
Commercial property prices[10]	4.5	-7.2	-4.9	0.2	-0.1	-0.3
Commercial property transactions[10]	1.1	7.6	-1.0	-0.4	0.0	0.0
Volume of stampable share transactions	2.2	-9.1	-1.1	0.0	0.0	0.0
Oil and gas						
Oil prices ($ per barrel)[5]	0.0	8.7	12.2	12.6	14.0	15.2
Oil prices (£ per barrel)[5]	0.0	7.9	14.7	15.1	16.0	16.7
Gas prices (p/therm)[5]	0.0	4.2	14.1	14.5	15.6	16.5
Oil production (million tonnes)[5]	0.3	3.9	3.8	3.7	5.8	5.6
Gas production (billion therms)[5]	0.0	1.0	0.9	0.8	0.7	0.7
Interest rates and exchange rates						
Market short-term interest rates[11]	0.0	-0.1	-0.3	-0.3	-0.3	-0.4
Market gilt rates[12]	0.0	-0.5	-0.6	-0.6	-0.6	-0.6
Euro/Sterling exchange rate (€/£)	0.00	-0.11	-0.16	-0.16	-0.15	-0.15

[1] Not seasonally adjusted.
[2] Denominator for receipts, spending and deficit forecasts as a per cent of GDP.
[3] Denominator for net debt as a per cent of GDP.
[4] Nominal. [5] Calendar year.
[6] Q3 forecast used as a proxy for September.
[7] Wages and salaries divided by employees.
[8] HMRC Gross Case 1 trading profits.
[9] Outturn data from ONS House Price Index.
[10] Outturn data from HMRC information on stamp duty land tax.
[11] 3-month sterling interbank rate (LIBOR).
[12] Weighted average interest rate on conventional gilts.

Policy announcements, risks and classification changes

4.9 The Government publishes estimates of the direct impact on the public finances of tax and selected spending policy decisions in its 'scorecard', after detailed discussions with the OBR. It also makes changes to departmental spending – only some of which are shown on the scorecard. If we were to disagree with any of the final scorecard numbers it chose, we would use our own estimates in our forecast. We are also responsible for assessing any indirect effects of policy measures on our economy forecast.[2] These are discussed in Box 3.2 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.

Direct effect of new policy announcements on the public finances

4.10 In Annex A, we reproduce the Treasury's scorecard of the direct effect on PSNB of policy decisions in the Autumn Statement or announced since the March Budget. Annex A also includes our formal assessment of the degree of uncertainty associated with each costing that we have certified.

4.11 Table 4.3 summarises the Treasury's policy scorecard and the changes since our last forecast to the Government's plans for spending subject to departmental expenditure limits (DELs). These encompass spending on public services, grants, administration and capital investment. It also shows the effects of a number of policy changes that have not been reported on the scorecard – for example, the lower tax receipts in 2017-18 and 2018-19 that result from abandoning plans to allow existing pensioners to sell their annuities in a secondary market. A positive figure means an improvement in PSNB, i.e. higher receipts or lower expenditure. (A supplementary fiscal table on our website provides a detailed breakdown of how each policy measure affects different categories of tax and spending.)

[2] 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.*

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

	£ billion					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Total effect of scorecard measures	**-0.3**	**-3.6**	**-5.7**	**-8.0**	**-6.9**	**-8.7**
Effects of scorecard receipts measures	**0.0**	**0.4**	**0.6**	**0.7**	**0.6**	**0.6**
of which:						
Fuel duty	0.0	-0.8	-0.8	-0.9	-0.9	-0.9
Insurance premium tax	0.0	0.7	0.8	0.8	0.8	0.9
Income tax and NICs	0.0	0.4	0.7	0.8	0.7	0.7
VAT	0.0	0.2	0.2	0.2	0.2	0.2
Other	0.0	-0.1	-0.3	-0.3	-0.3	-0.3
Effects of scorecard AME measures	**-0.2**	**-2.3**	**-3.3**	**-2.7**	**-2.2**	**-2.4**
of which:						
Welfare	-0.1	-1.0	-2.2	-1.8	-1.9	-2.4
Public corporations' capital expenditure	0.0	-1.2	-0.9	-0.7	-0.2	0.0
Other AME measures	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
Effects of scorecard DEL measures	**-0.1**	**-1.6**	**-3.1**	**-6.0**	**-5.3**	**-6.8**
	Summary of changes					
Total effect of Government decisions	**-0.9**	**-2.5**	**-4.5**	**-8.4**	**-9.6**	**-5.6**
of which:						
Receipts and AME scorecard measures	-0.2	-1.9	-2.6	-1.9	-1.6	-1.9
Non-scorecard measures	0.0	0.3	0.0	-0.9	-0.9	-0.9
Total RDEL changes[1]	-2.4	-0.5	-0.1	-1.7	-1.6	5.0
Total CDEL changes[1]	1.7	-0.3	-1.6	-3.5	-4.8	-5.8
Indirect effect of Government decisions	-0.1	-0.1	-0.1	-0.3	-0.7	-2.1
Financial transactions[2]	0.0	-0.2	-0.2	-0.2	-0.2	0.0
Memo: gross tax increases	0.0	1.4	1.8	1.9	1.8	1.8
Memo: gross tax cuts	0.0	-1.0	-1.1	-1.2	-1.3	-1.3

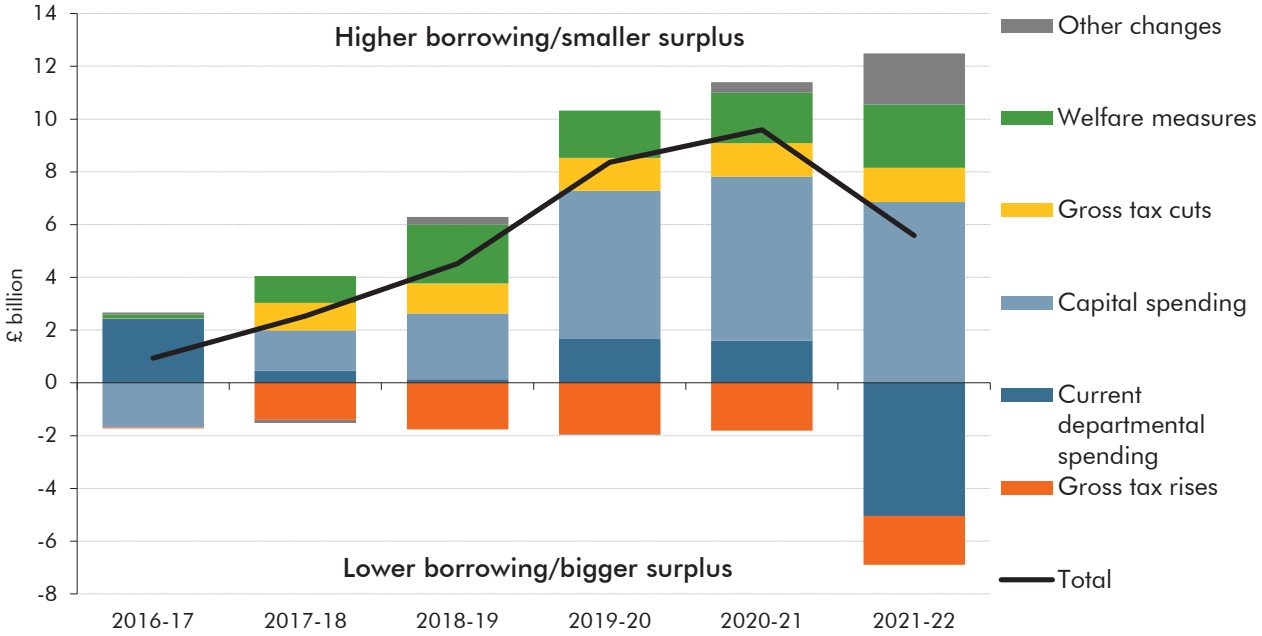
[1] The change in 2021-22 is relative to a baseline that assumes spending by departments would otherwise have remained constant as a share of potential GDP.

[2] Affects PSNCR, not PSNB.

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.

4.12 The Government's Autumn Statement policy decisions add to the deficit in every year. As Chart 4.1 shows, capital spending has been increased by rising amounts across the Spending Review years to 2020-21 and into 2021-22. The Government has also announced a small net tax increase. Tax rises include another increase in the insurance premium tax and more anti-avoidance measures. These outweigh the tax cuts, notably freezing fuel duty next year for the sixth year in a row. Welfare spending is higher after the disability benefit cuts announced in the March Budget were abandoned and because of a decision to taper away universal credit awards less aggressively. Departmental resource spending plans have been increased in 2019-20 and 2020-21, but held flat in real terms in 2021-22. So in that year they fall in real per capita terms and as a share of GDP. Taking forecast changes, classification changes and policy measures into account, we now forecast a deficit of £20.7 billion (0.9 per cent of GDP) in 2020-21, compared to an £11.0 billion surplus in March.

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



Source: OBR

Policy risks

4.13 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**: in the March Budget, the Government restated that it "*is determined to support those in work by continuing to cut taxes and has committed to raise the personal allowance to £12,500 and the higher rate threshold to £50,000 by the end of this Parliament*." These objectives are specified in terms of the levels being targeted and by when (the end of the Parliament), 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 on each year of the forecast of achieving this goal. In April 2017 the personal allowance is due to increase to £11,500 and the higher rate threshold to £45,000. 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 by 2019-20 the personal allowance reaches £12,090 and by 2020-21 it reaches £12,340. For the higher rate threshold, those figures are £47,390 and £48,440. Due to the much larger number of taxpayers affected by changes in the personal allowance, it is that element of the Government's commitment that would be most costly to meet. We have updated the estimates provided by HMRC in March of the cost in 2020-21 of closing the remaining gaps between the levels of the personal allowance and higher rate threshold reached in our central forecast and the

Government's commitments. It is now lower, at £1.3 billion, reflecting the smaller gap to be closed. If 'the end of this Parliament' was interpreted as 2019-20, the cost would be closer to £3 billion (smaller than in March, but bigger than in 2020-21, reflecting the relative size of the gaps to be closed);

- 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 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 it is in fact fiscally neutral. The Treasury has informed us that a number of areas are being considered for pilot schemes but precise details have not yet been established so we do not include the effect of these pilots in our central forecast either;

- the **intention to expand right-to-buy to tenants of housing associations**. An initial pilot scheme has been running since April and an expanded pilot is due to begin in April 2017. The Housing and Planning Act received Royal Assent in May, but the Treasury has informed us that the secondary legislation detailing how the policy will work has not yet been introduced. A further consultation on some of the key parameters is being planned. 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 outcome of the **consultation on fee proposals for grants of probate.** Depending on classification, these fees could boost receipts or leave more space for departmental spending. The fees may also affect inheritance tax receipts. The Government is currently considering its response to a recent consultation and has not yet decided on the form or level of the fees;

- the outcome of the **consultation on work, health and disability** that was launched by the Department for Work and Pensions and Department of Health in October. This may 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 for welfare spending;

- the **devolution of corporation tax to Northern Ireland**. The Corporation Tax (Northern Ireland) Act 2015 was given Royal Assent in March 2015, with devolution due to begin in April 2018. The Northern Ireland Executive has 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, which has not yet been reached, so we have not included the effect of the proposed tax cut in our central forecast; and

- the Government has also announced its intention to **ban additional fees charged by private letting agents**. 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.

4.14 In March we noted a policy risk relating to planned restrictions on EU migrants' access to certain in-work benefits and tax credits. Details of the policy were contingent on a 'remain' vote in the referendum, consistent with the conclusions of the February 2016 European Council. Given the referendum result, the Government has confirmed that these restrictions will not go ahead. As such, they no longer represent a specific risk to this forecast.

4.15 Our forecast for departmental spending in 2019-20 includes the effects of an 'efficiency review' announced in the March Budget. The Government has now announced that this will report next year. Given the Treasury's long-standing track record in keeping departmental spending within its published limits, in March we reflected these planned cuts in our forecast but we also reduced the amount by which we expected departments to underspend the lower spending limits. We have not changed those judgements. (It is not for us to judge now or later whether the cuts would in fact be genuine efficiency savings or cuts in the quality and quantity of public services.) The Treasury has confirmed the review will continue to seek £3½ billion of savings, although it has now chosen to allocate £1 billion of the expected cut to as-yet-unspecified other priorities in this Autumn Statement.

Contingent liabilities

4.16 We have asked the Treasury to identify any changes to future contingent liabilities as a result of policy announcements since March. Several appear relevant:

- in October, the Chief Secretary to the Treasury confirmed the provision of a £2 billion guarantee, provided by the UK Guarantees Scheme, for the new nuclear plant at **Hinkley Point C**. This will appear as an issued government guarantee in the next publication of the *Whole of Government Accounts*;

- the Government will increase country-specific limits for **UK Export Finance** (UKEF) lending from £2½ billion to £5 billion. While not increasing the overall contingent liability limit associated with UKEF, which is set at a maximum of £50 billion, that will potentially increase the riskiness of this liability and therefore the probability that any of it crystallises;

- the Treasury will extend the **UK Guarantee Scheme** until at least 2026 (from 2021 previously). This extends the formal scope to generate new infrastructure-related contingent liabilities between 2021 and 2026;

- the Department for International Development announced a new contingent liability of £360 million associated with lending by the **World Bank Group** agreed at the G7 summit in May to support the Government of Iraq. It would remain in place for the expected 15-year term of the World Bank loan to Iraq.

4.17 We also asked the Treasury *"What if any new contingent liabilities have been created in respect of Government assurances provided to Nissan? If new contingent liabilities have been created, which department's accounts do you expect them to be reported in and how?"* Unfortunately, the Treasury declined to address the substance of our question, telling us instead that *"There is a standard process for departments to report to Parliament as and when they incur contingent liabilities. Any commitments incurring costs will be managed within existing overall DEL totals."*

Classification changes

4.18 Our forecast contains a number of relatively small items that relate to classification decisions that the ONS has taken but has not yet implemented. These are detailed in a supplementary fiscal table on our website. In addition, our current forecast has been affected by a number of classification changes and decisions made since March:

- as set out in Box 4.2, the ONS has announced that it will move from recording **corporation tax** receipts in the public sector finances data on a cash basis (i.e. when the tax is received by HMRC) to a time-shifted accruals basis (closer to when the activity generating the liability occurred). This forecast is still presented on a cash basis, but we have removed the effect of the Budget 2016 measure that changes the timing of instalment payments for large companies in 2019-20 and 2020-21 as this will no longer affect the date at which receipts are scored;

- in 2015, the ONS implemented its decision to reclassify private registered providers of social housing in England into the public sector (see Annex B of our November 2015 *EFO* for more detail). It will now extend that coverage to **private registered providers of social housing in Scotland, Wales and Northern Ireland**. In 2015-16, this is expected to increase PSNB by around £0.4 billion. It increases PSND by around £7 billion. We have reflected these changes in our forecasts;

- in August, the Bank of England announced a package of monetary stimulus measures that included creation of a **Term Funding Scheme**. It will allow participants to borrow central bank reserves in exchange for eligible collateral. The central bank liabilities created when doing so add to PSND in the normal way, but the loans to participants will be classified as illiquid assets and therefore will not be netted off PSND. We expect this to add £85 billion to headline PSND over the next two years; and

- the ONS has recently classified a number of smaller funded **pension schemes** to the public sector, as part of its work programme evaluating schemes against the requirements of ESA10. This is part of a broader review of the treatment of pensions in the National Accounts. Both are likely to affect imputed pensions spending in our forecast. Given this ongoing work and the uncertainty around its results, we have not yet factored the latest classification decisions into this forecast.

Financial sector interventions

4.19 The Government undertook a number of interventions in the financial sector as a result of the crisis and recession of the late 2000s. In each *EFO* we provide an update on the estimated net effect of those interventions on the public finances. Table 4.4 summarises the position as at the end of September 2016.[3]

4.20 A total of £137 billion was disbursed by the Treasury during and following the crisis. That is somewhat higher than we reported in our last *EFO*, largely because UKAR borrowed a further £3 billion from the Treasury to finance the redemption of some privately held UKAR debt. By end-September, principal repayments on loans, proceeds from share sales and redemptions of preference shares amounted to £63 billion. That is up from the £56 billion we reported in March, mainly due to the ongoing rundown and sales of UKAR assets, including repayments of £5 billion on the Treasury loans and £1 billion received for the RBS Dividend Access Share. In total, the Treasury has also received a further £21 billion in other fees and interest, so the net cash position stood at around a £52 billion shortfall.

4.21 As of end-September, the Treasury was still owed £27 billion (largely by UKAR, since the £15.65 billion FSCS loan also relates to UKAR). The value of the shares it retained in Lloyds and RBS by end-October had fallen to £20 billion, down from £25 billion in March, reflecting lower share prices and the sale of some Lloyds shares. Its holdings in B&B and NRAM plc had an equity book value of around £8 billion.

4.22 If the Treasury was 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 £2.8 billion. That is down £4.1 billion from March, with the change more than explained by the fall 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, the Treasury estimates that additional debt interest costs would have amounted to £29.6 billion by end-September, mainly due to the costs associated with RBS and UKAR. This is £5 billion higher than we estimated in March, of which £2.7 billion reflects improvements the Treasury has made to the historical data used to generate this estimate. These improvements also allow us to apportion these costs to the individual interventions. Together this implies an overall cost of £26.8 billion to the Government, £9.3 billion higher than we estimated in March.

[3] The Lloyds and RBS figures show the position at 31 October, so they are consistent with the market-derived assumptions used in the rest of our fiscal forecast. All other figures reflect end-September data, allowing time for detailed scrutiny before the figures are provided to us.

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

	£ billion								
	Lloyds	RBS	UKAR[1]	FSCS[2]	CGS[3]	SLS[4]	Other	**Total**	Change since March *EFO*[5]
Cash outlays	-20.5	-45.8	-44.1	-20.9	0.0	0.0	-5.3	**-136.6**	-3.4
Principal repayments	16.9	3.8	32.1	5.2	0.0	0.0	5.2	**63.3**	7.1
Other fees received[6]	3.2	4.2	4.2	2.7	4.3	2.3	0.2	**21.0**	0.4
Net cash position	-0.5	-37.8	-7.8	-12.9	4.3	2.3	0.2	**-52.4**	4.1
Outstanding payments	0.0	0.0	11.6	15.7	0.0	0.0	0.1	**27.3**	-3.7
Market value[7]	3.6	15.9	8.3	0.0	0.0	0.0	0.0	**27.8**	-4.5
Implied balance	3.2	-21.9	12.0	2.7	4.3	2.3	0.3	**2.8**	-4.1
Exchequer financing	-3.6	-10.5	-9.9	-6.2	0.8	0.2	-0.5	**-29.6**	-5.2
Overall cost	**-0.4**	**-32.4**	**2.1**	**-3.5**	**5.1**	**2.4**	**-0.2**	**-26.8**	**-9.3**
Memo: change in implied balance since March[5]	*-0.2*	*-4.7*	*0.8*	*0.0*	*0.0*	*0.0*	*0.1*	*-4.1*	

[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 31 December 2015 data.
[6] Fees relating to the asset protection scheme and contingent capital facility are included within the Lloyds and RBS figures.
[7] Lloyds and RBS figures are based on average share prices in the 10 working days to 31 October 2016. UKAR is book value of equity derived from its accounts published 8 November 2016 (value up to date to 30 September 2016).

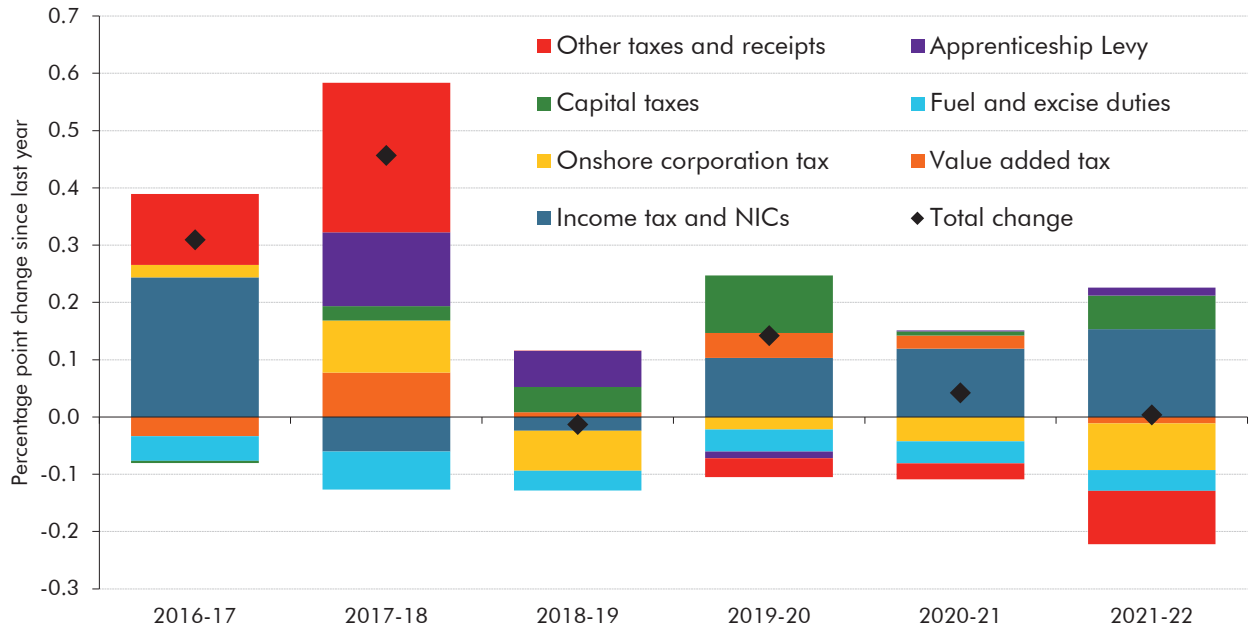
Public sector receipts

4.23 Table 4.5 summarises our receipts forecast as a share of GDP. As shown in Chart 4.2, the tax-to-GDP ratio is expected to rise this year (largely due to past policy measures that boost self-assessment income tax and NICs receipts, including £2½ billion due to forestalling ahead of the planned rise in dividend tax, and insurance premium tax being boosted by tax rate rises) and next year (when higher environmental levies and the introduction of the apprenticeship levy boost other taxes by 0.3 per cent of GDP). From 2018-19 onwards the ratio is expected to change little, as the effect of fiscal drag on taxes on labour income is largely offset by other factors, including the reduction in the main corporation tax rates.

Table 4.5: Major receipts as a per cent of GDP

	Per cent of GDP						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Income tax and NICs	15.0	15.3	15.2	15.2	15.3	15.4	15.6
Value added tax	6.2	6.2	6.2	6.2	6.3	6.3	6.3
Onshore corporation tax	2.3	2.4	2.4	2.4	2.4	2.3	2.2
Fuel duties	1.5	1.4	1.4	1.3	1.3	1.3	1.3
Business rates	1.5	1.5	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	1.1	1.0	1.0	1.0	1.0	1.0	1.0
Capital taxes	1.4	1.4	1.4	1.5	1.6	1.6	1.6
UK oil and gas receipts	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Other taxes	2.9	3.0	3.4	3.4	3.3	3.3	3.2
National Accounts taxes	**33.4**	**33.7**	**34.1**	**34.1**	**34.2**	**34.2**	**34.1**
Interest and dividend receipts	0.3	0.3	0.3	0.3	0.4	0.4	0.5
Other receipts	2.4	2.4	2.4	2.4	2.4	2.4	2.5
Current receipts	**36.1**	**36.4**	**36.9**	**36.9**	**37.0**	**37.0**	**37.1**

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



Source: OBR

Sources of changes in the tax-to-GDP ratio

4.24 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.

4.25 We have used this approach to identify the main drivers of the rise in the tax-to-GDP ratio over the forecast period.

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

4.26 The tax-to-GDP ratio is expected to have risen by 0.3 percentage points in 2016-17, thanks largely to policy measures affecting NICs and self-assessment. That would be a smaller rise than we expected in March. We expect it to rise more gradually over the following five years. Chart 4.3 shows that the main sources of the 0.4 percentage point rise between 2016-17 and 2021-22 are:

- a 0.3 per cent of GDP rise in **PAYE income tax and NICs** receipts. This is more than explained by a rise in the effective tax rate. Most of this is due to 'fiscal drag' as productivity and real earnings growth pick up (to still historically subdued rates), dragging more income into higher tax brackets (see paragraph 4.49);

- a 0.1 per cent of GDP rise in **taxes on property transactions** (stamp duty land tax (SDLT) and Scottish land and buildings transactions tax (LBTT)). This reflects both the tax base and effective tax rate. Tax base growth reflects rising prices and transactions. With thresholds still fixed in cash terms over the forecast period, the rise in the effective tax rate reflects rising house prices dragging a greater proportion of the value of residential transactions into higher tax brackets;

- a 0.1 per cent of GDP rise in **VAT** receipts. Household consumption rises as a share of nominal GDP over the forecast – particularly at the start when business investment is forecast to fall while higher consumer price inflation means that the weakness of real consumption is not matched in nominal consumption. We expect the gap between the theoretical total VAT receipts and the actual amount paid – reflecting receipts lost to evasion and non-compliance, plus any errors in estimating the theoretical total – to narrow over the forecast (due to policy measures announced over the past year). That boosts the effective tax rate. The share of consumer spending on standard rated goods and services is expected to rise modestly in the near term, as average mortgage interest rates (which are not standard rated) are expected to fall; and

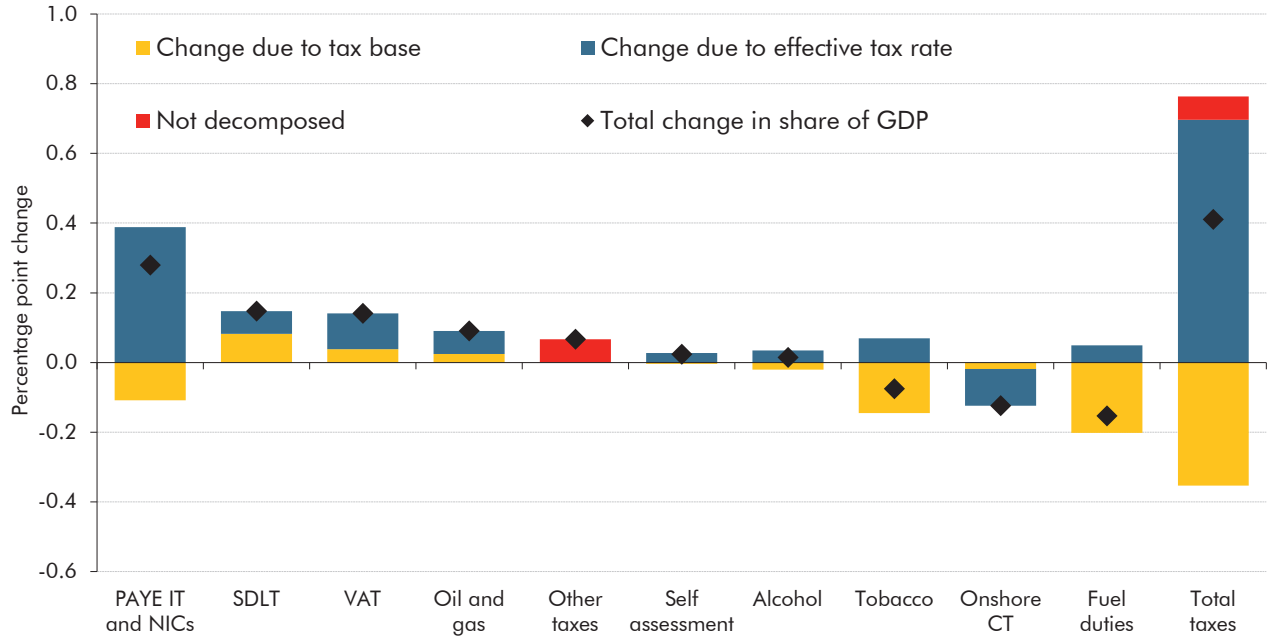
- a 0.1 per cent of GDP rise in **oil and gas** receipts in 2017-18. Receipts move from negative in 2016-17 to positive in that year. The 34 per cent year-on-year rise in sterling oil prices boosts both the tax base (through the higher sterling value of production) and the effective tax rate (as a higher share of fields become profit-making and fewer losses are generated).

4.27 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, raising the effective tax rate; and

- a 0.1 per cent of GDP fall in **onshore corporation tax** receipts. The fall in the ratio is driven by a falling effective tax rate – as the main corporation tax rate will be cut to 17 per cent by 2020-21, growth in investment increases the use of capital allowances and the financial sector sets past losses against future liabilities. The tax base also contributes negatively because we expect financial company profits to grow more slowly than the whole economy in the near term (due to post-referendum uncertainty, the effect of litigation provisions and pressures from regulation).

Chart 4.3: Sources of changes in the tax-to-GDP ratio (2016-17 to 2021-22)



Source: OBR

Detailed current receipts forecast

4.28 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 more detail in *Devolved tax forecasts*, also available on our website.

Table 4.6: Current receipts

	£ billion						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Income tax (gross of tax credits)[1]	168.9	173.7	175.4	183.5	192.6	201.9	213.1
of which: Pay as you earn	146.2	147.2	151.0	157.0	164.2	172.2	181.0
Self assessment	24.3	28.7	27.3	29.4	31.6	33.0	35.1
National insurance contributions	114.1	124.4	129.1	133.0	138.8	145.4	152.1
Value added tax	116.4	120.0	124.7	129.9	136.1	142.0	147.6
Corporation tax[2]	44.4	46.1	50.6	51.6	53.3	54.2	54.3
of which: Onshore	43.9	45.9	48.9	49.4	51.0	52.0	52.3
Offshore	0.5	0.2	1.7	2.2	2.4	2.2	2.0
Petroleum revenue tax	-0.6	-0.8	-0.8	-0.7	-0.6	-0.6	-0.5
Fuel duties	27.6	27.9	27.4	27.9	28.5	29.2	30.0
Business rates	28.8	29.0	29.3	30.3	31.2	31.8	32.3
Council tax	29.0	30.4	31.8	33.2	34.6	35.6	36.7
VAT refunds	14.1	13.9	14.1	14.2	14.1	14.6	15.0
Capital gains tax	7.1	7.3	7.4	8.3	10.3	10.0	11.0
Inheritance tax	4.7	4.7	4.9	4.9	5.1	5.4	5.7
Stamp duty land tax[3]	10.9	11.3	12.2	13.2	14.3	15.6	16.8
Stamp taxes on shares	3.3	3.5	3.3	3.4	3.6	3.7	3.9
Tobacco duties	9.1	9.2	9.2	9.4	9.4	9.4	9.3
Spirits duties	3.1	3.4	3.5	3.6	3.8	3.9	4.1
Wine duties	4.0	4.2	4.3	4.6	4.9	5.2	5.4
Beer and cider duties	3.6	3.6	3.8	4.0	4.1	4.1	4.2
Air passenger duty	3.0	3.2	3.4	3.5	3.7	3.8	4.0
Insurance premium tax	3.7	4.9	5.8	6.0	6.0	6.0	6.1
Climate change levy	1.8	1.9	1.9	2.0	2.2	2.2	2.2
Other HMRC taxes[4]	7.1	7.3	7.4	7.5	7.6	7.7	7.7
Vehicle excise duties	5.7	5.8	6.0	6.1	6.2	6.5	6.7
Bank levy	3.4	2.9	2.7	2.6	2.5	2.4	1.3
Bank surcharge	0.0	1.0	1.3	1.2	1.2	1.2	1.2
Apprenticeship levy	0.0	0.0	2.6	2.7	2.8	2.9	3.0
Licence fee receipts	3.1	3.1	3.2	3.3	3.4	3.4	3.5
Environmental levies	4.6	7.0	9.7	11.4	11.7	12.2	13.0
EU ETS auction receipts	0.5	0.5	0.4	0.4	0.4	0.3	0.3
Scottish taxes[5]	0.6	0.6	0.7	0.7	0.8	0.8	0.9
Diverted profits tax	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Soft drinks industry levy	0.0	0.0	0.0	0.5	0.5	0.5	0.5
Other taxes	6.7	7.7	7.7	7.8	8.1	8.4	8.7
National Accounts taxes	**628.6**	**657.7**	**683.2**	**710.3**	**741.1**	**770.0**	**800.4**
Less own resources contribution to EU	-3.1	-3.3	-3.4	-3.4	-3.5	-3.5	-3.5
Interest and dividends	6.1	5.5	5.9	7.1	8.6	10.0	11.2
Gross operating surplus	45.4	48.6	50.4	52.0	53.5	56.2	59.1
Other receipts	2.7	2.1	2.0	2.0	2.0	2.1	1.9
Current receipts	**679.8**	**710.6**	**738.0**	**768.0**	**801.8**	**834.8**	**869.2**
Memo: UK oil and gas revenues [6]	*0.0*	*-0.5*	*0.9*	*1.5*	*1.8*	*1.6*	*1.5*

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

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

[3] Forecast for SDLT is for England, Wales and Northern Ireland.

[4] Consists of landfill tax (excluding Scotland), aggregates levy, betting and gaming duties and customs duties.

[5] Consists of Scottish LBTT and landfill tax but not the Scottish rate of income tax or aggregates levy.

[6] Consists of offshore corporation tax and petroleum revenue tax.

Table 4.7: Change to current receipts since March

	£ billion					
	Outturn	Forecast				
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Income tax (gross of tax credits)[1]	-0.9	-8.4	-11.2	-14.7	-15.5	-16.8
of which: Pay as you earn	-0.4	-6.2	-10.1	-12.7	-13.5	-14.2
Self assessment	0.2	-1.5	-0.7	-1.4	-1.5	-1.9
National insurance contributions	-0.8	-2.1	-4.3	-5.9	-5.7	-5.7
Value added tax	0.7	-0.1	-0.2	-0.4	0.2	0.0
Corporation tax[2]	0.3	2.7	4.6	5.6	0.5	4.0
of which: Onshore	0.2	2.5	3.0	3.4	-2.0	1.7
Offshore	0.1	0.2	1.6	2.2	2.5	2.3
Petroleum revenue tax	-0.1	0.4	0.3	0.3	0.3	0.2
Fuel duties	0.1	0.4	-0.4	-0.3	-0.3	-0.1
Business rates	1.0	0.6	1.7	1.6	1.4	1.3
Council tax	0.2	0.3	0.4	0.4	0.4	0.1
VAT refunds	-0.2	-0.8	-0.9	-0.9	-1.0	-0.9
Capital gains tax	0.0	0.3	0.5	0.8	1.1	1.1
Inheritance tax	0.1	-0.1	0.0	0.0	-0.2	-0.2
Stamp duty land tax[3]	0.1	-1.6	-2.0	-2.1	-2.0	-1.8
Stamp taxes on shares	0.1	0.4	0.2	0.2	0.2	0.2
Tobacco duties	-0.1	0.0	-0.1	0.0	-0.1	-0.3
Spirits duties	-0.1	0.1	0.0	0.0	0.0	0.0
Wine duties	-0.1	0.0	-0.1	-0.1	-0.1	-0.1
Beer and cider duties	0.0	0.1	0.2	0.2	0.3	0.3
Air passenger duty	0.0	0.0	0.0	0.0	0.0	0.0
Insurance premium tax	0.1	0.3	1.0	1.1	1.0	1.0
Climate change levy	0.0	-0.2	-0.2	-0.1	-0.2	0.0
Other HMRC taxes[4]	0.0	0.3	0.3	0.2	0.0	-0.2
Vehicle excise duties	0.1	0.3	0.3	0.3	0.2	0.2
Bank levy	-0.1	0.0	0.0	0.1	0.2	0.2
Bank surcharge	0.0	0.2	0.2	0.1	-0.3	-0.3
Apprenticeship levy	0.0	0.0	-0.1	-0.1	-0.1	-0.1
Licence fee receipts	0.0	0.0	0.1	0.1	0.1	0.1
Environmental levies	-1.6	-0.4	1.2	1.1	-0.3	-0.1
EU ETS auction receipts	0.0	0.0	0.0	0.0	0.0	-0.1
Scottish taxes[5]	0.0	0.0	0.0	-0.1	-0.1	-0.1
Diverted profits tax	0.0	0.0	0.0	0.0	0.0	0.0
Soft drinks industry levy	0.0	0.0	0.0	0.0	0.0	0.0
Other taxes	-0.6	-0.1	-0.3	-0.4	-0.3	-0.4
National Accounts taxes	**-1.9**	**-7.4**	**-8.9**	**-13.1**	**-20.3**	**-18.4**
Less own resources contribution to EU	0.1	0.1	-0.2	-0.2	-0.1	0.1
Interest and dividends	-0.2	-0.1	-0.4	-0.2	-0.7	-1.2
Gross operating surplus	0.0	1.6	1.8	2.0	2.0	2.2
Other receipts	0.0	0.0	0.0	-0.1	-0.1	-0.1
Current receipts	**-2.0**	**-5.8**	**-7.8**	**-11.6**	**-19.1**	**-17.3**
Memo: UK oil and gas revenues [6]	*0.0*	*0.5*	*1.9*	*2.4*	*2.8*	*2.5*

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

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

[3] Forecast for SDLT is for England, Wales and Northern Ireland.

[4] Consists of landfill tax (excluding Scotland), aggregates levy, betting and gaming duties and customs duties.

[5] Consists of Scottish LBTT and landfill tax 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

4.29 We have revised our receipts forecast down in every year, with the revision reaching £14.7 billion in 2020-21 on a like-for-like basis. As Table 4.8 shows, the main downward revisions are explained by:

- **PAYE income tax and national insurance contributions (NICs)**. Weak outturn receipts (at the end of 2015-16 and so far in 2016-17) and weaker earnings growth (reflecting our downward revision to underlying productivity growth) have reduced receipts significantly. An upward revision to the number of people incorporating – and thereby paying tax on dividends or profits rather than employment income – reduces receipts too (see Box 4.1). Revisions to PAYE and NICs receipts dominate all other changes;

- **self-assessment income tax.** We have revised down the expected yield from a number of past policy measures. More incorporations also reduces receipts; and

- **stamp duty land tax (SDLT)**. Weak receipts in the year so far at the top end of the market, reflecting uncertainty both before and after the referendum.

4.30 The main sources of upward revision include:

- **onshore corporation tax.** Receipts this year have been stronger than expected, with October particularly strong. Weaker business investment will reduce the use of capital allowances while the upward revision to incorporations also boosts receipts;

- **North Sea revenues.** Higher sterling oil prices, thanks to the $15 a barrel rise in the dollar price since its low in the first quarter of 2016 and a 14 per cent fall in the pound against the dollar, mean that we now forecast positive revenues from the sector; and

- **capital gains tax.** Higher equity prices – boosted by the effect of a weaker pound on the sterling value of multinational companies' overseas earnings – raise receipts.

4.31 Over the forecast period as a whole, the effect of Government decisions is to raise receipts by £0.6 billion in 2020-21 (£0.8 billion a year on average from 2017-18). This includes:

- the latest **freeze in fuel duty**, which costs £0.9 billion by 2020-21 (see Box 4.3);

- the latest rise in **insurance premium tax** takes effect in June 2017. This third rate increase since last year's election means that the rate will have doubled in 20 months. This is expected to raise £0.9 billion by 2020-21;

- a package of measures to target **tax avoidance and evasion** raise receipts by £0.5 billion in 2021-22. Estimates in this area are highly uncertain (see Annex A);

- three **measures not included on the Treasury's scorecard** raise receipts by £0.2 billion over the forecast (also covered in Annex A); and

- the **indirect effects** of Government decisions lower receipts by £0.2 billion in 2020-21. That reflects overall decisions on the pace and composition of fiscal tightening.

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

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	**716.5**	**745.8**	**779.5**	**820.9**	**852.2**
Classification changes	0.9	0.9	0.9	-5.1	-2.6
March forecast post-classification change	**717.3**	**746.7**	**780.4**	**815.8**	**849.6**
November forecast	**710.6**	**738.0**	**768.0**	**801.8**	**834.8**
Like-for-like change	-6.7	-8.6	-12.4	-14.1	-14.7
	Underlying OBR forecast changes				
Total change to underlying forecast	**-6.7**	**-9.3**	**-13.1**	**-15.2**	**-15.3**
of which:					
Income and expenditure	**-1.4**	**-7.5**	**-11.8**	**-10.4**	**-9.1**
Average earnings	-2.0	-6.5	-8.8	-8.9	-9.4
Employee numbers	0.0	-1.0	-1.4	-1.0	-0.8
Non-financial company profits	0.7	1.1	0.4	0.9	1.6
Consumer expenditure	0.3	-0.3	-0.9	-0.8	-0.6
Investment	0.0	0.3	0.7	1.0	1.3
Other	-0.5	-1.1	-1.8	-1.6	-1.3
North Sea	**0.4**	**1.3**	**1.7**	**1.6**	**1.7**
Oil and gas prices	0.3	1.0	1.2	1.0	1.2
Production and expenditure	0.1	0.3	0.5	0.6	0.5
Property markets	**-1.0**	**-1.5**	**-1.5**	**-1.4**	**-1.0**
Market-derived assumptions	**0.4**	**1.7**	**1.9**	**1.8**	**1.7**
Equity prices	0.3	1.2	1.5	1.5	1.5
Interest rates	0.0	-0.4	-0.5	-0.5	-0.6
Exchange rates	0.1	0.8	0.9	0.8	0.7
Prices	**0.1**	**0.5**	**-0.3**	**-0.7**	**-0.7**
Other economic determinants	**0.3**	**0.0**	**-0.2**	**-0.4**	**-0.6**
Other assumptions	**-5.5**	**-3.7**	**-2.8**	**-5.7**	**-7.2**
IT and NICs receipts and modelling	-8.3	-6.9	-7.3	-7.9	-8.1
SDLT receipts and modelling	-0.4	-0.7	-0.7	-0.8	-0.8
Corporation tax receipts and modelling	1.7	1.5	2.3	1.6	1.8
VAT receipts and modelling	0.1	0.5	0.8	1.1	0.8
Incorporations modelling	-0.5	-0.8	-1.1	-1.3	-1.6
Excise duty modelling	0.4	0.8	0.9	0.9	1.0
Gross operating surplus	0.8	1.0	1.2	1.2	1.2
Environmental levies modelling	-0.4	1.2	1.1	-0.3	-0.1
VAT refunds modelling and outturn	-0.8	-0.9	-0.9	-1.1	-1.1
Other judgements and modelling	2.0	0.6	1.0	0.7	-0.3
	Effect of Government decisions				
Total effect of Government decisions	**0.0**	**0.7**	**0.7**	**1.1**	**0.6**
of which:					
Scorecard measures	0.0	0.4	0.6	0.7	0.6
Non-scorecard measures	0.0	0.3	0.0	0.3	0.2
Indirect effects of government decisions	0.0	0.0	0.1	0.1	-0.2
Memo: November forecast on a pre-measures basis	*710.6*	*737.4*	*767.3*	*800.6*	*834.2*

Receipts in 2016-17

4.32 In preparing this forecast, we had access to full ONS receipts data up to September 2016 and administrative data on most central government receipts for October.

4.33 We have revised down receipts in 2016-17 by £6.7 billion, with the revision more than explained by weaker income tax and NICs receipts. But as Table 4.9 shows, we expect overall growth in tax receipts to be slightly faster in the second half of the year than in the first. These figures are presented on a basis that is consistent with the current ONS data. Our full forecast also includes the effect of ONS classifications decisions that have been announced but not yet implemented, since we seek to forecast final rather than initial ONS outturns.

4.34 Faster expected growth in the second half of the year reflects:

- **self-assessment income tax** receipts. SA receipts are expected to be boosted by past policy measures that together add around £3 billion to 2016-17 receipts. £2½ billion reflects forestalling ahead of the April 2016 rise in dividend tax. SA receipts are received with a one year lag. Most are paid in the second half of the fiscal year;

- **corporation tax**, where administrative data showed that October cash receipts (a big month for quarterly instalment payments) were 20 per cent up on last year; and

- the year-on-year comparison for **PAYE IT and NICs** has been distorted by base effects in 2015-16. Lower bonuses in 2015-16 meant that a smaller proportion of receipts were paid during bonus season at the end of the year. We expect bonuses to grow in line with earnings this year, making the profile of receipts more end-loaded. This assumption is clearly subject to considerable uncertainty in light of volatility in financial markets and other post-referendum effects.

4.35 Partly offsetting those factors, we expect growth in SDLT receipts to be much weaker in the second half of 2016-17. SDLT receipts in April 2016 were up 48 per cent on a year earlier, reflecting forestalling ahead of the introduction of an additional rate of stamp duty on additional properties (i.e. buy-to-let investments and second homes). The surcharge was imposed from April, but many transactions that took place at the end of March to avoid it would have paid their stamp duty in early April. Over the three months following the referendum, SDLT receipts were down 0.2 per cent on a year earlier. Receipts were notably weaker at the top-end of the residential and commercial markets, particularly in London. We expect weak SDLT to persist over the rest of the year.

Table 4.9: Tax receipts in 2016-17

	£ billion			Percentage change on 2015-16		
	Outturn	Forecast		Outturn	Forecast	
	Apr-Sep	Oct-Mar	Full year	Apr-Sep	Oct-Mar	Full year
Income tax and NICs	138.0	160.1	298.1	4.5	6.1	5.3
of which:						
PAYE and NICs	130.5	141.1	271.6	4.0	4.7	4.4
Self assessment	8.9	19.8	28.7	12.9	20.6	18.1
Value added tax	58.8	61.2	120.0	2.8	3.4	3.1
Corporation tax[1]	21.0	26.1	47.1	3.4	8.4	6.1
Petroleum revenue tax	-0.4	-0.4	-0.8			
Fuel duties	14.1	13.8	27.9	1.8	0.6	1.2
Capital gains tax	0.0	7.2	7.3		2.4	2.7
Inheritance tax	2.4	2.3	4.7	2.9	-2.2	0.4
Stamp duties[2]	7.7	7.5	15.3	8.2	1.3	4.7
Tobacco duties	4.0	5.2	9.2	-1.7	3.7	1.3
Alcohol duties	5.4	5.8	11.2	2.4	6.0	4.2
Business rates	14.5	14.5	29.0	0.5	2.3	0.7
Council tax	15.3	15.2	30.4	5.3	4.6	5.0
Other[3]	28.2	28.3	56.5	4.1	5.4	4.9
National Accounts taxes[3]	**309.1**	**346.8**	**655.9**	**3.7**	**5.0**	**4.3**

[1] Includes onshore corporation tax and the bank surcharge.

[2] Includes stamp taxes on shares, SDLT for England, Wales and Northern Ireland and Scottish LBTT.

[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 fiscal supplementary table on our website.

4.36 The changes described above mean that the receipts-to-GDP ratio in 2016-17 rises significantly less than we forecast in March. As Table 4.10 shows, the revision is more than explained by weakness in the effective tax rate on PAYE income tax and NICs, despite the boost from abolishing the NICs contracting out rebate. We have assumed that this weakness is structural and therefore persists across the forecast period. This is partly offset by higher public sector gross operating surplus and environmental levies. These both affect receipts and spending, so are neutral for borrowing.

Table 4.10: Year-on-year change in the receipts-to-GDP ratio in 2016-17

	Year-on-year change in the receipts-to-GDP ratio in 2016-17					
	Percentage point change					
	PAYE IT and NICs	SA IT	Onshore CT	VAT	Other receipts	Total receipts
March forecast	0.47	0.27	-0.09	0.01	-0.12	0.53
November forecast	0.10	0.18	0.02	-0.03	0.04	0.31
Change	**-0.37**	**-0.09**	**0.11**	**-0.04**	**0.17**	**-0.22**
of which:						
Tax base	-0.08	0.01	0.05	0.03	-0.06	-0.06
Effective tax rate	-0.29	-0.10	0.07	-0.07	0.04	-0.35
Not decomposed					0.19	0.19

Tax-by-tax analysis

Income tax and NICs

4.37 Receipts of income tax and NICs have been revised down £10.5 billion in 2016-17. This comprises £8.4 billion from the tax on employee salaries, £1.5 billion from self-assessment (SA) income tax and £0.6 billion from other smaller elements. Even with these substantial downward revisions, we expect income tax and NICs receipts to show stronger growth in the second half of the year, as set out in paragraph 4.34.

4.38 The £8.4 billion reduction in the 2016-17 estimate of PAYE and NIC receipts reflects:

- a £2.0 billion shortfall from **lower-than-expected receipts in 2015-16**. Outturn data suggest that receipts relating to the end of 2015-16 were weaker than we assumed in March, reflecting lower tax from financial and non-financial sector bonuses;
- a £2.0 billion shortfall from **lower earnings growth** than we forecast in March; and
- a further £4.4 billion shortfall mainly due to a **lower than expected effective tax rate** on employee salaries. This may reflect changes in the composition of the labour force or the income distribution.

