Office for National Statistics

Article

National Accounts articles: Alternative Measures of Real Household Disposable Income and the Saving Ratio

How UK households have experienced increases in the cost of living since the 2008 economic downturn, as measured by the NPISH saving ratio, an estimate of the amount of money available to save as a percentage of total disposable income.

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1. Introduction

Authors of this report:

Real Household Disposable Income (RHDI) - Tom Evans Saving Ratio - Nicola Curtis and Rhian Jones

This article looks at how different measures of real household disposable income (RHDI) published in the UK national accounts can be used to assess the economic well-being of households in the UK.

Measurement of disposable income from the national accounts can vary due to a number of factors. In this article we consider an adjusted measure of RHDI, named throughout this article as “Cash RHDI”, which attempts to quantify disposable income in a way which better represents actual income received by households. We also briefly revisit how the treatment of non-profit institutions serving households (NPISH) can affect estimates of RHDI.

Finally we look at how adjusting the measurement of RHDI feeds through to calculating the saving ratio.

We are currently exploring options for the future publication of this content and would welcome feedback from users.

All data are presented on a Blue Book 2014 basis.

2. What is real household disposable income?

Gross Disposable Income (GDI) refers to the money households have left over to spend, save or invest after deductions such as taxes, national insurance and pension contributions have all been paid.

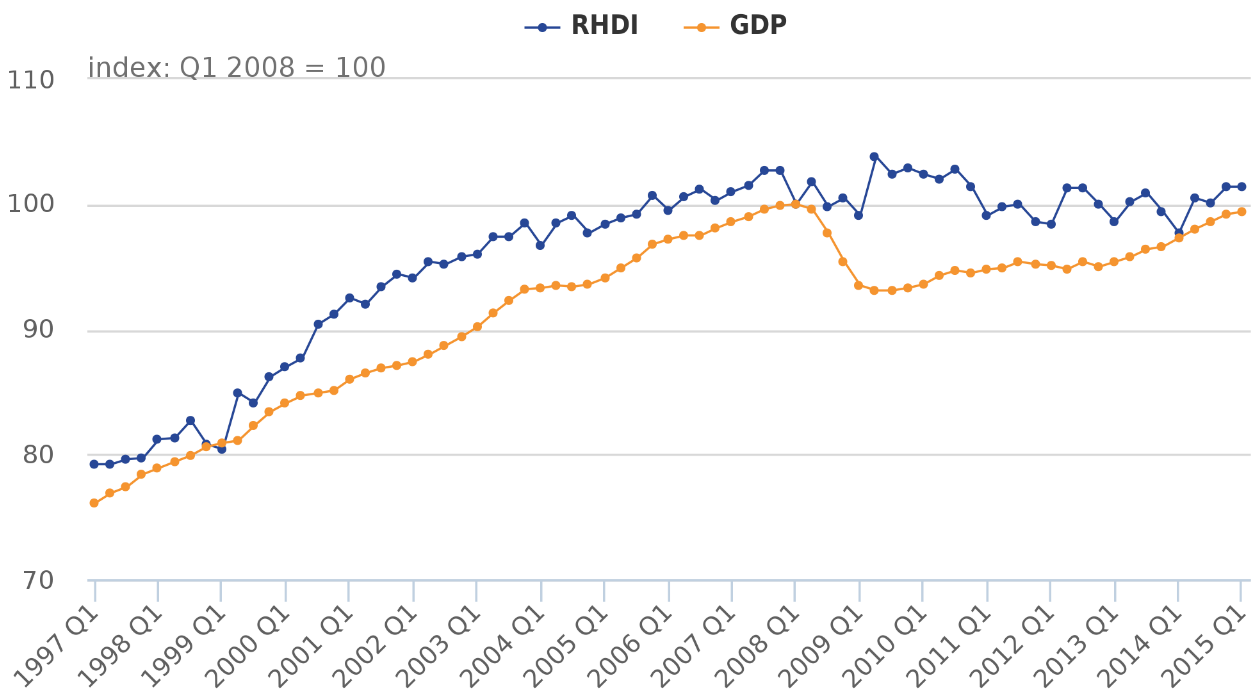
Within the national accounts, households GDI is calculated by aggregating a number of transactions. These transactions are categorised as a “resource” or “use”. Resources are those transactions which contribute to households’ income, for example, wages and salaries; uses are those which deduct from households’ income, for example, direct taxes. Some transactions appear as both resource and a use, for example, interest can be paid to households on savings (resource) but it is also paid by households on loans (use).

Taking GDI and then removing the effects of inflation, typically by applying an expenditure deflator, gives real household disposable income (RHDI). Finally, dividing RHDI by the population gives RHDI per capita, the main measure which is considered in this article.

We published a measure of RHDI within its quarterly United Kingdom economic accounts (UKEA). If we take this measure and convert it to a per capita basis we can start to consider the economic well-being of households since 1997.

Figure 1: Growth in Real Households' Disposable Income per capita and Gross Domestic Product per capita, 1997 Q1 - 2015 Q1, seasonally adjusted

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015



Source: Office for National Statistics

3. Making adjustments to RHDI

The measure of RHDI published within the UKEA contains certain elements which, though they are desirable for compiling a sequence of national accounts, are not directly observed by households.

For example, imputed rentals represent the value of housing services that owner occupiers derive from their homes: the amount that they would have to pay in rent to achieve the same consumption of housing services. Whilst this concept is important when measuring economic output, it is perhaps less appropriate to include it in measures of disposable income, as imputed rental is not something that a home owner directly observes.

We therefore consider "Cash RHDI". This measure removes imputed rental and other non-cash components resulting in a measure of RHDI which is a closer representation of disposable income as measured by social surveys. This is mainly achieved following guidance within the Organisation for Economic Co-operation and Development Framework for Statistics on the Distribution of Household Income, Consumption and Wealth and the United Nations Economic Commission for Europe (UNECE) Canberra Group Handbook on Household Income Statistics. Both of these documents include sections on comparing income as measured within the system of national accounts with income as measured by social surveys.

In essence, the move towards a more social survey-orientated measure of disposable income should yield a series which is a closer representation of what households experience. For a full list of those components which have been excluded from the cash measure please see Annex A.

Interest payments

Whilst many of the decisions around which transactions should be included in the calculation of cash RHDI are relatively straightforward, one transaction for which the case is easily balanced is Interest Paid (D41g) (use). This refers to the interest paid by households on loans and other forms of credit.

On the one hand interest payments are a real thing that households directly observe and so they should be included in the calculation of a “cash” measure of RHDI. However you can also take the view that decisions about paying interest, for example deciding whether or not to take out a loan, would be taken after knowing how much disposable income you have. Therefore throughout the following analysis we present cash RHDI on 2 different bases.

- net interest basis – this measure includes both interest paid and interest received by households.
- gross interest basis – this measure includes only interest received by households and not interest paid by households.

Households and non-profit institutions serving households

Existing estimates of RHDI from the UK economic accounts are comprised of 2 sectors: the household sector and the non-profit institutions serving households sector (NPISH). NPISH is comprised mainly of charities and universities but also includes entities like trade unions and political parties. The 2 sectors are often considered together because NPISHs are financed by households and their sole purpose is to serve households. However, if we want to consider the well-being of households alone then it would be beneficial to separate out the NPISH components of RHDI so that we are left with a households-only estimate.

We are running an ongoing project which aims to produce separate accounts for households and NPISH by autumn 2017. Ahead of this date, the measures of RHDI presented here simply attempt to remove NPISH elements from the calculation. As these estimates are based on current compilation methods, they may be subject to change as the project to separate the 2 sectors continues.

