Revised Statement

Productivity, prospects and priorities ahead of the Autumn Budget

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November 2017

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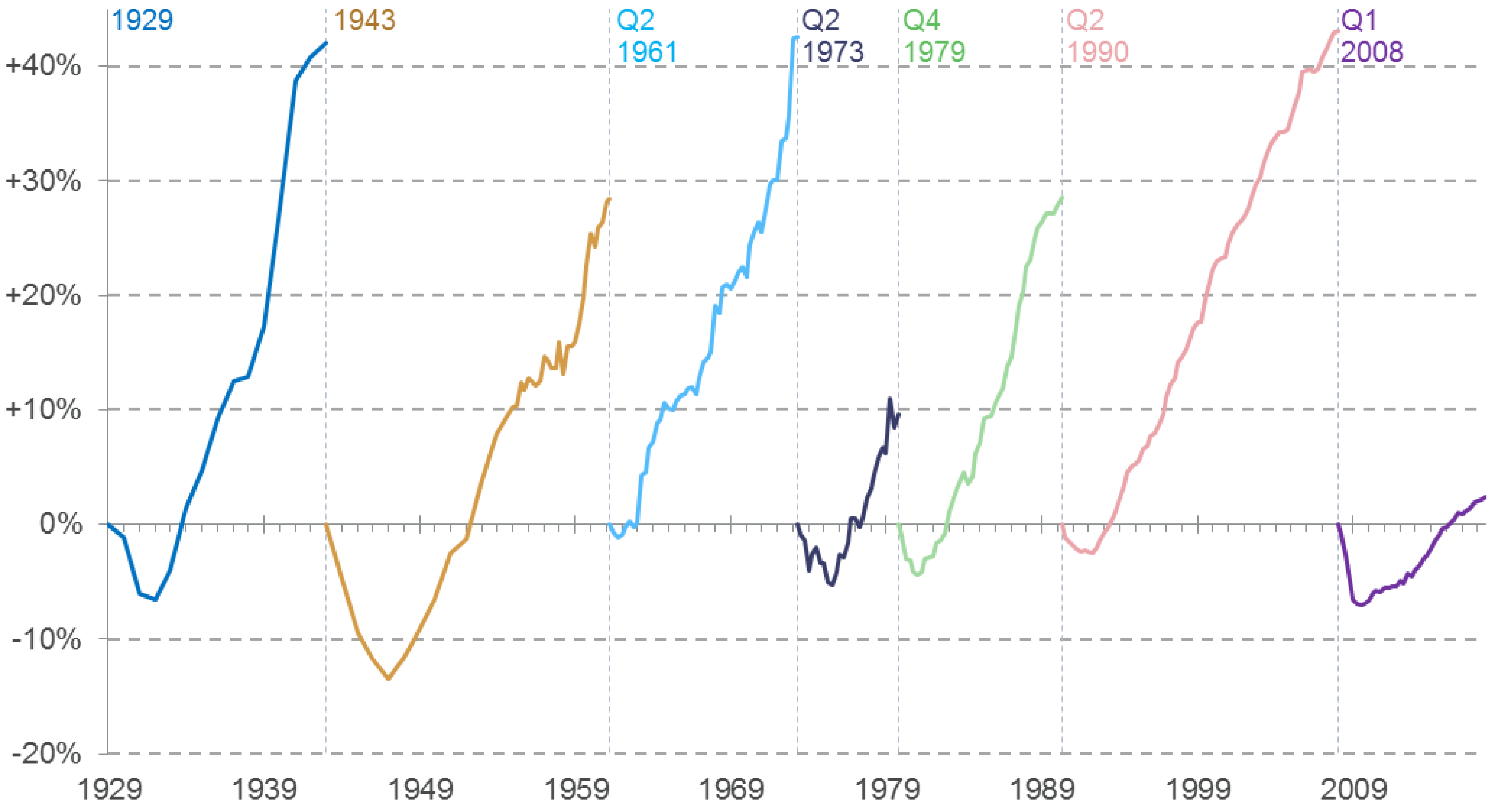
WINTER IS COMING

The OBR's productivity growth projection is set to be "significantly" reduced at the Autumn Budget

Recent growth figures have been steady, but the post-crisis period overall has been marked by extraordinarily weak recovery in GDP per capita

Cumulative growth in real-terms GDP per capita over successive economic cycles: UK



Nearly a decade on from the start of the 2008 recession, GDP per person is up just 2.4 per cent

GDP per person was up 21 per cent at the same stage in the 1990 cycle

Source: ONS, *National Accounts*

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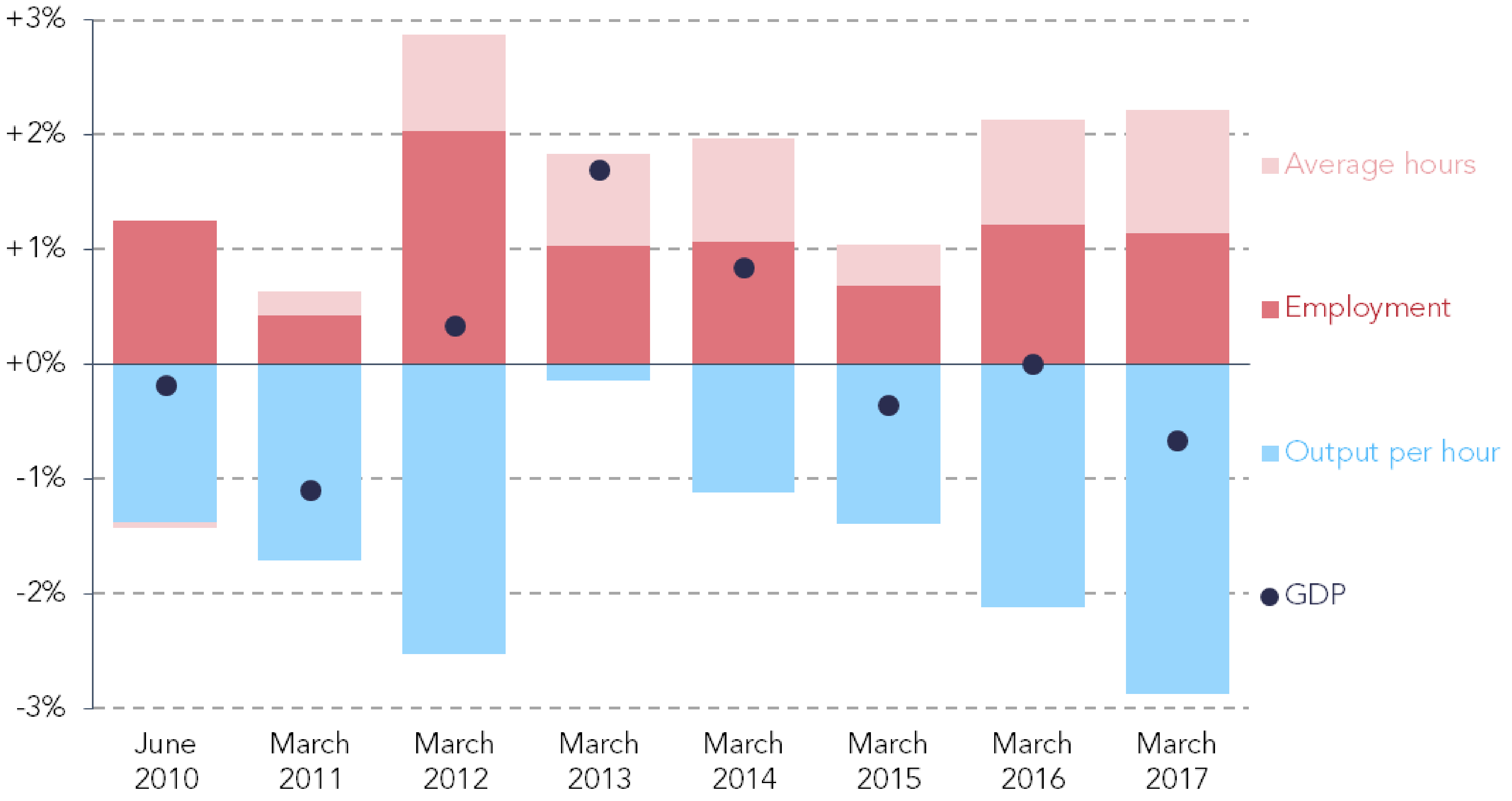
The OBR has consistently underestimated employment growth but overestimated productivity growth

Contributions to year-ahead percentage point differences from successive OBR forecasts for GDP growth



The OBR's analysis shows that annualised GDP growth in the current year appears to be falling short of the March 2017 projection by 0.7 percentage points

This performance is explained by a significantly worse picture on output per hour (contributing a -2.9 percentage points divergence from the GDP projection) along with partially offsetting performances on employment (+1.1 percentage points) and average hours (+1.1 percentage points)

Notes: March 2017 is annualised growth between Q4 2016 and Q2 2017.
Source: OBR, *Forecast Evaluation Report*

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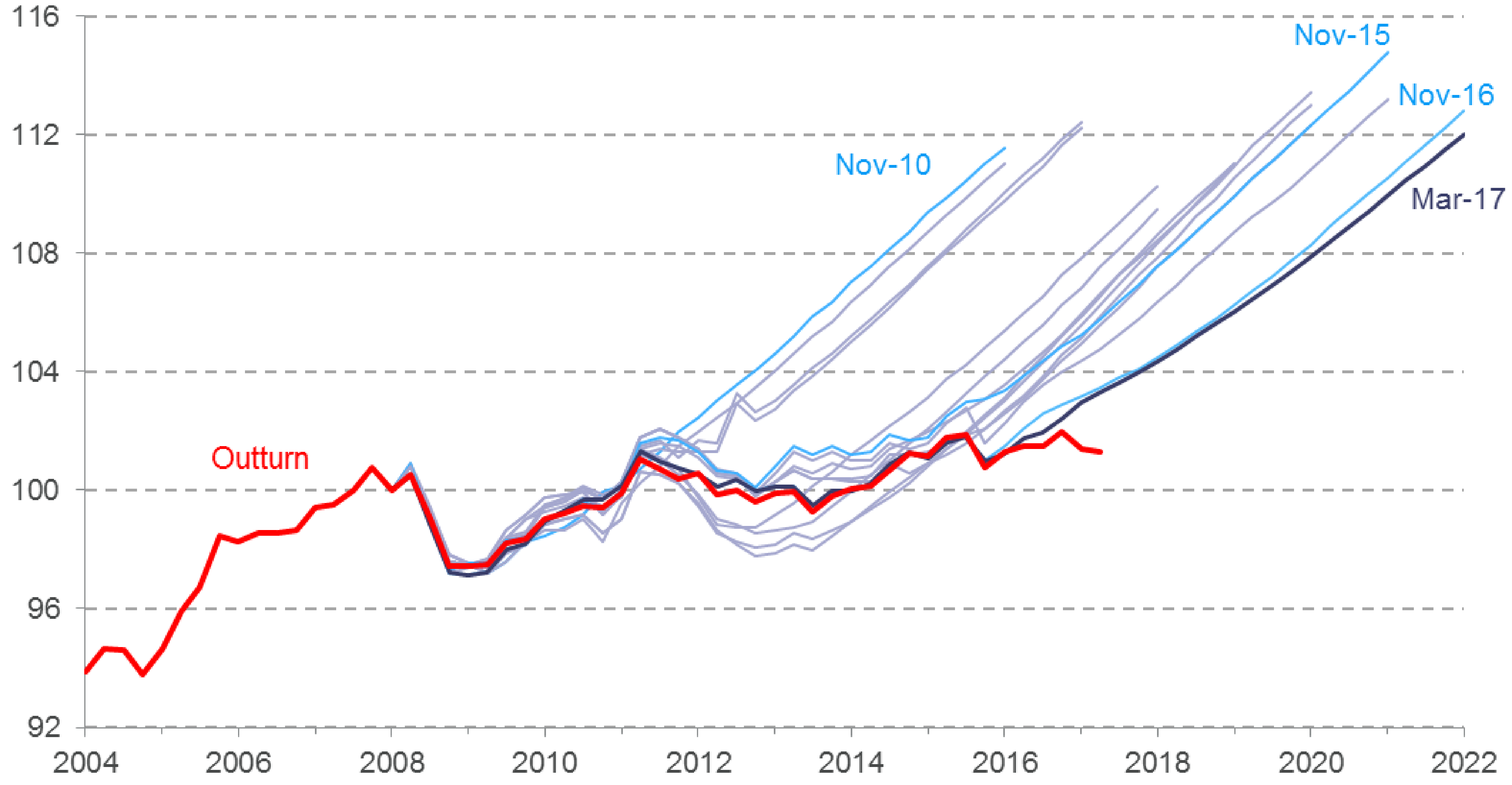
Output per hour has risen just 1.3% over the entirety of the post-crisis decade; pre-crisis it grew at an average of 2.3 per cent *every year*

Indices of non-oil GVA per hour: outturn and successive OBR projections
(Q1 2008 = 100)



Output per hour was roughly 18 per cent lower in Q2 2017 today than it would have been in the absence of *any* post-crisis stagnation

That's equivalent to £8 of output for every hour worked in the UK. Assuming no change in the total number of hours worked in the economy, that equates to an aggregate annual figure of around £430bn of 'lost output'

Source: ONS & OBR

Faced with the persistence of this productivity puzzle, the OBR has been on something of a journey…

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1) ***Six years of relative optimism:***
assuming productivity growth would eventually revert to its pre-crisis trend