4.39 Our March forecast assumed a rise in PAYE and NICs receipts of 0.5 per cent of GDP in 2016-17, with NICs accounting for much of it due to the Budget 2013 policy decision to abolish the NICs contracting-out rebate from April 2016. Sectoral data indicate that the strongest receipts growth has been in those sectors most affected by this measure, including the public sector. But we now expect a rise of just 0.1 per cent of GDP in 2016-17, with a 0.3 per cent rise in NICs partly offset by a fall in PAYE receipts as a share of GDP.

4.40 Growth in receipts from the financial sector – with many jobs at the higher end of the income distribution – has been weak so far in 2016-17. Tax from occupational pensions has actually fallen so far in 2016-17, which may reflect a lower-than-expected yield from pensions flexibility withdrawals. The composition of employment gains may also be a factor behind the lower than expected effective tax rate. After two years in which the majority of the rise in employee jobs was full-time, over half of the rise in the past six months has been in part-time employment, where the effective tax rate paid is typically lower.

4.41 Given the importance of the shape of the income distribution for PAYE receipts, we allow for differential earnings growth across it when calculating marginal and average tax rates for the forecast. In March we assumed that earnings growth at the top-end would be similar to the distribution as a whole. We have made a small adjustment in this forecast on the assumption that high-paying sectors such as financial and business services could be 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 2018-19. The weaker marginal tax rates from the combination of lower earnings growth and the revision to the income distribution

take off around £0.7 billion off income tax and NICs receipts by 2020-21. We will revisit this assumption once the policy settings that will follow our exit from the EU are clearer.

4.42 The downward revision to PAYE and NICs receipts builds across the forecast, rising from over £8 billion in 2016-17 to around £20 billion by 2020-21. Slower earnings growth – due to the downward revision to our trend productivity growth assumption – takes over £9 billion off the forecast by 2020-21. The £3.9 billion shortfall in 2016-17 that is not explained by weaker earnings growth or other factors is assumed structural and pushed through to future years.

4.43 We expect only modest growth in receipts next year due to weak earnings growth, slower employment growth and the above-inflation rises in the personal allowance and the higher rate threshold announced in Budget 2016. Following the Government's decision to abandon plans to create a market for secondary annuities, we have taken out the associated yield of just under £0.5 billion in both 2017-18 and 2018-19. We noted when the policy was announced in Budget 2015 that it was possible that no secondary market would develop and that the effect of the policy would therefore be nil.

4.44 From 2018-19 onwards, we expect receipts growth to pick up as stronger real earnings growth outpaces inflation-linked increases in tax thresholds and allowances. This causes 'fiscal drag' as more income is taxed at higher rates.

4.45 While the return of fiscal drag will boost PAYE receipts in the final years of the forecast, growth in receipts is likely to be held back by the rising trend in incorporations – both an underlying trend and the growing number that appear tax-motivated – and potential effects on the income distribution from leaving the EU. Box 4.1 looks at trends in incorporations by former employees (reducing PAYE) and the self-employed (reducing self-assessment).

4.46 We expect self-assessment (SA) income tax receipts to rise by £4.4 billion in 2016-17, up 18 per cent on a year earlier. These relate to 2015-16 liabilities. Forestalling ahead of the pre-announced April 2016 dividend tax rise is expected to boost receipts by around £2½ billion in 2016-17. The effect of forestalling will only be evident after individuals make the balancing payment on 2015-16 liabilities, which is not due until 31 January 2017. Receipts in the first half of 2016-17 (up £1 billion on a year earlier) almost entirely reflect payments on account based on last year's tax liabilities.

4.47 The strong rise in SA receipts in 2016-17 also reflects steady underlying growth in the self-employment income and dividend tax bases and by boosts from other policy measures. But it is £1.5 billion lower than we forecast in March. Much of the revision reflects a reassessment of the yield from earlier policy measures. In particular, the accelerated payments measure is expected to raise £0.7 billion less in 2016-17 than assumed in March. Accelerated payments require taxpayers to pay the disputed tax upfront. Both the stock of cases liable for the measure and tax per case have been revised down.

4.48 The path of SA income tax receipts over the rest of the forecast period is heavily influenced by the effect from measures. The unwinding of dividend tax forestalling explains the drop in

SA receipts in 2017-18. Receipts from accelerated payments drop off sharply after 2017-18 since they bring forward receipts. The higher dividend tax rate adds at least £2½ billion to SA receipts from 2019-20 onwards and a number of other measures announced at recent Budgets and Autumn Statements are expected to boost receipts. These include changes to non-domicile rules, HMRC compliance and 'making tax digital' measures, restrictions on residential landlords' deductions from taxable income and the savings tax reforms. Much of the remaining liabilities on savings income will now be collected via SA.

4.49 On the basis of this forecast, HMRC's Personal Tax Model (PTM) suggests that income tax liabilities will rise by 24 per cent between 2016-17 and 2021-22.[4] Almost half that growth is accounted for by additional rate taxpayers, the number of whom is forecast to rise from 329,000 in 2016-17 to 469,000 in 2021-22 (from 1.1 to 1.5 per cent of taxpayers). This reflects the fact that the additional rate threshold is frozen at £150,000 over the forecast while the income tax base grows by 4.3 per cent. Another quarter of the receipts growth comes from higher rate taxpayers, who rise in number from 4.4 million in 2016-17 to 4.6 million in 2021-21 (from 14.5 to 14.8 per cent of taxpayers) – despite the higher rate threshold rising from £43,000 in 2016-17 to £45,000 by 2017-18 and then in line with CPI inflation to £49,490 in 2021-22. But the 6 per cent rise in the number of higher rate taxpayers over this period is much smaller than the 21 per cent rise over the previous five years. Only a quarter of the rise in income tax liabilities relates to basic rate taxpayers, of which there are expected to be 25.6 million by then (81.8 per cent of the total).[5]

[4] Income tax liabilities relate directly to the year in which income is earned. This differs from our forecast which is on a National Accounts basis, where self-assessment tax receipts are scored in the year they are collected. Taxpayer numbers and shares of income tax liabilities are estimated from published information in the 2013-14 'Survey of Personal Income'. These data have been projected using the economic assumptions in this *Economic and fiscal outlook*.

[5] The remaining 1.9 per cent of income taxpayers not covered in this breakdown comprise individuals with no taxable earnings, but with taxable income from savings charged at 20 per cent and/or dividends at 7.5 per cent.

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

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	308.6	320.0	337.1	352.6	369.8
November forecast	298.1	304.5	316.5	331.4	347.3
Change	**-10.5**	**-15.5**	**-20.6**	**-21.3**	**-22.5**
Underlying OBR forecast changes					
Total	**-10.5**	**-15.4**	**-20.8**	**-22.2**	**-23.1**
(by economic determinant)					
Average earnings	-2.0	-6.5	-8.8	-8.9	-9.4
Employee numbers	0.0	-1.0	-1.4	-1.0	-0.8
Inflation	0.2	0.1	-1.0	-1.4	-1.4
Other economic determinants	0.1	-0.1	-0.5	-0.6	-0.5
(by other category)					
Lower 2015-16 PAYE and NIC1 outturn	-2.0	-2.0	-2.0	-2.0	-2.0
Lower 2016-17 PAYE and NIC1 receipts	-3.9	-4.3	-4.3	-4.5	-4.6
Incorporations modelling	-0.5	-1.1	-1.8	-2.3	-3.0
Marginal tax rates (incl. income distribution)	0.0	0.0	-0.2	-0.4	-0.7
Accelerated payments re-costing	-0.7	0.0	0.0	0.3	0.2
Other SA recostings and modelling	-1.1	-1.1	-1.4	-1.7	-2.0
Other modelling and receipts changes	-0.7	0.4	0.6	0.5	1.0
Changes due to Government decisions					
Scorecard measures	**0.0**	**0.4**	**0.7**	**0.8**	**0.7**
Removal of secondary annuities costing	**0.0**	**-0.5**	**-0.5**	**0.1**	**0.1**
Indirect effects of Government decisions	**0.0**	**0.0**	**0.0**	**0.0**	**-0.2**

Box 4.1: The effect of incorporations on tax receipts

Our PAYE, SA, NICs and corporation tax (CT) forecasts are affected by our assumption that incorporations will continue their rising trend. Employment income is taxed more heavily than profits and dividends, so when formerly employed or self-employed individuals incorporate, their tax bills generally fall and the government loses revenue. We model these fiscal impacts separately and add them to the relevant forecasts for income tax, NICs and corporation tax.

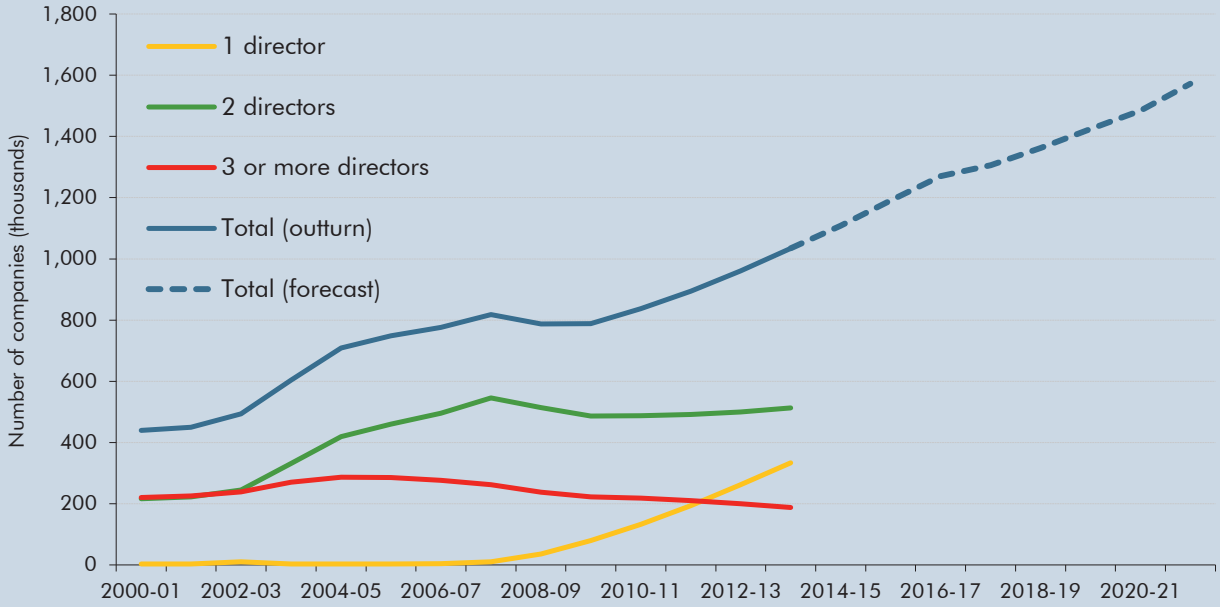
As set out in our 2016 *Forecast evaluation report*, we appear to have been underestimating the pace of incorporations and their effect on receipts. Since March, we have worked with HMRC to overhaul the forecast model in order better to reflect the affected population, the tax incentives they face and the exchequer cost of a typical incorporation.

The incorporations model is estimated on a sub-population of companies that are considered to have a genuine choice over their legal employment status. This population is defined as those with positive trading profits (after losses being carried forward) of up to £500,000 (in 2014 prices). There were roughly 1 million such companies in 2014, out of a total registered company population of 3.2 million. Between 2000 and 2014, growth in this population averaged around 7 per cent a year, much faster than growth in either employees or the self-employed.

The 2006 Companies Act abolished the legal requirement for companies to have at least two

directors. Since then, the number of single-director companies among this population has risen rapidly, reaching 37 per cent of the total by 2014 and accounting for all the growth since 2007. While the data used in the model only extends to 2014, other sources point to growth continuing. For example, the Labour Force Survey suggests that employment among sole directors of their own limited business increased by around 25 per cent between 2014 and 2015.

Chart A: Historical and forecast company population by number of directors



Source: HMRC

Not all these incorporations are tax-motivated, as incorporation provides other benefits such as limited liability status. Operating as a company is an increasingly common way to structure a business in a number of sectors – particularly construction, retail, IT, media and professional services. These sectors account for more than half the modelled company population in 2014.

The model estimates three key components to produce the overall effect on receipts. These are:

- **tax incentives** are modelled as a function of the income tax, NICs and CT rates in each year of the forecast. For both the employed and self-employed populations, the theoretical tax gain from incorporating is calculated for a range of incomes and then weighted by their distribution. These calculations assume that typical directors take a salary of at least the primary NICs threshold (currently £8,060) to ensure eligibility for state pensions and other benefits, retain a portion of earnings within the company each year and then withdraw the remaining post-CT profits as dividends. For the 2016-17 tax regime, the theoretical annual tax benefits for employed and self-employed individuals with incomes of around £30,000 are £3,300 and £700 respectively. These incentives are sensitive to tax rates. In 2021-22, when the CT rate will be 17 per cent, the equivalent figures (in today's prices) will be £4,200 and £1,000;
- the **volume of incorporations** is estimated using a time series regression that relates the size of the company population to the calculated tax incentives and various macroeconomic variables. This produces a breakdown of company numbers between 'underlying' and 'tax-

motivated' entities. The first group make up the majority of the company population (and the effect on the receipts forecast) and is forecast to expand regardless of tax incentives. The second group is sensitive to changes in tax rates, meaning policy measures that affect the relevant rates will have an additional effect on overall receipts; and

- **exchequer costs** are calculated by multiplying the forecast volume of incorporations by an estimated average cost per incorporation. The average cost is not the theoretical benefit calculated above, but is drawn from the observed income/profits of the modelled population. This allows for observed patterns of multiple directors within companies splitting income to increase the tax benefit. Across the forecast period, exchequer costs will come from the flow of new incorporations each year plus the stock of those incorporated since the first year of the forecast. These costs are then apportioned to the relevant taxes and added to those forecasts. We assume that the average cost per new incorporation will be higher than the average cost in the stock, so that it also rises over time.

The model is also used in policy costings to estimate the effects of changing tax rates on the number of incorporations and therefore receipts. A proposed change in the income tax, dividend, CT or NICs rates will affect the flow of incorporations in the estimated tax-motivated population as well as the average cost of each incorporation for the whole population.

In recent years, the Government has announced significant changes to the headline CT rate and to the tax rate on dividend income. The rise in dividend rates from 2016-17 reduces the tax incentive to incorporate, but this is partly offset by CT rate cuts in 2017-18 and 2020-21. Table A shows the effect of the baseline incorporation forecast and those rate changes on receipts.

Even allowing for the dividend tax reforms, we expect incorporations to increase by 5 per cent a year on average over the forecast period, much faster than the 0.4 per cent a year rise in total employment. Relative to a counterfactual that incorporations increased in line with employment, this takes around £3½ billion off total receipts in 2021-22. This is the net effect of boosting CT by almost £3 billion, but reducing income tax and NICs receipts by over £6 billion.

Table A: Total impact of incorporation modelling on forecast receipts

	£ billion					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Baseline incorporation forecast	-1.0	-1.7	-2.4	-3.0	-3.7	-4.4
Dividend tax reform	0.1	0.6	0.9	1.2	1.5	1.8
Corporation tax rate cuts	0.0	0.0	-0.2	-0.3	-0.4	-1.2
Other measures	0.0	0.0	0.1	0.1	0.2	0.2
Post measures incorporations forecast	**-1.0**	**-1.1**	**-1.7**	**-2.0**	**-2.5**	**-3.5**
of which:						
Corporation tax	0.1	0.8	1.3	1.9	2.4	2.8
Income tax	-0.6	-1.0	-1.5	-2.0	-2.4	-3.1
NICs	-0.5	-0.9	-1.4	-1.9	-2.4	-3.2

VAT

4.50 Accrued VAT receipts have risen 2.8 per cent on a year earlier so far in 2016-17 and are expected to increase at a slightly faster rate over the rest of the year. That reflects October administrative data that showed stronger-than-expected cash receipts. We expect real consumption growth to slow in the second half of 2016-17, but that is driven by higher inflation with nominal consumption growth holding up in the short term.

4.51 Compared with our March forecast, we expect accrued VAT receipts to be lower from 2017-18 onwards. That revision is more than explained by lower growth in the tax base. Nominal consumption has been revised down, with the effect of higher inflation only partly offsetting the reduction to real spending associated with the productivity-driven downward revision to earnings growth. Lower nominal GDP growth also lowers receipts from other sectors.

4.52 We have revised up our forecast for the share of household spending on standard rated goods and services (the SRS) over the forecast, boosting receipts by £0.8 billion in 2020-21. That largely reflects a lower assumption for Bank Rate, which we assume feeds through to mortgage rates and therefore reduces household spending on mortgage interest payments (which are zero-rated for VAT).

4.53 The 'implied VAT gap' in Table 4.1 is the difference between the theoretical total VAT receipts produced by the forecast model and actual VAT receipts. It reflects a number of factors, including true non-compliance but also any modelling and measurement errors. The level and profile of recent changes could therefore reflect real-world movements in non-compliance or errors in estimating the theoretical total. The implied gap rises this year by 0.7 percentage points as cash VAT receipts have risen more slowly than the model predicts. We assume that gap narrows over the forecast due to policy measures announced in Autumn Statement 2015 and Budget 2016.

4.54 In November 2015, we adjusted our VAT forecast to reflect the Government's assumption that it would comply with an EU court ruling that meant that the reduced rate of VAT (5 per cent) could no longer be applied to the installation of energy saving materials in residential properties. The Government has now informed us that it has postponed that change until an unspecified future date. We have therefore removed the effect from our forecast, which reduces receipts by £50 million a year on average from 2017-18 onwards, with a smaller effect in 2016-17.

4.55 There is a substantive body of EU law establishing common rules for VAT policy across Member States. In the absence of clear statements of Government policy, our central forecast makes no assumptions about potential changes to the UK VAT system when we leave the EU. We will return to this assumption when any details become clear.

Table 4.12: Key changes to the VAT forecast since March

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	120.1	124.8	130.3	135.9	142.0
November forecast	120.0	124.7	129.9	136.1	142.0
Change	**-0.1**	**-0.2**	**-0.4**	**0.2**	**0.0**
	Underlying OBR forecast changes				
Total	**0.0**	**-0.4**	**-0.6**	**0.0**	**-0.1**
of which:					
Household spending	0.3	-0.1	-0.6	-0.5	-0.4
Standard rated share	0.1	0.2	0.5	0.8	0.8
Other economic determinants	-0.4	-0.7	-0.8	-0.6	-0.5
Outturn receipts and modelling	0.0	0.2	0.4	0.3	-0.1
	Changes due to Government decisions				
Scorecard measures	**0.0**	**0.2**	**0.2**	**0.2**	**0.2**
No change to VAT on energy saving materials	**0.0**	**0.0**	**0.0**	**0.0**	**-0.1**

Onshore corporation tax

4.56 The ONS has announced that it will move from recording corporation tax (CT) receipts in the public sector finances data on a cash basis (when the tax is received by HMRC) to a time-shifted accruals basis (closer to when the activity generating the liability occurred). This forecast is still presented on a cash basis, but we have removed the effect of the Budget 2016 measure that changes the timing of instalment payments for large companies in 2019-20 and 2020-21 as this will no longer affect the date at which CT receipts are scored. We will present our next forecast entirely on an accruals basis. Box 4.2 sets out more detail.

4.57 We have revised up our 2016-17 forecast for onshore CT receipts by £2.5 billion. This reflects strong instalment payments made by large companies on 2016 profits – October receipts were up by around 20 per cent on a year earlier. Receipts from industrial and commercial companies, the financial sector and life assurance firms have all been revised up since March. In particular, the profits of life assurance firms have been boosted by the post-referendum rise in bond prices. Receipts from the financial sector are also up strongly, helped by the Budget 2016 measure that further restricts the use of trading losses by banks.

4.58 The profile of receipts over the forecast is influenced by policy measures. Receipts growth peaks in 2017-18, then slows over the rest of the forecast. The CT main rate will be cut to 19 per cent in April 2017, but other measures – such as restricting the use of trading losses, the deductibility of corporate interest expenses and reducing evasion by offshore property developers – more than offset the effect of the rate cut and slower profits growth on 2017-18 receipts. A less generous annual investment allowance (£200,000 from January 2016 after a temporary rise to £500,000) will boost small company CT in 2017-18. The further reduction in the main rate to 17 per cent in April 2020 lowers thereafter.

4.59 Abstracting from the change in the scoring of the CT timing measure, receipts have been revised up by between £2½ billion and nearly £5 billion a year relative to March. With

uncertainty related to the UK's exit from the EU assumed to reduce investment, use of capital allowances will deduct less from liabilities. This boosts receipts by £1.3 billion by the end of the forecast. Partly offsetting that, we have assumed that financial sector profit growth will be weaker than the whole economy average during the run-up to and after the UK leaves the EU. That takes around £¾ billion off the forecast by 2020-21.

4.60 We have pushed the effect of higher receipts from the financial sector and from industrial and commercial companies in 2016-17 through into future years. But we expect the strong growth in receipts from the life assurance sector to be partly a one-off, so we have only pushed some of that effect into future years. CT receipts have also been boosted by higher growth of incorporations than we assumed in March (see Box 4.1).

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

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	**43.4**	**45.9**	**46.1**	**53.0**	**50.4**
Classification changes	0.0	0.0	0.0	-5.6	-3.2
March forecast post-classification change	**43.4**	**45.9**	**46.1**	**47.4**	**47.2**
November forecast	**45.9**	**48.9**	**49.4**	**51.0**	**52.0**
Change	2.5	3.0	3.4	3.6	4.8
	Underlying OBR forecast changes				
Total	**2.5**	**3.0**	**3.4**	**3.6**	**4.8**
of which:					
Industrial and commercial company profits	0.7	1.1	0.4	0.9	1.6
Industrial and commercial company investment	0.0	0.3	0.7	1.0	1.3
Financial company profits	0.0	-0.2	-0.3	-0.5	-0.7
Other economic determinants	0.0	-0.1	-0.3	-0.5	-0.5
Incorporations modelling	0.0	0.3	0.7	1.1	1.3
Life sector receipts	1.2	1.2	0.6	0.4	0.5
Non-life receipts and modelling	0.5	0.3	1.7	1.2	1.2

Box 4.2: New National Accounts accruals methodology for corporation tax

The ONS announced on 21 October that it would implement a new accruals methodology for corporation tax (CT) early in 2017. CT is currently scored on a cash basis (when it is received by HMRC). The new approach would time-adjust cash receipts so that they score closer to the time when the economic activity that created the CT liabilities took place.

In the July 2015 Budget, the Government decided to bring the CT payment date for large non-oil companies forward by four months from April 2017. In Budget 2016, it delayed the start of the policy to April 2019. With CT scored on a cash basis, this boosted receipts by £5.6 billion in 2019-20 and by £3.2 billion in 2020-21. In effect, the timing measure delivered a one-off boost to receipts on a cash basis – with the biggest boost in the surplus target year that applied in that Budget – without any change in underlying liabilities.

Eurostat guidance is that revenues recorded on a cash basis should be time-adjusted. The

changes to the ONS methodology will be that:

- instalment payments by **large non-oil companies prior to the CT timing measure**: these are paid quarterly starting seven months after the start of the accounting period. They would be spread equally over the three-month period 4 to 6 months previously;
- instalment payments by **large non-oil companies after the CT timing measure**: these are paid quarterly starting three months after the start of the accounting period. They would be spread over the month they were received and the preceding two months (i.e. they would be accrued to the same months as prior to the measure). This takes out the yield from the timing measure; and
- payments by **small companies**: these are due nine months and a day after the end of the accounting period. They would be spread over the period from 10 to 21 months before they are paid. For example, receipts received in October 2016 relating to calendar year 2015 liabilities would be accrued back and spread over the whole of 2015.

In this forecast we have included only the effect that the new methodology would have on the scoring of the CT timing measure, taking out £5.6 billion from 2019-20 and £3.2 billion in 2020-21. We will include the effect on our underlying CT forecast at Budget 2017.

If a tax stream is rising over time and cash is received with a lag, measuring it on an accrued basis will raise the level of recorded receipts. Timing effects and rate cuts (e.g. the planned reductions in the CT main rate) may mean that accrued receipts are not higher than cash receipts in all years. The CT system is complex, so it is not possible to say precisely what the effect will be in each year until we are able to scrutinise the new approach in more detail. But one example of the likely effect would be that the sharp rise in small company CT that we forecast in 2017-18 would be accrued back to 2016-17, which could boost accrued CT by around £2 billion relative to the current cash treatment.

The ONS will also change the National Accounts accruals methodology for the bank surcharge and offshore CT. The bank surcharge was subject to the same timing measure as non-oil corporation tax. We have taken the effects of this timing measure (around £0.3 billion in both 2019-20 and 2020-21) out of this forecast and will include the effect on the underlying bank surcharge forecast alongside Budget 2017. We will also move to the new accruals methodology for offshore CT in our next forecast.

UK oil and gas revenues

4.61 Our forecast for UK oil and gas revenues in 2016-17 has been revised up by £0.5 billion since March, but is still *minus* £0.5 billion. Instalment payments have been stronger than expected so far this year, but revenues remain negative as repayments on petroleum revenue tax (PRT) are still expected to more than offset net CT payments.

4.62 Thereafter our revenue forecast has been revised up in all years – by £2.5 billion in 2020-21 – and is now positive from 2017-18 onwards. This is the first time we have revised our North Sea revenues forecast up since March 2011. This reflects higher sterling oil prices,

due to both a higher dollar oil price and a weaker pound. We have also adjusted the methodology we use in our dollar oil price assumption, although the impact is relatively modest. While we continue to use the first two years of the futures curve, we now hold prices flat in real terms thereafter rather than in nominal terms (see paragraph 3.50). The sterling oil price in 2017 is now expected to average £44 a barrel, up from £29 a barrel in our March forecast. Higher gas prices, up 14 to 16½ pence a therm from 2017-18 onwards, also boost receipts. Production in 2016 has been stronger than expected too. We now assume that oil production will be flat until 2019 (rather than until 2018) partly reflecting returns on high levels of capital expenditure over the past few years.

4.63 As we note in every *EFO,* the judgements underlying the oil and gas revenues forecast are particularly uncertain. These include the extent to which the current oil and gas price environment will affect production and expenditure in the industry and how much the cut in the PRT rate to zero in March 2016 will provide an offset by boosting post-tax returns on oil and gas extraction. The extent to which the high level of losses accumulated in recent years will drag on future receipts is also highly uncertain.

Stamp duties

4.64 **Stamp duty land tax (SDLT)** receipts are sensitive to changes in market sentiment. Receipts so far this year have been much weaker than expected, reflecting market uncertainty both before and after the referendum. Relative to March, growth in overall house prices has been a little higher than expected but residential transactions lower. Transactions weakness has been concentrated at the top end of the market: for residential properties worth over £1 million they have fallen by more than 15 per cent compared to last year. Year-to-date receipts from commercial property (which are even more sensitive to transactions at the very top end of the market) have fallen by 12.5 per cent compared to last year. We now expect receipts over the rest of the year to grow broadly in line with outturns since the referendum, leaving our estimate for 2016-17 receipts down £1.6 billion from our March forecast.

4.65 Compared with March, we have revised SDLT receipts down by almost £2 billion in 2020-21. Around half the revision reflects the weakness in 2016-17 receipts, which is assumed to reflect a less-tax rich composition of transactions and is pushed through the forecast. The remainder reflects lower forecasts for both transactions and prices.

4.66 We have revised up expected receipts from the 3 per cent surcharge on additional properties (i.e. buy-to-let investments and second homes) that came into effect in April. There was a stronger than expected surge of transactions prior to its introduction and receipts from the measure have been stronger than expected. This upward revision boosts receipts by around £0.7 billion by 2020-21. One uncertainty around this forecast arises from the fact that taxpayers can claim a refund of the surcharge for up to three years, if the property purchased ends up replacing a main residence. It will be some time before we know what proportion of receipts are ultimately refunded, but for SDLT we assume a steady state rate of 15 per cent based in part on experience to date in Scotland.

4.67 We have increased our forecast for **stamp duty on shares** by £0.2 billion a year on average from 2017-18 onwards, largely reflecting higher equity prices. The forecast is up £0.4 billion in 2016-17 compared to March, reflecting payments from several large takeovers.

Table 4.14: Key changes to the SDLT forecast since March

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	12.9	14.2	15.2	16.3	17.4
November forecast	11.3	12.2	13.2	14.3	15.6
Change	**-1.6**	**-2.0**	**-2.1**	**-2.0**	**-1.8**
	Underlying OBR forecast changes				
Total	**-1.6**	**-2.0**	**-2.1**	**-2.0**	**-1.8**
of which:					
House prices	-0.1	-0.3	-0.4	-0.5	-0.3
Residential property transactions	-0.8	-0.5	-0.4	-0.2	-0.1
Commercial property market	-0.2	-0.5	-0.5	-0.5	-0.6
Recosting of additional properties measure	0.6	0.6	0.6	0.6	0.7
Other modelling and receipts outturns	-1.0	-1.3	-1.4	-1.4	-1.5

Taxes on capital

4.68 **Capital gains tax (CGT)** is currently paid in the final quarter of the financial year after the year in which the gains from the sale of an asset are realised. So receipts in 2016-17 will reflect asset disposals in 2015-16. We expect receipts growth of around 3 per cent to £7.3 billion in 2016-17, much slower than the 27 per cent seen in 2015-16 and the 42 per cent in 2014-15. UK equity prices fell 4.7 per cent in 2015-16, offsetting the effect of house price growth in that year. With equity prices assumed to rise in line with the economy and associated capital gains to rise faster, we expect receipts to reach £11 billion in 2021-22.

4.69 CGT is highly geared to changes in equity prices, which are the key driver of the rise in receipts over the forecast period. Around three-quarters of chargeable gains are related to financial assets and CGT is charged only on the gain rather than the disposal price. Our assumption for the FTSE all-share index in 2016-17 is around 10 per cent higher than in March. Much of the recent rise has been driven by the weaker pound raising the sterling value of foreign currency profits earned by UK firms trading overseas. The majority of CGT chargeable gains are unlisted shares, which we assume are more domestically focused. We have therefore reduced the effect of higher equity prices on the CGT forecast. Even so, they add £1.2 billion to the forecast by 2020-21.

4.70 Receipts from **inheritance tax (IHT)** are expected to rise by only 0.4 per cent to £4.7 billion in 2016-17, having been revised down by £0.1 billion from our March estimate. IHT receipts were unusually high in 2015-16, reflecting more deaths in 2014-15 (the majority of IHT receipts are received with a 6 to 12 month lag) and a number of payments from very high value estates. Overall, receipts have been revised down slightly over the forecast due to the weaker receipts this year, which is only partly offset by the effect of higher equity prices.

Fuel duties

4.71 Compared with March, we have revised fuel duty receipts up by £0.4 billion to £27.9 billion in 2016-17, reflecting stronger than expected receipts so far this year. This would be 1.2 per cent up on last year. With duty rates frozen, this reflects a small rise in clearances.

4.72 Fuel clearances fell in every year between 2007-08 and 2012-13, as fuel efficiency improved and the late 2000s recession reduced miles driven. Since then, clearances have risen slowly, partly reflecting the drop in pump prices between late 2014 and early 2016 boosting demand for fuel. In particular, traffic from light goods vehicles (LGVs) has risen sharply, rising by around 15 per cent in the past four years.[6] In 2016, LGVs accounted for around 15 per cent of total vehicle traffic. Reflecting this trend, we have revised up mileage growth, adding around £1 billion to fuel duty receipts by 2020-21.

4.73 Despite stronger receipts this year and the higher mileage assumption, fuel duty receipts have been revised down from 2017-18 onwards. The latest freeze in fuel duty in April 2017 lowers receipts by £0.8 to £0.9 billion a year. Our lower GDP forecast and sterling-driven upward revision to pump prices also weigh on receipts. In line with stated Government policy, duty rates are assumed to be uprated with inflation each year from April 2018. This explains all the £2.1 billion rise in fuel duty receipts over the remainder of the forecast. As illustrated in Box 4.3, this could be considered a source of policy risk to the forecast.

Box 4.3: Fuel duty rates and policy risks to our forecast

Our fuel duty receipts forecast combines our underlying forecast assumptions about the amount of fuel that will be purchased and the Government's stated policies on the fuel duty rates that will be levied on those purchases. Parliament has stipulated that our forecasts be based on those stated policies and that we must not consider alternatives. But it also requires us to note risks to our forecast. The possibility that the actual path of fuel duty rates policy will differ from the Government's current stated policy is a risk that we consider worth noting.

As Chart B shows, fuel duty policy has been changed at most Budgets and Autumn Statements since 2010. Specifically:

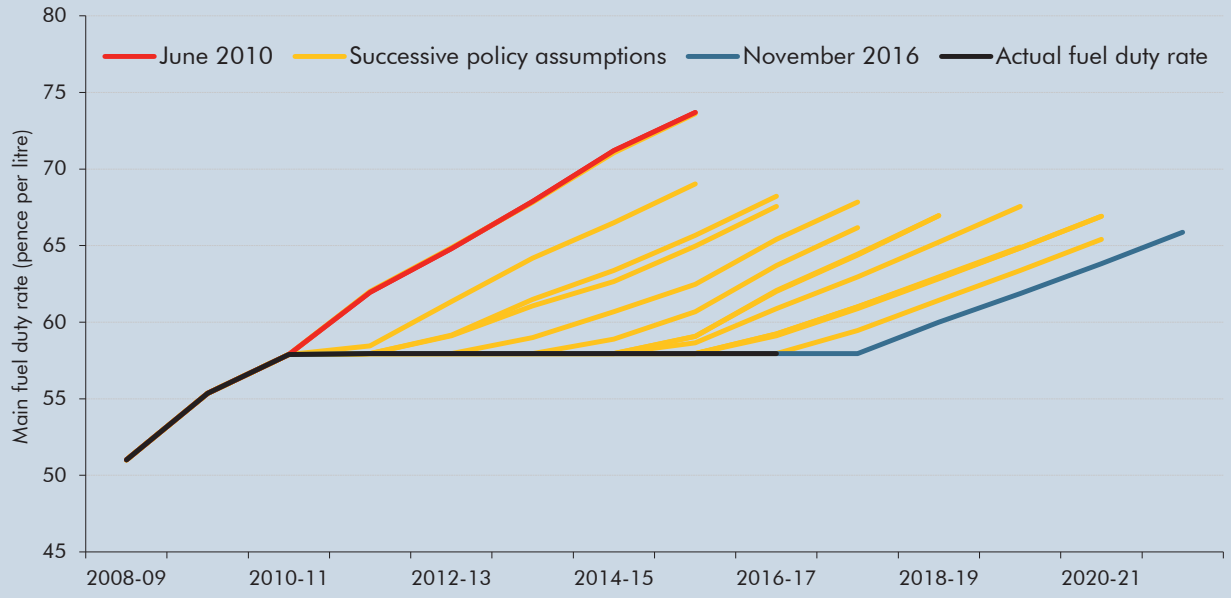
- in **Budget 2011**, the Government cancelled the pre-existing fuel duty escalator (where fuel duty rates were due to rise in line with RPI inflation plus a penny a litre in every year until 2014-15). The rate was also cut by one pence a litre in April 2011. The April 2011 RPI rise was delayed until January 2012 and the April 2012 rise was delayed until August 2012;
- in **Autumn Statement 2011**, it delayed the planned January 2012 RPI rise until August 2012– thereby planning a rise before the next Autumn Statement;
- in **June 2012**, it delayed the planned August 2012 RPI rise until January 2013;
- in **Autumn Statement 2012**, it cancelled the planned January 2013 RPI rise and pushed

[6] Department for Transport, *Road Traffic Estimates: Great Britain 2015*, May 2016.

back each subsequent year's April RPI rises until the end of the Parliament to September;

- in **Budget 2013**, it cancelled the planned September 2013 RPI rise;
- in **Autumn 2014**, it cancelled the planned September 2014 RPI rise;
- in **Budget 2015**, it cancelled the planned September 2015 RPI rise;
- in **Budget 2016**, it cancelled the planned April 2016 RPI rise; and
- in **this Autumn Statement**, the Government has cancelled the planned April 2017 RPI rise.

Chart B: Successive Government fuel duty rate policy assumptions



Source: HMRC, OBR

Alcohol and tobacco duties

4.74 **Alcohol duty** is expected to rise from £11.2 billion in 2016-17 to £13.7 billion in 2021-22. Receipts from wine and spirits are expected to increase by £1.3 billion and £0.7 billion respectively. But we expect a rise of just £0.6 billion over the same period in receipts from beer and cider. Beer consumption fell by over 30 per cent in the 10 years to 2013-14, but that trend has flattened off slightly in recent years. In light of those recent trends, we now expect beer consumption to fall more slowly over the forecast, which adds £0.3 billion to receipts by 2020-21 relative to our March forecast.

4.75 **Tobacco receipts** are forecast to rise very slightly from £9.2 billion in 2016-17 to £9.3 billion in 2021-22, despite RPI plus 2 per cent rises in cigarette duty until the end of the Parliament. We expect the downward trend in cigarette clearances to continue. It has been driven in recent years by above-RPI increases in duty, changing attitudes to smoking, policies (such as the display ban) and the growing popularity of e-cigarettes. In light of further recent weakness in tobacco receipts, we have assumed a steeper downward trend in

clearances (up from 3 to 4 per cent a year), taking £0.5 billion off receipts by 2020-21. The effect on receipts from the introduction of standardised tobacco packaging is assumed to be captured by this downward trend in clearances. Partly offsetting that, the recent fall in sterling is assumed to reduce the extent of cross-border shopping over the forecast (as the saving from buying overseas has fallen). This boosts tobacco receipts by £0.3 billion in 2017-18, with that effect persisting across the forecast period.

Other taxes

4.76 **Business rates** receipts are calculated by multiplying the rateable value of non-domestic property by the multiplier (which is uprated in line with inflation). Compared with March, the UK forecast is higher by an average of £1½ billion a year from 2017-18 onwards. This reflects a number of factors. Higher near-term RPI inflation pushes up the multiplier, adding £0.3 billion to receipts by 2020-21. Higher receipts in 2015-16 are assumed to affect future years. This is mainly related to the ONS adding £0.7 billion to its 2015-16 estimate for Scottish business rates. We had anticipated an upward revision in this area, but it proved larger than we had factored into our March forecast.

4.77 A revaluation of non-domestic properties for business rates will take effect from April 2017. Alongside the revaluation, the Government runs a transitional relief scheme for England that smooths out the biggest bill changes over a five-year period. This scheme is legally required to be designed to be fiscally neutral (with the yield from capping decreases in bills offset by the cost of capping increases). But the last two transitional relief schemes proved not to be fiscally neutral when implemented, with both having a net cost to the Exchequer. On this basis, our March forecast assumed that the 2017 scheme would also operate at a cost. The Government has sought to ensure that the latest scheme will be fiscally neutral in outturn, not just when planned. We have considered its parameters and believe that our central forecast should assume that it *will* be fiscally neutral. Relative to March, this adds £0.8 billion to business rates in 2017-18 and smaller amounts in later years.

4.78 Receipts from **council tax** have been revised up by £0.1 billion a year on average compared to our March forecast, as explained in the expenditure section of this chapter. We assume that council tax receipts are spent by local government, so they are neutral for borrowing.

4.79 **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 carbon reduction commitment until its abolition from the end of the 2018-19 compliance year. Receipts rise sharply from £7 billion in 2016-17 to £13 billion by 2021-22. This rise relates mainly to the build-up in the CfD scheme that is designed to boost renewable energy and the development of the capacity market scheme that focuses on security of supply. Other schemes such as the RO and FITs are assumed to remain flat in real terms.

4.80 For CFD spending, we have included an estimate for 2021-22 that allows for the second allocation round – 'Pot 2' (for less advanced technologies) – as this is the first year when commissioning of these projects is permitted. The main change since March is that we have

allowed for a supplementary capacity auction that adds £1.3 billion in 2017-18 and £1.2 billion in 2018-19. Our cost estimates are based on the lower end of the range for clearing prices outlined in BEIS's Impact Assessment.

4.81 Receipts from **insurance premium tax (IPT)** were up 52 per cent on a year earlier in the first half of 2016-17 and are expected to rise by 33 per cent in the year as a whole. That reflects the increase in the standard rate of IPT from 6 to 9.5 per cent in November 2015 and the further rise to 10 per cent in September 2016. In this Autumn Statement the Government has announced a third successive rate increase to 12 per cent, which will take effect in June 2017. The rate will therefore have doubled in the space of 20 months. Abstracting from the rate increases, growth in underlying IPT receipts in the forecast is expected to remain modest. We have continued to assume a small negative effect from reforms designed to reduce the cost of certain forms of road traffic personal injury claims.

4.82 **Air passenger duty** (APD) receipts are expected to rise from £3.2 billion in 2016-17 to £4.0 billion in 2021-22. This reflects RPI-linked duty rate rises and continued growth in air passenger numbers. Our forecast is little changed since March. More detail is available in our *Devolved taxes document*, since APD is set to be devolved to the Scottish Government from April 2018.

4.83 **Vehicle excise duty (VED)** is levied annually on road vehicles and is expected to rise from £5.8 billion in 2016-17 to £6.7 billion in 2021-22, reflecting the uprating of duties in line with RPI inflation and the major reforms announced in the July 2015 Budget. Relative to March, our forecast is up £0.2 to £0.3 billion a year, reflecting stronger-than-expected receipts so far this year that have been pushed through to the rest of the forecast.

4.84 Receipts from the **climate change levy (CCL)** are expected to be around £0.2 billion lower in 2016-17 than in our March forecast. This reflects lower than expected receipts from the carbon price floor (CPF) element of the CCL. The continued switch away from coal-fired to gas-fired electricity generation (where the tax rate is lower) has put downward pressure on CPF receipts.

4.85 Receipts from the **EU emissions trading scheme (EU-ETS)** are projected by multiplying planned auctions for EU emissions allowances by expected carbon futures prices. We use a futures curve to derive our carbon price assumption over the whole forecast. Receipts are expected to fall from £0.5 billion in 2016-17 to £0.3 billion in 2021-22, reflecting the planned auction schedule. Given the EU referendum result, there is uncertainty over the UK's future membership of the scheme. In the absence of clear statements of Government policy in this area, we continue to include EU-ETS revenues in our fiscal forecast.

4.86 **Bank levy** receipts are expected to fall from £2.9 billion in 2016-17 to £1.3 billion in 2021-22. This mainly reflects the graduated cuts in the bank levy rate from 0.18 per cent in 2016 to 0.10 per cent by 2021. The largest cut takes place in the final year of the forecast, in which receipts almost halve. Our forecast has been revised up by £0.1 to £0.2 billion a year since March, reflecting an updated forecast of the size of bank balance sheets.

4.87 **Customs duties** comprise the majority of 'traditional own resources' or TOR-based UK contributions to the EU. They are not included in public sector current receipts because they are deemed to be collected on behalf of the EU. In line with ONS definitions, we show customs duties as 'other HMRC taxes' as part of the National Accounts definition of UK taxes in Table 4.6. These receipts are then netted off in the 'less own resources contribution to the EU line'. Consistent with the approach that we have taken with spending associated with EU contributions, in the absence of firm details about policy in this area after the UK leaves the EU, we have made the fiscally neutral assumption not to adjust our receipts forecast. We will reconsider this when more information is available.

4.88 **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 lower by around £0.9 billion a year, reflecting changes to overall central and local government spending.

4.89 Our forecast for the **soft drinks industry levy** is broadly unchanged since March. We have not made any changes to reflect the recent consultation that closed in October 2016. The levy consists of two rates, based on the sugar content of beverages. It will operate with a specific revenue target of £500 million for 2019-20, the second year of implementation. The Government policy costing that we certified in March was produced on the basis of implied levy rates of 18 pence and 24 pence per litre and our current forecast is based on that same implied rate structure. We expect the cost to be passed on entirely to consumers.

4.90 Our forecast for **BBC licence fee** receipts has been revised up slightly from 2017-18 onwards, reflecting higher CPI inflation. (We assume the license fee increases in line with CPI inflation beyond the current charter period.)

Other receipts

4.91 **Interest and dividend** receipts include interest income on the government's stock of financial assets, which includes student loans and holdings related to financial sector interventions. With interest rates expected to remain lower for longer, we have revised down our forecast for interest and dividends receipts by amounts that rise to £1.2 billion in 2020-21. Lower interest rates will reduce the return on the stock of central and local government assets, including earnings on foreign exchange reserves.

4.92 Receipts from interest and dividends are expected to slightly more than double between 2016-17 and 2021-22. Of the £5.8 billion forecast rise between these years, around £5.2 billion reflects accrued interest on the fast-growing stock of student loans. The remainder reflects the modest rise in market expectations of short-term interest rates towards the end of the forecast period. They average just 1.0 per cent in 2021-22.

4.93 Our forecast for **gross operating surplus (GOS)** comprises general government depreciation and public corporations' gross operating surplus (PCGOS), including the operating surplus of housing associations. The inclusion of private registered providers of social housing in Scotland, Wales and Northern Ireland in the public finances increases PCGOS by around

£0.8 billion a year. Abstracting from that classification change, GOS receipts are still £1.2 billion higher by 2020-21. That reflects the latest outturn adjustment for the local authority imputed subsidy for equity injection into the Housing Revenue Account (HRA). This is offset in other National Accounts adjustments (see paragraph 4.154) and is neutral for borrowing.

Public sector expenditure

Definitions and approach

4.94 This section explains our central 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)**[7] – 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; and

- **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 of 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 and AME. It shows that TME is expected to fall by 2.1 per cent of GDP over the four years of the latest Spending Review period up to 2019-20 – with a sharp fall planned for 2019-20. It then falls by a further 0.2 per cent of GDP by 2021-22. That 2.4 per cent of GDP fall over six years is driven by further cuts in RDEL (down 2.2 per cent of GDP) and welfare spending (1.2 per cent of GDP). These come on top of the Coalition Government's cuts in the last Parliament.

[7] 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.

Table 4.15: TME split between DEL and AME

	Per cent of GDP						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
TME	**40.1**	**39.9**	**39.8**	**39.1**	**38.0**	**38.0**	**37.8**
of which:							
TME in DEL	**18.7**	**18.5**	**18.3**	**17.9**	**17.3**	**17.3**	**17.1**
of which:							
PSCE in RDEL	16.4	16.2	15.8	15.3	14.8	14.5	14.2
PSGI in CDEL	2.3	2.4	2.5	2.5	2.5	2.9	2.9
TME in AME	**21.4**	**21.4**	**21.5**	**21.2**	**20.7**	**20.6**	**20.7**
of which:							
Welfare spending	11.5	11.2	11.1	10.8	10.5	10.3	10.3
Debt interest net of APF	1.8	1.9	1.9	1.9	1.8	1.8	1.8
Locally-financed current expenditure	2.2	2.2	2.2	2.2	2.2	2.2	2.1
Net public service pension payments	0.6	0.6	0.6	0.7	0.6	0.6	0.7
Other PSCE in AME	3.8	3.9	4.0	4.2	4.1	4.1	4.1
PSGI in AME	1.6	1.7	1.7	1.6	1.5	1.6	1.6

Note: 2015-16 reflects outturn data and has not been adjusted for ONS classification decisions that have been announced but not yet implemented.

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					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Public sector current expenditure (PSCE)							
PSCE in RDEL	309.0	315.4	316.9	319.6	319.8	326.0	332.7
PSCE in AME	373.7	384.5	396.1	409.8	416.3	428.5	447.5
of which:							
Welfare spending	216.1	218.4	221.2	224.6	227.5	233.2	241.8
of which:							
Inside welfare cap	120.0	119.8	119.6	120.1	120.5	123.2	126.0
Outside welfare cap	96.2	98.5	101.6	104.6	107.0	110.0	115.9
Company and other tax credits	2.8	3.2	3.3	3.4	3.5	3.6	3.7
Net public service pension payments	11.4	11.1	12.1	13.6	13.4	14.6	16.1
National lottery current grants	1.3	1.4	1.4	1.4	1.4	1.5	1.5
BBC current expenditure	3.6	3.9	3.8	3.9	3.7	3.5	3.7
Network Rail other current expenditure[1]	0.8	0.9	0.6	0.0	-0.2	-0.2	-0.3
Other PSCE items in departmental AME	1.4	0.8	0.7	0.7	0.7	0.6	0.7
Expenditure transfers to EU institutions	10.5	10.7	10.2	12.5	-	-	-
Assumed domestic spending in lieu of EU transfers[2]	-	-	-	-	13.0	13.4	13.9
Locally financed current expenditure	41.7	42.2	44.3	45.8	47.4	48.7	50.2
Central government debt interest, net of APF[3]	33.4	36.3	38.0	39.2	39.3	39.6	42.7
Public corporations' debt interest	2.8	3.9	4.0	4.1	4.2	4.2	4.3
General government depreciation	29.4	31.0	32.7	34.3	36.0	37.9	40.0
Current VAT refunds	11.9	11.8	12.0	12.2	12.2	12.5	12.7
Environmental levies	4.2	6.9	9.9	11.8	12.1	13.3	14.2
Local authority imputed pensions	1.9	2.0	2.1	2.2	2.3	2.4	2.5
Other National Accounts adjustments	0.2	-0.1	0.0	0.0	-0.1	-0.1	-0.2
Total public sector current expenditure	**682.7**	**699.8**	**713.0**	**729.4**	**736.2**	**754.5**	**780.1**
Public sector gross investment (PSGI)							
PSGI in CDEL	43.0	46.1	49.9	52.7	54.4	64.8	68.2
PSGI in AME	30.0	32.9	34.1	32.4	33.2	36.2	38.1
of which:							
Tax litigation	0.0	0.2	1.5	1.5	1.5	1.5	1.5
Network Rail capital expenditure	6.4	6.6	6.1	5.1	6.4	6.5	6.7
Other PSGI items in departmental AME	0.5	1.0	1.4	1.6	1.9	2.4	2.7
Locally financed capital expenditure	7.0	7.7	7.3	6.2	6.8	6.9	7.2
Public corporations' capital expenditure	17.1	17.1	17.5	17.5	16.2	18.1	19.0
Other National Accounts adjustments	-0.9	0.4	0.3	0.5	0.5	0.8	0.9
Total public sector gross investment	**73.1**	**79.0**	**84.0**	**85.1**	**87.5**	**101.1**	**106.3**
Less public sector depreciation	-39.7	-41.5	-43.4	-45.3	-47.1	-49.2	-51.6
Public sector net investment	33.4	37.4	40.6	39.8	40.4	51.8	54.6
Total managed expenditure	**755.8**	**778.8**	**797.0**	**814.5**	**823.7**	**855.6**	**886.4**

Note: Forecasts from 2016-17 reflect the ONS classification change to include housing associations in Scotland, Wales and N Ireland.

