CUSTOMER FORUM FOR WATER

Briefing Paper on Prospects for Water Charges Affordability

John McLaren

August 2017

EXECUTIVE SUMMARY

Whats happened since 2013?

- Households (H/H's) have done notably worse than expected in terms of real wages….
- …. but this has been compensated for by: (i) protected benefit levels; (ii) low inflation; and (iii) a rising employment rate.
- As a result, real terms disposable household income (HDI) has, by and large, behaved as expected. That is, it has grown, but at a relatively low rate.
- In general, poorer H/H's have fared relatively better than wealthy ones and pensioner H/H's have fared better than working H/H's.

Whats going to happen, up to 2020?

- Current above target inflation has led to the return of falling real wages, further bolstered by an on-going 1% cap on public sector wage rises and by planned (non pension) benefits freeze.
- This mixture will hit poorer and working H/H's hardest.
- In general, HDI is forecast to continue to grow relatively slowly, but to fall for poorest H/H's and be static for working H/H's.

Big Picture

- Historical break in post WWII patterns seen since 2008 looks likely to continue, so no return to past norms of across-the-board and consistent rising wages and living standards.
- In terms of HDI, real terms annual growth over the half century average to 2007 was almost 3%, whereas since 2007 it has been 1% and something similar is forecast to continue to 2020.
- Recent fall in inequality likely to be reversed in coming years, as positive employment trends end, inflation returns and working age benefits are frozen.
- Continued protection of pensions means elderly H/H's will continue to do relatively well.
- Wealth effects are also having an impact on living standards, in particular in relation to older H/H's being 'housing rich' and younger H/H's being 'housing poor', 'pension poor' and 'education indebted'.
- In comparison to the past, pensioners now have fewer affordability concerns, whereas young working age H/H's have more.
- Uncertainty remains historically high, in relation to: world growth; Brexit; the euro; inflation; party political volatility, etc.
- One particular risk is the impact of a return to a more 'normal' (3%) interest rate level and the impact that would have across differently indebted households.

Scotland

- In some cases (e.g. inflation) separate data is not available for Scotland, but where it is most patterns affecting affordability have been similar in Scotland to those seen at the UK level.
- As a result, HDI has seen similar shifts in recent past and similar shifts are also expected in the near future.

Introduction

In attempting to estimate how affordable water charges will be in the coming years a number of different, and difficult to predict, elements need to be taken into account. These elements all have a bearing on household living standards and therefore on the affordability of any paid for service.

The best measure of such living standards is probably 'real terms equivalised disposable household income'. This construct is derived in the following way:

ORIGINAL HOUSEHOLD INCOME
(e.g. earnings)

Plus

CASH BENEFITS
(e.g. state pension)

Less

TAXES
(e.g. Income Tax)

Equals

HOUSEHOLD DISPOSABLE INCOME

Adjusted for

INFLATION
(e.g. CPI)

and Adjusted for

HOUSEHOLD MAKE UP
(e.g. size and ages of household)

Equals

REAL TERMS EQUIVALISED HOUSEHOLD DISPOSABLE INCOME

(NOTE: in order to simplify matters, this term will be shortened to the more manageable Household Disposable Income, or HDI, for the remainder of this report.)

As can be seen, such a calculation is influenced by a number of economic factors, including:

- earnings;
- labour market participation;
- central and local government taxes and benefits;
- inflation.

This Briefing Note will look at each of these factors in turn before concentrating on the prospects for HDI in the coming years.

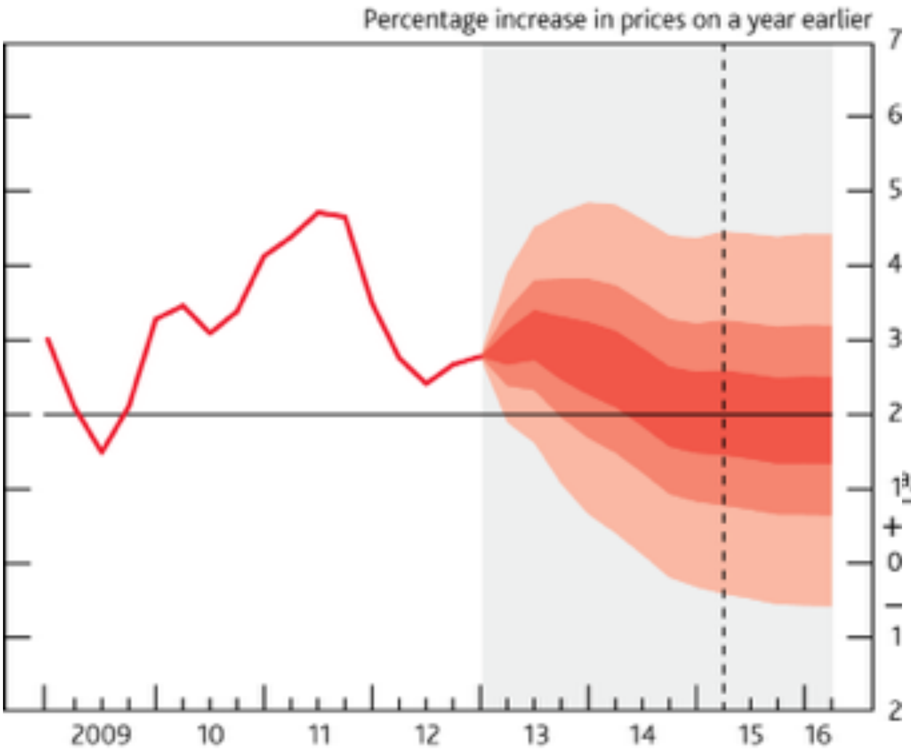
Inflation

From predictable to unpredictable

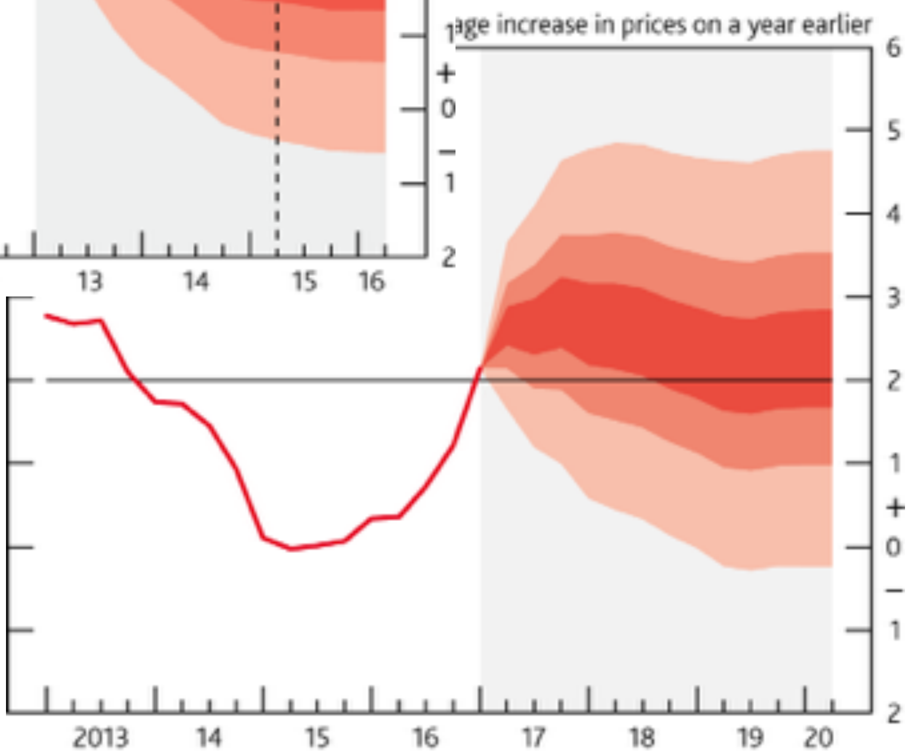
Between 1993 and 2007, annual UK inflation (CPI) kept within the narrow and acceptable (to the UK Government and the Bank of England) range of 1.2% to 2.6% in all but one year (0.8% in 2000). Since then it has ranged between 4.5% (2011) and 0% (2015).

