Institute for Fiscal Studies

The IFS Green Budget
October 2019

Edited by
Carl Emmerson
Christine Farquharson
Paul Johnson

In association with Citi and funded by the Nuffield Foundation
With additional analysis from the Institute for Government

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The IFS Green Budget: October 2019

Stuart Adam
Graham Atkins
Aron Cheung
Rowena Crawford
Carl Emmerson
Robert Joyce
Joe Marshall
Benjamin Nabarro
Christian Schulz
Isabel Stockton
Rebekah Stroud
Gemma Tetlow
Tom Waters
Xiaowei Xu
Ben Zaranko

Edited by Carl Emmerson, Christine Farquharson and Paul Johnson
Copy-edited by Judith Payne

The Institute for Fiscal Studies

Published by

The Institute for Fiscal Studies

7 Ridgmount Street
London WC1E 7AE

Tel: +44 (0) 20-7291 4800
Email: mailbox@ifs.org.uk
http://www.ifs.org.uk

in association with

Citi

Citigroup Centre
33 Canada Square, Canary Wharf
London E14 5LB
www.citigroup.com/citi/

funded by

The Nuffield Foundation

28 Bedford Square
London WC1B 3JS
www.nuffieldfoundation.org

with additional analysis from

The Institute for Government

2 Carlton Gardens, St. James's
London
SW1Y 5AA
www.instituteforgovernment.org.uk

with support from

The Economic and Social Research Council (ESRC)
through the Centre for Microeconomic Analysis of Public Policy
(CPP, reference ES/M010147/1)
www.esrc.ac.u

Printed by

Pureprint Group, Uckfield

ISBN 978-1-912805-39-6

Foreword from Citi

We are delighted to again be collaborating with the IFS on the production of the Green Budget this year at what is such a challenging time for the UK economy and public finances. The clear, objective thinking of the IFS research team always brings welcome clarity to complex UK economic issues. As we prepared our chapters this year, the UK Supreme Court had just delivered another twist in the political saga engulfing UK public life. As we note in our contribution to this year's Green Budget, the outcome of a now almost certain autumn general election – and the implications it might have for Brexit – could create quite different paths for the UK economy over the coming years.

Citi's economists have provided three chapters for this year's Green Budget. Our first chapter looks at the global environment. We discuss the recent sea change in global economic conditions, with strength in 2017 and 2018 giving way to growing deterioration. The downturn has spread across advanced economies and emerging markets, with particular weakness in manufacturing. China's rebalancing has negatively impacted its supply chains. The US-initiated trade war has compounded China's domestic economic challenges while also sapping global confidence and leading to weakening business investment. In the medium term, we forecast that US growth will remain strong, China's growth rate will slow, and parts of Europe will flirt with recession.

The second chapter reviews recent UK economic performance. While the global economy has weakened noticeably over the last twelve months, UK weakness has been more longstanding and more extensive. Relatively soft UK productivity growth since the referendum reflects persistent weakness in private investment and a shift to more employment-driven, consumption-led growth as a result. Brexit-related uncertainty has driven both a structural reduction in investment, alongside more acute bouts of weakness as successive political deadlines have approached. We estimate that GDP is around 2.5–3.0% below where we believe it might have been without Brexit. A recovery in UK growth is likely to require a profound reduction in policy uncertainty. Without investment and improvements in labour productivity, near-term growth is likely to slow further and prospects for real income growth over the longer term could also fall.

Our third chapter considers the potential path of the UK economy against contrasting political scenarios going forward. We believe that the near-term outcome of Brexit is likely to hinge on the result of a general election. This may increasingly be shaping up to frame a binary choice between either a 'no deal' exit from the EU or a second referendum. In the event of a 'no deal' exit, and subject to a number of caveats, we would expect UK GDP to flatline for two years, amounting to damage of perhaps 2.5% of GDP over two to three years. Manufacturing and highly regulated tradable services, as well as investment and exports, would be hit hardest. In the event that a grouping of Remain-supporting parties are able to secure a parliamentary majority, this may pave the way for a referendum which could overturn Brexit. We believe that UK GDP could grow by 1.5–2% more over two to three years than our current baseline (of continued Brexit uncertainty) if this were to occur. However, there are questions as to whether any 'Remain alliance' could actually create a stable, durable government and, also, what domestic policy agenda such a government would (or indeed could) pursue.

I would like to thank Christian Schulz, Citi's Chief UK Economist, and Benjamin Nabarro, from Citi's UK Economics team, for their detailed work in compiling the chapters for this year's Green Budget.

Andrew Pitt
Global Head of Citi Research

Foreword from the Nuffield Foundation

At the publication of last year's Green Budget, there was much debate about the uncertainties posed to the UK economy by Brexit. Indeed, the then chancellor's forthcoming Budget was to be the last before the UK's exit from the European Union. This year, the political and constitutional context in which the Green Budget is published has taken us into further uncharted territory. With so many variables at play, the task of analysing the tax and spending options available to the chancellor in any comprehensive way is a challenge daunting even to the IFS.

The great value of the IFS Green Budget is that it sets out the fundamentals that any government will have at some stage to address. This year's report tackles the question of the public finances with customary rigour. It examines different scenarios and their implications relating to proposed tax cuts, public spending and the future of motoring taxation. Contributions from Citi provide the broader context for both the global and UK economy as well as forecasts for how the latter might grow in different scenarios. The Institute for Government's chapter contributes additional analysis of the barriers to domestic policy in relation to different potential parliamentary outcomes. Together, these chapters offer an independent, detailed and expert analysis of the UK's economic outlook.

The Nuffield Foundation's strength lies in its independence, and this is reflected in the work of the IFS and of other organisations that we fund. Independent scrutiny of government is an essential component of our democracy, and by funding the Green Budget we enable the IFS to provide such scrutiny in the public interest. Tax and spending decisions drive some of the most significant domestic choices in people's lives and shape our individual and collective well-being – the focus of the Foundation's work. We are pleased to be able to support the Green Budget again this year, and we extend our thanks to all involved in its production.

Tim Gardam
Chief Executive, Nuffield Foundation

Preface

Welcome to the IFS 2019 Green Budget. In it we discuss some of the issues confronting the new chancellor as he prepares for his first Budget and for next year's spending review.

Uncertainty – over the political timetable in the next few months, over the manner and timing of the UK's departure from the European Union, over the prospects for economic growth in the coming years – is at the core of this year's Green Budget. This year more than many, the challenges facing the chancellor are magnified by the need to ensure that policy is robust to a range of ways in which the future could unfold. Our analysis in this year's Green Budget shows just how sensitive the economy and the public finances are to developments in these areas.

At the same time, this autumn's Budget could help to define the agenda for a new government that has already signalled a desire to break from the previous administration. We discuss the implications of last month's spending round and of the big tax cuts that the prime minister promised on the leadership campaign trail. We analyse the chancellor's choices for a new framework to govern the public finances. And we set out options for removing peculiarities in the direct tax system and addressing long-standing challenges in motoring taxation.

We are delighted to continue our collaboration with Citi. We are grateful both for their financial support for the Green Budget and for their chapters on the outlook for the global economy, UK growth over the last year, and forecasts for the economy under different Brexit scenarios. All provide vital context for the rest of the Green Budget's analysis.

We are very pleased to partner this year with the Institute for Government, who have provided a chapter setting out the broader political and legal forces that are likely to affect the government's ability to make progress on domestic policy – or not.

We are also very grateful to the Nuffield Foundation for the funding it has provided to support the Green Budget. Our most important aim for the Green Budget is to influence policy and inform the public debate. It is particularly appropriate, then, that it should be supported by the Nuffield Foundation, for which these are also central aims.

The continuing support that the Economic and Social Research Council (ESRC) provides for our ongoing research work via the Centre for the Microeconomic Analysis of Public Policy at IFS underpins all our analysis in this volume and is gratefully acknowledged.

Paul Johnson
Director, Institute for Fiscal Studies

Citi

Citi, the leading global bank, has approximately 200 million customer accounts and does business in more than 160 countries and jurisdictions. Citi provides consumers, corporations, governments and institutions with a broad range of financial products and services, including consumer banking and credit, corporate and investment banking, securities brokerage, transaction services, and wealth management. Citi Research provides full global research coverage across economics and politics as well as analysis of fixed income, FX, commodities and equity markets with staff in 30 countries and through around 70,000 publications per annum.

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The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds research that informs social policy, primarily in Education, Welfare, and Justice. It also funds student programmes that provide opportunities for young people to develop skills in science and research. The Nuffield Foundation is the founder and co-funder of the Nuffield Council on Bioethics, the Nuffield Family Justice Observatory and the Ada Lovelace Institute.

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The Institute for Government is the leading think tank working to make government more effective. On a non-party political basis, we provide rigorous research and analysis, topical commentary and public events to explore the key challenges facing government, from Brexit and devolution to public services and beyond. We also use our expertise to offer bespoke support and training to ministers, special advisors and officials, aiming to help them get the best out of their time in office.

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1. Global outlook: sea change

The phase of synchronised growth the world enjoyed in 2017 and early 2018 has come to an end. Following two years when the global economy finally expanded faster than its long-run average of 3.0%, growth looks set to slow to 2.8% in 2019. This is a significant disappointment compared with forecasts from this time last year, which predicted global growth of 3.2% in 2019.

The global downturn has also changed the policy narrative; after years of gradually normalising monetary policy following the response to the financial crisis, central banks are cutting interest rates again. And because government borrowing costs are so low at the moment and the effectiveness of yet more central bank intervention to combat an economic downturn is in doubt, fiscal policy trends could also move to a more expansionary setting.

In this part of Citi's contribution to the Green Budget, we analyse the causes of the global downturn and discuss the role of fiscal and monetary policy in addressing it. We argue that there are two big forces buffeting the global economy. Slower domestic growth in China as it transitions to a consumption-led economic model has had ramifications for much of the rest of the world. And the trade wars that US President Donald Trump has started against both China and the rest of the world have both imposed a direct penalty on global trade growth and raised uncertainty in the global economy.

Key findings

- **The global growth outlook has deteriorated.** Having grown by an above-average 3.2% in 2018, world output growth looks set to fall to below-average 2.8% in 2019 and stay there in 2020. The downturn is spread across advanced economies and emerging markets, but focused on the manufacturing hubs so far.

- **China's rebalancing hurts its supply chains.** Export- and investment-led growth allowed China to become the world's second economy, but reached financial and environmental limits. The inevitable shift towards domestic consumption and innovation slows growth in China and its supply chains, including Germany and Japan.

- **US trade wars compound China's troubles and sow uncertainty.** US President Donald Trump's administration is imposing tariffs, hurting exports in the targeted economies and raising prices at home. More importantly, business investment suffers globally as uncertainty about supply chains spreads.

- **In the medium term, we forecast that US growth will remain strong, China's growth rate will slow, and parts of Europe will flirt with recession.** While global trade and manufacturing are in recession, domestic demand remains resilient. The US still enjoys large fiscal stimulus, but as the boost from this winds down its growth rate

will slow to potential soon. Chinese growth is falling gradually. In Europe, Germany and Italy are close to recession, but France and Spain are more resilient.

2. Recent trends to the UK economy

The overall outlook for economic growth, and its constituent parts, underpins any fiscal event, with implications for the public finances, public spending, taxation and living standards. Growth in the size of the UK economy – known as gross domestic product or GDP – has averaged 1.3% (on an annualised basis) over the last four quarters. That is somewhat below its potential rate of 1.4% (as estimated by the Bank of England) and the 1.5% growth rate for 2019 that we forecast in last year's Green Budget, and well below the average of 2.0% per year between 2010 and 2015.

While global trends play a role in this underperformance, the biggest force weighing on the UK economy seems to be uncertainty surrounding when and how – or whether – it will leave the European Union. In this chapter, we analyse how the different elements of the UK economy have performed since last autumn, highlighting the resilience of consumer spending and the poor performance of business investment. We show that the type of uncertainty that Brexit entails – prolonged and with repeated 'deadlines' for a resolution that has not yet materialised – has been especially damaging to business investment, and another year of uncertainty has imposed broader costs on the UK's economy.

The UK has been hampered by low productivity and investment since the crisis, and these trends have been exacerbated by the referendum. Meaningful improvement in potential UK growth will require a more robust policy outlook, a revival in private investment and stronger productivity growth.

Key findings

- **UK economic weakness has been both more longstanding and more extensive than in other major economies.** Growth in the UK has been weaker than in other G7 economies since 2016, volatile through this year, and averaged only 1.3% in the second quarter of 2019, compared with the same period last year.

- **Unemployment is currently below its natural rate equilibrium, even while realised growth remains below potential.** This reflects weakness in productivity and investment since the referendum, but resilience in employment and household spending. Growth has become more consumption-driven as a result.

- **Private sector investment is particularly weak.** Business investment has witnessed its most sustained period of weakness outside of a recession and is now the lowest in the G7.

- **The sharp divergence between growth in UK private sector investment and that in other developed economies coincides with the post-referendum period**, reflecting a sharp and sustained increase in economic uncertainty. This has increased the perceived risk associated with investments and reduced quarterly private investment by around 15–20% compared with if business investment had continued to grow in line with pre-

referendum trends. Ongoing worries about the risk of a 'no deal' Brexit are particularly damaging to investment.

- **High employment, a falling exchange rate and low levels of investment have already led to unit labour costs rising sharply.** Low investment now will lead to low growth in productivity and earnings in the future.

- **GDP is roughly 2.5–3.0% (£55–£66 billion) below where we think it would have been without Brexit.** Based on pre-crisis forecasts and global economic performance in 2017 and 2018, we suspect the UK has missed out almost entirely on a bout of global growth, which would normally have boosted exports and investment.

- **A recovery in growth from here is likely to require a profound reduction in policy uncertainty.** Without investment and improvements in labour productivity, growth is likely to slow further.

3. UK economic outlook in four Brexit scenarios

The global outlook and recent trends in the UK economy point to significant headwinds for growth going forwards. Arguably the most important determinant of the UK's economic trajectory will be the continuing process of leaving the European Union. Brexit no longer 'just' determines future relations with the UK's largest trading partner and the transition towards them. It has become intertwined with the political outlook and thus broader economic policies, including monetary policy.

At the time of writing, Prime Minister Boris Johnson's government has failed to break both the deadlock in negotiations with the EU over the arrangements at the Northern Irish border and the deadlock in parliament over the UK's wider Brexit strategy. This has left the UK with little clarity on when, how or even whether it will leave the European Union. And, with the increasing chances of a general election in the coming months, the Brexit stance and domestic agenda of the UK's opposition parties would become relevant to growth in some plausible scenarios.

In this chapter, we set out forecasts for the UK economy under four distinct Brexit scenarios: continued uncertainty (our base case); a no-deal scenario accompanied by significant fiscal loosening; a negotiated Brexit deal passed through the current parliament; or a second referendum on a Brexit deal negotiated by a Labour-led coalition, culminating in a vote to remain. In each case, the impacts on the economy will depend not just on relationships with Brussels, but also on policy decisions made in Westminster.

We find that a 'no-deal' Brexit makes for the hardest hit to the economy under these scenarios. By contrast, our scenario for 'no Brexit' – which involves a Labour-led coalition government that brings in significant tax and spending giveaways but does not implement all of the more radical structural reforms outlined in Labour's 2017 manifesto – would, at least for the next three years, provide the most optimistic outlook for growth.

Key findings

- **Whether – and if so how and when – the UK leaves the European Union will be perhaps the key determinant of growth over the next few years.** Obviously, Brexit will define the terms on which the UK trades with its largest trading partner. But different Brexit outcomes may also be tied to different political outcomes in Westminster, and these come with very different sets of domestic policies that would significantly affect the economy.

- **In our base scenario, the UK continues to delay Brexit.** In this scenario, we assume a further fiscal loosening of between 1 and 2% of GDP. There would be a chance of small rate cuts. Growth remains below 1% in 2020 and, while it then picks up, it remains very poor, below 1½% in 2021 and 2022.

- **Securing a Brexit deal would be better for the economy over the next two to three years than another delay.** If this were to come with tax cuts and further spending increases together worth 1 to 1½% of GDP (over and above the loosening at the September 2019 Spending Round), then growth should pick up to (a still poor) 1½% a year in the short term. Some pent-up investment should occur, and consumer confidence would improve, as the risk of a no-deal Brexit recedes.

- **A 'no-deal' Brexit would be economically considerably worse**, even under a relatively benign scenario. We assume this would happen under a Conservative-led government, which would implement further fiscal loosening totalling 2% of GDP. Interest rates are cut to zero alongside £50 billion of quantitative easing. Private consumption and investment growth falls while net trade is also a drag on growth. Overall, the economy does not grow over the next two years, and grows by just 1.1% in 2022, leaving it 2½% smaller in that year than under our base case.

- **Revoking Brexit would lead to the best economic outcome.** We assume this would require a Labour-led government which, as well as revoking Brexit, would also implement significant tax and spending increases, an overall fiscal loosening and some tightening of labour market regulations. Interest rates would also rise more quickly. This might result in growth of 2% a year. Crucially, this scenario involves a Labour-led coalition rather than a majority Labour government.

- **In the short term, implementation of the full 2017 Labour manifesto would offset at least some of the economic benefits of remaining in the EU.** Widespread nationalisations, handing 10% of share capital of large companies to employees while redirecting some dividends to the Treasury, or other policies that might reduce private sector investment significantly, would challenge the UK's traditional 'business model' and risk damaging growth by an amount it is not possible to quantify. Unlike Brexit, at least some of these policies will be reversible under future governments.

4. Public finances: where are we now?

Post-financial-crisis, public sector borrowing – the gap between government revenue and spending – has fallen and, at the March 2019 Spring Statement, it stood below its long-run historical average. However, a number of changes have occurred since March, or loom on

the horizon. The new accounting treatment of student loans dispels a 'fiscal illusion' that was previously flattering headline measures of borrowing. The September 2019 Spending Round has, according to the government, 'turned the page on austerity'. The most recent Bank of England growth forecasts warned of the chances of an imminent recession. Finally, the Brexit process (perhaps) risks delivering a significant adverse shock to the public finances via a non-negotiated exit from the EU.

In this chapter, we produce an updated baseline forecast and look ahead to analyse a variety of scenarios for the medium term. We discuss the impact of a near-term downgrade in the growth outlook even with a smooth Brexit; a no-deal Brexit; and a potential further permanent fiscal loosening – for example, to implement cuts to income tax that were a part of the prime minister's platform during the Conservative leadership contest.

Key findings

- **A decade after the financial crisis, the deficit has been returned to normal levels, but debt is at a historical high.** The latest estimate for borrowing in 2018–19, at 1.9% of national income, is at its long-run historical average. However, higher borrowing during the crisis and since has left a mark on debt, which stood at 82% of national income, more than twice its pre-crisis level.

- **Given welcome changes to student loan accounting, the spending increases announced at the September Spending Round, and a likely growth downgrade (even assuming a smooth Brexit), borrowing in 2019–20 could be around £55 billion, and still at £52 billion next year.** Those figures are respectively £26 billion and £31 billion more than the OBR's March 2019 forecast. Both exceed 2% of national income.

- **A fiscal giveaway beyond the one announced in the September Spending Round could increase borrowing above its historical average over the next five years.** With a permanent fiscal giveaway of 1% of national income (£22 billion in today's terms), borrowing would reach a peak of 2.8% of GDP in 2022–23 under a smooth-Brexit scenario, and headline debt would no longer be falling.

- **Even under a relatively orderly no-deal scenario, and with a permanent fiscal loosening of 1% of national income, the deficit would likely rise to over 4% of national income in 2021–22 and debt would climb to almost 90% of national income** for the first time since the mid 1960s. Some fiscal tightening – that is, more austerity – would likely be required in subsequent years in order to keep debt on a sustainable path.

- **Over the longer term, keeping debt falling as a share of national income whilst funding an additional loosening would rely on a strong growth performance and an orderly Brexit.** Even if a Brexit deal is secured, there would be a strong case for the chancellor to resist any calls for a substantial package of permanent tax cuts or further increases in day-to-day spending unless these are to be covered by tax rises of a similar size.

5. Fiscal targets and policy: which way next?

The fiscal targets bequeathed by former chancellor Philip Hammond all expire during the current forecast period. Moreover, the government has stated that it wants to keep open the possibility of a 'no deal' Brexit and, should this occur, it would require an important decision on how fiscal policy should adjust both in the near and long term. These two issues interact since any new fiscal targets ought to be carefully designed so that they are robust to plausible scenarios for the UK economy, not least around Brexit.

This chapter begins by considering the case for having fiscal targets at all and then discusses the government's current fiscal targets and the rules proposed by the opposition Labour party. As well as critiquing these rules, we discuss how constraining they might prove to be under both current government policy and (in broad terms) under the policies that Labour set out in its 2017 general election manifesto.

Over the longer term, under a no-deal Brexit, the damage done to the economy would require some combination of tax rises and spending cuts. But in the near term, there could be a case for a temporary fiscal giveaway. The chapter outlines some of the key considerations when deciding upon the best fiscal policy response to an adverse economic shock and presents what a stylised fiscal stimulus in a no-deal scenario might do to growth, borrowing and debt.

Key findings

- **The current fiscal targets are no longer an anchor on fiscal policy.** All expire during the current forecast horizon. In any case, (cyclically adjusted) borrowing appears on course to exceed the 2% of national income ceiling supposedly imposed by the fiscal mandate. If a 'no deal' Brexit happens, it would be difficult to imagine the supplementary debt target not also being broken.

- **Labour's 2017 proposal for a rolling forward-looking target of current budget balance has much to commend it.** This would allow additional investment spending to be financed from borrowing when interest rates are low, and would also allow the chancellor some flexibility when responding to adverse shocks.

- **But Labour's 2017 proposal to have public sector net debt lower at the end of the parliament than at the start would be incompatible with its stated policies.** A large programme of nationalisation and substantial boost to investment spending would increase the size of the public sector balance sheet, increasing both its liabilities and its assets. Regardless of the merits of these policies, public sector net debt would rise, not fall.

- **Consideration could be given to targeting the projected path of public sector net debt over a longer horizon** and also to the feasibility of setting a target that takes account of a broader set of public sector assets.

- **If a 'no deal' Brexit occurred, fiscal policy would need to respond.** Over the longer term, the damage done to the economy would require some combination of tax rises and spending cuts. But in the near term, there could be a case for a temporary fiscal giveaway. This could target parts of the economy where the short-run dislocations were

particularly painful, or particularly likely to have adverse long-term effects. But the overall giveaway should be temporary.

- **It is hard to imagine a set of short-term fiscal targets that would make sense both in the event of the UK leaving the EU with a deal and in the event of leaving without a deal.** Any rules that constrained behaviour at all in the first case would be broken in the second. Given heightened uncertainty, rather than setting a target for borrowing or debt, the chancellor could consider instead setting a fiscal anchor to limit the amount of permanent tax cuts or further increases in day-to-day spending that is announced. This would not limit the chancellor's options for borrowing to invest more or to deliver a temporary stimulus package. Well-designed fiscal rules could then be set out once at least some Brexit uncertainties have been resolved.

6. Spending Round 2019: keeping perspective

The 2019 Spending Round, published in September 2019, set departmental budgets for the 2020–21 financial year. Chancellor Sajid Javid topped up the spending plans pencilled in by his predecessor, announced spending increases across the board and declared austerity to be over. But these increases must be seen in context: austerity may have 'ended' but it is far from undone. And a decade of spending restraint means that even after recent announcements, spending on public services next year will be well below where we might have expected it to be, given historical rates of spending growth and growth in national income.

In this chapter, we describe the announcements in this year's spending pound and emphasise the importance of keeping perspective. We consider the announced spending increases in the context of the real-terms cuts since 2010, and the longer-run history of public spending, and also compare it with the plans implied by the Labour party's 2017 election manifesto.

Key findings

- **Boris Johnson's government used the 2019 Spending Round to announce a 4.4% increase in day-to-day spending on public services (over and above economy-wide inflation) between 2019–20 and 2020–21.** This was not the first increase in such spending since 2010 – total day-to-day spending on services increased between 2018–19 and 2019–20. But this spending round was notable for the size of the increase, and in that *every* government department saw at least a real-terms freeze in its budget.

- **This might end, but does not 'undo', austerity. Total day-to-day spending on public services is still set to be 3% lower in real terms in 2020–21 than it was in 2010–11, and spending outside the Department for Health and Social Care is still set to be 16% below 2010–11 levels.** Since the pre-crisis trend was for public service spending to increase in real terms over time, the gap between spending today and what it might have been if that trend had continued is even greater.

- **Total spending as a share of national income is just 0.6% lower than it was pre-crisis and at around the same level as it was in 2006–07**, but day-to-day spending on

public services is now at 14.1% of national income compared with 16.2% in 2007–08. On public services excluding health, it is now at 8.1% of GDP against 11.1% in 2007–08.

- **This genuinely big spending round increase leaves the overall level of day-to-day public service spending for 2020–21 close to the levels implied by the Labour party's 2017 manifesto.** The Conservatives have implemented Labour's plans for school funding, gone some way on further education and social care, exceeded Labour's spending plans on the police and far exceeded them on the NHS. Labour had additional plans for big spending increases on early years and university education that the Conservative government has not chosen to match.

- **Labour's 2017 manifesto may, however, have understated what a Labour government would in reality have spent on the NHS had one been elected.** Had Labour increased NHS spending to the same extent as the Conservative government has done, in addition to its other manifesto commitments, then day-to-day spending on public services next year under Labour would have been around £9 billion higher than post-spending-round plans**.**

- **Given the stated policies of both main parties, it looks likely that austerity for public service spending is over for now.** That will, of course, mean some combination of higher taxes and/or higher borrowing. In either case, if the economy fails to grow as hoped – for example, due to a disruptive Brexit or other policies that undermine growth – the return to significant real spending increases could be short-lived. A return to austerity could well follow a mini spending boom.

7. Barriers to delivering new domestic policies

Since the 2016 vote to leave the European Union, Brexit has become the policy area that dominates debate in the UK. It defined Theresa May's government and will undoubtedly consume much of the government's time and energy over the next few years, regardless of how the Brexit agenda evolves or who is in power.

Even so, in his first few weeks in office, Prime Minister Boris Johnson has set out an ambitious domestic policy agenda – including 'fix[ing] the crisis in social care once and for all'; increasing funding for schools, the police, prisons and the NHS; and reinvigorating growth across the country. Likewise, the main opposition Labour party – which could take power if, as seems likely, an election is held later this year – used its last election manifesto and recent party conference to set out a wide range of domestic policy priorities. If either were to deliver on these promises, it would mark a notable change from the past three years when domestic policy has languished. But achieving such objectives will require the government to overcome several major barriers.

One of the issues will be finding the money needed to pay for some of these commitments. But progress on domestic policy under the last government was also hampered by the pressures of delivering Brexit, which consumed civil servants', ministers' and parliamentary time; the lack of a parliamentary majority and the breakdown of Cabinet discipline, which (even beyond Brexit) made it difficult to pass anything other than routine or relatively uncontroversial legislation; and unusually frequent turnover of

ministers, which deprived several areas of domestic policy of the political focus, continuity and drive needed to push through changes.

In this chapter, we analyse these barriers to progress in Mrs May's government and the extent to which they will continue to affect policymaking in different areas in the years to come. We also make recommendations to help the government – whoever is in power – to overcome some of these challenges.

Key findings

- **The all-encompassing nature of Brexit, the lack of a parliamentary majority and tight public finances created difficulties for Theresa May in advancing domestic policies.** Brexit imposed significant demands on civil servants' and ministers' time, at the expense of progress on the government's domestic priorities such as tackling 'burning injustices', reforming social care and delivering major infrastructure projects.

- **Progress on domestic policies under Mrs May's government was also undermined by poor Cabinet and party discipline and rapid turnover of ministers, both of which were partly a result of disagreement over Brexit.** Mrs May's task was made harder by her loss of the Conservatives' parliamentary majority at the 2017 election, following which the government suffered defeats in parliament on both Brexit and non-Brexit legislation.

- **A general election could break the current parliamentary deadlock, which has left new prime minister Boris Johnson hamstrung. But any future prime minister could still face many of the same difficulties in making progress on domestic policy.** Brexit in whatever form will continue to place demands on civil servants' and ministers' time and could continue to test Cabinet discipline and party allegiances in parliament; keeping no deal on the table will make it harder still to make progress on domestic policy. Tight parliamentary arithmetic has made passing major legislation difficult. Without a general election – and perhaps with one – any government will struggle to build coalitions to pass new legislation.

- **Negotiating a future trade relationship with the EU once the UK has left the bloc – with or without a deal – would be more difficult than negotiating the Withdrawal Agreement over the past three years.** Negotiations with 'third countries' take place on a different legal basis with a more complicated process and require ratification by all 27 member states, while the difficult trade-offs revealed in the withdrawal negotiations' would be likely to persist.

- **Despite these challenges, the government could do more to make progress on domestic policy.** It must set clear and limited priorities, enforce Cabinet discipline, avoid frequent ministerial reshuffles and set clear fiscal objectives. To increase its likelihood of success, particularly in controversial policy areas, the next government should be clearer about how additional public spending can help achieve its objectives and where other approaches (beyond just money) are needed, build cross-party support in some areas and make space for long-term thinking.

8. Options for cutting direct personal taxes and supporting low earners

The new prime minister has expressed a desire to radically overhaul the direct personal tax system. During his leadership campaign, Boris Johnson announced plans to cut income taxes for high-income individuals by raising the higher-rate threshold (HRT) from £50,000 to £80,000, and to raise the point at which people start paying National Insurance contributions (NICs) to help low earners. The new chancellor has expressed similar intentions to lower taxes and also to simplify the tax system.

This chapter sets out the impacts of the prime minister's proposed policies. We argue that these are big – and costly – reforms, both of which will predominantly help those in higher-income households. We also examine other ways the government could cut taxes for high-income individuals whilst at the same time simplifying the system, and analyse a more targeted way to boost the incomes of low-earning families by raising work allowances in universal credit.

Key findings

- **Raising the higher-rate income tax threshold (and the National Insurance contributions thresholds that are aligned with it) from £50,000 to £80,000 in 2020–21 would cost £9 billion per year and cut taxes for the highest-income 8% of individuals.** The cost of the policy would be lower, both in the short and long run, if the threshold were raised more gradually. For example, an £80,000 threshold in 2024–25 would cost £8 billion per year relative to current plans.

- **This is a substantial and expensive tax cut from which only those on high incomes would gain.** It would offset some of the big tax increases that have affected the very highest earners since 2009.

- **Raising the higher-rate threshold to £80,000 in 2020–21 would take 2.5 million people out of paying the higher rate**, reversing the increase over recent decades and taking the number of higher- (or additional-) rate taxpayers to its lowest level since the UK's individual tax system began in 1990–91.

- **The government should remove the tapered withdrawal of the personal allowance from £100,000 per year**, which creates a £25,000-wide 60% marginal income tax band and affects ever more people each year. Raising the higher rate of income tax from 40% to 45% above the proposed new higher-rate threshold of £80,000 would cover most of the cost to the exchequer of removing this bizarre and opaque feature of our income tax system.

- **Raising the point at which employees and the self-employed start to pay National Insurance contributions (NICs), from its planned level of £8,788 per year in 2020–21, would cost about £3 billion for every £1,000 by which it is raised.** If the employer NICs threshold were raised alongside this, the total cost would be £5 billion. Raising NICs thresholds would benefit everyone who currently pays NICs – all workers above the bottom 12% of the weekly earnings distribution, or any employee aged 25+ working at least 20 hours per week at the national living wage.

- **Raising the NICs threshold is the best way to help low and middle earners through the tax system, but if the aim is to help the lowest earners, increasing work allowances under universal credit is much more effective.** Only 3% of the total gains from raising the NICs threshold (either by £1,000 or to the personal allowance threshold) would accrue to the poorest fifth of households. Spending £3 billion on increasing work allowances could raise the incomes of the poorest fifth of households by 1.5%, compared with less than 0.1% under an equally costly NICs cut. □

9. A road map for motoring taxation

Taxes on motoring raise around £40 billion a year for the exchequer (around 5% of government revenue), equivalent to about £750 per adult in the UK. Most of this comes from fuel duties, which in 2019–20 are expected to raise £28 billion in their own right plus an additional £5.7 billion from the VAT payable on the duties. Another £6.5 billion comes from vehicle excise duty (VED) and £0.2 billion from the London congestion charge.

These taxes also affect people's decisions about the vehicles they buy and how much, when and where they drive them. This is important because motoring gives rise to a number of social costs that would not otherwise be reflected in the prices people pay – such as congestion, greenhouse gas emissions, local air pollution, accidents and noise. Well-designed motoring taxes can be used to influence these behaviours and reduce the social costs associated with driving.

Fuel duty revenue has been eroded by a combination of cash-terms freezes and improving fuel efficiency. With the advent of electric cars, revenue from this tax is set to disappear altogether in the coming decades if the government meets its commitment to reach zero net emissions by 2050. Good news for emissions is bad news for the government coffers.

Alternative taxes will be needed to ensure the social costs of motoring are reflected in the prices people pay. The government should take the opportunity it has now to set out both its long-term strategy for taxing motoring and how it will get there. There is a window of opportunity to do this quickly, before revenue from fuel duties disappears entirely. In this chapter, we examine both how satisfactorily tax policy treats motoring as we find it today and how it might be made ready for the future.

Key findings

- **Driving imposes costs on wider society. According to government estimates, the biggest of these by far is congestion (80% of the total).** Government estimates for 2015 suggest that each additional kilometre driven caused an average of 17p of societal harm. Other costs include accidents, greenhouse gas emissions, local air pollution and noise. While the additional cost of greenhouse gas emissions, at 1p per kilometre driven, may sound small, this still equates to £4 billion per year across the UK.

- **Fuel duties and the VAT paid on them account for more than four-fifths of revenue from motoring taxation and they are very well targeted at emissions. But they do a poor job of capturing the costs of congestion**, which vary hugely by time and place. Fuel duty rates are set higher than can be justified by emissions alone, but are much too low – and too poorly targeted – to reflect the costs of congestion.

- **Fuel duties have a roughly equal impact (as a share of spending) across the income distribution, but among car owners make up a greater share for lower-income households.** For nearly one household in twenty, fuel duties (and the VAT on them) make up a tenth of their total non-housing budget and for many driving is a necessity, one reason why this is an unpopular tax.

- **A 2p/litre cut in fuel duty rates would cost about £1 billion a year. But revenue from existing motoring taxes (which raise £40 billion a year) will all but disappear anyway in the next few decades** if the government's goal of achieving zero net emissions by 2050 is met.

- **This means the government needs to rethink how it taxes motoring. It should start now**, before the revenue disappears and expectations of low-tax motoring become ingrained. It should lay out how it plans to tax low-emissions driving in the long term whilst incentivising the take-up of lower-emissions cars in the short term.

- **A system of road pricing where charges vary by time and location is the best way to incorporate the costs of congestion into the prices paid by drivers.** Such systems are technologically feasible and are used in a number of cities worldwide. Failing that – or, better, as a stepping stone towards it – the government could introduce a flat-rate tax per kilometre driven, which would at least continue to raise revenue and discourage driving once alternatively fuelled vehicles replace petrol and diesel ones.

- **In the meantime, with conventionally fuelled cars still common, the government should move to monthly indexation of fuel duties in line with the Consumer Prices Index.** There is no case for the recurrent ritual of the past eight years, when planned inflation uprating of fuel duties has been repeatedly cancelled for one more year while assumed to recommence thereafter. But to tackle the harm that driving does, now and in the future, the government should look beyond the existing set of taxes.

1. Global outlook: sea change

Benjamin Nabarro and Christian Schulz (Citi)

Key findings

- **The global growth outlook has deteriorated.** Having grown by an above-average 3.2% in 2018, world output growth looks set to fall to a below-average 2.8% in 2019 and stay there in 2020. The downturn is spread across advanced economies and emerging markets, but focused on the manufacturing hubs so far.

- **China's rebalancing hurts its supply chains.** Export- and investment-led growth allowed China to become the world's second economy, but reached financial and environmental limits. The inevitable shift towards domestic consumption and innovation slows growth in China and its supply chains, including Germany and Japan.

- **US trade wars compound China's troubles and sow uncertainty.** US President Donald Trump's administration is imposing tariffs, hurting exports in the targeted economies and raising prices at home. More importantly, business investment suffers globally as uncertainty about supply chains spreads.

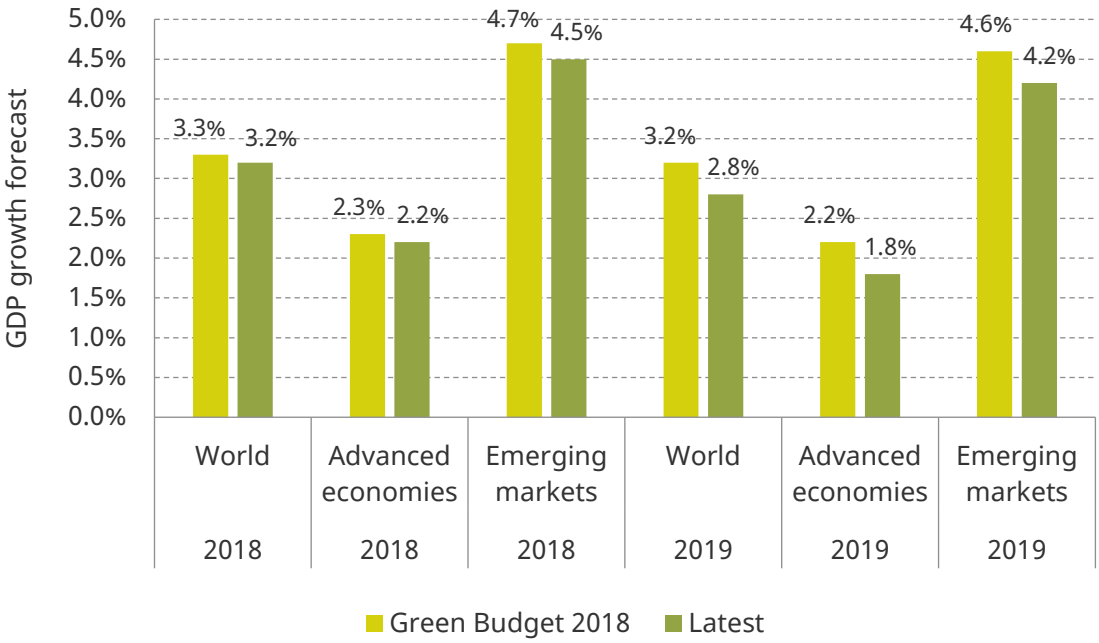
- **In the medium term, we forecast that US growth will remain strong, China's growth rate will slow, and parts of Europe will flirt with recession.** While global trade and manufacturing are in recession, domestic demand remains resilient. The US still enjoys large fiscal stimulus, but as the boost from this winds down its growth rate will slow to potential soon. Chinese growth is falling gradually. In Europe, Germany and Italy are close to recession, but France and Spain are more resilient.

1.1 Introduction

The phase of synchronised growth the world enjoyed in 2017 and early 2018 has come to an end. Following two years when the global economy finally expanded faster than its long-run average of 3.0%, growth looks set to slow to 2.8% in 2019. That is a significant disappointment compared with our expectations a year ago in the 2018 Green Budget, where we had expected 2018 global growth in the economy (gross domestic product, GDP) of 3.3%, followed by 3.2% in 2019.

As Figure 1.1 shows, the disappointment has come in equal measure from advanced economies (AE) and emerging markets (EM). A year ago, we expected stable above-average AE GDP growth of 2.2% in 2019, followed by a return to trend levels mainly as the impact of the fiscal stimulus in the US was expected to fade. Emerging markets were expected to expand at a steady rate of 4.7% in 2018, 4.6% in 2019, rising to 4.9% in 2020. According to the latest data, EM expanded by only 4.5% in 2018, are on course to experience a slowdown to around 4.2% this year and are expected to return to only 4.5% next year – and even that is subject to downside risks.

Figure 1.1. GDP growth forecasts in Green Budget 2018 versus latest actual and projections, 2018 and 2019



Source: IFS Green Budget 2018 and Citigroup Global Economic Outlook and Strategy (July 2019).

While idiosyncratic developments played a role in the slowdown in some economies (especially in emerging markets such as Turkey and Argentina), in our view the key drivers of the downturn are China's rebalancing and US trade wars.

The global downturn has also changed the policy narrative again. After years of gradual 'normalisation', with fading asset purchases and rising interest rates, central banks are cutting interest rates again; on 18 September, the US Federal Bank cut its key interest rate by 25 basis points (0.25 percentage points), only the second cut since 2008. And because government borrowing costs are so low at the moment and the effectiveness of yet more central bank intervention to combat an economic downturn is in doubt, fiscal policy trends could also move to a more expansionary setting.

In this chapter, we set out the factors driving this across-the-board downgrade to growth prospects. Section 1.2 outlines the influence of two big forces buffeting the global economy: a slowdown in the Chinese economy as it weathers the disruption caused by rebalancing towards a consumption-led model for growth, and the trade wars the US has started with China and the rest of the world. We also discuss the role of fiscal and monetary policy in addressing this slowdown. Section 1.3 presents our forecasts for the US, China and the eurozone for the next three years. Finally, Section 1.4 concludes.

1.2 Drivers of the global slowdown

China's rebalancing

Since the 1980s, China has grown by leaps and bounds to become the world's second-largest economy and one of its largest trading blocs. For decades, this growth model was based on low labour and other factor costs, as well as rapid investment and export

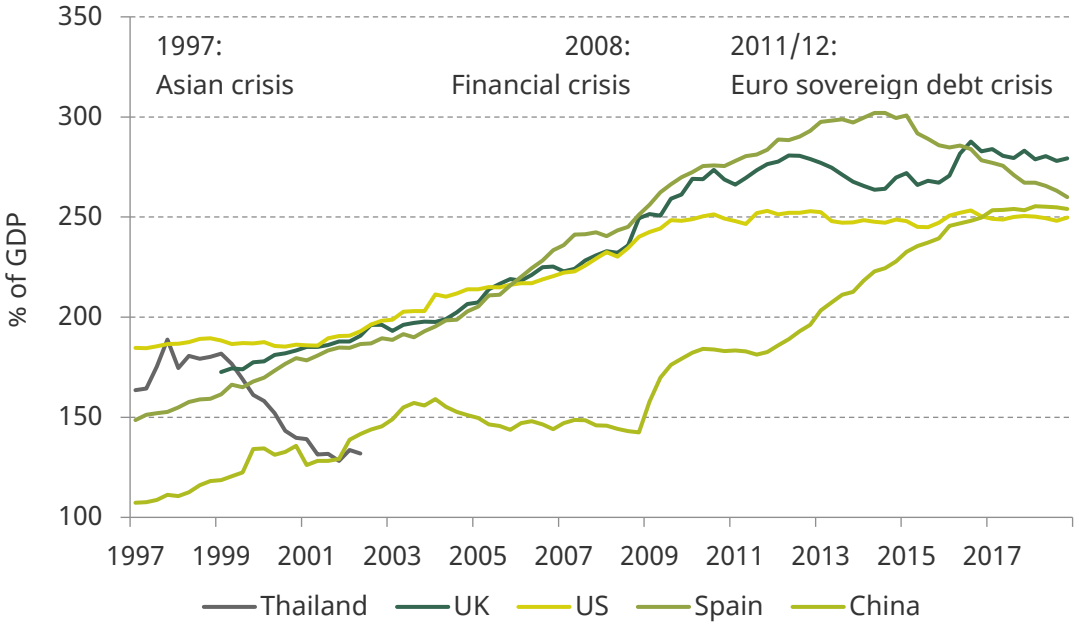
growth. Growth was funded by many years of household saving rates of close to 40% of disposable income, compared with around 10% or less in most advanced economies, which depressed private consumption below its potential. This allowed China to fund a credit boom without having to import capital and run a current account deficit. However, it leaves household savings exposed to a potentially fragile financial system, and probably drives further precautionary household saving to offset the risks.

While successful in delivering growth, this model had many side effects, including a large credit expansion, spiralling real estate prices and environmental pollution. Chinese non-financial sector debt rose from 150% of GDP at the time of the global financial crisis to 250% of GDP in 2016, a level at which advanced economies with arguably more sophisticated macro-prudential oversight such as the UK and the US succumbed to financial crises (see Figure 1.2). Chinese debt is not far below the levels at which the Spanish banking crisis in 2011–12 erupted, and is much higher than the debt levels that contributed to the Asian crisis in 1997 – for example, in Thailand.

As the economy matures and the gains to be had with the old growth model are increasingly outweighed by their negative side effects, Chinese authorities decided to begin rebalancing away from investment and exports and towards domestic consumption and innovation. Part of this process was curbing credit growth and some of the excess in the financial system – for example, by reining in the shadow banking system – as well as reducing environmental pollution. These policies should yield some results – for example, by stabilising China's non-financial debt ratio (see Figure 1.2).

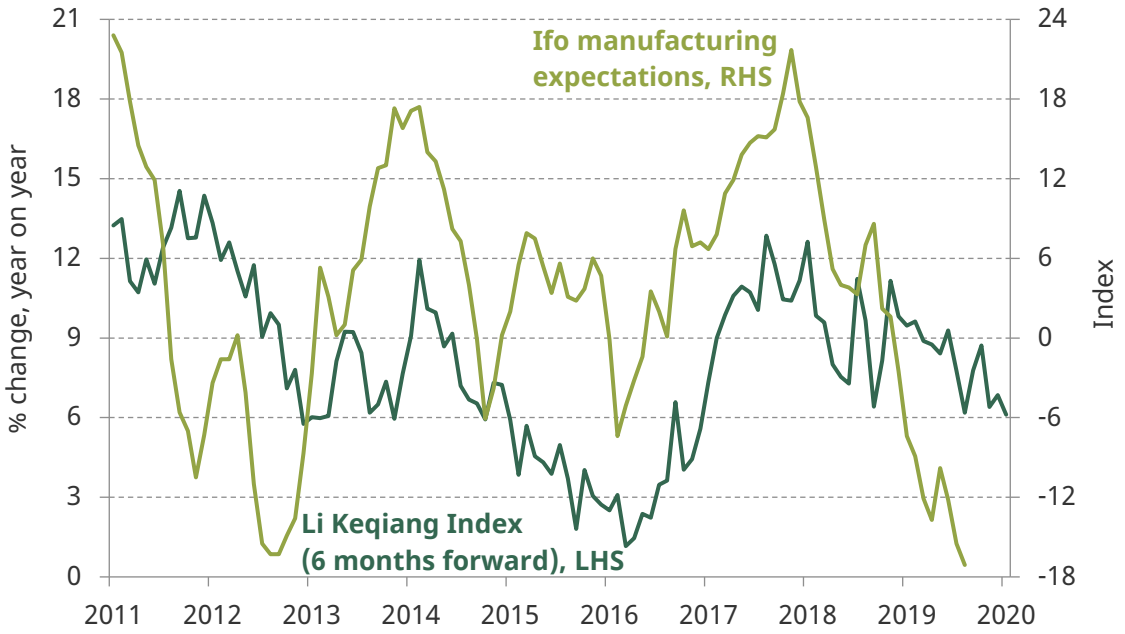
Rebalancing any economy often comes at a short-term cost. Depending on the size of the imbalances that need correcting and the pace of adjustment, domestic demand can suffer for a few years. Such reforms are thus most easily done during a period of strong external demand. Hence, the start of China's rebalancing process conveniently fell into the globally

Figure 1.2. Credit to the non-financial sector from all sectors in selected countries



Source: Bank for International Settlements and Citi Research.

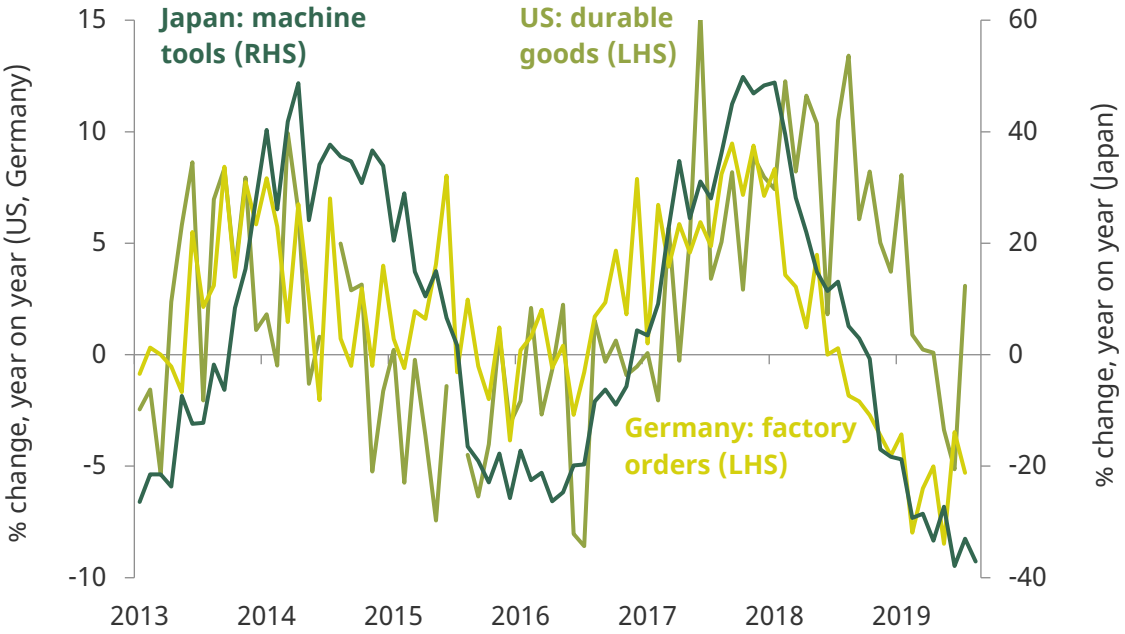
Figure 1.3. The Ifo manufacturing index (Germany) and year-on-year growth in the Li Keqiang Index (China)



Note: The Li Keqiang Index measures electricity consumption, railway freight and loans growth in China and so provides an indicator of economic growth. The Ifo manufacturing index is a leading indicator for economic activity in Germany. The figure plots the Ifo index over time against the annual growth rate of the Li Keqiang Index from six months earlier.

Source: Ifo Institute, Bloomberg and Citi Research.

Figure 1.4. Year-on-year growth in industrial orders in the US, Germany and Japan



Source: US Census Bureau, Germany Destatis, Japan Machine Tool Builders' Association and Citi Research.

synchronised upswing of 2017. While much of the official economic growth data remained steady, some more specific indicators such as purchasing managers' indices (PMIs, which survey companies' purchasing managers about their activity, including new orders, factory output, supplier delivery times, prices and employment) or the Li Keqiang Index (which combines measures of electricity consumption, railway freight and loans growth) peaked and have since started to decline.

For some time, China's domestic slowdown went more or less unnoticed. However, the world economy has become so dependent on China as a source of demand growth that by later in 2017, the Chinese slowdown started to leave a mark on global manufacturing powerhouses such as Japan and Germany.

This reflects the already-big and growing importance of China to other manufacturers' economies. For example, China is not only the largest single-country trading partner for Germany, accounting for 7% of its exports; it has also been the fastest-growing one. In the 2000s, China accounted for about 2% of German exports. This share has since quadrupled, so companies may well extrapolate that China will account for more than 10% of their external sales on average in the next cycle, even accounting for slower growth rates.

That means China matters more than stable large markets such as the US and Europe when companies plan new investment into additional capacities, and thus weighs significantly in manufacturing sentiment. In fact, as Figure 1.3 shows, Germany's Ifo manufacturing index seems to echo turns in Chinese growth momentum reliably, with a six-month lag. From Japan, Germany and others, the downturn then also spread to the manufacturing sectors in other economies, including the US (see factory orders in Figure 1.4).

Since the US administration started announcing and imposing tariffs on Chinese exports from January 2018 (starting with washing machines and solar panels) onwards, China's economy has been experiencing an additional downward draught. In response, Chinese authorities tried to provide monetary and fiscal stimulus, but perhaps not as decisively as in previous downturns due to the financial stability constraints posed by the rebalancing. In particular, Chinese authorities had to contend with rising US interest rates and a strengthening US dollar, which put strain on China's capital account. Most Chinese growth data suggest that the slowdown is continuing and thus continues to weigh on global manufacturing.

US trade wars

Rebalancing the US external trade account was one of US President Donald Trump's key pledges during the 2016 election campaign and one of his priorities when he took office in 2017. The new administration swiftly began by reopening existing trade deals, such as NAFTA (with Canada and Mexico) and KORUS (with South Korea), in 2018.

The administration also began introducing trade barriers, starting with tariffs on Chinese solar panels and washing machines in January 2018. On 1 March 2018, Trump announced 25% extra tariffs on all steel imports and 10% on aluminium imports (from around the world) under the pretext of national security concerns (USTR section 232) and later in the month tariffs on $50 billion worth of annual imports from China (USTR section 302). That opening salvo quickly triggered retaliatory tariffs, in particular from China and the EU, which then started a tit-for-tat escalation to a multi-front US trade war. By July 2018,

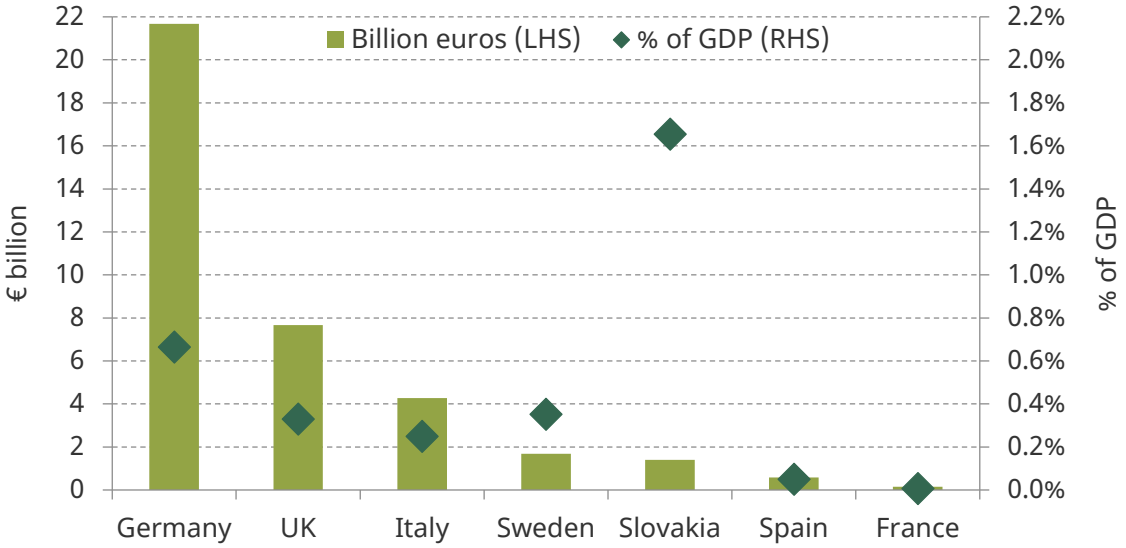
President Trump had announced 25% tariffs on an additional $200 billion worth of Chinese imports and – despite some delays and negotiation tactics – is currently on track to have imposed at least 15% tariffs on almost all of China's more than $500 billion worth of annual exports to the US by the end of 2019.

In May 2018, the Trump administration also started the process of imposing penalty tariffs on car imports. As Figure 1.5 shows, this would hit European economies hard – Germany, the UK and – as a share of GDP – Slovakia would be especially affected. The EU got at least a temporary reprieve in July 2018, when President Trump agreed with EU Commission President Jean-Claude Juncker to suspend any new announcements of tariffs while the two sides negotiated a relatively narrow agreement on non-auto industrial goods and regulatory cooperation. However, no progress has been made since then as the talks have stalled over debates on their scope: the US wants to include agricultural goods in the talks, while the EU wants to also include cars. President Trump effectively delayed the imposition of car tariffs to November 2019.

Increased protectionist measures on such a scale clearly depress global trade growth and thus demand and output across the world. However, the current unprecedented scale and scope of US trade wars has consequences well beyond their direct impact on global trade – namely, their impact on economic sentiment. The global manufacturing PMI has plunged from a cyclical peak of 54.5 in December 2017 to 49.5 in August 2019, below the 50.0 mark which separates expansion from contraction. The hit to business sentiment resulting from the Sino-US trade conflict is likely particularly large for three reasons:

- **The scale of the bilateral economic relationship.** The importance of the US and Chinese economies both to each other and to the global economy as a whole essentially means no economy in the world is isolated from the trade wars, since all likely have some exposure either to flows of goods and services between the two economies directly or to the economies themselves (or both).

Figure 1.5. Car exports to the US (€ billion and % of GDP), 2018



Note: Major car producers in the eurozone plus UK and Sweden.

Source: Eurostat and Citi Research.

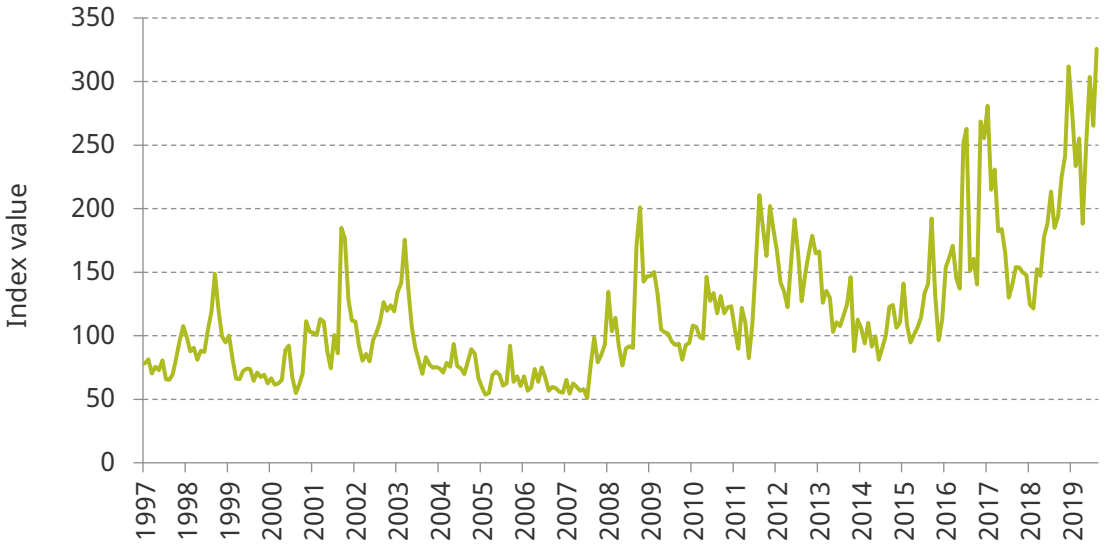
- **The nature of the strategic conflict between the two countries.** The US has branded China a 'strategic competitor', meaning that – rather than reflecting a specific issue of economic policy – it takes broader issue with China's growth and development, likely making the subsequent conflict difficult to reconcile. Couching the conflict in geopolitical terms also increases the risk that the economic conflict spreads beyond trade into other areas, including finance. This increases the risk of further escalation, via both intensification in existing areas and extension to new ones, depressing domestic and cross-border investment.[1]

- **The explicit rejection of past multilateral norms** by the Trump administration increases the risk that such actions are extended to other regions and countries, including Europe. The US has traditionally played a particularly essential, central, role in these global economic institutions (such as the World Trade Organisation and the Paris Climate Accord) which Europe and its trade rely on. Its withdrawal may also reduce confidence among third countries in their dealings with one another, especially given the disruptive trends in national politics in several global regions.

As a result, escalations in Sino-US trade conflicts have had a particularly severe impact on global economic uncertainty. Recent measures suggest a synchronised increase in uncertainty across the advanced economies in recent months. The Global Economic Policy Uncertainty Index, which tracks the coverage of policy uncertainty in selected newspapers in 20 countries, reached all-time highs (see Figure 1.6).

As a result, across the G7, business confidence has fallen sharply since 2017; levels now – for example, on the purchasing manager indices – appear to be at their lowest since the European sovereign debt crisis aftermath in 2013. This has had – as one would expect – a

Figure 1.6. Global Economic Policy Uncertainty Index



Note: The Global Economic Policy Uncertainty Index measures the coverage of policy rated uncertainty in selected newspapers in 20 countries.

Source: Economic Policy Uncertainty and Citi Research.

[1] B. S. Bernanke, 'Irreversibility, uncertainty, and cyclical investment', *Quarterly Journal of Economics*, 1983, 98, 85–106, https://doi.org/10.2307/1885568.

detrimental effect on business investment. Across the G7, as business sentiment has deteriorated, the average weight of gross fixed capital formation in growth has declined, reversing the growth seen in 2016–17.

For Europe and the UK specifically, US trade wars present two major downside forces:

- The **direct confrontation** over steel and potentially cars is already hitting manufacturers and their supply chains. Car tariffs could shave up to 0.3% off EU GDP over a year or two, with the effect on the UK equal to the EU average and the impact on Germany above it. If this morphs into a broader conflict similar to the US trade war with China, the impact would grow. In 2018, eurozone and UK goods exports to the US were worth 2.8% and 2.3% of GDP, respectively, according to IMF Direction of Trade data.

- The **collateral damage** of the US–China trade war is already harming European economies, including the UK's. China has become the single largest trading partner for important European economies such as Germany and – more importantly – has been by far the largest source of external demand growth over the last two decades. Slowing Chinese economic growth associated with the trade war is likely reducing demand for EU exports. In addition, some of the value added exported by the EU to the US is also via Chinese exports (1.2% of the total value added exported by the UK to the US is via Chinese exports according to 2015 OECD data, 2.8% for Germany). This is more directly affected by increased tariffs. Finally, European companies export to the US directly from China. That is becoming less competitive and thus weighing on these companies' cash flows and their capacity to invest, including in their home markets.

On the other hand, the trade wars also present one major opportunity for Europe and the UK specifically: trade diversion from US trade wars can benefit European companies. For example, European competitors to Chinese companies can benefit in US markets and European rivals to US companies have a relative advantage in China now. That could be a lasting advantage, even if future US administrations return to more conventional trade policies. In addition, US trade tactics may already have made the EU a relatively more attractive partner for free trade agreements, as witnessed by recent trade agreements with Canada, Japan, Singapore and, most recently, potentially Mercosur (whose full members are Argentina, Paraguay and Uruguay).

The prospect of the US stopping its trade wars is declining as the country heads into the 2020 presidential elections. A US–China trade deal is no longer our base scenario before the election. Pew polls suggest that American voters have an unfavourable opinion of China and, since even the opposition Democrats have issues with trade in general and Chinese competitive practices specifically, President Trump is unlikely to see much pushback from Congress on his current policies towards China. Even if a veneer of a deal did emerge before then – for example, because President Trump's re-election prospects decline – the level of uncertainty would remain high across global trade links and supply chains. This uncertainty could push the global economy into recession as defined by real growth rates below 2%.

Sea change: central banks pivoting, fiscal policy too?

The shift from globally synchronised growth in 2017 and 2018 to a broadening slowdown in 2019 has also triggered a marked shift in the outlook for monetary policy and, by extension, for global financial markets. For several years, central banks began to

'normalise' policy. The European Central Bank (ECB) phased out its asset purchase programme, the Bank of England raised interest rates twice (albeit to a peak of just 0.75%) and the Fed even got its main policy rate to 2.5% in late 2018. However, financial markets appeared to think that the Fed in particular had gone too far. There was a sell-off in the equity market in late 2018, while the yield curve inverted as longer-term interest rates fell below short-term ones (a rare occurrence which often predicts imminent recession).

The Fed and the ECB quickly changed their tone as signs of an economic slowdown became undeniable. The Fed cut interest rates in July and September (so that they now stand at 1.75–2.0%), while the ECB announced a package of a 10 basis point (bp) policy rate cut to –0.5% and open-ended asset purchases of €20 billion per month in September. Other central banks across the world also cut interest rates. The Bank of England has not followed suit so far, largely because its policymakers believe that their policy rate is low enough for an economy with a tight labour market and rising wage growth that does not appear to be matched by rising productivity growth. The threat of a supply-side shock following departure from the EU may also warrant keeping the powder dry for the time being.

Most central banks have only limited policy space, i.e. they are not far away from the effective lower bound for their conventional policy tools. A deeper downturn could, given already low long-run borrowing rates, easily exhaust even the set of unconventional tools, such as quantitative easing, that they have used in recent years. In addition, policymakers are increasingly concerned by the potential side effects of these unconventional tools, such as financial markets that worry more about central bank intervention than the fundamentals of the assets they are buying or the side effects of negative interest rates on bank profitability and households' saving behaviour. Some central bankers may also worry about the distributional effects of their policy tools.

Limited policy space for central banks has in many cases led to a renewed call for more fiscal support, in particular in the direction of current account and fiscal surplus countries such as Germany and the Netherlands. The experience of the US with the large-scale tax cuts and spending increases under President Trump highlights that stimulus can be effective in providing at least a short-term growth boost, even with already high public debt levels (and even in the context of an economy operating at around its potential level). Low borrowing costs create fiscal space, in particular in those countries with the soundest public finances such as Germany or the Netherlands. In the UK and in Italy (whose fiscal position is weaker), proposals for tax cuts and spending increases abound across the political spectrum. While fiscal easing may be fading in the US in the election year 2020, next year could be the beginning of a trend towards looser fiscal policy and higher government borrowing in Europe.

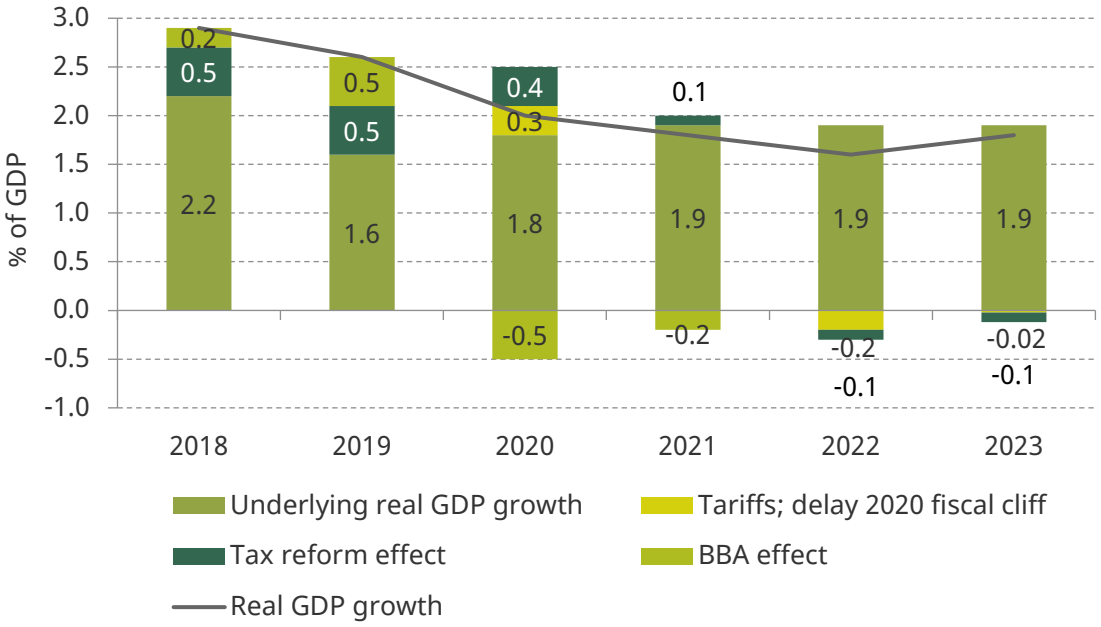
Whether central banks and governments will be successful in extending the cycle or only delay and perhaps worsen the inevitable reckoning will depend in part on the choice of fiscal tools. Allowing automatic stabilisers to work, for example, would already be of some help. Discretionary fiscal stimulus has a more mixed record and can have a delayed effect; this applies particularly to public investment when there are no 'shovel-ready' projects. But public investment can have a positive impact, if surplus countries contribute to a more structural rebalancing in the global economy.

1.3 Economic outlook by region

United States

Thanks to the growth-stimulating measures adopted since 2017 and despite the intermittent monetary tightening by the Federal Reserve, the US remained a relative growth outperformer among advanced economies until the first half of this year. After growing at 2.9% in 2018, we expect real GDP to advance at a still well-above-potential 2.6% year-on-year in 2019. Transitory drag from the government shutdown, tighter financial conditions and delayed tax returns (due to the government shutdown) caused consumption to slow between December and February before accelerating in recent months. We expect near-term US growth to remain above potential for the rest of the year. However, going forwards, the effect of last year's tax cuts and spending increases will fade (see Figure 1.7) and the deterioration of global growth will creep into US momentum by putting downwards pressure on exports. In the election year 2020, the economy will probably revert to its potential GDP growth rate of around 2% or slightly below as the fiscal stimulus unwinds further.

Figure 1.7. Estimates of real GDP growth and the impact of fiscal measures



Note: BBA = Bipartisan Budget Act 2018, which brought forward significant government spending from 2020 to 2019.

Assumptions

Final $1.5 trillion tax cut. Trump administration tax cuts remain in effect: cuts to personal income tax (leaving rates at 10%, 12%, 22%, 24%, 32%, 35% and 37%); larger standard deduction and fewer itemised deductions; corporate tax cut remains in effect (21%); income deductions for pass-through entities (20%); immediate investment expensing; repatriation and territorial tax. Obamacare individual mandate repealed. More spending on discretionary defence, veterans and infrastructure; less spending on discretionary non-defence items; hurricane relief from 2017 storms; discretionary budget caps by combined $300 billion in financial years 2018–19 and 2019–20.

Source: Congressional Budget Office and Citi Research 'Buy now, pay later – fiscal policy outlook for 2019 & beyond', 6 December 2018.

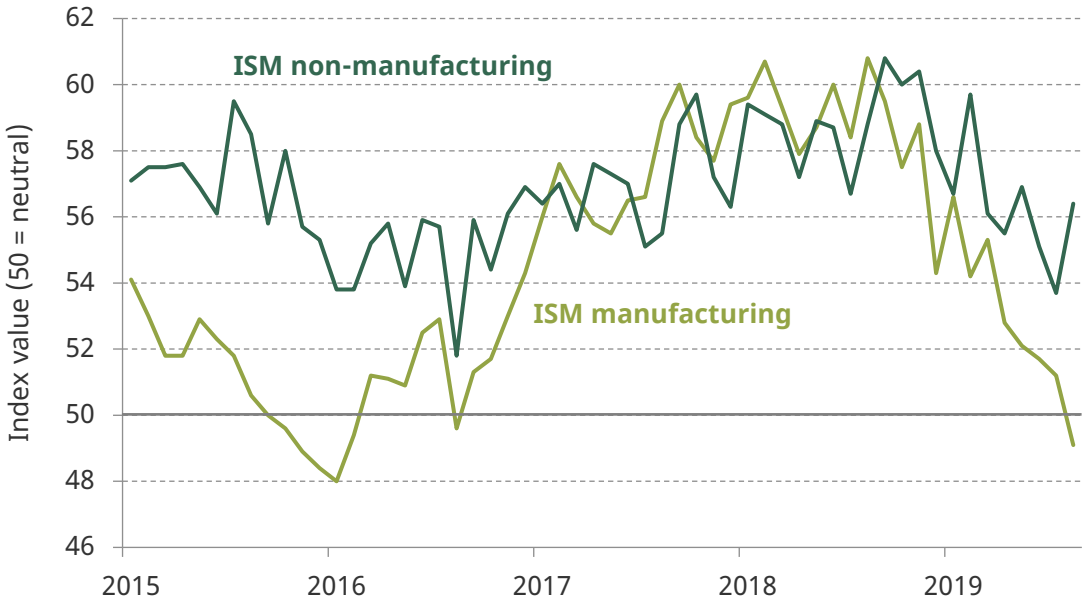
While growth in the US remains robust, the composition of growth has changed since the start of 2019. Business equipment investment slowed in the first quarter (Q1), which is likely to persist as manufacturers work off an inventory overhang. However, in keeping with the global trend, consumption has clearly rebounded in Q2. This, as in the UK, has been powered by strong job growth and wage growth running above inflation.

Employment growth may have slowed somewhat, but at 150,000–175,000 per month it remains well above the 75,000 per month necessary to avoid rising unemployment (average labour force growth is 120,000 per month, and the employment rate is just over 60%). Wage growth has reached a range of 3–3.5% year-on-year (YY), although it seems stuck there for the moment.

A subdued outlook for inflation means that this cash-terms wage growth will translate into real-terms earnings increases. Core inflation, as measured by the Personal Consumption Expenditure Price Index, is projected to spend the majority of the year below 2% YY, held down in part by a handful of transitory factors. Although wage growth is running above this level, stronger labour productivity growth and room for firms to compress profit margins should limit pass-through into price inflation, keeping inflation broadly at target.

So far, trade wars do not seem to have affected US headline economic growth very much and even trade with China remains generally robust. The main impact on the US economy so far appears to have been via manufacturing confidence, which Figure 1.8 shows has fallen into contraction territory on the Institute for Supply Management's measure. This is backed up by durable goods orders falling into negative territory this spring. Sentiment in the more domestic-oriented non-manufacturing sector has so far held up better, but may come under downward pressure if the manufacturing weakness persists.

Figure 1.8. ISM manufacturing versus ISM non-manufacturing



Source: Institute for Supply Management (ISM) and Citi Research.

This risk explains why the Fed turned dovish earlier this year and cut rates by a total of 50bp from 2.5% to 2% in July and September, despite the current robust domestic economic environment. Chair Jerome Powell has consistently emphasised risks to the domestic outlook stemming from slowing global growth and rising tensions over global trade, including in his congressional testimony in July and his speech at Jackson Hole over the summer. Further rate cuts are a possibility, but not our base case at the moment.

China

A year ago, we expected Chinese GDP growth to slow from 6.9% in 2017 and 6.6% in 2018 to 6.4% in 2019 and 6.3% in 2020. Indeed, China's GDP growth started 2019 with a 6.4% YY growth rate, but the fall in the rate of expansion to 6.2% YY in the second quarter triggered a downwards revision of our 2019 growth forecast. We therefore now expect official GDP growth to come in at 6.3%. Tighter financial and regulatory conditions due to the rebalancing of the economy and severe external headwinds from the US actions against Chinese exporters are only insufficiently counterbalanced by monetary and fiscal easing as well as the depreciation of the yuan.

Recent Chinese data have remained weak, suggesting that after a bit of a break over the summer, the easing bias of the policy stance may return. Headline fixed asset investment growth has been hovering around 6% YY (5.5% YY on average January–August 2019) since the middle of 2018, down from double-digit growth rates until 2016. In July, industrial production growth fell to 4.8% YY, the first sub-5% growth in over 15 years. And although the new focus on consumption has contained the slowdown of retail sales somewhat, their 7.5% YY growth in August this year was the lowest since 2003.

Survey data and unofficial growth data hardly paint a brighter picture. Following a temporary respite in late winter, China's official manufacturing PMI stayed in contraction territory below 50 from May onwards. The non-manufacturing PMI, at 53.8 in August, looks more robust, but is also at the lower bound of its range over the last two years. The unofficial Caixin data paint a similar picture. And, as mentioned in Section 1.2, the Li Keqiang Index also confirms an ongoing slowdown.

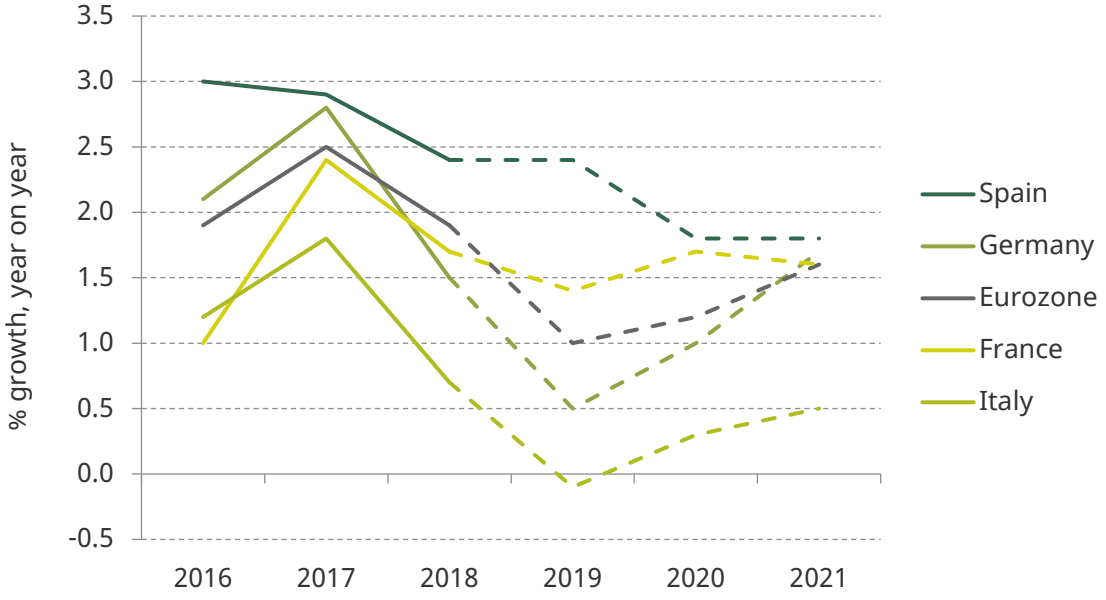
China's authorities will probably continue to do what they can to support the economy during US trade wars. The focus will be on infrastructure investment and the renovation of old urban residential communities. Monetary policy will be accommodative. However, we do not expect policymakers to drop their bias towards financial stability entirely, which limits chances for large-scale stimulus. That probably constrains how much further the yuan can depreciate, having broken through the symbolic threshold of seven per dollar in August 2019.

As a result, we expect the Chinese growth slowdown to continue, with official GDP growth likely slowing to 6.0% in 2020. Sub-6% growth rates are then likely from 2021 onwards.

Europe

In the 2018 Green Budget, we forecast eurozone GDP growth of 1.9% in 2018 and 1.7% in 2019 and 2020 each. That turned out to be too optimistic. On current data, the economy expanded by 1.8% in 2018, but for 2019 it is on track for only 1.0% growth. For 2020, our latest forecast is for growth of just 1.2%.

Figure 1.9. Year-on-year GDP growth in selected economies (actual and forecast)



Note: Dashed lines show forecasts.

Source: Eurostat and Citi Research.

The slowdown in euro-area GDP growth is almost exclusively driven by the drag from falling net exports and manufacturing output, and is concentrated in Germany and (to a lesser degree) Italy. In the case of the former, the above-mentioned dependence on China plays a great role and the exposure to US trade wars is also considerable. However, Figure 1.9 highlights a bigger slowdown in Germany than in the rest of the eurozone, and points to some home-made problems in Germany, too. That may mean Germany's weakness lasts longer, but also that the German economy could recover by fixing these idiosyncratic problems, even without relying on a Chinese growth recovery or an end to the US trade wars.

Italy's slowdown is partly a function of Germany's manufacturing recession, but partly also the result of tightening financial conditions. Following the formation of a populist coalition government with strong Eurosceptic leanings and rhetoric, the spread between Italian and German government borrowing costs widened to around 300bp, punishing Italian businesses as well as the government in Rome. Lately, this divergence has subsided as the most Eurosceptic coalition partner, Lega, catapulted itself out of government this summer.

In contrast to the manufacturing recession, final domestic demand growth in the eurozone edged up this year, including business investment; service sector sentiment remains robust; and countries such as Spain and France have hardly experienced any slowdown at all between 2018 and 2019, at least so far.

In the current global environment, the euro area is being somewhat penalised for its greater openness; European manufacturing firms have arguably been more successful than US firms in developing a presence to China and other emerging markets and selling goods made in Europe there. Also, some European economies have been more successful in retaining a manufacturing base than countries such as the US. This past success means

more exposure to the current global hit to manufacturing and so is now becoming a weak spot, especially for Germany.

Looking ahead, the key question for the euro area – but not just there – is whether and for how long domestic demand can be resilient to the external downturn. Fluctuations in the manufacturing cycle are not unusual. Unexpected adverse demand shocks create a capacity overhang, which then triggers the production downturn. Once capacity has been adjusted, production can rebound, often in combination with even just a small positive demand shock. However, with the unholy trinity of China's rebalancing, US trade wars and Brexit potentially not fading any time soon, risks that the manufacturing recession spreads to the rest of the economy are growing. Mass manufacturing layoffs could reverse the downwards trend in unemployment and would depress consumer confidence. Precautionary saving could rise with the associated fall in household spending, putting the economy at risk of a downward spiral.

The risk of a self-fulfilling downward spiral highlights the need for a circuit breaker, which is normally the role of the central bank. The ECB acted on 12 September, cutting its deposit rate by 10bp to –0.5% and restarting asset purchases. However, with eurozone interest rates already so low, the effectiveness of further ECB stimulus is highly questionable.

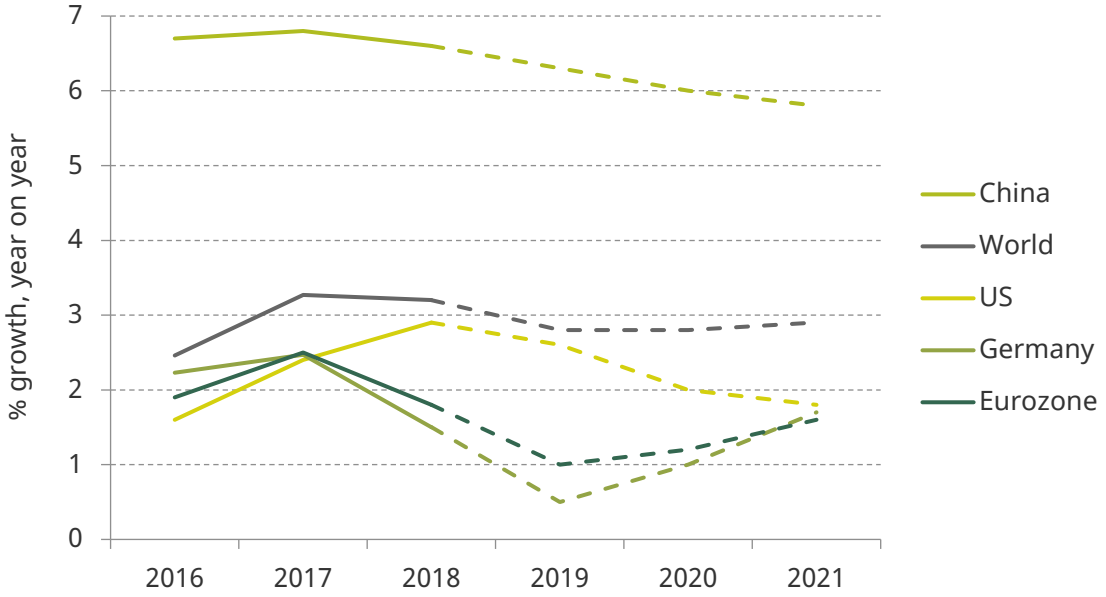
That puts the onus of being the circuit breaker on fiscal policy. The eurozone, as a whole, does indeed have a much better fiscal position than the US and the UK. However, there is no mandate for a joint fiscal policy. On the contrary, the distribution of fiscal space is lopsided, between surplus countries such as Germany (which could run a looser fiscal policy without pushing debt to worrying levels) and the highly indebted periphery. What is more, the fall in interest rates during a downturn creates extra fiscal space for Germany, while the experience of Italy in 2018 shows that under certain circumstances, interest rates rise in a downturn in the periphery, giving a pro-cyclical fiscal shock. This is because eurozone members effectively borrow in a foreign currency and their debt is thus not risk-free. The ECB (in combination with the European Stability Mechanism via the Outright Monetary Transactions facility) can be a lender of last resort, like central banks in other economies. However, at least since the 2011/12 sovereign debt crisis, the probability that a weak member state exits the currency rises in a downturn for economic and political reasons, leading investors to demand a higher risk premium.

The fact that the current downturn in the euro area is focused on Germany raises the chances that some pro-growth measures – whether outright stimulus or pro-growth structural reforms – will be forthcoming. In an optimistic scenario, that would also lead to some fiscal coordination in the eurozone which creates fiscal space across the currency area. However, we do not expect a large-scale stimulus and are thus sceptical that the eurozone economy can return above trend growth of 1–1.25% before 2021.

1.4 Conclusion

Global economic growth has taken a turn for the worse since the Green Budget 2018. China's rebalancing and US trade wars have triggered a global manufacturing downturn and a sharp slowdown in global trade. In particular, the new protectionist measures have triggered a degree of uncertainty which impacts the economy more than a normal mid-

Figure 1.10. Year-on-year GDP growth in selected economies (actual and forecast)



Note: Dashed lines show forecasts.

Source: National statistical offices and Citi Research.

cycle manufacturing downturn and weighs on business investment. The slowdown has triggered new monetary policy support, but with many central banks at or close to their effective lower bounds, central banks alone may struggle to extend the cycle. Fiscal policy could play a bigger part, as indeed it does already in the US, which stands apart with still strong growth. For the time being, however, our global growth forecasts – set out in Figure 1.10 – are more subdued than they were a year ago.

2. Recent trends to the UK economy

Benjamin Nabarro and Christian Schulz (Citi)

Key findings

- **UK economic weakness has been both more longstanding and more extensive than in other major economies.** Growth in the UK has been weaker than in other G7 economies since 2016, volatile through this year, and averaged only 1.3% in the second quarter of 2019, compared with the same period last year.
- **Unemployment is currently below its natural rate equilibrium, even while realised growth remains below potential.** This reflects weakness in productivity and investment since the referendum, but resilience in employment and household spending. Growth has become more consumption-driven as a result.
- **Private sector investment is particularly weak.** Business investment has witnessed its most sustained period of weakness outside of a recession and is now the lowest in the G7.
- **The sharp divergence between growth in UK private sector investment and that in other developed economies coincides with the post-referendum period**, reflecting a sharp and sustained increase in economic uncertainty. This has increased the perceived risk associated with investments and reduced quarterly private investment by around 15–20% compared with if business investment had continued to grow in line with pre-referendum trends. Ongoing worries about the risk of a 'no deal' Brexit are particularly damaging to investment.
- **High employment, a falling exchange rate and low levels of investment have already led to unit labour costs rising sharply.** Low investment now will lead to low growth in productivity and earnings in the future.
- **GDP is roughly 2.5–3.0% (£55–£66 billion) below where we think it would have been without Brexit.** Based on pre-crisis forecasts and global economic performance in 2017 and 2018, we suspect the UK has missed out almost entirely on a bout of global growth, which would normally have boosted exports and investment.
- **A recovery in growth from here is likely to require a profound reduction in policy uncertainty.** Without investment and improvements in labour productivity, growth is likely to slow further.

2.1 Introduction

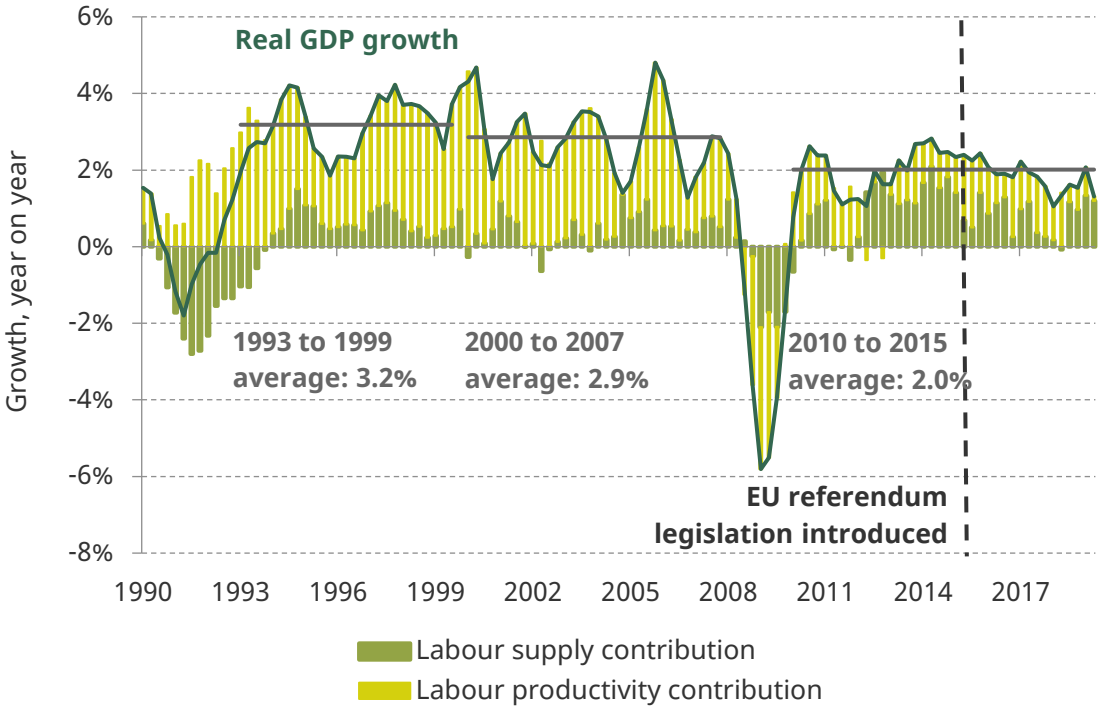
The outlook for economic growth is essential context for any fiscal event, with important implications for the public finances, public spending, taxation and living standards. As

Chapter 1 discusses, 2019 has been a year of intensifying headwinds to global growth, from US-initiated trade wars to a slowdown in both the Chinese and European economies.

