Managing fiscal risks:
data sources
Managing fiscal risks: data sources
Contents

 Preface 2
 Executive summary 3
 Chapter 1 Managing fiscal risks 4
 Chapter 2 Macroeconomy 8
 Chapter 3 Financial sector 18
 Chapter 4 Revenue 21
 Chapter 5 Spending 29
 Chapter 6 Balance sheet 35
Preface

This document provides details of sources of data in all the tables, charts, and graphs in the Managing Fiscal Risks 2018 (MFR), the government’s response to the Office for Budget Responsibility’s OBR Fiscal Risk Report (FRR). In addition, it includes details of sources for some data included in the text where, for reasons of space, it has not been possible to footnote these sources.

The document is aimed at transparently informing readers of the MFR document where the data used in the charts, tables, and text comes from and how it has been calculated.

This document also ensures that the Treasury meets the standards set out by the UK Statistics Authority to comply with the Statistics and Registration Service Act 2007. In particular, this document aims to meet 2 of the requirements of the UK Statistics Authority’s ‘Code of Practice for Official Statistics’:

- to distinguish clearly between outturn data that are official statistics, and other data and estimates that are not official statistics. Examples of estimates that are not official statistics include forecasts, management information, economic estimates calculated by the Treasury or other government departments which are constructed using assumptions or judgements and where the results of economic analyses have a material effect on the resulting estimate.
- for outturn data that are official statistics, to clearly refer to the source of the statistics and provide a link to the statistical release. Where possible, the sources that are used and shown are National Statistics.

Full details of sources are only provided for outturn data up to the 2017-18. Data for future years are forecasts. All of these forecasts are outside the domain of official statistics, as are the estimates of the impacts of government measures or policy decisions, as these are estimated, rather than measured or compiled using statistical processes.

In many cases, data for 2017-18 onwards are taken from the Office for Budget Responsibility’s March 2018 ‘Economic and fiscal outlook’ (EFO) or the FRR or the Fiscal sustainability (FSR). Where this is the case, it is mentioned in the text or in this document. Time series for other data that are shown with Office for National Statistics (ONS) time series identifiers codes can be downloaded from the ONS website at: www.ons.gov.uk.

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2 Code of Practice for Official Statistics’, UK Statistics Authority, 2018 T3.8
3 The ‘official statistics’ label refers to a specified subset of the quantitative information produced by the government and its nominated agents. Official statistics are produced and published in accordance with provisions set out in the Statistics and Registration Service Act 2007 and in supplementary statistical legislation, and in line with the Code of Practice for Official Statistics.
4 The ‘National Statistics’ label applies to a distinct subset of ‘official statistics’ which has been formally certified by the UK Statistics Authority to be compliant with the professional standards set out in the Code. Public bodies that produce National Statistics have a statutory duty to continue to comply with the Code.
Executive summary

All charts and analysis in the Executive Summary are sourced from subsequent chapters in the Managing Fiscal Risks report. The data sourcing from the charts and analysis in the executive summary can be found in this document as follows:

Chart A: UK government deficit and debt since 1800
See Chart 1.C in the section on Chapter 1.

Chart B: Projections of public sector net debt with illustrative shocks
See Chart 2.K in the section on Chapter 2.

Chart C: Aggregate increase in bank capital ratios
See Chart 3.A in the section on Chapter 3.

Chart D: UK tax gap
See Chart 4.F in the section on Chapter 4.

Chart E: Average expenditure forecast error (2000-2015)
See Chart 5.A in the section on Chapter 5.

Chart E: Drivers of changes in PSND
Chapter 1

Managing fiscal risks

Chart 1.A: OBR risk matrix: Sources of fiscal risk over the medium-term

Data
Risks, probabilities and impacts provided by OBR.

Data source, including ONS code if applicable
• OBR Fiscal Risks Report 2017

Further reference information
• This chart is a modified version of a chart produced in the OBR’s Fiscal Risks Report 2017. The version in the MFR report has risks categorised by chapter covered in the MFR.

Chart 1.B: OBR Risk Matrix: Sources of fiscal risk over the long-term

Data
Risks, probabilities and impacts provided by OBR.

Data source, including ONS code if applicable
• OBR Fiscal Risks Report 2017

Further reference information
• This follows the methodology from Chart 1.

Chart 1.C: UK government deficit and debt since 1800

Data
Uses PSND as a % of GDP and PSNB as % of GDP from 1800 to 2017-18.
Data source, including ONS code if applicable

- ONS data source for PSNB – J5II
- ONS data source for PSND – HF6W
- ONS data source for GDP – BKTL
- ONS Public Sector Finances release (https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/bulletins/publicsectorfinances/may2018)
- OBR PSF database (http://obr.uk/download/public-finances-databank/)

Chart 1.D: Volatility in government debt vs. GDP growth (2000-2016)

Data

Chart shows country names as data points on scatter chart. Volatility defined as standard deviation of GDP growth, and general government debt level as a % of GDP between 2000 and 2016.

Data source, including ONS code if applicable

- OECD database: https://data.oecd.org/

Further reference information

The level of General Government Debt, and the growth rate in GDP for OECD countries was taken from the OECD for the years between 2000 and 2016.

The standard deviation for these series was then taken.

A line of best fit is drawn on the scatter chart to show the average combination between standard deviation in GDP growth and General Government Debt.


Data

Chart shows international comparison of the absolute forecast errors for PSNB one year ahead of time at forecast. These are the forecasts made by the national Governments or independent fiscal forecasters.
Data source, including ONS code if applicable

- IMF Forecast Affairs Department database - data available on request.