As a result of this greater variation in out-turn it has become extremely difficult to forecast inflation, as the Bank of England's (BoE) Inflation Report charts below illustrate. The May 2013 central prediction of around 2% post 2013 turned out to be well above the out-turn (as of May 2017), which was at the extreme lower edge of its fan chart forecast.

The key elements that have been driving this increased volatility have been 'food' and, fuel price related, 'transport' costs. In the case of 'food' this went from averaging above 5% a year (2008-2011) to being negative (2014 to 2016). In the case of the 'transport' it went from around 8% (2010-11) to near zero or below (2014-2016).



Bank of England Inflation Report, May 2013



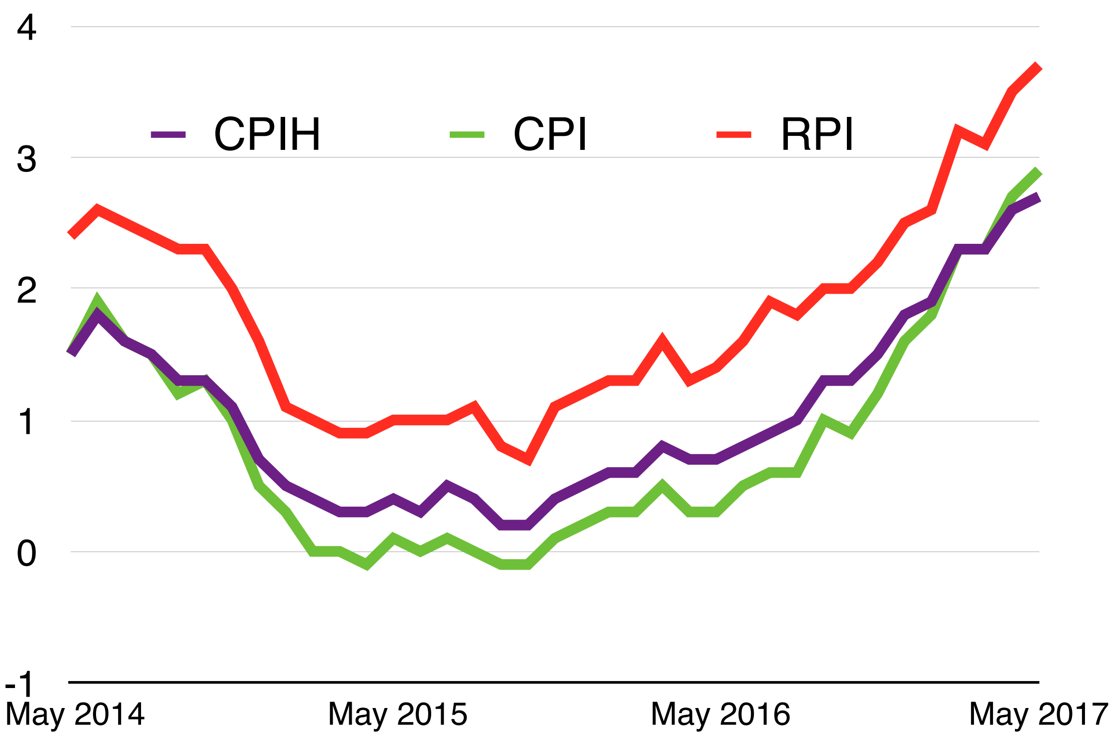
Bank of England Inflation Report, May 2017

While discussion of inflation tends to be in general terms there are actually 3 different measures that are regularly referred to:

- RPI: the old 'standard' measure but no longer an official National Statistic, due to errors in its methodology;
- CPI: the 'standard' measure currently used by the UK Government and the Bank of England;
- CPIH: as CPI but including a housing cost element with a weighting of 20%. *(Note: this definition is actually the ONS's preferred one for measuring household inflation but is not currently a National Statistic, due to methodological issues over the housing element. As a result CPI remains the headline figure announced.)*

As Chart 1 shows, even over a relatively short period these different measures of inflation can vary notably and can do so in an inconsistent way i.e. one measure is not consistently higher or lower than another.