But while these global trends have undoubtedly influenced UK economic performance in recent quarters, growth has also been driven – perhaps even more than usual – by idiosyncratic, domestic concerns. The UK's economic performance since the 2016 EU referendum looks relatively unique in cross-national comparison. The rest of the G7 has seen average year-on-year growth between 2016 and 2018 exceeding its average over the preceding six years (see Figure 2.20). By contrast, UK growth has lagged.

Uncertainty around the UK's departure from the European Union has played a key role. Growth in the size of the UK economy – known as gross domestic product or GDP – for the second quarter of this year was 1.3% (on an annualised basis) compared with the same quarter in 2018. That is somewhat below its potential of 1.4%, as estimated by the Bank of England,[1] and – as shown in Figure 2.1 – well below the average of 2.0% per year in the post-crisis, pre-referendum period between 2010 and 2015. While labour input appears to have continued to grow, and in fact accelerated over the last four quarters (see Figure 2.1), productivity growth has stalled. In part, this lack of productivity growth has been a feature since the 2008 financial crisis, but this has deteriorated further most recently.

Figure 2.1. UK real economic growth, year on year



Note: Labour and productivity growth contributions are derived assuming a simple two-factor Cobb–Douglas production function. Labour share is taken from the Office for National Statistics (ONS) assuming self-employed income is equal to that of employees on average. Labour supply is measured as the total hours worked.

Source: ONS and Citi Research.

[1] Table 3.C of Bank of England, *Inflation Report: February 2019*, https://www.bankofengland.co.uk/inflation-report/2019/february-2019.

In the most recent quarter for which GDP data are available, the second quarter of 2019 (Q2, April–June), GDP fell by 0.2% quarter-on-quarter (QQ). This was the first quarterly decline in UK GDP since the last quarter of 2012 and thus since the end of the eurozone sovereign debt crisis. The drop partly reversed the 0.6% QQ gain in the first quarter of 2019.

The economy started the third quarter on a brighter note, with a 0.3% month-on-month gain in gross value added in July, driven by the services sector. However, soft data for Q3 such as the Purchasing Managers' Indices (PMIs) suggest that output is likely to stagnate in Q3 as a whole. Beyond that, uncertainty about the further short-term path is very high, to put it mildly. The UK is scheduled to leave the EU on 31 October, but at the time of writing, there is no clarity over whether it will do so in orderly fashion with a deal, or without a deal, or whether it will reverse the decision to leave or take more time to make up its mind. This is discussed in depth in Chapter 3. Here, we provide a brief review of recent economic trends that provide context for this uncertain outlook.

In the sections below, we begin by discussing the components of headline UK growth. Section 2.2 provides an overview of the composition of UK growth in recent quarters, followed by more in-depth discussions on private business and residential investment (Section 2.3) and other parts of GDP by expenditure (Section 2.4), such as private consumption, public spending, inventories and trade. Following a comparison of our latest baseline forecasts with the projections in the 2018 Green Budget (Section 2.5), we conclude this chapter with a brief discussion of the effect of the Brexit process on the UK economy thus far in Section 2.6.

2.2 Recent UK growth

In the second quarter of 2019, UK GDP rose by 1.3% compared with the same quarter in 2018 (YY). However, this headline figure masks considerable divergences and notable changes in the respective subcomponents of GDP. For example, private consumption rose by 1.7% (above 2010–15 averages) and government consumption by 4.0% YY. By contrast, total investment (gross fixed capital formation, GFCF) edged up by merely 0.3%. Even this masks significant differences between private investment – where business investment fell by 1.4% and private sector dwellings investment grew by only 1.1% – and investment by the public sector, which grew by a considerable 6.1%. In total, final domestic demand added 1.2 percentage points (ppt) to GDP growth.

Many of these atypical divergences have emerged since the referendum, resulting in a marked change in both the composition and level of growth. As Figure 2.2 shows, investment growth (measured by GFCF) has weakened since the referendum while the contributions of private consumption to growth have stiffened.

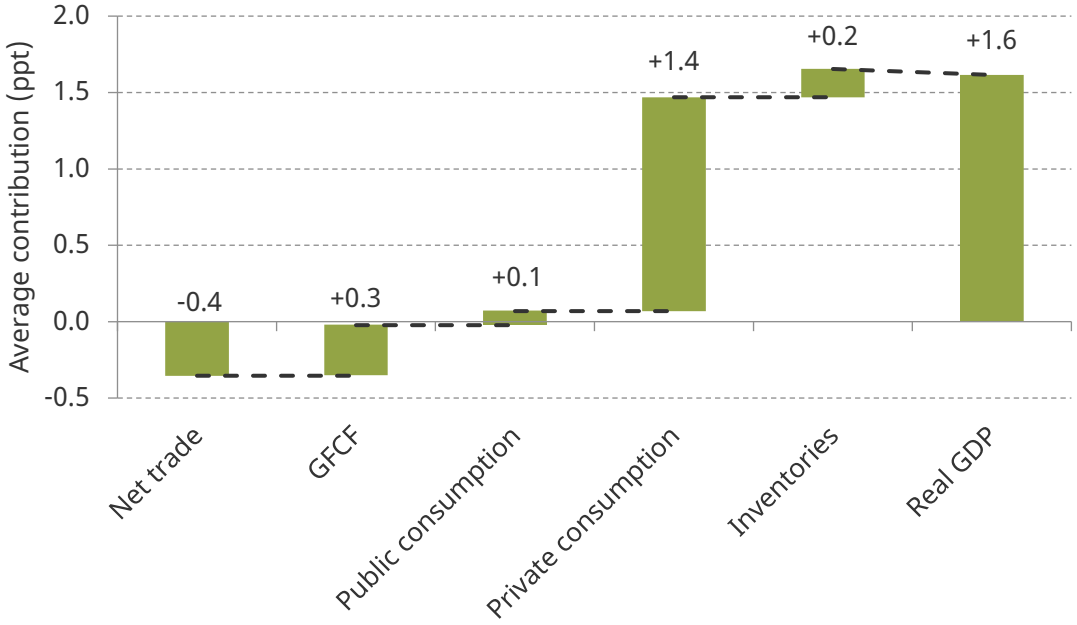
In recent quarters, UK GDP data – shown in Figure 2.3 – have been volatile. Seasonally adjusted real GDP in Q1 grew at 0.6% quarter on quarter, followed by a 0.2% QQ decline in Q2. These shifts were driven by highly unusual fluctuations in imports and inventories. In 2019Q1, imports rose by 10.3% QQ, while exports rose by 1.6% QQ, resulting in net trade subtracting 2.9ppt from quarter-on-quarter GDP growth. This was almost exactly offset by a substantial rise in inventories, which added 2.8ppt to growth in the same quarter. In part, this reflected companies' preparations for a potentially disruptive departure from

the EU on 29 March, for which they imported more input materials than usual. In part, however, the first quarter was also boosted by a one-off change in accounting rules, which led to a boost to the acquisition of valuables, which is often subsumed in the inventories category.

Figure 2.2. Average contributions of GDP components to year-on-year economic growth

Panel A. 2010Q1 to 2015Q4

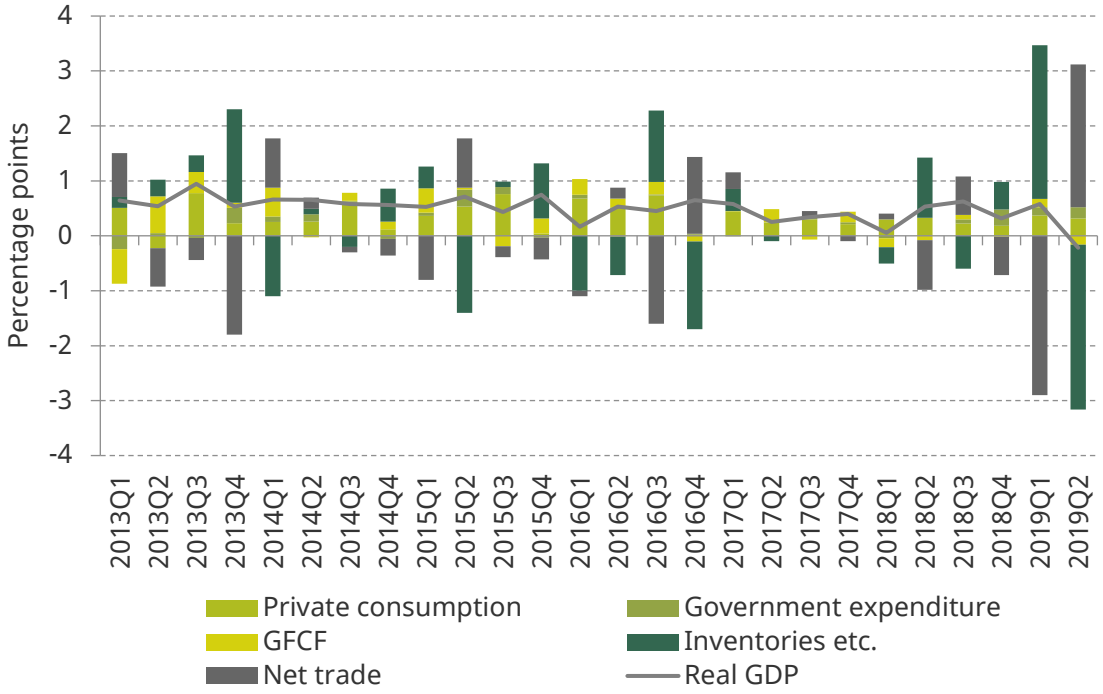
Panel B. 2016Q2 to 2019Q2



Note: These data are based on the first release of the 2019Q2 GDP data. Figures may not add due to rounding.

Source: ONS and Citi Research.

Figure 2.3. UK GDP growth and contribution of expenditure-based components



Note: GFCF refers to gross fixed capital formation, or overall investment. Net trade refers to changes in the trade balance (the difference in the volumes of exports less imports of goods and services).

Source: ONS and Citi Research.

As Brexit was delayed, these trends reversed somewhat in Q2. Inventory divestment weighed on quarterly GDP to the tune of 3.0ppt, while a 13.0% drop in imports paired with a 6.6% QQ drop in exports turned the net export contribution to a positive 2.6ppt. As Brexit-related deadlines continue to come into view in Q3, we expect similar exceptional movements to be repeated, if to a more limited degree.

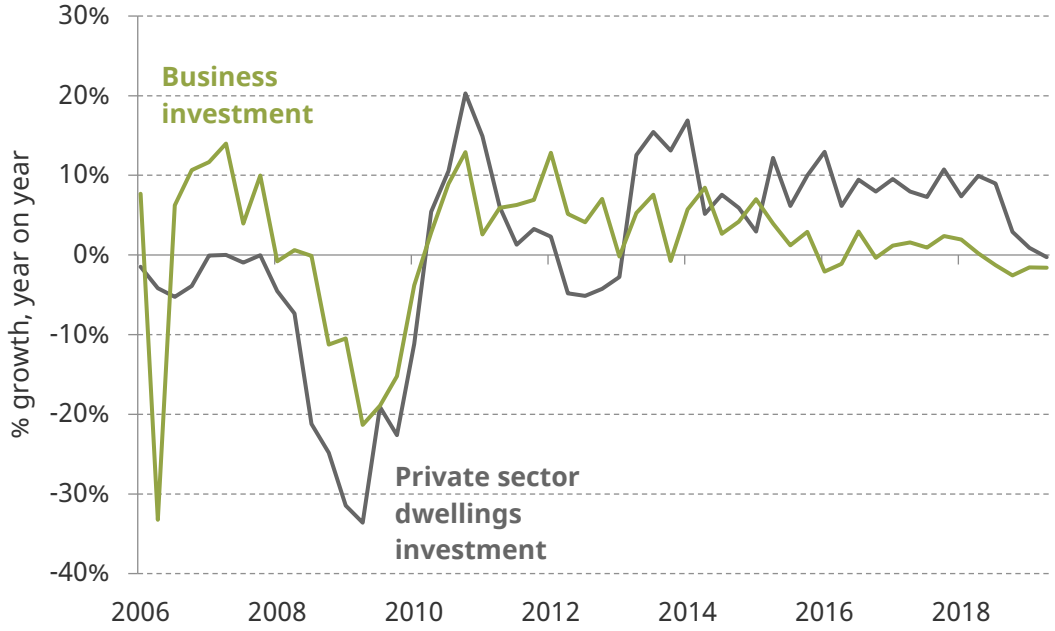
2.3 Private investment

Since the 2016 referendum, private investment in the UK has been weak. As Figure 2.4 shows, growth in business investment (gross non-residential investment by private and public corporations) has been negative in year-on-year terms since the third quarter of 2018, and it declined in five of the last six quarters in quarter-on-quarter terms. This is the most persistent reduction in investment, outside of a recession, on record.

Weakness in business investment (which accounted for 57% of GFCF in 2018) has also increasingly spread to other, traditionally more resilient, areas of investment. For example, private sector dwellings investment, the second-largest component of GFCF (21% in 2018), also fell in 2019Q2.

This persistent weakness in UK business investment is despite both labour shortages and accommodative financial conditions, which would normally be supportive. It is also in spite of relatively strong global investment performance over the post-referendum period, at least in the period before 2019. Between 2012 and the referendum, UK business

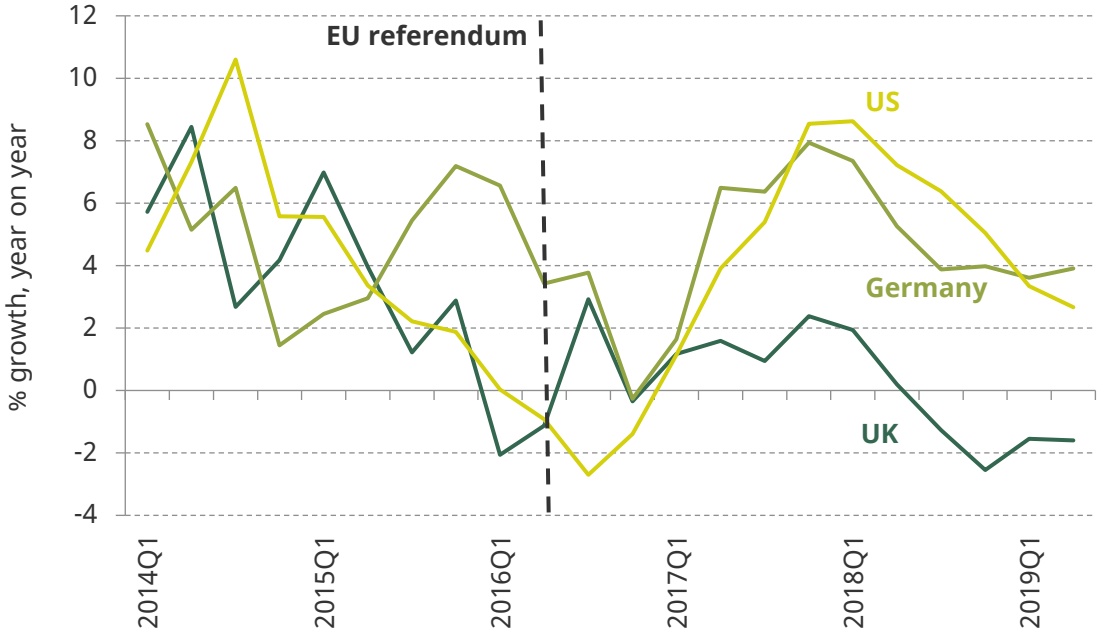
Figure 2.4. UK business investment and investment in private sector dwellings



Note: These data are based on the first release of the 2019Q2 GDP data.

Source: ONS and Citi Research.

Figure 2.5. UK, US and German growth in business investment



Note: The figure plots business investment for the UK, investment in machinery, equipment and systems for Germany and private non-residential fixed investment for the US.

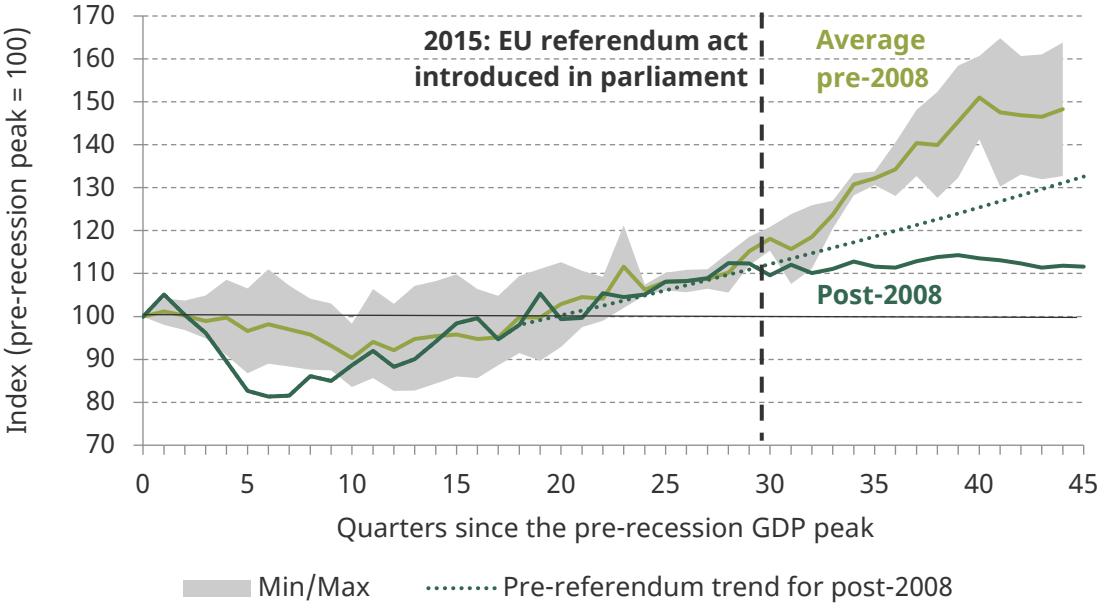
Source: National statistical offices and Citi Research.

investment was generally running ahead of the G7 median, in roughly the top quarter of the G7 economies. Since the referendum, UK business investment growth has dropped to the bottom of the G7 range. A large gap in business investment growth between the UK and the G7 median opened up in 2017 as investment accelerated across the other members of the G7. Even as global investment growth has since moderated, this gap has persisted. Figure 2.5 shows the divergence in business investment between the UK, the US and Germany; while they had previously tracked one another closely, investment in the UK has stayed broadly flat post-referendum while growth rates in the US and Germany have accelerated.

In addition, UK business investment has been weak in comparison with the pre-referendum trend. The dark green line in Figure 2.6 shows how real business investment changed relative to the level observed during the pre-crisis GDP peak. This is indexed to business investment levels in 2008Q1 (£44 billion in today's prices). Initially, investment slumped deeply during the recession – in fact, more deeply than in any other recession since 1970. However, 10 quarters on from the pre-recession peak, business investment had recovered to the extent that would have been predicted based on the UK's experience in the average pre-2008 recession (shown by the light green line).

But the vote to leave the EU in 2016 curtailed that nascent recovery. In the 12 quarters since the referendum, business investment has stayed essentially flat. On average, after previous recessions, investment grew by almost 30% over that period. Even the most

Figure 2.6. Real business investment since the 2016 referendum compared with historical cyclical recoveries (1970–2019)



Note: The figure uses the chained volume measure. Cyclical recoveries begin in 1973, 1975, 1980, 1990 and 2008. A cyclical recovery ends when a second recession begins – this is defined as the second quarter of contracting GDP. The 'pre-referendum trend' series is calculated over the period 2011Q1–2015Q2 using a Hodrick–Prescott filter with lambda of 1600.

Source: ONS, Bank of England and Citi Research.

anaemic recovery in investment since 1970 (the post-1990 recovery) still saw investment 30% higher than its pre-recession level. In the current recovery, this figure is now just 12%.

It is possible that the 2008 recession had particular characteristics that would have dampened investment for longer regardless of the referendum. But investment since the Brexit referendum has significantly underperformed even the rate of growth it had between 2010 and 2015Q2, shown by the dotted line in Figure 2.6. This is also a much more extensive slowdown than for other elements of the UK's national accounts, such as private consumption, which has continued to grow relatively well.

We, like most economists, attribute this significant UK-specific weakness in business investment to Brexit-related uncertainty. Below, we introduce a measure of UK macroeconomic uncertainty and explore its link with business investment in recent decades. We then discuss specific features of macroeconomic uncertainty since the referendum.

The role of uncertainty

Several different methods have been developed to measure uncertainty. Some look at media reports,[2] while others look at financial market indicators or more directly at how volatile the unpredictable random 'shocks' are across a range of macroeconomic series.[3] Since the 2016 EU referendum, some of these indicators have given conflicting accounts. For example, while media-based indicators have generally suggested a very high level of uncertainty, stock market indices have been more subdued.[4]

Here we use an approach employed by the Bank of England.[5] This combines information from a range of economic expectations alongside several financial indicators,[6] with synchronised movements across many of these data series taken to reflect changes in macroeconomic uncertainty.[7] These data all focus on economic *expectations*, rather than contemporary performance. We use indicators of both the level and dispersion of

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2 S. Baker, N. Bloom and S. Davis, 'Measuring economic policy uncertainty', *Quarterly Journal of Economics*, 2016, 131, 1593–636, https://doi.org/10.1093/qje/qjw024.

3 K. Jurado, S. Ludvigson and S. Ng, 'Measuring uncertainty', *American Economic Review*, 2015, 105, 1177–216, https://doi.org/10.1257/aer.20131193 use a functional autoregressive value-at-risk (FARVAR) model across a range of economic series.

4 N. Bloom, P. Bunn, S. Chen, P. Mizen, P. Smietanka, G. Thwaites and G. Young, 'Brexit and uncertainty: insights from the Decision Maker Panel', Bank of England Staff Working Paper 780, 2019, https://www.bankofengland.co.uk/working-paper/2019/brexit-and-uncertainty-insights-from-the-decision-maker-panel.

5 A. Haddow, C. Hare, J. Hooley and T. Shakir, 'Macroeconomic uncertainty: what is it, how can we measure it and why does it matter?', *Bank of England Quarterly Bulletin*, 2013Q2, https://www.bankofengland.co.uk/quarterly-bulletin/2013/q2/macroeconomic-uncertainty-what-is-it-how-can-we-measure-it-and-why-does-it-matter.

6 Technically, we use the first principal component from a principal components analysis of these series. In effect, this constructs a weighted average of the different data series, where the weights are determined by how strongly related the different data series are.

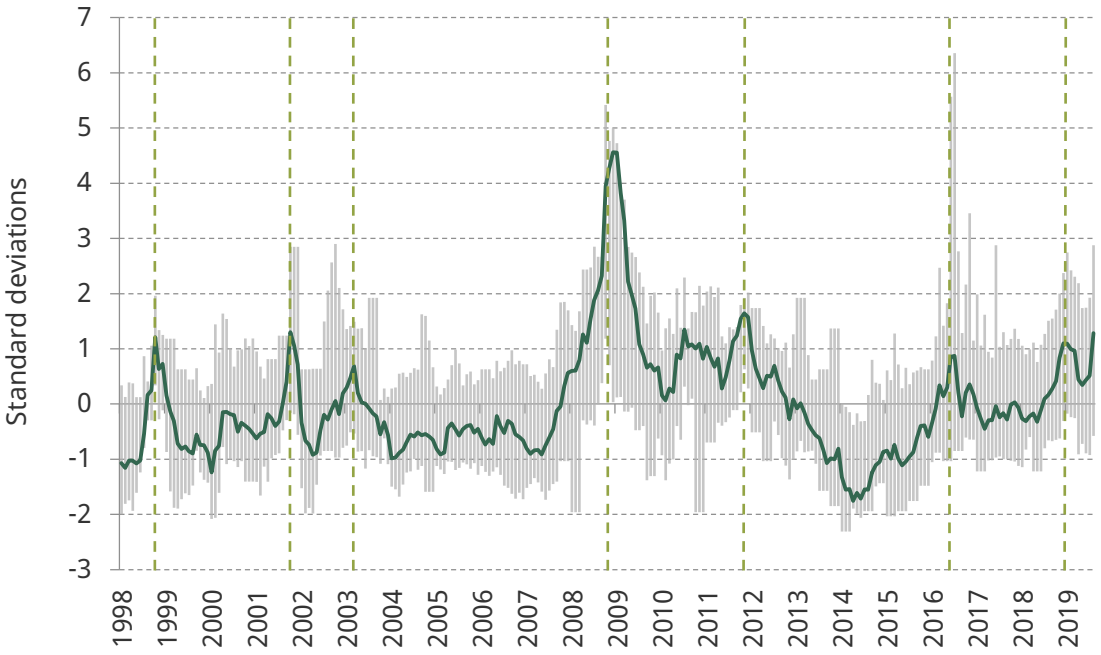
7 As noted by M. Melolinna, H. Miller and S. Tatomir, 'Business investment, cost of capital and uncertainty in the United Kingdom: evidence from firm-level analysis', Bank of England Staff Working Paper 717, 2018, https://www.bankofengland.co.uk/working-paper/2018/business-investment-cost-of-capital-and-uncertainty-in-the-uk-evidence-from-firm-level-analysis, any effective indicator of uncertainty must meet three criteria: it must be forward looking; it should not include anything that is easily forecastable; and the focus of any such indicator should be on the effect of changes in the so-called 'second order' of economic expectations – namely, their dispersion, rather than level.

economic expectations. This lets us capture both the dispersion of possibilities (how different the possible outcomes are) and the level of risk posed by the worst-case scenario (which is also relevant to businesses' decision-making).[8]

The resulting measure of uncertainty broadly follows the pattern one might expect; Figure 2.7 shows that there have been seven major spikes in uncertainty since 1997 (marked by the vertical dashed lines): Long-Term Capital Management's failure and the Asia/Russia crisis in 1998, the 9/11 terrorist attacks in the US in 2001, the invasion of Iraq in 2003, the 2008 acute transatlantic banking crisis, the eurozone sovereign debt crisis in 2011/12, the 2016 Brexit referendum result and, most recently, the growing risk of a no-deal Brexit as successive Article 50 deadlines have approached.

Figure 2.8 highlights that, over the last 20 years, this measure of uncertainty has been strongly associated with (reduced) business investment. Notably, in 2001, 2003, 2008, 2016 and 2018–19, sharp increases in uncertainty coincided with equally notable slowdowns in business investment six months later. The euro crisis is a notable exception: two

Figure 2.7. UK macroeconomic uncertainty since 1998

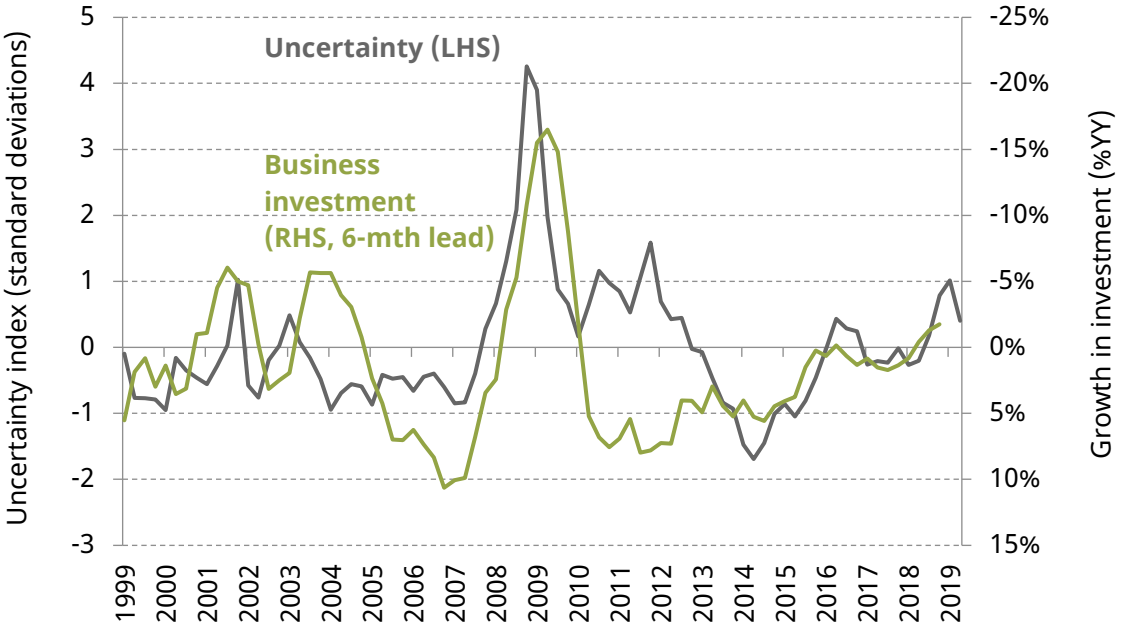


Note: This monthly measure of economic uncertainty is constructed using principal components analysis of the following data series (with their sources in parentheses): expectations and dispersion in expectations for unemployment for the next 12 months (GfK); expectations and dispersion in expectations for the general economic situation for the next 12 months (GfK); change in output volume for the next three months (CBI); change in uncertainty about demand limiting investment (blend of CBI manufacturing and service indicators); change in commercial residential property demand (RICS); change in price expectations for residential property for the next three months (RICS); 90-day implied volatility in the sterling–USD and sterling–euro exchange ranges (Bank of England); and the UK Economic Policy Uncertainty Index, based on 11 newspapers (Economic Policy Uncertainty). The grey error bars show the range of the different uncertainty indicators employed in this analysis.

Source: GfK, CBI, RICS, Bank of England, Economic Policy Uncertainty and Citi Research.

[8] B. Bernanke, 'Irreversibility, uncertainty, and cyclical investment', *Quarterly Journal of Economics*, 1983, 98, 85–106, https://doi.org/10.2307/1885568.

Figure 2.8. Macroeconomic uncertainty and real business investment growth (with a six-month lead)



Note: Macroeconomic uncertainty is a quarterly average of the index used in Figure 2.7. Business investment series refers to the real measure here (chained volume measure). We plot the four-quarter moving average of the year-on-year growth rate in this measure with a six-month lead and on an inverted scale. For example, the data for March 1999 plot uncertainty in March 1999 against investment growth in September 1999. For more details on the measure of uncertainty used here, see Figure 2.7.

Source: ONS and Citi Research.

successive spikes in uncertainty in 2010 and 2011 were not strongly associated with lower growth in UK business investment.

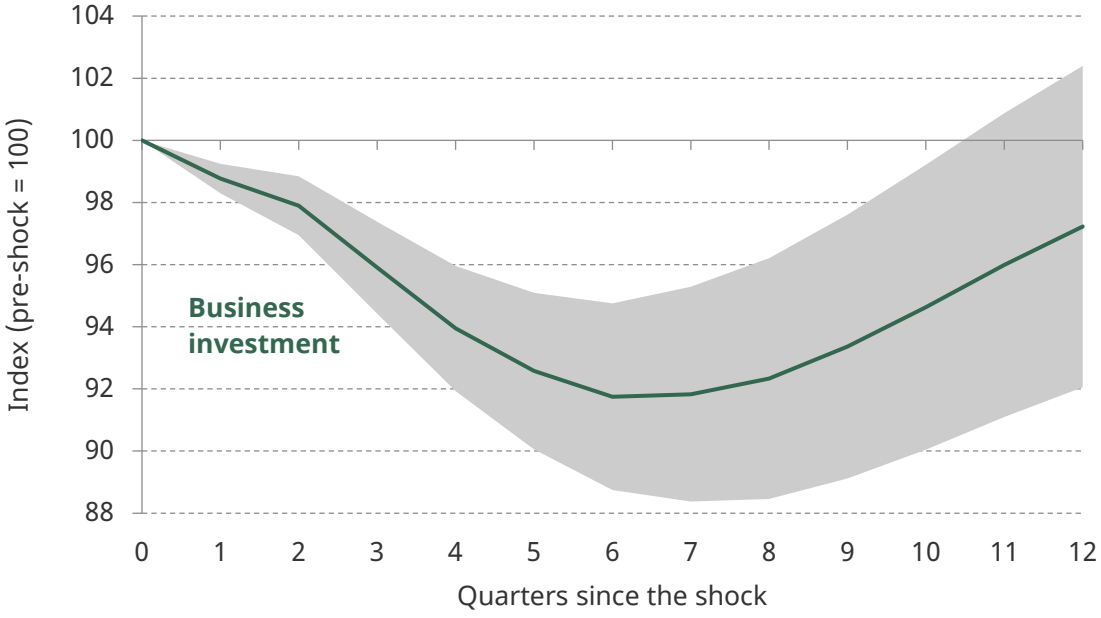
The role of uncertainty in depressing business investment and economic growth remains even after accounting for a range of other potential drivers, including labour supply growth and financial conditions. Figure 2.9 shows the impact that a sudden, one-standard-deviation increase in economic uncertainty has on business investment (Panel A) and real GDP (Panel B), after accounting for the role played by other factors.[9] We trace these impacts for three years after the initial shock – which is roughly equivalent in size to the increase in uncertainty around the Brexit referendum documented in Figure 2.7. We find that, around 18 months following the shock, the level of business investment is around 8% below its pre-shock trend. For GDP, the equivalent figure is 2.2% below trend. The latter effect is of a similar size to the impact of a one-standard-deviation increase in the effective cost of capital,[10] at least in the first 12–18 months; both weigh on year-on-year GDP growth to the tune of around 0.4–0.6ppt a year after the shock.

[9] More specifically, we use a conventional vector autoregression (VAR) model with a two-period lag. We account for the potential drivers listed in the note to Figure 2.9. Our model assumes that the Bank of England does react directly to uncertainty, but that fiscal policy only responds to changes in real economic data. We assume that uncertainty is itself affected by economic data even if also driven by exogenous factors.

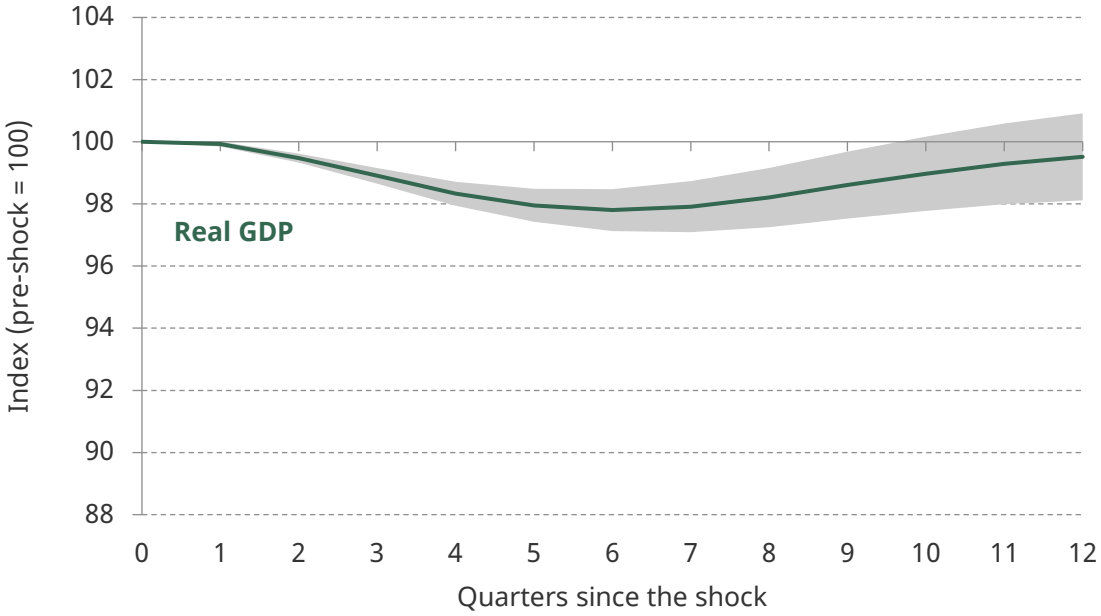
[10] Here measured as the weighted average interest rate of sterling loans made to private non-financial corporations by UK-resident monetary financial institutions (excluding the Bank of England).

Figure 2.9. Cumulative impact of a one-standard-deviation increase in uncertainty on business investment and real GDP

Panel A. Impact on business investment



Panel B. Impact on real GDP



Note: The grey band plots the central estimate plus or minus one standard error to indicate the uncertainty around it. The following endogenous variables are included in the VAR model: business investment growth (%YY), GDP growth (%YY), growth in hours worked (%YY), growth in government expenditure (%YY), the cyclical component of the broad sterling exchange rate, the cyclical component of house price changes, the cyclical component of the weighted average of commercial interest rates offered by banks to private non-financial corporations (PNFCs), and core inflation measured by the Consumer Prices Index. US Financial Conditions are included as an exogenous variable.

Source: ONS, Bank of England, Bloomberg and Citi Research.

An unconventional kind of uncertainty

Uncertainty is linked to macroeconomic performance both by strong theoretical ties and by a large body of empirical evidence. It has a particularly strong impact on investment, since the decision on an investment is made today but the returns to it will depend on how the future unfolds. A wider-than-normal range of possible outcomes in the future therefore translates into more risk that a particular project will, faced with adverse conditions in the future, end up being unprofitable. Projects that would be profitable in a stable state of the world might therefore become temporarily unattractive.[11]

Faced with a temporary period of uncertainty, one response is for companies to delay irreversible investment projects and wait for clarity. As former US Federal Reserve chairman Ben Bernanke argued in 1983,[12] as long as the time needed to complete a new investment project is not prohibitively long, a company can wait to undertake it until news improves and it can be confident that the investment will end up being profitable. By contrast, trying to reverse investment after it has been made is costly and time-consuming.

This means that, even in conditions of normal uncertainty, the risk of a bad outcome disproportionately drives firm behaviour, causing it to hold fire on investment projects. Temporary uncertainty would therefore be expected to hold down spending on investment as well as on other inputs into production, such as employment: companies will wait and see whether the demand ends up being in place before they commit to developing the capacity to meet it.

The impact of the referendum reflects many of these effects, which have consistently weighed on UK business investment. However, in several respects, Brexit is also an unusual – and particularly economically damaging – source of uncertainty.

One reason that post-referendum uncertainty has been unusual is its duration; since the referendum result, around 40% of firms have persistently reported an increase in uncertainty associated with Brexit.[13] But Brexit-based uncertainty is also unusual in the severity of its downside risk and how it has been politically managed: there has been a repeated pattern of fixing a date for the uncertainty to resolve, only to prolong it further. In this subsection, we consider each of these characteristics and how they might have contributed to a particularly distinctive impact on business investment.

Typically, uncertainty affects both investment and employment as firms temporarily postpone projects. However, the persistence of Brexit-related uncertainty has constituted a fundamentally more complex shock. As such, rather than driving a general slowdown in both employment and investment, it may increasingly be driving (or exacerbating) something of a substitution between the two by affecting their relative prices.

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[11] A. Dixit and R. S. Pindyck, *Investment under Uncertainty*, Princeton University Press, 1994.

[12] B. Bernanke, 'Irreversibility, uncertainty, and cyclical investment', *Quarterly Journal of Economics*, 1983, 98, 85–106, https://doi.org/10.2307/1885568.

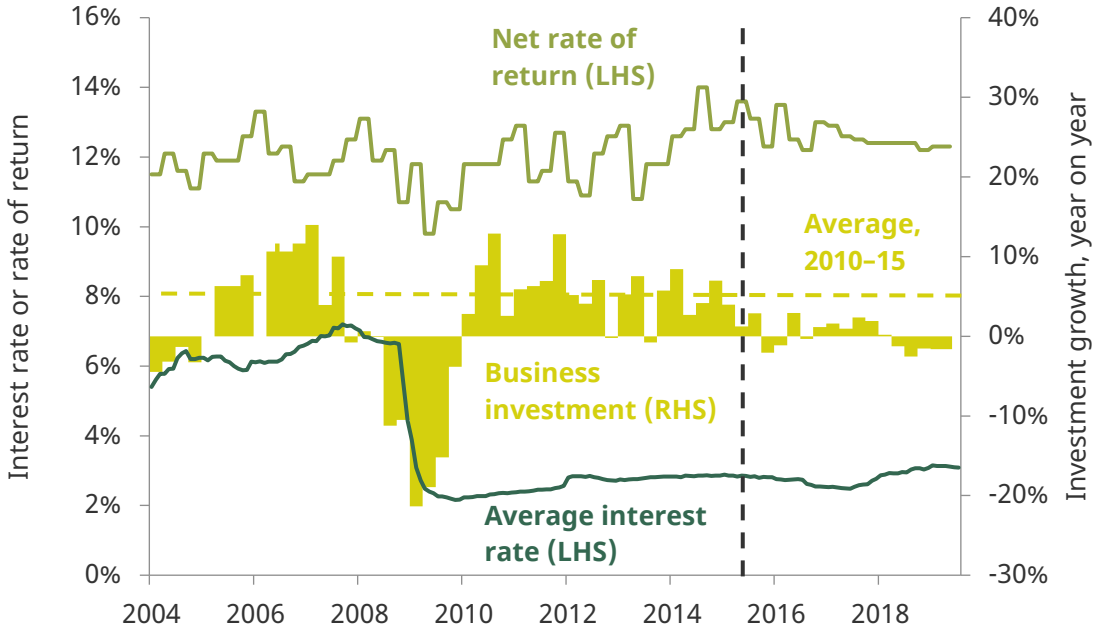
[13] Based on data from the Bank of England Decision Maker Panel survey. See Figure 2.12 and N. Bloom, P. Bunn, S. Chen, P. Mizen, P. Smietanka, G. Thwaites and G. Young, 'Brexit and uncertainty: insights from the Decision Maker Panel', Bank of England Staff Working Paper 780, 2019, https://www.bankofengland.co.uk/working-paper/2019/brexit-and-uncertainty-insights-from-the-decision-maker-panel.

In the face of a long-term increase in strategic uncertainty, like Brexit presents, it is simply not viable for firms to delay everything and wait for clarity. Instead, firms continue to adapt to the contemporary environment, but give more value to flexibility. Hiring a worker, or increasing her number of hours worked, is more easily reversible than investment into machines, buildings or software – which often requires a greater degree of strategic clarity. As longer-term uncertainty has grown and in a context of robust global demand during 2017 and 2018, firms may have favoured hiring in lieu of investment.

Several trends suggest such substitution may have been a feature of recent UK economic experience, even before the referendum. For example, since 2008, the risk premium on corporate investment decisions – which measures the return expected on an investment over and above the cost of financing – has increased markedly. Put another way, firms have become more discriminating in the investment decisions they take. Figure 2.10 plots the cost of funding (in the form of rates on bank loans, or corporate bond yields) in dark green against the net return on capital in light green. While the cost of funding has fallen, the net return on capital – which can be interpreted as a hurdle rate (the rate of return needed to prompt a company to pursue a given investment project) – has remained broadly constant.

Several factors could be at play here – for example, unobserved challenges in accessing financing may have grown. However, we suspect that firms have chosen not to take on

Figure 2.10. Rates of return and indicative costs of capital for private non-financial corporations



Note: The vertical line marks the introduction of the EU referendum bill to parliament in 2015Q2. The 2010–15 average is average business investment growth (YY) between 2010Q1 and 2015Q2. Business investment refers to the real series (chained volume measure). 'Rate of return' is measured by the (annualised) net rate of return to private non-financial corporations (PNFCs). The net rate of return reflects total net operating surplus, divided by the net capital stock. 'Average interest rate' is measured by the weighted average interest rate of sterling loans made to PNFCs by UK-resident monetary financial institutions (excluding the central bank).

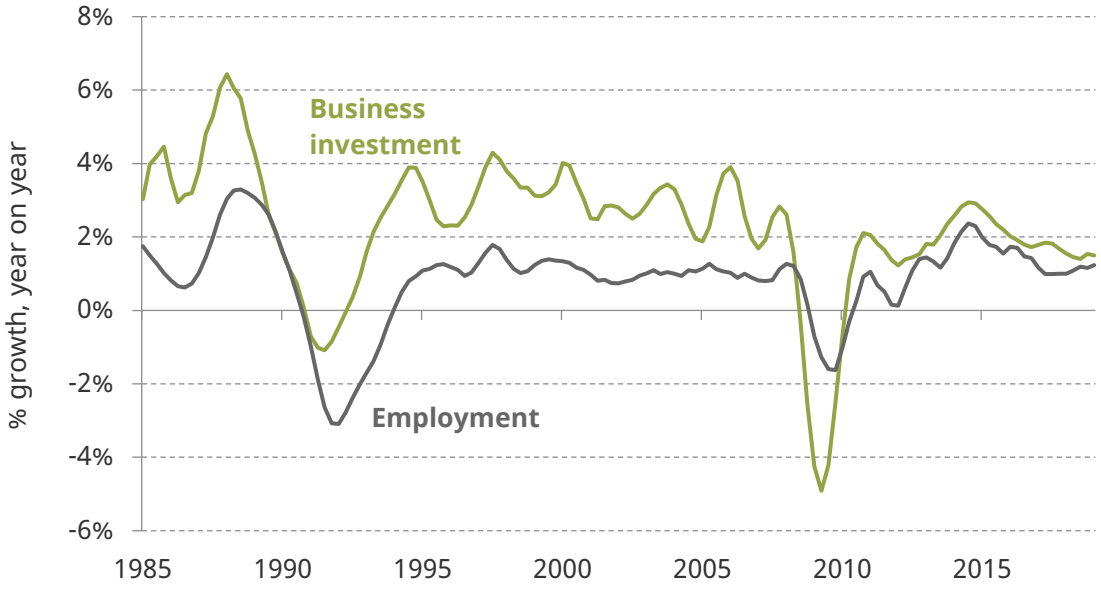
Source: ONS, Bank of England and Citi Research.

new, lower-return, investment projects even as lower financing costs have made these viable. This reflects a greater degree of corporate caution with respect to investment. Investment seems to have become more responsive to perceived uncertainty and subsequent changes in the investment risk premiums.[14]

The 2016 EU referendum has compounded these structural developments. Even as interventions by the Bank of England ensured borrowing costs remained historically low, increases in corporate risk premiums associated with Brexit uncertainty have still made investment relatively less attractive. Notably, since the referendum announcement, these trends have not increased the gap between borrowing costs and the observed rate of return. This is because firms have not systematically prioritised the most profitable investments, but instead the most essential ones. The result has been a persistent, structural reduction in investment over the Brexit period, even as the observed risk premium remains relatively steady (see Figure 2.10).

Persistent Brexit uncertainty thus had an effect similar to a relative increase in the cost of capital expenditure, making hiring relatively more attractive. All but non-essential investment has been put into a holding pattern. This, then, has still driven business investment down.[15] As such, this is likely to have exacerbated the post-crisis trend of

Figure 2.11. Year-on-year business investment and employment growth



Note: Business investment refers to the real series (chained volume measure). Both series are four-quarter moving averages.

Source: ONS and Citi Research.

[14] M. Melolinna, H. Miller and S. Tatomir, 'Business investment, cost of capital and uncertainty in the United Kingdom: evidence from firm-level analysis', Bank of England Staff Working Paper 717, 2018, https://www.bankofengland.co.uk/working-paper/2018/business-investment-cost-of-capital-and-uncertainty-in-the-uk-evidence-from-firm-level-analysis.

[15] B. Broadbent, 'Uncertain times', speech given at Wall Street Journal on 5 October 2016, https://www.bankofengland.co.uk/-/media/boe/files/speech/2016/uncertain-times; B. Broadbent, 'Investment and uncertainty: the value of waiting for news', speech given at Imperial College Business School on 20 May 2019, https://www.bankofengland.co.uk/speech/2019/ben-broadbent-imperial-college-business-school-london.

strong employment growth and weaker investment relative to the pre-crisis period (Figure 2.11).

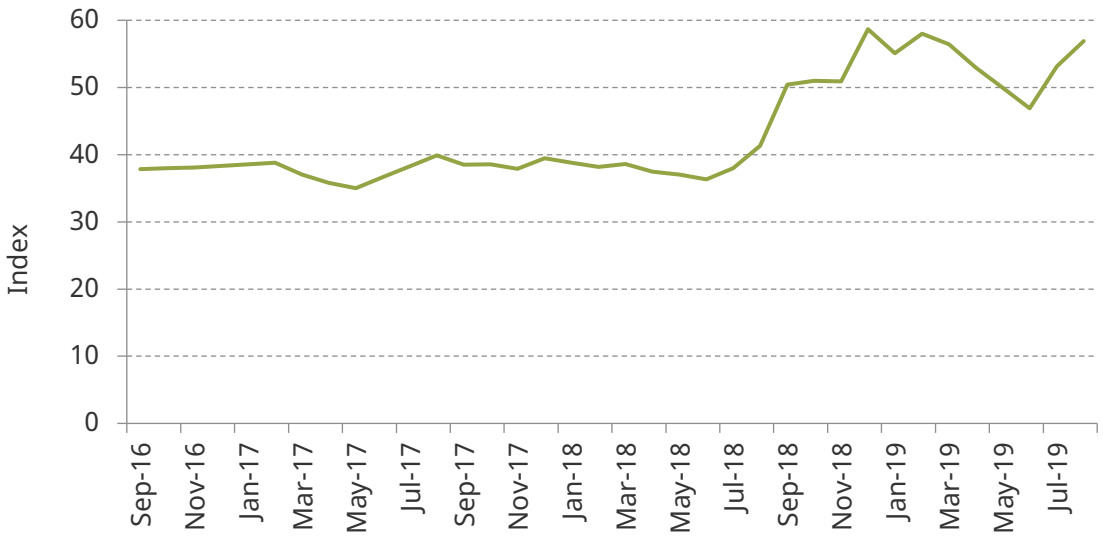
Alongside these more persistent effects, there have been periods when Brexit has also driven particularly acute reductions in business investment. These constitute more conventional uncertainty-driven slowdowns.

As the UK approached the scheduled Brexit day in the first quarter of 2019, and again in Q2, surveyed levels of uncertainty rose. This probably reflected both uncertainty about whether the UK would leave with a deal (and thus a transition period) and uncertainty about what the agreed arrangements would mean for businesses. As Brexit deadlines have loomed, companies asked about the sources of uncertainty facing them increasingly highlight Brexit as one of their main sources.

As the original March 2019 exit date drew closer and the risk of an economically damaging no-deal Brexit appeared to increase. This has been formalised in the Bank of England's 'Brexit Uncertainty Index'. This measures the number of firms reporting Brexit as one of their most important sources of uncertainty. Since the referendum, this has been broadly steady with around 40% of firms highlighting Brexit as one of their top three sources of uncertainty. As Figure 2.12 shows, as the 31 March deadline loomed, uncertainty increased markedly in 2019Q1. This then fell slightly following an extension, but has increased again since as the 31 October deadline has approached.

It is worth noting that the growth in uncertainty associated with Brexit may, in fact, have been greater than these data suggest. Since the start of 2019, other sources of macroeconomic uncertainty have also grown – including the Sino-US trade war. Here Brexit uncertainty is measured by comparing Brexit-related concerns to other sources of uncertainty. Specifically, it measures the number of firms identifying Brexit as one of their

Figure 2.12. Indicator of Brexit uncertainty among UK companies



Note: This is an index comprised of responses to the Decision Maker Panel Survey on sources of uncertainty, with the score defined by the proportion of respondents who highlight Brexit as one of their top three sources of uncertainty.

Source: Bank of England Decision Maker Panel survey and Citi Research.

top three sources of uncertainty. As other sources of uncertainty have also grown more notable, the growing relative importance of Brexit reflects a particularly significant growth in macroeconomic uncertainty.

As uncertainty increases, the attractiveness of waiting to see how it will be resolved also grows. In addition, as the time to supposed resolution falls, the costs of waiting are also reduced: firms go without a potentially profitable investment for less time before the deadline.[16]

In a Brexit context, this has often meant that the sensitivity of investment (and indeed other economic decisions) to increases in uncertainty grows in the run-up to key Brexit deadlines, just as uncertainty has also grown with it. The simultaneous increase in value of waiting and fall in cost associated with delay has driven particularly acute slowdowns in business investment as the UK has approached the 29 March 2019 Article 50 deadline.

In this sense, the manner in which the government managed the Brexit process exacerbated the economic effects of the post-referendum uncertainty. First, throughout the process, the possibility of a 'no deal' exit was kept alive as a perceived bargaining chip in talks with the EU. Keeping the continued risk of the most economically damaging form of Brexit on the table likely disproportionately affected investment decisions (which are more sensitive to downside than to upside risk) in the UK, leading more firms to push back investment plans.

Second, the repeated pattern of committing to a Brexit deadline only to push it back at the last minute has also likely worsened the impact on investment. The shorter the expected time to resolution of the uncertainty, the lower the cost of waiting to invest. Multiple delays are therefore likely to have weighed on business investment to a greater degree than if this length of negotiation period had been assumed initially, all else being equal.[17] Alongside a broader lack of clarity regarding the UK's future relationship with the EU, this is likely to have compounded inevitable increases in uncertainty since the referendum.

Business investment and future growth

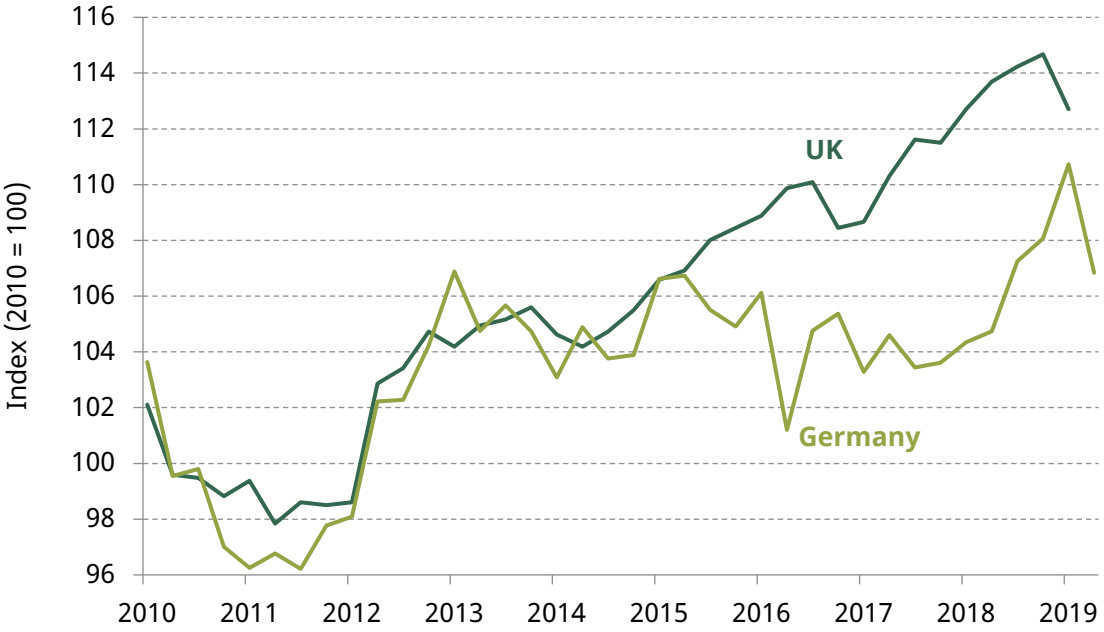
Besides weighing on current demand (through a lower contribution to this year's GDP), the persistent lack of business investment and the bias towards hiring rather than capital investment puts the economy's capital stock on a lower growth path. That will depress labour productivity (output per worker or per hour worked) in the future. Slower productivity growth means that either cash-terms wages will not grow as quickly or unit labour costs will rise.

In practice, because nominal wage growth has returned to the pre-crisis average of 4% while productivity growth remains virtually flat, the UK is facing the latter scenario. Besides generating cost pressures for firms, higher unit labour costs can put the competitiveness of trade-intensive sectors at risk. Since the EU referendum was announced in 2015 until the latest industrial slowdown since the second half of 2018,

[16] A. Dixit and R. S. Pindyck, *Investment under Uncertainty*, Princeton University Press, 1994.

[17] B. Broadbent, 'Investment and uncertainty: the value of waiting for news', speech given at Imperial College Business School on 20 May 2019, https://www.bankofengland.co.uk/speech/2019/ben-broadbent-imperial-college-business-school-london.

Figure 2.13. Nominal unit labour costs in manufacturing in the UK and Germany (seasonally adjusted, 2010 = 100)



Source: ONS, Destatis and Citi Research.

nominal unit labour costs in UK manufacturing have risen by almost 10ppt more than those in Germany (see Figure 2.13).

So far, the effect of these higher labour costs on the UK's international competitiveness has probably been more than offset by the depreciation of sterling since 2016. But a depreciating currency also has its own downsides, not least for private consumption. Domestic price adjustments may also drive a different picture in real terms, but that should not matter too much for the competitiveness of UK manufacturing labour.

2.4 Other GDP components

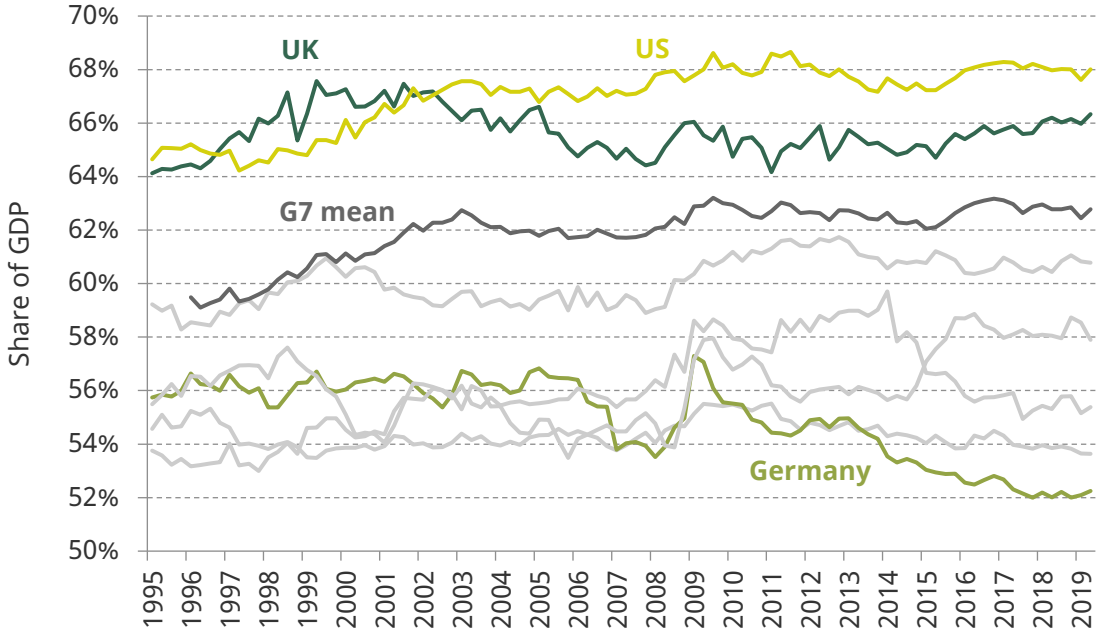
Private consumption

Private consumption is traditionally the dominant part of advanced economies, in the UK even more so than in most. As Figure 2.14 shows, consumer spending accounts for two-thirds of the UK's GDP. Among the G7, only the US has a slightly higher private consumption share (68%); in Japan, France and Germany, the share of private consumption in GDP is 10ppt or more below that of the UK.

A high share of private consumption makes the economy more dependent on the financial well-being of households. On the other hand, investment is less important, insulating the economy better against fluctuations in the global investment cycle. As financial crises are less frequent than the peaks and troughs of the global business cycle, consumer spending growth is by far the least volatile and most persistent part of expenditure in GDP. That normally makes consumers a source of resilience for the UK economy during externally induced slowdowns. Somewhat surprisingly, private consumption has also managed to

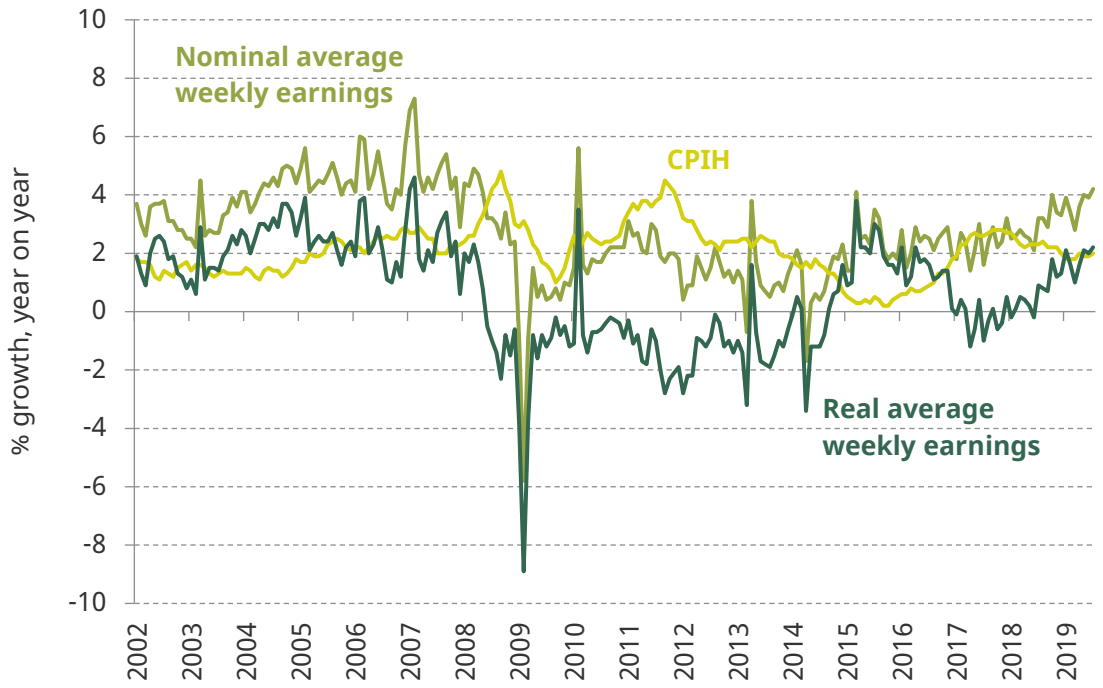
remain the pillar of growth throughout the uncertainty caused *domestically* by the 2016 EU referendum.

Figure 2.14. Share of private consumption in GDP of G7 economies



Source: OECD and Citi Research.

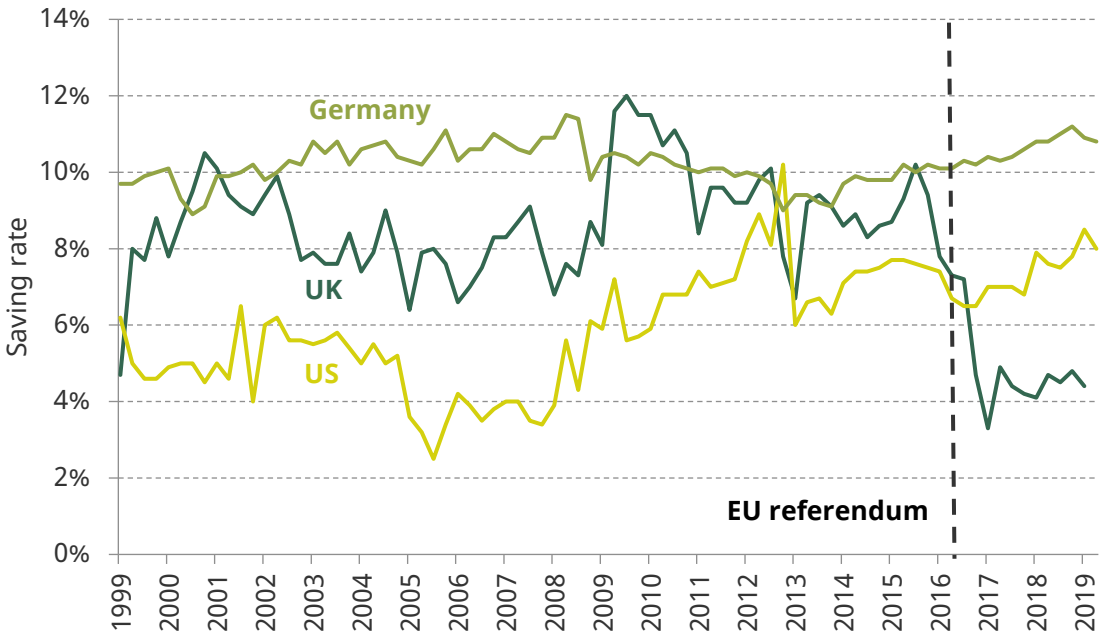
Figure 2.15. Year-on-year growth in average weekly earnings and consumer prices



Note: CPIH = Consumer Prices Index, a measure of inflation. Real average weekly earnings = Nominal average weekly earnings minus CPIH rate.

Source: ONS and Citi Research.

Figure 2.16. Household saving rate in the UK, US and Germany (% of disposable income)



Source: ONS, BEA, Destatis and Citi Research.

Consumer spending has slowed somewhat from the heady heights of pre-referendum days. However, it remains supported by robust employment growth, low unemployment (and thus low fears of being made redundant), nominal wage growth that is strong (at least in the context of the last decade) and consumer price inflation back to the Bank of England's 2% target. As Figure 2.15 shows, the latter two in combination have yielded the strongest real wage growth since 2016. Finally, consumers enjoy the wealth effects of very low interest rates (which boost disposable income for households with net debt, increase domestic asset prices and reduce the incentive to save) and globally rising equity markets.

Offsetting these positive factors, consumer confidence on the GfK measure is slightly below its long-run average due to weak economic expectations, pointing to modest spending growth; stagnating house prices reduce households' wealth gains and also weigh on spending decisions. Figure 2.16 shows that UK household saving rates are very low in historical and international comparison, suggesting that households have little room to cut saving rates further to keep spending through another downturn.

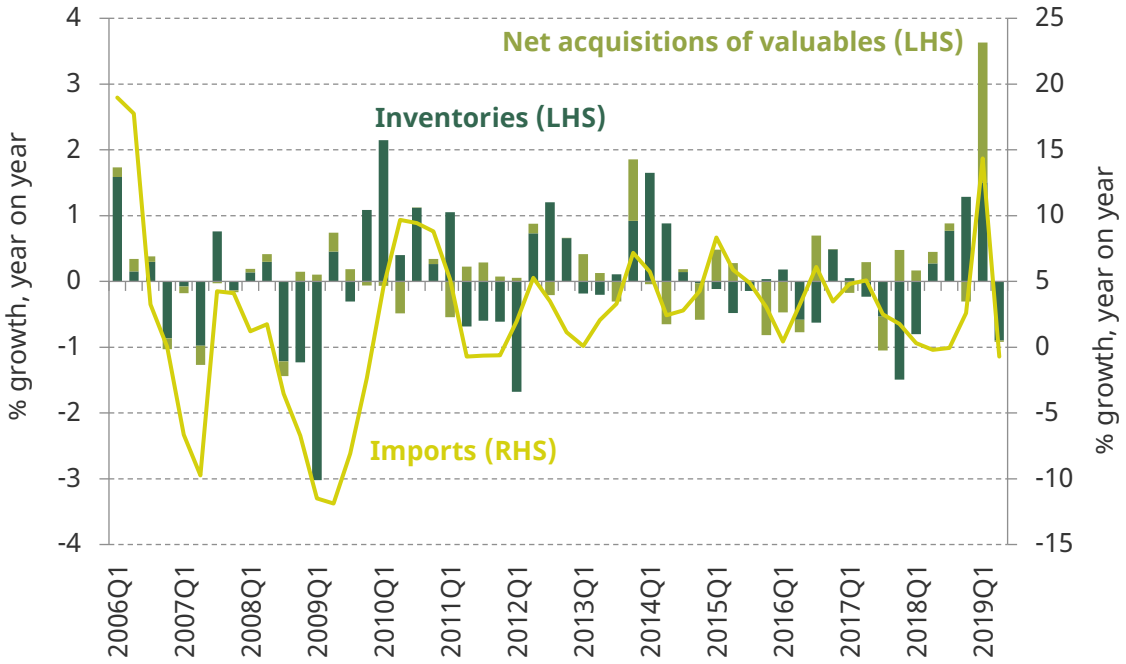
Government consumption and investment

An unusually strong expansion of public spending and investment offset some of the softening in parts of private sector demand over the past year (see Chapter 6). Reflecting a shift away from the fiscal rebalancing paradigm as well as Brexit preparations, real government consumption plus public investment rose by 3.5% YY in the second quarter of 2019, the second-highest annual growth rate since the global financial crisis. Since public consumption accounts for 21% of total consumption and public investment for 16% of total GFCF (both 2018 data), the boost to overall growth between 2018Q2 and 2019Q2 was a significant 0.7ppt or more than half of overall growth.

Inventories

Inventories and acquisitions less disposals of valuables usually do not impact GDP growth in a sustained fashion. However, as Figure 2.17 highlights, it seems that companies built up large inventories of finished goods in the run-up to the initial Article 50 Treaty of the European Union deadline on 29 March 2019 to tide them over any possible short-term disruption from Brexit. That acted to push up GDP growth massively, but was largely offset by a large increase in imports, since much of the stockpiling was of imported goods or materials. The only net positive impact of this stockpiling was probably the increase in exports by 3.2% over the two winter quarters (against the euro-area trend of falling exports according to CPB data), which could be the result of stockpiling of materials and goods from the UK by the rest of the European Union.

Figure 2.17. Year-on-year growth in UK inventories, net acquisitions of valuables and imports



Source: ONS and Citi Research.

But all these effects were quickly reversed in the second quarter, after Brexit was delayed. A similar pattern could now be repeated in the third quarter as companies may fear not just any Brexit but potentially the most disruptive version of it, a no-deal Brexit. On the other hand, where stocks are not perishable, no-deal inventories may already exist. We therefore expect the temporary effect of stockpiling to be merely 0.1 or 0.2ppt of GDP in Q3, with a later reversal depending on the Brexit schedule. Note that the data for net acquisition of valuables in the first quarter were distorted upwards by an accounting change, and thus probably not due to Brexit preparations or other real economic activity.

Trade

UK exports boomed for a brief period after the 2016 EU referendum. In part, this likely reflected rebounding growth of its export markets. In Figure 2.18, we compare UK export growth and the trade-weighted rate of change of real imports of the UK's trade partners (known as the UK export market index). This measure broadly captures changes in potential demand for UK exports. The UK's export boom coincided with a slight rebound

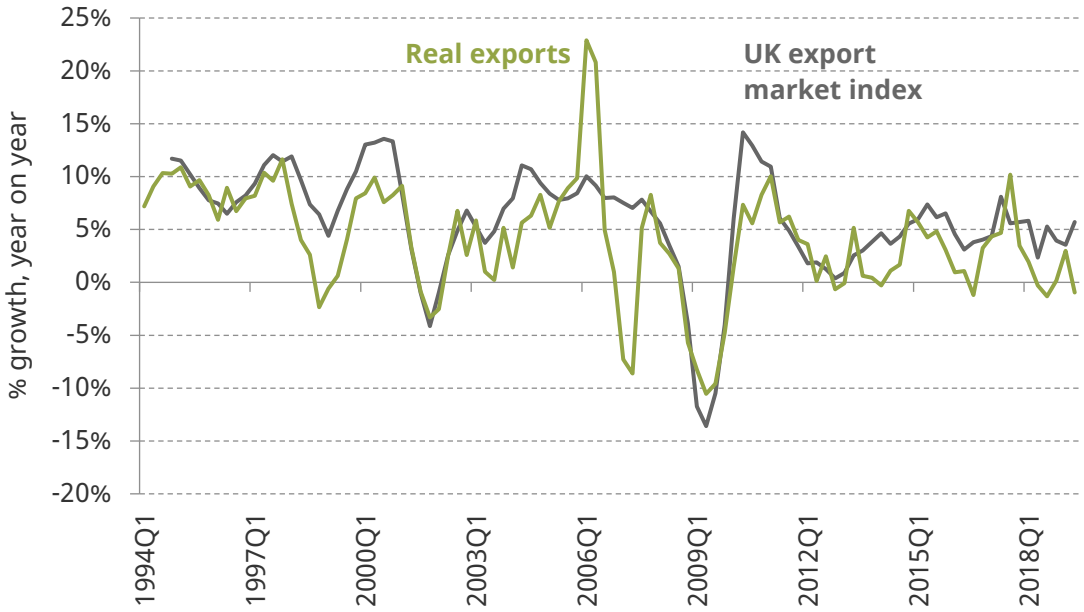
in import growth among the UK's trading partners in 2017. However, the far greater driver of this short period of export growth was likely the 20% depreciation of sterling from late 2015 to late 2016.

Since then, as Figure 2.18 shows, UK export growth has fallen back again and averaged only 0.1% YY over the last four quarters. This slower growth comes despite another small temporary surge in winter 2018/19, which probably reflected Brexit stockpiling of UK products in the rest of the EU.

Compared with potential demand, the UK's exports have somewhat underperformed in recent years. From 2002 to 2012, UK exports rose by two-thirds the pace of its export market index. However, from 2012 onwards, the UK's export market expanded by 33%, while UK exports only rose by 14%. So instead of tracking at least two-thirds of its export markets' growth as it did the decade before, the UK only achieved 40% of it. This is despite the strong tailwinds to exports from the 10% depreciation in the UK's trade-weighted exchange rate over this period.

The UK is not alone in underperforming export expectations in recent years; other European economies have done similarly badly. Germany's export market index had almost the exact same growth performance in 2002–12 (+64%) and 2012–19 (+32%) as the UK's. Germany's real exports of goods and services rose by 69% in the first period, but only 24% since then (108% and 75% of the growth in its export market index). Germany thus dramatically outperformed the UK in both periods, but nevertheless its export performance has deteriorated over the last two decades as it started losing market share like the UK. Of course, German exports did not have the benefit of a depreciating trade-weighted exchange rate over this period.

Figure 2.18. UK exports and potential demand from the rest of the world



Note: The export market index measures the trade-weighted growth in real imports of the UK's trading partners, and so provides a measure of potential demand for UK exports.

Source: ONS and Citi Research.

Import growth in the UK was roughly stable around the EU referendum despite the deteriorating exchange rate and falling business investment. This resilience was made possible by UK households, which absorbed post-referendum higher prices largely through a drop in their saving rate.

However, by the summer of last year, import growth had slowed to zero as business investment growth ground to a halt and consumer spending slowed further. Later in the year, a period of erratic moves started: the winter saw extremely strong imports growth as companies built stockpiles ahead of the Brexit deadline, which was followed in the second quarter of 2019 by a complete unwind when Brexit was delayed. Given that no-deal Brexit is becoming a greater risk again into October, a repeat of this cycle (strong imports in Q3, unwind in Q4) could be on the cards.

On balance, with the exception of 2017, net exports continue to contribute negatively to UK growth. According to our latest projections, in 2019 they will reduce GDP growth by 0.6ppt.

2.5 Compared with our forecasts a year ago

Our forecasts in last year's Green Budget 2018 proved a bit too optimistic relative to what the latest data suggest and to what we currently expect for the rest of the year. Based on the assumption that the UK would leave the EU into an agreed transition period in March 2019, we had forecast GDP to rise by 1.3% in 2018 and 1.5% in 2019. According to the latest ONS data, 2018 GDP growth ended up a smidgen higher than we had expected, at 1.4%. In contrast, our latest 2019 GDP growth projection is 1.1%. This is below many other forecasters (Consensus (Bloomberg) 1.3%, IMF 1.3%, OECD 1.2%, OBR 1.2%, BoE 1.3%), but all of these are also below what we anticipated last year.

Table 2.1. Differences between 2018 and current forecasts for % growth in GDP and its components

	Green Budget 2018		Latest		Deviation	
	2018	2019	2018	2019	2018	2019
GDP	1.3	1.5	1.4	1.1	0.1	–0.4
Private consumption	1.1	1.4	1.7	1.7	0.6	0.3
Public consumption	1.3	1.8	0.4	2.5	–0.9	0.7
Fixed investment	0.4	0.5	0.2	0.3	–0.2	–0.2
Business investment	0.5	–0.2	–0.4	–1.2	–0.9	–1.0
Residential investment	6.3	–0.2	7.2	0.6	0.9	0.8
Exports	–0.7	2.0	0.1	0.7	0.8	–1.3
Imports	–0.2	1.8	0.7	2.6	0.9	0.8

Table 2.1 summarises the differences between our forecasts in last year's Green Budget and our current projections, broken down by the different expenditure components of GDP discussed in the previous two sections. We expected private and public consumption growth to strengthen somewhat in 2019 compared with 2018, which only partly materialised – in public spending. Household consumption turned out stronger than we expected in 2018, but failed to accelerate in 2019. Our investment forecasts were nearly spot-on in total. Business investment is significantly weaker (we currently expect a 1.2% fall in 2019, while a year ago we expected investment to flatline in 2019), but this was largely offset by higher-than-expected public investment. Private sector dwellings investment slowed sharply in 2019, roughly in line with our expectations last year. Finally, real exports and imports growth is currently forecast to be a bit higher in 2019 than in 2018, but not by as much as we had anticipated last year.

In sum, the downward revision to our forecasts reflects weaker-than-expected business investment as well as a shallower-than-expected rebound in export growth. We put this down to the unexpected Brexit path and a deeper and more protracted global manufacturing slowdown than seemed likely last year (see Chapter 1). However, some components of GDP held up better than expected: both private consumption last year and public spending this year have higher-than-anticipated growth. We underestimated the resilience of these key elements of UK domestic demand.

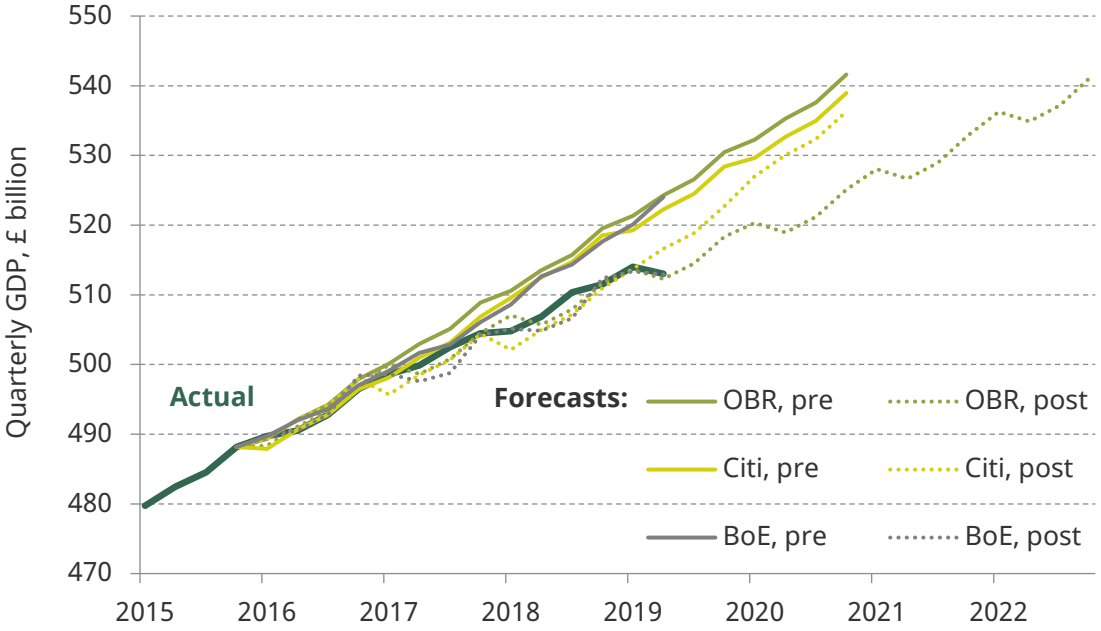
2.6 The cost of Brexit so far

In last year's Green Budget, we analysed the performance of the economy in comparison with forecasts made before and after the referendum. We noted that by the end of 2018, UK real GDP would probably be almost exactly at the level we had predicted immediately after the referendum. Updating this analysis for 2019, we can now say that the economy is now performing worse than our forecasts at the time (see Figure 2.19).

The cumulative accuracy of our forecasts in 2018 was the result of two major forecasting errors which offset each other. Instead of slowing sharply due to the confidence shock of the surprise 2016 EU referendum result, the economy initially stayed resilient and growth even accelerated briefly in the second half of 2016. Thereafter, the economy slowed gradually and progressively, while we and most forecasters had expected a growth rebound as the confidence shock was expected to wear off, policy support by the Bank of England to set in and support from weaker sterling to prop up domestic production.

To get a sense of where the UK economy might be had voters decided to remain in the EU in 2016, it is not enough to compare pre- and post-referendum forecasts. Subsequent performance reflects other shocks, which were not anticipated at the time of the referendum. While there have been few other major domestic economic disruptions in the UK since 2016, the external environment has seen some notable developments, many of which are discussed in Chapter 1. These include China's rebalancing, US fiscal stimulus and trade wars, the global investment acceleration in 2017, and a global manufacturing slowdown in 2018–19. These will all have influenced the UK economy's growth performance over the past three years; for example, the strong GDP growth in the eurozone in 2017 would normally have elicited stronger growth in the UK than had been predicted in 2016. On the other hand, the eurozone's sub-par performance in 2019 or US trade wars might have been expected to drive UK growth below the 2016 baseline.

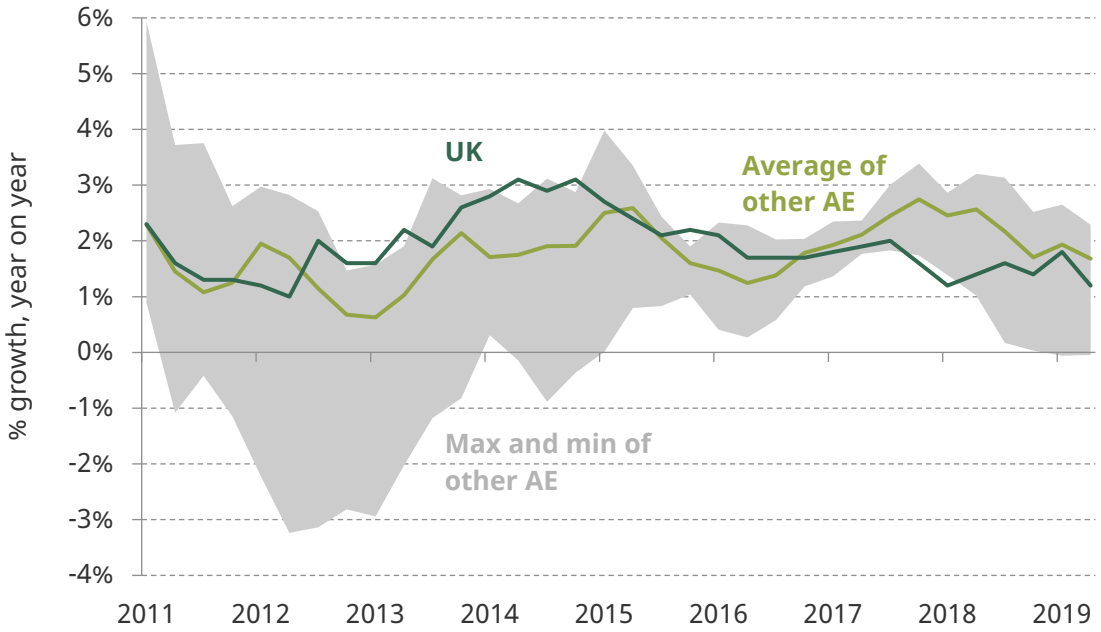
Figure 2.19. UK quarterly GDP forecasts (pre- and post-referendum) and realised data



Note: GDP is calculated using the chained value measure and reported in 2016 prices. Pre-referendum forecasts are taken from the March 2016 outlook from the OBR, the May 2016 inflation report from the Bank of England and May 2016 for Citi from our monthly Global Outlook and Strategy publication. The post-referendum forecasts are all taken from November 2016.

Source: ONS, OBR, Bank of England and Citi Research.

Figure 2.20. Year-on-year GDP growth in the UK and other advanced economies



Note: Other advanced economy (AE) average weighted by nominal GDP at market exchange rates for the four quarters before the observation in question. Countries included: France, Germany, Italy, Japan and the US. Max/Min series do not include the UK.

Source: National statistical offices and Citi Research.

We can try to disentangle the effects of Brexit from these global economic changes by constructing a measure of how the UK economy would have been expected to perform based on its historical correlation with other economies. If these other economies were not impacted (very strongly) by Brexit, but were affected by common global economic shocks, a 'synthetic' model of the UK economy can give some indication of how the UK would have likely behaved if driven by external, global factors alone. Clearly, however, this alternate state of the world can never be known for certain.

Here, we use an often-used methodology employed previously, for example, by the Centre for European Reform to construct a 'doppelgänger' of the UK economy,[18] based on a weighted average of the OECD economies that performed most similarly to it in the period up to 2015Q2.[19] The difference between this model and what actually happened allows us to isolate the impact of shocks, such as Brexit, that only or mainly affect the UK.

The model selects several economies to track UK GDP (Canada, Denmark, Hungary, Ireland, Japan, Norway and the US) and weights them based on pre-2016 data.[20] As Figure 2.21 shows, this doppelgänger has historically tracked realised GDP relatively closely, with the exception of the financial crisis, which had a greater – and more abrupt – impact on the UK economy. This is to be expected given the UK's extensive exposure to global finance.

However, since 2016, a sustained divergence has opened up between realised GDP and the level implied by the synthetic model. Comparing realised GDP with pre-referendum forecasts, the economy is 2.5% smaller than initially expected before the 2016 referendum. However, taking the doppelgänger results at face value, this divergence may be closer to 3.0% if we also take into account the positive global growth surprises that would have likely boosted the UK economy, at least until recently, beyond levels expected in 2016 (see Figure 2.20).[21] These orders of magnitude should be kept in mind when we turn to the potential impact of no-deal Brexit in Chapter 3.

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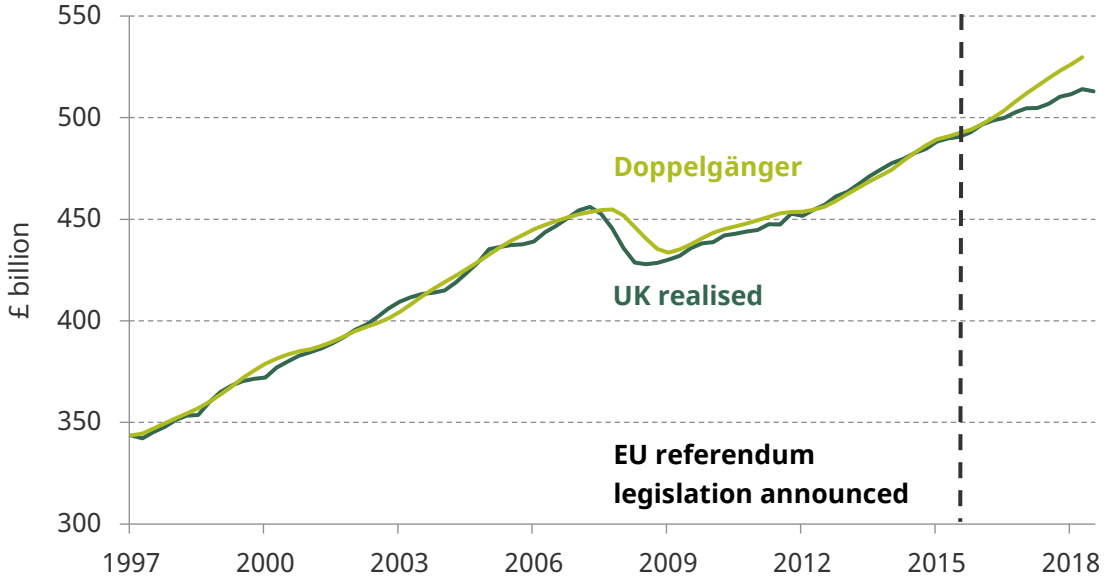
[18] J. Springford, 'What's the cost of Brexit so far?', Centre for European Reform – Insight, 2018, https://www.cer.eu/sites/default/files/insight_JS_23.6.18_revised.pdf.

