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# UK Income Tax Liabilities Statistics

**2014-15 Survey of Personal  
Incomes, with projections to  
2017-18**

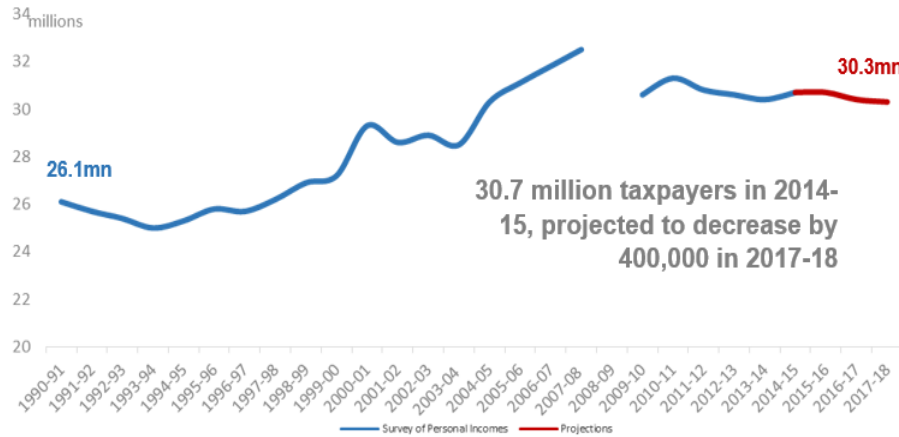
**Includes Tables 2.1 to 2.7**

# Content

Key Statistics .....	3
Background notes.....	4
SECTION A: Income Tax Liabilities Statistics.....	8
Table 2.1 – Number of individual income taxpayers by marginal rate, gender and age, 1990-91 to 2017-18.....	8
Table 2.2 – Number of individual income taxpayers by country and region, 1999-00 to 2017-18.....	11
Table 2.4 – Shares of total income (before and after tax) and income tax for percentile groups, 1999-00 to 2017-18.....	13
Table 2.5 – Income tax liabilities by income range, 2014-15 to 2017-18.....	18
Table 2.6 – Income tax liabilities by income source, tax band and marginal rate, 2014-15 to 2017-18.....	22
SECTION B: Illustrative Tax Burdens .....	46
Table 2.7 – Income tax (net of tax credits) as a per cent of gross earnings for specimen families, 1990-91 to 2017-18.....	46
Annex A: Context and background information.....	54
Annex B: Data sources and Methodology.....	64
Annex C: Quality indicators.....	77
Annex D: Glossary of Terms.....	83

# Key Statistics

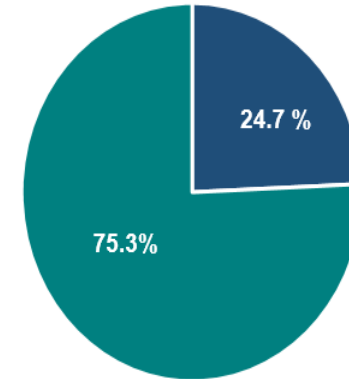
Number of Individual Income Taxpayers, 1990-91 to 2017-18



2014-15 total income by **Bottom** and **Top 50%\*\***

In 2014-15, the share of total income of the top 50% of taxpayers (£977 billion) was 75.3%, a 50.6 percentage point income inequality between the bottom and top 50%.\*\*

Top 50% of taxpayers were liable for 90.3% of total tax (£167 billion) in 2014-15, showing the progressive nature of the income tax system.\*\*



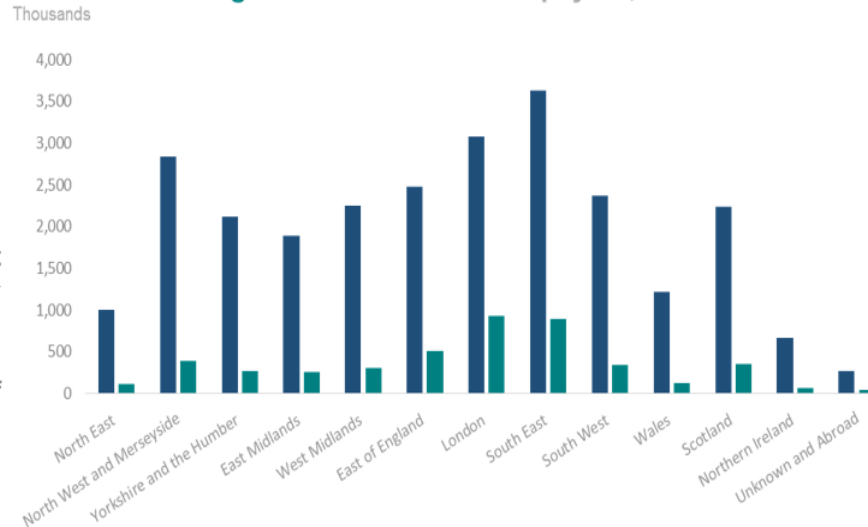
Projected 2017-18 taxpayer type compared to 2014-15:

25.8m basic\* rate (85.1%), down 0.3m  
4.2m higher rate (13.7%), down 0.1m  
364,000 additional rate (1.2%), up 36,000

In 2014-15, the South East had the highest number of taxpayers (14.7%), followed by London (13.1%).

Northern Ireland had the lowest number of taxpayers (2.4%), followed by the North East (3.7%).

Basic\* rate vs Higher/Additional rate taxpayers, 2014-15



The Top 1% (broadly all additional rate taxpayers) had 12.3% of total income in 2014-15 and were liable for 27.2% of total income tax.\*\*

Projections for 2017-18 show the top 1% share of total income, decreased to 12% whereas the top 1% of total income tax increased to 27.7% respectively.\*\*\*

Projected 2017-18 average tax rates compared to 2014-15:

9.6% for basic rate taxpayers, down 0.6pp  
21.7% for higher rate taxpayers, down 0.5pp  
37.8% for additional rate taxpayers, no change

Estimates for 2015-16 to 2017-18 are projections based on the 2014-15 Survey of Personal Incomes and Officer for Budgetary Responsibilities March 2017 economic and fiscal outlook

\*includes starting and savers rate taxpayers

\*\*Taxpayer distribution based on total income before tax

\*\*\*Projections for the top 1% are indicative

# Background notes

Income Tax Liabilities Statistics (ITLS) is a National Statistics publication by HM Revenue and Customs (HMRC). For more information about National Statistics, please see the United Kingdom Statistics Authority (UKSA) website:

<http://www.statisticsauthority.gov.uk/>

UKSA has confirmed that the ITLS and projections are designated as National Statistics, following HMRC implementing the enhancements listed in Assessment Report 157 *Statistics on Income Tax* and Assessment and Report 241 *Income Tax Projections*, available at:

<https://www.statisticsauthority.gov.uk/publications-list/?keyword=&type=assessment-report&theme=&producer=hm-revenue-customs&date=>

## Data sources, methods and quality

These statistics are based on HMRC's annual Survey of Personal Incomes (SPI), a representative sample survey of the tax records of individuals in HMRC's Pay As You Earn (PAYE), Self-Assessment (SA) and repayment claims administrative systems. Individuals' tax liabilities are estimated using the information SPI provides on taxpayer incomes and circumstances (e.g. their age).

Data sources and methods are described in Annex B, including information on changes to imputation methods introduced for the 2014-15 SPI (page 64). Information about the quality of the statistics is set out in Annex C.

As in previous releases, ITLS Table 2.2 provides projections of taxpayer numbers by taxpayer marginal rate for countries and regions. These projections are indicative only and users should note that the reliability of these projections by country and region is under review, with the possibility that they be partially withdrawn from future releases (Annex C).

## New in this release

ITLS was last published in May 2016. This publication includes the finalised figures for the 2014-15 SPI originally scheduled to be included in the February edition of the release, which was subsequently not published.

<https://www.gov.uk/government/statistics/schedule-of-updates-for-hmrcs-statistics>

This (May 2017) release provides revised projections for tax years 2015-16 to 2016-17 as well as the first estimates for the 2017-18 tax year, all based on the new 2014-15 SPI data. The data is projected using economic assumptions consistent with the Office for Budget Responsibility's (OBR) March 2017 Economic and fiscal outlook:

<http://budgetresponsibility.org.uk/efo/economic-fiscal-outlook-march-2017/>

## **Next release**

ITLS is currently published twice yearly, in January/February and April/May, with revised projections based on the OBR's latest published economic forecast, until final statistics based on outturn SPI data can be published.

The next scheduled release will be in January/February 2018, containing 2015-16 SPI outturn data with revised projections for 2016-17 and 2017-18 following the OBR's Autumn Budget 2017 economic forecast.

The exact date of publication will be given not less than one calendar month before publication on both the HMRC Gov.uk statistics page and Office for National Statistics (ONS) publication hub.

## **2008-09 Survey of Personal Income**

The 2008-09 SPI is still unavailable but HMRC remains committed to producing National Statistics for 2008-09 and will announce their publication dates as soon as they have been confirmed.

## **Income Tax Liability Statistics**

Section A provides detailed statistics on outturn and projections of individual income taxpayer numbers, income tax liabilities and average rates of tax broken down by taxpayer characteristics such as age and gender, income levels and groupings (e.g. the top 1%), and by marginal rate of tax (e.g. Basic Rate taxpayers). Section A also shows tax liabilities arising on different forms of income subject to income tax and in each tax band.

As a complement to the survey-based statistics, Section B sets out trends in income tax burdens over time for a selection of illustrative family types and earnings levels. HMRC also publishes statistics on income tax receipts:

<https://www.gov.uk/government/collections/income-tax-receipts-statistics>

## **Liability versus receipts**

Liabilities are amounts of income tax due on incomes arising in a given tax year whereas receipts are amounts of income tax paid and collected in a given year. Statistics on income tax liabilities and receipts in any year can differ appreciably, due to lags in the payment and collection of tax particularly under SA, or when over or underpayments occur which are repaid or recovered in a later year.

Data sources and methods underpinning the statistics also differ. Receipts statistics are based on aggregate administrative data sources whereas liabilities statistics are compiled using a sample of individuals' tax records (SPI).

The detailed breakdowns of income tax liabilities provided in ITLS, e.g. by taxpayer income or marginal rate, are not available on a receipts basis, and are not generally available in other statistical publications. Liabilities statistics also reflect more closely and immediately than tax receipts the impact of changes in the income tax policy regime and developments in the wider economy.

## **Time frames**

SPI survey results are usually available around 21 months after the end of the tax year. The information is drawn from the transactional systems approximately a year after the reference period and it takes about 8-9 months to turn the raw dataset into information and commentary ready for publication.

Projections up to the current tax year, 2017-18, are provided to bring the statistics up to date, and enhance their timeliness and usability.

Projections beyond the current tax year are not provided because tax rates, allowances and thresholds impacting on the statistics are not known until announced by the Government. Any projections beyond 2017-18 would also be subject to the likelihood of larger projection errors.

## **Projection methods**

The projection methods, described in Annex B, have been chosen to suit ITLS's key purpose of providing informative breakdowns of income taxpayers and liabilities. Provision of projections of total tax is not a key purpose of the ITLS release, and the use of other data sources and alternative projection methods would be required to make them suitable for that particular purpose. They should not be seen or used as alternatives to other forecasts of income tax.

## **Office for Budget Responsibility**

The Office for Budget Responsibility was created in 2010 to provide independent and authoritative analysis of the UK's public finances, and twice yearly publishes five-year forecasts for the economy and public finances, including income tax receipts:

<http://budgetresponsibility.independent.gov.uk/>

## **Use of Income Tax Liabilities Statistics**

Income Tax Liabilities Statistics are used by a variety of organisations mainly concerned with Government decision making about tax policy, both in a policy making and policy monitoring context.<sup>1</sup>

The projections form the basis for HMRC's detailed assessments of the Exchequer costs and impacts on individuals of potential changes to the income tax system. This informs the Government's tax policy decisions, and they are used by other Government departments for similar purposes.

They are also used by Parliament, Government departments such as HM Treasury, some private organisations including policy 'think tanks', as well as the media and other commentators to monitor income tax trends and distributions. They inform, for example, users' assessments of the impacts of past tax policy changes or the sustainability of the UK public finances. For some users, such as the Office for Budget Responsibility, the statistics are used explicitly in an economic and tax

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<sup>1</sup> UKSA Monitoring Brief 6/2010 *The Use Made of Official Statistics* provides a generic framework for classes of use of Official Statistics:  
<http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/monitoring-brief-6-2010---the-use-made-of-official-statistics.pdf>

forecasting context, informing assessments of recent trends or used as specific inputs to the forecasting process.

The statistics are also used by HMRC and other organisations including the Office for Tax Simplification in assessments of the operation of the UK income tax system and its impact on individuals.

While HMRC has regular contact with some key users of the ITLS bulletin within Government, we would like to improve our knowledge of the use made of the ITLS bulletin, particularly by private sector organisations and individuals. We encourage users to provide feedback on their use of the statistics including any decisions they may inform, together with their requirements and any improvements they would like to see by using the contact points set out below.

### **Further information**

Further information setting out the context for these statistics and projections is provided in Annex A. This includes an introduction to the UK income tax system and a summary of recent income tax policy changes which impact on the ITLS. Annex D provides a glossary of terms.

### **Feedback and questions**

We strive to improve the quality and accessibility of our National Statistics. Your feedback is crucial in this process. We welcome your suggestions on any of the Statistics and commentary in this publication. If you have any feedback or queries, please contact the Statisticians named on the front page of this release, or use HMRC's user engagement form:

<https://www.gov.uk/government/organisations/hm-revenue-customs/about/statistics#contact-us>

User comments are reviewed regularly, and results of surveys and consultations are published. Information on the most recent survey of users of HMRC income tax statistics is available here:

[http://webarchive.nationalarchives.gov.uk/\\*/http://www.hmrc.gov.uk/statistics/income/user-survey-results.pdf](http://webarchive.nationalarchives.gov.uk/*/http://www.hmrc.gov.uk/statistics/income/user-survey-results.pdf)

# SECTION A: Income Tax Liabilities Statistics

Section A provides detailed insights into some of the key statistics presented in the Table 2.1 to 2.6.

**Table 2.1 – Number of individual income taxpayers by marginal rate, gender and age, 1990-91 to 2017-18**

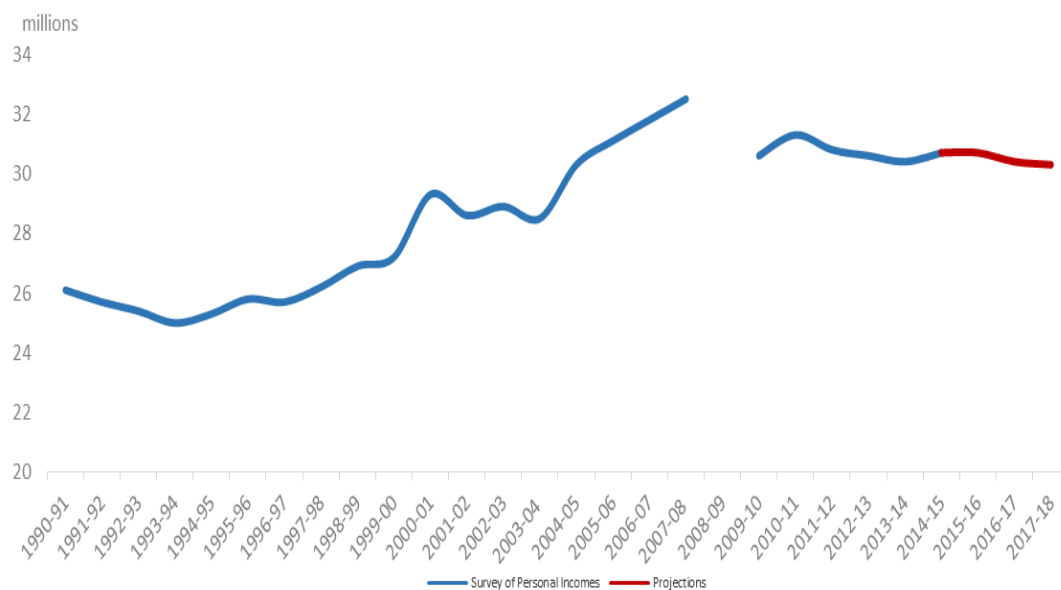
<https://www.gov.uk/government/statistics/number-of-individual-income-taxpayers-by-marginal-rate-gender-and-age>

*Table 2.1 shows how the number of individuals with positive income tax liabilities (taxpayers) has changed over time. The table begins in 1990-91, the year that independent taxation for all individuals was introduced in the UK; previously married couples were taxed jointly. The table provides separate breakdowns of the income taxpaying population by marginal tax rate, gender and by age group.*

## Taxpayers

Prior to the 2008 recession, income taxpayer numbers generally increased, from 26.1 million in 1990-91 to 32.5 million in 2007-08. Latest SPI data shows an estimated 30.7 million taxpayers in 2014-15, which is followed by a steady decline in taxpayers to 30.3 million in 2017-18.

**Figure 1: Number of Individual Income Taxpayers, 1990-91 to 2017-18**





Population, income and employment growth would be expected to drive growth in taxpayer numbers as the combined growth is higher than the effect of indexation of the tax free Personal Allowance (PA). Above indexation growth in the PA will have somewhat offset this growth in the overall number of taxpayers in total.

Total taxpayers rose by 0.3 million to 30.7 million in 2014-15. With income growth projected to be below the inflation measure used for indexation in the period to 2017-18, projections show taxpayer numbers declining further by 0.4 million to 30.3 million in 2017-18. These projected reductions in taxpayer numbers also reflect significant increases in the PA for under 65s, somewhat offset by the freezing of the age related PA for those born before 6<sup>th</sup> April 1948. Additionally, the Starting Rate Limit (SRL)<sup>2</sup> was extended to £5,000 in 2015-16, and the starting rate on savings was reduced from 10% to 0%, which further contributed to taking individuals out of tax.

In 2014-15, 13.1 million (42.7%) of the 30.7 million income taxpayers were female, 17.6 million (57.3%) were male; and 6.8 million (22.2%) were above the State Pension Age. Comparable figures for the UK population aged 16 and over in 2014 were 48.8% male, 51.2% were female; and 23.1% were over the State Pension Age<sup>3</sup>. Projections to 2017-18 show 12.6 million (41.6%) of the 30.3 million total income taxpayers will be female, 17.7 million (58.4%) will be male; and 6.5 million (21.4%) were above the State Pension Age.

## Marginal rate

An individual's marginal tax rate is the proportion of an extra pound of income that would be paid in income tax, which depends on their total taxable income and its composition.

In 1990-91, an estimated 24.4 million individuals, representing the large majority of all income taxpayers (93.5%) were non-Higher Rate taxpayers<sup>4</sup>. The remaining 1.7 million were Higher Rate (HR) taxpayers. In 2014-15, 26.1 million individuals (84.9%) were non-Higher Rate taxpayers, 4.3 million individuals (14%) were HR taxpayers and 328,000 (1.1%) were Additional Rate (AR) taxpayers. In 2017-18, an estimated 25.8 million individuals (85.1%) are non-Higher Rate taxpayers, 4.2 million individuals (13.7%) are HR taxpayers and 364,000 (1.2%) are AR taxpayers.

Among non-Higher Rate taxpayers in 2014-15, there were 285,000 starting rate taxpayers (0.93% of all taxpayers), classified as those with taxable savings only below the £2,880 starting rate limit on which a 10% tax rate applied. A further 686,000 (2.2%) without taxable earnings but with taxable savings above the starting rate limit and/or taxable dividends were savers rate taxpayers, where rates of 20% and 10% applied to savings and dividends. The remaining 25.1 million (81.8%) of

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<sup>2</sup> The Starting Rate Limit applies to taxable savings income, in 2014-15 the first £2,880 is liable at 10%. In 2015-16 the limit was extended to £5,000 and is tax free.

<sup>3</sup> Office for National Statistics Mid-Year Population Estimates for 2014, <http://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesandnorthernireland>

State Pension Age for the purposes of this publication in 2014-15 is 65 years for men and 62.5 years for women

<sup>4</sup> Non-Higher Rate taxpayers comprise of starting, savers and Basic Rate taxpayers.

non-Higher Rate taxpayers had taxable earnings and are classified as Basic Rate taxpayers.

The number of Additional Rate taxpayers increased in 2014-15, to a total of 328 thousand from 311 thousand in 2013-14 which is mainly due to the additional rate threshold being fixed at £150,000.

The number of higher and Additional Rate taxpayers are projected to rise by a further 0.3 million to a high of 4.9 million in 2015-16 compared with 2014-15, before falling back to around 4.5 million in 2017-18. While the proportion of such taxpayers normally rises over time as income growth typically exceeds indexation of tax thresholds, UK earnings growth is projected to be below indexation up to 2015-16.

Increases in HR taxpayer numbers reflect policy changes impacting the Higher Rate Threshold (HRT)<sup>5</sup> for income tax. The HRT was frozen at the 2011-12 level of £42,475 in 2012-13 before falling to £41,450 in 2013-14, rising by a capped rate of 1% to £41,865 in 2014-15 (£1,035 below indexation) and rising again in 2015-16 by a capped rate of 1% plus £100 (£515 below indexation) to £42,385. Numbers of higher and Additional Rate taxpayers are then projected to fall by 0.2 million to 4.7 million in 2016-17 and another 0.2 million to 4.5 million in 2017-18. This is, in part, due to a £615 above inflation increase in the HRT to £43,000 in 2016-17 and a further £1,490 above inflation increase to £45,000 in 2017-18.

The HRT for Scottish taxpayers was frozen at £43,000 in 2017-18 for earned income (details available in Annex A). This will have reduced the year on year decrease in Higher Rate taxpayer numbers from 2016-17 to 2017-18. The assumption around how a Scottish taxpayer is identified, how the dual HRT's has been modelled and how their marginal rate is allocated are detailed in Annex B.

### ***Interpreting Table 2.1***

*Starting, savers and Basic Rate taxpayers are non-Higher Rate, and might all be considered "Basic" Rate taxpayers in the sense that no tax is due at higher rates. The separate categories are published recognising that the highest marginal rate of tax paid will depend on the make-up of their taxable income, and this affected significant numbers of taxpayers particularly before April 2008 when the starting rate of tax on earnings was removed. Classification of taxpayers by marginal rate is described in Annex B, and is subject to discontinuities over time reflecting the changing structure of UK income tax.*

*The SPI is an annual cross section sample survey comprising a different sample of taxpayers each tax year. Changes in taxpayer numbers between years will in part reflect sampling variation (Annex C). Changes to SPI survey methods may also lead to some discontinuities in the accumulated time-series estimates of taxpayer numbers in survey years up to 2014-15.*

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<sup>5</sup> The Higher Rate Threshold is the point at which taxpayers are liable to higher rate tax on their taxable income.

Table 2.2 – Number of individual income taxpayers by country and region, 1999-00 to 2017-18

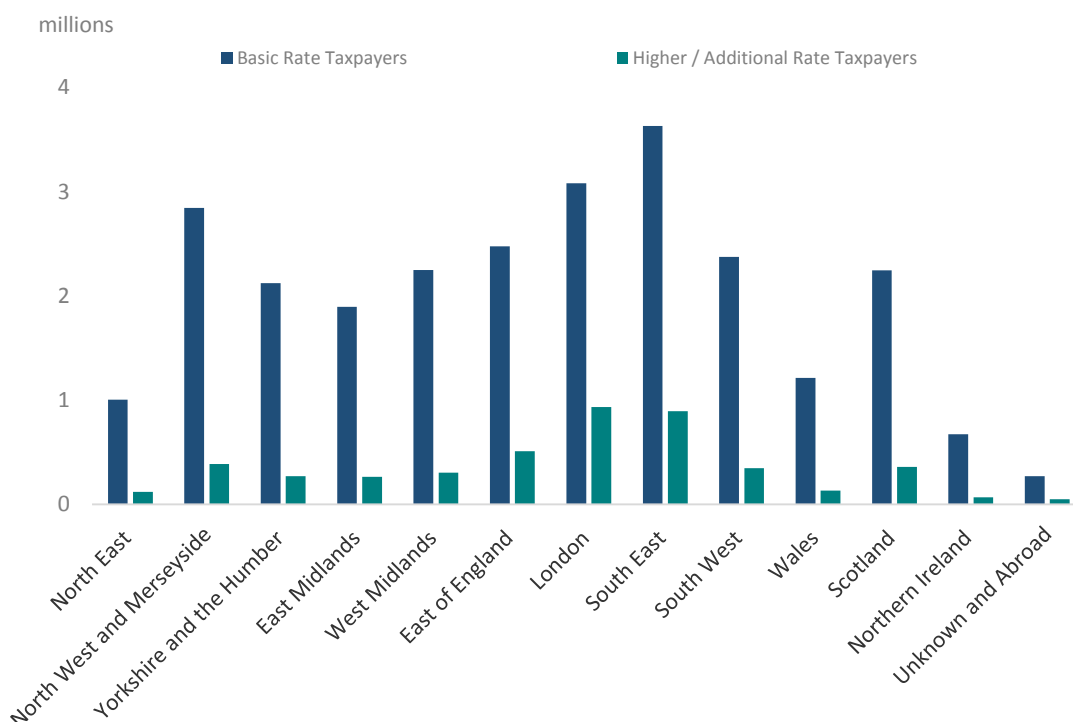
<https://www.gov.uk/government/statistics/number-of-individual-income-taxpayers-by-marginal-rate-gender-and-age-by-country>

Table 2.2 provides a breakdown of the number of individuals with positive income tax liabilities (taxpayers) over time, country and across Government Office Regions. The table provides separate breakdowns of the income taxpaying population by taxpayers' marginal tax rate, gender and by age group.