[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 make 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 4.31.

Table 4.17: Changes to total managed expenditure since March

	£ billion					
	Outturn	Forecast				
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Public sector current expenditure (PSCE)						
PSCE in RDEL	0.7	1.6	-0.4	-0.1	0.8	0.7
PSCE in AME	0.8	4.1	7.4	6.9	4.0	4.0
of which:						
Welfare spending	-0.5	0.1	2.0	3.4	3.3	3.7
of which:						
Inside welfare cap	-0.4	0.0	1.6	3.6	4.3	5.1
Outside welfare cap	0.0	0.1	0.4	-0.2	-1.0	-1.4
Company and other tax credits	0.4	0.7	0.7	0.7	0.7	0.8
Net public service pension payments	-0.1	-0.1	0.0	0.0	0.2	-0.1
National lottery current grants	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
BBC current expenditure	-0.3	0.0	0.0	0.2	0.1	-0.2
Network Rail other current expenditure[1]	0.0	0.2	0.2	0.3	-0.1	-0.2
Other PSCE items in departmental AME	0.2	-0.2	-0.3	-0.2	-0.2	-0.2
Expenditure transfers to EU institutions	0.0	-1.1	0.7	1.4	-11.6	-11.9
Assumed domestic spending in lieu of EU transfers[2]	-	-	-	-	13.0	13.4
Locally financed current expenditure	1.2	1.4	1.0	0.7	0.3	-0.1
Central government debt interest, net of APF[3]	-0.7	0.9	-0.6	-3.2	-4.1	-3.7
Public corporations' debt interest	-0.3	0.7	0.5	0.3	0.2	0.0
General government depreciation	0.0	-0.1	-0.1	-0.1	-0.1	0.1
Current VAT refunds	-0.1	-0.6	-0.5	-0.5	-0.4	-0.4
Single use military expenditure[4]	-0.4	-0.2	-0.2	-0.2	-0.3	-0.3
Environmental levies	-1.7	-0.4	1.1	1.1	-0.3	-0.1
Local authority imputed pensions	0.2	0.1	0.1	0.1	0.1	0.1
Other National Accounts adjustments	2.9	2.7	2.9	3.0	3.1	3.2
Total public sector current expenditure	**1.5**	**5.6**	**7.0**	**6.8**	**4.8**	**4.7**
Public sector gross investment (PSGI)						
PSGI in CDEL	0.6	-0.4	1.6	2.9	4.5	5.5
PSGI in AME	-0.2	1.6	3.8	3.8	4.0	4.2
of which:						
Tax litigation	0.0	-0.7	0.4	0.0	-0.2	-0.4
Network Rail capital expenditure	0.1	-0.3	0.1	0.1	1.4	1.2
Other PSGI items in departmental AME	0.3	-0.1	-0.1	0.0	-0.2	0.0
Locally financed capital expenditure	-0.3	0.8	0.0	0.4	0.3	0.3
Public corporations' capital expenditure	0.3	1.6	3.2	3.4	3.0	3.2
Other National Accounts adjustments	-0.6	0.3	0.2	-0.1	-0.3	-0.2
Total public sector gross investment	**0.3**	**1.2**	**5.4**	**6.7**	**8.5**	**9.8**
Less public sector depreciation	*-0.1*	*-0.2*	*-0.2*	*-0.1*	*-0.2*	*-0.3*
Public sector net investment	0.2	1.0	5.3	6.6	8.3	9.4
Total managed expenditure	**1.9**	**6.8**	**12.4**	**13.5**	**13.3**	**14.4**

Note: Changes from 2016-17 reflect the ONS classification change to include housing associations in Scotland, Wales and N Ireland.

[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 4.31.

[4] Single use military expenditure has been switched from AME to RDEL.

4.97 Table 4.18 summarises the sources of changes to our forecast since March. It shows that:

- **economy forecast changes** have increased spending, with inflation having the biggest effect, pushing up spending throughout the forecast. The effect is uneven across years (partly due to the effects of changes in RPI inflation on accrued interest on index-linked gilts), but averages £2.4 billion a year;

- **lower interest rates** have reduced debt interest spending significantly from 2017-18 onwards. Bank Rate was cut in August and markets expect short-term interest rates and gilt yields to remain lower for longer than was assumed in March;

- **higher-than-expected outturns for the National Accounts adjustments** that the ONS applies to convert some source data – notably in respect of local authority spending – onto National Accounts definitions. That has added around £3 billion a year to spending, with around half affecting borrowing and around half offset within our forecast for public corporations' gross operating surpluses;

- **welfare spending** has been revised up by increasing amounts from 2017-18 onwards. In particular, spending on incapacity and disability benefits has been revised up again;

- **local authorities' self-financed capital expenditure** and **public corporations' capital spending** have been revised up in all years reflecting strong outturns in the year-to-date and a higher forecast for spending by local authorities' housing revenue accounts; and

- **Government decisions** increase spending in all years, with the biggest effect in 2020-21 (£10.2 billion). In particular capital spending (both CDEL spending and housing associations' investment) is higher, while departmental resource spending has been boosted in 2019-20 and 2020-21. Welfare spending is up due to the decision to abandon cuts to disability spending that were announced in the March Budget, plus the Autumn Statement decision to taper universal credit awards less aggressively. There are a number of policy decisions affecting spending that have not been shown on the Treasury's policy scorecard, including a change in the policy assumption the Government provided in relation to Network Rail spending from 2019-20 onwards (pending the setting of full baselines). Some policy decisions also have indirect effects on our spending forecast – for example, the higher borrowing associated with the slower pace of fiscal consolidation has pushed up the financing requirement.

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

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	**771.9**	**784.6**	**801.0**	**810.4**	**841.1**
Classification change to include housing associations in Scotland, Wales and Northern Ireland	1.4	1.3	1.3	1.3	1.5
March forecast on latest classifications	**773.3**	**785.9**	**802.3**	**811.7**	**842.6**
November forecast	778.8	797.0	814.5	823.7	855.6
Change	**5.5**	**11.1**	**12.2**	**12.0**	**12.9**
Forecast changes since March	**4.5**	**7.9**	**7.0**	**2.5**	**2.8**
of which:					
Economic determinants	**2.5**	**3.7**	**2.5**	**1.6**	**1.9**
of which:					
Inflation	2.1	3.2	1.8	1.6	2.1
Unemployment	0.1	0.2	0.2	0.1	0.0
Average earnings and other wages determinants	0.1	0.3	0.4	0.4	0.4
Other determinants	0.2	-0.1	0.1	-0.5	-0.6
Market assumptions: interest rates	**-0.7**	**-1.6**	**-2.2**	**-2.9**	**-3.5**
Other assumptions and changes	**2.7**	**5.8**	**6.7**	**3.8**	**4.3**
of which:					
DEL forecast changes	0.5	0.4	1.1	0.1	-0.2
Other welfare changes	-0.3	0.2	0.6	1.3	1.7
Other public sector pensions forecast changes	-0.1	-0.2	-0.5	-0.4	-0.7
Expenditure transfers to EU institutions changes[2]	-1.3	0.8	0.6	0.5	0.7
Locally financed current expenditure forecast changes	1.4	1.0	0.7	0.3	-0.1
Locally financed and public corporations' capital expenditure forecast changes	1.3	1.1	2.0	1.7	2.4
Other debt interest forecast changes	-0.6	-2.0	-1.8	-1.5	-1.1
Company and other tax credits	0.7	0.7	0.7	0.7	0.7
Current VAT refunds	-0.6	-0.5	-0.5	-0.5	-0.4
Environmental levies	-0.4	1.1	1.1	-0.3	-0.1
Tax litigation	-0.7	0.4	0.0	-0.2	-0.4
Other National Accounts adjustments changes	3.0	3.1	3.0	2.8	3.0
Other	-0.4	-0.3	-0.1	-0.8	-1.0
	Effect of Government decisions				
Total effect of Government decisions	**0.9**	**3.2**	**5.2**	**9.5**	**10.2**
of which:					
AME scorecard measures	0.2	2.3	3.3	2.7	2.2
Policy assumption for Network Rail Control Period 6	0.0	0.0	0.0	1.3	1.1
Total RDEL changes[1]	2.4	0.5	0.1	1.7	1.6
Total CDEL changes[1]	-1.7	0.3	1.6	3.5	4.8
Indirect effects of Government decisions	0.0	0.1	0.2	0.3	0.5

[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, it is only changes to the baseline forecast that contribute to the revision to our spending forecast since March.

Expenditure in 2016-17

4.98 We have revised up spending in 2016-17 by £5.5 billion since March on a like-for-like basis. The main drivers are higher inflation, which pushes up the accrued cost of servicing index-linked gilts, as well as higher spending by local authorities.

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 2016-17 with our latest forecast for the full year. The latest official data for April to September show spending 1.5 per cent higher than last year. Our forecast implies stronger year-on-year growth in the rest of the financial year. This is mainly due to higher debt interest and capital spending, partly offset by lower net transfers to EU institutions.

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 comparisons difficult. In 2016-17 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, which explains why we expect spending growth to pick up in the second half of the year as inflation moves higher;

- the timing of **grants paid by central government to local authorities**. In particular, the size and profile of the Revenue Support Grant has affected the comparison of current grants to local authorities; and

- timing effects related to **VAT and GNI based EU contributions net of abatement**. Our latest forecast includes a higher rebate in the second half of 2016-17 than was received in 2015-16. Additional rebate associated with the implementation of the Own Resources Decision is now expected to be received in the last quarter of 2016-17 rather than over the whole of the 2017 calendar year. From 2016-17 onwards GNI and VAT surcharge payments – which correct for latest outturns compared to the estimates used to calculate previous contributions – has been put back six months, so that these payments shift back from 2016-17 to 2017-18. Finally, changes in the profile of EU budget spending across its multi-year framework – with a lower implementation rate this year expected to be followed by higher rates in later years – have further reduced our forecast for transfers to the EU this year.

Table 4.19: Central government expenditure in 2016-17

	Spending in 2016-17 (£ billion)			Percentage change on 2015-16		
	Outturn	Forecast[1]		Outturn	Forecast[1]	
	Apr-Sep	Oct-Mar	Full Year	Apr-Sep	Oct-Mar	Full Year
Total current expenditure	**332.6**	**334.5**	**667.1**	**1.5**	**3.0**	**2.2**
of which:						
Net social benefits	102.7	103.2	205.9	0.8	1.6	1.2
Debt interest	25.8	23.5	49.3	7.9	10.7	9.2
Current grants to local authorities	59.3	55.4	114.7	-5.5	0.4	-2.8
VAT and GNI based EU contributions net of EU abatement	4.6	6.4	11.0	25.9	-15.9	-2.3
Other current spending	140.2	146.0	286.2	5.9	7.9	6.9
Total (gross) capital spending	**25.9**	**30.6**	**56.5**	**7.3**	**9.7**	**8.6**
of which:						
Capital grants to local authorities	6.5	5.7	12.2	7.1	-1.5	2.9
Other capital spending	19.4	24.9	44.3	7.4	12.6	10.3
Total central government expenditure in TME	**358.5**	**365.1**	**723.6**	**1.9**	**3.5**	**2.7**

[1] Forecast data has been adjusted to be consistent with the latest National Accounts definitions of central government spending. One of our fiscal supplementary tables that are 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 (DELs)

DEL spending and changes since March

4.101 Our latest forecasts for DEL spending reflect departments' final plans as published in *Public expenditure statistical analyses* (PESA) 2016, the decisions announced in this Autumn Statement and our assumptions regarding likely underspending against the new plans. Each year, new PESA data typically require us to revise our forecasts for PSCE in RDEL and PSGI in CDEL, not least because departments often change the allocation of spending within their limits between items that are included in the fiscal aggregates of PSCE and PSGI and items that are not. In this section, we use 'RDEL spending' and 'CDEL spending' to refer to PSCE in RDEL and PSGI in CDEL.

4.102 This year, incorporating PESA plans has also resulted in a significant switch between RDEL and CDEL as the Treasury has aligned the treatment of research and development (R&D) spending in DEL with its revised treatment as capital spending in the National Accounts. In our recent *EFOs* we had reflected the classification of R&D as capital spending by including lines in our AME forecast that offset the R&D spending element of PSCE in DEL and added it to PSGI. The new Treasury treatment removes the need for those AME items. It therefore switches spending between AME and DEL in our forecast, with no change to PSCE or PSGI. To simplify comparisons with our March forecast, we have restated it on the new basis.

4.103 Table 4.20 shows how we have restated our March DEL forecasts. We have revised the treatment of capital grants from central government to housing associations. Since housing associations are classified as public corporations, these capital grants finance public corporations capital spending (PSGI in AME), but net out within the public sector. Previously

we had incorrectly included the payment of the grants in CDEL as capital grants to the private sector and netted the receipt off within public corporations' capital spending. We have now corrected our treatment so that the grants are included as capital grants to public corporations, which reflects the outturn now recorded in the National Accounts. Since these grants are not included in PSGI in CDEL or PSGI in AME, we have removed them. In effect, this switches spending from CDEL to capital AME, so is neutral for overall capital spending.

Table 4.20: DEL and AME switches since March

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast for PSCE					
PSCE in RDEL	321.7	325.3	327.7	327.1	333.7
PSCE in AME	372.5	380.8	394.9	404.3	416.2
Total PSCE	694.2	706.0	722.6	731.4	749.8
March forecast for PSCE, with DEL and AME restated					
R&D (AME to DEL switch)	-7.9	-7.9	-8.0	-8.1	-8.4
PSCE in RDEL restated	313.8	317.3	319.7	319.0	325.3
PSCE in AME restated	380.4	388.7	402.9	412.3	424.5
Total PSCE (unchanged)	694.2	706.0	722.6	731.4	749.8
March forecast for PSGI					
PSGI in CDEL	39.2	40.9	42.9	43.0	52.6
PSGI in AME	38.5	37.6	35.5	36.1	38.7
Total PSGI	77.8	78.6	78.4	79.1	91.3
March forecast for PSGI, with DEL and AME restated					
R&D (AME to DEL switch)	7.9	7.9	8.0	8.1	8.4
Housing association grants (DEL to AME switch)	-0.7	-0.6	-1.1	-1.2	-1.7
PSGI in RDEL restated	46.4	48.3	49.8	49.9	59.3
PSGI in AME restated	31.3	30.3	28.6	29.2	32.0
Total PSGI (unchanged)	77.8	78.6	78.4	79.1	91.3

4.104 Table 4.21 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 4.22.) Table 4.21 shows that:

- revisions to actual **resource spending** are uneven across the forecast period. The Government has increased spending limits in 2016-17 and from 2019-20 onwards, while we have slightly increased our underspending assumption in most years; and

- **capital spending** has been revised down in 2016-17, where the Government has reduced the spending limit by more than we have revised down expected underspending. From 2017-18 onwards, the Government has increased spending limits by rising amounts, pushing up our forecast for actual CDEL spending.

4.105 Our central forecast shows resource spending falling as a share of GDP in every year, little changed since March. Capital spending is expected to rise slightly up to 2019-20 (where it

had been relatively flat in March). It is still expected to jump in 2020-21 and is now expected to remain at that higher level in 2021-22.

Table 4.21: RDEL and CDEL spending and total changes since March

	£ billion					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
PSCE in RDEL						
March forecast restated						
Limits	314.3	317.8	320.7	319.5	325.8	
Assumed underspend[1]	-0.5	-0.5	-1.0	-0.5	-0.5	
Actual spending	313.8	317.3	319.7	319.0	325.3	
November forecast						
Limits	316.1	317.6	320.3	321.1	327.2	333.9
Assumed underspend[1]	-0.8	-0.8	-0.8	-1.3	-1.3	-1.3
Actual spending	315.4	316.9	319.6	319.8	326.0	332.7
Changes						
Limits	1.8	-0.2	-0.4	1.5	1.5	
Assumed underspend[1]	-0.3	-0.3	0.3	-0.8	-0.8	
Actual spending	1.6	-0.4	-0.1	0.8	0.7	
PSGI in CDEL						
March forecast restated						
Limits	48.4	50.5	52.3	52.2	63.3	
Assumed underspend[1]	-2.0	-2.2	-2.5	-2.3	-4.0	
Actual spending	46.4	48.3	49.8	49.9	59.3	
November forecast						
Limits	47.1	51.4	54.4	56.4	70.3	72.2
Assumed underspend[1]	-1.0	-1.5	-1.8	-2.0	-5.5	-4.0
Actual spending	46.1	49.9	52.7	54.4	64.8	68.2
Changes						
Limits	-1.4	0.9	2.1	4.2	7.0	
Assumed underspend[1]	1.0	0.7	0.8	0.3	-1.5	
Actual spending	-0.4	1.6	2.9	4.5	5.5	
	Per cent of GDP					
PSCE in RDEL (actual spending)						
March forecast	16.2	15.7	15.2	14.6	14.3	
November forecast	16.2	15.8	15.3	14.8	14.5	14.2
Change	**0.0**	**0.1**	**0.2**	**0.2**	**0.2**	
PSGI in CDEL (actual spending)						
March forecast	2.4	2.4	2.4	2.3	2.6	
November forecast	2.4	2.5	2.5	2.5	2.9	2.9
Change	**0.0**	**0.1**	**0.2**	**0.2**	**0.3**	

Note: Restated for switches between DEL and AME. See Table 4.20.

[1] Underspends are measured against plans at the start of each year as set out in PESA, and are net of amounts carried forward from previous years under Budget Exchange. They are measured against the plans set out in PESA 2016.

4.106 Table 4.22 breaks down the sources of changes relative to our restated March forecast into those that reflect our underlying forecast judgements and those that reflect Government decisions. The main judgements in our DEL spending forecasts are the assumptions we

make about how much departments will underspend against their budgets. Consistent with our approach across this forecast, we have not adjusted our DEL spending forecast to reflect specific pressures associated with the UK's decision to leave the EU. The EU currently makes payments to the UK, for instance related to structural funds, that are either paid direct to the private sector or channelled through UK departments. The guarantees the Government has made in respect of continued funding in some of these areas (see Box 4.4) could be paid out of departmental budgets, but for this forecast we have simply added an 'assumed domestic spending in lieu of EU transfers' line in our AME forecast. The Treasury has informed us that costs associated with machinery of government changes (e.g. setting up new departments) have been agreed within current spending plans. But it is not clear yet whether other additional costs associated with Brexit will require additional DEL spending. As the Government has yet to provide us details of any such costs, we have not altered our forecast. Any changes in future forecasts will be set out transparently.

4.107 Changes in our pre-measures forecast can be split into:

- changes in our **pre-measures underspend assumptions** against the plans laid out in PESA 2016. (We also adjust these assumptions in light of Government decisions to change spending limits, but account for those changes as a consequence of those decisions.) Our pre-measures judgements reflect information about departmental spending pressures, including possible future allocation from the reserve. We have revised up our RDEL underspending assumption slightly in light of departments' latest in-year expectations and our view on how those will evolve in the rest of the year. Thereafter we have smoothed the profile of expected underspending. The 2019-20 underspend assumption is relative to PESA plans that include an unspecified £3½ billion cut from an 'efficiency review' that was announced in March and will report in 2018. For CDEL, we have reduced our underspend assumption in most years due to the lower-than-expected underspend in 2015-16. We continue to assume a much bigger underspend in 2020-21, where the latest plans show a £9.8 billion or 20 per cent rise in planned spending, with £7 billion of that (contributing 14 percentage points to the year-on-year rise) not allocated to departments; and

- **movements in items switched between DEL and AME**. Our March forecast was produced before detailed PESA plans were available, so the level of R&D spending was forecast so that we could present it in capital spending (consistent with the National Accounts). PESA plans show R&D spending to be £0.5 billion a year higher on average than our March forecast. Similarly, PESA plans show capital grants to housing associations £0.2 billion a year higher on average than our March forecast, although in this case this reduces CDEL (and increases public corporations' capital spending capital AME).

4.108 The Government's Autumn Statement decisions:

- **increase CDEL spending** significantly. The amounts specified on the Treasury's scorecard raise CDEL plans by amounts rising from £1.5 billion in 2017-18 to £5.3 billion in 2020-21. Past experience suggests that planned increases in capital

spending will not translate fully into actual spending in the year planned, so we have assumed that 20 per cent of each year's planned spending will actually be spent a year later. In 2020-21, the Government has added more unallocated capital spending on top of the scorecard measures. That comes on top of the jump in planned spending in that year that was set out in March. We have therefore added £2.0 billion to the £3.5 billion underspend we already expected in 2020-21. The net effect of the Government's announcements and our underspending assumptions is to increase CDEL spending by £1.2 billion in 2017-18 rising to £4.8 billion in 2020-21;

- **increase RDEL spending** through various policy announcements. This includes adding £1.0 billion in 2019-20 by 'reinvesting' some of the £3.5 billion of cuts that have yet to be identified in an 'efficiency review' that the Government announced in the last Budget and has now said will report next year. The Government has also told us that it plans to spend an amount on RDEL in 2021-22 that is flat in real terms relative to 2020-21. That reduces spending by £5 billion relative to the 2020-21 baseline being held constant as a share of GDP. We have not made any further adjustments to our underspending assumptions in response to these policy changes;

- **switch £1.2 billion of Department of Health spending from capital to current in 2016-17**. This has no effect on total departmental spending, but does explain why our CDEL spending forecast has been revised down since March on a like-for-like basis;

- **bring forward £0.2 billion of current Ministry of Defence spending**, while reducing it by an equal amount in later years; and

- increase RDEL by an average of £0.3 billion a year as a result of **other changes**, mostly switches between non-fiscal and fiscal spending, as set out in departments' spending plans in PESA 2016.[8] Other CDEL changes are also mostly attributable to these switches and amount to a reduction of £0.6 billion a year on average.

[8] Non-fiscal spending is spending that is not included in total managed expenditure (TME), and so does not affect PSNB.

Table 4.22: Sources of changes to DELs since March

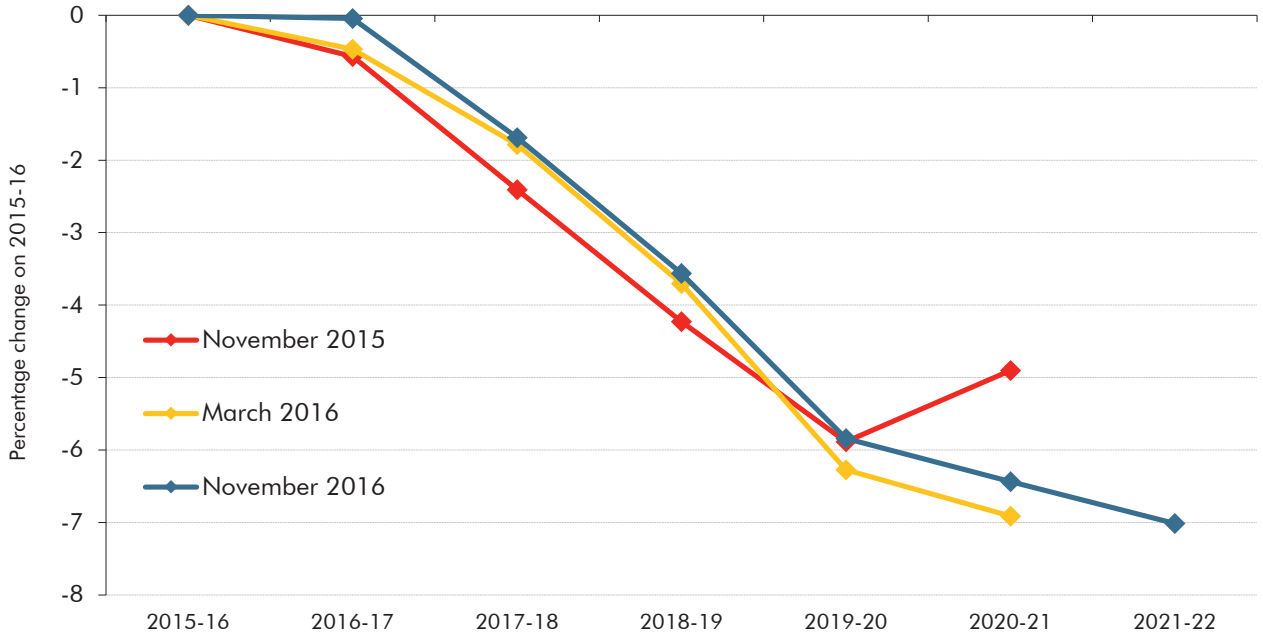
	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
PSCE in RDEL					
March forecast restated[1]	**313.8**	**317.3**	**319.7**	**319.0**	**325.3**
November forecast	**315.4**	**316.9**	**319.6**	**319.8**	**326.0**
Change	**1.6**	**-0.4**	**-0.1**	**0.8**	**0.7**
of which:					
Forecast changes	**-0.9**	**-0.9**	**-0.2**	**-0.9**	**-0.9**
Assumed underspend	-0.3	-0.3	0.3	-0.5	-0.5
R&D	-0.6	-0.6	-0.5	-0.4	-0.4
Effect of Government decisions	**2.4**	**0.5**	**0.1**	**1.7**	**1.6**
Scorecard measures	0.1	0.1	0.1	1.7	0.0
Additional policy measures	-	-	-	-	1.9
Assumed underspend (policy changes)	-	-	-	-0.3	-0.3
DH capital/current switch	1.2	-	-	-	-
MoD reprofiling	0.2	-	-	-0.1	-0.1
Other changes to RDEL spending	0.9	0.3	0.0	0.3	0.0
PSGI in CDEL					
March forecast restated[1]	**46.4**	**48.3**	**49.8**	**49.9**	**59.3**
November forecast	**46.1**	**49.9**	**52.7**	**54.4**	**64.8**
Change	**-0.4**	**1.6**	**2.9**	**4.5**	**5.5**
of which:					
Forecast changes	**1.3**	**1.3**	**1.3**	**1.0**	**0.7**
Assumed underspend	1.0	1.0	1.0	0.6	0.5
R&D	0.6	0.6	0.5	0.4	0.4
Housing association grants	-0.3	-0.3	-0.2	0.0	-0.2
Effect of Government decisions	**-1.7**	**0.3**	**1.6**	**3.5**	**4.8**
Scorecard measures	0.0	1.5	2.9	4.3	5.3
Additional policy measures	-	-	-	-	1.5
Assumed underspend (policy changes)	-	-0.3	-0.3	-0.3	-2.0
DH capital/current switch	-1.2	-	-	-	-
Other changes to CDEL spending	-0.5	-0.9	-1.1	-0.5	0.0

[1] Restated for switches between DEL and AME. See Table 4.20.

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

4.109 The Government's new plans for resource spending by departments are little changed from March. As Chart 4.4 shows, they imply a fall in real spending per person over the next five years. In particular, the last three years of the Spending Review period up to 2019-20 will see real spending per person fall by around 2 per cent a year, with a particularly sharp cut planned for 2019-20 (down 2.4 per cent on the previous year, despite the extra £1.5 billion of cash spending allocated in this Autumn Statement). In 2020-21 and 2021-22, where detailed allocation of resource spending across all departments is yet to take place, overall resource spending rises in line with whole economy prices, so falls 0.6 per cent a year in real per capita terms. Those falls will take place against a backdrop of upward pressure on spending – particularly health spending – from an ageing population.

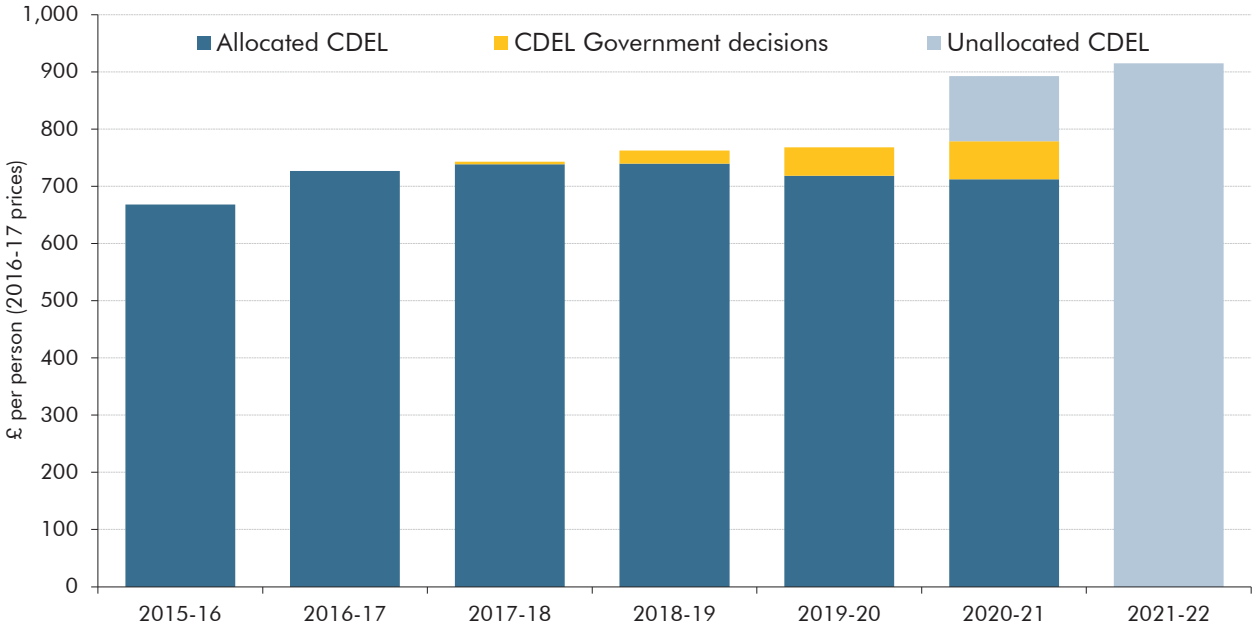
Chart 4.4: Change in real RDEL spending per capita from 2015-16



Source: OBR

4.110 The Government has added significant amounts to CDEL spending in this Autumn Statement. As Chart 4.5 shows, the Government's plans imply a rising path in real per capita spending. The jump in 2020-21 largely reflects the £7.0 billion of spending that was added to Spending Review totals in March, but not allocated. Autumn Statement policy decisions – which in 2020-21 include allocated and unallocated elements – have boosted spending further. 2021-22 spending rises from that higher base. Detailed spending plans published in the summer show that by 2019-20 more than 8 per cent of all allocated CDEL plans, and over 40 per cent of the Department for Transport's CDEL budget, will go to HS2.

Chart 4.5: Real per capita CDEL spending



Source: OBR

Annually managed expenditure (AME)

4.111 Table 4.16 sets out our latest central projection of AME spending to 2021-22, based on the economy forecast described in Chapter 3, the latest estimates of agreed policy commitments and the measures announced in this Autumn Statement.

Welfare spending (including spending subject to the 'welfare cap')

4.112 Total welfare spending in our forecast refers to AME spending on social security and tax credits – a subset of which is subject to the Government's 'welfare cap' (around 55 per cent in 2016-17). We have been tasked with assessing the Government's performance against the cap at each Autumn Statement. Our formal assessment is set out in Chapter 5. The Government has proposed a new welfare cap in this Autumn Statement, but the items that are subject to it have not been changed.

4.113 Table 4.23 shows that total welfare spending is forecast to increase by 10.7 per cent over the forecast period, from £218 billion in 2016-17 to £242 billion in 2021-22. Spending on items subject to the cap (predominantly working-age welfare spending) is projected to rise by 5.1 per cent, thereby falling in real terms (by 6.3 per cent relative to CPI inflation). By contrast, spending on items outside the cap – largely state pensions – is expected to rise by 17.6 per cent (6.1 per cent relative to CPI inflation).

4.114 Relative to the size of the economy, welfare spending is forecast to fall by 0.9 per cent of GDP between 2016-17 and 2021-22, with spending inside the welfare cap falling by 0.8 per cent of GDP and spending outside the cap falling by 0.1 per cent of GDP. That would take overall welfare spending to its lowest share of GDP since 2006-07 and spending on items subject to the welfare cap to its lowest since 1991-92.

Table 4.23: Welfare spending forecast overview

	Outturn	Forecast					
			Welfare cap period				
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
£ billion							
Total welfare spending	216.1	218.4	221.2	224.6	227.5	233.2	241.8
of which:							
Inside welfare cap	120.0	119.8	119.6	120.1	120.5	123.2	126.0
Outside welfare cap	96.2	98.5	101.6	104.6	107.0	110.0	115.9
Per cent of GDP							
Total welfare spending	11.5	11.2	11.1	10.8	10.5	10.3	10.3
of which:							
Inside welfare cap	6.4	6.1	6.0	5.8	5.6	5.5	5.4
Outside welfare cap	5.1	5.0	5.1	5.0	4.9	4.9	4.9

4.115 Chart 4.6 splits the 0.9 per cent of GDP fall in welfare spending expected over the forecast period into its main components and their drivers. These include:

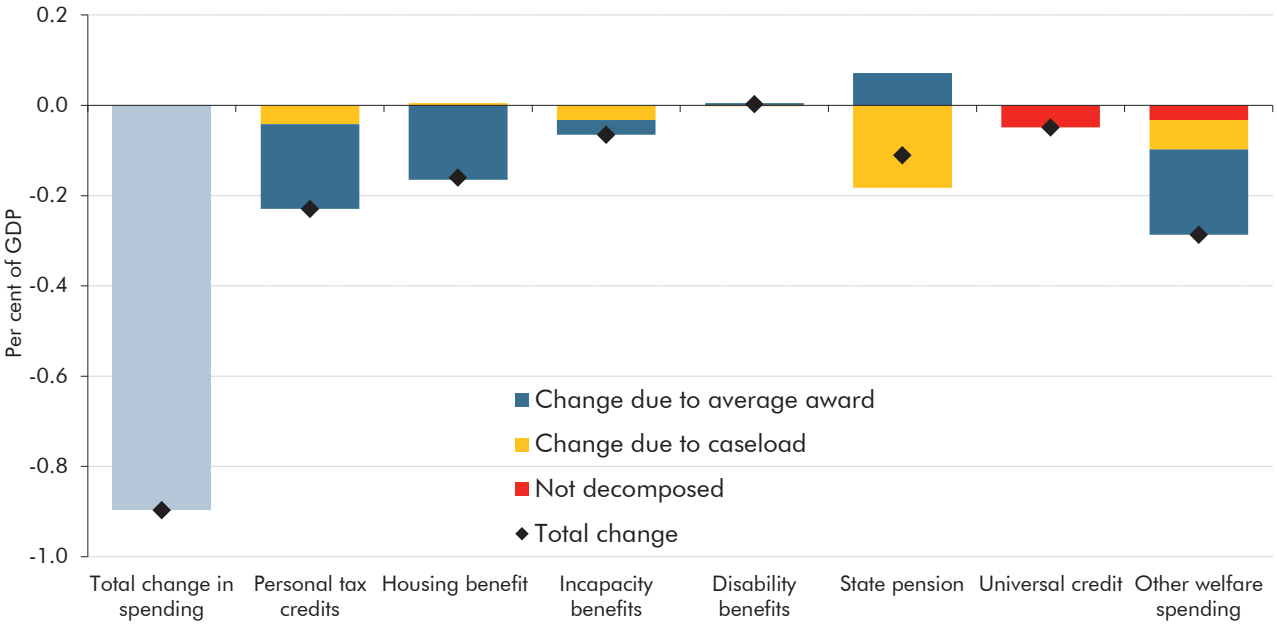
- a fall in spending on **tax credits** (0.2 per cent of GDP). In particular, the uprating freeze between 2016-17 and 2019-20 means that average awards fall relative to average earnings, reducing spending on tax credits as a share of GDP. Cuts in support for first children and families with more than two children also reduce average awards;

- a fall in spending on **housing benefit inside the cap** (0.2 per cent of GDP). This is almost entirely driven by a reduction in average awards relative to average earnings. This largely reflects the freeze in working-age benefit uprating and policies that place additional burdens on social sector landlords;

- lower spending on **incapacity benefits** (0.1 per cent of GDP), broadly split equally into falls in caseloads and average awards. Caseloads fall with the ongoing reassessment of incapacity benefits claimants while average awards rise more slowly than average earnings. Awards outside the ESA 'support group' have been frozen for four years, like most working-age benefits; and

- slightly lower spending on **state pensions** (0.1 per cent of GDP). This is driven by lower caseloads reflecting increases in the state pension age, partly offset by awards rising faster than earnings at the start of the forecast due to the triple lock on uprating.

Chart 4.6: Sources of changes to welfare spending (2016-17 to 2021-22)



Source: OBR

4.116 Table 4.24 sets out our detailed welfare spending forecasts for 2016-17 to 2021-22 on a pre-scorecard basis, plus the total effect on welfare spending of policy decisions announced in this Autumn Statement. A detailed post-measures forecast for each line is available in a supplementary fiscal table on our website.

Table 4.24: Welfare spending

	£ billion						
	Outturn	Forecast					
		Welfare cap period					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Welfare cap							
DWP social security	76.3	76.4	74.9	74.3	75.2	76.8	78.3
of which:							
Housing benefit (not on JSA)[1]	21.8	21.4	21.0	20.8	20.7	21.1	21.5
Disability living allowance and personal independence payments	16.2	16.6	16.7	16.9	17.7	18.3	19.0
Incapacity benefits[2]	15.1	15.0	15.1	15.2	15.5	15.9	16.3
Attendance allowance	5.5	5.5	5.5	5.6	5.9	6.1	6.3
Pension credit	6.0	5.7	5.4	5.1	5.1	5.1	5.1
Carer's allowance	2.6	2.7	2.9	3.0	3.2	3.3	3.5
Statutory maternity pay	2.3	2.3	2.4	2.5	2.5	2.6	2.7
Income support (non-incapacity)	2.4	2.3	2.1	2.0	2.0	2.1	2.2
Winter fuel payments	2.1	2.1	2.0	2.0	2.0	2.0	2.0
Universal credit[3]	0.0	0.6	-0.5	-1.2	-1.7	-2.1	-2.7
Other DWP in welfare cap	2.3	2.4	2.3	2.3	2.3	2.3	2.3
Personal tax credits	28.5	28.0	27.9	27.7	27.3	27.9	28.4
Child benefit	11.7	11.6	11.6	11.5	11.5	11.7	12.0
Tax free childcare	0.0	0.0	0.6	0.8	0.9	0.9	1.0
NI social security in welfare cap	3.4	3.5	3.5	3.5	3.6	3.8	3.9
Paternity pay	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Autumn statement measures	0.0	0.1	1.0	2.2	1.8	1.9	2.4
Indirect effects of Government decisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total welfare cap[4]	**120.0**	**119.8**	**119.6**	**120.1**	**120.5**	**123.2**	**126.0**
Welfare spending outside the welfare cap							
DWP social security	94.0	96.1	99.2	102.0	104.4	107.3	113.0
of which:							
State pension	89.4	91.5	94.1	96.7	99.1	101.9	107.5
Jobseeker's allowance	2.3	1.9	2.8	2.9	2.9	2.9	3.0
Housing benefit (on JSA)	1.9	1.6	2.2	2.4	2.4	2.4	2.5
Universal credit[3]	0.5	1.0					
NI social security outside welfare cap	2.3	2.4	2.5	2.6	2.6	2.7	2.9
Autumn statement measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Indirect effects of Government decisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total welfare outside the welfare cap[4]	**96.2**	**98.5**	**101.6**	**104.6**	**107.0**	**110.0**	**115.9**
Total welfare[4]	**216.1**	**218.4**	**221.2**	**224.6**	**227.5**	**233.2**	**241.8**
Memo: welfare cap as proportion of total welfare	*55.5*	*54.9*	*54.1*	*53.5*	*53.0*	*52.8*	*52.1*

[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 benefit, employment and support allowance, severe disablement allowance and income support (incapacity part).

[3] Universal credit actual spending for 2015-16 and 2016-17. Spending from 2017-18 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 2015-16 is sourced from OSCAR, consistent with PESA 2016. For 2015-16 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.

4.117 Table 4.25 sets out the changes in our welfare spending forecast since March, distinguishing between those that flow from our updated economy forecast, those from other movements in the pre-measures forecast, and the effects of policies announced in the Autumn Statement. It shows that before the effects of scorecard measures we have revised spending up by increasing amounts from 2017-18 onwards. The pre-measures forecast revision reaches £1.8 billion in 2020-21, with a £3.1 billion upward revision to welfare cap spending partly offset by a £1.4 billion downward revision to spending outside the cap. The sources of these revisions differ across years.

4.118 In 2016-17, the biggest changes include:

- spending on **tax credits** is down £0.5 billion relative to our March forecast. The number of claimants is lower than we expected and has now fallen in each of the past six years. The explanation remains unclear and we continue to work with HMRC to understand it. In the meantime, the tax credits forecast will be subject to greater-than-usual uncertainty; and

- the full rather than marginal cost of **universal credit** is reflected in-year. This increases spending on UC by £1.7 billion, with an equal and opposite effect spread across the existing benefits that it replaces. In future years, our forecast reflects spending on the legacy benefits with the marginal savings from UC subtracted from that spending.

4.119 Changes in our economy forecast push welfare spending up in all years. Higher inflation pushes up spending via uprating (for those elements of working-age welfare spending that are not frozen), while lower earnings growth raises spending on means-tested payments such as tax credits and housing benefit. But lower earnings growth also reduces spending on state pensions that are uprated by the triple lock during this Parliament. Higher unemployment adds to spending on jobseeker's allowance and associated housing benefit.

4.120 We have made a number of other estimating and modelling changes that have had material effects on our pre-measures forecast. Sources of upward revision include:

- spending on **disability benefits** is £0.8 billion higher in 2020-21, primarily due to a top-down adjustment to caseload growth that aims to capture the upward trend in the incidence of disability in the population (for example, the trend in mental health and learning disabilities among younger people that was discussed in our 2016 *Welfare trends report*). We have revised this forecast up repeatedly in recent *EFOs* via bottom-up modelling assumptions. We hope that by applying a further top-down adjustment we finally have a forecast with risks balanced on both sides;

- the marginal saving from **universal credit** (UC) is £1.0 billion smaller in 2020-21. DWP has carried out a thorough review of the UC model since March, updating inputs, aligning it to the other main policy and forecasting models, and ensuring that the yearly profile that it generates is consistent with the legacy forecasts. These changes have reduced the estimated UC saving. Partly offsetting those changes were the knock-on effects of upward revisions to disability premiums in current ESA cases, which are

not be available in UC. That increases the amount saved when ESA cases move to UC. These changes are themselves partly offset by transitional protection for those who would lose out as a result, although this only lasts until a change of circumstances terminates the transitional protection; and

- spending on **incapacity benefits** is £0.9 billion higher in 2020-21, due mainly to the knock-on effects from higher disability benefits spending to disability premiums and lower savings associated with the removal of the work-related activity component.

4.121 Partly offsetting these, sources of downward revision include:

- spending on **tax credits** is £0.6 billion lower in 2020-21, as the lower number of claims in 2016-17 is assumed to persist. This is partly offset by lower earnings growth feeding through to higher awards. Another source of upward revision has been the lower-than-expected savings from the 'error and fraud additional capacity' policy announced in Autumn Statement 2013, which is discussed in Annex A; and

- spending on **attendance allowance** is £0.4 billion lower in 2020-21, reflecting slower growth in inflows.

4.122 Welfare spending is affected by a number of Autumn Statement policy measures. Some reflect announcements that were made prior to the Autumn Statement:

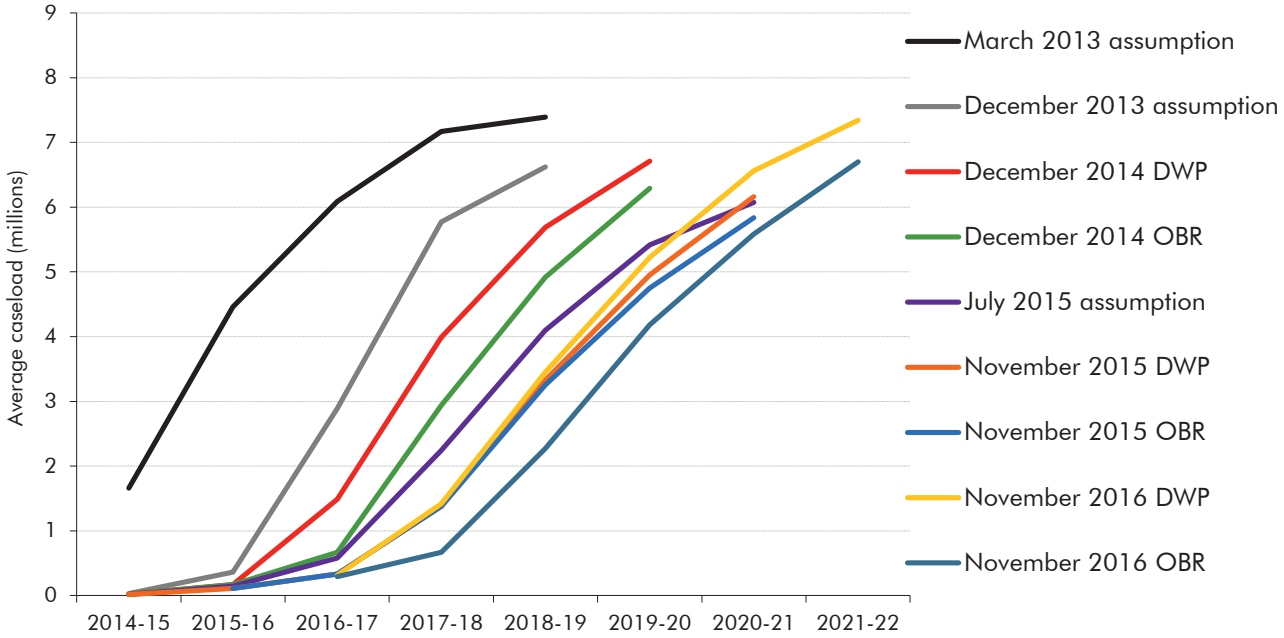
- **reversing the Budget 2016 'PIP aids and appliances' measure**: our March forecast factored in a Budget measure that would have cut disability benefits spending via a reduction in the entitlement points that would be awarded in PIP for cases involving the use of certain aids and appliances. This would have cut spending by £1.4 billion in 2020-21, but shortly after the Budget the Government announced that it would not be implemented. That has raised our disability benefits spending forecast further; and

- **the July 2016 announcement that the rollout of universal credit will be delayed**: for the fourth autumn forecast in succession we have needed to factor in the effects of the Government pushing back part or all of the UC rollout. This time it has pushed the start of the scaling up of natural migrations back by eight months to October 2017 and the managed migration process by another year, now due to end in March 2022. The succession of delays is shown in Chart 4.7. We first introduced UC into the forecast in March 2013. Over the three and a half years since then the rollout has been receded by around four years. Some of the knock-on effects of this delay include adjusting cuts to support for families making a new claim and delaying further cuts for families with more than two children and delaying the transfer of housing benefit paid to pensioners into a new housing credit in pension credit. We have decided to retain our assumption of a further 6-month contingency on the managed migration process, meaning that in our forecast it ends in October 2022. The effect of all these delays is

uneven across years because it pushes back both savings and costs, the net effect of which differs from year to year. But overall they reduce marginal UC savings.[9]

4.123 The other large policy measure announced was the cut in the **universal credit taper** from 65 to 63 per cent. This reduces the rate at which universal credit is withdrawn with income above the work allowances. Its cost rises to £0.7 billion by 2021-22 as the UC caseload rises. Is partly offsets the cut in the UC work allowances that was announced in July 2015.

Chart 4.7: Successive revisions to the universal credit rollout assumption



Source: DWP, OBR

[9] In March we published a breakdown of the marginal costs of UC in Table 4.25. An updated breakdown is available in a fiscal supplementary table on our website.