[19] More specifically, the methodology employs a 'synthetic control method.' Here we adopt the same approach as the Centre for European Reform. It matches the UK to a weighted average of other advanced economies. The basket and associated weighting are based on the extent of headline covariance, alongside the degree to which this is driven by common expenditure components of GDP.

[20] This is with the following weights: Canada – 15.5%; Denmark – 3.7%; Hungary – 23.1%; Ireland – 4.2%; Japan – 22.8%; Norway – 6.7%; US – 24.0%. Selection is based on the use of a synthetic control unit on quarterly national accounts data.

[21] These results are robust to a range of different tests. In particular, the same post-referendum divergence shown in Figure 2.21 is evident even after adjusting US growth for the somewhat idiosyncratic, pro-cyclical, US stimulus since the election of President Trump. Similarly, both J. Springford, 'The cost of Brexit to June 2018', Centre for European Reform – Insight, 2018a, https://www.cer.eu/sites/default/files/insight_JS_30.9.18_revised.pdf and G. Vlieghe, 'The economic outlook: fading global tailwinds, intensifying Brexit headwinds', speech given at Resolution Foundation on 14 February 2019, https://www.bankofengland.co.uk/speech/2019/gertjan-vlieghe-speech-at-the-resolution-foundation have shown the same conclusions are robust to including or removing different countries from the sample. This includes completely removing the US, as well as only including other G7 countries in the pool of potential economies. The results are also robust to basing the calibration only on data between 1995Q1 and 2014Q2 (rather than 2015Q2, as we use in our main estimates). However, if we only calibrate with a sample up to 2012, the doppelgänger economy shows a much weaker growth path than what actually happened, as Italy becomes a larger component of the basket of economies used to model the UK. (Springford, 2018a.)

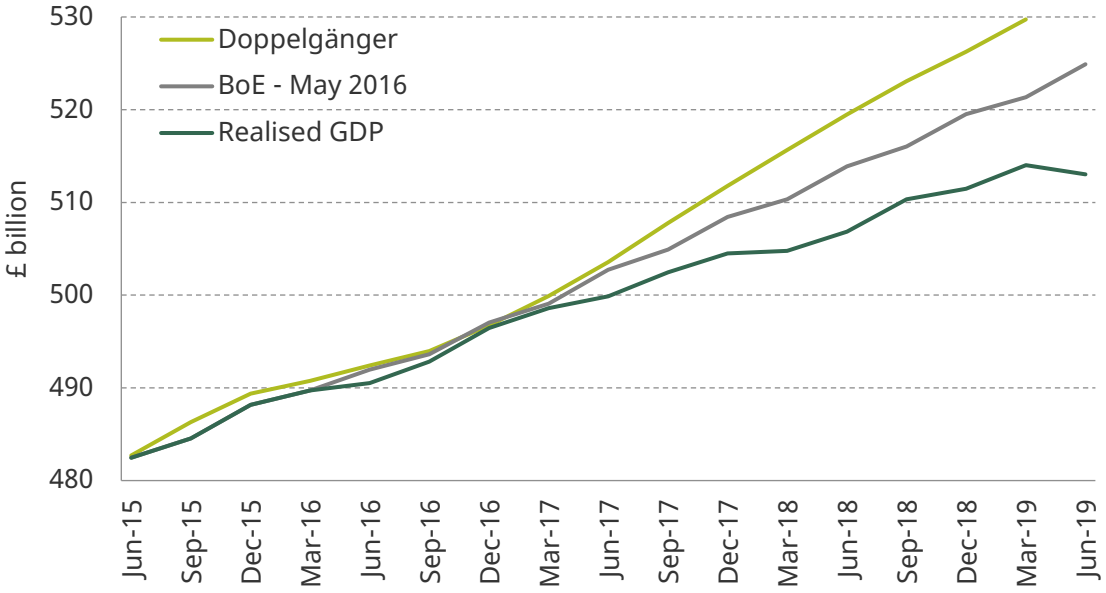
Figure 2.21. Quarterly real GDP: UK and doppelgänger



Source: Centre for European Reform, national statistical authorities and Citi Research.

Of course, the estimates from this model cannot provide a perfect indication of what would have happened had the Brexit referendum gone the other way; this is unknowable. However, it is noteworthy that the doppelgänger has performed better since 2016 than the pre-referendum path forecast by the Bank of England. This suggests that the method of comparing actual growth with pre-referendum forecasts is likely to, if anything, underestimate the impact that Brexit has had on the UK economy. As Figure 2.22 clearly shows, both this doppelgänger model and the comparison of pre- and post-referendum forecasts indicate that the UK's economy is smaller after 2016 than it would have been had the vote been to remain.

Figure 2.22. UK GDP: realised, forecast and doppelgänger



Source: ONS, Bank of England, Centre for European Reform and Citi Research.

2.7 Conclusion

Since our forecasts for the UK economy in last year's Green Budget, there have been important changes in the economic environment. Some of these changes look likely to be persistent: globally, a slowdown in growth in 2019 has dampened prospects for the UK economy. Others are likely to be purely temporary: volatility in the last few quarters – in particular for imports and inventories – is a result of Brexit stockpiling and is unlikely to reflect longer-term changes to the economy. Still other changes are yet to come: while private consumption has, so far, remained resilient, there are signs that it could provide less of a buffer against the next set of shocks.

But amidst all the other changes, cause for concern is greatest when looking at private, and especially business, investment. Business investment has witnessed its most sustained period of contraction, ever, outside a recession. While global forces and broader structural trends in the UK economy are partly to blame, it is hard to escape the conclusion that Brexit-related uncertainty has played an especially damaging role.

Any type of uncertainty deters investment, as companies postpone making costly decisions with long-term implications until the future becomes clearer. But the lack of clarity since 2016 – over whether the UK will leave the EU with a deal, and what future relations might look like after that – has been especially persistent and Brexit is now one of the biggest sources of uncertainty for UK companies.

The impact that this has had on investment has been amplified by the continued risk of a 'no deal' Brexit affecting firms whose investment decisions are sensitive to economically damaging scenarios for the future. And the political process since 2016 – with repeated deadlines to provide clarity ultimately postponed – has led firms to delay investment decisions repeatedly in the hope of getting over the short-term hump to find some clarity, which has not yet arrived.

The post-referendum negotiating period has not been a costless process. We estimate that the UK economy is now between 2.5% and 3.0% smaller than it would have been with a vote to remain in the EU. But this chapter points out that not all of this is driven by the expectations of looser eventual relations with the EU; the uncertainty of the process itself plays a role.

3. UK economic outlook in four Brexit scenarios

Benjamin Nabarro and Christian Schulz (Citi)

Key findings

- **Whether – and if so how and when – the UK leaves the European Union will be perhaps the key determinant of growth over the next few years.** Obviously, Brexit will define the terms on which the UK trades with its largest trading partner. But different Brexit outcomes may also be tied to different political outcomes in Westminster, and these come with very different sets of domestic policies that would significantly affect the economy.

- **In our base scenario, the UK continues to delay Brexit.** In this scenario, we assume a further fiscal loosening of between 1 and 2% of GDP. There would be a chance of small rate cuts. Growth remains below 1% in 2020 and, while it then picks up, it remains very poor, below 1½% in 2021 and 2022.

- **Securing a Brexit deal would be better for the economy over the next two to three years than another delay.** If this were to come with tax cuts and further spending increases together worth 1 to 1½% of GDP (over and above the loosening at the September 2019 Spending Round), then growth should pick up to (a still poor) 1½% a year in the short term. Some pent-up investment should occur, and consumer confidence would improve, as the risk of a no-deal Brexit recedes.

- **A 'no-deal' Brexit would be economically considerably worse**, even under a relatively benign scenario. We assume this would happen under a Conservative-led government, which would implement further fiscal loosening totalling 2% of GDP. Interest rates are cut to zero alongside £50 billion of quantitative easing. Private consumption and investment growth falls while net trade is also a drag on growth. Overall, the economy does not grow over the next two years, and grows by just 1.1% in 2022, leaving it 2½% smaller in that year than under our base case.

- **Revoking Brexit would lead to the best economic outcome.** We assume this would require a Labour-led government which, as well as revoking Brexit, would also implement significant tax and spending increases, an overall fiscal loosening and some tightening of labour market regulations. Interest rates would also rise more quickly. This might result in growth of 2% a year. Crucially, this scenario involves a Labour-led coalition rather than a majority Labour government.

- **In the short term, implementation of the full 2017 Labour manifesto would offset at least some of the economic benefits of remaining in the EU.** Widespread nationalisations, handing 10% of share capital of large companies to employees while redirecting some dividends to the Treasury, or other policies that might reduce private sector investment significantly, would challenge the UK's traditional 'business model' and risk damaging growth by an amount it is not possible to quantify. Unlike Brexit, at least some of these policies will be reversible under future governments.

3.1 Introduction

The global outlook (Chapter 1) and recent trends in the UK economy (Chapter 2) both point to significant headwinds for the economy going forwards. However, arguably the most important determinant of the UK's economic trajectory will be the continuing process of leaving the European Union. Brexit no longer 'just' determines future relations with the UK's largest trading partner and the transition towards them. It has become intertwined with the political outlook and thus broader economic policies, including monetary policy.

As set out in Chapter 7, Prime Minister Boris Johnson's government has failed to break the deadlock in negotiations with the EU over the arrangements at the Northern Irish border and the deadlock in parliament over the draft withdrawal agreement specifically and the wider Brexit strategy generally. The government has lost its majority, allowing parliament to pass the EU Withdrawal Act (No.2) in September. According to this Act, the government has to bring a withdrawal agreement through parliament or get a majority of MPs authorise a no-deal Brexit to leave the EU on 31 October. Both seem unlikely and, if they fail, the Act is designed to oblige the government to ask the European Council by 19 October to extend the Article 50 Treaty on European Union (TEU) deadline to 31 January 2020. The EU27 refusing such a request seems unlikely.

Once an extension is secured, it seems unlikely – but not impossible – that another three months will be enough to secure an orderly Brexit with this parliament. To break the deadlock in the UK, voters will probably have to give their verdict in a snap general election or a second EU referendum. In case of the former, polls are inconclusive; it is impossible to say with any confidence what the outcome of an election would be, but the outcome will certainly have implications for the UK's Brexit policy. Broadly, a Conservative victory with the current leadership could lead to a no-deal Brexit. A defeat for the Conservatives – either by a majority of one opposition party or a coalition of several – could open up a path to reversing Brexit.

Between these two extreme but perhaps most likely scenarios – a no-deal exit or a Brexit reversal – there are others, including an orderly Brexit ('deal') or further delays. In this chapter, we describe how we would expect the economy and policy to evolve under each of these four scenarios, starting with our – at least temporary – baseline of repeated delays (Section 3.2) and going on to 'deal' (Section 3.3), 'no-deal' (Section 3.4) and 'never Brexit' (Section 3.5).

3.2 Base case: uncertainty continues

While it is certainly possible that the Brexit uncertainty will soon be resolved in one of the three directions described in the next three sections, for the time being the UK parliament does not seem to be able to agree on any of them. Even if a general election is called, more time may pass before the new parliament takes a final decision, if it is taken at all. Already, parliament has effectively legislated to request a third extension of the Article 50 TEU deadline. Assuming a deal is not struck and that the government does request an extension, then provided the EU agrees (which we deem likely given the consequences for the economy, expatriate citizens and the situation in Ireland), Brexit will not happen

Table 3.1. Growth forecasts for continued Brexit uncertainty, 2019 to 2022

	2019	2020	2021	2022	Cumulative, 2019–22
GDP	0.9	0.8	1.3	1.4	3.6
Private consumption	1.7	1.2	1.4	1.4	4.1
Public consumption	2.5	2.2	1.2	0.9	4.3
Business investment	–1.2	0.3	0.8	1.3	2.4
Residential investment	0.6	2.9	2.8	2.8	8.8
Exports	–0.4	1.1	2.6	2.7	6.5
Imports	2.6	–1.0	2.6	2.5	4.1

Note: Real GDP growth rates.

Source: ONS and Citi Research.

before 2020 at the earliest, and there could be further delays ahead. How would the economy evolve in case of another Brexit delay?

After the last extension of Article 50 TEU in April this year, UK service sector confidence bounced briefly and modestly as no-deal was avoided, while manufacturing sentiment dropped because Brexit stockpiling ended and the global backdrop cooled. As a result of the unwinding of Brexit stockpiling, GDP recorded its first quarterly decline since 2012. We would expect a similar initial response if there is another Brexit delay in October, although the length and purpose of the extension could matter. The longer the extension, the bigger the scope for a sentiment rebound and for at least some pent-up investment projects to be executed. If the extension leads to a general election or a second referendum, sentiment implications would be different compared with an extension for further UK–EU negotiations. On balance, we would expect the economy to grow at a sub-potential rate of 0.5–1% annualised (Table 3.1).

Fiscal policy: easing delayed as well?

Further delays to the Brexit process do not necessarily have to mean that all other policy ceases as well. We would expect a budget with the prime minister's promised fiscal loosening of 1–2% of GDP. However, it may not come to that if there is a snap election, as we think is likely. Fiscal giveaways would then depend on the outcome of the election, but given that both Labour and the Conservatives have pledged to loosen fiscal reins, we would still factor in a high probability of 1–2% of easing in 2020–21.

Monetary policy: rate cut possible, but depends on details

So far, the Bank of England has treated delays to Brexit as not materially different from a 'smooth Brexit'. There is merit to this because no-deal is avoided either way. And while a deal would provide some more clarity about the final trading relationship between the UK and the EU than an extension, it would at the same time make the UK's withdrawal from the EU close to irreversible. However, short 'awkward' extensions such as the one the UK secured in April have contributed to lower business confidence. Some Bank of England

policymakers have argued that, while revolving Brexit delays are better than no-deal, they are worse than a deal. External Monetary Policy Committee member Gertjan Vlieghe, for example, said that his 'preferred path of policy in that case is likely to lie somewhere between' deal and no-deal.[1] That opens the door for a rate cut even if no-deal is avoided as soon as a (short) Brexit delay is agreed, i.e. as early as November.

3.3 Economic forecasts: Brexit deal

If the government achieves a deal with the EU and brings it through parliament, it would deliver two notable benefits. First, it would secure a transition phase at least until the end of 2020. Second, the political declaration on future relations would provide some assurance of a future trade deal, even without all the details ironed out. In the somewhat unlikely case where the backstop stays in its current form,[2] it would provide additional guarantees of smooth (goods) trade and effectively rule out no-deal after the end of the transition.

On the other hand, a Brexit deal would mean the chance of a Brexit reversal would be substantially reduced. Once out, the UK would have to apply to join the EU like any other third country. And while the UK would likely fulfil the criteria to join with relative ease, it would be very unlikely to receive the special concessions it currently has, such as opt-outs from the euro and judicial cooperation, and a rebate on membership fees. This likely means political support for the UK to rejoin the EU would be less extensive, all else being equal.

Fiscal policy: significant easing expected

If the government could command a functioning majority in parliament after passing a deal with the EU, we would expect the government to follow through with most of its fiscal announcements so far, including large-scale tax cuts (discussed in Chapter 8) and spending increases together worth 1–1.5% of national income over and above the £13.4 billion in spending increases already announced in the September 2019 Spending Round (and analysed in Chapter 6). The proposals discussed during the Conservative leadership election but not yet delivered include a cut to the higher rate of income tax (costing up to £9 billion a year), an increase in the threshold at which workers start to pay National Insurance contributions (between £3 billion and £17 billion depending on how it is implemented) and an increase in the threshold at which stamp duty is paid (around £4 billion). Combined, these would constitute a fiscal stimulus of around 1.4% of national income if not associated with commensurate spending cuts or tax rises. Spending increases might be even higher if public investment were further expanded to include additional plans – for example, for high-speed broadband.

Any of these giveaways would come on top of the giveaway reflected in the 2019 Spending Round, which the Bank of England already estimates would boost GDP by 0.4% over its

[1] https://www.bankofengland.co.uk/-/media/boe/files/speech/2019/continuous-improvements-in-communicating-monetary-policy-speech-by-gertjan-vlieghe.

[2] The Northern Irish backstop, as agreed in the Withdrawal Agreement negotiated in December 2017, specified that in the event that free movement of goods across the Irish border could not be guaranteed by a new post-Brexit trade deal, then a harder border would be avoided via specific proposals put forward by the UK. If these were not sufficient, then the UK committed to maintaining full alignment with the rules of the Internal Market and Customs Union.

three-year forecasting horizon. This stimulus would hit an economy that is already at or close to full employment. All else being equal, providing stimulus to an economy operating at capacity would put upwards pressure on inflation.

Monetary policy: wait, then hike interest rates

It is safe to say that, even if the UK were to leave the EU with a deal on Hallowe'en, the Bank of England's Monetary Policy Committee (MPC) would not immediately hike Bank Rate at its November meeting. External MPC member Silvana Tenreyro likely spoke for a majority of MPC members when she said that with inflation falling below target, sterling likely appreciating upon a deal, weaker global growth and consequently a dovish shift at the Fed and the ECB, 'recent developments likely lengthen the period until there is a sufficient pickup in inflationary pressures for me to vote to raise Bank Rate'.[3] Her colleague Gertjan Vlieghe said he would see Bank Rate rising by 25 basis points (0.25 percentage points, ppt) per year on a smooth Brexit assumption. And even that may depend on the UK and the EU agreeing on a much longer transition phase than the 14 months (extendable by one or two years) remaining under the current Withdrawal Agreement.

Forecast impact: GDP above potential in the short term

A deal is not as good as staying in the EU over our forecasting horizon. Even with a deal, UK firms could expect worse access to their biggest export market and face major uncertainty about future trade relations with the eurozone and the rest of the world.

However, we would expect GDP growth to rise above the potential rate of 1.4% to 1.6% in 2021 (as shown in Table 3.2). As immediate uncertainty associated with the plausible risk of a highly disruptive Brexit recedes, in the short term some pent-up investment projects will likely move ahead.

Table 3.2. Growth forecasts in a Brexit deal scenario, 2019 to 2022

	2019	2020	2021	2022	Cumulative, 2019–22
GDP	0.9	1.3	1.6	1.4	4.4
Private consumption	1.7	1.2	1.4	1.4	4.1
Public consumption	2.5	3.2	2.2	0.9	6.3
Business investment	–1.2	5.3	0.8	1.3	7.5
Residential investment	0.6	3.9	2.8	2.8	9.8
Exports	–0.4	2.1	2.6	2.7	7.6
Imports	2.6	1.0	2.6	2.5	6.2

Note: Real GDP growth rates.

Source: ONS and Citi Research.

[3] https://uk.reuters.com/article/us-britain-boe-tenreyro/no-rush-for-bank-of-england-to-raise-rates-after-a-brexit-deal-tenreyro-idUKKCN1U527T.

Given uncertainty would not fall away completely, this relief would be relatively short-lived, pushing business investment back towards its subdued current growth rates in 2021 ahead of the next deadlines. But in 2020, business investment growth would at least temporarily revert to levels around 5–7% annually, which are typical at the current stage of the economic cycle in the UK. Given business investment accounts for 8–9% of GDP, it alone could add around 0.3–0.6ppt to GDP growth next year in the event of a deal.

In addition, with more certainty about future trade arrangements and additional public spending, potential growth could rise back up a little towards 1.7% per year. A 5–10% rebound in sterling would reduce imported inflation by 0.5–1ppt and boost households' real purchasing power. House prices would rise, generating supportive wealth effects. A deal would also boost confidence on the EU side and thus boost export growth. In theory, above-trend growth rates close to 2% would be possible in the short term, in particular if the government goes ahead with tax cuts and increased public investment plans, alongside already announced increases in day-to-day spending.

However, despite a deal, the UK would not yet be out of the Brexit woods. Concluding a deal would leave the country swiftly heading for the next deadline or 'cliff edge', at the end of the transition period. The current political declaration on future relations guarantees smooth goods trade, if necessary via a temporary customs union. However, the degree of future regulatory cooperation is unclear and would have to be clarified during negotiations in the transition phase. For businesses where these regulations matter most, such as food, pharmaceuticals or indeed financial services, uncertainty post-Brexit deal would therefore persist and could heighten again towards the 31 December 2020 end of the transition period. We would therefore expect businesses to exercise caution in their hiring and investment plans (see Chapter 2).

3.4 Economic forecasts: a no-deal Brexit

If the UK leaves the EU on 31 October without a follow-on agreement, new customs and regulatory borders would be raised overnight and the EU and the UK would no longer automatically recognise licences to do cross-border business. This would likely happen in a context of heightened tensions between the EU27 and the UK over the implications for Northern Ireland as well as the UK's financial obligations to the EU.

The imposition of new borders would likely create significant disruption and a big hit to economic growth. Even once the immediate disruption has been resolved, we expect lasting damage as significant parts of the economy (such as highly regulated tradable services or important parts of the manufacturing sector) would face a major challenge to their established business model. We would expect to shave 2–3% off our GDP forecast for the UK over two to three years in such a scenario. This means that, as Table 3.3 shows, growth over this period would be somewhere between very slow and non-existent, with our forecast for GDP to rise by only 0–0.5% per year, cumulatively speaking (the lowest three-year growth rate since 2012–13). In this section, we highlight the assumptions underlying our modelling and break down the impact by sector and expenditure category.

Table 3.3. Growth forecasts in a no-deal Brexit scenario, 2019 to 2022

	2019	2020	2021	2022	Cumulative, 2019–22
GDP	0.9	–0.4	0.3	1.1	1.0
Private consumption	1.7	0.8	0.2	0.9	1.9
Public consumption	2.5	3.2	2.2	0.9	6.3
Business investment	–1.2	–3.7	–3.2	1.3	–5.6
Residential investment	0.6	–0.1	–0.2	2.8	2.5
Exports	–0.4	–3.9	0.6	2.7	–0.7
Imports	2.6	–3.0	0.6	2.5	0.0

Note: Real GDP growth rates.

Source: ONS and Citi Research.

No-deal Brexit modelling assumptions

According to the government's own contingency planning around a no-deal Brexit (code-named 'Operation Yellowhammer'),[4] a no-deal Brexit could cause significant short-term disruption, associated with delays at the borders and some immediate business, financial market and political uncertainty. This immediate shock presents major risks, but we assume that the worst impact would be overcome eventually as companies and consumers adjust.

We therefore focus here on the medium-term impact over two to three years. On this horizon, the impact of a no-deal Brexit depends on the choices the UK, the EU and other affected parties make. For our forecasts, we make a number of key – and debatable – assumptions:

- A stable government remains in place until 2022 aiming at low tariffs, low taxes and low regulation. No part of the UK leaves the union. This scenario likely requires a relatively stable Conservative government to be in place. We expect this to define other areas of the policy agenda.

- Following the tariff schedule it set out in March 2019, the UK imposes low tariffs on most imports, including those from outside the EU. Under this schedule, the government estimated in March that 87% of imported goods would have no tariff.[5] Still, importers from the EU will have to fill in UK customs paperwork, which the Treasury estimated to add two or three times the cost of tariffs to traded goods.[6] We assume

[4] HMG Operation Yellowhammer. See https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/831199/20190802_Latest_Yellowhammer_Planning_assumptions_CDL.pdf.

[5] The government is continuing to hone elements of this agenda, so the precise numbers here are of course subject to change.

[6] HM Treasury, 'The long-term economic impact of EU membership and the alternatives', April 2016, https://www.gov.uk/government/publications/hm-treasury-analysis-the-long-term-economic-impact-of-eu-membership-and-the-alternatives.

they add about 3% to the cost of imports. There will be no new trade deals concluded with the EU or any other major trading partner over the next few years.

- The EU imposes its external tariffs on the UK: these average 2.8% on industrial goods and 8.7% on agricultural goods (WTO estimates). We assume that EU customs procedures would double the impact of the headline tariffs.
- UK financial and professional services providers would initially maintain access to the EU market via equivalence, but would lose most access after a year or two as EU authorities do not prolong transition rules. Crucially, the equivalence arrangements already in place minimise the immediate risk to financial stability.
- The Bank of England cuts the Bank Rate to near zero by the end of 2019 and leaves it there until 2022. It restarts asset purchases to the tune of £50 billion.
- The UK government cuts taxes and raises spending by around 2% of GDP in the first year. This would see spending well above levels announced in the 2019 Spending Round, and a fiscal loosening in excess of the additional plans Mr Johnson announced in the 2019 Conservative leadership race, but has yet to implement.
- The sterling exchange rate falls by 5–10% in trade-weighted terms.
- Net immigration to the UK falls to zero in the short term. We would expect that in such a scenario with an extra 5–10% decline in sterling, net emigration from the UK to the EU would grow sufficiently to offset the ongoing net immigration to the UK from non-EU countries of roughly 200,000 per year. This implies net immigration from the EU falling from a current 60,000 annual net inflow to a 150,000 net outflow as EU citizens leave, in addition to the ongoing net emigration of 50,000 UK citizens per year.
- We assume a 5% immediate drop in UK share prices and a 5% fall in house prices over two years. Note that the UK's FTSE-100 index of large internationally exposed shares actually rose by 10% after the EU referendum in 2016 due to sterling's 20% fall. But we would not expect such a large decline in sterling this time around, and the near-20% fall in the more domestically oriented FTSE-250 index in the immediate aftermath of the 2016 referendum arguably matters more for the financing conditions of the UK economy.
- Alongside the drop in sterling, we assume real goods shortages associated with near-term disruption are contained – preventing a widespread acceleration in inflation.

No-deal economic impacts: by UK economy sector

Based on the modelling assumptions outlined in the previous subsection, we estimate that a no-deal Brexit would reduce UK economic growth by 1.2 percentage points in 2020, 1.0ppt in 2021 and 0.3ppt in 2022. This hit to GDP compares with forecast average annual growth of 1.2% over the same period under our baseline scenario, which assumes ongoing uncertainty and further delays. As such, like the OECD, we suspect a no-deal exit would imply a near-term recession. A no-deal Brexit would leave the UK economy 2.6% or £57.7 billion (in 2019 prices) smaller in 2022 than it would have been under our baseline scenario.

Table 3.4. Breakdown of the impact of no-deal Brexit on the UK economy, by sector

Deviation from baseline	Share of GVA (2018)	2020 (ppt)	2021 (ppt)	2022 (ppt)	Sum (ppt)	Contribution to total impact (ppt)	Average growth rate, 2016–19 (Q2)
High-regulation tradable services	14%	–0.8	–2.0	–1.5	–4.0	–0.6	1.8%
Manufacturing	13%	–4.0	–1.0	2.0	–3.0	–0.4	1.0%
Low-regulation tradable services	33%	–0.8	–0.8	–0.5	–2.0	–0.7	2.7%
Non-tradable services	40%	–0.8	–0.8	–0.5	–2.0	–0.8	1.5%
Total	100%	–1.2	–1.0	–0.3	–2.5	–2.5	1.6%

Source: ONS and Citi Research.

In this and the next subsection, we highlight the elements underlying these forecasts, first looking at the different sectors of the UK economy and then turning to the different expenditure components of UK GDP.

Table 3.4 summarises how we would expect no-deal Brexit to affect the different sectors of the UK economy. For each sector, we summarise its weight in the economy (share of GDP / gross value added, GVA); our forecast for its growth in 2020, 2021 and 2022 if there is a no-deal Brexit at the end of October, as well as the cumulative growth rate over these three years; the contribution this cumulative impact makes to our overall forecast of the impact of no-deal on GDP; and, for reference, the average growth rate of the sector in the most recent three years.

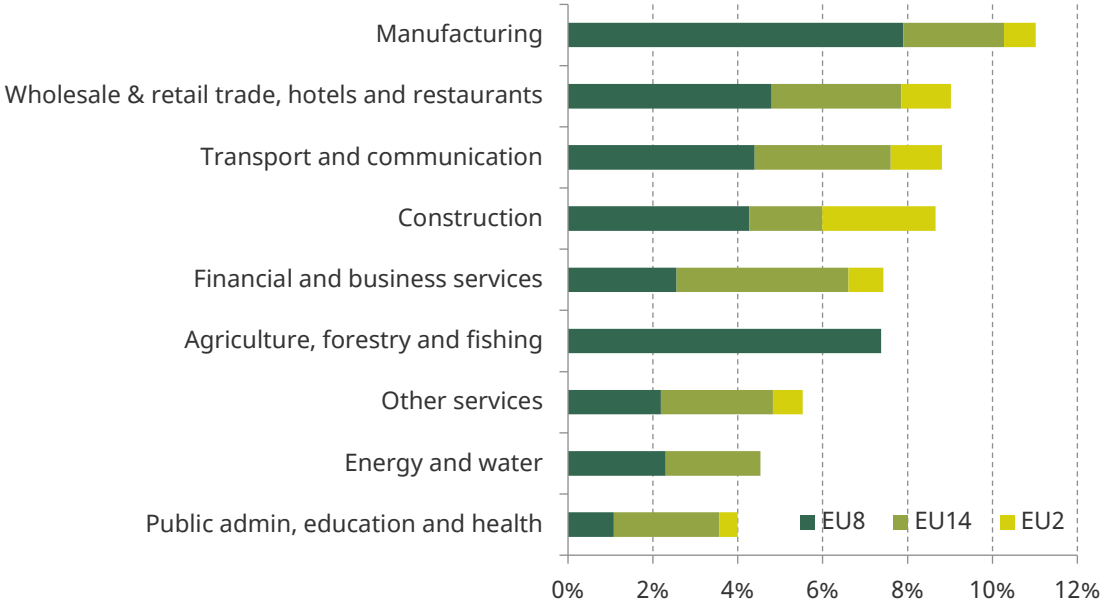
Each sector of the economy will be affected differently by a no-deal Brexit, depending on both its exposure via trade (what and how much it trades with the EU) and its exposure to EU migration.

In 2016, UK trade with the EU (the sum of exports and imports) was roughly 30% of UK GDP, but this was highly concentrated in a few sectors of the economy. The EU trade intensity[7] rises to more than 200% of GVA in the manufacturing sector and 85% in tourism-related industries. In many cases, exposure to both imports and exports matters in the sense that many UK sectors not only export to the EU, but also depend on EU imports either to produce for the domestic economy or to export elsewhere.

In addition, UK firms that employ large numbers of EU migrants are also disproportionately exposed. This is especially true in sectors where skills demand is quite

[7] Trade intensity is defined as the share of UK exports that go to the EU divided by the share of global exports that go to the EU. A trade intensity of 200% therefore means that the EU takes twice as many of the UK's exports as would be expected based on the EU's weight in global imports.

Figure 3.1. Share of EU workers in UK employment, by sector (2016)



Note: The EU14 refers to countries that were EU members prior to 2004, including, amongst others, Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and Sweden. The EU8 refers to eight of the ten countries that joined the EU in its 2004 enlargement: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. The EU2 comprises Bulgaria and Romania, which joined in 2007.

Source: ONS and Citi Research.

specific, and may be difficult to replace via increased levels of immigration from elsewhere. Here manufacturing also stands out, as Figure 3.1 shows.

The five most trade-exposed sectors, which also include agriculture, mining and financial services in addition to manufacturing and tourism, only account for around 20% of UK output and employment. In the following, we highlight differentiated effects divided over four broad sector groups, in order of declining impact. A more detailed breakdown of the sector-by-sector impacts is displayed in Table 3.5.

Highly regulated services

EU regulators have already adopted some transition provisions for a no-deal scenario.[8] But the financial services sector and highly regulated parts of professional services, which together accounted for 14% of 2016 UK GVA, would still likely face high export hurdles while these arrangements are in place. Equally, once the transition provisions expire, which would be entirely at the EU's discretion, service providers could be forced to move people and capital to the EU or to reorient their business model away from the EU. The companies would continue to function, but the services would no longer be provided from and accounted for in London.

[8] These include equivalence arrangements for central counterparties (until March 2020), OTC clearing (for 12 months) and central securities depositories (until March 2021).

Financial and regulated professional services are also exposed to significant risk from post-Brexit migration patterns. As Chapter 2 highlighted, both sectors employ significant numbers of EU workers, and thus their fortunes depend heavily on the new UK immigration system. Here, heightened sterling volatility and weaker perceived growth prospects may also have a direct near-term impact, dissuading would-be immigrants from coming to the UK.[9]

UK financial services may also be hit via the import side: if the UK unilaterally allows foreign-regulated financial services providers to operate in its markets, it would expose UK-based firms to additional competition. The CBI has noted the degree of asymmetry in the UK's external relations following a deal, with the UK largely allowing imports even as the access of UK firms to the EU (and indeed other markets) remains impeded.[10]

The financial sector's trade surplus with the EU in 2016 was nearly £25 billion, or 1.4% of GDP. If we add the entire professional services trade surplus with the EU, this becomes £46 billion or 2.6% of GDP. If that surplus were eliminated or even reversed (a possibility if, for example, banks move their European hubs to the continent and then reimport services to the UK), it would have a very large one-off impact on the UK's economic growth. Most of this impact is likely to be independent of the UK's choices on tariffs, regulations and immigration law. Indeed, deregulation in the form of deviation from international rules may even aggravate the loss of access to international (not just EU) markets. We would expect the sector's GVA to be 4% smaller over two to three years than without a no-deal Brexit, with much of the impact in the later stages when transitory EU equivalence measures expire.

Manufacturing and other goods trading

Manufacturing, mining and agriculture, which together account for 12% of the UK economy, are highly EU-trade intensive. Under WTO rules, all three would face the EU's external tariff framework (as well as new tariffs from the roughly 60 countries the EU has trade agreements with). EU tariffs average 2.8% for industrial goods, but rise to 10% for cars. For agricultural goods, the average tariff is 8.7% for countries trading on WTO rules. Customs bureaucracy might add another 2–3% of the value to the costs, not least because of the requirement to settle VAT at the point of customs. The new tariffs barriers could be mitigated by further exchange rate depreciation, but for highly time-critical production processes (for example, in the car industry), delays due to customs procedures would probably be more important than the actual level of tariffs.

On the import side, the impact of a 'no-deal' scenario would depend on the UK's new import tariffs. In March, the government published a temporary customs scheme for a no-deal scenario where about 90% of imported goods would be tariff-free, compared with around 70% under the current EU external tariff. If the UK were unilaterally to keep zero tariffs on all imports from the EU, the rest of the world would also benefit under the most-favoured nation principle (which requires the UK to offer its 'best' tariff terms outside agreed trade deals to all other WTO members). This would expose UK producers to global rather than just European competition. This might also make it more difficult for the UK to strike favourable trade deals with other countries (since many of their incentives to

[9] In recent years, wage differentials have generally shown themselves to be increasingly important determinants of migrant flows. See Citi GPS, 'Migration and the economy', 2018.

[10] https://www.cbi.org.uk/articles/what-comes-next-the-business-analysis-of-no-deal/.

Table 3.5. Exposure of different sectors of the UK economy to EU trade and immigration

Sector	2016 GVA, £bn (% of total)	Exports to [Imports from] EU, 2016, £bn	EU trade intensity (% of GVA)	Employment (thousands, 2016 average)	Tariff/Customs effect	Regulation effect	Immigration effect	Comments
Manufacturing	177 (10.1%)	129.0 [228.0]	202%	2,434	High	High	High	Trade on WTO tariffs between 2–3% on industrial products and 10% for cars. Customs procedures to slow trade. Regulatory divergence requires new licences, adding costs.
Accommodation and food	53 (3.0%)	14.8 [30.4]	85%	2,140	-	Medium	High	Tourism depends on potential changes to visa regime and potentially new immigration law, as well as exchange rate moves in the short term.
Agriculture, forestry and fishing	11 (0.6%)	2.1 [4.8]	63%	209	High	High	Medium	Trade on WTO tariffs (up to 45% for dairy). Customs procedures to slow trade. Immigration law to affect labour supply. UK producers may benefit from some import substitution.
Mining and quarrying	21 (1.2%)	10.0 [2.8]	61%	54	High	Low	Low	Trade on WTO tariffs. Customs procedures to slow trade.
Financial and insurance activities	115 (6.6%)	28.7 [4.1]	29%	1,013	-	High	Medium	Trade on GATS. Loss of passporting and validity of insurance contracts.
Information and communication	107 (6.1%)	15.0 [10.0]	23%	1,237	-	Low	Low	Trade on GATS. Likely relatively little regulated content.
Transportation and storage	77 (4.4%)	5.6 [10.8]	21%	1,395	-	High	High	Affected by open-skies agreement and new customs procedures. Potentially temporarily losing EU licences to operate on continent.
Professional, scientific and technical activities	215 (12.3%)	23.7 [2.6]	12%	5,101	-	Medium	Medium	Partly impacted by changes to highly regulated sectors (e.g. financial services), partly not trading and affected only by costs of goods and labour inputs. Trade on GATS.
Utilities (electricity, water)	46 (2.6%)	1.2 [1.9]	7%	330	Low	High	Low	Trade on WTO tariffs. Customs procedures to slow trade.

Public administration and defence	81 (4.6%)	0.5 [1.2]	2%	1,264	-	Low	Low	Limited exposure.
Construction	108 (6.2%)	0.8 [0.8]	1%	1,367	-	Low	High	Trade on GATS.
Wholesale and retail trade	191 (11.0%)			4,702	-	Low	High	Indirect effect via goods imports. Immigration law to affect labour supply.
Real estate activities	242 (13.9%)			493	-	Low	Low	Limited exposure. Trade on GATS.
Education	100 (5.7%)			2,697	-	High	Low	To watch: immigration laws, recognition of qualifications
Human health and social work	128 (7.3%)			3,958	-	High	Low	To watch: immigration laws, recognition of qualifications
Others	72 (4.1%)	1.0 [0.4]	2%	1,405				
Sums/Averages	**1744 (100%)**	**232 [298]**	**30%**	**29,799**				

Note: Thresholds are as follows: tariff/customs effect = high if goods trade intensity with the EU >30% of sector GVA, low if <6% (GVA = gross value added); regulation effect = high if subject to significant EU regulation at the moment, low if subject to minimal EU regulation / regulated by other international standards; immigration effect = high if share of EU workers ≥8% of workforce, low if <5%. We show figures from 2016 to strip out Brexit-induced changes that have already occurred. See also UK Economics & Strategy View - Brexit: Economic and Financial Implications of 'No Deal'.

Source: ONS and Citi Research.

negotiate better access to the UK market would be eroded), meaning UK firms are disadvantaged not just in the short term, but in the medium to long term too.

Outside import and export tariffs, regulation and thus Single Market rules matter greatly across most of the goods sector. Even though manufacturing products are often governed by global standards, EU regulations play a significant enough role in the sector that leaving the customs union could lead to new non-tariff barriers to trade both on exports and on imports. In addition, exports to the EU by some highly regulated sectors such as chemicals and pharmaceuticals (together 14% of manufacturing or 1.4% of the UK economy) are likely to be at risk.

A final risk factor for this sector is immigration. Manufacturing has the highest share of EU workers, suggesting it may be particularly hard-hit by tougher immigration laws. This is especially challenging for the sector given the skills composition of these workers, which may make them more difficult to replace at least over the next few years.

Taken together, we would expect manufacturing GVA to be 3% smaller after two to three years under a no-deal scenario than otherwise. That includes an assumed 2% rebound of production levels in year 3 due to factors such as deregulation, low tariffs, stimulus and sterling devaluation.

Low-regulation tradable services

Low-regulation tradable services such as tourism, parts of transportation, large parts of information and telecommunication, and real estate services should not be directly affected by external customs tariffs or diverging regulation and could largely continue trading with few obstacles. There are exceptions, but these tend to be small ones: within transport, for example, air transport might be affected by a no-deal Brexit, but it accounts for 10% of overall transport services and thus only 0.4% of the economy.

However, some of these sectors, in particular tourism and transport services, do depend on large numbers of workers from EU member states, and so might face labour shortages and higher personnel costs in the case of tight new immigration laws. All of these sectors also use EU-produced goods and services as an input into their services and could thus face further increases in costs (depending on the UK's new import customs scheme and exchange rate moves).

If we assume that half of the business services sector falls into a similar category of low-regulation tradable services, this part of the economy currently accounts for 34% of UK GVA. We would expect this sector to suffer somewhat from the general demand weakness at the beginning, but then start benefiting from some of the fiscal and monetary policy counter-measures in 2022–23, so that three years out it ends up 1% smaller than under our base case of continued Brexit delay.

Non-tradables

The remaining two-fifths of the economy is sectors that do not trade their output directly with the EU. However, some of these do use EU inputs, especially goods and labour. Construction and retail & wholesale trade in particular, which together account for 17% of the economy, have low direct trade intensities but high shares of EU workers and also depend on EU goods input. Even utilities and public services such as education and health have significant shares of EU workers (and together account for 20% of output).

The effect of a 'no-deal' scenario on value added in these sectors may not be as sharp as in the tradable sectors, but it could be significant nonetheless. We expect a 2% hit over two to three years and little positive impact from some of the pro-growth measures the government may take.

No-deal economic impacts: by component of GDP

We can also analyse the impact of a no-deal Brexit based on the GDP 'expenditure' components. Table 3.6 summarises the effect on each of these components of spending. We would expect the initially most dramatic impact of no-deal Brexit to come through a further plunge in business investment and exports, but private consumption – which has a heavy weight in the UK economy (see Chapter 2) – would also be vulnerable. The reduction in the household saving rate to all-time lows since the referendum suggests this could be vulnerable in the event of a further shock. These downward impacts could be offset partly by a decline in imports as well as a fiscal expansion, which would drive up public consumption and investment.

Investment

We expect business and private sector dwellings investment to plummet initially after a no-deal Brexit; in 2020, we expect business investment to come in 4ppt lower than it otherwise would have, while residential investment would be 3ppt lower. The export of goods and services to the UK's largest trading partners would become more difficult, and

Table 3.6. Breakdown of the impact of no-deal Brexit on the UK economy, by GDP expenditure component

Deviation from baseline	Share of GDP (2018)	2020 (ppt)	2021 (ppt)	2022 (ppt)	Sum (ppt)	Contribution to total impact (ppt)	Average growth rate, 2016–19 (Q2)
Private consumption	67%	–0.4	–1.2	–0.5	–2	–1.4	2.2%
Public consumption	18%	1	1	0	2	0.4	0.6%
Business investment	9%	–4	–4	0	–8	–0.7	0.0%
Residential investment	4%	–3	–3	0	–6	–0.2	7.3%
Public & other investment	4%	4	2	0	6	0.2	3.3%
Exports	28%	–5	–2	0	–7	–1.9	2.2%
Imports	–30%	–2	–2	0	–4	1.2	3.1%
Total (GDP)	100%	–1.2	–1.0	–0.3	–2.5	–2.5	1.6%

Note: Real GDP growth rates.

Source: ONS and Citi Research.

in some cases impossible, and the import of labour and capital inputs more costly due to new immigration rules and falling sterling.

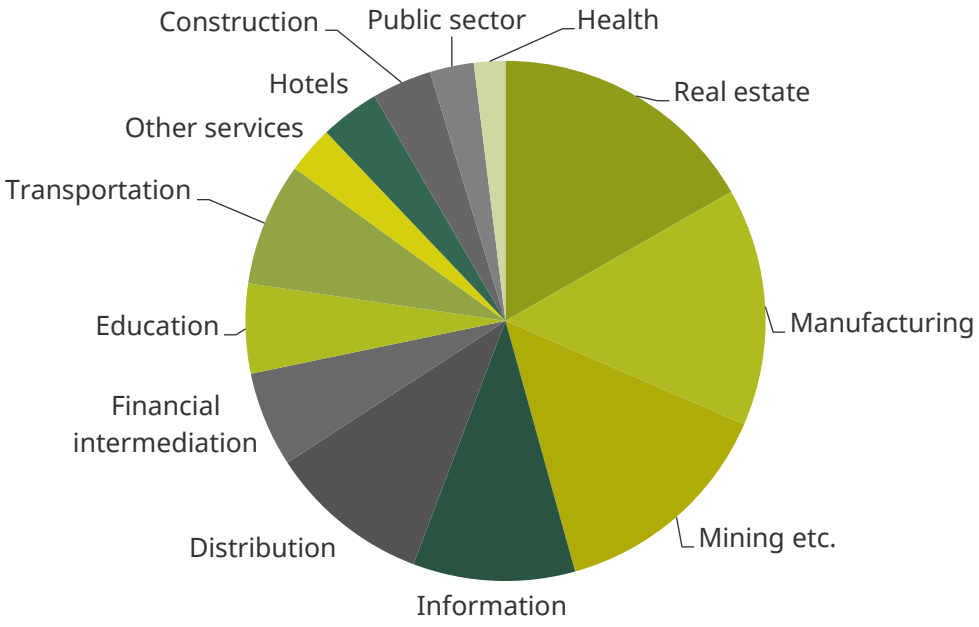
Investment disproportionately relies on sectors that are highly exposed to Brexit (see Figure 3.2). Manufacturing and other production industries accounted for 29% of investment alone in 2018. Investment in the real estate sector, which accounts for 18% of business investment, and in private sector dwellings would also likely fall given a likely decline in demand for commercial property and poorer prospects for national property valuations, respectively.

In principle, import substitution may require some offsetting investment to build up production capacity in the UK. However, much of the substitution is likely to occur between imports from the EU and the rest of the world (rather than boosting demand for domestic production), since we assume that the UK will lower tariffs for all importers in accordance with WTO rules. This means that much of the investment into new supply chains will occur outside the UK and the EU.

In addition, in those cases where alternative international suppliers cannot be found elsewhere, we suspect that onshoring, and subsequent boosts to domestic investment, will be appropriate in only relatively few cases. UK manufacturing, in particular, has often been based on a high degree of specialisation within equally specialised value chains. The loss of access to such transnational networks is then unlikely to generate any large-scale transitional investment in the UK; instead, firms will likely increase the scale of write-offs as existing UK production becomes unviable without easy access to EU supply chains.

On our current baseline (where no-deal is avoided but uncertainty continues due to further delays), we expect business investment to shrink by 1.2% this year and grow only modestly by 0.3%, 0.8% and 1.3% from 2020 to 2022 (2.4% cumulative). In a no-deal

Figure 3.2. Share of different sectors in total investment, 2018



Source: ONS and Citi Research.

scenario, we would expect an additional cumulative fall of 8ppt by 2022. For investment in private sector dwellings in our baseline, we expect 0.6% growth this year and close to 3% thereafter. In a no-deal scenario, we would expect stagnation or a slight decline for another two years. Overall, we would expect a drag of 0.7ppt on annual GDP growth over the three forecast years 2020 to 2022 from the slowdown in private sector investment, or one-third of the overall negative impact of no-deal Brexit.

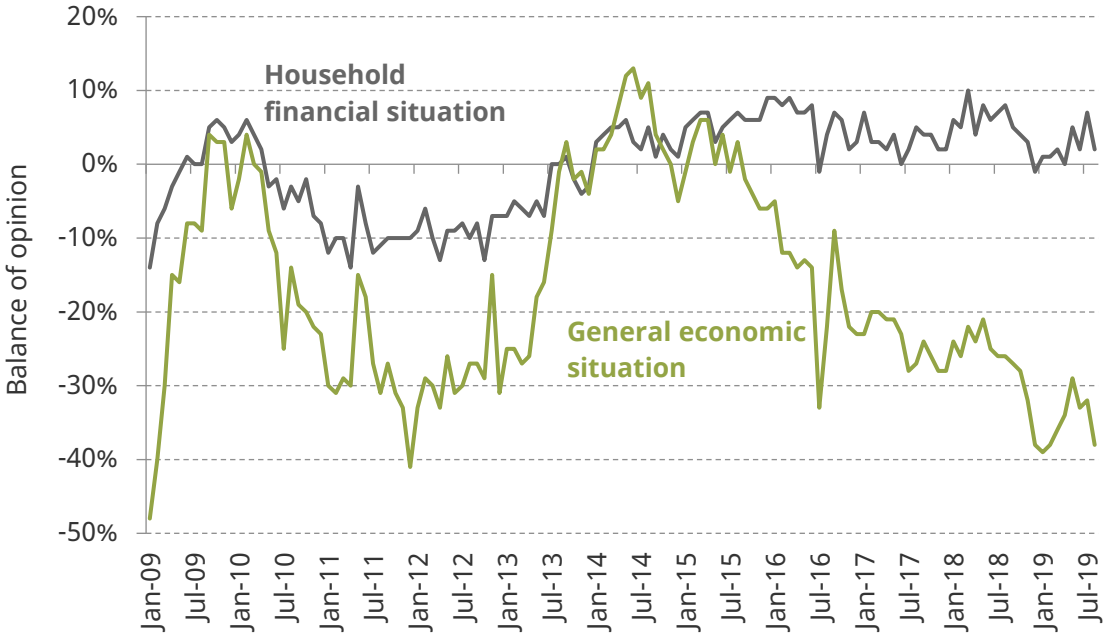
Private consumption

Private consumption would face a range of headwinds in the event of a no-deal Brexit. Prices would rise: a 10% depreciation of trade-weighted sterling would boost headline inflation by 1ppt in the following two years and thus diminish real wage growth. Import substitution would only partly mitigate this, as domestic production capacities are limited and probably expensive due to underinvestment. Instead, imports may be sourced from non-EU countries.

New competition from non-EU countries due to lower tariffs and import substitution would probably trigger a significant fall in employment. We would expect a 1–2ppt increase in the unemployment rate even if labour supply growth slows or stops due to reduced migration.

Over the last five years, rising employment has played an essential role in propping up private consumption growth. In particular, as Figure 3.3 shows, low unemployment has driven a wedge between household-level financial expectations (which remain, on

Figure 3.3. Consumer perceptions of household financial situation and general economic situation



Note: Surveyed 'balance of opinion' is obtained by taking the sum of the number of responses multiplied by the appropriate weight (–1 being very weak, –0.5 being weak, 0.5 and 1 being strong and very strong respectively). This is then divided by a weighted base of 2,000.

Source: GfK and Citi Research.

balance, slightly optimistic) and perceptions of macroeconomic performance (where considerable doubt has settled in). As households do not see the macroeconomic uncertainty affecting their personal capacity to spend, household consumption has been resilient, even in the face of growing Brexit uncertainty. In this context, a sudden increase in unemployment could have a more extensive impact on consumption, further curtailing economic growth.

The negative wealth effect from another fall in house prices would also weigh on spending. Unlike in 2016, households will be less able to smooth through a period of adverse conditions as the saving rate is already extremely low in historical and international comparison.

However, there are some supportive factors for consumption. A rate cut by the Bank of England would reduce debt service for households with variable-rate mortgages (although the average time for interest rate changes to affect mortgage rates is much greater than it used to be[11]). Government tax cuts would boost incomes, and new public spending could boost employment and wages in some sectors.

On balance, we would expect real private consumption to end up 2% smaller than without a no-deal Brexit, which implies household spending volumes flatlining for two years. This would reflect an increase in unemployment, pressure on real incomes and an increase in the household saving rate.

Public spending and investment

In a no-deal scenario, we suspect fiscal easing efforts would be stepped up, boosting public consumption and investment. In his 2019 Spending Round speech, Chancellor Sajid Javid commented that he had tasked the Treasury with developing a 'comprehensive economic response to support the economy if needed'.[12] These comments were made with close reference to a potential no-deal exit. Hence we would expect a further stimulus upgrade in a no-deal scenario. Just as in 2008–09, we expect public investment could prove the focus. That could leave public consumption 2% higher and public investment 6% higher than without no-deal. A more limited fiscal giveaway is already baked into our forecasts, given that almost any UK government seems likely to spend more in any Brexit scenario. But a no-deal case would likely see even more support forthcoming.

Exports and imports

Exports are likely to take a significant hit from the rise of new and significant tariff and non-tariff trade barriers between the UK and the EU. The EU accounted for 44% of total UK exports of goods and services in 2017.

While the hit to goods exports is likely to be immediate and, in the very short term, aggravated by transport disruptions and the running down of stockpiles of UK goods on the continent, services may initially benefit from transition periods. For example, the EU has announced that it will recognise equivalence for central counterparties (CCPs) until March 2020 and for central securities depositories (CSDs) until 30 March 2021. It will also facilitate the cross-border clearing of over-the-counter derivatives for 12 months after

[11] See the first figure here: https://bankunderground.co.uk/2019/09/27/bitesize-fixing-ideas-the-slowing-of-interest-rate-pass-through-to-mortgagors/.

[12] https://www.gov.uk/government/speeches/spending-round-2019-sajid-javids-speech.

Brexit. However, in a no-deal scenario, UK-based firms might ramp up their EU-based operations swiftly as these temporary exemptions could end soon afterwards. Hence, in addition to the immediate and persistent drop in goods exports, we would expect a second wave of export declines due to some service provision relocating from the UK to the EU in 2020 and 2021. If the UK's equivalence recognition ends up being more generous than the EU's (which is realistic under the assumption of a low-regulation UK government), some services may even be moved abroad and reimported. This would cause a double hit to the UK's national accounts, adding growth in imports to the fall in exports.

The drop in exports, in combination with lower domestic investment and private consumption and another sharp drop in the sterling exchange rate, should also trigger a decline in import volumes. However, we would expect that decline to be somewhat smaller than the export decline as the UK cuts tariffs and quotas on non-EU imports (meaning the trade environment becomes relatively more favourable for imports, compared with exports). On balance, we expect exports to grow 7ppt less over two to three years and imports 4ppt less, which together creates a drag of 0.7ppt on GDP.

Alternative paths under no-deal

We cannot rule out that the short-term consequences of a no-deal scenario are more disruptive than we factor in. In particular, if sterling depreciates much more than expected, a balance-of-payments crisis, where capital outflows reach such critical levels that the Bank of England has to raise interest rates at the expense of deepening the domestic financial crisis, is not impossible. The chances of this are increased by the UK's balance-of-payments deficit.

In such crises, the UK would be particularly vulnerable to debt denominated in foreign currencies. The UK's gross external debt is very large at 307% of GDP in 2018, more than double Germany's external debt as a share of GDP in the same year (145% of GDP) and five times Argentina's level (50% of GDP). However, these figures probably exaggerate the UK's exposure to exchange rate volatility: at least on aggregate, the UK's foreign liabilities largely fund foreign assets. The UK's net negative international investment position, meaning more foreign capital is invested in the UK than vice versa, is only about 9% of GDP, suggesting a smaller risk.

For devaluation to drive the Bank of England to tighten rates, real goods shortages and accelerating inflation would likely be necessary. In the short run, we think any food and medicine shortages suggested in the Operation Yellowhammer documents[13] may not have a major macroeconomic impact (although fuel shortages probably would). However, these could influence politics. This may not just lead to a change in government, but could also risk the cohesion of the UK, given a strong independence movement in Scotland and the special situation in Northern Ireland.

However, there is still a risk that a large depreciation could still make it more difficult attracting foreign capital – particularly in the midst of ongoing uncertainty. Since the referendum, the UK's financial account has shifted decisively to being funded via portfolio flows (that is, financial assets), rather than via foreign direct investment (FDI) in UK

[13] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/831199/20190802_Latest_Yellowhammer_Planning_assumptions_CDL.pdf.

companies or capital. While this means businesses may be less immediately affected by a reduction in attractiveness, there is evidence that a reduction in portfolio inflows can drive less accommodative bank lending.[14] This can also occur relatively suddenly.

The fact that the 20% depreciation around the referendum did not trigger a crisis is reassuring. In addition, the Bank of England has established swap lines with the US Federal Reserve, the European Central Bank, the Bank of Japan, the Bank of Canada and the Swiss National Bank, which should ensure access to foreign currency even in the case of major volatility and forestall any major crisis. However, a further reduction in the perceived attractiveness of the UK could drive an increase in commercial rates at the margin, tightening financial conditions.

In the medium and long term, the UK's economic trajectory post-Brexit would significantly depend on the structural choices future governments make with regards to tariffs, regulation and immigration. Over time, a low-tax, low-regulation and low-tariff approach could allow a steeper growth recovery (albeit still only a partial one), which we do not capture in our modelling due to the relatively short time horizon. One plausible scenario would be that, while the EU enters a trade war with the US, the UK could strike a free trade deal with Washington. In that case, European firms might invest in the UK in order to enter the US tariff zone.

By contrast, as discussed in last year's Green Budget,[15] an alternative, more protectionist approach to mitigate the impact of leaving the EU would soften the immediate impact but potentially make it worse over time. The result would be a shallower but longer no-deal Brexit impact.

3.5 Economic forecasts: revoking Brexit

A big shift in the distribution of likely outcomes of the Brexit process since the formation of Mr Johnson's government in July is that the path towards revoking Brexit has become much clearer. Some of the moves of the current UK government to make no-deal Brexit a more plausible outcome, such as attempting to sideline parliament with a (since ruled illegal) five-week prorogation, have sparked new cooperation between several opposition parties and pro-EU former Conservative MPs. Parliament passed legislation to prevent no-deal Brexit and looks prepared to go further if necessary. In addition, the opposition has become more pro-EU. The Labour Party has adopted holding a second EU referendum between a 'Labour Brexit' and remaining in the EU as its policy. The Liberal Democrats even want to revoke Article 50 without a second referendum should they win a majority in a general election.

Polls advise some scepticism on the chances of Remain-leaning parties winning an election, jointly or alone. The Labour party is struggling at around 25% in the polls, but based on the first-past-the-post voting system remains likely to win the most seats of the current opposition parties. However, cooperation between pro-EU parties such as the

[14] C. Kneer and A. Raabe, 'Tracking foreign capital: the effect of capital inflows on bank lending in the UK', Bank of England Staff Working Paper 804, 2019, https://www.bankofengland.co.uk/working-paper/2019/tracking-foreign-capital-the-effect-of-capital-inflows-on-bank-lending-in-the-uk.

[15] C. Schulz, 'UK outlook', in C. Emmerson, C. Farquharson and P. Johnson (eds), *The IFS Green Budget: October 2018*, https://www.ifs.org.uk/publications/13514.

Liberal Democrats, the Greens and the pro-EU regional parties has led to successful 'Remain alliances' in recent by-elections. Polls are still close enough for the Conservatives (and their potential allies DUP and Brexit Party) to lose, and thus for an alternative majority of Labour together with openly Remain-supporting parties. Importantly, since the start of the year, the growing support for the Liberal Democrats and the SNP means that, if a Remain-supporting group of parties are able to secure a parliamentary majority, this is likely to involve de facto parliamentary vetoes for both of these parties. For our 'revoking Brexit' scenario, our starting point is that, if such a majority materialised, it would commit to an eventual second referendum rather than revoking Article 50 outright.

Below, we consider three elements of such a pro-Remain coalition:

- **Brexit policy:** We would expect an attempt to negotiate a softer version of Brexit over a few months followed by a second referendum as early as mid 2020, with a choice between that negotiated Brexit deal and remaining in the EU. While it is not certain Remain would win, narrowing the options on the leave side to one particular compromise deal should make that outcome more likely. In any case, a Conservative defeat in a snap election would immediately – and greatly – diminish the likelihood of a no-deal Brexit. This could have a positive effect on investment in the short term,[16] with greater subsequent benefits if Remain did indeed prevail.

- **Economic policies:** The economic benefit of having a clear path to reversing the 2016 EU referendum would arguably be offset in part by some elements of the broader economic agenda pursued by such a Labour-led government. Labour's agenda poses risks to long-term growth by reducing the flexibility of the economy and increasing the role of the state. In the near term, some of Labour's policies could make the UK less attractive for foreign direct investment (or even trigger domestic funds moving abroad). That is particularly sensitive for an economy with a large current account deficit. However, to the extent that Labour is constrained by its dependence on other parties, we assume that the radicalism of its domestic agenda – and so the economic risks some elements of it might pose – would be reduced.

- **Fiscal policies:** A fiscal expansion is likely, but would not obviously exceed levels implied by Conservative spending plans (discussed in Section 3.2). However, this would still provide some near-term support to growth.

Our judgement is that, over a medium-term period of two to three years, the positive effects of staying in the EU (especially for investment) would offset the negative effects of domestic economic policies, and the economy would outperform compared with the deal, no-deal and base-case scenarios.

As in the no-deal scenario, changes to the assumptions can have substantial implications for the economic trajectory. For example, an outright Labour majority might make Brexit reversal less likely (given Labour leader Jeremy Corbyn is historically a Eurosceptic himself) and high-tax, high-regulation policies that are detrimental to growth more likely. Conversely, a Remain alliance's dependence on the SNP could lead to a second Scottish

[16] As we noted in Chapter 2, the depressive impacts of Brexit on investment have been disproportionately driven by the persistent risk of the very worst outcome.

independence referendum bringing its own uncertainties – and thus lower investment – with it. We assume in our forecasts that Scotland remains a part of the UK.

Brexit stance of a Labour-led coalition

All parties that could conceivably be part of a Labour-led coalition would likely be willing to support a second EU referendum. At least for Labour and the SNP, this is official policy; for the Liberal Democrats, this was official policy until very recently,[17] and would likely command their support.

While the SNP and the Liberal Democrats would probably not try to negotiate a Brexit deal, the Labour party is officially committed to holding negotiations with the EU before a second referendum. Labour's plan foresees negotiating a permanent customs union with the EU and deep regulatory alignment, along with cooperation on issues such as climate change, refugee crises and counter-terrorism. Such a model should be largely in line with the current Withdrawal Agreement, but would require significant adaptation of the political declaration on future trade relations. Such a deal would then be put to a referendum, with Remain as the second option.

It is dubious whether the relationship Labour plans to negotiate with the EU is economically and politically viable. Like Turkey, the UK would lose any say about most of its external trade policy. It would be obliged to open its markets to goods from economies the EU strikes free trade deals with, but these economies would not be obliged to return that favour (the UK would be able to negotiate trade deals covering services independently, but would not be able to offer up access to the UK goods market in return). The UK would continue to make financial contributions to the EU, though likely at a lower level than under full membership. In addition, the customs union would not, in itself, solve the issue at the Irish border; the UK would still be forced to match EU regulations on industrial and agri-food goods, which may include competition and state-aid rules, to prevent a hard border. The only significant policy advantages of a customs union would be the ability to control immigration by ending free movement; the ability to negotiate independent trade deals covering services and intellectual property; leaving the jurisdiction of the European Court of Justice (on most matters); and exit from the common agricultural and fisheries policies. These would come at the cost of losing voting rights as well as membership of the EU's single market – for example, for financial services.

There are other issues with such a plan too. Beginning negotiations with the subsequent intention of calling a second referendum could undermine discussions in the first place: if EU negotiators wanted UK voters to vote to stay, they could offer the worst-possible deal in order to make EU membership the obvious better alternative. However, that risk seems limited given that Labour would not ask for much more than the EU already offered to Theresa May and would presumably enter negotiations in a much more amicable manner. Still, it remains difficult to envisage a deal coming out of these negotiations which the majority of Labour MPs would campaign for.

Were this plan to become government policy (backed by a robust majority in parliament), it would have several immediate effects. The new policy would rule out a highly disruptive no-deal exit in the short term. A victory for the Brexit deal in the referendum would lead to

[17] The Liberal Democrats changed their policy from a referendum to revoking Article 50 at their 2019 party conference.

an exit, but on the basis of a softer ultimate deal than either of the options (no-deal or the current Withdrawal Agreement) now on the table. If Remain won, the UK's position in the EU would be restored.

As such, in the first year of such a government, Brexit-related uncertainty would not completely disappear. However, we expect ruling out a damaging no-deal exit would likely provide some near-term support to investment as businesses took advantage of the new 'no no-deal' policy to execute some projects that had been held back.[18] During the referendum campaign, uncertainty would probably remain elevated, given that a Remain outcome could not be guaranteed. The prospect of near-term resolution would mean investment remained somewhat depressed until the actual result. In the event of a Remain result, we would expect pent-up projects and plans for an even closer relationship would provide a further boost to investment.

We acknowledge that a second EU referendum would not permanently settle the issue of the UK's EU membership. Anti-EU campaigners might blame even a landslide victory for Remain on the framing of the question and the failure to negotiate an attractive deal. The announcement of the result of the second referendum could easily be the start of the campaign for the third referendum. The genie which escaped the bottle in 2016 cannot be put back in quite so easily, so neither economic circumstances nor risk asset prices would revert to the path that was expected prior to 2015. The UK's position in the EU, while restored in the short term, would not be guaranteed.

However, for our scenario with a three-year horizon, we would expect a boost to business investment in the short term, with a further increase if Remain were to win in the subsequent referendum. Further improvement beyond this would depend on the nature of the political fallout. We expect some residual uncertainty would likely persist.

Economic and fiscal agenda of a Labour-led coalition

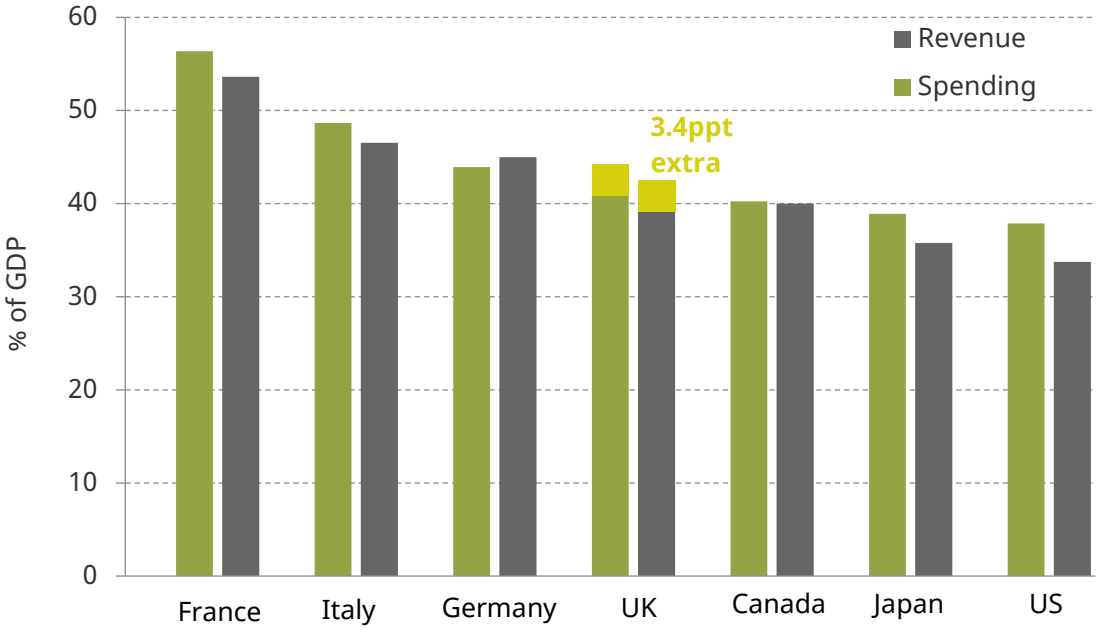
Labour's economic policies have caused concern among businesses and investors since Jeremy Corbyn became party leader in 2015. In the 2017 general election, Labour's manifesto plans included roughly £50 billion in additional day-to-day spending, offset by plans for a similar, if disputed, increase in taxation. In addition, the plans foresaw £250 billion of debt-funded investment spending over 10 years (on average, 1% of GDP each year).

Overall, this would have increased spending by a total of around £75 billion a year (3.4% of 2019 GDP), with tax-raising measures put in place that were intended to raise roughly £50 billion a year. While these numbers are large, as set out in Chapter 6 the Conservative government has already increased its plans for spending in 2020–21 dramatically since 2017 (especially on the NHS) and the prime minister has also discussed substantial tax cuts (see Chapter 8).

Labour's specific tax-raising measures were a set of income tax increases focused on those with an income over £80,000 a year (which is a risky revenue-raiser, as these taxpayers already account for a large share of tax revenues and those on the highest incomes can be quite responsive to increased tax rates) and measures intended to

[18] As we noted in Chapter 2, this has played a disproportionate role in depressing investment.

Figure 3.4. Government spending and revenue as a share of GDP among G7 economies



Source: OECD and Citi Research.

increase taxes on companies, not least an increase in the corporation tax rate from 19% back to the 2011 rate of 26% (which would raise substantial sums, but over the longer term would also be likely to depress investment in the UK). Overall, the Labour party costed these measures as raising £48.6 billion in cash terms (£52.5 billion less a £3.9 billion allowance for additional behaviour change, further reducing the yield).

It is likely that many of the revenue assumptions were too optimistic – analysis by IFS researchers at the time argued that even a £41 billion estimate would, more likely than not, prove too optimistic.[19] Failing to meet this revenue target would have meant a Labour government faced a choice between higher borrowing, more tax-raising measures or reneging on some of its spending commitment. Of course, if a government with this agenda also ended up stimulating growth by reversing the 2016 referendum result, it is also conceivable that fiscal space would be larger than Labour assumed in 2017.

While these are substantial tax and spending plans, and come with some risk, even if fully implemented the size of government in the UK would still be at the lower end of the range, at least in Europe. As Figure 3.4 shows, tax revenue in the UK was 39.1% of GDP in 2017. With Labour's 3.4ppt increase, that would become 42.5%, still below Germany at 45.0%, Italy at 46.5% and France at 53.6%.

Instead, it is other aspects of Labour's 2017 manifesto and additional announcements which would create structural changes to the economy and so might have the bigger economic impact. These include:

[19] https://www.ifs.org.uk/publications/9256.

- reforms to the labour market, such as rolling out sectoral collective bargaining; introducing a minimum wage of £10 per hour (already matched by a Conservative pledge to raise the minimum wage to £10.50);[20] banning zero-hours contracts; and introducing four new bank holidays;

- forcing large firms (employing more than 250 UK workers) to put 10% of all company equity into a fund owned by a firm's workers, which would distribute dividends up to £500 per employee each year to workers and send the rest to the Treasury;

- nationalising water and energy utilities, postal services and train services, with compensation potentially below market prices;

- introducing right-to-buy for tenants in privately rented properties.

Some of these reforms would constitute a significant change to the UK's 'business model' over the past four decades when it came to attracting foreign capital, which featured low tax rates, flexible labour laws and untouchable property rights. Given the UK depends on foreign capital inflows to fund its current account deficit (3.9% of GDP in 2018), challenges to the business model could make the UK less attractive for foreign investors, or trigger outflows of domestic capital. That would probably dampen sterling's appreciation due to receding Brexit fears and may even lead to a knee-jerk depreciation of sterling upon an election result making a Labour government possible. Fully implemented, the impact of these changes would likely do significant damage to the outlook for UK growth.

Labour's likely dependence on the Liberal Democrats and the SNP would probably limit the government's ability to implement some or all of these plans. The Liberal Democrats' 2017 plans were fiscally more conservative. For example, they wanted to eliminate the day-to-day budget deficit two years earlier than Labour and sought a 1 percentage point increase in income tax across the board rather than seeking to raise revenue from those on high incomes only. The Liberal Democrats wanted the corporate tax rate at 20% (not 26% like Labour), to review business rates and not to nationalise infrastructure. The Liberal Democrats could thus be a check on Labour's plans for new spending and structural reform, especially if they contribute a large number of seats to the new majority.

How might economic growth change under a Labour-led coalition?

In order to spell out the growth implications of our Brexit revocation scenario, we make the following assumptions:

- Parliament calls a second referendum on the new deal versus staying in the EU in mid 2020. We assume Remain wins such a referendum.

- The rises in day-to-day spending by 2.4% of GDP (1.8ppt over the level announced at the September 2019 Spending Round) are offset by revenue increases, so that they are largely neutral for the economy.

[20] At its recent conference, the Conservative party committed to raising the minimum wage to around £10.50 by 2024 for workers over age 22. IFS researchers estimate that either increase would bind the wages of around a quarter of all adults, and 60% of all 18- to 24-year-olds at above-market levels (J. Cribb, R. Joyce and A. Norris Keiller, 'Minimum wages in the next parliament', 2017, https://www.ifs.org.uk/publications/9205; https://twitter.com/PJTheEconomist/status/1178690846956363777).

- There would still be net fiscal easing from the £25 billion (1.1% of GDP) per year increase in public investment plus 0.6% of GDP for unfunded measures announced since 2017 to 'end austerity', so a total 1.7% of GDP.

- Labour market flexibility is reduced by limiting zero-hour contracts, reducing working hours (including the abolition of the voluntary opt-out of the working time directive) and raising the minimum wage.

- The government launches consultations into nationalising parts of the utilities sector, post and railways as well as a scheme to strengthen employee participation in larger companies, including handing over 10% of the shares of large companies to employees. But these measures are not implemented in the near term.

Starting with the profile of Brexit uncertainty, a Remain alliance victory would rule out a no-deal Brexit in the short term. We expect this would trigger a relief boost to business confidence in the UK and in the EU immediately, partly offset by uncertainty about the new government's economic policies. Brexit uncertainty would further recede after a Remain victory in a mid-2020 second EU referendum. However, some uncertainty about the UK's membership of the EU would remain, albeit at a longer time horizon.

During this period, households, businesses and investors would have to digest Labour's economic policies. We would expect higher corporate and high-income taxes and tighter labour laws to cap the rebound in (private) investment. The increase in corporation tax, in particular, is notable here. The large increase in public investment may help offset some of the negative aggregate effects associated with higher corporation tax, complementing the improvement associated with the reduction in Brexit-related uncertainty. However, this will depend on exactly how this is directed. After a vote to remain in the EU in the mid-2020 referendum, there should be further upside for business investment in particular.

At the same time, a 1.8% of GDP fiscal loosening (including significant redistribution from wealthier households to consumption-intensive poorer households via the tax and welfare system), minimum wage hikes and the relief to have avoided no-deal Brexit could boost consumption. Since private consumption accounts for two-thirds of GDP, we would expect a significant acceleration of GDP growth to 2% or more annualised until the middle of next year (Table 3.7). While the potential downside to residential property prices associated with policies such as the right for private tenants to buy their rental property may weigh on this, such policies may also boost disposable incomes for non-homeowners. We make no assumption about the effects of such changes.

On balance, we expect that the positive impact of this scenario on growth and financial markets would be smaller than the negative reaction in a no-deal scenario. We would expect UK GDP to grow 1.5–2% more over the next two to three years than in the baseline scenario of unresolved Brexit tensions. In contrast to the no-deal scenario, the initial positive impact in 2020 would be quite small (+0.3ppt to 1.1% GDP growth), because it would take time until the new referendum is held. In 2021, the relief would be greatest after a pro-EU referendum result, with growth rising above 2% for the first time since the 2016 EU referendum. In 2022, growth would fade again towards the (higher) potential rate of 1.5–2% per year.

Table 3.7. Growth forecasts in a 'never Brexit' scenario, 2019 to 2022

No Brexit	2019	2020	2021	2022	Cumulative, 2019–22
GDP	0.9	1.1	2.2	1.9	5.3
Private consumption	1.7	1.5	1.9	1.7	5.2
Public consumption	2.5	3.2	2.2	0.9	6.3
Business investment	–1.2	1.3	5.8	6.3	13.9
Residential investment	0.6	3.9	5.8	5.8	16.3
Exports	–0.4	2.1	3.6	3.7	9.7
Imports	2.6	1.0	4.6	4.5	10.3

Note: Real GDP growth rates.

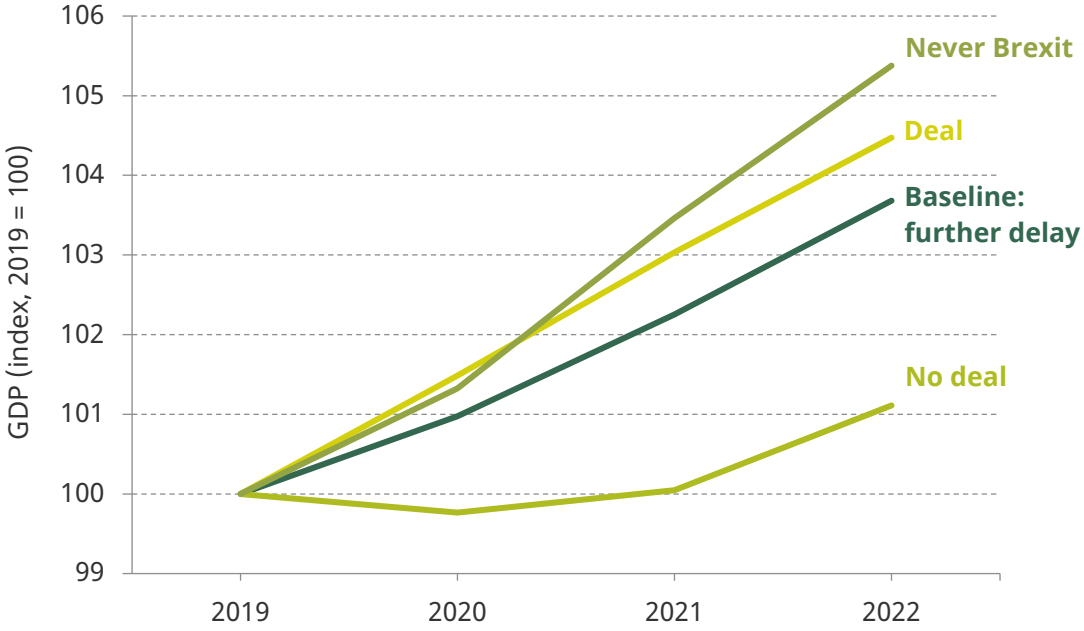
Source: ONS and Citi Research.

With the economy at full employment already, and receiving the extra boost of less uncertainty and fiscal easing, underlying inflationary pressures should build rapidly and push the Bank of England to hike Bank Rate. Depending on external developments (sterling as well as foreign monetary policy), the MPC may wait until May 2020, but then we would expect two rate hikes per year, which would dampen growth and any rebound in the housing market, for example.

3.6 Conclusion

We have described here four potential paths for the UK economy. While there are many others, in particular when combining potential election outcomes with Brexit paths, these four scenarios provide a useful indicative picture of where the UK economy may go from here. From a growth perspective, we would expect the Brexit reversal ('never Brexit') to be the best outcome in the medium term, with the economy 5.3% larger in 2022 than in 2019 (see Figure 3.5 on the next page). Clearly, however, as we noted above, if this were associated with full implementation of Labour's 2017 manifesto plans – perhaps under a Labour majority (rather than the assumed watered-down Labour minority) – the headwinds to growth would be substantial and the overall impact on growth remains unclear. A deal would still be better than our baseline, with GDP rising by 0.8% more than the 3.6% in total we expect in our baseline. Even in a no-deal scenario, we expect the economy to grow, but by more than 4% less than in the best scenario of 'never Brexit': in this scenario, the economy would only be 1.0% larger in 2022 than it is in 2019.

Figure 3.5. Real GDP growth in the UK under different Brexit scenarios (2019 = 100)



Source: ONS and Citi Research.

4. Public finances: where are we now?

Carl Emmerson and Isabel Stockton (IFS)

Key findings

- **A decade after the financial crisis, the deficit has been returned to normal levels, but debt is at a historical high.** The latest estimate for borrowing in 2018–19, at 1.9% of national income, is at its long-run historical average. However, higher borrowing during the crisis and since has left a mark on debt, which stood at 82% of national income, more than twice its pre-crisis level.

- **Given welcome changes to student loan accounting, the spending increases announced at the September Spending Round, and a likely growth downgrade (even assuming a smooth Brexit), borrowing in 2019–20 could be around £55 billion, and still at £52 billion next year.** Those figures are respectively £26 billion and £31 billion more than the OBR's March 2019 forecast. Both exceed 2% of national income.

- **A fiscal giveaway beyond the one announced in the September Spending Round could increase borrowing above its historical average over the next five years.** With a permanent fiscal giveaway of 1% of national income (£22 billion in today's terms), borrowing would reach a peak of 2.8% of GDP in 2022–23 under a smooth-Brexit scenario, and headline debt would no longer be falling.

- **Even under a relatively orderly no-deal scenario, and with a permanent fiscal loosening of 1% of national income, the deficit would likely rise to over 4% of national income in 2021–22 and debt would climb to almost 90% of national income** for the first time since the mid 1960s. Some fiscal tightening – that is, more austerity – would likely be required in subsequent years in order to keep debt on a sustainable path.

- **Over the longer term, keeping debt falling as a share of national income whilst funding an additional loosening would rely on a strong growth performance and an orderly Brexit.** Even if a Brexit deal is secured, there would be a strong case for the chancellor to resist any calls for a substantial package of permanent tax cuts or further increases in day-to-day spending unless these are to be covered by tax rises of a similar size.

4.1 Introduction

Since the financial crisis, public sector borrowing – the gap between government revenue and spending – has fallen rapidly and, at the March 2019 Spring Statement, it stood below its long-run historical average. However, a number of changes have occurred since March or loom on the horizon. The new accounting treatment of student loans dispels a 'fiscal illusion' that was previously flattering headline measures of borrowing. The September 2019 Spending Round has, according to the government, 'turned the page on austerity'.

The most recent Bank of England growth forecasts warned of the chances of an imminent recession. Finally, the Brexit process (perhaps) risks delivering a significant adverse shock to the public finances via a non-negotiated exit from the EU.

In Section 4.2, we contextualise the current situation of the public finances with respect to the recent past and international experience. Then in Section 4.3, we discuss changes since the Office for Budget Responsibility's (OBR's) last forecast for debt and borrowing at the Spring Statement in March that are already known to affect the public finances, and we produce an updated baseline forecast. In Section 4.4, we look ahead to analyse a variety of scenarios for the medium term, discussing the impact of a near-term downgrade in the growth outlook even with a smooth Brexit; a no-deal Brexit; and a potential further permanent fiscal loosening – for example, to implement cuts to income tax that were a part of the prime minister's platform during the Conservative leadership contest.

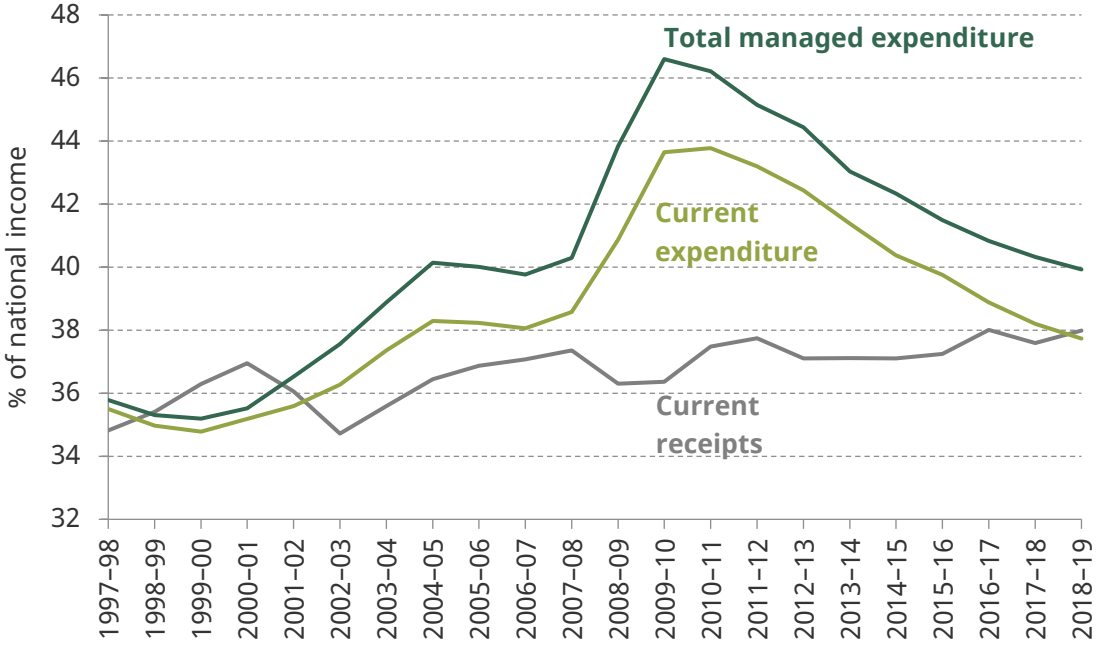
4.2 Where are we and how did we get here?

Government receipts, spending and borrowing

The path of government receipts and spending since 1997–98, measured as a share of national income, is shown in Figure 4.1.

Government spending increased slowly as a fraction of national income during the early 2000s, rose sharply as national income fell in the wake of the financial crisis, and has since fallen considerably over the last decade. In the most recent financial year, 2018–19, both total public spending (known as total managed expenditure, TME) and day-to-day or

Figure 4.1. Public sector receipts and spending since 1997–98



Note: Current expenditure includes depreciation. Figures are accurate as of the 24 September 2019 public finances data release.

Source: Office for Budget Responsibility, 'Public finances databank', 30 September 2019, https://obr.uk/data/.

current expenditure (TME excluding public sector net investment) were at their lowest share of national income since 2006–07.

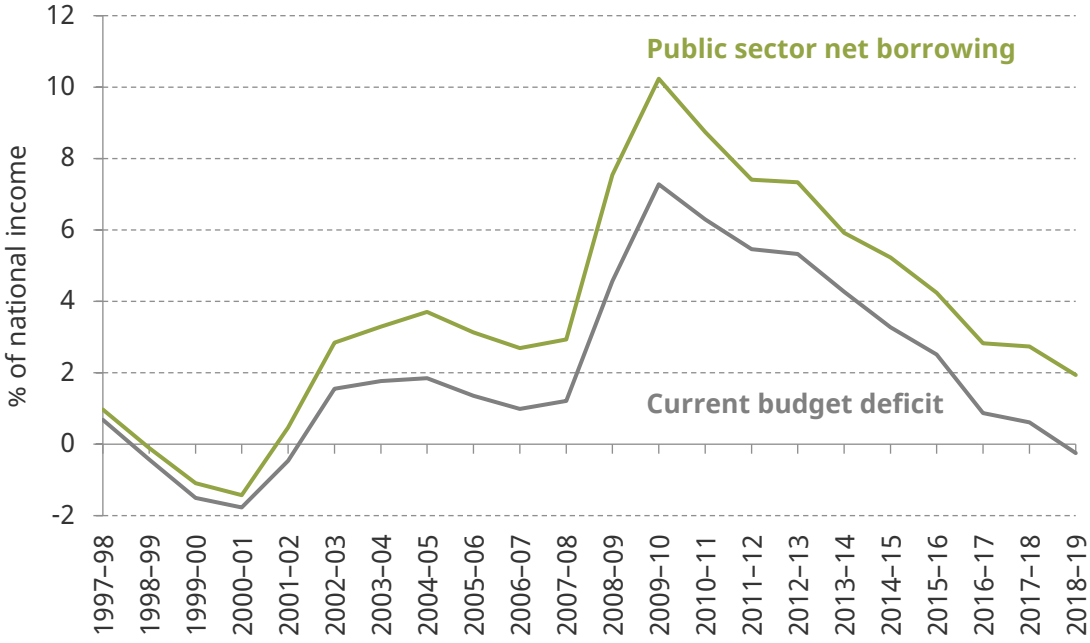
The path for current government receipts, which include both tax and non-tax receipts of government (the latter includes items such as interest income), has been much more stable. But receipts have edged up over the period since 1997–98, in part due to discretionary net tax-raising measures being announced and implemented in the year or two following the 1997, 2001, 2010 and 2015 general elections. In 2018–19, they had climbed to 38.0% of national income, which had not been exceeded since 1985–86. Looking just at *tax* (i.e. ignoring non-tax receipts), at 34.4%, revenues are at their highest sustained level as a fraction of national income since the early 1950s.

The gap between total spending and receipts is the deficit – more formally known as public sector net borrowing. As can be seen in Figure 4.1, while the UK has not run an overall budget surplus (i.e. had current receipts that exceed TME) since 2000–01, public sector net borrowing is now lower than it was in the years prior to the financial crisis. In addition, in 2018–19, the government ran a surplus on its current budget as receipts exceeded current spending – the first time in 17 years that the UK government was not borrowing to finance day-to-day spending.

These patterns are shown more clearly in Figure 4.2, which shows overall borrowing (the extent to which total spending exceeds receipts) and the current budget deficit (the extent to which current spending exceeds receipts), again since 1997–98. In 2018–19, both were at a lower level than in any year since 2001–02.

As Figures 4.1 and 4.2 have shown, public sector net borrowing has now been brought down to less than 2%, below pre-crisis levels, through a combination of current receipts rising to their highest share of national income since 1985–86 and total public spending being reduced to its lowest share of national income since 2006–07. Borrowing is also now

Figure 4.2. Public sector borrowing since 1997–98



Source: Office for Budget Responsibility, 'Public finances databank', 30 September 2019, https://obr.uk/data/.