## Taxpayers

In 2014-15, the largest number of taxpayers are estimated to reside in the South East (14.7% of the total), followed by London (13.1%) and the North West (10.5%) Government Office Regions. The countries and regions with the lowest number of taxpayers are Northern Ireland (2.4%), followed by the North East (3.7%) and Wales (4.4%). Around 1% of taxpayers either reside abroad or their address is unknown in the SPI (these are not included in the table 2.2).

**Figure 2: Income taxpayers by country and region, 2014-15**



Projections show taxpayer numbers declining on average by 1.3% across the countries and regions between 2014-15 and 2017-18. Of the 400,000 fewer taxpayers in 2017-18, 13.4% are from the North West, the largest decline, followed by the South West at 11.2% and West Midlands at 10.5%.

The projection methods take account of relevant economic trends at UK level; irrespective of the place of residence of each individual in the SPI data (see Annex B). Therefore, these regional projections of taxpayer numbers are indicative, and show close correspondence with the expected overall UK trend, but do not reflect intra-UK population changes since 2014-15.

## **Higher and Additional Rate taxpayers**

In 2014-15, there are three regions where the proportion of higher and Additional Rate taxpayers exceed the UK average (15.1%): London (23.3%), the South East (19.7%), and East of England (17.1%). The unknown and abroad group also exceeds the UK average proportion of higher and Additional Rate taxpayers. By contrast, under-representation of higher and Additional Rate taxpayers is most marked in Northern Ireland (9.1%), Wales (9.8%) and the North East (10.7%).

Projections of Additional Rate taxpayer numbers by regions and country for 2015-16 to 2017-18 are highly indicative, and are published for continuity with past publications while HMRC assesses their reliability (see Annex C).

The increases in the Higher Rate Threshold in 2017-18 contributes to the reduction in the number of individuals liable at higher rates of tax in these years across all regions except Scotland. The HRT freeze for non-savings non-dividend (NSND) income of Scottish taxpayers' results in the number of Higher Rate taxpayers in Scotland being projected to increase in 2017-18.

### ***Interpreting Table 2.2***

*Taxpayer country and region for individuals in the SPI data are determined by individuals' residential postcode (not, for example, place of work if any). Projections of taxpayer numbers by country and region beyond the 2014-15 outturns are based on economic outturns/projection assumptions applying generally to the UK as a whole, and should be regarded as indicative in that they make no explicit allowance for geographical variations in economic or population trends. Annex B provides further details.*

Table 2.4 – Shares of total income (before and after tax) and income tax for percentile groups<sup>6</sup>, 1999-00 to 2017-18

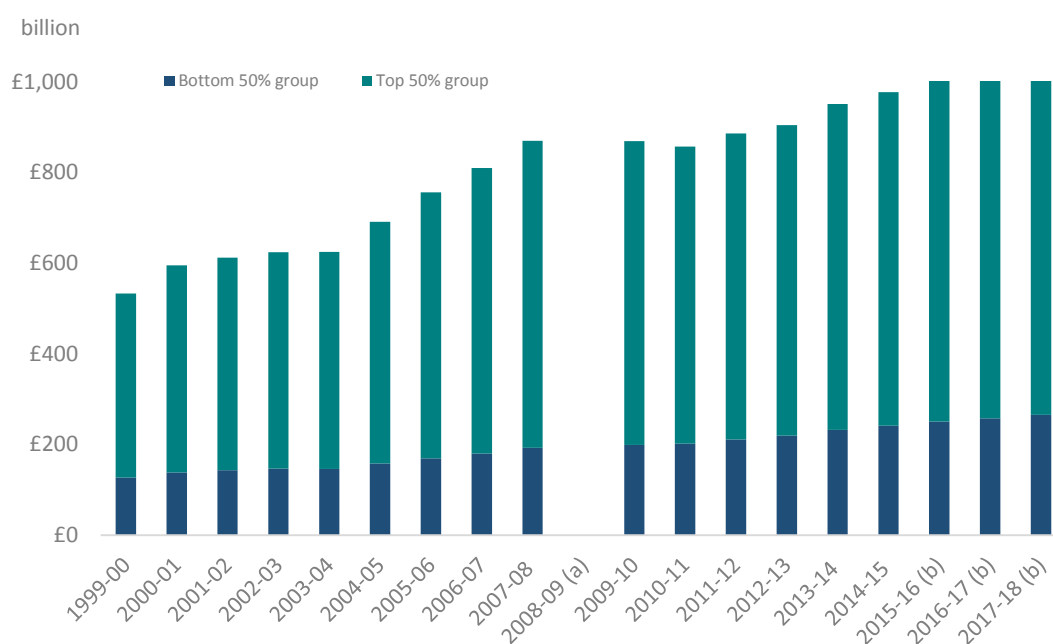
<https://www.gov.uk/government/statistics/shares-of-total-income-before-and-after-tax-and-income-tax-for-percentile-groups>

Table 2.4 shows how the distributions of income and tax liabilities have changed since 1999-00. Income distribution provides one measure of income inequality, while the shares of total tax liabilities reflect the progressivity of the income tax system. The table also shows the income breakpoints for each percentile group and how this has changed since 1999-00.

## Income distribution

Figure 3 shows taxpayers' total income, £533 billion in 1999-00, grew to £977 billion in 2014-15 and is expected to reach £1,049 billion by 2017-18.

**Figure 3: Distribution of total income for bottom and top 50% of taxpayers, 1999-00 to 2017-18**



(a) 2008-09 Survey of Personal Incomes is currently unavailable

(b) Projections

In 1999-00, income inequality between the bottom and top 50% of taxpayers (on total income before tax) was shown by a 52.4 percentage point difference in their share of total income: the bottom 50% had 23.8% of total income before tax whilst the top 50% had 76.2%. Inequality on this measure grew in the years leading up to the 2008 recession, showing a 55.8 percentage point difference in 2007-08 (77.9% compared

<sup>6</sup> Percentile groups are ranged on total income before tax

to 22.1%). By 2014-15 inequality had fallen below its 1999-00 level to 50.6 and is expected to decline further to 49.4 percentage points in 2017-18.

The top 10% of taxpayers accounted for around a third (34.1%) of all income in 2014-15, the top 5% around a quarter (24.8%), and the top 1% around 12.3%. By contrast, the bottom 10% accounted for 3.5% of all income, the bottom 5% had 1.7%, and the bottom 1% had 0.3%.

## Share of income tax liabilities

Figure 4 shows taxpayers' total tax, £93 billion in 1999-00, grew to £167 billion by 2014-15 and it is expected to reach £173 billion by 2017-18.

**Figure 4: Share of total tax for bottom and top 50% of taxpayers, 1999-00 to 2017-18**



(a) 2008-09 Survey of Personal Incomes is currently unavailable

(b) Projections

In 2014-15 the bottom 50% of taxpayers were liable for 9.7% of total tax, whilst the top 50% were liable for 90.3%, showing the progressive nature of the income tax system. More than half (58.5%) of total income tax is paid by the top 10% of taxpayers, while around a quarter (27.2%) is paid by the top 1% in 2014-15. In comparison, the bottom 10% paid 0.3% of total income tax and the bottom 1% paid a negligible share.

In 2017-18 the bottom 50% of taxpayers are projected to be liable to 9.7% of total tax, whilst the top 50% are projected to be liable for 90.3%. The top 10% of taxpayers are projected to be liable for 59.2% of total tax, with the bottom 25% projected to pay 2.3%. The share projected to be paid by the top 1% of taxpayers' increases by 0.5% to 27.7% between 2014-15 and 2017-18.

## Additional rate impacts

**Figure 5: Percentage share of total income for top 1% of taxpayers, 1999-00 to 2017-18**



(a) 2008-09 Survey of Personal Incomes is currently unavailable

(b) Projections

The top 1% of taxpayers broadly make up the Additional Rate taxpayer population. Figure 5 shows how the introduction of the additional rate in April 2010, on taxable income over £150,000, has led to individuals bringing forward or ‘forestalling’ income in 2009-10 from 2010-11. Income forestalling was estimated by HM Revenue and Customs at around £16-18 billion or 2% of total taxpayer income among the top 1% in 2009-10. Details of these effects were set out in a HM Revenue and Customs report.<sup>7</sup>

In April 2013, the additional rate was reduced and this led to the postponement or ‘deferral’ of income from 2012-13 to 2013-14. This can be seen in the ‘below normal’ share of income of the top 1% in 2012-13 and the subsequent increase in 2013-14. These behavioural responses are seen in the outturn figures and the share of income of the top 1% should have returned to a ‘normal’ level in 2014-15.

The impact of these behavioural responses means that the top 1% share of income is:

- artificially high in 2009-10,
- artificially low in 2010-11 and 2011-12 as the forestalling unwinds over these two years

*(relating to the introduction of the 50p rate in April 2010).*

<sup>7</sup> The Exchequer effect of the 50 per cent additional rate of tax:

<http://webarchive.nationalarchives.gov.uk/20140206144454/http://www.hmrc.gov.uk/budget2012/excheq-income-tax-2042.htm>

- artificially low in 2012-13
- artificially high in 2013-14  
(relating to the reduction in the additional rate to 45p in April 2013).

Projections for 2015-16 through to 2017-18 are unaffected by the 'income shifting' effects of the additional rate, but projections for 2015-16 to 2017-18 explicitly take account of estimated income shifting due to the changes to the taxation of dividends.

The impact of these possible behavioural responses means that the top 1% share of income is:

- artificially high in 2015-16,
- artificially low in 2016-17 and 2017-18 as the forestalling mostly unwinds over these two years  
(relating to the introduction of the new dividend taxation policies in 2016-17).

Therefore only 2014-15 can be compared directly with the years preceding the additional rate. 2007-08 is the most recent such year for which data are available.

The share of total before tax income taken by the top 1% of taxpayers declined from 13.4% in 2007-08 to 12.3% in 2014-15, reflecting the reduction in income inequality referred to earlier.

In contrast, the share of total tax paid by the top 1% of taxpayers increased from 24.4% in 2007-08 to 27.2% in 2014-15 indicating that the progressivity of the tax system increased over this period. Factors contributing to this increase in progressivity will include:

- introduction of the additional rate and the PA taper;
- lowering of the limits on tax relief on pension contributions;
- real terms PA increases since 2010-11 with the benefits going mainly to Basic Rate taxpayers.

*Annex B (page 72) describes in more detail HMRC's estimates of possible behavioural responses to the additional rate of income tax.*

#### ***Interpreting Table 2.4***

*The table relates to taxpayers only, as the SPI survey provides complete coverage only for this group. The table does not provide a complete picture of individual income inequality in the UK due to the exclusion of non-taxpayers, and because the SPI records only those incomes that are assessable for tax (e.g. a range of non-taxable social security benefits, tax credits and non-taxable savings from ISAs etc are not included).*

*Taxpayers are ranked on the basis of total income assessable for tax (earnings, savings and dividends incomes) before any deductions (e.g. pension contributions) and tax allowances, and then divided into specific groups (e.g. lowest and highest*



50% by total income). Income levels at specific percentile points of the taxpayer total income distribution have been added to Table 2.4 to help users.

*Projections of shares of income and tax for percentile groups should be considered indicative, as the projection of incomes for all taxpayers generally takes account only of expected growth in incomes in aggregate. The projections do, however, allow for differential earnings growth across the pay distribution consistent with past trends and also continued forestalling effects associated with changes in the additional rate of tax.*

## Table 2.5 – Income tax liabilities by income range, 2014-15 to 2017-18

<https://www.gov.uk/government/statistics/income-tax-liabilities-by-income-range>

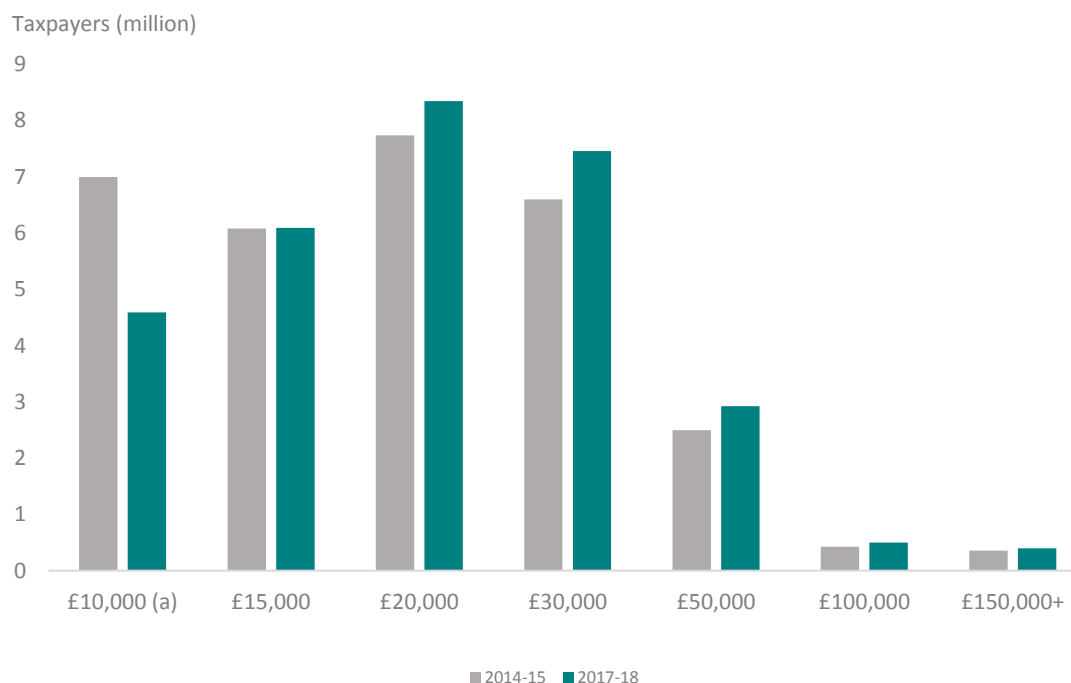
Table 2.5 shows numbers of taxpayers and their tax liabilities by range of total income and marginal rate of tax. Analysis by income range provides a snapshot of the distribution of taxpayers and their tax liabilities.

### Taxpayers by income

In 2014-15, an estimated 13.1 million taxpayers (42.6%) had total income assessable for tax from the Personal Allowance of £10,000 to under £20,000 and 14.3 million taxpayers (46.7%) had income from £20,000 to under £50,000. Combined these groups accounted for 89.3% of all taxpayers in 2014-15.

The number of taxpayers with total incomes of £50,000 or more in 2014-15 was 3.3 million (10.6%), substantially smaller than the number of taxpayers with incomes under £50,000. Table 2.5 also shows that there are fewer taxpayers with very high incomes. It is estimated that 15,000 have incomes above £1,000,000, of which 4,000 have incomes above £2,000,000.

**Figure 6: Taxpayers by income range (lower limits), 2014-15 and 2017-18**



(a) £11,500 in 2017-18

Figure 6 shows the projected net decline in taxpayers of 400,000 from 2014-15 to 2017-18 is driven by falls in the band from the PA to £15,000. Projections for 2017-18 show increasing or stable taxpayer numbers for all income bands over £15,000 compared with 2014-15, reflecting expected growth in the population, employment and incomes. However this is outweighed by the reduction in taxpayers with total income below £15,000. There are several reasons why low income taxpayers are reducing in numbers: above indexation increases to the PA, extension of the savings rate limit and the introduction of a 0% rate for the band, and weaker projected average earnings growth at the low end of the income distribution.

## Liabilities and average tax rates

Figure 7 shows that average rates of tax generally rise with total income. In 2014-15, for example the average rate was 7.9% of total income for those with incomes from £15,000 to under £20,000 and increased to 11.2% for incomes from £20,000 to under £30,000. They then rise to 21.9% for those with incomes between £50,000 and £100,000 (within the higher rate tax band), and to 33.6% for those with incomes from £150,000 to under £200,000 (with the additional rate band). The average rate of tax for those with incomes of £200,000 or more rose to a peak of 39.5% for individuals earning from £1 million to under £2 million before falling slightly to 39.3% for those with incomes of £2 million and more.

The distribution of total tax liabilities by taxpayers' marginal rate shows marked differences from the distribution of taxpayer numbers by marginal rate. In 2014-15, non-Higher Rate taxpayers (comprising starting, savers and the basic rate) taxpayers represented the large majority of taxpayers by number (84.9%) but accounted for less than half of total liabilities (34.5%). Higher Rate taxpayers by contrast (14.0% by number) accounted for 37.5% of total tax liabilities and Additional Rate taxpayers (1.1% by number) accounted for 28.0% of total tax liabilities.<sup>8</sup>

Figure 7 shows that the total tax liabilities of those with income under £30,000 is projected to decrease between 2014-15 and 2017-18. It shows that taxpayers with income over £30,000 are expected to be liable for a larger proportion of the total tax liabilities: whereas in 2014-15 they were liable for 80.4%, in 2017-18 they are liable for 83.8% of total tax.

The average tax liability is expected to increase by £280, from £5,430 to £5,710 from 2014-15 to 2017-18 due to above indexation Personal Allowance increases removing some individuals with lower incomes from income tax. However, those with income between £15,000 and £150,000 are expected to see an average decrease in their tax liability of £263 over this period.

The average rate of tax for the group as a whole is projected to fall from its outturn of 17.1% in 2014-15 to 16.5% in 2017-18. This is driven by the fall in average rates of tax for those in income groups below £50,000; which decreases by up to 1.8 percentage points for those with incomes between £15,000 and £20,000. These projected falls again reflect increases in Personal Allowances for under 65s. All else equal, these cash increases in the Personal Allowance conferred essentially fixed

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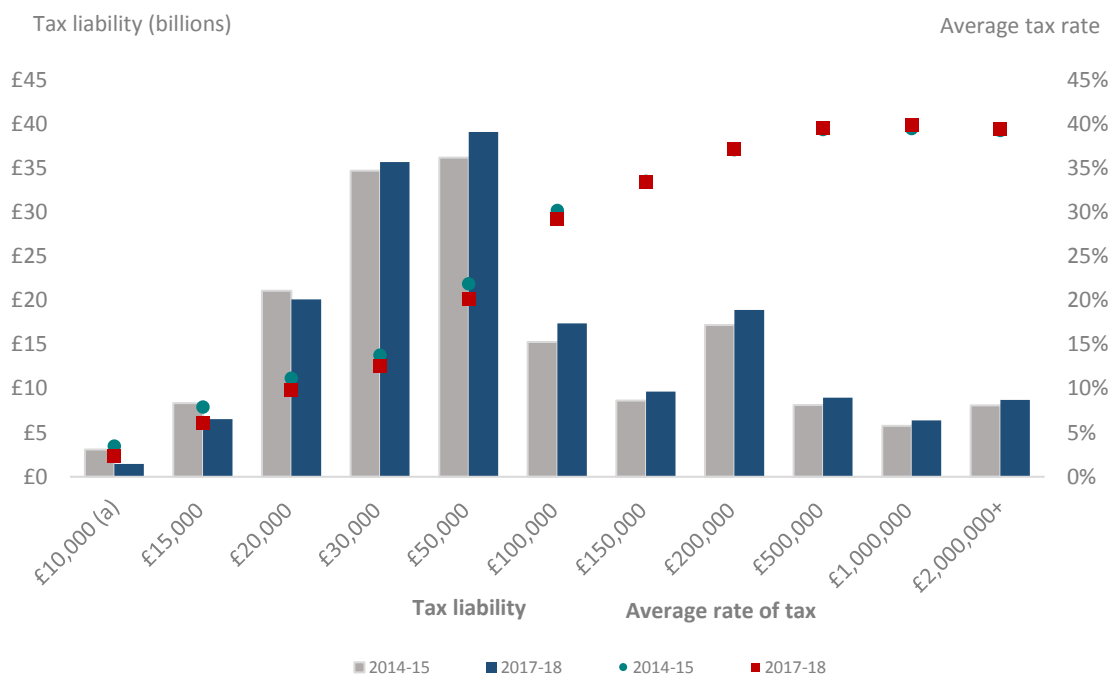
<sup>8</sup> 2014-15: Non-Higher Rate taxpayer liabilities = £56.4bn, higher-rate liabilities = £62.6bn, Additional Rate taxpayer liabilities = £46.7bn. Total taxpayer liabilities = £167.0bn.

reductions in tax due for Basic Rate taxpayers over the period, and so their impact on average tax rates becomes progressively smaller as income rises.

Those with incomes between £50,000 and £200,000 are projected to see falls in their average tax rates in 2017-18 compared to 2014-15 in part due to the increases in the Personal Allowance but also due to a widening of the Basic Rate Limits in 2017-18.

For those with incomes above £200,000, average tax rates are projected to increase slightly from 2014-15 to 2017-18. Such individuals have the Personal Allowance fully withdrawn and therefore do not benefit from its above indexation increase but have benefitted from the 2016-17 and 2017-18 increase in the Basic Rate Limit.

**Figure 7: Total tax liabilities and average rate of income tax by income range (lower limits), 2014-15 and 2017-18**



(a) £11,500 in 2016-17

### Interpreting Table 2.5

Income groups are defined in the table in terms of the lower limit for total income before any deductions, allowances and tax credits. Taxable income is net of these deductions, allowances, and credits, and this explains why total income for some taxpayers at each marginal tax rate in Table 2.5 exceeds the corresponding limits for taxable incomes that apply to the tax bands (e.g. total income for some Basic Rate taxpayers significantly exceeds the Basic Rate Limit for taxable income). The lowest income limit shown for each tax year corresponds to the Personal Allowance for individuals aged under 65.

Column totals for tax liabilities of taxpayers by marginal rate show total liabilities of such taxpayers, including liabilities paid at other rates of tax (e.g. total liabilities of Higher Rate taxpayers includes liabilities due at the basic and other rates of income

*tax). For each income group, the average rate of income tax is calculated as total tax liabilities expressed as a percentage of total income defined above. Deductions, allowances and tax credits will vary across individuals within each group contributing to differences in individual tax rates within groups over and above differences in individual incomes. An individual's marginal rate of tax places an upper limit on their average rate of tax due on their total income. Average tax rates show small year on year increase with income peaking around the level of 40% from 2014-15 to 2017-18.*

## Table 2.6 – Income tax liabilities by income source, tax band and marginal rate, 2014-15 to 2017-18

<https://www.gov.uk/government/statistics/income-tax-liabilities-by-taxpayers-marginal-rate>

*Table 2.6 shows total tax liabilities, broken down by income source (earnings, savings and dividends) and by income tax band showing the composition of the total tax liabilities. It also shows average tax rates by taxpayer marginal rate.*

### Income Source

The table presents tax liabilities classified into three broad sources of income assessable for income tax: earnings, savings interest and dividends, split by marginal rates. In 2014-15, the large majority of total tax liabilities was due on earnings, which, as defined here, includes earnings from employment, but also profits from self-employment, pensions, taxable state benefits and income from property. Tax liabilities on earnings accounts for 90.7% of total tax liabilities (£167 billion), with a further 7.8% from dividends and 1.5% from savings interest. In the projections to 2017-18, the proportion of tax from earnings increases to 93.0%, dividends decreases to 6.4% and savings interest decreases to 0.6% of the total tax liabilities (£173 billion), mainly due to policy changes in the taxation of dividends and savings. These results largely reflect the composition of taxpayer incomes by source<sup>9</sup>.

The projection for 2016-17 and 2017-18 reflects the significant changes in dividend income taxation. Up to 2015-16, table 2.6 shows dividend tax on a liabilities basis, reflecting the gross taxation before the 10% dividend tax credit is applied. The policy change abolished the tax credit, and changed the tax rates (the ordinary rate reduced from 10% to 7.5%, the higher rate was set at 32.5% and the additional rate increased from 37.5% to 38.1%). A Dividend tax allowance was also introduced, giving a tax-free allowance on total dividend income up to £5,000.

The projections for the amount of dividend income in 2015-16, are also affected by some individuals forestalling the measure by bringing forward dividend income to benefit from the lower effective rate before the policy change, which leads to a corresponding reduction in dividend income in 2016-17 and 2017-18 as the unwinding effect for dividend broadly affects these two years. There is also a behavioural response to the changes further reducing dividend income. All of these factors have impacted the levels of dividend taxation in 2015-16, 2016-17 and 2017-18, as shown in table 2.6 with the total dividend tax significantly varying between the three years. The forestalling will unwind by 2019-20, with the dividend tax returning to a new post behavioural level, with the removal of the tax credit, the rate changes and the introduction of the dividend allowance appearing as a permanent step change in the series for tax on dividends shown in the table from 2016-17 onwards.

The introduction of the Personal Savings Allowance in 2016-17 has reduced the amount of tax liabilities on savings income. The allowance gives either £1000 of

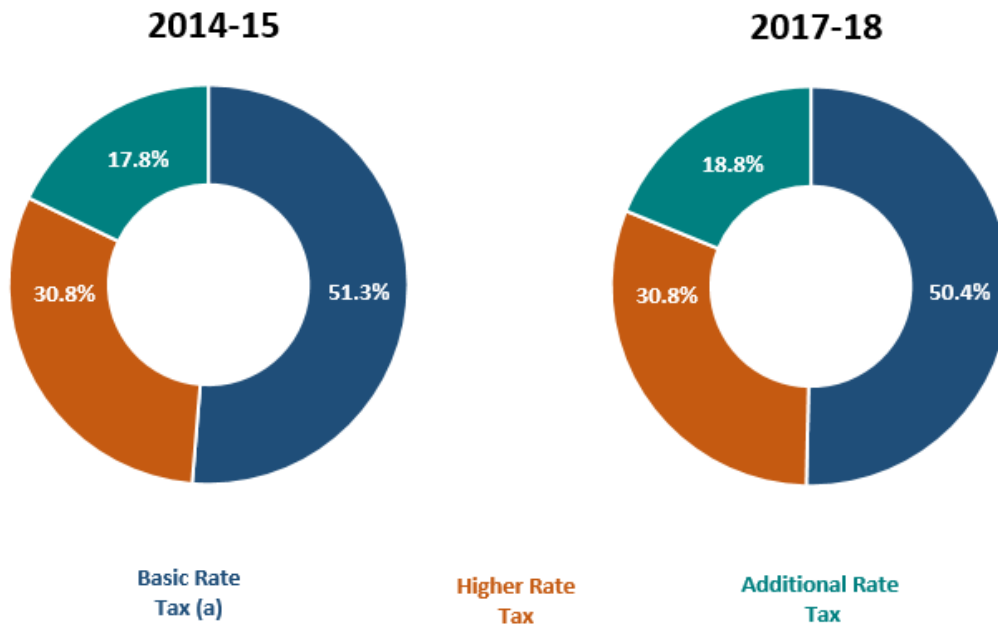
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<sup>9</sup> HMRC also publishes detailed statistics on taxpayer incomes based on the SPI data: <https://www.gov.uk/government/statistics/income-and-deductions>

savings income tax free for Basic Rate taxpayers or £500 for Higher Rate taxpayers. This has led to a fall in overall tax on savings income, arising mainly from basic and Higher Rate taxpayers, where in total the tax for those bands halved from 2015-16 to 2016-17.