Deflators

The final adjustment made to estimates presented here is to change the deflator series which is used to account for changes in prices. RHDI as published in the UKEA uses the combined household and NPISH final consumption expenditure implied deflator. For the same reason as outlined above, we only want to consider expenditure by households, so instead we use the household final consumption expenditure (HHFCE) implied deflator as published in Consumer Trends.

To summarise, this analysis will present the following series, all on a per capita basis:

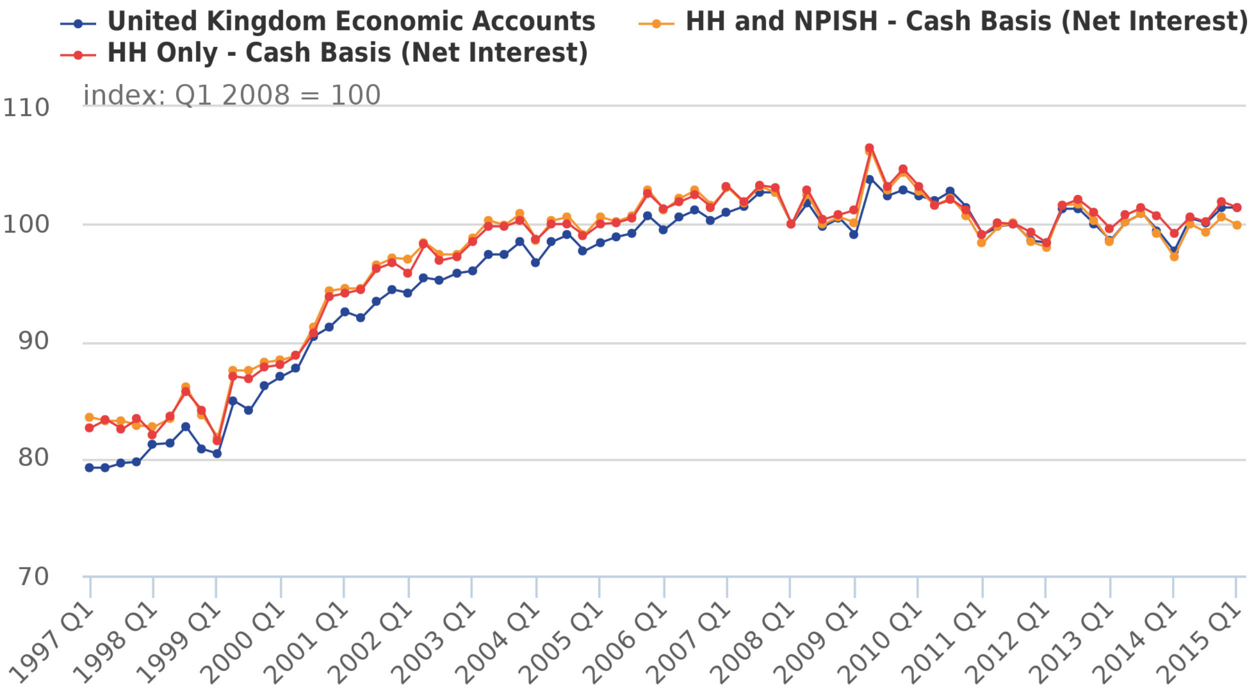
- UKEA RHDI – the measure of RHDI routinely published in the United Kingdom economic accounts. This is on a non-cash basis, includes both the Household and NPISH sectors, and is deflated by the combined Households and NPISH expenditure deflator
- HH and NPISH cash RHDI (net and gross interest) – based on both the HH and NPISH sectors, this takes the UKEA RHDI and strips out the “non-cash” transactions and is deflated by the combined HH and NPISH expenditure deflator
- HH only cash RHDI (net and gross interest) – this goes one step further and tries to strip out the NPISH sector and is deflated by the HHFCE implied deflator

4. Household-only Cash RHDI

Net interest basis

Figure 2: Comparison of various measures of real household disposable income (RHDI) per capita, net interest basis, seasonally adjusted

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015



Source: Office for National Statistics

Figure 2 shows that the evolution of the new measures of RHDI per capita, on a net interest basis, is broadly similar to that of the UKEA RHDI. All three measures show strong growth from 1999 to 2007, followed by a period of stable household income which, as shown in figure 1, did not suffer to the same extent as other economic metrics such as GDP per capita during the downturn. Comparing a National Accounts consistent measure with a cash measure (black dotted to blue dashed) makes little difference to the growth path of RHDI. Similarly, excluding NPISH has little effect on the growth path.

Table 1: Comparison of the levels of various measures of real household disposable income (RHDI) per capita on a net interest basis, aggregated, Quarter 1 (Jan to Mar) to Quarter 4 (Oct to Dec) 2007 and Quarter 1 (Jan to Mar) to Quarter 4 (Oct to Dec) 2014

pounds

Measure	RHDI (Q1-Q4 2007)	RHDI (Q1-Q4 2014)
United Kingdom Economic Accounts	17,306	16,954
HH and NPISH – Cash Basis (net interest)	14,386	13,907
HH Only - Cash Basis (net interest)	13,939	13,610

Source: Office for National Statistics

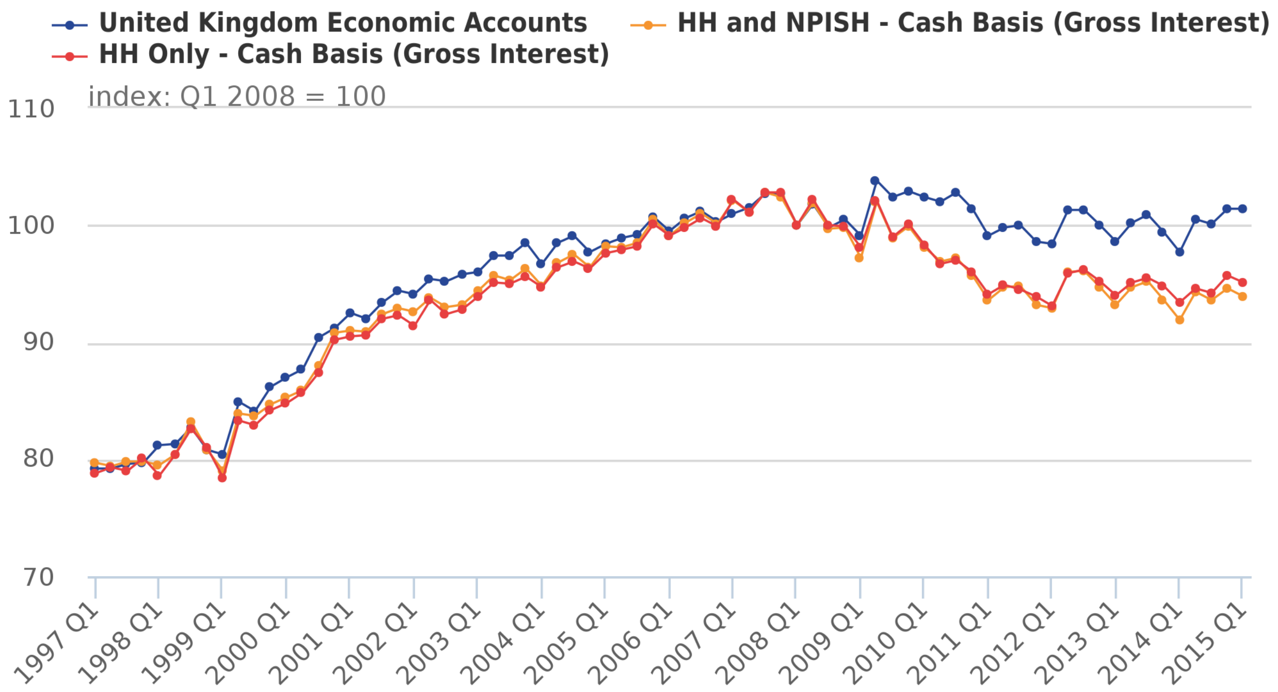
Table 1 highlights that during each stage of adjustment to RHDI the level of income falls. This reduction is not particularly surprising as the cash measure tends to exclude more transactions which contribute to income than transactions which deduct from income. Similarly, the removal of the NPISH sector decreases the level of income. The table also shows relatively small drop in RHDI per capita for all 3 measures between 2007, before the crisis, and across the four quarters of 2014.