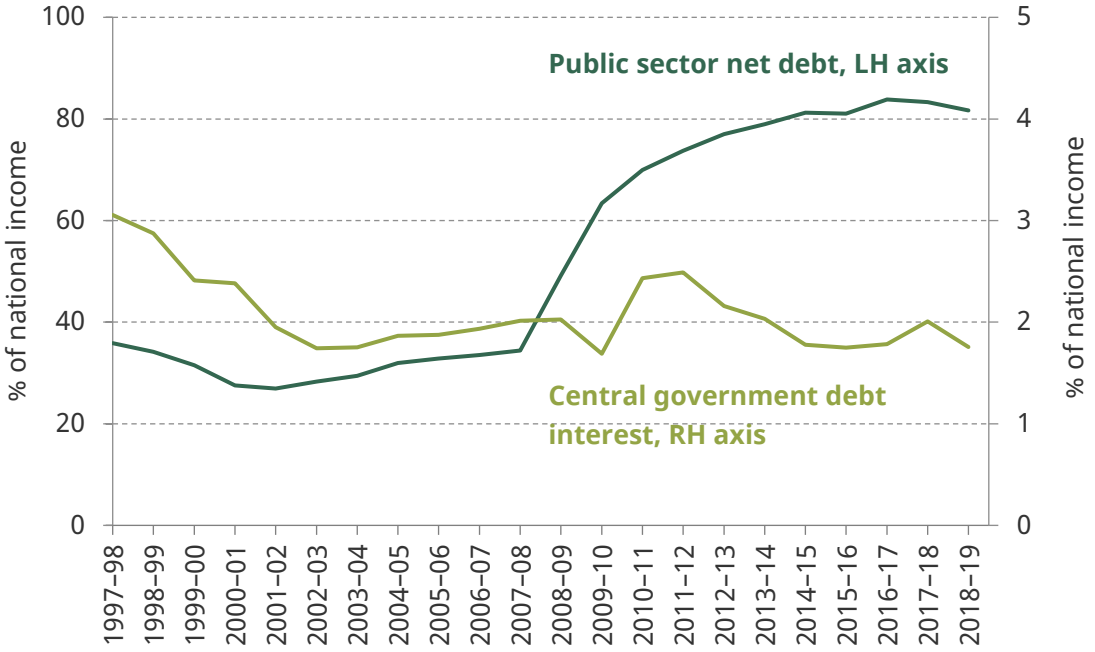
typical by longer-run UK historical standards: borrowing of 1.9% of national income in 2018–19 is equal to the average rate of public sector net borrowing over the 60 years from 1948 to 2007–08.

Public sector net debt and debt interest

The high levels of public sector net borrowing over the period from 2008–09 to 2015–16 (inclusive) have increased the stock of government debt substantially. Prior to the financial crisis and associated recession, public sector net debt was running at just below 40% of national income but – as shown in Figure 4.3 – it has since more than doubled as a share of national income, reaching a peak of 84% in 2016–17. This is the highest level of public sector net debt since 1963–64 (although prior to this, net debt had been continuously above this share of national income since 1915–16). Public sector net debt has since fallen as a share of national income. This is because government borrowing since 2016–17 has been sufficiently low that the cash stock of debt has grown less quickly than the cash size of the economy.

Despite this doubling of net debt, the government's debt interest bill has remained flat in real terms as the recorded cost of government borrowing has fallen. As shown in Figure 4.3, in 2018–19, when public sector net debt exceeded 80% of national income, spending on debt interest was 1.8% of national income, or £37.5 billion in nominal terms. Compare this with 2007–08, when public sector net debt was below 40% of national income but spending on debt interest was actually higher as a share of national income, at 2.0%. A simple 'effective annual interest rate', calculated as annual spending on debt interest as a share of public sector net debt at the end of the preceding financial year, has fallen from around 6% just before the financial crisis to just above 2% in 2018–19.

Figure 4.3. Public sector debt and debt interest since 1997–98



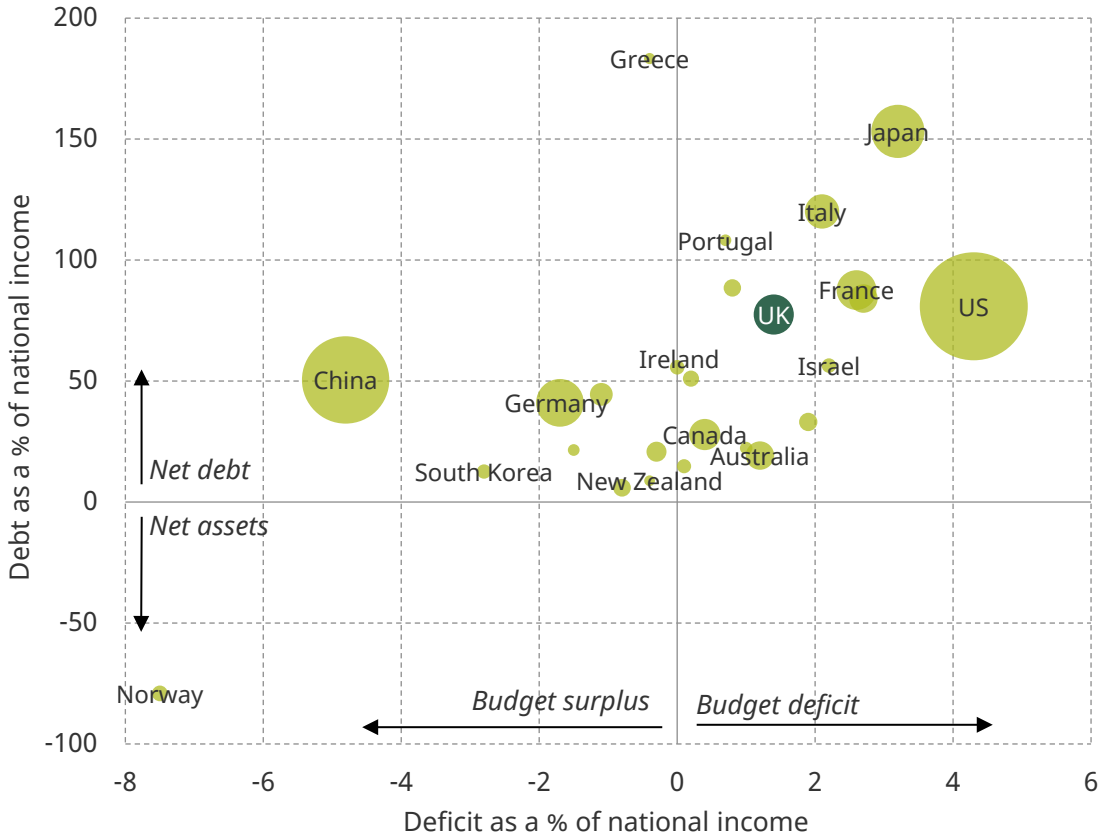
Source: Office for Budget Responsibility, 'Public finances databank', 30 September 2019, https://obr.uk/data/. Debt interest is net of the Bank of England's Asset Purchase Facility (see https://www.bankofengland.co.uk/markets/quantitative-easing-and-the-asset-purchase-facility and footnote 1 at the bottom of the next page).

Mostly, the low debt interest cost is due to low rates on gilts (government bonds), which reflect a genuinely low cost of borrowing and can be used to justify greater borrowing. However, spending on debt interest is also currently flattered by the Bank of England's programme of quantitative easing. If the gilts purchased under this scheme had instead been held by the private sector, debt interest spending would have been scored at around £3 billion higher in 2018–19.[1]

International comparisons

Compared with other industrialised countries, both the UK's deficit and its debt are above average. Figure 4.4 shows that among 25 other large economies, only seven have a higher

Figure 4.4. Deficit and debt in 26 countries in 2018



Note: Bubbles represent the size of a country's economy in 2018 (in dollars). Debt in Czech Republic refers to 2017, not 2018; net debt not available for Greece and China so gross figure used. Measures are general government net deficit and general government net debt. These are similar to, but differ slightly from, the public sector measures typically used in the UK and quoted elsewhere in the chapter.

Source: International Monetary Fund, *World Economic Outlook Database, April 2019*, https://www.imf.org/external/pubs/ft/weo/2019/01/weodata/index.aspx.

[1] Under this programme, £430 billion of gilts have been purchased by the Bank of England through its Asset Purchase Facility, which is about one-quarter of the £1.8 trillion of outstanding public sector net debt in March 2019. The interest rate scored against this borrowing is equal to the Bank of England's base rate – currently 0.75%. This is very low, depressing debt interest payments: over the financial year 2018–19, the Bank of England base rate averaged just under 0.7%, whereas gilt rates (specifically the weighted average interest rate on conventional gilts) averaged 1.4% (source: chart 7.2 of OBR, *Fiscal Risks Report: July 2019*, https://obr.uk/docs/dlm_uploads/Fiscalrisksreport2019.pdf).

deficit and only eight have a larger stock of debt, relative to the size of their economies. Among the countries with the highest debt stock are those hardest hit by the financial crisis, including Greece, Italy, Portugal and Spain.

The size of the dots in Figure 4.4 indicates the size of each economy. As a general rule, larger economies tend to run higher deficits and accumulate more debt as a share of national income than smaller ones, with the United States having the largest deficit and Japan both the second-largest deficit and the second-largest debt. Italy, France and the UK are also all large economies where the government deficit and debt are comparatively high relative to the size of the economy. Notable exceptions to this rule are Germany and China: both have a below-average level of debt and are running a budget surplus. Sizeable budget surpluses are also seen in South Korea and Norway (whose oil reserves are being used to accumulate substantial net assets).

4.3 Changes since the Spring Statement

On 24 September 2019, the Office for National Statistics (ONS) released its latest public finances figures. These differ considerably from the estimates of borrowing that had been released alongside the March 2019 Spring Statement, for reasons both expected and unanticipated. This section discusses the drivers behind these revisions and assesses their possible impact on the outlook for the public finances going forwards.

Student loan accounting

One of the biggest revisions to the March 2019 figures on the public finances has come from changes to the accounting methods used by the ONS, which came into effect in September 2019. The most significant of these is an important change to the way in which student loans are accounted for in the public finances. A substantial portion of student loans extended (estimated by IFS researchers to be 45% of the total outlay for those beginning to receive loans in Autumn 2019[2]) is not expected to be repaid. Under the new methodology, the expected government loss is recorded as an increase in government borrowing at the moment the loan is extended (when the student is at university) rather than when the loan is actually written off (30 years after graduation). More details on this accounting change are given in Box 4.1.

As the new accounting treatment more accurately reflects the economic reality, the change is a welcome one. The impact on measured fiscal aggregates is to push up capital spending (and therefore total spending) and to depress current receipts. Therefore, it pushes up measures of both overall public sector net borrowing and (to a lesser extent) the current budget deficit. But, as ever, the choice of accounting methodology (and changes to it) does not directly affect the true underlying health of the public finances.

In contrast to the deficit, measures of public sector net debt are unaffected by the accounting change: all spending on student loans continues to add to debt when the loans are made, while repayments of student loans (or receipts from selling the student loan book) reduce debt in the year the funds are received.

[2] J. Britton, C. Farquharson and L. Sibieta, *2019 Annual Report on Education Spending in England*, IFS Report R162, https://www.ifs.org.uk/publications/14369.

In total, the student loan change adds £12.4 billion to borrowing in 2018–19, which accounts for the lion's share of the upwards revision from 1.1% to 1.9% of national income since March. This amount will rise over time as more students receive loans to cover the higher fees in place since 2012. As shown in Table 4.1 (under adjustment A), our calculations suggest that it will rise to £16.1 billion in nominal terms in 2023–24.

Box 4.1. New student loan accounting treatment

The total nominal value of UK student loans is large (around £120 billion[a]) and projected to rise rapidly, with the OBR forecasting that under current policy it will reach close to one-fifth of national income in 2040.[b] In the past, the headline borrowing figure has been flattered by treating student loans like any other loan: specifically, when the loan was made there was no increase in public sector net borrowing at that point.

This makes sense in situations where the borrower is expected to repay in full and with interest. But student loan repayments depend on a graduate's income, and any remaining loan balance is written off after 30 years. As a result, about 80% of graduates do not repay the full amount and the write-off effectively subsidises their tuition. But under the old method, this subsidy was only ever recorded as public sector net borrowing at the point of write-off, 30 years after the loan was initially made. (And – even more bizarrely from an economic standpoint – it was never scored as public sector net borrowing if the student loan book was sold off before the 30-year point was reached.)

In December 2018, the ONS announced a decision to develop a new accounting treatment for student loans that better reflects their true fiscal impact.[c] Under this methodology, only the part of the loan that is expected to be repaid is treated as a loan, with the rest treated as capital spending from the start. Economically, it is rather odd that the portion of loans that are not expected to be collected will count as capital rather than current spending, given that were these pure grants – to which the overall loan subsidy is similar in nature – they would count as current spending. Still, the new methodology certainly moves the accounting treatment of student loans closer to the reality of how they operate.

Similarly to the principal of the loan, as interest accrues on the outstanding student loan book, only the portion that is actually expected to be received will be scored as a receipt under the new accounting treatment. There is no impact on public sector net debt: loans will continue to add fully to debt when they are made, with subsequent payments (or receipts from selling the student loan book) reducing debt only when they are received.

In June 2019, the ONS produced estimates of how this accounting change will affect measured fiscal aggregates for the years up to 2018–19,[a] with the latest estimates being published in September 2019.[d] In 2018–19, the estimated impact is to add 0.6% of national income, or £12.4 billion, to public sector net borrowing. Since the additional spending is classified as capital spending, the change adds only £2.3 billion to the current budget deficit, much less than to the headline deficit. This is because public sector net investment, which does not count toward the current budget deficit, is increased by £10.1 billion.

Prior to the ONS producing its latest estimates, the OBR produced estimates of how its forecasts for public sector net borrowing might be affected from 2018–19 through to 2023–24. The latest ONS adjustment to borrowing for 2018–19 is larger than the OBR estimate. Therefore, for the years beyond 2018–19, which are shown in Table 4.1, we adjust the OBR's estimate upwards.

[a] Office for National Statistics, 'Student loans in the public sector finances: a methodological guide', 2019, https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/methodologies/studentloansinthepublicsectorfinancesamethodologicalguide.
[b] J. Ebdon and R. Waite, 'Student loans and fiscal illusions', OBR Working Paper 12, 2018, https://obr.uk/student-loans-and-fiscal-illusions/.
[c] Office for National Statistics, 'Accounting for student loans: how we are improving the recording of student loans in government accounts', 2018, https://www.ons.gov.uk/news/news/accountingforstudentloanshowweareimprovingtherecordingofstudentloansingovernmentaccounts.
[d] Office for National Statistics, 'Public sector finances, UK: August 2019', 24 September 2019, https://www.ons.gov.uk/releases/publicsectorfinancesukaugust2019.

Table 4.1. The March 2019 borrowing forecast updated for subsequent developments

	2019–20	2020–21	2021–22	2022–23	2023–24
OBR March forecast (£ billion)	**29.3**	**21.2**	**17.6**	**14.4**	**13.5**
Changes since March:					
(A) Student loan adjustment	*13.3*	*13.8*	*14.4*	*15.3*	*16.1*
(B) Corporation tax and pensions adjustments	*4*	*4*	*4*	*4*	*4*
(C) Spending Round increase	*5.2*	*13.4*	*15.4*	*17.2*	*18.5*
(D) Growth-revenue effects	*–1.2*	*–2.9*	*–3.0*	*–2.4*	*–1.5*
(E) Direct saving from EU withdrawal agreement relative to membership	*0*	*–3.0*	*–3.0*	*–5.6*	*–9.3*
(F) Replacing EU spending in the UK	*0*	*3.2*	*7.6*	*7.6*	*7.8*
Adjusted baseline forecast:					
£ billion	**50.6**	**49.7**	**53.0**	**50.6**	**49.1**
As % of GDP	**2.3**	**2.2**	**2.2**	**2.1**	**1.9**

Note: All £ billion figures in nominal terms. (A) is constructed from ONS September 2019 public finance release and OBR forecast. (B) assumes that the combined impact of changes remains roughly at the same level it has been for the past four years, as reported in the August public finance release. (C) is the direct increase in TME announced in the September 2019 Spending Round. (D) uses OBR multipliers to calculate the boost to revenues that arises as a result of the additional spending announced in the Spending Round. (E) assumes EU contributions and receipts during the transition period are the same as during membership. (F) assumes counterfactual EU spending in the UK remains constant as a share of the gross contribution, with counterfactual contributions to the EU taken from the March 2019 Economic and Fiscal Outlook.

Corporation tax receipts and pensions

Receipts had been artificially high for several years due to an accounting error at HMRC that double-counted corporation tax credits. Correcting this error added £2.6 billion to borrowing in 2018–19. In addition, methodology and data changes related to the treatment of pensions in public sector statistics increased recorded borrowing by £1.3 billion in the same year. Figure 4.1, and all other numbers on the past state of the public finances in this chapter, are based on the updated figures for all years, released in September. For our projections, we assume that the impact of these changes on borrowing stabilises at £4 billion a year (adjustment B).

The 2019 Spending Round

On 4 September 2019, Chancellor Sajid Javid announced a substantial boost to day-to-day departmental spending. This increased planned spending in 2020–21 by £13.4 billion. In addition, he announced a three-year settlement for spending on schools in England which, if delivered, would reverse most of the cuts to day-to-day per-pupil spending seen since 2009.

Limits for day-to-day departmental spending have not been set beyond 2020–21. We assume that overall day-to-day department spending is increased in real terms so that it can cover the multi-year settlements announced for the NHS and schools in England.[3] Keeping to even these increased spending limits would still mean that any other additional spending commitments – for example, to increase police numbers further and to keep defence spending and official development assistance spending at 2.0% and 0.7% of national income respectively – and any Barnett implications from the NHS and schools spending increases in England would require cuts to be found elsewhere.

As shown in Table 4.1 (adjustment C) relative to the March 2019 Spring Statement, this adds £13.4 billion to spending in 2020–21, rising to £18.5 billion in nominal terms in 2023–24.

Other adjustments

We make two other adjustments to the forecasts set out in the March 2019 Budget.

First, we allow the spending round boost to spending to increase demand in the economy, using the multipliers that the OBR applies. This increase in economic activity boosts revenues temporarily (thereby reducing the deficit), but this effect is assumed to fade over time as monetary policy, exchange rates, wages and other prices in the economy adjust (adjustment D in Table 4.1).

Second, the OBR's forecast assumes that the UK chooses to spend the money it no longer pays the EU on unspecified domestic priorities. There is a direct saving to the public finances because the UK's payments to the EU under the financial settlement ('the divorce bill') are typically lower than what the payments would have been, had the UK remained in the EU. In the March 2019 Spring Statement, the OBR assumed this saving would be spent rather than used to reduce borrowing. One could argue that the September 2019 Spending Round announcement was Mr Javid choosing to devote these funds to UK public services, but we separately account for this spending, as discussed. In line with the UK government's commitment, we assume it replaces EU spending in the UK – for example,

[3] We have not included any Barnett consequentials.

on farm subsidies and research funding. We then assume that any savings from EU contributions over and above this level are available to reduce borrowing or, in one of our scenarios, partly to fund an additional giveaway.

As shown in Table 4.1, the overall impact of these changes is zero in this financial year and very modest in 2020–21 because during the transition period (which is assumed to run until the end of 2020), both UK contributions to the EU and EU spending in the UK continue unchanged.[4] But the saving rises to £1.5 billion in 2023–24 (as shown by the net effect of adjustments E and F). This corresponds to less than £30 million per week. This direct saving is only a small part of the impact Brexit will have on the public finances: the impact that it has had and may still have on growth, which is discussed in detail in the next section and in Chapter 3, dwarfs the direct benefits of avoiding EU contributions.

Overall change to the outlook for borrowing

Overall, the net effect of these changes is to push up headline borrowing by £21.3 billion in 2019–20. Borrowing in 2023–24 is now expected to be nearly £50 billion, £36 billion more than forecast by the OBR in March. Most of this change is explained by the (welcome) change in student loan accounting and the chancellor's spending round decision to boost overall day-to-day spending on public services. This revised forecast for borrowing – £50.6 billion or 2.3% of national income in 2019–20, falling to 1.9% of national income in 2023–24 – implies that, on the new accounting basis, the deficit would not decrease from its 2018–19 level (1.9% of national income) over the next five years.

This adjusted borrowing forecast is essentially what we might have expected the OBR to have produced alongside the March 2019 Spring Statement had the methodological changes to the public sector statistics already come into effect, had the error in recording corporation tax receipts already been corrected and had Mr Hammond announced the additional spending for departments in 2020–21 at that point (and had the OBR changed its assumption that any direct saving from EU contributions would be spent rather than saved). There have, of course, been other developments since March. The possible impact of these on the public finances is considered in the next section.

4.4 Looking ahead

The adjustments discussed so far relate to accounting changes and firm spending commitments, which we know will affect borrowing no matter what happens to the economy. But, clearly, the outlook for the public finances depends crucially on whether, as a number of forecasters have predicted (at least for the near term), economic growth is weaker than forecast at the time of the Spring Statement, and on whether the UK leaves the EU without a deal, with the disruption to the economy that this would entail.

This section first shows how the adjusted baseline forecast might be expected to change if the OBR decided to downgrade its forecasts for growth to be in line with the Bank of England's forecast made in August 2019 (which, like the OBR's forecast, is predicated on a

[4] The saving is negative in some years despite the UK being a net contributor in terms of its contributions and receipts as a member state. This is due to the timing of financial settlement payments: they were chosen such that the UK would not pay more than it would have paid as a member state in any year, but not necessarily such that it would never pay more *net of counterfactual receipts*. We discuss our assumptions on UK–EU transfers in a no-deal Brexit scenario in Section 4.4.

smooth Brexit). It then considers the impact of an additional permanent fiscal giveaway – on top of the spending round announcement – of 1% of national income. This is done first for scenarios in which we retain the OBR's assumption of a 'smooth and orderly' Brexit process and then repeated under a – still reasonably orderly – 'no deal' scenario.

Smooth and orderly Brexit scenarios

The top panel of Table 4.2 simply repeats the adjusted baseline forecast for borrowing that was shown in Table 4.1, and the related forecasts for public sector net debt (excluding the Bank of England; see Box 4.2). The table also shows the forecast path for economic growth under this scenario, which is the OBR's March 2019 growth forecasts updated to

Table 4.2. Scenarios for the public finances in a smooth-Brexit scenario

	2019–20	2020–21	2021–22	2022–23	2023–24
Adjusted baseline forecast					
Public sector net borrowing (£bn)	50.6	49.7	53.0	50.6	49.1
Public sector net borrowing (% of GDP)	2.3%	2.2%	2.2%	2.1%	1.9%
Net debt (excl. BoE, % of GDP)	72.8%	72.7%	72.8%	72.8%	72.6%
Memo: growth (%)	*1.3%*	*1.7%*	*1.8%*	*1.7%*	*1.7%*
With Bank of England near-term growth downgrade					
Public sector net borrowing (£bn)	55.3	52.3	42.8	46.4	49.1
Public sector net borrowing (% of GDP)	2.5%	2.3%	1.8%	1.9%	1.9%
Net debt (excl. BoE, % of GDP)	73.3%	73.1%	72.1%	71.9%	71.5%
Memo: growth (%)	*1.0%*	*1.6%*	*2.4%*	*1.7%*	*1.7%*
1% GDP additional fiscal giveaway					
Additional giveaway (% of GDP)	0%	⅓%	⅔%	1%	1%
Public sector net borrowing (£bn)	55.3	58.8	56.3	68.2	72.4
Public sector net borrowing (% of GDP)	2.5%	2.6%	2.4%	2.8%	2.8%
Net debt (excl. BoE, % of GDP)	73.3%	73.4%	72.9%	73.5%	74.0%
Memo: growth (%)	*1.0%*	*1.7%*	*2.5%*	*1.7%*	*1.6%*

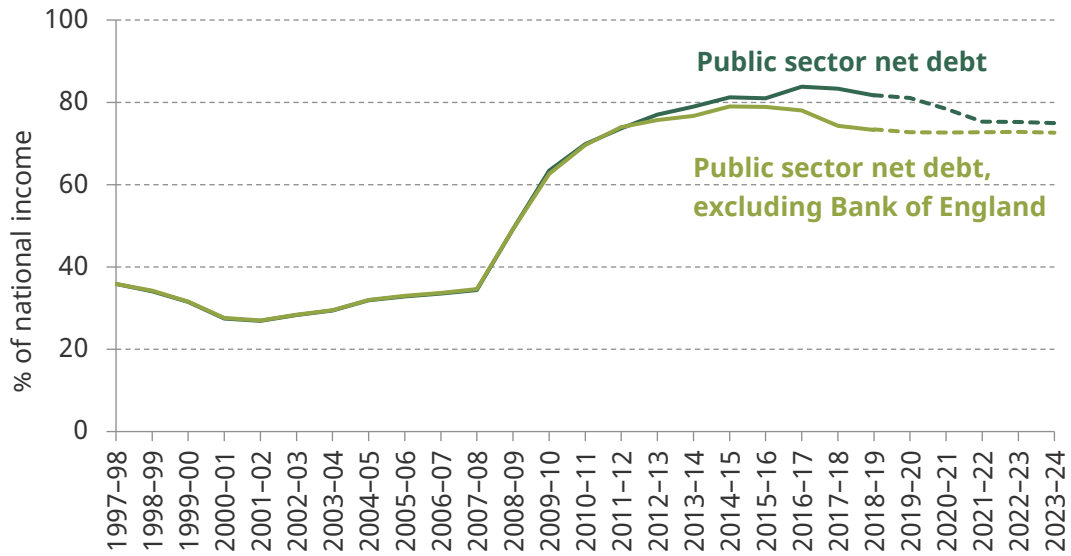
Note: The adjusted baseline forecast is as shown in Table 4.1. 'Bank of England' growth forecast additionally updates for the August 2019 Bank forecast. Additional 1% giveaway is permanent and phased in over three years, starting in 2020–21. Debt excluding Bank of England (BoE) assumes that the Bank's contribution to debt is unaffected by the scenarios considered.

Source: Office for Budget Responsibility, *Economic and Fiscal Outlook: March 2019*; Bank of England, *Inflation Report: August 2019*.

Box 4.2. Headline debt figures and the Term Funding Scheme

The OBR's March 2019 Spring Statement forecasts were for public sector net debt to continue falling over the coming years (see Figure 4B.1). Much of this forecast decline is, however, explained by an intervention made by the Monetary Policy Committee of the Bank of England in August 2016 following the result of the EU referendum. Specifically, loans totalling £127 billion were made to 62 participating UK banks and building societies under the Term Funding Scheme over the period to February 2018, with the loans to be repaid within four years of being taken out.[a] The liabilities created to make these loans add to public sector net debt but the assets (the value of the expected loan repayments) are not netted off (because they are not deemed to be a short-term financial asset). So public sector net debt was pushed up when the loans were made in 2016–17 and 2017–18, with this effect expected to reverse when the loans are due to be repaid in 2020–21 and 2021–22.

Figure 4B.1. Public sector net debt since 1997–98



Source: OBR, 'Public finances databank', 30 September 2019, https://obr.uk/data/, ONS, 'Public sector finances, UK: August 2019', 24 September 2019, https://www.ons.gov.uk/releases/publicsectorfinancesukaugust2019 and chart 4.8 of OBR, *Economic and Fiscal Outlook: March 2019*, https://obr.uk/efo/economic-fiscal-outlook-march-2019/.

Also shown in Figure 4B.1 is a measure of public sector net debt that strips out the balance sheet of the Bank of England. This allows us to consider public sector net debt while disregarding the temporary impact of the Term Funding Scheme. The OBR's March 2019 Spring Statement forecast is for this measure to fall gradually as a share of national income from 74.8% in 2018–19 to 70.7% in 2023–24: i.e. a drop of 4% of national income over five years. Continuing to reduce the ratio of debt to national income at this rate would see it remain above pre-crisis levels until well into the second half of this century.

[a] Bank of England, 'The Term Funding Scheme: design, operation and impact', 21 December 2018, https://www.bankofengland.co.uk/quarterly-bulletin/2018/2018-q4.

take into account the temporary boost to economic activity that might be expected from the spending round announcement.

The near-term outlook for the economy in 2019 and 2020 has deteriorated in recent months. For example, the Bank of England's latest forecasts (from August 2019)[5] are for the economy to be 0.3% smaller in the first quarter of 2020 than it had predicted in its February 2019 forecast. This is even though it maintains its assumption that a Brexit deal will be achieved and predicts a higher growth rate than the previous forecast in 2021–22.

The second panel in Table 4.2 therefore adjusts the growth forecasts for the most recent Bank of England growth forecast. Under this scenario, growth in 2019–20 would be 1.0% (down from 1.3%) with this lost ground being made up by higher growth in 2021–22 (2.4% rather than 1.8%). Borrowing would rise to £55 billion in 2019–20 (2.5% of national income), but would then fall over time so that it was back to 1.8% of national income in 2021–22. Debt would still fall as a share of national income throughout this period.

Finally, we consider the possibility of an additional permanent fiscal giveaway. During his successful campaign to be leader of the Conservative party, Boris Johnson set out a commitment to increase the income tax higher-rate threshold from £50,000 a year to £80,000. He also suggested that tax cuts for the low-paid would be a priority. The impact of these reforms is considered in Chapter 8. There have also been suggestions that, once again, there is to be a freeze in rates of fuel duties (see Chapter 9).

Producing a firm costing for these is difficult, as often necessary information – such as the timescale to get to a higher-rate threshold of £80,000 – has not been provided. It is also not clear which changes are 'commitments' and which are 'aspirations'. But it is clear that there could be a sizeable package of tax cuts – and, to the best of our knowledge, Mr Johnson has made no proposals for substantial tax-raising measures.

Therefore the third panel of Table 4.2 considers a scenario in which there is a 1% of national income giveaway (on top of the spending round announcement), worth £22 billion in today's terms. We assume that one-third of this would be in place in 2020–21, two-thirds in place in 2021–22 and the full package in place from 2022–23 onwards. To reflect the boost to the economy from increased spending, we use the OBR's fiscal multiplier, which predicts that an income tax cut amounting to 1% of GDP increases output by 0.3% in the first year, fading to zero over five years as the economy adjusts. The boost to the economy feeds through to revenues, such that the net cost of the giveaway to the government is less than its overall size – the giveaway partly 'pays for itself' in the first few years after its introduction, but this effect fades away over time.

Such a giveaway would push up borrowing considerably. In 2023–24 (when the initial boost to the economy would start to fade), the deficit would be £72.4 billion. At 2.8% of national income, this is above the level projected for the current year (2.5% of national income): so borrowing would no longer be on a downwards trajectory and would be set to remain above the UK's historical average and close to the deficit that the last Labour government was running prior to the financial crisis in 2006–07. Public sector net debt (at least excluding the Bank of England) would be on an upwards trajectory, with the

[5] Bank of England, *Inflation Report: August 2019*, https://www.bankofengland.co.uk/-/media/boe/files/inflation-report/2019/august/inflation-report-august-2019.pdf?la=en&hash=6BDB165D5ABAF6B8E218A90AB6790F1377B20F18.

projection suggesting it would stand at 74.0% of national income in 2023–24, up from 73.3% of national income in 2019–20. A comparison of the borrowing outlook in the three scenarios is shown in Figure 4.8 later.

As is shown in Section 4.5, it is far from clear that continuing to run a deficit of this size would be consistent with reducing public sector net debt as a share of national income over the longer term: depending on the long-run growth performance of the economy, debt may fall very slowly or not at all. It is therefore questionable whether a permanent tax cut of this magnitude, funded through increased borrowing, would be sustainable.

A further change since the OBR's March forecast is that market expectations of both the Bank of England interest rate and gilt rates (which have formed the basis for the OBR's fiscal forecasts to date) have fallen. As of 5 July 2019, these implied the Bank of England base rate still averaging below 0.7% in 2023–24 (rather than rising to just over 1.1% as was expected at the time of the Spring Statement) and the gilt rate rising to just 1.3% in 2023–24 (rather than to 1.7%).[6] Incorporating these lower interest rates into the forecast would lead to debt interest spending being forecast to fall further over the next five years, reaching just 1.5% of national income in 2023–24, some 0.2% of national income – or £4 billion – lower than was forecast by the OBR in the March 2019 Spring Statement (see Table 4.3).

However, this downwards revision in market expectations for interest rates should probably not be incorporated into the forecast. Indeed, doing so could exacerbate a current inconsistency: the OBR's forecasts are intended to be predicated on a smooth and

Table 4.3. Outlook for central government debt interest spending (net of APF)

	% of national income	£ billion
2018–19	1.8%	37.5
2023–24		
OBR March 2019 forecast	1.7%	42.3
Updated for fall in market expectations for interest rates up to 5 July 2019	1.5%	38.4
Memo: scenario under which interest rates and gilt rates rise by 1ppt (100 basis points)	*2.1%*	*52.0*

Note: Debt interest is net of the Asset Purchase Facility (APF).

Source: Office for Budget Responsibility, 'Public finances databank', 30 September 2019, https://obr.uk/data/; authors' calculations using the OBR's debt interest ready reckoner (https://obr.uk/forecasts-in-depth/tax-by-tax-spend-by-spend/debt-interest-central-government-net/) and data on changes in market expectations of interest rates between March 2019 and July 2019 from chart 7.2 of OBR, *Fiscal Risks Report: July 2019*, https://obr.uk/docs/dlm_uploads/Fiscalrisksreport2019.pdf.

[6] Chart 7.2 of OBR, *Fiscal Risks Report: July 2019*, https://obr.uk/docs/dlm_uploads/Fiscalrisksreport2019.pdf.

orderly Brexit process. But market expectations will reflect some risk of a choppy and disorderly Brexit and markets might, under that scenario, expect interest rates to fall rather than rise (although in practice they could move either way).[7] What is clear is that the chancellor would be best advised not to use any such reduction in forecast debt interest spending to justify a permanent discretionary fiscal giveaway. Therefore we do not adjust for this in Table 4.2.

No-deal Brexit scenarios

The previous discussion is based on the OBR's central forecasts, which, as we discussed above, are predicated upon a smooth and orderly withdrawal from the European Union. In its recent 2019 Fiscal Risks Report, the OBR analysed a scenario for a withdrawal without a negotiated agreement on 31 October, again with a five-year time horizon. The consequences of such a 'no deal' Brexit are highly uncertain and this scenario (a more detailed version of one that the International Monetary Fund (IMF) presented in its World Economic Outlook in April) represents only one of a range of possible outcomes. Amongst this range, it represents a relatively benign scenario, particularly in the short term. The IMF itself presented an additional scenario in the same report which adds short-run border disruption, causing additional losses of 1.4% (0.8%) in the first (second) year. The scenario underlying our analysis, as well as the OBR stress test, assumed that temporary mitigation measures succeed in eliminating border disruption.

In addition to the absence of border disruptions, notable assumptions reducing the negative economic impact include only moderate (rather than severe) financial market disruptions and a gradual (rather than immediate) increase in non-tariff barriers between the EU and the UK with some temporary recognition of standards, including for financial services. On the fiscal side, the scenario assumes that the government receives £6.3 billion in 2020–21 and £10 billion a year thereafter of tariff revenue according to the schedule it has announced,[8] but despite this it is assumed that there is no change to trade patterns. This will tend to flatter the public finances, since we would expect firms and consumers to change their patterns of production and consumption in response to the new tariffs, and to do so in ways that would reduce tariff revenues.

The 'smooth Brexit' scenarios we presented above assume that, as per the draft withdrawal agreement negotiated by Theresa May's government, the UK participates in the EU budget as normal until the end of the latter's current financial framework in December 2020. In a no-deal scenario, there would be no such transition period. While the full ramifications of EU and UK financial commitments in a no-deal scenario are beyond the scope of this chapter, we make a broad-brush assumption that the UK would not pay membership contributions during what would have been the transition period (from 1 November 2019 to 31 December 2020), and in turn would receive no EU funding. This represents a direct saving for the public finances, although one that is far outweighed by the detrimental effect of the resulting economic downturn on the public finances.

[7] As the OBR's recent Fiscal Risks Report states, 'If a smooth Brexit is achieved, market interest rates – and our debt interest forecast – could rise again' (paragraph 7.17 of OBR, *Fiscal Risks Report: July 2019*, https://obr.uk/docs/dlm_uploads/Fiscalrisksreport2019.pdf).

[8] The no-deal tariff schedule for a period of 12 months, with World Trade Organisation (WTO) most-favoured nation (MFN) tariffs applying thereafter.

Our estimated 'saving' is £12 billion which is far less than the oft-cited £39 billion. There are three main assumptions we make that lead to this:

- first, that EU spending in the UK – for example, on farm subsidies and research – is replaced in full by Westminster;
- second, that additional outstanding commitments beyond the end of the would-be transition period, such as contributions to pension liabilities and the paying out of the UK's stake in EU assets, are honoured on both sides, with the UK paying more than it receives in these transactions;
- third, that the UK will have been a member of the EU between 31 March 2019 and 31 October 2019 and the UK will have paid, or will pay, its membership contribution for this period.

In addition to these adjustments reflecting transfers between the UK and the EU, we applied the same updates to this no-deal scenario that we applied to the March forecast in Section 4.3. These are the increase in borrowing resulting from the student loan accounting change, the removal of previously double-counted corporation tax credits, changes to the methodology of accounting for pensions and the fiscal loosening arising from the September 2019 Spending Round.

Table 4.4 shows that both the deficit and debt are projected to rise substantially as a share of national income in the no-deal scenario, with the ratio of debt to national income (excluding the Bank of England) standing 10 percentage points higher by 2023–24 than this year in the adjusted baseline forecast. The deficit peaks at 4% in 2021–22, before decreasing slightly in the following two years but remaining well above 2%.

For the scenario with an additional (and in these circumstances perhaps modest) fiscal loosening equivalent to 1% of national income, we assume that the fiscal loosening produces an equivalent stimulus effect as in the orderly Brexit scenario. (The case for, and potential public finance implications of, a temporary giveaway of the same magnitude are considered in Chapter 5.) If a no-deal Brexit is associated with heightened uncertainty, this may prove to be optimistic, although to the extent to which there is additional spare capacity, the multipliers could be greater. The deficit in this scenario is projected to climb to around 4.5% for two years as the giveaway is phased in. Debt as a share of national income is projected to climb to above 85% of national income – or almost 90% of national income including the Bank of England and assuming the Term Funding Scheme is extended – which would be its highest level since the mid 1960s.

This exercise shows that even if mitigation efforts are moderately successful and the disruption of a no-deal Brexit is limited, there would still be substantial consequences for the public finances in the short and medium run. In the longer term, effects on productivity and growth become more important. In Section 4.5, we explore the longer-term fiscal implications of the IMF's projection of an eventual 3% hit to GDP from a no-deal Brexit (relative to a Brexit with a deal) through increased trade barriers and (to a lesser extent) lower migration.

Table 4.4. Scenarios for the public finances in a benign no-deal Brexit scenario

	2019–20	2020–21	2021–22	2022–23	2023–24
Adjusted baseline forecast					
Public sector net borrowing (£bn)	43.7	67.8	92.0	85.0	71.2
Public sector net borrowing (% of GDP)	2.0%	3.1%	4.0%	3.6%	2.9%
Net debt (excl. BoE, % of GDP)	73.7%	75.4%	80.8%	83.3%	83.4%
Memo: growth (%)	*0.4%*	*–1.0%*	*1.4%*	*2.7%*	*2.8%*
Plus additional 1% GDP fiscal giveaway					
Additional giveaway (% of GDP)	0%	⅓%	⅔%	1%	1%
Public sector net borrowing (£bn)	43.7	74.1	105.1	106.0	93.8
Public sector net borrowing (% of GDP)	2.0%	3.3%	4.6%	4.5%	3.8%
Net debt (excl. BoE, % of GDP)	73.7%	75.7%	81.7%	85.0%	85.9%
Memo: growth (%)	*0.4%*	*–0.9%*	*1.5%*	*2.8%*	*2.8%*

Note: The adjusted baseline forecast is the March Spring Statement forecast, adjusted for the new student loan accounting treatment, the adjustment for corporation tax and pensions, direct savings from lower transfers to the European Union and the September 2019 one-year spending round. Additional 1% giveaway is permanent, starts in 2020–21 and is phased in over three years. Debt excluding Bank of England assumes that the Bank's contribution to debt is the same as in the Fiscal Risks Report stress test in all scenarios considered.

Source: Office for Budget Responsibility, *Fiscal Risks Report*, July 2019; authors' calculations using OBR estimates of transfers between the UK and the EU (*Economic and Fiscal Outlook*, March 2018 and March 2019); Office for National Statistics.

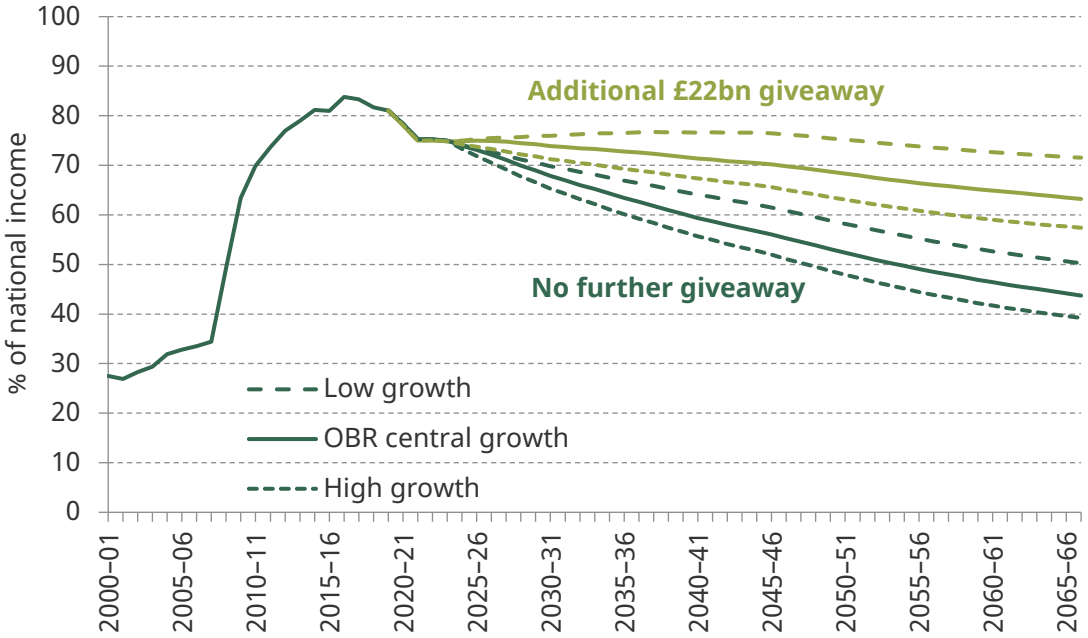
4.5 Long-run outlook

In Section 4.4, we considered the outlook for the public finances over the next four years under different scenarios for Brexit and also with and without a further permanent fiscal loosening of 1% of national income (over and above the spending round announcements). A crucial consideration when deciding if a permanent fiscal loosening is appropriate is the longer-term health of the public finances. This section therefore projects the ratio of debt to national income over the next several decades under different scenarios.

The size of the debt stock relative to national income crucially depends not only on government borrowing, but also on growth in national income. A rapidly growing economy would allow the government to run larger deficits while keeping debt on a sustainable path. This is because debt sustainability in the long run is largely determined by whether the debt stock is growing more or less quickly than the size of the cash economy.

In Figure 4.5, we show the path of debt (here we focus on headline debt, i.e. not excluding the Bank of England) under three different assumptions for long-run economic growth

Figure 4.5. Paths for debt under alternative assumptions for the deficit and economic growth



Note: The solid lines take growth projections from the OBR's July 2018 Fiscal Sustainability Report. The dashed lines assume instead that the real growth rate in 2023–24 from the Spring Statement forecast (1.6%) persists in the longer term (long dashes) or that the economy returns to a real growth rate of 2.7% per year (the long-run pre-crisis average) after 2023–24 (short dashes). The giveaway is 1% of national income, which is £22 billion in 2019–20.

after the end of the current forecast period. The solid lines represent the OBR's central growth projection. This projection is based on the OBR's assumptions for a smooth Brexit and its view of the future path of productivity (the amount a worker can produce in a given amount of time) and labour supply. It anticipates that growth will continue to recover, but not return all the way to its pre-crisis long-run average (of 2.7%). Under this scenario, growth averages 2.2% per year over the period from 2024–25 to 2066–67.

The dashed lines represent two more extreme cases: if, in five years, any post-crisis recovery ceased and real economic growth remained at the still historically relatively weak level (1.6%) predicted for that point, debt would fall more slowly than in the central forecast. If, in contrast, real economic growth returns to its long-run historical average (2.7%) and remains there, debt would fall more quickly.

The figure shows that, if current spending and taxation plans as of the September 2019 Spending Round were implemented ('no further giveaway') and a continuity policy without any further cuts or giveaways (such as the tax cuts pledged by Mr Johnson) pursued after that, debt would fall relative to national income. It should be noted that 'no further giveaway' in this context means that growing spending pressures either are not accommodated or are counterbalanced by either tax hikes or cuts to other areas of spending. An important source of such pressures will be the ageing of the population and growing demand for healthcare services (see Box 4.3 for a discussion). Even under our high-growth scenario, where real growth averages 2.7% per year, debt would only return

to pre-crisis levels (below 40% of national income) at the very end of the long-run projection – in both of the other growth scenarios, this goal would remain out of reach.

Box 4.3. Cost pressures of ageing, health and social care

Our continuity scenario assumes that after the end of the current five-year spending plans, there will be no more tightening or loosening of fiscal policy. But we already know that some cost pressures are all but certain to increase, chiefly those related to an ageing society. In its 2018 Fiscal Sustainability Report, the OBR projected that age-related public spending as a share of GDP would increase by almost 9% of national income over a 50-year period.

The largest driver of this increase is higher spending on health, which is expected to almost double to 14% of national income. Only part of this increase is due to growth in the proportion of the population at older ages, who on average use more – and more expensive – healthcare services than younger people. In addition, productivity growth in the health service has tended to lag behind that achieved across the economy as a whole – perhaps due to the labour-intensive nature of healthcare – and therefore a faster growth in health spending would be required for health outputs (age- and per-capita-adjusted) to grow in line with non-health outputs.

If the government wanted to implement the continuity policy of no giveaways over the long term and at the same time accommodate these cost pressures, corresponding cuts would have to be made in other areas or taxes would need to rise. In other words, maintaining the deficit at the same level is not equivalent to maintaining the current level of public service provision and an unchanged tax burden.

Table 4B.1. Projected change in age-related spending as a share of GDP over 50 years

	2017–18	2067–68	Difference
Health	7.1	13.8	6.7
Adult social care	1.2	1.9	0.7
Education	4.3	3.8	–0.5
State pensions and pensioner benefits	5.9	8.2	2.3
Public service pensions	2	1.5	–0.5
Total age-related spending	**20.5**	**29.2**	**8.7**

Note: 'State pensions and pensioner benefits' includes items such as pension credit, winter fuel payments and the Christmas bonus.

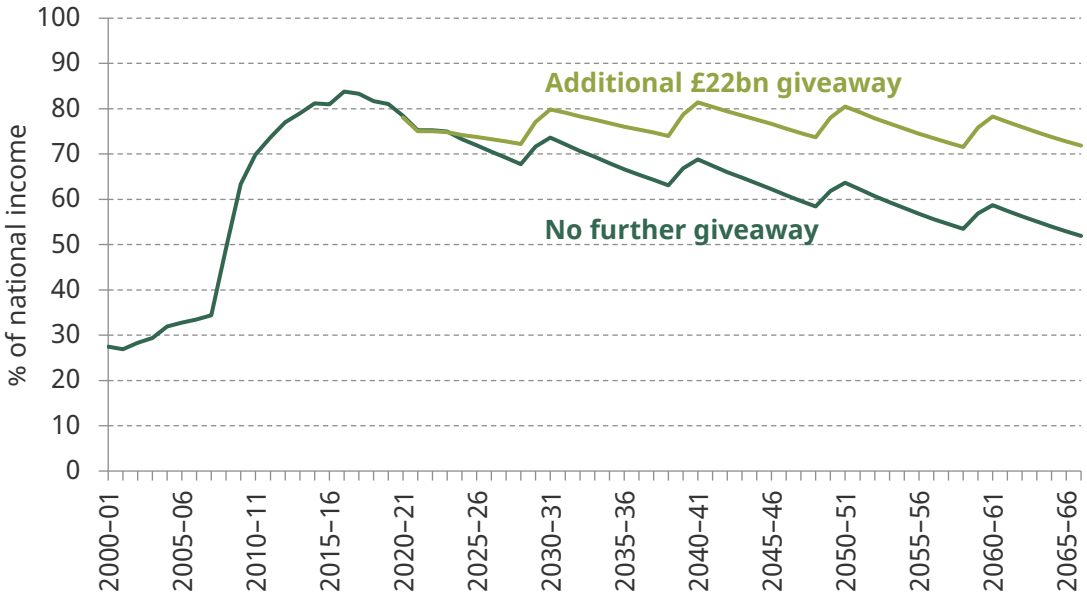
Source: Table 3.10 of Office for Budget Responsibility, *Fiscal Sustainability Report: July 2018*.

If, on the other hand, the chancellor implemented a substantial fiscal loosening, debt would fall less quickly as a share of national income. The alternative scenario we present here assumes a permanent net giveaway worth 1% of national income, which in the current year amounts to £22 billion. This giveaway could fund commitments for additional spending beyond those announced in the September Spending Round, or tax cuts such as those discussed during the Conservative leadership contest. Under the OBR's central growth scenario and this additional giveaway, the ratio of debt to national income would still be above 60% of national income in 40 years' time.

The previous discussion has assumed a smooth path for growth, which is clearly not how the economy will actually evolve going forwards. One of the main reasons why a government might aim to reduce the debt-to-GDP ratio when the economy is operating at full capacity is to ensure that it will be able to increase borrowing to support the economy through a slump. If the debt-to-GDP ratio is already high in good economic times, 'fiscal space' for such a response may not be available when it is most needed.

The OBR's recent Fiscal Risks Report reiterated its observation that, based on past experience, the chance of a recession in the UK is 'around one in two over any five-year horizon'. The Bank of England's August growth forecast[9] suggested that the probability of

Figure 4.6. Paths for debt under alternative assumptions for the deficit, with a recession every decade



Note: Every 10 years, we assume a recession event occurs, with real growth dropping for two years, to the average rate seen in the last three recessions before the financial crisis (–1.7% and –0.2%), feeding into the deficit via the ready reckoner for trend GDP. In all other years, real growth is assumed to be 2.7% (we take the 'high growth' scenario in the normal years to provide some offset for the two recessionary years). We assume that the extra borrowing done during recessions is completely temporary, and borrowing returns to its pre-recession level after two years. We also assume that higher borrowing is only the result of a smaller economy, with no discretionary fiscal response such as a stimulus package.

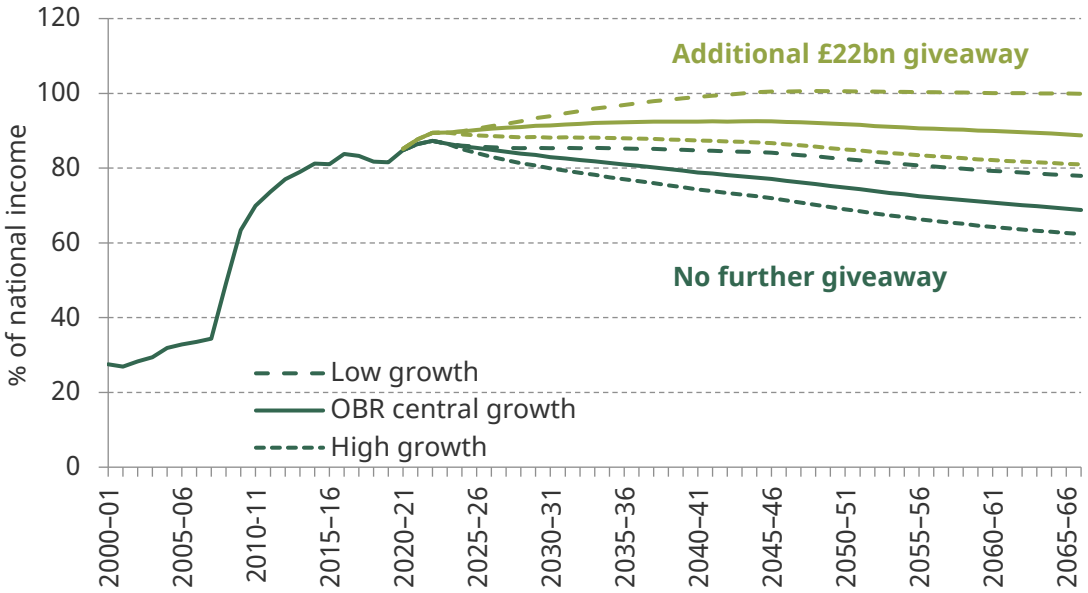
[9] Bank of England, *Inflation Report: August 2019*, https://www.bankofengland.co.uk/-/media/boe/files/inflation-report/2019/august/inflation-report-august-2019.pdf?la=en&hash=6BDB165D5ABAF6B8E218A90AB6790F1377B20F18.

negative growth in the last quarter of 2019 was 24%, rising to 30% in the first quarter of 2020 even in the case of a smooth Brexit. In contrast, we make the more favourable assumption that the next recession only hits 10 years from now. This would imply the UK having a 20-year period without a recession (from 2009 to 2029), which has not been the case since the First World War.

Figure 4.6 shows that the scope for permanent fiscal giveaways appears much smaller once we allow for a recession every decade: even without any loosening, the debt-to-GDP ratio remains above 50% for the whole of the projection horizon. With a permanent fiscal giveaway of 1% of national income, there is very little long-run reduction in debt, as every recession pushes it back up almost to the current level. Under this scenario, it is far from clear that such a permanent giveaway would be fiscally sustainable.

In Section 4.4, we discussed the short-run fiscal consequences of a no-deal Brexit. However, increased trade barriers and lower net migration would affect economic growth, and ultimately the public finances, for many years to come. The IMF projects a long-run loss of just under 3% of GDP (£64 billion a year in today's terms) from its version of a no-deal Brexit, relative to its current baseline (i.e. a smooth and orderly Brexit and a wide-ranging free trade agreement). Most of this effect is driven by increased barriers to trade. In generating debt paths for this scenario, we have assumed that this loss accumulates gradually until 2030, after which the normal growth path is resumed.

Figure 4.7. Paths for debt under alternative assumptions for the deficit and economic growth in the no-deal Brexit scenario



Note: Solid lines are based on the OBR's central long-run growth projection, adjusted for the longer-term impact of a no-deal Brexit according to the IMF scenario. Dashed lines represent a high-growth and a low-growth scenario. The high-growth scenario assumes a return to pre-crisis long-run averages, whereas the low-growth scenario assumes weak growth at the end of the forecast persists. Long-run real growth is 2.7% and 1.6% in these two scenarios, compared with 2.2% in the central scenario. All scenarios are adjusted for the impact of no deal until 2030.

Source: Medium-term outlook based on chapter 10 of Office for Budget Responsibility, *Fiscal Risks Report: July 2019*. Longer-term impact on GDP from International Monetary Fund, *World Economic Outlook: April 2019*. Central growth projection from Office for Budget Responsibility, *Fiscal Sustainability Report: January 2017*.

Of course, a no-deal Brexit does not occur in a vacuum and all other sources of uncertainty about the drivers of economic growth that affected the baseline projection remain present. In addition, as discussed in Chapter 5, the government may wish to loosen its fiscal policy temporarily to support firms or individuals most affected by the economic disruption that a no-deal Brexit entails. The IMF's medium-term scenario includes a monetary policy response and increased government spending through the automatic stabilisers. But it does not include any discretionary spending to mitigate the effect of the downturn beyond some loans to affected industries on a very limited scale.

In Figure 4.7, we illustrate the path of the debt-to-GDP ratio after a no-deal Brexit under different assumptions on baseline growth and the deficit. Under all of the scenarios we consider for baseline growth and the deficit, the debt-to-GDP ratio does not fall below 60% over the whole projection. If baseline growth follows the central forecast and a permanent fiscal giveaway of 1% of national income is implemented, debt as a share of national income is not projected to fall at all. Again, under this scenario, such a permanent giveaway is unlikely to be fiscally sustainable.

The top panel of Table 4.5 summarises the debt-to-GDP ratio in the last year of the projection period assuming a smooth and orderly Brexit process for different levels of

Table 4.5. Projected debt-to-GDP ratio in 2066–67 for different growth scenarios and fiscal giveaways

	No giveaway	0.5% giveaway	1% giveaway	1.5% giveaway
Debt-to-GDP in 2018–19	82%			
Deal, with no recessions				
Low long-run growth [1.6%]	50%	61%	72%	82%
Normal long-run growth [2.1%]	44%	54%	63%	73%
High long-run growth [2.6%]	39%	48%	57%	67%
No deal, with no recessions				
Low long-run growth [1.6%]	78%	89%	100%	111%
Normal long-run growth [2.1%]	69%	79%	89%	99%
High long-run growth [2.5%]	62%	72%	81%	90%
With a recession every decade				
Deal, high growth in non-recession years [2.0%]	52%	62%	72%	82%
No deal, high growth in non-recession years [1.9%]	78%	88%	98%	108%

Note: Figures in square brackets show the average annual real growth rate between 2019–20 and 2066–67 under the scenario where there is no fiscal giveaway.

Source: Authors' calculations based on the Office for Budget Responsibility's 2018 Fiscal Sustainability Report for the baseline scenarios and 2019 Fiscal Risks Report stress test for the no-deal scenario.

assumed long-term growth and different permanent fiscal giveaways. The second panel does the equivalent under a benign no-deal scenario. So far, this discussion has ignored the impact of additional recessions beyond the initial downturn assumed to be triggered immediately by a no-deal Brexit. The bottom panel of Table 4.5 takes this impact into account by assuming that a 'normal' (non-Brexit-related) recession arrives every 10 years, starting in 2029. Compared with the present day, debt as a share of national income is projected to fall decisively in all but one of the scenarios with a smooth Brexit and no recessions. Only if the largest of the giveaways considered combines with a poor growth performance would the debt-to-GDP ratio remain at (almost) the same level.

In a no-deal Brexit scenario, a giveaway of 1% of national income (or more) does not appear consistent with a falling debt-to-GDP ratio: even in the most optimistic scenario of permanently high growth rates with no recessions, debt remains at virtually the same share of national income as today at the end of the projection horizon.

Returning the debt-to-GDP ratio to its pre-crisis level within the next fifty years or so is only projected to be achievable with a smooth Brexit, with robust growth performance and without further significant fiscal loosening.

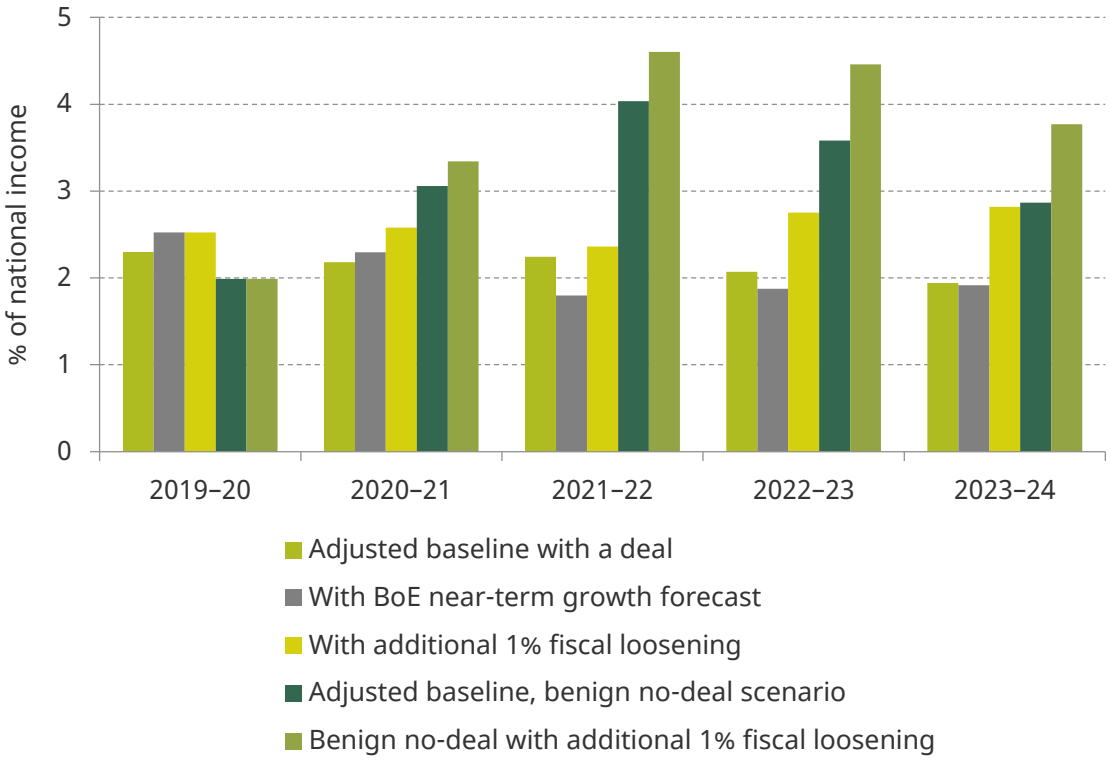
4.6 Conclusion: what's in store for the public finances?

After close to a decade of substantial fiscal consolidation, the deficit is low by historical standards, though debt as a share of national income is still more than twice its pre-crisis level of less than 40%. The analysis set out in Section 4.5 showed that reversing this sharp increase, even over the long run of the next fifty years or so, is only feasible with a favourable growth performance and without a further fiscal loosening. This would require the public sector to respond to growing cost pressures, including those resulting from an ageing society, through tax increases or cuts to other areas, instead of relying on additional borrowing.

If the UK is to continue to experience a recession every decade, then even keeping debt from being on a rising trajectory might not allow further permanent fiscal loosening over and above that already set out in the 2019 Spending Round. And for as long as a 'no deal' Brexit remains a possibility, the case against any further permanent fiscal loosening is much stronger. In this context, while there may be a case for conducting additional investment spending while interest rates are low (a proposition we analyse in Chapter 5), the case for permanent cuts to tax that are not financed through commensurate cuts to spending looks weak; equivalently, the case for sizeable increases in day-to-day spending that are not covered by tax rises also looks weak. Having announced a considerable boost to day-to-day departmental spending in the September Spending Round, there is a strong case for the chancellor to resist any calls for a substantial package of tax cuts or further increases in day-to-day spending unless these are covered by tax rises of a similar size.

Over the next five years, the new accounting treatment of student loans and the September 2019 Spending Round are set to push borrowing up substantially, no matter the outlook for growth and the outcome of the ongoing Brexit process. We summarise the resulting deficit in each of our scenarios in Figure 4.8. Even a benign no-deal Brexit with limited disruption could be expected to have a substantial negative impact on the public finances in the short and medium term. In contrast, while the recent growth forecasts

Figure 4.8. Summary of deficit projection in all medium-run scenarios considered



from the Bank of England are more pessimistic for this and the next year, the return to higher growth rates it predicts for the medium term – subject to a smooth Brexit – would mean that the consequences for borrowing would unwind quickly. The wide range of outcomes between these scenarios highlights how the uncertainty around current economic and political developments feeds through to the public finances, making fiscal policy decisions that much more difficult for the new chancellor.

5. Fiscal targets and policy: which way next?

Carl Emmerson and Isabel Stockton (IFS)

Key findings

- **The current fiscal targets are no longer an anchor on fiscal policy.** All expire during the current forecast horizon. In any case, (cyclically adjusted) borrowing appears on course to exceed the 2% of national income ceiling supposedly imposed by the fiscal mandate. If a 'no deal' Brexit happens, it would be difficult to imagine the supplementary debt target not also being broken.

- **Labour's 2017 proposal for a rolling forward-looking target of current budget balance has much to commend it.** This would allow additional investment spending to be financed from borrowing when interest rates are low, and would also allow the chancellor some flexibility when responding to adverse shocks.

- **But Labour's 2017 proposal to have public sector net debt lower at the end of the parliament than at the start would be incompatible with its stated policies.** A large programme of nationalisation and substantial boost to investment spending would increase the size of the public sector balance sheet, increasing both its liabilities and its assets. Regardless of the merits of these policies, public sector net debt would rise, not fall.

- **Consideration could be given to targeting the projected path of public sector net debt over a longer horizon** and also to the feasibility of setting a target that takes account of a broader set of public sector assets.

- **If a 'no deal' Brexit occurred, fiscal policy would need to respond.** Over the longer term, the damage done to the economy would require some combination of tax rises and spending cuts. But in the near term, there could be a case for a temporary fiscal giveaway. This could target parts of the economy where the short-run dislocations were particularly painful, or particularly likely to have adverse long-term effects. But the overall giveaway should be temporary.

- **It is hard to imagine a set of short-term fiscal targets that would make sense both in the event of the UK leaving the EU with a deal and in the event of leaving without a deal.** Any rules that constrained behaviour at all in the first case would be broken in the second. Given heightened uncertainty, rather than setting a target for borrowing or debt, the chancellor could consider instead setting a fiscal anchor to limit the amount of permanent tax cuts or further increases in day-to-day spending that is announced. This would not limit the chancellor's options for borrowing to invest more or to deliver a temporary stimulus package. Well-designed fiscal rules could then be set out once at least some Brexit uncertainties have been resolved.

5.1 Introduction

In his 2019 Spending Round announcement, the new chancellor, Sajid Javid, claimed that 'even with the extra spending we are still meeting the current fiscal rules'. As we will show, it now appears more likely than not that the government will breach its fiscal mandate. Perhaps relatedly, Mr Javid also announced that there would be a review of the current fiscal framework, noting 'it is my judgement today that with a strong fiscal position and record low cost of borrowing, we can invest more in growing our economy' but that 'we'll still need to make difficult choices about our national priorities, within a clear set of rules to anchor our fiscal policy and keep control of our national debt'.[1]

Historically low borrowing, coupled with very low interest rates, can justify a loosening of fiscal policy. All else equal, public investment spending will be more attractive when interest rates are low. And when very low interest rates are combined with periods of temporary weakness in the economy, there can be a stronger argument for implementing carefully designed discretionary fiscal giveaways in an attempt to stimulate demand. Measures of this type were implemented in many major economies – including the UK – in response to the financial crisis and Great Recession.

The Budget is an obvious opportunity for the new chancellor to set out the government's thinking in these areas. This is particularly true for two reasons. First, the fiscal targets bequeathed by former chancellor Philip Hammond no longer provide much of a fiscal anchor. Second, the government has stated that it wants to keep open the possibility of a 'no deal' Brexit and, should this occur, an important decision would need to be made over how fiscal policy should adjust. These two issues interact since any new fiscal targets ought to be carefully designed so that they are robust to plausible scenarios for the UK economy, not least around Brexit.

This chapter begins by considering the case for having fiscal targets (Section 5.2). This is followed by two sections that look at the government's current fiscal targets (Section 5.3) and the rules proposed by the opposition Labour party (Section 5.4). As well as critiquing these rules, we discuss how constraining they might prove to be under both current government policy and (in broad terms) under the policies that Labour set out in its 2017 general election manifesto. The chapter then turns in Section 5.5 to outline some of the important considerations when deciding upon the best fiscal policy response to an adverse economic shock and presents what a stylised fiscal stimulus might do to growth, borrowing and debt. Finally, Section 5.6 concludes by drawing together the discussion to recommend what a sensible course of action could be for Mr Javid – or his successor – to follow in terms of setting fiscal targets in the current climate.

5.2 Why set fiscal targets?

The recent history of UK governments adopting fiscal targets begins with the Labour party taking office in 1997. Keen to convince markets and voters that he would not repeat the perceived failings of former Labour chancellors, newly appointed chancellor Gordon Brown committed to keeping to his 'golden rule' and his 'sustainable investment rule'.

[1] 'Spending Round 2019: Chancellor Sajid Javid's speech', 4 September 2019, https://www.gov.uk/government/speeches/spending-round-2019-sajid-javids-speech.

Since then, chancellors Alistair Darling, George Osborne and Philip Hammond have all followed Mr Brown's lead and set themselves fiscal targets.

There are a number of related potential advantages from having fiscal rules. These mainly stem from a concern that governments suffer from 'deficit bias' due to a desire to avoid taking difficult decisions, which would lead to spending being too high and taxes being too low. Fiscal targets can act as a self-commitment device constraining future behaviour in order to reduce this tendency.

Targets also help communicate this to voters and market actors and may add transparency over government intentions. They may also help the Treasury with the internal management of government. In the run-up to Budgets, chancellors can expect to receive far more submissions calling for tax cuts than ones calling for tax rises. Similarly, spending departments will put in bids for additional spending that exceed the total amount of spending available. For example, it was recently reported that bids to the September 2019 Spending Round totalled £55 billion;[2] these were whittled down to an eventual £13 billion of additional spending in what was still one of the most generous spending giveaways since 2010 (see Chapter 6).

Good fiscal targets, which appropriately constrain the government, can therefore lead to lower borrowing, and debt over the longer term, than would otherwise be the case. This can have obvious advantages, such as reducing debt interest spending (which in turn means the desire to keep future debt down will depend on what interest rates are expected to be) and ensuring that the public finances are able to respond to adverse shocks while remaining sustainable in the longer run.

Lower debt achieved through implementing higher taxes or lower day-to-day spending today would typically benefit future generations and improve fiscal sustainability. But if lower future debt is achieved by reducing investment spending (which should improve either the productive capacity of the economy or the future quality of public services), then it is less clear that this is desirable in the longer term. Future generations might also be less concerned about higher debt that was associated with the public sector acquiring marketable assets: not least because, assuming they are managed well, they would always have the option of selling those assets.

All of these arguments underscore that it is the longer-term path of debt which matters, rather than the precise level of debt (or its change) in the near term.

Finally, one of the key challenges with designing fiscal targets is ensuring that they allow a chancellor the flexibility to respond appropriately to new fiscal developments. Allowing borrowing to fall and rise over the ups-and-downs of the economic cycle is sensible: it facilitates a smoother path for tax rates and spending and helps support the economy when it is underperforming. When structural public finance problems emerge, such as those following the global financial crisis and Great Recession, it can be sensible to implement the necessary fiscal tightening gradually rather than all at once.

[2] https://www.theguardian.com/politics/2019/sep/18/it-has-got-worse-boris-johnson-hamstrung-by-rift-with-sajid-javid.

In the end, there is a tension between having clear and measurable short-term targets which impose real constraints and allowing chancellors full discretion to make appropriate decisions. Were governments fully rational and trustworthy – and this widely seen to be the case – rules would not be needed. The rules themselves will always be second-best. The less trust and confidence there is in a government's handling of the economy, the greater the benefits from having a transparent, measurable and constraining set of rules.

With these considerations in mind, the next section critiques the government's current fiscal targets, while the subsequent section examines Labour's proposed fiscal rules.

5.3 The government's current fiscal targets

The government's formal – and current – fiscal targets were announced by the then chancellor Philip Hammond in the 2016 Autumn Statement. They were then legislated in the Charter for Budget Responsibility, which was last updated prior to the 2017 general election.[3] The targets are:

- **the fiscal mandate:** cyclically adjusted public sector net borrowing – that is, headline borrowing adjusted for the estimated impact of the ups-and-downs of the economic cycle – to be less than 2% of national income in 2020–21;
- **the supplementary debt target:** public sector net debt to be lower as a share of GDP in 2020–21 than in 2019–20;
- **the welfare cap:** spending on 'welfare-in-scope' in 2022–23 to be below the cap set in November 2017, with compliance assessed in the first fiscal event of the next parliament.

There is no perfect fiscal target as there is no one measure that is best suited to guide policy in all time periods and all circumstances. But all of the above targets have some reasonably obvious flaws.[4] One issue they have in common is that they are all time-limited: the fiscal mandate constrains borrowing but only in 2020–21; the supplementary debt target constrains the growth in debt but only between March 2020 and March 2021; and the welfare cap constrains welfare spending only in 2022–23.

The Charter for Budget Responsibility also says that the government's overall fiscal objective is to 'return the public finances to balance at the earliest possible date in the next Parliament'. This was legislated prior to the 2017 general election, but the government is clearly not focusing on meeting this target: we are not going to have an

[3] HM Treasury, 'Charter for Budget Responsibility: Autumn 2016 update', legislated January 2017, https://www.gov.uk/government/publications/charter-for-budget-responsibility-autumn-2016-update.

[4] As stated in C. Emmerson and T. Pope, 'Risks to the UK public finances', in C. Emmerson, C. Farquharson and P. Johnson (eds), *The IFS Green Budget: October 2018*, https://www.ifs.org.uk/publications/13516, 'There are sensible reasons to attempt to adjust for the economic cycle when looking at borrowing, but what about borrowing caused by other factors that are known to be temporary, such as one-off revenues or spending items? There are good reasons to want debt to fall as a share of national income over the longer term, but how can we be sure that there won't be good reasons why it should be higher in March 2021 than in March 2020? The government should carefully consider how best to respond to unintended increases in social security spending but, rather than wait until the next parliament, why not retain annual assessments as was the case with Mr Osborne's version of this fiscal target?'.

overall budget balance early in the current parliament since, regardless of the date of the next general election, we will soon be in the second half of this parliament.

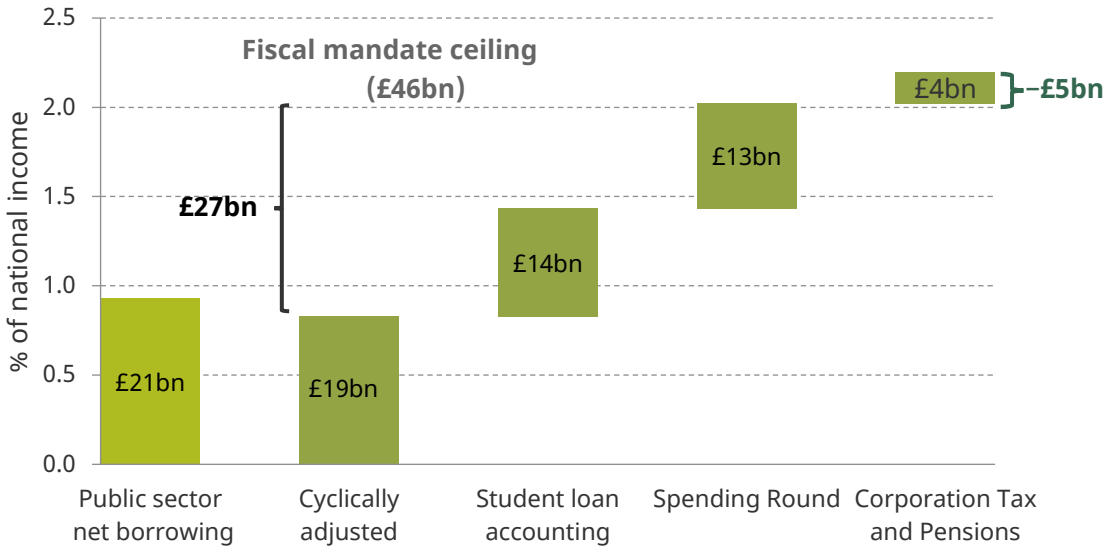
The Conservative party's 2017 general election manifesto stated, less ambitiously, that the objective was instead 'a balanced budget by the middle of the next decade'. But it is also far from clear that Mr Hammond was striving to meet this target: the March 2019 Spring Statement forecasts are for the government to run a deficit of 0.5% of national income in 2023–24. In Chapter 4, we update this forecast for developments since March and estimate that the deficit might, under current government policy and still assuming a 'smooth and orderly' Brexit process, now be on course to be 1.7% of national income in 2023–24 (see Table 4.2).

The fiscal mandate

The most constraining target in the current parliament appears to be the fiscal mandate. The OBR's March 2019 Spring Statement forecasts were for cyclically adjusted borrowing in 2020–21 to be 0.8% of national income, which would be 1.2% of national income – or £27 billion – below the 2% ceiling on this measure of borrowing in that year. This headroom against the government's fiscal mandate has become known as the 'Brexit war chest'. This is shown in Figure 5.1.

As described in Chapter 4, a number of things have changed since March that will push up public sector net borrowing. First, a welcome change has been made to the accounting treatment of student loans, which we estimate will add £14 billion to borrowing in 2020–21. Second, the boost to day-to-day spending announced by Mr Javid in the September 2019 Spending Round will add another £13 billion. Third, changes to the accounting of public sector pensions and the correction of an error in estimated corporation tax receipts will push up borrowing by £4 billion more. Taken together, these three changes appear set to add over £30 billion to borrowing (and to cyclically adjusted borrowing) in 2020–21. On these estimates, cyclically adjusted borrowing next year is set to be above the 2% of

Figure 5.1. Changes to the outlook for cyclically adjusted borrowing in 2020–21



Source: Office for Budget Responsibility, *Economic and Fiscal Outlook: March 2019*, https://obr.uk/efo/economic-fiscal-outlook-march-2019/. Student loan accounting change is authors' calculation, as set out in Box 4.1.

national income ceiling. Indeed, our 'adjusted baseline forecast', presented in Table 4.1, was for headline borrowing in 2020–21 to be 2.2% of national income.

Of course, borrowing could turn out to be lower (or higher) than our forecast. But on current policy (and assuming a smooth and orderly Brexit process), these estimates suggest that there is a slightly more than 50% chance that the fiscal mandate will in fact be breached.[5] Other developments since March might suggest that borrowing is actually more likely to be revised upwards rather than downwards. As described in Chapter 4, the Bank of England's latest forecasts are for near-term growth to be weaker than the OBR forecasts. Under this forecast, borrowing in 2020–21 would be expected to be higher, although to the extent that weaker growth was deemed to represent only temporary weakness in the economy it would not increase the structural deficit. Mr Javid will doubtless be hoping for a positive shock to lead to borrowing coming in below the 2% ceiling imposed under the fiscal mandate. But the fact that the government has chosen not to preserve any degree of 'headroom' shows that (for better or for worse) it is not taking this fiscal target that seriously.

The supplementary debt target

The chancellor does remain on course to meet the supplementary debt target to have debt falling as a share of national income. In part, this is because the change to student loan accounting, which pushes up headline borrowing, does not affect the measure of debt. This is also true after including the estimated impact of the downgrade to the Bank of England's growth forecasts (which might not push up cyclically adjusted borrowing but would add to headline borrowing and therefore debt). Under our 'adjusted baseline forecast with Bank of England near-term downgrade', public sector net debt (excluding the Bank of England) would be on course to fall, slightly, from 74.8% of national income in 2019–20 to 74.3% of national income in 2020–21 (middle panel of Table 4.2). The headline measure of debt – which includes the Bank of England, and is the measure targeted by the supplementary debt target – would fall faster as loans made under the Term Funding Scheme are repaid.

One scenario in which this rule could be breached is if the UK economy enters a recession. For example, under the no-deal Brexit scenario presented in Table 4.4, public sector net debt excluding the Bank of England would be forecast to rise from 73.7% of national income in 2019–20 to 75.4% of national income in 2020–21. Under such a scenario, it is plausible that the Monetary Policy Committee (MPC) of the Bank of England would choose to extend the Term Funding Scheme (or to introduce a new, similar scheme), which could lead to headline debt (i.e. including the Bank of England) also rising as a share of national income.

Summary

The government's fiscal targets will soon cease to provide any kind of fiscal anchor. In any case, the government's actions are not consistent with it being committed to keeping

[5] The chancellor could reasonably argue that the 2% ceiling was chosen with reference to a different measure of borrowing, and that now student loans are being accounted for differently, it would be reasonable to raise the ceiling by a corresponding amount. But were the chancellor minded to make such a change, he would presumably have communicated this in his spending round announcement.

borrowing within a ceiling of 2% of national income in 2020–21. The supplementary debt target would also be likely to be breached were a no-deal Brexit to occur.

5.4 Labour's proposed fiscal rules

At the last election, the Labour party proposed a 'fiscal credibility rule'[6] (FCR), which included two targets:

- a rolling forward-looking target to run a current budget balance five years out;
- to have public sector net debt as a proportion of national income (adjusted for what are deemed to be the ups-and-downs of the economic cycle) lower at the end of the parliament than it was at the start.

Sensibly, compliance with the FCR would be judged by the OBR (whose mandate would be changed so that it reported solely to parliament rather than to both the executive and to parliament). Furthermore, were the MPC to deem that monetary policy was at its effective lower bound – a situation where the MPC would like to loosen monetary policy but, due to short- and long-term interest rates being so low, it feels that it does not have an effective policy lever to do this – then the FCR would be suspended. This would give the independent MPC a direct say over fiscal policy since only on its say-so could the fiscal rules be suspended. Having an independent judgement on this has much to commend it. It would mean that (if deemed appropriate) further fiscal loosening could be implemented to support the economy (which we discuss in Section 5.5) without the FCR being breached.

Rolling forward-looking target for the current budget

This component of Labour's FCR has many sensible features: indeed, it has been recommended in successive IFS Green Budgets.[7] It was also actually adopted as a fiscal target by George Osborne as chancellor in 2010 and by Ed Balls as shadow chancellor in 2015. The forward-looking nature of the target has much to commend it, allowing a chancellor time to respond flexibly to shocks while still returning the current budget to its planned path over the medium term.[8] By targeting a current budget balance, the target would allow for borrowing to fund investment spending – permitting the government to invest more if, for example, new opportunities arise or interest rates fall. This feature could be attractive to Mr Javid as it would be consistent with his stated desire to invest more when borrowing costs are low.

If the government did adopt this rule then it would, under current economic forecasts, be met.[9] However, continuing to meet this target would – again, on current economic

[6] See https://labour.org.uk/wp-content/uploads/2017/10/Fiscal-Credibility-Rule.pdf.

[7] See, for example, R. Chote, C. Emmerson and C. Frayne, 'The fiscal policy framework', in R. Chote, C. Emmerson, R. Harrison and D. Miles (eds), *The IFS Green Budget: January 2006*, https://www.ifs.org.uk/green-budget/2006.

[8] Of course, the extra flexibility in this target also means it would be less constraining on the chancellor; for example, a chancellor could attempt to game the target by announcing tax rises for the end of the forecast horizon and then repeatedly pushing them back. Effective scrutiny by the OBR, IFS and others would be an important part of ensuring that chancellors kept to the spirit, not just the letter, of this target.

[9] In 2018–19, government receipts exceeded current spending (including depreciation) by £5.4 billion or 0.3% of national income. While the September 2019 Spending Round added £13.4 billion (0.6% of national income) to

forecasts – not allow any further substantial permanent net giveaways (outside of investment spending). This would mean that any large tax cuts would need to be financed, at least primarily, either through tax rises elsewhere or through cuts to day-to-day spending. So were the government to sign up to such a target, it would (given the recent decision to increase day-to-day spending) require the tax proposals put forward by Boris Johnson (see Chapter 8) either to be put on ice, or to be financed through tax rises elsewhere. Furthermore, the economic forecasts could change – most obviously in the event of a no-deal-Brexit scenario. Even a relatively benign no-deal Brexit would leave this target on course to be missed (although under such a scenario the rule could be suspended as the MPC might deem monetary policy at its effective lower bound).

The target would also be constraining for a Labour government. At the time of the 2017 general election, the Labour party's stated intention was for a substantial increase in day-to-day spending to be covered by a substantial increase in taxes. This could be sufficient to maintain a forecast current budget surplus. But at the time of the last election, analysis by IFS researchers suggested that Labour's proposed tax-raising measures would, most likely, raise significantly less than Labour had assumed (and that its day-to-day spending increase would cost more than it had allowed).[10] Overall, the impact of Labour's proposals was estimated to add over 0.4% of national income to the current budget deficit. While at the time this would still have been consistent with meeting this rule, it might no longer be possible to accommodate a similar shortfall now.

Debt to be a lower share of national income at the end of the parliament

A commitment to aim to run a surplus on the current budget would not, on its own, place any constraint on public sector net debt. Under Labour, this would come from the second component of its FCR, which requires that the net-debt-to-(trend)-GDP ratio is lower at the end of the next parliament than at the beginning. This suffers from two of the same problems as the government's debt target. First, defining targets based on the length of parliament means that the effective period to which the target applies can change in an unusually short parliament. Second, depending on circumstances, it may be better for debt to be a greater share of national income at the end of the period than at the start. There are good reasons to want to ensure that policy is consistent with public sector net debt as a share of national income trending decisively downwards, but this should be measured by looking over the longer term rather than just comparing what happens to be the first and last financial years of a parliament.

We would not recommend the current government adopts this target, though current policy appears consistent with remaining on course to meet it. After adjusting the 2019 Spring Statement OBR fiscal forecasts for changes since March, including the estimated impact of the downgrade to the Bank of England's growth forecasts, debt would still be forecast to fall as a share of national income over the next four years (as was shown in the middle panel of Table 4.2). But a substantial fiscal loosening – or indeed even a relatively benign no-deal-Brexit scenario – would put compliance in doubt. So, as with the first component of Labour's FCR, the current government would be on course to comply with this target as long as any new tax cuts or spending increases were (largely) covered by

day-to-day spending in 2020–21, the surplus on the current budget was forecast by the OBR in the March 2019 Spring Statement to increase by a further 0.6% of national income between 2018–19 and 2023–24.

[10] See C. Emmerson, 'General election 2017, manifesto analysis: the outlook for the public finances', https://www.ifs.org.uk/publications/9256.

new tax rises and as long as a no-deal Brexit was avoided. (Although again, in practice, depending on the view of the MPC, it is possible the FCR would be suspended under such a no-deal-Brexit scenario.)

In contrast, a Labour government would not, at least under the policies set out in its 2017 general election manifesto, be able to expect to see debt falling as a share of national income. A rise in the net-debt-to-GDP ratio would seem much more likely than a fall. This arises because the 'net' in public sector net debt only reduces gross debt by the value of any short-term financial assets, such as cash, held by the public sector, while the Labour party's 2017 manifesto contained two sets of policies that would add substantially to both the liabilities and the physical assets of the public sector:

- First, the party's proposed nationalisation of Royal Mail and publicly owned companies operating in rail, energy and water. The liabilities of these organisations would add to public sector net debt. Of course, their assets would also become part of the public sector balance sheet, and economically what matters is whether these assets would be better managed by the public or the private sector. But the net-debt-to-GDP ratio would rise, not fall.

- Second, even if the additional liabilities acquired from the newly nationalised bodies were ignored (perhaps on the basis that the assets acquired at the same time could generate a flow of substantial revenues), Labour's other stated policies could be enough to see debt on a rising path. Specifically, it proposed a £250 billion boost to infrastructure spending over a 10-year period, to be financed from additional borrowing. If spent well, this would boost the productive capacity of the economy. But this also implies borrowing an additional £25 billion a year – which is slightly more than 1% of national income. If we assume that Labour's tax plans would be sufficient to cover its planned increase in day-to-day spending, this much extra borrowing would be sufficient to leave the net-debt-to-GDP ratio broadly flat over the next four years, so even a modest worsening of the fiscal outlook would leave the fiscal target breached.[11]

Given the desire of the Labour party to pursue policies that would substantially expand the balance sheet of the public sector, it is odd that it also claims to be committed to reducing public sector net debt as a share of national income over the course of a parliament. Given its policies, it might make more sense for Labour to target a measure of debt that takes better account of the longer-term assets, as well as the liabilities, of the public sector. This could involve netting off the estimated value of the public sector's long-term financial assets (such as loans made) and its physical assets (which are substantial and, crucially in this context, would increase under Labour's proposed nationalisation and investment plans). Indeed, the potential benefits of such an approach were acknowledged by the Treasury last year: 'Taking a more comprehensive view of the government balance sheet can help to provide a more complete picture of the sustainability of the public finances and promote greater accountability for the management of public wealth'.[12]

[11] Taking the scenario set out in the bottom panel of Table 4.2, but instead having a £25 billion a year boost to investment spending (assumed to be 1.1% of national income), this would see the debt-to-GDP ratio being projected to fall from 74.8% in 2019–20 to 74.1% in 2020–21 but then to rise gradually over time, reaching 74.3% in 2023–24.

[12] Paragraph 6.2 of HM Treasury, 'Managing fiscal risks: government response to the 2017 fiscal risks report', July 2018,

An argument for increased investment spending and a new target along these lines was recently made by Chris Giles in the *Financial Times*.[13] Such a measure already exists: public sector net worth. In principle, targeting a broader measure of debt (one that encompasses as many of the liabilities and the assets of the public sector as possible), such as public sector net worth, is preferable.