Chart 1: Recent changes in main UK inflation rates

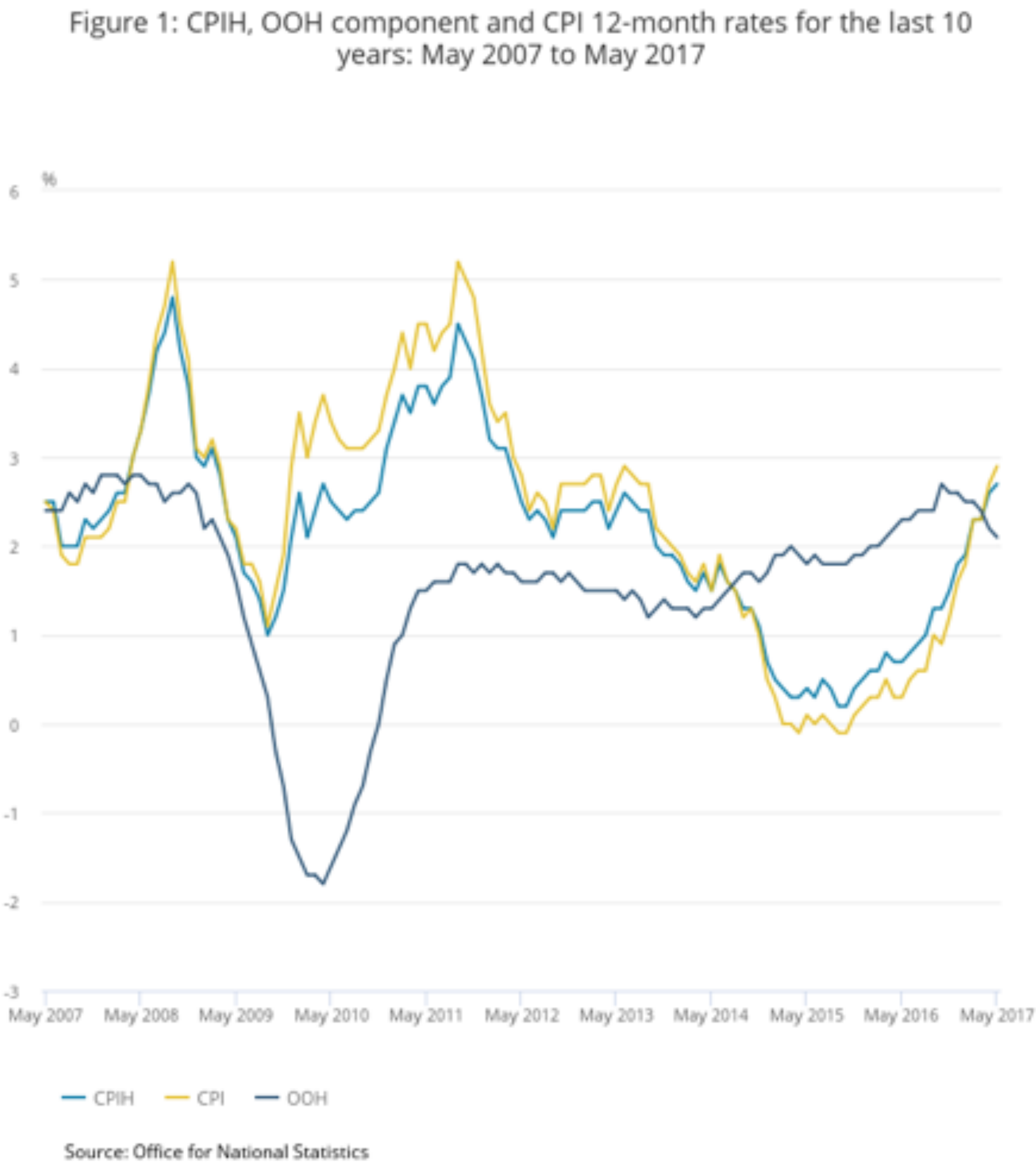


Source: ONS

Chart 2 below shows the impact of including an owner occupied housing (OOH) element, going back to 2007. This highlights that its inclusion reduced inflation from 2009 to 2013 (especially in the earlier years) but increased it in 2015 to 2016. The impact of using CPIH instead of CPI would be increase the spending power of households in the earlier years but to worsen it in the later years.

(Note: the conversion from cash to real terms in most of the charts shown in the Briefing Note use CPI due to the methodological issues referred to above. However, it could be argued that CPIH is a more appropriate measure as housing costs, whether through rental or mortgage payments, is a significant expense for most households, although CPIH does not adjust for mortgage payments but rather for imputed rent).

Chart 2: UK inflation: UK consumer price inflation statistical bulletin, May 2017 (ONS)



At present forecasts of future inflation remain highly uncertain, as both the earlier (BoE May 2017) fan chart and the forecasts in Annex 1, Table A2, illustrate. The OBR forecast is for inflation to converge on the official 2% target rate, but this has been its forecast for many years now while the reality has been a series of under or overshooting outcomes. Such unpredictability, especially in the light of events like Brexit and erratic oil prices, is likely to continue.

The Labour Market

Wages/Earnings

One long term impact of the financial crisis of 2008 has been the slowdown in wage growth. Indeed for much of the period since then real terms earnings have been falling, as is shown in Chart 3.

Chart 3: Earnings growth: Analysis of real earnings, July 2017 (ONS)

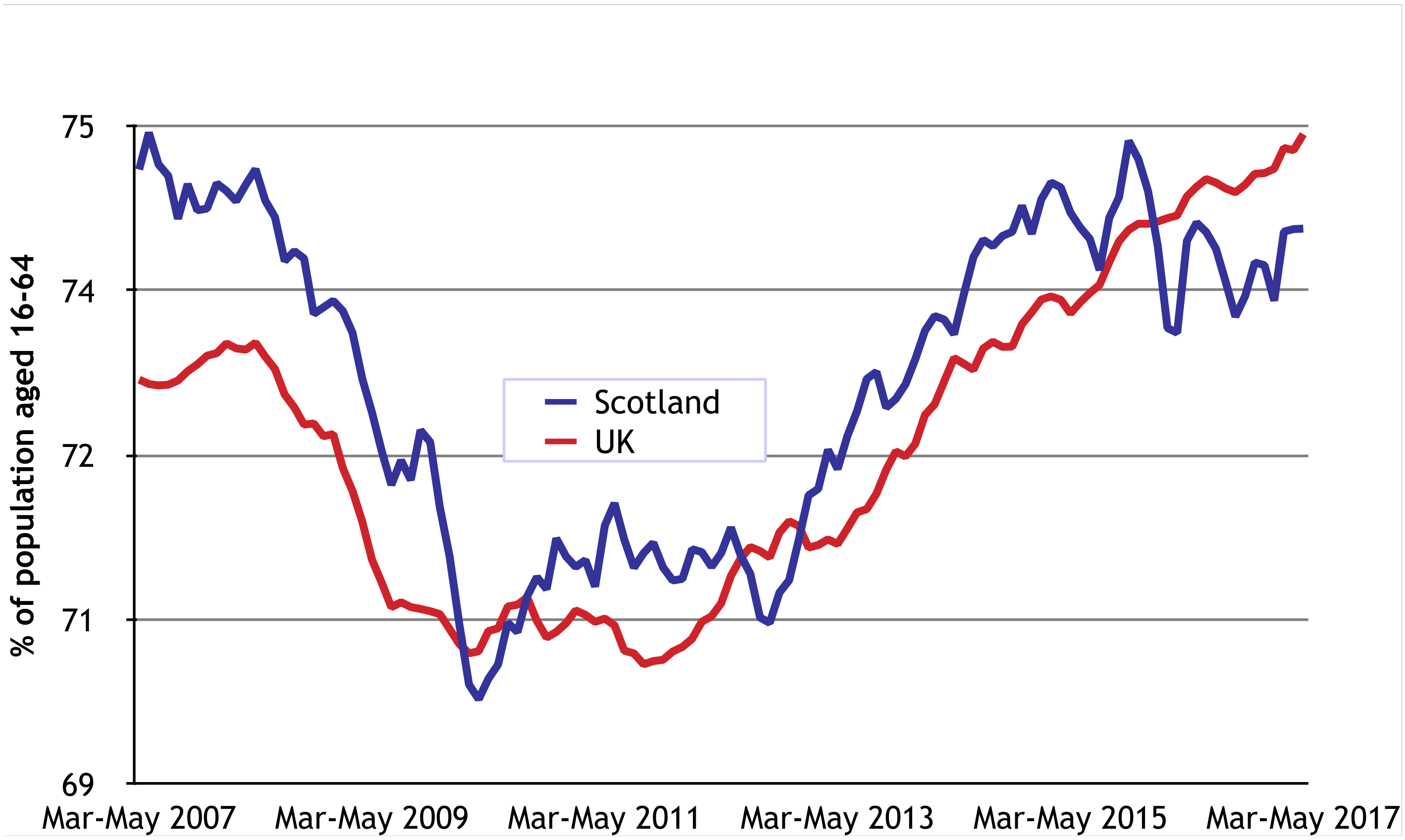
While Chart 3 shows the average position there will be considerable variation around this, especially with the rise of self employment and zero hour jobs.

A return to real wage growth has been seen of late and was expected to continue, as shown in the latest (March 2017) OBR projections. However, the most recent data casts doubt over this recovery, as real wages have dipped into negative territory again, in part due to the return of above target inflation.

Employment

In comparison to past recessions the Great Recession of 2008 had less of an impact on employment. As well as the fall in employment being relatively shallow it also recovered quite quickly and is currently at record levels and rates (see Chart 4). *(Note: the rising level of employment is not surprising given the rising UK population. However, attaining the highest employment rate since records began in 1971 is impressive, especially given the low rate of economic growth since 2009.)*

Chart 4: Employment rate (16-64), UK and Scotland (seasonally adjusted), 'Labour Market Monthly Briefing Summary Tables - July 2017', Scottish Government



As the employment rate is already at such an elevated level it will be difficult for it to improve further, although the OBR and other forecasters still expect some increase in employment levels in 2017 and 2018 (see Annex 1, Table A2).