Further reference information

Uses the absolute forecast error for one-year ahead of forecast, split into two period: between 2000-2010; and 2010-2015.

The average across the period takes the average forecast error across all countries between 2000 and 2015.

Chart 1.F: Breakdown of average PSNB forecast error (2010-2018)

Data

Chart shows the average forecast error for PSNB from the year of forecast, t. The error is broken down into components.

Data source, including ONS code if applicable

- OBR data ‘Fiscal forecasts revisions database March 2018 EFO’. Revisions to headline Public Sector Net Borrowing forecasts (as a % of GDP) (http://obr.uk/download/forecast-revisions-database/)

Further reference information

- HMT summed the total forecast revision for forecast year t, from the year it first appeared in an OBR forecast, to its final revision – giving the total error from first forecast.

- The average error for the forecast x years after forecast year t was then calculated by taking the errors calculated above, and grouping by the distance until forecast year.

Box 1.A

“around £9 billion has been set aside in the Nuclear Liabilities Fund (NLF)”

Data

Chart 1.G: Estimates of total future decommissioning spending

Data
Chart shows a split in the future cost of decommissioning broken down into Sellafield and ‘rest of programme’ spend.

Data source, including ONS code if applicable

Further reference information
This chart is a direct replication of the chart produced by the OBR in the Fiscal risks report.

Chart 1.I: IMF FTE scores for fiscal risk management

Data
Chart shows the results of the IMF’s Fiscal Transparency Evaluation (FTE) programme.

Data source, including ONS code if applicable
- IMF Forecast Transparency reports:
Chapter 2

Macroeconomy

Chapter 2 Paragraph 2.7

“In the 20 years prior to Bank independence, inflation averaged over 6% and fluctuated from 1% to 22%, while over the past two decades inflation has averaged 2% and never risen above 5.2%.”

Data

This is the arithmetic average of annual change in RPIX (ONS series CDKQ) between 1978-1997.

This is the arithmetic average of annual change in CPI (ONS series C7D7) between 1998-2017

Source:
(https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpricelnflation/may2018)

Chart 2.A: Inflation and inflation expectations

Data

Inflation targets and anchoring expectations

Data source, including ONS code if applicable


- ONS data CPI annual rate. ONS code D7G7
  https://www.ons.gov.uk/economy/inflationandpriceindices

- ONS data RPI All Items Excluding Mortgage Interest (RPIX): Percentage change over 12 months. ONS series CDKQ
  https://www.ons.gov.uk/economy/inflationandpriceindices
Chart 2.B: Composition of APF holdings

Data
Bank of England’s Asset Purchase Facility holdings

Data source, including ONS code if applicable
Bank of England data Weekly APF holdings: www.bankofengland.co.uk/boeapps/iadb/

Further reference information
Other includes commercial paper and corporate bond purchases financed through reserves and the Debt Management Office (DMO), and secured commercial paper financed via the DMO.
All data points are as of 31 March.
HM Treasury’s calculations to show the aggregate APF holdings as a % of GDP use the OBR’s Spring Statement 2018 March-centered GDP figures.

Chart 2.C: Bank of England balance sheet

Data
Chart showing the change in the Bank’s balance sheet between 2006 and 2018 broken down into drivers.

Data source, including ONS code if applicable

Chart 2.D: The Bank capital and income framework, illustration

Data

Data source, including ONS code if applicable
Chart 2.E: Average annualised deficit reduction

Data

Shows the average annual reduction in PSNB as a % of GDP between 2009-10 to 2015-16, and 2015-16 to 2022-23. The chart shows the composition of the reduction in PSNB in terms of current spending, capital spending and taxation.

Data source, including ONS code if applicable

- ONS data Public Sector Net Borrowing as % of GDP. ONS code J5II divided by ONS code BKTL
- ONS data Public Sector Current Expenditure as % of GDP. ONS code JW2Q divided by ONS code BKTL
- ONS data Public Sector Current Receipts as % of GDP. ONS code JW2O divided by ONS code BKTL
- ONS data on Public Sector Gross Investment as % of GDP. ONS code (-JW2Z) – (-JW2S) divided by ONS code BKTL
- OBR Spring Statement 18 forecast for Public Sector Net borrowing from 2017-18 to 2022-23
- OBR Spring Statement 18 forecast for Public Sector Current Expenditure from 2017-18 to 2022-23
- OBR Spring Statement 18 forecast for Public Sector Current Receipts from 2017-18 to 2022-23
- OBR Spring Statement 18 forecast for Public Sector Gross Investment from 2017-18 to 2022-23

Further reference information

- Data link: https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/bulletins/publicsectorfinances/may2018
- The changes are calculated by subtracting the level of PSNB, PSCE, PSCR and Public Sector gross investment in 2015-16 from the level in 2009-10. The same process is applied to the levels in 2022-23 forecast by the OBR, from the outturn levels in 2015-16.
- These differences are then divided by the number of years between the measured year.

Chart 2.F: UK sectoral net lending

Data

ONS Economic Accounts
Data source, including ONS code if applicable

- ONS data on Household and NPISH net lending. ONS code RPZT
- ONS data on Corporate net lending (PNFC and Financial Corporations). ONS code RPYN+RQBV
- ONS data on Public Sector net lending. ONS code RQBN+RPZD
- ONS data on Rest of the world net lending. ONS code RQCH

Further reference information

Data source
https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/datasets/unitedkingdomeconomicaccountstotaleconomy

Balances are expressed as a percentage of nominal GDP.