However, caution is needed. Valuing the public sector assets is difficult: how much is the UK road network worth, for example? And one could easily imagine estimates moving dramatically over time in ways that did not reflect the true situation. Indeed, as noted by the OBR in its recent Fiscal Risks Report, 'the ONS [Office for National Statistics] has not published PSNW [public sector net worth] data since 2012 due to concerns about the quality of the public corporations' non-financial assets data. It aims to address these concerns later in 2019.'[14]

Keeping an eye on public sector net worth certainly makes sense. Targeting it as the key element of your fiscal framework may lack the sort of transparency and credibility required of such a framework. It would need to be combined with a commitment to ensure that policy was consistent with public sector net debt being on a decisively downwards path over the longer term (rather than over a parliament).

Summary

Labour's FCR has two key targets. The first – a rolling forward-looking target for the current budget – has much to commend it. Under a smooth and orderly Brexit, it would not allow substantial tax cuts or further increases in day-to-day spending to be financed through greater borrowing. Given the strong case against a substantial permanent fiscal loosening – as set out in Chapter 4 – there would be merits in such a target being adopted by the current government or by an incoming Labour administration. Such a target might well not prove robust to a no-deal Brexit: it is possible that a no-deal Brexit might mean that it is no longer an appropriate (or effective) constraint.

Labour's second target – to have public sector net debt lower as a share of national income at the end of the parliament than at the start – has less to commend it. It is also incompatible with the programme of nationalisation and boost to investment spending proposed in Labour's 2017 general election manifesto. Consideration should be put to the feasibility of targeting a broader measure of the public sector balance sheet and to targeting the projected path of public sector net debt over a longer time.

5.5 Case for – and design of – a fiscal stimulus

During the recent Conservative party leadership election, it was widely reported that Boris Johnson would implement an emergency 'no deal' Budget that would ensure the

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725913/Managing_Fiscal_Risks_web.pdf.

[13] 'Britain can afford to loosen its fiscal rules', *Financial Times*, 19 September 2019, https://www.ft.com/content/65825520-d483-11e9-8367-807ebd53ab77.

[14] Paragraph 6.2 of Office for Budget Responsibility, *Fiscal Risks Report: July 2019*, https://obr.uk/docs/dlm_uploads/Fiscalrisksreport2019.pdf.

economy was going 'gangbusters' by 31 October.[15] A giveaway Budget – either through tax cuts or further spending increases – could boost demand in the near term, although any such measures would at best have only a very limited impact before the end of October.

More recently, in his spending round announcement, Mr Javid stated: 'I've tasked the Treasury with preparing a comprehensive economic response to support the economy if needed. And we'll work closely with the independent Bank of England to coordinate fiscal and monetary policy'.[16] This section looks at the case for such measures and, if they are to be implemented, sets out some principles for how they should be designed. It also shows what impact an illustrative fiscal stimulus might be expected to have on the path of growth, borrowing and debt. The chancellor should consider scenarios such as these, alongside how likely he deems them, as part of deciding which, if any, fiscal targets to set himself.

The case for a stimulus

At the moment, most economic forecasters – including the OBR in the March Spring Statement – estimate that the UK economy is operating around full capacity.[17] If correct, this would suggest that any stimulus could only have a very limited impact on boosting demand before it led to inflationary pressures. Of course, the prime minister has specifically referred to a stimulus to assist in a no-deal Brexit. Such a situation would see the UK leaving the EU single market and customs union and trading with EU countries on non-preferential World Trade Organisation (WTO) terms.

How economically harmful such an outcome would be is, to say the least, highly uncertain. The previous government's central assessment was that the resulting reduction in trade with the EU would, after 15 years, leave GDP 7.7% lower than under a scenario where the UK had remained in the EU.[18] This was forecast to add 2.4% of national income to the deficit, equivalent to about £50 billion in today's terms. Chapter 3 underscores the economic damage a no-deal Brexit would do. A fall in net migration would depress GDP, and weaken the public finances, even further. Over the long term, it would be necessary for fiscal policy to adjust to offset this increase in the deficit – it is not possible for the government to simply borrow 2.4% of national income more each year indefinitely. So the long-run response to an economically bad Brexit would be some combination of further tax rises and a return to austerity for at least some public services.

But in the short run there could be a case for a different approach. This could be particularly true since, with short- and long-term interest rates already so low, looser monetary policy might not be an effective way to help stimulate demand in the economy. Some fiscal policy response would come by default through the 'automatic stabilisers': weaker economic performance leads to more spending on working-age benefits and lower receipts of taxes on income, spending and profits, both of which act to push up

[15] See, for example, C. Giles, 'Here is what awaits the next UK chancellor', *Financial Times*, 18 July 2019, https://www.ft.com/content/c46ebbf6-a8ae-11e9-984c-fac8325aaa04.

[16] https://www.gov.uk/government/speeches/spending-round-2019-sajid-javids-speech.

[17] HM Treasury, 'Forecasts for the UK economy: August 2019', https://www.gov.uk/government/statistics/forecasts-for-the-uk-economy-august-2019.

[18] HM Government, *EU Exit: Long-Term Economic Analysis: November 2018*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/760484/28_November_EU_Exit_-_Long-term_economic_analysis__1_.pdf.

borrowing.[19] But the automatic stabilisers have not been designed in order to support the economy through all periods of weakness: rather, they largely arise from government's choice of progressivity for the tax and benefit system.

Therefore, there may be a case for an additional short-term fiscal policy response. In deciding whether and how to intervene, the government should consider carefully the nature of the shock. In particular, it must assess the extent to which there is *temporary* weakness in demand and/or supply in excess of the expected *permanent* hit to the economy. It can then decide whether a discretionary, short-term fiscal giveaway could be an effective way of addressing the former.

The design of a fiscal stimulus

If a discretionary fiscal stimulus package is deemed appropriate, then the key is – as set out by the International Monetary Fund (IMF) at the height of the global financial crisis just over a decade ago – to ensure that it is timely, targeted and temporary.[20] Timely so that it helps the economy at the right moment; targeted so that it boosts activity where the costs of lost output would otherwise have been greatest; and temporary so that it does not make restoring the long-run health of the public finances harder to achieve. A package of permanent tax cuts and spending increases does not meet these tests.

One option for the government would be to use existing fiscal policy levers. There are in fact at least two policies already in place that should have the impact of boosting demand this year and next. First, public sector net investment is forecast to grow in real terms by 10.5% between 2018–19 and 2019–20. Second, the government has increased the amount of investment that can be entirely offset against corporation tax from £200,000 a year to £1 million a year temporarily for the period between January 2019 and December 2020.

One could go further with existing policy levers: for example, temporary cuts to income tax or National Insurance contributions or a reduction in the main rate of VAT or an increase in benefits. One issue is ensuring these do not end up being a permanent giveaway, as was successfully done by the UK during the financial crisis when the main rate of VAT was lowered from 17½% to 15% for 13 months.

If a no-deal Brexit created specific, localised disruptions that were deemed to be especially costly, then specially tailored measures could be more effective at mitigating them. These could attempt to target very closely parts of the economy where the short-run dislocations were thought to be particularly painful in the short term, or to be particularly likely to have adverse long-term effects.

Work by IFS researchers that was summarised in last year's Green Budget suggests that the industries that are most exposed to the risk of trade barriers being created by a no-deal Brexit are: transport equipment; chemicals, pharmaceuticals and refining; and

[19] A cyclical drop in national income of 1% (around £22 billion in today's terms) would, according to the OBR's ready reckoner, add around 0.7% of national income (£15 billion) to public sector net borrowing. Source: ready reckoners published alongside the 2017 fiscal risks report: https://obr.uk/download/july-2017-fiscal-risks-report-ready-reckoners/.

[20] A. Scott, 'IMF survey: making fiscal stimulus effective during downturns', 2008, https://www.imf.org/en/News/Articles/2015/09/28/04/53/sores100208b.

clothing and textiles.[21] So there may be a case for post-Brexit industrial policy to target temporary support at these industries, in order to help them through the adjustment to a new trading environment outside of the EU. This could be either to achieve a (more) managed decline in industries that might be less economically viable once the UK has left the EU, or to prevent particularly costly short-term disruptions having undesirable long-term effects.

The impact of a no-deal Brexit will also vary across the UK. For example, The UK in a Changing Europe[22] highlighted that industries such as vehicles and parts, whose highly integrated European supply chains would be severely disrupted by trade barriers, were also regionally concentrated in areas such as the West Midlands. Northern Ireland, with its close links to the Irish economy, might also be particularly adversely affected by an economically bad Brexit, so consideration could be given to providing additional support to activity there.

The impact of a stylised stimulus on growth, borrowing and debt

The actual impact of a fiscal stimulus will depend on many factors, including its scale, duration and precise design. Here we illustrate the extent to which a stylised giveaway of 1% of national income, in place for two years, could boost growth and what the resulting impact could be on public sector borrowing and debt. This is shown in Table 5.1. The top panel repeats the relatively benign no-deal scenario that was presented in Table 4.4, with no further fiscal giveaway in place. Under this scenario, the economy contracts by 1% in 2020–21 and grows by just 1.4% in 2021–22. Public sector net borrowing would peak at 4% of national income in 2021–22, while public sector net debt would rise as a share of national income over the next four years to reach 83.4% in 2023–24.

The bottom panel of Table 5.1 incorporates the impact of the stylised stimulus package. For simplicity, we take the largest OBR fiscal multiplier, of +1, which relates to public sector net investment[23] – and, like the OBR has done in the past, we assume this fades away completely over the subsequent four years. In practice, the actual multiplier would depend on the particular policies being delivered; spending an additional 1% of national income on investment next year, and delivering it well, might not be possible. Furthermore, the economic climate will affect the size of the multiplier, which might be larger in periods when the economy is underperforming, though perhaps reduced in periods of much heightened uncertainty.

Under our stylised example, the stimulus is successful in delivering a much smoother profile for growth. The economy is forecast to stand still rather than contract in 2020–21,

[21] P. Levell and A. Norris Keiller, 'The exposure of different workers to potential trade barriers between the UK and the EU', in C. Emmerson, C. Farquharson and P. Johnson (eds), *The IFS Green Budget: October 2018*, https://www.ifs.org.uk/publications/13463. This was similar to the later study by the former UK government that highlighted chemicals, pharmaceuticals, rubber and plastics, and motor vehicles and parts, as the sectors that would be hardest hit by a no-deal Brexit. Source: HM Government, *EU Exit: Long-Term Economic Analysis: November 2018*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/760484/28_November_EU_Exit_-_Long-term_economic_analysis__1_.pdf.

[22] https://ukandeu.ac.uk/research-papers/cost-of-no-deal-revisited/.

[23] Multipliers measure how much of a giveaway feeds through into national income. A multiplier of +1 means that national income is expected to rise by the same amount as the giveaway in the first year. Multipliers can be lower than 1 if the giveaway increases inflation or if some of it is saved or spent on imports.

Table 5.1. Scenarios for growth and the public finances under a relatively benign no-deal Brexit, with and without a stylised two-year stimulus package

	2019–20	2020–21	2021–22	2022–23	2023–24
Adjusted baseline forecast					
Public sector net borrowing (£bn)	43.7	67.8	92.0	85.0	71.2
Public sector net borrowing (% of GDP)	2.0%	3.1%	4.0%	3.6%	2.9%
Net debt (excl. BoE, % of GDP)	73.7%	75.4%	80.8%	83.3%	83.4%
Memo: growth	*0.4%*	*–1.0%*	*1.4%*	*2.7%*	*2.8%*
With additional giveaway (% of GDP)	**0%**	**1%**	**1%**	**0%**	**0%**
Public sector net borrowing (£bn)	43.7	79.6	101.9	81.2	71.2
Public sector net borrowing (% of GDP)	2.0%	3.6%	4.4%	3.4%	2.9%
Net debt (excl. BoE, % of GDP)	73.7%	75.9%	81.8%	84.0%	84.1%
Memo: growth	*0.4%*	*0.0%*	*2.2%*	*2.7%*	*2.8%*

Note: As Table 4.4 but here the additional 1% giveaway is implemented in full immediately and is only left in place for two years, and we assume a higher multiplier (of 1, which is what the OBR uses for investment spending) which fades over time to zero.

Source: Office for Budget Responsibility, *Fiscal Risks Report*, July 2019; authors' calculations using OBR estimates of transfers between the UK and the EU (*Economic and Fiscal Outlook*, March 2018 and March 2019); Office for National Statistics.

and then to grow by 2.2% in 2021–22. Public sector net borrowing would rise further, reaching 4.4% of national income in 2021–22 before returning to the level it would have been at without the stimulus in 2023–24. Overall, by the end of the period, public sector net debt is left slightly higher at 84.1% of national income instead of 83.4% of national income. In other words, of the increase in public sector net debt between 2019–20 and 2023–24, relatively little would be the direct result of the stimulus; the vast majority would have occurred anyway.

There are at least two key questions raised by this analysis: first, whether the smoother path for GDP growth would justify the slightly higher debt level at the end of the period; and second, whether there are good reasons to believe that the fiscal giveaway would have more enduring positive impacts on the level of activity than is assumed here. One reason why both answers could be yes is if avoiding the contraction in the economy meant fewer households endured the potentially scarring impact of a period of unemployment. But given the complexity of what a no-deal Brexit would do to the economy, answering either question would be far from straightforward.

There are challenges with managing a stimulus package though. One is ensuring that it is well targeted and effective. It is easy to waste money if the spending taps are turned on

too quickly. The other key challenge lies in unwinding the stimulus. If that means putting taxes back up or cutting spending, it may prove politically difficult to achieve.

5.6 Conclusion: so what should the chancellor do?

The current fiscal targets all expire within the current forecast period. In any case, the government is currently not taking its own fiscal mandate seriously. A new set of targets are needed, but this is a difficult time to set them. Setting targets that would be suitably constraining under a smooth and orderly Brexit process (let alone under a remain scenario), but that would also allow the chancellor to respond appropriately under a no-deal scenario, is no easy task.

The last two decades have seen the implementation of numerous fiscal targets. Some have been quite well designed (most notably Mr Osborne's 2010 fiscal mandate, which has much in common with the first half of Labour's proposed fiscal rule). But many have been poorly designed; and many have been committed to, only subsequently to be missed or abandoned. Indeed, it looks as if the government's self-imposed ceiling on borrowing next year will be breached. Were the UK to enter a recession now, then the forecasts made next spring could be for debt in 2020–21 to rise rather than fall as a share of national income, thereby missing the debt target as well. In this scenario, the chancellor would be best advised to abandon the supplementary debt target rather than to implement immediate tax rises or spending cuts.

Given current uncertainties, the chancellor should wait before implementing a new set of fiscal targets. This would also allow the Treasury to take more time in designing its fiscal targets, which could also lead to smarter targets that are more appropriate in a wider range of situations. When it does undertake this process, the government should consider returning to a rolling forward-looking target for the current budget; whether it would be sensible to target a measure of public sector net debt that takes account of a broader set of public sector assets; and focusing its commitment to downward-trending debt on a longer time horizon, rather than an arbitrary fixed date (which both the current government and the Labour opposition share an odd enthusiasm for).

In the meantime, some fiscal anchor could be useful – not least given the prime minister's desire to cut taxes, and next year's spending review. Given current heightened uncertainty, rather than targeting measures of borrowing or debt, one short-term option could instead be to set a maximum amount of permanent discretionary fiscal loosening that the chancellor would be prepared to implement. If an increase in investment spending financed by borrowing was thought to be appropriate, such an anchor could apply just to the current budget. For example, the chancellor could commit to ensuring that any permanent tax cuts or further permanent increases in day-to-day spending would be entirely financed through tax rises or cuts to other spending. But because it would not constrain actual borrowing or debt, these could still increase if the underlying fiscal outlook deteriorates, or if the chancellor chooses to raise investment spending or deliver a temporary fiscal stimulus package – flexibility that might be particularly important in the event of an adverse economic scenario, such as a no-deal Brexit. Well-designed fiscal rules could then be set out once at least some Brexit uncertainties have been resolved.

6. Spending Round 2019: keeping perspective

Rowena Crawford and Ben Zaranko (IFS)

Key findings

- **Boris Johnson's government used the 2019 Spending Round to announce a 4.4% increase in day-to-day spending on public services (over and above economy-wide inflation) between 2019–20 and 2020–21.** This was not the first increase in such spending since 2010 – total day-to-day spending on services increased between 2018–19 and 2019–20. But this spending round was notable for the size of the increase, and in that *every* government department saw at least a real-terms freeze in its budget.

- **This might end, but does not 'undo', austerity. Total day-to-day spending on public services is still set to be 3% lower in real terms in 2020–21 than it was in 2010–11, and spending outside the Department for Health and Social Care is still set to be 16% below 2010–11 levels.** Since the pre-crisis trend was for public service spending to increase in real terms over time, the gap between spending today and what it might have been if that trend had continued is even greater.

- **Total spending as a share of national income is just 0.6% lower than it was pre-crisis and at around the same level as it was in 2006–07**, but day-to-day spending on public services is now at 14.1% of national income compared with 16.2% in 2007–08. On public services excluding health, it is now at 8.1% of GDP against 11.1% in 2007–08.

- **This genuinely big spending round increase leaves the overall level of day-to-day public service spending for 2020–21 close to the levels implied by the Labour party's 2017 manifesto.** The Conservatives have implemented Labour's plans for school funding, gone some way on further education and social care, exceeded Labour's spending plans on the police and far exceeded them on the NHS. Labour had additional plans for big spending increases on early years and university education that the Conservative government has not chosen to match.

- **Labour's 2017 manifesto may, however, have understated what a Labour government would in reality have spent on the NHS had one been elected.** Had Labour increased NHS spending to the same extent as the Conservative government has done, in addition to its other manifesto commitments, then day-to-day spending on public services next year under Labour would have been around £9 billion higher than post-spending-round plans**.**

- **Given the stated policies of both main parties, it looks likely that austerity for public service spending is over for now.** That will, of course, mean some combination of higher taxes and/or higher borrowing. In either case, if the economy fails to grow as hoped – for example, due to a disruptive Brexit or other policies that undermine growth – the return to significant real spending increases could be short-lived. A return to austerity could well follow a mini spending boom.

6.1 Introduction

The 2019 Spending Round was published in September 2019 and was limited to a single year, setting departmental budgets for 2020–21 only. Despite the fact the resulting spending envelope was larger than that pencilled in by the previous chancellor, it was notable the spending round took place before this year's Budget and the latest economic and fiscal forecasts from the Office for Budget Responsibility (OBR). A full multi-year spending review is now planned to be held in 2020. In September, the chancellor announced spending increases across the board, with no department facing a real budget cut, and declared austerity to be over.

In this chapter, we describe what Chancellor Sajid Javid announced in the spending round and emphasise the importance of keeping perspective: austerity may have 'ended' but is far from undone. We consider the announced spending increases in the context of the real-terms cuts since 2010 and the longer-run history of public spending, and also compare it with the plans implied by the Labour party's 2017 election manifesto.

6.2 Spending Round 2019 settlements

Day-to-day spending

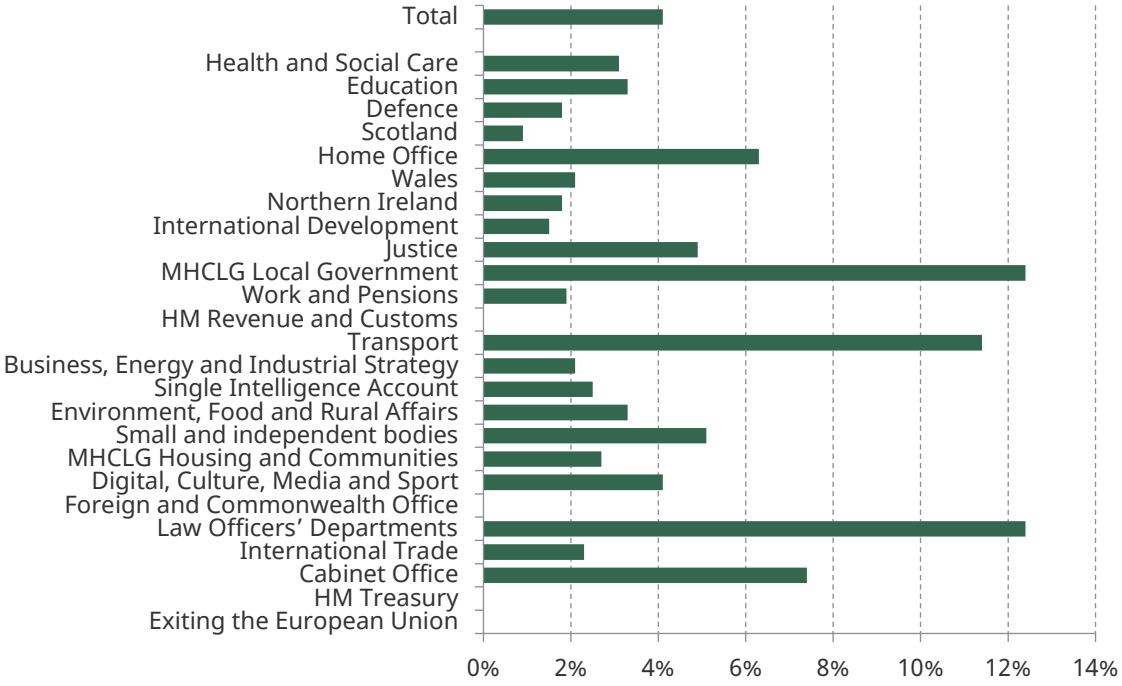
The 2019 Spending Round announced day-to-day departmental spending plans for 2020–21. In aggregate, these were £11.5 billion more generous (in 2019–20 prices) than the provisional plans pencilled into the March 2019 Spring Statement (£11.7 billion more generous in cash terms). As a result, day-to-day spending on public services is planned to increase by 4.4%, over and above economy-wide inflation, between 2019–20 and 2020–21 – an increase in real-terms spending of £13.8 billion.[1]

Figure 6.1 shows how the budget of each government department will change, with departments ordered according to the size of their budget in 2019–20 (from the largest – the Department of Health and Social Care (DHSC), with a budget of £132.3 billion – to the smallest – the Department for Exiting the European Union, with a budget of £0.1 billion). The bars in Figure 6.1 indicate the real-terms percentage change in budgets, while Figure 6.2 provides a breakdown of where the additional funding between 2019–20 and 2020–21 is going in pounds billion terms.

The departments seeing the biggest real pounds billion increase in their budgets are mainly those that were given considerable fanfare before the spending round.

[1] Note that this refers to real growth in the OBR definition of public sector current expenditure in resource departmental expenditure limits (PSCE in RDEL, adjusted for historical discontinuities). The equivalent figure for real growth in the Treasury definition of resource DEL excluding depreciation between 2019–20 and 2020–21 is 4.1% (which is the figure used in table 1.1 of Spending Round 2019). Throughout this chapter, we use the OBR definition where possible, as it is adjusted to be consistent over time and so allows for more meaningful comparisons. It is only available at an aggregate level, however, so for analysis of particular components of day-to-day spending (such as departments), we rely on the HM Treasury definition. 'Economy-wide inflation' refers to converting cash figures to real terms using the GDP deflator.

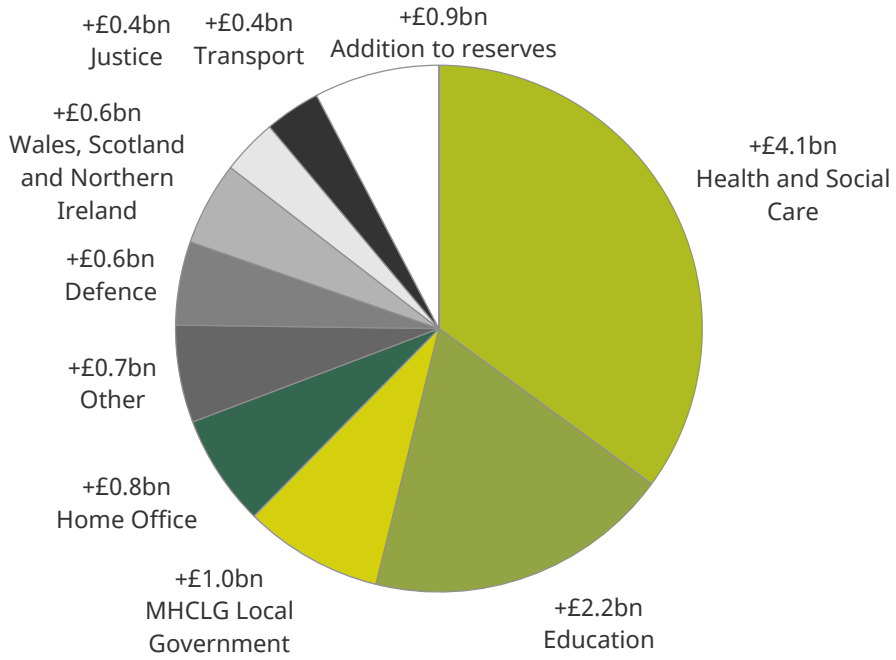
Figure 6.1. Real-terms percentage change in day-to-day budgets, 2019–20 to 2020–21



Note: Total refers here to the Treasury definition of resource DEL excluding depreciation.

Source: Table A2 of Spending Round 2019.

Figure 6.2. Real-terms £ billion change in day-to-day budgets, 2019–20 to 2020–21 (total increase: £13.8 billion)



Note: Figures are resource DEL excluding depreciation, expressed in 2020–21 prices, in line with the presentation in the Spending Round 2019 document. Figures do not sum to £13.8 billion due to rounding and adjustments for baseline funding.

Source: Table A3 of Spending Round 2019.

- **Department for Health and Social Care (+£4.1 billion in 2020–21 prices):** In June 2018, the government promised a real-terms extra £20.5 billion for front-line English NHS services by 2023–24.[2] The increase in spending between 2019–20 and 2020–21 represents the second year of that five-year settlement for the English NHS announced by the then prime minister Theresa May in the run-up to the NHS's 70th birthday last year. Day-to-day spending on wider (i.e. non-NHS) DHSC services such as public health has fallen by 12.5% in real terms over this two-year period.

- **Department for Education (+£2.2 billion in 2020–21 prices):** During the Conservative leadership contest, Boris Johnson promised £4.6 billion in extra funding for schools to reverse some of the cuts made to their budgets.[3] In the 2019 Spending Round, the government duly announced additional funding for schools to deliver on this promise. The first tranche of this is an extra £1.8 billion (in today's prices) in 2020–21, relative to 2019–20 spending. The government also announced an extra £400 million in real terms for other components of the education budget (including further education), taking the total increase for the Department for Education to £2.2 billion.

- **Home Office (+£0.8 billion in 2020–21 prices):** During the Conservative leadership contest, Mr Johnson also promised to hire an extra 20,000 police officers in England and Wales (which, if delivered, would return the number of police officers to around its 2009–10 level).[4] The additional funding for the Home Office provided in the spending round is intended to put the government on track to deliver on this promise by 2023.

In addition, the spending round announced extra funding for social care – an extra £1.1 billion in grant funding for local authorities (£1.0 billion in today's prices). This was part of Mr Javid's announced £2.9 billion cash increase in local government 'core spending power'; the other £1.8 billion is assumed to come from increases in council tax (regular council tax increases, and a 2% precept for social care that the government has said it will consult on) and increases in business rates baseline funding in line with inflation.

One notable feature of this year's spending round settlements is that no department saw a real-terms fall in its budget. Indeed, in contrast to recent spending reviews, many small departments saw relatively large percentage increases in their budgets. For example, the Law Officers' Departments, which includes the Crown Prosecution Service, saw a 12.4% real increase and the Department for Digital, Culture, Media and Sport saw a 4.1% real increase.

The increase in planned spending between 2019–20 and 2020–21 also includes an additional £0.9 billion for the reserve (taking the total to £7 billion in nominal terms, or 2% of budgeted day-to-day departmental spending, in 2020–21) as a contingency to meet any

[2] 'Prime Minister sets out 5-year NHS funding plan', HM Treasury and DHSC press release, 18 June 2018, https://www.gov.uk/government/news/prime-minister-sets-out-5-year-nhs-funding-plan.

[3] Total school spending per pupil fell by 8% in real terms between 2009–10 and 2018–19. Reversing these cuts would cost £4.7 billion a year by 2022–23, in 2019–20 prices. See C. Farquharson and L. Sibieta, '2019 annual report on education spending in England: schools', chapter in IFS Report R162, 2019, https://www.ifs.org.uk/publications/14344.

[4] See figure 4 of R. Crawford, P. Johnson and B. Zaranko, 'Spending Review 2019: deal or no deal', IFS Briefing Note BN254, 2019, https://www.ifs.org.uk/publications/14347.

unforeseeable costs – a sensible move given the uncertainty surrounding departmental responsibilities post-Brexit.

Investment spending

This year's spending round was primarily focused on day-to-day spending, as capital budgets for the 2020–21 financial year were decided at the 2015 Spending Review (which set capital budgets for the following five years and day-to-day spending budgets for four years). Mr Javid did, however, choose to top up those pre-existing capital spending plans for 2020–21 by £1.7 billion. This included an extra £300 million for the DHSC, an extra £500 million for Justice and an extra £200 million for the Home Office (all relative to plans published at the 2018 Budget). Capital spending by departments is now set to grow by 7.5% between 2019–20 and 2020–21, up from the previously planned increase of 4.8%.[5]

6.3 In the context of recent spending cuts

Day-to-day spending

Spending Round 2019 is not the first time day-to-day spending on public services has been increased post-crisis – spending is planned to be 2.3% higher in real terms in 2019–20 than it was in 2018–19 – but at 4.4% the increase announced for next year is larger, and the largest since 2009–10.[6] If delivered, it will be sufficient to return overall day-to-day spending to around the real-terms level it was in 2011–12, and just 3% below the level it was in 2010–11. This is illustrated in Figure 6.3. Taking account of the growth in the population, however, things look somewhat less rosy. Day-to-day spending per person will still be 9% below the level it was in 2010–11.

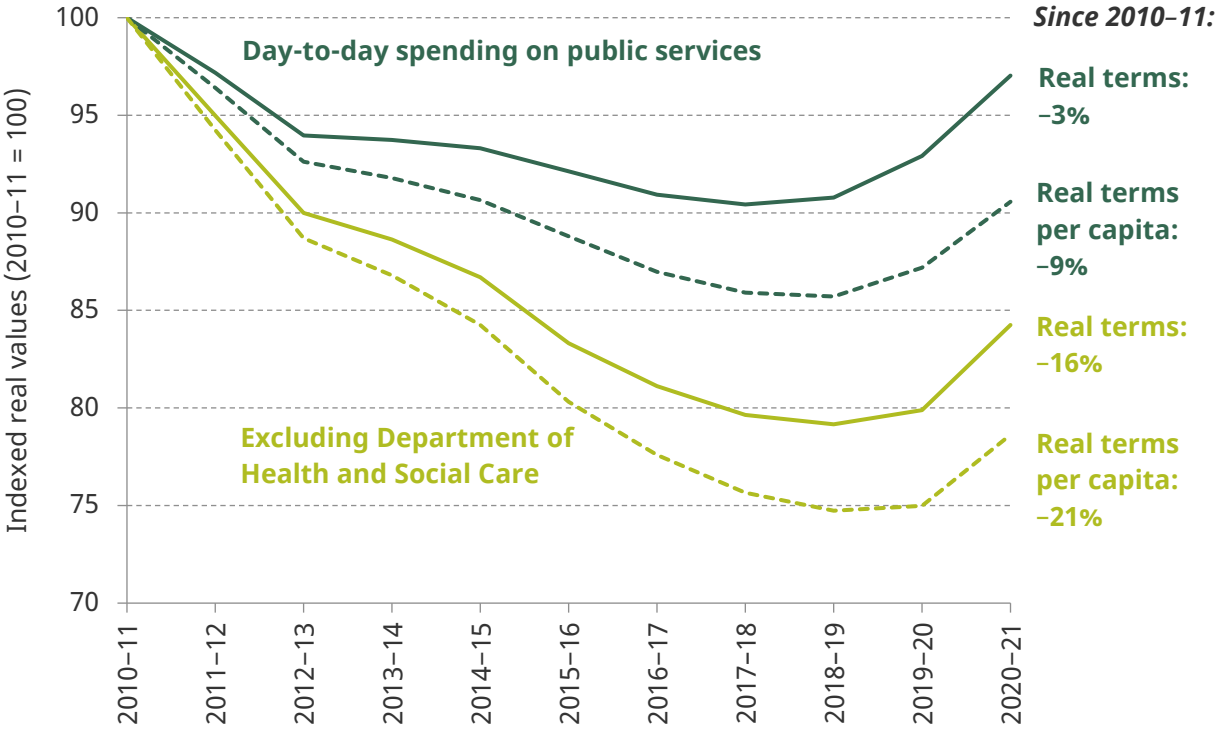
Within that, however, different areas of spending have fared very differently. The budget of the NHS has had repeated protection from cuts (and, indeed, repeated increases) and as a result comprises a greater share of departmental spending than ever before. By 2020–21, the DHSC is planned to account for 42% of total day-to-day spending. This share has rapidly increased in recent years: the (then) Department of Health (and other central government spending on social care) amounted to 33% of total day-to-day spending in 2010–11, and 26% at the turn of the millennium.

Stripping out the DHSC makes a big difference to the overall picture. The settlements in Spending Round 2019 are sufficient to reverse around a quarter of the cuts to other day-to-day public service spending seen since 2010–11. In 2020–21, spending is planned to be 16% below the 2010–11 level in real terms and 21% below in real per-capita terms (also shown in Figure 6.3).

[5] Note that this refers to real growth in the OBR definition of public sector gross investment in capital DEL (PSGI in CDEL, adjusted for historical discontinuities). The equivalent figure for real growth in the Treasury definition of Capital DEL between 2019–20 and 2020–21 is 5.0% (which is the figure used in table 1.1 of Spending Round 2019).

[6] Here and throughout, we define day-to-day spending on public services as public sector current expenditure in resource DEL (PSCE in RDEL), adjusted for historical discontinuities. The figure for real growth between 2018–19 and 2019–20 has also been adjusted to strip out the effect of changes to public service pension contributions.

Figure 6.3. Day-to-day spending on public services over the past decade



Note: Day-to-day spending refers to the OBR definition of public sector current expenditure in resource DEL, which differs from the Treasury definition of resource DEL excluding depreciation. Spending Round 2019 figures have been adjusted so as to be on a consistent basis with the OBR's historically consistent series for PSCE in RDEL and to strip out the effect of changes to public service pension contributions.

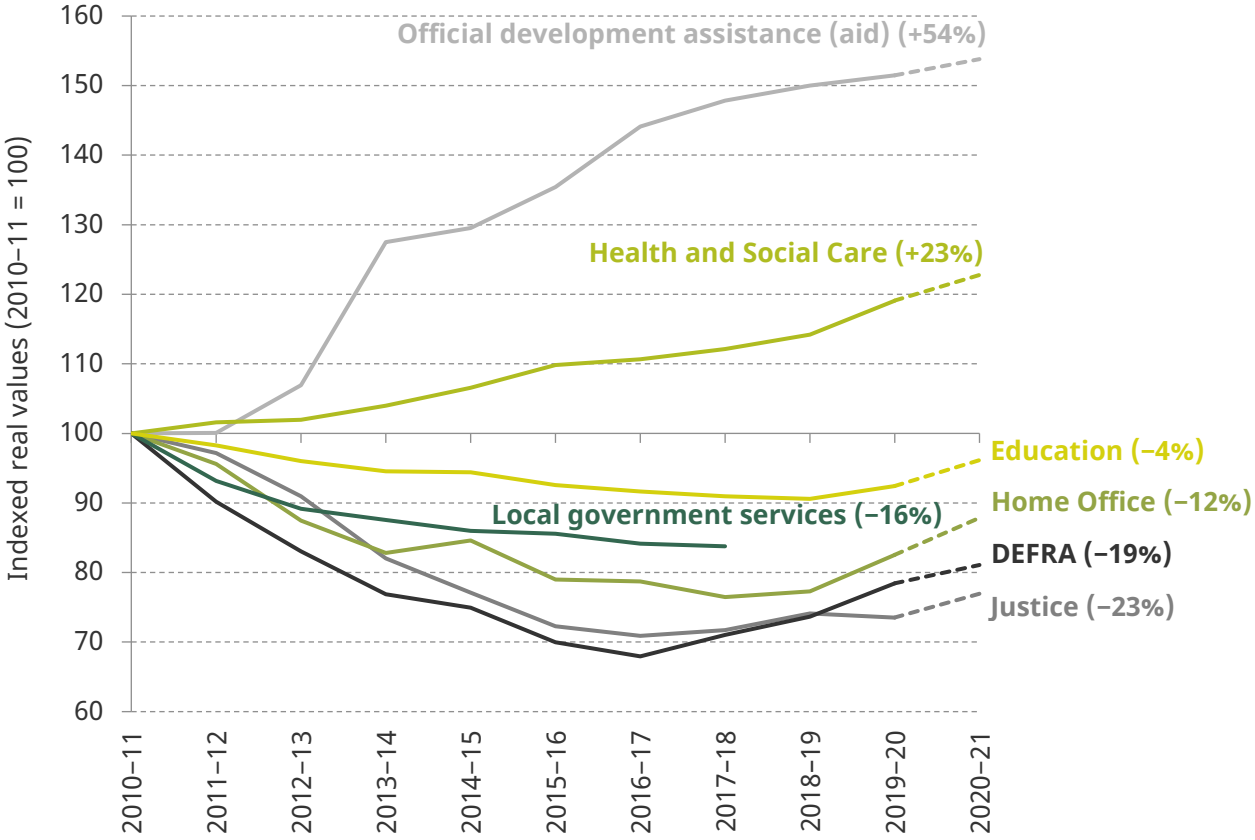
Source: Authors' calculations using OBR Economic and Fiscal Outlook March 2019, various HM Treasury Public Expenditure Statistical Analyses, Spending Round 2019 and ONS population figures.

Figure 6.4 describes the path of real-terms spending for selected areas since 2010–11. Total spending on official development assistance (ODA, which includes both day-to-day and investment spending on aid) has increased by more than 50% in real terms over the past decade, with a particularly sharp increase in 2013 (the first year in which the government had committed to spend at least 0.7% of national income on ODA). In contrast, total local government expenditure on services (including social care) fell by 16% between 2010–11 and 2017–18.[7] All other lines in Figure 6.4 represent day-to-day spending by central government departments. DHSC spending is set to be 23% higher in real terms in 2020–21 than a decade earlier, for example. And despite increases in day-to-day funding for the Department for Education, Home Office, DEFRA and the Ministry of Justice next year, each of these departments is set to have a lower budget in 2020–21 than in 2010–11 (4%, 12%, 19% and 23% lower, respectively). In per-person terms, day-to-day budgets for those departments will be 10%, 18%, 24% and 28% lower than a decade previously.

Austerity may be 'over' for many departments, in the sense that real-terms budget increases have returned, but it remains far from undone. Most departments' budgets remain some way below the level they were in 2010–11, and even further below the level

[7] This figure is for England only and is not available beyond 2017–18 as it is based on local authority out-turn data available only after the fact.

Figure 6.4. Spending paths for selected areas over the past decade



Note: 'Local government services' refers to service spending by English local authorities. Official development assistance includes both resource and capital spending. All other figures refer to resource DEL (excluding depreciation). DEFRA refers to the Department for Environment, Food & Rural Affairs. Final out-turn data for local government service spending are not available beyond 2017–18; provisional out-turns indicate that real-terms service spending was broadly flat between 2017–18 and 2018–19.

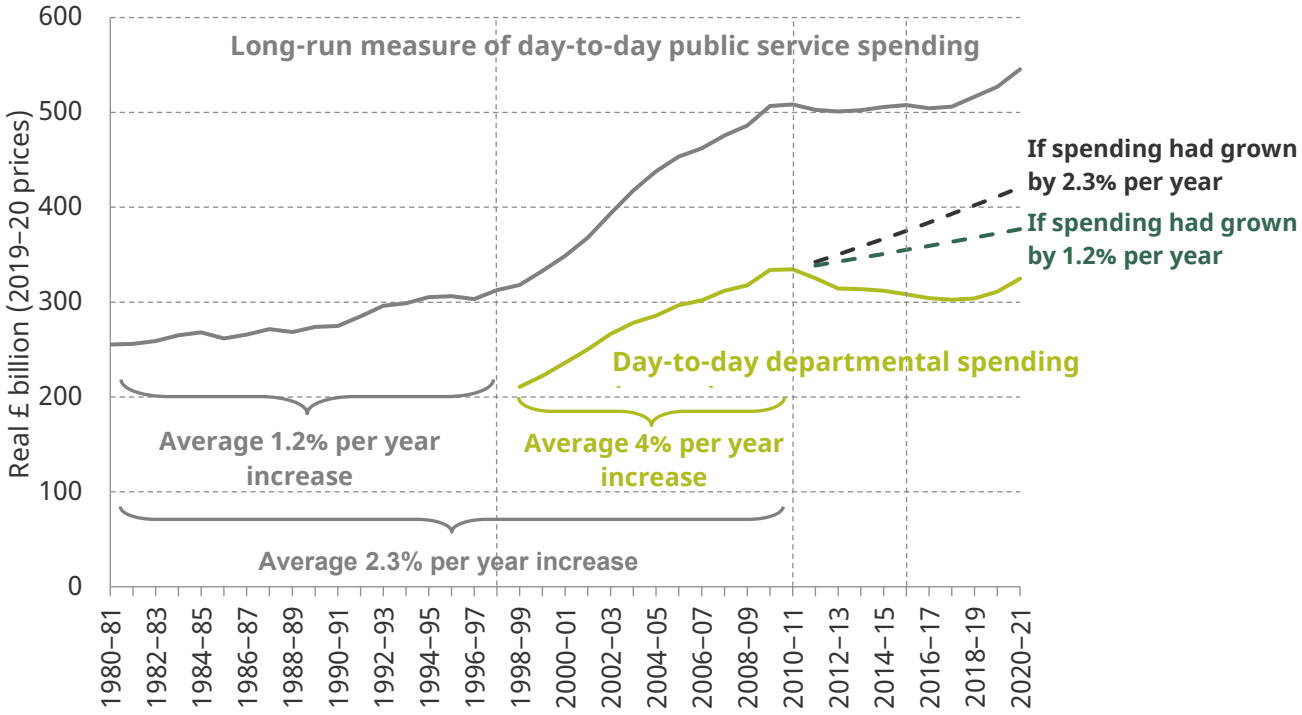
Source: Authors' calculations using various HM Treasury Public Expenditure Statistical Analyses, Spending Round 2019 and N. Amin Smith and D. Phillips, 'English council funding: what's happened and what's next?', IFS Briefing Note BN250, 2019, https://www.ifs.org.uk/publications/14133.

that might have been predicted prior to the crisis. This is because public service spending normally increases in real terms over time; as national income grows, the tax system raises more revenues, and spending the same *share* of national income would, for example, imply a higher *level* of spending in pounds billion terms.

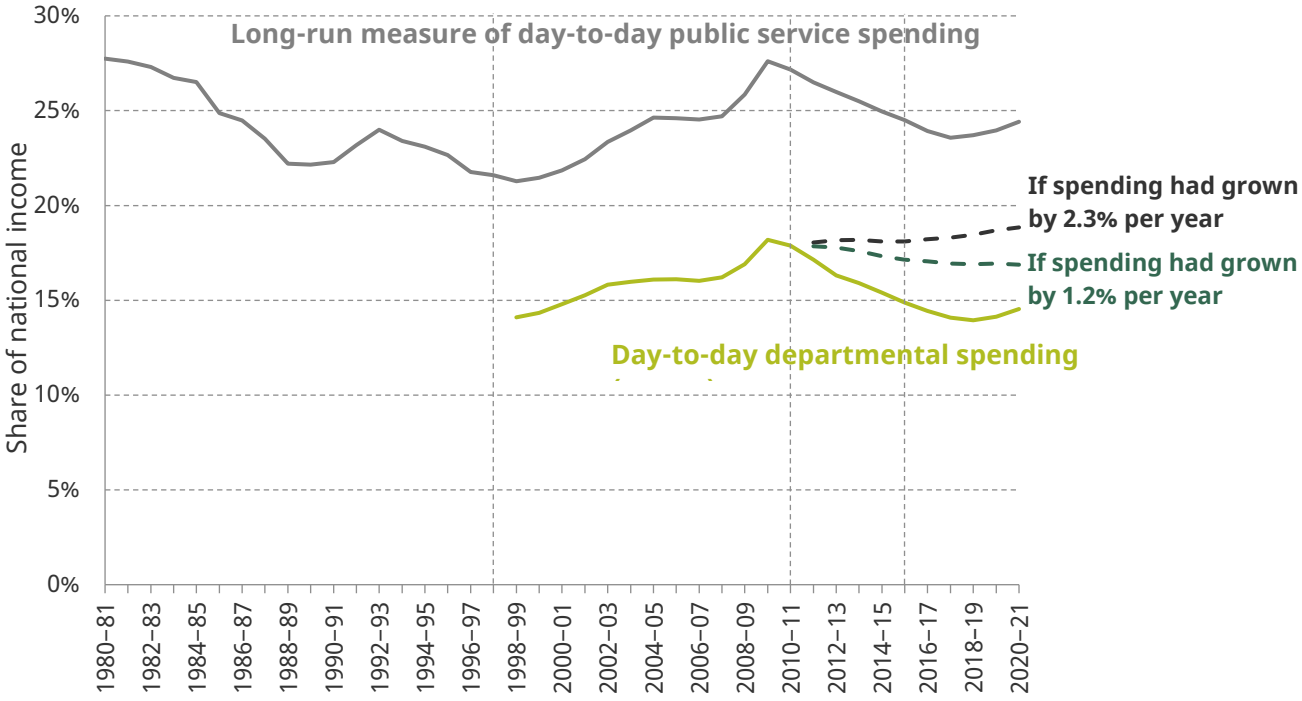
This is illustrated in Figure 6.5 – panel A shows day-to-day spending on services in real terms since 1980–81, while panel B shows spending as a share of national income. Between 1998–99 and 2010–11, day-to-day departmental spending grew at an average real rate of around 4% per year (faster than the real growth in national income over this period, and so this spending grew as a share of national income from 14.1% to 17.9%). To look further back, we need to use a broader measure of day-to-day public service

Figure 6.5. Day-to-day spending on public services over the long run

A. In real terms



B. As a share of national income



Note: Day-to-day departmental spending refers to the OBR definition of PSCE in RDEL. Long-run measure of day-to-day public service spending defined as total managed expenditure less spending on social security, public sector net investment and gross debt interest.

Source: Authors' calculations using OBR Economic and Fiscal Outlook March 2019, OBR Public Finances Databank, various HM Treasury Public Expenditure Statistical Analyses, ONS series JW2P, DWP benefit expenditure tables 2019 and Spending Round 2019.

spending, which includes day-to-day spending not done by central government.[8] Under this broader measure, spending on public services increased at an average annual real rate of around 2.3% between 1980–81 and 2010–11 (similar to the average growth rate of national income, leaving spending as a share of national income at roughly the same level in 2010–11 as in 1980–81).

The black dashed line on Figure 6.5 shows how day-to-day spending by central government departments would have evolved since 2010–11 had it increased at the long-run average rate of 2.3% per year. Spending in 2020–21 would be £100 billion higher than currently planned had this been the case. If departmental day-to-day spending had instead grown by 1.2% per year (the average growth rate between 1980–81 and 1997–98; shown by the dark green dashed line), spending would be £50 billion higher in 2020–21, and would have stabilised at around the pre-crisis level as a share of national income.

As things stand, day-to-day spending by central government departments is now forecast to be at around the same share of national income in 2020–21 as in 1999–00 – in other words, still lower than the share of national income in almost any year under the previous Labour government. On a broader measure (which includes day-to-day spending not done by central government departments), day-to-day spending next year is set to be at around the same levels as in 2006–07.[9] Mr Javid's public spending announcements must be seen in that context.

Investment spending

Investment spending by departments accounts for around 16% of the total, or around £61 billion in 2019–20. Between this year and next, it is now set to grow by 7.5% in real terms. Figure 6.6 shows that departmental capital spending grew at a rapid rate in the run-up to the financial crisis (average annual real growth was 9.4% between 1998–99 and 2008–09) but was cut back sharply in the years after 2010. Since 2012–13, however, investment spending by departments has steadily increased and will return in 2020–21 almost to its 2009–10 peak,[10] and to above pre-crisis levels; but, at 3.0% of national income, it will still be below its 2007–08 level on that measure. Public sector net investment (PSNI, a broader measure of investment spending than capital DEL) is discussed in Section 6.4.

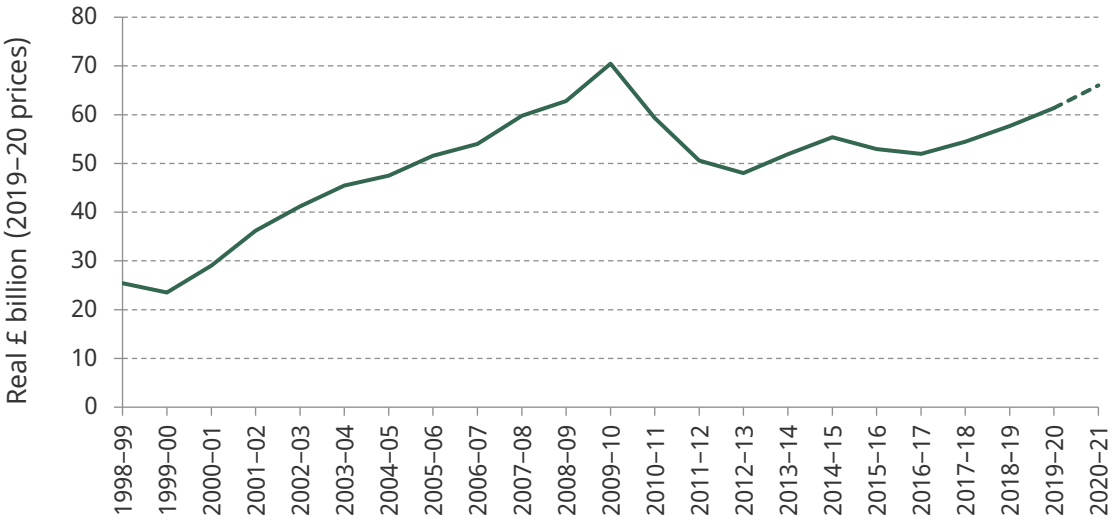
As with day-to-day spending on public services, the cuts to investment budgets did not fall equally, as shown in Figure 6.7. As ever, the DHSC was relatively (though by no means entirely) protected from cuts, and its capital budget has been steadily increased in recent years. As a result, the DHSC capital budget in 2020–21 is set to be 16% higher in real terms than in 2010–11. In sharp contrast, capital budgets for the Home Office and Department

[8] We define this broader measure of public service spending as total managed expenditure less spending on social security, public sector net investment and debt interest. It therefore includes elements of day-to-day spending outside of departmental expenditure limits. The largest of these are locally financed current expenditure, transfers to the EU, net public service pension payments, VAT refunds, general government depreciation and environmental levies.

[9] The biggest driver of the difference between these two measures is the substantial increase in self-financed local expenditure: increases in council tax and business rates revenues have offset part of the cuts in central government grants to local authorities.

[10] The sharp peak in capital DEL in 2009–10 was in part a result of investment spending being brought forward from 2010–11 in response to the economic downturn. See sections 3.2 and 3.6 of R. Crawford, P. Johnson and B. Zaranko, *The Planning and Control of UK Public Expenditure, 1993–2015*, IFS Report R147, 2018, https://www.ifs.org.uk/publications/13155.

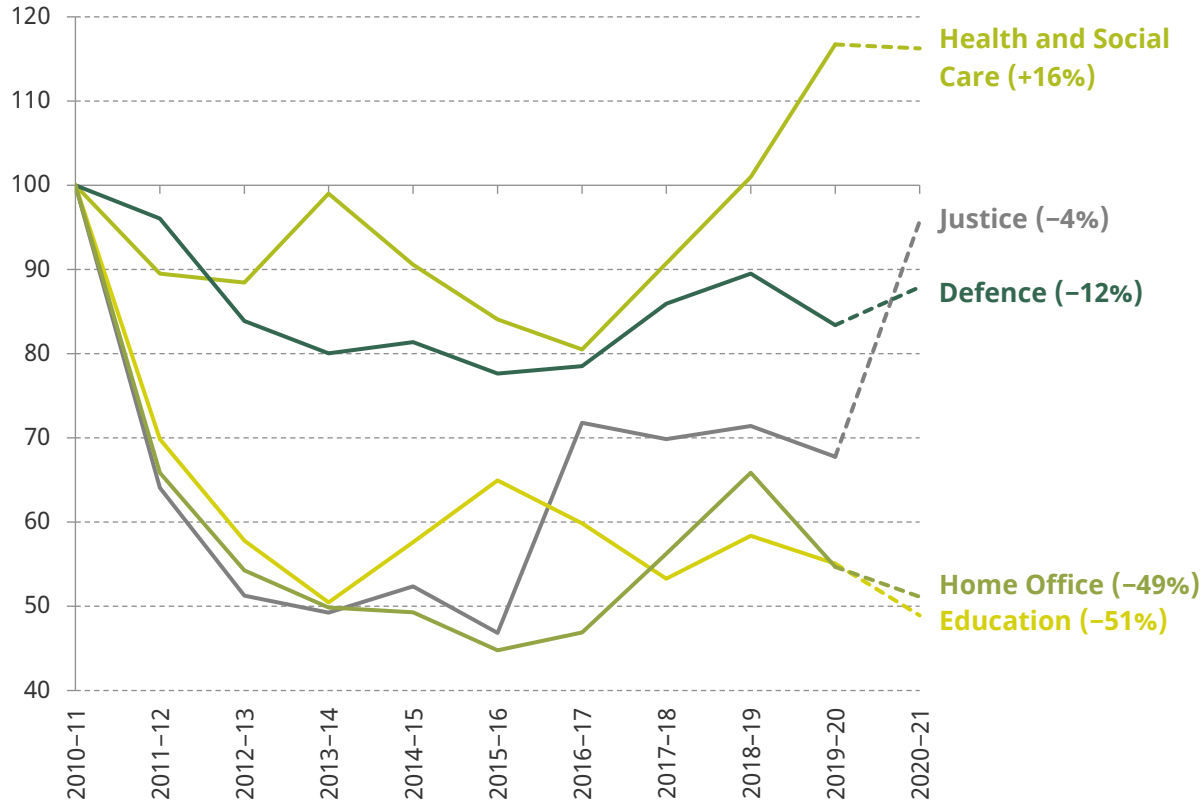
Figure 6.6. Capital spending by departments



Note: Figures refer to the OBR definition of public sector gross investment in capital departmental expenditure limits (PSGI in CDEL), adjusted for historical discontinuities. Figure for 2020–21 has been adjusted to reflect the £1.7 billion of additional spending announced at Spending Round 2019.

Source: Authors' calculations using supplementary table 4.3 of OBR Economic and Fiscal Outlook March 2019, various HM Treasury Public Expenditure Analyses, Spending Round 2019 and June 2019 GDP deflators.

Figure 6.7. Changes in capital spending by selected departments over the past decade



Source: Authors' calculations using various HM Treasury Public Expenditure Statistical Analyses, Budget 2018 and Spending Round 2019.

for Education will have been halved in real terms over the decade.[11] Justice investment spending was more than halved between 2010–11 and 2015–16 but has increased since then; additional funding announced in this year's spending round means that the Justice capital budget in 2020–21 will be only 4% lower in real terms than in 2010–11. Given that it is especially important to plan investment spending over a long time frame, the path of investment spending by the Ministry of Justice over the last decade (with deep cuts followed by a sharp increase) is unlikely to be conducive to ensuring spending is done well.

6.4 In the context of what Labour was proposing in 2017

Day-to-day spending

The £11.5 billion increase in day-to-day spending announced in the 2019 Spending Round – shown in mid green on Figure 6.8 – was not the first time that planned spending in 2020–21 has risen. Following the 2019 Spring Statement, spending plans for 2020–21 (shown in dark green) were around £16 billion higher (in 2019–20 prices) than what had been set out in March 2017 (shown in yellow), just before the last general election. This was in large part a result of the government's decision in June 2018 to promise an extra £20.5 billion in real terms for front-line NHS services by 2023–24.[12]

How do the latest spending plans compare with what Labour was proposing in the 2017 election? In its 2017 manifesto, the Labour party proposed a number of policies that would significantly increase day-to-day spending on public services – it estimated the cost of its policies to be £44.0 billion in cash terms in 2021–22 (£42.4 billion in today's prices).[13] At the time, IFS analysis raised some queries about the Labour costings of some of these policies,[14] but here we just take Labour's numbers with one exception: the cost associated with its policy to abolish tuition fees and bring back maintenance grants for poorer students.

The Labour party manifesto assumed this policy would increase government spending in 2021–22 by £11.2 billion in cash terms (£10.8 billion in today's prices). However, the long-run cost to the government would have been lower than this, as a substantial share of student loans made to cover fees and maintenance are not expected to be repaid in full. Our latest estimate of the long-run cost associated with Labour's policy is £6.6 billion in 2021–22 in today's prices; changes to the accounting rules (discussed in Chapter 4) mean that this figure is now equal to the short-term deficit impact as well.[15]

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[11] The cuts in Department for Education capital spending follow a decade of rapidly increased spending. Between 1998 and 2009, capital spending on schools (the bulk of capital spending by the Department for Education) increased by an average 12.9% per year in real terms (L. Sibieta, 'Schools spending in England 2010–15', *Fiscal Studies*, 2015, 36, 283–302, https://doi.org/10.1111/j.1475-5890.2015.12057).

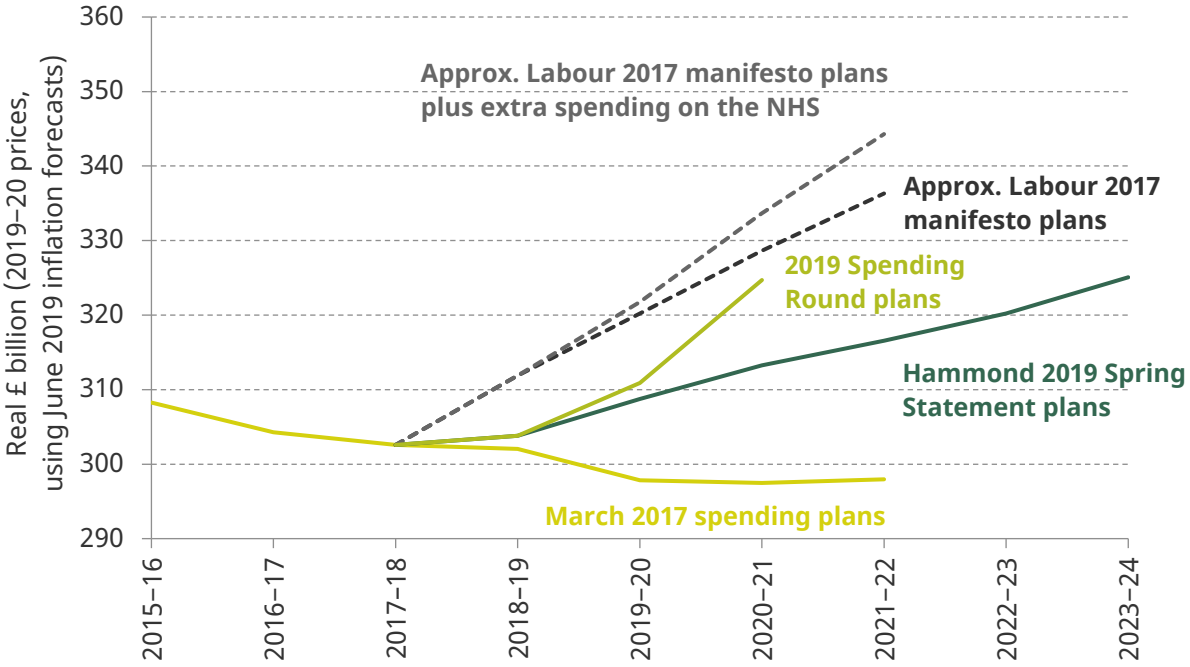
[12] 'Prime Minister sets out 5-year NHS funding plan', HM Treasury and DHSC press release, 18 June 2018, https://www.gov.uk/government/news/prime-minister-sets-out-5-year-nhs-funding-plan.

[13] Labour Party, 'Funding Britain's future', 2017, http://labour.org.uk/wp-content/uploads/2017/10/Funding-Britains-Future.pdf. Note that we exclude the £4.6 billion of commitments on social security, which would fall within annually managed expenditure.

[14] See R. Crawford, 'General election 2017, manifesto analysis: spending on public services', 2017, https://www.ifs.org.uk/publications/9258.

[15] In fact, Labour's policy is likely to increase day-to-day departmental spending by £14.7 billion and reduce investment spending by £8.1 billion in 2021–22 (both in today's prices), because under the ONS's new

Figure 6.8. Successive plans for day-to-day spending on public services



Note: Day-to-day spending refers to PSCE in RDEL. Labour 2017 manifesto contained policy proposals that it estimated would add £44 billion to day-to-day spending on public services in 2021–22 in cash terms, equivalent to £42.4 billion in today's prices. We take these costings at face value, with the exception of the cost associated with the manifesto's proposal to replace student loans with grants. For this policy, we include our latest estimate of the long-run cost of this policy per year, rather than Labour's estimate of the up-front cost (the latter being higher, since few loans are expected to be fully repaid), which lowers the real total to £38.3 billion. We assume here that three-quarters of the spending increase between 2017–18 and 2021–22 would be delivered by 2020–21. Hammond Spring Statement 2019 plans included additional funding for the NHS from 2019–20 onwards. We estimate that for Labour to match those NHS spending plans would require extra day-to-day spending of approximately £5 billion in 2020–21 and £8 billion in 2021–22, in 2019–20 prices, relative to manifesto plans. Spending Round 2019 added £2.1 billion of day-to-day spending for 2019–20 and £11.5 billion for 2020–21 (in 2019–20 prices). All figures have been adjusted for classification changes at each fiscal event between March 2017 and March 2019 so as to be on a consistent (March 2019) basis. Hammond Spring Statement 2019 plans and 2019 Spending Round plans have been adjusted to strip out the effect of changes to public service pension contributions. All series converted into real terms (2019–20 prices) using HM Treasury forecasts for the GDP deflator published in June 2019.

Source: Authors' calculations using OBR Economic and Fiscal Outlook March 2017, November 2017, March 2018, October 2018 and March 2019 (https://obr.uk/efo/economic-fiscal-outlook-march-2019/), Spending Review and Autumn Statement 2015 (https://www.gov.uk/government/publications/spending-review-and-autumn-statement-2015-documents), Spending Round 2019 (https://www.gov.uk/government/publications/spending-round-2019-document), Labour Manifesto 2017 (http://labour.org.uk/wp-content/uploads/2017/10/Funding-Britains-Future.pdf), R. Crawford and G. Stoye, 'Challenging times ahead for the NHS regardless of who wins the election', IFS Observation, 30 May 2017 (https://www.ifs.org.uk/publications/9262) and J. Britton, C. Farquharson and L. Sibieta, *2019 Annual Report on Education Spending in England*, IFS Report R162, 2019 (https://www.ifs.org.uk/publications/14369).

classification of student loans, the current government subsidy to higher education that comes through individuals not repaying their student loans in full is classified as capital spending. However, economically, loans that will not be repaid are more like grants and therefore we simply illustrate the difference between Labour and the current government plans as the net cost (i.e. £14.7 billion less £8.1 billion). See J. Britton, C. Farquharson and L. Sibieta, *2019 Annual Report on Education Spending in England*, IFS Report R162, 2019, https://www.ifs.org.uk/publications/14369.

We therefore illustrate the Labour manifesto plans as implying a total of £38.3 billion in additional spending in 2021–22 (in today's prices) over and above the Conservative government's March 2017 plans (£31.7 billion for Labour's pledges outside higher education, plus £6.6 billion for the estimated long-run cost of its higher education pledges). For simplicity, we assume that Labour would have increased spending smoothly over the four years between 2017–18 and 2021–22 to get to that level.

Given these assumptions, what is striking is that the latest spending plans of Mr Johnson's government for 2020–21 appear very similar to the level of spending we might have seen for a four-year phase-in of Labour's 2017 manifesto plans (we estimate that day-to-day spending would have been only £4 billion higher under Labour), and they are certainly closer to that than they are to what the government claimed it was planning to spend back in March 2017.

A reminder of the main Labour 2017 manifesto pledges on public service spending is set out in Table 6.1. In many cases, the Conservative governments of Mrs May and Mr Johnson have moved policy decisively in the direction Labour had been planning. Spending on schools was increased in the 2019 Spending Round in line with Labour's 2017 plans, while additional money was allocated to further education and social care. In some cases, the Conservatives have exceeded Labour's spending plans. Health spending has been increased by vastly more than either Labour or the Conservatives had committed to back in 2017 – the day-to-day budget of the DHSC in 2020–21 is set to be around £5 billion higher than Labour's manifesto plans implied back in 2017, and around £8 billion higher in 2021–22 (both in 2019–20 prices). Mr Johnson has also doubled Labour's planned additional recruitment of police officers.

One significant Labour proposal was to increase public spending on university education by replacing university tuition fees with grants and restoring maintenance grants for poorer students. Since 2017, the Conservative government has frozen the level of tuition fees in cash terms, and increased the repayment threshold (the income level above which graduates must make repayments on their student loans) from £21,000 to £25,000. This latter policy is estimated to cost the government around £2.3 billion a year in the long run, as a result of reduced loan repayments by graduates over their lifetimes before their loans are written off 30 years after graduation.[16] However, while this has reduced the cost of Labour's policy to replace student loans with government grants, the latest estimate by IFS researchers is that Labour's policy would still cost £6.6 billion (in today's prices) per year by 2021–22.[17]

The government has delivered on its manifesto commitment to introduce an 'extended' entitlement to 30 hours a week of funded childcare for 3- and 4-year-olds in working families, and also increased per-hour spending by 7% in 2017–18.[17] But while these policies have meant a £0.8 billion increase in spending on free childcare between 2016–17 and 2018–19, they are nowhere near as substantial as the significant changes the Labour party promised in 2017. Labour had been planning to extend the offer of 30 hours of free

[16] C. Belfield, J. Britton and L. van der Erve, 'Higher education finance reform: raising the repayment threshold to £25,000 and freezing the fee cap at £9,250', IFS Briefing Note BN217, 2017, https://www.ifs.org.uk/publications/9964.

[17] J. Britton, C. Farquharson and L. Sibieta, *2019 Annual Report on Education Spending in England*, IFS Report R162, 2019, https://www.ifs.org.uk/publications/14369.

Table 6.1. Main Labour 2017 manifesto public service spending proposals

	Policy and cost as per manifesto (cost in 2021–22, cash terms)	Main Conservative government action since 2017 election
Early years education	Extending 30 free hours to all 2-, 3- and 4-year-olds, more subsidised childcare on top of this, raise reimbursement rates for free hours, increase Sure Start funding (offset somewhat by ending tax- and benefit-system subsidies for childcare) Net cost: £5.3bn	Introduction of extended entitlement to funded childcare for 3- and 4-year-olds in working families Per-hour spending for 3- and 4-year olds increased by 5% between 2016–17 and 2018–19 (though 1% cut for 2-year-olds)
Schools	Reverse cuts [since 2009–10] and protect per-pupil funding in real terms Extend free school lunches to all primary school pupils Cost: £6.3bn	Mr Johnson pledged to increase school budgets by £4.6bn relative to 2019–20 levels by 2022–23
Further education (FE)	Introduce free FE tuition, equalise 16–19 funding and restore the Education Maintenance Allowance Cost: £2.5bn	Spending Round 2019 increased FE spending by £400m in 2022–23 (including extra funding for roll-out of T levels)
Universities	End tuition fees (replace with grant funding), bring back maintenance grants for poorer students Cost: £11.2bn	Government increased loan repayment threshold in October 2017 and froze the maximum tuition fee in cash terms Commissioned the Augar Review into post-18 education
Health	Increase day-to-day spending by £5.8bn relative to current plans by 2021–22 (including £0.8bn for higher pay) Restore nurses' bursaries (cost: £0.6bn)	Government pledged a £20.5bn (real-terms) increase for front-line English NHS services between 2018–19 and 2023–24
Social care	Increase funding by £2.1bn Ambition for a National Care Service (estimated cost: around £3bn)	Extended social care precept and topped up social care funding (including £1bn increase in Spending Round 2019)
Police	Recruit an additional 10,000 officers Cost: £0.3bn	Mr Johnson pledged to recruit an additional 20,000 officers and awarded the Home Office a £0.8bn real increase in Spending Round 2019
Public sector pay	Lift public sector pay cap Cost: £4bn	Cap on public sector pay lifted in September 2017 (albeit without extra funding explicitly being made available to departments to cover the increase in labour costs)
Barnett implications	The above policies would imply increases in block grant for Scotland, Wales and Northern Ireland Cost: £6.1bn	

Source: Labour Party, 'Funding Britain's future', 2017, http://labour.org.uk/wp-content/uploads/2017/10/Funding-Britains-Future.pdf.

childcare to all 2-, 3- and 4-year-olds, increase the reimbursement rate for providers significantly, offer additional subsidised childcare on top of this, and increase spending on Sure Start – at a net cost of around £5 billion.[18]

Overall, the Spending Round 2019 announcements of the new prime minister closed many of the differences between the Conservative offer and that of the Labour party at the time of the 2017 general election. Furthermore, the scale of the increases in spending on the NHS has been such that the total level of day-to-day spending on public services looks similar next year to what we might have expected a Labour government to spend based on its 2017 manifesto promises. The composition, though, is somewhat different – with higher spending on the NHS and lower spending on early years and university education under the current Conservative government than the Labour 2017 manifesto implied.

However, arguably the Labour 2017 manifesto understated how much Labour would have chosen to spend on the NHS had they been elected. In the run-up to the 70th anniversary of the NHS, the future funding of the NHS received a great deal of attention. In May 2018, a joint report from IFS researchers and the Health Foundation estimated that UK spending on healthcare would have to rise by an average of 3.3% a year over the next 15 years just to maintain current levels of NHS provision.[19] Shortly after, then prime minister Theresa May announced that day-to-day spending on the English NHS would increase by £20.5 billion in real terms between 2018–19 and 2023–24 (equivalent to average growth of 3.4% per year). Had Labour increased NHS spending to the same extent as the Conservative government has, in addition to its manifesto commitments, then day-to-day spending could in fact have been around £5 billion higher in 2020–21 (in today's prices) than our illustrative black line in Figure 6.8 suggests, and around £8 billion higher in 2021–22. We show this in Figure 6.8 with a grey line.

Investment spending

Labour's manifesto also proposed a 'National Transformation Fund' to invest £250 billion over 10 years. Public sector net investment (PSNI) as a share of national income is already at a relatively high level by recent historical standards (as shown in Figure 6.9). If achieved, Labour's plans (illustrated by the dashed dark green line) would return public investment to levels last sustained in the early 1970s.[20]

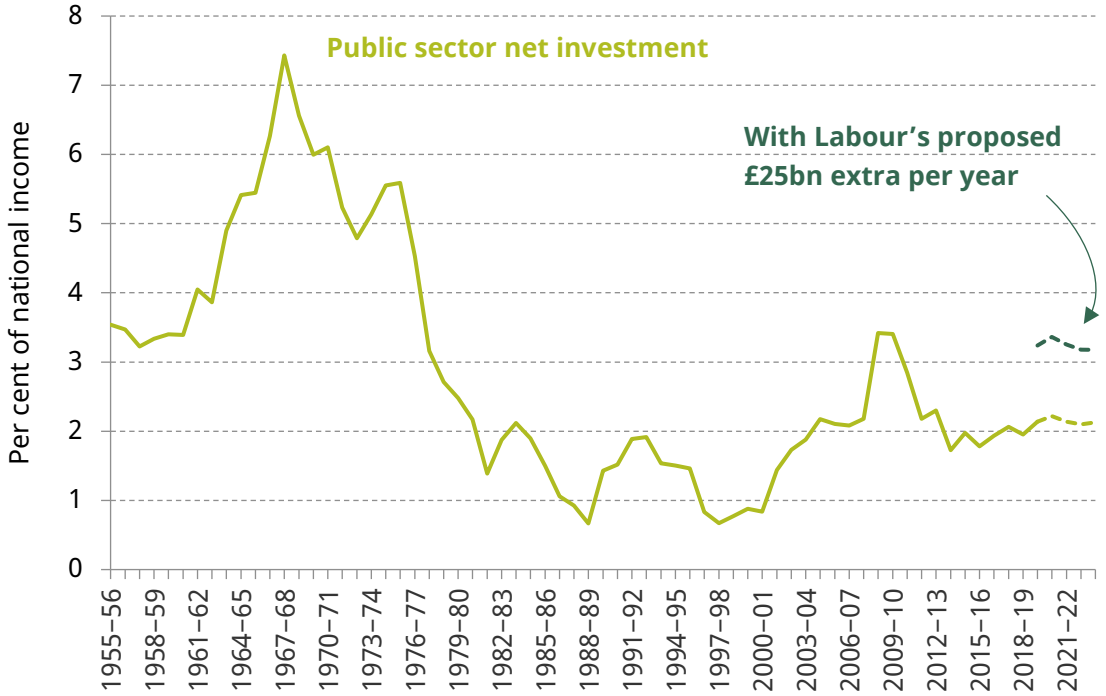
The constraints on a Labour government looking to deliver such investment may not be funding-related, but instead be a shortage of appropriately skilled workers, a dearth of 'shovel-ready' projects and the fact that under governments of all political stripes investment spending has consistently and repeatedly tended to come in lower than

[18] This was a net costing where the total cost of the additional spending arising from these policies was reduced by extra revenue that was expected to be received as a result of the associated policy to move away from demand-side subsidies for childcare through the tax and benefit systems. By only including the net costing in our measure of Labour's manifesto plans, we are slightly understating its actual planned level of day-to-day public service spending.

[19] Institute for Fiscal Studies and Health Foundation, *Securing the Future: Funding Health and Social Care to the 2030s*, 2018, https://www.ifs.org.uk/publications/12994.

[20] It is important to exercise caution when making such comparisons over longer periods of time. Genuine reductions in public investment spending have played a role in PSNI falling as a share of national income, but the decline also reflects the changing boundaries of the state. For a more detailed discussion, see T. Clark, M. Elsby and S. Love, 'Twenty-five years of falling investment? Trends in capital spending on public services', IFS Briefing Note BN20, 2001, https://www.ifs.org.uk/publications/1770.

Figure 6.9. Public sector net investment since 1955–56



Note: Figure for 2020–21 has been adjusted to reflect the £1.7 billion of additional spending announced at Spending Round 2019; growth beyond that is assumed to be the same as in provisional plans published at the 2019 Spring Statement. Forecasts of PSNI as a share of national income under Labour's plans take account of the impact on real output using multipliers from the Office for Budget Responsibility. Figures shown are those prior to the recent student loans accounting change, following which loans made to students that are not expected to be repaid count towards capital spending. However, economically, it makes more sense to treat these the same way as grants to students (which do not score as capital spending).

Source: Authors' calculations using OBR Public Finances Databank (accessed July 2019), OBR fiscal multipliers (https://obr.uk/box/fiscal-multipliers/), Labour Party manifesto 2017 (http://labour.org.uk/wp-content/uploads/2017/10/Funding-Britains-Future.pdf) and Spending Round 2019 (https://www.gov.uk/government/publications/spending-round-2019-document).

planned.[21] Such a commitment, however, would go some way towards delivering long-term certainty over infrastructure funding, as recommended by the National Infrastructure Commission in its inaugural National Infrastructure Assessment.[22]

6.5 Conclusion

The 2019 Spending Review increased day-to-day spending on public services across the board, and by 4.4% in real terms overall. This has been heralded by many as the end of austerity.

It is important, however, to keep some perspective. The picture is less rosy outside the favoured DHSC. Although many departments may have breathed a sigh of relief at the

[21] R. Crawford, P. Johnson and B. Zaranko, 'The planning and control of UK public expenditure, 1993–2015', IFS Report R147, 2018, https://www.ifs.org.uk/publications/13155.

[22] National Infrastructure Commission, July 2018, https://www.nic.org.uk/our-work/national-infrastructure-assessment/.

real-terms increases in their budgets, this will in most cases be insufficient to undo the budget cuts implemented since 2010. And a decade of spending restraint means that even after recent announcements, spending on public services next year will be well below where we might have expected it to be, given historical rates of spending growth and growth in national income.

An important question many departments will be asking is whether this is a pause or an end to austerity. Will increases in budgets be forthcoming as standard going forwards? There are reasons for them to be concerned. The government's ability to spend money on public services depends on the performance of the economy, its willingness to tax and its willingness to borrow. The OBR's forecasts for growth over the next five years are underwhelming at best, and these are predicated on a 'smooth and orderly' departure from the European Union. The new Conservative leadership does look more inclined to borrow than its predecessors – announcing in the Spending Round that it would be reassessing the current fiscal targets – but the Prime Minister also has stated big ambitions to cut taxes, which may leave little more for public services. He has also stated an ambition for the national debt to fall year on year. If the economy does falter, this is unlikely to be compatible with sustained spending increases on the scale of the recent spending round, let alone those in combination with tax cuts.

There is also the likelihood of an early election. While this is likely to be triggered by, and therefore largely focused on, disagreement between political parties (and in some cases between politicians within political parties) about how the UK leaves the EU, we are also likely to see big differences between Labour and the Conservatives in their overall stance on the future size and composition of public service spending – even if such differences appear to have narrowed since 2017. The 2019 Spending Round provided breathing space for departments, but no real clarity on where things are headed in the medium term.

7. Barriers to delivering new domestic policies

Graham Atkins, Aron Cheung, Joe Marshall and Gemma Tetlow (Institute for Government)

Key findings

- **The all-encompassing nature of Brexit, the lack of a parliamentary majority and tight public finances created difficulties for Theresa May in advancing domestic policies.** Brexit imposed significant demands on civil servants' and ministers' time, at the expense of progress on the government's domestic priorities such as tackling 'burning injustices', reforming social care and delivering major infrastructure projects.

- **Progress on domestic policies under Mrs May's government was also undermined by poor Cabinet and party discipline and rapid turnover of ministers, both of which were partly a result of disagreement over Brexit.** Mrs May's task was made harder by her loss of the Conservatives' parliamentary majority at the 2017 election, following which the government suffered defeats in parliament on both Brexit and non-Brexit legislation.

- **A general election could break the current parliamentary deadlock, which has left new prime minister Boris Johnson hamstrung. But any future prime minister could still face many of the same difficulties in making progress on domestic policy.** Brexit in whatever form will continue to place demands on civil servants' and ministers' time and could continue to test Cabinet discipline and party allegiances in parliament; keeping no deal on the table will make it harder still to make progress on domestic policy. Tight parliamentary arithmetic has made passing major legislation difficult. Without a general election – and perhaps with one – any government will struggle to build coalitions to pass new legislation.

- **Negotiating a future trade relationship with the EU once the UK has left the bloc – with or without a deal – would be more difficult than negotiating the Withdrawal Agreement over the past three years.** Negotiations with 'third countries' take place on a different legal basis with a more complicated process and require ratification by all 27 member states, while the difficult trade-offs revealed in the withdrawal negotiations' would be likely to persist.

- **Despite these challenges, the government could do more to make progress on domestic policy.** It must set clear and limited priorities, enforce Cabinet discipline, avoid frequent ministerial reshuffles and set clear fiscal objectives. To increase its likelihood of success, particularly in controversial policy areas, the next government should be clearer about how additional public spending can help achieve its objectives and where other approaches (beyond just money) are needed, build cross-party support in some areas and make space for long-term thinking.

7.1 Introduction

Brexit is the policy objective that defined Theresa May's government and will undoubtedly consume much of the government's time and energy over the next few years. Even so, in his first few weeks in office, Prime Minister Boris Johnson has set out an ambitious domestic policy agenda – including 'fix[ing] the crisis in social care once and for all';[1] increasing funding for schools, the police, prisons and the NHS; and reinvigorating growth across the country. Likewise, the Labour party – which could take power if, as seems likely, an election is held later this year – used its last election manifesto and recent party conference to set out a wide range of domestic policy priorities from scrapping university tuition fees to a substantial programme of nationalisation to universal free social care. If either were to deliver on these promises, it would mark a notable change from the past three years when domestic policy has languished. But achieving such objectives will require the government to overcome several major barriers that prevented Mrs May from making progress.

One of the issues will be finding the money needed to pay for some of these promises. Substantial permanent increases in spending that are financed through additional borrowing would, as is shown in Chapter 4, leave public sector net debt at an elevated level for longer.

But it was not money alone that stopped Mrs May's government from making good on her domestic policy promises. As Section 7.2 sets out, the last government was also hampered by: the pressures of delivering Brexit, which consumed civil servants', ministers' and parliamentary time; the lack of a parliamentary majority and the breakdown of Cabinet discipline, which made it difficult to pass anything other than routine legislation; and unusually frequent turnover of ministers, which deprived several areas of domestic policy of the political focus, continuity and drive needed to push through changes.

Many of the same challenges will continue to plague the government over the coming months and will need to be overcome if the government is to deliver changes to domestic policy. Section 7.3 sets out how these challenges are likely to evolve over the coming months; Section 7.4 summarises what the next government must do differently to make progress on domestic policies.

7.2 Limited progress on domestic policy

Mrs May's domestic policy ambitions were initially extensive. On the steps of Downing Street in 2016, she pledged to tackle 'burning injustices'.[2] The 2017 Conservative manifesto had more words than any previous offering from the party[3] and contained a range of promises from increasing spending on the NHS and schools to reforming social care and investing in infrastructure. But her government struggled to make progress on many areas of her agenda.

[1] https://www.gov.uk/government/speeches/boris-johnsons-first-speech-as-prime-minister-24-july-2019.

[2] https://www.gov.uk/government/speeches/statement-from-the-new-prime-minister-theresa-may.

[3] https://twitter.com/GavinFreeguard/status/864022074809081856.

Having lost her parliamentary majority at the 2017 election, Mrs May was forced to abandon some of her manifesto promises in order to secure the backing of Northern Ireland's Democratic Unionist Party (DUP) through a confidence and supply agreement. To do that, the government agreed not to cut benefits for pensioners as it had intended – instead retaining the triple lock on the state pension and entitlement to a winter fuel payment for all pensioners – at a cost of around £1 billion a year[4] during this parliament, with that cost increasing in the long run. Mrs May also agreed to increase planned spending in Northern Ireland by a further £1 billion over the following five years.

At least two other explicit manifesto pledges were also dropped. Mrs May dropped her manifesto proposal to reform social care funding during the campaign, and shortly after the election she dropped a plan to replace free school lunches for infants with free breakfasts for all primary school children. She later stated her intent to bring forward a consultation on reforms to social care funding, but this did not materialise under her premiership.

Mrs May's lack of progress reflected the difficulties that faced a minority government in getting legislation through parliament and the pressures of Brexit on ministers, civil servants and parliament. There were also disagreements within the ruling Conservative party – and even within the Cabinet – over key policy issues, with normal Cabinet discipline breaking down.

Slim parliamentary majority has limited the government's ability to pass legislation

Before the 2017 election, Mrs May enjoyed a majority of 16 in the House of Commons. The snap election was intended to strengthen her position and provide a mandate to push through her version of Brexit. But it had the opposite effect. Mrs May returned to Downing Street in June 2017 at the helm of a minority government – having won only 317 seats in the House of Commons, four seats short of a working majority.

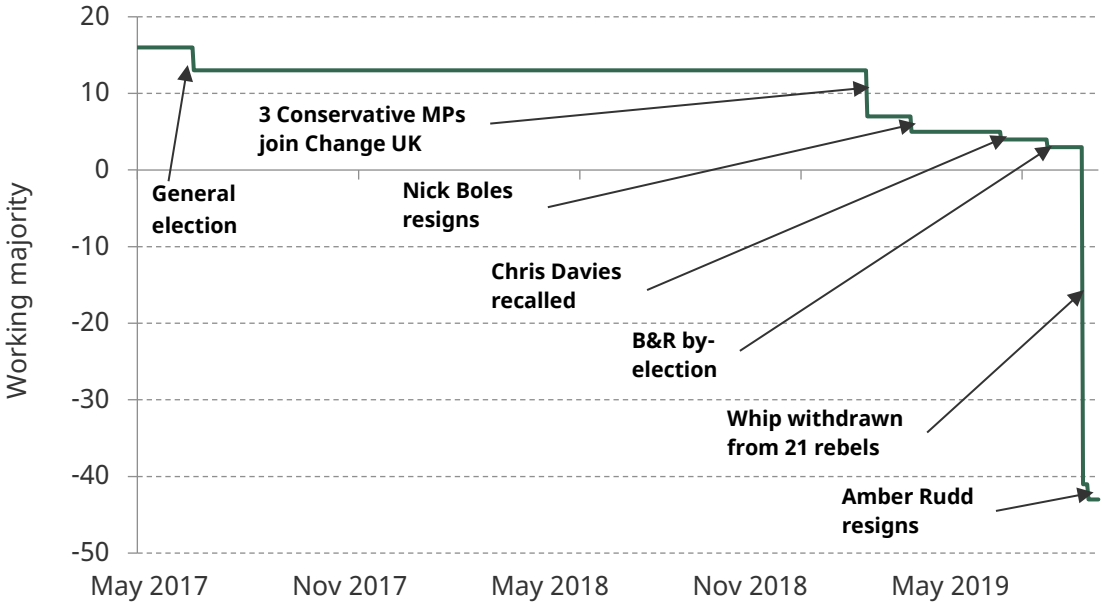
She was forced to enter into an agreement with the DUP in an attempt to ensure the government had the numbers (a working majority of 13 in June 2017) to pass Brexit legislation, finance bills, legislation to allow the government to spend money, and legislation to deliver priorities set out in the Queen's Speech. But the agreement did not guarantee DUP support on other issues.

As Figure 7.1 shows, the parliamentary arithmetic has become even more challenging for the government since then. During the first eight months of 2019, four Conservative MPs resigned the Tory whip and one seat was lost to the Liberal Democrats in the Brecon and Radnorshire by-election. As a result, Mr Johnson had an effective working majority of just three at the beginning of August.[5] But in the first week in September, the government lost its working majority: Phillip Lee defected to the Liberal Democrats, Mr Johnson decided to remove the whip from 21 Conservative MPs who rebelled against the government to support plans to prevent a no-deal Brexit on 31 October (precipitating another defection

[4] https://www.ifs.org.uk/uploads/Presentations/Carl%20Emmerson%2C%202017%20General%20Election%2C%20manifesto%20analysis.pdf.

[5] This figure is calculated on the basis that Charlie Elphicke – who has been suspended from the Conservative party – would continue to vote with the government.

Figure 7.1. The government's working majority since May 2017



Note: Suspensions with pending permanent decisions are not shown. Where by-elections have been won by the incumbent party, the temporary change in majority has not been shown. Phillip Lee joined the Liberal Democrats at the same time as the whip was withdrawn from the 21 rebel MPs. 'B&R' is Brecon and Radnorshire.

Source: Institute for Government analysis of state of the parties. Based on a chart by FT Research and Cale Tilford.

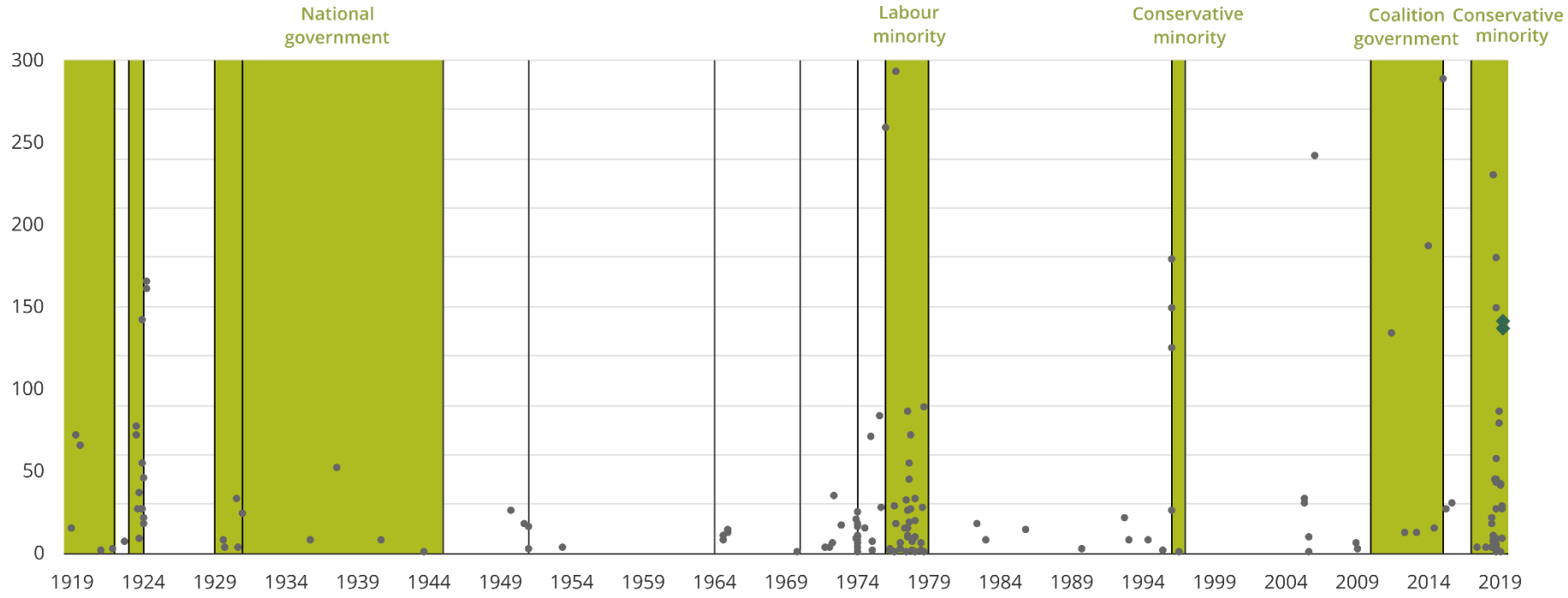
to the Liberal Democrats from Sam Gyimah), and Jo Johnson and Amber Rudd resigned from the Cabinet (and the latter also from the parliamentary Conservative party).