*Up **until March 2016**, we had conditioned our forecasts on the assumption that the factors that had been holding back productivity growth in the post-crisis period (whatever they might be) would be temporary and would have faded completely by the end of the forecast period. Consequently we **assumed that potential growth in output per hour would return to our estimate at the time of its pre-crisis average (2.2 per cent a year)** by the final year of the forecast…*

Source: OBR, *Forecast Evaluation Report 2017*

Faced with the persistence of this productivity puzzle, the OBR has been on something of a journey…

RF

2) Modest pessimism in March 2016: lowering trend productivity growth to reflect the duration of stagnation

*In **March 2016**, faced with another shortfall in productivity growth relative to our then latest forecast, we **decided to place more weight on the evidence of the post-crisis period**. We assumed that potential growth in output per hour would **rise back to 2.0 per cent by the end of our forecast period** – equivalent to a time-weighted average of the pre- and post-crisis periods (i.e. a historical average excluding the crisis years of 2008 and 2009).*

Source: OBR, *Forecast Evaluation Report 2017*

Faced with the persistence of this productivity puzzle, the OBR has been on something of a journey…

RF

3) More (temporary) pessimism in November 2016: a modest reduction to reflect the impact of Brexit on investment

*In **November 2016**, we revised potential productivity down again – this time on the grounds that the **Brexit vote** and the UK's subsequent departure from the EU were likely to create greater uncertainty over investment returns and that this would lead some firms to cancel or postpone some productivity-enhancing capital investment projects (i.e. slowing 'capital deepening')…we **revised potential growth in output per hour down to 1.8 per cent** by the final year of the forecast period. We **did not assume that this effect would persist over the long term**, sticking with a 2.0 per cent assumption beyond the medium term…*

Source: OBR, *Forecast Evaluation Report 2017*

Faced with the persistence of this productivity puzzle, the OBR has been on something of a journey…

RF

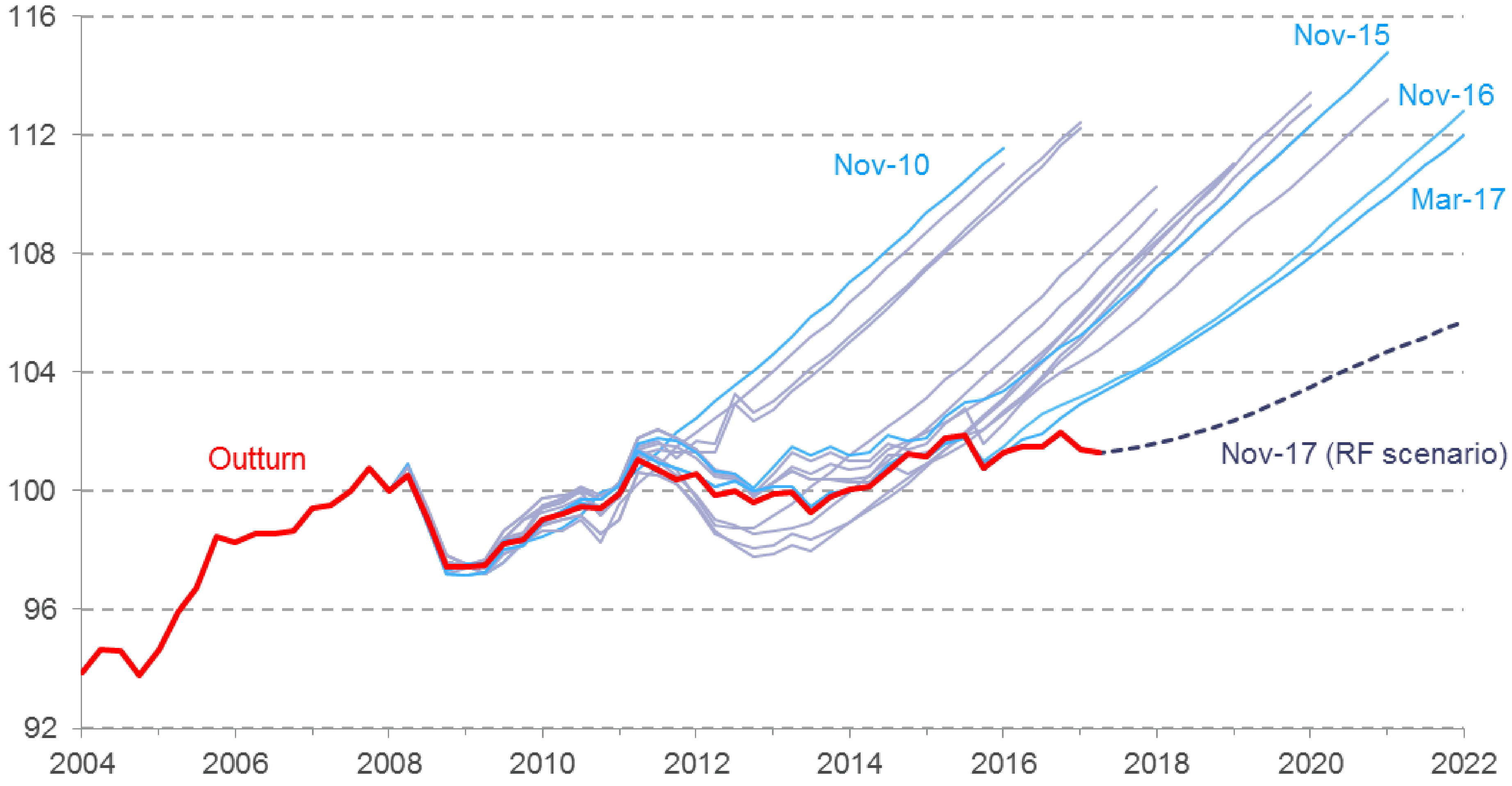
4) Exasperation in November 2017: signalled a much more significant reduction in trend productivity growth

*As the period of historically weak productivity growth lengthens, it seems **less plausible to assume that potential and actual productivity growth will recover** over the medium term to the extent assumed in our most recent forecasts… We will take a final decision in our November forecast, based on all the information available at the time, but we **expect to lower our forecast for cumulative potential productivity growth significantly over the next five years**, without going so far as to assume that there is no recovery at all from the very weak performance of recent years.*

Source: OBR, *Forecast Evaluation Report 2017*

By way of illustration, plugging in the latest Bank of England productivity outlook would lower the OBR's assessment of output per hour 5.6% in 2022

Indices of non-oil GVA per hour: outturn and successive OBR projections
(Q1 2008 = 100)



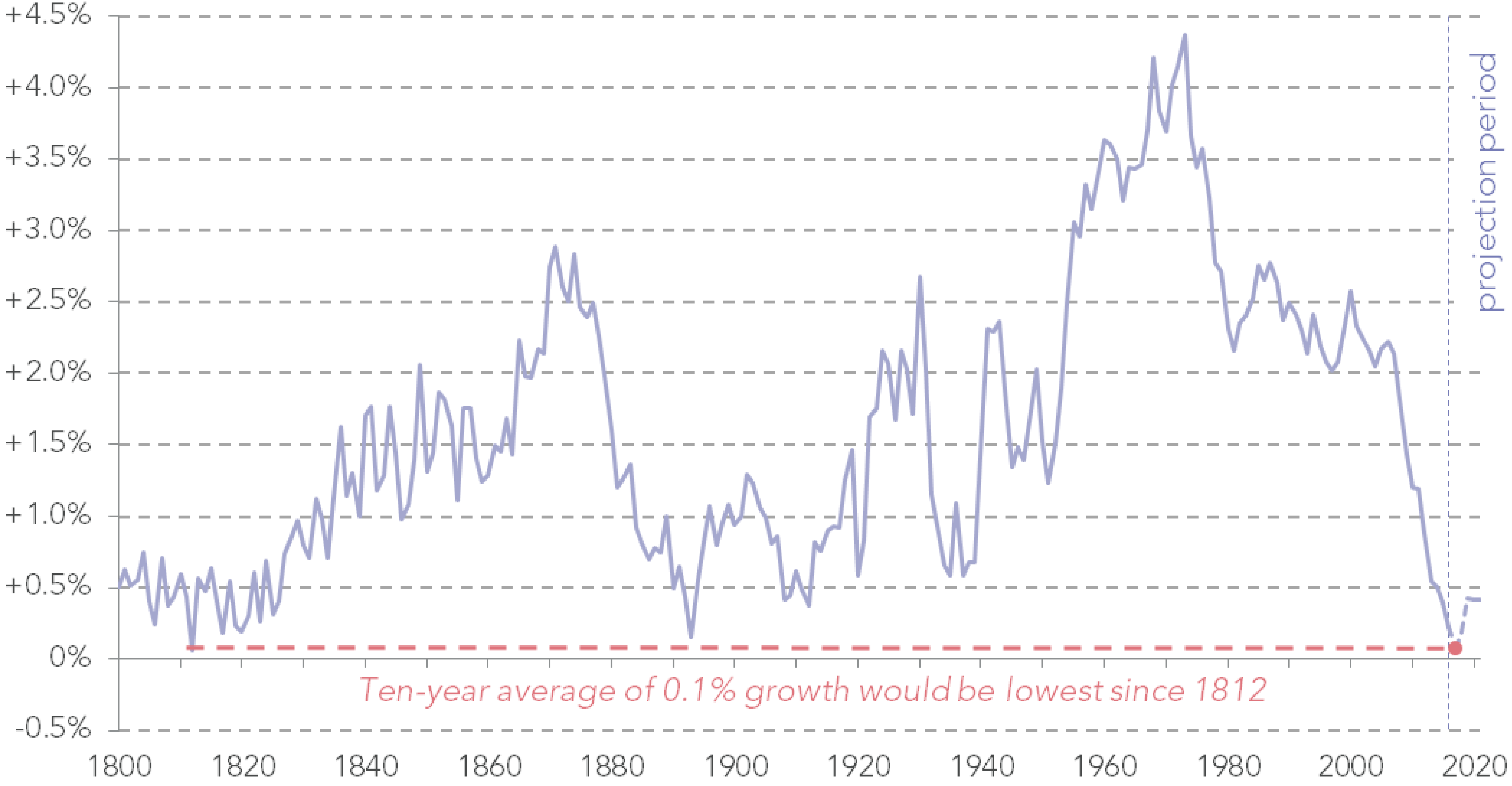
Source: OBR, Bank of England, and RF modelling

The Bank of England's latest *Inflation Report* states that "potential productivity is projected to grow at around 1% a year". But the Bank expects a partial rebound from exceedingly weak productivity growth in recent years, such that output per hour grows by more than trend through to the end of the decade before falling back

We plug the same pattern in here (described as an 'RF scenario'), with productivity growth reaching 1.25 per cent in 2020, but falling back to 1 per cent by 2022

Following this path, the decade to 2017 would mark the worst for productivity growth since Napoleon tried to invade Russia

10-year rolling average of annual growth in real-terms output per hour: outturn and projection based on November 2017 'RF scenario'



Following the path defined by the 'RF scenario' the rolling ten-year average of annual productivity growth would drop to a low of 0.1 per cent in 2017

Thereafter, as the crisis years of 2008 and 2009 drop out of the average, the measure shows some signs of recovery. But under this scenario the ten-year average would remain at 0.4 per cent a year in 2021, lower than any decade between 1908 and 2015

Source: OBR, Bank of England, and RF modelling

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Partly offsetting lower productivity growth, the OBR will revise up its labour supply forecasts and so reduce the overall economic growth impact