Gross interest basis

This cash measure can be thought of as the amount of income households have prior to the decision to take out a loan upon which they would pay interest.

Figure 3: Comparison of various measures of real household disposable income (RHDI) per capita, gross interest basis, seasonally adjusted

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015



Source: Office for National Statistics

Figure 3 highlights the effect of measuring RHDI on a gross interest basis, compared with the national accounts consistent measure. Though the removal of the NPISH sector still only has a minor effect on growth, the move to RHDI on a cash gross interest basis shows that incomes contracted more sharply through 2009 and 2010 since when they have been stagnant. In quarter 1 (Jan to Mar) 2015 household only cash RHDI was 5% below its quarter 1 (Jan to Mar) 2008 level. We will consider the reasons for this contraction later on in the article.

Table 2: Comparison of the levels of various measures of real household disposable income (RHDI|) per capita on a gross interest basis, aggregated, Quarter 1 (Jan to Mar) to Quarter 4 (Oct to Dec) 2007 and Quarter 1 (Jan to Mar) to Quarter 4 (Oct to Dec) 2014

pounds

Measure	RHDI (Q1-Q4 2007)	RHDI (Q1-Q4 2014)
United Kingdom Economic Accounts	17,306	16,954
HH and NPISH – Cash Basis (gross interest)	16,143	14,780
HH Only - Cash Basis (gross interest)	15,694	14,506

Source: Office for National Statistics

The levels show a similar pattern to the net interest scenario, with the move to the cash basis resulting in a larger reduction income than the reduction caused by the removal of the NPISH sector. However, compared with the net interest scenario, the level is higher for both of the cash measures. This is due to interest payments no longer being deducted. Comparing the gross interest basis with the net interest basis you can also see the greater reduction in RHDI between 2007 and the most recent 4 quarters.

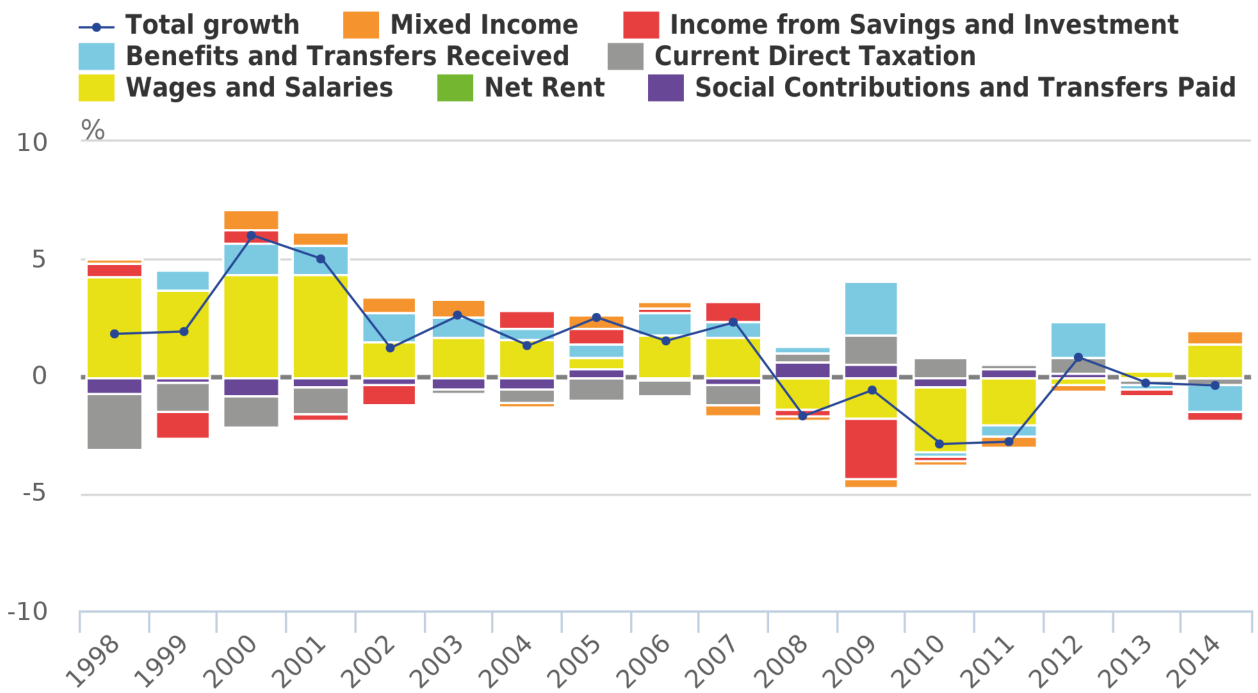
5. Contributions to growth

Figure 4 shows the contributions to the annual growth rate for Cash RHDI on a gross interest basis.

There are 21 transactions which contribute towards the calculation of Cash RHDI on a gross interest basis. For ease of presentation these transactions have been assigned to 7 groups according to the nature of the transaction. For a full breakdown of which transaction feeds into each group, please see Annex B.

Figure 4: Annual real household disposable income (RHDI) per capita growth and percentage point contributions to growth made by transaction groupings, gross interest basis

United Kingdom, 1998 to 2014



Source: Office for National Statistics

Between 1998 and 2007, the components which contributed to growth in cash RHDI were fairly consistent. Wages and Salaries, Mixed Income (including self-employment income) as well as Benefits and Transfers Received all made positive contributions to the growth of RHDI. Social Contributions and Transfers Paid as well as Current Direct Taxation consistently held back growth.

Savings and investment fluctuated between contributing positively and negatively between the period and tended to coincide with corresponding changes in the Bank of England base rate.

From 2008 to 2011, with the onset of the financial crisis and subsequent recession, there were 4 years of negative growth in RHDI. During this period, Wages and Salaries and Income from Savings and Investments made negative contributions in each year with an average contribution of -2.0 percentage points and -1.1 percentage points respectively. The latter fall was in part due to falling interest rates, though other investments would also have seen lower returns. These falls however were offset by cuts in tax rates for households, notably on income. Further, in 2008 and particularly in 2009, there were increases in the benefits and transfers received by households. This contributed 0.3 and then 2.3 percentage points to growth in 2008 and 2009 respectively. However, during 2010 and 2011, there was no such offset in benefits and transfers received which instead made small negative contributions of 0.2 and 0.4 percentage points respectively. It was during these years that Cash RHDI was falling at its fastest rate: -2.9% and -2.8% respectively.