The sum of financial balances by sector is equal (but opposite sign) to the residual error between the expenditure and income based estimates of GDP.

Chart 2.G: MHCLG Exposures to the Housing Sector

Data

MCHLG data on exposure to the housing sector over time, including forecasted exposure across MHCLGs portfolio in 2021.

Data source, including ONS code if applicable

- MHCLG and HM Treasury calculations

Further reference information

- Figures for 2017/18 are taken whilst the annual accounts are still being finalised so are draft figures. MHCLGs forecast for Help to Buy exposure in 2021 includes exposure from some legacy schemes.
- Figures for 2012/13 to 2016/2017 will be available in MHCLG accounts: https://www.gov.uk/government/collections/dclg-annual-reports-and-accounts

Paragraph 2.34

Data

“If it were a ministry, it would have the third largest departmental spending after health and education.”
Data source, including ONS code if applicable

Resource DEL excluding depreciation for 2017-18, Autumn Budget 2017 (Table 1.7, page 23)

Gross debt interest for 2017-18, March 2018 EFO (Table 4.32, page 154)

ONS Public Sector Finances
(https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/bulletins/publicsectorfinances/may2018)

Chart 2.H: Estimates of government debt limits, thresholds, and targets

Data

Estimates of government debt limits, thresholds and targets from a range of international financial institutions and academic researchers.

Data source, including ONS code if applicable

- Fall, F., et al. (2015), "Prudent debt targets and fiscal frameworks", OECD Economic Policy Papers, No. 15
- IMF Fiscal Monitor: Capitalizing on Good Times (April 2018)
- Outturn for UK treaty debt in 2017-18. OBR public finances databank
  http://obr.uk/download/public-finances-databank/

Further reference information

- UK target (1997-2008) refers to the sustainable investment rule which was in operation between 1997 and 2008. This said that over the economic cycle, the ratio of net public sector debt to GDP will be set at a ‘stable and prudent’ level, defined by the Chancellor as no more than 40% of GDP.
- Stability and Growth Pact (EU countries) refers to the set of rules designed to ensure that countries in the European Union pursue sound public finances and coordinate their fiscal policies. These say that public debt should be kept below 60% of GDP.
- OECD UK estimates (higher and lower risk) (2015) refer to two OECD estimates of the UK’s prudent debt target. The difference between the two estimates reflects alternative assumptions about the risk tolerance for breaching the debt threshold under a range of plausible economic shocks.
OECD UK estimate (b) reflects a less than 10% risk and OECD UK estimate (a) reflects a less than 25% risk.

- OECD advanced economies lower and upper bound refer to the finding that empirical cross-country evidence suggests a debt threshold range - defined as the turning point at which negative effects of debt on the economy kick in - for higher-income countries, of 70 to 90% of GDP.

- IMF Debt Sustainability Analysis Framework refers to the IMF’s Debt Sustainability Analysis for Market Access Countries, which identifies the critical debt thresholds—beyond which debt sustainability is put at high risk—as 85 percent of GDP for advanced economies and 70 percent of GDP for emerging market economies.


**Chart 2.I: Periods of historic debt reduction**

**Data**

UK public sector net debt as a share of GDP between 1956-57 and 2022-23.

**Data source, including ONS code if applicable**

- ONS outturn data (ONS code: HF6W) and OBR March 2018 Spring Statement forecast.


- [www.obr.uk/data](http://www.obr.uk/data)

**Further reference information**

- Episodes of sustained debt reduction are identified by assessing the annual change in the debt-GDP ratio. A period is defined as a sustained debt reduction episode if the debt-GDP ratio falls for at least four consecutive years.

**Table 2.A: Economic conditions during periods of historic debt reduction**

**Data**

Average annual: change in public sector net debt as a share of GDP, primary balance as a share of GDP, real GDP growth as a share of GDP, inflation and interest rates, during the periods of sustained debt reduction identified in Chart 2.N.
Data source, including ONS code if applicable

- Data on public sector net debt is ONS outturn data (ONS code: HF6W) and the OBR March 2018 Spring Statement forecast. http://obr.uk/data/ and https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/bulletins/publicsectorfinances/may2018

- Data on primary balance is ONS outturn data (ONS code: J5II-JW2P+JW2L+JW2M) divided by GDP (ONS code: BKTL) and the March 2018 Spring Statement forecast. http://obr.uk/data/


- Data on inflation is ONS outturn data for the GDP deflator (ONS code: YBGB) and the March 2018 Spring Statement forecast. http://obr.uk/data/

- Data on interest rates is Bank of England data on Bank Rate from the ‘a millennium of macroeconomic data’ dataset. https://www.bankofengland.co.uk/statistics/research-datasets

Further reference information

- Calendar year real GDP growth rates have been calculated using the quarterly ONS and OBR series.

Chart 2.J: Debt-stabilising PSNB in the final year of the forecast

Data
Estimates of the PSNB as a % of GDP, which would leave PSND as a % of GDP unchanged on the previous year

Data source, including ONS code if applicable


Further reference information

- These estimates are calculated by taking PSND as a % of GDP in the final forecast year, subtracting the previous years’ level of PSND as % of GDP, and multiplying the difference by nominal GDP in the final year of the forecast.

- This takes the OBR forecast for FTs as given.
Chart 2.K: Projections of public sector net debt with illustrative shocks

Data

Presents HM Treasury projections of public sector net debt (PSND as a percentage of GDP) under differing borrowing scenarios, with illustrative shocks.