Within this positive employment pattern there have been concerns expressed about the growing levels of part-time (PT) and zero hours (ZH) work, as opposed to more traditional full time (FT) employment.

On the FT to PT shift, this occurred in the early years (2008 to 2013) of the recession. Since then (2013 to 2016), the level of FT jobs in Scotland has recovered to close to the level seen in 2008, while the number of PT jobs has levelled off.

In terms of ZH jobs, this has grown from around 0.8% all those employed (2000 and 2012) to 2.8% (2016). In Scotland the latest figure is slightly lower (2.2%). Around two-thirds of these jobs are PT and 68% of ZH employees do not want to work more hours, in some cases because they are also in full time education or above pension age. As a result of these traits is difficult to say the degree to which such ZH jobs may be affecting wages or living standards.

Taxes & Benefits

The principal impact of taxes and benefits on HDI since the financial crisis has been in relation to UK Government benefits.

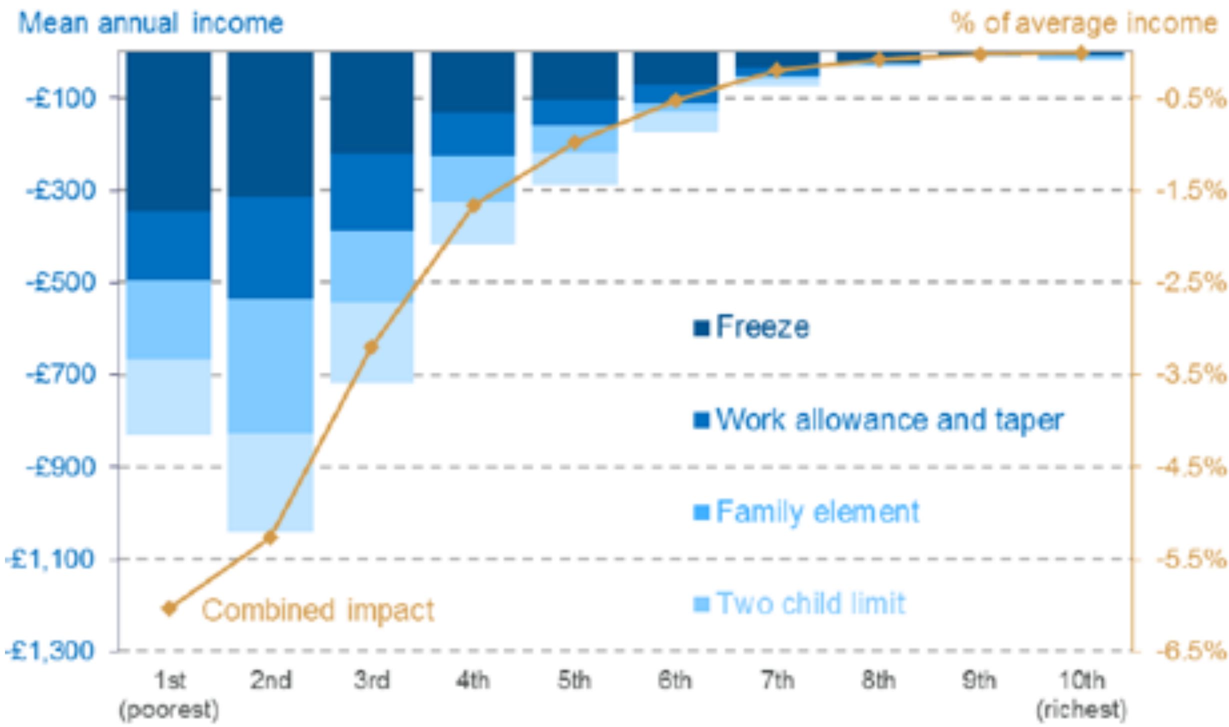
Initially these were protected against inflation and so, as earnings fell, those H/H's more dependent on benefit payments were relatively better off.

However, this position has now reversed with a cash freeze on most working age benefits (but not on pensions, which continue to be well protected) for the foreseeable future. This will result in H/H's which are more dependent on such payments being relatively worse off, unless the recent return to stagnant, or falling, earnings continues.

As a result of this shift in how benefits are treated, most forecasters now predict that poorer H/H's will suffer more than wealthier ones in the coming years, see Chart 5 below for example.

Chart 5: Ending Austerity? Resolution Foundation, July 2017

Change in income in 2021-22 associated with selected post-2015 general election welfare cuts, by equivalised household income decile



Notes: Working-age benefit rates (excl. disability benefits premia, statutory entitlements & maternity allowance) will not be increased until April 2020. UC work allowance cuts lower the point at which earnings start to reduce benefit entitlements, with the taper reduction slightly lowering that rate of withdrawal. New tax credit and UC claims will no longer qualify for the 'family element', and no additional payments will be available beyond the first two children. Source: RF modelling using the IPPR tax/benefit model

Household Disposable Income (HDI)

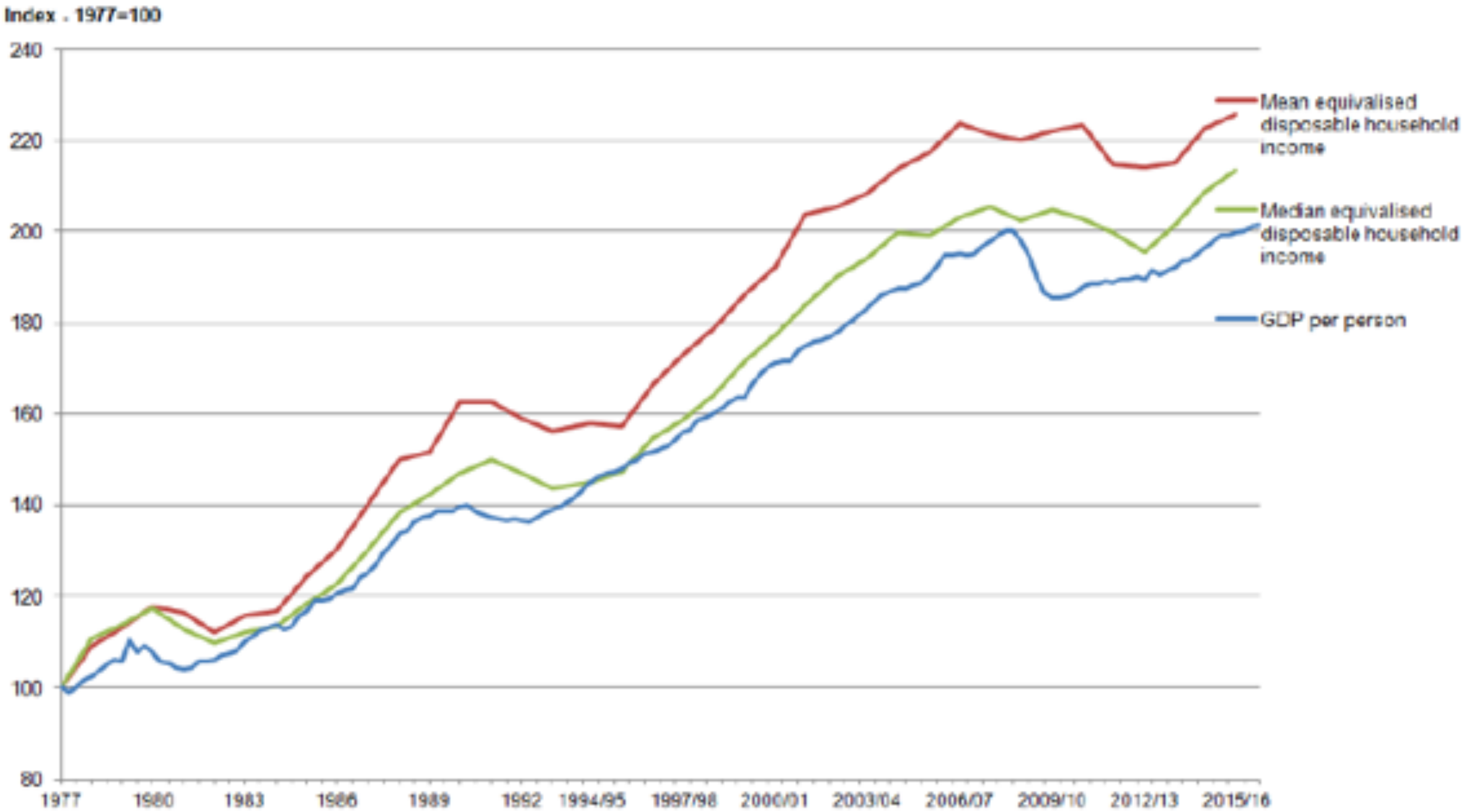
Bringing together the combined effect of projections for inflation, labour market shifts and changes to tax and benefit levels allows for an assessment of how living standards, as measured by HDI, have changed in recent years and may change in years to come.