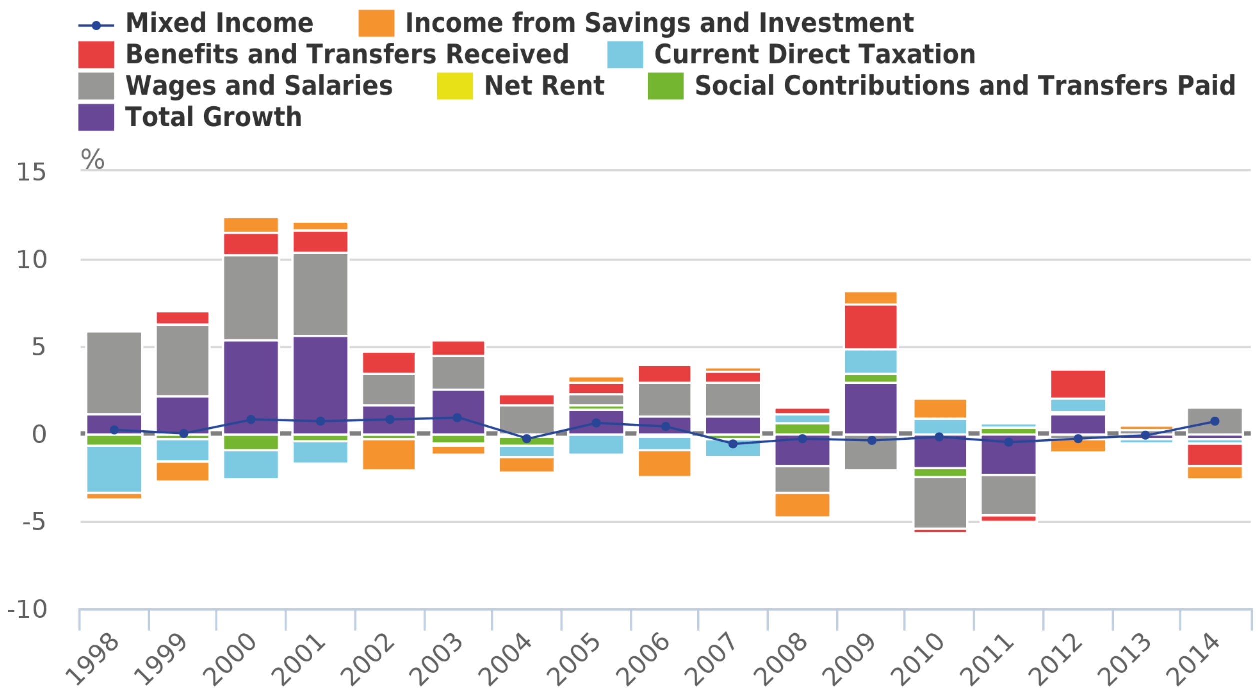
During 2012, negative pressure from falls in Wages and Salaries and income from Savings and Investment eased. Benefits and Transfers received returned to making a positive contribution and households also paid less in direct taxes, making a positive contribution to disposable income. Overall this combination of factors lead to RHDI growing by 0.9%.

Finally, during 2013 and 2014, the picture was more mixed, with very little change in 2013 as all groups of transactions showed little change. In 2014, there was a return to positive contributions for Wages and Salaries as well as Mixed Income, however, this was held back by further negative contributions from benefits and transfers received and from income from savings and investments.

Compared with the gross interest basis, growth in RHDI on a net interest basis is largely unchanged with the exception of 2009. During 2009, the growth rate of Cash RHDI on a net basis was 3.0%, whereas on a gross interest basis RHDI contracted by 0.6%.

Figure 5: Annual real household disposable income (RHDI) per capita growth and percentage point contributions to growth made by transaction groupings, net interest basis

United Kingdom, 1998 to 2014



Source: Office for National Statistics

Notes:

Components may not sum due to rounding

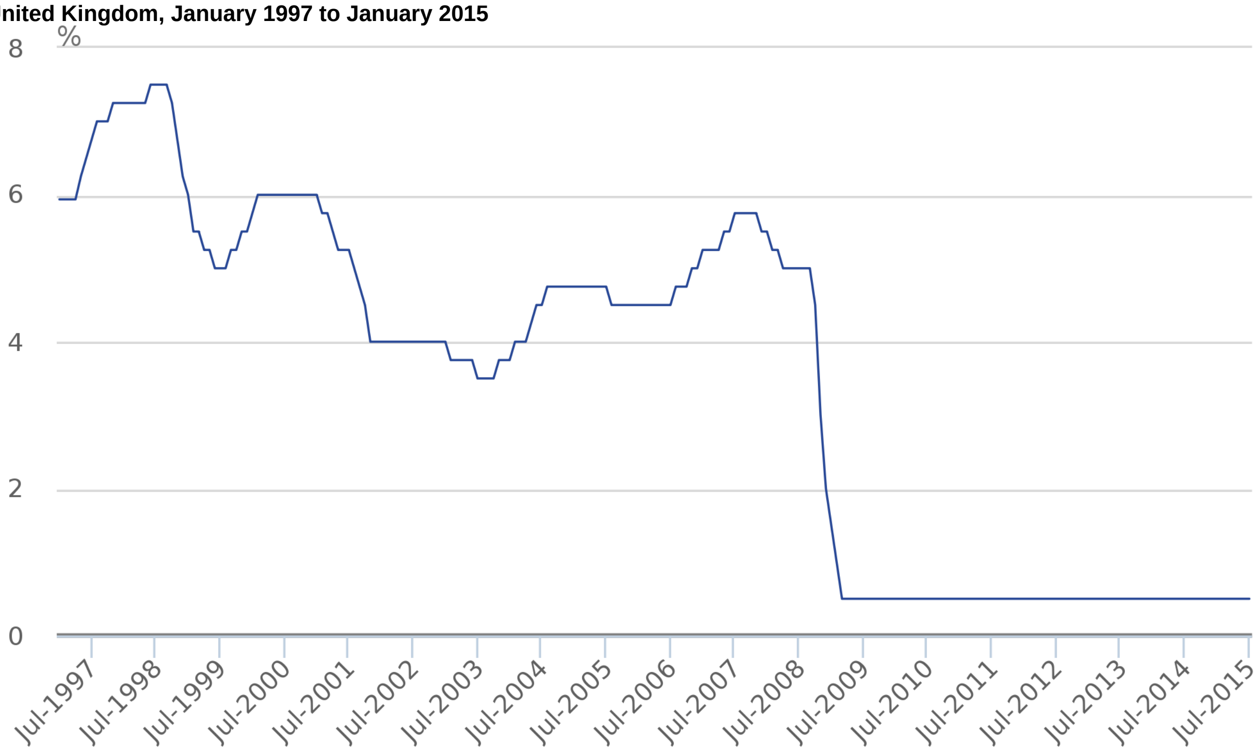
This gives a further illustration of how the change in interest rates affected the total growth rate as income from savings and investment on a net interest basis made a 0.8 percentage point contribution to the overall 3% growth for 2009. This highlights how changes in interest paid and received by the household sector roughly cancelled each other out.

6. Potential reasons for the divergence between net and gross RHDI measures

The previous sections showed a large divergence between net and gross RHDI cash measures since the onset of the financial crisis. Unsurprisingly the relatively poor performance of the gross measure reflects the evolution of interest rates over this period.