### Liabilities by tax band

**Figure 8: Proportion of tax liabilities at Basic, Higher and Additional rate, 2014-15 and 2017-18**



(a) Includes starting rate and savers rate taxpayer's liabilities, 0.7% in 2014-15 and 0.4% in 2017-18

In 2014-15, 51.3% of total tax liabilities were due on taxable incomes falling within the basic rate tax band (applying to the first £31,865 of taxable income in 2014-15), compared with 30.8% in the higher rate tax band (taxable income above £31,865 and up to £150,000) and 17.8% in the additional rate tax band. Just £90 million of tax liabilities (0.1%) were due on taxable incomes in the starting rate band, which applied to the first £2,880 of taxable savings only in 2014-15 (the starting rate for earnings was abolished in 2008-09).

Composition of total tax liabilities is expected to change compared with 2014-15. Tax at the basic rate (including tax at starting and savings rate) is projected to decrease by 0.9 percentage points to 50.4% in 2017-18. Tax at the higher rate is projected to be 30.8% while additional rate tax to increase by 1.0 percentage points to 18.8%.

Increases in the Personal Allowance between 2014-15 and 2017-18 has reduced the total number of taxpayers by taking some of those taxpayers with the lowest income out of income tax all together. This has contributed to the lower projected liabilities at the basic rate despite the increasing width of the Basic Rate Limit between 2014-15

and 2017-18. An increase in the number of Additional Rate taxpayers had led to the Additional Rate taxpayer proportion of tax liabilities increasing.

### **The average rates of tax**

As a complement to Table 2.5, average rates of income tax for taxpayers by taxpayer marginal rate are also shown in Table 2.6. Average rates are estimated to be 10.2% for Basic Rate taxpayers, 22.2% for Higher Rate taxpayers, and 37.9% for Additional Rate taxpayers in 2014-15, compared with headline marginal tax rates of 20%, 40% and 45% on earnings. Average rates of tax in 2014-15 were 2.1% for starting rate taxpayers (individuals with savings income below the starting rate limit and no taxable earnings) and 5.9% for savers rate taxpayers (with taxable savings above the starting rate limit or taxable dividends but no taxable earnings). Headline marginal rates were 10% for starting rate savings, 20% for basic rate savings and 10% for dividends.

For Basic Rate taxpayers, the average rate of income tax is projected to fall to 10.0% in 2015-16, 9.7% in 2016-17, and then to 9.6% in 2017-18, following increases in Personal Allowances for these years. The average rate for Higher Rate taxpayers is also expected to decline, to 21.7% by 2017-18. The average rate for Additional Rate taxpayers is projected to stay broadly the same and is projected to be 37.8% in 2017-18.

### ***Interpreting Table 2.6***

*The purpose of Table 2.6 is to provide breakdowns of income tax liabilities by income source, by tax band and taxpayer marginal rate. Projections of total liabilities shown here and in other tables are for reference, but please see background notes on relevance and use of ITLS statistics and projections.*

*Dividends liabilities are shown gross of the 10% dividends tax credit that covers the first 10% of tax due on dividends income for all taxpayers up to 2015-16, after which the tax credit was abolished, the rates increased and the Dividends Allowance was introduced. Estimates of total liabilities for given tax bands include tax paid on incomes in that band by all taxpayers, e.g. totals for starting rate tax include the starting rate tax liabilities of basic and Higher Rate taxpayers.*



## 2.1 Number of individual income taxpayers by marginal rate, gender and age, 1990-91 to 2017-18

Numbers: thousands

Year	All taxpayers	Lower (1) or starting (2) rate	"Savers" (3) rate	Basic (4) rate	Higher (5) rate	Additional (6) rate	Males	Females	Under 65's	65's and over	State Pension Age (7)
1990-91	26,100	.	.	24,400	1,700	.	15,400	10,700	23,000	3,120	3,620
1991-92	25,700	.	.	24,100	1,620	.	15,100	10,600	22,800	2,930	3,590
1992-93	25,400	4,240	.	19,400	1,720	.	14,900	10,500	22,400	2,960	3,480
1993-94	25,000	5,390	.	17,900	1,740	.	14,600	10,300	22,000	3,040	3,570
1994-95	25,300	5,180	.	18,200	2,000	.	14,700	10,600	22,100	3,250	3,860
1995-96	25,800	5,770	.	18,000	2,130	.	15,000	10,800	22,500	3,320	3,970
1996-97	25,700	7,350	.	16,200	2,080	.	14,900	10,800	22,400	3,280	3,860
1997-98	26,200	7,690	.	16,400	2,120	.	15,200	11,000	22,800	3,390	4,000
1998-99	26,900	8,090	.	16,500	2,350	.	15,600	11,300	23,300	3,670	4,340
1999-00	27,200	2,280	954	21,400	2,510	.	15,500	11,700	23,600	3,580	4,220
2000-01	29,300	2,820	1,010	22,600	2,880	.	16,900	12,400	25,300	3,950	4,660
2001-02	28,600	3,030	857	21,700	3,000	.	16,400	12,200	24,500	4,090	4,780
2002-03	28,900	3,100	730	22,000	3,040	.	16,500	12,400	24,700	4,190	4,920
2003-04	28,500	3,220	734	21,600	2,960	.	16,100	12,400	24,500	3,950	4,700
2004-05	30,300	3,570	833	22,500	3,330	.	17,000	13,300	26,000	4,250	5,110
2005-06	31,100	3,490	866	23,100	3,590	.	17,600	13,500	26,900	4,160	5,100
2006-07	31,800	3,450	927	23,700	3,770	.	17,900	13,900	27,300	4,520	5,590
2007-08	32,500	3,440	1,070	24,100	3,870	.	18,200	14,200	27,700	4,790	5,930
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	30,600	163	602	26,600	3,190	.	17,100	13,500	26,000	4,530	5,690
2010-11	31,300	276	623	27,100	3,020	236	17,400	13,800	26,400	4,910	6,010
2011-12	30,800	318	621	26,000	3,570	262	17,300	13,400	25,700	5,090	5,980
2012-13	30,600	270	630	25,700	3,720	273	17,300	13,300	25,200	5,380	6,140
2013-14	30,400	289	686	24,900	4,200	311	17,400	13,000	24,400	5,970	6,560
2014-15	30,700	285	686	25,100	4,300	328	17,600	13,100	24,400	6,330	6,810
2015-16 (8)	30,700	.	692	25,100	4,510	348	17,700	13,000	24,100	6,540	6,890
2016-17 (8)	30,400	.	598	25,200	4,340	330	17,700	12,800	24,000	6,390	6,600
2017-18 (8)(9)	30,300	.	617	25,200	4,160	364	17,700	12,600	23,900	6,390	6,470

Source: Survey of Personal Incomes.

Table updated May 2017

### Key

. not applicable / zero

### Footnotes for tables 2.1

(a) Figures for 2008-09 tax year are not currently available.

(1) Taxpayers with total taxable income below the lower rate limit and some taxpayers whose savings and dividend income took them above the lower rate limit. From 1993-94 until 1998-99 a number of taxpayers with taxable income in excess of the lower rate limit only paid tax at the lower rate. This was because it was only their dividend income and (from 1996-97) their savings income which took their taxable income above the lower rate limit, and such income was chargeable to tax at the lower rate and not the basic rate.

(2) In 1999-2000 the starting rate replaced the lower rate. Between 1999-2000 and 2007-08 taxpayers with total taxable income below the starting rate limit. From 2008-09 taxpayers with no taxable earnings and total taxable income from savings below the starting rate limit. From 2015-16 the starting rate of tax for savings income has been reduced from 10% to 0%, and the starting rate limit has been increased to £5,000.

(3) Before 2016-17 taxpayers with no taxable earnings and total taxable income from savings between the starting/lower rate limit and the basic rate limit and/or dividends at the 10p ordinary rate. From 2016-17 taxpayers with no taxable earnings and total taxable income from savings charged at 20% and/or dividends at 7.5%. Before 1999-2000 these taxpayers would have been classified as lower rate taxpayers.

(4) Between 1999-2000 and 2007-08 taxpayers whose total taxable income is between the starting rate limit and basic rate limit and includes income from earnings or income taxed as earnings. From 2008-09 taxpayers whose income includes earnings or other income taxed as earnings and with total taxable income below the basic rate limit.

(5) Before 2010-11 taxpayers with total taxable income above the basic rate limit. From 2010-11 taxpayers with total taxable income between the basic rate limit and the higher rate limit.

(6) Taxpayers with total taxable income above the higher rate limit.

(7) Taxpayers aged 65 years or older for men and 60 years or older for women in 2009-10. The female State Pension Age is being increased gradually from April 2010 to be equalised with the male State Pension Age by November 2018. The female State Pension Age for the purposes of this table is 60.5 years in 2010-11, 61 years in 2011-12, 61.5 years in 2012-13, 62 years in 2013-14, 62.5 years in 2014-15, 63 years in 2015-16, 63.5 years in 2016-17 and 64.5 years in 2017-18.

(8) Projected estimates based upon the 2014-15 Survey of Personal Incomes using economic assumptions consistent with the OBR's March 2017 economic and fiscal outlook.

(9) From 2017-18, individuals who are classified as resident in Scotland and have total taxable income above the Scottish Basic Rate Limit (BRL) but below the UK government's BRL have their marginal rate classification based on their income within this notional band. For these taxpayers, non-savings non-dividend (NSND) income within this band is taxed at the higher rate, whereas savings and dividends income is taxed at the basic rate. A Scottish taxpayer with any taxable NSND income within this band (but no total taxable income above the UK BRL) is classified as a Higher Rate taxpayer, as this is the top rate they are paying. A Scottish taxpayer with only savings and/or dividend income within this band (and no total taxable income above the UK BRL) is classified as a Basic Rate taxpayer.

## 2.2 Number of individual income taxpayers by marginal rate, gender and age, by country and region (9), 1999-00 to 2017-18

Government Office Region (GOR)										Numbers: thousands	
Year	All taxpayers	Starting (2) rate	"Savers" (3) rate	Basic (4) rate	Higher (5) rate	Additional (6) rate	Males	Females	Under 65's	65's and over	State Pension Age (7)
<b>England</b>											
1999-00	22,900	1,910	800	18,000	2,230	.	13,100	9,860	19,900	3,040	3,570
2000-01	24,700	2,350	853	18,900	2,560	.	14,200	10,500	21,400	3,310	3,900
2001-02	24,200	2,530	733	18,300	2,660	.	13,900	10,300	20,700	3,450	4,030
2002-03	24,300	2,570	615	18,400	2,680	.	14,000	10,300	20,800	3,510	4,090
2003-04	23,800	2,660	618	17,900	2,610	.	13,500	10,300	20,500	3,300	3,920
2004-05	25,400	2,960	716	18,800	2,920	.	14,300	11,100	21,800	3,550	4,260
2005-06	26,000	2,890	737	19,200	3,130	.	14,700	11,300	22,500	3,460	4,230
2006-07	26,600	2,850	795	19,700	3,280	.	15,000	11,600	22,900	3,770	4,650
2007-08	27,100	2,850	904	20,000	3,360	.	15,200	11,900	23,100	3,970	4,910
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	25,500	142	525	22,100	2,790	.	14,300	11,200	21,700	3,770	4,740
2010-11	26,100	235	540	22,400	2,620	214	14,600	11,500	22,000	4,050	4,950
2011-12	25,700	265	538	21,500	3,090	237	14,500	11,200	21,500	4,210	4,950
2012-13	25,500	233	552	21,300	3,220	246	14,500	11,100	21,100	4,450	5,080
2013-14	25,400	240	608	20,700	3,630	280	14,600	10,900	20,500	4,950	5,440
2014-15	25,700	241	604	20,800	3,730	296	14,700	10,900	20,400	5,250	5,650
2015-16 (8)	25,700	.	608	20,800	3,910	314	14,800	10,800	20,200	5,430	5,720
2016-17 (8)	25,500	.	535	20,900	3,760	297	14,800	10,700	20,200	5,300	5,470
2017-18 (8)	25,400	.	551	20,900	3,570	327	14,800	10,500	20,100	5,300	5,370
<b>North East</b>											
1999-00	1,090	106	33	890	56	.	629	457	935	150	177
2000-01	1,160	116	41	939	67	.	664	499	1,010	157	185
2001-02	1,180	147	36	927	66	.	682	494	1,010	169	198
2002-03	1,190	145	30	946	71	.	683	509	1,020	171	198
2003-04	1,170	139	28	933	75	.	686	489	1,020	159	186
2004-05	1,260	155	31	988	86	.	701	559	1,100	165	194
2005-06	1,250	149	30	978	89	.	708	538	1,090	151	181
2006-07	1,330	155	31	1,040	97	.	748	578	1,150	177	219
2007-08	1,320	151	36	1,030	101	.	732	587	1,130	186	233
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	1,190	4	17	1,090	80	.	682	505	1,020	164	202
2010-11	1,190	11	19	1,080	78	3	645	543	1,000	184	229
2011-12	1,170	11	16	1,050	93	3	673	501	985	188	221
2012-13	1,160	9	17	1,030	100	3	664	495	955	204	232
2013-14	1,150	11	18	1,000	118	3	679	474	921	232	256
2014-15	1,120	10	20	974	116	4	648	476	883	240	257
2015-16 (8)	1,120	.	21	973	123	4	654	467	873	248	260
2016-17 (8)	1,110	.	16	973	119	3	651	461	868	243	250
2017-18 (8)	1,110	.	17	973	112	4	652	453	861	244	246

## 2.2 Number of individual income taxpayers by marginal rate, gender and age, by country and region (9), 1999-00 to 2017-18

continued

Government Office Region (GOR)											Numbers: thousands
Year	All taxpayers	Starting (2) rate	"Savers" (3) rate	Basic (4) rate	Higher (5) rate	Additional (6) rate	Males	Females	Under 65's	65's and over	State Pension Age (7)
<b>North West</b>											
1999-00	3,080	335	111	2,420	216	.	1,740	1,340	2,700	380	458
2000-01	3,220	327	106	2,550	232	.	1,840	1,380	2,800	417	497
2001-02	3,190	368	93	2,480	250	.	1,830	1,360	2,750	431	507
2002-03	3,210	371	78	2,510	253	.	1,820	1,390	2,740	468	549
2003-04	3,160	393	84	2,430	253	.	1,770	1,390	2,720	438	519
2004-05	3,310	412	89	2,530	282	.	1,830	1,480	2,860	456	553
2005-06	3,360	405	88	2,570	298	.	1,880	1,480	2,920	438	539
2006-07	3,450	405	96	2,640	315	.	1,920	1,530	2,970	484	601
2007-08	3,490	398	111	2,660	317	.	1,920	1,570	2,980	507	633
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	3,300	16	64	2,960	258	.	1,810	1,490	2,820	476	603
2010-11	3,340	30	63	2,990	248	12	1,840	1,500	2,840	504	622
2011-12	3,260	33	66	2,850	301	13	1,820	1,440	2,720	538	635
2012-13	3,260	28	65	2,840	315	14	1,840	1,420	2,680	579	661
2013-14	3,220	31	73	2,740	353	16	1,820	1,390	2,570	645	710
2014-15	3,230	32	73	2,740	370	17	1,850	1,380	2,560	671	724
2015-16 (8)	3,220	.	71	2,740	392	18	1,860	1,360	2,530	692	730
2016-17 (8)	3,190	.	64	2,740	372	17	1,850	1,340	2,520	676	697
2017-18 (8)	3,180	.	66	2,740	355	19	1,850	1,320	2,500	674	681
<b>Yorkshire and the Humber</b>											
1999-00	2,210	165	80	1,820	140	.	1,260	952	1,950	259	307
2000-01	2,390	254	90	1,890	157	.	1,380	1,010	2,090	296	351
2001-02	2,340	269	70	1,830	176	.	1,360	983	2,040	307	364
2002-03	2,360	285	59	1,840	179	.	1,380	986	2,050	314	370
2003-04	2,340	280	58	1,830	174	.	1,350	996	2,050	299	354
2004-05	2,430	306	65	1,860	200	.	1,380	1,050	2,100	325	389
2005-06	2,500	297	69	1,920	216	.	1,430	1,070	2,190	308	377
2006-07	2,590	306	75	1,980	231	.	1,470	1,120	2,250	341	418
2007-08	2,580	296	79	1,980	228	.	1,470	1,120	2,220	364	446
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	2,410	13	45	2,170	181	.	1,350	1,050	2,060	350	436
2010-11	2,470	20	45	2,220	180	8	1,400	1,070	2,100	373	460
2011-12	2,390	25	44	2,110	207	9	1,360	1,030	2,010	380	454
2012-13	2,380	24	43	2,090	217	10	1,360	1,020	1,970	410	470
2013-14	2,360	23	52	2,040	241	11	1,370	989	1,900	462	506
2014-15	2,390	23	49	2,050	257	12	1,390	1,000	1,900	495	532
2015-16 (8)	2,380	.	50	2,050	270	13	1,400	989	1,870	510	537
2016-17 (8)	2,370	.	41	2,050	259	12	1,390	976	1,870	499	514
2017-18 (8)	2,360	.	42	2,060	245	13	1,390	963	1,850	501	507

## 2.2 Number of individual income taxpayers by marginal rate, gender and age, by country and region (9), 1999-00 to 2017-18

continued

Government Office Region (GOR)											Numbers: thousands
Year	All taxpayers	Starting (2) rate	"Savers" (3) rate	Basic (4) rate	Higher (5) rate	Additional (6) rate	Males	Females	Under 65's	65's and over	State Pension Age (7)
<b>East Midlands</b>											
1999-00	1,940	150	66	1,570	149	.	1,130	812	1,710	234	276
2000-01	2,080	217	71	1,620	169	.	1,200	876	1,810	268	318
2001-02	2,070	242	61	1,590	174	.	1,210	855	1,770	293	336
2002-03	2,090	223	51	1,640	182	.	1,230	867	1,810	285	332
2003-04	2,090	240	53	1,620	179	.	1,190	901	1,820	274	328
2004-05	2,190	263	62	1,660	204	.	1,260	932	1,890	297	357
2005-06	2,240	265	63	1,690	218	.	1,300	941	1,940	295	362
2006-07	2,300	260	68	1,750	224	.	1,320	986	1,980	318	395
2007-08	2,340	253	78	1,780	231	.	1,350	992	2,000	340	421
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	2,200	12	42	1,960	183	.	1,250	945	1,880	317	404
2010-11	2,220	19	42	1,970	177	8	1,260	962	1,880	335	414
2011-12	2,170	22	45	1,880	208	10	1,240	924	1,800	366	429
2012-13	2,170	18	42	1,880	220	10	1,250	915	1,770	392	444
2013-14	2,140	20	50	1,800	255	11	1,250	886	1,710	427	469
2014-15	2,160	21	47	1,830	250	13	1,280	880	1,690	469	502
2015-16 (8)	2,150	.	47	1,830	264	14	1,290	865	1,670	485	509
2016-17 (8)	2,140	.	41	1,830	252	12	1,280	853	1,660	474	488
2017-18 (8)	2,130	.	42	1,830	238	14	1,290	839	1,650	475	481
<b>West Midlands</b>											
1999-00	2,380	200	75	1,930	174	.	1,370	1,010	2,080	301	354
2000-01	2,530	263	75	1,990	198	.	1,490	1,040	2,210	321	386
2001-02	2,500	275	66	1,960	205	.	1,460	1,050	2,180	329	391
2002-03	2,500	277	63	1,960	203	.	1,450	1,050	2,150	348	408
2003-04	2,490	305	58	1,930	204	.	1,430	1,070	2,170	327	392
2004-05	2,640	323	68	2,020	226	.	1,510	1,130	2,290	351	421
2005-06	2,640	312	71	2,020	236	.	1,510	1,140	2,310	338	415
2006-07	2,710	308	75	2,080	254	.	1,570	1,150	2,340	378	463
2007-08	2,750	299	87	2,110	256	.	1,570	1,180	2,360	390	474
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	2,530	14	46	2,270	197	.	1,440	1,090	2,150	377	478
2010-11	2,610	27	50	2,330	192	10	1,490	1,110	2,190	418	505
2011-12	2,560	27	48	2,240	235	11	1,460	1,100	2,140	418	493
2012-13	2,530	24	49	2,210	243	11	1,470	1,070	2,100	435	499
2013-14	2,500	29	54	2,130	279	13	1,450	1,050	2,000	500	549
2014-15	2,550	27	54	2,170	288	14	1,490	1,060	2,010	540	582
2015-16 (8)	2,550	.	56	2,170	304	15	1,500	1,050	1,990	558	589
2016-17 (8)	2,520	.	45	2,170	291	13	1,490	1,040	1,980	545	565
2017-18 (8)	2,510	.	47	2,170	275	16	1,490	1,020	1,960	543	550

## 2.2 Number of individual income taxpayers by marginal rate, gender and age, by country and region (9), 1999-00 to 2017-18

continued

Government Office Region (GOR)											Numbers: thousands
Year	All taxpayers	Starting (2) rate	"Savers" (3) rate	Basic (4) rate	Higher (5) rate	Additional (6) rate	Males	Females	Under 65's	65's and over	State Pension Age (7)
<b>East of England</b>											
1999-00	2,530	173	100	1,970	292	.	1,510	1,020	2,190	339	393
2000-01	2,750	242	93	2,080	338	.	1,630	1,120	2,380	375	437
2001-02	2,720	257	80	2,030	354	.	1,610	1,120	2,310	409	468
2002-03	2,780	269	70	2,080	360	.	1,640	1,140	2,370	408	482
2003-04	2,740	295	71	2,020	351	.	1,570	1,170	2,350	386	459
2004-05	2,840	312	84	2,070	382	.	1,630	1,210	2,420	428	513
2005-06	2,980	316	93	2,160	408	.	1,720	1,260	2,550	429	524
2006-07	3,010	309	96	2,180	423	.	1,730	1,280	2,550	462	566
2007-08	3,070	314	109	2,220	435	.	1,770	1,310	2,590	486	608
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	2,940	17	66	2,490	361	.	1,670	1,260	2,470	464	583
2010-11	2,980	28	66	2,520	338	27	1,700	1,280	2,480	500	614
2011-12	2,970	32	62	2,450	394	31	1,710	1,260	2,450	521	608
2012-13	2,950	30	69	2,410	409	31	1,690	1,260	2,410	546	621
2013-14	2,970	32	73	2,350	474	35	1,730	1,240	2,350	617	676
2014-15	2,980	28	74	2,370	472	37	1,730	1,250	2,330	650	698
2015-16 (8)	2,980	.	74	2,370	495	39	1,750	1,240	2,310	671	707
2016-17 (8)	2,960	.	65	2,380	478	37	1,740	1,220	2,300	657	678
2017-18 (8)	2,950	.	67	2,390	453	40	1,750	1,200	2,290	657	665
<b>London</b>											
1999-00	3,290	273	91	2,460	470	.	1,780	1,510	2,910	384	452
2000-01	3,610	304	111	2,630	566	.	1,980	1,630	3,190	426	501
2001-02	3,390	303	89	2,420	574	.	1,860	1,530	2,980	410	486
2002-03	3,420	311	71	2,470	572	.	1,880	1,540	3,010	409	481
2003-04	3,330	316	75	2,400	542	.	1,830	1,500	2,960	376	454
2004-05	3,740	396	88	2,620	631	.	2,030	1,710	3,340	401	493
2005-06	3,790	368	85	2,670	673	.	2,090	1,710	3,410	385	483
2006-07	3,890	363	94	2,720	711	.	2,150	1,740	3,470	417	523
2007-08	4,030	391	109	2,790	743	.	2,230	1,800	3,590	436	549
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	3,840	14	74	3,090	654	.	2,080	1,760	3,430	406	509
2010-11	3,930	27	79	3,160	583	81	2,150	1,780	3,500	427	520
2011-12	3,950	36	79	3,060	685	88	2,170	1,790	3,500	446	526
2012-13	3,930	26	82	3,020	710	91	2,160	1,780	3,460	470	538
2013-14	3,950	25	93	2,940	792	104	2,190	1,760	3,440	517	575
2014-15	4,010	30	94	2,960	823	110	2,230	1,790	3,500	512	556
2015-16 (8)	4,010	.	90	2,940	859	115	2,230	1,780	3,480	528	560
2016-17 (8)	4,000	.	90	2,960	833	112	2,230	1,770	3,480	517	535
2017-18 (8)	3,990	.	92	2,980	795	120	2,240	1,750	3,470	517	524