Chart 6, below, highlights how the seemingly relentless rise in household income over time has broken down since the crisis of 2008. Indeed, such a breakdown may have occurred even earlier, around the turn of the century, but was obscured by the unsustainable housing and financial service booms.

When a return to more normal growth rates will occur is a matter of conjecture. Meantime the on-going slowdown has been exceptional. For example, it has set a number of unwanted records,. For example:

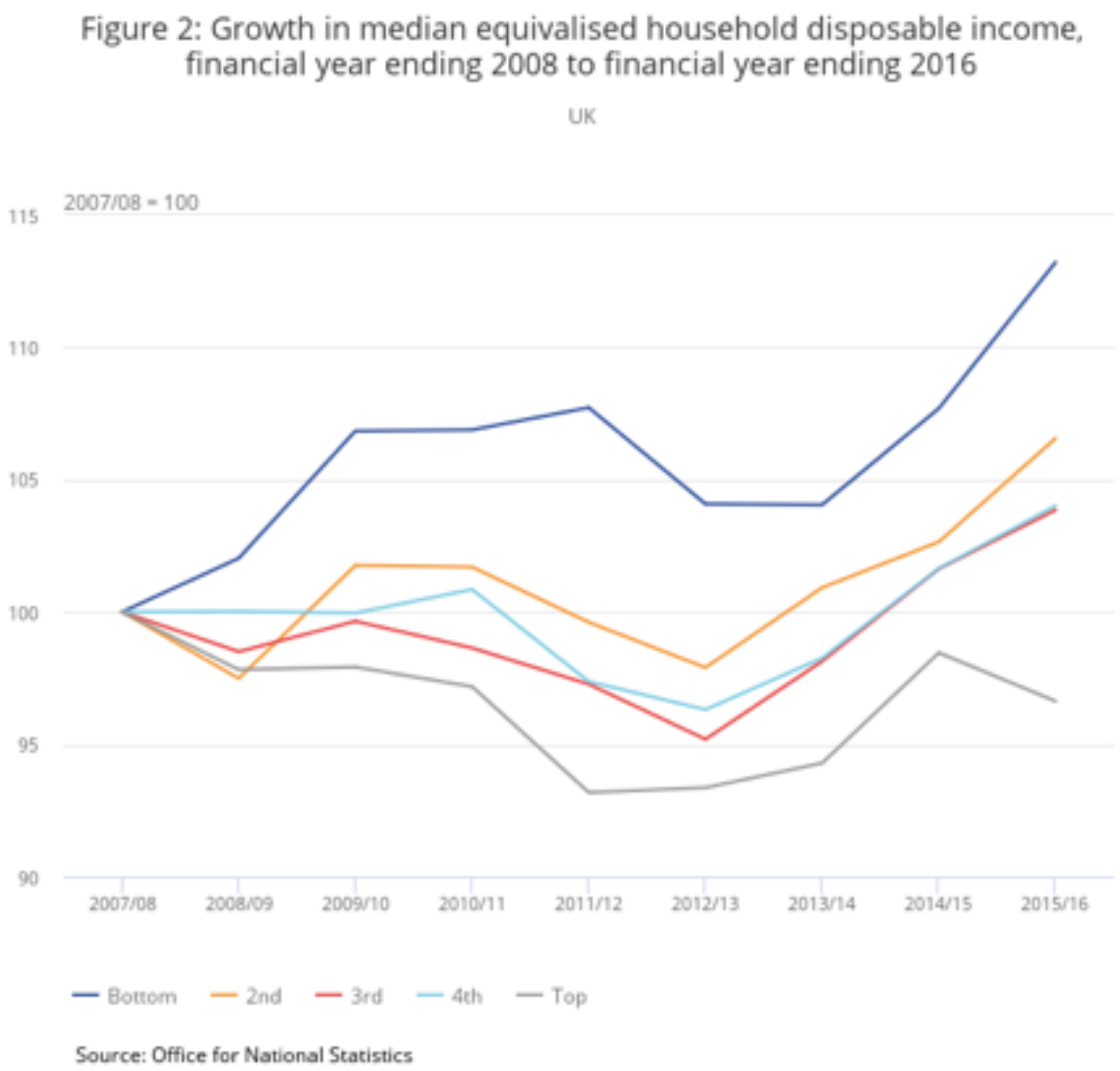
- in early 2017 the average basic weekly wage, measured in real terms (i.e. adjusted for inflation) was still below that seen in early 2008 and the Resolution Foundation believes that the 2010s are on course to be the worst decade for wage growth since the start of the nineteenth century;
- the longest period of constraint on public service spending, now expected to last at least 15 years. *(Note: such austerity in public spending terms can lead to H/H's having to spend more of their own money on services that would normally have been paid for by the state.)*

Chart 6: Real income measures, 1977 to 2016, Household disposable income and inequality in the UK (ONS - 10/01/17)



The five charts that follow illustrate the general picture that is emerging from most of the key academic research bodies working in this area.