Data source, including ONS code if applicable

- ONS outturn data (ONS code: HF6W), OBR March 2018 Economic and Fiscal Outlook (EFO) and HM Treasury calculations

Further reference information

- Public sector net debt up to and including 2020-21 is consistent with ONS outturn data (ONS code: HF6W) and the OBR’s March 2018 Spring Statement forecast. The projections of public sector net debt after 2020-21 are HM Treasury projections under four policy scenarios:
  - overall budget balance from 2025-26, where the OBR’s March 2018 Spring Statement forecast is assumed until 2022-23 and then the deficit is straight-lined to zero in 2025-26;
  - 1% of GDP budget deficit from 2021-22 onwards;
  - 2% of GDP budget deficit from 2021-22 onwards; and
  - current budget balance from 2021-22, where borrowing (% of GDP) is equal to Public Sector Net Investment (PSNI) (% of GDP). After 2022-23, PSNI (and hence borrowing) is held constant as share of GDP at the level in the final year of the OBR’s March 2018 Spring Statement forecast (equivalent to a deficit of 2.3% of GDP).

- For all policy scenarios, projections include the impact of an illustrative shock that increases PSND by 10% of GDP every 9 years (starting in 2029-30).

- The HM Treasury projections beyond the OBR’s medium-term forecast period are based on the OBR’s latest set of long-run economic determinants. There is assumed to be no long run impact of shocks on real or nominal GDP growth.
Chart 2.L: Projections of debt interest payments with illustrative shocks

Data

Presents HM Treasury projections of debt interest payments under differing borrowing assumptions, with illustrative shocks.

Data source, including ONS code if applicable

- ONS outturn data (ONS code: NMFX+MU74), OBR March 2018 Economic and Fiscal Outlook and HM Treasury calculations

Further reference information

- Debt interest payments (net of APF) to 2020-21 are consistent with ONS outturn data and the OBR March 2018 Economic and Fiscal Outlook. The projections of debt interest payments beyond 2020-21 are HM Treasury projections under the four policy scenarios outlined for Chart 2.K.

- As with Chart 2.K, projections include the impact of an illustrative shock that increases PSND by 10% of GDP every 9 years (starting in 2029-30).

The HM Treasury projections beyond the OBR’s medium-term forecast period are based on the OBR’s latest set of long-run economic determinants.

Para 2.45

Data

If the trend rate of productivity growth was 2.5%, by running an overall balance from 2025-26, the government could reduce debt below 60% of GDP by the mid-2040s, even after accounting for shocks.

Data source, including ONS code if applicable


Chart 2.M: Average maturity of the debt stock by country

Data

Weighted average debt maturity in years of the G7 countries, 2018

Data source, including ONS code if applicable

- Bloomberg
Chart 2.N: Annual index-linked gilt issuance

Data
UK government index-linked gilt issuance in absolute terms and as a proportion of total gilt issuance, 2002-03 to 2018-19

Data source, including ONS code if applicable

Chart 2.O: Index-linked government debt: international comparisons

Data
Index-linked debt as a proportion of total government debt in G7 countries, 2018

Data source, including ONS code if applicable

Chart 2.P: Future index-linked debt stock under different issuance assumptions

Data
Projections of index-linked gilts as a proportion of the total gilt portfolio under different issuance scenarios, 2018-19 to 2047-48

Data source, including ONS code if applicable
- UK Debt Management Office internal projections.

Further reference information
- These projections assume a balanced budget; continuation of current average issuance maturities; continuation of the relative average issuance maturities of index-linked and conventional gilts; and market derived inflation and interest rate expectations
Chapter 3

Financial sector

Chart 3.A: Aggregate increase in bank capital ratios

Data
Shows the increase in Common Equity Tier 1 (CET1) capital, of the UK’s major banks.

Data source, including ONS code if applicable

Further reference information
- The chart is a replication of the chart in the Bank’s Financial Stability Report
- Major UK banks are: Banco Santander, Bank of Ireland, Barclays, Co-operative Banking Group, HSBC, Lloyds Banking Group, National Australia Bank, Nationwide, RBS and Northern Rock (until 2007)
- From 2008, the chart shows core Tier 1 ratios as published by banks, excluding hybrid capital instruments and preference shares, and making deductions from capital based on FSA definitions. Prior to 2008 that measure was not typically disclosed; the chart shows Bank estimates.
- From 2012, the ‘Basel III common equity Tier 1 capital ratio’ is calculated as common equity Tier 1 capital over risk-weighted assets, according to the CRD IV definition as implemented in the United Kingdom. Prior to 2012, the chart shows Bank estimates. The peer group includes Barclays, Co-operative Banking Group, HSBC, Lloyds Banking Group, Nationwide, RBS and Santander UK

Chart 3.B: UK banks’ resilience to the 2017 stress test

Data
Shows aggregate CET1 ratios for UK banks participating in the 2017 Annual Cyclical Scenario.
Chart 3.C: Implementation of key G20 financial sector reforms by FSB members

Data

Shows implementation status of key reforms across priority areas, including Basel III, compensation, OTC derivatives, resolution and shadow banking – as of June 2017 – based on information collected by FSB and standard-setting bodies’ monitoring mechanisms.

Data source, including ONS code if applicable


Further reference information

The chart uses the RAG ratings from the table on implementation of reforms in priority areas by FSB jurisdictions – as of 30 June 2017 – see pg 3 of the Third Annual Report.