## 2.2 Number of individual income taxpayers by marginal rate, gender and age, by country and region (9), 1999-00 to 2017-18

continued

Government Office Region (GOR)											Numbers: thousands
Year	All taxpayers	Starting (2) rate	"Savers" (3) rate	Basic (4) rate	Higher (5) rate	Additional (6) rate	Males	Females	Under 65's	65's and over	State Pension Age (7)
<b>South East</b>											
1999-00	3,990	287	134	3,030	543	.	2,280	1,720	3,420	572	657
2000-01	4,340	355	151	3,220	618	.	2,530	1,810	3,700	635	742
2001-02	4,240	382	140	3,090	634	.	2,430	1,810	3,580	664	775
2002-03	4,140	389	113	3,010	633	.	2,390	1,760	3,480	666	769
2003-04	3,990	403	113	2,870	609	.	2,270	1,720	3,360	632	741
2004-05	4,330	464	133	3,070	669	.	2,430	1,910	3,650	684	815
2005-06	4,500	458	143	3,170	722	.	2,540	1,950	3,820	680	825
2006-07	4,580	440	154	3,240	745	.	2,570	2,010	3,850	727	894
2007-08	4,660	434	177	3,290	758	.	2,590	2,070	3,900	763	938
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	4,430	29	105	3,660	641	.	2,480	1,950	3,700	731	915
2010-11	4,570	43	108	3,760	598	53	2,540	2,030	3,770	792	963
2011-12	4,490	45	111	3,580	696	59	2,540	1,950	3,670	820	958
2012-13	4,500	42	115	3,560	724	62	2,550	1,950	3,640	857	975
2013-14	4,480	42	124	3,450	795	71	2,540	1,940	3,530	949	1,030
2014-15	4,520	39	122	3,470	819	73	2,560	1,960	3,510	1,010	1,080
2015-16 (b)	4,540	.	127	3,480	855	78	2,590	1,950	3,490	1,050	1,100
2016-17 (b)	4,500	.	115	3,490	823	74	2,590	1,910	3,480	1,020	1,050
2017-18 (b)	4,490	.	118	3,500	785	81	2,590	1,890	3,460	1,020	1,040
<b>South West</b>											
1999-00	2,410	223	111	1,880	192	.	1,370	1,030	1,990	417	491
2000-01	2,590	270	115	1,990	216	.	1,500	1,100	2,180	415	484
2001-02	2,550	288	98	1,940	221	.	1,450	1,090	2,110	442	506
2002-03	2,570	295	79	1,980	223	.	1,500	1,080	2,140	438	505
2003-04	2,500	291	77	1,910	222	.	1,440	1,060	2,090	410	488
2004-05	2,620	326	96	1,950	245	.	1,480	1,140	2,180	441	520
2005-06	2,710	326	95	2,020	271	.	1,540	1,170	2,280	438	529
2006-07	2,760	308	105	2,060	285	.	1,560	1,200	2,290	467	572
2007-08	2,860	316	118	2,130	294	.	1,600	1,260	2,360	498	611
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	2,690	23	67	2,360	235	.	1,520	1,170	2,200	484	608
2010-11	2,760	30	69	2,420	230	12	1,550	1,220	2,250	516	627
2011-12	2,700	34	66	2,320	271	13	1,510	1,190	2,180	528	625
2012-13	2,670	31	69	2,270	282	13	1,510	1,160	2,110	561	641
2013-14	2,670	28	73	2,230	327	16	1,530	1,140	2,070	604	660
2014-15	2,720	32	70	2,270	330	17	1,570	1,140	2,050	667	715
2015-16 (b)	2,720	.	72	2,280	350	18	1,590	1,130	2,030	686	721
2016-17 (b)	2,690	.	57	2,280	333	16	1,580	1,100	2,020	668	690
2017-18 (b)	2,670	.	59	2,280	313	19	1,580	1,090	2,010	668	678

## 2.2 Number of individual income taxpayers by marginal rate, gender and age, by country and region (9), 1999-00 to 2017-18

continued

Government Office Region (GOR)											Numbers: thousands
Year	All taxpayers	Starting (2) rate	"Savers" (3) rate	Basic (4) rate	Higher (5) rate	Additional (6) rate	Males	Females	Under 65's	65's and over	State Pension Age (7)
<b>Wales</b>											
1999-00	1,200	104	58	971	69	.	711	492	1,030	170	205
2000-01	1,330	143	51	1,060	75	.	765	566	1,110	217	255
2001-02	1,330	145	40	1,060	79	.	768	557	1,130	198	232
2002-03	1,360	162	36	1,070	83	.	780	575	1,140	218	262
2003-04	1,340	169	37	1,050	85	.	762	578	1,140	200	239
2004-05	1,410	186	37	1,090	98	.	802	606	1,180	223	268
2005-06	1,450	178	37	1,130	107	.	825	627	1,230	222	269
2006-07	1,480	178	40	1,150	112	.	837	643	1,240	240	295
2007-08	1,510	176	51	1,170	115	.	852	655	1,250	257	316
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	1,400	7	23	1,280	90	.	776	620	1,170	230	286
2010-11	1,440	13	23	1,320	87	3	789	655	1,200	249	305
2011-12	1,410	18	24	1,260	105	3	787	626	1,150	264	307
2012-13	1,390	10	23	1,250	106	3	776	616	1,100	288	326
2013-14	1,350	12	23	1,180	126	4	777	571	1,050	295	319
2014-15	1,340	12	25	1,180	127	4	778	567	1,040	306	330
2015-16 (8)	1,350	.	26	1,180	133	4	784	561	1,030	318	334
2016-17 (8)	1,330	.	19	1,180	129	4	781	552	1,030	308	317
2017-18 (8)	1,320	.	19	1,180	122	5	783	541	1,020	308	312
<b>Scotland</b>											
1999-00	2,270	190	71	1,850	167	.	1,290	984	1,990	288	344
2000-01	2,490	246	84	1,970	193	.	1,420	1,070	2,160	326	389
2001-02	2,450	266	67	1,910	213	.	1,350	1,110	2,120	330	393
2002-03	2,490	274	59	1,940	216	.	1,360	1,130	2,150	340	411
2003-04	2,470	281	59	1,930	207	.	1,350	1,130	2,150	326	394
2004-05	2,570	308	61	1,970	237	.	1,400	1,180	2,230	344	425
2005-06	2,650	294	63	2,030	261	.	1,440	1,200	2,310	341	423
2006-07	2,700	289	66	2,070	276	.	1,470	1,230	2,330	372	465
2007-08	2,780	283	73	2,140	288	.	1,500	1,280	2,380	398	499
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	2,630	9	39	2,350	235	.	1,430	1,200	2,260	370	466
2010-11	2,720	19	41	2,420	232	11	1,460	1,260	2,300	425	532
2011-12	2,640	23	41	2,290	281	13	1,450	1,190	2,220	426	508
2012-13	2,590	17	38	2,230	296	14	1,420	1,170	2,150	442	508
2013-14	2,590	22	39	2,170	335	17	1,430	1,160	2,090	490	547
2014-15	2,600	21	41	2,180	339	18	1,440	1,160	2,080	524	569
2015-16 (8)	2,600	.	42	2,190	354	19	1,460	1,150	2,060	543	574
2016-17 (8)	2,580	.	34	2,190	345	18	1,450	1,130	2,050	533	550
2017-18 (8, 10)	2,570	.	36	2,150	365	21	1,450	1,120	2,040	531	536

## 2.2 Number of individual income taxpayers by marginal rate, gender and age, by country and region (9), 1999-00 to 2017-18

continued

Government Office Region (GOR)										Numbers: thousands	
Year	All taxpayers	Starting (2) rate	"Savers" (3) rate	Basic (4) rate	Higher (5) rate	Additional (6) rate	Males	Females	Under 65's	65's and over	State Pension Age (7)
<b>Northern Ireland</b>											
1999-00	638	58	18	526	36	.	347	291	579	59	73
2000-01	666	64	17	545	40	.	375	291	595	71	83
2001-02	552	66	11	434	41	.	318	235	486	66	79
2002-03	629	72	13	500	44	.	347	282	546	83	99
2003-04	701	79	12	562	48	.	385	316	624	77	98
2004-05	746	88	10	597	52	.	411	335	661	85	107
2005-06	773	87	16	612	59	.	436	338	688	86	105
2006-07	785	85	15	623	63	.	439	346	703	82	101
2007-08	801	82	22	632	65	.	450	351	706	95	118
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	747	3	8	689	48	.	402	346	656	91	112
2010-11	762	5	10	698	46	2	418	344	664	98	117
2011-12	746	6	9	673	55	2	414	333	646	100	117
2012-13	732	4	9	661	56	2	404	328	630	102	117
2013-14	730	6	8	648	64	3	396	334	610	120	136
2014-15	738	5	9	657	64	3	409	328	616	122	132
2015-16 (8)	732	.	8	653	67	3	408	323	608	124	132
2016-17 (8)	731	.	7	657	65	3	409	322	609	122	127
2017-18 (8)	727	.	7	655	61	3	409	318	604	123	124

Source: Survey of Personal Incomes

Table updated May 2017

### Key

. not applicable / zero

### Footnotes for tables 2.2

(a) Figures for 2008-09 tax year are not currently available.

(1) Taxpayers with total taxable income below the lower rate limit and some taxpayers whose savings and dividend income took them above the lower rate limit. From 1993-94 until 1998-99 a number of taxpayers with taxable income in excess of the lower rate limit only paid tax at the lower rate. This was because it was only their dividend income and (from 1996-97) their savings income which took their taxable income above the lower rate limit, and such income was chargeable to tax at the lower rate and not the basic rate.

(2) In 1999-2000 the starting rate replaced the lower rate. Between 1999-2000 and 2007-08 taxpayers with total taxable income below the starting rate limit. From 2008-09 taxpayers with no taxable earnings and total taxable income from savings below the starting rate limit. From 2015-16 the starting rate of tax for savings income has been reduced from 10% to 0%, and the starting rate limit has been increased to £5,000.

(3) Taxpayers with no taxable earnings and total taxable income from savings between the starting rate limit and the basic rate limit and/or dividends at the 10p ordinary rate.

(4) Between 1999-2000 and 2007-08 taxpayers whose total taxable income is between the starting rate limit and basic rate limit and includes income from earnings or income taxed as earnings. From 2008-09 taxpayers whose income includes earnings or other income taxed as earnings and with total taxable income below the basic rate limit.

(5) Before 2010-11 taxpayers with total taxable income above the basic rate limit. From 2010-11 taxpayers with total taxable income between the basic rate limit and the higher rate limit.

(6) Taxpayers with total taxable income above the higher rate limit.

(7) Taxpayers aged 65 years or older for men and 60 years or older for women in 2009-10. The female State Pension Age is being increased gradually from April 2010 to be equalised with the male State Pension Age by November 2018. The female State Pension Age for the purposes of this table is 60.5 years in 2010-11, 61 years in 2011-12, 61.5 years in 2012-13, 62 years in 2013-14, 62.5 years in 2014-15, 63 years in 2015-16 and 63.75 years in 2016-17.

(8) Projected estimates based upon the 2013-14 Survey of Personal Incomes using economic assumptions consistent with the OBR's March 2016 economic and fiscal outlook.

(9) Some UK taxpayers reside abroad, or region is not known (318,000 in 2014-15). The sum of taxpayer numbers across countries and regions in Table 2.2 therefore will not match UK total shown in Table 2.1.

(10) From 2017-18, individuals who are classified as resident in Scotland and have total taxable income above the Scottish Basic Rate Limit (BRL) but below the UK government's BRL have their marginal rate classification based on their income within this notional band. For these taxpayers, non-savings non-dividend (NSND) income within this band is taxed at the higher rate, whereas savings and dividends income is taxed at the basic rate. A Scottish taxpayer with any taxable NSND income within this band (but no total taxable income above the UK BRL) is classified as a Higher Rate taxpayer, as this is the top rate they are paying. A Scottish taxpayer with only savings and/or dividend income within this band (and no total taxable income above the UK BRL) is classified as a Basic Rate taxpayer.



## 2.4 Shares of total income (before and after tax) and income tax for percentile groups, 1999-00 to 2017-18

Taxpayers only

Percentage

Percentile Groups (ranged on total income before tax)	Bottom				Bottom	Top	Top				Total (All Taxpayers) £bn
	1%	5%	10%	25%	50%	50%	25%	10%	5%	1%	
<b>Share of Total Income</b>											<b>Total Income</b>
<b>Before Tax</b>											<b>Before Tax</b>
1999-00	0.2	1.3	2.8	8.9	23.8	76.2	53.4	32.9	23.3	11.0	533
2000-01	0.2	1.2	2.7	8.5	23.2	76.8	54.1	33.7	24.0	11.5	595
2001-02	0.2	1.2	2.7	8.6	23.4	76.6	53.9	33.4	23.7	11.1	612
2002-03	0.2	1.2	2.7	8.6	23.5	76.5	53.7	33.1	23.3	10.8	624
2003-04	0.2	1.2	2.7	8.5	23.3	76.7	53.9	33.3	23.6	11.0	625
2004-05	0.2	1.2	2.7	8.4	22.9	77.1	54.4	33.6	23.8	11.3	691
2005-06	0.2	1.2	2.6	8.3	22.4	77.6	55.3	34.8	25.1	12.2	756
2006-07	0.2	1.2	2.6	8.2	22.2	77.8	55.8	35.5	25.8	12.9	810
2007-08	0.2	1.1	2.5	8.1	22.1	77.9	56.1	36.0	26.4	13.4	870
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	0.2	1.3	2.8	8.7	22.9	77.1	55.5	35.8	26.4	13.9	869
2010-11	0.2	1.3	2.9	8.9	23.5	76.5	54.2	33.7	24.0	11.5	857
2011-12	0.3	1.4	3.1	9.2	23.8	76.2	54.1	33.8	24.2	11.5	886
2012-13	0.3	1.5	3.2	9.6	24.3	75.7	53.5	33.4	23.8	11.2	904
2013-14	0.3	1.6	3.4	9.8	24.4	75.6	54.0	34.5	25.1	12.6	951
2014-15	0.3	1.7	3.5	10.0	24.7	75.3	53.6	34.1	24.8	12.3	977
2015-16 (1)	0.3	1.7	3.5	10.1	24.7	75.3	53.8	34.6	25.4	13.1	1,015
2016-17 (1,2)	0.3	1.7	3.6	10.4	25.4	74.6	52.6	33.2	23.8	11.6	1,014
2017-18 (1,2)	0.3	1.7	3.6	10.4	25.3	74.7	52.8	33.5	24.2	12.0	1,049
<b>After Tax</b>											<b>After Tax</b>
1999-00	0.3	1.5	3.4	10.2	26.4	73.6	50.0	29.3	19.9	8.8	440
2000-01	0.3	1.5	3.2	9.9	25.8	74.2	50.6	29.8	20.4	9.2	489
2001-02	0.3	1.5	3.2	9.9	26.0	74.0	50.3	29.5	20.0	8.9	505
2002-03	0.3	1.5	3.2	10.0	26.1	73.9	50.1	29.2	19.7	8.6	515
2003-04	0.3	1.4	3.2	9.8	25.9	74.1	50.4	29.5	20.1	8.9	514
2004-05	0.3	1.4	3.2	9.8	25.5	74.5	50.8	29.7	20.3	9.1	568
2005-06	0.3	1.4	3.1	9.6	25.1	74.9	51.7	30.8	21.3	9.9	618
2006-07	0.3	1.4	3.1	9.6	24.9	75.1	52.1	31.4	22.0	10.5	661
2007-08	0.2	1.4	3.1	9.5	24.8	75.2	52.4	31.8	22.5	10.9	708
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	0.3	1.5	3.3	10.0	25.4	74.6	52.0	31.6	22.4	11.2	716
2010-11	0.3	1.6	3.4	10.3	26.1	73.9	50.5	29.4	19.9	8.6	706
2011-12	0.3	1.7	3.6	10.7	26.6	73.4	50.1	29.2	19.8	8.6	731
2012-13	0.3	1.8	3.8	11.1	27.2	72.8	49.4	28.7	19.4	8.3	747
2013-14	0.4	1.9	4.0	11.4	27.4	72.6	49.6	29.4	20.4	9.5	787
2014-15	0.4	2.0	4.1	11.6	27.8	72.2	49.2	29.1	20.1	9.3	811
2015-16 (1)	0.4	2.0	4.2	11.7	27.8	72.2	49.3	29.4	20.5	9.8	841
2016-17 (1,2)	0.4	2.0	4.3	12.0	28.4	71.6	48.2	28.2	19.2	8.6	847
2017-18 (1,2)	0.4	2.1	4.3	12.0	28.4	71.6	48.4	28.5	19.6	8.9	876

## 2.4

### Shares of total income (before and after tax) and income tax for percentile groups, 1999-00 to 2017-18

Continued

Taxpayers only

Percentage

Percentile Groups (ranged on total income before tax)	Bottom				Bottom	Top	Top				Total (All Taxpayers) £bn
	1%	5%	10%	25%	50%	50%	25%	10%	5%	1%	
Share of Total Tax											Total Tax
1999-00	0.0	0.1	0.3	2.4	11.6	88.4	69.5	50.3	39.6	21.3	93
2000-01	0.0	0.1	0.3	2.2	11.3	88.7	70.3	51.5	40.7	22.2	106
2001-02	0.0	0.1	0.3	2.2	11.1	88.9	70.8	51.9	40.8	21.8	107
2002-03	0.0	0.1	0.3	2.2	11.1	88.9	70.5	51.5	40.2	21.0	109
2003-04	0.0	0.1	0.3	2.2	11.2	88.8	70.1	50.9	39.8	20.8	111
2004-05	0.0	0.1	0.3	2.1	10.8	89.2	70.7	51.4	40.3	21.4	123
2005-06	0.0	0.1	0.3	2.1	10.6	89.4	71.5	52.9	41.9	22.7	138
2006-07	0.0	0.1	0.3	2.1	10.5	89.5	71.8	53.5	42.6	23.5	150
2007-08	0.0	0.1	0.3	2.1	10.4	89.6	72.2	54.3	43.4	24.4	163
2008-09 (a)	*	*	*	*	*	*	*	*	*	*	*
2009-10	0.0	0.1	0.6	2.7	11.2	88.8	72.0	54.9	44.8	26.5	154
2010-11	0.0	0.1	0.5	2.7	11.3	88.7	71.3	53.5	43.3	25.0	152
2011-12	0.0	0.1	0.5	2.5	10.7	89.3	72.7	55.4	44.7	25.4	156
2012-13	0.0	0.1	0.5	2.5	10.6	89.4	73.0	55.8	44.8	25.1	157
2013-14	0.0	0.1	0.3	2.2	9.7	90.3	75.0	58.6	47.5	27.6	165
2014-15	0.0	0.1	0.3	2.2	9.7	90.3	75.0	58.5	47.4	27.2	167
2015-16 (1)	0.0	0.1	0.3	2.2	9.4	90.6	75.8	59.8	48.8	28.9	174
2016-17 (1,2)	0.0	0.1	0.4	2.3	9.9	90.1	74.8	58.5	47.2	26.9	167
2017-18 (1,2)	0.0	0.1	0.4	2.3	9.7	90.3	75.2	59.2	48.1	27.7	173

## 2.4

### Shares of total income (before and after tax) and income tax for percentile groups, 1999-00 to 2017-18

Continued

Taxpayers only

Percentage

Percentile points for total income before tax										Amounts: £
	1	5	10	25	50	75	90	95	99	Mean
1999-00	4,600	5,630	6,570	9,260	14,400	22,300	33,000	44,600	96,400	19,600
2000-01	4,620	5,520	6,480	9,280	14,800	23,000	34,200	46,700	102,000	20,300
2001-02	4,780	5,850	6,860	9,910	15,500	24,300	36,200	49,200	107,000	21,400
2002-03	4,860	5,960	6,970	10,000	15,800	24,700	36,700	49,800	108,000	21,600
2003-04	4,820	5,850	7,000	10,100	16,000	25,100	37,100	50,600	111,000	21,900
2004-05	4,980	6,070	7,260	10,300	16,400	26,100	39,000	52,400	117,000	22,800
2005-06	5,200	6,350	7,610	10,800	17,100	27,400	41,300	56,200	132,000	24,300
2006-07	5,410	6,600	7,880	11,200	17,700	28,400	42,900	58,500	141,000	25,500
2007-08	5,600	6,870	8,240	11,800	18,500	29,500	44,900	61,500	149,000	26,800
2008-09 (a)	*	*	*	*	*	*	*	*	*	*
2009-10	6,800	7,970	9,510	12,900	19,600	30,900	46,600	63,200	149,000	28,400
2010-11	6,730	7,830	9,350	12,700	19,500	30,900	46,300	62,600	140,000	27,400
2011-12	7,740	8,840	10,200	13,500	20,300	32,100	48,300	66,200	147,000	28,800
2012-13	8,370	9,570	10,900	14,200	21,000	32,900	49,200	67,900	150,000	29,600
2013-14	9,710	10,760	11,800	15,000	21,900	33,900	50,600	70,400	159,000	31,300
2014-15	10,300	11,200	12,200	15,500	22,400	34,500	51,400	71,700	162,000	31,800
2015-16 (1)	10,800	11,700	12,800	16,100	23,100	35,400	52,700	73,600	166,000	33,100
2016-17 (1,2)	11,200	12,200	13,300	16,700	23,800	36,300	53,700	74,800	163,000	33,300
2017-18 (1,2)	11,700	12,700	13,800	17,300	24,700	37,500	55,400	77,300	171,000	34,600

Source: Survey of Personal Incomes

Table updated May 2017

#### Key

\* not available

- negligible

#### Footnotes for table 2.4

(a) Figures for 2008-09 tax year are not currently available.

(1) Projected estimates based upon the 2014-15 Survey of Personal Incomes using economic assumptions consistent with the OBR's March 2017 economic and fiscal outlook.

(2) Prior to 2016-17, total income includes the amount of dividends plus dividend tax credit (one ninth of the dividend), the grossed dividend, and income tax is charged on the grossed dividend. The tax due can be satisfied (in part) by the notional tax credit (10% of the grossed dividend). The table reflects the grossed dividend in total income and shows the income tax liability before the tax credit is offset. From 2016-17 the dividend tax credit is abolished, effective dividend tax rates are increased by 7.5% and a £5,000 Personal Dividend Allowance is introduced. This affects the measure of total income and leads to a discontinuity in the basis on which tax liabilities are presented between 2015-16 (and earlier) and 2016-17, so the share of incomes and tax liabilities are not directly comparable.

## 2.5 Income tax liabilities, by Income Range, 2014-15 to 2017-18

2014-15 <sup>(1)</sup>

Numbers: thousands; Amounts: £ million

Range of total income (lower limit)	Starting rate (2) taxpayers		"Savers" rate (3) taxpayers		Basic rate (4) taxpayers		Higher rate (5) taxpayers		Additional rate (6) taxpayers		All taxpayers	Total income of taxpayers	Tax liability	Average rate of tax	Average amount of tax
	£	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number					
10,000	250	20	179	33	6,570	3,030	.	.	.	.	7,000	87,500	3,090	3.5	441
15,000	12	7	105	78	5,960	8,270	.	.	.	.	6,080	106,000	8,350	7.9	1,370
20,000	10	13	154	232	7,570	20,900	.	.	.	.	7,730	189,000	21,100	11.2	2,730
30,000	13	35	243	674	4,970	24,100	1,380	9,940	.	.	6,600	251,000	34,700	13.8	5,260
50,000	..	..	4	10	21	100	2,470	36,100	.	.	2,490	165,000	36,200	21.9	14,500
100,000	..	..	..	..	1	4	424	15,300	.	.	425	50,700	15,300	30.2	36,000
150,000	..	..	..	..	..	..	26	1,180	124	7,470	151	25,700	8,640	33.6	57,400
200,000	.	.	..	..	..	..	2	55	158	17,200	160	46,400	17,300	37.2	108,000
500,000	.	.	.	.	.	.	..	..	30	8,140	30	20,700	8,140	39.4	268,000
1,000,000	.	.	.	.	.	.	.	.	11	5,780	11	14,600	5,780	39.5	534,000
2,000,000+	.	.	..	..	.	.	..	..	4	8,100	4	20,600	8,100	39.3	1,850,000
All Ranges	285	76	686	1,030	25,100	56,400	4,300	62,600	328	46,700	30,700	977,000	167,000	17.1	5,430

In 2014-15 earnings is taxable at 20 percent up to the Higher Rate Threshold (HRT) of £41,865, 40 percent up to the Higher Rate Limit (HRL) of £150,000 and 45 percent over the HRT.

Savings income is taxable at 10 percent up to the Starting Rate Limit (SRL) of £2,880 above the PA, 20 percent up to the HRT, 40 percent up to the HRL and 45 percent over the HRT.

Dividend is taxable at 10 percent up to the HRT, 32.5 percent up to the HRL and 37.5 percent above HRL. These rates are charged on total dividend income plus a notional tax credit (one-ninth of the dividend); this tax credit satisfies part of the tax charge.

See Bulletin for more details on income tax calculations - Annex A: Context and Background information.

## 2.5 Income tax liabilities, by Income Range, 2014-15 to 2017-18

continued

2015-16 (7)

Numbers: thousands; Amounts: £ million

Range of total income (lower limit)	Starting rate (2) taxpayers		"Savers" rate (3) taxpayers		Basic rate (4) taxpayers		Higher rate (5) taxpayers		Additional rate (6) taxpayers		All taxpayers	Total income of taxpayers	Tax liability	Average rate of tax	Average amount of tax	
	£	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number		Amount	Amount	Amount	%	£
10,600 (a)	.	.	.	202	24	5,990	2,440	.	.	.	.	6,190	79,200	2,460	3	398
15,000	.	.	.	114	67	6,020	7,690	.	.	.	.	6,130	107,000	7,760	7.3	1,270
20,000	.	.	.	174	237	7,840	20,800	.	.	.	.	8,010	196,000	21,000	10.7	2,630
30,000	.	.	.	199	503	5,240	25,000	1,430	9,780	.	.	6,870	261,000	35,300	13.5	5,140
50,000	.	.	.	4	8	22	109	2,590	37,100	.	.	2,620	173,000	37,200	21.5	14,200
100,000	.	.	.	..	..	..	..	460	16,300	.	.	460	54,700	16,300	29.9	35,500
150,000	.	.	.	..	..	..	..	26	1,220	123	7,390	149	25,500	8,610	33.8	57,700
200,000	.	.	.	..	..	..	..	-	12	172	19,000	172	51,000	19,000	37.2	110,000
500,000	.	.	.	..	..	..	..	..	..	36	9,530	36	24,400	9,530	39.1	266,000
1,000,000	.	.	.	..	..	..	..	..	..	12	6,570	12	16,700	6,570	39.3	532,000
2,000,000+	.	.	.	..	..	..	..	..	..	5	10,200	5	26,100	10,200	39.1	1,890,000
All Ranges	.	.	.	692	839	25,100	56,100	4,510	64,500	348	52,700	30,700	1,020,000	174,000	17.2	5,680

In 2015-16 earnings is taxable at 20 percent up to the Higher Rate Threshold (HRT) of £42,385, 40 percent up to the Higher Rate Limit (HRL) of £150,000 and 45 percent over the HRT.