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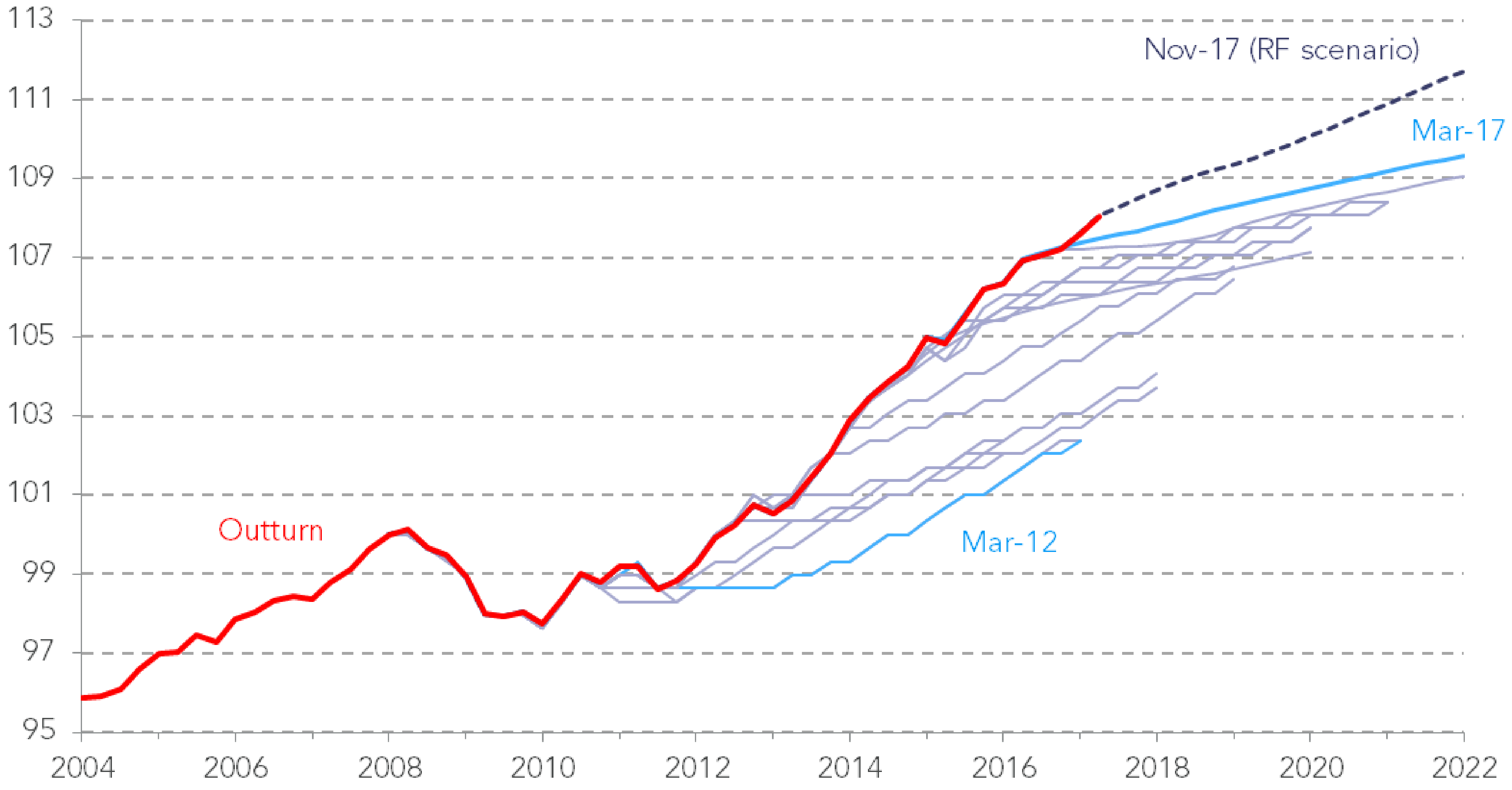
*We find ourselves looking back on a period in which productivity and earnings growth have been weaker than expected and growth in hours worked stronger… In light of this, we expect to revise down our assumption for average potential productivity growth significantly in our November forecast. Partly offsetting that, **we are likely to assume a lower equilibrium rate of unemployment and, at a minimum, less of a decline in average hours**.*

Source: OBR, *Forecast Evaluation Report 2017*

On employment, we can again adopt Bank of England projections to illustrate how the OBR forecasts might change

Indices of number of people in employment, 16+: outturn and successive OBR projections (Q1 2008 = 100)



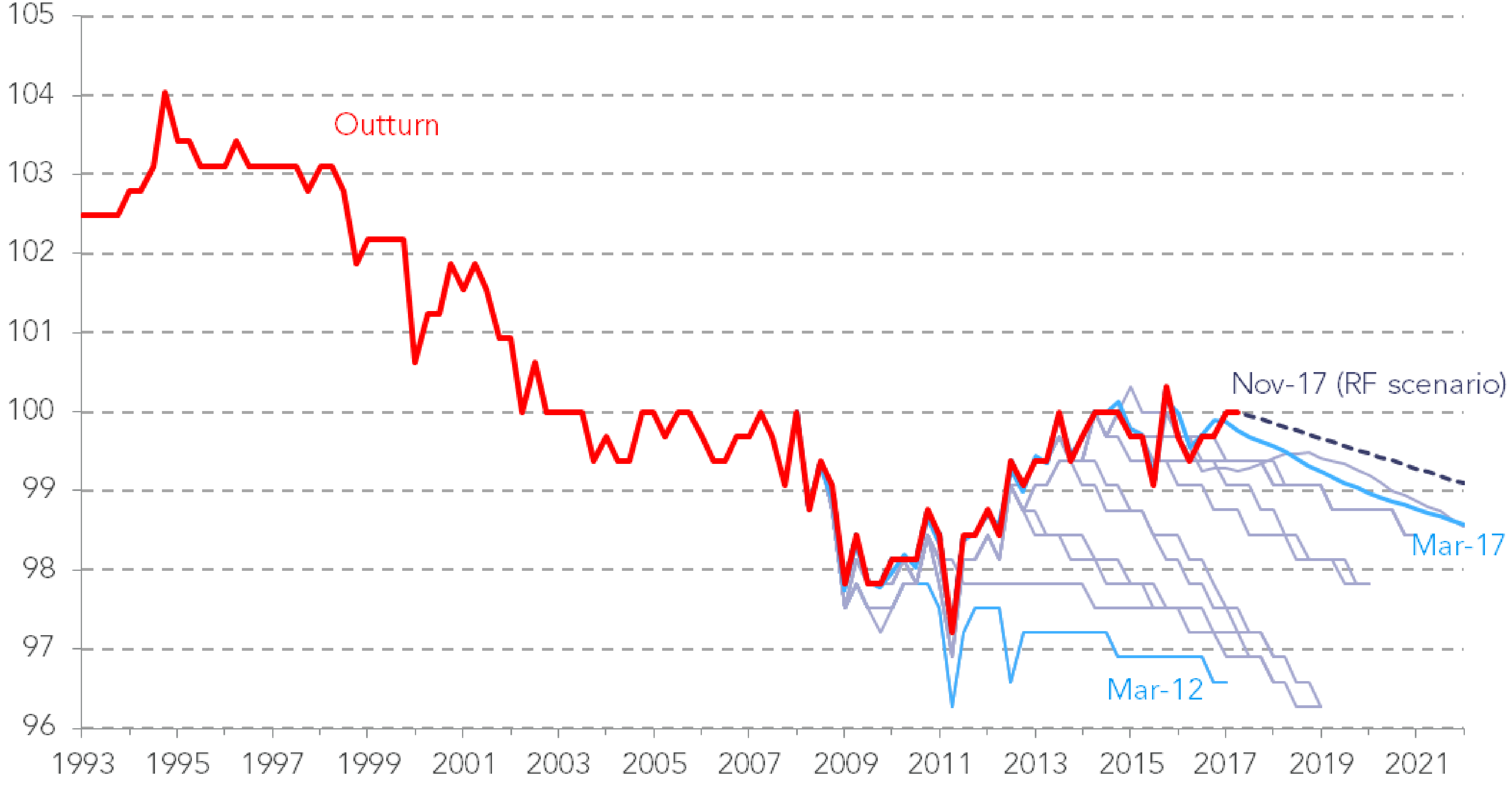
The strength of employment growth in recent years is such that roughly 1.7 million more people were employed in Q2 2017 than the OBR projected back in March 2012. The figure is up by 170,000 even relative to the Spring Budget projection

The Bank's *Inflation Report* shows employment rising by between 0.5 per cent and 1 per cent a year between now and the end of the decade. Applying this in our 'RF scenario' implies 640,000 more people in work in 2022 than the OBR previously forecast

Source: OBR, Bank of England, and RF modelling

Moving towards the Bank of England's projection for average hours worked would also fit with the OBR's new approach

Indices of average weekly hours of work: outturn and successive OBR projections (Q1 2008 = 100)



The OBR has consistently assumed that the long-term downward trend in average hours would re-assert itself as the economy recovered. That it hasn't may be due to households responding to weak productivity and pay, and to the impact of low interest rates on savings income

Applying the Bank of England's modest assumption for reduction relative to the pre-crisis average, our 'RF scenario' implies a reduction in average weekly hours from 32.2 today to 31.9 by 2022

Source: OBR, Bank of England, and RF modelling

New OBR projections remain unknown at this stage, but we can illustrate the potential scale of the change by adopting the Bank projections discussed above

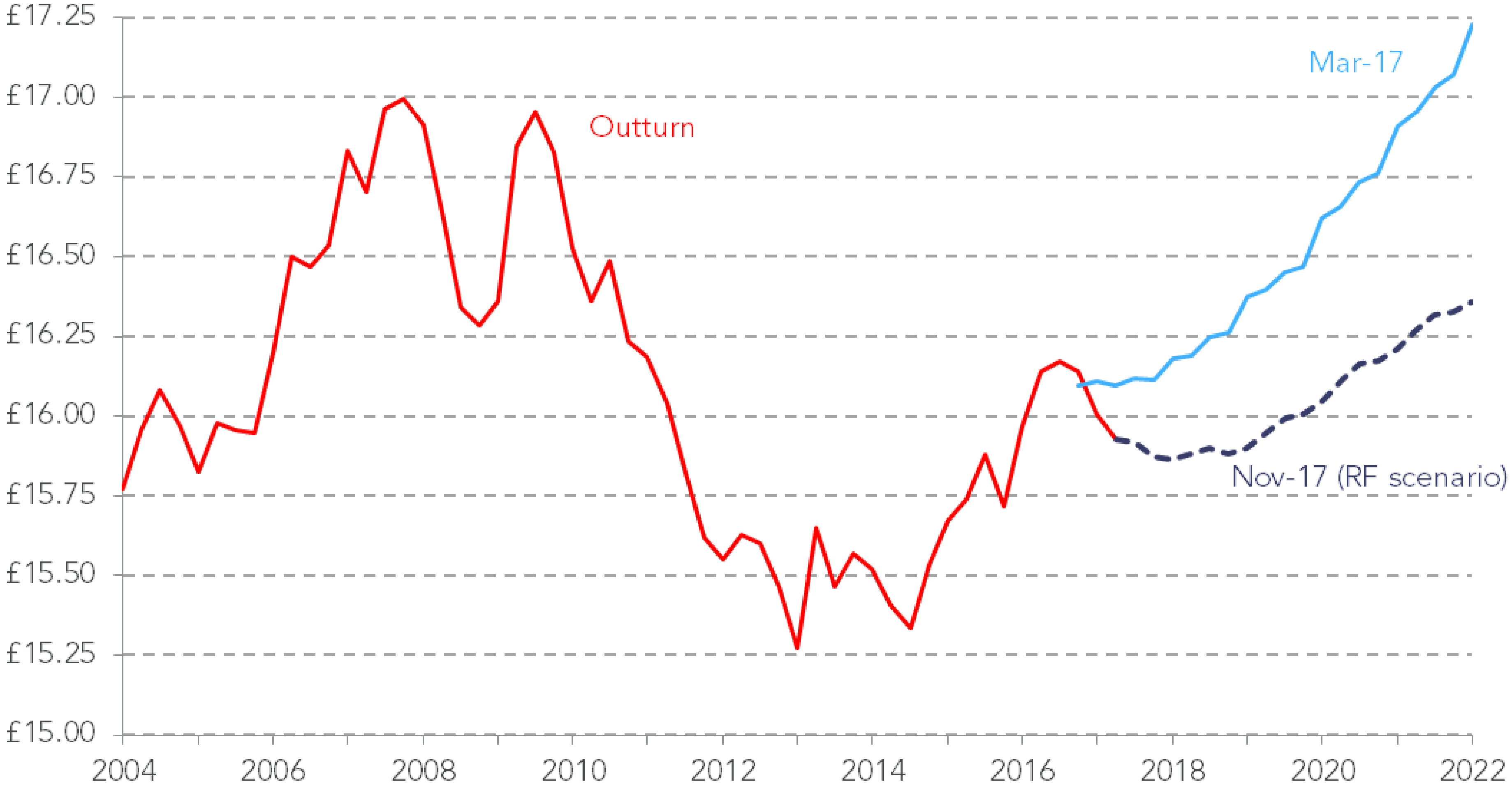
- Revisions to productivity, employment and hours will have implications for living standards (via earnings) and for the public finances (primarily via revenues)
- Below, we use the indicative revisions associated with moving towards the Bank of England's position on these three measures (while holding all others in line with the OBR's March 2017 *Economic and Fiscal Outlook*) to establish a 'RF scenario' that provides an estimate of the potential impacts we might see next week
- Our 'RF scenario' is inevitably approximate – not just because the precise level of the OBR's revisions remain uncertain, but also because changes in these three metrics will interact with other economic data (e.g. inflation) in ways not considered here
- Nevertheless, our approach is designed to provide an illustration of the potential scale of the living standards and public finance challenges facing the Chancellor at the Budget

WORKING HARDER NOT SMARTER

OBR revisions and the living standards outlook

Lower productivity growth could dramatically lower the OBR's projection for average hourly pay

Real-terms average hourly employee earnings: outturn and projection (CPI-adjusted, four-quarter moving average)