Table 4.25: Key changes to welfare spending since March

	£ billion					
	Outturn	Forecast				
			Welfare cap period			
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Welfare spending inside the welfare cap						
March forecast	120.4	119.8	118.0	116.4	116.2	118.1
November forecast	120.0	119.8	119.6	120.1	120.5	123.2
Change	**-0.4**	**0.0**	**1.6**	**3.6**	**4.3**	**5.1**
of which:						
Economic determinants	**0.0**	**0.1**	**0.4**	**0.8**	**1.1**	**1.3**
CPI inflation	0.0	0.0	0.1	0.4	0.6	0.8
Average earnings	0.0	0.1	0.3	0.4	0.3	0.4
Other	0.0	0.0	0.0	0.1	0.1	0.1
Estimating/modelling changes	**-0.3**	**-0.3**	**0.2**	**0.5**	**1.4**	**1.8**
Universal credit (inside of cap)	0.0	0.7	0.1	0.3	0.9	1.0
Pension credit	0.0	-0.1	-0.2	-0.1	-0.1	-0.1
Attendance allowance	0.0	0.0	-0.1	-0.2	-0.3	-0.4
Incapacity benefits[1]	0.0	0.1	0.5	0.7	0.8	0.9
Disability benefits[2]	0.0	0.2	0.3	0.5	0.7	0.8
Housing benefits (inside of cap)	-0.2	-0.3	-0.1	-0.1	-0.1	0.0
Personal tax credits	-0.1	-0.7	-0.4	-0.6	-0.6	-0.6
Tax free childcare	0.0	0.0	0.2	0.3	0.3	0.2
Other	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
Autumn Statement measures	**0.0**	**0.1**	**1.0**	**2.2**	**1.8**	**1.9**
Other	**-0.1**	**0.0**	**0.0**	**0.1**	**0.1**	**0.1**
Welfare spending outside the welfare cap						
March forecast	96.2	98.4	101.2	104.8	108.1	111.4
November forecast	96.2	98.5	101.6	104.6	107.0	110.0
Change	**0.0**	**0.1**	**0.4**	**-0.2**	**-1.0**	**-1.4**
of which:						
Economic determinants	**0.0**	**0.1**	**0.4**	**-0.2**	**-0.9**	**-1.2**
CPI inflation	0.0	0.0	0.1	0.3	0.4	0.4
Claimant count unemployment	0.0	0.1	0.3	0.2	0.1	0.0
Triple lock	0.0	0.0	0.0	-0.8	-1.4	-1.6
Other	0.0	0.0	0.0	0.0	0.0	0.0
Estimating/modelling changes	**0.2**	**0.0**	**0.0**	**0.0**	**-0.1**	**-0.1**
Autumn Statement measures	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other	**-0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total welfare spending						
March forecast	216.6	218.3	219.2	221.2	224.2	229.5
November forecast	216.1	218.4	221.2	224.6	227.5	233.2
Change	**-0.5**	**0.1**	**2.0**	**3.4**	**3.3**	**3.7**
of which:						
Economic determinants	**0.0**	**0.2**	**0.8**	**0.6**	**0.2**	**0.1**
Estimating/modelling changes	**-0.2**	**-0.3**	**0.2**	**0.5**	**1.2**	**1.6**
Autumn Statement measures	**0.0**	**0.1**	**1.0**	**2.2**	**1.8**	**1.9**
Other	**-0.3**	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**

[1] Incapacity benefit, employment and support allowance, severe disablement allowance and income support (incapacity part).

[2] Disability benefits refers to disability living allowance and personal independence payment.

Public service pensions

4.124 The public service pensions forecast covers net expenditure on benefits paid less employer and employee contributions received. 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 covered by our forecast is included in the supplementary fiscal tables on our website.

4.125 Table 4.26 details the changes to our public service pensions forecast since March. Net expenditure is little changed due to largely offsetting movements in gross expenditure and receipts. Gross expenditure has been revised down slightly, as lower-than-expected payments to existing pensioners are largely offset by the effect of higher CPI inflation on the uprating of pension benefits. Contributions have also been revised down, largely due to lower expected NHS pensionable pay bill growth in 2016-17, reflecting year-to-date outturns.

4.126 Changes since our March forecast include:

- a large fall in **gross expenditure** in the teachers pensions' scheme. Recent evidence suggests that teachers now tend to retire later and that they take out smaller lump sums at the point of retirement than previously assumed. This reduces spending within our forecast period, but will add to it beyond that as scheme members retire later. In addition, as part of its ongoing scheme valuation exercise the Government Actuary's Department has revised up its projection of the number of pensioner deaths. Similar revisions were made to retirement and mortality rates in the NHS and a number of other pension schemes. We have also revised down our estimate for early retirement payments in the Royal Mail pension scheme;

- we have reduced our forecast of **NHS scheme receipts**. The NHS has revised down its workforce growth assumption in 2016-17, which feeds through to later years of the forecast. We expect this to put upward pressure on average NHS pay as existing staff progress through pay scales while fewer new, lower-paid staff are recruited. Lower growth in staff numbers in certain NHS groups, in particular GPs and dentists, has led us to revise down future receipts. The net effect of these changes has been to reduce total NHS scheme receipts over the forecast period. Receipts in other pension schemes have been revised down, largely as a result of lower-than-expected contributions in the year-to-date, which set a lower base for the forecast; and

- we have updated our forecasts for **pensionable earnings growth rates.** In the absence of firm spending plans beyond 2019-20 (and beyond 2020-21 for the NHS and armed forces), we assume that scheme budgets will be flat in real terms, in line with the Government's policy assumption for aggregate departmental budgets in those years. Adjustments in Spending Review years reflect scheme experience to-date and small revisions that some schemes have made to their workforce plans.

[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.

Table 4.26: Key changes to public service pensions since March

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
Net public service pensions					
March forecast	11.2	12.1	13.7	13.2	14.7
November forecast	11.1	12.1	13.6	13.4	14.6
Change	**-0.1**	**0.0**	**0.0**	**0.2**	**-0.1**
Expenditure					
March forecast	40.0	41.3	43.1	44.9	46.9
November forecast	39.8	41.1	42.9	44.8	46.6
Change	**-0.2**	**-0.2**	**-0.2**	**-0.1**	**-0.3**
of which:					
CPI inflation	0.0	0.1	0.4	0.6	0.6
TPS workforce re-profiling	-0.2	-0.3	-0.4	-0.5	-0.6
Royal Mail methodology changes	0.0	-0.1	-0.1	-0.1	-0.1
Other	0.0	0.0	-0.2	-0.1	-0.2
Income					
March forecast	-28.8	-29.2	-29.4	-31.8	-32.2
November forecast	-28.6	-29.0	-29.2	-31.4	-32.1
Change	**0.1**	**0.2**	**0.2**	**0.3**	**0.1**
of which:					
NHS paybill growth	0.2	0.1	0.1	0.1	0.1
Other forecast changes	0.0	0.0	0.1	0.2	0.1

Net expenditure transfers to EU institutions and possible substitute spending

4.127 The UK's financial contributions to the EU will clearly be affected – and could cease altogether – when the UK leaves the EU. We have not been given any information regarding the Government's negotiating stance or expectations that is not already in the public domain, so we are not able to make a forecast of any post-exit reduction or the extent to which the Government will decide to reallocate any savings. It is the net effect of those changes that will affect our fiscal forecasts.

4.128 For this forecast, we have made the fiscally neutral assumption that any reduction in these transfers to the EU would be recycled fully into extra domestic spending.[11] We have produced a forecast for transfers to the EU on a 'no-referendum' counterfactual basis and used that as our forecast for such transfers up to 2018-19 and as an unspecified increase in domestic spending from 2019-20 onwards, when we assume the UK leaves (Table 4.27).

4.129 Box 4.4 summarises some of the financial issues that commentators believe may be raised by one or other side in the negotiations. These include flows that are already in our forecasts, plus liabilities of EU institutions where there is public discussion over whether the EU will ask the UK to bear a share of the liabilities after exit. This discussion illustrates the scope for further revisions to our forecasts as and when these issues are resolved.

[11] Our forecast is consistent with the ESA10 National Accounts definitions that are used in the public sector finances data. Expenditure transfers to EU institutions include an amount that reflects VAT-based contributions that are treated as UK revenue that is then transferred to the EU. The supplementary fiscal tables provide more detail on gross and net contributions to the EU.

Table 4.27: Expenditure transfers to EU institutions and possible substitute spending

	£ billion					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
'No-referendum' counterfactual	10.7	10.2	12.5	13.0	13.4	13.9
Expenditure transfers to EU institutions	10.7	10.2	12.5	-	-	-
Assumed domestic spending in lieu of EU transfers	-	-	-	13.0	13.4	13.9

4.130 To generate our no-referendum counterfactual forecast for transfers to the EU, we have as usual considered the economic determinants of the forecast and the latest information on the EU budget and associated transfers to and from the UK. As a result, transfers have been revised down in 2016-17, then up in 2017-18 and significantly so from 2018-19 onwards.

4.131 Table 4.28 summarises the main changes to our forecast since March, which include:

- **sterling depreciation** since the referendum, which we assume will persist, has increased spending by £0.8 billion a year from 2018-19 onwards. The effect of weaker sterling on the UK's contributions is not straightforward. It reduces the UK's share in euro-denominated GNI and VAT bases, but the bigger impact is to increase the sterling value of euro-denominated payments, abatements and receipts;

- **changes in the timing of net transfers** mainly stem from the 2014 Own Resources Decision (ORD14). As expected, this has now been ratified by all Member States. Our forecasts have anticipated the various impacts from ORD14 for some time. While the total effect is similar to amounts included in our past forecasts, the timings differ. In particular, the UK will receive the rebate in respect of ORD14 changes at the same time as the main ORD14 contribution is made in the first quarter of 2017 (i.e. 2016-17). Previously we had expected the rebate to follow over the whole of 2017. ORD14 arrangements also mean that all members' annual surcharge payments – which correct for the latest outturns, compared to the estimates used to calculate previous contributions – move back from December to the following June. We did not anticipate that. We have also revised our assumptions about future changes to agreed VAT and GNI bases such that expenditure transfers previously expected in the final three quarters of 2017 (i.e. in 2017-18) are now expected in the first quarter (i.e. 2016-17);

- **changes in implementation rates for EU budget expenditure** reflect the latest information on 2015 outturns, the expected EU budget in 2016 and the draft EU budget for 2017. The implementation rate refers to the amount of the expenditure ceiling that is actually spent each year (where ceilings are set as part of the agreement covering the full 2014 to 2020 Multiannual Financial Framework (MFF)). Implementation rates at the start of the MFF period are lower than we had expected,

so we have assumed that they will be higher in the rest of the MFF to recoup those earlier spending shortfalls. This would repeat the pattern of the last MFF;[12] and

- **other changes** mainly reflect those to miscellaneous revenue in the draft amending budget for 2016, a small revision to our forecast for the surcharge adjustment in 2017 in respect of historical revisions to GNI and VAT bases, and changes in other economic assumptions.

Table 4.28: Key changes to expenditure transfers to EU institutions on a 'no referendum' counterfactual basis

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	11.8	9.4	11.2	11.6	11.9
November forecast	10.7	10.2	12.5	13.0	13.4
Change	**-1.1**	**0.7**	**1.4**	**1.4**	**1.5**
of which:					
Exchange rate	0.2	-0.1	0.8	0.8	0.9
Timing of net transfers	-0.6	0.5	-	-	-
Implementation rates	-0.9	0.2	0.3	0.2	0.3
Other	0.2	0.1	0.2	0.3	0.4

Note: 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.
Note: 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.

Box 4.4: External views on the possible scope of Brexit negotiations

The UK currently makes a substantial net financial contribution to the activities of the European Union. This contribution may not be eliminated entirely when we leave the EU, as some non-member countries choose to contribute to the EU financially in exchange – for example – for preferential access to the single market or funding for university research. Commentators also expect the EU to argue that the UK will have an ongoing responsibility for some EU liabilities.

The size and scope of any ongoing financial flows between the UK and EU will depend on the outcome of the negotiations over our future relationship. Neither the UK Government nor the EU have set out their negotiating positions. As we know neither the Government's negotiating stance, nor its chances of success, we have not attempted to predict what the outcome of the negotiations will be and therefore what the financial flows will look like after we leave. As described in paragraphs 4.130 to 4.131, we have instead made the fiscally neutral assumption that any reduction in the net expenditure transfers that we would make to the EU if we remained a member will be recycled into other domestic spending – either to compensate private or public sector recipients for the loss of EU funding or to meet other spending priorities.

[12] The latest data and our latest assumptions on the EU budget expenditure and implementation rates are all shown in a supplementary fiscal table on our website. Another table provides a breakdown of our forecast into GNI and VAT contributions, the rebate and the surcharge adjustments that correct for revisions to historical outturns.

Financial flows that already form part of our forecast include our net expenditure transfers to the EU. The Government has said it wishes to negotiate a bespoke arrangement with the EU. That may or may not include agreeing to contribute to the EU budget to retain some of the benefits that it has enjoyed from membership. Among existing relationships, members of the European Economic Area (EEA) contribute grants to poorer parts of the EU in exchange for preferential access to the EU single market. Norway, which provides the vast majority of EEA contributions, paid around £586 million (gross) in 2014.[a] Switzerland, which has limited access to the single market, provides grants to those countries that have joined the EU since 2004, which amount to around £900 million in commitments over five years (with payments spread over ten).[b]

Issues that some officials, institutions and MEPs are reported to be arguing that the UK should pay a share for include:

- **EU pension liabilities**: total liabilities relating to pension rights of EU staff amounted to €63.8 billion (£46.9 billion) at the end of 2015;
- **2014-2020 MFF**: EU spending is set over a seven-year Multiannual Financial Framework (MFF) through which annual budgets are negotiated. Over the current 2014-2020 period, total spending is expected to reach around €1 trillion. Some of this expenditure will not have been financed by the time the UK leaves the EU, which could result in a shortfall for the EU. For some areas of the budget such as structural funds, there is also a routine lag between commitments and payments from the EU budget; and
- **European Investment Bank (EIB) capital contribution**: the UK has a 16.11 per cent shareholding in the European Investment Bank, which makes long-term loans to support innovation, small business, the environment and infrastructure. At the end of 2015, this corresponded to a €39.2 billion capital subscription, of which only €3.5 billion was paid in and the remainder callable if the EIB's Board of Directors requires it. Following the EU referendum, the EIB said *"at present the UK shareholding in the EIB remains and the EIB's engagement in the UK is unchanged"* and it expected *"that the EIB's shareholders, the 28 EU Member States, will discuss the EIB's engagement in the UK as part of broader discussions to define the future relationship of the UK with Europe and European bodies. At present, the EIB's shareholders have not requested the Bank to change its approach to operations in the UK"*.

The Chancellor announced in August that the Treasury would make good any loss of EU funding for structural and investment fund projects signed before Autumn Statement 2016, any loss of Horizon research funding granted while the UK remains a member of the EU and any loss of agricultural funding until 2020. In October, the Chancellor extended these guarantees to the point at which the UK departs the EU, for those projects that it deems good value for money and consistent with domestic strategic priorities. These guarantees cover elements of the existing spending by the EU in the UK, which include:

- **payments received via central government and the devolved administrations**: the UK received an estimated £4.4 billion from EU structural funds and rural policy channelled through government departments or agencies in 2015. The largest flows from the EU were via the Common Agricultural Policy (£2.5 billion from the European Agricultural

Guarantee Fund and £0.6 billion from the European Agricultural Fund for Rural Development) and £1.2 billion from the Social and Regional Development Funds. The allocation of EU receipts varies across the nations and regions of the UK. For example, England has been allocated €6.9 billion (£5.9 billion) from structural funds alone across the 2014-2020 budget, Wales €2.4 billion (£2.0 billion), Scotland €0.9 billion (£0.8 billion) and Northern Ireland €0.5 billion and (£0.4 billion) [c]; and

- **payments received by the private sector**: the EU also makes some payments directly to private sector programme participants, for example to finance research at UK universities. These payments can be volatile from year to year, but they averaged £1.3 billion a year between 2010 and 2014. For example, funding so far awarded to UK organisations under the 'Horizon 2020' programme – for research and innovation in the areas of science, industrial leadership and societal challenges – amounts to £1.1 billion in total between 2014 and 2020.

Overseas aid spending could be affected too. The UK has legislated to spend 0.7 per cent of its gross national income on Official Development Assistance (ODA). In 2015, the UK spent an estimated £12.1 billion or 0.70 per cent of UK GNI on ODA. This was achieved in part by attributing around £0.9 billion of EU ODA spending to the UK, some 7.7 per cent of the total UK spending. On the basis that the UK will maintain UK ODA spending at a given level after leaving the EU, the part channelled through the EU and therefore financed via the UK's net expenditure transfers to the EU would need to be replaced by domestic UK spending.

We will keep our assumption that the Government will recycle any reduction in the net financial contribution it makes to the EU into domestic spending under review in future forecasts.

[a] *Brexit: some legal and constitutional issues and alternatives to EU membership*, House of Commons Library Briefing Paper 07214, July 2016.
[b] *Brexit and the UK's Public Finances*, Institute for Fiscal Studies Report 116, May 2016.
[c] Sterling values are based on the average forecast exchange rate between 2014 and 2020.

Locally financed current expenditure

4.132 We forecast local authority spending by forecasting the sources of income that local authorities use to finance their spending and then the extent to which spending will be higher or lower through additions to or withdrawals from their reserves. Our forecast therefore encompasses spending financed by grants from central government, which are mostly in DEL, and local authority self-financed expenditure (LASFE) in AME. Table 4.29 focuses on LASFE, while further detail on all aspects of our local authority spending forecast are available in supplementary tables on our website.

4.133 There are currently a number of important uncertainties affecting this forecast:

- **financing from central government**. Our forecasts now reflect departments' detailed spending plans that allocate their Spending Review settlements across responsibilities. This will have included future splits of Dedicated Schools Grant (DSG) funding between local authorities (for schools) and direct payments to academies, which are classified as part of central government. Some uncertainty remains about the pace at which

schools will convert to academies in future years, so the split of funding may also be affected by the Government's consultation on future schools systems. This could affect total funding and spending by local authorities, but not LASFE; and

- **100 per cent business rates retention**. The Government plans for local authorities to retain all business rates by the end of the Parliament (up from 50 per cent at present). We described the potential implications in Box 4.3 in our March *EFO*. Since then, the government has published a consultation on how this could work and the responsibilities that should be devolved.[13] It is expected to respond in early 2017. In March, the Government also announced that it proposed to pilot some elements from April 2017. The pilots are limited to local authorities that have agreed devolution deals with the Government.[14] As the full details of the pilots have yet to be confirmed, so the proposed pilots are not reflected in our forecast. As with full retention of business rates, the effects are intended to be fiscally neutral. We would expect to be able to reflect the final agreements for the April 2017 pilots in our next forecast .

4.134 Table 4.29 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 will be offset in our receipts forecast and therefore neutral overall – and those related to the net use of current reserves or change in the amounts set aside to repay debt – which affect our borrowing forecast.

4.135 In March, we reflected the latest in-year information for 2015-16 by increasing our forecast for total local authority current spending that year by £0.7 billion. That assumed that local authorities would draw down a small net amount from current reserves. For 2016-17 onwards, we assumed that English local authorities would respond to uncertainties over future funding by adding £0.9 billion to reserves in 2016-17, with additions tapering to zero over four years as pressures on local authority budgets intensify. Provisional outturn for English local authorities' current spending in 2015-16 was £1.2 billion higher than expected. That and the latest information on local authorities' 2016-17 budgets and first quarter spending has led us to increase our forecast for English local authorities net current expenditure by £1.1 billion in 2016-17. We now assume that local authorities will hold their reserves flat across the forecast period.

4.136 The other changes to our forecast for current LASFE shown in Table 4.29 include:

- small increases in our forecast for **council tax**, which reflect outturns for the council tax base and rates set by local authorities in England in 2016-17. This includes an assumption, based on the latest available data, that 95 per cent of eligible authorities will take up the additional 2 per cent precept for social care, which the Government announced in the 2015 Autumn Statement;

[13] *Self-sufficient local government: 100% Business Rates Retention*, July 2016. In August 2016, the Government also published a further consultation *'Check, Challenge, Appeal - reforming Business Rates appeals'*, which may result in further reforms that could affect the business rates income that local authorities set aside to deal with business rates appeals.
[14] These include the Greater London Authority, Greater Manchester and Liverpool City Region, which have all expressed an interest in becoming pilot areas. Some other authorities with devolution deals have also come forward to explore the options.

- a lower forecast for the amount that English local authorities will **set aside to repay debt**, which reflects 2015-16 outturns and 2016-17 budgets; and

- **other changes in local finance**, including small reductions in our forecast for retained business rates in England, which are broadly offset by increases in Scottish non-domestic rates.

Table 4.29: Key changes to locally financed expenditure and public corporations' expenditure since March

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
Locally financed current expenditure					
March forecast	40.8	43.3	45.1	47.0	48.8
November forecast	42.2	44.3	45.8	47.4	48.7
Change	**1.4**	**1.0**	**0.7**	**0.3**	**-0.1**
of which, changes in sources of local finance:					
Council tax	0.1	0.2	0.2	0.2	-0.1
Net use of current reserves	0.7	0.5	0.2	-0.1	-0.1
Reduction in finance from repayment of debt	0.3	0.4	0.3	0.2	0.1
Revenue used to finance capital expenditure (CERA)	0.2	0.0	0.0	0.0	0.0
Other changes in local finance	0.2	0.0	0.1	0.1	0.1
Locally financed and public corporations' capital expenditure					
March forecast restated[1]	22.4	21.5	19.8	19.6	21.5
Classification change to include housing associations in Scotland, Wales and Northern Ireland	1.0	0.9	0.9	0.8	1.0
March forecast on latest classifications	23.4	22.4	20.7	20.4	22.5
November forecast	24.7	24.7	23.6	22.9	25.0
Change	**1.4**	**2.3**	**2.9**	**2.5**	**2.5**
of which:					
Housing associations' capital spending	-0.1	0.1	0.8	0.6	1.3
HRA major repairs and other capital spending	0.6	0.6	0.5	0.5	0.5
Local authority capital spending financed by:					
Prudential borrowing	0.8	0.3	0.4	0.3	0.4
Use of capital receipts, net of asset sales	0.4	0.3	0.1	0.0	-0.2
Capital expenditure financed from revenue (CERA)	-0.2	0.0	0.0	0.0	0.0
Other changes to capital LASFE and public corporations' capital expenditure	-0.1	-0.2	0.2	0.3	0.3
Scorecard measures	0.0	1.2	0.9	0.7	0.2

[1] The restatement removes the receipt of these grants from public corporations' capital spending in PSGI in AME. This correction is effectively a switch from DEL to AME. See Table 4.20.

Locally financed and public corporations capital expenditure

4.137 Our latest forecasts for locally financed capital expenditure (capital LASFE) and public corporations' capital spending are shown in Table 4.29 above. 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.[15] We switch these items out of capital LASFE and include them in our forecast for public corporations' net capital expenditure to ensure it is consistent with the National Accounts. We therefore look at changes for LASFE and public corporations' capital spending together, so that any changes to the switches net out and do not obscure the changes that affect TME.

4.138 Since November 2015, reflecting previous ONS classification decisions, our public corporations forecast has included housing associations in England. Our latest forecast reflects the ONS decision to classify housing associations in Scotland, Wales and Northern Ireland as public corporations too. This forecast is covered separately below.

4.139 Other changes to our forecasts for locally financed and public corporations' capital spending include:

- an increase in our forecast for **HRAs' capital spending on major repairs and other capital spending**. We have assumed this will be £0.5 billion higher in each year of the forecast. This reflects the higher outturn in 2015-16, which forms the starting point for our forecast. We assume that capital spending increases in line with additional funding that is generated from HRAs' gross trading surplus, which means that higher starting point lifts spending across the whole forecast period;

- higher **capital spending financed by prudential borrowing** in each year, with a £0.8 billion increase in 2016-17. This reflects our latest forecast for the overall level of spending in 2016-17, and also a slightly higher outturn for prudential borrowing in 2015-16. That has led us to revise up local authorities' non-project-specific prudential borrowing from 2017-18 onwards. In recent years borrowing by Transport for London (TfL) has made up a significant proportion of the total and we have based our forecasts on their business plan. Although our forecast reflects the limits that were set for prudential borrowing by TfL in the 2015 Spending Review, TfL's latest business plan was not available for this forecast. We will return to this in our next forecast;

- reductions to our forecast for **local authority asset sales** in 2016-17 reflecting lower sales in the first half of the year, but increases over the rest of the forecast period due to changes in our latest economic determinants. These higher sales also increase the **use of capital receipts to finance capital spending**; and

- **other changes** to capital LASFE and public corporations' capital expenditure reflect small increases related to higher spending by other public corporations in 2015-16, and revisions to capital spending financed by contributions from private sector developers and the community infrastructure levy.

[15] 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.

Housing associations

4.140 Since November 2015, we have included English housing associations in our forecast following an ONS classification decision last year. As described above, the ONS has now reclassified housing associations in Scotland, Wales and Northern Ireland to the public sector too.[16] This decision has not yet been implemented in the official data. We estimated its impact on our forecast by grossing up our England-only forecast. Our methodology was described in Annex B of our November 2015 *EFO*.

4.141 We have revised down our England-only pre-measures forecast for housing associations' net borrowing in 2016-17 by £0.4 billion since March, mainly due to lower capital spending. We have recalibrated our model to be consistent with the latest ONS estimate for 2014-15, which implied that housing associations had leveraged grants and cash surpluses by less than we had assumed. All else equal, that would reduce capital spending in the initial years of the forecast. Offsetting that, we have revised up our forecast of rental income and cash surpluses to make the forecast consistent with how the ONS has grossed up the 'global accounts' data to reflect small providers not covered in that report. That pushes up capital spending via our assumption about leveraging. By 2020-21, that means our pre-measures borrowing forecast has been revised up by £0.4 billion. Effects on PSND are similar, with debt slightly lower early in the forecast and slightly higher by the end.

4.142 To factor in the effect on borrowing of including housing associations in Scotland, Wales and Northern Ireland we have made a simplifying assumption based on the size of their historical balance sheets relative to English housing associations. In 2013-14 these were 13 per cent the size of the England total, so we have applied this proportion to the England-only forecast. This increases borrowing by £0.5 billion a year on average. It increases debt by £7.6 billion in 2016-17 rising to £10.3 billion in 2021-22. We will consider alternative methodologies for future forecasts.

4.143 In this Autumn Statement the Government has announced a number of policy changes that affect our housing associations forecast:

- the **pay to stay** policy – announced in July 2015 on a compulsory basis and amended in March to be voluntary – that in its latest form would have allowed housing associations to charge higher rents to tenants with higher incomes has been cancelled;
- the tenure balance in the **affordable housing programme** has been altered with a sharp reduction in grants for shared ownership offset by increases in 'rent to buy' and 'affordable rent';
- an overall increase in the size of grants to the **affordable housing programme**; and
- a further pilot of **voluntary right to buy** that will be run in 2017-18.

[16] Strictly speaking, private registered providers of social housing. ONS, *Statistical classification of registered providers of social housing in Scotland, Wales and Northern Ireland:* September 2016.

4.144 These changes build on a number of past policies, including the July 2015 decision to require housing associations to cut rents by 1 per cent a year for four years. These all affect the income of housing associations, with the increase in the size of the affordable housing programme the biggest of the latest changes. Our model assumes that this higher income is leveraged into extra capital spending and so increases net borrowing. In total, this adds £1.7 billion to borrowing over the forecast. The reduction in grants for share ownership also alters the cash flows associated with part sales of those properties, which reduces the volume of expected housebuilding via the leverage term in our model.

Table 4.30: Housing associations forecast and key changes since March

	£ billion, unless otherwise stated						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Current receipts (a)	7.7	7.6	7.4	7.3	7.1	7.5	8.0
Current spending (b)	3.5	3.6	3.7	3.8	3.8	3.8	3.9
Depreciation (c)	1.8	1.9	1.9	2.0	2.0	2.1	2.2
Capital spending (d)	9.2	8.5	7.4	8.1	7.1	9.5	10.4
of which: Additional capital	6.4	5.9	5.5	6.7	6.8	9.7	11.8
Current deficit (b+c-a)	-2.4	-2.1	-1.8	-1.5	-1.3	-1.6	-2.0
Pre-measures net borrowing (b+d-a)	5.0	4.5	3.7	4.6	3.7	5.8	6.3
Policy measures (e)	0.0	0.0	0.7	0.5	0.5	0.1	0.0
Post-measures net borrowing (b+d-a+e)	5.0	4.5	4.4	5.1	4.2	5.9	6.3
Post-measures net debt	70.3	74.8	79.2	84.3	88.5	94.3	100.6
Post-measures net debt as a share of GDP	3.7	3.8	3.9	4.0	4.0	4.1	4.2
Change since March							
Net borrowing	-0.5	0.1	1.2	1.3	0.9	1.1	
of which:							
England only forecast	-1.0	-0.4	0.1	0.3	0.0	0.4	
Grossing to UK	0.6	0.5	0.4	0.5	0.4	0.6	
Policy measures	0.0	0.0	0.7	0.5	0.5	0.1	

Central government debt interest

4.145 Central government debt interest payments (net of the effect of the Bank of England's Asset Purchase Facility (APF) holdings of gilts) are forecast by applying interest rates to the stocks of different liabilities. These interest rates are derived from financial market expectations and (for index-linked gilts) our inflation forecast.[17]

4.146 Table 4.31 shows that we have revised up debt interest spending in 2016-17, but down thereafter. The downward revision from 2018-19 onwards is significant, averaging £3.7 billion a year. These revisions reflect significant changes to the gross interest paid by central government, the amount of this that is received by the APF and the Bank of England's payments to the private sector related to financing the APF. Since March:

[17] Our forecasting approach was explained in Box 4.4 of our March 2015 *EFO*. 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.

- **Bank Rate has been cut and market expectations of Bank Rate and gilt yields have fallen**. This reduces spending by increasing amounts over the forecast as lower gilt yields reduce gross debt interest payments and lower Bank Rate reduces the cost of financing the reserves created to fund the APF's gilt purchases. By 2020-21, lower interest rates reduce debt interest spending by £3.5 billion;

- **the stock of gilts held by the APF is set to rise** by £60 billion (as part of the package of monetary stimulus measures announced by the Monetary Policy Committee (MPC) in August). This means that a larger amount of public sector debt is in effect financed at the lower Bank Rate rather than at gilt rates. MPC guidance is that the stock of gilts in the APF will be kept unchanged until Bank Rate reaches a level from which it can be cut materially, which the MPC currently judges to be around 2 per cent. On the market expectations underpinning our forecast, this is currently beyond our forecast horizon and so we forecast no reductions in the holdings of the APF. By 2020-21, the £60 billion rise in APF gilt holdings reduces debt interest spending by £1.4 billion;

- **higher RPI inflation** has increased the accrued cost of servicing index-linked gilts, especially in 2016-17 and 2017-18 as the drop in the pound since the referendum pushes up RPI inflation via its effect on import prices. Changes in RPI inflation affect spending associated with index-linked gilts with a lag of three to eight months;

- the **pre-measures financing requirement** has been revised up due to the deterioration in our underlying fiscal forecast; and

- the **indirect effects of the Government decisions** announced in the Autumn Statement increase debt interest spending from 2017-18 onwards. That reflects the higher borrowing associated with the slower pace of fiscal consolidation and the decision to put further sales of RBS shares on hold.

Table 4.31: Key changes to central government debt interest since March

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast (net of APF)	35.4	38.6	42.4	43.4	43.4
November forecast (net of APF)	36.3	38.0	39.2	39.3	39.6
Change	**0.9**	**-0.6**	**-3.2**	**-4.1**	**-3.7**
March forecast (gross of APF)	47.8	51.0	54.1	54.4	53.5
November forecast (gross of APF)	49.3	52.2	52.6	51.7	51.0
Change	**1.5**	**1.2**	**-1.5**	**-2.7**	**-2.5**
of which:					
Interest rates	-0.5	-1.5	-2.2	-3.1	-3.6
Inflation	2.1	2.9	0.7	0.0	0.3
Financing	0.1	0.2	0.3	0.5	0.8
Other factors (including outturn)	-0.3	-0.6	-0.5	-0.5	-0.6
Effects of Government decisions	0.0	0.2	0.3	0.4	0.5
of which:					
Scorecard measures	0.0	0.0	0.1	0.1	0.0
Indirect effects of Government decisions	0.0	0.1	0.2	0.3	0.5
of which:					
Financing	0.0	0.0	0.1	0.2	0.3
Asset sales	0.0	0.1	0.1	0.1	0.2
Changes from the Asset Purchase Facility					
March forecast	-12.4	-12.4	-11.7	-11.0	-10.1
November forecast	-13.0	-14.3	-13.4	-12.4	-11.3
Change	**-0.6**	**-1.8**	**-1.6**	**-1.4**	**-1.2**
of which:					
Size of APF	-0.4	-1.7	-1.6	-1.5	-1.4
Interest rates	-0.2	-0.1	0.0	0.1	0.1

Other AME spending

4.147 Spending on **company tax credits** has been revised up by an average of £0.7 billion a year over the forecast. This reflects HMRC data that show higher-than-expected use of R&D tax credits. This may suggest that the cost of recent policy measures – increasing the generosity for both small and large firms – has been underestimated.

4.148 Our forecasts of **BBC** spending and licence fee income are little changed since March. The forecast allows for an increase in licence fee receipts associated with the recent legislative change in September, which means those consuming non-live content on iPlayer must now pay for a TV licence. This was previously included in the forecast, but the cash boost has been brought forward, reflecting the Government's decision to bring forward the policy change. Receipts are further boosted a little by our higher CPI inflation forecast (from 2017-18, after the current Charter period has ended, we assume that the licence fee increases in line with CPI inflation). The £0.2 billion reduction in spending in 2020-21 compared to March reflects a smoothing out of pension deficit payments (the previous forecast assumed the largest chunk would be paid out in that year). Further detail can be found in the supplementary fiscal tables on our website.

4.149 Our forecast for **Network Rail current spending** has been revised up by an average of £0.2 billion a year from 2016-17 to 2018-19, reflecting latest plans. Changes in our forecast of **Network Rail capital spending** from 2016-17 to 2018-19 reflect reprofiling, with spending being net of £1.8 billion of planned asset sales across 2017-18 and 2018-19. Changes thereafter reflect the Government's latest policy assumptions for current and capital spending in the next Control Period (CP6). The Government will not set Network Rail's final CP6 spending baselines until nearer the end of the current Control Period (CP5). Current spending is reduced by small amounts in 2019-20 and 2020-21 compared to our March forecast. Capital spending has been increased by an average of £1.3 billion a year in 2019-20 and 2020-21. It is now assumed to remain flat in real terms from a 2018-19 baseline (the final year of CP5).

4.150 **Other PSCE in departmental AME** is down by between £0.2 and £0.3 billion a year. This largely reflects inclusion of estimates for receipts associated with Pool Re, amounting to £0.2 billion a year. (Pool Re is a scheme whereby the Government provides the insurance industry with a guarantee of financial support in the event of a severe terrorist attack, receiving annual payments in return for this backing.) The movement in **other PSGI items in departmental AME** is small, with reductions in 2016-17 and 2017-18 reflecting the cancelled Lloyds retail share offering, which would have included a capital grant element attributable to giving away some shares as part of the sale.

4.151 **VAT refunds** expenditure is neutral for borrowing, as it is directly offset within receipts. The downward revisions to the forecast are also explained in the receipts section.

4.152 **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 receipts. These forecasts and the upwards revision since March are explained in the receipts section.

4.153 Our forecast for **HMRC tax litigation** spending has been reduced by £0.2 billion a year on average over the forecast. We have also altered the profile of spending, with £0.2 billion of payments forecast this year and a flat £1.5 billion in each subsequent year. These figures reflect our latest in-year view and the amount that HMRC expects to pay out over the next five years, as well as amounts paid in 2015-16 but that will not be classified as spending by the ONS until the case has reached a final verdict. The flat profile reflects uncertainty over both the timing of payments and when they will be scored in the National Accounts.

4.154 The AME forecast includes **other National Accounts adjustments**, which are included in the definitions for PSCE and PSGI. Table 4.16 shows that the other National Accounts adjustments have increased by an average of £3 billion in 2015-16 and across the forecast. This reflects changes in two areas. First, work that we have done with the ONS to better understand the adjustments in respect of local authority source data, as collected by the Department for Communities and Local Government and the devolved administrations, so that they are consistent with National Accounts definitions. The ONS's work to clarify some of these adjustments led to revisions that increased spending outturn in 2015-16 by £0.9

billion. We assume that this will persist in future years. Further work is needed on the remaining adjustments, but we have revised up our estimates in line with 2015-16 outturns, which adds a further £0.6 billion a year to our forecast. Second, we have brought our forecast into line with the latest outturn adjustment for the local authority imputed subsidy for equity injection into the Housing Revenue Account. This adds an average of £1.1 billion a year to our forecast. This adjustment is offset in public corporations' gross operating surplus in current receipts, so is neutral for borrowing.

4.155 On the capital side, the £0.4 billion a year downward revision over the forecast relates to an adjustment that removes financial transactions (which do not score as PSGI) from local authorities' capital spending totals (thus increasing spending). This is more than offset by downward revisions to capital VAT refunds in later forecast years (rising from £0.3 billion less spending in 2016-17 to £0.6 billion less in 2020-21). Further details of our forecasts for all our National Accounts adjustments are included in the supplementary tables on our website. Explanations and the background to National Accounts adjustments are given in Annex D to PESA 2016.[18]

Loans and other financial transactions

4.156 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 and stock of debt.

4.157 The public sector net cash requirement (PSNCR) is the widest measure of the public sector's cash flow position in each year.[19] 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.

4.158 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;

[18] See HM Treasury, July 2015, *Public expenditure statistical analyses 2016*.
[19] Consistent with the measures of debt and deficit used in this forecast, PSNCR excludes the public sector banks.

- **monetary policy operations:** in August 2016, the Bank of England announced a package of measures to support the economy that will affect the PSNCR in the same way as loans or the acquisition of financial assets;

- **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 late 2000s 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; and

- an **alignment adjustment** between PSNB and PSNCR accounts for other factors that we expect to persist.

Table 4.32: Reconciliation of PSNB and PSNCR

	£ billion					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Public sector net borrowing	**68.2**	**59.0**	**46.5**	**21.9**	**20.7**	**17.2**
Loans and repayments	**18.3**	**20.9**	**22.0**	**22.2**	**23.0**	**24.9**
of which:						
Student loans[1,2]	12.6	14.5	16.5	18.0	19.0	19.7
DFID[3]	0.5	1.2	0.8	1.0	1.2	
Green Investment Bank	0.4	0.2	0.2	0.1	0.0	
Business Bank/Partnership	0.3	0.1	-0.2	0.2	-0.2	
Help to Buy	1.8	1.7	1.7	1.8	1.8	
UK Export Finance	0.3	0.5	0.6	0.6	0.7	
Ireland	0.0	0.0	0.0	-1.6	-1.6	
Other lending[4]	2.5	3.1	2.8	2.6	2.6	5.7
Allowance for shortfall	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Transactions in financial assets	**-1.3**	**-7.5**	**-2.5**	**-2.4**	**-2.4**	**0.0**
of which:						
Student loan book	0.0	-4.7	-2.4	-2.4	-2.4	0.0
Lloyds Banking Group share sales	-1.0	-2.5	0.0	0.0	0.0	0.0
Royal Bank of Scotland share sales	0.0	0.0	0.0	0.0	0.0	0.0
Other	-0.3	-0.3	-0.1	-0.1	-0.1	0.0
Bank of England schemes	**36.4**	**58.6**	**0.0**	**0.0**	**-33.1**	**-51.9**
UKAR asset sales and rundown	**-4.9**	**-18.6**	**-5.1**	**-0.7**	**-0.8**	**-0.7**
Accruals adjustments	**7.7**	**1.8**	**-3.8**	**-6.9**	**4.7**	**-3.5**
of which:						
Student loan interest[1,2]	2.0	3.0	4.3	5.4	6.3	7.2
PAYE income tax and NICs	0.6	1.6	0.7	1.5	1.6	1.7
Indirect taxes	0.7	0.4	0.7	0.6	0.4	0.4
Corporation tax and bank surcharge	0.0	0.0	0.0	-5.9	-3.5	0.0
Other receipts	3.1	2.9	3.2	3.3	3.2	3.2
Index-linked gilts[5]	-0.7	-10.1	-15.5	-14.2	-6.1	-18.5
All gilts	4.0	5.6	5.0	4.9	5.2	4.8
Network Rail	0.5	1.1	0.5	0.3	0.5	0.7
Other expenditure	-2.6	-2.7	-2.8	-2.9	-3.0	-3.1
Other factors	**-0.6**	**-0.8**	**-0.8**	**-0.8**	**-0.8**	**-0.8**
of which:						
Alignment adjustment	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
Public sector net cash requirement	**123.8**	**113.4**	**56.2**	**33.2**	**11.3**	**-14.9**

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

Cash spending on new loans	15.2	17.1	19.0	20.8	22.2	23.2
Cash repayments	2.6	2.6	2.6	2.8	3.2	3.5

[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.

Table 4.33: Changes in the reconciliation of PSNB and PSNCR

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
Public sector net borrowing	**12.7**	**20.2**	**25.1**	**32.4**	**31.8**
Loans and repayments	**-0.3**	**0.1**	**0.2**	**0.6**	**1.2**
of which:					
Student loans[1,2]	-0.1	-0.2	-0.4	-0.4	-0.5
DFID[3]	-0.3	0.0	0.0	0.0	0.0
Green Investment Bank	-0.3	0.0	0.0	0.0	0.0
Business Bank/Partnership	0.0	-0.2	0.0	0.2	-0.2
Help to Buy	0.3	0.2	0.4	0.5	0.6
UK Export Finance	-0.1	-0.2	-0.3	-0.2	0.7
Ireland	0.0	0.0	0.0	0.0	0.0
Other lending	-0.6	0.2	0.1	0.1	0.1
Allowance for shortfall	0.8	0.3	0.5	0.5	0.5
Transactions in financial assets	**10.5**	**0.4**	**5.4**	**5.3**	**0.0**
of which:					
Student loan book	2.4	-2.4	0.0	0.0	0.0
Lloyds Banking Group share sales	2.6	-2.5	0.0	0.0	0.0
Royal Bank of Scotland share sales	5.4	5.4	5.4	5.3	0.0
Other	0.1	-0.1	0.0	0.0	0.0
Bank of England schemes	**36.4**	**58.6**	**0.0**	**0.0**	**-33.1**
UKAR asset sales and rundown	**9.4**	**-5.3**	**-3.8**	**0.6**	**0.3**
Accruals adjustments	**-3.2**	**-1.1**	**-0.8**	**-5.4**	**-3.5**
of which:					
Student loan interest[1,2]	-0.1	0.2	0.4	0.1	-0.2
PAYE income tax and NICs	-1.4	-0.4	-0.8	-0.4	-0.5
Indirect taxes	-0.5	-0.5	-0.3	-0.4	-0.4
Corporation tax and bank surcharge	0.0	0.0	0.0	-5.9	-3.5
Other receipts	0.7	0.3	0.5	0.5	0.5
Index-linked gilts[4]	-2.2	-2.9	-0.9	-0.3	-0.6
All gilts	0.6	0.9	0.8	1.3	1.7
Network Rail	-0.3	1.0	-0.5	-0.5	-0.6
Other expenditure	0.0	0.1	0.1	0.1	0.1
Other factors	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**
of which:					
Alignment adjustment	0.0	0.0	0.0	0.0	0.0
Public sector net cash requirement	**65.7**	**72.9**	**26.1**	**33.5**	**-3.2**

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

Cash spending on new loans	-0.1	-0.2	-0.4	-0.5	-0.5
Cash repayments	0.1	0.0	0.0	-0.1	0.0

[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] This change reflects the recapitalisation of the CDC, the UK's Development Finance Institution (DFI).

[4] This reconciliation to the net cash requirement does not affect public sector net debt.

Loans and repayments

Student loans

4.159 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 over recent years have increased the size of the upfront loans, with repayments being made over a longer period. In a *Fiscal sustainability analytical paper* published in July, we estimated on the policy settings that were current at the time that student loans would increase PSND by 11.5 per cent of GDP by the early 2040s before falling to 10.4 per cent of GDP in 2065-66.[20]

4.160 Reflecting the latest UCAS acceptances data, we have revised our forecast for 2016-17 student numbers in England down by 5,000 relative to our March forecast. This has a knock-on effect in subsequent years. There is significant uncertainty around our medium-term forecast – both in terms of any direct effects on UK student numbers if the treatment of EU students in the UK changes after the UK leaves the EU and any knock-on effects on UK student numbers if EU countries change their treatment of UK students. For this forecast we have assumed that the number of EU-domiciled entrants will be flat from 2017-18 onwards. For UK-domiciled students, we have assumed a similar upward trend in entry rates as we assumed in March. Taken together, these changes reduce our student numbers forecast by 15,000 in 2020-21 relative to March. Details of our student numbers forecast are available in a supplementary fiscal table on our website.

4.161 Over the medium term, it is outlays that are most sensitive to the assumptions we make about student numbers, while repayments would be affected over much longer horizons. All else equal, an increase/decrease of 10,000 in the number of students would increase/decrease student loan outlays by around £145 million in 2016-17, rising to £170 million in 2021-22 (in line with the assumed path of average loans per student).

4.162 Other changes to our student loans forecast include:

- a downward revision to outlays based on recent data showing **slightly fewer students taking up loans in their second year relative to the number doing so in their first**; and
- lower repayments due mainly to **lower earnings growth** than we forecast in March.

4.163 The Government has announced that an additional 1,500 medical undergraduate training places will be available from September 2018. The stock of additional medical students is expected to reach 6,000 by 2021-22. This adds only around £10 million to outlays by 2021-22, because we assume that most students opting to study medicine as a result of this policy would have chosen other subjects in its absence.

[20] *Fiscal sustainability analytical paper: Student loans update*, July 2016.

Other lending

4.164 Other lending covers a range of Government schemes. We produce this forecast by considering information from the Government 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 we felt that was appropriate). As shown in Table 4.33, relative to our March forecast planned lending by most of these schemes has been revised down. One exception is Help to Buy equity loans, for which planned lending has been revised up by £0.4 billion a year on average over the forecast period.

4.165 With bottom-up 2016-17 lending plans having been revised down significantly, we have removed the £0.8 billion allowance for under-lending that we had assumed in March. We have also revised down the assumption from 2017-18 onwards to £0.5 billion a year.

4.166 In this Autumn Statement, the Government has also announced new lending by the British Business Bank, Digital Infrastructure Fund, Northern Powerhouse Investment Fund and Midlands Engine Investment Fund. In total, lending by these four schemes will reach about £0.2 billion in 2020-21. Reflecting experience from many lending schemes in the past, we have assumed that actual lending will be around a fifth lower than the announced totals.

Transactions in other financial assets

4.167 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, although their scale has been reduced significantly relative to our March forecast due to RBS share sales being put on hold. Our latest forecast of major asset sales is shown in Chart 4.8, and all the changes in financial asset sales since March are shown in Table 4.34.