Savings income is taxable at 0 percent up to the Starting Rate Limit (SRL) of £5,000 above the PA, 20 percent up to the HRT, 40 percent up to the HRL and 45 percent over the HRT.

Dividend is taxable at 10 percent up to the HRT, 32.5 percent up to the HRL and 37.5 percent above HRL. These rates are charged on total dividend income plus a notional tax credit (one-ninth of the dividend); this tax credit satisfies part of the tax charge.

See Bulletin for more details on income tax calculations - Annex A: Context and Background information.

## 2.5 Income tax liabilities, by Income Range, 2014-15 to 2017-18

continued

2016-17 <sup>(7,8)</sup>

Numbers: thousands; Amounts: £ million

Range of total income (lower limit)	Starting rate (2) taxpayers		"Savers" rate (3) taxpayers		Basic rate (4) taxpayers		Higher rate (5) taxpayers		Additional rate (6) taxpayers		All taxpayers	Total income of taxpayers	Tax liability	Average rate of tax	Average amount of tax
	£	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number					
11,000 (a)	.	.	.	-	5,390	1,950	.	.	.	.	5,400	70,000	1,950	2.8	362
15,000	.	.	79	12	6,030	7,110	.	.	.	.	6,110	106,000	7,120	6.7	1,170
20,000	.	.	179	116	8,020	20,400	.	.	.	.	8,190	201,000	20,500	10.2	2,500
30,000	.	.	335	539	5,690	26,600	1,130	7,980	.	.	7,160	272,000	35,100	12.9	4,910
50,000	.	.	5	7	27	132	2,710	37,900	.	.	2,740	182,000	38,000	20.9	13,900
100,000	.	.	..	..	..	..	471	16,700	.	.	471	56,300	16,700	29.6	35,400
150,000	.	.	..	..	..	..	28	1,290	127	7,690	155	26,600	8,980	33.8	57,800
200,000	.	.	..	..	..	..	1	17	157	17,200	158	45,800	17,200	37.6	109,000
500,000	.	.	.	.	.	.	..	..	30	8,270	30	20,700	8,270	39.9	271,000
1,000,000	.	.	.	.	.	.	..	..	10	5,700	10	14,200	5,700	40.1	546,000
2,000,000+	.	.	.	.	.	.	.	.	4	7,580	4	18,900	7,580	40.1	1,810,000
All Ranges	.	.	598	674	25,200	56,100	4,340	63,900	330	46,400	30,400	1,010,000	167,000	16.5	5,490

In 2016-17 earnings is taxable at 20 percent up to the Higher Rate Threshold (HRT) of £43,000, 40 percent up to the Higher Rate Limit (HRL) of £150,000 and 45 percent over the HRT.

The Personal Savings Allowance is £1,000 for BR taxpayers, £500 for HR taxpayers and £0 for AR taxpayers, savings income above this is taxable at 0 percent up to the Starting Rate Limit (SRL) of £5,000 above the PA, 20 percent up to the HRT, 40 percent up to the HRL and 45 percent over the HRT.

The Dividend Allowance is £5,000 for all taxpayers, dividend income above this is taxable at 7.5 percent up to the HRT, 32.5 percent up to the HRL and 38.1 percent above HRL.

See Bulletin for more details on income tax calculations - Annex A: Context and Background information.

## 2.5 Income tax liabilities, by Income Range, 2014-15 to 2017-18

continued

2017-18 (7,8,9)

Numbers: thousands; Amounts: £ million

Range of total income (lower limit)	Starting rate (2) taxpayers		"Savers" rate (3) taxpayers		Basic rate (4) taxpayers		Higher rate (5) taxpayers		Additional rate (6) taxpayers		All taxpayers	Total income of taxpayers	Tax liability	Average rate of tax	Average amount of tax
	£	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number					
11,500 (a)	.	.	.	-	4,590	1,450	.	.	.	.	4,590	60,800	1,450	2.4	317
15,000	.	.	70	9	6,020	6,510	.	.	.	.	6,090	106,000	6,520	6.1	1,070
20,000	.	.	179	109	8,160	20,000	.	.	.	.	8,340	205,000	20,100	9.8	2,410
30,000	.	.	361	592	6,330	29,800	764	5,380	.	.	7,460	285,000	35,700	12.6	4,790
50,000	.	.	6	10	49	272	2,870	38,800	.	.	2,920	193,000	39,100	20.2	13,400
100,000	.	.	..	..	..	..	499	17,400	.	.	499	59,600	17,400	29.2	35,000
150,000	.	.	..	..	..	..	29	1,340	139	8,310	169	28,900	9,650	33.4	57,200
200,000	.	.	..	..	..	..	1	16	175	18,900	175	50,700	18,900	37.2	108,000
500,000	.	.	.	.	.	.	..	..	33	8,980	33	22,700	8,980	39.6	269,000
1,000,000	.	.	.	.	.	.	..	..	12	6,400	12	16,000	6,400	39.9	541,000
2,000,000+	.	.	.	.	.	.	.	.	5	8,720	5	22,100	8,720	39.4	1,860,000
All Ranges	.	.	617	720	25,200	58,000	4,160	63,000	364	51,300	30,300	1,050,000	173,000	16.5	5,710

In 2017-18 earnings is taxable at 20 percent up to the Higher Rate Threshold (HRT) of £45,000, 40 percent up to the Higher Rate Limit (HRL) of £150,000 and 45 percent over the HRT (9).

The Personal Savings Allowance is £1,000 for BR taxpayers, £500 for HR taxpayers and £0 for AR taxpayers, savings income above this is taxable at 0 percent up to the Starting Rate Limit (SRL) of £5,000 above the PA, 20 percent up to the HRT, 40 percent up to the HRL and 45 percent over the HRT.

The Dividend Allowance is £5,000 for all taxpayers, dividend income above this is taxable at 7.5 percent up to the HRT, 32.5 percent up to the HRL and 38.1 percent above HRL.

See Bulletin for more details on income tax calculations - Annex A: Context and Background information.

Source: Survey of Personal Incomes

Table updated May 2017

## Key

- . not applicable / zero
- .. not available or sample size too small to produce a reliable estimate
- negligible

## Footnotes for table 2.5

- (1) The figures published in the ILS publication for total liabilities for 2014-15 are not consistent with the figures first published in the personal income statistics publication of the 2014-15 SPI. This is due to a small correction, which can be seen in a few of the comparable breakdowns of total liabilities which feature in both publications.
- (2) Taxpayers with no taxable earnings and total taxable income from savings below the starting rate limit. From 2015-16 the starting rate of tax for savings income has been reduced from 10% to 0%, and the starting rate limit has been increased to £5,000.
- (3) Before 2016-17 taxpayers with no taxable earnings and total taxable income from savings between the starting rate limit and the basic rate limit and/or dividends at the 10p ordinary rate. From 2016-17 taxpayers with no taxable earnings and total taxable income from savings charged at the 20p rate and/or dividends at the 7.5p rate.
- (4) Taxpayers whose income includes earnings or other income taxed as earnings and with total taxable income below the basic rate limit.
- (5) Taxpayers with total taxable income between the basic rate limit and the higher rate limit.
- (6) Taxpayers with total taxable income above the higher rate limit.
- (7) Projected estimates based upon the 2014-15 Survey of Personal Incomes using economic assumptions consistent with the OBR's March 2017 economic and fiscal outlook.
- (8) Prior to 2016-17, total income includes the amount of dividends plus dividend tax credit (one ninth of the dividend), the grossed dividend, and income tax is charged on the grossed dividend. The tax due can be satisfied (in part) by the notional tax credit (10% of the grossed dividend). The table reflects the grossed dividend in total income and shows the income tax liability before the tax credit is offset. From 2016-17 the dividend tax credit is abolished, effective dividend tax rates are increased by 7.5% and a £5,000 Personal Dividend Allowance is introduced. This affects the measure of total income, income range and marginal rate band, and leads to a discontinuity in the basis on which tax liabilities are presented between 2015-16 (and earlier) and 2016-17, so the share of incomes and tax liabilities are not directly comparable.
- (9) From 2017-18, individuals who are classified as resident in Scotland and have total taxable income above the Scottish Basic Rate Limit (BRL) but below the UK government's BRL have their marginal rate classification based on their income within this notional band. For these taxpayers, non-savings non-dividend (NSND) income within this band is taxed at the higher rate, whereas savings and dividends income is taxed at the basic rate. A Scottish taxpayer with any taxable NSND income within this band (but no total taxable income above the UK BRL) is classified as a Higher Rate taxpayer, as this is the top rate they are paying. A Scottish taxpayer with only savings and/or dividend income within this band (and no total taxable income above the UK BRL) is classified as a Basic Rate taxpayer.
- (a) Can include some taxpayers who are not entitled to a Personal Allowance whose total income can be less than the Personal Allowance (see Annex B: Data sources and methodology). From 2015-16, this will also include individuals whose Personal Allowance is reduced and therefore become taxpayers as an impact of the Marriage Allowance (see Annex B: Data sources and methodology).



## 2.6 Income tax liabilities, by income source, tax band and marginal rate, 2014-15 to 2017-18

2014-15

Amounts: £ million

	Starting rate (1) taxpayers	"Savers" rate (2) taxpayers	Basic rate (3) taxpayers	Higher rate (4) taxpayers	Additional rate (5) taxpayers	All taxpayers
Tax liability after allowances given as income tax reductions (6)						
Tax on Earnings:						
Basic rate	.	.	54,900	24,700	1,970	81,500
Higher rate	.	.	.	31,400	13,500	44,900
Additional rate	.	.	.	.	24,900	24,900
Tax on Savings:						
Starting rate	20	20	44	6	-	90
Basic rate	.	73	687	188	16	963
Higher rate	.	.	.	724	175	900
Additional rate	.	.	.	.	548	548
Tax on dividends (before tax credit relief) (7):						
Ordinary rate	56	935	753	1,210	34	2,990
Higher rate	.	.	.	4,420	1,220	5,650
Additional rate	.	.	.	.	4,340	4,340
Allowances given as tax reductions	-	48	277	367	1,340	2,030
Tax liability after allowances given as income tax reduction	76	1,030	56,400	62,600	46,700	167,000
Average Rate of Tax %	2.1	5.9	10.2	22.2	37.8	17.1
Average amount of tax £	267	1,500	2,250	14,600	142,000	5,430

## 2.6 Income tax liabilities, by income source, tax band and marginal rate, 2014-15 to 2017-18

continued

2015-16 <sup>(7)</sup>

Amounts: £ million

	Starting rate (1) taxpayers	"Savers" rate (2) taxpayers	Basic rate (3) taxpayers	Higher rate (4) taxpayers	Additional rate (5) taxpayers	All taxpayers
<i>Tax liability after allowances given as income tax reductions (6)</i>						
<i>Tax on Earnings:</i>						
Basic rate	.	.	54,900	25,100	2,080	82,000
Higher rate	.	.	.	31,800	14,200	46,000
Additional rate	.	.	.	.	26,000	26,000
<i>Tax on Savings:</i>						
Starting rate	.	.	.	.	.	.
Basic rate	.	42	538	151	13	745
Higher rate	.	.	.	629	148	777
Additional rate	.	.	.	.	475	475
<i>Tax on dividends (before tax credit relief) (7):</i>						
Ordinary rate	.	797	662	1,650	40	3,150
Higher rate	.	.	.	5,140	1,470	6,600
Additional rate	.	.	.	.	8,300	8,300
Allowances given as tax reductions	.	46	254	374	1,370	2,050
Tax liability after allowances given as income tax reduction	.	839	56,100	64,500	52,700	174,000
Average Rate of Tax %	.	5.2	10.0	21.8	37.8	17.2
Average amount of tax £	.	1,210	2,230	14,300	151,000	5,680

## 2.6 Income tax liabilities, by income source, tax band and marginal rate, 2014-15 to 2017-18

continued

2016-17 <sup>(7)</sup>

Amounts: £ million

	Starting rate (1) taxpayers	"Savers" rate (2) taxpayers	Basic rate (3) taxpayers	Higher rate (4) taxpayers	Additional rate (5) taxpayers	All taxpayers
<i>Tax liability after allowances given as income tax reductions (6)</i>						
<i>Tax on Earnings:</i>						
Basic rate	.	.	55,700	25,500	2,050	83,200
Higher rate	.	.	.	32,800	14,600	47,400
Additional rate	.	.	.	.	27,200	27,200
<i>Tax on Savings:</i>						
Starting rate	.	.	.	.	.	.
Basic rate	.	25	147	88	5	265
Higher rate	.	.	.	339	84	423
Additional rate	.	.	.	.	328	328
<i>Tax on dividends (after personal dividend allowance) (7):</i>						
Ordinary rate	.	650	317	613	5	1,580
Higher rate	.	.	.	4,510	470	4,980
Additional rate	.	.	.	.	1,740	1,740
Allowances given as tax reductions	.	2	219	342	1,350	1,920
Tax liability after allowances given as income tax reduction	.	674	56,100	63,900	46,400	167,000
Average Rate of Tax %	.	3.6	9.7	21.8	38.2	16.5
Average amount of tax £	.	1,130	2,230	14,700	141,000	5,490

## 2.6 Income tax liabilities, by income source, tax band and marginal rate, 2014-15 to 2017-18

continued

2017-18 (8,9)

Amounts: £ million

	Starting rate (1) taxpayers	"Savers" rate (2) taxpayers	Basic rate (3) taxpayers	Higher rate (4) taxpayers	Additional rate (5) taxpayers	All taxpayers
<i>Tax liability after allowances given as income tax reductions (6)</i>						
<i>Tax on Earnings:</i>						
Basic rate	.	.	57,400	25,400	2,330	85,100
Higher rate	.	.	.	31,900	15,200	47,100
Additional rate	.	.	.	.	28,500	28,500
<i>Tax on Savings:</i>						
Starting rate	.	.	.	.	.	.
Basic rate	.	28	163	94	8	293
Higher rate	.	.	.	348	101	449
Additional rate	.	.	.	.	364	364
<i>Tax on dividends (after personal dividend allowance) (7):</i>						
Ordinary rate	.	692	344	634	14	1,680
Higher rate	.	.	.	4,640	1,020	5,650
Additional rate	.	.	.	.	3,680	3,680
Allowances given as tax reductions	.	2	190	329	1,490	2,010
<i>Tax liability after allowances given as income tax reduction</i>	.	720	58,000	63,000	51,300	173,000
<i>Average Rate of Tax %</i>	.	3.6	9.6	21.7	37.8	16.5
<i>Average amount of tax £</i>	.	1,170	2,300	15,100	141,000	5,710

Source: Survey of Personal Incomes.

Table updated May 2017

**Key**

- negligible

. not applicable / zero

**Footnotes for table 2.6**

- (1) Taxpayers with no taxable earnings and total taxable income from savings below the starting rate limit. From 2015-16 the starting rate of tax for savings income has been reduced from 10% to 0%, and the starting rate limit has been increased to £5,000.
- (2) Before 2016-17 taxpayers with no taxable earnings and total taxable income from savings between the starting rate limit and the basic rate limit and/or dividends at the 10p ordinary rate. From 2016-17 taxpayers with no taxable earnings and total taxable income from savings charged at the 20p rate and/or dividends at the 7.5p rate.
- (3) Taxpayers whose income includes earnings or other income taxed as earnings and with total taxable income below the basic rate limit.
- (4) Taxpayers with total taxable income between the basic rate limit and the higher rate limit.
- (5) Taxpayers with total taxable income above the higher rate limit.
- (6) In this context tax reductions refer to allowances given at a fixed rate, for example the Married Couples Allowance.
- (7) Prior to 2016-17, total income includes the amount of dividends plus dividend tax credit (one ninth of the dividend), the grossed dividend, and income tax is charged on the grossed dividend. The tax due can be satisfied (in part) by the notional tax credit (10% of the grossed dividend). The table reflects the grossed dividend in total income and shows the income tax liability before the tax credit is offset. From 2016-17 the dividend tax credit is abolished, effective dividend tax rates are increased by 7.5% and a £5,000 Personal Dividend Allowance is introduced. This affects the measure of total income, income range and marginal rate band, and leads to a discontinuity in the basis on which tax liabilities are presented between 2015-16 (and earlier) and 2016-17, so the share of incomes and tax liabilities are not directly comparable. For this reason comparing dividend tax liabilities between 2016-17 and 2015-16 is not a reliable indication of the impact of the 2016-17 dividend tax reform.
- (8) Projected estimates based upon the 2014-15 Survey of Personal Incomes using economic assumptions consistent with the OBR's March 2017 economic and fiscal outlook.
- (9) From 2017-18, individuals who are classified as resident in Scotland and have total taxable income above the Scottish Basic Rate Limit (BRL) but below the UK government's BRL have their marginal rate classification based on their income within this notional band. For these taxpayers, non-savings non-dividend (NSND) income within this band is taxed at the higher rate, whereas savings and dividends income is taxed at the basic rate. A Scottish taxpayer with any taxable NSND income within this band (but no total taxable income above the UK BRL) is classified as a Higher Rate taxpayer, as this is the top rate they are paying. A Scottish taxpayer with only savings and/or dividend income within this band (and no total taxable income above the UK BRL) is classified as a Basic Rate taxpayer.

## SECTION B: Illustrative Tax Burdens

Section B provides details of some of the key illustrative statistics presented in the Table 2.7.

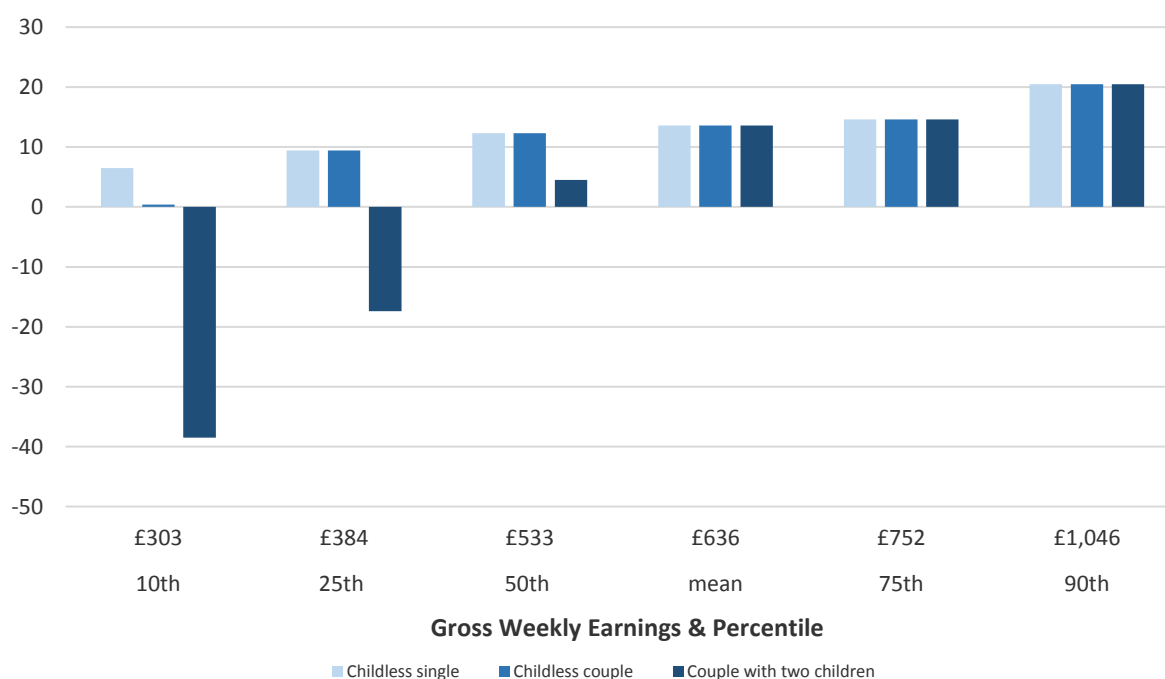
**Table 2.7 – Income tax (net of tax credits) as a per cent of gross earnings for specimen families, 1990-91 to 2017-18**

<https://www.gov.uk/government/statistics/percentage-of-earnings-paid-in-income-tax>

Table 2.7 shows how income tax burdens (tax due as percent of gross earnings) have evolved over time for a range of illustrative families with a single wage earner at specific earnings levels across the earnings distribution. From 1999-00, income tax burdens take account of the financial support families receive in the form of tax credits, and are shown for single persons, and couples with and without children.

**Figure 9: Income tax (net of tax credits) as a per cent of gross earnings, 2015-16**

### Tax Burden (% of gross income)



#### Tax burden

In 2015-16, the latest tax year for which earnings outturns are available, childless single persons with gross earnings at the 10th percentile of the earnings distribution had an estimated income tax burden of 6.5% of gross earnings. This increases to 12.3% at the median (50th percentile) and 20.5% at the 90th percentile. For childless couples, the tax burden is the same except for those at the 10th percentile who would still be entitled to Working Tax Credit (WTC) in 2015-16, which reduces their net income tax burden to 0.4%.

Childless single people also qualify for WTC but only receive support at earnings levels below those shown in the table.

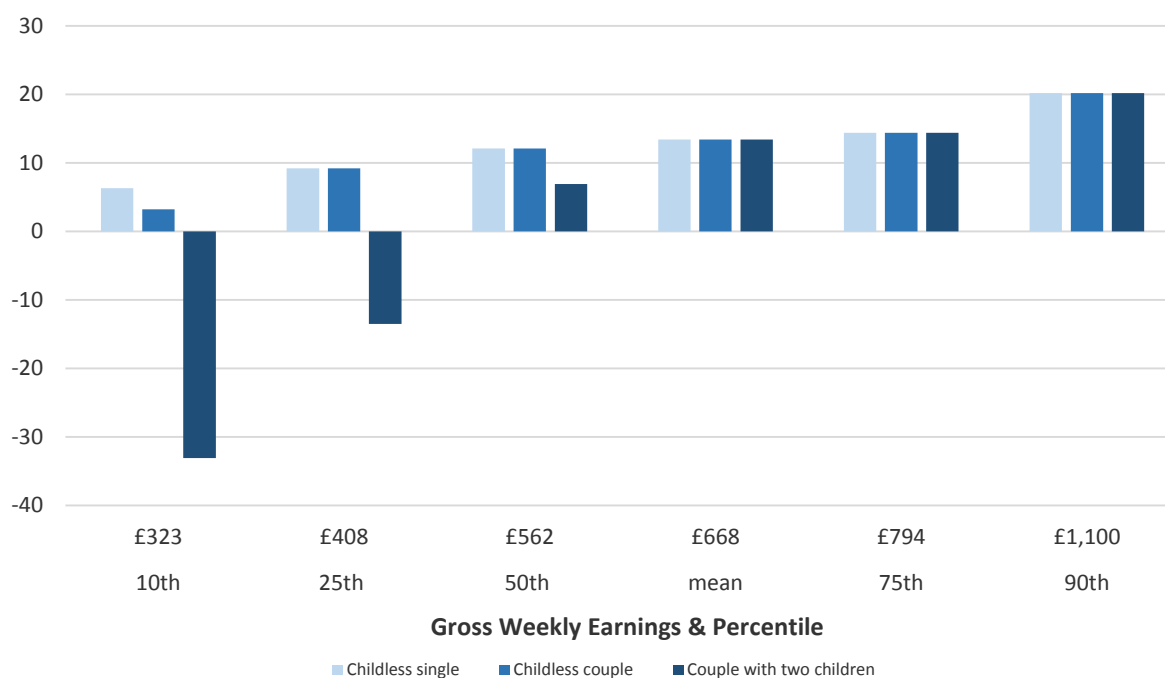
A couple with two children is eligible for WTC and Child Tax Credit (CTC). CTC extends much further up the income scale than WTC, reducing tax burdens for a couple with two children at incomes up to and including mean earnings. At the 10th percentile the amount of CTC and WTC received in 2015-16 significantly exceeds income tax liabilities due, giving a net tax burden of -38.5% of gross earnings. As the child element of tax credits is withdrawn at higher earnings levels, the difference in tax burdens for couple families with and without children steadily falls. At mean earnings, the CTC family element only is received, reducing the income tax burden for the two child family up to 2014-15. Since 2014-15 those at mean earnings no longer receive any WTC or CTC.

Income tax burdens for childless single persons generally declined in 2015-16 compared with the previous year, by 0.3 percentage points at median earnings and below. This was due to the £600 cash increase in the Personal Allowance to £10,600 in 2015-16. The tax burden decreased slightly to 20.5% for the illustrative high earner at the 90th earnings percentile as the Higher Rate Threshold increased from £41,865 to £42,385.

Changes in tax burdens in 2015-16 for single earner childless couples were the same as those for single persons, except at the 10th earnings percentile, where reductions in WTC relative to earnings give a lower overall reduction in the net tax burden for childless couples. Couples with two children, with earnings up to the mean saw their net tax burden increase due to reductions in their WTC and CTC award compared with 2014-15. Those in the 75th and 90th percentile do not receive WTC and CTC thus saw the same net decrease in their tax burden as those without children.