Like minority governments before it, over the past two years the May government faced opposition in many policy areas and suffered numerous heavy defeats in parliament. As Figure 7.2 shows, these included two of the largest defeats on record. The usual challenges of minority government were exacerbated by Brexit, which has cut across party lines, contributing to a breakdown in party discipline. Since the 2017 election, the government has lost eight votes by a margin of more than 50 (all of which have happened since the start of 2019); this compares with four defeats on such a scale during the 20 years between the 1997 and 2017 elections. Mrs May's biggest defeat came in January 2019 when the first so-called meaningful vote on her Brexit deal was rejected by a majority of 230 – the largest defeat on a fully whipped vote in modern times.[6]

The government has suffered defeats not only on Brexit bills but also on non-Brexit bills, which have been targeted to try to force the government's hand on Brexit. For example, in November 2018, a show of force by pro-Brexit Conservative MPs forced the Home Secretary to amend the Offensive Weapons Bill. In January 2019, the Finance Bill was

[6] The defeats shown in Figure 7.2 that are larger than the one experienced by Mrs May in January 2019 were not fully whipped votes. Government losses on fully whipped votes are more politically significant. Fully whipped votes are votes when all members of the governing party (or parties) are instructed to vote with the government. On other occasions, only ministers are instructed to vote with the government, allowing other MPs to vote against the government if they choose. As parties' instructions on how to vote are often not public, it is not always possible to say how a vote has been whipped.

Figure 7.2. Government defeats in the House of Commons (minority governments highlighted)



Note: Includes defeats up to 9 September 2019. Motions to call an early general election under the Fixed-Term Parliaments Act (FTPA) are highlighted with green diamonds, as these constitute government 'losses' under the FTPA (since fewer than two-thirds of MPs voted for the motion), even though a majority of MPs who voted supported the government motion.

Source: Institute for Government analysis of D. Butler and G. Butler, *British Political Facts*, 2011, and Wikipedia. Excludes Opposition Day motions except 4 December 2018. Note that some non-whipped or partially whipped votes may be included in these data.

successfully amended to make the use of certain (relatively minor) provisions for post-Brexit tax changes conditional on parliament approving a Brexit deal, the government requesting an extension to the Article 50 period or MPs expressly approving the UK leaving the EU without a deal. The Northern Ireland (Executive Formation) Bill was also amended in July 2019 in an attempt to prevent the government proroguing parliament to force through a no-deal Brexit.

Parliamentarians also tried – albeit unsuccessfully – to amend the government's spending plans in July 2019. Margaret Beckett and Dominic Grieve attempted to amend Estimates motions in July 2019 to make some government spending in 2019–20 contingent on having secured a deal with the EU – but failed when their proposed amendments were not chosen for debate by the Speaker.

Even when the government was successful in getting legislation through, it was often by a very slim margin. During the 2017–19 parliamentary session so far, 19 votes have passed the Commons with a majority of no more than 1% (and a further 13 by a majority of between 1% and 2%). Taken together, these equate to 7.2% of all the votes held during the 2017–19 parliamentary session.[7] The previous highest number of votes won with such a small margin in any previous parliament over the past decade was five (or 2.0% of votes) during the 2008–09 parliamentary session.

But, if anything, this analysis of opposition to votes put before parliament understates the parliamentary barriers that Mrs May's government faced. This is because she avoided introducing non-essential legislation that she might have struggled to get passed (as previous minority governments may also have done).

Although quite a lot of non-Brexit legislation has been introduced since the 2017 general election, it has been lower-key than would normally be expected from a new government. The 2017 Queen's Speech failed to mention some the Tories' key manifesto pledges, such as the expansion of grammar schools. Ministers faced strong internal scrutiny of their legislative proposals, and were encouraged to use non-legislative means to implement their policies wherever possible.[8]

One example of legislation that fell victim to Mrs May's loss of majority is the Prison and Courts Bill, which set out plans for prison reform and changes to prisoner rehabilitation. These reforms were initially flagged as a priority in the 2016 Queen's Speech and the bill was introduced to the House of Commons in February 2017. But it was dropped because of the 2017 election and never reintroduced, despite a commitment in the 2017 election manifesto to 'create a new legal framework for prisons'.

During the parliamentary session since Mrs May lost the Conservatives' parliamentary majority, 51 government bills have received Royal Assent, or an average of one bill every seven sitting days. This is a bit below the average (nearly one every six sitting days) during the parliamentary sessions from May 2010 to June 2017.

However, the nature of the legislation passed during the current session has differed. Six of the bills achieving Royal Assent related to leaving the EU. Beyond that, most of the bills

[7] These figures include votes held up to 24 September 2019.

[8] https://www.gov.uk/government/speeches/leader-of-the-commons-addresses-institute-for-government.

have either been routine (such as money bills), Northern-Ireland-specific or focused on narrow – often uncontentious – policy areas. There have been eight routine money bills that the government had to pass (that is, Finance Acts and Supply and Appropriation Acts). There have been nine Northern-Ireland-specific pieces of legislation, which were required in the absence of an executive in Northern Ireland. The remaining 28 bills were mostly focused on specific policy areas – such as data protection, smart meters and the protection of wild animals in circuses – rather than on wholesale policy reform.

Ministerial turnover and breakdown of Cabinet discipline also hampered progress

Mrs May's domestic policy agenda faced challenges not just from MPs in parliament but also from members of her own Cabinet. Throughout her time as prime minister, Mrs May attempted to retain a balance between former Remain and Leave supporters in top jobs in her Cabinet. This created problems in reaching decisions on Brexit and – after Mrs May lost her majority at the 2017 election – these splits spilled over to create problems for the domestic policy agenda.

Mrs May headed off some rebellions by limiting her policy ambitions, as described above. But there were also instances when she was forced to change course following objections from ministers. For example, the government was forced to accelerate the introduction of limits on fixed-odds betting terminals after sports minister Tracey Crouch resigned in November 2018, which caused political embarrassment for the government.[9]

Cabinet disunity also made it difficult to make progress on building HS2 – the high-speed rail link from London to the Midlands and the North – and expanding airport capacity at Heathrow. Mrs May's government was, in theory, committed to delivering both projects[10] – but these projects exposed the problems that Brexit created for collective decision-making in Cabinet. Mrs May was forced to suspend collective Cabinet responsibility – that is, the convention that government decisions are supported by all members of the Cabinet and that disagreements between ministers are kept behind closed doors – in October 2016 to allow a free vote on the Heathrow proposals. This was done to avoid Boris Johnson – and fellow Cabinet minister, Justine Greening – resigning from Mrs May's then only recently formed Cabinet. When she finally held a whipped vote on Heathrow expansion – in June 2018, which passed with a large majority – international trade minister Greg Hands resigned, and Mr Johnson missed the vote because he was travelling to Afghanistan. Despite spending having been approved for the first phase of HS2 (from London to the Midlands), the start of engineering work on the line and tunnels has been delayed.

Discontent over the direction of government policy on Brexit also led to unusually rapid turnover of ministers, which deprived some areas of the domestic agenda of the ministerial attention, continuity and drive needed to push them forward. As Figure 7.3

[9] https://www.theguardian.com/uk-news/2018/nov/01/sports-minister-resigns-over-chancellors-delay-to-gambling-curb.

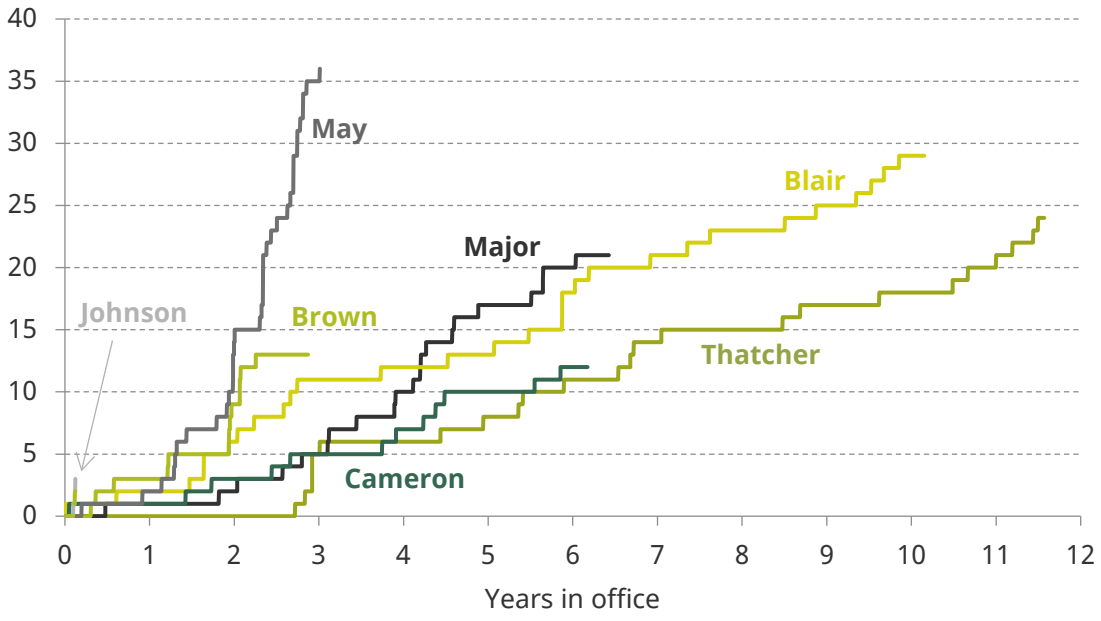
[10] Parliament voted to approve a national policy statement designating Heathrow the preferred option for airport expansion on 25 June 2018: https://www.gov.uk/government/collections/heathrow-airport-expansion#history. The hybrid bill for phase 1 of HS2 (which 'enables' but does not commit the government to build the line between London and Birmingham) was backed by 399 votes in favour to 42 against and received Royal Assent on 23 February 2017: https://www.gov.uk/government/collections/high-speed-rail-london-west-midlands-bill.

shows, a far greater number of ministers resigned under May's premiership than over comparable periods under her predecessors.

As Figure 7.4 shows, departments such as the Department for Digital, Culture, Media and Sport (DCMS), the Department for Work and Pensions (DWP) and the Ministry of Justice (MoJ) have suffered particularly acutely from ministerial churn since 2010.

For example, the MoJ has so far had seven different secretaries of state; it has also had seven different prisons ministers since 2010. Over that period, the coalition and then Conservative governments have vacillated over prison and sentencing reform and efforts to cut reoffending. Ken Clarke, then justice minister, agreed to significant cuts to his department's budget in 2010 alongside plans to reform sentencing guidelines, which would have helped reduce the prison population. But plans to introduce sentencing 'discounts' for early guilty pleas were scrapped in 2011 and other legislation since then – such as the Criminal Justice and Courts Act 2015 – has served to increase (rather than reduce) the use and length of custodial sentences. As a result, there has been little change in the number of people in prison since 2012. The House of Commons Justice Select Committee noted in April 2019 that frequent ministerial changes 'hindered the sustained implementation of an overarching strategic approach to prisons policy'.[11]

Figure 7.3. Number of ministerial resignations outside reshuffles, 4 May 1979 to 24 September 2019

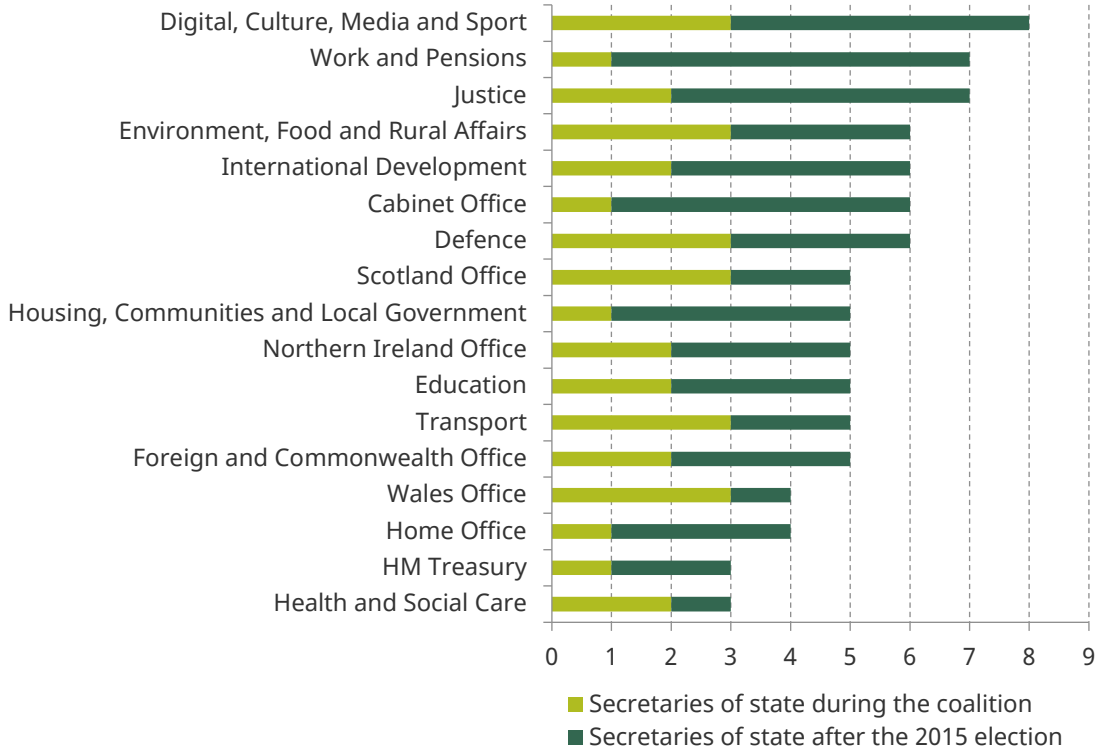


Note: Excludes those resignations announced before a reshuffle but effectively taking place during it – e.g. Hurd (1995), Smith/Blears/Hughes/Watson (2009), Dunlop (2017) – and sackings.

Source: Institute for Government analysis of sources including: D. Butler and G. Butler, *British Political Facts*, 2011; House of Commons Library; A. King and N. Allen, 'Off with their heads: British prime ministers and the power to dismiss', 2010, *British Journal of Political Science*, 40, 249–78, https://doi.org/10.1017/S000712340999007X; and IfG ministerial database.

[11] https://publications.parliament.uk/pa/cm201719/cmselect/cmjust/483/483.pdf.

Figure 7.4. Number of secretaries of state since 2010



Note: Secretaries of state who returned to the same post after the 2015 election are counted only in the number of 'secretaries of state during the coalition'.

Source: Institute for Government ministerial database.

DWP has also had very rapid turnover of ministers over the past three years. Having had a single secretary of state (Iain Duncan Smith) from 2010 to 2016, the department has since had six secretaries of state in three-and-a-half years. This has come at a time when the department has been attempting to implement major and controversial changes to the working-age benefits system, which have taken much longer than originally envisaged to put in place, and dealing with the issues arising from this.

Ministers', civil servants' and parliamentary time has been consumed by Brexit

As well as creating conflict within the government and in parliament, Brexit has also hindered progress on other policy areas because it has consumed time and energy that civil servants, ministers and MPs would otherwise have been able to devote to other issues.

Of the 2,640 hours that the House of Commons main chamber sat in the 2017–19 session (up to the beginning of its summer recess in July 2019), 485 hours (equivalent to roughly 61 sitting days) were spent debating Brexit-related issues. Although this means that only a fifth of MPs' time in the main chamber has been spent on Brexit, this is still a considerable amount of time to spend on one subject and the proportion will have risen in September 2019. In addition, MPs have spent much parliamentary time outside the main chamber debating Brexit – for example, MPs spent 135 hours discussing Brexit legislation in Public

Bill Committees over the same period, and almost every Commons Select Committee has conducted inquiries related to Brexit.

Despite this, parliamentary time itself does not seem to have been the major constraint on domestic policy progress. Mrs May's government tried as far as possible to limit parliament's engagement in Brexit[12] and the government deliberately padded out the parliamentary agenda from the end of April to July 2019 with low-priority issues. This included 8 hours and 33 minutes of debate in the House of Commons on the treatment of wild circus animals – legislation that affects only 19 animals in the UK[13] – and nine Opposition Day debates, following a four-month hiatus in which the government failed to schedule any Opposition Days.

But balancing the demands of Brexit with progress on the domestic policy agenda has been a more serious challenge for ministers and civil servants, particularly in some departments. Figures 7.5–7.7 provide various indications of the demands that Brexit has placed on different departments. Figure 7.5 examines the number of Brexit-related workstreams underway in each department – totalling over 300, according to the National Audit Office.[14] (This figure excludes the Department for Exiting the EU, DExEU, since all of its activity is focused on leaving the EU.) Figure 7.6 shows how much money has been added to each department's budget to pay for Brexit preparations, while Figure 7.7 shows how many pieces of Brexit-related primary legislation and Brexit-related statutory instruments[15] each department laid before parliament during the 2017–19 parliamentary session (up to 24 September 2019). Figure 7.8 combines all of these metrics, summarising how departments have been affected: on each of the metrics, the departments that are most affected (for example, with the most workstreams or receiving the most additional funding) are ranked first.

Taken together, these figures suggest that preparing for Brexit has imposed particular burdens on the Department for Business, Energy and Industrial Strategy (BEIS), the Department for the Environment, Food and Rural Affairs (Defra) and the Department for Transport (DfT). For example, Defra has had to set up a new environmental governance body, while the DfT has had to put in place international air service agreements.

Other departments rank highly on only some of these metrics. For example, while the Home Office has only a relatively small number of workstreams and has not introduced much Brexit-related legislation or statutory instruments, it has been given more money than any other department to help put in place a new immigration system to deal with EU citizens, a future immigration regime and new security systems.

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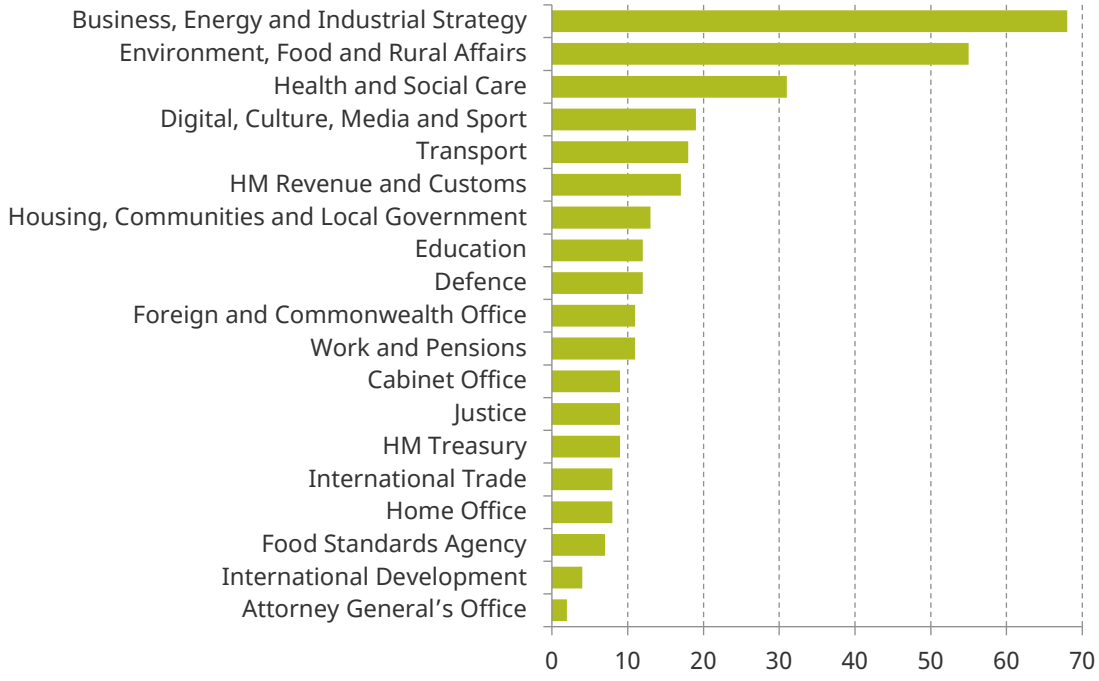
12 For further details, see https://www.instituteforgovernment.org.uk/publications/brexit-effect.

13 David Rutley (Parliamentary Under Secretary of State) told the House of Commons that there were only 19 wild animals left in two travelling circuses that would be affected by the ban (http://bit.ly/2I6YZT0). Department for the Environment, Food and Rural Affairs (Defra) figures show that in 2018 two licences were applied for, covering six reindeer, four zebras, three camels, three racoons, a fox, a blue and gold macaw and a zebu. (https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN05992#fullreport).

14 Figure 7.5 includes all central government departments (apart from DExEU) and agencies that have explicit Brexit workstreams.

15 To prepare the UK statute book for Brexit, the government has had to pass a large amount of secondary legislation. This has predominantly been in the form of statutory instruments, which are usually used to make technical legal changes. Many of these have been passed using powers granted to government in the European Union (Withdrawal) Act 2018.

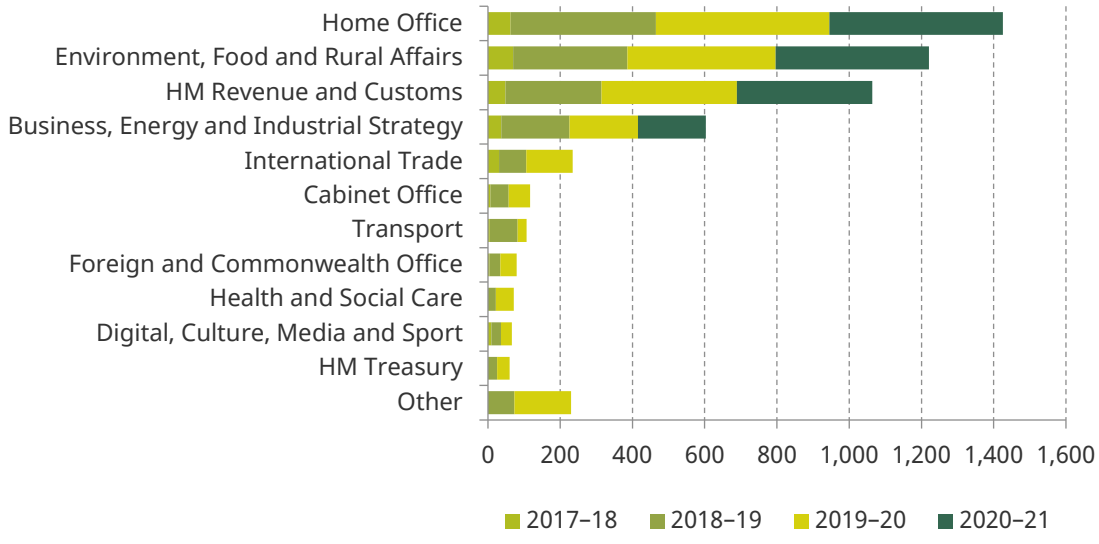
Figure 7.5. Number of Brexit-related workstreams in each government department



Note: Estimates for all departments are from November 2017 except for Department for International Trade (January 2018), Foreign and Commonwealth Office (April 2018), Department for Transport (July 2018) and Department for the Environment, Food and Rural Affairs (September 2018).

Source: Institute for Government analysis of National Audit Office reports.

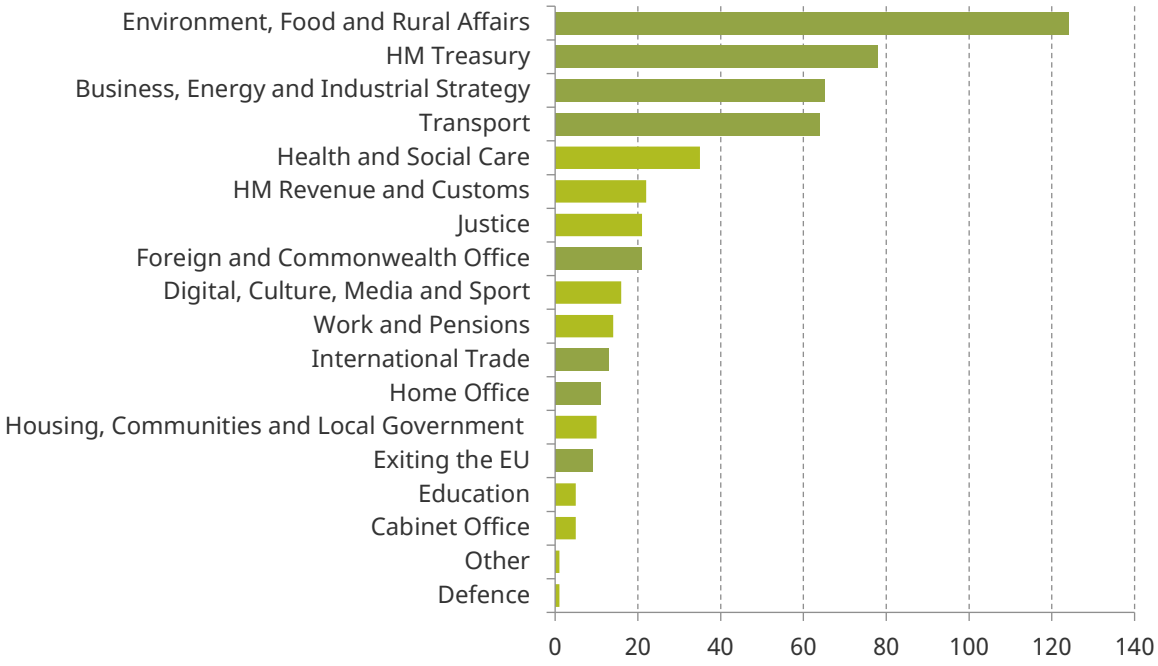
Figure 7.6. Brexit funding allocated to departments (2019–20 prices)



Note: Some of the additional Brexit funding allocations announced in August 2019 are not included as the government has yet to make clear to which departments additional funding will be allocated.

Source: IfG analysis of: Chief Secretary to the Treasury, Written Statements HCWS1205 and HCWS540, 18 December 2018 and 13 March 2018; HM Treasury, 'Central government supply estimates 2017–18'; HM Treasury, 'Supplementary estimates', 7 February 2018; and HM Treasury, 'Spending Round 2019'.

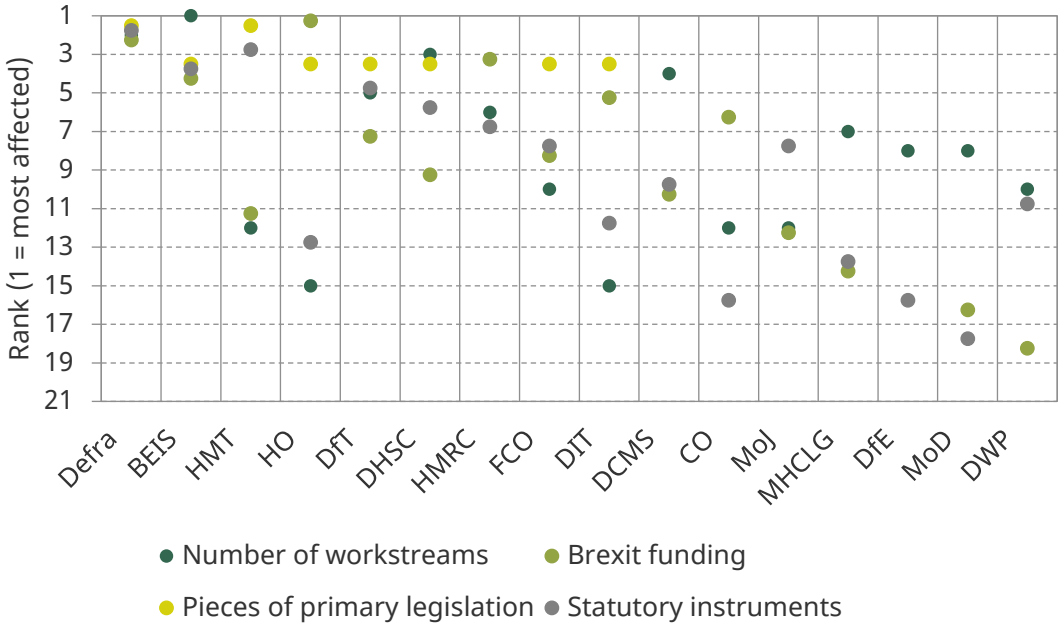
Figure 7.7. Number of Brexit-related statutory instruments introduced to parliament, by department



Note: Bars show the number of statutory instruments (excluding proposed negative statutory instruments) laid by each department between 21 June 2017 and 13 June 2019. Bars highlighted in darker green indicate departments that also introduced primary legislation during the 2017–19 parliamentary session (up to 24 September 2019).

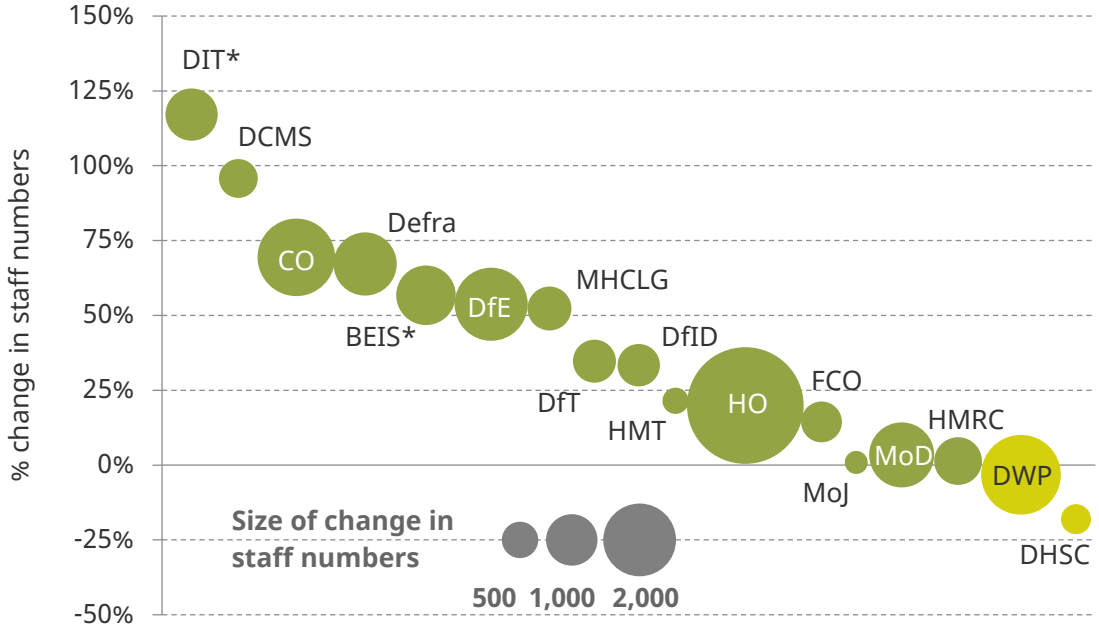
Source: IfG analysis of Parliament.UK and data provided by the House of Commons Journal Office.

Figure 7.8. Departmental rankings on different measures of Brexit affectedness



Note and source: As for Figures 7.5–7.7. Note that rankings are vertically offset ('jittered') to ensure all points are visible. DExEU is excluded from this figure as it cannot be ranked on some measures (i.e. Brexit-related workstreams and funding) because its entire portfolio is Brexit-related.

Figure 7.9. Change in staff numbers (2016 Q2 to 2019 Q2), by department



* Change for DIT and BEIS are since 2016 Q4 (the first quarter of available data) rather than 2016 Q2.

Note: Departments that have increased in size are shown in green; those that have shrunk are shown in yellow. DExEU is not shown because it is not possible to show a percentage change for the department since the EU referendum (as the department is completely new). By now the department has 600 full-time-equivalent staff. Figures for MoJ exclude HM Prison Service.

Source: Institute for Government analysis of table 9 of ONS, 'Public sector employment'.

The size of the civil service has expanded since the Brexit referendum to help accommodate these various additional demands. But, despite this, Brexit has still hampered the day-to-day work of government. The total number of civil servants rose by just over 29,000 between June 2016 and June 2019[16] – this reversed some of the steady decline in numbers that had occurred since 2010. Among the departments that have had the largest increase in headcount are those departments most affected by Brexit – such as the Department for International Trade (DIT) – as Figure 7.9 shows.

John Manzoni – chief executive of the civil service – estimated that in total 16,000 civil servants were working on Brexit in late February 2019, which is fewer than the 29,000 overall increase in civil servant numbers since the referendum.[17] However, only scattered evidence is available on the demands on individual departments. Treasury permanent secretary Sir Tom Scholar told the Treasury Select Committee in October 2018 that around 400 full-time-equivalent staff in his department (out of the Treasury's full complement of

[16] Table 9 of Office for National Statistics, 'Public sector employment'. This figure excludes the Scottish and Welsh governments. It is, however, likely to overstate the number of additional civil servants available to work on Brexit demands, since it includes an increase in the HM Prison and Probation Service headcount of 6,120. HMPPS has recruited a large number of prison officers in recent years to tackle rising levels of violence and deteriorating standards in prisons.

[17] https://www.civilserviceworld.com/articles/news/over-16000-civil-servants-now-working-brexit-sedwill-and-manzoni-reveal.

1,300 staff at that point) were working on Brexit.[18] This suggests the demands within the Treasury for staff to work on Brexit have not been fully compensated for by the 260 additional staff who have been recruited since the referendum. In March 2019, it was reported that more than two-thirds of Defra's staff were working on delivering Brexit;[19] for comparison, Defra's staff numbers have increased by 58% since the referendum.

To prepare for no deal in March 2019, large numbers of staff were temporarily redeployed from their usual roles. Again, no comprehensive data are available on how all departments were affected. However, some evidence was revealed through freedom of information requests that Ben Chu of Newsnight submitted to each government department.[20]

BEIS reported that it had temporarily redeployed 532 civil servants internally (out of a total of 4,480) to work on 'priority EU exit work'. The Department for Education (DfE) seconded 209 members of staff during the first three months of 2019 to help other departments prepare for EU exit, with 140 having returned to the department by mid June.[21]

It is difficult to pinpoint all the ways in which Brexit has distracted attention from other policy priorities: ministers have not set out which policies have been downgraded, though departments have been told to reprioritise their work to accommodate the demands of Brexit. However, in addition to the general paucity of progress on domestic policy over the past three years, there are some documented cases of Brexit directly sapping resource and attention from other areas.

The former chancellor Philip Hammond had intended to carry out a spending review over the summer of 2019, to agree spending plans for the next three years.[22] But this was derailed by Mrs May's failure to secure parliamentary support for her Brexit deal and, in September 2019, Mr Johnson's government announced just a one-year settlement to cover spending in 2020–21.

Draft legislation to extend indemnity for dispensing errors to pharmacists in hospitals and prisons was delayed because civil service lawyers were instead focused on work related to Brexit.[23] A similar problem stood in the way of progress on plans for stricter online regulation. Plans to shield former soldiers from prosecution for alleged offences during the Troubles in Northern Ireland were also reported to have been held up by a lack of ministerial engagement.[24]

On the face of it, Defra appears to have been very active despite the demands of Brexit – launching consultations on a range of new policy proposals, including a plastic packaging tax and deposit return scheme for plastic bottles, and launching an independent review of

[18] http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/treasury-committee/the-work-of-hm-treasury/oral/91987.pdf, Q36.

[19] https://www.theguardian.com/politics/2019/mar/30/defra-staff-brexit-related-roles.

[20] https://www.bbc.co.uk/news/uk-politics-48883817.

[21] There are 6,240 staff in total in DfE. However, this figure includes teachers and other staff in academy schools.

[22] https://www.gov.uk/government/speeches/spring-statement-2019-philip-hammonds-speech.

[23] https://www.pharmaceutical-journal.com/news-and-analysis/news/appg-chair-urges-government-not-to-let-brexit-delay-dispensing-errors-legislation/20206261.article?firstPass=false.

[24] https://www.theguardian.com/politics/2019/mar/31/anger-whitehall-brexit-strife-delays-key-policies-legislation.

England's national parks and Areas of Outstanding Natural Beauty. However, many of these policy proposals have yet to make any real progress.

Summary

Mrs May made more limited progress on domestic policy than would usually have been expected of a new prime minister. Departments' ability to focus on developing domestic policies was hampered by the demands of preparing for Brexit, even though a large number of extra civil servants have been hired since 2016. The pressures on some departments (such as BEIS, Defra, the DfT and Home Office) have been particularly acute. Progress has also been hampered by rapid ministerial turnover – partly, though not solely, as a result of disagreements over Brexit – which has deprived various policy areas of the ministerial drive and attention needed to make progress. The breakdown of Cabinet discipline also made it harder to push ahead with controversial reforms as disagreements among ministers were aired in public, rather than being resolved behind closed doors. The challenges facing Mrs May were intensified after she lost her parliamentary majority in 2017, which made her more wary of introducing legislation to parliament and meant more time had to be devoted to shepherding bills through, as MPs targeted both Brexit and non-Brexit legislation to express their discontent over the government's Brexit strategy.

7.3 What now stands in the way of domestic policy priorities?

The outlook for UK domestic policy remains uncertain given the ongoing demands of Brexit and the loss of Mr Johnson's working majority in parliament, which has substantially raised the likelihood of a general election within the next few months. Mr Johnson has set out a range of ambitions – keen that his premiership should not be defined solely by Brexit. This year's party conference season has also made clear that other parties have domestic policy ambitions as well.

Without a majority in parliament, Mr Johnson will find it easier to make progress in areas where parliamentary approval is not needed

Even with the support of the DUP, Mr Johnson is more than 40 seats short of a working majority in parliament. He lost all six of the votes held in the House of Commons after parliament returned in September 2019 before it was then (unlawfully) prorogued, as a majority of MPs demonstrated they would be willing to use all avenues open to them to try to prevent the government taking the UK out of the EU without a deal. Mr Johnson subsequently lost a seventh vote at the end of September on plans for a short parliamentary recess to be held during the Conservative party conference, after parliament resumed following the Supreme Court's judgement on the unlawful prorogation.

Mr Johnson's decision to commit to leaving the EU at the end of October 2019 'do or die' and his decision then to withdraw the whip from Conservative MPs who sought to frustrate his intentions have left the current government in an unusually debilitating position. He is well short of a majority in the Commons but so far unable to call an election, having failed to get the consent of the requisite two-thirds of MPs under the terms of the Fixed-Term Parliaments Act 2011. Mr Johnson would have faced a major test in mid October – when he would have had to present a Queen's Speech when parliament reconvened – had the Supreme Court not ruled his prorogation unlawful.

Though Mr Johnson will now avoid facing this immediate test of the government's ability to command the confidence of parliament, without a parliamentary majority, the government still faces major barriers to changing policy. Its best chance is likely to be in those areas where decision-making powers lie with the executive.

In this section, we outline some areas where Mr Johnson could make policy without relying on parliament. First, however, we outline policy areas – such as a Budget – where primary or secondary legislation is required.

Some policy changes require primary legislation

The government has little scope to change most taxes without seeking parliament's approval, with some notable exceptions as discussed below. If Chancellor Sajid Javid wanted to make changes to most bits of the tax system – including of the sort described in Chapter 8 – he would need to present these in the expected autumn Budget. Without changes to increase taxation, the additional spending announced in the September 2019 Spending Round (described further below) is due to be funded by higher borrowing. Borrowing would be even further increased if an eventual Budget introduced net tax cuts (some of which Mr Johnson has already suggested), rather than rises.

There are broadly three stages to parliament's approval of the Budget:

1. Immediately following the exchanges on the Budget Statement in the House of Commons, the chancellor moves a motion to give immediate effect to any tax changes or new tax measures that the government wants to come into effect on the day of the Budget. These are typically changes in the rates of duty on beer, spirits, tobacco and road fuel, or changes to stamp duty land tax, where advance notice of a change in tax rates might lead people to change the timing of their purchases to avoid the higher rate of tax. If that motion is agreed to, these changes have provisional (and immediate) legal effect but they must be confirmed by resolution of the House within 10 sitting days.

2. The chancellor then moves the first of several motions that outline specific tax measures and form the basis of the Finance Bill. These motions are debated together over four sitting days. They must be agreed within 10 sitting days of the Budget Statement to have legal effect. When agreed to by the House of Commons, they form the Budget Resolutions.[25]

3. Tax measures are given full legal effect in a Finance Bill, which is introduced as soon as the Budget Resolutions are agreed to. It must receive its second reading in the House of Commons within 30 days of the Budget Resolutions being passed and must become law within seven months.

Even if the government chooses to make no changes to tax policy whatsoever, Mr Johnson cannot avoid putting some form of a Finance Bill to parliament before the end of April 2020. This is because two existing taxes – income tax and corporation tax – are technically

[25] Tax changes having immediate legal effect, or which are intended to have legal effect before the Finance Bill to enact them is passed, must be debated and agreed within 10 days of the Budget Statement. But the government could in theory choose to delay debate on measures that are due to take effect at a later date. Budget Resolutions can be moved at any time but it would be unusual for a chancellor to separate them from the Budget Statement.

'temporary' and the government's right to collect them must be renewed by parliament each year. Income tax provides around a quarter of government revenues, while corporation tax provides around 7% of revenues.

Defeat on all or part of the Budget would not automatically bring down a government. However, it could still be enormously damaging for the government, particularly if it lost a vote on a tax that was of major significance to its financial plans.

The government is also likely to face scrutiny on economic and fiscal policy as and when the Office for Budget Responsibility (OBR) presents updated economic and fiscal forecasts. Under the terms of the Budget Responsibility and National Audit Act 2011, the OBR is required to publish two forecasts every financial year. So far this year, the OBR has not published a forecast – meaning that to comply with this law, it would have to publish two between now and the end of March, even if these do not accompany a fiscal event.

Some changes to the benefit system also require primary legislation. These include fundamental reforms to the benefit system but also some changes to existing provisions set out in primary legislation – such as if the government wanted to uprate various existing benefits by something other than growth in prices.[26] Changes to the benefit system are usually announced during a Budget or fiscal statement but are legislated for separately, usually through legislation introduced by the DWP.

Primary legislation is also required (usually biannually) to approve government spending as a whole.[27] However, the rules governing parliament's authorisation of spending differ from those on tax: the time frame for securing parliament's approval of the government's spending plans is more flexible, and MPs have more limited opportunities to make amendments to spending proposals. This was evident in the spending round announced on 4 September. The government was able to set out its plans for spending on public services in 2020–21 (and for some services, such as health and schools, beyond that) without needing to put the plans quickly to a parliamentary vote. This allowed Mr Javid to set out ambitious objectives and commitments for public services without risking rapid defeat in the Commons.

But parliamentary approval will eventually be needed for these spending plans. Parliamentary approval for government spending each year is provided in three stages:

1. Before the end of each financial year (i.e. the end of March) the government must pass a Supply and Appropriation (Anticipation and Adjustment) Bill, which authorises any additional spending required in the current financial year and/or authorises changes in the purpose for which the money is sought by departments. This Bill also gives approval to the government to spend money during the first few months of the next financial year (known as 'votes on account' – usually authorising the government to spend 45% of the previous financial year's total).

[26] http://researchbriefings.files.parliament.uk/documents/RP13-1/RP13-1.pdf.

[27] Some government spending can also be authorised by parliament through statute without the need for further, annual, parliamentary authority. This includes, for example, spending on judges' salaries and some election costs, which is covered by the 'Consolidated Fund Standing Services'. This spending is listed as 'non-voted' in the Estimates.

2. The government then sets out its formal spending plans by department for the current financial year in the Main Estimates. The House of Commons rules that enable Estimates to be approved as a package require these to be debated no later than 5 August, although these debates usually happen in late June or early July. The planned expenditure from the Main Estimates must then be legally authorised by parliament in a Supply and Appropriation (Main Estimates) Bill, introduced immediately after the Estimates have been approved. Under Commons rules, the Bill is put to the House for approval the following day; such Bills typically receive Royal Assent by mid July.

3. If the government ultimately wants to spend more than the amount set out in the Main Estimates, this must be approved in the Supplementary Estimates (and given legal effect in a Supply and Appropriation (Anticipation and Adjustment) Bill) before the end of the financial year. If the government overspends before it has been able to request additional spending authority, it must seek retrospective approval through 'excess votes'.

MPs can only make limited amendments[28] to the motions to approve the Main and Supplementary Estimates – and those can only be used to reduce spending – and cannot currently amend the Supply Bills that subsequently authorise the expenditure. Beyond that, MPs only have the extreme option of voting against the Estimates motions as a whole or trying to vote down the entire Supply Bill at second reading[29] – in other words, preventing almost all government spending. In practice, rejection at either stage would not necessarily be fatal to the government but would require it to pass fresh Estimates and a new Bill before the money it was already authorised to spend ran out.

Some policy changes can be made through secondary legislation

As Mrs May demonstrated during her time in office, the government has scope to make some policy changes through secondary legislation. Such legislation allows the executive to make technical changes to the law and flesh out the details of Acts of Parliament. Most secondary legislation takes the form of statutory instruments, which are usually subject to one of two types of parliamentary procedure, both involving less parliamentary scrutiny than passing an Act of Parliament:

- **The affirmative procedure** requires statutory instruments to be actively approved by both Houses of Parliament (the exception being statutory instruments related to

[28] To authorise most government spending, the House of Commons must approve both Supply motions and the subsequent Supply and Appropriation Bill. Only those Supply motions covering individual departmental Estimates that are chosen for debate (on the advice of the Backbench Business Committee and the Liaison Committee) can be amended. Even then, the scope of amendments is limited, and MPs may only propose a reduction – not an increase – in proposed spending. 'Roll-up' Supply motions, which provide approval for departmental Estimates that are not chosen for debate, cannot be amended.

[29] MPs' opportunities to vote down the Supply Bill are far more limited than would be the case for most other primary legislation. As the Commons has already approved the Supply resolutions during debate on the estimates, the Supply Bill is not subject to debate or amendment at any stage: there is no committee stage and no report stage and under Commons rules the questions in second and third reading of the Bill are put to the House 'forthwith' (i.e. without debate). Although parliamentary norms have been tested during Brexit, the underlying financial machinery has not been subject to serious challenge: for example, as described above, Margaret Beckett and Dominic Grieve's amendment to make the passage of Estimates conditional on the avoidance of 'no deal' was not selected by the Speaker. Supply Bills have passed without challenge, although it is technically possible for MPs to force votes on them.

taxation, which only need to be approved by the Commons, due to its privilege in financial matters).

- Under **the negative procedure**, a piece of secondary legislation usually becomes law so long as neither House objects within a given time period (usually 40 days).

One major tax change that the government can make through secondary legislation is to change the rate of VAT for up to a year. The Value Added Tax Act 1994 allows the government to reduce the rate of VAT temporarily through a negative procedure and to increase it temporarily through an affirmative procedure.[30] The former happened in 2008 in response to the financial crisis.

Some benefit changes can also be made through secondary legislation. For example, Section 96A of the Welfare Reform Act 2012 allows the Secretary of State for Work and Pensions, following a review, to vary the benefit cap by affirmative statutory instrument. Some other welfare changes – including some changes to the personal independence payment (PIP) system under Part 4 of the Welfare Reform Act 2012 – can be made by negative statutory instrument. However, past experience suggests that an attempt to make major changes to benefits through secondary legislation could encounter resistance in the House of Lords. A constitutional row – over the House of Commons's financial privilege – erupted in 2015 when Chancellor George Osborne attempted to make large cuts to tax credits through secondary legislation, which the House of Lords blocked.

The government also has many other existing powers to change policy through secondary legislation. For instance, the government can make significant changes to immigration policy using Immigration Rules under the Immigration Act 1971, and governments have previously introduced many criminal offences using secondary legislation.[31]

In other areas, the executive can make announcements and changes without parliamentary approval

Mr Johnson's government could also continue to pursue objectives that do not require either primary or secondary legislation. For example, changes to the operation, staffing and delivery of public services can typically be made without legislation – provided the changes do not need to be backed by extra spending.

The prime minister may even be able to deliver on his ambitious commitment to 'fix the crisis in social care once and for all' if he were willing to put his weight behind reforms that were put forward by Sir Andrew Dilnot as chair of the Commission on Funding of Care and Support and were initially backed by former prime minister David Cameron and chancellor George Osborne.

The Care Act 2014 put in place the legislation necessary to replace the current system for funding social care with one in which individuals' lifetime contributions to their care costs would be capped and the government would pick up the remaining cost, as

[30] Increases in the rate of VAT under the Value Added Tax Act 1994 are made using the 'made affirmative' procedure. Statutory instruments made using this procedure can come into effect immediately but need to be retrospectively approved within a given period to continue to have effect. See http://researchbriefings.files.parliament.uk/documents/SN00701/SN00701.pdf.

[31] J. Chalmers and F. Leverick, 'Criminal law in the shadows: creating offences in delegated legislation', *Legal Studies*, 2018, 38, 221–41.

recommended by the Dilnot Commission. But Mr Osborne delayed full implementation of these plans after the 2015 election.

The Dilnot proposals received broad support when they were debated in parliament in 2014,[32] but that is now some years ago and there is no guarantee that support among parliamentarians – not to mention the broader public – exists today. However, if Mr Johnson were to put his weight behind these changes, it would overcome one barrier that has stood in the way of progress in this area since 2015. Reflecting on the stalled progress of the reforms, Sir Andrew said: 'The major obstacle is almost always the money, and honestly a lack of strong support from the Treasury and strong support from the Prime Minister'.[33]

Even a government with a parliamentary majority will face challenges in reinvigorating domestic policy

As Chapter 4 outlines, domestic policy will continue to be constrained by the public finances. Exactly how tight the fiscal constraints will be will depend partly on the fiscal rules chosen by the chancellor (as discussed in Chapter 5) and the outcome of Brexit. As Chapters 3 and 4 discuss, leaving the EU without a deal would weaken growth for at least the next few years and do permanent damage to the public finances. But the government will also face other barriers to making progress on domestic policy.

Brexit demands will not dissipate and could intensify

Whoever is in office – whether Mr Johnson's current administration, a new post-election Johnson government with a renewed majority, or a different government – Brexit is likely to continue to divert civil servants', ministers' and parliament's time and resources for years to come. This will limit what any government is able to achieve on domestic policy.

Exactly what demands it will place on the government will depend on the nature of the UK's departure from the EU. Whatever happens, however, the demands of Brexit will not end on 31 October 2019 (nor on 31 January 2020 if the EU grants the extension for which parliament has legislated Mr Johnson to ask for).

To prepare for the possibility of leaving without a deal, Mr Johnson has stepped up 'no deal' preparations more intensively than those carried out by Mrs May in early 2019 – with 1,700 civil servants working on Operation Yellowhammer, the government's contingency planning for the potential short-term disruption in the event of a no-deal Brexit.[34] If the UK does leave without a deal, those civil servants are likely to need to remain in those temporary posts – and more may need to be deployed – to help the government put in place the systems and policies necessary to operate outside the EU, such as establishing fully functioning border and immigration systems.

Five key Brexit bills (on trade, agriculture, fisheries, immigration and environmental principles) have yet to pass parliament but will need to do so shortly after the UK leaves the bloc – whether the UK leaves with or without a deal. A sixth – on financial services – will be needed if the UK leaves without a deal. Five of these bills have already been

[32] At second reading, the Care Bill passed by 519 votes to 59.

[33] https://www.carehomeprofessional.com/sir-andrew-dilnot-on-social-care-reform-where-did-it-all-go-wrong/.

[34] https://www.parliamentlive.tv/Event/Index/d3716de3-baa9-4ebe-9dba-a7201e9f1553.

introduced to parliament[35] but the one on environmental principles has not yet been introduced.

After leaving the bloc, the government will also have to start new trade negotiations with the EU, which will be more difficult than negotiating the Withdrawal Agreement over the past three years. Negotiations with 'third countries' take place on a different legal basis with a more complicated process and require ratification by all 27 member states.[36] Meanwhile, the difficult trade-offs revealed in the withdrawal negotiations would be likely to remain.

The negotiation of the UK and EU's future relationship would go beyond what has been discussed for the Withdrawal Agreement, requiring greater time and effort from many government departments than they have put in over the past three years. Negotiations with the EU have thus far focused mainly on withdrawal issues – citizens' rights, Northern Ireland, the financial settlement and transition. Future trade negotiations will require a range of departments (particularly BEIS and Defra) to be involved in negotiating on a wide range of detailed issues, including individual product regulations, standards and tariffs.

If the UK manages to reach an agreement for withdrawal from the EU that is acceptable to both the EU and parliament, the UK would enter a transition period. This transition period, which is expected to run to the end of 2020, provides some additional time compared with no deal but is still not long compared with the amount of time usually required to draw up and ratify international trade deals. For example, it took over four years of negotiation before the EU's free trade agreement with South Korea was provisionally in force and over seven years for the EU's agreements with Ukraine and Canada.

The government will therefore continue to be under pressure and Mr Johnson (or any successor) is likely to have to expend political capital to handle the difficult trade-offs that any future negotiations with the EU and trade deals with other countries will inevitably throw up. The government will also then have to adapt to the new arrangements, which will require major changes to systems and processes in areas such as the border.

Addressing problems in public services will require long-term thinking, political capital and civil servants' time

After eight years of cuts to many government departments and tight control of spending growth for others, there have been growing signs over the past few years of problems in public services. As the Institute for Government's Performance Tracker illustrates, these range from rising levels of violence and self-harm in prisons to reductions in the availability and scope of publicly funded social care packages (even as the number of adults in need has grown) and increasing delays in visiting children under the supervision of children's social services.[37] Mr Johnson has also highlighted other areas of public services where he believes more is needed – including police numbers and spending on NHS hospitals. The opposition Labour party has also made sizeable commitments to expand public services, as have the Liberal Democrats.

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35 https://www.instituteforgovernment.org.uk/charts/parliamentary-progress-legislation-introduced-implement-brexit.

36 For further details, see https://www.instituteforgovernment.org.uk/publications/preparing-brexit-no-deal.

37 https://www.instituteforgovernment.org.uk/our-work/performance-tracker.

Deciding how to prioritise spending demands, how to trade them off against other calls for money – for example, for more support for low-income households – and what scope there is to spend more efficiently should be the subject of a spending review. Any such review will need to be framed by a decision about the government's overall fiscal objectives (see Chapter 5): how are priorities for spending to be traded off against any desire to restrain borrowing and to avoid higher taxes? The choice of rules will be an important statement of the government's approach to managing the public finances.

Such decisions need to be made regardless of who is in office. Most central government departments (apart from schools and the NHS in England), all local authorities and the devolved nations still face considerable uncertainty about their finances beyond the end of March 2021. That lack of certainty makes it harder to plan and manage budgets effectively. It is, for example, more difficult to enter into long-term contracts or to commit to employing staff permanently if you are unsure what your budget will be in the coming years.

The one-year spending round, announced on 4 September 2019, required the government to make some important choices – for example, choosing to focus some extra spending next year on areas such as adult social care, courts and prisons that have struggled in recent years. But next year's planned spending review – covering, presumably, several future years – will require a wider set of decisions. The new government will also need to decide what (if any) fiscal targets to adopt. If the government wanted to make more money available for services without increasing borrowing, it would need to raise taxes or cut benefit spending. Either option would be likely to require parliamentary approval via a Budget.

To complete a successful longer-term spending review, the government will need to look at the evidence on public services and benefits. That evidence will help it decide how to allocate spending to achieve its objectives with the best possible value and impact (within the constraints implied by the chosen fiscal targets and tax policy). The Treasury has recently shown an increasing interest in going beyond controlling spending to push more strongly for it to achieve value and impact, through its new Public Value Framework.

Reaching good-quality decisions will require a lot of work from each government department, their agencies and arm's-length bodies, and local authorities to understand what spending pressures they are likely to face and explore how public services and investment could be managed to achieve better results and deliver value for money. Done well, spending reviews provide an opportunity to assess what the government's priorities are, how resources should be allocated and how government performance might be improved, including through departments working together on cross-cutting issues. However, done badly, they can lead to government setting unrealistic targets and ministers scrapping for cash in 'a series of haggles'[38] – sometimes in the public glare through leaks to the media.

Cabinet unity can make it easier to balance competing ministerial demands in a spending review. The 2010 Spending Review, for example, was aided by strong working relationships between the chancellor, the chief secretary to the Treasury and the prime

[38] Page 16 of https://www.instituteforgovernment.org.uk/publications/2019-spending-review.

minister.[39] While Mrs May was hampered by a breakdown in Cabinet collective responsibility, as a result of disagreements over Brexit, Mr Johnson has so far sought to enforce greater discipline on his Cabinet, appointing only those who were prepared to back his approach to Brexit. He has suffered two high-profile ministerial resignations over his approach to Brexit – of his brother, Jo Johnson, and Work and Pensions Secretary Amber Rudd. But the fact that these ministers resigned demonstrates in itself that adherence to collective responsibility may have returned, rather than ministers openly dissenting from the government line. It is still early days for the Johnson administration, however, and the strength of discipline within the Cabinet has yet to be tested on domestic social and economic policy.

Reforming public services to meet the public's expectations within fiscal constraints may require changes to legislation. This is likely to be true, for example, in the case of Mr Johnson's desire to ensure some types of offenders are 'caught, locked up, punished and properly rehabilitated'.[40] Changes to the funding and provision of adult social care – aside from those already legislated in Care Act 2014 – are also likely to require new legislation. Completing major infrastructure projects, such as HS2, will require further parliamentary votes too. Drawing up such legislation will require time from civil servants. It is likely to require continuity of ministerial oversight, and getting it through parliament may require cross-party consensus if there is a minority or coalition government. Cross-party consensus may also be needed for changes – such as to social care or major infrastructure projects – which will only be effective if they continue to be backed by future administrations.

7.4 Conclusion

Mrs May left office having failed to fulfil her early promises on domestic policy. Her ambitions were thwarted by Brexit – which undermined Cabinet and party unity and took up a substantial amount of civil servants' and ministers' time – and the challenges she faced were compounded after she lost her parliamentary majority in 2017.

Mr Johnson began his premiership eager to show that his government would not be defined solely by leaving the EU. But he has been left politically impotent after his decision to withdraw the whip from 21 Conservative MPs who sought to thwart his ability to leave the EU without a deal left him well short of a parliamentary majority but unable to call an election.

There is a high chance that an election will be held over the next few months. Whoever is prime minister after that election is likely to want to make progress on domestic policies beyond Brexit. To do that, the government will need to accept and work within some of the same constraints that Mrs May faced:

- **Keeping no deal on the table makes it harder to make progress on domestic policy:** To be ready for no deal, Mrs May and Mr Johnson diverted hundreds of civil servants to operational centres and to roll out an extensive communications campaign.

[39] Page 14 of https://www.instituteforgovernment.org.uk/sites/default/files/publications/IfG_2019_%20spending_review_web.pdf.

[40] https://www.ft.com/content/48fe1ed0-bc18-11e9-89e2-41e555e96722.

This means fewer civil servants are available to maintain and develop policy elsewhere. The threat from MPs opposed to no deal also means that the government will probably continue to minimise what legislation it puts before parliament before the UK has left the EU.[41] If the UK leaves the EU without a deal, the government will have to commit further time and resources to ensure the systems and policies needed to operate outside the EU are in place – continuing to squeeze out domestic policy beyond October 2019.

- **Brexit demands will not end on 31 October 2019 (or 31 January 2020):** Whatever happens on 31 October 2019 (or 31 January 2020), Brexit will continue to place demands on civil servants, ministers and parliament. Leaving the EU – whether with some form of withdrawal agreement or not – is just the first step in redefining the UK's relationship with its nearest neighbours.

- **Fiscal constraints:** Public borrowing is lower now than it was under Mrs May's premiership, making the fiscal constraints on domestic policy superficially looser. But debt remains high and Mr Javid has set out significant new spending pledges for 2020–21, using up almost all of the current government's claimed 'fiscal headroom'. These changes, if adopted by a potential Labour government, would also reduce the unallocated money available under the Fiscal Credibility Rule laid out in Labour's 2017 manifesto.

- **Parliamentary arithmetic:** Making changes to many areas of domestic policy, including most changes to taxation and benefits, requires passing legislation in parliament. Mr Johnson currently faces an even more daunting challenge than Mrs May did on this front, having lost his parliamentary majority. A general election could – but is not by any means guaranteed to – return a majority government.

To have the best chance of delivering on a domestic policy agenda, the prime minister – either Mr Johnson in the current administration, or Mr Johnson or some other candidate after an election – will need to:

- **Limit the list of priorities:** The government should avoid having too many priorities. This would be good advice for any government: designing and implementing policy takes time and controversial policies can require prime ministers to expend political capital in getting them passed. But it is particularly pertinent now because Brexit will continue to place significant demands on most government departments and ministers and could deplete some of the government's political capital. Some policies that Mr Johnson has discussed, for example, will only make progress with unwavering support from him and Mr Javid. The Dilnot proposals for social care reform, for instance, were kicked into the long grass after David Cameron and George Osborne lost interest in the idea. Many of the policies advocated by the opposition Labour party would also require unwavering support and leadership from the centre of government.

- **Enforce Cabinet discipline:** Mrs May's ability to change domestic policy was hampered by a lack of Cabinet discipline. The UK government over the next few months and years will inevitably have to make controversial decisions, including how to prioritise spending in next year's spending review. To maintain control of the agenda and

[41] https://www.instituteforgovernment.org.uk/publications/parliament-role-before-31-october-brexit.

decision-making, the prime minister will need to maintain Cabinet discipline and prevent the leaks and media briefings from Cabinet attendees that plagued Mrs May's time in office.

- **Avoid changing ministers too often:** Ministers play a crucial role in getting policies through their departments and through parliament. It takes time for new ministers to get on top of their brief. But ministers – particularly junior ministers – changed at an unprecedented rate during Mrs May's premiership. Avoiding this excessive churn will help the government to make progress on its policy agenda, including on areas such as prison reform which have suffered from high levels of ministerial turnover in recent years.

- **Decide on fiscal objectives and priorities for spending:** Many of the policy proposals put forward by Mr Johnson and by the main opposition Labour party will require extra money to be found from somewhere. Mr Javid and Shadow Chancellor John McDonnell have indicated that they intend to retain some rules limiting public borrowing. Having such rules in place will help clarify what the government's fiscal objectives are, the trade-offs that need to be made, and could help the chancellor – like predecessors – resist special pleading from fellow ministers. But within those constraints, the prime minister must decide what the priorities are for extra spending. Next year's spending review will need to spell out the detail and which areas of public spending will be ramped up and which will not.

- **Carve out time for long-term thinking:** Conducting a successful spending review in 2020 and making decisions about infrastructure investment, which Mr Johnson and Mr McDonnell have both indicated they want to prioritise, will require officials to have the time to analyse and understand the challenges they face and where the possibilities are for improvement. It will require the Treasury to assess competing bids from different departments and understand how government priorities cross departmental boundaries. This will involve the prime minister and chancellor assessing the resulting analysis and the accompanying bids from their fellow ministers. All groups will need to carve out time for this longer-term thinking. These tasks are likely to be more than usually difficult in next year's spending review because there are likely to be unresolved questions about the UK's future relationship with Europe, which will continue to create uncertainty about what policies, services and institutions will be needed in future.

- **Be clear on how spending decisions can help deliver the government's objectives.** The government will need to think about how best to achieve impact through spending decisions, rather than how to grab headlines.

- **Build cross-party support:** Several of the areas that Mr Johnson wants to pursue (such as social care reform and major infrastructure projects) require cross-party support – both to ensure that a minority government can pass the necessary legislation and to ensure that any changes are sustained for the long term.

8. Options for cutting direct personal taxes and supporting low earners

Robert Joyce and Xiaowei Xu (IFS)

Key findings

- **Raising the higher-rate income tax threshold (and the National Insurance contributions thresholds that are aligned with it) from £50,000 to £80,000 in 2020–21 would cost £9 billion per year and cut taxes for the highest-income 8% of individuals.** The cost of the policy would be lower, both in the short and long run, if the threshold were raised more gradually. For example, an £80,000 threshold in 2024–25 would cost £8 billion per year relative to current plans.

- **This is a substantial and expensive tax cut from which only those on high incomes would gain.** It would offset some of the big tax increases that have affected the very highest earners since 2009.

- **Raising the higher-rate threshold to £80,000 in 2020–21 would take 2.5 million people out of paying the higher rate**, reversing the increase over recent decades and taking the number of higher- (or additional-) rate taxpayers to its lowest level since the UK's individual tax system began in 1990–91.

- **The government should remove the tapered withdrawal of the personal allowance from £100,000 per year**, which creates a £25,000-wide 60% marginal income tax band and affects ever more people each year. Raising the higher rate of income tax from 40% to 45% above the proposed new higher-rate threshold of £80,000 would cover most of the cost to the exchequer of removing this bizarre and opaque feature of our income tax system.

- **Raising the point at which employees and the self-employed start to pay National Insurance contributions (NICs), from its planned level of £8,788 per year in 2020–21, would cost about £3 billion for every £1,000 by which it is raised.** If the employer NICs threshold were raised alongside this, the total cost would be £5 billion. Raising NICs thresholds would benefit everyone who currently pays NICs – all workers above the bottom 12% of the weekly earnings distribution, or any employee aged 25+ working at least 20 hours per week at the national living wage.

- **Raising the NICs threshold is the best way to help low and middle earners through the tax system, but if the aim is to help the lowest earners, increasing work allowances under universal credit is much more effective.** Only 3% of the total gains from raising the NICs threshold (either by £1,000 or to the personal allowance threshold) would accrue to the poorest fifth of households. Spending £3 billion on increasing work allowances could raise the incomes of the poorest fifth of households by 1.5%, compared with less than 0.1% under an equally costly NICs cut.

8.1 Introduction

The new prime minister has expressed a desire to overhaul radically the direct personal tax system. During the leadership election, Boris Johnson announced plans to cut income taxes for all existing higher-rate payers by raising the threshold at which the 40% rate kicks in from £50,000 to £80,000. He also suggested raising the point at which people start paying National Insurance contributions (NICs) to help those on low earnings. The new chancellor has expressed similar priorities to lower taxes, and also to simplify the tax system.

The proposed policies would constitute a dramatic tax giveaway at a time when the prime minister has just turned on the spending taps (see Chapter 6). Raising the higher-rate threshold (HRT) and the NICs thresholds that are aligned with it to £80,000 a year would cost around £9 billion a year in 2020–21.[1] If the threshold is raised more gradually, to £80,000 in cash terms in 2024–25, this would still cost £8 billion a year. Depending on the details of the pledge to raise the threshold for starting to pay NICs, the total package could cost as much as £26 billion. To set this in context, reversing all welfare cuts announced since 2015 would cost around £13 billion.[2] The total increase to day-to-day departmental spending in 2020–21 announced in the September 2019 Spending Round, relative to what was planned in the spring, was also around £13 billion.[3]

Total taxes in the UK are high by historical standards: tax revenues now are (just) higher as a share of national income than at any point since the late 1960s. But revenues from income taxes and social security contributions (NICs and equivalents) are slightly lower, as a share of national income, than their late 1960s levels and much lower than their peak in the mid 1970s (around 15% today compared with 19% in 1975).

Further, revenues from income taxes and social security contributions are low in the UK compared with most similar countries. In 2016, they stood at around 15% of national income, compared with an average of 20% across G7 countries and 25% in Scandinavia.[4] Lower revenue from these taxes entirely explains why total tax revenue as a share of national income is lower in the UK than on average across other similar countries. As Figure 8.1 shows, the UK raises more than average from all other taxes combined as a share of national income. The proposed policies would reduce revenues from direct personal taxes by 3–7%, making the UK even more atypical among developed countries.

At a time of economic uncertainty over Brexit – not least the possibility of a 'no deal' Brexit – a substantial permanent tax giveaway would risk putting the public finances on an unsustainable path, as set out in Chapter 4.

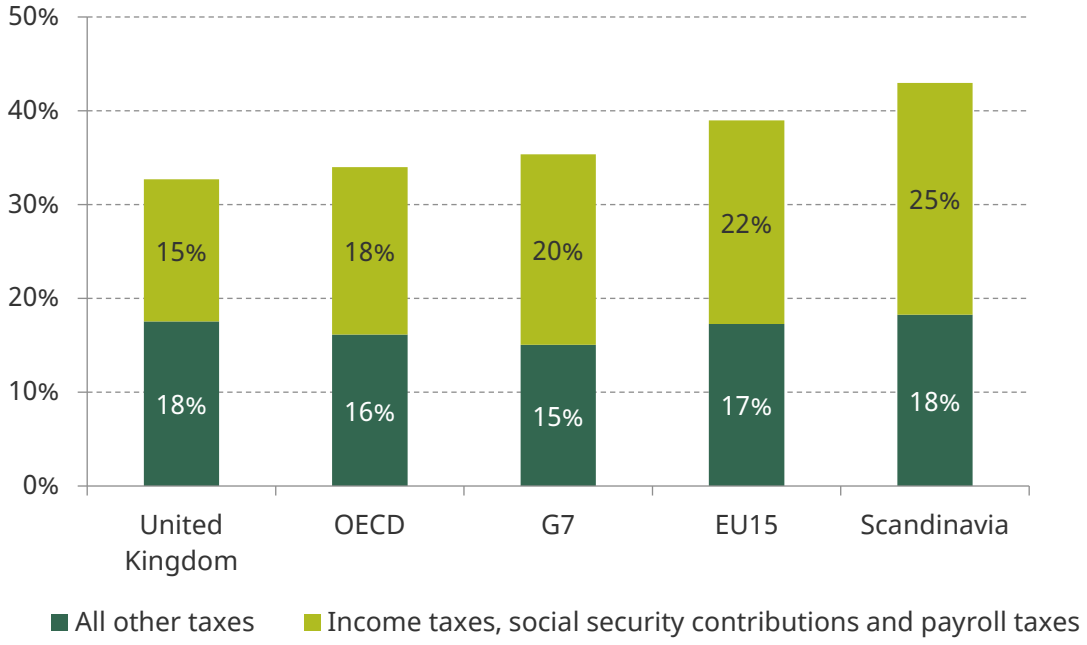
[1] The upper earnings limit (UEL) for employees and the upper profits limit (UPL) for the self-employed, above which a lower NICs rate of 2% is paid, are currently aligned with the higher-rate threshold in income tax. Throughout this chapter, we assume that they would continue to be aligned.

[2] https://www.ifs.org.uk/uploads/budgets/budget2018/tw_budget2018.pdf.

[3] https://www.ifs.org.uk/publications/14351.

[4] M. Conte, H. Miller and T. Pope, *How Do Other Countries Raise More in Tax than the UK?*, IFS Report R160, 2019 (https://www.ifs.org.uk/publications/14256).

Figure 8.1. Tax revenues as a share of national income, 2016



Note: OECD categories are as follows: income taxes 1100, social security contributions 2000, payroll tax 3000. Averages for OECD, G7, EU15 and Scandinavia are simple averages. The OECD average excludes Mexico, for which a tax-by-tax breakdown is unavailable.

Source: Authors' calculations using OECD, Global Revenue Statistics Database, extracted 28 August 2019 (http://www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm).

The government's intention to make big cuts to direct taxes could, however, provide an opportunity to clean up some of the complexity and anomalies in the system while ensuring that there are fewer 'losers' than a revenue-neutral reform would imply. In particular, the government should consider removing the arbitrary and opaque spike in marginal tax rates between £100,000 and £125,000 caused by the withdrawal of the personal allowance, which – because the threshold is not even indexed to prices, let alone incomes – is rapidly affecting ever more people as it becomes less generous in real terms. It should also consider less costly ways to boost the incomes of low-earning families than raising the NICs threshold, which on average benefits richer families more than families on low incomes.

This chapter sets out the cost of the prime minister's proposed policies and analyses their distributional impacts on workers and households. It examines other ways the government could cut taxes for high-income individuals whilst simplifying the system, and a more targeted – and hence less costly – approach to boost the incomes of low-earning households.

The chapter proceeds as follows. Section 1.2 briefly describes the direct personal tax system in the UK and how it varies for different groups of people. Section 1.3 sets out the effects of the proposed rise to the higher-rate threshold and examines a reform package that removes the personal allowance taper in a broadly revenue-neutral way (relative to the prime minister's proposed policy). Section 1.4 discusses the effects of raising the point at which people start paying NICs, and considers raising work allowances under universal credit as a more cost-effective way to help low earners. Section 1.5 concludes.

Box 8.1. Key modelling choices

Scotland: NICs and benefit policy is set by Westminster for the whole of the UK, but income tax on earned income (other than the personal allowance threshold) is devolved to Scotland. However, changes to income taxes in the rest of the UK affect the amount of grant funding given to the Scottish government via the Barnett formula (see Box 8.2). In modelling the costs of various policies, we take the Barnett formula into account and present total costs to the UK government. Since we do not know how the Scottish government would respond to changes in grant, analysis of the distributional impacts of reforms involving changes to income tax – including numbers of winners and losers – excludes Scotland. Distributional impacts of other policies are shown for the whole of the UK.

Thresholds linked to the higher-rate threshold: A number of thresholds in the tax system are linked to the HRT. These include the upper earnings limit and the upper profits limit (above which employees and self-employed workers pay a lower NICs rate) and the upper secondary threshold and the apprentice upper secondary threshold (below which employers of under-21s and certain apprentices under 25 pay no NICs). In addition, higher-rate taxpayers are not eligible for the marriage allowance (which lets couples transfer up to 10% of their personal allowance between them) and have a lower personal savings allowance (above which they start paying income tax on savings income). In modelling the effect of raising the HRT, we assume that these thresholds remain linked to the HRT. The threshold at which child benefit starts being withdrawn, fixed at £50,000 in cash terms, currently coincides with the HRT, but this is merely a transitory coincidence: the two are not formally linked and have not coincided in previous years. Our central estimates therefore do not assume that the threshold for tapering child benefit is raised with the HRT.

Modelling period: Our calculations assume that all policies take effect in 2020–21. Effects would be slightly different in reality if policies were introduced later, particularly for policies that are specified in nominal terms, taking no account of inflation. For example, raising the HRT to £80,000 costs less (in real terms) the later it is done, since the inflation-indexed threshold rises (in cash terms) over time even without policy change. If the HRT were raised to £80,000 in 2024–25 instead of 2020–21, it would cost £8 billion instead of £9 billion in today's prices.

Universal credit: We model all policies assuming that universal credit is fully in place. This is obviously not the case – the government currently expects its roll-out to be complete in December 2023 – but since we are considering permanent changes to the tax and benefit system, it is more informative to model impacts under universal credit than under the benefits it is replacing. The assumption has little effect on the estimated impacts of the proposed tax policies.

8.2 Income taxes in the UK

Personal incomes in the UK are subject to two direct taxes: income tax and National Insurance contributions. Individuals are entitled to an income-tax-free personal allowance of £12,500 a year, above which they start to pay income tax at a basic rate of 20%. In

England, Wales and Northern Ireland, any income between £50,000 and £150,000 is taxed at a higher rate of 40%, and income above £150,000 at an additional rate of 45%. (See Box 8.2 later for a discussion of income taxes in Scotland.)

Since 2010, those with incomes above £100,000 are affected by an oddity in our tax system, which creates an effective band taxed at 60%. This is because the personal allowance is withdrawn by £1 for every £2 of income above £100,000. Each additional pound is therefore subject to an effective 20% tax rate, on top of the usual higher-rate (40%) tax that is due, until the personal allowance is exhausted at £125,000. As a result, the marginal income tax rate jumps from 40% to 60% at £100,000, and back to 40% at £125,000, before rising to 45% at £150,000.

National Insurance is a separate tax system, originally intended to entitle workers to contributory social security benefits. In practice, how much an individual contributes bears little relation to how much they receive in benefits, and the link has weakened over time, so that NICs act much like an additional tax on earnings. Unlike income tax, NICs are only payable on earned income, not income from other sources such as pensions, interest on savings or rent on a property. For employees, NICs layer an additional 12% tax rate on annual earnings between £8,632 and £50,000 – the 'upper earnings limit', which is aligned to the higher-rate threshold in income tax – and 2% thereafter.[5]

Throughout this chapter, we refer to the threshold at which earnings become liable for NICs as the 'lower NICs threshold' or simply the 'NICs threshold' and we use the term 'upper earnings limit' (UEL) to refer to the threshold above which the 2% rate is paid (or analogously the 'upper profits limit' (UPL) for the self-employed, which is aligned with the UEL and higher-rate threshold).

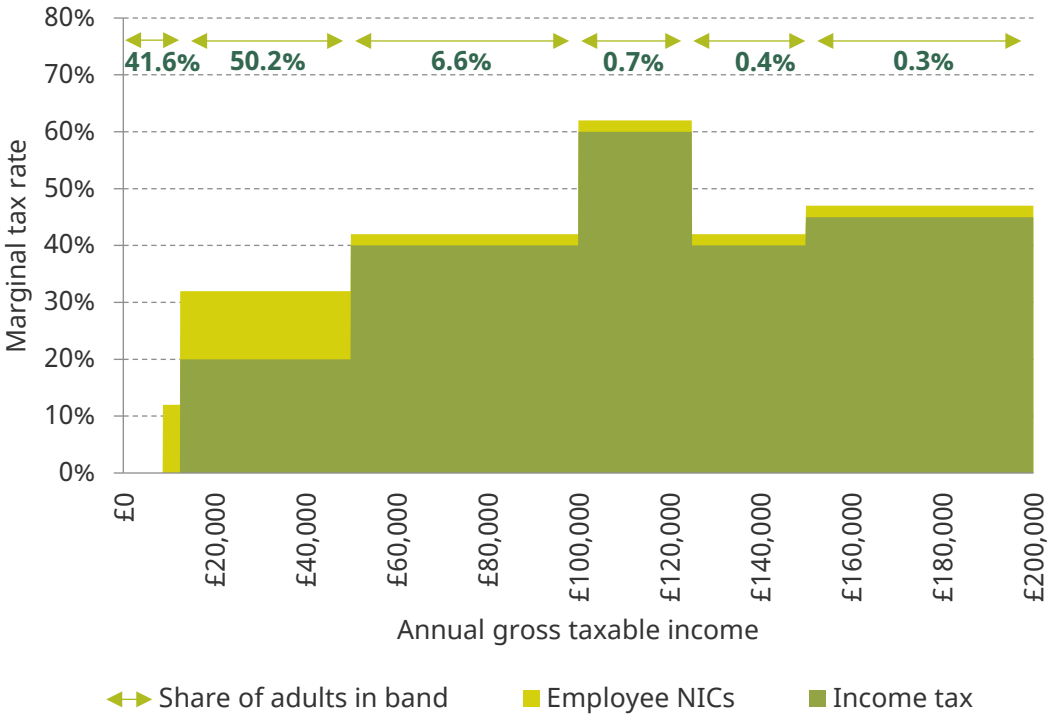
Figure 8.2 shows the marginal rates of income tax and employee NICs – the tax incurred on every additional pound – at different levels of earned income. The ranges at the top of the graph show the share of adults in each income tax band. It shows that nine in ten adults pay a marginal income tax rate of 20% or less: 42% have incomes below the personal allowance and pay no income tax, whilst a further half pay the basic rate. Approximately 1 million people have taxable incomes of over £100,000 a year, and are therefore affected by the withdrawal of the personal allowance above that level.

Employers also pay NICs of 13.8% on salaries above £8,632. Although the tax is levied on employers, in the long run earnings are likely to adjust so the economic burden of the tax falls at least partly on employees. Irrespective of who 'pays' the tax in a legal sense, both employer and employee NICs divert some of the amount that it costs an employer to employ someone, away from the pocket of the employee and towards the exchequer. Hence, if employee NICs reduce take-home incomes for workers then so, in the long run, should employer NICs, through knock-on effects on the earnings that employers are willing to pay.[6]

[5] NICs are levied on a weekly or monthly basis, whilst income tax is levied annually. For comparability, we express all figures on an annual basis.

[6] In the modelling below, we assume that employees bear the full burden of employer NICs. This can be seen as an upper bound on the effect of NIC cuts on workers: in practice, some of the gains from cutting employer NICs may accrue to employers – but the same is true of the gains from cutting employee NICs. What is harder to rationalise, at least in the long run, is an expectation that the gains from cuts to employee NICs and

Figure 8.2. Current income tax and employee NICs schedule for earned income



Note: Shows tax schedule for working-age employees and distribution of taxable income among all people in England, Wales and Northern Ireland. Assumes all income is from earnings and no use of transferable personal allowance for married couples or personal savings allowance. Approximately 0.3% of adults have total taxable incomes of over £200,000 a year.

Source: HMRC tax rates and thresholds and authors' calculations using Family Resources Survey 2017–18 and TAXBEN, the IFS microsimulation model.

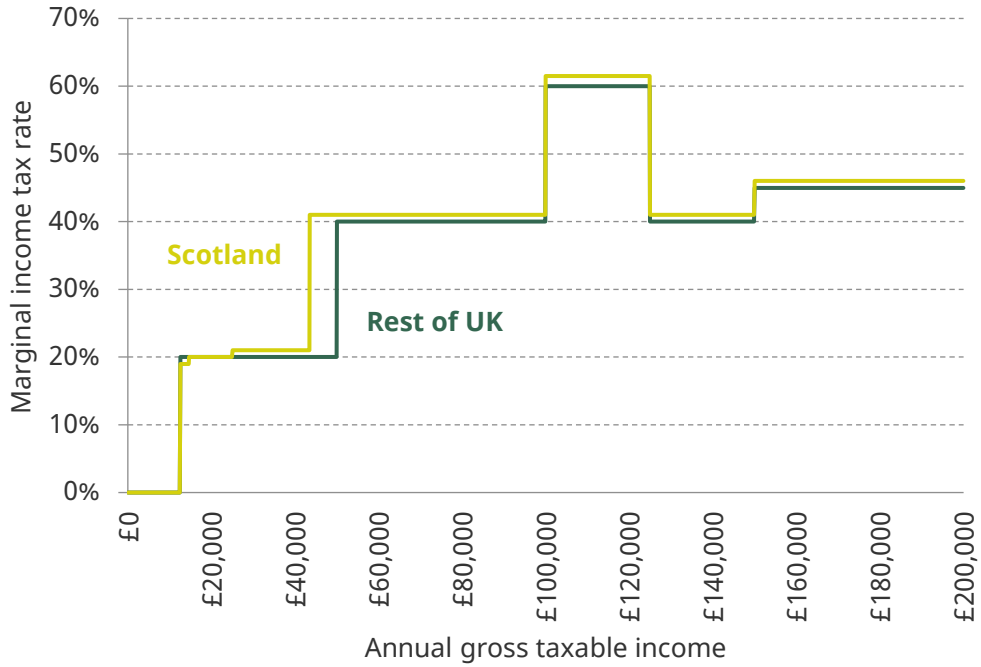
Box 8.2. Income taxes in Scotland

The discussion in the main text relates to tax schedules in England, Northern Ireland and Wales. The income tax (but not NICs) schedule in Scotland has differed since 2017–18, following the devolution of rates and bands of income tax on non-savings-and-dividends income in that year. The Scottish government has used these powers to raise revenues and increase the progressivity of the income tax schedule. Figure 8B.1 shows the income tax schedules in Scotland and the rest of the UK. Note that the UK government retains the power to set the personal allowance in Scotland, so this is the same across the UK.

The differences in tax schedules mean that those with incomes of more than £27,000 a year pay more income tax in Scotland than in the rest of the UK. Scottish taxpayers with incomes of £50,000, £100,000 and £200,000 pay £1,544, £2,044 and £3,169 more a year in income tax than residents in the rest of the UK respectively.

employer NICs should be shared differently (although they may well be in the short run – see E. P. Hargaden and B. Roantree, 'Does statutory incidence matter? Earnings responses to social security contributions', 2019, https://www.sbs.ox.ac.uk/sites/default/files/2019-07/hargeden_statutoryincidence.pdf).

Figure 8B.1. Marginal income tax rates in Scotland and the rest of the UK



Note: Assumes all income is from earnings and no use of transferable personal allowance for married couples or personal savings allowance.

Source: HMRC tax rates and thresholds.

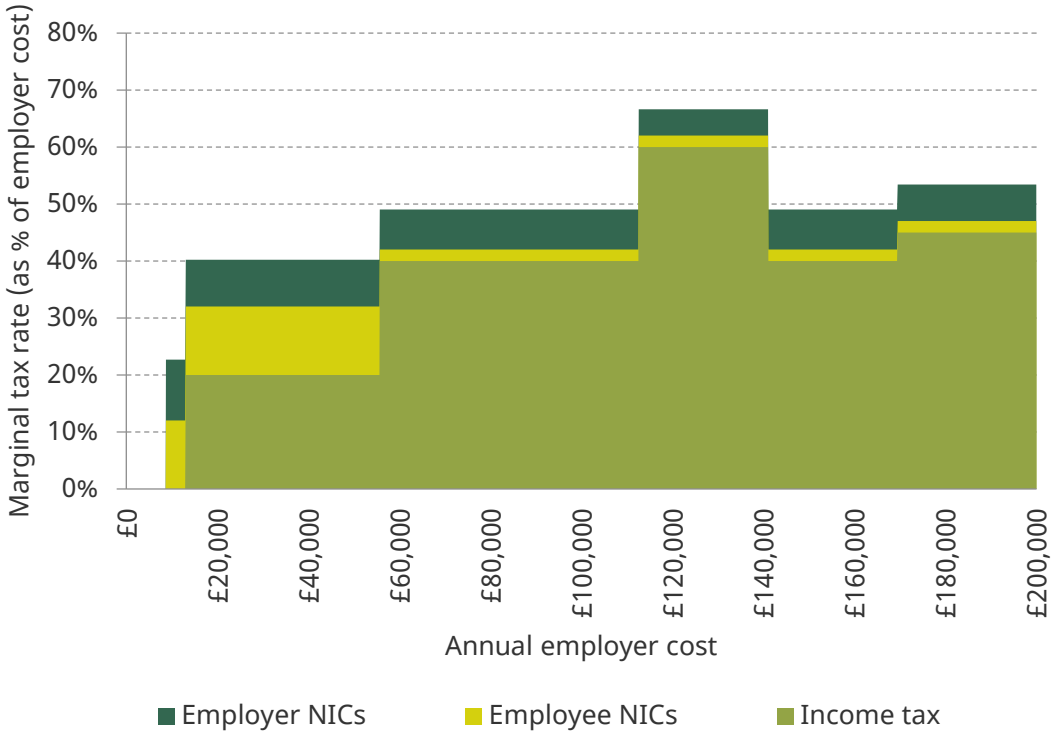
It will be up to the Scottish government to decide whether to replicate any changes to tax rates and thresholds made by the UK government.

The funding system is set up so that changes to Scottish or UK income taxes affect grants to the Scottish government through the Barnett formula. This means that if the UK were to increase the higher-rate threshold, the net grant to the Scottish government would rise. The Scottish government would then have the choice of replicating the increase in the higher-rate threshold made by the UK government or using the additional block grant funding for other purposes – such as alternative cuts to income tax or other taxes, or higher public spending.[a]

Note that since April this year, the Welsh government also has powers over income tax, albeit more limited than in the case of Scotland. It can vary the basic, higher and additional rates of income tax on non-savings-and-dividends income in Wales, but it cannot vary thresholds or introduce new marginal rate bands. Furthermore, changes to the basic, higher and additional rates of income tax by the UK government continue to apply by default in Wales – although the Welsh government could choose to offset them.