4.168 Our latest forecast and changes since March reflect:

- our March forecast included the Government's planned sales of £3.6 billion of **Lloyds Banking Group** shares in 2016-17, including via a retail offer that incorporated a gift element (reflected in our spending forecast). The retail offer has been cancelled and the Government has announced that its remaining stake will be sold through a pre-arranged trading plan. The Autumn Statement confirms that it expects to return Lloyds Banking Group fully to the private sector by the end of 2017-18. Based on the share price assumption underpinning our forecast (the 10-day average to 31 October of 55.8 pence per share, which we assume rises in line with nominal GDP as we do for the broader equity price assumption used in our fiscal forecast), we expect Lloyds share sales to raise £1.0 billion in 2016-17 and £2.5 billion in 2017-18. With the share price relatively low, one risk to this forecast is that market volatility or other factors push the share price below the trading plan floor (the level below which the Government judges not to represent value-for-money), which would mean no further share sales took place unless or until the price recovered;

- our March forecast included £21.5 billion of **Royal Bank of Scotland (RBS) share sales** between 2016-17 and 2020-21 (following the £2.1 billion that was sold in 2015-16). The RBS share price averaged 189 pence in the 10 days to 31 October, putting the value of the Government's remaining stake at £15.9 billion, so in the absence of any policy changes we would have revised this forecast down. But the Autumn Statement states that while the Government plans to seek opportunities for further sales, it judges that the need to resolve legacy issues makes that challenging in the near term. RBS has reported difficulties in disposing of its Williams & Glyn subsidiary and remains subject to litigation in the US in relation to pre-crisis residential mortgage-backed securities. The Chancellor has been reported as saying that further sales were *"not practical at the moment"* and that *"the right time to look at this again would be when those issues are set"*. On this basis, we have not included any RBS share sales in this forecast;

- the Government has announced that **UK Asset Resolution (UKAR)** has launched a programme of sales of mortgage assets it holds from Bradford & Bingley (B&B), expected to raise sufficient proceeds for B&B to repay the £15.65 billion debt to the Financial Services Compensation Scheme, which, in turn, would repay the corresponding loan from the Treasury. We expect that the sales of Bradford & Bingley mortgage assets will be completed by the end of 2017-18. But unlike our March forecast, we do not expect any proceeds in 2016-17. The Government has also stated that UKAR will look to make further sales over the course of the Parliament, currently expected to total £5 billion (detailed in paragraph 4.173);

- we continue to expect the Government to raise around £12 billion from selling part of the pre-2012 **student loan book**. The timing of these sales has been pushed back in a number of forecasts and again in this forecast. The process of preparing for the initial sale tranche continues, but we now judge the probability that the first sale will be completed in 2016-17 to be less than 50 per cent. We have assumed that the first sale will be completed in early 2017-18, but that the Government will still be able to complete the second sale by the end of 2017-18. Uncertainty over these timings and the rest of the sale programme remains. Selling the loan book changes the years in which payments are received by government, with more recorded upfront as sales proceeds and less as loan repayments in future years, as these will flow to the private sector rather than the Exchequer. We expect that the sale of the loan book will reduce the flow of repayments to the Exchequer by around £1.4 billion by 2021-22; and

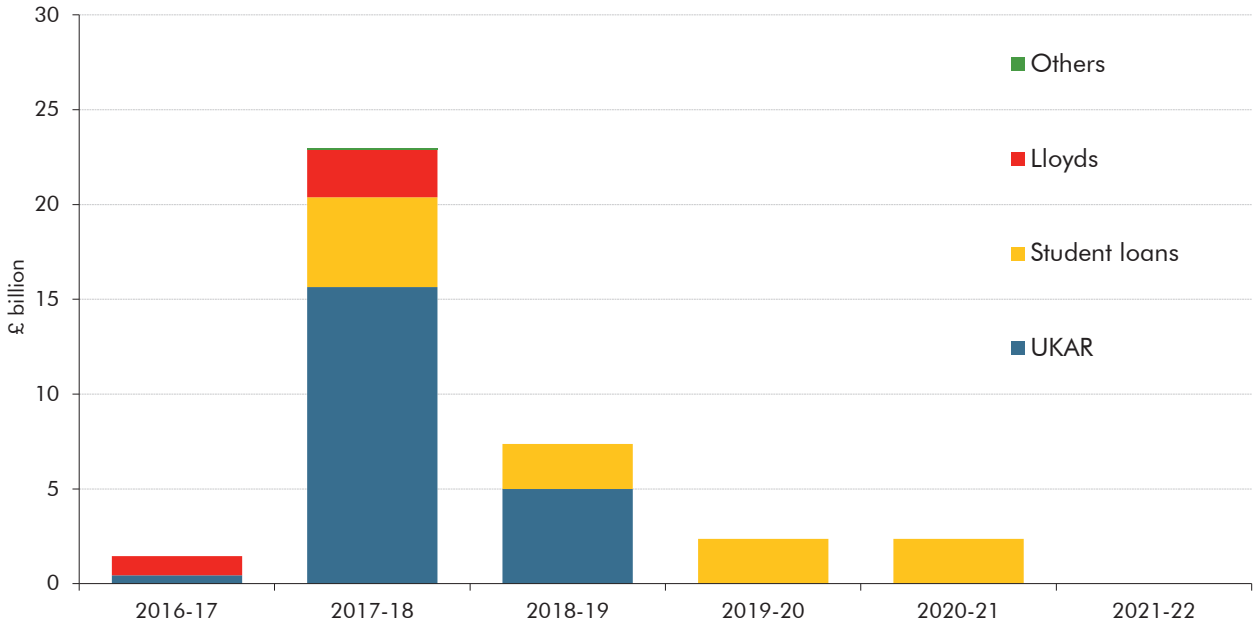
- we include £0.1 billion in respect of the forthcoming auction of **2.3 and 3.4 GHz spectrum**. Following the announcement of a further consultation on aspects of the auction design, we have assumed that the proceeds of the sale will be received in 2017-18 rather than in 2016-17.

4.169 We expect the proceeds of these financial asset sales to total just £1.7 billion in 2016-17, including £0.5 billion received at the start of the year in respect of UKAR assets and the £1.0 billion from Lloyds share sales. A further £35 billion is expected over the remainder of the forecast. Over the full forecast period, proceeds from financial asset sales have been revised down by around £18 billion relative to our March forecast.

Table 4.34: Changes in financial asset sales since March

	£ billion					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	20.9	16.6	7.9	7.8	2.4	
November forecast	1.7	23.2	7.5	2.4	2.4	0.0
Change	-19.2	6.5	-0.4	-5.3	0.0	
of which:						
Forecast changes	-12.7	8.0	-1.4	-1.4	0.0	
Effects of Government decisions	-6.4	-1.5	1.0	-3.9	0.0	
Royal Bank of Scotland share sales						
March forecast	5.4	5.4	5.4	5.3	0.0	
March share sales at latest share price	4.0	4.0	4.0	3.9	0.0	
Post-measures November forecast	0.0	0.0	0.0	0.0	0.0	0.0
Lloyds Banking Group share sales						
March forecast	3.6	0.0	0.0	0.0	0.0	
March share sales at latest share price	3.4	0.0	0.0	0.0	0.0	
Post-measures November forecast	1.0	2.5	0.0	0.0	0.0	0.0
UKAR asset sales (excluding rundown)						
March forecast	9.2	8.7	0.0	0.0	0.0	
November forecast	0.5	15.7	0.0	0.0	0.0	0.0
Post-measures November forecast	0.5	15.7	5.0	0.0	0.0	0.0
Pre-2012 student loan books sales						
March forecast	2.4	2.4	2.4	2.4	2.4	
November forecast	0.0	4.7	2.4	2.4	2.4	0.0
Others						
March forecast	0.4	0.2	0.1	0.1	0.1	
November forecast	0.3	0.3	0.1	0.1	0.1	0.0

Chart 4.8: Proceeds from major asset sales



Source: HM Treasury, OBR

Monetary policy interventions

4.170 Since March 2009, the 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.

4.171 In August 2016, the MPC announced a package of measures that included further gilt purchases and two new measures that operate through the APF. These will increase the public sector net cash requirement as well as net debt:

- the **'Term Funding Scheme'** (TFS) provides funding to UK banks and building societies that choose to participate. It is a demand-led scheme with an initial drawdown period of 18 months (until the end of February 2018) and a maximum authorised size of £100 billion. In order to factor in its effects on the cash requirement and net debt, we have assumed that TFS usage will reach £85 billion – halfway between the £70 billion maximum size reached under the funding for lending scheme and the £100 billion authorised maximum. It is also around 5 per cent of the current level of lending to households and private non-financial corporations. That will raise the net cash requirement in 2016-17 and 2017-18. TFS participants will be able to borrow for up to four years and, given the low rate of interest that will be charged, we have assumed that all loans are redeemed exactly four years after issuance, reducing the net cash requirement in 2020-21 and 2021-22. The MPC will confirm by August 2017 whether the drawdown period will close in February 2018 or will be extended; and

- the **'corporate bond purchase scheme'** (CBPS) will buy up to £10 billion of sterling non-financial investment-grade corporate bonds issued by firms making a material contribution to the UK economy. We have assumed that the purchases are spread evenly over the course of the 18-month window starting from September 2016, raising the net cash requirement over that period. We have assumed that any redemption during the period is rolled over, similarly to what we have assumed for the APF, so there is no period where the CBPS is assumed to reduce the net cash requirement.

UK Asset Resolution (UKAR) asset sales and rundown

4.172 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 UKAR's decision to begin a major sale programme of B&B mortgages. The sale process was delayed following the referendum, so we now expect it to be completed during 2017-18, a year later than assumed in March. We still expect it to raise sufficient proceeds for B&B to repay its £15.65 billion liability to the FSCS, and for the FSCS to repay its corresponding loan from the Treasury.

4.173 As well as confirming the B&B mortgage sale, the Government has announced in this Autumn Statement that UKAR will look to make further sales over the course of the Parliament that are currently expected to total £5 billion. Given UKAR's track record in completing such sales, we have included that amount in our forecast. The proceeds are assumed to be received in 2018-19.

4.174 As with any major asset sales, UKAR's 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. There will be effects from foregone mortgage repayments associated with the sale. These reduce interest receipts (affecting both PSNB and PSND) and principal repayments (affecting only PSND).

Accruals adjustments

4.175 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, if receipts are forecast to rise over time, the cash received each year will generally be lower than the accrued receipts.

4.176 A large component of the receipts timing adjustment relates to the interest on student loans. This is included in the accrued measure of public sector current receipts as soon as the loan is issued, but cash repayments are not received until the point at which former students earn sufficient income. This part of the forecast is higher than in March until 2019-20, reflecting the effect of higher RPI inflation during this period that more than offsets lower Bank Rate. It is then lower than in March in 2020-21, as the impact of lower Bank Rate dominates. Our forecast includes student interest payments related to England, Scotland, Wales and Northern Ireland.

4.177 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 the government will have to pay on index-linked gilts when they are redeemed. This commitment is recognised in PSNB as debt interest payments each year, but the actual cash payments do not occur until redemption, which may be many years in the future. Since March, the upward revision to RPI inflation, especially in the first half of the forecast, has increased accrued debt interest, with a largely offsetting change in the accrual adjustment.

4.178 We have introduced an accruals adjustment associated with corporation tax and bank surcharge receipts in this forecast following the ONS decision to record them on a time-shifted accruals basis rather than a cash basis in PSNB. The effect of this change on our receipts forecast is described in Box 4.2. In this forecast the adjustment only relates to the effect of the Budget 2016 policy to bring forward payment dates for large companies in 2019-20, which no longer affects the accrued measure but still brings in cash earlier. This results in adjustments of £5.9 billion in 2019-20 and £3.5 billion in 2020-21.

Alignment adjustment

4.179 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.[21] We include a £1.1 billion a year 'alignment adjustment' for factors that we expect to persist.

Central government net cash requirement

4.180 The central government net cash requirement (CGNCR) is the main determinant of government's net financing requirement. Table 4.35 reconciles CGNCR with PSNCR and Table 4.36 sets out the changes in this reconciliation since March. The CGNCR is derived by adding or removing transactions associated with local authorities and public corporations to the PSNCR. By far the biggest change in this reconciliation relative to March relates to the Bank of England's monetary policy operations, which affect the public corporations sector's net cash requirement at the start and end of the forecast period. The CGNCR has been revised up by £25 billion in 2016-17, significantly more than PSNB, reflecting the Government's decision not to sell further RBS shares and our assumption that no proceeds from UKAR and student loan book sales will be received until 2017-18.

4.181 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.[22] 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 almost £18.6 billion in 2017-18, falling to around £1 billion by 2021-22, but this does not directly affect the Exchequer (this forecast is shown towards the bottom of Table 4.35);

- **interactions between the Exchequer and these bodies net off** within the headline measure. The banks' loan repayments to the Exchequer vary from around £0.5 billion to £3 billion a year; and

- the Treasury will finance **Network Rail**'s new and maturing debt in future, for which Network Rail will pay a fee. Refinancing needs are projected at £2.5 billion in 2016-17, but decline over time.

[21] 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.
[22] The Government is publishing a revised financing remit for 2016-17 alongside the Autumn Statement. 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 4.35: Reconciliation of PSNCR and CGNCR

	£ billion					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Public sector net cash requirement (NCR)	**124**	**113**	**56**	**33**	**11**	**-15**
of which:						
Local authorities and public corporations NCR	43	66	6	3	-29	-53
Central government (CG) NCR own account	81	47	50	30	41	38
CGNCR own account	81	47	50	30	41	38
Net lending within the public sector	1	1	1	1	1	1
CG net cash requirement	**81**	**48**	**51**	**31**	**41**	**39**
B&B and NRAM adjustment	2	0	1	0	0	0
Network Rail adjustment	2	1	1	-1	0	-1
CGNCR ex. B&B, NRAM and Network Rail	**86**	**48**	**53**	**30**	**42**	**39**

Table 4.36: Changes in the reconciliation of PSNCR and CGNCR

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
Public sector net cash requirement (NCR)	**66**	**73**	**26**	**33**	**-3**
of which:					
Local authorities and public corporations NCR	40	66	7	6	-28
Central government (CG) NCR own account	25	7	19	27	25
CGNCR own account	25	7	19	27	25
Net lending within the public sector	0	0	0	0	0
CG net cash requirement	**25**	**7**	**19**	**27**	**25**
B&B and NRAM adjustment	-2	0	1	-1	0
Network Rail adjustment	0	0	0	0	0
CGNCR ex. B&B, NRAM and Network Rail	**24**	**7**	**21**	**27**	**25**

Key fiscal aggregates

4.182 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 some 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. We focus on it when explaining the reasons for changes since the previous forecast;

- **cyclically adjusted net borrowing**: public sector net borrowing adjusted to reflect the estimated impact of fluctuations in 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 proposed new 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;

- **public sector net investment**: the sum of investment by central and local government and by public corporations, but net of depreciation. In effect, this represents the extent to which public investment adds to the stock of capital;

- the **cyclically adjusted budget deficit**: the current budget adjusted to reflect the estimated impact of fluctuations in the economic cycle. It was the target measure for the Coalition Government's fiscal mandate in the last Parliament;

- **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 existing and proposed supplementary fiscal targets (as it was by the Coalition Government in the last Parliament);

- **public sector net debt excluding the Bank of England**: which, by removing the Bank's balance sheet from the headline measure, abstracts from the uneven effect across years of the Bank's August monetary policy stimulus measures; and

- **public sector net financial liabilities**: a broader balance sheet measure that includes all financial assets and liabilities recorded in the National Accounts (described in more detail in Annex C).

Public sector net borrowing

Expected borrowing in 2016-17

4.183 We expect borrowing to fall from £76.0 billion in 2015-16 to £68.2 billion this year, a £12.2 billion upward revision from March (on a like-for-like basis). Most of that revision is explained by two developments. First, income tax and national insurance receipts from pay-as-you-earn have fallen far short of our March forecast, prompting a £10.5 billion downward revision for 2016-17 as a whole. Second, spending – particularly local authority spending – was higher than expected in 2015-16, which we assume will persist this year.

4.184 On a like-for-like basis – removing the impact of ONS classification decisions that have been announced but not yet implemented – our forecast for borrowing in 2016-17 implies a 10.9 per cent fall year-on-year. That is a little faster than we have seen over the year to date, even though we expect the economy to slow further. We expect the improvement in the deficit to accelerate over the remainder of the year because:

- policy measures – notably forestalling ahead of the dividend tax rate increase this April – are expected to boost **self-assessment income tax** receipts at the end of the year;

- strong **onshore corporation tax** receipts in October boost our receipts estimate for the full year. We had access to administrative data before closing our forecast; and

- two timing effects related to **net transfers to the EU** reduce spending in the second half of the year relative to 2015-16. They relate to the profile of total EU budget spending across the multi-year framework that underpins it and the timing of payments and rebates associated with implementing the 2014 Own Resources Decision.

Forecasts for borrowing from 2017-18 onwards

4.185 Table 4.37 shows how classification changes, our underlying forecast judgements and the Government's policy decisions have affected our forecast for borrowing:

- in order to compare the forecasts on a like-for-like basis, we have restated our March forecast for the effects of two ONS **classification changes** – the reclassification of Scottish, Welsh and Northern Irish housing associations into the public sector[23] (bringing them into line with last year's reclassification of most English housing associations) and the decision to record corporation tax receipts on a time-shifted accruals basis rather than a cash basis. The latter is only partly reflected in this forecast – we have removed the effect of the Budget 2016 payment dates policy measure in 2019-20 and 2020-21, since that only affected the timing of cash receipts. It will be fully reflected in our next forecast;[24]

- we have revised down our **pre-measures receipts forecast** significantly (which raises borrowing and therefore shows as positive figures in this table). The overall revision reaches £15.3 billion in 2020-21, which is more than explained by weaker income tax and NICs receipts. These are down £23.1 billion in 2020-21, as the weakness this year is compounded by the downward revision to our productivity and earnings growth forecasts and our belief that more people than we previously thought will incorporate over coming years, which lowers their tax bills. Stronger corporation tax receipts – both onshore and from the North Sea – offset some of this latter change;

- our **debt interest forecast** is lower from 2017-18 onwards, having been pushed up by higher RPI inflation in 2016-17. That reflects lower interest rates, which more than offset the upward pressure on debt interest from higher inflation and borrowing;

- **other spending** has been revised up. The bigger changes include higher expected local authority spending and significant further upward revisions to incapacity and disability benefits spending. This revision also includes the effects of weaker sterling on our forecast for transfers to the EU from 2018-19 onwards, given our assumption that any future reduction in those transfers after leaving the EU will be recycled into extra domestic spending; and

[23] ONS, *Statistical classification of registered providers of social housing in Scotland, Wales and Northern Ireland*, September 2016.
[24] ONS, *Public sector finances statistical bulletin (Recent events and forthcoming methodological changes)*, November 2016.

- the **policy decisions** increase the deficit in every year. Capital spending plans have been increased by rising amounts across the Spending Review years to 2020-21 and into 2021-22. Gross tax rises (including another rise in the insurance premium tax and more anti-avoidance measures) outweigh its gross tax cuts (notably freezing fuel duty once again). Welfare spending is higher due to the decision shortly afterwards to abandon disability benefit cuts announced in the March Budget and the Autumn Statement decision to taper universal credit awards more slowly. Departmental resource spending has been boosted in 2019-20 and 2020-21, but has been held flat in real terms in 2021-22, thereby falling in real per capita terms and as a share of GDP. Other policy effects pushing up the deficit include a change in the policy assumption that the Government provided in relation to Network Rail capital spending beyond 2018-19 and the debt interest costs associated with higher borrowing.

Table 4.37: Public sector net borrowing since March

	£ billion						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
March forecast	**72.2**	**55.5**	**38.8**	**21.4**	**-10.4**	**-11.0**	
Classification changes		0.5	0.4	0.5	6.4	4.1	
March forecast post-classification change[1]	**72.2**	**56.0**	**39.2**	**21.9**	**-4.1**	**-6.9**	
Total forecast changes	**3.9**	**11.2**	**17.2**	**20.1**	**17.7**	**18.1**	
of which:							
Receipts	2.0	6.7	9.3	13.1	15.2	15.3	
CG debt interest spending	-0.7	0.8	-0.8	-3.4	-4.5	-4.3	
Other spending	2.5	3.7	8.7	10.4	6.9	7.0	
November forecast pre-policy decisions	**76.0**	**67.2**	**56.4**	**42.0**	**13.6**	**11.2**	**11.6**
Total effect of Government decisions	**0.0**	**0.9**	**2.5**	**4.5**	**8.4**	**9.6**	**5.6**
of which:							
Scorecard receipts measures	0.0	0.0	-0.4	-0.6	-0.7	-0.6	-0.6
Scorecard AME spending measures	0.0	0.2	2.3	3.3	2.7	2.2	2.4
Changes to RDEL spending[2]	0.0	2.4	0.5	0.1	1.7	1.6	-5.0
Changes to CDEL spending[2]	0.0	-1.7	0.3	1.6	3.5	4.8	5.8
Non-scorecard measures	0.0	0.0	-0.3	0.0	0.9	0.9	0.9
Indirect effect of Government decisions	0.0	0.1	0.1	0.1	0.3	0.7	2.1
November forecast	**76.0**	**68.2**	**59.0**	**46.5**	**21.9**	**20.7**	**17.2**
Memo items:							
Overall change since March	*3.9*	*12.7*	*20.2*	*25.1*	*32.4*	*31.8*	
Overall like-for-like change since March	*3.9*	*12.2*	*19.8*	*24.6*	*26.0*	*27.7*	

[1] 2015-16 reflects outturn data and has not been adjusted for ONS classification decisions that have been announced but not yet implemented.

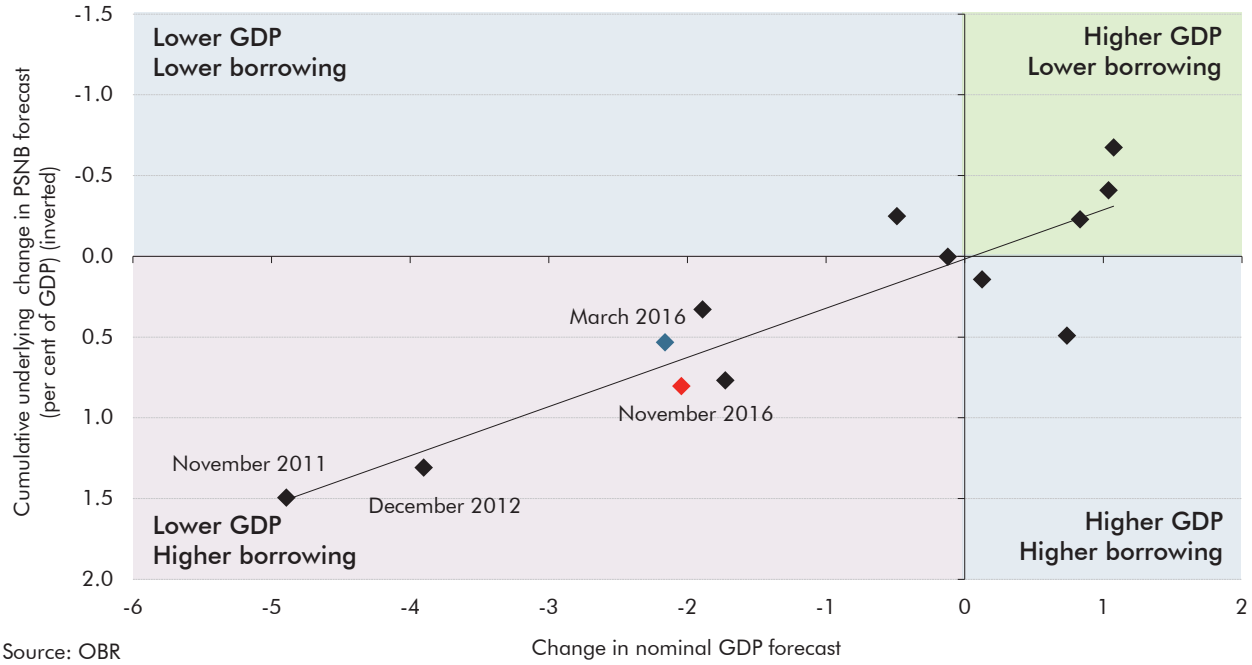
[2] The change in 2021-22 is relative to a baseline that assumes spending by departments would otherwise have remained constant as a share of GDP.

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.

4.186 In our March *EFO*, we analysed our past fiscal forecast revisions in order to put the significant downward revision we made at the time into context. How does the revision in this *EFO* compare with our past forecast revisions? The cumulative increase in borrowing over the five years from 2016-17 to 2020-21 is 0.8 per cent of GDP, the third largest

revision we have made (after November 2011 and December 2012). As with past revisions, the size of the hit to borrowing is closely correlated with the extent to which we have revised down nominal GDP growth, as shown in Chart 4.9. Indeed, our latest revision is very close the trend line in the chart that reflects the average relationship between these two factors.

Chart 4.9: Underlying fiscal forecast and overall nominal GDP revisions since 2010



Source: OBR

Box 4.5: Institute for Fiscal Studies' outlook for the public finances: a comparison

The IFS published an assessment of the outlook for the public finances in November.[a] In this box, we describe the differences between our latest pre-measures forecast and that assessment.

The IFS forecast for the deficit in 2019-20 was £14.9 billion, a £25.3 billion deterioration relative to our March forecast. That is very close to our pre-measures forecast of £13.6 billion in 2019-20. But Table B shows compares the sources of the revisions to each forecast:

- our forecast has been adjusted for **classification changes**. These add £6.4 billion to borrowing in 2019-20, largely reflecting the removal of the effect of the corporation tax timing measure in that year. This change is not reflected in the IFS forecast;
- we have increased our **2016-17 borrowing estimate** up significantly and we have assumed that most of the factors driving that are structural, so persist across the forecast. This boosts borrowing by £8.0 billion in 2019-20. The IFS estimated this effect to add £6.8 billion in 2019-20;
- the downward revision to our **GDP growth** forecast increases borrowing by £10.9 billion in 2019-20. The IFS expected lower GDP growth to raise it by around £30 billion in that year. Two-thirds of the difference reflects their assumption of an even weaker GDP profile than ours, with the rest likely to reflect either the approach taken to estimating the hit or

the composition of the hit assumed;

- higher **consumer price inflation** adds £3.0 billion to our forecast in 2019-20, reflecting weaker tax receipts (as faster uprating of income tax and NICs thresholds mean that less income is taxed at higher rates) and higher spending (where some welfare and public service pension payments are uprated in line with CPI inflation). The IFS estimated that this effect would add £4.3 billion in that year;
- we expect **higher equity and oil prices** to boost receipts by £3.1 billion in 2019-20 via higher capital gains tax and North Sea revenues. The IFS estimated this to add £3.8 billion in that year;
- lower **debt interest payments** (more than explained by lower interest rates) lower our forecast by £4.5 billion in 2019-20, broadly in line with the IFS forecast; and
- we have made the fiscally neutral assumption that any reduction in **expenditure transfers to the EU** would be recycled fully into domestic spending. Our forecast for this spending is £1.4 billion higher in 2019-20, largely due to the effect of a weaker pound. The IFS assumed that these transfers will be reduced to zero and that this will reduce borrowing by £8.0 billion in that year.

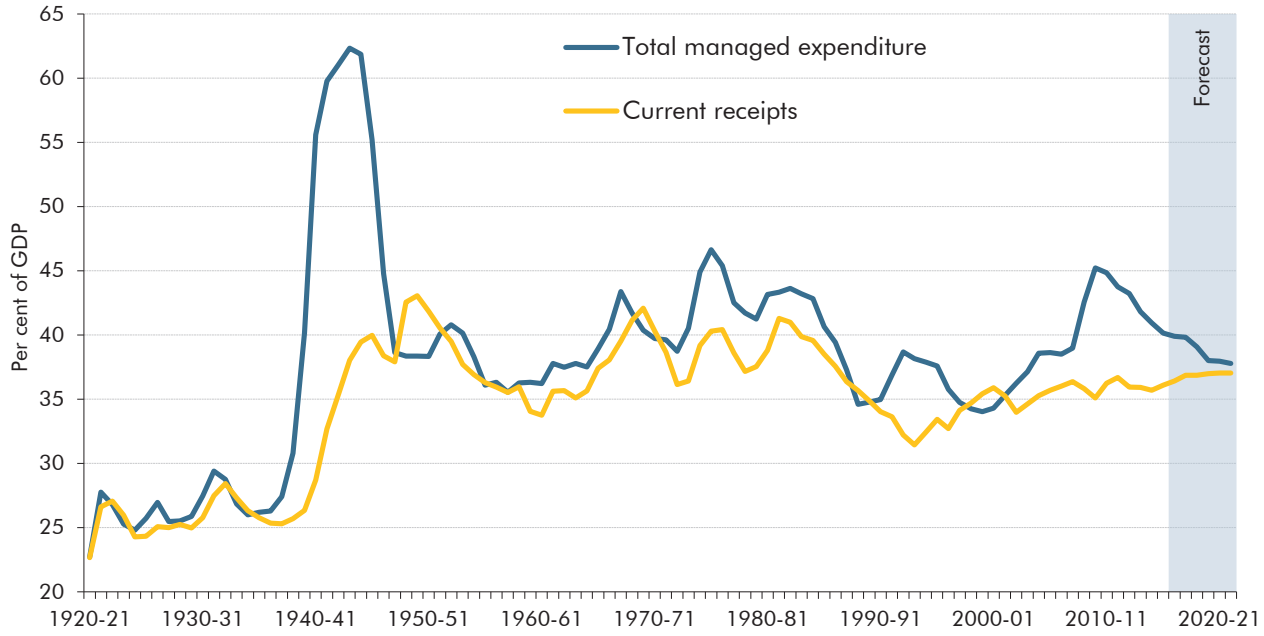
Table B: Revisions to net borrowing in 2019-20: IFS and OBR estimates

	£ billion		
	IFS November outlook	OBR November forecast	Difference
March forecast	**-10.4**	**-10.4**	
Classification changes	0.0	6.4	**6.4**
March forecast restated for classification changes		**-4.1**	
November pre-measures forecast	**14.9**	**13.6**	**-1.3**
Underlying forecast changes	**25.3**	**17.7**	**-7.6**
of which:			
Outturn data	6.8	8.0	**1.2**
Revision to GDP forecast	30.0	10.9	**-19.1**
Consumer price inflation	4.3	3.0	**-1.3**
Equity and oil prices	-3.8	-3.1	**0.7**
Debt interest	-3.9	-4.5	**-0.6**
EU contributions	-8.0	1.4	**9.4**
Other determinants and modelling	-0.1	2.0	**2.1**

[a] IFS, Winter is Coming: The outlook for the public finances in the 2016 Autumn Statement

4.187 Chart 4.10 shows current receipts and total managed expenditure as a share of GDP since 1920-21 using Bank of England and ONS data. Total spending reaches 37.8 per cent of GDP in 2021-22, while current receipts reaches at 37.1 per cent of GDP in 2021-22. The ONS has revised historical nominal GDP estimates up, largely reflecting changes in Blue Book 2016. This revision has reduced historic measures of receipts and spending as a share of GDP. As a consequence, the receipts-to-GDP ratio from 2017-18 onwards now surpasses the previous 2000-01 peak, taking it to its highest level since 1986-87. The spending-to-GDP ratio in 2021-22 is the lowest since 2003-04.

Chart 4.10: Total public sector spending and receipts



Source: Bank of England, ONS, OBR

Cyclically adjusted net borrowing (the structural fiscal position)

4.188 Our estimate of the margin of spare capacity in the economy is small in 2016-17 at just 0.2 per cent of potential output. We then expect the output gap to widen to 0.7 per cent of GDP in 2017-18 as the economy slows, before closing slowly and reaching zero in 2021-22. This means that structural borrowing falls by more than total borrowing in 2017-18, i.e. there is a rise in cyclical borrowing. The Government's proposed new fiscal target is set in terms of this measure, so its profile is discussed in more detail in Chapter 5.

Current budget

4.189 We estimate that the current budget deficit, which excludes borrowing to finance net investment spending, will be £30.8 billion in 2016-17, down from a peak of £103.4 billion in 2009-10. Our latest forecast shows the current budget moving into surplus in 2019-20 (a year later than in March) and the surplus reaching £37.4 billion in 2021-22.

Cyclically adjusted current budget

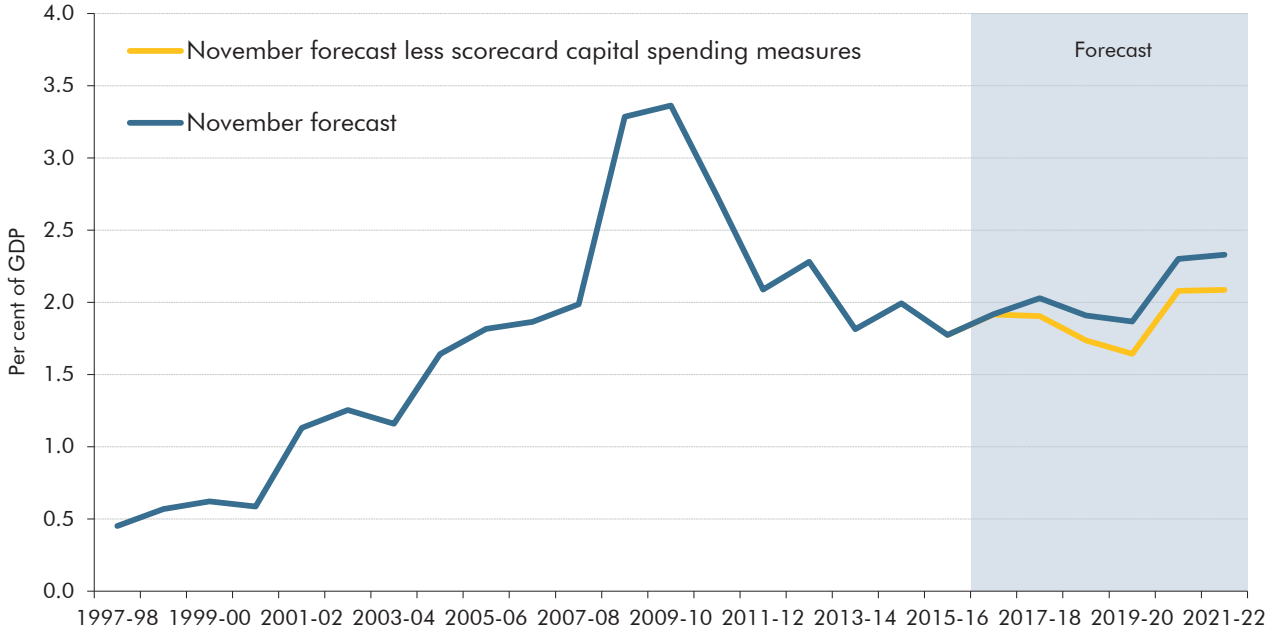
4.190 We expect the cyclically adjusted current budget to move from a deficit of 1.4 per cent of GDP in 2016-17 to a surplus of 0.1 per cent in 2018-19. The surplus rises to 1.6 per cent of GDP in 2021-22. This measure was targeted by the Coalition Government during the 2010 to 2015 Parliament.

Public sector net investment

4.191 Chart 4.11 shows public sector net investment (PSNI) as a share of GDP from 1997-98, and the effect on its path of the Government's Autumn Statement decisions. Its path has been

uneven over the period, which is not unusual for spending on capital projects. Having risen in the pre-crisis decade, it jumped during the financial crisis and recession as investment was brought forward to support the economy. Having fallen to a 10-year low in 2015-16, it is now set to rise again. In the absence of the Autumn Statement capital spending scorecard measures, it would have fallen to a low of 1.6 per cent of GDP in 2019-20, before jumping again on the back of as-yet-unspecified spending in 2020-21. With the spending added in the Autumn Statement, PSNI edges up as a share of GDP in 2017-18, then falls slightly in the following two years, before jumping as before.

Chart 4.11: Public sector net investment



Source: ONS, OBR

Public sector net debt

4.192 In March we expected public sector net debt (PSND) to have peaked as a share of GDP in 2015-16 (at 83.7 per cent) and that it would fall thereafter. Changes to our forecasts for borrowing and asset sales since March would be sufficient to push the peak year back to 2016-17, but once the effects on PSND of the August monetary policy package are added on top, the peak year in this forecast moves back further to 2017-18 at 90.2 per cent.

4.193 Table 4.38 decomposes the changes in our PSND forecast since March. It shows that:

- **weaker nominal GDP growth** at the start of the forecast pushes the debt-to-GDP ratio up in 2016-17 and particularly 2017-18;
- **higher borrowing** adds increasing amounts across the forecast period. The cumulative upward revision to our pre-measures borrowing forecast adds £100 billion to the level of PSND by 2020-21. The Government has added a further £26 billion to that with the policy decisions announced in the Autumn Statement;

- **lower asset sales proceeds** mean that PSND is not reduced by the amounts assumed in our March forecast. Absent any policy changes, lower share prices for Lloyds and particularly RBS would have reduced the forecast by £6 billion. But the biggest effect comes from the Government's decision that now is not the right time to sell RBS shares. That adds a further £12 billion to our PSND forecast relative to March;

- the Bank's **August monetary policy package** and other APF-related changes add over £100 billion to PSND by 2017-18. This includes £85 billion of TFS usage, £17 billion due to gilts being purchased at a premium (rising in future years as redemptions are rolled over at greater premiums) and £10 billion of corporate bond purchases. The TFS effect unwinds after four years, reflecting the term of the funding provided;

- much higher **gilt premia,** due to the fall in market interest rates, are the only factor that reduces our forecast. In particular, index-linked gilts are sold with a minimum coupon of +0.125 per cent, but real yields at all maturities are currently negative by significant margins generating large premia on new issuance; and

- **other factors** include the small upward revision associated with the reclassification of Scottish, Welsh and Northern Irish housing associations into the public sector and the effect of sterling depreciation on the unhedged portion of the foreign currency reserves.

Table 4.38: Changes in public sector net debt since March

	Per cent of GDP					
	Estimate	Forecast				
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	83.7	82.6	81.3	79.9	77.2	74.7
November forecast	84.2	87.3	90.2	89.7	88.0	84.8
Change	**0.5**	**4.7**	**8.9**	**9.8**	**10.8**	**10.1**
of which:						
Change in nominal GDP[1]	-0.5	0.3	0.9	0.9	0.8	1.0
Change in cash level of net debt	1.0	4.4	8.0	8.9	10.0	9.2
	£ billion					
March forecast	1591	1638	1677	1715	1725	1740
November forecast	1610	1725	1840	1904	1945	1950
Change in cash level of net debt	**19**	**86**	**163**	**189**	**220**	**210**
of which:						
Pre-measures borrowing changes	4	16	33	54	78	100
Effect of Government decisions on borrowing	0	1	3	8	16	26
Pre measures asset sales changes	0	13	5	6	8	8
Effect of Government decisions on asset sales	0	6	8	7	11	11
APF Term Funding Scheme	0	33	85	85	85	52
APF gilt holdings	-1	13	17	20	23	22
APF corporate bond holdings	0	3	10	10	10	10
Gilt premia	1	-8	-11	-14	-18	-24
Other factors[2]	16	10	12	13	9	6

[1] Non-seasonally-adjusted GDP centred end-March.

[2] Includes the estimated impact of the reclassification of Scottish, Welsh and Northern Irish housing associations to the public sector.

Reconciliation of PSNCR and changes in PSND

4.194 Table 4.39 reconciles the PSNCR, a cash measure of borrowing, with the changes in PSND. For the most part, PSND is the stock of PSNCR but this will differ in our forecast for the following reasons:

- the large **auction 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 unwinds as APF stock runs down;
- movements in sterling affect the value of the unhedged component of the **international reserves** that are netted off PSND. This effect is large in 2016-17; and
- **other factors** are small and relate mainly to the impact of PFI contracts.

Table 4.39: Reconciliation of PSNCR and changes in PSND

	£ billion					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Public sector net cash requirement	**123.8**	**113.4**	**56.2**	**33.2**	**11.3**	**-14.9**
Auction price effects	-21.2	-13.8	-12.1	-12.4	-13.4	-11.6
Index-linked gilts	0.7	10.1	15.5	14.2	6.1	18.5
APF	17.0	4.9	3.9	5.7	0.4	9.0
International reserves	-5.8	0.2	0.2	0.2	0.1	0.1
Other	0.4	0.4	0.4	0.4	0.4	0.4
Change in public sector net debt	**114.9**	**115.1**	**64.1**	**41.3**	**5.0**	**1.5**

Public sector net debt excluding the Bank of England

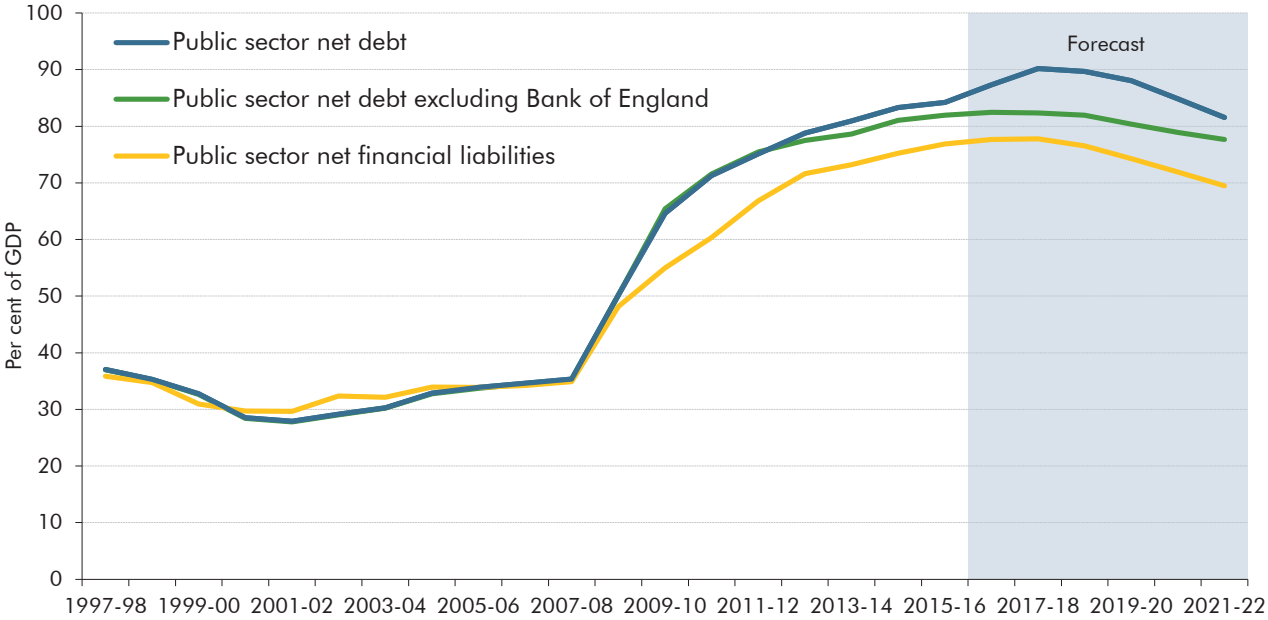
4.195 Table 4.40 includes two alternative balance sheet measures that the Government has asked us to forecast. As discussed above, our forecast for the path of PSND has been significantly affected by the Bank of England's August monetary policy package. Public sector net debt excluding Bank of England removes these impacts – plus other smaller impacts relating to cash management within the APF and the Bank's other activities. On this measure, the path of the debt-to-GDP ratio is smoother across years. It peaks at 82.4 per cent of GDP, and a year earlier than PSND in 2016-17 (although only on an unrounded basis).

Public sector net financial liabilities

4.196 The second alternative balance sheet measure that the Government has asked us to forecast is a wider measure called public sector net financial liabilities (PSNFL), which includes all

public sector financial assets and liabilities recognised in the National Accounts. In particular, it includes the various illiquid assets that are not netted off PSND – e.g. student loans and shareholdings in public sector banks. The composition of PSNFL and how we have produced an illustrative projection of it is detailed in Annex C. It peaks in 2017-18, the same year as PSND, but at a lower level (77.8 per cent of GDP).

Chart 4.12: Public sector balance sheet measures



Source: ONS, OBR

Table 4.40: Fiscal aggregates

	Per cent of GDP						
	Outturn	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Receipts and expenditure							
Public sector current receipts (a)	36.1	36.4	36.9	36.9	37.0	37.0	37.1
Total managed expenditure (b)	40.1	39.9	39.8	39.1	38.0	38.0	37.8
of which:							
Public sector current expenditure (c)	36.3	35.9	35.6	35.0	34.0	33.5	33.3
Public sector net investment (d)	1.8	1.9	2.0	1.9	1.9	2.3	2.3
Depreciation (e)	2.1	2.1	2.2	2.2	2.2	2.2	2.2
Proposed fiscal mandate and supplementary target							
Cyclically adjusted net borrowing	3.8	3.3	2.6	1.8	0.8	0.8	0.7
Public sector net debt[1,2]	84.2	87.3	90.2	89.7	88.0	84.8	81.6
Deficit							
Public sector net borrowing (b-a)	4.0	3.5	2.9	2.2	1.0	0.9	0.7
Current budget deficit (c+e-a)	2.3	1.6	0.9	0.3	-0.9	-1.4	-1.6
Cyclically adjusted current budget deficit	2.0	1.4	0.5	-0.1	-1.1	-1.5	-1.6
Primary deficit	2.4	1.7	1.1	0.5	-0.6	-0.6	-0.8
Cyclically adjusted primary deficit	2.2	1.5	0.7	0.1	-0.9	-0.7	-0.8
Financing							
Central government net cash requirement	3.2	4.2	2.4	2.4	1.4	1.8	1.7
Public sector net cash requirement	2.8	6.3	5.7	2.7	1.5	0.5	-0.6
Alternative balance sheet metrics							
Public sector net debt exc. Bank of England[2]	82.0	82.4	82.4	82.0	80.4	78.9	77.7
Public sector net financial liabilities[2]	76.9	77.7	77.8	76.5	74.3	71.9	69.5
Stability and Growth Pact							
Treaty deficit[3]	4.0	3.6	2.9	2.2	1.1	1.0	1.0
Cyclically adjusted Treaty deficit	3.8	3.4	2.5	1.8	0.9	0.9	1.0
Treaty debt ratio[4]	87.8	88.7	89.2	88.7	87.2	85.5	84.2
	£ billion						
Public sector net borrowing	76.0	68.2	59.0	46.5	21.9	20.7	17.2
Current budget deficit	42.6	30.8	18.4	6.7	-18.5	-31.1	-37.4
Cyclically adjusted net borrowing	71.6	64.9	51.4	37.9	16.6	18.5	16.7
Cyclically adjusted current budget deficit	38.2	27.5	10.7	-1.9	-23.9	-33.4	-38.0
Public sector net debt[2]	1610	1725	1840	1904	1945	1950	1952
Memo: Output gap (per cent of GDP)	*-0.2*	*-0.2*	*-0.7*	*-0.6*	*-0.3*	*-0.1*	*0.0*

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

[2] The ONS outturn data for 2015-16 has been adjusted for the estimated impact of the reclassification of Scottish, Welsh and Northern Irish housing associations to the public sector.

[3] General government net borrowing on a Maastricht basis.

[4] General government gross debt on a Maastricht basis.

Risks and uncertainties

4.197 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. While there are some risks and uncertainties common to all forecasts, in this *EFO* we have highlighted:

- **global and domestic risks associated with the economy,** including the outlook for productivity growth in the UK, the nature of trading arrangements agreed following our departure from the EU and the effects of sterling depreciation on the UK's export market share, import substitution and inflation (Chapter 3);
- risks to receipts associated with the rising **trend of people choosing to incorporate** rather than being employees or self-employed (Box 4.1);
- specific uncertainties related to **expenditure transfers to EU institutions**, including how they might change after the UK leaves the EU and the extent to which any reductions would be recycled into other domestic spending (Box 4.4);
- risks to the **delivery of reforms to the welfare system**, particularly in relation to disability benefits and universal credit (from paragraph 4.120);
- ongoing uncertainties around the large **financial asset sales** that are planned to take place over this Parliament (from paragraph 4.167);
- **higher interest rates** clearly pose an upside risk to our spending forecast, although recent experience shows that even at very low interest rates it is possible for them to fall further (see Box 4.4 in our March 2016 *EFO*); and
- the Government has set out a number of **ambitions or intentions** that have not yet been confirmed as firm policy decisions, but which remain a source of risk to the forecast (paragraph 4.13).

International comparisons

4.198 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 general government debt and borrowing and are presented on a calendar year basis. To facilitate comparisons, Tables 4.41 and 4.42 present our UK forecasts on a basis that is comparable with that used by these international organisations. With both modelling and reporting of much tax and expenditure 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 4.41: Comparison with European Commission forecasts

	Per cent of GDP					
	Treaty deficit[1]			Treaty debt[2]		
	2016	2017	2018	2016	2017	2018
UK (November *EFO*)	**3.7**	**3.1**	**2.4**	**88.5**	**89.2**	**88.9**
UK (EC)	3.5	2.8	2.3	89.2	88.9	87.5
Germany	-0.6	-0.4	-0.3	68.1	65.7	63.1
France	3.3	2.9	2.1	96.4	96.8	97.1
Italy	2.4	2.4	2.5	133.0	133.1	133.1
Spain	4.6	3.8	3.2	99.5	99.9	100.0
Euro area	1.8	1.5	1.5	91.6	90.6	89.4

[1] General government net borrowing.

[2] General government gross debt.

Source: European Commission, *European Economic Forecast Autumn 2016,* OBR.

Table 4.42: Comparison with IMF forecasts

	Per cent of GDP					
	General government net borrowing			General government net debt		
	2016	2017	2021	2016	2017	2021
UK (November *EFO*)	3.7	3.1	1.0	80.2	80.7	76.6
UK (IMF)	3.3	2.7	0.7	80.5	80.3	73.6
Germany	-0.1	-0.1	-0.6	45.4	43.7	36.8
France	3.3	3.0	1.0	89.2	89.8	85.8
Italy	2.5	2.2	0.0	113.8	113.9	106.7
Japan	5.2	5.1	3.1	127.9	130.7	131.5
U.S	4.1	3.7	3.7	82.2	82.3	84.4

Source: IMF, *World Economic Outlook,* October 2016, OBR.

5 Performance against the Government's fiscal targets

Introduction

5.1 This chapter:

- sets out the Government's current and proposed **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 5.12); 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 5.34).

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.

5.3 The current version of the *Charter* (approved by Parliament in October 2015 and available on our website) sets out two targets that are formally in place for this forecast:

- the fiscal mandate requires a surplus on **public sector net borrowing** by the end of 2019-20 and in each subsequent year; and
- it is supplemented by a target for **public sector net debt** to fall as a percentage of GDP in each year to 2019-20 (after which it would continue to do so if the mandate is met).