Footnote 3.15: Net finance raised by UK private non-financial corporations (£ billions)

Data

Data includes:

- £13 billion sale of former Northern Rock mortgages
- £11.8 billion sale Bradford & Bingley asset sale
- £5.3 billion Bradford & Bingley mortgages sale
- £747 million Northern Rock plc sale

Data source, including ONS code if applicable

Chart 3.D: Cumulative net finance raised by UK private non-financial corporations

Data
Shows the cumulative net finance raised through loans and market-based finance by private non-financial UK firms.

Data source, including ONS code if applicable
- Bank of England, Capital Issuance Statistics, April 2018

Chart 3.E: Composition of the financial system among selected countries

Data
Breakdown of financial system among selected advanced economies with significant financial sectors.

Data source, including ONS code if applicable
- Financial Stability Board, Global Shadow Banking Monitoring Report 2018

Further reference information
- Original FSB analysis used absolute figures, which are shown as percentages in this chart to allow effective comparison.

Chart 3.F: Tax revenues from the banking sector

Data

Data source, including ONS code if applicable
- HMRC Pay-As-You-Earn and Corporate Tax Receipts from the Banking Sector 2017

Further reference information
- The figures have been sourced from the Official Statistics publication released by HMRC in August 2017.
Chapter 4

Revenue

Chart 4.A: Self-employment in the workforce

Data

Proportion of individuals in the workforce who are self-employed, 1945-2017

Data source, including ONS source code if applicable

- 2017: ONS

Further reference information

- Bank of England data: https://www.bankofengland.co.uk/statistics/research-datasets

Chart 4.B: Small companies in profit, by number of directors

Data

Government data on the number of companies with positive trading profits (after losses carried forward) of up to £500,000 (in 2014 prices) between the financial years 2000/01 and 2015/16. Filtered by companies with 1 or 2 directors and 3+ directors.
Data source, including ONS source code if applicable

- Her Majesty’s Revenue and Customs

**Chart 4.C: Tax due on £50,000 of income in 2017-18**

**Data**

Tax paid by individuals in the three different forms of labour discussed in the ‘Different Ways of Working’ section: employees, self-employed individuals, and individuals working as sole director of their own company. In each case the total costs of their compensation or the value of their profits is £50,000. In the case of the employee this will include the costs of employer National Insurance contributions (NICs) paid on the individual’s salary.

The chart assumes that the single company director withdraws profits in the most tax efficient way, paying themselves a salary up to the primary threshold for NICs, and taking the rest as dividends, all in the same year.

**Data source**


**Further reference information**


**Paragraph 4.17**

**Data**

Estimated cost of the difference in tax and NICs treatment between the employed and self-employed.

**Data source, including ONS source code if applicable**

- ‘Estimated costs of principal tax reliefs’, Her Majesty’s Revenue and Customs, January 2018, data provided under ‘National Insurance Contributions: Reduced contributions for self-employed not attributable to reduced pensions eligibility’.

**Further reference information**

Paragraph 4.17

Data

Estimated cost to the Exchequer of non-compliance with the off-payroll working rules (commonly known as IR35) by 2022-23.

Data source, including ONS source code if applicable

Her Majesty’s Revenue and Customs

Further reference information

‘Off-payroll working in the private sector’, May 2018, p4

Paragraph 4.29

Data

How much less tax a typical basic rate taxpayer will be paying, in 2017-18 vs 2007-08.

Data source, including ONS source code if applicable

HMT calculation. The personal allowance (PA) was £5,225 in 2007-08, and £11,500 in 2017-18. Basic rate taxpayers earning over £11,500 would have benefitted from the full cash increase to the PA, and will have benefitted from this at their marginal tax rate – 20%.

Therefore, the calculation is:

£11,500 - £5,225 = £6,275

£6,275 * 20% = £1,255

Chart 4.D: Personal Allowance: policy and RPI

Data

The path of the personal allowance, RPI from 2007 versus policy decisions.

Data source, including ONS source code if applicable

Office for National Statistics (ONS)

Consumer Price Indices, Retail Price Indices: MM23
Further reference information

- ONS: Consumer Price Indices, Retail Price Indices
- https://www.ons.gov.uk/economy/inflationandpriceindices/datasets/consumerpriceindices

Paragraph 4.31

Data

Proportion of the working age population paying income tax.

Data source, including ONS source code if applicable

- HMRC
- Income tax statistics and distributions
- Office for National Statistics (ONS)
- United Kingdom 16-64 population estimates 2017-18
- England and Wales 16-64 (males) and 16-59 (females) population estimates 2007-08
- National Records of Scotland
- 16-64 (males) and 16-59 (females) population estimates for 2007-08
- Northern Ireland Statistics and Research Agency
- 16-64 (males) and 16-59 (females) population estimates for 2007-08

Further reference information

- HMRC Income Tax statistics and distributions
- ONS population estimates
- https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/parliamentaryconstituencymidyearpopulationestimates
- National Records of Scotland: population estimates
- Northern Ireland Statistics and Research Agency: population estimates

Chart 4.E: Average daily consumption of cigarettes among smokers

Data

Graph showing a decrease in average daily consumption of cigarettes amongst smokers from 1974 to 2015.
Data source, including ONS source code if applicable

- Adult smoking habits in the UK: 2016, para 6

Further reference information


Paragraph 4.38

Data

Saving for the average car driver between 2011 and April 2019 as a result of successive fuel duty freezes.