[a] See D. Phillips, 'Would Boris's tax plans represent an unfair grab of Scotland's money?', IFS Observation, 2019, https://www.ifs.org.uk/publications/14169.

Figure 8.3. Current income tax and NICs schedule for earned income



Note: Shows tax schedule for working-age employees, including employer NICs, based on the employer cost (gross salary + employer NICs). Assumes all income is from earnings, no pension contributions and no use of transferable personal allowance for married couples or personal savings allowance.

Source: HMRC tax rates and thresholds.

Figure 8.3 shows the marginal rates of income tax, employee NICs and employer NICs as a share of employer cost. This is a different measure from the annual gross taxable income shown in Figure 8.2, and captures the annual direct cost to a firm of employing a worker – that is, the worker's gross earnings plus the employer NICs due on them.[7] Figure 8.3 shows, for an extra £1 paid out by the employer, what fraction of that ends up with the exchequer rather than the employee (whether through income tax, employer NICs or employee NICs).

NICs rates differ between employees and the self-employed and between working-age workers and those above the state pension age. Self-employed workers earning more than £6,365 pay a flat rate of £156 a year, plus 9% of self-employed earnings between £8,632 and £50,000, falling to 2% at the upper profits limit of £50,000. The net effect is that a self-employed worker generating more than £8,632 in profit will keep more of the proceeds than an employee in a job generating the same amount of value, since the sum of employer and employee NICs for that employee exceeds the NICs payable by the self-

[7] Because this is a different measure from Figure 8.2, the thresholds at which tax and NICs rates change are in different places. For example, the higher rate of income tax kicks in at an annual gross taxable income of £50,000 (Figure 8.2), which translates into an employer cost of £55,709 once employer NICs are included (Figure 8.3).

employed.[8] Workers above the state pension age do not pay employee or self-employed NICs, though employers of pensioners carry on paying employer NICs of 13.8%.

The figures above show the marginal income tax and NICs schedules that apply to all workers, regardless of their family circumstances. In practice, some people may keep less of every additional pound earned than the direct tax schedules would imply. For low-income households, entitlements to state benefits are gradually withdrawn at higher levels of income, so the effective marginal tax rate they face is often higher than the income tax and NICs rate. Claimants of universal credit with children or a disabled family member can earn a certain amount before seeing their benefits withdrawn (their 'work allowance', which depends on their family and housing circumstances), but thereafter lose 63p in benefits for every additional pound earned net of tax.

The tax system for high earners

In recent years, a number of tax reforms have increased tax for families at the top of the income distribution. These include the following:

- The higher-rate income tax threshold has been deliberately cut in real terms since 2010, partly to claw back gains to higher-rate taxpayers from personal allowance increases.
- Since 2010, the income tax personal allowance is tapered away from those with incomes exceeding £100,000, as described above.
- Since 2010, an 'additional' rate of income tax has applied to those on at least £150,000 per year – currently a marginal rate of 45% above that level.
- The so-called 'high income child benefit charge', introduced in 2013, effectively claws back a family's child benefit through the income tax system when the highest-income adult in the family has a taxable income of £50,000 or more (and claws back all of the child benefit if that person has an income of £60,000 or more).
- The annual limit on tax-free pension saving (before pension contributions) was reduced in a tapered way in 2016, from £40,000 for those with a taxable income (before pension contributions) of £150,000 or less, down to £10,000 for those with a taxable income (before pension contributions) or £210,000 or more.[9]

In sum, these policies have represented a significant increase in tax for those on the highest incomes. IFS researchers have previously estimated that policies introduced by the coalition government (May 2010 to May 2015) reduced net household incomes among the richest 10% of households by around 2.5%. If one were also to include measures introduced in the final months of the last Labour government (in particular, the additional

[8] Whilst self-employed workers are taxed more lightly than employees, those with low earnings receive less benefit under universal credit. This is because of the 'minimum income floor', discussed in detail by M. Brewer, R. Joyce, T. Waters and J. Woods, 'Universal credit and its impact on household incomes: the long and the short of it ', IFS Briefing Note BN248, 2019, https://www.ifs.org.uk/publications/14083.

[9] Precisely, it is reduced for people whose income *after deducting* pension contributions exceeds £110,000, by £1 for every £2 by which their income *before deducting* pension contributions exceeds £150,000, until the annual pension allowance is reduced to £10,000.

income tax rate and the tapered withdrawal of the personal allowance), that figure rises to 6.5%.[10]

Unfortunately, these increases in taxes at the top have often been done in a way that also makes the system increasingly complex and opaque. The tapering of the personal allowance – really just another marginal income tax rate in disguise, as explained above – and annual limit on pension contributions are clear examples of that. The fact that other tax breaks have been newly introduced but then restricted only to people with taxable income below a certain level have added further to this complex picture when it comes to the effective income tax schedule. These include the transferable allowance for married couples, which is only available to basic-rate taxpayers, and the personal savings allowance, which is lower for higher- and additional-rate taxpayers. The additional 15 hours a week of free childcare (for 3- and 4-year-olds in working families) and childcare subsidies of up to £2,000 a year per child through 'tax-free childcare' are not available to those with incomes exceeding £100,000.

In addition, the changes have introduced various additional sources of 'fiscal drag': more people end up paying higher tax rates over time as incomes rise faster than tax thresholds. Fiscal drag can happen even if tax thresholds are uprated with inflation (since earnings growth typically exceeds inflation), but it is particularly pronounced when thresholds are fixed in nominal terms, as many of the new ones are. These include the £50,000 and £60,000 thresholds used to withdraw child benefit; the £100,000 threshold from which the personal allowance is tapered (and from which tax-free childcare and the additional 15 hours of free weekly childcare are withdrawn); and the £150,000 threshold from which the additional income tax rate and the taper on tax-free pension saving limits kick in.

These forms of fiscal drag are important. IFS researchers have estimated that, by 2022–23, one in five families with children will have someone who earns more than £50,000 in cash terms and lose at least some of their child benefit, up from one in eight when the child benefit clawback was introduced.[11] More than 300,000 additional people now earn more than £100,000 than in 2007–08 – an increase of over 50% – and there are over 100,000 more taxpayers with incomes exceeding £150,000 than there were back then.[12]

8.3 Changes to top taxes

Effect of raising the higher-rate threshold

Prime Minister Boris Johnson has proposed raising the higher-rate threshold from its current level of £50,000 to £80,000. This would mean that taxable income between £50,000

[10] To put this in context, households in the richest 60–90% of the income distribution were protected from fiscal consolidation during the coalition years: their net household incomes fell by less than 0.5%. But the poorest 10% of households saw their incomes fall by 4% as a result of policies by the coalition government. See A. Hood and T. Waters, 'The impact of tax and benefit reforms on household incomes', IFS Briefing Note BN196, 2017, https://www.ifs.org.uk/publications/9164.

[11] C. Emmerson, R. Joyce and T. Waters, 'Stealthy changes mean that soon one in five families with children will be losing some child benefit', IFS Observation, 2019, https://www.ifs.org.uk/publications/13791.

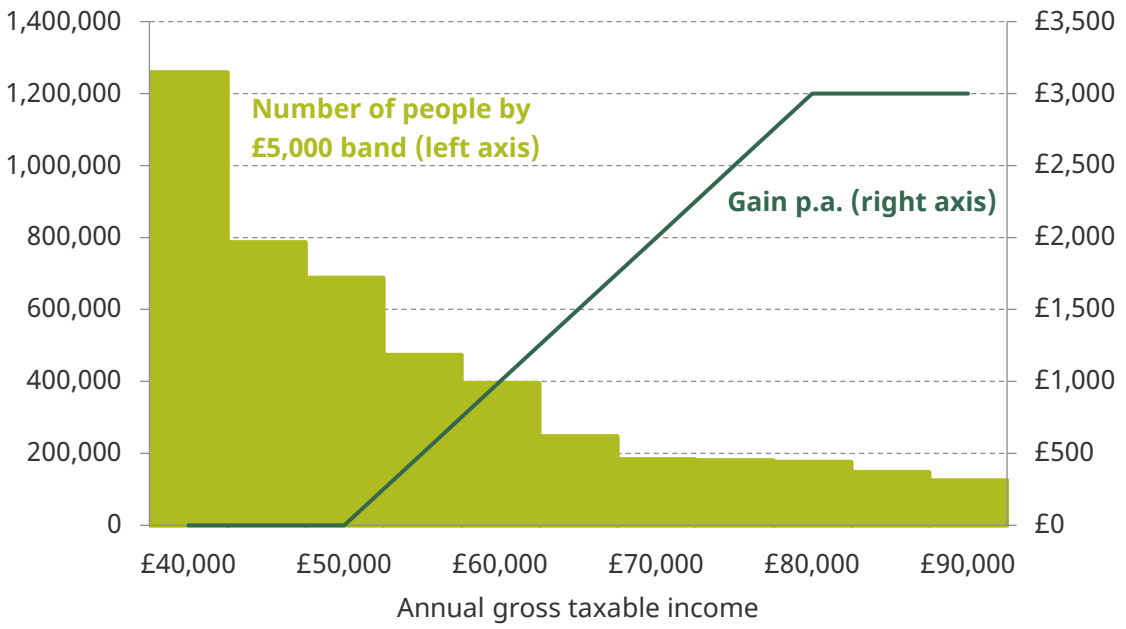
[12] S. Adam and P. Johnson, 'Dragging people into higher rates of tax', IFS Briefing Note BN247, 2019, https://www.ifs.org.uk/publications/14048.

and £80,000 is subject to the basic rate of income tax of 20%, rather than the higher rate of 40%.

For pensioners and those with unearned income in this range, this change would reduce the tax due by 20p for each additional pound of income. But the policy would be less generous than this for those of working age with *earned* income in that range, for whom half of the gains would be clawed back through higher NICs. This is because the upper earnings limit – above which the rate of employee NICs falls from 12% to 2% – is aligned with the HRT. Taken together, raising the HRT from £50,000 to £80,000 reduces the combined tax liability from income tax and employee NICs on earnings within that range from 42% to 32%. In other words, the combined marginal tax rate falls by 10, rather than 20, percentage points for these people.

Figure 8.4 shows the annual gain from raising the HRT for working-age employees at different levels of income, focusing simply on the increase in individual take-home income (we include a household-level analysis later). Employees with total taxable incomes of £80,000 per year or more would be made £3,000 better off per year as result of the policy, with those between £50,000 and £80,000 gaining by less than that. Working-age self-employed people with incomes in the affected range gain slightly more, up to £3,900 a

Figure 8.4. Gains from raising HRT, by taxable income



Note: Shows gains for working-age employees and number of people within £5,000 income bands. Excludes Scotland. Number of people on top incomes (above £80,000) in the UK is estimated using a Pareto distribution to interpolate between thresholds provided by HMRC, following the methodology set out in S. Adam, A. Hood, R. Joyce and D. Phillips, 'Labour's proposed income tax rises for high-income individuals', IFS Briefing Note BN209, 2017, https://www.ifs.org.uk/publications/9229. Share of those on top incomes in England, Wales and Northern Ireland (excluding Scotland) is estimated using a linear approximation of the share of Scottish taxpayers by £5,000 income band.

Source: Authors' calculations using Family Resources Survey 2017–18, TAXBEN (the IFS microsimulation model) and table 2.1 of HMRC, 'Income tax statistics and distributions', https://www.gov.uk/government/collections/income-tax-statistics-and-distributions.

year, as they face a lower NICs rate (9%) below the UEL and so less of their gains would be clawed back through higher NICs. People above the state pension age (and the very small number of people of working age without earnings and with very high savings and investment income) can gain up to £6,000 a year, as they do not pay employee or self-employed NICs. To give a sense of which kinds of people get this tax cut, anyone with a taxable income of over £50,000 is in the highest-income 8% of adults and anyone on more than £80,000 is in the highest-income 3%.

Basic-rate taxpayers can take advantage of the marriage allowance, which lets couples transfer up to 10% of the personal allowance between them if one member of the couple has income below the allowance and the other member is a basic-rate taxpayer. This can be worth up to £250 a year. The personal savings allowance, above which people start paying income tax on savings, is also higher for basic-rate taxpayers than for higher-rate taxpayers. Assuming that these allowances stay tied to the higher-rate threshold, raising the HRT to £80,000 would also entitle more families to take advantage of these tax breaks. Figure 8.4 ignores those details, for simplicity and because the HMRC data on which the figure is based do not reveal how many people in the relevant income ranges are able to take advantage of these allowances. But for the rest of the chapter, we assume that the thresholds for these tax allowances are raised alongside the HRT.

Effects on government revenues

If implemented in April 2020, the policy would cost the government around £8 billion a year in reduced tax revenue from England, Wales and Northern Ireland. When the increase in grant to Scotland through the Barnett formula is taken into account, the overall cost to the UK exchequer would be around £9 billion a year, cutting income tax revenue by 4%.[13] How the Scottish government would spend this extra grant (or use it to cut taxes) is of course unknown, so for the rest of this section we focus on the effects in the rest of the UK.

The prime minister has indicated that he might choose to raise the higher-rate threshold to £80,000 more gradually, rather than in a single year.[14] This would reduce the cost of the policy, both in the short run (because the short-run increase in the HRT would be smaller) and in the long run (because £80,000 will be worth less in real terms in future years). For example, given current inflation forecasts, if the HRT were to reach £80,000 by 2024–25, the long-run cost would be about £8 billion per year (rather than £9 billion) in today's terms, since by 2024–25 that threshold is already set to rise from its current level of £50,000 to £54,080 in nominal terms under current policy.[15] The shorter-term costs would of course depend on the details of how the rise to £80,000 is phased in. To give a sense of scale, raising the threshold by £5,000 or £10,000 in cash terms in 2020–21 would cost £2 billion or £4 billion in that year respectively.

[13] Based on the Office for Budget Responsibility's latest forecast of income tax revenue in 2020–21, in constant 2019–20 prices: https://obr.uk/data/.

[14] https://www.thetimes.co.uk/article/tory-leadership-rivals-raise-heat-on-boris-johnson-cptt9wr8g.

[15] This is modelled as the cost of the HRT increase in 2020–21 that would be required for the HRT to reach £80,000 in cash terms by 2024–25 through default (inflation) uprating.

Table 8.1. Effects of raising HRT by different amounts in 2020–21 in current prices

Outcome	To £80,000	By £5,000	By £10,000
Annual short-run cost	£8.9bn	£2.3bn	£4.1bn
Number of people taken out of higher-rate tax	2.5m	0.8m	1.3m
Number of people who gain	3.7m	3.7m	3.7m
Average tax cut for people who gain	£2,280	£580	£1,050
Number of households that gain	3.3m	3.4m	3.4m
Average gain per household p.a.	£320	£80	£150
Average gain p.a. among households that gain	£2,490	£640	£1,150
Share of total gains accruing to the richest 10% of households	75%	66%	69%

Note: Total costs are rounded to the nearest 0.1 billion, numbers of people and households to the nearest 0.1 million, and annual gains to the nearest £10. The richest 10% of households are defined in terms of their net equivalised household incomes. Income deciles are derived by dividing all households into 10 equal-sized groups according to income adjusted for household size using the modified OECD equivalence scale. Total costs are for the whole of the UK but other figures exclude Scotland.

Source: Authors' calculations using Family Resources Survey 2017–18 and TAXBEN, the IFS microsimulation model.

Table 8.1 summarises key effects of raising the higher-rate threshold by different amounts. The numbers of people and households that gain are similar across the options, as everyone over the current HRT gains.[16] But average gains (even in the long run) are higher the more quickly the HRT is raised to £80,000, for the reasons explained above. In the remainder of this section, we discuss the impact of raising the HRT to £80,000 next year (2020–21) – that is, the scenario corresponding to the first column of Table 8.1.

Effects on individuals

As Prime Minister Johnson set out, part of the motivation behind the policy is to 'help the huge numbers that have been captured in the higher rate by fiscal drag'.[17] The number of higher-rate taxpayers has indeed risen over the past three decades, as the threshold for

[16] The number of people and households gaining from a smaller increase in the HRT is actually very slightly higher because of the perverse interaction with NICs – see below.

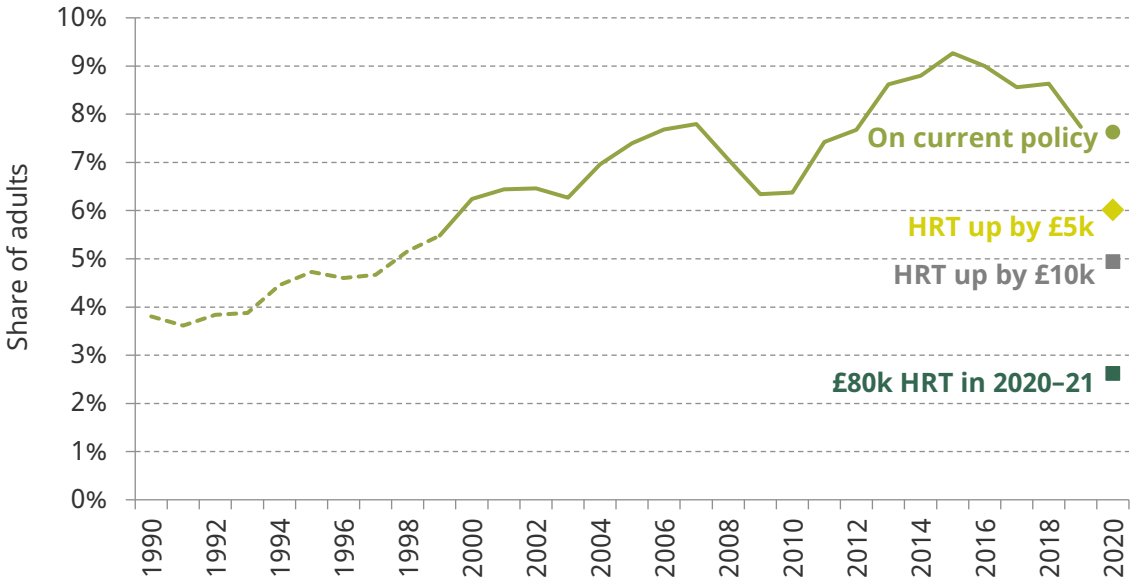
[17] https://www.bbc.co.uk/news/business-48744109.

paying the higher rate has not risen in line with incomes (and has been deliberately cut in real terms since 2010, partly as a way of clawing back some of the gains to higher-rate taxpayers of raising the personal allowance).[18] Around 3.8 million people pay the higher (or additional) rate today, which is 13% of all income tax payers or 8% of all adults – nearly double the proportion paying the higher rate when the individual tax system was introduced in 1990–91.

As Figure 8.5 shows, raising the HRT to £80,000 in 2020–21 would take 2.5 million people out of paying higher-rate tax and undo this rise in numbers in one fell swoop. The number of higher- (or additional-) rate taxpayers would fall to just 1.3 million, or 3% of adults – a lower proportion than in 1990–91. Even raising the HRT by £5,000 in 2020–21 would take the share of higher- (or additional-) rate taxpayers to its lowest level since 2000–01.

Around 3.2 million working people would gain from raising the HRT to £80,000 in 2020–21, including 0.4 million people in self-employment. 3.0 million of those 3.2 million are below their state pension age. 0.4 million retired pensioners and 0.1 million working-age people who do not have earnings, but have significant unearned income, would also gain. Those

Figure 8.5. Higher- or additional-rate taxpayers as share of adult (16+) population



Note: Excludes Scotland. Shows number of higher- (and additional-) rate taxpayers in financial years divided by population estimates in corresponding calendar year (calendar year 1990 for financial year 1990–91, labelled 1990; and so on). Figures for 1990 to 1998 are estimates based on the number of higher-rate taxpayers across the UK as a whole because nation-specific figures are not available for that period. Population for 2019 and 2020 are based on projections for 15+ population.

Source: Authors' calculations using: Family Resources Survey 2017–18; TAXBEN, the IFS microsimulation model; tables 2.1 and 2.2 of HMRC, 'Income tax statistics and distributions', https://www.gov.uk/government/collections/income-tax-statistics-and-distributions; and ONS, 'National population projections: 2016-based', https://www.ons.gov.uk/releases/nationalpopulationprojections2016basedstatisticalbulletin.

[18] If the HRT had been uprated from 2010 in line with (CPI) inflation, it would stand at around £53,700 today instead of £50,000.

who gain see their direct personal tax liabilities fall by an average of around £2,300 a year – although, as described above, the amount gained varies according to how far above £50,000 their income is, whether they are employed or self-employed, and whether they are below or above the state pension age.

Some 0.4 million people would actually lose from the policy. This is a perverse and unintended consequence of having two systems – income tax and NICs – kept separate, with slightly different rules, when they are really trying to do much the same thing. Unlike income tax, earnings liable for NICs are calculated without applying any personal savings allowance or transferable personal allowance for married couples, and – unless using a salary sacrifice scheme – without deducting employee pension contributions. As result, there are people who have earned income above the current National Insurance UEL (so are currently subject to the lower 2% rate of NICs), but have less or no income that attracts higher-rate income tax due to the use of these additional income tax allowances that do not apply to NICs. For most of these people, the loss from raising the UEL would outweigh the gain from raising the HRT of income tax. This is an example of a seemingly innocuous wrinkle in our tax system making it impossible for the government to make basic policy changes without unintended consequences.

Personal incomes vary substantially over people's lifetimes and between men and women. Three-quarters (76%) of those who would get a tax cut from the rise in the HRT are men, who would receive 79% of total cash gains. 12% of men would get a tax cut, compared with just 3% of women, though it is worth noting that 14% of women (and 16% of men) live in a household where someone benefits from the policy.

In the short term, people in the mid to late working-age years are most likely to gain from the policy, as incomes tend to be higher at this point than at other stages of life. 12% of 35- to 54-year-olds would see their tax liabilities reduced (and 21% would be in a household where at least one person sees their tax reduced), compared with just 3% of those under 35 and 7% of those aged 55 and over. Of course, assuming that the policy is permanent, the long-term gains to different generations will be less unevenly spread than the short-term gains to different age groups. For example, of the current younger generations who do not have an income above £50,000, some will do so later in life and hence would, at a later stage, benefit from this policy were it to remain in place. Of those who do gain from the rise in the higher-rate threshold, older people typically gain more. As explained above, people over the state pension age do not pay NICs, so a taxpayer over the state pension age would typically gain twice as much as a working-age person with the same income. People over the state pension age make up just 15% of those who gain, while 20% of the total reduction in tax accrues to them.

Table 8.2 compares the characteristics of those who would be taken out of paying higher-rate tax by an increase in the HRT to £80,000, those who would remain higher-rate taxpayers, and those who would be basic-rate taxpayers either way. Compared with those who will remain on higher-rate tax after the policy, those taken out of paying higher-rate tax are more likely to live in London and the South and to be women. They are less likely to work as managers and directors and less likely to work in finance than those who will remain higher-rate taxpayers, but on most dimensions still resemble this group more than they resemble basic-rate taxpayers.

Table 8.2. Characteristics of taxpayers

Characteristic	Taken out of higher-rate tax (£50,000–£80,000)	Remain on higher-rate tax (£80,000+)	Basic-rate taxpayers (below £50,000)
Male	73%	81%	56%
Above state pension age	15%	11%	19%
In a couple	84%	88%	74%
Has children	38%	43%	27%
Lives in London	19%	18%	13%
Lives in South East/West	39%	31%	28%
Manager or director	21%	30%	8%
Works in finance	8%	11%	4%
Works in public sector	26%	20%	32%

Note: 'Manager or director' refers to SOC2010 major group 1. Finance corresponds to SIC2007 K (finance and insurance). Public sector corresponds to SIC2007 O, P, Q (public administration and defence, education, health and social work).

Source: Authors' calculations using Family Resources Survey 2017–18 and TAXBEN, the IFS microsimulation model.

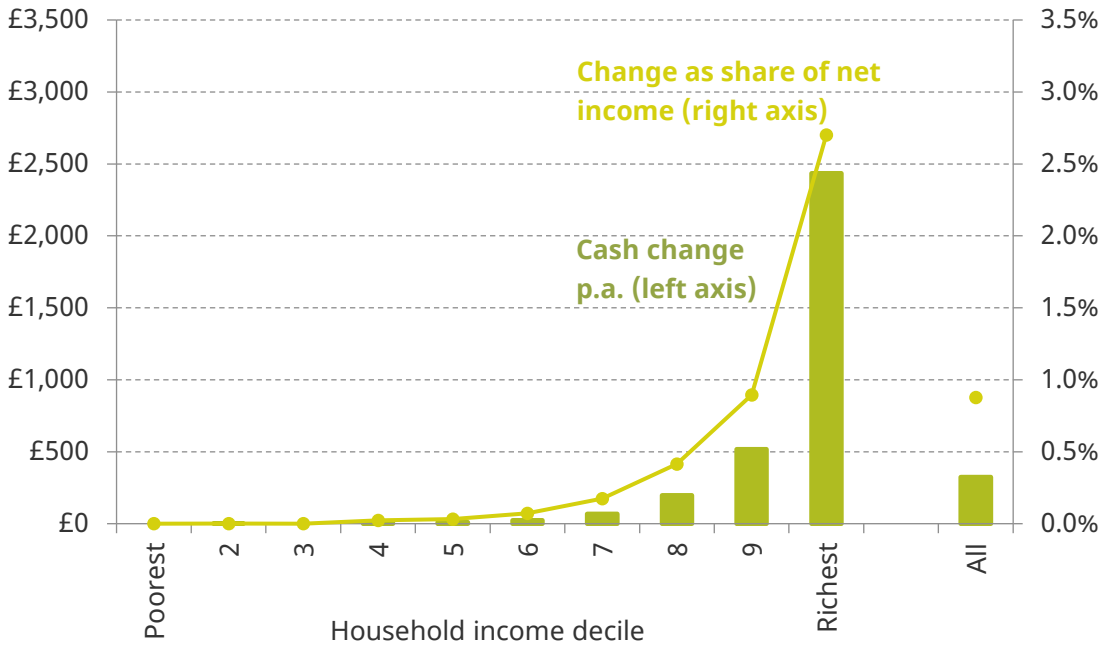
Effects on households

Typically when assessing the distributional impacts of policy, we should also examine the impacts on household – rather than individual – incomes. For example, the member of a single-earner couple not in paid work still benefits from an income tax cut for their spouse if some of the additional after-tax income is pooled within the household. The 3.7 million people who get a personal tax cut from the policy are in 3.3 million households – containing 9.5 million people in total – which gain an average of £2,500 per household per year. As Figure 8.6 shows, these gains mostly accrue to households at the top of the household income distribution. Three-quarters of the fall in tax liabilities would go to those in the top tenth richest households, which gain around £2,400 a year on average and see their net incomes rise by 2.7%. Nearly all (97%) of the gains accrue to the richest 30% of households.

The reason that any households outside the top few deciles gain at all is that tax is levied on individual incomes, while we are measuring incomes at a household level and taking account of the size of the household. So someone earning £60,000, for example, who lives with a spouse with no personal income and has a few children, could be around the middle of the household income distribution.

Since 2013, families in which either partner earns over £50,000 are subject to the child benefit clawback, losing 1% of their child benefit entitlement for every additional £100 of income, until all child benefit entitlement is exhausted at £60,000. Unlike the personal savings allowance and the marriage allowance, the threshold for the child benefit clawback has been fixed at £50,000 (without any indexation) and not tied to the HRT, but it does currently happen to coincide with it. In our modelling so far, we have assumed that

Figure 8.6. Distributional effects of raising the HRT to £80,000, by household income



Note: Excludes Scotland. Income deciles are derived by dividing all households into 10 equal-sized groups according to income adjusted for household size using the modified OECD equivalence scale.

Source: Authors' calculations using Family Resources Survey 2017–18 and TAXBEN, the IFS microsimulation model.

the threshold for withdrawing child benefit will remain at £50,000, which would mean that people paying the basic rate of income tax under the new prime minister's plans would lose their child benefit. This was certainly not the policy intent when the child benefit withdrawal was introduced, although that was in the context of an HRT substantially lower than £80,000. If the threshold above which child benefit is tapered away rises to £80,000 in line with the HRT, this would cost a further £2 billion, with gains accruing overwhelmingly to the top half of the household income distribution.

Potential behavioural effects

The modelling above assumes that people do not adjust their earnings in response to the cut in taxes. In his *Telegraph* column and in hustings during the leadership election, the prime minister has repeatedly cited the Laffer curve,[19] which posits that there is a tipping point beyond which higher tax rates reduce government revenue by encouraging people to earn less or engage in avoidance or evasion. In a nod to the Laffer curve, the chancellor has also said that maximising tax revenue 'doesn't always mean that you have to have the highest tax rate possible'.[20]

However, whilst (declared) taxable incomes for the very-highest-income individuals (approximately those with incomes above £150,000 per year) have been found to be quite

[19] See, for example, https://www.telegraph.co.uk/news/2018/09/09/dont-put-taxes-cut-reward-strivers-give-economy-jolt-energy/.

[20] https://www.thetimes.co.uk/article/sajid-javid-interview-i-m-a-low-tax-guy-says-chancellor-as-he-reveals-his-priorities-gdt9b36j5.

responsive to marginal tax rates,[21] the evidence does not suggest that changing marginal tax rates in the income range between £50,000 and £80,000 would have nearly such a significant 'behavioural' impact. In Budget 2012, following a review of the evidence, HM Treasury assumed a 'taxable income elasticity' of just 0.03 for individuals affected by cuts to the HRT, with incomes of over £48,000 in today's prices. This means that a 1% rise in the marginal net-of-tax rate (the share kept of every additional pound earned, so 100% minus the marginal tax rate) is estimated to increase taxable income by 3%. Previous IFS research estimated the taxable income elasticity around the HRT to be 0 for employees and around 0.05 for the self-employed.[22] Based on these estimates, the exchequer would recoup around half a billion of the £9 billion sticker cost of raising the HRT to £80,000.

That is not a knock-down argument against the tax cut: governments can still reasonably do things even if they cost money – after all, millions of individuals would get to enjoy a rise in their after-tax income. But it should not be implied that the policy will pay for itself. It certainly will not.

One of the stated aims of the policy is to 'stimulate' the economy after the UK leaves the EU,[23] and the prime minister has advocated tax cuts to 'give the economy the jolt that it needs'.[24] But a permanent change to the income tax schedule, at ongoing cost to the exchequer, would not be a good way of providing fiscal stimulus, not least because fiscal stimulus packages should be temporary and not permanent. Furthermore, giveaways to high-income households (those who would benefit from this policy) would be less effective at boosting spending than comparable giveaways to low-income households, as the latter spend a higher share of their gains.[25] Alternative policies to support the economy after Brexit are discussed in Chapter 5.

Removing the personal allowance taper

The proposed rise to the higher-rate threshold would represent a substantial change to our tax system for those on higher incomes. The government could introduce a more comprehensive package which simultaneously rationalises income taxes for those on high incomes, in particular by removing the arbitrary and opaque 60% marginal income tax rate between £100,000 and £125,000.

As described above, the 60% rate arises from the withdrawal of the personal allowance by £1 for every £2 of income above £100,000, until there is no allowance left at £125,000.

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[21] See, for example, P. Johnson and D. Phillips, '50p tax – strolling across the summit of the Laffer curve?', IFS Observation, 2014, https://www.ifs.org.uk/publications/7066.

[22] S. Adam, J. Browne, D. Phillips and B. Roantree, 'Frictions and taxpayer responses: evidence from bunching at personal tax thresholds', IFS Working Paper W17/14, 2017, https://www.ifs.org.uk/publications/9679.

[23] https://www.telegraph.co.uk/politics/2019/06/09/boris-johnsons-radical-plan-slash-income-tax-3million-raising/.

[24] https://www.telegraph.co.uk/news/2018/09/09/dont-put-taxes-cut-reward-strivers-give-economy-jolt-energy/.

[25] See, for example, D. Johnson, J. Parker and N. Souleles, 'Household expenditure and the income tax rebates of 2001', *American Economic Review*, 2006, 96, 1589–1610, https://www.aeaweb.org/articles?id=10.1257/aer.96.5.1589.

Once employee and employer NICs are included, the marginal income tax rate (as a share of employer cost) over this range is (at least) 67%.[26]

The high effective marginal tax rate kicking in from £100,000 will significantly reduce incentives to earn above this level. Previous analysis by IFS researchers has indeed found evidence of bunching at incomes just below £100,000.[27] The data they used ran to 2013–14 – predating the cliff-edge withdrawal of some childcare subsidies at this level of income – so all else equal we might expect more bunching today.

Further, the threshold for withdrawing the personal allowance is fixed in cash terms, which means that the number of people affected rises arbitrarily over time with inflation. Since the policy was first mooted in 2007–08, the number of people with incomes over £100,000 has increased by over 50%.[28] The number of people facing the 60% marginal income tax rate has also increased rapidly, to around 360,000 today, not only due to nominal income growth but also because of a widening of the band. That is because the width of the band is double the personal allowance, which successive governments have increased in real terms. When the policy was first introduced in 2010–11, the personal allowance stood at £6,475, so the 60% marginal tax rate applied to everyone with incomes between £100,000 and £112,950. Now, with the personal allowance at £12,500, the band stretches between £100,000 and £125,000.

Whilst many people would consider it reasonable for marginal tax rates to rise with incomes, an income tax schedule in which the marginal rate peaks, then falls, then rises again (when the additional income tax rate of 45% kicks in, from £150,000) looks extremely difficult to rationalise, whatever the government's distributional objectives. And where government judges that high-income groups should pay more, one might hope that this could be achieved in a transparent manner after an open debate about how taxes are raised, rather than by letting opaque tapers and fiscal drag do the job.

Simply removing the personal allowance taper would, of course, be a giveaway to some very-high-income people, to the tune of £4 billion a year. It would benefit people with incomes over £100,000 – approximately the top 3% of those paying income tax or the top 2% of adults. But the government could choose to raise taxes at the top in a way that is far more straightforward and transparent than withdrawing the personal allowance.

One way of doing this is to allow the 45% rate of income tax, which currently applies only above £150,000, to kick in earlier. Since the prime minister is already proposing to raise the HRT to £80,000, he could consider raising the tax rate above this threshold to 45% at the same time as removing the personal allowance taper.[29] Doing so would remove the

[26] Families with young children with incomes over £100,000 also lose their entitlement to tax-free childcare (worth up to £2,000 a year per child) and the additional 15 hours of free childcare (worth around £3,100 a year). See J. Britton, C. Farquharson and L. Sibieta, *2019 Annual Report on Education Spending in England*, IFS Report R162, 2019, https://www.ifs.org.uk/publications/14369.

[27] S. Adam, J. Browne, D. Phillips and B. Roantree, 'Frictions and taxpayer responses: evidence from bunching at personal tax thresholds', IFS Working Paper W17/14, 2017, https://www.ifs.org.uk/publications/9679.

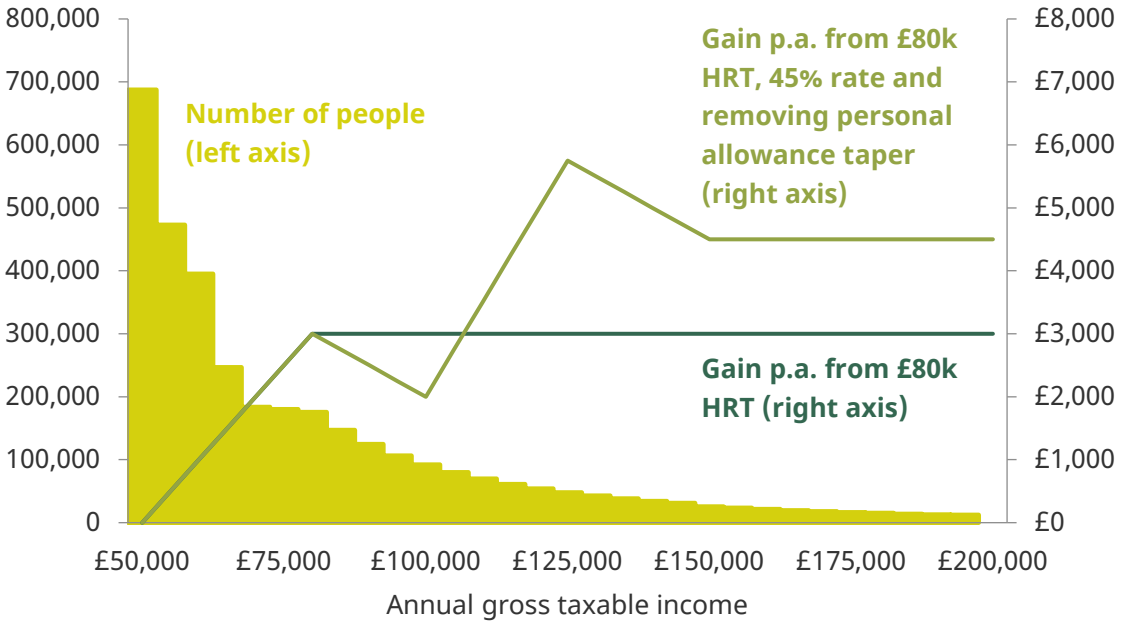
[28] S. Adam and P. Johnson, 'Dragging people into higher rates of tax', IFS Briefing Note BN247, 2019, https://www.ifs.org.uk/publications/14048.

[29] The Labour party proposed a marginal income tax rate of 45% from £80,000 in the 2017 general election. Its proposal kept the old HRT and personal allowance taper, and introduced a new marginal rate of 50% from £123,000 (S. Adam, A. Hood, R. Joyce and D. Phillips, 'Labour's proposed income tax rises for high-income individuals', IFS Briefing Note BN209, 2017, https://www.ifs.org.uk/publications/9229).

bizarre spike in the marginal tax rate between £100,000 and £125,000, and would have the additional benefit of sweeping away two tax thresholds that are not indexed to inflation (the £100,000 threshold for the 60% rate and the £150,000 threshold for the additional rate). It would return the income tax system to a two-rate system (or three rates including the 0% band below the personal allowance), as it was in 2009–10, simplifying the tax system in line with the chancellor's stated intention.[30]

Figure 8.7 compares the effects of this reform with those of the proposed policy to raise the HRT to £80,000 in England, Wales and Northern Ireland. Approximately 700,000 people with taxable incomes between £80,000 and around £107,000 would gain less from this package than from simply raising the HRT to £80,000 (with a difference of up to £1,000 per year). This is because they would face a higher marginal rate of 45% without benefiting as much, or at all, from the removal of the personal allowance taper. Approximately 900,000 people with taxable incomes above £107,000 would gain more, by up to £2,750 a year.

Figure 8.7. Gains from top income tax reform options, by taxable income



Note: Shows gains for working-age employees and number of people within £5,000 income bands. Excludes Scotland. Number of people on top incomes (above £80,000) in the UK is estimated using a Pareto distribution to interpolate between thresholds provided by HMRC, following the methodology set out in S. Adam, A. Hood, R. Joyce and D. Phillips, 'Labour's proposed income tax rises for high-income individuals', IFS Briefing Note BN209, 2017, https://www.ifs.org.uk/publications/9229. Share of those on top incomes in England, Wales and Northern Ireland (excluding Scotland) is estimated using a linear approximation of the share of Scottish taxpayers by £5,000 income band.

Source: Authors' calculations using Family Resources Survey 2017–18, TAXBEN (the IFS microsimulation model) and table 2.1 of HMRC, 'Income tax statistics and distributions', https://www.gov.uk/government/collections/income-tax-statistics-and-distributions.

[30] https://www.thetimes.co.uk/article/sajid-javid-interview-i-m-a-low-tax-guy-says-chancellor-as-he-reveals-his-priorities-gdt9b36j5.

Removing the personal allowance taper whilst starting the 45% rate at £80,000 would cost around £1 billion, on top of the £9 billion cost of raising the HRT to £80,000 in 2020–21. To keep the net cost the same as the prime minister's plan of simply increasing the HRT to £80,000, one could start the higher rate of 45% at £75,000 rather than £80,000. Relative to current policy, this would still cut taxes for 3 million people and take 2 million people out of paying the higher rate of income tax, taking the number of higher-rate taxpayers to the lowest level since 1990–91.

8.4 Policies to help the low-paid

Effect of raising the NICs threshold

The earnings threshold for paying employee, self-employed and employer NICs is currently £8,632 and is set to increase with (CPI) inflation to £8,788 in 2020–21. The prime minister has said he wants to increase this threshold, indicating that helping people on the lowest pay would be his 'priority'.[31] In an interview to the *Times*, the chancellor has also said: 'if you are going to have tax cuts, I think you should always be thinking about the lowest paid, and about how you can try and help them'.[32]

If the focus is indeed on the lowest paid, then changing the NICs threshold certainly makes more sense than fixating only on the income tax personal allowance, as has been the case in recent years: income tax kicks in at a significantly higher level of earnings than NICs, and is paid not only on earnings but on other sources of income too. In a context where the income tax personal allowance has risen sharply, some attention for NICs is long overdue. That said, if the primary objective is to help lower earners then any direct tax policy is limited in how well it can target the problem. We discuss a natural alternative in the following subsection.

The prime minister has not stated how much he would like the NICs threshold to increase by, or whether he intends to raise the threshold for employer NICs along with the employee and self-employed thresholds. One option would be to align the point at which earnings are liable for NICs with the Personal Allowance at £12,500, as proposed by Dominic Raab (the new foreign secretary) during the Conservative leadership contest. Raising the employee and self-employed NICs thresholds to this level would cost £10 billion per year – £1 billion more than the cost of raising the HRT to £80,000, which would be consistent with raising NICs being the government's 'priority'. If the employer NICs threshold were raised in tandem, the cost would rise to £17 billion. Either policy would represent a substantial cut to NICs revenues[33], of around 7% and 12% respectively.

Aligning employee, self-employed and employer NICs thresholds with the personal allowance would take around 2 million people out of paying tax on earnings. 26 million people would gain from the policy, of whom around 3 million are self-employed. They are in 16 million households which gain an average of around £1,000 a year. Remarkably, a small number of low-income households would actually lose a little from the policy. This is

[31] https://www.telegraph.co.uk/politics/2019/06/30/boris-johnson-says-priority-increase-national-insurance-thresholds/.

[32] https://www.thetimes.co.uk/article/sajid-javid-interview-i-m-a-low-tax-guy-says-chancellor-as-he-reveals-his-priorities-gdt9b36j5.

[33] Based on the Office for Budget Responsibility's latest forecast for 2020–21, in constant 2019–20 prices: https://obr.uk/data/.

because some families that receive both universal credit and council tax support – both assessed on the basis of net incomes – would lose some of their entitlement to each of these benefits when a NICs cut increases their post-tax earnings, and the combined loss of benefits would in some cases exceed the gain from the tax cut.[34]

Of course, the prime minister could choose to raise the NICs threshold by a smaller amount. Raising the threshold by £1,000 to £9,788 in 2020–21 would take 1 million people out of paying NICs and cost £3 billion in total, or £5 billion if the employer NICs threshold is raised alongside the employee and self-employed thresholds. The number of people and households that gain would be similar to the number gaining when raising the NICs threshold up to the personal allowance – in both cases, nearly everyone with earnings above the current NICs threshold gains. However, a smaller rise in the threshold of course translates into lower average gains.

Table 8.3 summarises key outcomes for different options for raising the NICs threshold: by £1,000 or to £12,500, with and without raising the employer NICs threshold. In general, the cost of the policy would increase by around £3 billion for every £1,000 that the NICs threshold is raised, and raising the employer NICs threshold in tandem would increase the cost by around 60%.

Raising the NICs threshold is the most effective way to target low-paid workers through the tax system. It is more effective than, say, further raising the personal allowance threshold, which has been increased by successive governments since 2008 in real terms. This is both because the threshold for paying NICs is lower and because raising the personal allowance thresholds also benefits people who are not in paid work but have other sources of income. But cutting NICs does not reach the lowest 12% of earners, whose earnings fall below the current threshold for paying NICs (equivalent to working less than 20 hours a week as an employee aged 25 or over on the national living wage). In cash terms, it benefits high earners at least as much as low earners, so is an expensive way to boost the incomes of low earners. Further, low earners who benefit from the NICs threshold may live with higher-earning partners, and hence not be in low-income households. Some of those who are in low-income households can also have some of the gains clawed back through reduced benefit entitlements, since universal credit is assessed against net-of-tax income.

Figure 8.8 shows the distributional impact of raising all NICs thresholds, including the employer NICs threshold, to £12,500. It shows that raising the NICs threshold disproportionately benefits households towards the middle and top of the income distribution. 77% of the households that benefit from the policy are in the top half of the income distribution, and only 2% are in the poorest tenth of households. On average, the richest 30% of households gain around £1,000 a year, whilst the poorest 10% gain only around £30 a year.[35] This is the most extensive – and expensive – of the NICs reforms that we consider; for other proposals, the shape of the distributional impact is broadly similar, but the value of the gains will be smaller. As shown in Table 8.3, raising the NICs threshold

[34] This highlights one of the problems of keeping the council tax support system separate from universal credit. Note that raising the threshold at which people start paying NICs does not affect entitlement to contributory benefits (such as contributory jobseeker's allowance), which depend on the lower earnings limit (LEL).

[35] The modelling may slightly understate gains (and overstate losses) to the poorest households because of incomplete benefit take-up.

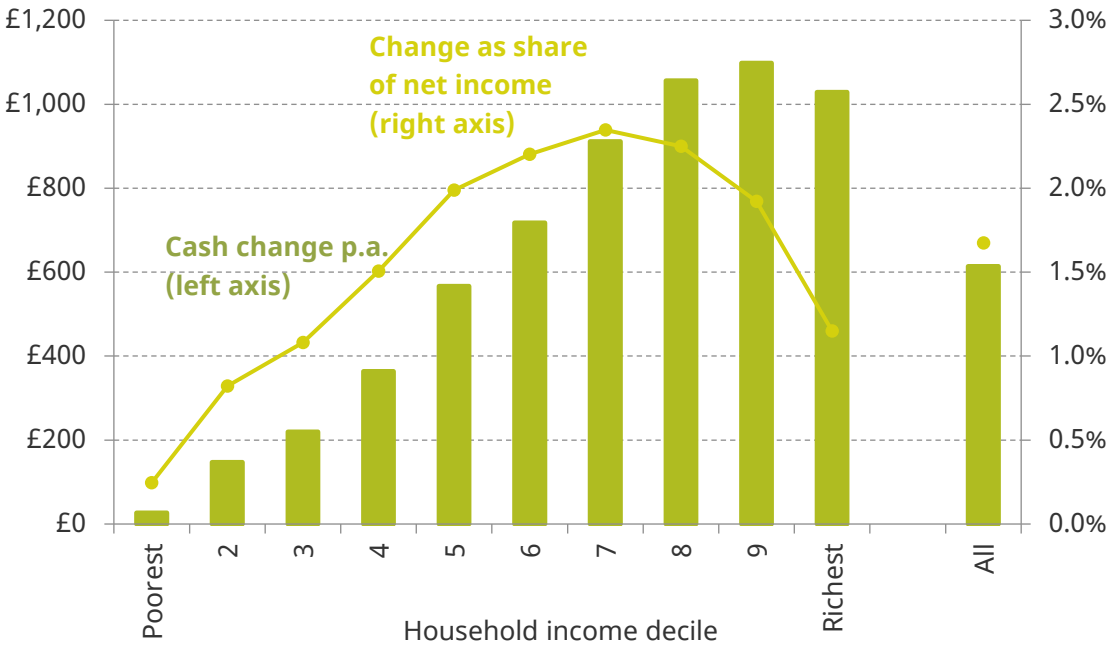
Table 8.3. Effects of raising NICs threshold for different policy variants

Outcome	Employee/ self-employed NICs threshold to £12,500	All NICs thresholds to £12,500	Employee/ self-employed NICs threshold up by £1,000	All NICs thresholds up by £1,000
Total cost	£10.4bn	£17.0bn	£2.8bn	£4.5bn
Number of people taken out of NICs	2.6m	2.4m	0.6m	0.6m
Number of people whose personal income is increased	25.3m	26.0m	25.3m	26.0m
Number of households that gain	15.9m	16.4m	16.0m	16.4m
Average gain per household p.a.	£380	£610	£100	£160
Average gain p.a. among households that gain	£650	£1,040	£170	£280
Average gain in poorest half of households p.a.	£160	£260	£40	£70
Average gain in poorest half of working households p.a.	£400	£660	£110	£180
Average gain in poorest 10% of working households p.a.	£130	£230	£40	£70
Average gain in richest half of working households p.a.	£770	£1,240	£200	£330

Note: Total costs are rounded to the nearest 0.1 billion, numbers of people and households to the nearest 0.1 million, and annual gains to the nearest £10. The poorest and richest *x*% of households are defined in terms of their net equivalised household incomes. Income deciles are derived by dividing all households into 10 equal-sized groups according to income adjusted for household size using the modified OECD equivalence scale.

Source: Authors' calculations using Family Resources Survey 2017–18 and TAXBEN, the IFS microsimulation model.

Figure 8.8. Distributional effects of raising all NICs thresholds to £12,500, by household income



Note: Shows the effect of increasing employee, self-employed and employer NICs thresholds to £12,500. Assumes full take-up of benefits. Income deciles are derived by dividing all households into 10 equal-sized groups according to income adjusted for household size using the modified OECD equivalence scale.

Source: Authors' calculations using Family Resources Survey 2017–18 and TAXBEN, the IFS microsimulation model.

by just £1,000 also benefits the richest households much more than the poorest households.

Richer households benefit more from raising the NICs threshold for three main reasons:

- First, many of the poorest households do not currently pay any NICs at all, either because they have no one in paid work or because no one earns above the current NICs threshold. These households do not benefit from the policy at all. Only one in ten of the 10% poorest households gain from raising all NICs thresholds to £12,500, compared with eight in ten of the 10% richest households. This is partly due to higher worklessness among poorer households: only 26% of the poorest households have someone in paid work, whilst 84% of the richest households do. But low earnings at the bottom of the income distribution mean that only 46% of those in the poorest 10% of working households gain from raising the NICs threshold compared with 99% in the richest 10%. Average gains among winners are also larger for richer households.

- Second, households nearer the bottom of the income distribution get a larger share of their income from benefits, rather than earnings. Since benefits are unearned income and so not subject to NICs, this means that the policy has a smaller impact on their incomes in proportional terms.

- Finally, because universal credit and council tax support are assessed on the basis of net-of-tax incomes, many low-income households lose benefits as they gain from the higher NICs threshold. Of all households in the bottom 10% of the income distribution that gain from the policy, nearly two-thirds (62%) have some of their gains offset by withdrawn benefits.

Increasing work allowances

Raising the starting point for paying NICs would be the best way to help low earners by cutting direct taxes. But as we show above, the policy would be expensive and largely benefit richer households, without benefiting the very lowest earners.

Low-income working households could be better targeted by increasing work allowances under universal credit. This is the amount claimants can earn before they start losing their universal credit, at a rate of 63p for every additional pound earned net of income tax and NICs. As with the NICs threshold, work allowances can be used to target only those families with someone in paid work.

An alternative policy would be to reduce the rate at which universal credit is withdrawn as family earnings increase above the work allowance (the so-called 'taper rate'), as was done in 2017. This would also focus support on low earners, though it would be slightly less progressive than raising the work allowance, as those earning less than the current work allowances would not benefit and universal credit recipients with the highest earnings (although still relatively low earners when compared with the population at large) would benefit more in cash terms than those with lower earnings.[36] In this subsection, we focus on raising work allowances, which is more directly analogous to raising the threshold for paying NICs.

There are at least four important reasons why raising universal credit work allowances has a different distributional impact from raising the NICs threshold:

- First, higher work allowances would benefit the very-lowest-earning people, not just those earning more than the current NICs threshold. As stated above, the bottom 12% of the earnings distribution currently pay no NICs.

- Second, universal credit entitlements are assessed based on family incomes, whereas the NICs system is entirely based on individual earnings. Individuals with low earnings are not always individuals in low-income households, in particular because low earners sometimes have a higher-income partner. If the aim is to focus resources on the lowest-income households, as would often be the case where the underlying concern is poverty and low living standards, then this is an advantage of using the benefit system rather than the tax system.

- Third, raising the NICs threshold reduces taxes paid by high earners as much as low earners (in cash terms), and is therefore an expensive way to boost incomes at the bottom. Because universal credit is restricted to families on relatively low incomes,

[36] The two policies also have different (not straightforwardly ranked) effects on work incentives, as discussed in the IFS submission to the Work and Pensions Committee's universal credit roll-out inquiry: https://www.ifs.org.uk/publications/10334.

raising work allowances can more tightly focus any increase in generosity on the poorest.

- Fourth, cuts in NICs are partly (and in a small number of cases fully) offset by reductions in benefits for those on the lowest incomes, because universal credit and council tax support are assessed against net-of-tax income. Channelling support through the benefit system, instead of the tax system, avoids this result.

There are always drawbacks of increasing means-tested benefits too. There can be both hassle and stigma involved in claiming means-tested benefits, and some families do not claim their entitlement – issues that are avoided with cuts to personal taxes which feed through automatically. Raising work allowances would increase the number of families on universal credit, which would increase administration costs (though those costs would be dwarfed by the costs of giving a NICs cut not only to low-income families but to millions of others as well). And the impacts on financial work incentives would not be uniformly positive, as explained below.

There have been a number of cuts to universal credit work allowances since the 'finalised' allowances were first announced in the 2012 Autumn Statement. In 2013 and 2014, work allowances were frozen in cash terms until 2017–18. Budget 2015 further reduced the levels at which work allowances were set, and abolished allowances altogether for non-disabled families without children. Budget 2018 rowed back on some of these cuts, raising work allowances by £1,000 a year, but only for family types for whom work allowances had not already been abolished entirely.

The overall effect of these policies is that work allowances are much lower than originally planned for most family types, meaning more families are getting their benefits clawed back. Table 8.4 shows the current work allowances in 2019–20, and what they would have been had they been set and uprated according to the plans in 2012. For most family types, work allowances are lower now than they would be under the 2012 plans; for childless families, work allowances have been removed entirely. For example, lone parents who own their home can earn £6,036 a year before seeing their benefits withdrawn (equivalent to working 14 hours a week on the national living wage), but could have earned £9,552 a year in today's prices had work allowances remained at their planned 2012 levels (equivalent to working 22 hours per week on the national living wage). The exceptions are couples with children and disabled families that claim support for housing costs, for whom work allowances today are more generous than initially conceived, and lone parents who claim support for housing costs, whose work allowances are as intended in 2012.

Reinstating the 2012 plans for all family types for whom work allowances have since fallen[37] would benefit the poorest fifth of households more than even the most generous variant of the NICs policy (raising all NICs thresholds to £12,500). Assuming full take-up of universal credit, the poorest 10% of households would see their incomes rise by 0.8% on average, by around £80 a year, substantially more than the 0.0–0.2% increase under the different NICs options set out above. Unlike raising the NICs threshold, no households would lose from raising work allowances.

[37] That is, for all family types except couples with children and disabled families that claim support for housing costs. Hereon we refer to this simply as 'reinstating the 2012 plans'.

Table 8.4. Planned and current universal credit work allowances in 2019–20, £ per month

Family type	2012 planned allowances	2019–20 allowances	% difference
Not claiming support for housing costs			
Single, no children	£120	£0	–100%
Lone parent	£796	£503	–37%
Couple, no children	£120	£0	–100%
Couple with children	£581	£503	–13%
Disabled	£703	£503	–28%
Claiming support for housing costs			
Single, no children	£120	£0	–100%
Lone parent	£287	£287	0%
Couple, no children	£120	£0	–100%
Couple with children	£240	£287	20%
Disabled	£209	£287	37%

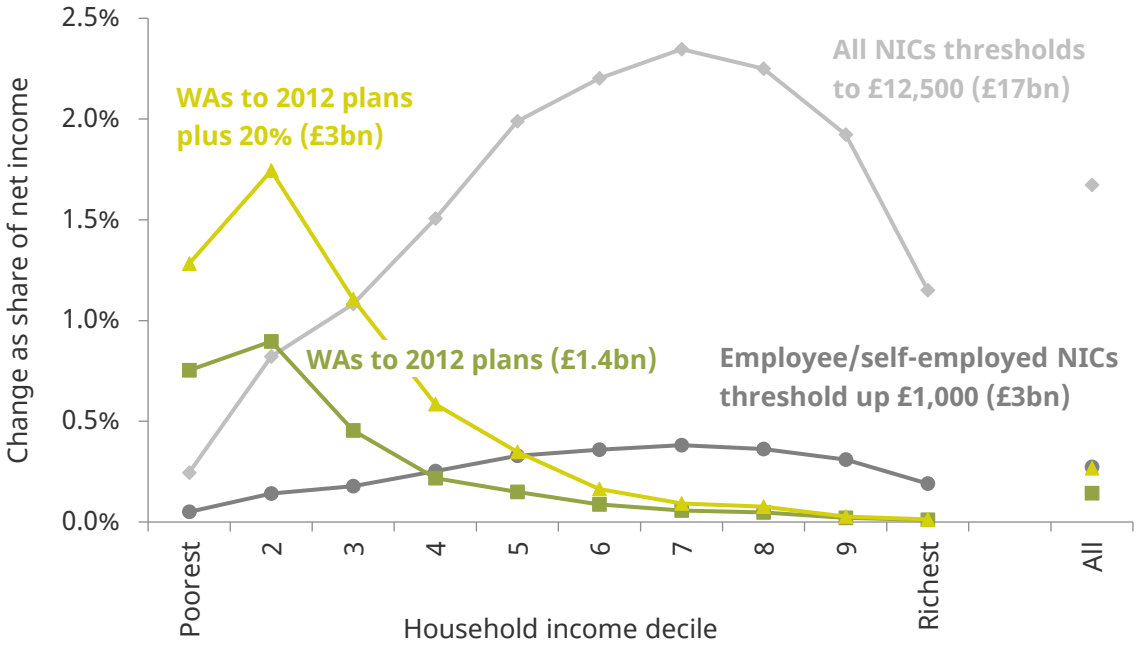
Note: 2012 planned levels are uprated to 2019–20 using the method set out in the 2012 Autumn Statement: rising by 1% a year in 2014–15 and 2015–16 and with inflation thereafter.

Source: Office for Budget Responsibility, *Economic and Fiscal Outlook: March 2019*, https://obr.uk/efo/economic-fiscal-outlook-march-2019/ and J. Browne, A. Hood and R. Joyce, 'The (changing) effects of universal credit', *The IFS Green Budget: February 2016*, https://www.ifs.org.uk/uploads/gb/gb2016/gb2016ch10.pdf.

Nearly half (46%) of the gains from restoring the planned 2012 work allowances would accrue to the poorest fifth of households. In comparison, only 3% of the gains from (any option for) raising the NICs threshold would accrue to the bottom fifth. Because they concentrate gains on low-income households, raising work allowances to (at least) their planned 2012 levels would cost just £1.4 billion – half the cost of raising employee and self-employed NICs by £1,000, and less than a tenth of the cost of aligning all NICs thresholds with the personal allowance threshold.

The distributional consequences of reinstating 2012 work allowances, compared with the least and most generous variants of the NICs policy we consider, are shown in Figure 8.9. A government looking to put more money in the pockets of low earners could go one step further. At the same cost to the exchequer as raising employee and self-employed NICs thresholds by £1,000 (£3 billion), it could restore 2012 work allowances and further increase all work allowances by 20%. Such a policy would benefit the bottom half of the income distribution significantly more than the corresponding NICs cut. The poorest tenth of households, who barely benefit at all from the change in NICs thresholds, would see their net incomes rise by 1.3% on average (around £140 a year), compared with just 0.1% (£5 a year) under the NICs cut of the same cost. Average net incomes for those in the second poorest decile of households would rise by 1.7%, or around £310 a year, compared with 0.1% (£25 a year) under the corresponding NICs cut.

Figure 8.9. Distributional effects and cost of raising NICs thresholds and universal credit work allowances (WAs)



Note: 'WAs to 2012 plans' refers to reinstating 2012 plans for all family types for whom work allowances have since fallen – that is, not for couples with children and disabled families claiming support for housing costs, for whom current work allowances are more generous. Assumes full take-up of benefits. Income deciles are derived by dividing all households into 10 equal-sized groups according to income adjusted for household size using the modified OECD equivalence scale.

Source: Authors' calculations using Family Resources Survey 2017–18 and TAXBEN, the IFS microsimulation model.

Increasing work allowances would also have different effects on work incentives from raising the NICs threshold. The financial incentive to be in work at all, and the financial incentive to increase earnings slightly, can be summarised by the participation tax rate (PTR) and effective marginal tax rate (EMTR) respectively.[38] In both cases, higher effective tax rates indicate weaker work incentives.

Raising the NICs threshold slightly strengthens the incentive to be in paid work for those whose earnings exceed the current NICs threshold. Raising employee and self-employed NICs by £1,000 would reduce the PTRs of 25 million people by 0.5 percentage points on average. It would also strengthen the incentive to earn a little more for 0.6 million workers earning between the current and proposed NICs thresholds, reducing their EMTRs by 10 percentage points on average.[39] But it has no effect on work incentives for the very lowest earners, who are not affected by the policy. Nor does it affect the incentive to earn a little more for workers earning more than the proposed NICs threshold.

[38] The PTR is the average tax rate an individual faces. The EMTR is the share of every additional pound of earned income that is lost to taxes and reduced benefits.

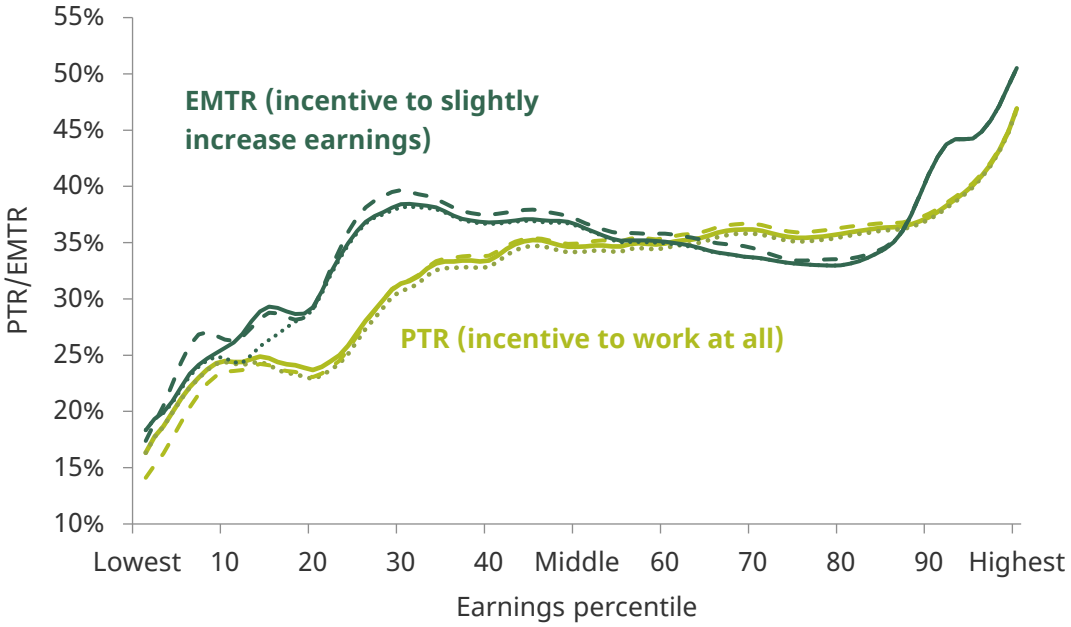
[39] The policy reduces EMTRs for this group by at most 12 percentage points (the current NICs rate). The effect is smaller for those in receipt of universal credit and/or council tax support, who lose benefits as their net incomes increase.

Higher work allowances mean stronger financial incentives to have at least one person in the family in paid work. But because they give some families more universal credit than they would have had, whilst not changing the fact that families will lose universal credit if their combined earnings rise high enough, they tend to mean weaker financial incentives to have a second person in paid work. They can also either strengthen or weaken incentives for some people already in work to increase earnings further, depending on the details of their circumstances.

Restoring 2012 work allowances and further increasing all work allowances by 20% would strengthen incentives to be in paid work (that is, reduce PTRs) for 0.7 million people in the bottom 10% of the earnings distribution, and weaken incentives to be in paid work for 0.2 million people in the bottom 10%, with the remaining 2.1 million unaffected. Of those who see their PTRs rise, 0.1 million see a rise of over 10 percentage points, and of those who see their PTRs fall, 0.3 million see a fall of over 10 percentage points. The policy very slightly weakens average incentives to be in paid work for people further up the earnings distribution. Among those above the 10th percentile of earnings, 4.4 million see their PTRs rise (0.2 million by more than 10 percentage points) and 2.3 million see their PTRs fall (0.3 million by more than 10 percentage points).

The policy strengthens incentives to earn slightly more for 0.4 million people across the earnings distribution and weakens them for 0.5 million people. On average, EMTRs under increased work allowances are very slightly (0.6 percentage points) higher than under the current system. Of those who face weaker incentives to earn slightly more under the

Figure 8.10. PTR and EMTR in current system (solid line), raising employee/self-employed NICs threshold by £1,000 (dotted line) and increasing 2012 planned work allowances by 20% (dashed line)



Note: PTR and EMTR curves have been smoothed. Only estimated for people in paid work.

Source: Authors' calculations using Family Resources Survey 2017–18 and TAXBEN, the IFS microsimulation model.

policy, nearly all see their EMTRs rise by more than 10 percentage points, and of those who face stronger incentives, 0.1 million see their EMTRs fall by more than 10 percentage points.

Figure 8.10 shows average PTRs and EMTRs at different levels of earnings under the current system (solid line), the policy of raising the employee and self-employed NICs threshold by £1,000 (dotted line), and the alternative policy of raising work allowances with the same total cost (dashed line).

One could introduce further reforms to try to mitigate adverse effects of work allowances on work incentives; for example, one could introduce a separate work allowance for second earners. But the basic point remains that any increase in a means-tested benefit will weaken work incentives for some people. Notwithstanding these caveats, raising universal credit work allowances is clearly a much more cost-effective way of targeting support at low-earning families than raising the NICs threshold.

8.5 Conclusion

The government has expressed a desire to cut incomes taxes and National Insurance contributions, with the stated aims of taking people out of higher-rate tax, helping low earners and stimulating the economy. We estimate that the proposed rise to the higher-rate threshold would cost at least £9 billion if implemented in the next fiscal year, and it would take the number of higher-rate taxpayers to its lowest level since the UK's individual income tax system began in 1990–91. Raising the point at which people start paying NICs would cost around £3 billion for each £1,000 that it is raised, or £5 billion if employer NICs were included.

The combined cost of the policies depends on how gradually the HRT is raised, how much the NICs thresholds are raised by, and whether the increase applies to employer NICs. If the higher-rate threshold is raised to £80,000 in 2020–21, the total cost to the exchequer is around £19 billion if employee and self-employed (but not employer) NICs thresholds are raised to £12,500, and around £12 billion if they are raised by £1,000. If employer NICs are raised in tandem, the estimated costs would be £26 billion and £13 billion respectively. To put these numbers in further context, they would imply a drop in revenue from income tax and National Insurance contributions of 3–7%.

As we have outlined in this chapter, both of these policies on their own benefit high earners more, so it is not surprising that their combined effect does as well. The richest tenth of households could gain up to £3,500 a year if the higher-rate threshold is raised in 2020–21 and all NICs thresholds are aligned with the personal allowance, whilst the poorest tenth of households would gain less than £30 a year on average.

Given the government's intention to overhaul the direct tax system radically and the amount of money it appears willing to spend, it would do well to take the opportunity to rectify deficiencies in the current system in the process. In particular, it should remove the arbitrary and opaque spike in marginal tax rates caused by the withdrawal of the personal allowance from £100,000. To offset some of the cost, the government could allow the 45% rate to kick in at the (new, higher) higher-rate threshold. Doing so would largely preserve the tax cut to those on high incomes that the prime minister clearly intends. It would

return us to a simpler income tax system with just two rates (20% and 45%), in line with the chancellor's stated aim to simplify the tax system. It would cost £1 billion more than the prime minister's plans, but could be made revenue neutral (with respect to the prime minister's plans) by setting the higher-rate threshold at £75,000 rather than £80,000.

Successive governments have fallen prey to the temptation to fixate on the totemic income tax at the expense of NICs, distorting tax policy – for example, by raising the income tax personal allowance considerably since 2010 while doing nothing to the point at which NICs become payable. One might then consider the prime minister's focus on NICs both welcome and long overdue. That said, a primary stated objective of this is to help the low-paid. There are better-targeted ways of doing that than any changes to direct taxes. Only 3% of the total tax cut from (any variant of) raising the NICs threshold accrues to the lowest-income fifth of households. The government could target low-earning families much more effectively by raising work allowances under universal credit, which would deliver higher benefits to the lowest-paid working households for a fraction of the cost.

9. A road map for motoring taxation

Stuart Adam and Rebekah Stroud (IFS)

Key findings

- **Driving imposes costs on wider society. According to government estimates, the biggest of these by far is congestion (80% of the total).** Government estimates for 2015 suggest that each additional kilometre driven caused an average of 17p of societal harm. Other costs include accidents, greenhouse gas emissions, local air pollution and noise. While the additional cost of greenhouse gas emissions, at 1p per kilometre driven, may sound small, this still equates to £4 billion per year across the UK.

- **Fuel duties and the VAT paid on them account for more than four-fifths of revenue from motoring taxation and they are very well targeted at emissions. But they do a poor job of capturing the costs of congestion**, which vary hugely by time and place. Fuel duty rates are set higher than can be justified by emissions alone, but are much too low – and too poorly targeted – to reflect the costs of congestion.

- **Fuel duties have a roughly equal impact (as a share of spending) across the income distribution, but among car owners make up a greater share for lower-income households.** For nearly one household in twenty, fuel duties (and the VAT on them) make up a tenth of their total non-housing budget and for many driving is a necessity, one reason why this is an unpopular tax.

- **A 2p/litre cut in fuel duty rates would cost about £1 billion a year. But revenue from existing motoring taxes (which raise £40 billion a year) will all but disappear anyway in the next few decades** if the government's goal of achieving zero net emissions by 2050 is met.

- **This means the government needs to rethink how it taxes motoring. It should start now**, before the revenue disappears and expectations of low-tax motoring become ingrained. It should lay out how it plans to tax low-emissions driving in the long term whilst incentivising the take-up of lower-emissions cars in the short term.

- **A system of road pricing where charges vary by time and location is the best way to incorporate the costs of congestion into the prices paid by drivers.** Such systems are technologically feasible and are used in a number of cities worldwide. Failing that – or, better, as a stepping stone towards it – the government could introduce a flat-rate tax per kilometre driven, which would at least continue to raise revenue and discourage driving once alternatively fuelled vehicles replace petrol and diesel ones.

- **In the meantime, with conventionally fuelled cars still common, the government should move to monthly indexation of fuel duties in line with the Consumer Prices Index.** There is no case for the recurrent ritual of the past eight years, when planned inflation uprating of fuel duties has been repeatedly cancelled for one more year while assumed to recommence thereafter. But to tackle the harm that driving does, now and in the future, the government should look beyond the existing set of taxes.

9.1 Introduction

Taxes on motoring raise around £40 billion a year for the exchequer (around 5% of government revenue), equivalent to about £750 per adult in the UK. They also affect people's decisions about the vehicles they buy and how much, when and where they drive them. This is important because motoring gives rise to a number of social costs that would not otherwise be reflected in the prices people pay – such as congestion, greenhouse gas emissions, local air pollution, accidents and noise. Well-designed motoring taxes can be used to influence these behaviours and reduce the social costs associated with driving.

Most of the revenue from taxes on motoring comes from fuel duties, which in 2019–20 are expected to raise £28 billion in their own right. Fuel duties are also subject to VAT at the standard rate of 20%, which raises an additional £5.7 billion. Another £6.5 billion comes from vehicle excise duty (VED) and £0.2 billion from the London congestion charge.

Revenues from existing motoring taxes are threatened by ever-increasing fuel efficiency and the prospect of a widespread shift towards electric, hybrid and other alternatively fuelled cars. Good news for emissions is bad news for the government coffers. And improvements in fuel efficiency and the advent of alternatively fuelled cars are not the only ways in which the nature of motoring has been changing or is predicted to change:

- Among conventionally fuelled cars, the relative prevalence of petrol and diesel has shifted back and forth, encouraged by the government, in response to changing views on the environmental damage caused by the two fuels.[1]

- The provision of cars and fuel by companies for their employees' use has seen a long-term decline.

- Leasing cars rather than buying them outright is becoming more common among both businesses and households.

- The prospect of autonomous (driverless) cars in widespread use seems ever less distant, and may be accompanied by a shift away from traditional car ownership and use towards 'motoring as a service' (automated cars operating more like taxis but with more ride sharing and closer integration with public transport).

These actual and potential changes in the nature of motoring have wide-ranging implications both for the harms that it causes and for revenue from existing motoring taxes. Policy needs to respond appropriately. In this chapter, we examine both how satisfactorily tax policy treats motoring as we find it today and how it might be made ready for the future. Section 9.2 quantifies the social costs associated with motoring and Section 9.3 explains how motoring taxes can be used to incorporate these costs into the prices paid by people. In Sections 9.4–9.7, we discuss each of the four main current motoring taxes (fuel duties, vehicle excise duty, the London congestion charge and company car taxation) and the degree to which they accord with the economic principles

[1] Between 2002 and 2012, the number of new diesel cars sold in the UK almost doubled from half a million to a million while the number of petrol cars halved from over two million to less than one million; the number of petrol cars has been rising since then, while the number of diesel cars has fallen sharply since 2017 ('Cars registered for the first time by propulsion and fuel type: Great Britain', https://www.gov.uk/government/statistical-data-sets/veh02-licensed-cars).

set out in Section 9.3. Section 9.8 rounds up the discussion by considering the challenges for the government going forward and how it should reform motoring taxes to reflect better the true costs of motoring. Section 9.9 concludes.

In this chapter, we restrict our attention to cars. Many of the same considerations apply to other forms of road transport such as lorries and motorbikes, though there are some differences in the policy environment and the societal costs of these forms of transport which affect policy considerations.

9.2 The social costs of motoring

Motoring has a number of wider costs to society (known as externalities) that are not reflected in the prices that people pay. These costs include congestion, accidents, greenhouse gas emissions, noise and local air pollution. One important rationale for motoring taxes is that they can help to discourage the behaviour that gives rise to these costs.

How big are these social costs and how are they changing?

Table 9.1 shows the Department for Transport's official estimates of the average externality from a marginal (i.e. one extra) kilometre (km) driven in Great Britain, in 2015 and 2025. Despite the focus on emissions in public policy debate, these figures show that congestion is by far the largest component of the external cost of additional driving, accounting for almost 80% of the total in 2015. The exact numbers are highly debatable: it is difficult to put a precise cash figure on the cost of greenhouse gas emissions or time spent in traffic jams.[2] But all serious estimates (both academic and official) that we know of tell this same basic story. This is not to downplay the problem of climate change or air pollution: an externality of 1p/km still values emissions from cars at £4 billion per year.[3] Rather, it highlights how much of people's time is wasted sitting in traffic that is created collectively by other drivers. This is time that people could spend producing valuable goods and services, or enjoying precious time at home and leisure pursuits.

As shown in Table 9.1, the cost of congestion is expected to rise over the next few years, even as the costs related to greenhouse gas emissions and local air pollution are expected to fall. Those trends are expected to continue for at least another decade after that. The congestion forecasts are based on an expected rise in the number of vehicles on the road and the distance travelled by each, and an expected fall in available road space due to its allocation to buses, cyclists or roadworks.[4] They also assume that the value of people's

[2] The valuation of emissions in Table 9.1 is based on the standard estimate of the cost of carbon provided in the 'Green Book' guidance for government appraisal. The valuation of time lost to congestion is ultimately derived from questionnaires asking respondents to choose between hypothetical slower-but-cheaper and quicker-but-dearer options (and estimated separately for working and non-working time, etc.).

[3] This is simply 1p for each of the 410 billion kilometres driven by cars in 2018 according to Department for Transport, 'Road traffic statistics (TRA02)', 14 May 2019, https://www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra. In the context of global greenhouse gas emissions, it seems reasonable to assume that the cost of emissions from the first kilometre driven in the UK is the same as that from the last.

[4] Department for Transport, 'TAG UNIT A5.4: marginal external costs', 2014, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/286935/webtag-tag-unit-a5-4-marginal-external-congestion-costs.pdf.

Table 9.1. External costs of motoring (2019–20 prices)

	Marginal external cost of motoring (pence/km)		% of total	
	2015	**2025**	**2015**	**2025**
Congestion	13.2	20.3	77.9	82.9
Accidents	2.2	2.9	13.1	11.9
Greenhouse gases	0.9	0.8	5.5	3.3
Local air quality	0.3	0.1	2.1	0.5
Noise	0.1	0.2	0.7	1.0
Infrastructure	0.1	0.1	0.7	0.5
Total	*16.9*	*24.5*	*100*	*100*

Note: Figures are for cars only.

Source: Table A5.4.2 of Department for Transport, WebTAG Databook, May 2019, converted to 2019–20 prices using the GDP deflator.

time spent in congestion will increase in line with national income per person.[5] Note that the forecasts ignore the advent of autonomous vehicles and possible shifts towards motoring as a service. There is no consensus as to how these will affect congestion, though the change could be substantial.[6] But unless the number of cars on the road drastically decreases, it is likely that congestion will remain the biggest external cost of motoring for the foreseeable future.

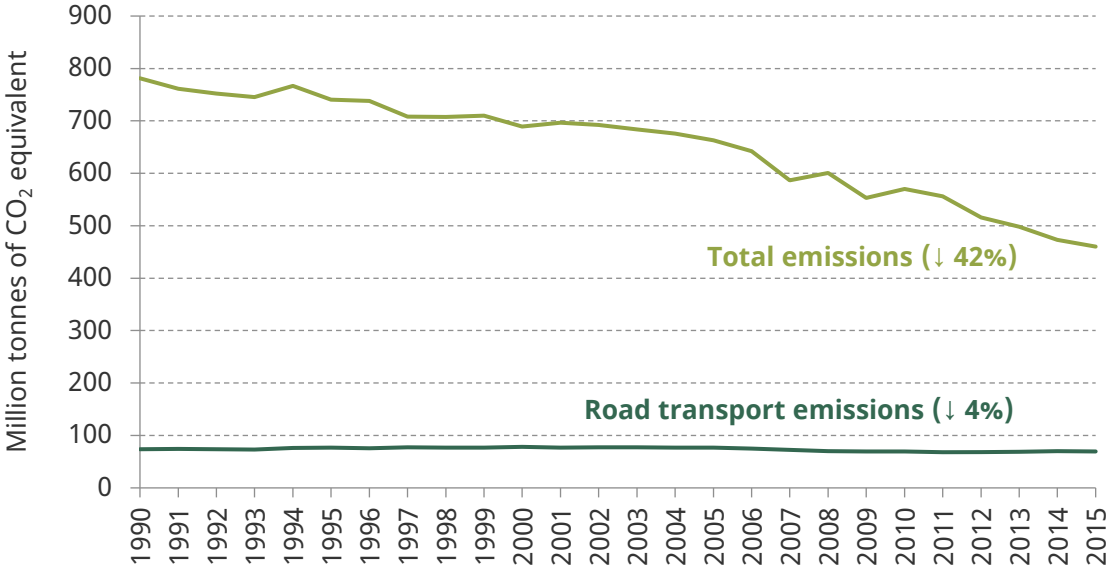
While congestion deserves more attention, the focus on emissions in the public and policy debate is not misplaced. Climate change is one of the biggest challenges facing the world in the coming decades, and motoring accounted directly for 15% of the UK's greenhouse gas emissions in 2017. This is up from 9% in 1990 since, as shown in Figure 9.1, the UK's progress in reducing other greenhouse gas emissions (such as from the energy sector) has not been matched in emissions from motoring.[7]

[5] Department for Transport, *Road Transport Forecasts 2018*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740399/road-traffic-forecasts-2018.pdf.

[6] Michael Dnes, 'Roads to Tomorrow', Wolfson Prize submission, 2017 (unpublished, but as cited in G. Raccuja, 'Miles better', Wolfson Economics Prize winner, 2017) points out a number of factors that might increase congestion (cars becoming cheaper and less troublesome to drive, access to private vehicles for groups currently unable to drive, substitution from public transport to ride sharing) and a number of factors that might reduce congestion (more efficient driving, fewer accidents, different ownership structures encouraging more ride sharing and bus-like travel, movement of freight travel to night time). The likely net effect of these competing forces is unclear.

[7] These figures include vehicles' exhaust pipe emissions, but not the emissions from their manufacture or in generating electricity for plug-in or battery-operated cars. These emissions are important but are not separately identified in these data.

Figure 9.1. UK greenhouse gas emissions (CO_2 equivalent)



Note: 'Equivalent CO_2 emissions' indicates the quantity of CO_2 emissions that would have the equivalent global warming impacts to the combination of greenhouse gases that was emitted. Numbers in parentheses show the fall from 1990 to 2017.

Source: Department for Business, Energy & Industrial Strategy, 'Final UK greenhouse gas emissions national statistics: 1990-2017', 2019, https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-2017.

The expected fall in the emissions cost of motoring shown in Table 9.1 reflects forecast changes in the number of vehicle-kilometres driven per year and changes in emissions per kilometre. This fall is likely to be seen not only in the next five years but also in the longer term: the government has committed to reaching zero net emissions for the UK as a whole by 2050, and given motoring's contribution to UK emissions, decarbonising road transport must inevitably play a major role in that. In 2018, the government published *The Road to Zero*, its strategy for moving to zero-emission road transport.[8] Its targets include:

- 50–70% of new cars being ultra-low emission by 2030;
- banning the sales of new conventional petrol and diesel cars by 2040;
- 'almost every car' being zero-emission by 2050.

We are currently a long way from reaching any of these goals. Although there was a 22% increase in the number of alternatively fuelled new cars registered last year, they still make up only 6% of all new cars registered, and around two-thirds of these are hybrids, meaning that they still give rise to some emissions.[9] The UK Energy Research Centre found that the 2040 ban on sales of conventionally fuelled cars will not be enough to eliminate emissions from cars by 2050 and is unlikely to result in even an 80% reduction, because

[8] https://www.gov.uk/government/publications/reducing-emissions-from-road-transport-road-to-zero-strategy.

[9] Department for Transport, 'Vehicle licensing statistics: 2018', 2019, https://www.gov.uk/government/statistics/vehicle-licensing-statistics-2018.

many cars remain on the road for longer than 10 years and because the ban does not apply to hybrid cars.[10] In order to meet the 2050 target, the Climate Change Committee and two parliamentary Select Committees (the Science and Technology Committee and the Business, Energy and Industrial Strategy Committee) have all recommended that the ban be brought forward (to 2035, 2035 and 2032 respectively) and that it should apply to hybrids as well as conventional petrol and diesel cars.[11] As electric vehicles become more widespread, it will become increasingly important that the electricity powering these vehicles is also generated in a clean way.

Alongside tax policy, a key factor driving falling greenhouse gas emissions per kilometre is ever-tightening regulations. The latest EU rules – which the UK has signed up to regardless of the Brexit outcome – require car makers to reduce the average emissions of the cars they sell across the EU from 120gCO_2/km in 2018 to 95gCO_2/km by 2021,[12] with even more stringent limits for 2030. Eye-watering fines for missing these targets mean that car makers are making strenuous efforts to meet them. But they will be extremely challenging, and in fact greenhouse gas emissions of new cars actually rose in 2017 and 2018 (after falling consistently for many years) because of a shift from diesel to petrol cars (discussed further in Section 9.5), which cause less local air pollution but more greenhouse gas emissions.

EU regulations have been just as important in driving reductions in local air pollutants as greenhouse gas emissions. The Department for the Environment, Food and Rural Affairs found that emissions of nitrogen oxides and particulates from road transport fell by 77% and 50% respectively from 1990 to 2017.[13] With the introduction of the latest standards, Table 9.1 shows that the costs of local air pollution are expected to fall by another two-thirds from 2015 to 2025, an even more rapid decline than for greenhouse gas emissions.

How do these social costs vary across journeys?

Table 9.1 shows the *average* external costs of each kilometre driven (holding all other driving constant in each case). But the costs of any particular journey depend not only on how long the journey is, but also on when and where it takes place and on what type of car is being driven.

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[10] UK Energy Research Centre, 'Review of energy policy: 2018', 2018, http://www.ukerc.ac.uk/publications/review-of-energy-policy-2018.html.

[11] Committee on Climate Change, 'Net Zero: the UK's contribution to stopping global warming', 2019, https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/; House of Commons Science and Technology Committee, 'Clean growth: technologies for meeting the UK's emissions reduction targets', https://www.parliament.uk/business/committees/committees-a-z/commons-select/science-and-technology-committee/news-parliament-2017/clean-growth-report-published-17-19/; House of Commons Business, Energy and Industrial Strategy Committee, 'Electric vehicles: driving the transition', https://www.parliament.uk/business/committees/committees-a-z/commons-select/business-energy-industrial-strategy/news-parliament-2017/electric-vehicles-report-published-17-19/.

[12] The target is higher for companies making big cars and lower for those making small cars, and companies can also pay each other to pool their measured emissions, in effect buying the headroom that another manufacturer might have against the target. See https://ec.europa.eu/clima/policies/transport/vehicles/cars_en.

[13] Authors' calculations using https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/778483/Emissions_of_air_pollutants_1990_2017.pdf.

Greenhouse gas emissions are generated by fuel consumption, so are lower for more fuel-efficient cars, and also vary by fuel type. Diesel cars typically give rise to 15–20% less CO_2 than petrol cars per kilometre driven (despite giving off more CO_2 per litre of fuel burned)

Table 9.2. Marginal congestion externality by road type, 2015 (in 2019–20 prices)

	Marginal congestion externality (p/km)	% of total traffic
London motorways	0.1	0.3
London A roads	80.6	3.5
London other roads	53.5	2.5
Conurbations motorways	1.9	4.6
Conurbations A roads	38.4	6.1
Conurbations other roads	27.4	7.0
Urban A roads	15.5	12.3
Urban other roads	12.0	12.5
Rural motorways	1.1	14.1
Rural A roads	2.6	23.2
Rural other roads	3.4	14.0
Overall	*13.2*	*100*

Note: Figures are for cars only. Conurbations include major cities outside London such as Birmingham and Manchester and their surrounding areas. Urban areas are defined as smaller cities and towns. Full details are given in Department for Transport, 'TAG UNIT A5.4: marginal external costs', 2018, https://www.gov.uk/government/publications/webtag-tag-unit-a5-4-marginal-external-costs-may-2018.

Source: Tables A5.4.1 and A5.4.2 of Department for Transport, WebTAG Databook, May 2019, converted to 2019–20 prices using the GDP deflator.

Table 9.3. Marginal externality of congestion by period, 2015 (in 2019–20 prices)

	Marginal congestion externality (p/km)	% of total traffic
Mon–Fri peak AM	19.1	15.9
Mon–Fri inter-peak	12.7	24.2
Mon–Fri peak PM	21.1	18.8
Mon–Fri other	5.7	15.4
Sat–Sun average	12.9	25.6
Overall	*13.2*	*100*

Note: Figures are for cars only. Peak hours are 7:00a.m. to 10:00a.m. and 4:00p.m. to 7:00p.m.

Source: Tables A5.4.3 and A5.4.4 of Department for Transport, WebTAG Databook, May 2019, converted to 2019–20 prices using the GDP deflator.

as they tend to require less fuel to cover a given distance.[14] Alternatively fuelled vehicles (most of which are hybrid cars) emit, on average, 45% less CO_2 than the average car on the market,[15] with electric cars having zero emissions at the point they are driven. Despite outperforming petrol cars in terms of greenhouse gas emissions, diesel cars (particularly old diesel models) perform far worse than petrol cars in terms of the local air pollution they generate.[16]

Other costs such as congestion, noise and accidents depend not on car type but on when and where the journey takes place. Table 9.2 shows how the marginal congestion externality varied, on average, across different types of road and parts of Great Britain in 2015. The costs of congestion are particularly high on London A roads: over six times the average and 25–75 times larger than in rural areas. These are averages over all roads within these broad categories and across all times of day, so will drastically understate the variation in cost of congestion. Table 9.3 shows that the average externality also varies substantially across time of day. As we discuss further in Section 9.4, most driving creates minimal congestion costs; the vast majority of these costs is generated by a very small proportion of journeys.