Chart 7: HDI by income quintile: Household disposable income and inequality in the UK (ONS - 10/01/17)



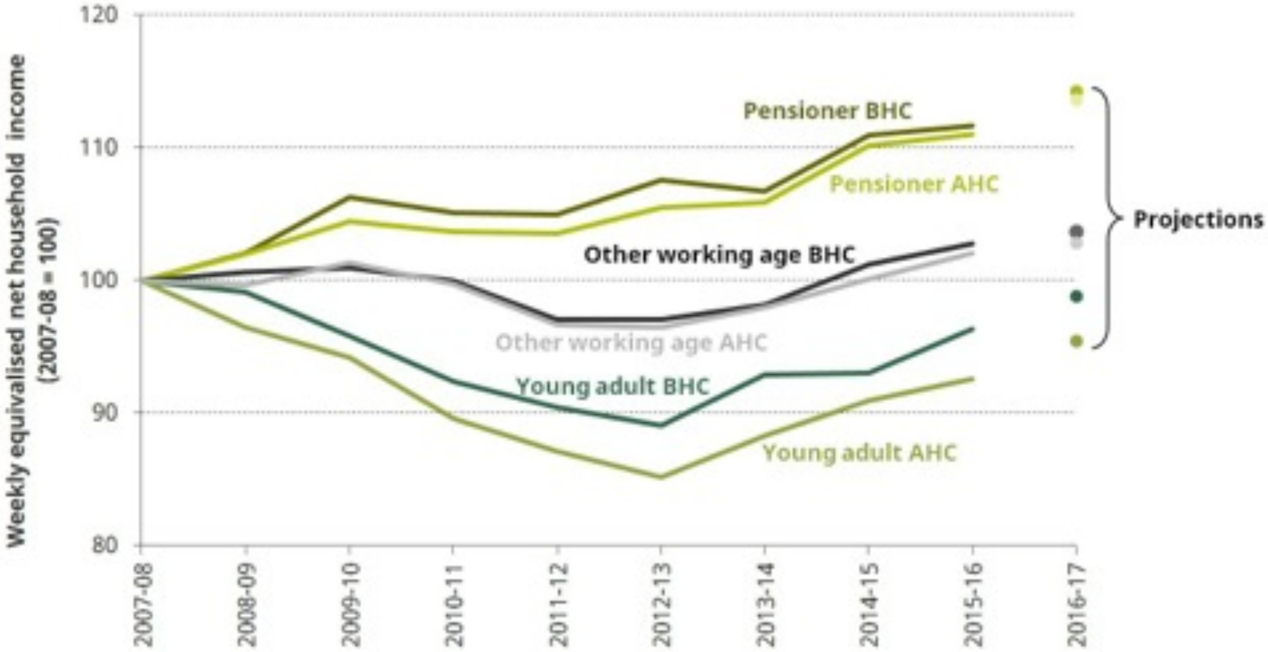
Note on BHC (Before Housing Costs) and AHC (After Housing Costs)

Many of the illustrations used by commentators on changes in HDI show changes in terns of two different measures, BHC and AHC. The former relates to household income before any adjustment is made for the high and fairly constant element of housing, which includes mortgage interest payments, public and private rentals and housing benefits. AHC is the position <u>after</u> such costs have been adjusted for. In the main we look here at figures in BHC terms, since housing costs clearly have a significant impact on affordability issues in general.

As can be seen from Chart 9 the shift from BHC to AFC can have a notable impact on the outcome.

Chart 8: Income change by type of household:
(Source for Charts 8 to 10: Incomes and inequality - the last decade and the next Parliament, IFS Briefing Note BN202)

Figure 2. Changes in real median income by age group before and after housing costs have been deducted (BHC and AHC), 2007-08 to 2016-17



Note and sources: See Figure 1. Pensioners are defined as those aged 65 or above; other working aged are defined as those aged between 31 and 64; and young adults are defined as those aged 22 to 30.

Chart 9: Change in income between 2007–08 and 2016–17 at selected percentiles, before and after housing costs have been deducted

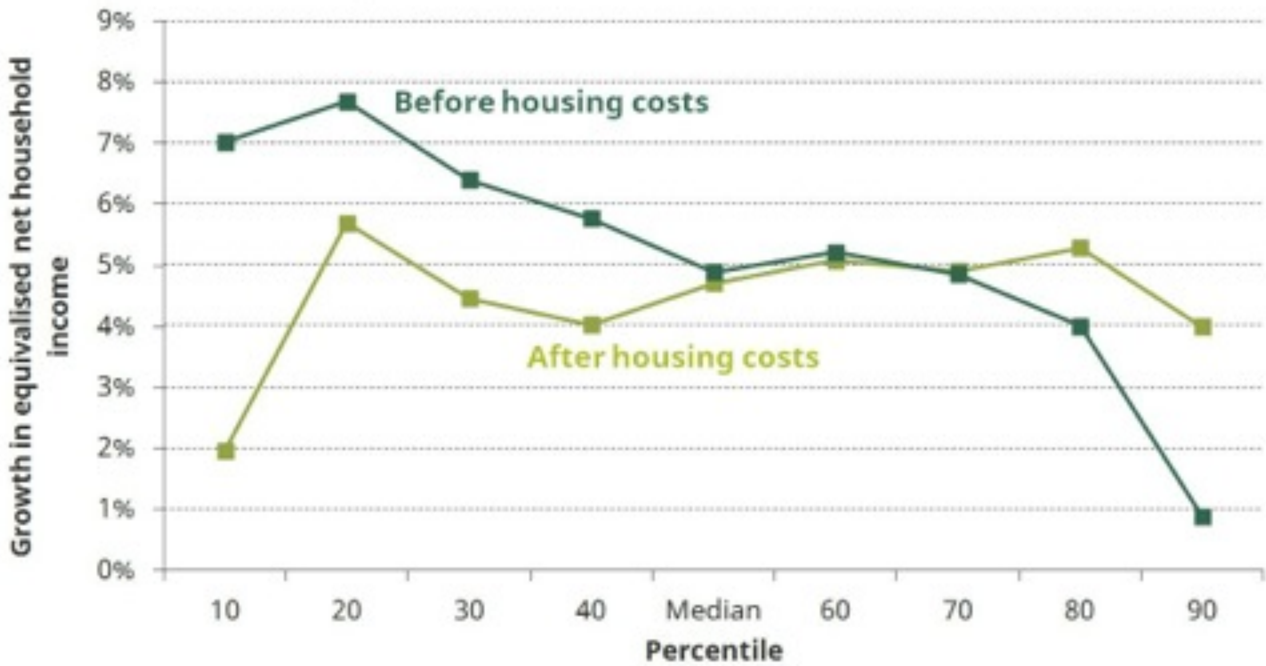
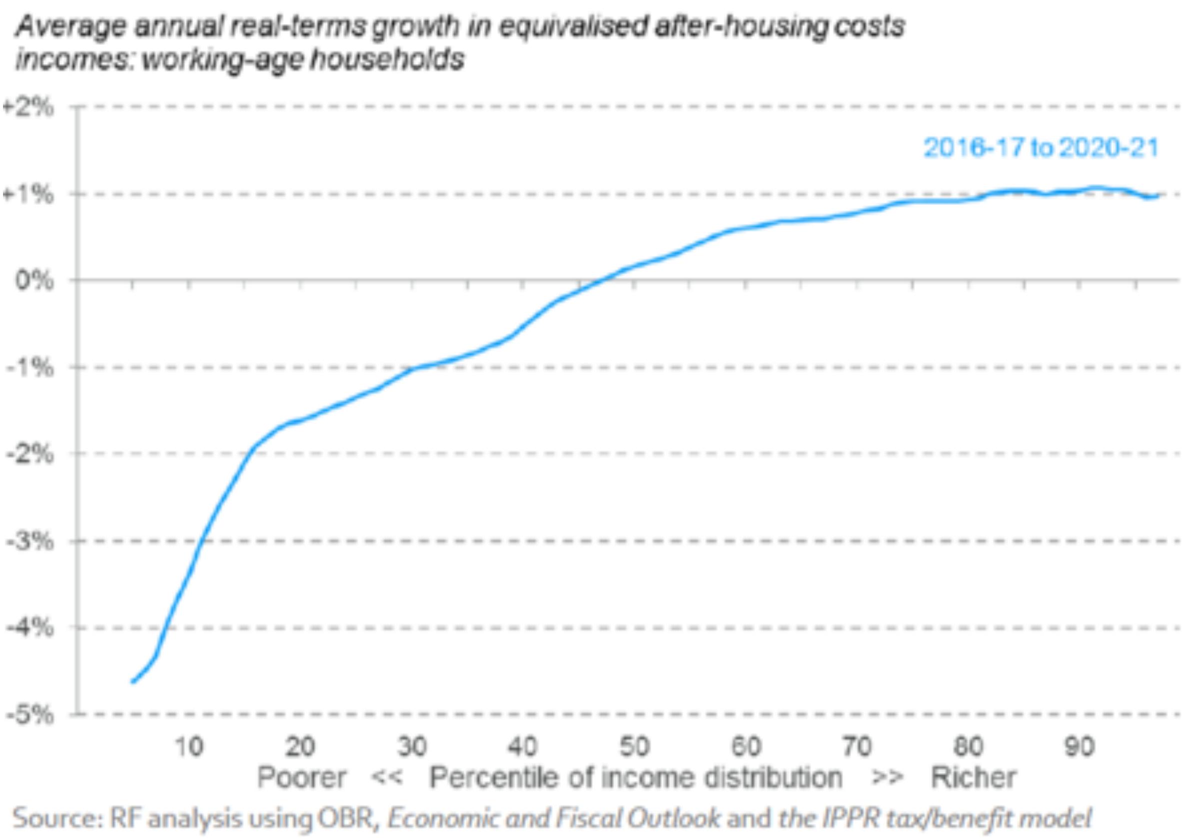