Figure 6: The Bank of England end-month official bank rate

United Kingdom, January 1997 to January 2015

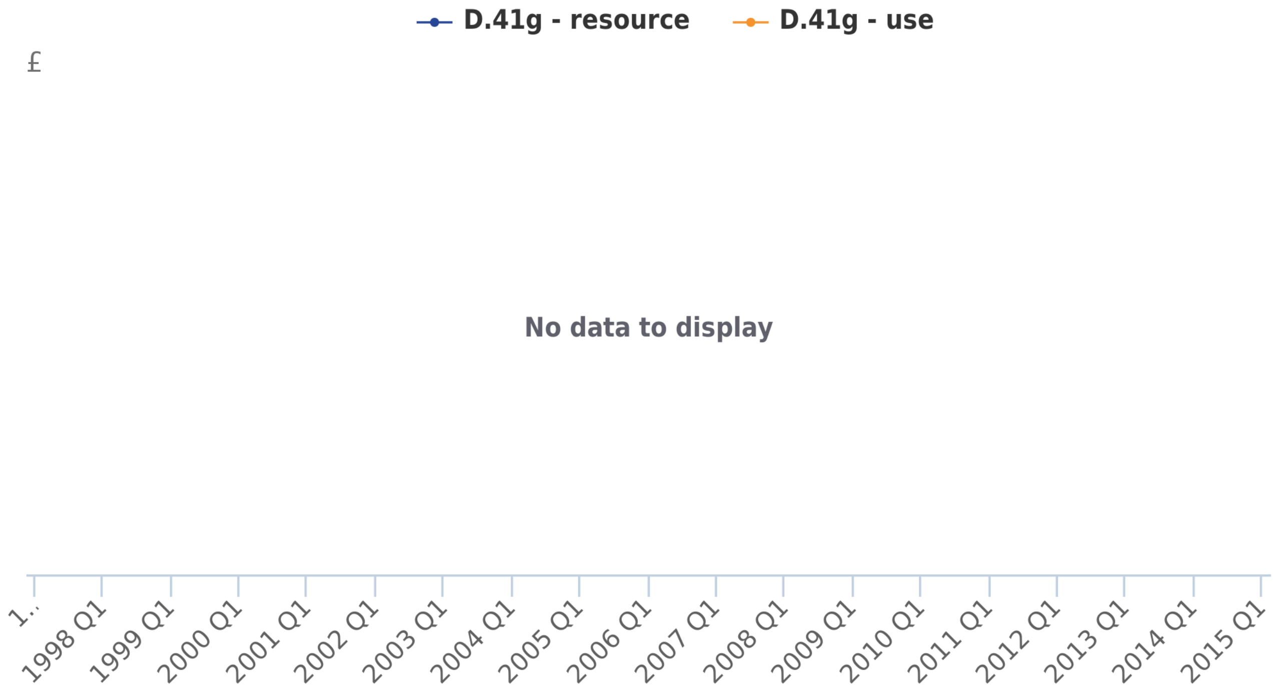


Source: Bank of England

In response to the onset of the financial crisis, the Bank of England (BoE) eased monetary policy by cutting the base rate rapidly at the end of 2008 and beginning of 2009. This in turn lead to a fall in the rate of interest received by households on saving and also to a fall in the interest paid by households on loans.

Figure 7: Levels of per capita interest paid by (use) and received by (resource) the household sector, seasonally adjusted

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015

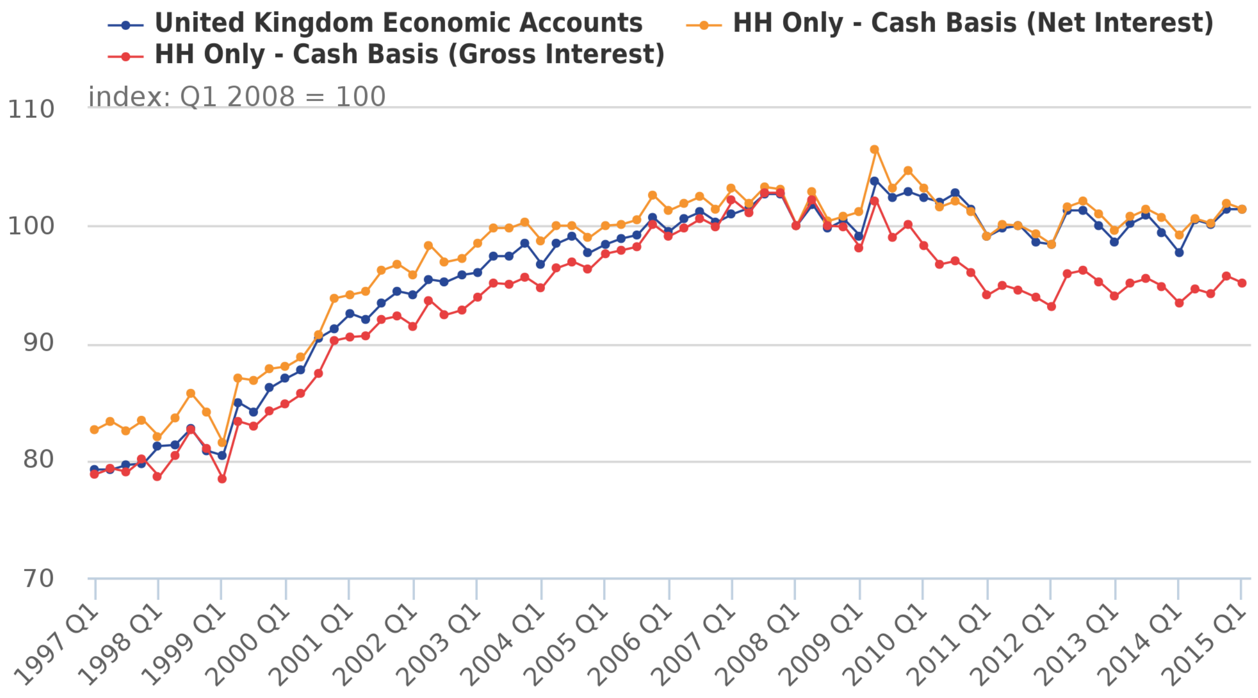


Source: Office for National Statistics

Figure 7 illustrates this. Real interest received and paid by households, per capita, changed little from 1997 through until 2004. From 2004 through to quarter 4 (Oct to Dec) 2007 and quarter 1 (Jan to Mar) 2008 both interest received and paid steadily increased to their respective peaks. Both measures of interest then fell sharply in quarter 1 (Jan to Mar) 2009 reflecting the shift in the base rate. Interest paid continued to fall at a steadier pace until quarter 1 (Jan to Mar) 2011, since when both measures of interest have remained flat.

Figure 8: Comparison of growth in real household disposable income (RHDI) per capita as published in the UK economic accounts and Cash RHDI per capita on both a net and a gross interest basis, seasonally adjusted

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015



Source: Office for National Statistics

On a net interest basis these two factors largely cancelled out as households paid but also received less interest.