9.3 Using taxes to correct for the external costs of motoring

Motoring taxes bring in valuable revenue for the government. But the rationale for levying taxes specifically on motoring, rather than getting the revenue from more general taxes, is because of the harm that motoring does to wider society. The aim of motoring taxation should be to apply a price to driving that reflects the costs it imposes on others (as described in Section 9.2), so that the driver 'internalises' the external cost of her behaviour. An appropriately designed system of motoring taxation means that people will be induced to take appropriate account of the social consequences of their actions when choosing whether to buy a car and which one, and how much, when and where to drive it.

An advantage of using taxation in this way (rather than, say, mandating particular behaviour) is that it reduces social harms in an efficient way – that is, in whatever way drivers find easiest. Driving a particular car, or at a certain time and place, is so important to some people that it is worth their doing it despite the harms imposed on others. Put another way, the driver would in principle be willing to pay others enough to offset the harm imposed on them. Putting a price on the externality is essentially a version of this: drivers are asked to pay a price that reflects the harm their behaviour does to others, and can choose either to pay the price (if it is worth it to them) or to change their behaviour. This means that congestion or emissions will be reduced most by those who find it easiest to do so, minimising the costs of behaviour change and maximising people's well-being.

This explains how motoring taxes can, in theory, be used to reduce driving's costs to society in an efficient way. But in practice, doing this effectively requires targeting the externalities accurately. Badly targeted taxes will change the wrong behaviours, imposing costs of unnecessary behaviour change and reducing success in mitigating true social harms. In an ideal world, the government would tax each kilometre driven by exactly the

[14] SMMT, 'New car CO_2 report 2018', https://www.smmt.co.uk/wp-content/uploads/sites/2/SMMT-New-Car-Co2-Report-2018-artwork.pdf.

[15] Ibid.

[16] https://www.racfoundation.org/motoring-faqs/environment.

same amount as the social costs it generates. But in practice, since the social costs of motoring vary a lot depending on when, where and in what kind of vehicle a journey takes place, to implement the ideal system the government would need both very good information on social costs and a very flexible tax system to take them into account. This is usually impractically hard.

Instead, policymakers look for something closely related to the externality that can more easily be measured and taxed. Greenhouse gas emissions closely mirror fuel use, meaning that a tax on fuel is well targeted at reducing emissions. Congestion, on the other hand, varies enormously by time and place in a way that, among our existing motoring taxes, only the London congestion charge even attempts to capture.

In the next four sections, we assess the UK's existing motoring taxes, with a particular focus on how well they target the externalities created by driving. We then turn in Section 9.8 to consider how motoring taxation might be reformed to address the challenges of the future.

9.4 Fuel duties[17]

Petrol and diesel are subject to excise duties of 57.95p/litre. Additionally, VAT is charged at the standard 20% rate on the price of fuel including the duty itself, meaning that 69.54p more tax is paid due to fuel duties than would be in their absence. No fuel duty is paid on electricity used by electric or hybrid vehicles and this electricity is also subject to a reduced VAT rate of 5%.

Figure 9.2. Distributional impact of fuel duty + VAT on duty

Source: Authors' calculations using TAXBEN run on uprated data from the 2015 Living Costs and Food Survey.

[17] Parts of this section draw heavily on S. Adam and T. Waters, 'Options for raising taxes', in C. Emmerson, C. Farquharson and P. Johnson (eds), *The IFS Green Budget: October 2018*, https://www.ifs.org.uk/publications/13495.

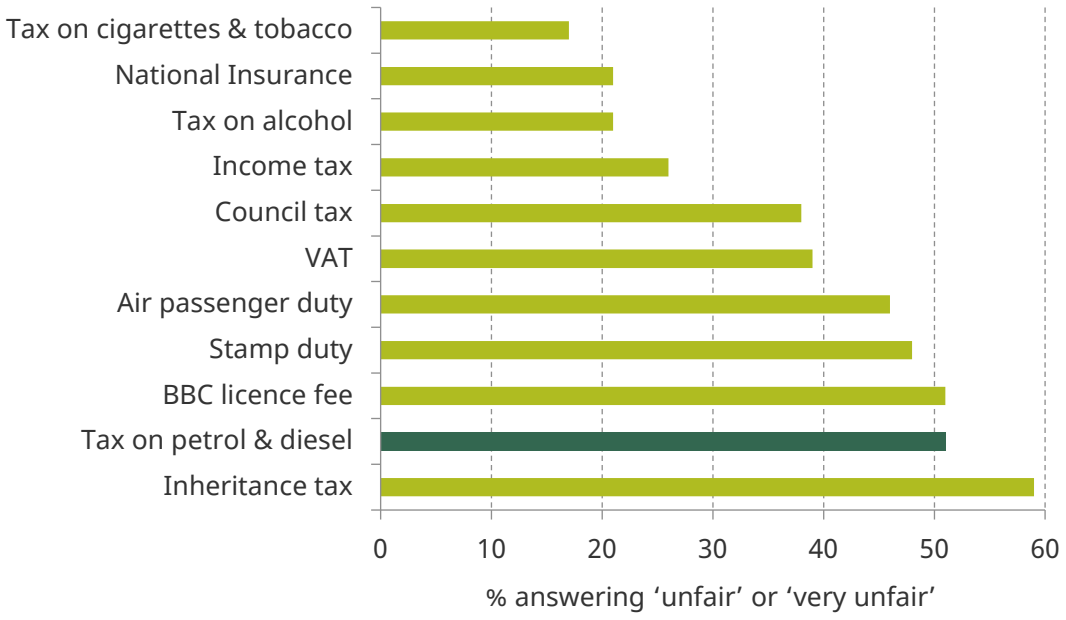
Figure 9.2 shows that the duties paid on households' fuel purchases are, on average, roughly proportional to household spending, accounting for between 2% and 3% of the non-housing budget for all income groups. Among car owners, fuel duties take up a larger share of poorer households' budgets. But since lower-income households are much less likely to own a car in the first place (in 2015 only half of those in the lowest income decile owned a car, compared with over 90% in the highest income decile), the average budget share across all households is broadly constant over the income distribution (though slightly lower for the poorest tenth and the richest tenth).

The burden of fuel duties varies widely within income groups. Right across the income distribution, around 4–5% of households find fuel duties (and VAT on the duties) consuming more than a tenth of their budget, and it is for these people that rates of fuel duties are a particularly sensitive issue.

The distributional impact of fuel duties paid by firms is harder to estimate: the duties are likely to increase the prices of goods and services that require transport, so it depends what kinds of households disproportionately buy the goods and services that require more road fuel to supply.

Whatever its distributional impacts, the unpopularity of fuel duties is clear. A 2015 YouGov survey (see Figure 9.3) found that just over half of respondents thought fuel duties were unfair; only inheritance tax received a more unfavourable response. It is particularly striking when contrasted with tobacco duties, which are highly regressive and which many economists would bracket with fuel duties as 'corrective taxes' designed to discourage harmful behaviour, but which were considered the fairest of the taxes listed. Evidently the harms that motoring causes do not make people think of fuel duties as a legitimate 'sin tax' like alcohol or tobacco duties. One reason for this may be that many people feel they

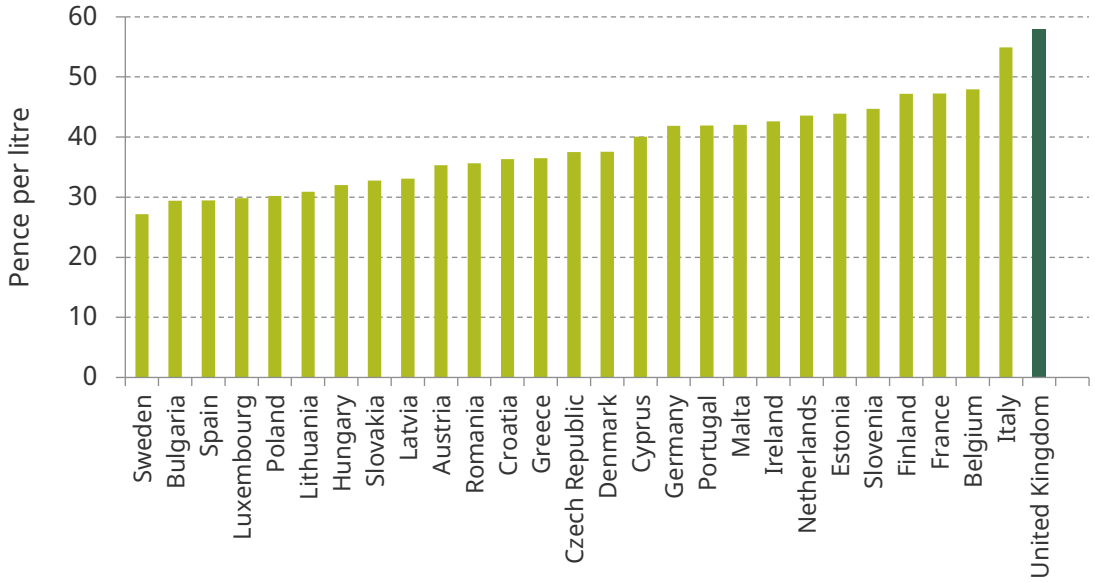
Figure 9.3. 'How fair or unfair do you think the following types of taxation are?'



Source: YouGov / Times *Red Box Survey*, March 2015, https://d25d2506sfb94s.cloudfront.net/cumulus_uploads/document/j9x8nbtks7/TimesRedBoxResults_150318_taxation_Website.pdf.

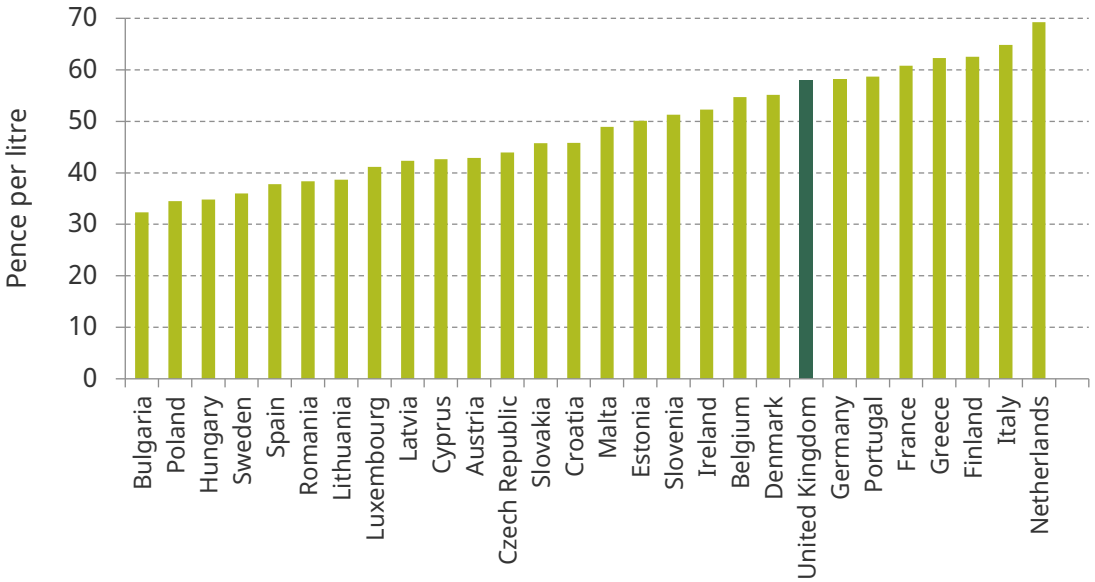
have little option but to drive – it may be their only way to get to work, for example – and resent being penalised for something they can do nothing about.

Figure 9.4. Diesel duties across the EU, 2018



Source: Fuel duty rates for all EU countries except the UK taken from https://www.eea.europa.eu/data-and-maps/daviz/road-fuel-excise-duties-5#tab-chart_1 (converted to pence at latest exchange rates). UK rates as stated by government.

Figure 9.5. Petrol duties across the EU, 2018



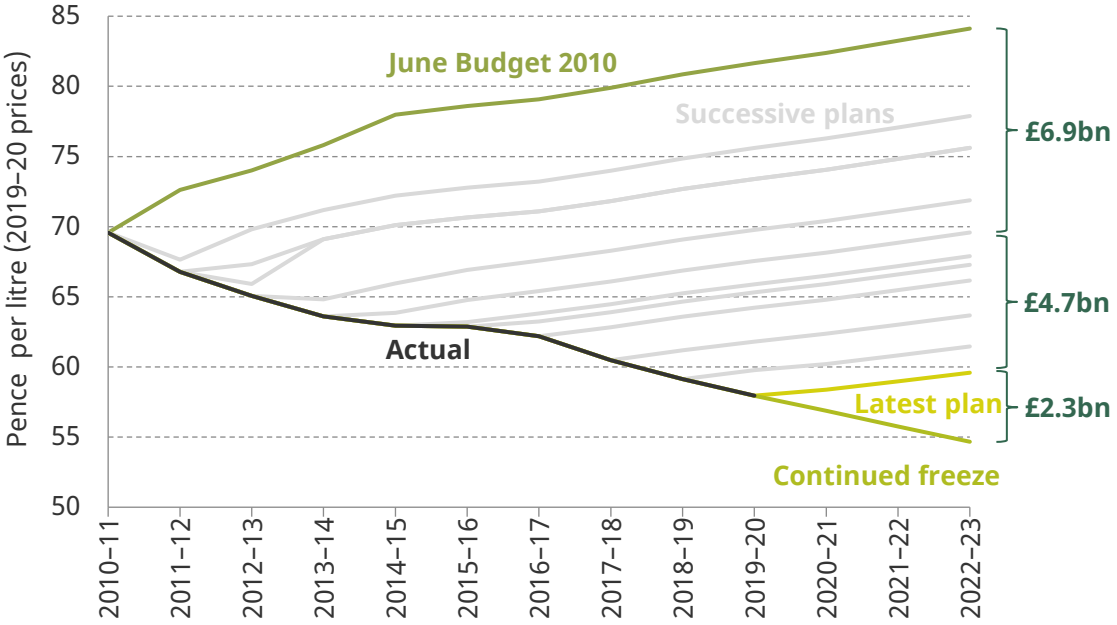
Source: Fuel duty rates for all EU countries except the UK taken from https://www.eea.europa.eu/data-and-maps/daviz/road-fuel-excise-duties-5#tab-chart_1 (converted to pence at latest exchange rates). UK rates as stated by government.

Rates of fuel duties in the UK are high by international standards. The duty on diesel is the highest in the EU (see Figure 9.4), though since most other countries tax petrol more heavily than diesel, the UK's petrol duty is 'only' the eighth highest in the EU (Figure 9.5).

The UK's rates of fuel duties have remained high by international standards despite substantial real-terms reductions in recent years. The government's public finance forecasts assume that fuel duties increase each April in line with the Retail Prices Index (RPI). However, Figure 9.6 – which shows the real value of fuel duties (relative to CPI inflation) under successive government plans – makes clear that is not what has happened. In April 2011, the coalition government cancelled the series of real-terms increases that the previous Labour government had pencilled in and instead cut the rate by a penny per litre, and it has been frozen in nominal terms ever since – meaning that fuel duties have fallen by 17% in real terms since 2010–11 (at a cost to the exchequer of £5.5 billion in 2019–20), and by 29% relative to the plans that the coalition inherited (at a cost to the exchequer of £11.2 billion).[18]

But this freeze was not laid out in advance. Instead, the government has repeatedly delayed or cancelled imminent fuel duty rises but maintained the assumption that, from

Figure 9.6. Fuel duty rates planned and implemented



Note: Revenue figures are the difference in revenue in 2022–23 (expressed in 2019 prices) between (from top) the June Budget 2010 plan and no real change after 2010–11 (£6.9 billion), no real change and the government's latest plan (£4.7 billion) and the government's latest plan and a continued nominal freeze (£2.3 billion).

Source: Authors' calculations using OBR, *Economic and Fiscal Outlook: March 2019* and HMRC, 'Direct effects of illustrative tax changes', April 2019, https://www.gov.uk/government/statistics/direct-effects-of-illustrative-tax-changes.

[18] Note that the difference between these two numbers reflects the difference between RPI and CPI inflation as well as Labour's small proposed 'discretionary' increases. Revenue effects of fuel duty changes in this section are calculated by the authors using HMRC, 'Direct effects of illustrative tax changes', April 2019, https://www.gov.uk/government/statistics/direct-effects-of-illustrative-tax-changes.

the following year, duties would be uprated in line with RPI inflation – only to repeat the same exercise a year later. The steady fall in real fuel duty rates shown in Figure 9.6 has never been the government's officially stated plan (with successive plans shown by the grey lines in the figure).

In light of this recent history, it is not surprising that the Office for Budget Responsibility's (OBR's) recent Fiscal Risks Report put the probability of further real reductions at over 90%.[19] Freezing fuel duties until the end of the five-year parliament would reduce annual revenue by £2.3 billion by 2022–23 (relative to RPI uprating), and recent reports suggest the government is thinking of going further and cutting fuel duties by 2p/litre,[20] which would cost about another £1 billion a year.

Regardless of whether the government chooses to increase or reduce fuel duties, it should still routinely adjust them to reflect inflation. Freezing fuel duties in nominal terms has the odd consequence that the degree to which fuel duties rise or fall in real terms depends on the rate of inflation, instead of being the result of deliberate policy. Uprating of fuel duties should be resumed and should be carried out in line with the CPI rather than the discredited RPI measure (which overstates the rate of inflation, as shown by the upwards slopes of the grey lines).

One reform the government could consider would be to uprate fuel duties monthly rather than annually. This would separate out routine inflation uprating from policy decisions, rightly taken in the Budget, as to whether real rates of duty should be increased or reduced. It would have little direct effect on revenue, but more gradual inflation uprating would more accurately keep the real rates of duty constant and would reduce the political pressures currently associated with sharp annual uprating. If it made more credible the 'plan' to index rates of duties then, over time, it could raise revenue and reduce uncertainty over future tax rates.

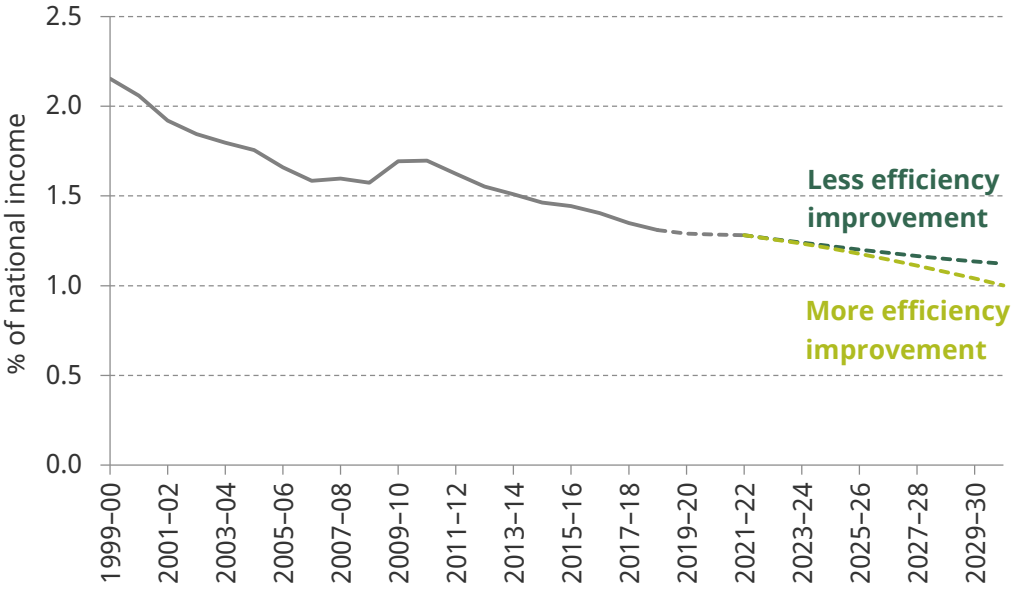
Fuel duties are expected to raise £28.4 billion in 2019–20, with an additional 20% (£5.7 billion) from VAT on the duties. This makes fuel duties by far the most important source of revenue from motoring taxes, even though revenue from fuel duties has fallen from 2.2% of national income in 1999–2000 to 1.3% this year (a fall equivalent to £19 billion in today's terms). This fall has been driven by the combination of the nominal freeze in duty rates and improvements in the fuel efficiency of vehicles. As cars become more fuel-efficient, less fuel is needed to travel the same distance, reducing the average fuel duty paid per kilometre driven. This trend is set to continue, both as conventionally fuelled cars continue to become more fuel-efficient and as they get replaced by alternatively fuelled cars.

How quickly the revenue from fuel duties declines depends on the pace of this shift towards lower-emissions motoring; Figure 9.7 shows OBR forecasts from 2017 under a 'less efficiency improvement' scenario (fuel efficiency improving in line with recent trends, reaching 95gCO_2/km in 2030) and a 'more efficiency improvement' scenario (consistent with the Committee on Climate Change recommendation of reaching 50gCO_2/km by 2030). Both scenarios show that revenues will continue to decline, but not fall to zero any

[19] OBR, *Fiscal Risks Report: July 2019*, https://obr.uk/frr/fiscal-risks-report-july-2019/.

[20] https://www.thesun.co.uk/news/9797158/boris-johnson-slash-fuel-duty/.

Figure 9.7. Fuel duty revenue 1999–2017 and OBR forecasts to 2030



Note: OBR forecasts assume annual RPI uprating resumes.

Source: HMRC statistics; OBR, Public Finances Databank; OBR, *Fiscal Risks Report: July 2017*; authors' calculations.

time soon – though both scenarios assume that fuel duty rates will be uprated annually in line with RPI inflation, which the OBR itself regarded as highly unlikely.[21]

In any case, such a gradual decline in revenues continuing after 2030 is not compatible with the government's 2050 target of zero net emissions. If this target is to be achieved, then the tax base for traditional fuel duties will have to disappear altogether in the coming decades.

Do fuel duties accord with economic principles?

Since fuel duties are proportional to fuel consumption, they are perfectly designed to target the direct (exhaust) emissions from driving – though they do not, of course, capture the emissions associated with electricity generation for hybrid and electric cars.

As described in Section 9.3, a tax that is proportional to emissions encourages the people who find it easiest to reduce emissions to do so in whichever way they find easiest. People could reduce their emissions by 10% either by buying a 10% cleaner car or by driving 10% less. From the point of view of emissions reduction these are equally good outcomes; the better outcome would be whichever of these the individual prefers. Fuel duties give the same incentive to do both, and so the individual will indeed do whichever they find easier.

Set at the right level, fuel duties could therefore effectively incorporate the social costs of emissions into the prices faced by consumers. And people do respond to these incentives: one review of the evidence concluded that a 10% rise in the fuel price cuts the amount of

[21] The OBR's 2019 Fiscal Risks Report stated that its revised revenue forecasts were now slightly higher in all scenarios, but did not give exact numbers corresponding to its 2017 forecasts and in any case the difference between the two scenarios would remain.

fuel consumed by 2.5% in the first year and by 6% in the longer term, once people have had more chance to switch to smaller or more fuel-efficient cars.[22]

But if fuel duties are intended only to correct for emissions-related costs, then they are currently set too high. On the government's estimates, in 2015 the combined marginal external cost of greenhouse gas emissions and local air pollution was barely a sixth of the average amount of fuel duty (plus VAT on fuel duties) paid per kilometre driven (1.2p/km compared with 7.0p/km).[23]

If, on the other hand, fuel duties are intended to correct, at least on average, for all the other social harms from driving as well – principally congestion – then they are too low: the marginal external cost of congestion in 2015 was 13.2p/km (in today's prices), double the average fuel duties (plus VAT on fuel duties) paid per kilometre.

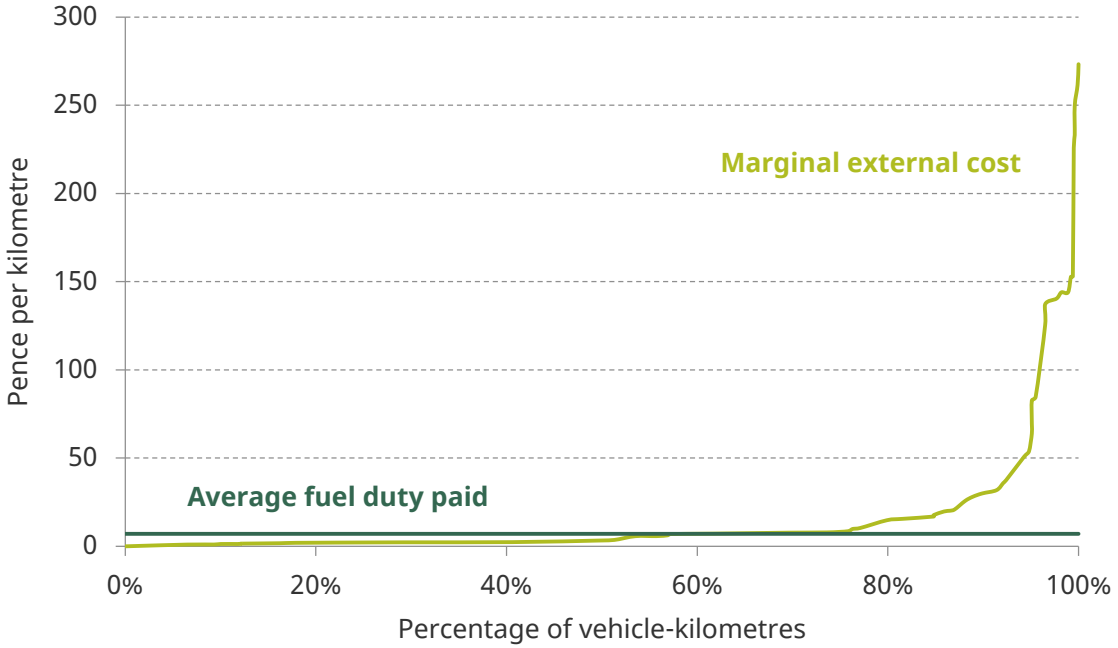
More importantly, fuel duties are not well-suited to correcting for these types of costs. While the social costs of congestion, accidents and noise vary greatly with both the time and location of a journey, fuel duties do not. As such, those driving on congested routes will face fuel duty costs that are far too low relative to the external cost of their journeys, and those driving on empty streets will end up paying far too high a price.

Figure 9.8 shows the approximate distribution of the marginal external costs of motoring in 2015 (incorporating all the sources of externalities listed in Table 9.1). It is worth emphasising that even this approximation understates the true extent of variation in externalities, as it is based on average costs in each of eleven road types and five congestion bands within each type, ignoring potentially large variations by time of day and precise location within those averages. Even ignoring that fine-grained variation, it suggests that over 50% of kilometres driven have external costs of less than 3.5p per kilometre, half as much as the tax these drivers must pay. This difference appears small on the graph only because it is dwarfed by the scale of social harms caused by a relatively small number of journeys: just 10% of kilometres travelled account for over 60% of the external costs, and fuel duties do very little to address those. This highlights the importance of motoring taxes' being able to vary not only with distance travelled but also with time and location. In Section 9.8, we discuss a number of alternative policies for targeting external costs that vary by time and location.

[22] P. Goodwin, J. Dargay and M. Hanly, 'Elasticities of road traffic and fuel consumption with respect to price and income: a review', *Transport Reviews*, 2004, 24, 275–292, https://www.researchgate.net/publication/32885803_Elasticities_of_Road_Traffic_and_Fuel_Consumption_with_Respect_to_Price_and_Income_A_Review. This, like most of the other evidence on this subject, is now rather elderly. F. Dunkerley, C. Rohr and A. Daly, *Road Traffic Demand Elasticities: A Rapid Evidence Assessment*, 2014, https://www.rand.org/pubs/research_reports/RR888.html include what little more recent evidence there is and reaches similar conclusions.

[23] Fuel duties per kilometre calculated based on Department for Transport, 'Road traffic statistics (TRA02)', 14 May 2019, https://www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra and OBR, Public Finances Databank, August 2019, https://obr.uk/data/. Distance driven is data for Great Britain, whilst duty receipts are UK total. Receipts per kilometre will therefore be overstated slightly. Both are expressed in 2019–20 prices.

Figure 9.8. Distribution of total marginal external costs of motoring in 2015 (in 2019–20 prices)



Source: Authors' calculations and tables A5.4.1 and A5.4.2 of Department for Transport, WebTAG Databook, May 2019, converted to 2019–20 prices using the GDP deflator. The 2015 marginal external cost distribution is derived using estimates of the total motoring externality for all major types of road (conurbation, urban and rural) across different congestion bands and includes all external costs listed in Table 9.1.

9.5 Vehicle excise duty

VED is an annual tax levied on every vehicle registered for road use. It is forecast to raise £6.5 billion in 2019–20. The tax levied depends on the type of car, its emissions and when it was registered, as summarised in Table 9.4. Since 2001, payments have been linked to the fuel efficiency of the car, with the aim of encouraging a shift to more efficient cars, but for new cars registered since April 2017, only the first year's tax (the 'showroom tax') depends on emissions, ranging from zero to £2,135. A higher first-year charge is also levied on diesel cars that do not meet the newest standards for nitrogen oxide emissions (which most existing diesel cars do not meet), while lower first-year rates and a £10 lower annual charge are levied on alternatively fuelled cars; purely electric cars are completely exempt.[24]

There is also an additional annual charge of £320 for vehicles with a list price of more than £40,000, payable for five years from the second year that the vehicle is taxed, which seems an odd and arbitrary way to tax the well-off: it is not clear why we should want to tax specifically those who choose to buy an expensive car rather than those with high income, spending or wealth more generally.

[24] The full set of rates is available at https://www.gov.uk/vehicle-tax-rate-tables.

Table 9.4. Summary of the vehicle excise duty system

	First year (£)	Second and subsequent years (registered on or after 1 April 2017)[a] (£)	Second and subsequent years (registered before 1 April 2017)[a] (£)
Petrol cars and diesel cars meeting newest standard	0–2,135	145	0–570
Diesel cars not meeting newest standard	0–2,135 (typically higher than for petrol cars and diesel cars meeting newest standards)	145	0–570
Alternatively fuelled cars	0–2,125	135[b]	0–560 (£10 lower than for petrol and diesel cars)

[a] Additional £320 per year payable for five years (from the second year) if the car's list price exceeds £40,000.

[b] Zero for pure electric cars.

Source: https://www.gov.uk/vehicle-tax-rate-tables.

Does VED accord with economic principles?

VED is a tax on the purchase and ownership of a car rather than its use. As such, it is poorly targeted at the external costs of motoring, which depend on how much, when and where one drives, not on whether one owns a car.

It is hard to see any economic rationale for an annual tax on car ownership. If it depends on the car's emissions, then it can encourage people to buy cleaner cars and scrap dirtier ones; but fuel duties create those incentives too, and have two major advantages over VED:

- they encourage people to drive their cars less;
- the incentive to buy a cleaner car is stronger for those people who are planning to drive more.

This means that, economically speaking, the chancellor should get rid of the annual VED payments entirely and instead raise the equivalent revenue through higher fuel duties. The only justification for retaining an annual VED payment is if, for some reason, the government rules out using fuel duties in its place.

It could be that this is indeed the case; as Section 9.4 shows, the political will even to maintain fuel duties in line with inflation has been consistently lacking over the past eight years, and recent reports that Prime Minister Boris Johnson is contemplating cutting fuel duties by a further 2p per kilometre underline that the direction of travel for fuel duties

seems if anything to be down, not up. If the government deems changes to fuel duties unacceptable but changes to other existing motoring taxes remain possible, then there may be a case for other, second-best forms of environmental taxation on emissions. An annual VED varying by emissions could at least discourage people from owning high-emissions cars, while new taxes such as London's ultra-low emission zone (discussed in Section 9.6) provide some link between driving more often and paying more tax. But while these may be better than nothing, it is important to recognise that they are vastly inferior to using fuel duties to target greenhouse gas emissions.

The first-year VED charge ('showroom tax') is more defensible. Taxing the purchase rather than the use of the car still has these same two disadvantages relative to fuel duties. But there are two arguments that might be made in favour of an emissions-based tax at the point of purchase:

- First, when buying a car, people might pay less attention to the future running costs (including fuel duty) than to the up-front purchase price (including the 'showroom tax'). In principle, an additional £100 of fuel costs (in present-value terms) over the lifetime of the car should influence people's purchase decisions as much as a £100 higher purchase price for a higher-emissions car. But if people do not properly take account of the lower running costs of more efficient cars but do react more strongly to higher up-front costs, then taxing purchases could be a more effective policy to incentivise lower-emissions motoring. The evidence on how individuals weigh up these costs is mixed; on the whole, it suggests that consumers do undervalue future running costs somewhat, but probably not enough to outweigh the two big advantages of fuel duties mentioned above.[25]

- Second, an advantage that VED has over fuel duties is that it allows policymakers to target new purchases, and therefore the characteristics of cars entering the fleet, without directly affecting owners of older cars.[26] This flexibility has most notably been used to encourage a transition from diesel- to petrol-fuelled cars, without penalising drivers who previously purchased diesel vehicles in response to earlier government incentives.[27] In cases such as this, a tax on purchases of new cars may play an important

[25] A 2010 literature review (D. Greene, 2010, *How Consumers Value Fuel Economy: A Literature Review*, US Environmental Protection Agency) found twelve studies that suggest consumers undervalue fuel efficiency, eight that suggest consumers value it roughly correctly and five that find they overvalue it. Two more recent studies look at how effective taxes on fuel are relative to VED-style taxes (A. Alberini and M. Bareit, 'The effect of registration taxes on new car sales and emissions: evidence from Switzerland', *Resource and Energy Economics*, 2019, 56, 96–112, https://doi.org/10.1016/j.reseneeco.2017.03.005; L. Grigolon, M. Reynaert and F. Verboven, 'Consumer valuation of fuel costs and tax policy: evidence from the European car market', *American Economic Journal: Economic Policy*, 2018, 10, 193–225, https://doi.org/10.1257/pol.20160078). Both find modest undervaluation of fuel efficiency but that taxes on fuel still remain more effective at reducing emissions than emissions-based VED-style taxes.

[26] This is also true of annual VED payments, changes to which can be (and often have been) restricted to cars registered after a certain date. But since the first-year charge can achieve this, there remains no rationale for an annual tax.

[27] Having used motoring taxes to incentivise the purchase of diesel cars for many years because of their lower emissions, the government has recently sought to disincentivise the purchase of such vehicles because of increasing concerns about local air pollutants. It might therefore seem unfair to increase the duty on diesel relative to petrol, since this would penalise those who responded to the government's earlier efforts to incentivise diesel car purchases. So, instead, the government has increased the first-year VED on new diesel cars relative to that on petrol cars.

role, although this suggests a much more restricted role for taxes on purchases than the system we currently have in place.

These arguments suggest that there might be a case for sometimes using an emissions-based tax on new car purchases while abolishing the annual VED charge.[28] But on its own, a tax on new car purchases would not only encourage people to go without a car rather than buying one (part of the point of the policy, with a stronger encouragement to forgo dirtier cars); it would also encourage people to keep their old car rather than replace it with a new one. Consider someone who is contemplating replacing their existing car with a new one; the prospect of a first-year VED charge might put them off replacing the car. With a more environmental focus, we might say that a showroom tax counteracts the incentive that fuel duties provide to replace a dirty old car with a cleaner one.

A solution to that would be to combine an emissions-based showroom tax with a scrappage subsidy that depends on emissions in the same way. For someone replacing an old car with a new car with the same emissions, this would be neutral: the showroom tax would equal the scrappage subsidy, so that a decision with no immediate environmental implications would not be affected by tax. But since the scrappage subsidy would exceed the tax, people with dirty old cars would be encouraged to replace them with cleaner models. And both the showroom tax and the scrappage subsidy would encourage people to have fewer cars in total – respectively, not to buy them in the first place and to scrap those they already have.

9.6 London congestion charge and ultra-low emission zone

The London congestion charge was introduced in 2003 and is the main UK example of a tax aimed directly at reducing congestion.[29] It originally consisted of a £5 daily charge that applied to the vast majority of vehicles entering an eight-square-mile zone within central London between 7a.m. and 6:30p.m. on weekdays. Since its introduction, the zone has been expanded to cover a larger 13-square-mile area and the daily charge has been increased to £11.50. In 2018–19, drivers paid a total of £230 million in congestion charges (though it cost £83 million to run the scheme, so net revenue was £147 million).[30]

The charge has been effective at reducing congestion within the zone. Impact assessments carried out by Transport for London (TfL) in each of the four years after the congestion zone's introduction found that it led to an immediate and persistent reduction in congestion of around 20–30%.[31] TfL survey data suggest that over half of the initial reduction in congestion came from people taking public transport instead of driving; around 10–20% from people driving around the charge zone rather than through it;

[28] Note that they do not provide a case for taxing second-hand purchases, as such purchases do not determine which cars are on the road, just who owns them. A tax on second-hand purchases is a classic transaction tax, like stamp duties, which economic theory shows is generally a bad idea: for a given set of cars in circulation, it is inefficient for taxation to discourage mutually beneficial transactions which allocate the cars to those who value them most.

[29] Other smaller schemes include the congestion zone in Durham, which has been in place since 2002, as well as the toll roads on the M6, the Dartford crossing, and a handful of bridges and tunnels across the UK.

[30] Transport for London, *Annual Report and Statement of Accounts 2018/19*, 2019, https://tfl.gov.uk/corporate/publications-and-reports/annual-report.

[31] Transport for London, *Central London Congestion Charging: Impacts Monitoring – Fourth Annual Report*, 2006, http://content.tfl.gov.uk/fourthannualreportfinal.pdf.

around 10% from people shifting towards untaxed forms of private transport such as bicycle or taxi; and 10% from people stopping travelling within the charging hours or stopping travelling into the zone at all.[32]

Despite some people choosing to divert their journeys around the zone rather than travelling through it, the introduction of the charging zone had only a relatively small effect on the amount of traffic in the surrounding area. The Inner Ring Road acted as the boundary of the zone and was the most obvious route for traffic to avoid the zone, yet it only experienced a 4% increase in traffic in the year following the zone's introduction (with traffic reverting back to around its pre-charge level in the three years following this).[33]

In April this year, London also saw the introduction of a £12.50 daily charge for certain cars entering the ultra-low emission zone (ULEZ), which initially covers the same area as the congestion charge zone but is due to be expanded from October 2021. As the ULEZ is aimed at reducing local air pollution rather than congestion, it applies 24 hours a day, every day of the year, and is payable only on cars that fail to meet certain emissions standards: the Euro 4 standard for petrol cars (which all new petrol cars sold since 2006 are required to meet) and the Euro 6 standard for diesel cars (which all new diesel cars sold since 2015 are required to meet). In practice, therefore, it is mainly a tax on older and more polluting diesel cars.

Although the ULEZ is still very new, preliminary evidence suggests that the policy has been effective at achieving a reduction in the number of older, more polluting vehicles driving into the zone. TfL found that there were 9,400 (26%) fewer vehicles falling short of the relevant emissions standards in the ULEZ on an average day in the first month of its operation than in the previous month, and that around 71% of vehicles in the zone during congestion charging hours met the relevant standards, compared with 61% the month before and 39% in February 2017 when the policy was announced.[34]

The forthcoming expansion of the ULEZ will bring very large numbers of cars into the charge: TfL predicts that in 2021 there would be about 100,000 cars a day entering the expanded zone and not meeting the emissions standards for exemption – or there would be in the absence of the charge.[35] It is likely that the charge will induce many of those affected either to get rid of their old cars (perhaps selling them to people outside London) or not to drive into the zone. As with the congestion charge, the ULEZ charge is expected to raise relatively little revenue, particularly once operating costs are taken into account.

Do the congestion charge and the ULEZ accord with economic principles?

As discussed in Section 9.2, congestion is by far the largest social cost that motoring gives rise to, with the average marginal congestion externality being more than six times that of accidents and 14 times that of greenhouse gas emissions. The benefits of a well-targeted

[32] Transport for London, 'Central London congestion charging scheme: three months on', June 2003, https://www.eltis.org/sites/default/files/case-studies/documents/3_month_report_5.pdf.

[33] Transport for London, *Central London Congestion Charging: Impacts Monitoring – Fourth Annual Report*, 2006, http://content.tfl.gov.uk/fourthannualreportfinal.pdf.

[34] Comparable figures over time are only available for congestion charging hours. Over the full 24 hours during which the ULEZ operates, 74% met the relevant standards in the first month of the zone's operation. See https://www.london.gov.uk/sites/default/files/ulez_-_first_month_report_may_19.pdf.

[35] Transport for London, 'Changes to low emission zone and expansion of the ultra low emission zone', 2017, https://www.london.gov.uk/sites/default/files/appendix_c1_supporting_information_document_-_copy.pdf.

system that takes these costs into account could therefore be substantial: in the mid 2000s, the Eddington Review of transport policy estimated that a full national system of time- and location-specific road pricing could bring gains in well-being equivalent to up to 1% of national income.

The existing congestion charge falls a long way short of the theoretical ideal. As a flat-rate daily charge, it does not reflect exactly where, when or how much the car is driven in the charging zone – just whether or not it is driven somewhere in the zone at some point during the daytime, Monday to Friday. Nevertheless, it is much better than nothing. As we saw in Table 9.2, the congestion externality per kilometre driven in London is five times the national average and almost 30 times the average in rural areas, so discouraging driving in London is a good place to start. And, as shown in Figure 9.9, the charge covers the most congested periods of the week in London (although it should arguably be extended to include the midday–early-afternoon period during weekends). It has succeeded in reducing congestion. Crude though it is, the congestion charge has been described as 'a triumph of economics [which] represents a high-profile public and political

Figure 9.9. Percentage increase in time spent in traffic relative to free flow conditions in London

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
0:00 – 1:00	17	6	5	7	8	12	16
1:00 – 2:00	12	4	1	2	3	6	11
2:00 – 3:00	8	2	0	0	1	3	7
3:00 – 4:00	6	1	0	0	0	1	4
4:00 – 5:00	2	0	0	0	0	0	1
5:00 – 6:00	0	2	2	2	2	1	0
6:00 – 7:00	1	23	23	23	22	17	2
7:00 – 8:00	3	52	54	54	51	39	7
8:00 – 9:00	6	63	67	67	64	49	13
9:00 – 10:00	12	44	48	49	47	39	22
10:00 – 11:00	20	35	38	39	40	37	32
11:00 – 12:00	30	35	36	38	39	41	41
12:00 – 13:00	39	36	37	39	41	45	47
13:00 – 14:00	40	34	36	38	40	45	48
14:00 – 15:00	37	35	38	40	42	50	44
15:00 – 16:00	34	43	48	51	53	61	39
16:00 – 17:00	34	49	57	60	62	67	37
17:00 – 18:00	36	55	66	69	70	67	39
18:00 – 19:00	34	45	55	58	59	56	38
19:00 – 20:00	28	28	34	36	39	40	33
20:00 – 21:00	21	18	21	23	25	28	26
21:00 – 22:00	15	15	17	19	20	22	22
22:00 – 23:00	13	14	17	19	21	22	22
23:00 – 0:00	10	10	13	15	18	21	22

Note: Relates to all of London, not just the congestion charge zone. Boxed area indicates times when the congestion charge is levied.

Source: TomTom Traffic Index.

recognition of congestion as a distorting externality and of road pricing as an appropriate policy response'.[36]

Although the ULEZ is aimed at reducing air pollution, it will also further reduce congestion: after all, whatever the name and the stated intention, it is another tax on driving in London. Similarly, by discouraging driving in London, the congestion charge acts to reduce local air pollution as well as congestion. But while complementary, these policies are by design targeted at different aims: the congestion charge is better targeted at congestion (varying at least somewhat by time and day) while the ULEZ, being restricted to dirtier cars, is better targeted at air pollution.

9.7 Company car tax

So far, we have discussed taxes specific to motoring: fuel duties, vehicle excise duty, and the London congestion charge and ultra-low emission zone charge.

But cars and fuel also feature in all the UK's main taxes: income tax, National Insurance contributions (NICs), VAT and corporation tax. The tax treatment of cars gets complicated because cars can be bought (or leased) by companies or individuals and used for both business and leisure purposes. The tax system needs to ensure that the cost of using cars for business purposes is tax-deductible (like other business costs) while the purchase or provision of cars for private use is taxable (like other personal income/consumption) – a particularly difficult challenge when the same car might be used for a mixture of purposes.

As a result, all of the UK's main taxes have special provisions that apply to cars and fuel. We do not discuss in this chapter all the details of – and flaws in – those provisions. Suffice it to say that successive governments have made an inevitably difficult issue much worse than it needs to be. Here we focus on just one key part of that system: the income tax and NICs levied on cars owned or leased by a company but provided for employees' private use. This is an important part of the system of motoring taxes: while the provision of company cars has been in long-term decline, there are still almost a million employees paying tax on a company car each year, and the income tax and NICs on these came to £2.3 billion in 2017–18 – about £2,500 per company car user.[37]

Providing a car for an employee's private use is a form of remuneration and should be taxed as such. In practice, the provision of company cars, like many other benefits in kind, is subject to income tax and employer NICs but not to employee NICs. This employee NICs exemption reduces the tax rate on company cars by 12 percentage points for the half of recipients earning less than the NICs upper earnings limit (currently equivalent to £50,000 a year) but by only 2 percentage points for those earning more than that. There is no good justification for this exemption: remuneration should be subject to the same taxes, at the same rates, whether provided in cash or in kind.

[36] J. Leape, 'The London congestion charge', *Journal of Economic Perspectives*, 2006, 20(4), 157–76, https://www.jstor.org/stable/30033688.

[37] This excludes the (rather high) tax on employer-provided fuel, which we do not discuss here. Source: Table 4.5 of HMRC statistics, https://www.gov.uk/government/statistics/number-of-recipients-and-amounts-of-taxable-benefits-by-type-of-benefit.

But perhaps more interesting is how the government calculates the value of the remuneration that is to be taxed. Rather than estimating the value to the employee (or the market value) of receiving the use of the car for a year, the government sets the taxable amount as a percentage of the car's list price, with the percentage varying with the car's emissions and fuel type (it currently ranges from 16% for the cleanest cars to 37% for the dirtiest).

Those percentages have been increased over time to maintain revenue as cars have become more fuel-efficient. But, in recent years, tax rates have been increased more quickly, with the deemed taxable value of most company cars increasing by 13% of the list price over the past six years. For cars emitting less than 95gCO_2/km, that more than doubles the tax. This increase is much faster than the rate at which the company car fleet has been getting more fuel-efficient, so the average tax liability on company cars rose by almost a quarter in real terms between 2013–14 and 2017–18 (from £2,150 to £2,630 in today's prices) and will have increased still more in the past two years as the rise in tax rates has accelerated.

The recent history of company car tax policy for electric vehicles is even more remarkable. The tax on the provision of a pure electric car has increased gradually from zero before 2015 to 16% of the list price this year, but will fall back to zero next April and then rise again to 1% in 2021–22 and 2% in 2022–23. Such wild swings cannot be conducive to good planning by the suppliers and buyers of company cars.

Does company car tax accord with economic principles?

Taxing company cars according to their emissions is superficially appealing: it is another way the government can promote a shift away from damaging high-emissions driving. It is tempting to think that every weapon in the armoury should be employed to pursue this goal. But in fact almost the opposite is true. Rather than asking how every policy tool can be used to achieve a particular goal, policymakers should ask which tool is best suited to achieving the objective, and concentrate on that. As the Mirrlees Review of the tax system emphasised, 'not all taxes need to address all objectives. Not every tax needs to be "greened" to tackle climate change as long as the system as a whole does so'.[38]

What matters is the effect of the system as a whole. The best way to strengthen environmental incentives is to make more use of the best-targeted policies. Adding different, less well-targeted, policies into the mix instead means that the aim of reducing emissions will not be achieved as efficiently, increasing the cost of meeting the objective – and complicating the tax system in the process.

Company car taxation is not the best-targeted policy available for reducing car emissions. As with VED, the current system of company car taxation encourages people to choose cleaner cars but does nothing to encourage them to drive their cars less. Fuel duties do both. Furthermore, company car taxation is even less well targeted than VED precisely because the incentives it creates are restricted to company cars. Making company car taxation depend on the emissions of the car (rather than, say, increasing fuel duties or strengthening the link between VED and emissions for *all* cars) means that we are incentivising 'green' choices in respect of company cars more than for other cars.

[38] Page 472 of J. Mirrlees et al., *Tax by Design: The Mirrlees Review*, 2011, https://www.ifs.org.uk/publications/5353.

A tax regime that is more strongly emissions-based for company cars than for other cars means that those buying company cars will choose cleaner models even if they are much less desirable than dirtier cars, whereas for other car-buyers, the dirty car need have only relatively small advantages to outweigh the tax penalty for buying it. If the environmental incentives were evened out between the two groups, similar environmental outcomes could be achieved while, on average, people would have cheaper, better cars.

Taxation can and should make cars, especially dirty cars, more expensive to buy and run so that everyone uses them less. But beyond that, whether people use their own cars for work or the firm provides one, and whether firms reward their staff in cash or by providing them with a car, should be private, commercial decisions. A company's purchase of a car for an employee's exclusive private use should be treated the same as if the company paid her the amount in cash and she bought the car herself. Under the system now in place, if people want a cleaner car then the company should provide it, whereas if it is a dirtier car then they should buy it themselves. That is a bizarre incentive for the tax system to create.

Arguments sometimes made for emissions-based company car taxation are similar to those for the emissions-based first-year VED: that, since company cars are disproportionately new cars, changing how they are taxed provides a quick way to influence the characteristics of new cars entering the UK market (and therefore the stock of cars on the road). But in that respect the first-year VED is better targeted than company car taxation: it is precisely targeting the inflow of all new cars, rather than cars that merely happen to be newer than average, and it applies regardless of who buys the vehicle. Similarly, to the extent that targeting new cars is effective because people pay too little attention to future running costs when buying a car, a VED charge at point of purchase should be more effective than annual company car taxation. Given the availability of an emissions-based showroom tax, it is hard to see a role for emissions-based company car taxation.

Income tax and NICs should be levied, at the taxpayer's marginal rate, on the value to the employee of having the use of the car for a year. That is, they should be applied to the amount it would cost the employee to lease the car for a year – which will depend on the car's emissions only in so far as the car's rental price reflects its fuel efficiency (and the tax should reflect the car's age, for example, in the same way). At present, a typical company car (a 100gCO_2/km diesel) will be taxed on 28% of its list price, which is higher than this benchmark suggests: the employee would be taxed on the full value of the car over four years, hardly its full lifetime. But that high taxable *value* is somewhat offset by a reduced tax *rate* on that value, resulting from the employee NICs exemption. Whether a company car is overtaxed or undertaxed in any particular case will therefore depend on the car's emissions and on whether the recipient earns more or less than the upper earnings limit.

9.8 Motoring forward: making policy for the future

The government's commitment to reaching zero net emissions by 2050 means that, over the next few decades, the money that it raises from fuel duties and any taxes linked to emissions (which is almost all of the revenue currently raised from motoring taxes) will all but disappear.

This is a long-run fiscal challenge for the government. It is also an economic and social challenge: since the other external costs of motoring, particularly congestion, will not disappear, alternative taxes on motoring will be needed to help reflect these costs in the prices that drivers pay. As discussed in Sections 9.4–9.7, current motoring taxes are not effectively designed to do this. The need to rethink motoring taxation in light of declining revenue from fuel duties provides an opportunity to design better-targeted taxes that overcome some of the limitations set out in this chapter.

The change needs to start now, before existing taxes are eroded to the point that we have virtually no taxes on motoring at all. And it needs to start from a clear plan for the long term, albeit one that is flexible enough to cope with the unpredictable future of motoring.

How should motoring taxes be structured in the long run?

Motoring taxes should be designed to incorporate the social costs of motoring – congestion, emissions, noise and so on – into the prices paid by motorists. Different social costs require different kinds of taxes; while emissions are best targeted with fuel duties, targeting congestion requires taxes that vary by time and place.

As the UK transitions towards low-emissions motoring, taxes targeted at emissions will become a less important part of the overall system of correcting for the social costs of motoring. That does not mean that policymakers can ignore them now; while there are still conventionally fuelled cars on the road, fuel duties will remain the best tool to target these costs. And going forward, policymakers should think about some of the indirect environmental costs of alternatively fuelled cars – for example, from generating the electricity to power them. These are not small concerns: the National Infrastructure Commission estimates that a 100% uptake of electric cars and vans could increase total annual electricity demand by 26% by 2050,[39] so a broader set of policies to support the ongoing transition to low-emissions electricity generation will be essential for these alternatively fuelled vehicles to fulfil their environmental potential.

But when it comes to the future of taxes on motoring specifically, the biggest challenge will be to design a long-term policy framework that can correct for motoring's external costs. We have seen that by far the biggest of these costs is congestion, and – notwithstanding the advent of autonomous vehicles – that is likely to be increasingly true in a future with lower-emissions motoring. It is therefore important that motoring taxes be designed to reflect the costs of congestion, which in turn means they should vary according to when and where someone is driving.

The theoretically ideal way of targeting the costs of congestion is a flexible system of road pricing, where the charges people face vary substantially with the time and location of their journey. Such systems are technologically feasible and exist already – with the first full-scale system introduced in Singapore in 1998. The technology used there is relatively simple: vehicles are required to contain an 'in-vehicle unit' which can be detected by Radio Frequency Identification (RFID)[40] when they pass under gantries that are located along the most congested routes, along with a pre-paid card from which payment is deducted. Predetermined fees vary by route and time of travel and cars are charged each time they

[39] Page 57 of National Infrastructure Commission, *National Infrastructure Assessment July 2018*, https://www.nic.org.uk/publications/national-infrastructure-assessment-2018/.

[40] https://www.mot.gov.sg/about-mot/land-transport/motoring/erp.

pass under a gantry; the charges range from zero to the equivalent of £3.50 and are frequently reviewed and updated.[41]

Short of a fully fledged system of variable road pricing, countries and cities around the world have developed and implemented less intensive road pricing systems that still do a fairly good job of capturing the costs of congestion. As discussed in Section 9.6, the London congestion charge is one such example, although it remains a relatively blunt instrument, applying to one city and levied at a flat daily rate. There are large potential gains to be had from both applying similar schemes to other congested routes or areas elsewhere in the UK – with Birmingham, Glasgow, Manchester and Bristol topping the list of congested cities outside London in 2018[42] - and developing a more nuanced system that allows charges to approximate the costs of congestion more precisely.

More nuanced systems that remain less invasive than a comprehensive system have been applied elsewhere internationally. Stockholm uses a system that charges vehicles each time they enter different zones. The charges depend on the time of day, ranging from no charge (between 6:30p.m. and 6:30a.m.) to 35 SEK (around £2.90). The maximum daily charge is capped at 105 SEK (£8.70).[43] Oslo, Bergen and Gothenburg have also implemented systems where the price drivers pay depends on where and when they are driving, and Jakarta is planning on introducing a similar scheme next year.

Challenges to taxing congestion

Although technologically road pricing looks much more feasible now than when it was discussed 10 or 20 years ago, that does not mean it is politically acceptable. One objection is that some systems would involve the collection of extensive information on the location of vehicles across all times of day (and storing the resulting data for at least a while), raising concerns among some about invasion of privacy. But even simpler approaches face political challenges. Although congestion charging was successfully introduced in London, referendums in 2005 in Edinburgh and 2008 in Manchester rejected it, with 74% and 79% respectively of votes cast against it.[44] In addition to concerns about privacy, some of this unpopularity may be due to the fact that residents did not have a clear idea of the likely reductions in congestion that the schemes would achieve. The Stockholm congestion zone was initially met with a great deal of opposition and therefore first introduced as a seven-month trial. After the trial, residents chose in a referendum to make the scheme permanent.[45] This reversal of public opinion suggests that people underestimated the benefits of the scheme. A similar argument could be made in London, where the then mayor Ken Livingstone was re-elected after having introduced the London congestion charge.

A further objection is that congestion charging is unfair on those who have less choice over whether they drive through a congested area at a particular time. But a similar argument could be made that fuel duties unfairly penalise those living in rural areas

41 https://blog.moneysmart.sg/transportation/erp-rates-gantry-singapore/.

42 INRIX Global Traffic Scorecard 2018 (see http://inrix.com/press-releases/scorecard-2018-uk/).

43 https://www.transportstyrelsen.se/en/road/Congestion-taxes-in-Stockholm-and-Goteborg/.

44 L. Butcher, 'Local road charges', House of Commons Library Briefing Paper SN01171, 2018, https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN01171#fullreport.

45 J. Eliasson, 'The Stockholm congestion charges: an overview', Centre for Transport Studies Working Paper 2014:7, https://swopec.hhs.se/ctswps/abs/ctswps2014_007.htm.

poorly served by public transport, who may have little choice but to drive: they would benefit from a shift away from fuel duties towards road pricing. Furthermore, unlike with fuel duties, those who have no choice but to drive through a congested area are the same people who would benefit from the reductions in congestion that would follow from the introduction of road pricing.

The proposals in both Edinburgh and Manchester were for congestion charging in addition to existing taxes. One possible way for the government to make the idea of road pricing more politically palatable is to propose it as a *replacement* for most of fuel duties, rather than levied in addition.[46] This would certainly not be cost-neutral for individual households: those driving long distances in rural areas would gain while those making short journeys in congested areas would lose. But while some people (particularly drivers in congested cities) would pay substantially more, there would be many more winners than losers. And if it were revenue-neutral at the point the reform happened, it might at least not be seen simply as an excuse to raise taxes. Politics aside, it makes sense at the moment on economic and environmental grounds: as we saw in Section 9.4, fuel duties are currently too high to justify by emissions alone if there are other policies targeted at congestion. But it is an offer viable only while there are still fuel duties being collected.

Other options for replacing fuel duties

If the government wishes to continue taxing motoring as petrol and diesel are phased out, but rejects road pricing for whatever reason, a number of alternatives are available:

- One would be to place more reliance on taxes on car purchase or ownership such as VED. But such taxes do nothing to encourage people to drive their cars less once they have them.

- Another option would be to apply duties to alternative fuels, such as electricity and hydrogen, much as fuel duties apply to petrol and diesel now. Unlike VED, that would impose a higher tax on heavier car usage. But it would require the ability to enforce a higher tax rate on electricity used for a car than on other electricity, which might be challenging if people charge their cars at home, for example.

- Perhaps the most promising alternative to road pricing is a simple per-mile charge, an idea proposed and developed most fully by Raccuja (2017).[47] This would raise revenue in a very similar way to fuel duties (as distance travelled is closely related to fuel consumption) but would continue to be viable as cars move away from using fossil fuels.

If the aim is simply to sustain motoring tax revenues as fuel duties disappear, this last option is an appealing one. But all of these options share the inadequacy of fuel duties in that they would be very poorly targeted at congestion which, as we have seen, is overwhelmingly created by a relatively small subset of journeys. Raccuja suggests that drivers could be given the choice between 'no tech, high privacy' (self-declared mileage, which is already collected by insurance companies) and 'high tech, low privacy' (telematics

[46] This was the recommendation of the IFS-led 2011 Mirrlees Review of taxation: J. Mirrlees et al., *Tax by Design: The Mirrlees Review*, 2011, https://www.ifs.org.uk/publications/5353.

[47] G. Raccuja, 'Miles better', Wolfson Economics Prize winner, 2017, https://policyexchange.org.uk/wolfson-winner/.

'black box' in the car that tracks when and where you drive) options, and argues that the greater convenience and automation that come with the telematics option would probably lead to large-scale movement to that option. If that is true, it would therefore be a good intermediate option en route to a comprehensive system of road pricing, which could use this same technology. Once telematics were prevalent in cars, it would be easy to adapt this technology to vary the charge by time and place of driving – though Raccuja himself opposes actually doing that because of the perceived unfairness of variable road pricing.

Managing the transition to low-emissions cars

An eventual move to low-emissions motoring now looks all but inevitable, almost irrespective of the details of UK policy. Car production is a highly internationalised industry. When car makers have stopped designing and manufacturing conventionally fuelled cars for the global market and make cleaner ones instead, those cleaner models will form the base of the UK market too.

But that shift will happen gradually: for several decades, there will be a mixture of conventionally and alternatively fuelled cars available on the market, and UK government policy can have a major influence on how quickly the transition happens here. The government has committed to ending the sale of new petrol and diesel cars by 2040, but that is still 20 years away. In the intervening period, policies on motoring are likely to be crucial in determining whether the UK is in the vanguard or the rearguard of the global shift to low-emissions cars. Given that 15% of the UK's total greenhouse gas emissions comes from road transport (and that share is rising), the speed of this transition has big implications for the UK's cumulative emissions output.

The government faces a difficult trade-off. In the long run, low-emissions motoring should be taxed, to maintain some disincentive to socially costly motoring (and some revenue) when all cars have low emissions. Yet in the short run, the government may want to encourage the shift towards low-emissions vehicles, and keeping taxes low on low-emissions vehicles is an obvious way to do that.

Raising tax rates on low-emissions motoring – or introducing entirely new taxes once existing ones have withered – is likely to become increasingly politically difficult as more and more people have low-emissions cars. The government needs to decide both what it wants the long-run tax regime for motoring to look like and how it will manage the transition to that point. The challenge is to get this transition right: encouraging the shift to low-emissions motoring without embedding the expectation that it will always be taxed at low levels (or hardly at all).

One possibility is to start taxing low-emissions motoring now (in one of the ways discussed above, or another) but combine that with short-run measures to encourage low-emissions motoring that could more easily be removed in the future. In other words, rather than encouraging the shift to low-emissions cars by leaving them largely untaxed, and then trying to introduce significant taxes on them later, the government could bring in a sensible long-run tax regime for them now (while they still represent a small minority and expectations are not entrenched) and instead encourage the shift to low-emissions cars through other policies that are inherently short-term in nature or which might be easier to remove than a new tax would be to introduce.

What might such short-term policies be?

One option is to offer a temporary subsidy for the purchase of low-emissions cars. The government already does this: since 2011, it has offered a plug-in car grant which provides a discount of 35% of the purchase price of low-emissions vehicles, initially up to a maximum of £4,500 for pure electric cars and £2,500 for hybrids.[48] The grant is explicitly temporary, as Transport Secretary Grant Shapps advised last month: 'If you are … thinking of buying an electric car, buy it while the subsidy's there, because it will go eventually'.[49] This is a reminder that the prospect of removal of a subsidy can also help to accelerate the transition to low-emissions cars; indeed, when the subsidy on hybrids was removed in November 2018 – surprisingly early – sales of plug-in hybrids subsequently fell sharply.[50]

Although a typical electric car is about £10,000 more expensive than a typical conventionally fuelled car, these purchase subsidies can make a difference: a number of studies have found that, together with the lower running costs of electric vehicles, the subsidies bring down the total cost of an electric car over its lifetime to less than that of a conventionally fuelled car.[51]

However, there might be people who would benefit financially in the long run with an electric car but lack the up-front cash to buy one. Motivated by this, the Labour party proposed its own temporary subsidy for electric cars at its party conference last month, announcing that for five years it would provide interest-free loans of up to £33,000 to up to 500,000 people a year to buy new electric cars.[52] It is not clear why the subsidy should take the form of a zero interest rate (and therefore vary in generosity as interest rates change), why the government should provide loans for car purchases but not other things and why Labour has decided that the eligible population should comprise low- and middle-income households, those living in rural areas, and independent contractors and small businesses. Indeed, one difficulty with targeting subsidised loans is that the people (and cars) for whom loans are appropriate and those for whom subsidies are appropriate are not necessarily the same. But the scheme (and the prospect of its removal) would certainly help to speed up the adoption of electric cars.

Similarly, a shift to cleaner cars could be incentivised by subsidising scrappage of dirty old ones – a policy with a naturally limited lifespan as old conventionally fuelled cars gradually disappear from the road. As part of its package of measures to promote electric cars, Labour also proposed a one-year scrappage scheme that would provide a subsidy for

[48] Since November 2018, the subsidy for pure electric cars has been capped at £3,500 and the subsidy for hybrid cars removed entirely.

[49] '£3,500 electric car grant will run dry, says the transport secretary, Grant Shapps', *The Sunday Times*, 8 September 2019, https://www.thetimes.co.uk/article/electric-car-grant-will-fizzle-out-bfq8b6ppp#.

[50] See https://www.gov.uk/government/news/reformed-plug-in-car-grant-extended-into-next-decade for the government's announcement and https://www.ft.com/content/e58b168c-70a4-11e9-bbfb-5c68069fbd15 for the aftermath.

[51] K. Palmer, J. Tate, Z. Wadud and J. Nellthorp, 'Total cost of ownership and market share for hybrid and electric vehicles in the UK, US and Japan', *Applied Energy*, 2018, 209, 108–19, https://doi.org/10.1016/j.apenergy.2017.10.089 compare the Ford Focus and Nissan Leaf Electric Car. International Council on Clean Transportation, *Using Vehicle Taxation Policy to Lower Transport Emissions*, 2018, https://theicct.org/publications/using-vehicle-taxation-policy-lower-transport-emissions carries out a comparison of different models of the Volkswagen Golf, which offers electric, hybrid, petrol and diesel versions.

[52] https://labour.org.uk/press/john-mcdonnell-announces-interest-free-loans-electric-cars/. A similar loan scheme already operates in Scotland: see http://www.greenerscotland.org/greener-travel/greener-driving/grants-and-funding.

drivers who scrapped a conventionally fuelled car that was at least 10 years old and bought a new electric one instead.[53]

Along with temporary subsidies for buying clean new cars or scrapping dirty old ones, another way the government could encourage the adoption of low-emissions cars (while avoiding tax-free treatment that risks becoming permanent) is to fund the infrastructure that makes them useful. Indeed, this is arguably where the case for government intervention is strongest: infrastructure such as charging points requires a coordinated system and is exactly the kind of public good that the market might underprovide as the reward to any individual actor might not make it worthwhile even if the shared benefits are large. The UK's first ever National Infrastructure Assessment, delivered last year, emphasised the value of public investment in this area.[54] And such support will naturally tend to be front-loaded while the infrastructure is built up. In *The Road to Zero*, the government announced a number of policies committing to improving the availability of charging infrastructure for electric vehicles.[55] And again, Labour's raft of proposals included a £3.6 billion investment to expand charging networks between now and 2030.[56]

A recent survey by OVO Energy found that the main barriers to electric vehicles' becoming widespread were their high purchase price, lack of available charging infrastructure and concern about how long a given charge will last ('range anxiety').[57] Purchase subsidies could help to address the first of these, and investment in infrastructure the other two (which are related as the availability of local charging infrastructure is likely to alleviate range anxiety). Such temporary policies could help to support the transition to low-emissions cars even as a sustainable long-term approach to taxing them is put in place from (almost) the outset. The government might prefer an alternative approach. But it needs a plan of some sort if it wants to promote low-emissions vehicles in the short run but tax them in the long run. And it needs to move quickly.

Speed is of the essence

Whatever system of motoring taxation the government envisages for the long term – be that a system of road pricing or blunter instruments such as an increased tax on car ownership – it is important that swift action is taken. Politically, it will be much easier to introduce alternative motoring taxes if that can be set against big cuts to fuel duties (which are destined to disappear anyway over the coming decades) and before the expectation of untaxed motoring becomes ingrained. Moreover, if the new system requires infrastructure to be put in place (a system of road pricing, for example), that is likely to take time.

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53 https://labour.org.uk/press/electric-car-revolution-labour-launch-car-scrappage-scheme-help-drivers-go-electric/.

54 National Infrastructure Commission, *National Infrastructure Assessment July 2018*, https://www.nic.org.uk/publications/national-infrastructure-assessment-2018/.

55 https://www.gov.uk/government/publications/reducing-emissions-from-road-transport-road-to-zero-strategy. These included ensuring new-build homes include charging points and installing charging infrastructure in new lamp posts in areas with on-road parking, as well as putting aside £40 million for a programme to develop new low-cost wireless and on-street charging technology. If wireless charging were successfully introduced, this would also address range anxiety as charging could take place while driving.

56 https://labour.org.uk/press/labour-announces-mammoth-expansion-uks-electric-vehicle-charging-networks/.

57 OVO Energy, 'What's stopping the "electric vehicle revolution"?', 2017, https://www.ovoenergy.com/blog/ovo-news/whats-stopping-the-electric-vehicle-revolution.html.

9.9 Conclusion

The UK's existing taxes on motoring are badly designed and should be improved.

Vehicle excise duty is a strange levy, taxing the purchase and ownership of cars rather than their use. There is some case for a first-year VED charge ('showroom tax'), ideally combined with a scrappage subsidy that depends on emissions in the same way. These might influence people's car purchase, replacement and scrappage decisions more effectively than taxes that affect cars' running costs, and allow the government to change incentives for future purchases without affecting existing car owners as much. In contrast, there is no case for keeping an annual VED charge if the revenue can be raised from fuel duties instead.

The arguments against emissions-based company car taxation are even stronger, since these taxes are also based on ownership rather than how much the cars are driven but are further restricted to only apply to the subset of cars that are bought by companies and made available for their employees' private use. Rather than try to achieve its environmental goals through the company car tax system, the government should simply tax the value of the car to the employee.

Fuel duties are the best-targeted way to reduce emissions from motoring, since they encourage people to drive their cars less and provide a stronger disincentive to buy high-emissions cars for people who plan to use them a lot. Despite significant real-terms reductions in recent years, UK fuel duties are high by international standards, too high to be justified by motoring emissions, and widely perceived as unfair – though they are too low to reflect the overall costs (principally congestion) that driving imposes on others.

Policymaking on fuel duty in recent years has been a mess. Whether fuel duties should be higher or lower, the government should stop the ad hoc but repeated cancellation of regular fuel duty uprating, perhaps aided by moving from annual to monthly uprating and certainly linked to the CPI measure of inflation rather than the RPI.

If the government finds it politically impossible even to maintain fuel duty rates in line with inflation, then making more use of emissions-based VED is probably the best of the alternatives currently in use. But to tackle the harm that driving does, now and in the future, the government should look beyond the existing set of taxes.

Ideally, the cornerstone of motoring taxation should be a system of road pricing, varying by time and place to reflect congestion levels. Failing that – or, better, as a stepping stone towards road pricing – the government could introduce a tax per kilometre driven. Like fuel duties, this would provide an incentive to drive less, but it could be applied equally to alternatively fuelled cars, helping to shore up revenues and maintain some disincentive to drive as conventionally fuelled cars are phased out.

However, it is important to recognise how inferior this is to a system of road pricing that varies by time and place. Congestion is by far the biggest social cost of driving and it varies enormously by time and place, with most of the congestion caused by only a small fraction of journeys. Only a tax that varies by time and place in the same way can reap the huge rewards potentially available in terms of freeing up people's time. While technology

is becoming less of a barrier to such a system, challenges remain – particularly in reconciling the need to collect data on driving routes with concerns about privacy.

Any changes along these lines would be politically challenging. But the status quo is not sustainable. Fuel duties are gradually shrinking as a share of national income and will disappear altogether in the coming decades as petrol and diesel cars become more fuel-efficient and are ultimately replaced by alternatively fuelled vehicles. The government needs a plan for how it wants to tax motoring when cars are no longer powered by fossil fuels, and it needs a plan for how to get from the current system to that long-run goal. The desire to encourage a shift to low-emissions cars makes it tempting to levy low or no taxes on them. But the longer that goes on, the more revenue will be eroded and the more entrenched expectations of low taxes on motoring will become, making it ever harder to start taxing low-emissions motoring in whatever way the government ultimately wants to. Managing that trade-off is the core long-term challenge for motoring tax policy.

In our view, the most promising approach would be to move quickly towards a significant tax that can apply long term to low-emissions vehicles as well as conventionally fuelled cars – probably a flat-rate tax per kilometre in the first instance, with a view to varying the tax rate by time and place later on. This tax should be introduced in exchange for large reductions in petrol and diesel duties, which are well targeted at emissions but far too high to justify by emissions alone – a quid pro quo that is only available while people are still buying large amounts of petrol and diesel. Switching to low-emissions cars should be encouraged via subsidies for buying clean new cars and scrapping dirty old ones, and via investment in infrastructure such as charging points that makes alternatively fuelled vehicles a more attractive proposition. Such policies will tend to wither away naturally as alternatively fuelled cars become the norm – or at least it might be easier to remove them at that stage than to introduce new (or much higher) taxes on alternatively fuelled cars once most people already have them.

The government might prefer a different approach. But whatever view it takes, it needs a plan both for the long term and for how to get there. So far, the government has not said how it thinks low-emissions driving should be taxed in the long term – or whether it is content to see motoring tax revenues dry up and virtually no tax at all levied on motoring and the harms it causes. New systems can take time to set up and there is a premium on acting quickly, while fuel duties are still raising significant revenue and before lightly taxed low-emissions cars make up a substantial share of the fleet. Given the speed at which the nature of driving is evolving – and must evolve – the government needs to start now. Burying its head in the sand is not a good option.

Appendix A. Headline tax and benefit rates and thresholds

This table shows headline tax and benefit rates and thresholds for 2019–20. Rates and thresholds for 2020–21 are also shown where either by default they do not change or the government has already announced its plans. Other rates and thresholds –which depend on the September 2019 CPI inflation rate – are marked with an asterisk (*). Shortly after these inflation figures are released (16 October 2019), an updated version of this table will be available at http://www.ifs.org.uk/green-budget/2019.

	2019–20	2020–21[a]
Income tax		
Personal allowance	£12,500 p.a.	£12,500 p.a.
Married couple's allowance, restricted to 10% (at least one spouse/civil partner born before 6/4/35)	£8,915 p.a.	*
Basic rate[b]	20%	20%
Higher rate[b]	40%	40%
Additional rate[b]	45%	45%
Basic-rate limit[b]	£37,500 p.a.	£37,500 p.a.
Higher-rate limit[b]	£150,000 p.a.	£150,000 p.a.
Threshold for personal allowance withdrawal	£100,000 p.a.	£100,000 p.a.
Personal savings allowance, basic (higher) rate	£1,000 (£500) p.a.	£1,000 (£500) p.a.
Starting-rate limit (for savings income)	£5,000 p.a.	£5,000 p.a.
Tax rates on savings income	0%, 20%, 40%, 45%	0%, 20%, 40%, 45%
Dividend allowance	£2,000 p.a.	£2,000 p.a.
Tax rates on dividend income	7.5%, 32.5%, 38.1%	7.5%, 32.5%, 38.1%
National Insurance contributions		
Earnings threshold	£166 p.w.	*
Upper earnings limit (UEL)	£962 p.w.	*
Employee rate – below UEL	12%	12%
– above UEL	2%	2%
Employer rate	13.8%	13.8%
Apprenticeship levy		
Rate	0.5%	0.5%
Allowance	£15,000 p.a.	£15,000 p.a.
Corporation tax		
Main rate	19%	17%
Bank surcharge	8%	8%

			2019–20	2020–21[a]
Bank levy				
Rates:	equity and long-term liabilities		0.075% (0.07% from Jan 2020)	0.07% (0.05%from Jan 2021)
	short-term liabilities		0.15% (0.14% from Jan 2020)	0.14% (0.10% from Jan 2021)
Capital gains tax				
Annual exempt amount (for individuals)			£12,000 p.a.	*
Standard rate	– housing and carried interest		18%	18%
	– other assets		10%	10%
Higher rate	– housing and carried interest		28%	28%
	– other assets		20%	20%
Entrepreneurs' relief rate			10%	10%
Inheritance tax				
Nil-rate band			£325,000	£325,000
Residence nil-rate band			£150,000	£175,000
Rate for transfer at or near death			40%	40%
Value added tax				
Registration threshold			£85,000 p.a.	£85,000 p.a.
Standard rate			20%	20%
Reduced rate			5%	5%
Excise duties				
Beer (pint at 3.9% ABV)			42.3p	43.4p[c]
Wine (75cl bottle at 12% ABV)			223p	229p[c]
Spirits (70cl bottle at 40% ABV)			805p	826p[c]
20 cigarettes:[d]	specific duty		457p	480p[c]
	ad valorem (16.5% of retail price)		178p	183p[c]
Ultra-low-sulphur petrol (litre)			57.95p	59.46p[c]
Ultra-low-sulphur diesel (litre)			57.95p	59.46p[c]
Air passenger duty				
Band A (up to 2,000 miles):		economy	£13	£13
		club & first class	£26	£26
Band B (over 2,000 miles):		economy	£78	£80
		club & first class	£172	£176
Betting and gaming duty				
Gaming duty (depends on gross gaming yield)			15–50%	15–50%
Spread betting rate:	financial bets		3%	3%
	other bets		10%	10%

		2019–20	2020–21[a]
Insurance premium tax			
Standard rate		12%	12%
Higher rate		20%	20%
Stamp duty land tax (England)[e]			
First-time buyers of residential property valued up to £500,000:	up to £300,000	0%	0%
	£300,000–£500,000	5%	5%
Other residential property purchases (excl. second homes):	up to £125,000	0%	0%
	£125,000–£250,000	2%	2%
	£250,000–£925,000	5%	5%
	£925,000–£1,500,000	10%	10%
	above £1,500,000	12%	12%
Non-residential property purchases:			
	up to £150,000	0%	0%
	£150,000–£250,000	2%	2%
	above £250,000	5%	5%
Stamp duty on shares			
Rate		0.5%	0.5%
Vehicle excise duty			
Petrol/diesel cars registered after 1/4/17:			
First year (emissions-based)		£0–£2,135 p.a.	£0–£2,190 p.a.[c]
Subsequent years		£145 p.a.	£150 p.a.[c]
Petrol/diesel cars registered 1/3/01–31/3/17:			
Graduated (emissions-based) system		£0–£570 p.a.	£0–£585 p.a.[c]
Landfill tax[f]			
Standard rate		£91.35 per tonne	£94.15 per tonne
Lower rate (inactive waste only)		£2.90 per tonne	£3.00 per tonne
Climate change levy			
Electricity		0.847p/kWh	0.811p/kWh
Natural gas		0.339p/kWh	0.406p/kWh
Liquefied petroleum gas		2.175p/kg	2.175p/kg
Any other taxable commodity		2.653p/kg	3.174p/kg
Council tax			
Average band D rate in England		£1,750	Councils to set

	2019–20	2020–21[a]
Business rates		
Rate applicable for mid-value properties[g] in:		
England	49.1%	*
Scotland	49.0%	*
Wales	52.6%	*
Income support / income-based JSA / income-based ESA		
Single (aged 25 or over)	£73.10 p.w.	*
Couple (both aged 18 or over)	£114.85 p.w.	*
ESA additional components and premiums		
Work-related activity component[h]	£29.05 p.w.	*
Support component	£38.55 p.w.	*
Carer premium	£36.85 p.w.	*
Severe disability premium	£65.85 p.w.	*
Enhanced disability premium – single	£16.80 p.w.	*
– couple	£24.10 p.w.	*
Personal independence payment		
Daily living component – standard rate	£58.70 p.w.	*
– enhanced rate	£87.65 p.w.	*
Mobility component – standard rate	£23.20 p.w.	*
– enhanced rate	£61.20 p.w.	*
State pension		
Basic state pension, for those who reached SPA before 6/4/16 – single	£129.20 p.w.	*
– couple	£206.65 p.w.	*
Single-tier pension, for those who reach SPA on or after 6/4/16:	£168.60 p.w.	*
Winter fuel payment		
For those born before 6/04/54:		
and aged under 80	£200 p.a.	£200 p.a.
aged 80 or over	£300 p.a.	£300 p.a.

	2019–20	2020–21[a]
Pension credit		
Guarantee credit, for those over female SPA:		
single	£167.25 p.w.	*
couple	£255.25 p.w.	*
Savings credit, for those aged 65 or over who reached SPA before 6/4/16:		
threshold – single	£144.38 p.w.	*
– couple	£229.67 p.w.	*
maximum – single	£13.73 p.w.	*
– couple	£15.35 p.w.	*
withdrawal rate	40%	40%
Child benefit		
First child	£20.70 p.w.	*
Other children	£13.70 p.w.	*
Threshold	£50,000 p.a.	£50,000 p.a.
Withdrawal rate	1% per £100	1% per £100
Child tax credit		
Family element[i]	£545 p.a.	£545 p.a.
Child element[j]	£2,780 p.a.	*
Working tax credit		
Basic element	£1,960 p.a.	*
Couple and lone-parent element	£2,010 p.a.	*
30-hour element	£810 p.a.	*
Childcare element:		
maximum eligible cost for one child	£175 p.w.	£175 p.w.
maximum eligible cost for two or more children	£300 p.w.	£300 p.w.
proportion of eligible costs covered	70%	70%
Features common to child and working tax credits		
Threshold	£6,420 p.a.	£6,420 p.a.
Threshold if entitled to child tax credit only	£16,105 p.a.	*
Withdrawal rate	41%	41%

	2019–20	2020–21[a]
Universal credit		
Standard allowance:		
single (aged 25 or over)	£317.82 p.m.	*
couple (at least one aged 25 or over)	£498.89 p.m.	*
Child element[j]	£231.67 p.m.	*
Premium for first child[i]	£45.41 p.m.	*
Limited capability for work element[h]	£126.11 p.m.	*
Limited capability for work-related activity element	£336.20 p.m.	*
Carer element	£160.20 p.m.	*
Childcare element:		
maximum eligible cost for one child	£646.35 p.m.	£646.35 p.m.
maximum eligible cost for two or more children	£1,108.04 p.m.	£1,108.04 p.m.
proportion of eligible costs covered	85%	85%
Work allowance (awarded to claimants with children or a limited capability for work):		
claim includes housing support	£287.00 p.m.	*
claim includes no housing support	£503.00 p.m.	*
Withdrawal rate	63%	63%
Maternity benefits		
Sure Start maternity grant	£500	£500
Statutory maternity pay:		
weeks 1–6	90% of earnings	90% of earnings
weeks 7–39	£148.68 p.w., or 90% of earnings if lower	*
Maternity allowance	£148.68 p.w.	*

Abbreviations: ABV = alcohol by volume; ESA = employment and support allowance; JSA = jobseeker's allowance; SPA = state pension age.

[a] 2020–21 figures take pre-announced values where available and estimated results of standard indexation – where available – otherwise.
[b] Income tax rates and thresholds are different in Scotland (except for savings and dividend income). In 2019–20, a rate of 19% applies to the first £2,050 of taxable income, 20% to the next £10,395 and 21% to the next £18,485; the higher rate is 41% and applies to taxable income above £30,930; and the additional rate is 46% and applies to incomes above £150,000. Rates for 2020–21 are yet to be announced.
[c] Assumes RPI inflation of 2.6% in the year to the second quarter of 2020 as forecast in Office for Budget Responsibility, *Economic and Fiscal Outlook: March 2019*, http://obr.uk/efo/economic-fiscal-outlook-march-2019/. Note that tobacco and alcohol duties change on Budget day and in February respectively, not in April.
[d] Assumes the August 2019 average pre-tax price of 20 king-size filter cigarettes (based on series CZMP from table 55 of ONS's consumer price inflation tables, https://www.ons.gov.uk/economy/inflationandpriceindices/datasets/consumerpriceinflation).
[e] Scotland and Wales operate different systems of property transaction taxes – called land and buildings

transaction tax and land transaction tax, respectively – with different rates and thresholds.
[f] Scotland and Wales operate their own systems – Scottish landfill tax and landfill disposals tax, respectively – but currently set rates the same as those in the rest of the UK.
[g] Applies to businesses with a rateable value between £15,000 and £51,000 in England, between £18,000 and £51,000 in Scotland, and above £12,000 in Wales (assuming in all cases that the business occupies a single property). Lower rates apply to properties below these ranges, and higher rates to properties above these ranges (in England and Scotland). An additional 0.6% is payable on properties in the City of London. Northern Ireland operates a different system with locally varying rates.
[h] Only available for claims that began before April 2017.
[i] Only available to families with a child born before April 2017.
[j] From April 2017, some families with more than two children are not awarded the child element for third and subsequent children, depending on the children's dates of birth.

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For descriptions of the tax and benefit systems, see T. Pope and T. Waters, 'A survey of the UK tax system', IFS Briefing Note BN9, 2016, http://www.ifs.org.uk/publications/1711 and A. Hood and A. Norris Keiller, 'A survey of the UK benefit system', IFS Briefing Note BN13, 2016, http://www.ifs.org.uk/publications/1718.

For a summary of the main tax measures introduced in each Budget, Pre-Budget Report and Autumn Statement between 1979 and Spring 2017, see http://www.ifs.org.uk/uploads/publications/ff/budget_measures.xls.

For estimates of the effects of various illustrative tax changes on government revenues, see HMRC, 'Tax ready reckoner statistics', https://www.gov.uk/government/collections/tax-expenditures-and-ready-reckoners.

Appendix B. Abbreviations

ABV	alcohol by volume
AE	advanced economies
AME	annually managed expenditure
APF	Asset Purchase Facility
BEIS	Department for Business, Energy and Industrial Strategy
bn	billion
BoE	Bank of England
bp	basis points
CBI	Confederation of British Industry
CCP	central counterparty
CDEL	capital departmental expenditure limits
CO	Cabinet Office
CO_2	carbon dioxide
CPB	Netherlands Bureau for Economic Policy Analysis
CPI	Consumer Prices Index
CSD	central securities depository
DCMS	Department for Digital, Culture, Media and Sport
Defra	Department for Environment, Food and Rural Affairs
DEL	departmental expenditure limit
DExEU	Department for Exiting the EU
DfE	Department for Education
DfID	Department for International Development
DfT	Department for Transport
DHSC	Department of Health and Social Care
DIT	Department for International Trade
DUP	Democratic Unionist Party
DWP	Department for Work and Pensions
ECB	European Central Bank
EFO	Economic and Fiscal Outlook
EM	emerging markets
EMTR	effective marginal tax rate
ESA	employment and support allowance
ESRC	Economic and Social Research Council

EU	European Union
FARVAR	functional autoregressive value-at-risk
FCO	Foreign and Commonwealth Office
FCR	fiscal credibility rule
FDI	foreign direct investment
FE	further education
FRS	Family Resources Survey
FTPA	Fixed-Term Parliaments Act
g	grams
G7	Group of Seven countries: Canada, France, Germany, Italy, Japan, UK, US
GATS	General Agreement on Trade in Services
GDP	gross domestic product
GFCF	gross fixed capital formation
GfK	Growth from Knowledge
GVA	gross value added
HM	Her Majesty's
HMG	Her Majesty's Government
HMPPS	Her Majesty's Prison and Probation Service
HMRC	Her Majesty's Revenue and Customs
HMSO	Her Majesty's Stationery Office
HMT	Her Majesty's Treasury
HO	Home Office
HRT	higher-rate threshold
IfG	Institute for Government
IFS	Institute for Fiscal Studies
IMF	International Monetary Fund
ISM	Institute for Supply Management
IT	information technology
JSA	jobseeker's allowance
kg	kilograms
km	kilometres
KORUS	United-States–Korea free trade agreement
kWh	kilowatt-hour
LEL	lower earnings limit
LH	left-hand

LHS	left-hand side
m	million
max	maximum
MFN	most-favoured nation
MHCLG	Ministry of Housing, Communities and Local Government
min	minimum
MoD	Ministry of Defence
MoJ	Ministry of Justice
MP	Member of Parliament
MPC	Monetary Policy Committee
mth	month
NAFTA	North American Free Trade Agreement
NHS	National Health Service
NICs	National Insurance contributions
OBR	Office for Budget Responsibility
ODA	official development assistance
OECD	Organisation for Economic Cooperation and Development
ONS	Office for National Statistics
OTC	over the counter
p	pence
p.a.	per annum
PESA	Public Expenditure Statistical Analyses
PIP	personal independence payment
p.m.	per month
PMI	purchasing managers' index
PNFC	private non-financial corporation
ppt	percentage point(s)
PSCE	public sector current expenditure
PSGI	public sector gross investment
PSNB	public sector net borrowing
PSNI	public sector net investment
PSNW	public sector net worth
PTR	participation tax rate
p.w.	per week
Q	quarter

QQ	quarter on quarter
RDEL	resource departmental expenditure limits
RFID	Radio Frequency Identification
RH	right-hand
RHS	right-hand side
RICS	Royal Institution of Chartered Surveyors
RPI	Retail Prices Index
SIC	Standard Industrial Classification
SMMT	Society of Motor Manufacturers and Traders
SNP	Scottish National Party
SOC	Standard Occupational Classification
SPA	state pension age
TAXBEN	the IFS tax and benefit microsimulation model
TEU	Treaty on European Union
TME	total managed expenditure
UC	universal credit
UEL	upper earnings limit
UK	United Kingdom
UKERC	UK Energy Research Centre
ULEZ	ultra low emission zone
UN	United Nations
UPL	upper profits limit
US	United States
USD	US dollar
USTR	Office of the United States Trade Representative
VAR	vector autoregression
VAT	value added tax
VED	vehicle excise duty
WA	work allowance (in universal credit)
WTO	World Trade Organisation
YY	year on year