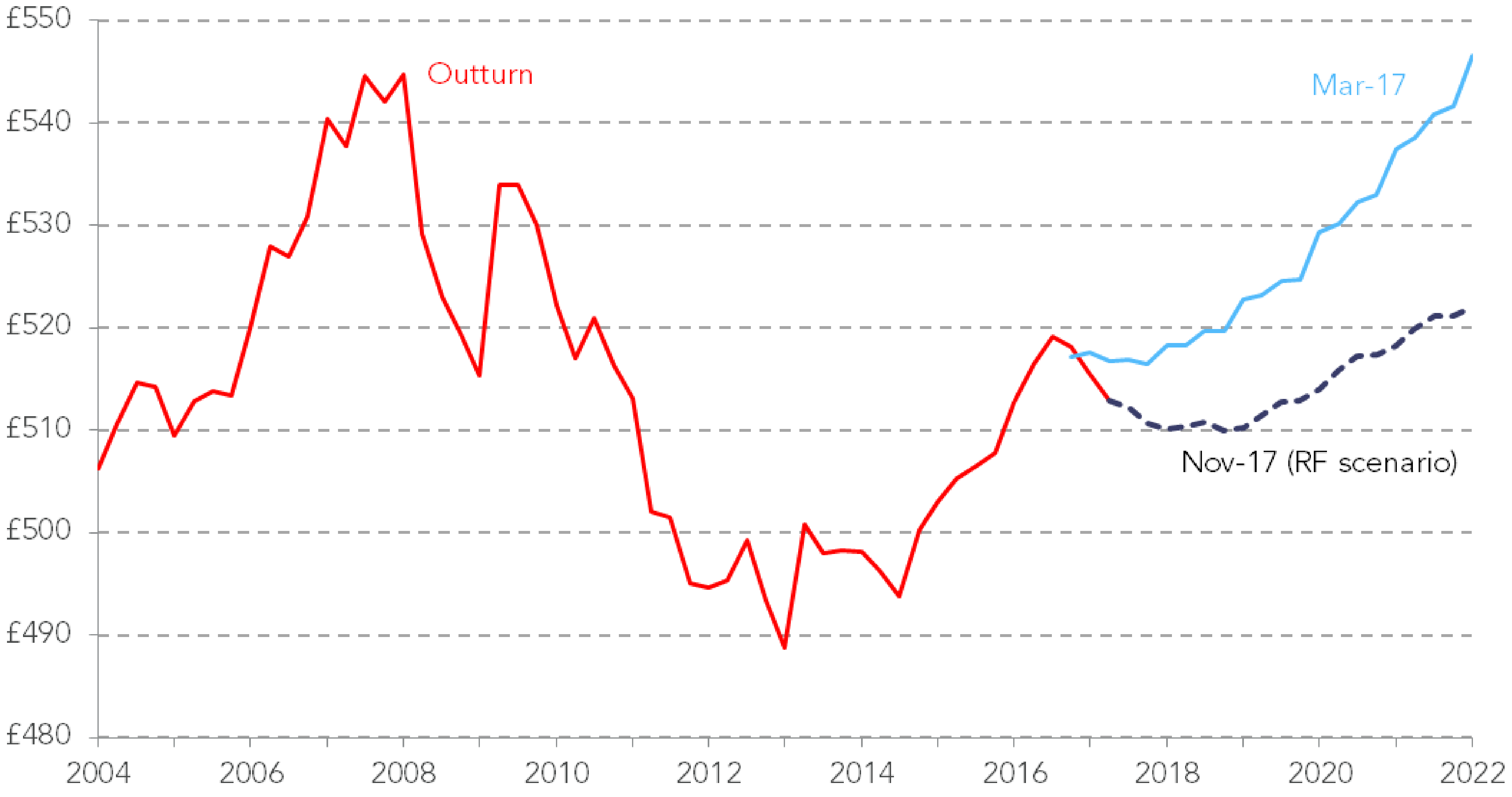
In the short-term, hourly pay growth needn't match productivity growth, but the OBR has previously assumed a 1:1 feed through over the course of its forecast horizon

Taking such an approach with the lower Bank of England productivity forecast reduces hourly pay by around 85p in 2022 relative to the OBR's March 2017 projection

Source: OBR, Bank of England, and RF modelling

Despite increasing the average hours assumption relative to the March projection, the overall effect on weekly wages would also be strongly negative

Real-terms average weekly employee earnings: outturn and projection (CPI-adjusted)



On a weekly basis, our 'RF scenario' implies a £24.50 reduction in average earnings in 2022 relative to the March 2017 forecast

Average earnings would remain £22.70 (4.2 per cent) below the pre-crisis peak and no higher than they were in 2006. That would delay the return to the pre-crisis peak level of average pay significantly past the already unprecedented 15 years implied by the March 2017 projections

Source: OBR, Bank of England, and RF modelling

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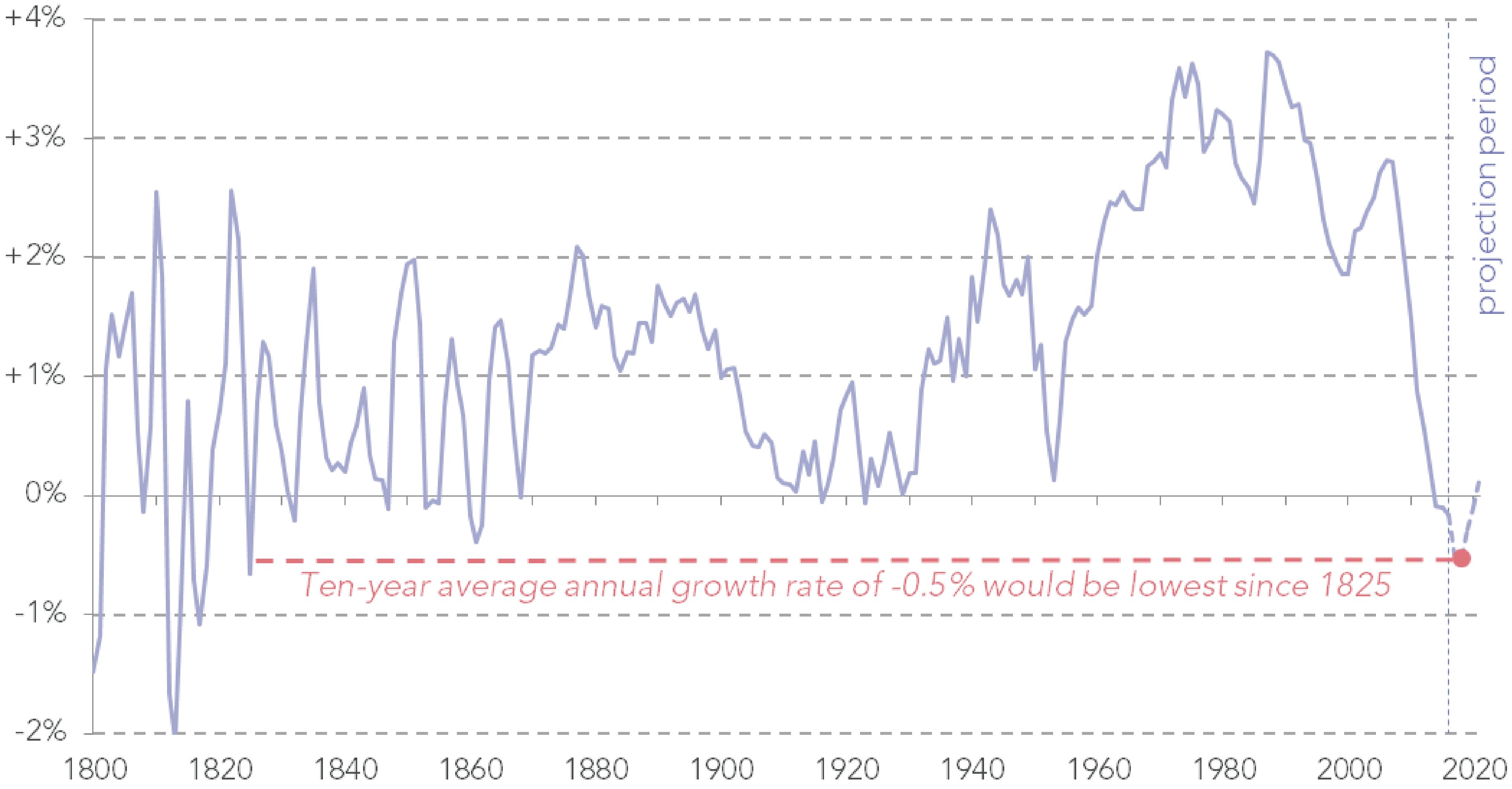
If wages followed this path, the decade to 2018 would mark the worst period for wage growth in nearly 200 years

10-year rolling average of annual growth in real-terms average weekly pay: outturn and projection based on November 2017 'RF scenario'



Following the path implied by the 'RF scenario' , the ten-year rolling average of real-terms wage growth would drop to a low of -0.5 per cent in 2018

As with the long-run productivity series, the rolling-average would pick up after 2018 as the crisis years start to drop out of the measure. The average annual growth would only turn positive again in 2021 though, remaining lower than at any point between 1953 and 2014

Source: OBR, Bank of England, and RF modelling

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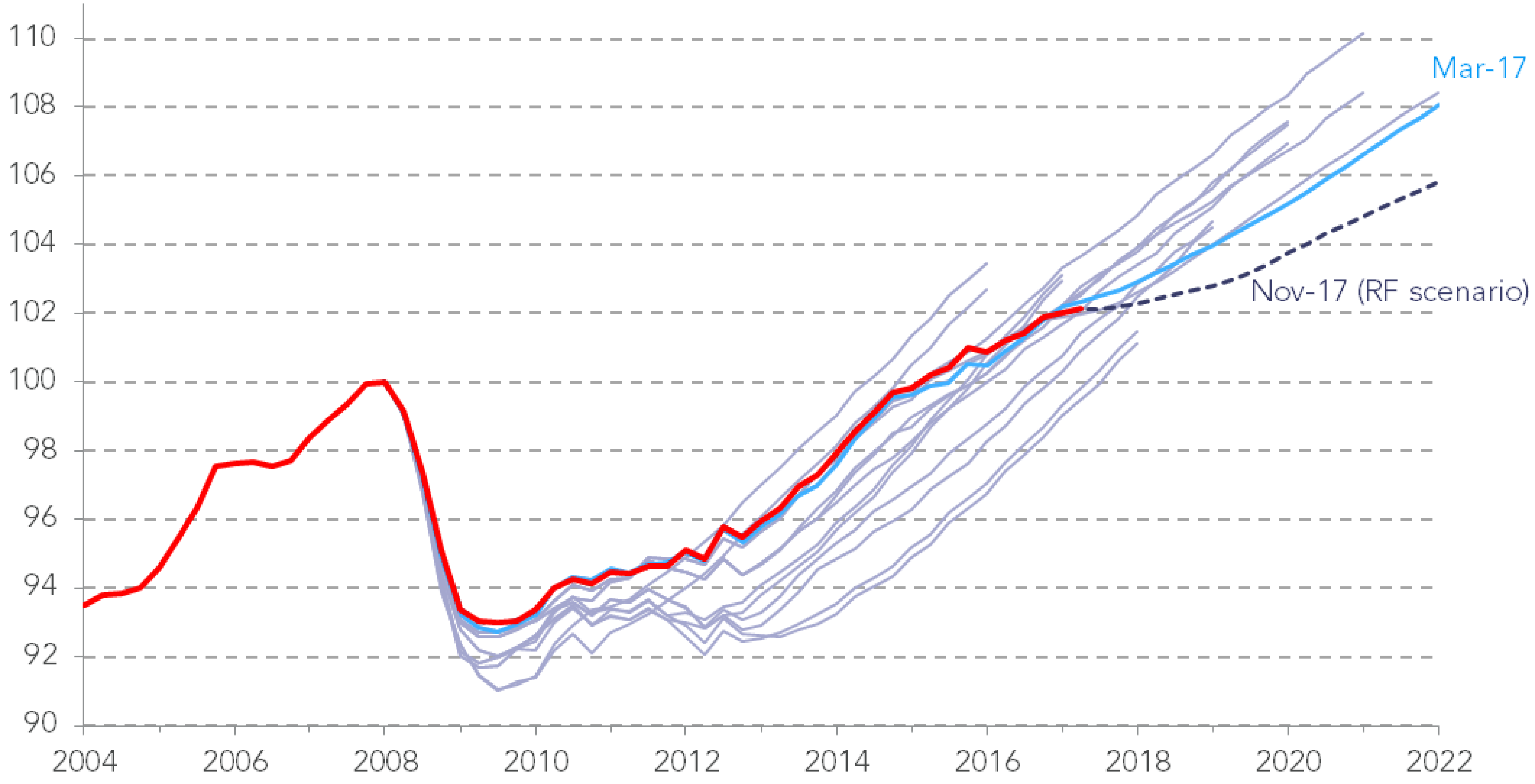
A higher level of employment would partially offset the impact on GDP per person, but the impact of a productivity downgrade would still be sizeable

Indices of real-terms GDP per capita: outturn and successive OBR projections
(Q1 2008 = 100)



Under the 'RF scenario' (combining the Bank of England's November 2017 approach to productivity and labour supply with the OBR's March 2017 projections for all else), GDP per person comes in at roughly £650 lower (in 2015 prices) in 2022 than was forecast back at the Spring Budget

That means the total economy would be around £44bn smaller in 2022 than was projected in March

Source: OBR, Bank of England, and RF modelling

Any significant movement in the OBR's productivity projections would likely have a very marked effect on the outlook for households' living standards

- These forecasting changes do nothing to alter what *will* happen to living standards in the UK; they simply reflect shifting expectations of what the future holds. They do however provide the backdrop against which the Chancellor must present his Budget. The implication of our modelling is that he will face a living standards picture that continues to improve relative to today, but at a much slower pace than set out in March

- In the near-term, earnings growth may hold up even if productivity disappoints. Over the longer-term however, sustainable pay growth must rest on an improvement in output per hour. We have assumed a 1:1 relationship between productivity growth and increases in average hourly earnings in our modelling, in line with the standard approach of the OBR. On that basis:
  - the potentially weaker outlook for productivity growth we have modelled here results in <u>**hourly pay**</u> coming in **£0.85 (5.1 per cent) lower in 2022** than previously forecast;
  - a slightly improved outlook on average hours provides some mitigation for the <u>**weekly earnings**</u> outlook, but it remains some **£24.50 (4.5 per cent) lower in 2022** than the March 2017 projection;
  - higher employment provides further mitigation in relation to <u>**GDP per capita**</u>, but our approach still implies a **£650 per person reduction (2.1 per cent) relative to previous projections**

SHRINKING HEADROOM

OBR revisions and the public finances outlook

Any downgrade to the OBR's economic outlook will be bad news for the Chancellor, but particular focus will fall on what it means for his fiscal 'rules'