5.4 The current version of the *Charter* states 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.*" We make this assessment in each *Economic and fiscal outlook (EFO)*, at the same time as we carry out our assessment of performance against the fiscal targets.

5.5 Alongside the Autumn Statement the Government has published a revised draft *Charter*. If approved by Parliament, the targets it sets out will form the basis of the formal assessment in our next fiscal forecast. This would:

- replace the current fiscal mandate with a target to reduce **cyclically adjusted public sector net borrowing** (the structural deficit) to below 2 per cent of GDP by 2020-21; and

- replace the current supplementary target with a target for **public sector net debt** to fall as a percentage of GDP, but only in 2020-21 rather than in every year from now.

5.6 The proposed targets are less constraining than the current targets. Given our estimate of the structural deficit in 2015-16, the proposed fiscal mandate would be met by halving the structural deficit in this Parliament. And given our forecasts for nominal GDP and for other factors that affect debt but not borrowing in 2020-21 – including the favourable effect of loans from the Bank of England's Term Funding Scheme being repaid that year – the new supplementary target could be met with headline borrowing of around 4 per cent of GDP. As with the current targets, both the proposed targets specify the year in which they must be achieved, so the period over which any policy adjustments if the Government finds itself off-track but wants to get back on track will diminish as the Parliament progresses.

5.7 The draft *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. As described later in this chapter, the current escape clause has not been triggered.

5.8 As well as setting out its proposed new fiscal targets, the draft *Charter* states that the Treasury's fiscal policy objective is to return the public finances to balance at the earliest possible date in the next Parliament. Our medium-term forecast only extends to 2021-22, but our long-term fiscal projections illustrate some of the challenges the Government will face in trying to meet that aim.

5.9 The existing targets are further supplemented by:

- a cap on a subset of **welfare spending**, at cash levels set out by the Treasury in the July 2015 Budget. The Government sets a 2 per cent margin above the cap that can be used for forecasting reasons but not to fund policy giveaways.

5.10 The draft *Charter* retains the welfare cap as a target, but has changed its terms and its level. It will now:

- **apply in only one year**: 2021-22, with a 'pathway' set for the intervening period;

- **be set at £126.0 billion**, in line with our latest forecast. Spending will be permitted to rise up to 3 per cent above the cap, for any reason, so in effect the true cap will be £129.7 billion. (Relative to the existing welfare cap, our latest forecast is around 7 per cent higher by 2020-21);

- only **be assessed formally once every five years**, with the first assessment not due until early in the next Parliament. But we will monitor progress against the cap and the pathway at each forecast between now and then; and

- be assessed in a way that will **strip out the effects of changes in inflation** relative to our forecast in this *Economic and fiscal outlook (EFO)*.

5.11 In this chapter, we assess the Government's performance against both the current fiscal targets and the proposed new ones. On our central forecast, the Government is on course to meet all three of its proposed targets, but to miss all three of its current ones.

The implications of our central forecast

5.12 Table 5.1 shows our central forecasts for the fiscal aggregates relevant to the past, current and proposed 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 are 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						
	Estimate	Forecast					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Proposed fiscal mandate: Cyclically adjusted public sector net borrowing							
March forecast	3.6	2.7	1.9	1.0	-0.5	-0.5	
November forecast	3.8	3.3	2.6	1.8	0.8	0.8	0.7
Current fiscal mandate: Public sector net borrowing							
March forecast	3.8	2.9	1.9	1.0	-0.5	-0.5	
November forecast	4.0	3.5	2.9	2.2	1.0	0.9	0.7
Current and proposed supplementary targets: Public sector net debt							
March forecast	83.7	82.6	81.3	79.9	77.2	74.7	
November forecast	84.2	87.3	90.2	89.7	88.0	84.8	81.6
Spending subject to the welfare cap (£ billion)							
March forecast	120.4	119.8	118.0	116.4	116.2	118.1	
November forecast	120.0	119.8	119.6	120.1	120.5	123.2	126.0
Previous fiscal mandate: Cyclically adjusted current budget deficit							
March forecast	1.8	0.9	0.2	-0.5	-2.0	-2.4	
November forecast	2.0	1.4	0.5	-0.1	-1.1	-1.5	-1.6

The current fiscal mandate

5.13 The current fiscal mandate requires the Government to achieve an overall budget surplus (in other words, that PSNB must be negative) in 2019-20 and each year thereafter, absent the 'significant negative shock' defined above. In March, the Government was on course to meet its surplus target with £10.4 billion and £11.0 billion to spare in 2019-20 and 2020-21 respectively. The combination of a significant downward revision to our underlying fiscal

forecast and the higher public spending announced in the Autumn Statement mean that we now forecast a deficit of £21.9 billion in 2019-20, falling to £17.2 billion in 2021-22.

5.14 We have revised GDP growth down relative to March, but it does not fall below 1 per cent on the relevant metric at any point in our forecast – so on that basis a 'significant negative shock' has neither occurred nor is in prospect in our central forecast. We would therefore judge that the Government is not on course to meet the current target on existing policy. But with GDP growth on this basis forecast to reach a low of 1.3 per cent in early 2018, the probability of growth slowing sufficiently to have triggered that escape clause is around 35 per cent based on the size and distribution of past forecast errors.

5.15 The £32.4 billion deterioration since March in the budget balance in 2019-20 is detailed in Chapter 4. The biggest contributing factors are:

- a £5.6 billion downward revision to receipts reflecting a **classification change to the recording of corporation tax receipts**. These will in future be recorded on an accruals basis (in the year relating to the underlying activity) rather than a cash basis (when the tax is paid). That removes the effect of the Budget 2016 policy to bring forward large companies' payment dates, which on the existing cash basis in effect meant that five quarterly payments would be recorded in the fiscal mandate year;

- a £22.2 billion pre-measures downward revision to **income tax and NICs receipts.** This reflects unexpected weakness so far in 2016-17, a downward revision to productivity and earnings growth, and an assumption that more people will choose to incorporate, which reduces their tax bills; and

- the £8.4 billion **fiscal loosening announced in the Autumn Statement**, including £5.6 billion of extra capital spending and £3.9 billion more current spending (both departmental and annually managed expenditure). These are partly offset by a £0.7 billion net tax increase from scorecard measures.

The proposed fiscal mandate

5.16 The Government's proposed new 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 2016-17 is 3.3 per cent of GDP, so meeting this target requires an improvement in the structural balance of 0.3 per cent of GDP a year on average between now and the end of the Parliament. That compares with the 0.6 per cent of GDP a year improvement on average over the last Parliament. Our central forecast shows that on current policies the structural deficit will have fallen to 0.8 per cent of GDP in 2020-21, so the target is on track to be achieved with a margin of 1.2 per cent of GDP or £26.6 billion.

5.17 Chart 5.1 uses cyclical-adjustment coefficients for different types of receipts and spending[1] to show how the structural deficit narrows in the run-up to the target year of 2020-21:

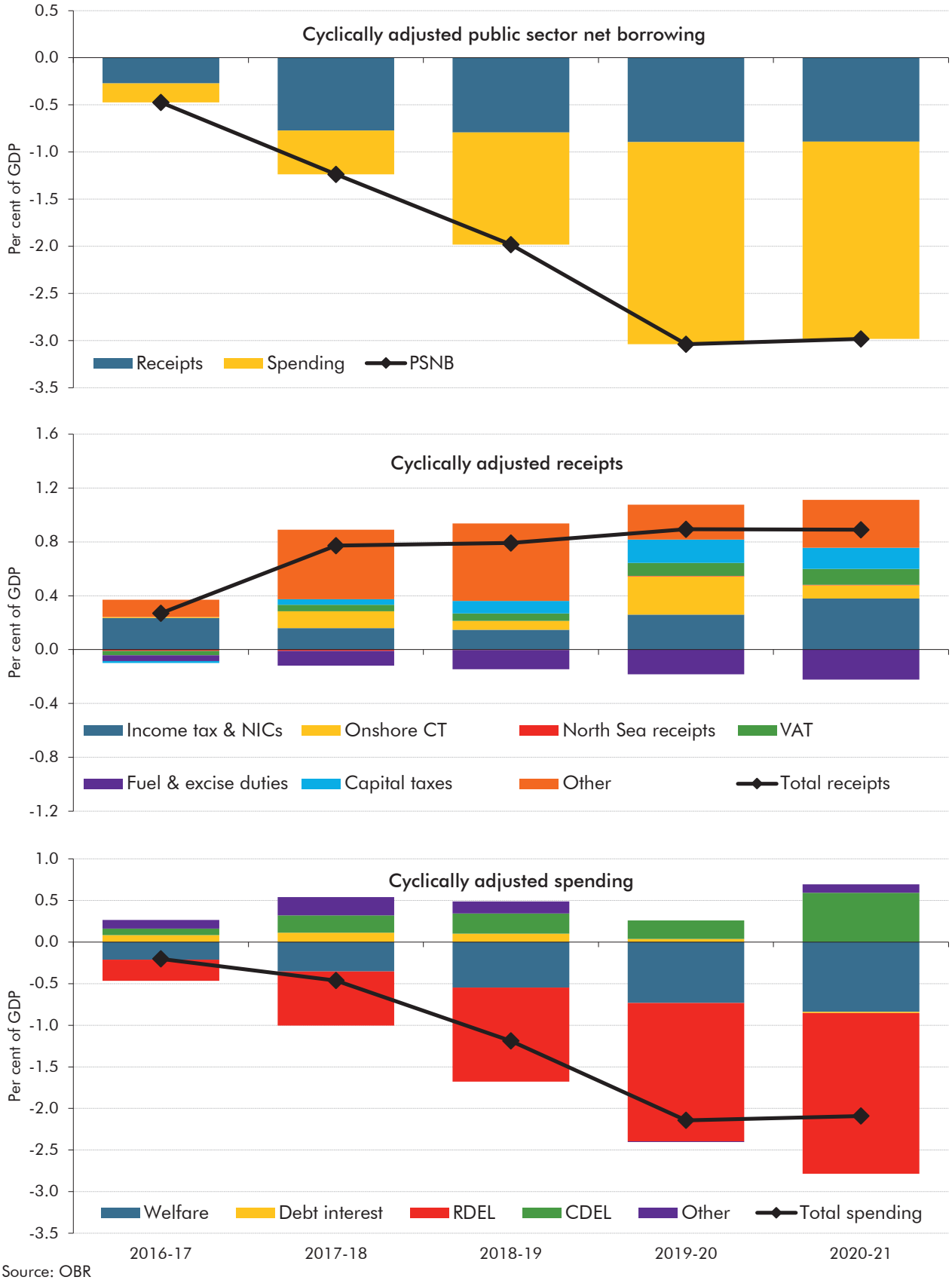
- the **structural deficit** is expected to improve by 3.0 per cent of GDP between 2015-16 and 2020-21, with lower spending contributing 2.1 per cent and higher receipts 0.9 per cent. The majority of the improvement happens by 2019-20, with both receipts and spending stabilising as a share of GDP in 2020-21. The expected reduction over this Parliament is similar to the 2.8 per cent of GDP achieved in the last Parliament;

- **receipts** are expected to increase by 0.8 per cent of GDP by 2017-18, but to be relatively flat thereafter. This is largely due to policy measures affecting NICs and self-assessment receipts, plus the introduction of the apprenticeship levy. In later years, real earnings growth raises income tax and NICs receipts as a share of GDP, partly offset by a fall in fuel and excise duties due to declining tax bases; and

- **spending** is expected to fall steadily over the four years of the latest Spending Review period up to 2019-20. Cuts to departmental resource spending (RDEL) dominate, falling by 1.9 per cent of GDP by the end of the Parliament. Welfare cuts are also significant, reaching 0.8 per cent of GDP in 2020-21. Partly offsetting, departmental capital spending (CDEL) is set to rise by 0.6 per cent of GDP, due in part to increases announced in this Autumn Statement. The step up in CDEL spending in 2020-21 largely reflects an amount added in the March Budget that has not yet been allocated.

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

Chart 5.1: Year-on-year changes in the structural deficit up to 2020-21

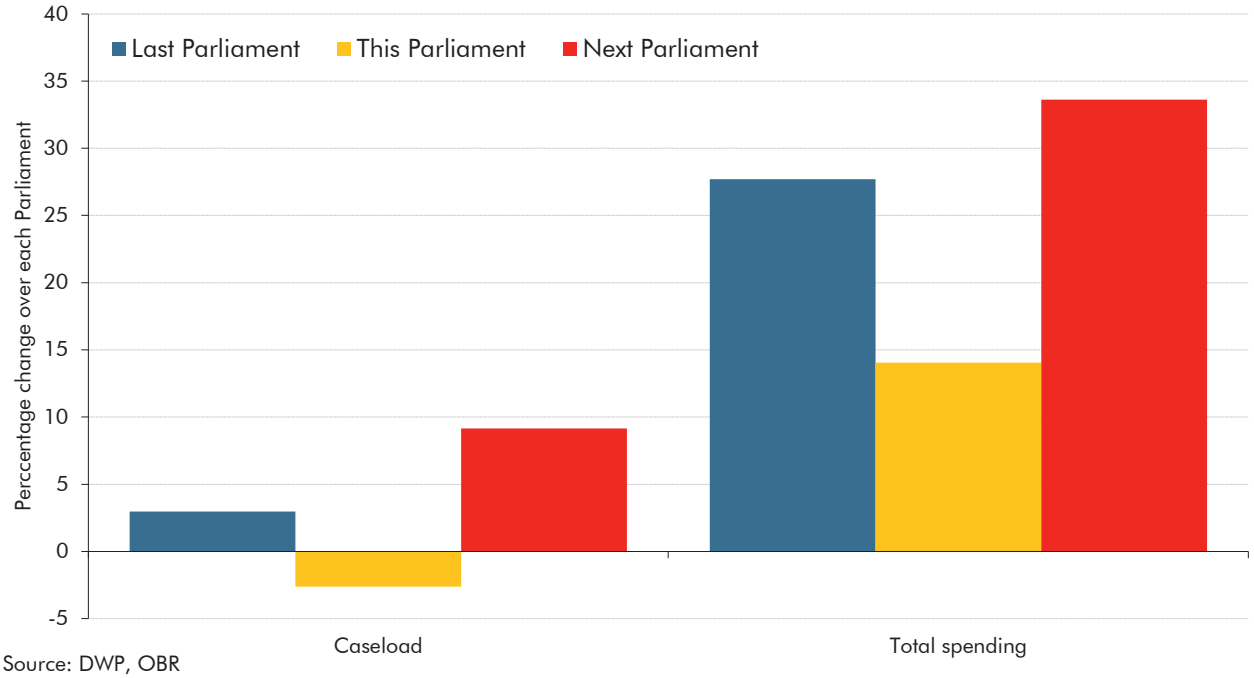


Source: OBR

5.18 As Table 5.1 shows, on current policy the structural deficit would narrow significantly in 2019-20 (reflecting the spending cuts for that year established in the March Budget), but falls no further in the following two years. This sets the platform for the Government's aim of returning the public finances to balance at the earliest possible date in the next Parliament, which will also take place against a backdrop of significant fiscal headwinds from an ageing population. We will consider this in more detail when we update our long-term fiscal projections later this fiscal year. But these headwinds are evident from our 2015 *Fiscal sustainability report (FSR)*, which suggested that demographic pressures on health, long-term care and state pensions spending would cause the fiscal balance to deteriorate by 0.8 per cent of GDP between 2020-21 and 2025-26.

5.19 Focusing on state pensions, extending our forecast to 2025-26 shows how much faster the caseload is expected to rise in the next Parliament relative to this and the last Parliaments. Further ageing of the population is one factor, but the biggest difference is that caseload growth has been held down by the ongoing process of equalising the male and female state pension ages at age 65 (due to be completed in November 2018) and then increasing them to 66 for both men and women (scheduled between December 2018 and October 2020). The state pensions caseload increased by 3.0 per cent in the last Parliament and is expected to fall 2.6 per cent in this Parliament, but in the next it is projected to jump 9.1 per cent (Chart 5.2). This alone would push state pensions spending up by 0.3 per cent of GDP.

Chart 5.2: State pensions caseload and spending



Source: DWP, OBR

The current and proposed supplementary targets

5.20 The *current* supplementary target requires public sector net debt (PSND) to fall as a share of GDP in every year to 2019-20. The *proposed* supplementary target only requires it to fall in 2020-21. Both targets are subject to 'significant economic shock' escape clauses, although specified in different ways.

5.21 We now expect the debt-to-GDP ratio to rise in 2016-17 and 2017-18, so the current supplementary target would not be met. It falls from 2018-19 onwards, so the Government is on course to meet its proposed supplementary target.

5.22 Chart 5.3 decomposes year-on-year changes in the debt-to-GDP ratio over the forecast period. It shows that:

- the **Bank's August monetary policy package** has a material effect on the path of net debt, pushing it up by £47 billion (2.7 per cent of GDP) and £57 billion (3.1 per cent of GDP) in 2016-17 and 2017-18 respectively. This reflects lending under the Term Funding Scheme (TFS), the purchase of corporate bonds and the purchase of further gilts at a premium to their nominal value. The repayment of TFS loans after four years then pulls the ratio down in 2020-21 and 2021-22. Lending through the TFS is treated as illiquid, and is not therefore netted off PSND. But it is secured on collateral and thus very unlikely to generate losses for the public sector. Excluding the TFS effect, the path of the debt ratio would be smoother, although it would still rise in 2016-17 and 2017-18, before falling from 2018-19 onwards. Other APF-related changes, including assumptions about premiums paid when gilts mature and proceeds are reinvested, add small amounts to debt in most years;

- changes in the year-on-year profile of the debt-to-GDP ratio typically reflect changes in the **primary balance**. But the debt-to-GDP ratio (excluding the temporary ups and downs related to the TFS) falls in 2018-19 despite the primary balance being in deficit in that year;

- **financial asset sales** (including the rundown of UK Asset Resolution (UKAR) assets) are expected to reduce PSND by 1.3 per cent of GDP in 2017-18 and by diminishing amounts in subsequent years. We no longer assume further RBS share sales, so the biggest reduction comes from UKAR's sales of Bradford & Bingley mortgage assets. (Financial asset sales typically bring forward cash that would otherwise have been received in future revenues, in the shape of mortgage repayments and dividends, so they only temporarily reduce the debt-to-GDP ratio. In broad terms, financial asset sales leave the public sector's net worth unchanged. This can be seen in an illustrative projection of public sector net financial liabilities shown in Annex C);

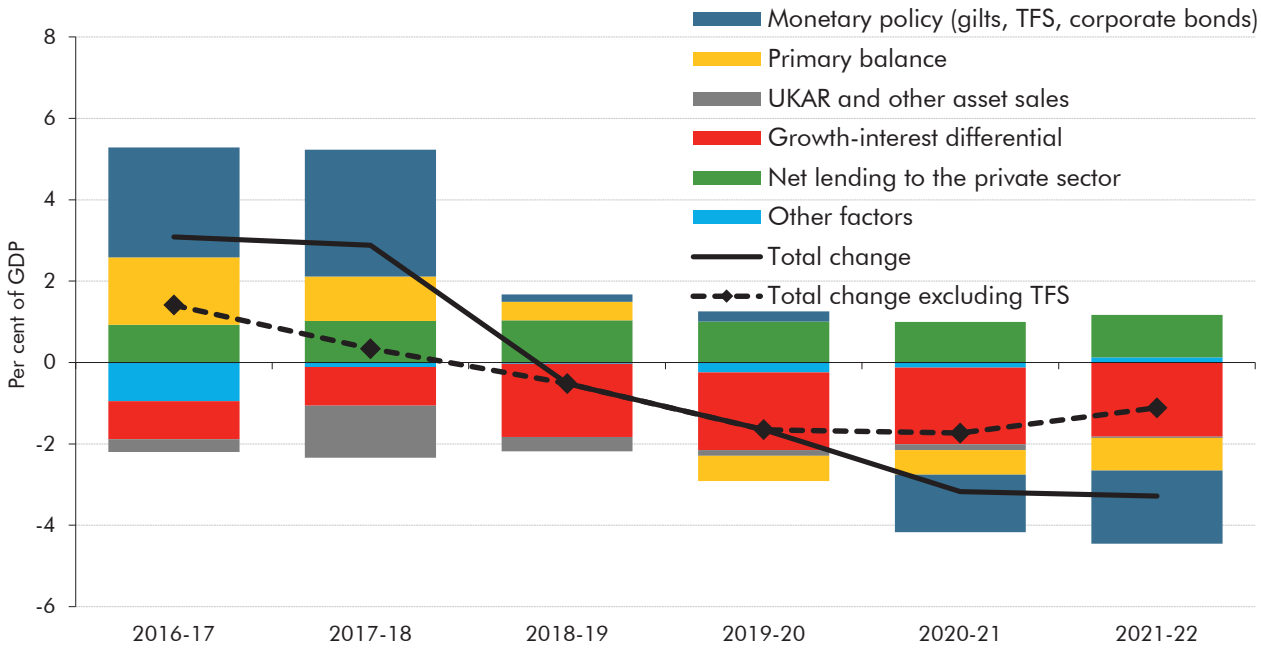
- the fact that **nominal GDP growth exceeds expected interest rates** reduces the debt ratio in every year – and by large amounts from 2018-19 onwards, when we expect above-trend GDP growth but market interest rate expectations remain very subdued. This differential is an extremely important component of public sector debt dynamics,

especially over longer timeframes. In our *FSRs*, we analyse the impact of different assumptions on our results;

- **net lending to the private sector** – mainly student loans, but also other lending schemes including Help to Buy – increases net debt in every year (but, as a financial transaction, it does not directly affect measures of the deficit); and

- **other changes** 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). In 2016-17, the fall in the pound also increases the sterling value of unhedged foreign currency assets, which subtracts from the change in the ratio in that year.

Chart 5.3: Year-on-year changes to the debt-to-GDP ratio



Source: OBR

5.23 We now expect net debt to peak as a share of GDP in 2017-18, two years later than in March. Table 5.2 decomposes the changes in the profile of net debt since then:

- weaker **nominal GDP growth** has added to the year-on-year changes in the debt-to-GDP ratio in the first two years of the forecast;

- the upward revision to our **pre-measures borrowing** forecast and the **fiscal loosening announced in the Autumn Statement** have increased the pace at which nominal debt increases across the forecast period;

- by far the most significant change to the profile of net debt relates to the August 2016 **monetary policy package**, as set out above. This explains more than half the upward revision to the profile in 2016-17 and 2017-18 and more than explains the downward revision in 2020-21;

- changes to the scale and timing of **financial asset sales and the rundown of UKAR assets** have contributed to the upward revision in 2016-17, as some of the proceeds of UKAR and student loan sales previously included in 2016-17 are now assumed to be received in 2017-18;

- increases in the **gilt premia** associated with issuing gilts at prices above their nominal value have led to downward revisions to the year-on-year profile of the debt ratio. These premia are primarily expected from index-linked gilts, due to negative real interest rates persisting throughout the forecast period; and

- **other factors** include the effect of sterling depreciation on the unhedged foreign currency reserves in 2016-17 and the inclusion of an accruals adjustment that offsets the effect on borrowing of recording corporation tax on an accrued basis.

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

	Per cent of GDP				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	-1.1	-1.3	-1.4	-2.7	-2.5
November forecast	3.1	2.9	-0.5	-1.7	-3.2
Change	**4.2**	**4.2**	**0.9**	**1.1**	**-0.7**
of which:					
Nominal GDP[1]	0.8	0.6	0.0	0.0	0.1
Pre-measures borrowing	0.6	0.8	0.9	1.0	0.8
Autumn Statement fiscal loosening	0.0	0.1	0.2	0.4	0.4
Monetary policy package	2.5	3.0	-0.1	-0.1	-1.7
UKAR rundown and other asset sales	1.0	-0.3	0.0	0.2	0.0
Gilt premia	-0.4	-0.1	-0.1	-0.2	-0.2
Reclassification and others	-0.4	0.1	0.0	-0.3	-0.1

[1] GDP is centred end-March.

The current welfare cap

5.24 The welfare cap was initially set in line with our March 2014 forecast for the items of spending subject to it. As required by the *Charter* at the time, the welfare cap was reset for this Parliament at the July 2015 Budget, when the Government chose to set it at our then post-measures forecast. This locked in a reduction in the level of the cap that reached £16.3 billion by 2019-20. The Government sets a 2 per cent forecast margin above the cap, which can be used if our forecast judgements push up expected spending, but cannot be used to accommodate policy giveaways. The current *Charter* requires us to assess the Government's performance against the cap formally at each Autumn Statement. By the 2015 Autumn Statement, the Government had already breached the terms of the cap.

5.25 In this Autumn Statement, the Government has proposed a new, higher welfare cap that will only apply in 2021-22. If approved by Parliament, this will become the formal target against which we monitor the Government's performance in future, including a formal assessment at the start of the next Parliament. In this *EFO*, we assess its performance against the existing July 2015 welfare cap. The cap does not apply to in-year spending, so our formal assessment relates to 2017-18 to 2020-21.

Forecasting changes

5.26 The welfare cap includes a 2 per cent margin that permits spending to be higher than the cap for forecasting reasons, but not for policy reasons. We therefore need to track the sources of changes to our welfare cap spending forecast in order to assess performance against it. As discussed in Chapter 4, since March we have once again revised up spending on incapacity and disability benefits, and have also revised down the marginal saving associated with universal credit. These forecasting changes alone mean that spending exceeds the forecast margin in every year. Upward revisions to our forecast reach £8.2 billion in 2020-21 (up 7.2 per cent relative to our July 2015 forecast for that year).

Policy changes

5.27 The Government has announced a number of policy changes since the March Budget, including new measures in the Autumn Statement, that increase spending subject to the welfare cap. The two biggest effects are:

- the **reversal of the PIP aids and appliances cuts** that were announced in the March Budget but dropped shortly after. This increases spending by £1.4 billion in 2020-21. That cost is larger than the saving we certified for the original measure in March, because our disability benefits forecast has been revised up. This means that the measure would have reduced spending by more if it had gone ahead; and

- the cut in the **universal credit income taper** from 65 to 63 per cent. This is expected to cost £0.6 billion in 2020-21.

5.28 The *Charter* requires us to assess whether the cap has been breached "*as a result of discretionary policy action*". We therefore need to factor in such actions since the cap was set, not just new policy measures. In order to do so, we have used updated estimates of the effect of policies announced in Autumn Statement 2015 and Budget 2016. These increase spending by £2.2 billion in 2017-18 and by diminishing amounts thereafter. This profile reflects the cost of reversing two of the July 2015 tax credit cuts, which falls steadily as tax credits cases migrate to the less generous universal credit.

Classification changes

5.29 The *Charter* requires the Government to reset the cap to reflect any fiscally neutral reclassification that takes spending out of the cap and transfers it into departmental expenditure limits (DEL). But it does not specify when that resetting has to take place. In March 2016, we noted a small classification change for the fees associated with the

administration of tax-free childcare. These had previously been captured in the relevant welfare cap spending line, but were transferred into HMRC's DEL in the Spending Review. At the time, the Treasury told us that it intended to adjust the cap for this effect at this Autumn Statement. But as it has proposed a new cap instead, this change has not been made. It would not have been material to our assessment if it had been.

Performance against the existing welfare cap

5.30 Table 5.3 shows our forecast for spending subject to the July 2015 welfare cap in each year that it currently applies and also in 2016-17, the first year to which it applied when it was originally set. Our assessment is that the cap will be breached by large and increasing amounts. Our forecast of welfare cap spending in 2016-17 is also significantly higher than the cap that was set for that year, due largely to the decision to abandon the cuts to tax credits that were announced in the July 2015 Budget. Relative to the cap, spending is expected to be 4.0 per cent higher in 2016-17, rising to 7.2 per cent by 2020-21.

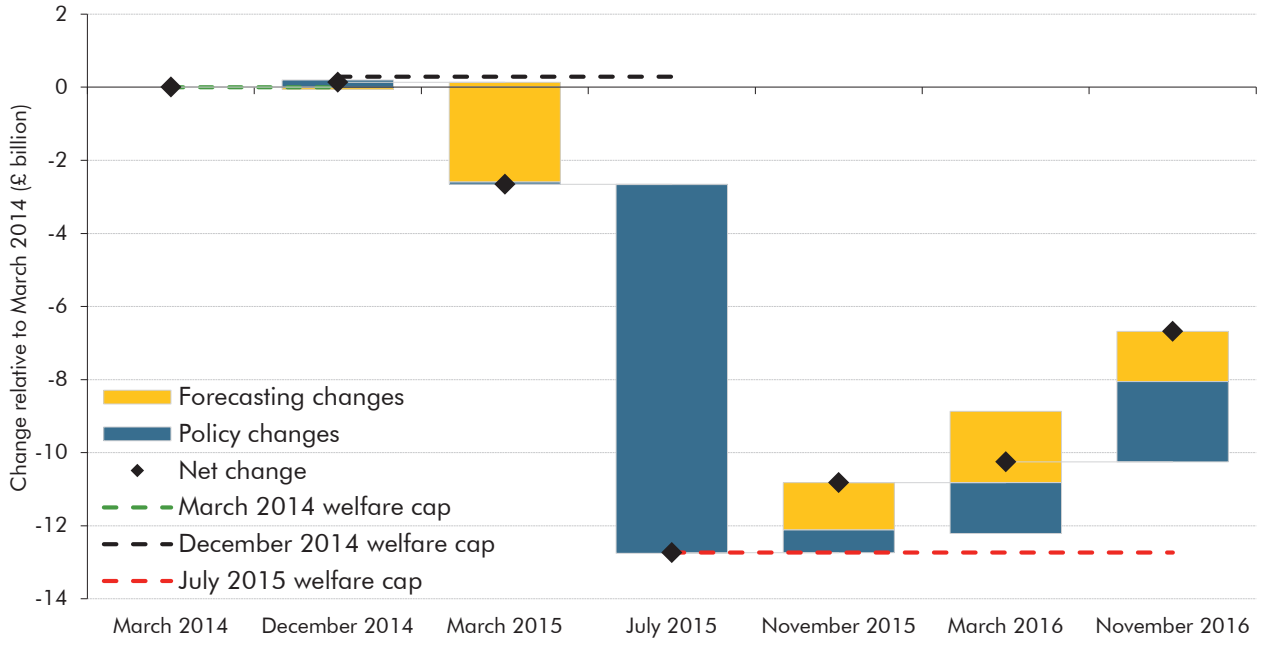
Table 5.3: Performance against the existing welfare cap

	£ billion				
	Forecast				
		Welfare cap period			
	2016-17	2017-18	2018-19	2019-20	2020-21
Welfare cap set in July 2015					
Welfare cap	115.2	114.6	114.0	113.5	114.9
2 per cent forecast margin	2.3	2.3	2.3	2.3	2.3
November 2016 forecast relative to July 2015 forecast					
November forecast	119.8	119.6	120.1	120.5	123.2
Change	**4.6**	**5.0**	**6.1**	**7.0**	**8.2**
of which:					
Forecast changes	**1.6**	**2.9**	**4.7**	**6.9**	**8.2**
of which:					
November 2015	1.2	1.2	1.3	1.9	2.4
March 2016	0.6	1.1	2.0	2.5	2.6
November 2016	-0.1	0.6	1.4	2.5	3.1
Scorecard measures	**3.0**	**2.2**	**1.6**	**0.2**	**0.1**
of which:					
November 2015	2.8	1.9	0.7	-0.1	-0.3
March 2016	0.0	-0.7	-1.3	-1.5	-1.5
November 2016	0.1	1.0	2.2	1.8	1.9
of which:					
Reversing PIP aids and appliances cut	0.0	0.6	1.2	1.4	1.3
UC rollout delay and parameter changes	0.0	0.3	0.4	0.2	0.1
Other policy measures	0.1	0.1	0.6	0.3	0.5
Classification changes	**0.0**	**-0.1**	**-0.1**	**-0.1**	**-0.1**
Indirect effect of Government decisions	**0.0**	**-0.1**	**-0.1**	**0.0**	**0.1**
Difference from welfare cap	**+4.6**	**+5.0**	**+6.1**	**+7.0**	**+8.2**
Difference from welfare cap + forecast margin	**+2.3**	**+2.7**	**+3.8**	**+4.7**	**+5.9**

Evolution of the welfare cap since 2014

5.31 Chart 5.4 shows how successive forecasts for welfare cap spending in 2018-19 – the final year for which the cap was set in March 2014 – and the various caps that the Government has set for that year have changed relative to the original cap. It shows that our forecast was revised down in December 2014, due largely to lower inflation. It was then revised down more substantially in July 2015 thanks to the cuts announced in the new Government's first Budget. The Government then chose to reset the cap at that level. Since then we have revised spending up significantly, due to the reversal of some elements of the July cuts and underlying revisions to our forecasts of incapacity and disability benefits spending.

Chart 5.4: Successive welfare caps and spending forecasts



Source: OBR

The proposed welfare cap

5.32 The Government has proposed a new welfare cap that applies only in 2021-22. It has been set in line with our latest forecast. The Government is no longer setting caps for all years, but has set a year-by-year 'pathway' to 2021-22 that also follows our latest forecast. A margin that rises in 0.5 percentage point steps from 0.5 per cent this year to 3.0 per cent in 2021-22 has been set that can be used for any reason – the distinction between policy and forecasting changes having been dropped. So in effect the true cap on this spending is equal to the cap plus the margin. The levels of each are set out in Table 5.4.

Table 5.4: The proposed welfare cap and margin

	£ billion, unless otherwise stated					
	Forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Welfare cap						**126.0**
Welfare cap pathway	119.8	119.6	120.1	120.5	123.2	
Margin (per cent)	0.5	1.0	1.5	2.0	2.5	3.0
Margin	0.6	1.2	1.8	2.4	3.1	3.8
Welfare cap and pathway plus margin	**120.4**	**120.8**	**121.9**	**122.9**	**126.3**	**129.7**

5.33 Assessment of the cap will only take place formally at the start of the next Parliament, but we will monitor progress against it in each forecast between now and then. The Government has asked us to assess the cap in a way that will strip out changes in inflation relative to our current forecast – with details yet to be specified – but it will still be subject to the types of risk that have pushed up our recent welfare spending forecasts. These include delivery risks associated with disability benefits reforms and the rollout of universal credit.

Recognising uncertainty

5.34 Past experience and common sense suggest that 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 looming negotiations about the UK's exit from the EU – and the lack of information about the policy settings that will follow – create additional uncertainty.

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

Past performance

5.36 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 forecasts 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 forecast errors in the past offered a reasonable guide to likely forecast errors in the future.

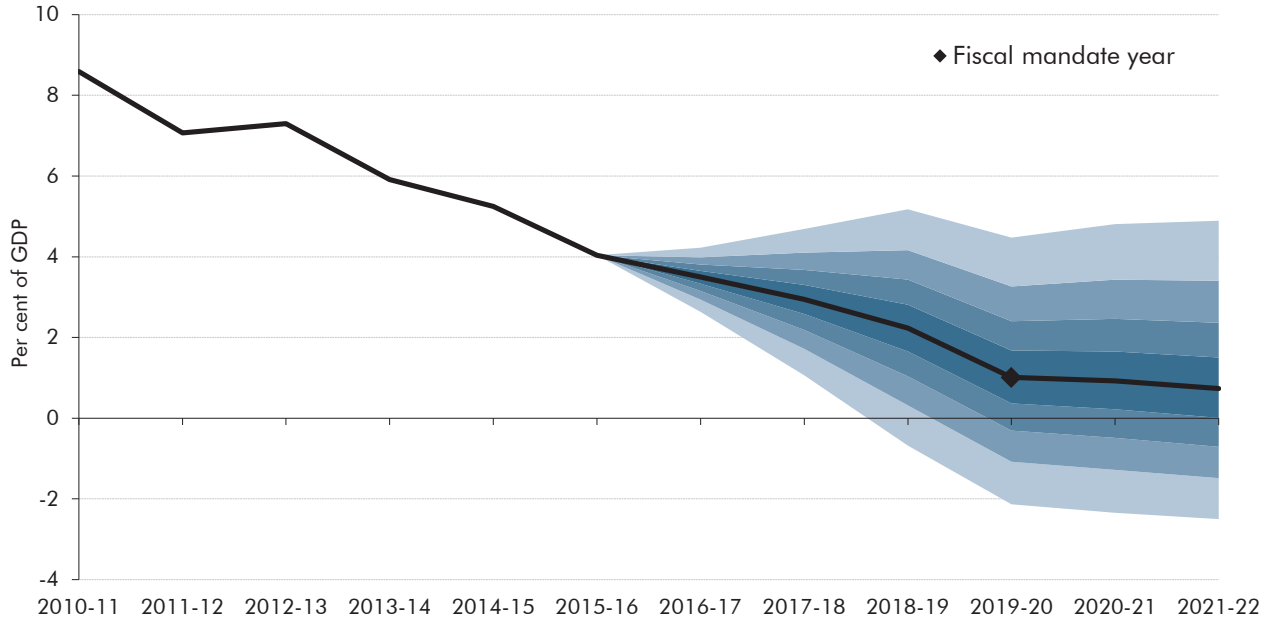
5.37 It is important to note that the historical forecast errors that underpin our fan charts reflect both underlying forecast errors and the effects of any subsequent policy responses. That is likely to be one reason why the probability distributions around borrowing and other measures of the budget balance do not widen significantly at longer time horizons: when underlying forecast changes push borrowing 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 *EFO*.

5.38 The approach that the Government has taken in this Autumn Statement – taking an underlying structural deterioration that amounts to 0.7 per cent of GDP in 2020-21 and adding 0.4 per cent of GDP to it rather than offsetting some of it – is historically unusual, but permitted by the loosening of the fiscal mandate. In November 2011 and March 2016, the other OBR forecasts that showed big structural deteriorations, the Government tightened policy in the final years of the forecast to offset some of the effect. Even in the November 2008 Pre-Budget Report, when the Treasury incorporated a big structural hit to the public finances due to the crisis then unfolding and policy was loosened to support the economy in the near term, fiscal policy was tightened from the third year of the forecast.

Current fiscal mandate

5.39 Chart 5.5 shows the fan chart around our central forecast for PSNB. A direct reading of the chart would imply that the probability that PSNB will reach balance is less than 50 per cent in all years. It rises to around 35 per cent in 2019-20 and 2020-21 and 40 per cent in 2021-22. The Government therefore misses the current fiscal mandate by a margin that is small relative to the uncertainty around the central forecast at that horizon.

Chart 5.5: Public sector net borrowing fan chart



Source: ONS, OBR

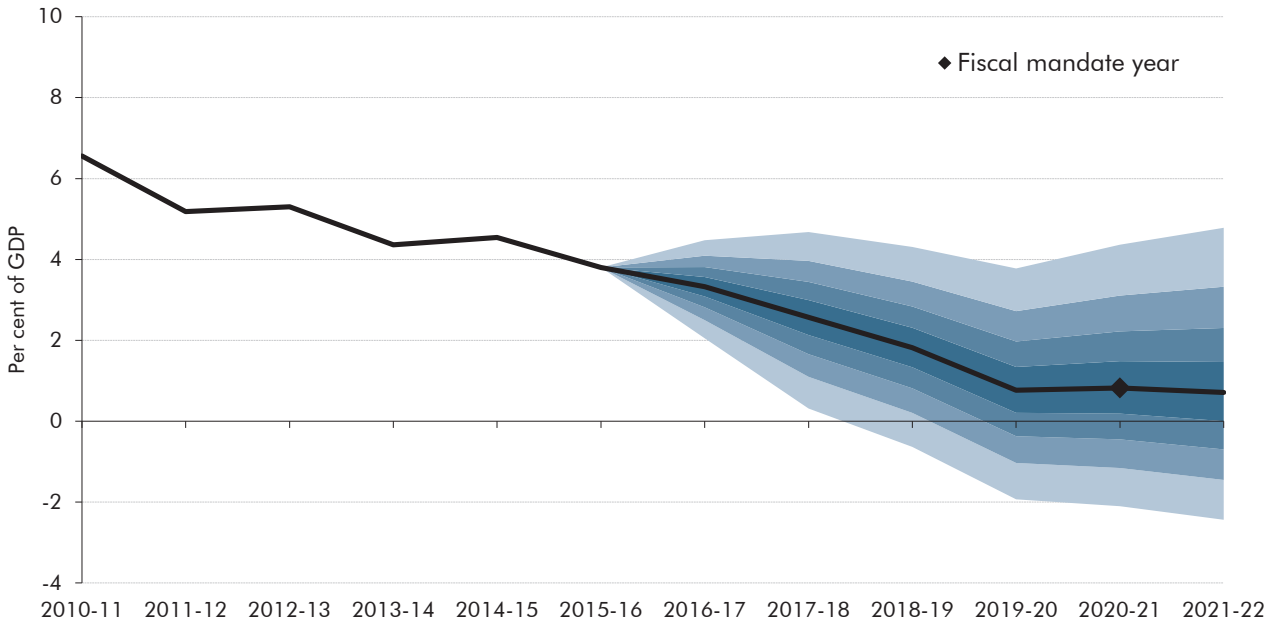
Proposed fiscal mandate

5.40 The probability of the Government meeting its proposed fiscal mandate can be assessed using a fan chart for cyclically adjusted PSNB. Relative to headline PSNB, this aims to remove borrowing errors associated with the economic cycle to leave an estimate of the fan chart we would expect if the output gap was always zero. As neither the output gap nor its effect on borrowing can be observed directly, we are no official outturns against which to assess past forecasts. Instead, they are compared with our own latest estimates.

5.41 We only have forecasts for cyclically adjusted PSNB have dating back to 2003. The sample of errors is therefore smaller than for headline PSNB. To produce Chart 5.6, to supplement that sample, we have compared the average absolute errors for headline and cyclically adjusted PSNB from 2003 onwards and use it to remove the cyclical component of pre-2003 PSNB errors. Output gap errors contribute to bigger cyclically adjusted borrowing errors on average over short horizons. But with the output gap usually assumed to be closed or nearly closed at the end of forecasts, the width of the cyclically adjusted PSNB fan chart five years ahead is similar to that for headline PSNB.

5.42 Chart 5.6 shows the fan chart around our central forecast. It shows that the Government in on course to meet the proposed 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.

Chart 5.6: Cyclically adjusted public sector net borrowing fan chart



Source: ONS, OBR

5.43 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 rising up to 2017-18 and falling in each year thereafter. That implies a less than 50-50 chance that the existing supplementary target will be met since it requires the ratio to be falling in every year. But the proposed target is

more likely than not to be met in 2020-21. We also do not have a long enough disaggregated series of past welfare spending forecasts to produce a fan chart for the welfare cap projections.

Sensitivity analysis

5.44 It is very difficult to produce a full subjective probability distribution for the Government's target fiscal variables because they are affected by a huge variety of economic and non-economic determinants, many of which are correlated with each other. But we can go further than using evidence from past forecast errors by quantifying roughly how sensitive our central forecast is to changes in certain key economic parameters.

5.45 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 current and proposed **fiscal mandates** to changes to the level of GDP, inflation, interest rates and effective tax rates. As the proposed fiscal mandate is set in cyclically adjusted terms, we also consider its sensitivity to the output gap;
- the sensitivity of the current and proposed **supplementary debt targets** 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
- for the **proposed targets**, some of the circumstances in which the supplementary target could be missed while still meeting the fiscal mandate.

The current and proposed fiscal mandates

5.46 We have already shown that, on the basis of past forecast errors, the probability of *missing* the current fiscal mandate in 2019-20 is 65 per cent while that of *meeting* the proposed fiscal mandate in 2020-21 is also around 65 per cent. There are many reasons why performance against these targets might differ. For example, economic developments could be more or less favourable than we forecast or we could be wrong about prospects for receipts or spending for a given state of the economy. And while our forecasts are conditioned on current Government policy, that is likely to evolve over time, especially in respect of establishing the policy-setting that will apply once we have left the EU.

5.47 In Annex B of our March 2015 *EFO*, we presented 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 were stylised quantifications that reflect the typical impact of changes in variables on receipts and spending. They are subject to significant uncertainty. But with those caveats in mind, we can use ready-reckoners to calibrate a number of possible surprises relative to our central forecast that would be sufficiently positive to bring the headline budget balance back into surplus in 2019-20 or sufficiently negative to push the structural deficit above 2 per cent of GDP in 2020-21.

5.48 In terms of the current fiscal mandate, the analysis suggests that the 1.0 per cent of GDP headline deficit in 2019-20 could fall to zero if:

- there was a **positive output gap** of 1.4 per cent or **potential output** was 2.0 per cent higher. Swings in the output gap have a larger effect since we assume that these also drive changes in asset prices, which have geared effects on receipts;

- **whole economy prices** rise by 2.4 per cent more than expected. This is important because receipts are linked to nominal tax bases and thus rise and fall with prices (slightly more than proportionately). By contrast, much public spending is fixed in nominal terms in Spending Reviews or is relatively insensitive to prices (e.g. much debt interest on conventional gilts is based on the stock that has already been accumulated, on which interest rates are fixed). That is particularly true in our current forecast since most working-age welfare spending is subject to a four-year freeze on uprating;

- the **effective tax rate** – as measured by the tax-to-GDP ratio – was 1.0 per cent of GDP higher than in our central forecast. This could be because the composition of GDP was more tax rich than expected, or asset markets outperformed our assumptions, or the income distribution was skewed towards people with higher effective tax rates; or

- a drop in **RPI inflation** could reduce accrued interest on index-linked gilts. Taken in isolation, if RPI inflation was 4.5 percentage points lower than expected in 2019-20 (i.e. the RPI index fell 1.4 per cent on a year earlier), that alone would subtract 1.0 per cent of GDP from debt interest costs. Based on past forecast errors, there would be a very small chance of that happening. Of course, this sort of shock to inflation would be likely to have other material effects on the public finances.

5.49 In previous *EFOs*, we have also shown the extent to which interest rates or planned departmental spending cuts would need to change for the existing fiscal mandate to be missed (when it was on course to be met in the central forecast). We do not consider the extent of the changes that would be necessary to be plausible. In terms of interest rates, they would need to be negative for debt interest spending to fall far enough to offset the headline deficit. And it would require the Government to overshoot its already significant planned spending cuts by more than half.

5.50 In terms of the proposed fiscal mandate, the 1.2 per cent of GDP margin relative to the 2 per cent target could fall to zero if:

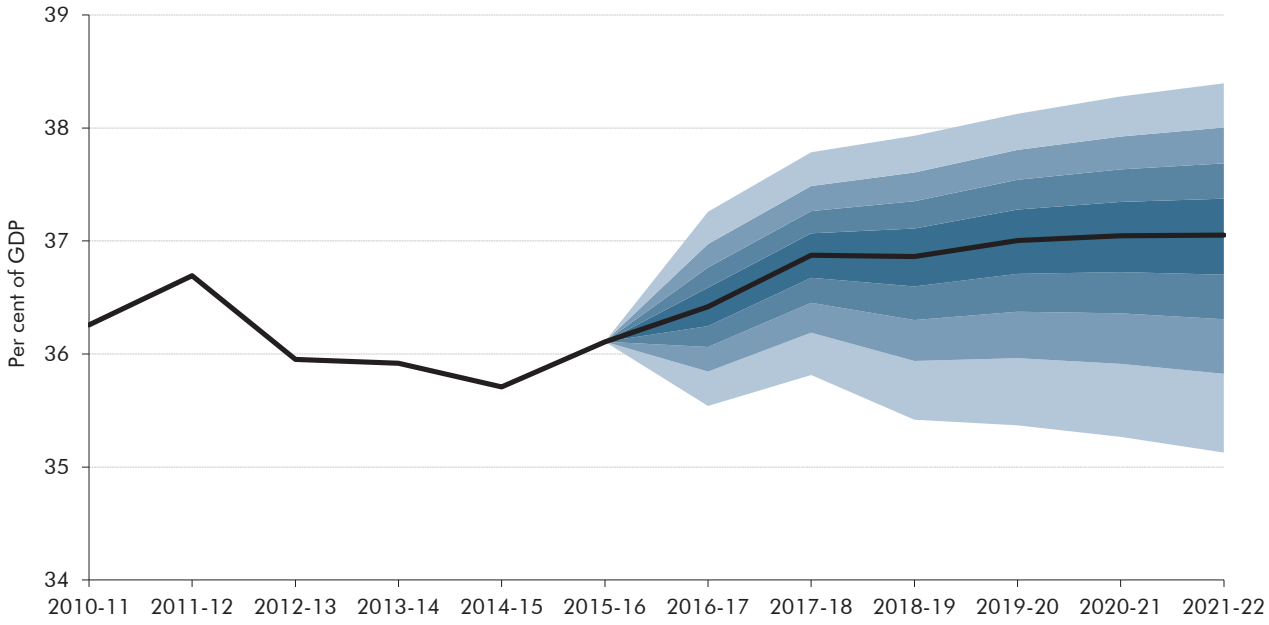
- **potential output** was 2.4 per cent lower. That would be 1.3 percentage points bigger than the downward revision to potential output in 2020-21 we have made in this forecast. But it is not large relative to the cumulative downward revisions that have been made since the financial crisis and recession of the late 2000s;

- the **effective tax rate** – as measured by the tax-to-GDP ratio – was 1.2 per cent of GDP lower and the difference was explained by structural changes in the composition of GDP, the income distribution or asset markets. Unpicking the structural and cyclical

elements of such changes would be very difficult. Chart 5.7 presents a fan chart for receipts as a share of GDP using a similar methodology to that used above. It reflects both cyclical and structural drivers of past forecast errors. It suggests there is a 20 per cent chance that receipts could be 1.2 per cent of GDP lower than forecast; or

- **planned spending cuts** – which reduce RDEL by 1.7 per cent of GDP between 2016-17 and 2020-21 in our forecast – fell short by around three-quarters.