**Figure 10: Income tax (net of tax credits) as a per cent of gross earnings, 2017-18**

## Tax Burden (% of gross income)



Projections for 2017-18 show income tax burdens slightly decreasing for most families due to the £500 cash increase in the Personal Allowance. For lower earning families with children, net tax burdens are projected to increase for those below median earnings in 2017-18. This is due to the freeze in most tax credit rates relative to earnings, which also impact childless couples below the 10th percentile. Tax burdens for all illustrative families in the 90th percentile are projected to also decrease slightly, this is due to the cash increase of £2,000 in the Higher Rate Threshold. For individuals in Scotland the Higher Rate Threshold for non-savings non-dividend (NSND) income is unchanged in cash terms for 2017-18.

### ***Interpreting Table 2.7***

*Table 2.7 is different from the other tables in this release. The tax burdens are shown for hypothetical or illustrative families with given circumstances and earnings, and since 1999-00 take account of financial support received through the tax credit system. Tax credit entitlements exceed income tax liabilities in some cases leading to negative estimated tax burdens. SPI survey data is not used in constructing the table.*

*These illustrative families are not designed to represent the overall UK taxpaying population, whose family circumstances and incomes vary widely. Earnings levels assumed in the table are derived from the Office for National Statistics's Annual Survey of Hours and Earnings, with latest available outturn data for April 2016. Outturns for tax burdens therefore are published to 2015-16, with projections for 2017-18.*



## 2.7

### Income tax (net of tax credits) as a per cent of gross earnings for specimen families, 1990-91 to 2017-18

Per cent of gross earnings	Position in earnings (1) distribution					
	10 <sup>th</sup> percentile	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	mean	75 <sup>th</sup> percentile	90 <sup>th</sup> Percentile
1990-91						
Gross earnings (£ weekly)	133.6	172.9	238.2	273.9	328.2	439.2
Tax burden (per cent of gross earnings)						
Single	14.2	16.6	18.9	19.7	20.6	21.7
Married (2)	8.0	11.9	15.5	16.7	18.1	19.8
1991-92						
Gross earnings (£ weekly)	143.7	185.7	255.8	294.7	354.1	473.1
Tax burden (per cent of gross earnings)						
Single	14.0	16.5	18.8	19.6	20.5	21.7
Married (2)	8.2	12.0	15.6	16.8	18.2	19.9
1992-93						
Gross earnings (£ weekly)	150.6	195.2	269.0	310.8	373.6	499.5
Tax burden (per cent of gross earnings)						
Single	12.7	15.5	18.1	19.1	20.1	21.3
Married (2)	7.2	11.3	15.1	16.4	17.8	19.6
1993-94						
Gross earnings (£ weekly)	155.6	201.5	277.6	321.3	385.3	517.0
Tax burden (per cent of gross earnings)						
Single	12.8	15.6	18.2	19.1	20.1	21.3
Married (2)	7.5	11.5	15.2	16.5	17.9	19.7
1994-95						
Gross earnings (£ weekly)	159.2	207.0	286.1	331.0	396.5	533.5
Tax burden (per cent of gross earnings)						
Single	12.8	15.6	18.2	19.1	20.1	21.7
Married (2)	8.6	12.4	15.9	17.1	18.4	20.4
1995-96						
Gross earnings (£ weekly)	163.5	213.8	295.7	343.9	411.9	556.3
Tax burden (per cent of gross earnings)						
Single	12.8	15.6	18.2	19.2	20.1	22.0
Married (2)	9.7	13.3	16.6	17.7	18.9	21.1
1996-97						
Gross earnings (£ weekly)	171.1	223.0	308.0	359.6	428.9	580.1
Tax burden (per cent of gross earnings)						
Single	12.1	14.9	17.4	18.3	19.2	21.0
Married (2)	9.1	12.5	15.7	16.9	18.0	20.1

## 2.7

### Income tax (net of tax credits) as a per cent of gross earnings for specimen families, 1990-91 to 2017-18

continued

	Position in earnings (1) distribution					
	10 <sup>th</sup> percentile	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	mean	75 <sup>th</sup> percentile	90 <sup>th</sup> Percentile
1997-98						
Gross earnings (£ weekly)	178.8	232.1	320.8	376.1	446.6	604.3
Tax burden (per cent of gross earnings)						
Single	11.7	14.3	16.7	17.6	18.5	20.3
Married (2)	8.7	12.0	15.0	16.2	17.3	19.5
1998-99						
Gross earnings (£ weekly)	186.2	241.2	332.7	392.3	465.0	631.8
Tax burden (per cent of gross earnings)						
Single	11.7	14.3	16.7	17.6	18.5	20.5
Married (2)	8.8	12.0	15.0	16.2	17.3	19.6
1999-2000						
Gross earnings (£ weekly)	194.1	251.0	346.0	409.9	483.9	659.2
Tax burden (per cent of gross earnings)						
Single	11.2	13.9	16.4	17.4	18.3	20.5
Married (2)	9.2	12.4	15.3	16.5	17.5	19.9
With two children	-23.1	-4.3	13.3	16.5	17.5	19.9
2000-01						
Gross earnings (£ weekly)	202.6	261.7	361.7	432.0	506.8	697.7
Tax burden (per cent of gross earnings)						
Childless	11.1	13.6	15.9	16.9	17.6	20.6
With two children	-25.3	-6.2	11.9	16.9	17.6	20.6
2001-02						
Gross earnings (£ weekly)	211.3	272.5	376.8	454.5	529.6	737.3
Tax burden (per cent of gross earnings)						
Childless	10.9	13.4	15.8	16.8	17.6	20.9
With two children	-27.6	-8.1	10.6	14.6	15.7	20.3
2002-03						
Gross earnings (£ weekly)	218.6	283.6	397.5	479.6	562.2	781.0
Tax burden (per cent of gross earnings)						
Childless	11.0	13.6	16.0	17.0	17.7	21.6
With two children	-27.3	-7.4	11.7	14.9	15.9	21.3
2003-04						
Gross earnings (£ weekly)	226.5	293.1	411.8	492.9	581.8	804.8
Tax burden (per cent of gross earnings)						
Childless single	11.4	13.8	16.2	17.1	17.9	21.9
Childless couple	1.6	13.8	16.2	17.1	17.9	21.9
With two children	-27.5	-7.9	11.4	15.0	16.1	20.6

## 2.7

### Income tax (net of tax credits) as a per cent of gross earnings for specimen families, 1990-91 to 2017-18

continued

	Position in earnings (1) distribution					
	10 <sup>th</sup> percentile	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	mean	75 <sup>th</sup> percentile	90 <sup>th</sup> Percentile
2004-05						
Gross earnings (£ weekly)	232.8	301.8	425.4	507.8	601.6	833.0
Tax burden (per cent of gross earnings)						
Childless single	11.4	13.8	16.2	17.1	17.9	22.0
Childless couple	1.9	13.8	16.2	17.1	17.9	22.0
With two children	-29.5	-9.3	10.5	15.1	16.1	20.7
2005-06						
Gross earnings (£ weekly)	240.5	312.3	440.9	528.6	626.1	869.7
Tax burden (per cent of gross earnings)						
Childless single	11.4	13.8	16.2	17.2	17.9	22.2
Childless couple	2.0	13.8	16.2	17.2	17.9	22.2
With two children	-29.4	-9.1	10.7	15.2	16.2	21.0
2006-07						
Gross earnings (£ weekly)	248.2	321.0	451.6	543.7	641.0	896.1
Tax burden (per cent of gross earnings)						
Childless single	11.4	13.8	16.2	17.2	17.9	22.3
Childless couple	2.5	13.8	16.2	17.2	17.9	22.3
With two children	-29.0	-9.1	10.6	15.2	16.3	21.1
2007-08						
Gross earnings (£ weekly)	257.4	332.1	468.1	562.3	663.3	927.0
Tax burden (per cent of gross earnings)						
Childless single	11.4	13.8	16.2	17.2	17.9	22.2
Childless couple	3.1	13.8	16.2	17.2	17.9	22.2
Couple with two children	-28.5	-8.9	10.8	15.3	16.3	21.1
2008-09						
Gross earnings (£ weekly)	266.2	343.0	483.7	580.8	684.5	958.9
Tax burden (per cent of gross earnings)						
Childless single	11.3	13.2	15.2	16.0	16.6	21.2
Childless couple	1.1	13.2	15.2	16.0	16.6	21.2
Couple with two children	-32.9	-12.3	8.4	14.2	15.1	20.1
2009-10						
Gross earnings (£ weekly)	273.2	351.1	493.8	592.8	699.1	977.6
Tax burden (per cent of gross earnings)						
Childless single	10.9	12.9	15.0	15.8	16.4	20.2
Childless couple	0.4	12.9	15.0	15.8	16.4	20.2
Couple with two children	-34.9	-14.1	7.0	14.0	14.9	19.2
2010-11						
Gross earnings (£ weekly)	276.0	354.3	498.6	600.6	706.9	991.4
Tax burden (per cent of gross earnings)						
Childless single	11.0	13.0	15.0	15.9	16.5	20.5
Childless couple	0.4	13.0	15.0	15.9	16.5	20.5
Couple with two children	-35.5	-14.6	6.7	14.1	15.0	19.6

## 2.7

### Income tax (net of tax credits) as a per cent of gross earnings for specimen families, 1990-91 to 2017-18

continued

	Position in earnings (1) distribution					
	10 <sup>th</sup> percentile	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	mean	75 <sup>th</sup> percentile	90 <sup>th</sup> Percentile
<b>2011-12</b>						
Gross earnings (£ weekly)	279.2	357.0	502.2	605.4	711.6	1,000.2
Tax burden (per cent of gross earnings)						
Childless single	9.7	11.9	14.3	15.3	16.0	20.8
Childless couple	0.5	11.9	14.3	15.3	16.0	20.8
Couple with two children	-38.5	-16.8	5.7	13.5	14.5	20.8
<b>2012-13</b>						
Gross earnings (£ weekly)	284.8	364.1	511.8	614.0	722.0	1,011.0
Tax burden (per cent of gross earnings)						
Childless single	9.1	11.4	13.9	14.9	15.7	20.8
Childless couple	0.8	11.4	13.9	14.9	15.7	20.8
Couple with two children	-39.3	-17.4	5.2	14.5	15.7	20.8
<b>2013-14</b>						
Gross earnings (£ weekly)	287.7	369.0	517.9	620.5	731.5	1,022.7
Tax burden (per cent of gross earnings)						
Childless single	7.4	10.2	13.0	14.1	15.0	20.9
Childless couple	-0.5	10.2	13.0	14.1	15.0	20.9
Couple with two children	-40.6	-18.2	4.5	13.9	15.0	20.9
<b>2014-15</b>						
Gross earnings (£ weekly)	292.0	374.2	522.7	624.1	737.7	1,030.1
Tax burden (per cent of gross earnings)						
Childless single	6.8	9.7	12.6	13.8	14.8	20.6
Childless couple	-0.7	9.7	12.6	13.8	14.8	20.6
Couple with two children	-40.6	-18.3	4.3	13.5	14.8	20.6
<b>2015-16</b>						
Gross earnings (£ weekly)	302.5	383.8	532.9	635.7	752.0	1,046.3
Tax burden (per cent of gross earnings)						
Childless single	6.5	9.4	12.3	13.6	14.6	20.5
Childless couple	0.4	9.4	12.3	13.6	14.6	20.5
Couple with two children	-38.5	-17.4	4.5	13.6	14.6	20.5
<b>2016-17 (3)</b>						
Gross earnings (£ weekly)	312.7	395.8	547.3	651.7	772.4	1,072.5
Tax burden (per cent of gross earnings)						
Childless single	6.5	9.3	12.3	13.5	14.5	20.6
Childless couple	1.9	9.3	12.3	13.5	14.5	20.6
Couple with two children	-35.7	-15.4	5.8	13.5	14.5	20.6
<b>2017-18 (3)</b>						
Gross earnings (£ weekly)	323.3	408.3	562.2	668.2	793.6	1,099.5
Tax burden (per cent of gross earnings)						
Childless single	6.3	9.2	12.1	13.4	14.4	20.2
Childless couple	3.2	9.2	12.1	13.4	14.4	20.2
Couple with two children	-33.1	-13.5	6.9	13.4	14.4	20.2

**Footnotes for table 2.7**

- (1) Gross weekly earnings (Annual Survey of Hours and Earnings). Earnings are for full-time employee jobs (male and female) on adult rates with pay unaffected by absence.
- (2) Married partner calculation assumes that the person is claiming the full Married Couple's Allowance.
- (3) Earnings projections based on Annual Survey of Hours and Earnings (ASHE) data to April 2016, and earnings growth assumptions consistent with the OBR's March 2017 economic and fiscal outlook.

# Annex A: Context and background information

## Income tax

An overview of income tax is available on the gov.uk website:

<https://www.gov.uk/income-tax>

Income tax is an annual tax on individuals' income arising in a given tax year (6th April to the 5th April the following year). It is the UK Government's largest single source of tax revenue, with income tax receipts net of tax credits contributing £168.9 billion to total current receipts of £682.3 billion in 2015-16.

Since April 1990, the UK has had a system of independent taxation. This means that the tax liability for each taxpayer is based solely on their own income and circumstances, and the income of spouses or partners or other family members in general has no effect on the total tax paid. The exception to this is for married couples or civil partnerships that are living together where at least one spouse or partner was born before 6th April 1935, who can still claim Married Couples Allowance (MCA).

The Marriage Allowance became available from 2015-16. This allows the transfer of 10% (£1150 in 2017-18) of the tax free Personal Allowance between couples who are married or in civil partnerships, were born after 6th April 1935 and one partner has an annual income of £11,500 or less, plus up to £5,000 of tax-free savings interest and the other partner's annual income is between £11,501 and £45,000 (or £43,000 if you are in Scotland).

<https://www.gov.uk/marriage-allowance>

Most sources of income are liable for income tax including earnings from employment and from self-employment, most pensions income (state, occupational and personal), interest on most savings, income from shares (dividends), rental income and income paid from trusts, and some social security benefits. Employees who receive non-cash benefits from their employers such as company cars, fuel, medical insurance, living accommodation or loans also pay tax on these benefits. Adding all these sources together will give an individual's total income assessable for tax, an aggregate that appears in several ITLS tables.

Some sources of income are not liable for tax including certain social security benefits, Child and Working Tax Credits, and income from tax exempt savings accounts (e.g. Individual Savings Accounts and some National Savings & Investment products):

<https://www.gov.uk/income-tax>

Most individuals resident in the UK for tax purposes receive a tax free or 'Personal Allowance' (PA), which is an amount of income they can receive each year tax-free. In 2017-18, the basic PA is £11,500. All individuals with an income above £100,000 have their allowance reduced by £1 for every £2 of the excess until it is withdrawn completely. People who are registered as blind in England and Wales, or who in Scotland and Northern Ireland cannot do any work for which eyesight is essential, can claim Blind Person's Allowance.

From 2016-17 the Dividend Allowance was available which means that the first £5,000 of an individual's dividend income is tax free. This is irrespective of their total dividend and non-dividend income. Furthermore, from 2016-17 the Personal Savings Allowance applies. As a result a Basic Rate taxpayer is able to earn up to £1,000 in savings income tax-free. The corresponding allowance is £500 for higher rate and £0 for Additional Rate taxpayers.

Income tax is due only on taxable income above an individual's Personal Allowance. Even then, there are other reliefs and allowances that can reduce an individual's tax bill. Tax reliefs are available on contributions to pension schemes and donations to charities. Employees and Directors may also receive tax relief on business expenses they have paid for. There are other allowances and reliefs that can reduce tax bills such as MCA described above. Unlike Personal Allowances, these are not amounts of income that can be received tax-free; rather they are amounts that may be deducted from any tax bill due.

Once tax-free allowances have been taken into account, income tax due is calculated using different tax rates for specific types of income across a series of tax bands. There are three different sources of income for tax purposes:

- income other than savings and dividends, often referred to informally as “earnings”, which includes earnings from employment, but also profits from self-employment, pension income, taxable benefits and rental income
- savings income (e.g. bank and building society interest)
- dividends (e.g. income from shares in UK companies)

These sources are taxed at one of the main rates of income tax shown in the table below (the basic rate, the higher rate and, from 2010-11, the additional rate). Income tax works on a ‘stack’ basis. This means that earnings are taxed first, then savings and finally dividend income is taxed last. This means, for example, that if an individual has earnings after allowances sufficient to completely fill the basic rate tax band, all savings or dividends income would be charged at the higher (or additional) rates of tax.

**Table 1: Income tax rates 2017-18 by type of income and tax band**

Source	Starting rate for savings <sup>1</sup>	Basic rate	Higher rate	Additional rate
Taxable income after allowances	£0 - £5,000	£0 - £33,500	£33,500 - £150,000	More than £150,000
Earnings <sup>2</sup>	-	20%	40%	45%
Savings	0%	20%	40%	45%
Dividends <sup>3</sup>	-	7.5%	32.5%	38.1%

1 The starting rate for savings is a special rate of tax for savings income only. It is only available to the extent that the individual's taxable income from earnings does not exceed the starting rate limit.

2 Includes all taxable income not defined as savings or dividend income.

A series of example tax calculations using 2017-18 rates and allowances are provided in table 2 below:

**Table 2: Examples of tax liability calculations for 2017-18<sup>1</sup>**

Liabilities rounded to nearest whole £

**Example 1a: Individual with earnings only**

Personal Allowance 11,500

	income:		income after Personal Allowance at:			income after savings & dividends allowance at:			income tax liabilities at:			Total liabilities
	before allowance	after allowance	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	
<b>Earnings</b>	<b>50,000</b>	38,500	-	33,500	5,000	-	33,500	5,000	-	@20% = 6700	@40% = 2,000	<b>8,700</b>
<b>Savings</b>	<b>0</b>	0	0	0	0	0	0	0	0	0	0	<b>0</b>
<b>Dividends</b>	<b>0</b>	0	-	0	0	-	0	0	-	0	0	<b>0</b>
<b>Total</b>	<b>50,000</b>	38,500	0	33,500	5,000	0	33,500	5,000	0	6,700	2,000	<b>8,700</b>

**Example 1b: Individual in Scotland with earnings only**

Personal Allowance 11,500

	income:		income after Personal Allowance at:			income after savings & dividends allowance at:			income tax liabilities at:			Total liabilities
	before allowance	after allowance	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	
<b>Earnings</b>	<b>50,000</b>	38,500	-	31,500	7,000	-	31,500	7,000	-	@20% = 6300	@40% = 2800	<b>9,100</b>
<b>Savings</b>	<b>0</b>	0	0	0	0	0	0	0	0	0	0	<b>0</b>
<b>Dividends</b>	<b>0</b>	0	-	0	0	-	0	0	-	0	0	<b>0</b>
<b>Total</b>	<b>50,000</b>	38,500	0	31,500	7,000	0	31,500	7,000	0	6,300	2,800	<b>9,100</b>



**Example 2: Individual with earnings, savings and dividends**

Personal Allowance

11,500

	income:		income after Personal Allowance at:			income after savings & dividends allowance at:			income tax liabilities at:			Total liabilities
	before allowance	after allowance	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	
<b>Earnings</b>	<b>40,000</b>	28,5000	0	28,500	0	-	28,500	0	-	@20% = 5700	0	<b>5,700</b>
<b>Savings</b>	<b>3,000</b>	3,000	0	3,000	0	0	2,500	0	0	@20% = 500	0	<b>500</b>
<b>Dividends</b>	<b>5,000</b>	5,000	0	2,000	3,000	-	0	0	-	0	0	<b>0</b>
<b>Total</b>	<b>48,000</b>	37,000	0	33,500	3,000	0	31,000	0	0	6,200	0	<b>6,200</b>

**Example 3: Individual with starting rate savings tax**

Tax allowance

11,500

	income:		income after Personal Allowance at:			income after savings & dividends allowance at:			income tax liabilities at:			Total liabilities
	before allowance	after allowance	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	
<b>Earnings</b>	<b>10,000</b>	0	0	0	0	-	0	0	-	0	0	<b>0</b>
<b>Savings</b>	<b>8,000</b>	6,500	5,000	1,500	0	5,000	1,500	0	0	@0% = 0	@20% = 300	<b>300</b>
<b>Dividends</b>	<b>0</b>	0	0	0	0	-	0	0	-	0	0	<b>0</b>
<b>Total</b>	<b>18,000</b>	6,500	5,000	1,500	0	5,000	1,500	0	0	300	0	<b>300</b>

**Example 4: Individual with pension and savings income**

Tax allowance 11,500

	income:		income after Personal Allowance at:			income after savings & dividends allowance at:			income tax liabilities at:			<b>Total liabilities</b>
	before allowance	after allowance	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	starting rate	basic rate	higher rate	
<b>Earnings</b>	<b>12,000</b>	500	0	500	0	-	500	0	-	@20% = 100	0	<b>100</b>
<b>Savings</b>	<b>500</b>	500	500	0	0	0	0	0	0	0	0	<b>0</b>
<b>Dividends</b>	<b>0</b>	0	0	0	0	-	0	0	-	0	0	<b>0</b>
<b>Total</b>	<b>12,500</b>	1,000	500	500	0	0	500	0	0	100	0	<b>100</b>

The way income tax is collected depends both on the type of the income and circumstances of the taxpayer. For most taxpayers, income tax on employment income or occupational pensions is collected through PAYE where income tax is calculated and deducted from the taxpayer's pay or pension before being paid over directly to HMRC by the employer or pension provider. Tax on savings income is usually deducted at source by banks or building societies at the basic rate, with additional income tax due for higher and Additional Rate taxpayers being collected either through PAYE via a change in their tax code or through SA.

Various categories of taxpayers including those with total income above £100,000, or income from savings, investments and property above a certain level, the self-employed, company directors and others with more complex tax affairs pay income tax due through Self-Assessment (SA):

<https://www.gov.uk/self-assessment-tax-returns/who-must-send-a-tax-return>

There are lags between when taxes collected through SA are received and when the corresponding tax liabilities arise. This is because the majority of tax collected through SA is not usually paid until the year after the liability arises.

## Recent changes to income tax

The Personal Allowance and most income tax limits are statutorily increased each tax year with the annual increase in the Consumer Price Index (CPI) for September in the previous year ('indexation'). This has changed from using the Retail Price Index (RPI) for most thresholds since 2015-16. The Government may also legislate to introduce other changes to allowances and limits to over-ride indexation, or to introduce changes to income tax rates and structures.

Details of current and historic income tax allowances and rates are published on the HMRC website: <https://www.gov.uk/government/collections/tax-structure-and-parameters-statistics>

The main income tax changes over recent years can be summarised as follows.

### 2008-09

- The basic rate of income tax was reduced from 22% to 20% and the 20% savings rate was abolished. The 10% starting rate was removed except for savings income.
- The Personal Allowance was increased by £600 above indexation, and the Personal Allowances for those aged 65-74 and 75 and over were increased by £1,180 above indexation. The Basic Rate Limit was reduced by £1,200 after indexation.

### 2009-10

- The Personal Allowance was increased by £130 above indexation and the Basic Rate Limit was increased by £800 above indexation.

### 2010-11

- All existing allowances and limits remained at their 2009-10 levels, reflecting the annual change in the RPI being negative in the previous September.
- Additionally, two changes to the structure of income tax came into effect: the first was the introduction of a new tax rate, the additional tax rate, set at 50% for taxable income over £150,000 (42.5% for dividends); the second reduces the Personal Allowance by £1 for every £2 of taxable income above £100,000 until fully withdrawn, regardless of the individual's age. This creates a notional marginal tax rate of 60% as every extra £2 earned within this band can be taxed at 40% as well as the 20% impact of having £1 of the Personal Allowance removed.

### 2011-12

- The Personal Allowance for those aged under 65 was increased by £1,000 in cash terms (£690 above indexation) and the Basic Rate Limit was reduced by £2,400 in cash terms, leading to a £1,400 decrease in the Higher Rate Threshold.
- The pension tax relief annual allowance was reduced from £255,000 to £50,000 in April 2011 (and the lifetime allowance falls from £1.8m to £1.5m from April 2012). These measures replaced a previously announced policy of restricting pension relief for those with incomes of £150,000 and over.

## 2012-13

- In 2012-13, the Personal Allowance for those aged under 65 was increased by £630 in cash terms (£210 above indexation) and the Basic Rate Limit was reduced by the same amount, implying no change in the Higher Rate Threshold.

## 2013-14

- In 2013-14, the Personal Allowance for those born after 6 April 1948 (previously those aged under 65) was increased by £1,335 in cash terms (£1,115 above indexation). The Basic Rate Limit was reduced by £2,360 to £32,010.
- The age-related Personal Allowances were frozen at 2012-13 levels so that the aged Personal Allowance for those born between 6 April 1948 and 5 April 1938 (previously those aged 65-74) remained at £10,500 while the aged Personal Allowance for those born before 6 April 1938 (previously those aged 75 and over) remained at £10,660.
- The additional rate of income tax for earnings and savings was reduced from 50% to 45% while the additional rate for dividend income was reduced from 42.5% to 37.5%.

## 2014-15

- In 2014-15, the Personal Allowance for those born after 6 April 1948 (previously those aged under 65) was increased by £560 in cash terms (£260 above indexation). The Basic Rate Limit was reduced by £145 to £31,865 since the higher-rate threshold is subject to a 1% growth cap in 2014-15.
- The age-related Personal Allowances were frozen at 2013-14 levels so that the aged Personal Allowance for those born between 6 April 1948 and 5 April 1938 (previously those aged 65-74) remained at £10,500 while the aged Personal Allowance for those born before 6 April 1938 (previously those aged 75 and over) remained at £10,660.