RF

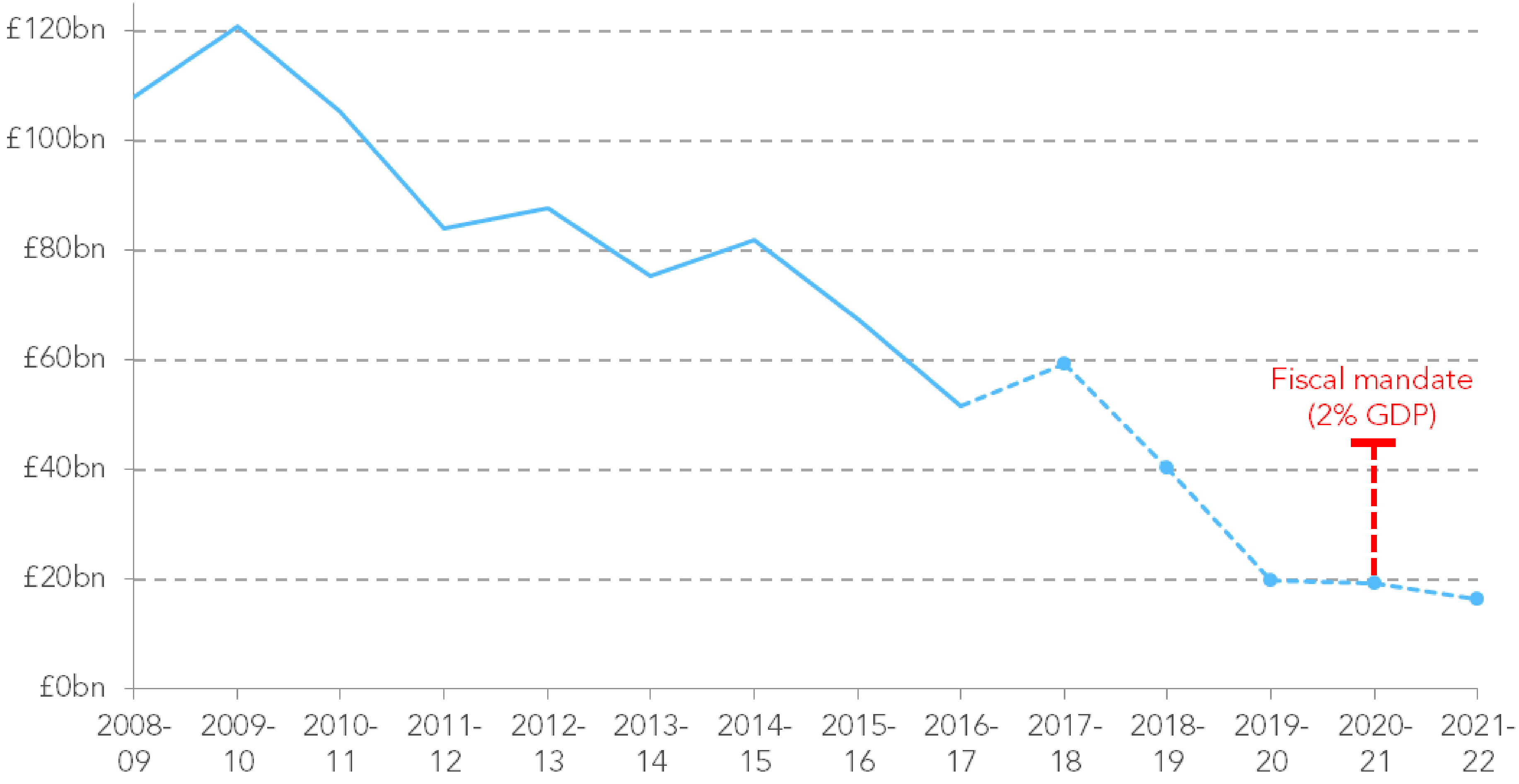
- As with living standards, revisions to the OBR's forecasting assumptions have no direct effect on what *will* happen in relation to the public finances. But they establish the parameters the Chancellor has to work with. In particular, the OBR's assessment details the room for manoeuvre he has relative to the fiscal rules he has established

- The Chancellor's *Charter for Budget Responsibility* has three main elements:
    - a **'mandate'** to reduce cyclically-adjusted public sector net borrowing (CAPSNB) – the 'structural deficit' – below 2 per cent of GDP by 2020-21;
    - a **'supplementary target'** for public sector net debt (PSND) as a share of GDP to be falling in 2020-21; and
    - an **'objective'** to return PSNB to balance at the 'earliest possible date' (currently earmarked for the "middle of the next decade")

- At the March Budget, the OBR assessed the government to be on track to meet both the mandate and the supplementary target but described meeting the government's wider longer-term objective as "challenging"

At the Spring Budget, the Chancellor appeared to have £26bn headroom relative to the fiscal mandate

Cyclically-adjusted net borrowing: outturn and OBR projection at March 2017 Budget (nominal)



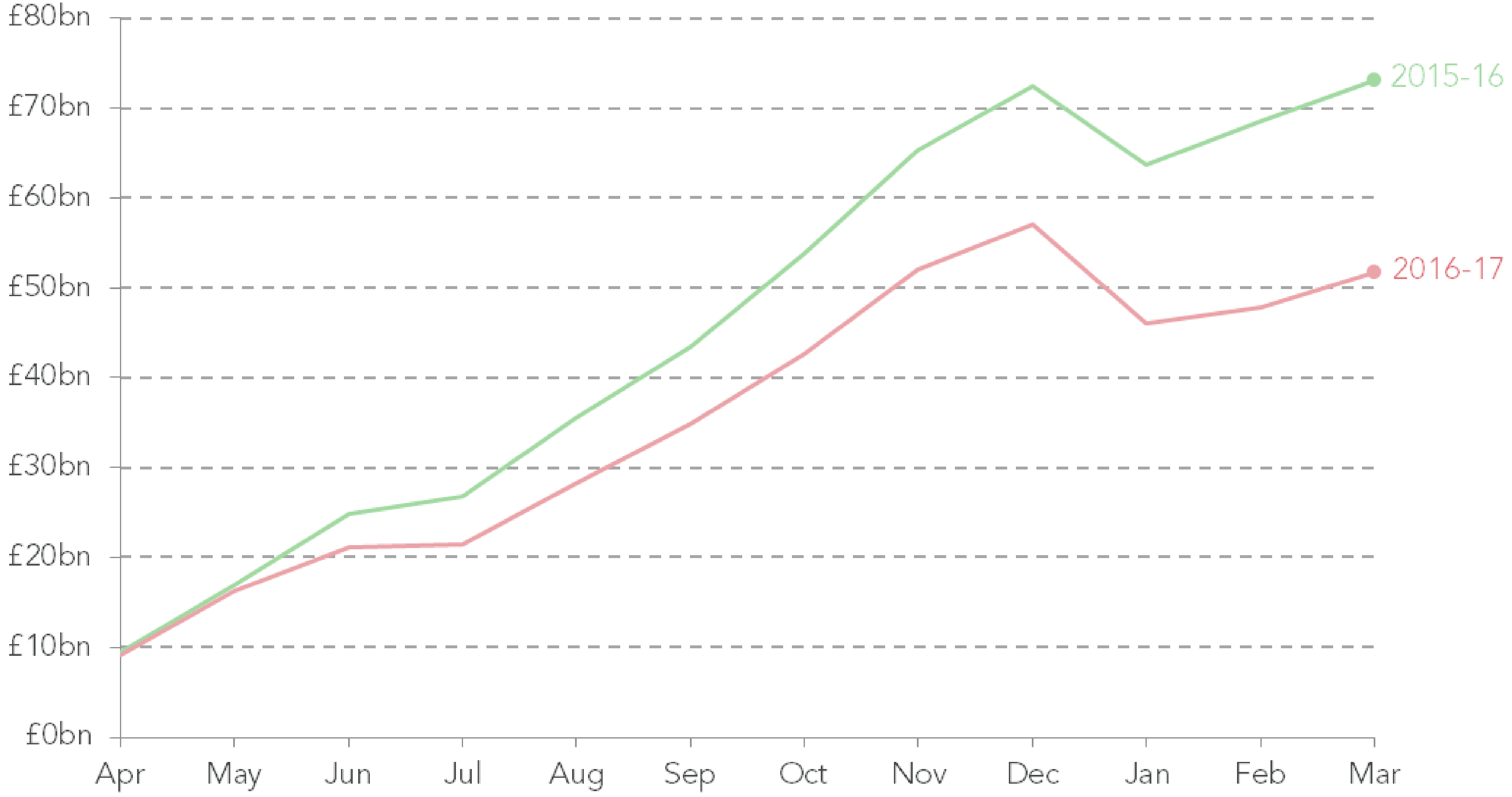
The March outlook put PSNB at £20.6bn in 2020-21, with the cyclically-adjusted figure standing at £19.3bn (with the output gap assumed to be almost non-existent by this point). A forecast structural deficit of 0.9 per cent of GDP was well within the 2 per cent 'ceiling' imposed by the fiscal mandate

However, a proposed slowdown in deficit reduction towards the end of the forecast horizon meant that pushing PSNB into balance in the 2020s remained contingent on delivering further fiscal consolidation

Source: OBR, *Economic and Fiscal Outlook*

A number of developments since March will affect the Chancellor's outlook next week: *(1) better-than expected recent performance*

Cumulative Public Sector Net Borrowing: outturn and estimate at March 2017 Budget
(nominal, ex. public sector banks)



Back in March, public sector net borrowing was estimated to have fallen to £51.8bn in 2016-17

Source: OBR

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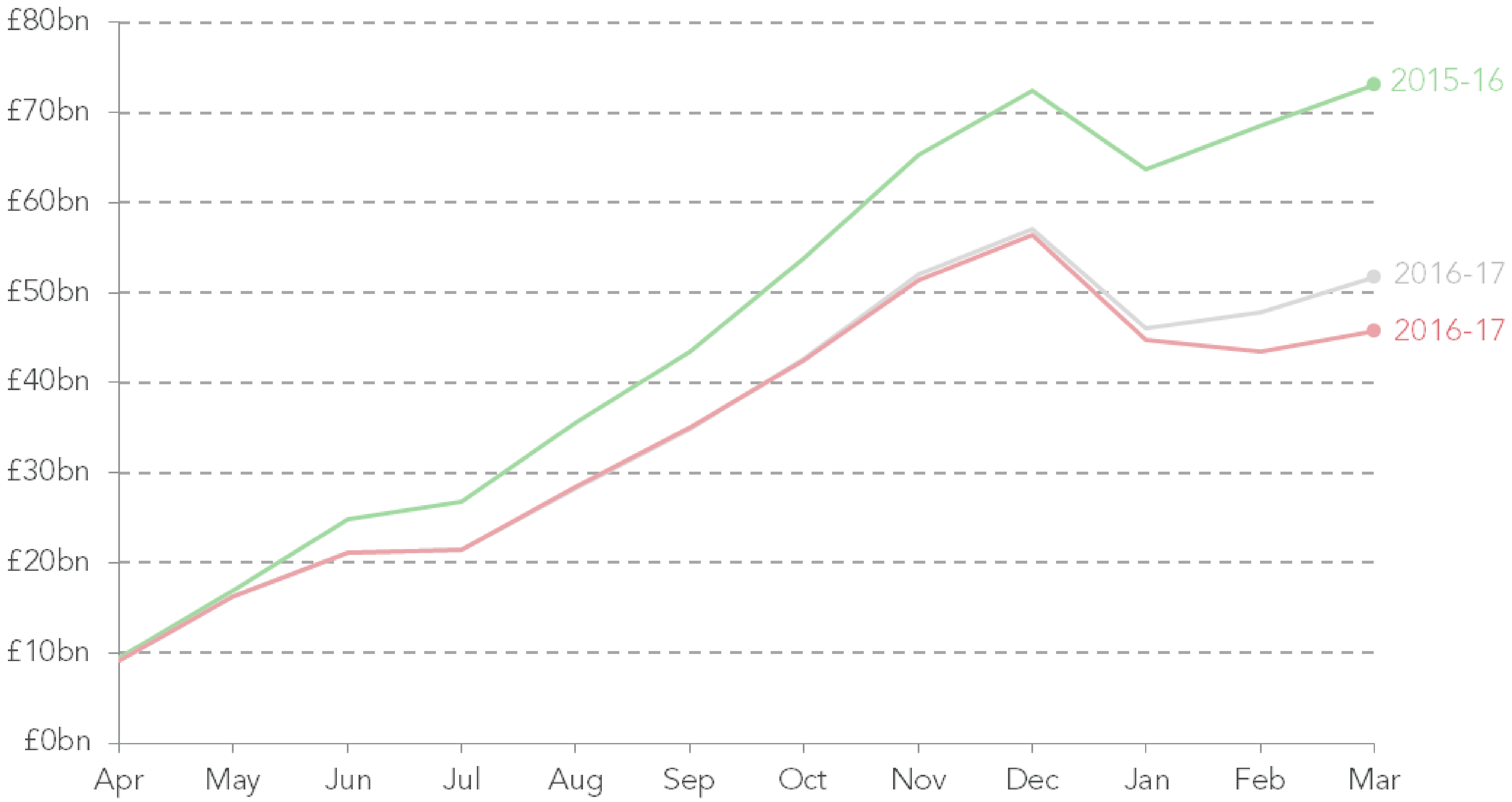
A number of developments since March will affect the Chancellor's outlook next week: *(1) better-than expected recent performance*