Data source, including ONS source code if applicable


Paragraph 4.38

Data

Cost to Exchequer of previously announced freezes to fuel duty, and revenue foregone in future years.

Data source, including ONS source code if applicable

- HM Treasury calculations from OBR Policy Measures Database, http://obr.uk/data/

Further reference information

- Announced freezes in the OBR’s Policy Measures Database:
  - Budget 2011 (row 805)
  - Autumn Statement 2011 (row 840)
  - Autumn Statement 2012 (row 928)
  - Budget 2013 (row 992)
  - Autumn Statement 2013 (row 1025)
  - Budget 2015 (row 1201)
  - Budget 2016 (row 1401)
  - Autumn Statement 2016 (row 1416)
  - Autumn Budget 2017 (row 1493)
Paragraph 4.38

Data

£4.25bn is the cost of the fuel duty freeze for 2018/19 over the scorecard period

Data source, including ONS source code if applicable


Chart 4.F: UK tax gap

Data

UK tax gap, 2005-06 – 2016-17

Data source, including ONS source code if applicable

Her Majesty’s Revenue and Customs (HMRC)

UK tax gap, 2005-06 - 2016-17

Further reference information


Paragraph 4.45

Data

Compliance yield

Data source, including ONS source code if applicable

Her Majesty’s Revenue and Customs (HMRC) calculations based on compliance yield detailed in HMRC Annual Reports 2010-11 to 2016-17 and HMRC quarterly performance updates for 2017-18 up to end of December 2017 (the latest quarter published)

Further reference information

HMRC Quarterly Performance Update – October to December 2017

Data

UK tax gap by tax head, 2016-17

Data source, including ONS source code if applicable

Her Majesty’s Revenue and Customs (HMRC)
UK tax gap by tax head, 2016-17

Further reference information

Paragraph 4.57

Data
Reduction in administration burdens by £25 million per annum due to employee benefits and expenses reforms.
Introduction of the cash basis being used by over 1.1 million trading and property businesses.

Data source, including ONS source code if applicable
- HMRC Tax Information Notices
- HMRC KAI Information

Further reference information
For the reduction in administration burdens this includes HMRC notices:
Income tax: abolition of the £8,500 threshold for benefits in kind
Income Tax: statutory exemption for trivial benefits in kind
Real time collection of tax on benefits in kind and expenses through voluntary payrolling
Income tax: simplifying the administration of employee expenses, including preventing salary sacrifice

Chart 4.H: Oil and gas tax revenues and repayments

Data
Impact of decommissioning tax relief on the tax revenues collected by the Exchequer

Data source, including ONS source code if applicable
HMRC Knowledge, Analysis and Intelligence (KAI) estimate

Further reference information
These projections were commissioned by HMT and are derived from data provided by the UK Oil and Gas Authority. They have not been published before.
Chapter 5

Spending


Data

Shows an international comparison of expenditure forecast errors for in-year, the year ahead and two years ahead.

Data source, including ONS source code if applicable


Data not public, provided upon request.

Paragraph 5.6

Data

AME has increased from 49% of TME in 2010-11 to 54% in 2017-18

Data source, including ONS source code if applicable

Calculated using annual managed expenditure and total managed expenditure figures from the OBR's Spring Statement 2018.

Further reference information


Paragraph 5.21

Data

Over 920,000 claimants are now in receipt of UC, and it has now been rolled out to nearly 360 jobcentres - over half the total number.
Data source, including ONS source code if applicable

Data from DWP accurate to 10 May 2018. These official statistics have been compiled using data from systems within local offices and records of Universal Credit benefit payments made by the Department. Further background information and methodology document can be found here: https://www.gov.uk/government/publications/universal-credit-statistics-backgroundinformation-and-methodology

Further reference information

‘Universal Credit Statistics’, DWP, June 2018

Chart 5.B and Paragraph 5.36: Old Age Dependency Ratio (OADR)

Data

Old age dependency ratio under different State Pension age scenarios including the legislated timetable and the 32% path as set out in the SPa Review.

‘Without SPa changes’ assumes a constant State Pension age of 65 for males and 60 for females.

Data source, including ONS source code if applicable

ONS Population Estimates and projections data to determine the number of pension age dependants per 1,000 persons of working age.

Source code from ONS publication on Population Projections, 2016-based
Table A1-1, Principal Projection – UK summary
Z1 - Zipped population projections data files, UK
Pensionmatrixfor2016npp
Source code from ONS publication on Population estimates, mid-2017
MYEB1_detailed_population_estimates_series_UK_(0116)

Further reference information

ONS publication on Population Projections, 2016-based
https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2016basedstatisticalbulletin
ONS publication on Population estimates, mid-2017
Paragraph 5.40

Data

A one percent increase in the number of people in work aged 50 – 64 could increase GDP by £5.7 billion per year and have a positive impact on income tax liabilities and National Insurance contributions of around £800 million per year.

Data source, including ONS source code if applicable

HMT analysis based on ONS ASHE, LFS and mid-year population statistics.

Further reference information

One percent of the number of people aged 50 – 64 in employment and self-employment was calculated using ONS LFS microdata and mid-year population estimates:

- The share of individuals reported as employed and self-employed at each year of age between 50 and 64 was calculated from LFS data (quarter 2 2017 – quarter 1 2018).
- These shares were multiplied by the number of people at each of age in the mid-year population estimates, and then one percent of each number was calculated.