## 2015-16

- In 2015-16, the Personal Allowance for those born after 6 April 1948 (previously those aged under 65) was increased by £500 in cash terms (£370 above indexation), and then by a further £100 in cash terms. The Basic Rate Limit was reduced by £80 to £31,785 since the higher-rate threshold is subject to a 1% growth cap in 2015-16 plus a £100 increase in line with the further £100 Personal Allowance increase passing full gains to Higher Rate taxpayers.
- The age-related Personal Allowances were frozen at 2013-14 levels so that the aged Personal Allowance for those born before 6 April 1938 (previously those aged 75 and over) remained at £10,660. The allowance for those born between 6 April 1948 and 5 April 1938 (previously those aged 65-74) remained at £10,500 until this year when the Personal Allowance went beyond this amount to £10,600 and therefore this aged Personal Allowance was surpassed.
- A new Marriage Allowance was introduced from 2015-16, allowing the transfer of £1,060 (10%) of the tax free Personal Allowance between couples who are married

or in civil partnerships. It is for those born after 6th April 1935 and one partner must have an annual income of £10,600 or less, plus up to £5,000 of tax-free savings interest and the other partner's annual income must be between £10,601 and £42,385.

- The starting rate for savings was reduced to 0% from 10% and the threshold for which the rate applies above the Personal Allowance for savings interest was increased from £2,880 to £5,000.

A number of the reductions in the Basic Rate Limit had the effect of restricting the gains made by higher-rate taxpayers from Personal Allowance increases.

## **2016-17**

- In 2016-17, the Personal Allowance for those born after 6 April 1948 (previously those aged under 65) was increased by £400 in cash terms. Due to negative CPI in 2016-17, the effective indexation was zero. Therefore the increase above indexation was also £400. The Basic Rate Limit was increased by £215 to £32,000.
- The age-related Personal Allowances were frozen at 2013-14 levels so that the aged Personal Allowance for those born before 6 April 1938 (previously those aged 75 and over) remained at £10,660 until this year when the Personal Allowance went beyond this amount to £11,000 and therefore this aged Personal Allowance was surpassed.
- From 2016-17 the 10% dividend tax credit was abolished while the rates charged on dividend income were increased such that the basic rate is now 7.5%, the higher rate 32.5% and the additional rate 38.1%. The Dividend tax allowance was introduced in April 2016, which gives a tax-free allowance on total dividend income below £5,000.
- The Personal Savings allowance was introduced in 2016-17, giving a tax-free allowance on total savings income below the threshold of £1,000. The tax-free allowance is dependent on the top marginal tax rate on an individual's total income, with the threshold being halved for Higher Rate taxpayers and set to £0 for Additional Rate taxpayers.
- All savings and dividends income is taken into account when calculating a taxpayer's marginal rate. No tax is liable on dividend or savings income within an individual's Dividend or Personal Savings allowances, as this is charged at a nil rate.
- The effect of the Personal Allowance, Starting Rate and Personal Savings Allowance for 2016-17 is that an individual with total taxable income of £17,000 will pay no tax on savings income.

## **2017-18**

- In 2017-18, the Personal Allowance for those born after 6 April 1948 (previously those aged under 65) was increased by £500 in cash terms to 11,500. The effective indexation due to CPI was £110. Therefore the increase above indexation was £390.
- The Basic Rate Limit was increased by £1,500 to £33,500 for individuals in all areas of the United Kingdom excluding Scotland. This combined with the Personal

Allowance increase sets the Higher Rate Threshold at £45,000, up £2000 on 2016-17.

- The Scottish Government has set the 2017-18 Higher Rate Threshold for non-savings non-dividend (NSND) income of Scottish taxpayers unchanged from 2016-17 in cash terms at £43,000 – below the level set by the UK Government of £45,000.
- The starting rate band for savings was frozen at the 2016-17 level of £5,000.

Note that the High Income Child Benefit charge applicable from 7 January 2013 is not included in the ITLS projections.

# Annex B: Data sources and Methodology

Annex B first describes the data sources and methods used to compile statistics on the number of taxpayers and income tax liabilities shown in Tables 2.1 to 2.6 of this release.

The methods used to compile estimates of the percentage of earnings paid in income tax by individuals at specific income levels (Table 2.7) are quite distinct, and described in a later section.

## Tables 2.1 to 2.6

### Data sources and sampling

The published estimates of the number of persons subject to UK tax with positive income tax liabilities (“income taxpayers”) and the magnitude of those tax liabilities are based on HMRC’s Survey of Personal Incomes (SPI).

The SPI is a sample survey of the tax records held by HMRC for individuals in the PAYE, SA and repayment claims administrative systems. The survey is conducted annually, and consists of a different sample of individuals each tax year. For each individual in the sample, SPI includes information on incomes assessable to income tax together with some basic information on individual characteristics, for example age and gender. As described below, the survey data is used to estimate income tax liabilities arising on incomes in a given tax year for each individual in the SPI sample, these amounts summarised in Tables 2.1 to 2.6 of this release.

The SPI sample totalled 730,700 individual records in 2014-15, the latest available, representing an approximate 1.5% sample overall of individuals in contact with HMRC, and is made up of three separate samples drawn from the following HMRC administrative systems:

- National Insurance and PAYE Service (NPS): covering all employees and recipients of occupational or personal pensions with a PAYE record.
- Computerised Environment for Self-Assessment (CESA): covering the SA population which includes individuals with self-employment, rental, or untaxed investment income, as well as company directors and individuals with high incomes or complex tax affairs.
- Claims: covering persons without NPS or CESA records who have had too much tax deducted on incomes at source (e.g. on savings income) and claim a repayment from HMRC.

Some individuals with a PAYE record are also in the SA system. These individuals are excluded from the PAYE population prior to sampling, as their SA record provides a more complete picture of their taxable income. Separate samples were drawn from each of these systems and different sampling strategies were used for each. The samples were structured as follows:

- The PAYE population from NPS was stratified by gender and by the sum of pay plus occupational pension income for the previous tax year. Where no previous year’s income was available cases were stratified by gender and by whether they were a



higher rate or Additional Rate taxpayer for the current tax year based on information available at the time the sample was drawn. The sampling fractions varied from 1 in 10 for individuals with high incomes and rare allowances to about 1 in 200 for people with low combined pay and pensions. In all, about 411,600 individuals were selected from NPS for inclusion in the 2014-15 SPI.

- For the SA population from CESA, the main source of income (self-employment or employment/occupational pension) and ranges of income and tax were used to stratify the sample, with the sampling fraction varying from 1 in 1 for cases with very high income or tax up to about 1 in 200 for employees and occupational pensioners with smaller income or tax for 2014-15. In all, about 309,100 individuals were selected from SA for inclusion in the 2014-15 SPI.
- For claims cases, a random sample of about 1 in 20 was selected for inclusion in the SPI. This led to around 10,000 cases being selected for inclusion in the 2014-15 SPI.

Once data was collected for the three constituent parts of the sample, the data sets were joined together. After allowing for incomplete records and records that failed data validation tests, there were about 730,700 valid cases on the 2014-15 final SPI file.

The stratified SPI sample design purposely yields very large sub-samples of SPI cases with very high incomes who account for a large proportion of total liabilities, increasing the precision of estimates of tax liabilities and taxable incomes.

### **Coverage of SPI and imputation of missing data items**

Not all of the individuals in the SPI sample are taxpayers. About 21 per cent of sample cases (37 per cent grossed) have no income tax liability because allowances, deductions and reliefs exceed their total income assessable for tax. Where income exceeds the threshold for the operation of PAYE (£10,000 for 2014-15), the SPI provides the most comprehensive and accurate official source of data on personal incomes assessable for income tax.

However, as HMRC does not hold information for all people with personal incomes below this level, the SPI is not a representative data source for this part of the population and no attempt has been made to estimate the number of cases below the tax threshold or the amount of their incomes. Therefore the statistics in this publication only cover individuals liable to UK income tax (taxpayers) and their incomes.

The coverage of investment income for the sample drawn from NPS is incomplete. This is because HMRC does not need information on interest from which tax has been deducted at source nor dividends and associated tax credit to operate the PAYE system for most individuals. In order to create a full picture of total income for this survey, it is necessary to impute values of bank and building society interest and dividends to some sample cases. For interest and dividends imputation, the amount for each SPI case:

- is known for cases in Self-Assessment from the amount declared on the Self-Assessment Return
- can be inferred or estimated reasonably for NPS cases where there is an adjustment to the tax code for Higher Rate taxpayers
- is supplemented with information from interest paying institutions
- is unknown for NPS cases where there is no coding adjustment - typically those with no liabilities at the higher rate of tax.

Where no information at case level is available from HMRC administrative systems, estimated values are imputed to cases so that the population as a whole has amounts consistent with evidence from other sources (for example, amounts of tax accounted for by deposit takers or indicated by household surveys).

For interest income, starting from control totals at UK level, for the number of cases with interest and the total amount of that interest, the numbers of cases and amounts of interest in Self-Assessment cases and those NPS cases with coding adjustments are deducted to leave targets for the remainder of the taxpayer population. These targets are at UK level – no attempt is made to control the targets to sub-UK geographical units. The cases to which amounts are attached by the imputation process and the amounts attached are determined by probabilistic methods with just the UK targets and distributions in mind.

For dividends income, the number of non SA cases with dividends income and distribution of imputed amounts were inferred from Family Resources Survey data for 2014-15.

As with investment income, HMRC does not have complete information about superannuation or personal pension contributions. Under PAYE, tax is paid on pay after the deduction of superannuation contributions and therefore HMRC does not need to record the contributions deducted from gross pay. For a small proportion of individuals, the superannuation contribution has been taken directly from an end of year return submitted by employers. For most others, their total amount of superannuation contributions has been imputed and has been distributed among earners in the SPI sample, based on information from the Annual Survey of Hours and Earnings produced by the Office for National Statistics. The imputation of superannuation contributions has been improved using P14 employer returns data to identify probable superannuation contributions (as P14s contain information on income subject to tax and income subject to NICs, and superannuation contributions are only subject to NICs).

Relief at basic rate is given at source for employee contributions to personal pensions. As this is the correct amount of relief for Basic Rate taxpayer employees, HMRC does not need to collect personal pension data for this group of taxpayers. To compile complete estimates for personal pensions and total income for the SPI, a significant proportion of the amount of personal pension contributions has been imputed using data from external data sources. The estimated value for this and for superannuation contributions has been combined with other pension reliefs and included in these statistics.

## **Methods for modelling income tax liabilities**

Numbers of taxpayers, total income tax liabilities, and the distributions of income tax liabilities shown in Tables 2.1 to 2.6 are estimated using HMRC's Personal Tax Model (PTM).

PTM is a micro simulation model of the UK income tax system. 'Micro simulation' denotes modelling of tax with reference to individual case level data, in this context the large sample of individuals within the SPI. For each sample case, PTM models income tax liabilities due in a given tax year based on the main features and parameters of the income tax system applying in that year, and incomes assessable for tax recorded in SPI.

Annex A provides a brief summary of how tax liabilities are calculated. An overview of the PTM modelling process applied to each SPI sample case is given below.

- Step 1: "Total income" is summed across the various components of income assessable for tax recorded or imputed in SPI, with separate sub totals for "earnings" (comprising all incomes taxed like earnings), savings and dividends.

- Step 2: “Income after deductions” is calculated by PTM as total income less contributions to occupational and private pensions and charities. This approach implies 100% tax relief on such contributions, consistent with the overall exchequer effects. PTM deducts pension contributions and contributions to charities from earnings income first, then savings then dividends income.
- Step 3: PTM calculates Personal Allowances, initially on the basis of an individual’s age, and with blind person’s allowance allocated where applicable. PTM’s final assessment of Personal Allowances takes account of the excess of income after deductions over the aged income limit for SPI cases aged 65 and over (replaced by those born before 6 April 1948 from 2013-14) and, from 2010-11, the excess of income after deductions over £100,000 for all SPI cases.
- Step 4: The resulting allowance is allocated first to earnings, then savings and then dividends incomes (after deductions) in order to derive sub totals for “taxable income”.
- Step 5: Taxable incomes are allocated to the starting, basic, higher and, from 2010-11, additional rate tax bands beginning with taxable earnings, then savings, and then dividends, with corresponding gross tax liabilities in each category found by applying the corresponding rate of income tax.
- Step 6: The resulting total for income tax liabilities is adjusted to take account of other allowances given as income tax reductions (sometimes called “tax credits”). PTM takes the following such allowances into account: Married Couples Allowance, Maintenance Payments Relief, Community Investment Tax relief, Venture Capital Trust Relief, Enterprise Investment Scheme Relief and Seed Enterprise Investment Scheme Relief.

As with similar models of personal taxes and benefits, it is neither possible nor practical to incorporate all of the detailed features of the UK income tax system into the PTM modelling process. For example, the list of deductions and allowances built into the PTM modelling process at steps 2-6 is not exhaustive, but does cover the most significant income tax reliefs by value.

The tax calculation process has been revised to better reflect the treatment of a small number of cases subject to the pension charge or who, under the residence and /or domicile rules, do not qualify for or choose to give up their Personal Allowance.

A Pension Tax Charge occurs when a taxpayer makes contributions to their pension above the annual (or lifetime) threshold for tax relief. The charge is the equivalent of taxing these contributions at the taxpayers’ marginal tax rate. While this charge uses the income tax rates, and it is part of a taxpayer’s tax liability, it is strictly the recovery of an excess of tax relief given. The methodology used in the personal tax model keeps this charge separate from a taxpayer’s income tax liability, which maintains the link between their taxable income and the income tax paid.

An individual with income below the Personal Allowance can still be a taxpayer in some circumstances. This can arise where individuals who have income liable to UK tax do not qualify for a Personal Allowance under the residence and /or domicile rules. Some people who do qualify for the Personal Allowance choose to give up their Personal Allowance as part of the qualifying conditions for having their income taxed under the “remittance basis”. These taxpayers may only have a small amount of income liable to UK tax (i.e. below where

the Personal Allowance is set), but this income is still liable to tax and is charged at the starting and/or basic rates.

### **Taxpayers and taxpayer marginal rates**

SPI sample cases with PTM modelled tax liabilities greater than zero are classified as income taxpayers and underpin the analyses of numbers of taxpayers shown in Tables 2.1 and 2.2. PTM further classifies taxpayers by their highest marginal rate of tax, as seen in Tables 2.1, 2.2, 2.5 and 2.6.

In practice, the marginal rate of tax an individual will pay on an additional pound of income will depend on what type of income it is, as well as the total and composition of their other taxable incomes. For example, an individual with earnings only within the basic rate tax band would face a marginal rate of 20% on an additional pound of earnings in 2014-15; the same rate would apply to an extra pound of savings, whereas a 10% rate would apply for dividends in 2014-15.

PTM adopts a simplified and strictly ordered method in allocating marginal rates to SPI sample cases:

- From 2010-11, cases with total taxable income above the additional rate threshold (£150,000) are classified as Additional Rate taxpayers.
- Cases with total taxable income above the Basic Rate Limit but below the additional rate threshold are classified as Higher Rate taxpayers.
- From 2017-18, individuals who are classified as resident in Scotland and have total taxable income above the Scottish Basic Rate Limit (BRL) but below the UK government's BRL have their marginal rate classification based on their income within this notional band. For these taxpayers, non-savings non-dividend (NSND) income within this band is taxed at the higher rate, whereas savings and dividends income is taxed at the basic rate. A Scottish taxpayer with any taxable NSND income within this band (but no total taxable income above the UK BRL) is classified as a Higher Rate taxpayer, as this is the top rate they are paying. A Scottish taxpayer with only savings and/or dividend income within this band (and no total taxable income above the UK BRL) is classified as a Basic Rate taxpayer.
- Remaining cases with non-zero total taxable income lying at or below the UK government's BRL (or Scottish BRL for individual classified as resident in Scotland) are classified as either starting, savers or Basic Rate taxpayers according to the make-up of their total taxable income:
  - Those with any taxable earnings (NSND income) are classified as Basic Rate taxpayers.
  - Those without taxable earnings (NSND income), and with taxable savings only below the starting rate limit for savings income are classified as starting rate taxpayers.
  - Those without taxable earnings (NSND income), and with taxable savings exceeding the starting rate limit or taxable dividends, are classified as "savers" rate taxpayers.

This ITLS classification has changed over time reflecting the changing structure of the income tax system. The allocation described above applies from 2008-09, when the starting rate of tax was removed for earnings income.

For 2007-08 and earlier, all SPI cases with taxable earnings/savings income below the starting rate limit were classified as starting rate taxpayers. Those with taxable earnings/savings between the starting and Basic Rate Limits were classified either at savers rate (i.e. those without earnings charged at the then basic rate of 22%) or basic rate otherwise. Individuals with taxable dividends only below the Basic Rate Limit were classified at savers rate.

Informally, all individuals classified by PTM as either starting, savers and Basic Rate taxpayers may all be viewed as “non-higher rate” taxpayers in the sense that their total taxable income is less than the Basic Rate Limit, and so no tax liabilities are due at higher or additional rates of tax.

Tables 2.1, 2.2, 2.5 and 2.6 are presented in their current format to provide additional information showing these different types of non-Higher Rate taxpayer, but some users may prefer to group together these categories depending on context and purpose; in a time-series context for example, this grouping is helpful in abstracting from those step changes in numbers assigned to each sub category that have arisen directly as a result of changes to the structure of the income tax system.

## **Projections**

Due to the time needed to receive and process tax returns and information provided by employers, SPI survey results are not available until several years after the tax year to which the survey data relate. The latest available SPI survey data is for 2014-15, and was first published in March 2017.

Projections up to the current tax year, 2017-18, therefore are also given in tables 2.1 to 2.6 in order to provide a more up-to-date assessment of the distributions for taxpayers and liabilities. While the projections methods aim to capture where possible the most important likely influences on taxpayer numbers and liabilities, projection of the base SPI survey data to later years inevitably means that these projections are subject to greater uncertainties and potential error margins than outturns for 2014-15 and earlier years (see Annex C).

The projection methods described below have been chosen to suit the ITLS statistics key purpose of providing informative breakdowns of income taxpayers and liabilities. Provision of projections of total tax is not a key purpose of the ITLS release, and use of other data sources and alternative projection methods would be required to make them suitable for that particular purpose. They should not be seen or used as alternative or competitor forecasts of income tax produced by other organisations.

Potential taxpayer numbers in the projections years are projected via a re-scaling of the SPI base year grossing factors for individual SPI sample cases, according to a high level partition of the SPI sample by each case’s main income source:

- main source employment and self-employment income cases are first projected/re-scaled according to published Office for National Statistics (ONS) population projections by single year of age (implying initially constant employment and self-employment rates by age band). Grossing factors are then further re-scaled uniformly across all age bands so that grossed SPI main source employment and self-employment case totals change in percentage terms from 2014-15 in line with the OBR’s most recently published forecast for total employment and self-employment (Labour Force Survey definitions).

- remaining SPI cases are projected/re-scaled uniformly according to the implied percentage change in the residual main source “other” category, calculated as difference between the published ONS population total and projected SPI main source employed and self-employed totals derived as described immediately above.
- this process is applied separately for males and females.

Nominal income amounts recorded in the base SPI survey data for each case are projected at the UK level using OBR’s most recently published forecasts for a range of macroeconomic series relevant to the specific income sources recorded in SPI. For each income source, this uprating is generally uniform across all sample cases. However, in the case of pay/earnings, the projection factors are allowed to vary across the pay distribution according to the recent trends revealed in the ONS Annual Survey of Hours and Earnings (ASHE):

- SPI cases are assigned to one of six quantile groups, partitioned according to percentiles P10, P25, P75, P90 and P95 of the ASHE weekly pay distribution.
- For each quantile group, earnings growth is adjusted according to the percentage point difference between historic earnings growth for the corresponding percentile point in the ASHE data and the growth in the mean. For example, earnings growth for those in the bottom group (below P10) is adjusted according to average growth at ASHE P10 relative to the ASHE mean.
- For projecting 2015-16, the percentage point differences referred to above are based on the April 2015 and April 2016 ASHE data already available. This has been adjusted to remove the impact of the national living wage, which was introduced in April 2016 (as this is already included in the overall average growth determinants from the OBR).
- For projecting 2016-17 and 2017-18, the percentage point differences are based on a seven year long term average of ASHE back from 2015-16.

Again, this process is applied separately for males and females. Since these ASHE and SPI samples are different, it should be clear that resulting mean earnings growth across all SPI cases would differ from the OBR forecast; a further re-scaling is applied to all cases to ensure that mean earnings growth does align with the OBR forecast.

**Table 3 below summarises which assumptions/series are used in the ITLS projections processes for re-scaling of grossing factors and nominal incomes.**

<b>SPI population totals:</b>	<b>SPI taxpayer total 2014-15 £ billion</b>	<b>Series used in projections</b>
Main source employed	-	Population by single year age; and total employees (LFS)
Main source self employed	-	Population by single year age; and total self-employment (LFS)
Main source other	-	Population by single year age
<b>Main income components:</b>		
Pay	662	Implied whole economy average earnings (Wages and salaries divided by LFS employees), with allowance for differential growth across distribution (see main text)
Profits	83	Total self-employed (mixed) income
Personal pension income	89	Weighted average Retail Prices Index and whole economy average earnings
Dividends	62	Household and Non-profit institutions serving households dividend receipts
State pension income	51	Announced rates
Bank & building society interest	7	Household bank & building society deposits multiplied by weighted average building society deposit and 5-year rates
Property income	15	Retail Prices Index
Taxable employer benefits	9	Retail Prices Index

The economic series used in the projection processes are consistent with the most recently published OBR forecast for the UK economy. Note that because ITLS projections are provided only to the current tax year, these economic series mainly consist of economic outturns published by other organisations, usually ONS. The OBR forecasts for these series are typically relevant only for the ITLS projections for tax year 2017-18, where economic outturns for most series are not yet available.

The projections in the May 2017 release of ITLS use economic series consistent with the OBR's March 2017 Economic and fiscal outlook. Outturns and OBR forecasts for key series including employment, earnings, prices and interest rates are published by the OBR (Table 4.1 'Determinants of the fiscal forecast'):

<http://budgetresponsibility.org.uk/download/march-2017-economic-and-fiscal-outlook-charts-and-tables-fiscal/>

The OBR's release policy for supplementary forecast information is available here:

[http://budgetresponsibility.independent.gov.uk/wordpress/docs/release\\_policy.pdf](http://budgetresponsibility.independent.gov.uk/wordpress/docs/release_policy.pdf)

Population projections used in this ITLS release are published by ONS (Table Z1 - Zipped Population Projections Data Files, UK, 'UK\_PPP\_opendata2014'):

<http://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/z1zippedpopulationprojectionsdatafilesuk>

Income tax structures, rates, allowances and thresholds have been announced up to and including the current tax year 2017-18. No projection methods or assumptions are therefore required for this aspect of the modelling process for projections years.

For all projection years, income tax liabilities are modelled as described with respect to regrossed and updated SPI dataset, and announced tax rates, allowances and thresholds.

### **Additional rate adjustments**

The adjustments for the impacts of additional rate have now all been realised in the SPI survey data. Outturn of incomes for high earners from 2009-10 displays a large amount of forestalling prior to introduction of the 50% rate, 2010-11 and 2011-12 contain behaviour from the rate increase and unwinding of forestalling while in 2012-13 taxpayers will have been anticipating the pre-announced reduction to 45% in 2013-14. Data for 2013-14 includes the impact of the behavioural responses following the reduction in the additional rate from 50% to 45% in April 2013. The outturn for 2013-14 includes some amount of temporarily elevated incomes. The size of this forestalling effect is estimated to be around £5.25 billion in 2013-14. This represents the counterpart of the 2012-13 deferrals following the reduction in the additional rate.

Specifically, these responses are: (a) continued temporary reductions in incomes below 'normal' levels for those affected during 2012-13, the counterpart of significant forestalling of incomes in 2009-10 ahead of the introduction of the additional rate; and (b) possible anticipatory effects in 2012-13 and their subsequent counterpart in 2013-14 that arose in advance of the reduction in the additional rate of tax to 45%.

In March 2012 HMRC published a comprehensive ex-post assessment of the 50% additional rate of income tax using a range of evidence including 2010-11 SA returns<sup>10</sup>... The degree of forestalling/unwinding is assumed to have increased by broad income band, consistent also with the evidence from SA returns.

The new 2014-15 SPI includes estimates of income for higher earners and is expected to be the first year relatively unaffected by timing effects due to the changes in the additional rate of income tax in the recent series.

HMRC's assessment of the yield arising from the introduction of the additional rate in 2010-11 is set out in the published report on the exchequer effects of the 50p rate. It is not possible to infer the additional yield arising from the 50p rate using ITLS Table 2.6, as this gives no indication of reductions in income and yield arising due to behavioural responses.

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<http://webarchive.nationalarchives.gov.uk/20140206144454/http://www.hmrc.gov.uk/budget2012/excheq-income-tax-2042.htm>



## Dividend tax adjustments

Projections of dividend income allow for the behavioural response following the reforms to dividend taxation. These responses include some forestalling of dividend income in 2015-16 and a reduction in dividend income in 2016-17 and 2017-18.

The 2015-16 adjustment to account for forestalling has been updated to reflect outturn data from SA returns, which will be seen in the 2015-16 SPI next year. The changes to these estimates were set out in the OBR's March 2017 EFO<sup>11</sup>, and have been reflected in the latest projections.

Consistent with the costing methodology including the estimated behavioural impact for the policy, the projections for 2015-16, 2016-17 and 2017-18 allow for:

- A temporary increase in dividend income in 2015-16 representing income brought forwards ahead of the dividend policy changes, which is estimated to be £10.7bn.
- The temporary reduction in dividend income in 2016-17 representing a large proportion of that brought forward to 2015-16.
- The temporary reduction in dividend income in 2017-18 to further represent those who brought forward more than double the normal dividend income to 2015-16, allowing two years to unwind the impact.
- A behavioural response in 2016-17 onwards to the change in the effective dividend tax rates and the introduction of the dividend allowance.

The projection adjustments are applied to most SPI cases with dividend income and have a significant impact on the ITLS projections for 2015-16, 2016-17 and 2017-18, which are particularly visible in table 2.6 where the underlying amounts of dividend income impact the projected tax liabilities shown.