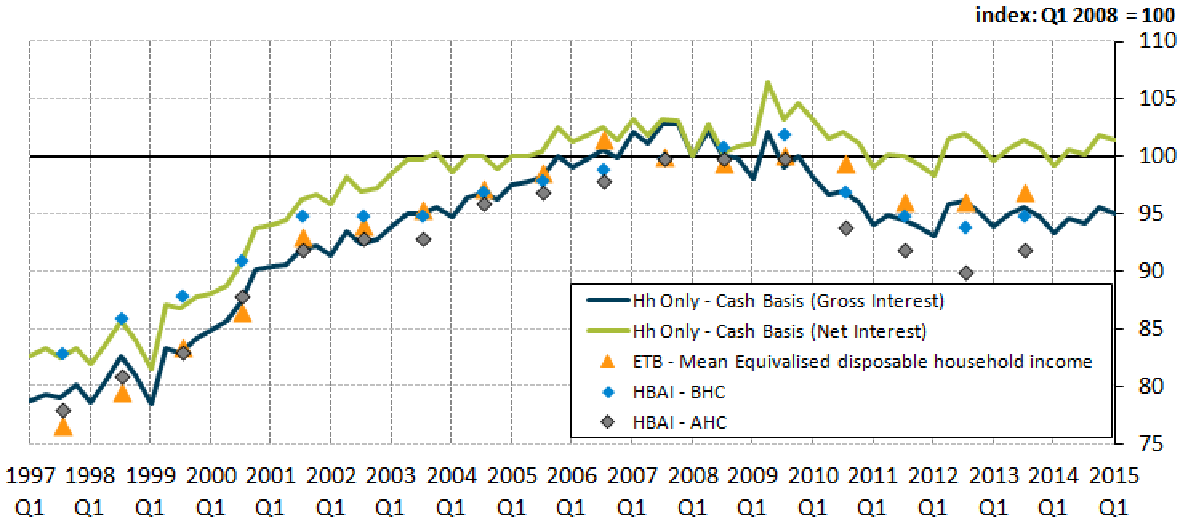
However, on a gross interest basis, households experienced a fall in interest received without a corresponding fall in interest paid. This has a negative impact on the growth of RHDI. As the BoE base rate has remained constant at 0.5% since April 2009 there has been little opportunity for households to see a recovery in their income coming from higher interest rates. This explains why the gross interest series has not recovered any ground relative to its Q1 2008 level.

7. Social survey comparisons

Part of the exercise of calculating Cash RHDI was to compute a national accounts measure of disposable income which is more comparable with disposable income as measured by social surveys.

Figure 9: Comparisons of growth in Cash real household disposable income (RHDI) per capita compared with growth in various social survey sources[1] on disposable income

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015



Source: Office for National Statistics, Department for Work and Pensions

Notes:

1. All three social survey sources are presented annually on a financial year basis and are indexed to financial year ending 2008 = 100.

Figure 9 plots the 2 measures of RHDI per capita computed within this analysis against 3 others estimated from 2 of the leading social survey-based data sources.

Firstly, mean equivalised disposable household income from our, effects of taxes and benefits on household income (ETB) published by the Office for National Statistics. This series measures income before housing costs and is deflated by an expenditure deflator making it fairly comparable with UKEA RHDI. The main difference is that ETB excludes interest paid and also some of the imputed elements found in the UKEA measure.

Alongside this are 2 measures taken from the households below average income (HBAI) series published by the Department for Work and Pensions. These series both refer to mean equivalised weekly disposable income, one before housing costs (BHC), and one after housing costs (AHC). The housing cost adjustment comprises the following components: Rent; water rates, community water charges and council water charges; mortgage interest payments; structural insurance premiums for owner occupiers as well as ground rent and service charges. It should be noted that unlike RHDI and ETB, HBAI is deflated by the Retail Prices Index.

Looking at the data we can see that cash RHDI on a gross interest basis is more closely aligned with the 3 social survey sources, compared with Cash RHDI on a net interest basis. In the case of ETB and HBAI before housing costs this is expected as both of these measures are also calculated on a gross interest basis. The HBAI after housing costs series shows a sharper and more protracted decline in income than the other measures. This may appear at odds with the logic that mortgage repayments would have fallen over this period which would have increased income; however mortgage repayments are only one element of the housing costs adjustment that is made in HBAI and may have been outweighed by other factors, such as rent, which caused the level of income to fall overall. Furthermore, RPI has grown more strongly than the household expenditure implied deflator since 2009 which would also have the effect of depressing growth in both HBAI measures compared with the cash RHDI and ETB disposable income.

For more information on [sources and data on earnings and income](#) see this guide on our website.

8. Saving ratio

This final section extends the methodology adopted to calculate household only Cash RHDI to derive alternative cash only saving ratios.

What is the saving ratio?

The saving ratio is an estimate of the amount of money households have available to save (gross saving) as a percentage of their total disposable income. Gross saving is estimated as the difference between household's income (gross disposable income) and their spending (final consumption expenditure). Final consumption expenditure is money spent by households on goods and services, for example food and internet providers. It does not include investment in housing (mortgages) or purchasing financial products such as shares. Gross saving is therefore the amount of money households have left after spending money on goods and services.

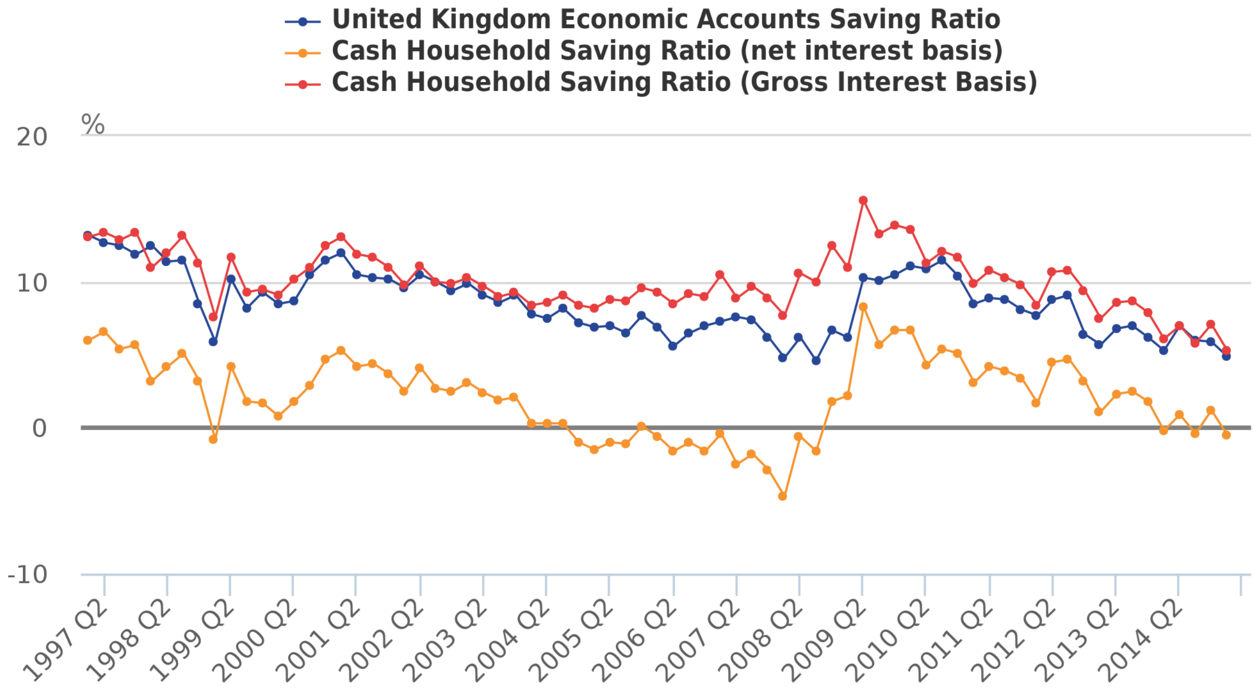
Unobserved income measures (for example, pension contributions) feed into the saving ratio calculation without being directly observed by households. The following section explores alternative compilations and definitions of a household saving ratio focusing on directly observed income and expenditure items.