The illustrative impact on GDP was estimated using ASHE (2017) microdata on gross weekly earnings, and the resulting increase in total economy earnings:

- One percent of the number of employees and self-employed at each year of age (from the previous step) was multiplied by mean gross weekly earnings for each corresponding year of age. These figures were annualised.
- The resulting numbers were added together, to give a total increase in earnings across the 50 – 64-year-old group.
- This figure was scaled, based on the share of GDP accruing to labour in 2017 Q2 (as this most closely corresponded to the time the ASHE survey was undertaken), to translate to a GDP impact.

The impact on income tax receipts and National Insurance contributions was estimated by simulating individuals’ tax liabilities using ASHE (2017) microdata on gross weekly earnings, and weighting these according to the share of employees and self-employed people:

- For employees, the mean annual income tax and National Insurance liability for each year of age was multiplied by one percent of the number of employees at the corresponding year of age.
- For self-employed, it was assumed that the distribution of income is the same as the distribution of earnings for employees. Income tax and National Insurance liabilities were simulated under this assumption. The mean annual
self-employed tax liability for each year of age was then calculated, and multiplied by one percent of the number of self-employed people at the corresponding year of age.

- The tax figures were added together across both age and employment status.

The analysis made several assumptions:

- It assumed that the additional one percent of people in work would have the same age and earnings distribution as the current population in work. It also assumed that the self-employed share of the additional individuals was the same as the current population.
- Because ASHE does not report income of self-employed people, it was assumed that the ASHE employee earnings data was representative of the earnings of the self-employed.
- In simulating tax liabilities, it was assumed that individuals pay income tax and NICs as if this was their only income source, and the simulation did not take account of reliefs or exemptions. In reality, individuals may make use of reliefs (e.g. pension contributions), reducing liabilities compared to the simulation, or have other sources of income (e.g. pension income, income from property), which would increase liabilities compared to the simulation.

General information about LFS and ASHE data:

https://www.ons.gov.uk/surveys/informationforhouseholdsandindividuals/householdandindividualsurveys/labourforcesurveylfs

Mid-year population estimates:

https://www.ons.gov.uk/releases/populationestimatesforukenglandandwales,scotlandandnorthernirelandmid2017

Chapter 5 Paragraph 5.53

Data

Claims for certain injuries at birth, where clinical negligence is proven, are generally the highest value claims. Increases in damages awarded in these cases are one of the major drivers for the recent rise in the costs of claims. Other drivers are increases in the number of claims and to a rise in legal costs (mainly associated with claimant’s legal costs for low- and medium value claims up to £250,000).

This comes from National Audit Office analysis.

Data source, including ONS source code if applicable

‘Managing the rising costs of clinical negligence in trusts’, NAO, September 2017
Chart 5.C: Clinical negligence cash payouts

Data
NHS Resolution expenditure under the Clinical Negligence Scheme for Trusts

Data source, including ONS source code if applicable
NHS Resolution (NHS Litigation Authority before 2016-17) annual report and accounts

Further reference information
NHS Resolution (NHS Litigation Authority before 2016-17) annual report and accounts

Chapter 5: Paragraph 5.59

Data
As a result of several positive judgements, HMRC’s central estimate of tax litigation losses has fallen by 67% to from £27 billion to £9 billion.

HMRC’s tax litigation central estimate represents an approximation of the net impact on Exchequer finance. This is subject to uncertainty.

Data source, including ONS source code if applicable
Internal HMRC analysis, accurate as of the end of June 2018.

Chart 5.D: Devolved administration budgets and borrowing powers

Data

Scottish Government annual borrowing limit and statutory borrowing cap.
Welsh Government annual borrowing limit and statutory borrowing cap.
Northern Ireland Executive annual borrowing limit and statutory borrowing cap.

Data source, including ONS source code if applicable
Tables 1.1, 1.2, and 1.3 of HM Treasury’s Block Grant Transparency publication.
Paras 54-70 of the agreement between the Scottish Government and the UK Government on the Scottish Government’s fiscal framework.


Financial Annex to the Stormont House Agreement.

**Further reference information**

Block Grant Transparency: HM Treasury, December 2017

Scottish Government’s fiscal framework agreement: UK Government, February 2016


https://www.gov.uk/government/publications/the-stormont-house-agreement
Chapter 6
Balance sheet

Chart 6.A: Drivers of changes in public sector net debt

Data
Drivers which explain annual change in public sector net debt from 1998 to 2018 and forecasts to 2023.

Data source, including ONS code if applicable

- ONS Public Sector Finances Tables 1 to 10: Appendix A - tables PSA1, PSA8d1, Rec2 and Rec3. ONS Public Sector Finances June 2018 release: https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/datasets/publicsectorfinancesappendixatables110
- OBR Economic and fiscal outlook, March 2018: T4.33 and T4.39
- Treasury calculations

Further reference information

- “Change in PSND” is the change in PSND debt from ONS Public Sector Finances Table PSA1 (ONS CDID: HF6W).
- “Borrowing” is the in-year borrowing series from ONS Public Sector Finances Table PSA1 (ONS CDID: J5II).
- “Accounting effects” refers to accounting reconciliations in central government (such as the adjustment for interest on gilts) and changes due to local government and public corporations.
- “Balance sheet effects” refers to Government transactions that contribute to debt without impacting the deficit. This is mostly asset sales and loans, but also includes revaluations.
- “BoE debt” reflects the operations of the Bank of England, including transactions in the Term Funding Scheme in 2016-22, this is changes in the Bank of England’s contribution to PSND from ONS Public Sector Finances Table PSA8d1 (ONS CDID: A8J8).
Chart 6.B: Balance sheets of selected governments

Data
Public sector financial assets, non-financial assets and liabilities as a percentage of GDP, for European countries who have been through the IMF’s Fiscal Transparency Evaluation.