Chart 10: Projected change in income between 2016-17 and 2021-22 at selected percentiles, before and after housing costs have been deducted

Chart 11: Ending Austerity? Resolution Foundation, July 2017



Looking at the period since 2013-14 (to 2015-16):

- Chart 7 shows that the wealthier the H/H the worse off the change in HDI, although all grew. This is a similar picture to what happened between 2007-08 to 2013-14, although not all H/H's experienced rising HDI over this earlier period;
- Chart 8 show a similar picture, with H/H's doing worse over the earlier time period, but this time it is pensioner H/H's that do best and young adult H/H's that do worst;
- Chart 9 shows the position for H/H's by income level before housing costs (BHC) and after housing costs (AHC). The biggest change when moving from BHC to AHC is for the poorest and richest H/H's but the changes are in opposite directions. The position of richer H/H's improves, reflecting the removal of the fall in mortgage interest payments after 2007, while the position for poorer H/H's worsens, likely reflecting the impact of removing housing related benefits, which were growing initially before being capped later on. *(Note: To clarify on this point, if, for example, HDI for richer H/H's had remained flat over this period but mortgage payments had gone down, then if we exclude these housing costs the remaining HDI will have risen.)*

Looking at the period post 2016/17:

- Chart 10 shows growing inequality as the poorest H/H's are worst hit, with falling HDI, while the richest do best, with growing HDI. Once again, moving from BHC to AHC significantly worsens the outcome for the poorest H/H's but this time improves it for richer H/H's;
- Chart 11 highlights how the picture changes if pensioner H/H's are excluded. This results in almost half of working age H/H's suffering a decline in HDI, in AHC terms.

Most **forecasters** expect no increase in HDI in 2017 and little in 2018, although the range of outcomes in 2018 is quite wide (see Table A2 in Annex A). Given the range of possible outcomes for the key components that determines HDI then it is not surprising that the uncertainty over future HDI growth patterns is even greater.

Beyond HDI, there are further impacts that could affect affordability over time. For example, **wealth effects** are also having an impact on living standards, in particular in relation to older H/H's being 'housing rich' and younger H/H's being 'housing poor', 'pension poor' and 'education indebted'. At present there is little prospect of these trends ending or reversing in coming years.

Overall, the prospects for growth of HDI can be characterised as:

- continuing to be poor, compared with historical growth rates, and so no return to rising living standards across the board;
- the poorest H/H's suffering the most, in contrast to recent experience;
- a return to a wider range of outcomes across H/H's than has been seen since 2007/08;
- uncertainty due to a wide range of risk factors affecting: inflation; wages; employment and benefits.

This last point is developed further in the next section.

Uncertainty

Most forecasts give a single, central, outcome for whatever economic variable they are looking at. However, at times of great uncertainty, when 'normal' relationships no longer apply, such 'central' forecasts can give a false sense of security.

The current economic landscape remains highly uncertain and so more attention than normal needs to be paid to outlying potential outcomes.

Some of the risk related uncertainties are now long-standing (for example, historically low post financial crisis economic growth rates seen in many countries, including the UK and Scotland), while some are relatively new (for example, the impact of Brexit).

What is particularly worrying is the breakdown in what economists had thought to be reasonable solid relationships which makes policy setting much more difficult. Some key examples include:

- the slowdown in productivity;
- the lack of inflation as employment rates reach record levels;
- the good labour market performance despite the poor GDP growth performance.

Clearly these are related but they are not well understood and so how and when they may turn around is difficult to predict.

Such uncertainty has knock on effects. For example, normally with a tightening labour market and rising inflation (as we currently have) then the Bank of England would be looking to raise interest rates from their historically low level of 0.25%. However, wages have returned to falling in real terms and GDP growth remains poor and so it is likely that interest rates will not rise, or, if they do, only very slowly.

However, the Bank of England still foresee a return to a **'new normal' interest rate** over time, estimated to be around 2.5 to 3%. This could have a significant impact on H/H's in different ways. For example, wealthier H/H's and pensioner H/H's would tend to benefit as they are net savers, while poorer and younger H/H's would suffer as they are net borrowers. The timing of such changes and the impact this could have on those currently paying very little in the way of mortgage and other interest payments is impossible to predict.

Another, unexpected and not well understood, uncertainty revolves around the **party political volatility** that has emerged in recent years. Each of Labour, the Tories, the Lib Dems, the SNP and UKIP have experienced contrasting fortunes in elections in the 2010's, as well as considerable internal volatility. This makes the outcome of key policy issues like: the future of Brexit; public sector wage caps; and working age benefits freezes, much more difficult to predict than would normally be the case. At present, in particular with regard to the two most likely UK governing parties, Labour and the Tories, such volatility seems more likely to continue than to wane.

Scotland

Most of the UK patterns described thus far are, as far as we know, not dissimilar to those experienced in Scotland.

On **inflation**, there is no separate measure available for Scotland. However, differences between Scottish and UK rates will exist over time. For example, the emergence of rising tuition fees in England has had a significant impact on 'English' inflation. Although it has a low weight (2%) in the calculation of overall UK inflation, the education element rose by an annual average of 10% from 2007 to 2014, so, cumulatively, this will have had noticeable differential impact.