Making adjustments to the saving ratio

Following the cash RHDI approach the components of the saving ratio were assessed on whether they would be directly observed by households and certain components were removed to create a cash only saving ratio. The components removed were the adjustment for the change in pension entitlements (D.8) and imputed rentals of owner occupiers and charges for Financial intermediation services indirectly measured (FISIM) from household's final consumption expenditure (P.3) (see Annex A).

Figure 10: UK economic accounts published and cash only household saving ratios, per cent

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015



Source: Office for National Statistics

Figure 10 shows the national accounts consistent saving ratio alongside the two cash saving ratios; on a net interest basis and a gross interest basis.

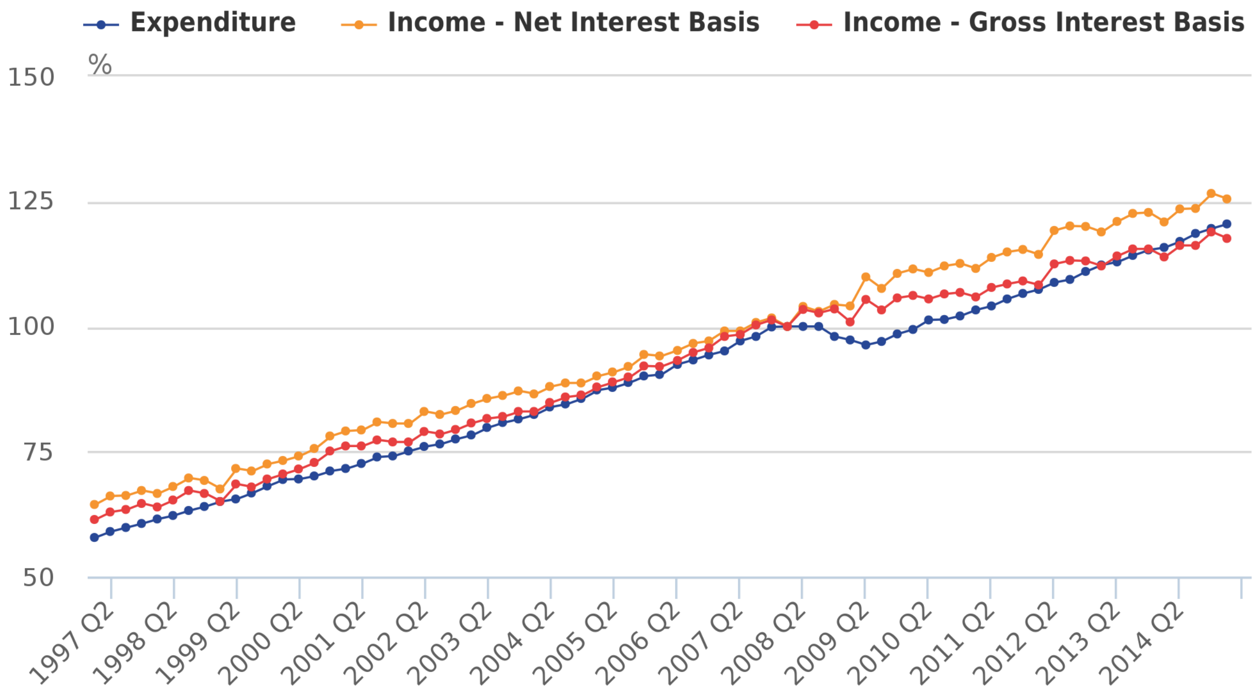
All three ratios showed very similar patterns from Quarter 1 (January to March) 1997 through to Quarter 1 (January to March) 2015. From Quarter 1 (January to March) 1997 through to Quarter 1 (January to March) 2008 the saving ratio declined. On a net interest basis this resulted in a negative saving ratio between Quarter 4 (October to December) 2004 and Quarter 3 (July to September) 2005 and also between Quarter 1 (January to March) 2006 and Quarter 3 (July to September) 2008. During these periods expenditure exceeded income. This can occur either by drawing down existing saving or by borrowing. We know that throughout this period there was an increase in consumer debt and in particular mortgage debt (see ONS Economic Review – November 2014, Figure 10) and so increases in borrowing are likely to have played a significant part in falling saving ratios over this period.

From the beginning Quarter 1 (January to March) 2008 to Quarter 1 (January to March) 2009, in the beginning of the financial crisis the saving ratio then rose sharply for all three measures. Over this period there was a great deal of economic and financial uncertainty which typically results in households cutting back on expenditure and increasing saving, particularly through the first three quarters of 2008 when interest rates were still relatively high meaning that the incentive to save was also still relatively high.

From Quarter 2 (April to June) 2009 onwards the saving ratio steadily declined for all measures. In Quarter 1 (January to March) 2015 the saving ratio had fell to 5.3% (on a gross interest basis), which was below its Quarter 1 (January to March) 2008 level of 7.7%. Part of the explanation for this is that since Quarter 2 (April to June) 2009 the BoE base rate had been held at 0.5% which reduced the incentive for households to save.

Figure 11: Gross disposable income on a gross and net interest basis and households' observed expenditure, index Quarter 1 (January to March) 2008=100

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015



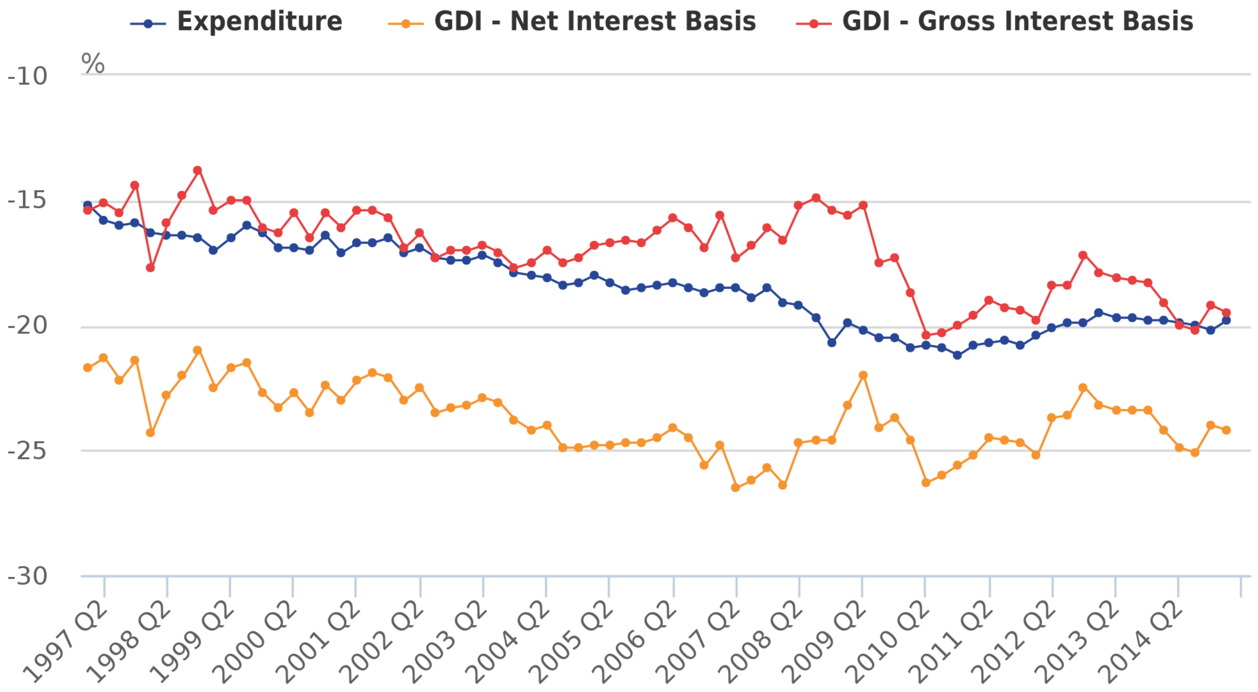
Source: Office for National Statistics

This reduced incentive to save is reflected in Figure 11. After contracting by 3.7% between quarter 1 (Jan to Mar) 2008 and quarter 2 (Apr to Jun) 2009, households' expenditure then grew at a faster pace than income (on both a gross and net basis) as signified by the narrowing of the gap between the respective series.