## Projection for 2017-18 - Scottish Income Tax

The PTM and projections for 2017-18 have been adjusted to account for the devolution of Income tax rates and thresholds for non-savings, non-dividend (NSND) income liabilities (i.e. earnings from employment, self-employment, pension income, foreign income, taxable benefits and income from property), also called earned income in this publication.

For 2017-18 the Scottish income tax is payable by Scottish taxpayers. An individual's taxpayer status is determined by the location of their main place of residence for the majority of the tax year. This is based on HMRC address data. The SPI holds the postcode for the address as at the end of the tax year. Within this analysis Scottish individuals have therefore been identified on the basis of this postcode rather than the taxpayer status which is determined by place of residence, not at a point in time but over the course of the year and thus only finalised after each tax year, from 2016-17 onwards, has ended. The income of individuals identified as Scottish in the 2014-15 SPI is projected forward without any adjustments for changes in address in later years, and then the appropriate tax system, Scottish or non-Scottish tax, is applied for each year.

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<sup>11</sup> <http://cdn.budgetresponsibility.org.uk/March2017EFO-231.pdf> (page 101 box 4.3)

Rates and thresholds for Scottish taxpayers in 2017-18 have been set by the Scottish Parliament. The rates and thresholds set mirror the system for the rest of the UK apart from the Basic Rate Limit (BRL) for NSND income of Scottish taxpayers, which remained unchanged from 2016-17 at £31,000 – below the level set by the UK Government of £33,500. The 2017 Higher Rate Threshold (HRT) for NSND income of Scottish taxpayers is therefore £43,000 while the UK HRT is £45,000. The UK HRT also applies to non-Scottish NSND income and all dividend and savings income.

The two different systems are modelled together in PTM and applied to an individual's NSND income based on their address.

The Scottish government set out some details on their website<sup>12</sup>.

The OBR set out some further details in their devolved taxes forecast, with the 2017-18 rates and thresholds set out in table 2.4.<sup>13</sup>

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<sup>12</sup> <http://www.gov.scot/Topics/Government/Finance/scottishapproach/Scottishincometax2017-18>

<sup>13</sup> <http://cdn.budgetresponsibility.org.uk/DevolvedtaxesforecastMarch2017.pdf> (page 22)

## Table 2.7

Table 2.7 “Percentage of earnings paid in income tax” depicts income tax burdens over time for a selection of specific family types and illustrative earnings levels.

The purpose and therefore methods underpinning Table 2.7 are quite distinct from Tables 2.1 to 2.6. The statistics in Table 2.7 do not relate to actual UK taxpayers, nor any particular subset of UK taxpayers, but rather hypothetical families assuming specific family circumstances (e.g. concerning numbers of children) and gross wages. Family circumstances and earnings in all cases are by assumption, and SPI data is not used in the calculations. The family types depicted are illustrative but far from exhaustive; circumstances and incomes in practice vary widely across families in the UK.

Table 2.7 also differs from the other tables in this release by taking account of the amounts of personal tax credits (Working Tax Credit and Child Tax Credit) the depicted families would be entitled to. These tax credits provide financial support to working families and families with children, based on family circumstances including hours worked, family income, claimant’s age, the number and age of children and childcare costs.

An introduction to the tax credit system is published alongside HMRC’s regularly published tax credit statistics:

<https://www.gov.uk/government/collections/personal-tax-credits-statistics>

### Methods

Gross income tax liabilities and tax credit entitlements are calculated for each family in each tax year assuming specific family circumstances and the presence of a single wage earner with gross earnings at specified points in the earnings distribution.

The family types depicted in Table 2.7 have changed over time, reflecting changes to the systems, including the introduction of tax credits in 1999 00, abolition of Married Couples Allowance for all born after 6th April 1935, and reforms to the tax credits system in April 2003. Since 2003-04, income tax burdens are presented for single adult families without children, couple families without children, and couples with two children.

The income tax calculations assume that:

- the taxable income of the wage earner consists only of the specified gross earnings; and that the partner in couples is a non-taxpayer.
- the wage earner is entitled only to the Personal Allowance for under 65s, and has no deductions (e.g. pension contributions) or other allowances (e.g. blind persons allowance) reducing gross tax liabilities.

The tax credit calculations assume that:

- wage earners work full-time (>30 hours per week) and so are entitled to Working Tax Credit (WTC), including the couple element where applicable, and the WTC 30 hour element whatever their family circumstances or earnings.
- the family with two children is entitled to the Child Tax Credit (CTC) family premium and per child element; and does not receive any support through WTC for childcare costs.

- the final (tapered) tax credit award is based on a family income that consists solely of the gross earnings of the wage earner.

Calculations for each tax year are based on the prevailing structure and parameters of the income tax and tax credit systems. Table 2.7 shows income tax net of tax credits entitlements, and expressed as a percentage of gross earnings. In some cases, calculated tax credit entitlements exceed income tax liabilities, leading to a negative estimate of tax overall as a per cent of income.

## **Data**

Earnings at the specified points in the earnings distributions are based on the Office for National Statistics Annual Survey of Hours and Earnings (ASHE):

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/workplacepensions/bulletins/annualsurveyofhoursandearningspensiontables/2016provisionaland2015revisedresults>

The specific ASHE-based earnings percentiles used in Table 2.7 relate to gross weekly pay for full-time employee jobs (ASHE Table 1-1a), on an annualised basis. ASHE is published annually with an April reference period. Figures for tax years are derived by HMRC as an average of the ASHE results for the adjacent Aprils.

<http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/allemployeesashtable1>

## **Projections**

The most recently published ASHE results are for April 2016, published on 26 October 2016, permitting derivation of estimates of earnings across the distribution up to tax year 2015-16.

Projections of income tax burdens are also provided for 2016-17 and 2017-18. Earnings are projected to grow uniformly across the earnings distribution according to the OBR's March 2017 forecast for whole economy earnings growth.

# Annex C: Quality indicators

A quality report covering the ITLS statistics and projections is available from the National and Official Statistics section of the HMRC website:

<https://www.gov.uk/government/statistics/quality-report-income-tax-liabilities-statistics>

This report, last updated in January 2014, assesses the statistics against standard dimensions of quality such as relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, and coherence and comparability.

This Annex provides an annual update on quality, and provides more detailed summary quality indicators, in particular summarising the accuracy and reliability of ITLS statistics and projections. It also contains further information on the relevance and appropriate use of the statistics.

## Sampling Error

The SPI sample is compiled in order to infer results for the UK taxpaying population as a whole, e.g. the number of such taxpayers and their total tax liabilities. As with all sample surveys, estimates from the SPI are subject to sampling variation meaning estimated totals and other sample statistics would vary from one sample to the next if repeated random samples were drawn, and in all cases would differ to some degree from the corresponding population totals purely by chance. Intuitively, the extent of such variation increases with the degree of variation across the population in the variable of interest (e.g. income tax liabilities), and falls as the size of the sample increases.

Variation in a given sample-based statistic is usually measured by its standard error, which represents the standard deviation of the statistic of interest computed across all possible samples that could have been drawn from the population. Based on the standard errors, the precision of sample estimates is typically illustrated through confidence intervals, which provide an estimated range of values which is likely to include the unknown population parameter with a given level of confidence.

95% confidence intervals for SPI-based estimates of the number of UK income taxpayers and total tax liabilities by region and county in 2014-15, together with a range of other variables, are published in HMRC Table 3.13a:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/610763/National\\_Statistics\\_T3\\_12\\_to\\_T3\\_15a\\_Publication\\_2014\\_15.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/610763/National_Statistics_T3_12_to_T3_15a_Publication_2014_15.pdf)

Key results are repeated in table 4 below. For the United Kingdom, the width of the 95% confidence intervals for numbers of taxpayers and total income tax liabilities are 100 thousand and £1 billion (0.3% and 0.6% of the central estimates respectively). As shown in the table, precision declines for smaller estimated totals, e.g. for numbers of taxpayers and tax liabilities in specific countries and regions. Broadly speaking, as sample size changes by a factor  $x$ , the confidence interval will change by a factor  $(1/\sqrt{x})$ , so a fourfold increase in sample size will halve the confidence interval. Confidence intervals for year on year changes in these quantities meanwhile may very broadly be expected to be larger than those for the annual levels shown below by a factor of around  $\sqrt{2}$ .

**Table 4: Confidence intervals for estimates of taxpayer numbers and total tax liabilities, 2014-15 Survey of Personal Incomes<sup>14</sup>**

**SPI 2014-15**

	Taxpayers, thousands				Income tax liabilities, £million			
	95% CI		95% CI	CI width as % estimate	95% CI		95% CI	CI width as % estimate
	Lower Limit	Central estimate	Upper Limit		Lower Limit	Central estimate	Upper Limit	
United Kingdom	30,600	30,700	30,700	0.3	166,000	167,000	167,000	0.6
North East	1,100	1,120	1,140	3.6	3,960	4,050	4,140	4.4
North West	3,200	3,230	3,260	1.9	13,000	13,200	13,400	3.0
Yorkshire and the Humber	2,360	2,390	2,420	2.5	9,200	9,360	9,520	3.3
East Midlands	2,130	2,160	2,180	2.3	8,850	9,000	9,160	3.4
West Midlands	2,520	2,550	2,580	2.4	10,100	10,300	10,400	2.9
East of England	2,950	2,980	3,010	2.0	17,100	17,400	17,600	2.9
London	3,980	4,010	4,050	1.7	38,700	39,300	39,800	2.8
South East	4,490	4,520	4,560	1.5	30,500	30,900	31,200	2.3
South West	2,690	2,720	2,750	2.2	11,500	11,700	11,900	3.4
Wales	1,320	1,340	1,370	3.7	4,600	4,710	4,810	4.5
Scotland	2,570	2,600	2,630	2.3	11,800	11,900	12,100	2.5
Northern Ireland	722	738	753	4.2	2,510	2,580	2,650	5.4

The 95% confidence intervals may be interpreted in one of two ways: (i) if repeated samples were drawn and intervals computed as in the table, those intervals would contain the unknown population parameter around 95 times in 100; or (ii) the lower and upper confidence limits provide a plausible range for the true population value in the sense that if that value were in reality greater [smaller] than the upper [lower] confidence limit, then the probability of obtaining a sample estimate any lower [greater] than that observed would be just 2.5%.

**Coverage error**

The SPI survey is fully representative only of UK taxpayers, as opposed to the entire UK population, and so ITLS tables are published for UK taxpayers only.

Annex B also notes that for the SPI sub-sample of individuals drawn from PAYE only, a number of data items are not recorded in administrative tax records because these are not needed for the operation of the income tax system. These items include, for example, savings interest income which is not recorded in PAYE because tax is deducted at source via a separate scheme operated by deposit takers. These missing data items are imputed for most SPI sample cases in PAYE only as described in the annex.

Table 5 below shows the total contribution to key SPI income aggregates from imputed values in 2014-15. Users interested in ITLS estimates and projections of tax liabilities on these particular items should note the degree of imputation. A large contribution to the estimates from imputed values is likely to lead to a loss of accuracy. Overall, imputation

<sup>14</sup> The figures published in the ITLS publication for tax liabilities for 2014-15 are not consistent with the figures first published in the personal income statistics publication of the 2014-15 SPI. This is due to a small correction, which can be seen in the confidence intervals of tax liabilities which feature in both publications.

contributes around £26.4 billion to grossed total income across all taxpayers of £977 billion in 2014-15.

**Table 5: Extent of imputation, 2014-15 Survey of Personal Incomes**

	Number of Individuals (thousands)		Total amount (£ millions)	
	Imputed	Total	Imputed	Total
Individuals Gender	2	48,700	-	-
Individuals Age	40	48,700	-	-
Bank and building society interest income	26,700	32,500	4,260	8,540
Dividend income	2,200	5,740	1,940	62,500
Occupational pension contributions	10,200	10,200	13,700	13,700
Personal pension contributions	5,480	5,480	6,530	6,530

### Model errors

Income tax liabilities in ITLS are estimated at case level on the basis of the SPI survey data using HMRC's Personal Tax Model (PTM). The PTM tax modelling process attempts to capture all of the significant features of the UK income tax system, but inevitably this involves certain simplifications and omissions.

PTM model outputs are regularly benchmarked at case level against income liabilities recorded as due in HMRC's SA system for the SPI sub-sample in SA. Differences arise for known and specific reasons and only in a small minority of sample cases. The impact of these simplifications is judged to be small for key aggregates at UK level, and for most UK taxpayer sub populations.

### Projection errors

Simplifications and potential errors: (a) in projection processes; and also (b) the economic assumptions employed in those processes are likely to induce larger errors in ITLS projections compared with outturn statistics for 2014-15 and earlier tax years.

Projection methods are described in Annex B. Users of the projections should note that the projection methods are suited to analysis of tax liabilities at UK level. Projection of potential taxpayer numbers and incomes by income source are based on UK economic assumptions, which are applied generally uniformly to all individuals in the SPI sample. They take no account of local divergences in economic trends since 2014-15 within the UK, or indeed across other dimensions such as industrial sector.

Published breakdowns of projected taxpayer numbers by country and region (Table 2.2) therefore are indicative, and there is some evidence that they may be subject to potentially large error margins. HMRC is reviewing the evidence, and will consider whether regional projections are suitable for continued publication.

In addition, the projections will not capture potentially important shifts in the distribution of incomes occurring after 2014-15. ITLS projected shares of total income and tax across taxpayer income groupings are therefore likewise indicative (Table 2.4), but do allow for differential growth in earnings across the pay distribution consistent with past trends, and possible responses of high income taxpayers to changes in the tax policy regime.

Summary statistics describing ex post ITLS absolute projection errors across key aggregates for projections released following spring Budgets since 2001 are shown in the table below. The forecast horizon is defined with respect to the latest SPI outturn data available, e.g. this ITLS release uses 2014-15 SPI survey data, which gives a 'one-year ahead' projection for 2015-16.

**Table 6: Summary statistics for absolute errors in ITLS projections of key aggregates<sup>1,2</sup>**

	Taxpayers thousands	Higher rate taxpayers thousands	Total income £ billion	Total liabilities £ billion
<b>One-year ahead projections (N = 13)</b>				
Mean	530	120	16	4
Max	1,400	290	40	9
Standard deviation	480	100	13	3
Mean	2%	3%	2%	3%
Max	5%	10%	7%	8%
Standard deviation	2%	3%	2%	2%
<b>Two-year ahead projections (N = 12)</b>				
Mean	810	160	24	6
Max	1,900	400	63	14
Standard deviation	460	130	20	5
Mean	3%	5%	3%	5%
Max	6%	11%	8%	10%
Standard deviation	2%	4%	3%	4%
<b>Three-year ahead projections (N = 11)</b>				
Mean	1,070	190	33	8
Max	2,300	480	84	19
Standard deviation	600	130	26	6
Mean	4%	6%	4%	6%
Max	8%	13%	11%	13%
Standard deviation	2%	4%	4%	4%
<b>Memo: Evolution of projections for 2014-15</b>				
Three-year ahead projection (April 2014)	29,900	4,610	983	172
Two-year ahead projection (April 2015)	29,800	4,470	966	167
One-year ahead projection (April 2016)	30,500	4,430	973	166
SPI 2014-15 outturn	30,700	4,630	977	167

<sup>1</sup> ITLS projections released after spring Budgets since 2001.

<sup>2</sup> Projection horizon is defined by latest SPI outturn data available for analysis, e.g. one-year ahead projections are projections for tax year T+1 based on SPI data for year T. Budget projections for year T+1 are generally published at the beginning of year T+3, and so economic assumptions used in the projection process are typically outturns to around year T+2.



The table indicates mean absolute projection errors of 2-3% for key UK aggregates in respect of the one-year ahead projections, roughly doubling for three-year ahead projections. Plus or minus one standard deviation in past errors provides one guide to the possible limits of approximate 70% confidence intervals around central projections for key ITLS aggregates. However, past errors may not accurately reflect the degree of ex ante uncertainty in projections made at any specific point in time. The table also shows the evolution of projections made for 2014-15, the latest SPI outturn.

Ex ante uncertainty in the projections may be illustrated via 'ready reckoners'. The table below shows estimated changes from the May 2017 ITLS central projections used in this publication, arising for illustrative increases in key economic assumptions used in the projection process. Comparable reductions in the same series would have broadly similar impacts of opposite sign.

**Table 7: Sensitivity of central projections to changes in key economic assumptions**

	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>
	<b>outturn</b>	<b>projection</b>	<b>projection</b>	<b>projection</b>
<b>Central projection</b>				
Taxpayers	30,700	30,700	30,400	30,300
o/w non Higher Rate taxpayers	26,100	25,800	25,800	25,800
o/w Higher/Additional Rate taxpayers	4,630	4,850	4,670	4,520
Total liabilities	167,000	174,000	167,000	173,000
o/w liabilities of non Higher Rate taxpayers	57,500	56,900	56,800	58,700
o/w liabilities of Higher/Additional Rate taxpayers	109,000	117,000	110,000	114,000
<b>Working-age employees+1%<sup>1</sup></b>				
Taxpayers		132	136	137
o/w non Higher Rate taxpayers		103	107	109
o/w Higher/Additional Rate taxpayers		29	29	28
Total liabilities		778	773	797
o/w liabilities of non Higher Rate taxpayers		294	301	314
o/w liabilities of Higher/Additional Rate taxpayers		484	472	483
<b>Pay+1%<sup>2</sup></b>				
Taxpayers		82	87	96
o/w non Higher Rate taxpayers		-4	-5	8
o/w Higher/Additional Rate taxpayers		86	91	88
Total liabilities		2,010	2,070	2,110
o/w liabilities of non Higher Rate taxpayers		795	819	852
o/w liabilities of Higher/Additional Rate taxpayers		1,210	1,250	1,260
<b>Profits+1%<sup>2</sup></b>				
Taxpayers		23	20	21
o/w non Higher Rate taxpayers		13	13	16
o/w Higher/Additional Rate taxpayers		10	8	5
Total liabilities		268	267	272
o/w liabilities of non Higher Rate taxpayers		76	77	79
o/w liabilities of Higher/Additional Rate taxpayers		192	190	194
<b>Interest rates+1ppt<sup>3</sup></b>				
Taxpayers		78	43	43
o/w non Higher Rate taxpayers		-6	-38	-32
o/w Higher/Additional Rate taxpayers		85	81	75
Total liabilities		2,330	2,090	2,180
o/w liabilities of non Higher Rate taxpayers		727	599	622
o/w liabilities of Higher/Additional Rate taxpayers		1,610	1,490	1,560

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<sup>1</sup>1% point increase in numbers employed (SPI cases with pay > 0 aged 16-59) relative to central projection, holding SPI population aged 16-59 constant.

<sup>2</sup>1% point increase in pay/profits for all SPI cases with pay/profits relative to central projection.

<sup>3</sup>1% point increase interest rates on savings income relative to central projection. The resulting percentage change in savings interest income depends on the central projection for interest rates, but will generally be much larger than the +1% ready reckoners shown earlier in the table for pay/profits.

The table shows that:

- An illustrative 1 percentage point increase in working-age employment increases projected taxpayer numbers by 0.43% and tax liabilities by 0.47% in 2015-16, with increases in taxpayer numbers and liabilities at non higher and higher/additional rates reflecting the centrally projected distributions.
- An illustrative 1 percentage point increases in earnings has a larger 1.2% impact on liabilities in 2015-16, as marginal rates of tax exceed average rates (the latter relevant to the employment change). Taxpayer numbers rise by 0.3% overall, but increase for higher/Additional Rate taxpayers (1.8%) compared with a decrease for non-Higher Rate taxpayers (0.02%) as numbers moving into higher rate tax (from basic rate) exceed those moving into basic rate tax as pay increases.
- An illustrative 1 percentage point increase in average profits raises liabilities by 0.15% in 2015-16, reflecting the much lower level of profits in total taxpayer income relative to earnings. Taxpayer numbers rise by 0.1%.
- An illustrative 1 percentage point increase in interest rates increases liabilities by 1.3% in 2015-16. Note that the percentage change in savings income resulting from a 1 percentage point increase in savings interest rates varies with the central projection for interest rates, but will generally be much larger than 1 percentage point ready reckoners shown for pay and profits. Taxpayer numbers rise by 0.25%.

# Annex D: Glossary of Terms

Annex D aims to explain acronyms, abbreviations and terms associated with personal incomes and income tax liabilities.

## **Allowances**

The amount of income which an individual can receive before being liable for income tax. The Personal Allowance is an example of an allowance.

## **Average rate of Tax**

The ratio of income tax liability to total income, where income is measured before deductions, reliefs and allowances.

## **Basic Rate Limit**

This is the highest income point for taxable income (after allowances) at which basic rate income tax is charged.

## **CESA (Computerised Environment for Self-Assessment)**

This is the computer system used to administer Self-Assessment from which SA data for the SPI has been extracted since 1996-97. See Self-Assessment (SA).

## **COP (Computerisation of PAYE)**

The computer system which used to administer PAYE until being replaced by NPS and from which PAYE data for the SPI was extracted for tax years 1997-98 to 2007-08 inclusive.

## **Deductions and Reliefs**

Amounts deducted from total income, along with Personal Allowances to arrive at the amount of taxable income subject to an income tax charge. This includes amounts for contributions to occupational and personal pensions, and a variety of other Deductions and Reliefs including charitable giving and loss relief etc.

## **Dividend Allowance**

This is the amount of dividends income you can receive for the tax year without having to pay tax on it, this is currently set to £5000 irrespective of the total amount of dividend and non-dividend income received.

## **Dividend Income**

Income derived from shares.

## **Earned Income**

Earned income consists of income such as pay, private and occupational pensions, retirement annuities, state retirement pensions and taxable social security income.

## **Geographical Areas**

Some tables present information for sub-UK areas described as Government Office Region, County, District and Parliamentary Constituency. Administrative and Political geographical areas are not held on taxpayers' records. For the SPI, the areas are attached by matching the individual's postcode to the Office for National Statistics Postcode Directory.

## **Industry**

Industry categories are based on UK Standard Industrial Classification of Economic Activities 2007 (SIC2007). Income from self-employment (sole trade and partner) is assigned

an industry using the nature of business text descriptions supplied on Self-Assessment Returns.

### **National Insurance and PAYE System (NPS)**

NPS is the computer system HMRC uses to administer PAYE. It replaced COP and is the source of PAYE data for SPI for tax year 2008-09 onwards.

### **National Insurance Recording System 2 (NIRS2)**

This computer system is used to monitor payment of National Insurance (NI) contributions and to calculate and prove entitlement to contributory benefits. These include Job Seekers Allowance (JSA) and the National Insurance Pension. It provides contribution information to a number of government departments.

### **Non-Savings Non-Dividend Income (NSND)**

See earned income.

### **P14s**

Form P14 is an End of Year summary for an employment that is submitted by the employer to HMRC, showing pay, tax and NI contributions for the year. The employer provides similar information to the employee on an end of year certificate, form P60.

### **Pay As You Earn (PAYE)**

PAYE is the system used by HMRC to collect and account for income tax on earnings from employment and pensions. Income Tax and National Insurance Contributions are deducted by the employer and paid over to HMRC on behalf of the individual for each pay period.

### **Personal Allowance**

This is the amount of income you can receive for the tax year without having to pay tax on it.

### **Personal Savings Allowance**

This is the amount of savings income you can receive for the tax year without having to pay tax on it. The upper bound for the tax-free allowance depends on the top marginal tax rate on an individual's total income; the threshold for Higher Rate taxpayers is half that for Basic Rate taxpayers and is set to £0 for Additional Rate taxpayers.

### **Savings Income**

A particular class of income that includes interest on bank and building society accounts.

### **Self-Assessment (SA)**

SA is a system where an individual declares their income and can calculate their own income tax due after the end of the tax year. Taxpayers included in SA can be higher earners, self-employed and taxpayers with complex tax affairs.

### **Starting rate limit/Starting rate for savings limit**

This is the highest income point for taxable income (after allowances) at which starting rate income tax is charged. From 2008-09 the starting rate was abolished for non-savings income and applied only to non-dividend savings income.

### **Superannuation contributions**

These are the regular amounts paid by an employee into an employer occupational pension fund which are deducted from the employee's salary. Superannuation contributions to an authorised fund or scheme are not liable to income tax and the employer would deduct the amount of superannuation contributions from the gross pay before assessing the income tax liability through PAYE.

## **Survey of Personal Incomes (SPI)**

An annual survey of individuals who could be liable for income tax derived from HMRC administrative systems holding data on persons within PAYE, SA and income tax claims.

### **Tax liabilities**

The amount of income tax due on taxable income after applying tax rates to the tax base. The income tax liability for each sample case in SPI is calculated by reference to the amounts of income by type, deductions and reliefs and the tax regime parameters that apply for the year. The calculated liability for a tax year will differ from the amount of tax receipts collected in a financial year.

### **Tax receipts**

The amount of income tax collected by HMRC. The SPI measures the amount of income tax liability for a tax year, but not the amount of receipts in the financial year.

### **Taxable income**

Income assessable to income tax after allowances.

### **Taxpayer**

An individual calculated to have a positive income tax liability for the tax year, based on the income, allowances, reliefs and deductions for the year.

### **Total income**

The sum of an individual's components of income taken into account in calculating income tax. This includes earnings from employment, profits from self-employment, pension income, some social security benefits, savings income, income from shares (dividends), rental income, and income paid from trusts. It excludes:

- gains from the disposal of assets that are classified as capital gains
- interest, dividends or bonuses from tax exempt investments (for example, ISAs and National Savings & Investments Savings Certificates)
- interest and terminal bonuses from Save As You Earn Schemes
- Premium Bond, National Lottery and gambling prize winnings

It is before relief for contributions to occupational and personal pensions, other deductions and reliefs or Personal Allowances.

In the tax system, income is streamed into three main categories: Dividends; Savings Income (not dividends); Non-savings income as different rules apply.