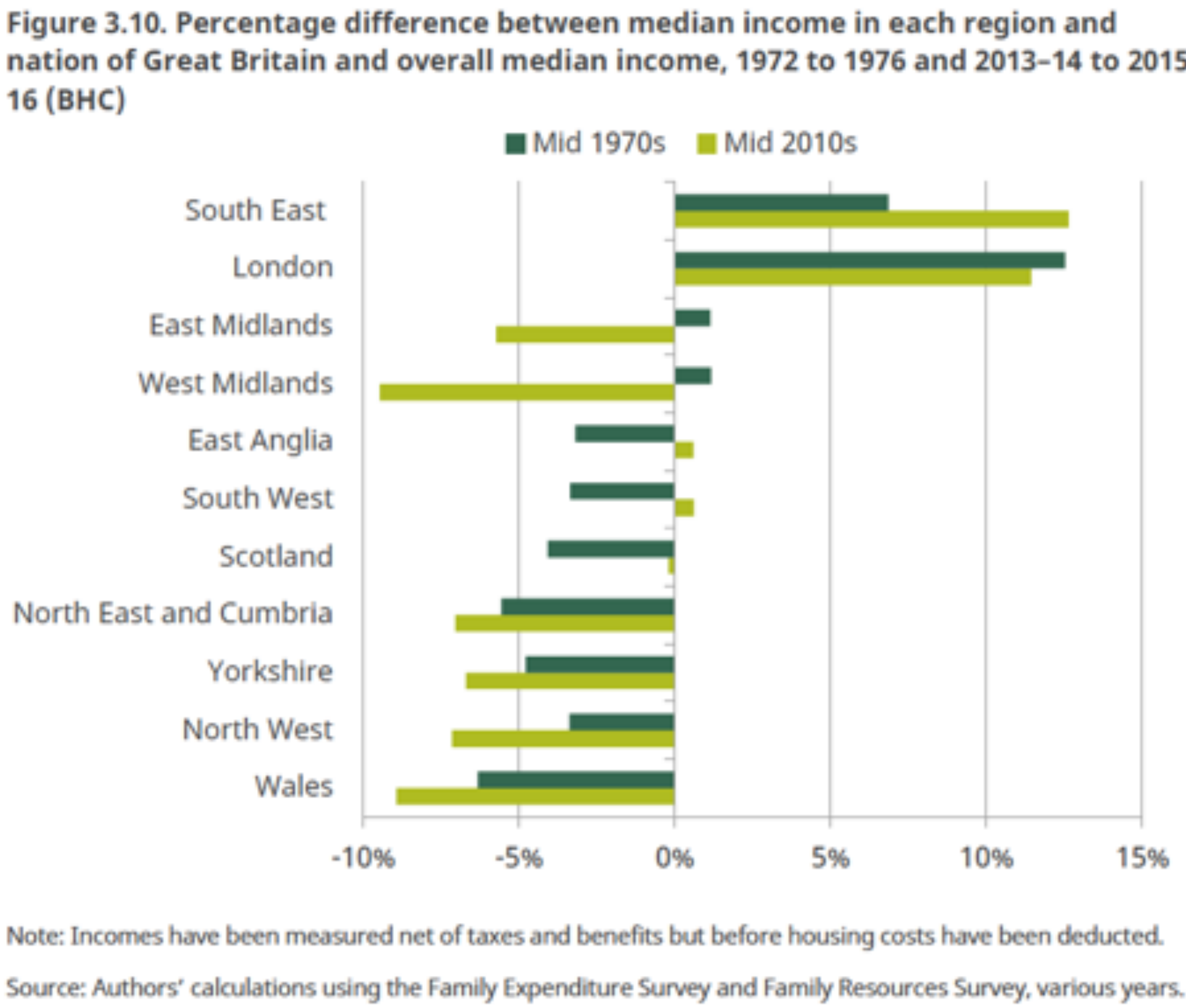
On **wages**, the best data (ASHE) is annual and only goes up to 2016. This shows that between 2013 and 2016 the overall change in full time gross average earnings is similar to that seen for the UK (both just over 5.5%), although the year by year changes have varied. *(Note: Labour Force Survey (LFS) data can show very different patterns but these are highly erratic quarter-by-quarter. For this reason it is better to concentrate on ASHE data, even though it is not so up to date.)*

On **employment,** the post recession pattern is similar to that seen for the UK (see Chart 4). However, within this general trend Scotland has not performed quite as well as the UK over periods 2007 to 2013 and 2013 to 2017.

On **household income,** Chart 12 shows the performance of Scottish median H/H income, 2013-14 to 2015-16, to be little different to that of the UK as a whole, unlike in the mid 1970s.

Looking forward, Scotland's economic prospects are clouded by the on-going slowdown in relation to North Sea activity, both offshore and onshore. Privates sector services in particular have under performed vs the UK over the past couple of years, which may involve issues beyond NSO.

Chart 12: Living standards, poverty and inequality in the UK: 2017 (IFS, July 2017)



Conclusions

In terms of affordability, as measured by changes in living standards via HDI:

- 2013-2016 vs 2007-2013

Slightly better outcome, and more even across H/H types, but still very poor in comparison to the historical average.

The poorest H/H's doing best BHC but not AHC.

- Post 2016 vs 2013-2016

Prospects remain fairly dismal, especially for the poorest H/H's.

Worries remain over the return of above target inflation and falling wages in real terms, as well as a freeze on benefits and poorer employment prospects.

- Pensioner H/H's

Triple lock on pensions likely to mean that pensioner H/H's continue to have above average outcome.

- Uncertainty

No return to 'normality' in the offing, possibly even greater risks in the short to medium term.

- Scotland

H/H's in Scotland have performed similarly, on average, to those in the UK.

Economic prospects are currently poorer than the UK's, in part due to declining North Sea activity.

ANNEX 1 - Forecasts for the UK economy

Table A1: Forecasts and out-turns for key UK economic variables, 2013 vs 2017

Change, %	2014		2015		2016		2017	
	F	O	F	O	F	O	F	O
GDP	1.8	2.9	2.3	2.2	2.7	1.8	2.8	2.0
CPI	2.4	1.5	2.1	0	2.0	0.7	2.0	2.4
Av earnings	2.7	1.4	3.6	1.9	4.0	2.2	4.0	2.6
HDI	0.4	0.6	1.3	3.6	1.8	1.6	2.3	0

Sources: Office for Budget Responsibility, 'Economic and Fiscal Outlook' publication's, March 2013 and March 2017.

Notes:

1) 'F' is the forecast made at the time of the Spring 2013 Budget, and 'O' is the actual or predicted out-turn at the time of the Spring 2017 Budget.
2) HDI stands for 'real household disposable income'.

Table A2: Main UK economic variable forecasts, 2017 and 2018

Change, %	2017				2018			
	High	Median	Low	OBR	High	Median	Low	OBR
GDP	2.1	1.6	1.1	2.0	2.6	1.3	0.4	1.6
Interest Rate	1.5	0.25	0.25	0.27	1.5	0.25	0.05	0.43
CPI (Q4)	3.4	3.0	2.4	2.7	3.1	2.5	1.7	2.2
Av earnings	3.5	2.3	1.8	2.6	4	2.6	1.7	2.7
Employment	1.5	0.8	0	0.6	1.4	0.2	-0.7	0.4
HDI	0.7	0	-1.2	0	3.2	0.8	-0.5	0.8

Source: HM Treasury 'Forecasts for the UK economy, July 2017'.

Notes:

1) All figures show year-on-year % change, except for Interest Rate which is shows the level.
2) HDI stands for 'real household disposable income'.
3) OBR (Office for Budget Responsibility) forecast was made in March 2017. All other forecasts are taken from 3 month period, mid April to mid July.