Cumulative Public Sector Net Borrowing: outturn and latest estimate
(nominal, ex. public sector banks)



But the latest data suggests it fell much further – to £45.7bn

The adjustment to the previous 2016-17 estimate has been driven by a combination of stronger than reported government revenues (worth roughly £5.8bn) and lower than reported spending (roughly £0.4bn)

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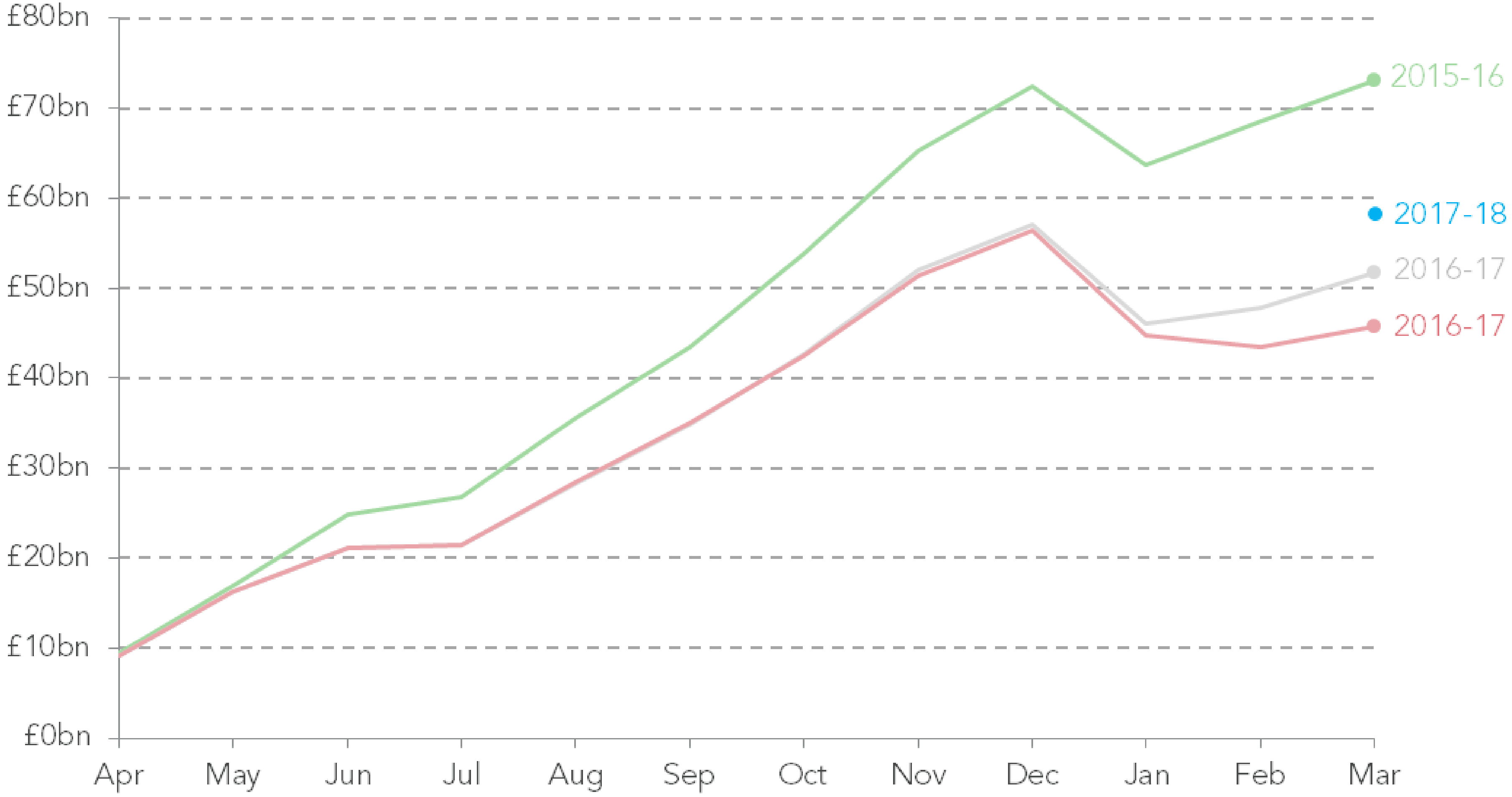
Source: ONS, *Public Sector Finances*

A number of developments since March will affect the Chancellor's outlook next week: *(1) better-than expected recent performance*

Cumulative Public Sector Net Borrowing: outturn, latest estimate and March 2017 Budget forecast for 2017-18 *(nominal, ex. public sector banks)*

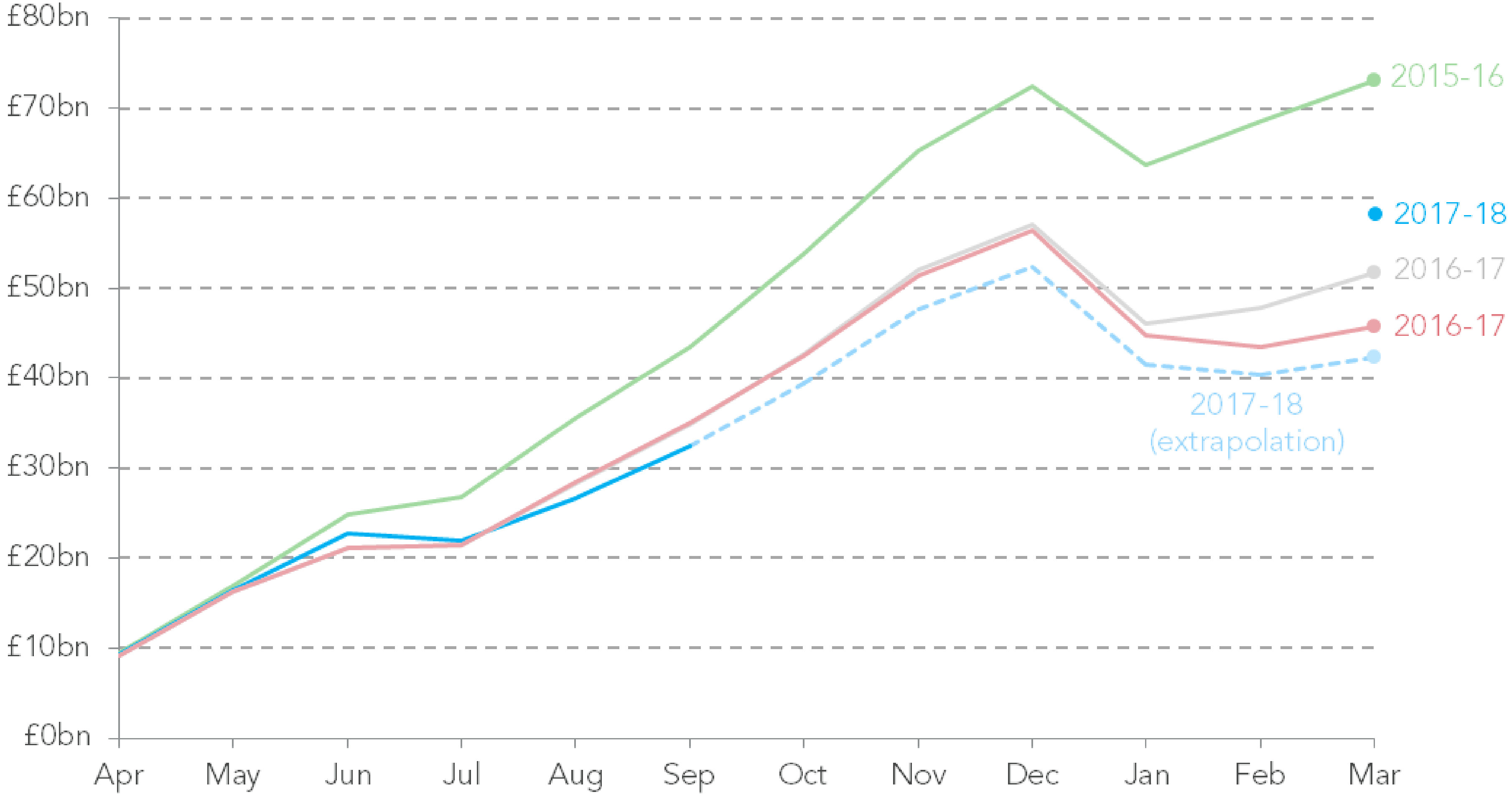


In March, the OBR forecast a £6.5bn increase in borrowing in 2017-18 relative to its 2016-17 estimate, reflecting changes in the timing of both EU payments and Corporation Tax payments, along with greater than expected income shifting into 2016-17 in order to beat the April 2016 dividend tax rise

Source: OBR & ONS, *Public Sector Finances*

A number of developments since March will affect the Chancellor's outlook next week: *(1) better-than expected recent performance*

Cumulative Public Sector Net Borrowing: outturn, latest estimate and March 2017 Budget forecast for 2017-18 *(nominal, ex. public sector banks)*

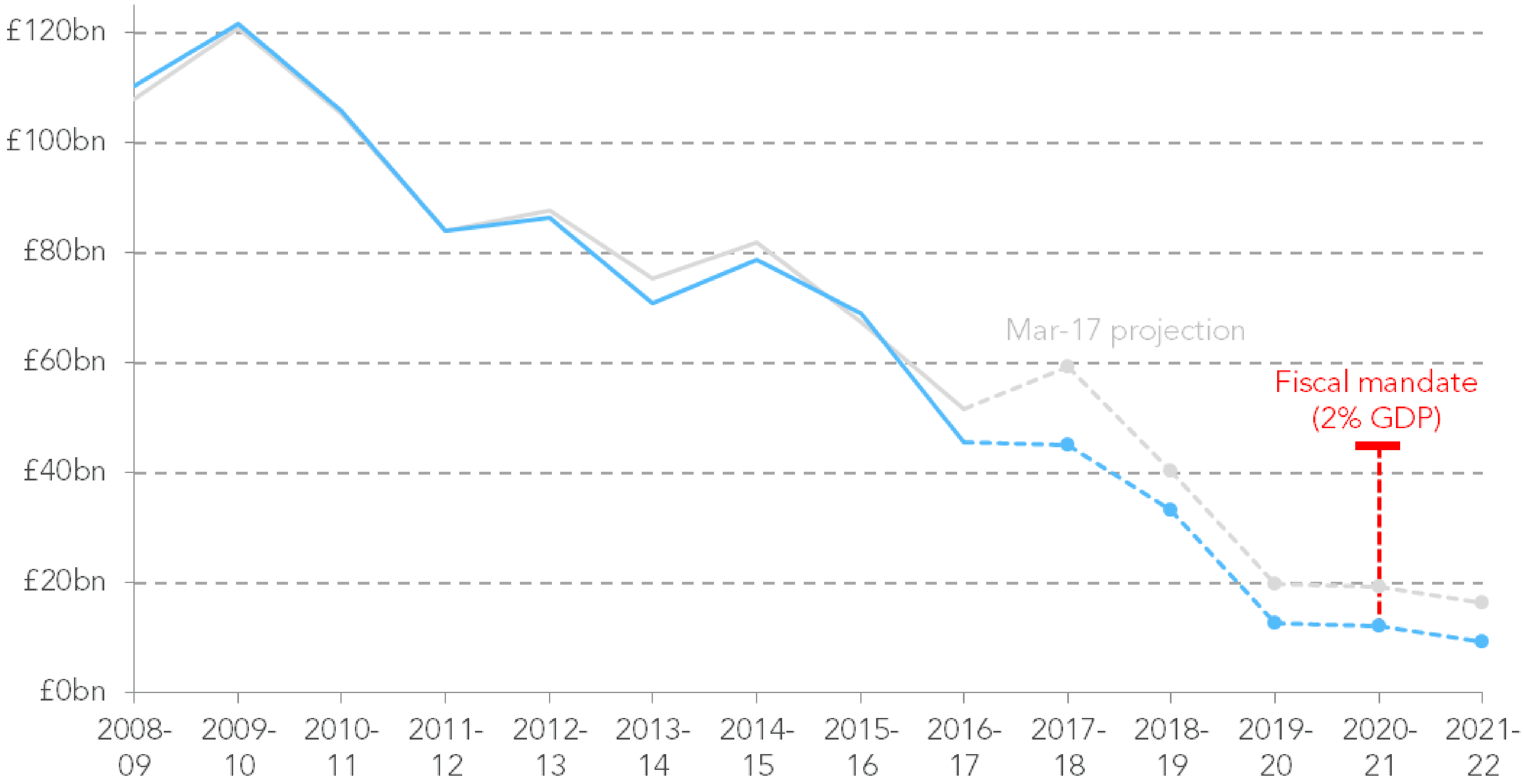


Rather than rising though, borrowing is *down* 7.2 per cent year-on-year after the first six months of 2017-18. A straight extrapolation of this trend would bring full-year borrowing in £3.3bn below the revised 2016-17 figure and £15.9bn below the Spring Budget 2017-18 projection. The OBR has cautioned against such extrapolation, however. Factors such as the unwinding of dividend forestalling mean the final figure for 2017-18 is not expected to be 7.2 per cent down year-on-year. For our purposes, we assume an improvement of half this size instead

Source: OBR & ONS, *Public Sector Finances*

A number of developments since March will affect the Chancellor's outlook next week: *<u>(1) better-than expected recent performance</u>*

Cyclically-adjusted net borrowing: outturn and OBR projection including assumed 'underlying improvements' in borrowing (nominal)