As referenced above, there is also a noticeable difference between the levels of the saving ratio on a net interest basis compared with a gross interest basis.

Figure 12: Percentage difference between expenditure and income as published in UK economic accounts compared with cash expenditure and cash income on gross and net interest bases

United Kingdom, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2015



Source: Office for National Statistics

Figure 12 shows the percentage difference between the National Accounts measures of income and expenditure and the respective Cash measures of income and expenditure. Throughout the time period considered, the move from the published expenditure measure to the cash expenditure measure resulted in a fall of around 15 to 20%. This was very similar to the percentage difference between National Accounts GDI and Cash Disposable Income on a gross interest basis. If the levels of income and expenditure fell by similar proportions then so must have the level of saving, explaining why the UKEA saving ratio and the saving ratio on a gross interest basis are at similar levels. The reduction in income when moving from the UKEA measure to the Cash Net Interest measure is larger, around -25%. This is because the Cash measure includes Interest Paid (D.41g) in its calculation of income which, all else equal, lowers the level of household income. This means that for a given level of expenditure households have less income left over to save, resulting in a lower saving ratio as seen in Figure 10.

9. Background notes

1.Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk.

10. Annex A

Transactions which feature in the calculation of gross disposable income

In order to calculate gross disposable income we have to work through the first 2 accounts of the household sector, adding up all the resources and subtracting all the uses in each of the accounts.

Allocation of primary income account

Resources		Uses	
Transaction	Code	Transaction	Code
Gross Operating Surplus	B.2g	Interest before FISIM allocation	D.41g
Gross Mixed Income	B.3g	(less) FISIM	P.119
Wages and Salaries	D.11	Rent	D.45
Employers' Social Contributions	D.12		
Interest before FISIM allocation	D.41g		
(plus) FISIM	P.119		
Dividends	D.421		
Withdrawals of Income from quasi-corporations	D.422		
Income attributable to insurance policy holders	D.441		
Income payable on pension entitlements	D.442		
Collective Investment Fund shareholders – Dividends	D.4431		
Collective Investment Fund shareholders – Retained earnings	D.4432		
Rent	D.45		
Is carried over to the next account		Balance of gross Primary Income	B.5g

Distribution of secondary income account

Resources		Uses	
Transaction	Code	Transaction	Code
Balance of Gross Primary Income	B.5g	Taxes on Income	D.51
Social Benefits other than Transfers in kind	D.62	Other current taxes	D.59
Non-life insurance claims	D.72	Employers' actual social contributions	D.611
Miscellaneous current transfers	D.75	Employers' imputed social contributions	D.612
		Households' actual social contributions	D.613
		Households' social contribution supplements	D.614
		Social insurance scheme service charge	D.61SC
		Social benefits other than transfers in kind	D.62
		Net non-life insurance premiums	D.71
		Miscellaneous current transfers	D.75
		Gross Disposable Income	B.6g

For more information on all of these transactions, please see the European System of Accounts 2010.

Those transactions which are shaded in the tables, are excluded from the calculation of cash RHDI in line with the OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth :

- Gross Operating Surplus (B.2g) – This is comprised almost entirely of "Imputed Rental", a national accounts concept which captures the value to owner-occupiers of living in their own home. This isn't something that a household would see on a bank balance and is therefore excluded.

- Employers' Social Contributions (D.12) – This refers to the contributions made by employers towards social insurance schemes held by their employees. This is excluded is it not seen by households until they draw their pension, which falls under a separate transaction.

- FISIM (resource and use) – FISIM, or financial intermediation services indirectly measured, refers to charges made by financial corporations acting as intermediaries which are implicitly included the interest rates offered on loans and savings. Within the national accounts FISIM adjustments are made to return these implicit charges back to households, however as these charges are real the adjustment is excluded from cash RHDI.

- Income Payable on Pension Entitlements (D.442), – This is comprised of the earnings which arise from the investment of "technical funds" held by pension providers. These earnings are not actually seen by households as they are returned to the pension fund later on in the accounts and as such have been excluded from the cash measure of RHDI.

- Retained earnings attributable to collective investment fund shareholders (D.4432), – This represents the earnings made by collective investment funds which are not paid out as dividends. These are paid to households, such that the investment fund is left with no saving. These retained earnings are then paid back to the investment fund in the financial account. Again, this is a transfer which households don't really see and as such it has been excluded from cash RHDI

- Non-life insurance claims (D.72), – This refers to the funds received by households when making claims on non-life insurance policies. Whilst within the system of national accounts these are treated as current transfers, within social survey sources these sorts of transfers are not normally captured as income and so have been excluded from cash RHDI. (See Canberra Group Handbook)

- Employers' actual social contributions (D.611) and Employers' imputed social contributions (D.612) - Excluded as these transactions are the use counterpart to D.12 which was excluded above

- Households' social contribution supplements (D.614) – Excluded as this is the use counterpart to D.442 which was excluded above

Adjustments to transactions which calculate the saving ratio

- Adjustments for the change in pensions (D.8) – This adjustment adds back in the amount that households have paid into pension schemes net of any payments they have received from these schemes. This is because the contributions that households make to pension schemes are effectively a form of saving whilst the benefits received from these schemes are effectively reduce savings. The saving ratio calculated in this analysis excludes this adjustment as it is not something that is directly observed by households as saving.

- Households' final consumption expenditure (P.3) – To calculate savings, households' expenditure is deducted from households' disposable income. To reflect some of the changes made to the measurement of RHDI above, there are also corresponding changes which need to be made to the measurement of households' expenditure. Imputed rental of owner occupiers is deducted from expenditure as it is not directly observed by households.

- FISIM is also deducted from expenditure as this is already accounted for in the calculation of Gross Disposable Income

11. Annex B

Transaction groupings for contributions chart

Mixed income:

Gross Mixed Income (B.3g)

Wages and Salaries:

Wages and Salaries (D.11)

Income from savings and investment:

Interest before FISIM allocation (D.41g) (resource) Interest before FISIM allocation (D.41g) (use) – Net interest basis only Dividends - (D.421) Withdrawal of Income from quasi-corporations (D.422) Income attributable to insurance policy holders (D.441) Collective Investment Fund Shareholders – Dividends (D.4431)

Benefits and transfers received:

Social benefits other than transfers in kind (D.62) (resource) Miscellaneous current transfers (D.75) (resource)

Current direct taxation:

Taxes on Income (D.51) Other Current Taxes (D.59)

Net rent:

Rent (D.45) (resource) Rent (D.45) (use)

Social contributions and transfers paid:

Households' actual social contributions (D.613) Social insurance scheme service charge (D.61SC) Social benefits other than transfers in kind (D.62) (use) Net non-life insurance premiums (D.71) Miscellaneous current transfers (D.75) (use)