Data source, including ONS code if applicable
- IMF Fiscal Transparency Evaluation data

Chart 6.D: Changes in PSNFL components over time

Data
Value of components of Public Sector Net Liabilities from 1998 to 2017, £ billion

Data source, including ONS code if applicable
- ONS (PSNFL ex) Table PSNFL1_1 and _2 in the Public Sector Finances release
- CPNG, Total liabilities,
- CPMU, Monetary Gold & Special Drawing Rights liabilities,
- CPNH, Currency and deposit liabilities,
- CPNI, Debt securities liabilities,
- CPNN, Loans liabilities,
- CPMV, pensions liabilities,
- CPMW, CPMX, CPMY, other liabilities,
- CPNR, Total assets,
- CPNT, Monetary Gold & Special Drawing Rights assets,
- CPNU, Currency and deposit assets,
- CPNV, Debt securities assets,
- CPMZ, Loan assets,
- CPNA, Equity assets,
- CPNB, pensions assets,
- CPNY, CPNC, CPNF other assets.
Further reference information

- ONS Public Sector Finances release (https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes publi csectorfinance/bulletins/publicsectorfinances/may2018)

Chart 6.E: The New Zealand intertemporal balance sheet

Data
Value of New Zealand’s social, financial, commercial and fiscal assets and liabilities, NZ$bn

Data source, including ONS code if applicable

- The New Zealand Treasury, 2018 Investment Statement, page 30

Chart 6.F: Maximum exposure by investment grade

Data
Value of public sector assets financial assets which are exposed to credit risk, broken down by investment grade, £ billion

Data source, including ONS code if applicable

- Whole of Government Accounts (WGA) 2009-10 to 14-15, note on credit risk; HM Treasury calculations.

Further reference information

- Details on credit risk are calculated by HM Treasury but not published in WGA after 2014/15

Chart 6.G: Foreign exchange holdings by currency

Data
Value of public sector assets financial assets and liabilities which are exposed to foreign exchange risk, broken down by currency, £ billion
Data source, including ONS code if applicable


Further reference information

- Details on exchange rate risk are calculated by HM Treasury but not published in WGA after 2014/15

Chart 6.H: Asset and liability maturity

Data

Value of public sector liquid and illiquid financial assets, and value of public sector financial liabilities broken down by maturity, £ billion

Data source, including ONS code if applicable


Further reference information

- Details on liquidity risk are calculated by HM Treasury but not published in WGA after 2014/15
- Liquid assets includes cash and cash equivalents, and gold holdings. Gold holdings are treated as illiquid in WGA, but as liquid in the National Accounts as published by the ONS as they form part of the Reserves.

Chart 6.I: Cash flows from assets acquired in the financial crisis

Data

Cash flows relating to public sector interventions in the financial crisis, £ billion

Data source, including ONS code if applicable

- OBR and HM Treasury calculations

Further reference information

- This data is published in the OBR’s Economic and Financial Outlook (EFO). HM Treasury have updated the figures from the OBR’s March 2018 EFO to
reflect the financial position at end-June, including proceeds from recent sales in UKAR and RBS.

- The RBS share priced used is 270.5p, as per the opening price on the London Stock Exchange on 5 June 2018. https://www.londonstockexchange.com/exchange/prices-and-markets/stocks/summary/company-summary/GB00B7T77214GBGBXSET1.html

- The net asset value of UKAR is from HM Treasury’s 2017-18 financial statements, note 10.1. Note 10.1 sets out that the proceeds from the UKAR sale were used to pay down loans owed to FSCS and HMT. As a result, the sale had an equal effect on UKAR’s assets and liabilities and did not affect the net asset position.


Data

Value of provisions recognised in the Whole of Government Accounts, and maximum exposure for quantifiable contingent liabilities disclosed under IAS 37 or disclosed to Parliament, £ billion, 2010 to 2017

Data source, including ONS code if applicable

- WGA, 2009-10 to 2016-17: Statement of Financial Position, notes on contingent liabilities and assets disclosed under IAS 37, and remote contingent liabilities disclosed to Parliament.

Chart 6.M: Contingent liabilities: number and maximum exposure

Data

Maximum exposure of outstanding contingent liabilities that have been approved or awaiting approval through HMT’s contingent liability framework, broken down by category, £ billion

Data source, including ONS code if applicable

- HM Treasury calculations

Further reference information

- These figures are taken from the contingent liability database which contains information taken from the contingent liability approval checklists provided to HMT. The checklists include estimates of the
maximum exposure and maturity made by the relevant department. These figures exclude contingent resulting from the Bank of England’s Term Funding Scheme. The contingent liability database contains policy sensitive information and is not published.

Chart 6.N: Contingent liabilities: maximum exposure over time

Data

Maximum exposure of outstanding contingent liabilities that have been approved or awaiting approval through HMT’s contingent liability framework, over time, £ billion

Data source, including ONS code if applicable

- HM Treasury calculations

Further reference information

- These figures are taken from the contingent liability database which contains information taken from the contingent liability approval checklists provided to HMT. The checklists include estimates of the maximum exposure and maturity made by the relevant department. These figures exclude contingent resulting from the Bank of England’s Term Funding Scheme. The contingent liability database contains policy sensitive information and is not published.
HM Treasury contacts

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