By further assuming that half of the eventual reduction recorded in 2017-18 relative to the March 2017 forecast persists into subsequent years, we can identify a figure for apparent improvements in underlying borrowing conditions (driven by growth being more tax-rich than previously thought for instance)

This approach increases the potential fiscal headroom available to the Chancellor in 2020-21 to £33bn

Source: OBR, ONS, Bank of England & RF modelling

A number of developments since March will affect the Chancellor's outlook next week: *(2) policy announcements & interest rates*

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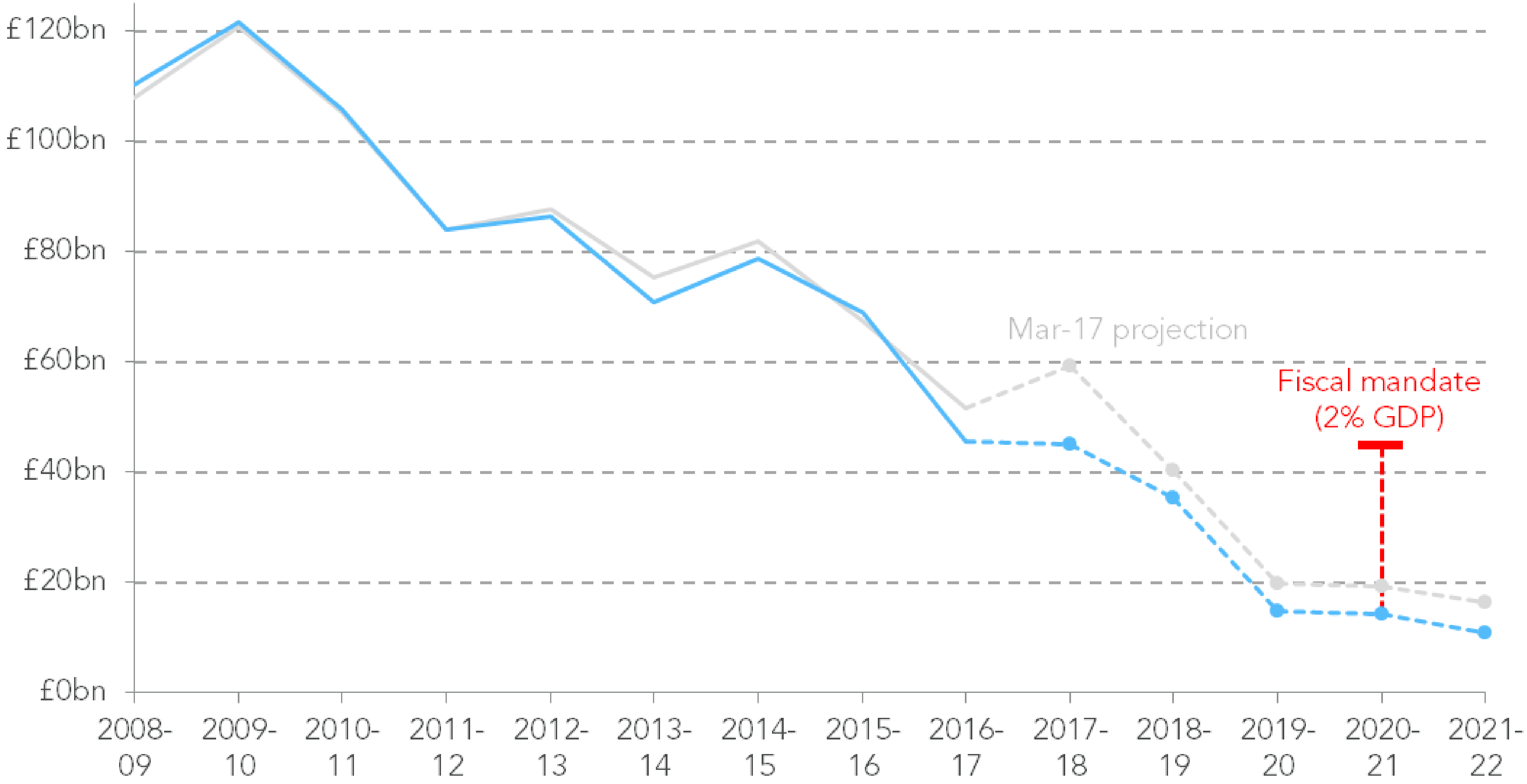
- The government has outlined several policy measures with implications for borrowing since March, including:
  - reversal of the self-employed (Class 4) National Insurance increase introduced in the Spring Budget, lowering revenues by roughly £610m in 2020-21 and £525m a year in 2021-22;
  - delaying the scrapping of Class 2 National Insurance contributions for the self-employed from April 2018 to April 2019 will save roughly £355m in 2018-19, but nothing thereafter
  - £455m a year extra funding over two years for Northern Ireland as part of the post-election DUP deal, with a further £30m a year pledge for three further years; and
  - removal of the Local Housing Allowance cap for Housing Benefit in the social housing sector costing around £385m in 2020-21 and £360m in 2021-22
- Interest rate movements and market expectations matter too. Rate increases raise the cost of servicing government debt – both in relation to gilt rates on government bonds and in relation to the cost of financing the Bank of England's Asset Purchase Facility. The OBR's November outlook will therefore be affected both by the recent increase in the Bank's base rate and by the fact that market expectations point to a more rapid increase in rates over the coming years than was the case in March. Using the OBR's ready reckoner for debt interest costs, we estimate that shifts in interest rate expectations will cost £1.1bn in 2020-21. That figure falls back to £0.6bn in 2021-22 because longer-term interest rate expectations have shifted by less

A number of developments since March will affect the Chancellor's outlook next week: *(2) policy announcements & interest rates*

- Other recently announced policy measures have less immediate impact on government borrowing, including:
  - removal of the public sector pay cap, with funds currently coming from within existing budgets (though this may change);
  - adjustments to student loan arrangements, with little immediate impact on government borrowing (though they do affect PSND in the near-term, the main PSNB impact will come when the loans are written off after 30 years); and
  - a pledge to increase Help to Buy funding by £10bn (with details to be confirmed next week), leaving PSNB unaffected in the near-term but raising PSND

A number of developments since March will affect the Chancellor's outlook next week: *(2) policy announcements & interest rates*

Cyclically-adjusted net borrowing: outturn and OBR projection including assumed 'underlying improvements' in borrowing plus policy/interest rate changes (nominal)



The combination of the policy changes announced since March (£1.0bn) and shifts in interest rate expectations (£1.1bn) reduce headroom in 2020-21 by roughly £2bn (to £31bn)

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Source: OBR, ONS, Bank of England & RF modelling

A number of developments since March will affect the Chancellor's outlook next week: *(3) expectations of a productivity growth downgrade*

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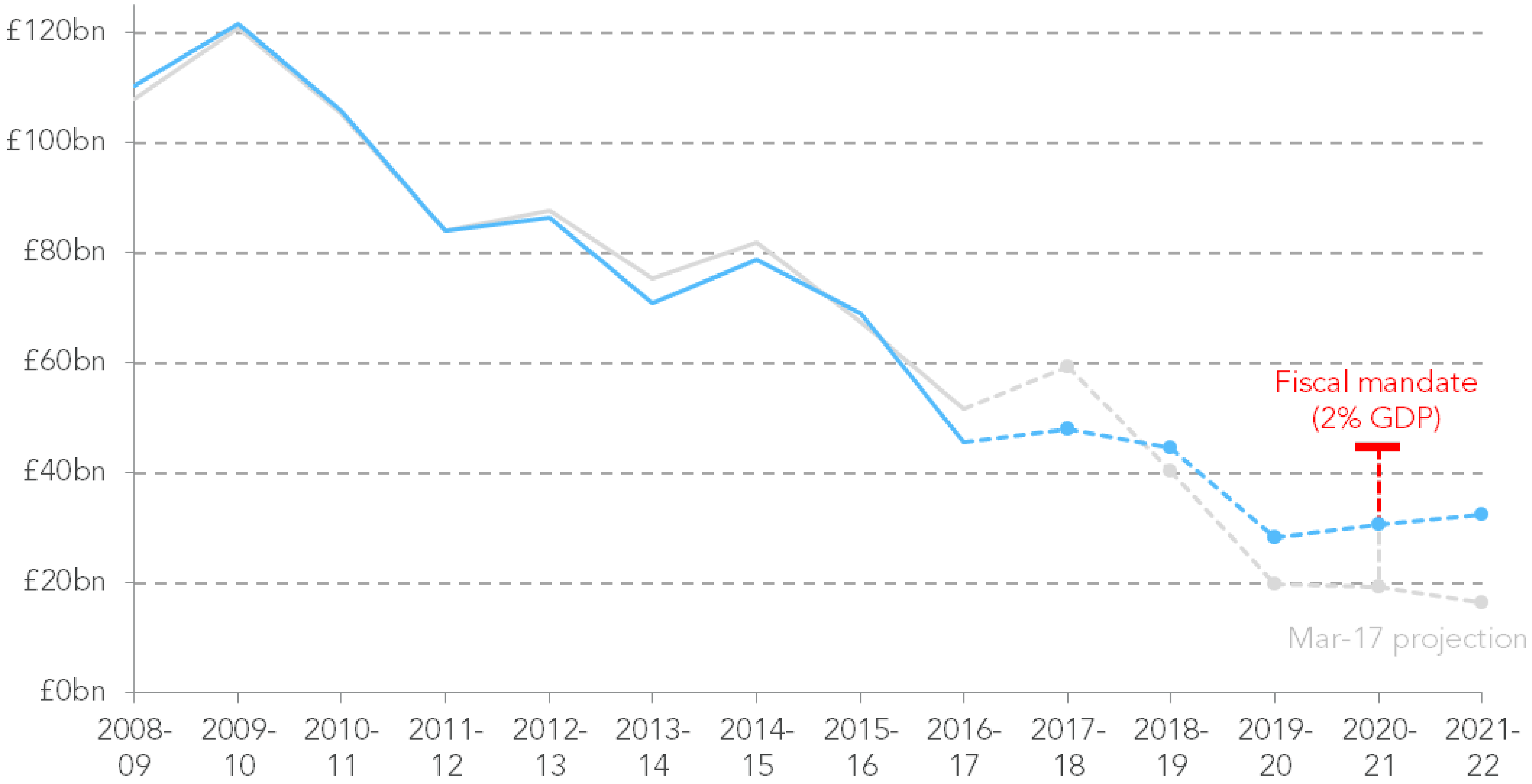
Cyclically-adjusted net borrowing: outturn and OBR projection including assumed 'underlying improvements' in borrowing plus policy/interest rate changes & 'RF scenario' forecasts (nominal)



Here we plug in GDP projections in line with the 'RF scenario' described above. We use the OBR ready reckoner, which increases borrowing by 50p for every £1 reduction in GDP relative to previous expectations. We assume no change in the projected output gap over the period (reflecting the fact that the weaker growth we plot is associated with weaker potential rather than a temporary undershoot), so the lower borrowing feeds through to the structural deficit

The result is a lowering of the fiscal headroom in 2020-21 to £14bn

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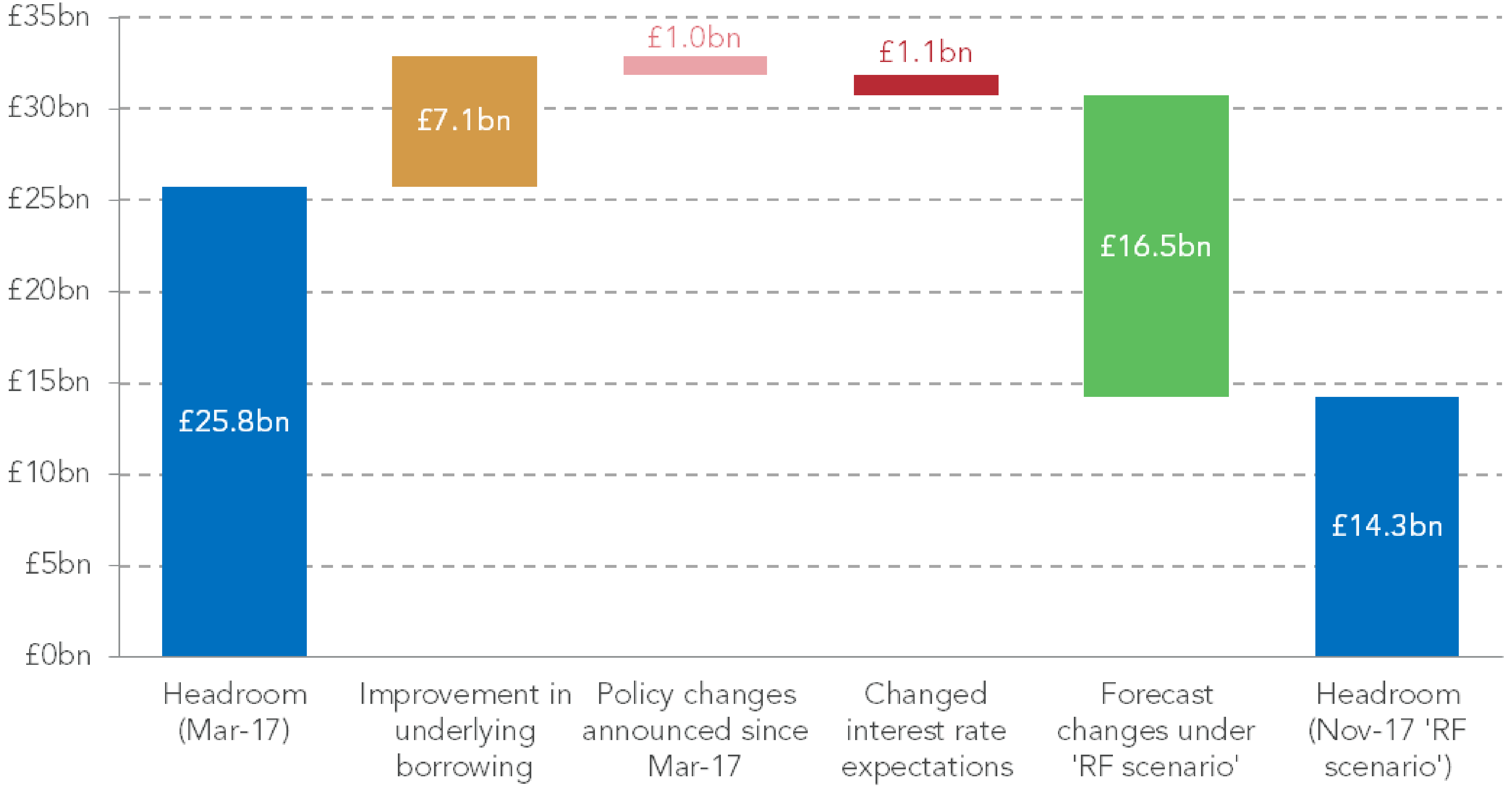
Source: OBR, Bank of England, and RF modelling