Chart 5.7: Receipts fan chart



Source: ONS, OBR

The current and proposed supplementary debt targets

5.51 The current and proposed supplementary debt targets are both focused on year-on-year changes in the debt-to-GDP ratio, with the proposed target set for a fixed date of 2020-21. Table 5.5 shows how our central forecast for a 3.2 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 by 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 GDP growth rate 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 bigger 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 3 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; and

- 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). A little over 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
Difference in the level of PSND in 2019-20 (per cent of GDP)	-20	1.2	-0.1	-1.4	-2.8	-4.1	-5.4
	-10	1.3	-0.1	-1.6	-3.0	-4.4	-5.8
	+0	1.4	-0.1	-1.7	-3.2	-4.7	-6.1
	+10	1.5	-0.2	-1.8	-3.4	-5.0	-6.5
	+20	1.6	-0.2	-1.9	-3.6	-5.3	-6.9

5.52 Both the proposed 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:

- **cyclical borrowing** caused the primary balance to deteriorate by more than 2.0 per cent of GDP (relative to 0.1 per cent of GDP in our central forecast). Excluding the TFS loan repayment effect, a deterioration of only 0.6 per cent of GDP would be sufficient;

- **financial transactions** pushed cash borrowing up relative to PSNB by 2.0 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 this August was necessary in that year. A smaller effect of 0.6 per cent of GDP would be sufficient if the TFS loan repayment effect is excluded; or

- **nominal GDP growth** was lower than 2.7 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 4.0 per cent in our central forecast). A shortfall of just 0.4 percentage points would be sufficient if the TFS loan repayment effect is excluded.

Scenario analysis

5.53 The sensitivity analysis discussed above focuses on 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.

5.54 While the top subject of debate in the forecasting community is how our departure from the EU will affect the economy, there is little that we can add to that debate while remaining within the confines of the remit that has been set for us by Parliament. What we can highlight is that whatever happens after we leave – and whether it is a consequence of that departure or other factors – it is prospects for growth in the productive potential of the economy that matters most for the fiscal outlook.

5.55 As ever, the long-awaited return of sustained productivity growth is the most important judgement underpinning our forecast. This is necessary to finance private spending and to allow domestic producers to compete in export markets and with foreign producers in the domestic market. Despite the downward revisions in this and our previous forecast, we still expect a gradual strengthening of trend productivity growth over the forecast period. But since it is difficult to explain the abrupt fall and persistent weakness of productivity in recent years – and given the uncertainty around the effects of leaving the EU – it remains hard to judge when or if productivity growth will return to its historical average.

5.56 Here we revisit two scenarios that we last considered in December 2014, although we have revised their size to be consistent with outturn data since then. We consider two alternative paths for trend productivity growth that are broadly symmetric around our central forecast:

- a '**weak productivity**' scenario where the weakness of underlying trend productivity growth since the crisis persists over the next five years. On an hourly basis, that leaves trend productivity growth at 0.8 per cent a year, similar to 2015. That would leave GDP growth averaging around 1 per cent over the forecast period; and

- a '**strong productivity**' scenario, where trend productivity growth picks up more strongly than in our central forecast so that hourly trend productivity growth reaches 2.8 per cent, its average over the second half of the twentieth century. That would lead to GDP growth of around 3 per cent being sustained over the forecast period – similar to growth rates sustained in previous recovery phases, but conspicuous by their absence since the post-crisis trough in GDP in mid-2009.

5.57 In both scenarios, the output gap profile is unchanged, so that trend and actual growth are adjusted in equal measure. The alternative paths for productivity are also reflected one-for-one in average earnings, which in turn affects house prices. Inflation, unemployment and interest rates are assumed to be unchanged from our central forecast.

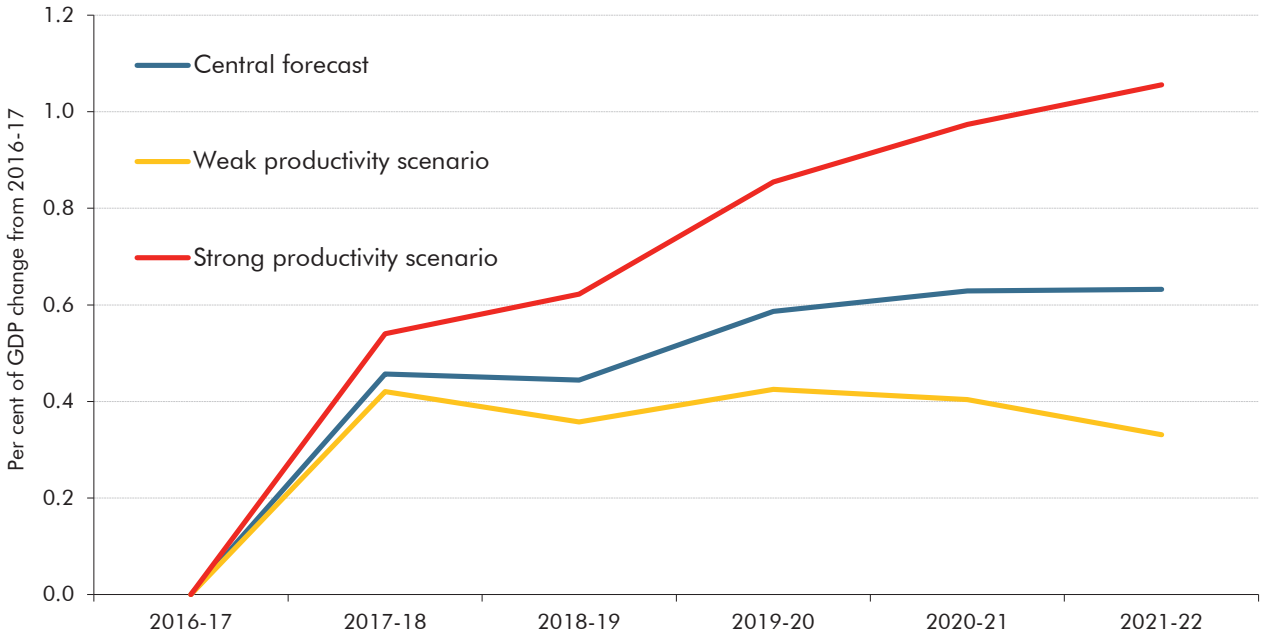
5.58 Given these assumptions, Table 5.6 sets out the main fiscal implications of each scenario on the existing and proposed fiscal targets. It shows that:

- in the **weak productivity scenario**, lower receipts (due to lower growth in average earnings, profits and consumer spending, only slightly offset by lower investment), plus slightly higher spending (due mainly to higher borrowing pushing up debt interest spending, but also higher spending on means-tested benefits like tax credits) would push up borrowing and debt. As a result, the existing mandate, debt target and welfare cap would be missed by bigger margins than in the central forecast. The new debt target would still be met, as the peak in the debt-to-GDP ratio would be pushed back only a year to 2018-19, and spending subject to the welfare cap would remain within the margin set above the proposed cap. But the proposed fiscal mandate would be missed by 0.2 per cent of GDP; and

- in the **strong productivity scenario**, higher receipts and lower spending – for the opposite reasons to those in the weak productivity scenario – improve the fiscal position and reduce debt. As a result, while the existing debt target and welfare cap would still be missed, the existing fiscal mandate would be met, with the budget moving into surplus in the target year of 2019-20. All three proposed fiscal targets would be met by bigger margins than in our central forecast.

5.59 Despite these scenarios being symmetric in growth terms, their effects are not symmetric in level terms, which explains why their effects on the public finances are also asymmetric. The tax-to-GDP ratio is boosted by more in the strong productivity scenario than it is reduced in the weak productivity scenario (Chart 5.8). That reflects the compounding effect of persistently different growth rates. So despite nominal GDP growth in the two scenarios being 1 percentage point higher or lower than in our central forecast, by 2021-22 that equates to nominal GDP growing around £29 billion faster in the high productivity scenario but only £25 billion slower in the weak productivity scenario.

Chart 5.8: Alternative scenarios for the rise in the receipts-to-GDP ratio



Source: OBR

Table 5.6: Key economic and fiscal aggregates under alternative scenarios

	Per cent of GDP, unless otherwise stated					
	Central forecast					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Economic assumptions						
GDP growth	2.0	1.3	1.9	2.1	2.1	2.0
Fiscal mandate measures						
Public sector net borrowing (£ billion)	68.2	59.0	46.5	21.9	20.7	17.2
Cyclically adjusted public sector net borrowing	3.3	2.6	1.8	0.8	0.8	0.7
Cyclically adjusted current deficit	-1.4	-0.5	0.1	1.1	1.5	1.6
Supplementary debt targets						
Public sector net debt	87.3	90.2	89.7	88.0	84.8	81.6
Margin against welfare caps (per cent)						
Existing welfare cap	4.0	4.3	5.2	6.0	7.1	
Proposed welfare cap and 'pathway'	0.0	0.0	0.0	0.0	0.0	0.0
	Weak productivity scenario					
Economic assumptions						
GDP growth	1.9	0.8	1.2	1.3	1.1	1.0
Fiscal mandate measures						
Public sector net borrowing (£ billion)	69.0	64.0	57.7	41.8	50.9	58.5
Cyclically adjusted public sector net borrowing	3.4	2.8	2.4	1.7	2.2	2.6
Cyclically adjusted current deficit	-1.4	-0.3	0.7	2.1	2.9	3.5
Supplementary debt targets						
Public sector net debt	87.4	91.0	91.6	91.5	90.4	89.6
Margin against welfare caps (per cent)						
Existing welfare cap	4.0	4.3	5.2	6.0	7.2	
Proposed welfare cap and 'pathway'	0.0	0.0	0.0	0.1	0.1	0.1
	Strong productivity scenario					
Economic assumptions						
GDP growth	2.2	2.5	3.2	3.3	3.1	3.0
Fiscal mandate measures						
Public sector net borrowing (£ billion)	66.8	47.3	21.9	-15.8	-29.7	-46.3
Cyclically adjusted public sector net borrowing	3.3	2.0	0.6	-0.9	-1.4	-1.9
Cyclically adjusted current deficit	-1.5	-1.2	-1.1	-0.6	-0.7	-1.0
Supplementary debt targets						
Public sector net debt	87.1	88.4	85.6	81.5	75.7	69.5
Margin against welfare caps (per cent)						
Existing welfare cap	3.9	4.2	5.1	5.8	6.9	
Proposed welfare cap and 'pathway'	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2

A Autumn Statement 2016 policy decisions

Overview

A.1 Our *Economic and fiscal outlook (EFO)* forecasts incorporate the expected impact of the policy decisions announced in each Budget and Autumn Statement. In the run-up to each statement, the Government provides us with draft estimates of the cost or gain from each 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 the process is complete, the Government chooses which measures to implement and what costings to include in the 'scorecard' in its Budget or Autumn Statement document. We choose whether to certify the costings as 'reasonable and central', and whether to include them – or an alternative – in our forecast.

A.2 In this forecast, we have certified all the costings of tax and annually managed expenditure (AME) measures that appear in the Government's main policy decisions scorecard as reasonable and central.

A.3 The costings process worked reasonably efficiently, with fewer measures submitted just before the deadline than in recent fiscal events. But there were once again a very large number of measures submitted for scrutiny.

A.4 Table A.2 reproduces the Treasury's scorecard, with further details in Chapter 4 and the Treasury's *Autumn Statement 2016 policy costings document*, which summarises very briefly the methodologies used to produce each costing and the main areas of uncertainty.

Policy decisions not on the Treasury scorecard

A.5 In this *EFO* we have shown the effect on our forecasts for receipts and AME spending of a number of policy decisions that the Treasury has chosen not to present on its scorecard. These effects are presented in Table A.1. They include:

- '**annuities: secondary market**' – this measure was announced in March 2015 and was designed to allow people already receiving pension income from an annuity to sell that income stream to a third party, taking the value either as a lump sum or transferring it to an alternative, taxable, retirement income product. It was originally due to begin in April 2016, but in July 2015 the Government announced a one-year delay. The Government has now decided to cancel it completely. In our March 2015 *EFO* we gave this costing a very high uncertainty ranking, noting that there might be little interest from pensioners and that a secondary market might not develop. The latter

proved correct. The decision not to pursue this policy costs £0.9 billion over 2017-18 and 2018-19, with £0.4 billion of that recouped in the remaining years of the forecast;

- '**business rates transitional relief**' – this sets an annual cap on the increase in business rates bills associated with the April 2017 revaluation, with the limit determined by a property's rateable value. It is designed to be revenue neutral, as required by legislation, with the cost of providing relief to some taxpayers offset by higher rates for others. Similar arrangements associated with the last two revaluations operated at a loss despite also being designed to be revenue neutral. On this basis, our March forecast assumed that the 2017 scheme would also operate at a cost. The Government has sought to ensure that the latest scheme will be fiscally neutral in outturn, not just when planned. We have considered its parameters and believe that our central forecast *should* assume that it will be fiscally neutral. Relative to March, this adds £0.8 billion to business rates in 2017-18 and smaller amounts in later years;

- '**VAT on energy saving materials**' – in November 2015 we adjusted our VAT forecast to reflect the Government's assumption that it would comply with an EU court ruling that meant that the reduced rate of VAT (5 per cent) could no longer be applied to the installation of energy saving materials in residential properties. The Government has now informed us that it has postponed that change until an unspecified future date. We have therefore removed the effect from our forecast, which reduces receipts by £50 million a year on average from 2017-18 onwards, and by less in 2016-17; and

- '**Network Rail spending**' – the Government will not set Network Rail's final 'Control Period 6' spending baselines until nearer the end of the current control period, but it has provided a policy assumption that raises capital spending by an average of £1.3 billion a year in 2019-20 and 2020-21. We have recorded this as a non-scorecard measure since it would not have featured in our forecast absent that change in Government assumption.

Table A.1: Costings for policy decisions not on the Treasury scorecard

	£ million					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Annuities: secondary market	0	-470	-475	+120	+115	+115
Business rates transitional relief	0	+755	+475	+250	+145	-90
VAT on energy saving materials	-10	-20	-40	-35	-85	-90
Network Rail spending	0	0	0	-1280	-1080	-875

[1] 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.6 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
			2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	
Changes to Inherited Policy									
1	Personal Independence Payment: not implementing Budget 2016 measure	Spend	-15	-605	-1,250	-1,400	-1,390	-1,410	Medium-high
2	Universal Credit: reprofile	Spend	-20	-295	-445	-185	-110	-425	Medium
3	Disability benefits: eligibility test change	Spend	-20	-20	-20	-20	-15	-15	Medium
4	Social Sector Rent dow nrating: exemptions	Spend	0	-5	-10	-15	-15	-15	Medium-low
5	Pay to Stay: do not implement	Spend	0	-280	-15	-100	-100	-105	Medium-high
6	Local Housing Allow ance: adjusted roll-out and supported housing fund	Spend	0	0	-305	-265	+160	+125	Medium-high
Public spending									
7	Efficiency Review : reinvestment	Spend	0	0	0	-1,000	-	-	N/A
National Productivity Investment Fund									
8	Housing	Spend	-10	-1,465	-2,060	-2,490	-2,145	-	N/A
9	Transport	Spend	0	-475	-790	-705	-1,050	-	N/A
10	Telecoms	Spend	0	-25	-150	-275	-290	-	N/A
11	Research and Development	Spend	0	-425	-820	-1,500	-2,000	-	N/A
12	Long-term investment	Spend	0	0	0	0	0	-7,000	N/A
An economy that works for everyone									
13	Fuel Duty: freeze in 2017-18	Tax	0	-845	-845	-860	-885	-910	Medium-low
14	Universal Credit: reduce taper to 63%	Spend	0	-35	-175	-400	-570	-700	Medium
15	NS&I Investment Bond	Spend	0	-45	-85	-90	-45	0	High
16	Right to Buy: expand pilot	Spend	0	-25	-90	-110	-25	0	Medium
17	National Living Wage: additional enforcement	Spend	0	-5	-5	-5	-	-	N/A
Tax reform									
18	Insurance Premium Tax: 2ppt increase from June 2017	Tax	0	+680	+840	+840	+845	+855	Medium-low
19	National Insurance contributions: align primary and secondary thresholds	Tax	0	+170	+145	+145	+145	+145	Medium-low
20	Salary Sacrifice: remove tax and NICs advantages	Tax	-10	+85	+235	+235	+235	+260	High
21	Money Purchase Annual Allow ance: reduce to £4,000 per annum	Tax	0	+70	+70	+70	+75	+75	Medium-high
22	Company Car Tax: reforms to incentivise ULEVs	Tax	0	0	0	0	+25	+5	High

Avoidance, Evasion, and Imbalances									
23	VAT Flat Rate Scheme: 16.5% rate for businesses with limited costs	Tax	0	+195	+130	+130	+125	+115	Medium-high
24	Disguised Remuneration: extend to self-employed and remove company deduction	Tax	+10	+25	+180	+310	+40	+65	Very high
25	Adapted motor vehicles: prevent abuse	Tax	0	+20	+15	+15	+15	+15	Medium-high
26	Employee Shareholder Status: abolish tax advantage for new schemes	Tax	*	+10	+15	+15	+25	+50	High
27	HMRC: administration and operational measures	Tax	-115	-20	+50	+170	+215	+180	High
28	Offshore Tax: close loopholes and improve reporting	Tax	0	+10	+25	+15	+60	+70	Very high
29	Money Service Businesses: bulk data gathering	Tax	0	0	+5	+5	+10	10	Medium-high
Other Tax and Spending									
30	Overseas Development Assistance: meet 0.7% GNI target	Spend	0	+80	+210	0	-	-	N/A
31	MoJ: Prison safety	Spend	0	-125	-245	-185	-	-	N/A
32	Grammar Schools expansion	Spend	0	-60	-60	-60	-60	-	N/A
33	Tax credits: correcting awards	Spend	-95	-80	-65	-55	-40	-25	Medium-low
34	Biomedical catalysts and Technology Transfers	Spend	0	-40	-60	-60	-60	-	N/A
35	DCMS Spending	Spend	-10	-10	-20	-15	-10	-	N/A
36	Midlands Rail Hub	Spend	0	-5	-5	0	-	-	N/A
37	Scotland City Deals and Fiscal Framework	Spend	0	-25	-60	-75	-50	-25	N/A
38	Mayfield Review of Business Productivity	Spend	0	-5	-5	-5	-	-	N/A
39	Business Rates: support for broadband and increase Rural Rate Relief	Tax	0	-10	-15	-15	-20	-25	Medium-low
40	Gift Aid: reforms	Tax	0	*	-10	-15	-15	-20	Medium
41	Museums and Galleries tax relief	Tax	0	-5	-30	-30	-30	-30	Medium-high
42	Social Investment Tax Relief: implement with a £1.5m cap	Tax	0	+10	+5	+5	*	-5	Medium-high
43	Offpayroll working: implement consultation reforms	Tax	0	+25	+20	+20	+25	+25	Medium-high
	TOTAL POLICY DECISIONS		**-285**	**-3,555**	**-5,695**	**-7,960**	**-6,925**	**-8715**	
	TOTAL POLICY DECISIONS EXCLUDING NPIF AND INHERITED POLICY		**-220**	**+40**	**+170**	**-5**	**+30**	**130**	
	Total tax policy decisions		**+25**	**+375**	**+640**	**+720**	**+565**	**555**	
	Total spending policy decisions		**-310**	**-3,930**	**-6,335**	**-8,680**	**-7,490**	**-9270**	

**negligible*

[1] Costings reflect the OBR's latest economic and fiscal determinants.

[2] At Spending Review 2015, the government set departmental spending plans for RDEL for years up to 2019-20 and CDEL for years up to 2020-21. RDEL budgets have not been set for most departments for 2020-21 and CDEL for 2021-22. Given this, RDEL figures are not set out for 2020-21 and CDEL for 2021-22.

A.7 Table A.3 shows the detailed criteria and applies them to a sample policy measure from this Autumn Statement: '**Insurance Premium Tax: 2ppt increase from June 2017**'. This is expected to yield £4.1 billion from 2017-18 to 2021-22 by raising the standard rate of insurance premium tax from 10 to 12 per cent. For this policy we have judged that the most important source of uncertainty will be data, followed by behaviour, then modelling.

A.8 The data used consist of high quality HMRC administrative data, so we consider this to be a 'medium low' source of uncertainty.

A.9 We consider the greatest uncertainty to be from the behavioural response to the change. As the tax rise is passed on by insurers, the cost of insurance will rise, reducing demand. The costing estimates the response of demand to these higher prices, known as the price

elasticity of demand. Direct evidence is not available, so the costing includes an assumption based on academic research. It also assumes that some consumers will bring forward their purchases before the tax rise. Again, this is judgement based, although it is not considered to be material to the costing. We consider this to be a 'medium' source of uncertainty.

A.10 The modelling is based on an HMRC forecasting model that has been subject to relatively small errors.[1] So we regard this as a 'medium low' source of uncertainty.

A.11 Taking all these judgments into account, we gave the costing a rating of 'medium low'.

Table A.3: Example of assigning uncertainty rating criteria: 'insurance premium tax'

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	Low	High	Medium
Overall		**Medium-low**	

A.12 Using the approach set out in Table A.3, we have judged five measures in the scorecard to have 'high' uncertainty around the central costing and two to have 'very high' uncertainty. Together, these represent 16 per cent of the Autumn Statement scorecard measures by number and 6 per cent by absolute value (in other words ignoring whether they are

[1] In our 2016 *Forecast evaluation report* we showed the relative fiscal forecast errors at the two-year horizon across most of our receipts and spending forecasts. IPT forecast errors were the second smallest on the volatility-adjusted metric that we used.

expected to raise or cost money for the Exchequer). In net terms, they are expected to raise the Exchequer £2.2 billion in total over the forecast period. The measures are:

- 'offshore tax: close loopholes and improve reporting' – we give this measure – which has several components targeting offshore evasion – a 'very high' uncertainty ranking. 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 such little real information, modelling these effects can be highly complex. All elements of the costing receive a 'very high' ranking;

- 'disguised remuneration: extend to self-employed and remove company deduction' – this combines two elements and receives a 'very high' uncertainty ranking for the one that raises the vast majority of the yield. That part aims to tackle use of schemes by the self-employed to avoid income tax and NICs, by ensuring that all payments to them are taxed, irrespective of their description. It is an extension of the Budget 2016 measure on employers and contractors. The main uncertainty was the behavioural effect, which is common for most avoidance measures. Some users can be expected to find new ways to get around the new proposed rules, whether through different avoidance schemes or outright evasion. Estimating the yield that will be lost from such responses, and how quickly that might build up, make this the key uncertainty in the costing. The data and modelling were both also highly uncertain;

- 'salary sacrifice: remove tax and NICs advantages' – this receives a 'high' uncertainty ranking. It takes effect from April 2017, changing the amount of taxable benefit for benefits-in-kind provided in exchange for salary sacrifice. The main uncertainty was the data. Information on salary sacrifice take-up is sparse because there is no requirement to report on it to HMRC. As this measure expands the tax base, there was no administrative data to draw on. The costing therefore had to bring together many different data sources to estimate the tax base. Behaviour could also have a significant impact on the yield in 2017-18, because employers and employees may bring forward reviews of their salary sacrifice arrangements;

- 'HMRC: administration and operational measures' – this measure contains a number of parts and receives a 'high' uncertainty ranking due to the largest. That element provides HMRC with additional resource of up to 200 full-time equivalent staff each year from 2018-19 to 2021-22, with the aim of capitalising on recent strengthening of HMRC's powers with supporting compliance activity. The main area of uncertainty is the number, value and timing of accelerated payment and follower notices that HMRC will issue. As such, the data element receives a 'very high' uncertainty ranking;

- 'NS&I Investment Bond' – this receives a 'high' uncertainty ranking. In April 2017 the Government will launch a new 3-year savings bond that will be on sale for 12 months. It is open to all those aged 16 and over and is expected to pay an interest rate of 2.2 per cent, with individual deposits capped at £3,000. There is no upper limit to the number of people that can take up the bond. The key uncertainty is take-up, which will

depend on returns on other products available when it is launched. With the savings tax allowance having removed tax on savings income for most people, funds may be diverted from ISAs into this product. The latest available data showed 6.9 million people had saved more than £4,000 into an ISA in 2013-14. Previous NS&I products that offered particularly attractive rates have seen very high take-up or have been closed when more funds flowed into them more quickly than expected;

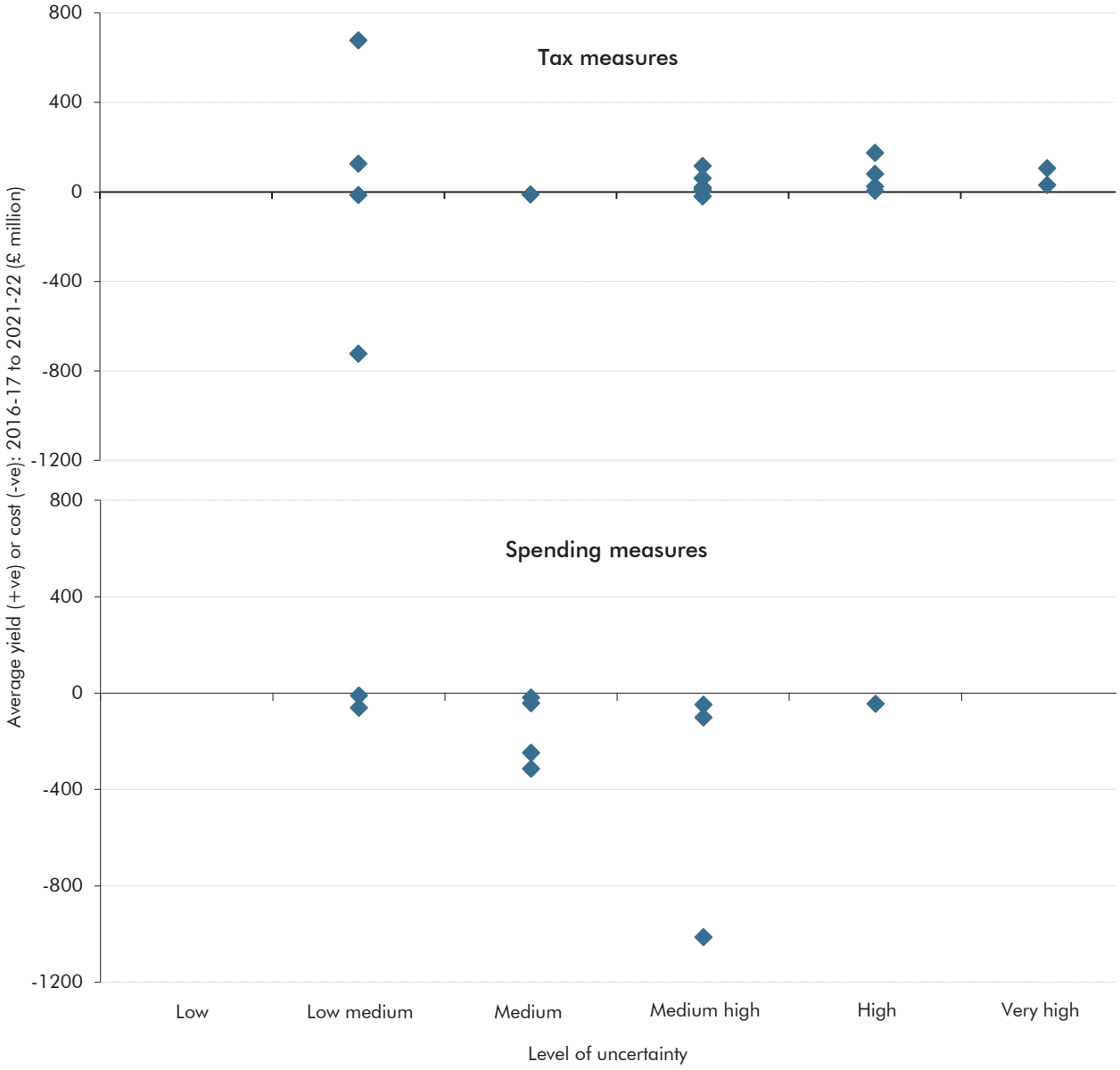
- **'employee shareholder status: abolish tax advantage for new schemes'** – this receives a 'high' uncertainty ranking. In Autumn Statement 2012, the Government announced that the first £50,000 of shares received through an employee share scheme (ESS) – which involves the employee surrendering certain employment rights – would be exempt from capital gains tax (CGT). Further announcements followed in Budget 2013 and Budget 2016. This measure removes the reliefs altogether for any shares awarded under new ESS agreements entered. The most important source of uncertainty was the behavioural effect, which was considered 'very high'. Attrition is applied to the costing to account for aggressive tax-planners finding alternative means of reducing their tax liabilities. Data are also considered a 'high' source of uncertainty as the forecast tax base from previous measures remains uncertain; and

- **'company car tax: reforms to incentivise ULEVs'** – this receives a 'high' uncertainty ranking. HMRC specifies how the taxable benefit value should be calculated for a range of different benefits-in-kind. In the case of company cars, the cash equivalent of the benefit is based on the car's list price (when new) plus any accessories times the 'appropriate percentage'. This measure changes the company car tax (CCT) appropriate percentage banding structure for ultra-low emission vehicles (ULEVs), as well as increasing CCT appropriate percentages in 2020-21 for CO_2 emission ranges over 90g/km by 1 per cent. The main uncertainty was modelling. Forecasting the tax base required several steps and relies on assumptions about the proportion of ULEVs forecast by the Department for Transport to be used as company cars.

A.13 We have judged twenty two scorecard measures to have between 'medium-low' and 'medium-high' uncertainty around the central costing, with none having 'low' uncertainty. That means that 48 per cent of the Autumn Statement scorecard measures have been placed in the medium range (43 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, while the tax raising measures often have higher uncertainty ratings than the tax cuts. 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. Unlike many recent Budgets and Autumn Statements, in this Autumn Statement the biggest tax raising measure (insurance premium tax) is assigned a lower uncertainty rating.

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 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. In this Autumn Statement, the final year effects of most scorecard measures are representative of the longer-term cost or yield.

A.16 We note two measures where the scorecard costing is not representative of the longer term. In both cases, long-term effects are particularly uncertain. These are:

- **'HMRC: administration and operational measures'** – the largest revenue raising element of this package is to provide additional resources to expand HMRC's use of

accelerated payment and follower notices in the litigation of anti-avoidance cases. As with previous measures in this area, it brings forward yield that HMRC would expect to receive in future years in its absence. On this occasion, we estimate that it raises receipts from 2018-19 to 2022-23 but lowers them from then until 2025-26. It would be broadly revenue neutral overall; and

- **'employee shareholder status: abolish tax advantage for new schemes'** – when this measure was introduced in December 2012, we noted that the cost could rise significantly beyond the scorecard period. The opposite is true of cancelling it. It reduces the cost over the scorecard period by £115 million, but because the arrangements exempt the disposal of these shares from capital gains tax, and there may be a long lag between award and disposal, the yield beyond the scorecard period could rise significantly.

Small measures

A.17 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.18 A good example of a small measure announced in this Autumn Statement is '**social sector rent downrating: exemptions**'. In July 2015, the Government announced that social sector landlords would be required to cut rents by 1 per cent a year for the four years up to 2019-20. In September 2016, it was announced that almshouses, community land trusts, co-ops and refuges will be exempt from this. This costs around £10 million a year through higher spending on housing benefit associated with the rents charged by these entities. The data used are high quality and the modelling is straightforward. No behavioural response is expected. And unlike the imposition of the rent downrating policy, removing these entities from its effect is not considered to be contentious.

A.19 By definition, any costings that meet all these conditions will have a maximum uncertainty rating of 'medium'.

Evaluation of HMRC anti-avoidance measures

A.20 The Treasury Select Committee's report on Autumn Statement 2013 recommended that *"the OBR should do all it can to report on whether yields [from anti-avoidance measures] were*

attained as originally costed." We did so first in Box 4.2 of our December 2014 *EFO* and repeated the exercise in our November 2015 *EFO*, after which we published more detail in a working paper.[2] We have repeated the exercise this year, looking at more recent measures and those for which there is new information. In total, 12 measures from the last four years have been evaluated. We also asked for updates on a further three measures where there is not enough information to undertake a full evaluation at this stage. These 15 measures are reported below.

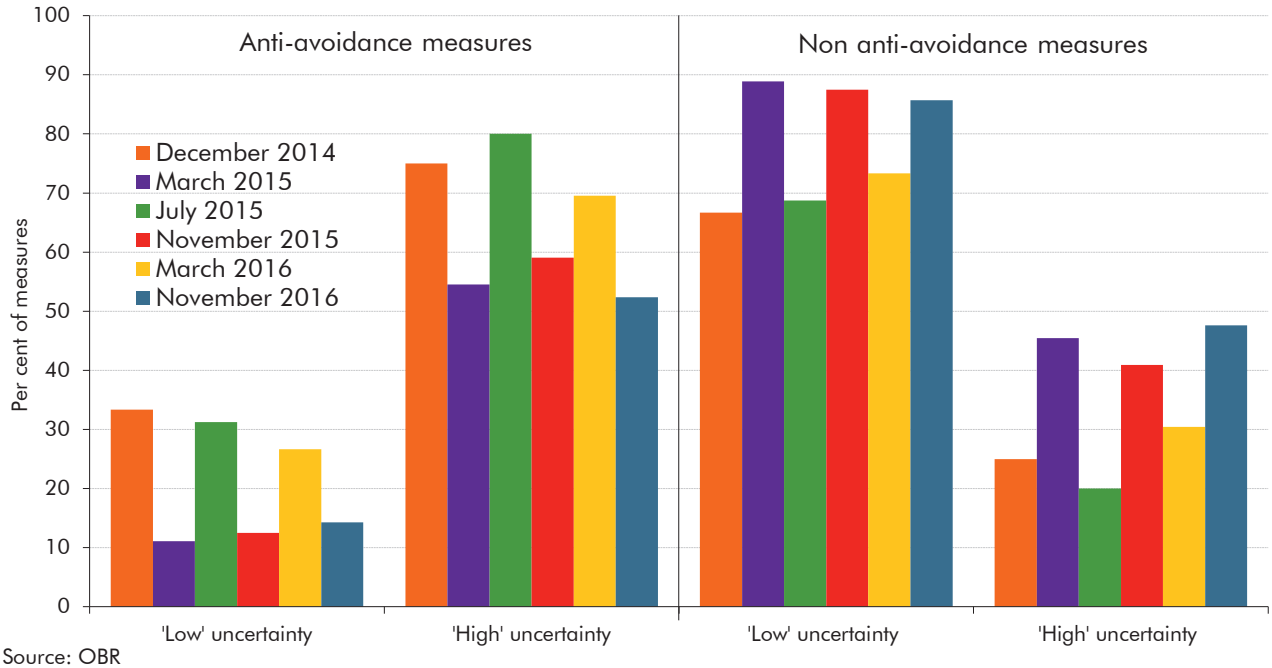
A.21 The revenue impact of anti-avoidance measures tends to be particularly uncertain as they often target a specific subset of taxpayers who are already actively changing their behaviour in response to the tax system. Typically these measures are assigned one of our higher uncertainty rankings as both data quality and behavioural response tend to be uncertain.[3] That is clear again in the uncertainty ratings assigned in this Autumn Statement.

A.22 Chart A.2 confirms that since we began assigning an uncertainty rating to every scorecard measure in December 2014, the types of measures covered by this evaluation have typically received a higher rating than other measures. The first two sets of bars show the ratings for anti-avoidance measures – more often than not these are given one of our three highest uncertainty ratings (very high, high or medium-high, grouped as 'high' for this chart). The opposite is true for other measures, displayed in the third and fourth sets of bars – typically these measures are assigned one of our three lowest ratings (low, medium-low and medium, grouped as 'low' for this chart).

A.23 Due to the difficulty and resource requirements of producing formal counterfactual evaluations, we again draw on evidence from HMRC's monitoring of receipts, operational intelligence and re-costing of previous measures for most of the evaluations.

[2] See Johal and Sousa (2016): *Working Paper No 9: Anti-avoidance costings: an evaluation*.
[3] While we are labelling this an evaluation of anti-avoidance costings, we have broadened it to cover wider HMRC operational activity. This brings into scope measures where HMRC is expecting to increase tax revenue through additional compliance resources or enforcement powers. On the welfare spending side, we have also included measures where HMRC is expecting to make savings from compliance or enforcement actions within the tax credit and child benefit systems that are administered by HMRC. We typically assign a lower uncertainty rating to these types of welfare measures as the quality of data is higher and the behavioural response is more limited.

Chart A.2: Uncertainty ratings for anti-avoidance measures

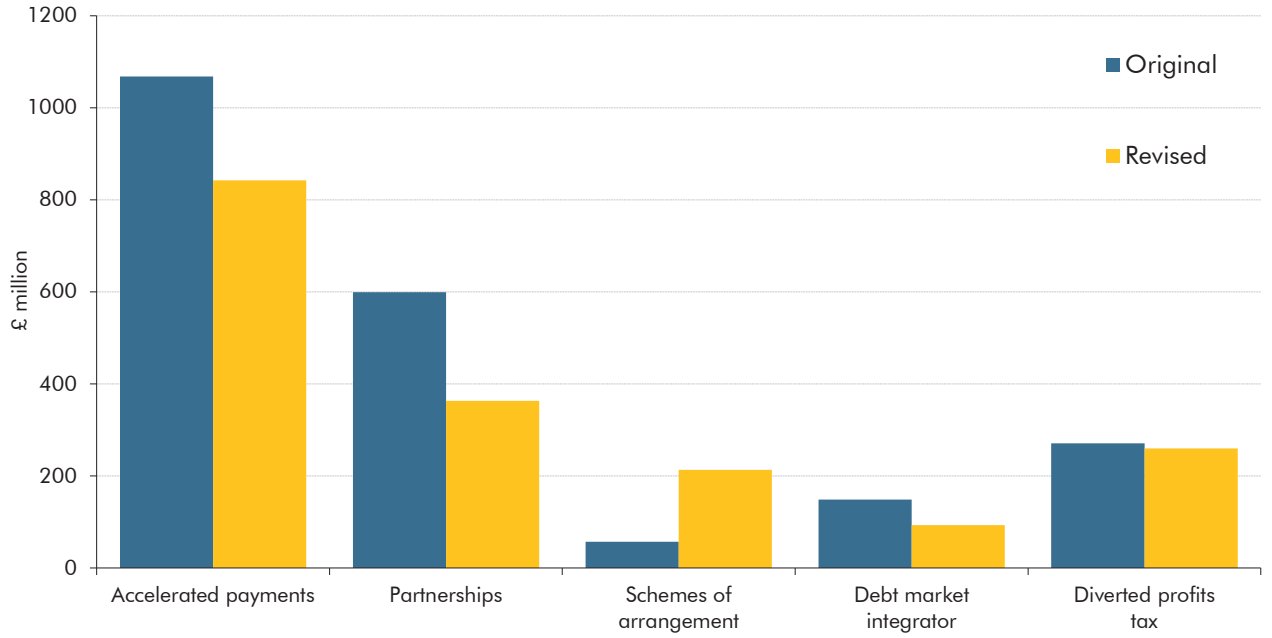


Source: OBR

Total receipts compared to original costing

A.24 Our previous evaluations showed the vast majority of measures were within £50 million either way of the original estimate. Chart A.3 shows the main findings from this evaluation, comparing average revenue raised each year between the original and revised costings.

Chart A.3: Comparison of evaluated anti-avoidance measures (average yearly yield)



Source: HMRC, OBR

A.25 For evaluation and monitoring purposes we combine five measures where the yield is generated through '**accelerated payments**' and follower notices.[4] These five measures have so far raised less than expected, and we now expect yield to be lower by an average of £0.2 billion a year. We also combine the two '**partnerships**' measures. These have also raised less than expected, and once again our latest estimate has average yearly yield £0.2 billion lower than the original estimate. Only the '**schemes of arrangement**' stamp duty measure brought in more revenue than expected, by an average of around £0.2 billion a year, and we have revised up our forecast by the same amount as a result. The '**debt market integrator**' measure is now expected to generate savings of an average £55 million a year less than the original costing. The costing for '**diverted profits tax**' is broadly unchanged.[5]

A.26 Measures that changed the most since the original costing include:

- '**accelerated payments**' – since Budget 2013, HMRC has been issuing accelerated payments (AP) notices, which bring in revenue more quickly by demanding payment upfront in avoidance cases. For the most part this is revenue that HMRC would have received in future years but which has now been brought forward, so most of the effect of these measures was due to timing. Chart A.3 shows the combined costings were expected to raise £1.1 billion a year on average from 2014-15 to 2018-19. The two largest measures date from before we formally assigned uncertainty rankings but we highlighted the high level of uncertainty around the multiple-stage costings model that was sensitive to changes in the underlying assumptions. In our November 2015 evaluation, actual AP receipts were higher than originally estimated, so we increased our near-term forecast while reducing it in later years. But information provided by HMRC for this evaluation suggests that the initial estimate of the tax under consideration, which forms the basis for the costing, was too high. This is partly due to some of the stock of cases at the time of the original costing falling out of scope for AP. HMRC have also reduced the average value of cases. It is also possible the threat of receiving an AP notice has acted as a stronger deterrent than originally thought. The combined effect reduces the expected yield of these measures by around £0.2 billion on average a year compared to the original costings;

- '**partnerships**' – in March and December 2013, the Government announced a range of legislation to counter commonly used avoidance schemes involving partnerships. The two measures were expected to yield £3.3 billion between 2014-15 and 2018-19. This was before we formally assigned uncertainty rankings but we highlighted the very high uncertainty around the costings at the time. Of particular concern were the two difficulties common to most anti-avoidance costings – determining the current level of avoidance via existing channels and the future use of alternative avoidance channels if existing ones were closed down. Following this evaluation we have lowered our

[4] The five are: 'penalties in avoidance cases' from March 2013, 'accelerated payments in follower cases' from December 2013, 'accelerated payments: extension to disclosed tax avoidance schemes and the GAAR' from March 2014, 'DOTAS regime changes' from December 2014 and 'accelerated Payments: extension' from March 2015. We excluded the sixth measure 'corporation tax: accelerated payments and group relief' which we evaluated last year and for which there is no significant change. This Autumn Statement has added another within 'HMRC: administration and operational measures'.
[5] We also evaluated two polices within the December 2013 measure 'HMRC: extending online services' but there was nothing significant to report.

estimate to £1.8 billion over the same period. This mainly reflects initial receipts being lower than we expected. The original estimate was for £1.2 billion yield by 2015-16, but the latest outturn estimate is £0.6 billion. Most of the receipts for the measure come in through self-assessment income tax, so more information will be available after the next SA payments are made in January and reported by HMRC in February. That information will remain subject to some uncertainty as it is difficult for HMRC to separate the receipts directly attributable to this measure from general returns;

- '**stamp duty on shares: schemes of arrangement**' – in December 2014 the Government announced a measure to tackle avoidance of stamp tax on shares by prohibiting the use of reduction of share capital in cancellation schemes of arrangement designed to implement takeovers of UK registered companies. These schemes of arrangement were a way of structuring a takeover so that no stamp tax would be paid. The original costing was sensitive to the number and regularity of very large takeovers, both of which are uncertain. It allowed for two behavioural effects. First, bringing forward or forestalling of some deals to avoid the legislation, which was due to take effect from March 2015. Second, allowing for alternative avoidance via an attrition assumption. At the time we gave this measure a 'medium-high' uncertainty rating and emphasised that the number of takeovers was the most uncertain element. Since this measure has come into effect, more takeovers than anticipated, including a number of large ones, have paid stamp duty, increasing the estimated yield. This also suggests the behavioural assumptions may have been overstated, although that cannot be discerned with confidence. The original estimate was to raise £285 million in total from 2015-16 to 2019-20, with £130 million in the first two years. In fact, it has already raised £600 million in the first two years and we have revised up our forecast for future receipts from this measure; and

- '**HMRC's use of the debt market integrator**' – this was announced in December 2014 as part of 'HMRC: operational measures' and was an extension to HMRC's debt collection agency programme, using the Cabinet Office-led debt market integrator (DMI) to market the recovery of debt owed to government. This was done by placing packages of debt across income tax, NICs, onshore corporation tax and VAT with the DMI. It was originally expected to raise £0.7 billion from 2014-15 to 2018-19. HMRC has informed us that performance for 2015-16 was close to expectations but that at the current level of funding it would be unable to meet all the planned placements. Yield for 2016-17 and 2017-18 has been lowered by a third as a result, so total yield across the original scorecard period is £0.3 billion lower than originally estimated.

A.27 We approached HMRC about a number of other measures and were told there was insufficient information to evaluate them at this time. These include the March 2013 measure on tackling '**offshore employment intermediaries**', its December 2013 counterpart targeting '**onshore employment intermediaries**' and the December 2014 measure '**self-incorporation: intangible assets**'. We will revisit these in next year's evaluation.

A.28 The Government has announced further anti-avoidance and compliance measures in recent Budgets and Autumn Statements. For many of these policies, the yield is only expected in the

forecast period and we will evaluate them once they have come into effect. For example, much of the yield from the July 2015 evasion package comes in 2017-18. HMRC has provided us with updated information about the delivery of compliance measures and at this stage they remain broadly on track. In particular they now maintain a record of planned and actual recruitment for policy measures which they were able to share with us.

Update on previous measures

A.29 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.

Policy reversals

A.30 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:

- '**personal independent payment: aids and appliances**' – this measure, announced in the March Budget, would have cut disability benefits spending via a reduction in the entitlement points that would be awarded in PIP for cases involving the use of certain aids and appliances. Shortly after the Budget the Government announced that it would not be implemented. That decision costs £6.1 billion in total across the scorecard period (see Table A.2);

- '**pay to stay**' – this was announced in July 2015 and would have required social sector landlords – both local authorities and housing associations – to charge higher rents to households with income above a defined threshold. In March the Government announced that the policy would be less stringent by making it voluntary for housing associations and by introducing a taper to reduce how sharply rents would increase for those with income that exceeded the threshold. In this Autumn Statement the Government has abandoned the policy entirely. That costs £0.6 billion over the scorecard period (see Table A.2);

- '**employee shareholder status**' – in December 2012 the Government announced that the first £50,000 worth of shares received under an employee shareholder status arrangement – which involves the employee surrendering certain employment rights – would be exempt from capital gains tax (CGT) and in March 2013 extended this to exempt the first £2,000 of shares from income tax and national insurance contributions. In March 2016 the Government introduced a lifetime limit of £100,000 for the CGT element. The latest HMRC statistics show that take-up in 2013-14, the first seven months of the scheme, was just 230. That was well below the original estimate of 11,000 (which included 5,000 expected to go on to benefit from the CGT exemption). We have since lowered our steady state take-up assumption from 65,000 (including 30,000 benefiting from the CGT exemption) to 20,000, though this remains

highly uncertain. Originally we expected these measures to cost £125 million in 2017-18, but that has been revised down to £20 million, though this reflects weaker equity prices as well as take-up. In this Autumn Statement the Government has announced it is cancelling the tax exemptions from new shares awarded under employee shareholders arrangements; and

- '**annuities: secondary market**' – this measure was announced in March 2015, but has now been cancelled. The Government has chosen not to put this measure on its scorecard. We discussed it in more detail in paragraph A.5.

Policy delays

A.31 In order to certify costings as central, we need to estimate when – as well as by how much – measures will affect the public finances. Many of the Government's previously announced policy measures were subject to uncertainty over the timing of delivery, and a number have been subsequently delayed. These include:

- '**universal credit**' – for the fourth autumn forecast in succession we have needed to factor in the effects of the Government pushing back part or all of the UC rollout. This time it has pushed the start of the scaling up of natural migrations back by eight months to October 2017 and the managed migration process by another year, now due to end in March 2022. The succession of delays is shown in Chart 4.7. We first introduced UC into the forecast in March 2013. Over the three and a half years since then the rollout has been receded by around four years. Some of the knock-on effects of this delay include adjusting cuts to support for families making a new claim and delaying further cuts for families with more than two children and delaying the transfer of housing benefit paid to pensioners into a new housing credit in pension credit. We have decided to retain our assumption of a further 6-month contingency on the managed migration process, meaning that in our forecast it ends in October 2022. The effect of all these delays is uneven across years because it pushes back both savings and costs, the net effect of which differs from year to year. But overall they reduce marginal UC savings; and

- '**Royal Bank of Scotland (RBS) share sales**' – our March forecast included £21.5 billion of share sales between 2016-17 and 2020-21. The Chancellor has been reported as saying that further sales were *"not practical at the moment"* and that *"the right time to look at this again would be when those issues are set"*. On this basis, we have not included any RBS share sales in this forecast.

A.32 We have also received updates on a number of other policies including:

- '**making tax digital**' – HMRC has reported on progress in delivering this November 2015 measure. From the information available, it is broadly on track although it is still at an early stage. There was a four month referendum-related delay in HMRC issuing a consultation, but we have been reassured that this was allowed for in the contingency built into the timetable. Before certifying any measures of this nature, we

routinely ask whether such contingencies have been included given past experience of delivery hurdles delaying their effects on the public finances. If the consultation leads to any changes in the policy, we will consider them in our next forecast;

- 'help to buy: ISA' – this Budget 2015 measure allows first-time buyers to benefit from a 25 per cent government top-up when purchasing a first home, with restrictions on the value of the home and the amount that can be saved. We originally expected this to cost £2.1 billion from 2016-17 to 2019-20. Take-up has been lower than expected, around half that assumed in the original costing, with deposit levels also slightly lower than the allowable limits under the scheme. This reduces the expected cost to £1.2 billion from 2016-17 to 2019-20. Uncertainty remains around these assumptions;

- 'corporation tax: bringing forward payments for large groups' – in the July 2015 Budget, the Government decided to bring the corporation tax (CT) payment date for large non-oil companies forward by four months from April 2017. In Budget 2016, it delayed the start of the policy to April 2019. With CT scored on a cash basis, this boosted receipts by £5.6 billion in 2019-20 and by £3.2 billion in 2020-21. In effect, the timing measure would have delivered a one-off boost to receipts on a cash basis – with the biggest boost in the surplus target year that applied in that Budget – without any change in underlying liabilities. On 21 October, the ONS announced that it would implement a new accruals methodology for CT early in 2017. CT is currently scored on a cash basis (when it is received by HMRC). The new approach would time-adjust cash receipts so that they more closely reflect when the economic activity that created the CT liabilities took place. Because of this, we have removed the effect of this measure on public sector net borrowing. As it will still affect the timing of cash payments, it continues to affect our forecasts for the public sector net cash requirement and public sector net debt;

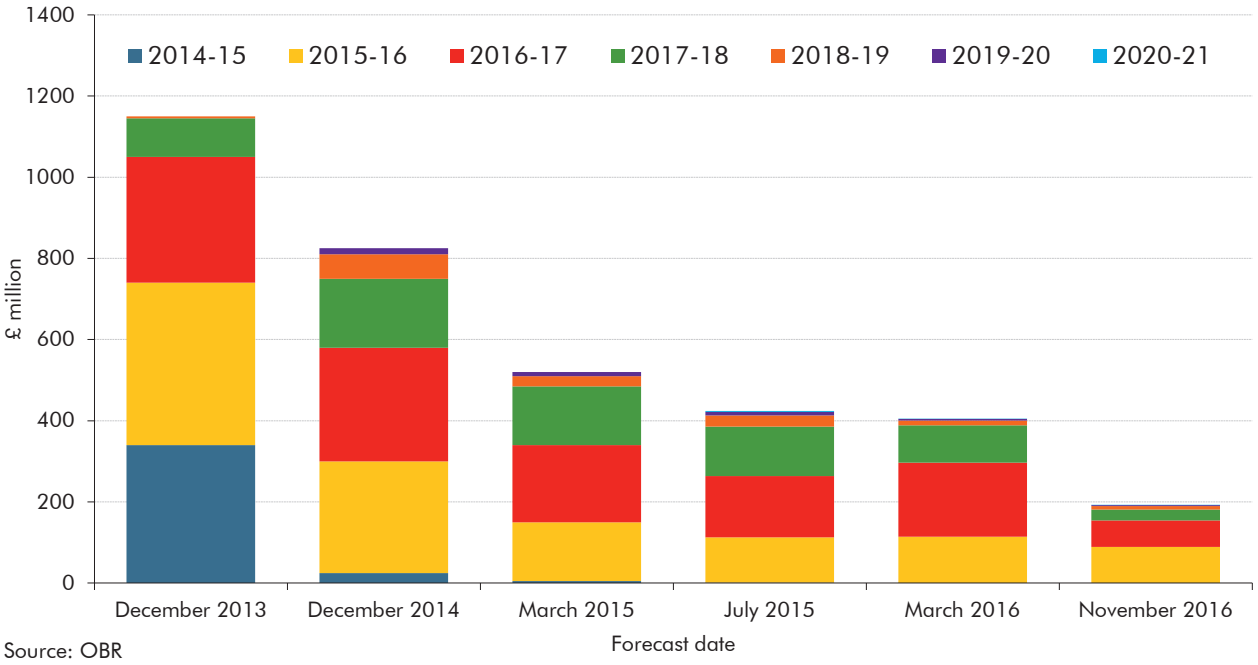
- 'stamp duty land tax: higher rates on additional properties' – in November 2015, the UK Government pre-announced a 3 per cent SDLT surcharge on purchases of buy-to-let properties and second homes. It was due to raise £3.8 billion from 2016-17 to 2020-21. We gave this measure a 'high' uncertainty rating due to low quality data and the potential for a large behavioural effect. The measure came into effect on 1 April 2016, providing a four month window from announcement for buyers to bring forward transactions and avoid the surcharge. We did consider this behaviour when scrutinising the original costing but it seems likely we underestimated its size.[6] Despite this, receipts so far have been much higher than expected and we have increased our forecast by £3.1 billion (76 per cent). However, the measure allows taxpayers to claim a refund if they sell their main residence within three years and there remains uncertainty over the eventual size of these; and

  'error and fraud additional capacity' – in Autumn Statement 2013, the Coalition announced a tax credits policy that it called 'Error and fraud: additional capacity'

[6] More detail can be found in Mathews (2016): *Working Paper No 10: Forestalling ahead of property tax changes*.

(EFAC).[7] It involved using an external provider – the contract went to Concentrix – to provide additional resources to identify tax credits compliance interventions and was expected to save £1.1 billion over the five years to 2018-19. Since our March forecast, the contract with Concentrix has been terminated early and HMRC has temporarily redeployed over 600 of its own staff to complete the project. Our latest forecast has been adjusted to reflect the very high proportion of cases that are being overturned at the mandatory reconsideration stage and the effect on HMRC's business-as-usual activity caused by redeploying staff from other work. We now expect EFAC to have saved £0.2 billion by 2019-20 – £0.9 billion or around 80 per cent less and also later than originally assumed. As Chart A.4 shows, the overall shortfall reflects a succession of downward revisions since EFAC was announced. The other big changes include those in December 2014 (reflecting a delayed start date and lower productivity) and in March 2015 (reflecting further productivity falls).

Chart A.4: Savings from 'error and fraud: additional capacity'



Source: OBR

Departmental spending

A.33 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 underspent in aggregate.

A.34 In this Autumn Statement the Government has announced a significant increase in departmental capital spending, alongside other smaller changes in current spending. Past

[7] It was contained within the wider measure 'tax credits: improving collection and administration'.

experience suggests that planned increases in capital spending will not translate fully into actual spending in the year planned, so we have assumed that 20 per cent of each year's planned spending will actually be spent a year later.

A.35 For a number of recent forecasts we have asked the Treasury to provide assurance on the funding of a number of HMRC and DWP operational measures. For this forecast, we confirmed that these had been fully funded. And for this Autumn Statement, the Treasury has provided £160 million of funding to HMRC as part of the package 'HMRC: administration and operational measures'.

Indirect effects on the economy

A.36 This Autumn Statement contains a number of policy changes that we have judged to be sufficiently large to justify adjustments to our central economic forecast. These include:

- fiscal policy – the Government has loosened fiscal policy between 2017-18 and 2020-21, largely reflecting increases in departmental current and capital spending. This has small effects on the profile of real GDP growth, adding 0.1 percentage points in 2017-18 and subtracting less than 0.1 percentage points a year thereafter;

- housebuilding and residential investment – there are a number of policies in the Autumn Statement that are likely affect housebuilding by housing associations (some positively and some negatively) and on surplus public sector land (bringing some activity forward into our forecast horizon). The overall effect is small, reducing residential investment growth by an average of 0.2 percentage points a year; and

- inflation – the Government has announced a number of policies that we expect to affect inflation. The latest freeze in fuel duty takes effect in April 2017, while the latest increase in insurance premium tax from 10 to 12 per cent takes effect in June 2017. These have small and partly offsetting effects, reducing CPI inflation by less than 0.1 percentage points in 2017-18.

B A 'no referendum' counterfactual

Introduction

B.1 In Chapter 3, we explained how the revision to our economy forecast since March could be split into two steps: the upward revision to GDP growth that we would have made in the absence of the referendum (due to continuing strength in net inward migration) and the downward revision that we have made relative to that 'no referendum' counterfactual. The steps involved – if not the judgements behind them – were relatively simple.

B.2 We wanted to show the equivalent steps for the revision to our pre-measures fiscal forecast. But, given the highly disaggregated nature of that forecast, there were many more assumptions to be made. For some developments since March it was obvious whether their effects should be ascribed to the 'no referendum' counterfactual or to the effects of the referendum result and the UK's subsequent exit from the EU. For many, it was not.

B.3 In this annex we describe how we split the revision to borrowing between March and November into these two steps. As well as trying to meet our usual objective of being as transparent as possible, we hope that this will also illustrate the uncertainties inherent in the process and allow others to use our numbers to test different judgements.

Overview of our approach

B.4 It is reasonable that people should ask: what difference has the decision to leave the EU made to your fiscal forecast? In trying to answer that question, it is important to recognise that we did not start by producing a full-blown 'no referendum' forecast and then impose the impact of the referendum on top. Rather we made a series of judgements based on economic, market and fiscal developments since March, plus new information on Government policy – including, but not only, the implementation of the referendum result. Our primary goal is to produce the best forecast we can conditioned on current policy.

B.5 So to answer the question requires us to distinguish after the event between roughly what the forecast might have looked like in the absence of the referendum result and the forecast we have actually published. This should be regarded only as an illustrative decomposition, as we have to make a number of simplifying assumptions about the degree to which movements in economic determinants and fiscal outturns can be attributed to the referendum result. This is subject to considerable uncertainty, since we cannot be sure what would have happened in the absence of the vote and because movements in receipts and spending ahead of the referendum might have been affected by anticipation of the result.

B.6 That said, our first step was to remove any sources of revision since March that did not relate to our own forecast judgements. That meant removing two things:

- the effects of **ONS classification decisions** that we have anticipated in this forecast: first, removing the impact of the Budget 2016 measure to bring forward the timing of corporation tax payments (as the move to an accrual basis means that this this will no longer affect the year in which they scored) and, second, adding housing associations in Scotland, Wales and Northern Ireland to our housing associations forecast. This step is equivalent to restating our March forecast on current classifications; and

- the **effects of Government decisions** announced in the Autumn Statement. That includes measures recorded on the Treasury's 'scorecard' and other changes in departmental spending and policies that the Treasury chooses not to report on its scorecard. We also estimate the indirect effects of those decisions on borrowing, so we remove that effect too. This step creates a November pre-measures forecast.

B.7 The difference between the restated March forecast and the pre-measures November forecast is the revision that we want to split into those elements that are related to the referendum result and exiting the EU, and those that are not so would have affected our forecast regardless.

B.8 The approach we took was to use the detailed diagnostics that are generated by the many forecast models that underpin the individual lines of our receipts and spending forecasts. These diagnostics assign elements of the change in each forecast to different factors: how has our revised inflation forecast affected income tax receipts via its effect on tax thresholds and allowances that are linked to inflation; how has an updated equation in a forecast model affected the forecast it produces relative to using the old model; and so on. We use them when scrutinising the forecasts as they are prepared and also when presenting them in Chapter 4 of each *Economic and fiscal outlook (EFO)*. They are the building blocks for the explanation of why our borrowing forecast has changed since the previous *EFO*.

B.9 To generate our 'no referendum' counterfactual forecast, we did two things:

- **assigned each diagnostic** underpinning each forecast to one of the steps; and

- used our 'no referendum' economy forecast counterfactual to **split those diagnostics** that combine referendum and non-referendum related elements.

B.10 The next two sections detail what was included in each step and how the diagnostics were split up where that was appropriate. Chronologically the referendum and exit effects come second, but analytically we identified them first and assigned anything not identified as relevant to the referendum step to the counterfactual. We describe the process in that analytical order.

Changes related to the referendum and exiting the EU

B.11 This line aims to represent the fiscal equivalent of the revision between the 'no referendum' economy forecast counterfactual and our latest forecast. This has lowered GDP growth due to lower net inward migration and lower trend productivity growth. It also raises inflation as the fall in the pound since the referendum pushes up import prices. The combination of uncertainty effects on business investment and the real income squeeze from higher inflation cause a cyclical slowdown. This step in our borrowing revision therefore includes:

- an estimate of the effect on borrowing of **lower migration** than would otherwise have been the case;
- the effect of **lower trend productivity growth and the cyclical slowdown**, which affect average earnings, consumer spending, profits growth and many other economic determinants of the fiscal forecast;
- the direct effects of **higher inflation**;
- the direct effects of **lower interest rates**; and
- a variety of **other factors**, including the direct effects of the weaker exchange rate, some developments in property markets and the monetary policy stimulus announced by the Bank of England in August.

Lower migration

B.12 In our March *EFO* we presented alternative economic scenarios that estimated the effect on the fiscal forecast of a range of different migration assumptions – including the ONS high migration variant that would have been used in this forecast in the absence of the referendum result. We therefore used the results of that analysis to quantify the revision that would have resulted from moving back from the counterfactual 'high migration' assumption to the 'principal' migration assumption used in this forecast. This would have increased borrowing over the forecast period, reaching an additional £5.9 billion in 2020-21. That largely reflects weaker tax receipts through a smaller and slightly older population, marginally offset by slightly lower welfare spending.

Lower trend productivity growth and the cyclical slowdown

B.13 The biggest effect on our forecast relative to March and to the counterfactual comes from our downward revision to trend productivity growth. This reduces cumulative real GDP growth to 2020-21 by 1.4 percentage points, relative to March. Our productivity growth forecast is the most important factor in our forecasts for wages, salaries and other forms of employment income, company profits, consumer spending and business investment. The profile of our revisions since March also reflects the cyclical slowdown that we expect over the coming year and the above-trend growth that will follow as the output gap closes.

B.14 The biggest effects of these changes are on receipts. They include:

- **lower employment income growth reduces income tax and NICs receipts**. A lower forecast for taxable income reduces PAYE income tax and NICs receipts by £10.1 billion in 2020-21. This effect is dominated by weaker average earnings, driven by our lower productivity assumption. We also assume weaker growth in marginal tax rates over the forecast, partly reflecting our assumption that earnings growth for the top 10 per cent of the income distribution will be more depressed as the financial and business services sectors could be more adversely affected by the UK leaving the EU;

- **lower consumer spending growth reduces VAT receipts**. Around 70 per cent of VAT receipts are derived from household consumption. Weaker consumption reduces VAT receipts by £0.4 billion in 2020-21;

- **lower company profits growth reduces corporation tax receipts**. We assume that financial company profits will grow more slowly than the rest of the economy for the four years from 2017-18 as the financial and business services sectors could be more adversely affected than other sectors by the UK leaving the EU. We assume that our downward revision to non-financial profits growth from 2017-18 onwards is related to the referendum. Combined, these effects reduce receipts by an average of £0.2 billion from 2017-18 to 2020-21; and

- **lower business investment boosts corporation tax receipts**. The level of business investment determines the amount of capital allowances that can be used to deduct from taxable profits. Lower investment boosts corporation tax receipts by £1.3 billion in 2020-21.

B.15 There are some offsetting effects on spending. In particular, lower average earnings growth reduces state pensions spending. The 'triple lock' on uprating means that the basic state pension rises by the highest of 2.5 per cent, CPI inflation or average earnings growth. In our central forecast, earnings growth is the highest of these three from 2019-20 onwards. Weaker earnings growth thus reduces state pension spending by £1.3 billion in 2020-21.

B.16 To decompose these effects into the part related to trend productivity growth and the part related to the cyclical slowdown, we have simply summed them and split the total by applying cyclical adjustment coefficients to the change in our output gap forecast since March.[1] This top-down approach will not capture the effects of any idiosyncratic features of this slowdown, but does provide a reasonable guide to the relative importance of the two sources of revision, with the cyclical effect larger in the short term while the structural effect is greater by the end of the forecast.

[1] The cyclical adjustment coefficients we use are described in Helgadottir *et al* (2012): *OBR Working Paper No.3: Cyclically adjusting the public finances*.

Higher inflation

B.17 We have revised up our inflation forecasts since March. The majority of that reflects the pass-through from the fall in the pound, which will raise import prices and in turn raise consumer prices. We only include that element of the revision, assigning changes due to higher dollar oil prices and other factors to the counterfactual. We have factored in the effect of higher inflation on:

- **receipts**. This includes effects in both directions. Higher CPI inflation pushes up income tax and NICs allowances and thresholds, reducing receipts. But higher RPI inflation also pushes up excise duty rates, raising receipts. The net effect by 2020-21 is to reduce receipts by £0.6 billion;

- **welfare spending**. While most working-age benefits and tax credits have been frozen in cash terms up to 2019-20, some elements are still affected by inflation uprating. This pushes up spending by £1.0 billion in 2020-21;

- **public sector pensions**. Payments to pensioners are also uprated by CPI inflation. That adds another £0.5 billion to spending in 2020-21; and

- **debt interest**. RPI inflation affects the accrued interest on index-linked gilts. The effect is largely confined to the year in which it takes place, so the biggest effect is in 2017-18 at £2.9 billion higher spending.

Lower interest rates

B.18 Market expectations of interest rates dropped sharply after the referendum. The assumptions underpinning our forecast include Bank Rate averaging 0.6 per cent in 2020-21, down 0.2 percentage points from expectations ahead of the referendum. For gilt yields, those figures are 1.8 per cent and 0.3 percentage points. This has two main effects:

- **lower debt interest spending**. Lower short-term interest rates affect spending relatively quickly via the issuance of short-term debt and the effect on financing the Bank of England's Asset Purchase Facility at Bank Rate. Lower long-term interest rates feed through more slowly due to the long average maturity of outstanding gilts. The overall effect is to reduce spending in 2020-21 by £2.2 billion; and

- **lower interest receipts**. Returns on government financial assets are also affected. That reduces receipts by £0.3 billion in 2020-21.

Other factors

B.19 We have assigned the change in a number of other determinants of the fiscal forecast to referendum or exit-related factors. These include

- **the exchange rate**. The biggest effect of the weaker pound comes via its effect on inflation, but some lines of our forecast are more directly affected. The sterling value of North Sea oil and gas production has risen boosting revenues. The attractiveness of cross-border tobacco shopping has reduced, also boosting revenues. But the biggest single effect comes via our forecast for expenditure transfers to the EU, where a weaker exchange rate has positive and negative effects that net to a higher spending forecast. As we have made the fiscally neutral assumption that any post-exit reduction in these transfers will be recycled into other domestic spending, that affects all years of the forecast. Overall, these effects increase borrowing by £0.1 billion in 2020-21;

- **the residential property market**. We assume that earnings growth is the main driver of house prices, so this revision is indirectly related to the productivity revision described above. We have also assumed that the majority of the downward revision to our property transactions forecast is not related to the referendum, as it reflects stronger-than-expected forestalling ahead of the introduction of a surcharge on the purchase of additional properties. The net effect reduces receipts by £0.3 billion in 2020-21;

- **the commercial property market**. This market is sensitive to changes in sentiment, so we assume that the downward revisions we have made relate to uncertainty after the referendum. This reduces stamp duty receipts by £0.6 billion in 2020-21;

- **the weakness of stamp duty land tax receipts**. We have revised down our 2016-17 SDLT forecast by £1.6 billion. That reflects developments in both residential and commercial property markets. Some may reflect uncertainty ahead of and since the referendum. Some may reflect other factors. Once the effect of lower property transactions and a weaker commercial property market has been stripped out, for simplicity we split the remaining revision 50/50 between the two steps;

- **higher equity prices**. The drop in the pound helped to boost equity prices via the effect on the sterling value of multinational companies' overseas earnings. We scaled that effect down in light of the more domestic focus on the equity on which capital gains tax is levied, but it still adds £1.3 billion to receipts in 2020-21;

- the **stock of gilts held by the APF**. This is set to rise by £60 billion (as part of the package of monetary stimulus measures announced by the Bank of England in August following the referendum result). This means that a larger amount of public sector debt is in effect financed at the lower Bank Rate rather than at gilt rates, which reduces debt interest spending by £1.4 billion in 2020-21; and

- **the effect of higher borrowing on debt interest spending.** The upward revision to net borrowing increases the amount of government debt that must be issued. This boosts debt interest spending by £0.7 billion in 2020-21.

Changes not related to the referendum and exiting the EU

B.20 This line aims to be consistent with the 'no referendum' economy forecast counterfactual. That would have pushed up GDP growth, because the ongoing strength in net inward migration would have prompted us to condition our forecast on the ONS 'high migration' population projections. It would also have reflected data up to the referendum. This step in our borrowing revision therefore includes:

- an estimate of the effect of **higher migration** on borrowing;
- the revisions to our **in-year estimates of receipts and spending** which – for the most part – have been assigned to the 'no referendum' counterfactual; and
- any **residual changes** that did not fall readily into either category. These include revisions to economy determinants that are not related to the referendum (such as dollar oil prices). They also include any other changes – which could have been assigned to either step or split between them, but we decided that it was best to include here anything where the underlying driver of the change was unclear.

Higher migration

B.21 In our March *EFO* we presented scenarios that estimated the effect on the fiscal forecast of a range of different migration assumptions – including the ONS high migration variant that would have been used in this forecast in the absence of the referendum result. We therefore used the results of that analysis to quantify the revision that we would have made to our borrowing forecast due to a migration-driven upward revision to GDP growth. The effect would have increased over the forecast period, reaching £5.9 billion in 2020-21.

In-year estimates of receipts and spending

B.22 Most elements of our fiscal forecast start by producing an in-year estimate for the current year – 2016-17 on this forecast – and then using models to forecast growth from that base. Our estimate of borrowing in 2016-17 has been revised up significantly and we have assumed that most of the factors driving that are structural, so persist across the forecast. For the most part, these have been assigned to the 'no referendum' counterfactual. The key elements of this are:

- **the weakness of income tax and NICs receipts**. As described in Chapter 4, the effective tax rate paid on employment income appears to have fallen well short of the level assumed in our March forecast. That pre-dated the referendum. It adds £5.9 billion to borrowing this year. Since it provides a lower base from which the forecast grows, the effect rises to £6.6 billion in 2020-21. This more than explains the overall effect on the counterfactual forecast of in-year receipts;

- **the weakness of stamp duty land tax receipts**. As described above, we have split that part of the downward revision to SDLT receipts not explained by property transactions 50/50 between the two steps. The true split is of course likely to be different; and

- **higher spending in 2015-16 that feeds through to 2016-17**. In large part this relates to local authority spending and the adjustments that are made by the ONS to convert the underlying source data to be consistent with the National Accounts definitions that drive public sector net borrowing. Our March forecast underestimated this effect in 2015-16, so we have factored that into this forecast. Its effect is assumed to be equal in all years. It explains most of the in-year spending element of the counterfactual.

Other factors

B.23 After having assigned and apportioned diagnostics as described in the preceding sections, a residual remains that is assigned to the counterfactual revision. As Table 4.1 in Chapter 4 illustrates, there are many economic determinants of our fiscal forecasts. This line includes full or partial effects of changes in a number of them.

B.24 We assigned the full effect of revisions to the following determinants:

- **dollar oil and gas prices**. These are assumed to be driven by global developments. The dollar oil price is up 25 per cent this year, relative to our March forecast assumption. That boosts North Sea revenues, but reduces fuel duty receipts because the resulting higher petrol prices reduce the amount of fuel purchased; and

- **oil production and expenditure**. These are assumed to reflect sector-specific factors, including the implications of higher dollar oil and gas prices. Production has been revised up, boosting receipts from North Sea revenues.

B.25 We assigned partial effects from the following determinants:

- **RPI and CPI inflation**. This includes the effects on inflation of higher dollar oil prices (pushing inflation up in the near term) and the downward revision to our estimate of the effect of the new soft drinks industry levy (reducing it marginally in 2018-19). Inflation affects many parts of our fiscal forecast. These effects would have been small;

- **market interest rates**. For simplicity, we assume that movements in market interest rates up to the referendum are representative of what would have happened in its absence. Of course, there will have been some anticipation effects in interest rates ahead of the referendum, but we have no way of knowing how much. In the first two years of the forecast, interest rates would have been little changed, but expectations had been revised down a little from 2018-19 onwards. That would reduce debt interest spending, with a smaller partly offsetting effect on interest receipts;

- **residential property transactions**. Our March forecast underestimated the extent of forestalling ahead of the new stamp duty surcharge on additional properties, an effect

that would have been reflected in this forecast regardless of the referendum result. Our forecast is anchored to an assumed turnover rate in the medium term, so lower transactions this year reduces transactions across the forecast. This would have reduced near term receipts; and

- **equity prices**. As with interest rates, we assign the effects of movements in equity prices up to the referendum to this step. Equity prices were slightly higher than our March assumption by the time of the referendum, but most of the rise since March has come since then. It would have provided a small boost to capital tax receipts.

B.26 These changes also include our assumptions about departmental underspending, the amount of capital spending by public corporations (excluding the classification effect on housing associations) and the profile of Network Rail's spending over the next three years.

B.27 The net effect of these other changes is uneven across years, peaking in 2019-20. That reflects a number of factors, including the boost to North Sea revenues from higher production and dollar oil prices, partly offset by a larger upward revision to housing associations' capital expenditure at the end of the forecast.

Results

B.28 Table B.1 sets out the results of this analysis. It shows that our 'no referendum' counterfactual borrowing forecast would have been weaker than in March even though the equivalent counterfactual economy forecast would have been stronger. Specifically:

- higher-than-projected **net inward migration** in the year to March 2016 would have prompted us to revise up our migration assumption for later years. This would have reduced borrowing up to 2018-19 and increased the surplus from 2019-20 onwards;

- **receipts were lower and spending higher** than we forecast in March, even before the referendum. This suggests that the public finances were in a structurally weaker position than we thought, more than offsetting the effect of higher GDP growth; and

- **other fiscal forecast changes** would have been small and uneven from year to year. These would have included the boost to North Sea revenues from the higher oil price and the latest upward revision to spending on incapacity and disability benefits.

B.29 Relative to that illustrative 'no referendum' counterfactual, we have revised borrowing up significantly. That reflects a number of factors that we consider mostly referendum-related:

- **lower migration**. We have used the same migration assumption as in March, so this reverses the improvement that would have been in the counterfactual;

- **lower trend productivity growth**. This feeds through to weaker growth in earnings, profits and consumer spending, all of which reduce receipts. But it also feeds through

to weaker growth in business investment, which boosts receipts by reducing the use of capital allowances. This effect builds steadily over the forecast period;

- **the cyclical slowdown in GDP growth**. This affects borrowing along the same channels as weaker trend productivity growth, but the effect is concentrated at the start of the forecast when we expect a negative output gap to open up;

- **higher inflation**. After stripping out the effect of higher dollar oil prices, we assume that most of the remaining upward revision to inflation in this forecast is predominantly referendum-related via the weaker pound. This pushes up borrowing via debt interest, public sector pensions, those elements of welfare spending that are not subject to the uprating freeze, and the cost of indexation in the tax system. That is only partly offset by the boost to excise duties where rates rise with inflation;

- **lower interest rates**. This reduces borrowing as the beneficial effect on debt interest spending more than offsets the loss of interest income on government assets; and

- **other factors**, including the fall in the pound, reduced activity in the property market, the effect on debt interest spending of the Bank’s August monetary stimulus package and the strength of the stock market, push the deficit down in most years.

Table B.1: Alternative decomposition of borrowing forecast changes

	£ billion				
	Forecast				
	2016-17	2017-18	2018-19	2019-20	2020-21
March forecast	**55.5**	**38.8**	**21.4**	**-10.4**	**-11.0**
Classification changes	0.5	0.4	0.5	6.4	4.1
March forecast post-classification change	**56.0**	**39.2**	**21.9**	**-4.1**	**-6.9**
Changes unrelated to the referendum result and exiting the EU	**7.8**	**7.3**	**4.6**	**3.0**	**2.9**
of which:					
Higher migration and GDP growth	-0.8	-1.9	-3.0	-4.4	-5.9
Weaker in-year receipts	4.5	4.6	4.8	5.0	5.3
Higher in-year spending	2.9	2.9	2.9	2.9	2.9
Other factors	1.2	1.7	-0.1	-0.6	0.6
November counterfactual	**63.8**	**46.5**	**26.6**	**-1.1**	**-4.0**
Changes related to the referendum result and exiting the EU	**3.5**	**9.9**	**15.4**	**14.7**	**15.2**
of which:					
Lower migration	0.8	1.9	3.0	4.4	5.9
Lower trend productivity growth	0.0	1.2	4.2	5.5	7.2
Cyclical slowdown	2.3	7.6	8.6	5.4	2.3
Higher inflation	0.9	2.7	2.3	2.0	2.2
Lower interest rates	-0.5	-1.1	-1.3	-1.6	-1.8
Other factors	0.0	-2.5	-1.5	-1.1	-0.6
November forecast pre-policy decisions	**67.2**	**56.4**	**42.0**	**13.6**	**11.2**
Total effect of Government decisions	0.9	2.5	4.5	8.4	9.6
November forecast	**68.2**	**59.0**	**46.5**	**21.9**	**20.7**

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.

C Public sector net financial liabilities

Introduction

C.1 The Government has proposed a new supplementary target for public sector net debt (PSND) – on the headline measure that excludes the public sector banks – namely that it should fall as a share of GDP between fiscal years 2019-20 and 2020-21. It has also asked the Office for National Statistics (ONS) to publish two new balance sheet metrics in the monthly public finances data: PSND excluding the Bank of England, which removes the uneven effect on PSND of the Bank's August monetary policy measures, and public sector net financial liabilities (PSNFL), a broader measure covering all the public sector's financial assets and liabilities recorded in the National Accounts.

C.2 The Government has also asked us to forecast these measures. Excluding the Bank of England from our central PSND forecast is straightforward, and is presented in Chapter 4. Producing an illustrative projection of the new PSNFL measure is less so. So this annex:

- describes **public sector net financial liabilities**;
- sets out a **reconciliation between it and PSND**;
- presents initial ONS estimates of **the historical path** of PSNFL; and
- describes **the approach we have taken** to produce an illustrative projection.

Public sector net financial liabilities

C.3 PSNFL is a broader measure than PSND, which has been targeted by current and previous Governments since 1997, but narrower than the less well-known public sector net worth (PSNW). It covers more assets and liabilities than PSND but, unlike PSNW, it does not cover non-financial assets (like the roads network or public sector buildings).

C.4 Wider balance sheet measures can be useful in providing additional context on the public finances. In particular, PSND is affected by the acquisition or disposal of financial assets in ways that may not genuinely reflect changes in the public sector's indebtedness. For example, selling illiquid assets – such as shares in public sector banks – for what they are worth reduces PSND but would not affect a broader measure that netted off illiquid assets.

C.5 The ONS has published a methodology paper[1] describing how it has compiled initial estimates of PSNFL, based on the data underlying its estimates of PSND and other data on assets and liabilities not included in PSND.

C.6 The ONS article notes data quality issues and the need for development in parts of the outturn data, in particular in relation to the net liabilities of pensions schemes. This applies equally to our forecast, which contains a mixture of estimates from or closely related to our central forecast, overlaid with a projection of pensions data. Unlike our main forecast, the methodology used to project these pensions estimates does not allow us to say that this represents a median forecast around which we judge the risks to be balanced. We are therefore labelling this an 'illustrative projection' of PSNFL rather than a forecast.

Reconciling PSNFL to PSND

C.7 PSND only includes 'debt' liabilities (currency and deposits, loans and debt securities) and nets off only 'liquid' assets (mostly currency and deposits and the sterling and foreign currency assets of government cash management vehicles). It is an approximate stock equivalent of the cash deficit – the 'public sector net cash requirement'. By contrast, PSNFL includes all financial assets and liabilities recognised in the National Accounts. As such it is closer to being a stock equivalent of the accrued deficit – 'public sector net borrowing' (PSNB). But it will differ from cumulative PSNB due to changes in the valuation of stocks, reclassifications and measurement issues.

Measurement and valuation issues

C.8 PSNFL follows the approach used in PSND by valuing debt security liabilities at nominal rather than market value. Given that the market and nominal values of government debt securities will converge at the point of redemption, and that government will need to refinance its financial liabilities on redemption, in normal circumstances it should care more about the nominal values.

C.9 Where assets that are valued in PSNFL at nominal value are sold at their market value – and where that differs from the nominal value – accounting gains or losses will need to be recognised. This differs from PSND, where the value of most financial assets does not feature at all, so the sale of an asset will reduce PSND by the market value that is realised. So care needs to be taken when interpreting the effect on each measure of asset sales.

C.10 The ONS has noted that there are measurement issues in some elements of PSNFL that will require further development. In particular, its estimates for pensions liabilities may be subject to significant revisions as the methodology is reviewed.

[1] *New public sector balance sheet aggregates to supplement public sector net debt* ONS, November 2016.

Coverage differences

C.11 The ONS article describes in detail the additional assets and liabilities that are included in PSNFL, but not in PSND. As Chart C.1 shows, at the end of 2015-16 these included:

- **net pension liabilities for funded pension schemes**. The local government pension scheme (LGPS) is a funded scheme with net liabilities that the ONS estimates for the purposes of PSNFL to be £51 billion. The LGPS is currently the only pension liability included in the public finances data and PSNFL, but the ONS has recently classified a number of smaller funded schemes to the public sector.[2] It will implement these reclassification decisions after it has reviewed a number of other similar schemes.[3] In line with National Accounts methodologies, PSNFL does not include the far larger net liabilities associated with unfunded public sector pensions (which are reported in each year's *Whole of Government Accounts*) and future spending on state pensions (which we analyse in our long-term fiscal projections);[4]

- **'special drawing rights' liabilities.** These are UK government liabilities to the International Monetary Fund (IMF), valued at £10 billion;

- **loan assets.** The public sector has £150 billion of loan assets, the largest of which are the stock of student loans (£81 billion) and mortgages held by UK Asset Resolution (£36 billion). These are included in PSNFL at nominal value;

- **equity assets**. The largest of the public sector's £46 billion of equity assets are its shareholdings in Lloyds and RBS. The PSNFL estimates of these holdings were based on closing share prices in 2015-16;

- **accounts payable/receivable**. This is money that the public sector owes to suppliers or others such as gilt holders who are paid in arrears, less money that it is owed by taxpayers and others such as the recipients of student loans who usually pay in arrears. The total amounts payable and receivable tend to be large, but quite evenly balanced. The net asset of £10 billion was outstanding at the end of 2015-16; and

- a number of **other smaller items**. These include deposits and debt securities not included as assets in PSND, derivatives, and standardised guarantees. Together they represented net liabilities of £4 billion.

[2] These are pension schemes for: the Audit Commission, Bradford & Bingley, British Coal, Mineworkers, National Library of Wales, National Museum of Wales and Transport for London.
[3] The latest ONS forward classification plan notes that these include railway pensions and Crown Guarantee schemes.
[4] *Fiscal sustainability analytical paper: Population projections and pensions spending update*, July 2016.

Chart C.1: Differences between PSND and PSNFL in 2015-16

Source: ONS

Historical trends in PSNFL and PSND

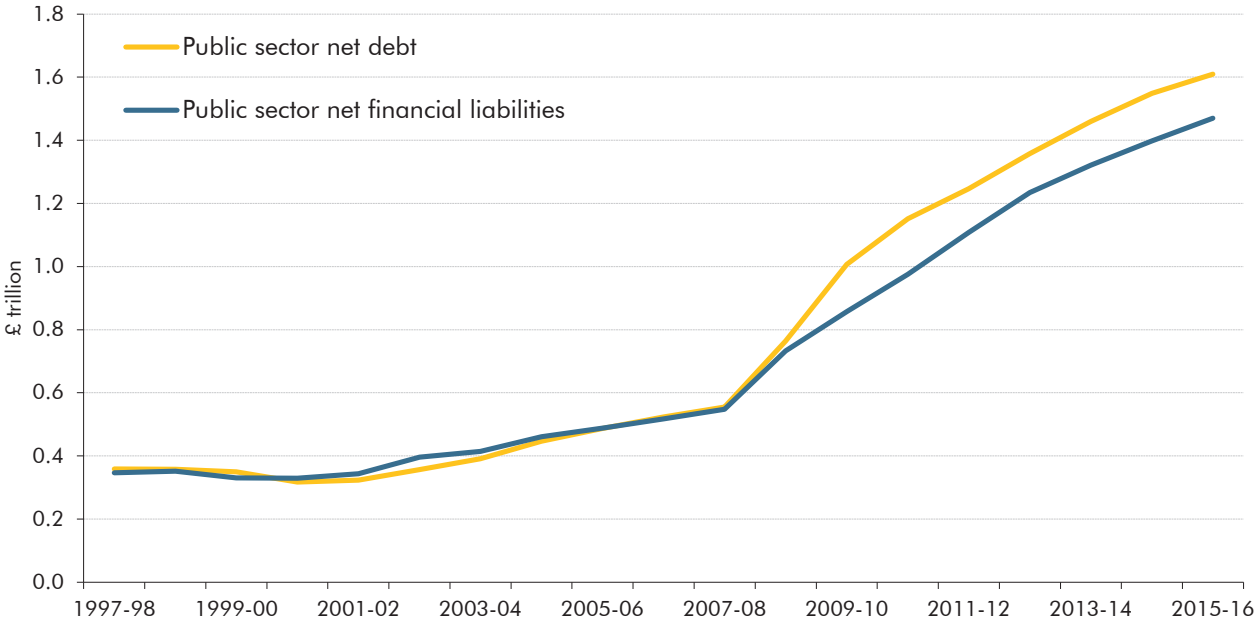
C.12 Prior to the financial crisis and recession of the late 2000s, PSND and PSNFL were of similar size. In the decade from 1997-98 to 2007-08, PSND increased 55 per cent to £554 billion while PSNFL rose 58 per cent to £548 billion. The effect on PSNFL of increases in non-debt liabilities (in particular pensions) was offset by increases in illiquid assets (especially loans). The profile across years was uneven: non-debt liabilities increased earlier than the offsetting assets, which meant PSNFL was £40 billion higher than PSND in 2002-03.

C.13 Both measures increased sharply during and after the financial crisis. But PSND rose much faster than PSNFL, with the gap between them increasing to £177 billion in 2010-11. Of this change, £160 billion related to increases in loan and equity assets held by government, mostly from the nationalisation of Bradford and Bingley and Northern Rock (£84 billion) and the purchase of shares in Lloyds and RBS worth £53 billion at the end of 2010-11.

C.14 Since 2010-11, the gap has narrowed somewhat and stabilised in recent years. It stood at £140 billion in 2015-16. Accounts payable pushed the difference up by £29 billion, but that was more than offset by a reduction in the estimated LGPS liability (reducing PSNFL by £24 billion, but with no effect on PSND) and the effect of changes in equity assets (which reduced the gap by £23 billion). This was largely because sales of Lloyds and RBS shares – which changed an illiquid asset (equity) into a liquid asset (deposits) – reduced PSND but had little effect on PSNFL.

C.15 Loan assets have risen by just £5 billion over this period – more slowly than in the pre-crisis period – as reductions in the UKAR mortgage book (£48 billion) largely offset the increase in the stocks of student loans (£41 billion) and other loans.

Chart C.2: PSND and PSNFL



Source: ONS

Forecasting PSNFL

C.16 To produce an illustrative projection of PSNFL that is consistent with the central forecasts described in Chapter 4, two basic approaches were available. We could:

- try to forecast the items described in the previous section that reconcile PSNFL to PSND in order to forecast **the level of PSNFL**; or
- exploit the fact that PSNFL is in broad terms the stock equivalent to PSNB and use that to forecast **yearly changes in PSNFL** from the latest ONS estimate of the level.

C.17 We chose the second as it requires fewer new forecasts. The first would necessitate a far more granular approach to forecasting PSNFL, with more detailed modelling on our part of individual elements of the PSND and PSNFL dataset. Moving from PSNB to PSNFL is more straightforward. Many elements of the reconciliation of PSNB and PSNCR (see Table 4.32 in Chapter 4) that drive our forecast for PSND are not required for PSNFL:

- the **acquisition of illiquid financial assets** (such as student loans) usually has no direct impact on PSNB or PSNFL because equal and opposite changes in liabilities and loan assets are recorded. These flows increase PSND because the loan assets are not netted off. This effect is particularly big in our current forecast because the Bank of England's August 2016 package of monetary policy stimulus measures involves the acquisition of large quantities of financial assets financed by additional central bank liabilities;
- the **disposal of many illiquid assets** has no direct impact on PSNB or PSNFL, but does reduce PSND because the sale changes an illiquid asset into a liquid cash asset; and

- most **accruals adjustments**, which account for timing differences between the point of recording in PSNB and the accompanying payment or receipt, are not needed as these changes are reflected in accounts payable/receivable.

C.18 As noted above, there are differences that largely arise from measurement and, to a lesser extent, from valuation changes. Reclassifications or occasions when government assumes the debt of other entities can also cause differences, but we do not forecast either of these. The differences we reflect include:

- **gilts:** these are valued in both measures at their nominal value, but the cash raised when they are issued has recently tended to be larger than this. To account for these gilt premia, we remove the PSNB impacts of this and add estimates for the stock impacts on gross liabilities and from gilt purchases by the Asset Purchase Facility (APF);

- **pensions:** the change in the stock can be quite different from the imputed flow recorded in PSNB, so we remove the PSNB effect and replace it with a projection of the change in the stock based on its historical trend. This is one of the most uncertain areas in the illustrative projection;

- **asset sales:** the sale price achieved can differ from the holding value leading to a change in the level of PSNFL. For example, we expect the sales of student loans to raise less than the face value at which they are held in the accounts. (The book value of student loans recorded in the *Whole of Government Accounts* is around 75 per cent of the nominal value, reflecting the expectation that some loans will be written off before they are repaid);

- **equity:** changes in the market value of equity holdings will affect PSNFL without a corresponding flow affecting PSNB;

- **foreign currency assets and liabilities:** as with equity, unhedged reserve assets and SDR liabilities can change in value without affecting PSNB; and

- a number of **smaller items**, including derivatives, whose value can change but which are close to zero in our forecast.

C.19 Of these elements, our central forecasts already cover the issues relating to gilts and foreign currency assets. It is also relatively straightforward to produce forecasts relating to asset sales, equity values and foreign currency liabilities that are consistent with assumptions in our central forecast.

C.20 Only the net pensions liability of the LGPS has required a completely new approach. A simple method has been applied that assumes that the LGPS will implement a deficit recovery plan that would remove the deficit over 15 years, consistent with the Government's deficit recovery guidance.[5] We have not attempted to anticipate the effect of future

[5] *Actuarial valuations of public service pension schemes,* November 2012, HM Treasury.

revaluations or to adjust for different paths under a National Accounts rather than an actuarial valuation of the deficit. The results are broadly consistent with recent outturns, but of course subject to considerable uncertainty. Results of the current triennial valuation of the LGPS are expected during 2017. In addition, the ONS is considering methodological changes that may lead to significant revisions to outturn data and therefore our projection.

C.21 Table C.1 sets out the results of this approach. It shows that our central forecast for PSNB is the main source of changes to PSNFL – as we would expect. Issuing gilts at a premium to their nominal value and our assumption about pensions reduce the change in PSNFL relative to PSNB. The main factor pushing in the opposite direction is student loan sales.

Table C.1: Illustrative projection of year-on-year changes in PSNFL

	£ billion						
	Estimate	Forecast/projection					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Public sector net borrowing		**68**	**59**	**47**	**22**	**21**	**17**
Gilts		2	-6	-4	-2	-6	-1
Pensions		-5	-5	-5	-5	-5	-5
Asset sales		0	4	2	2	2	0
Equity values		5	-1	-1	-1	-1	-1
Foreign currency		-4	0	0	0	0	0
Other		0	0	0	0	0	0
Change in public sector net financial liabilities		**65**	**52**	**39**	**16**	**11**	**11**
Public sector net financial liabilities	**1469**	**1535**	**1586**	**1625**	**1641**	**1653**	**1663**

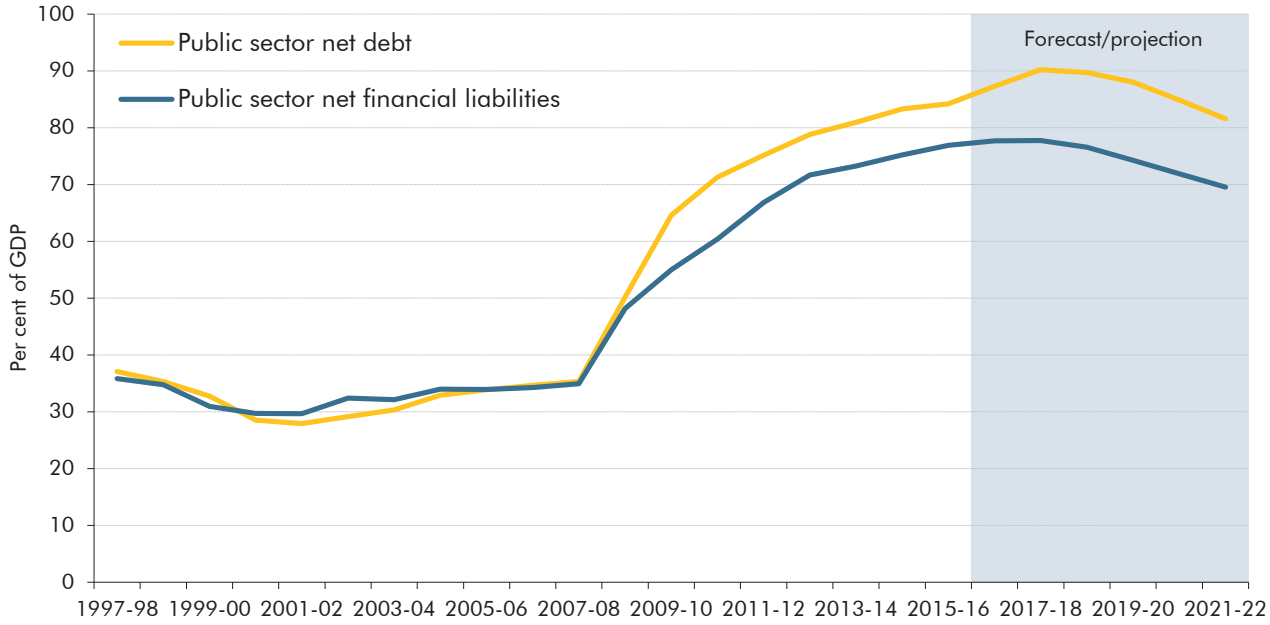
C.22 Table C.2 reconciles PSND and PSNFL. It shows that the gap between them more than doubles to £304 billion by 2019-20. The biggest source of this is the additional loan and corporate bond assets acquired by the APF (£95 billion), which increase PSND but not PSNFL. Other lending to the private sector (notably student loans) also increases the gap (£83 billion). Sales of UKAR assets and Lloyds shares offset this by £33 billion. As loans from the APF are repaid in 2020-21 and 2021-22, the gap narrows.

Table C.2: PSND to PSNFL forecast reconciliation

	£ billion						
	Estimate	Forecast/projection					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Public sector net debt	**1610**	**1725**	**1840**	**1904**	**1945**	**1950**	**1952**
Total difference between PSND and PSNFL	-140	-190	-254	-279	-304	-298	-288
of which:							
Pension liabilities	51	48	45	42	39	36	34
SDR liabilities	10	12	11	11	11	11	11
Loan assets	-150	-200	-261	-278	-299	-289	-261
Equity assets	-46	-42	-45	-46	-46	-47	-48
Other	-6	-8	-4	-9	-9	-9	-25
Public sector net financial liabilities	**1469**	**1535**	**1586**	**1625**	**1641**	**1653**	**1663**

C.23 Chart C.3 shows that we expect PSNFL to peak relative to GDP in 2017-18, the same year as for PSND. But unlike PSND, our projection for PSNFL as a share of GDP is fairly flat between 2015-16 and 2018-19. It would therefore only require relatively small changes in any part of the projection for the year in which PSNFL is expected to peak to move forward or backwards. Given the uncertainties set out in this annex, there is clearly a strong possibility that the peak year will be revised when we return to this in future forecasts.

Chart C.3: PSND forecast and PSNFL illustrative projection



Source: ONS, OBR

Index of charts and tables

Annex C Public sector net financial liabilities