Overall, good news in terms of recent borrowing performance is likely to be more than offset by bad news in relation to the productivity forecast

Cash headroom in 2020-21 relative to the fiscal mandate at the March 2017 Budget and under the November 2017 'RF scenario'



Under the 'RF scenario' the fiscal headroom available to the Chancellor in 2020-21 falls by around £11.5bn

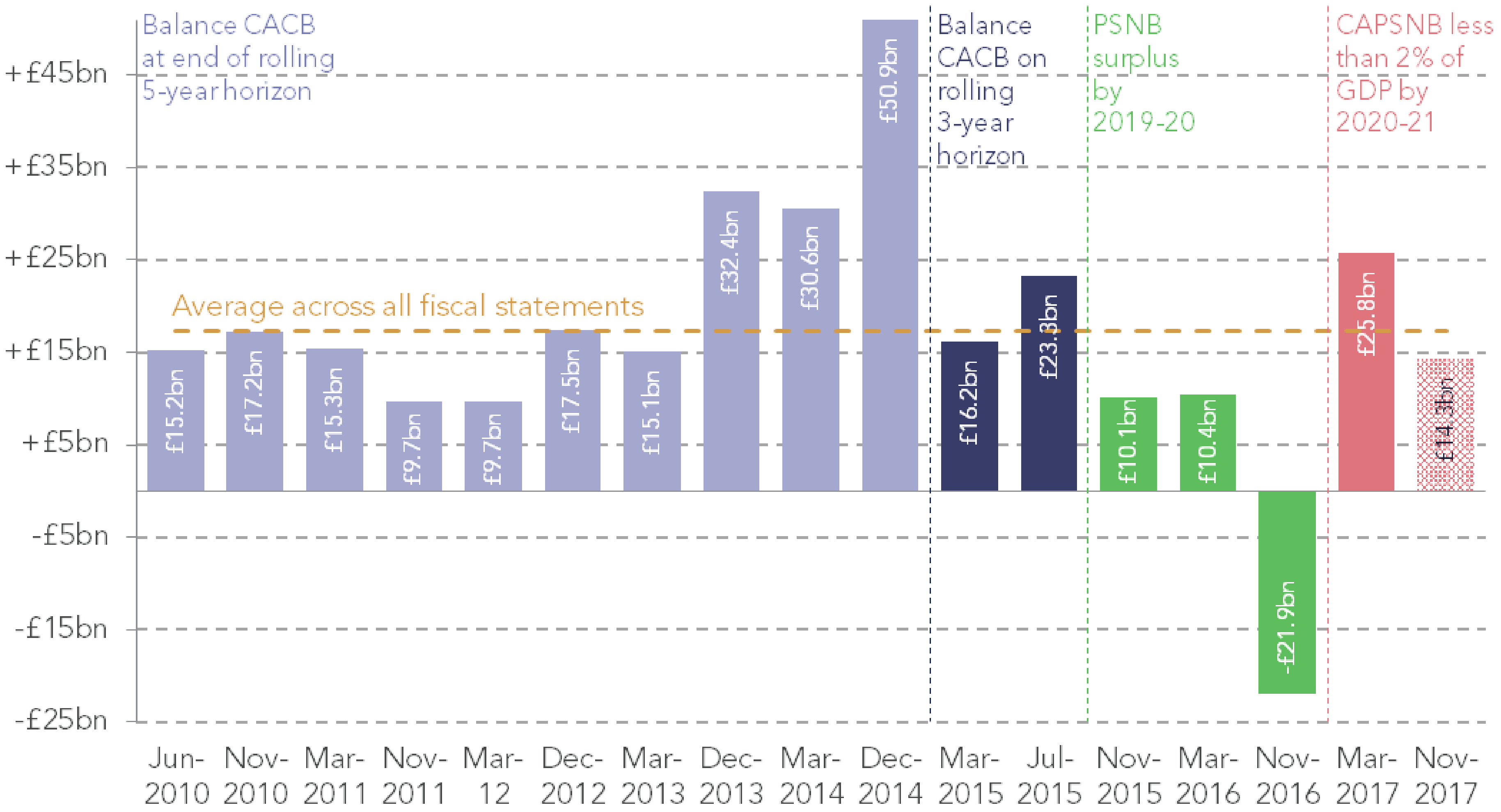
The forecasting changes provide a larger drag in isolation, but we assume some offsetting effect associated with lower-than-expected borrowing over the last 18 months

Source: OBR, Bank of England, and RF modelling

While the Chancellor's headroom is likely to shrink next week, a figure of £14bn would be broadly in line with the post-2010 average

RF

Forecast headroom against fiscal mandate in sucessive OBR *Economic and Fiscal Outlook* publications



When pressing the fiscal 'reset' at Autumn Statement 2016, Philip Hammond deliberately introduced a new mandate that acted as a 'ceiling' rather than a target, providing him with contingency against Brexit uncertainty

Gloomier forecasts from the OBR next week could eat into that contingency but, in the scenario we set out, his headroom would fall just £3bn short of the average available across each of the last 16 fiscal statements

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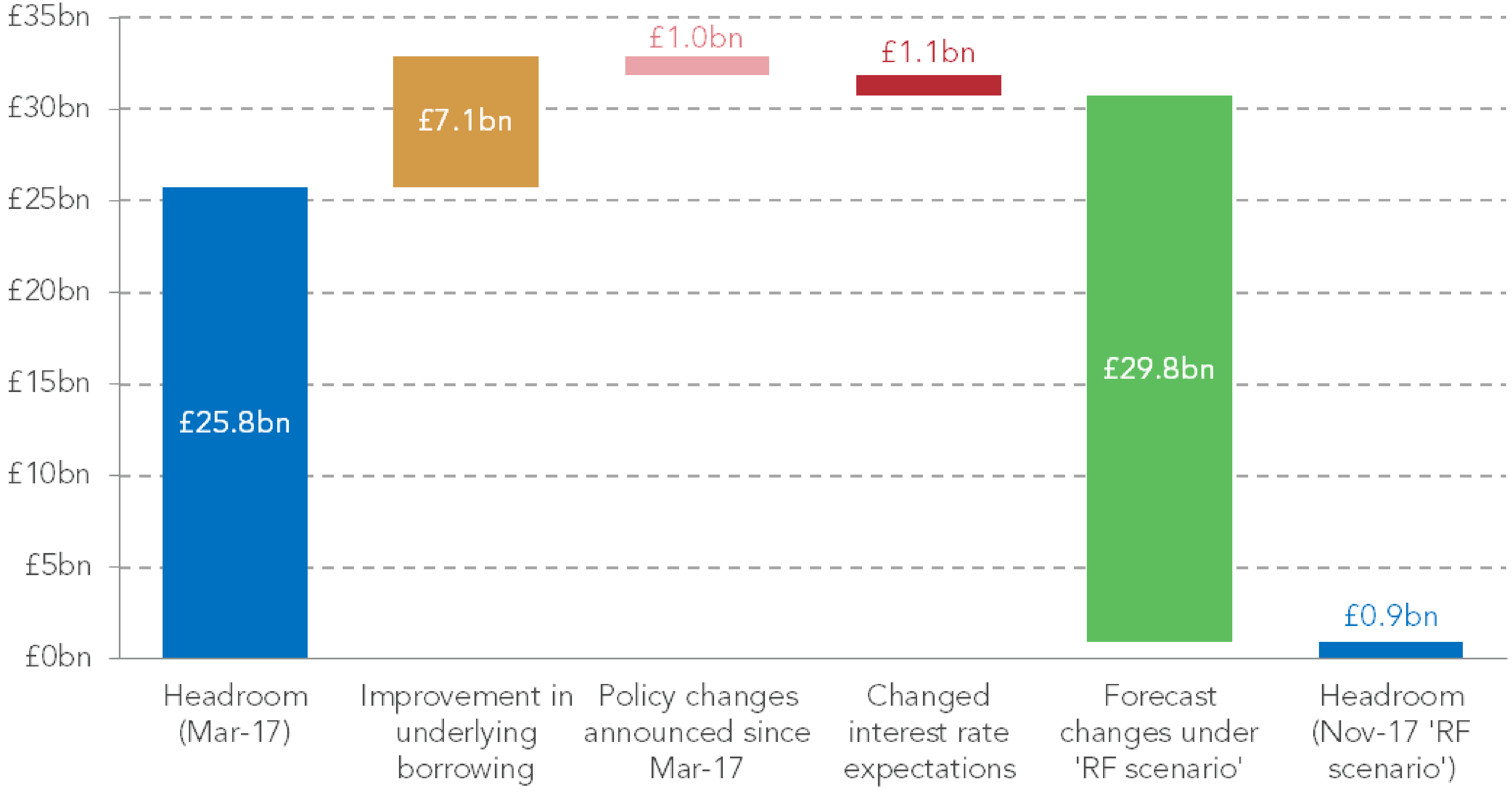
Source: OBR

However, repeating the exercise with a more pessimistic productivity growth projection lowers the fiscal headroom very rapidly

Cash headroom in 2020-21 relative to the fiscal mandate at the March 2017 Budget and under the November 2017 'history repeats scenario'



To illustrate the sensitivity of our modelling to alternative productivity assumptions, we can repeat the analysis under a scenario in which productivity growth matches the average recorded between 2014 and Q2 2017 (with no further change to labour supply)

In this 'history repeats' scenario, the fiscal headroom available to the Chancellor in 2020-21 almost entirely disappears

Source: OBR, Bank of England, and RF modelling

The OBR is likely to provide the Chancellor with bad news, but it is unlikely to be sufficient to cause a breach of the 'fiscal mandate'

RF

- Any significant downgrade in the OBR's projection for productivity growth is liable to have a very profound effect on the amount of fiscal headroom available to the Chancellor when he stands up next Wednesday. However, the effect is set to be modified to some extent by increases in the OBR's projections for employment and for hours worked. At least some of the upside performance on borrowing in the last 18 months is also likely to persist into projections for subsequent years
- Relative to past years, the Chancellor's fiscal mandate provided very sizeable headroom back in March, and it seems likely that he'll retain some room for manoeuvre this time around:
    - growth has been more <u>**tax rich**</u> than previously supposed by the OBR over the past 18 months, lowering borrowing in 2016-17 and 2017-18 (to date) relative to the March Budget estimate. Assuming some of this improvement persists into future years **increases the Chancellor's headroom in 2020-21 from £26bn to £33bn**
    - <u>**policy changes**</u> announced since the Spring Budget, along with a bringing forward of interest rate rise expectations, would **lower the headroom back to £31bn**
    - adopting <u>**productivity and employment projections**</u> which more closely resemble those set out by the Bank of England in its November 2017 *Inflation Report* would **lower the available headroom to £14bn**
    - these figures are highly sensitive to the precise assumptions in place for productivity and labour supply, however; adopting a <u>**more pessimistic productivity projection**</u> (in line with the experience between 2014 and 2017) would result in **almost all of the Chancellor's headroom in 2020-21 being lost**

GETTING THE BALANCE RIGHT

Prioritising action against a tougher backdrop

While forecasting changes may not be enough to break the Chancellor's fiscal rules, they will make it harder to respond to growing pressure for action

RF

The Budget looks set to be take place against an outlook for living standards that is even gloomier than the one likely to be facing the Chancellor on the public finances. This will reduce his room for manoeuvere but increase the need for action. Priorities should include:

- **Housing**, going well beyond the additional Help-to-Buy funding already trailed. The government should take advantage of today's ultra-low borrowing costs to embark on a large-scale programme of state investment in housebuilding – revising the fiscal rules to allow this to happen
- Revising **social security** plans, not only to shorten the six week wait in Universal Credit but to also reverse cuts to the new benefit and undo a deeper than expected benefit freeze
- Supporting the ending of the **public sector pay cap** with additional resources – especially for the NHS
- Ending the expensive and regressive policy of raising **income tax** thresholds now that the goal of a £12,500 personal allowance is within sight, instead raising revenues via freezes to income tax thresholds later this parliament

Revised Statement

Productivity, prospects and priorities ahead of the Autumn Budget

Matt Whittaker

November 2017

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