Office for National Statistics

Article

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

Alternative Measures of Real Household Disposable Income and the Saving Ratio

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1. Introduction

This article provides an update to data for the "Alternative measures of real household disposable income and the saving ratio" that was published on 20 August 2015 where we considered an adjusted measure of Real Household Disposable Income (RHDI) and the saving ratio which attempted to quantify disposable income in a way which better represents actual income received by households.

It should be noted that following user feedback, for this article the RHDI and saving ratio measured on a "cash basis" are calculated using combined household and non-profit institutions serving households (NPISH) data. This article is presented with data consistent with the annual Blue Book 2015 which was published on 30 October 2015.

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

2. Real Household Disposable Income

There are 2 measures of household and NPISH income, in real terms or in current prices (these are sometimes known as nominal prices, meaning that they included the effects of price changes).

Gross household and NPISH disposable income (GDI) is the estimate of the total amount of money from income that households and NPISH have available from wages received, revenue of the self-employed, social benefits and net property income (such as interest on savings and dividends from shares) less taxes on income and wealth. All the components that make up GDI are estimated in current prices.

However, by adjusting GDI to remove the effects of inflation, we are able to estimate another useful measure of disposable income called real disposable income. This is a measure of real purchasing power of household and NPISH incomes, in terms of the physical quantity of goods and services they would be able to purchase. We use the household and NPISH expenditure deflator to remove the effects of price inflation.

We publish a measure of the RHDI within the quarterly United Kingdom economic accounts (UKEA).

3. Making adjustments to RHDI

The measure of RHDI published within the United Kingdom economic accounts (UKEA) contains certain elements which, though they are required 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. This is 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 helpful 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.

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

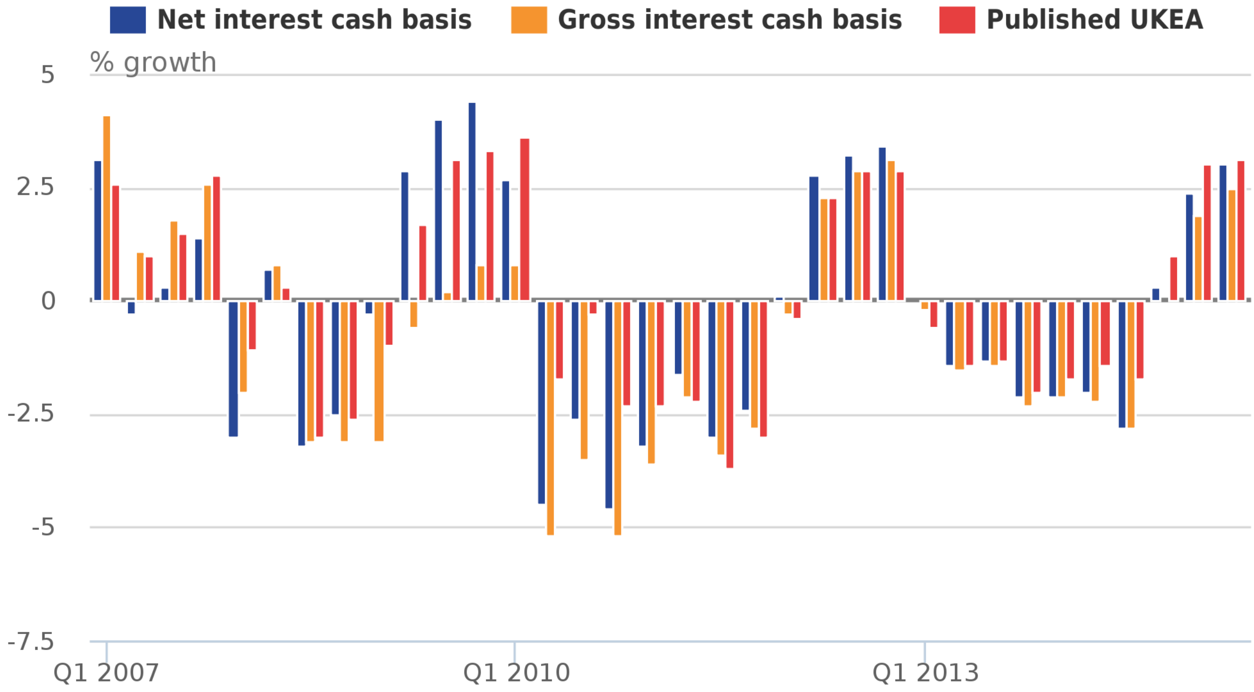
Whilst many of the decisions about which transactions should be included in the calculation of cash RHDI are relatively straightforward, one transaction for which the case is finely balanced is Interest Paid (D41g-use). This refers to the interest paid by households on loans and other forms of credit.

On the one hand, interest payments are an expense that households directly observe and therefore should be included in the calculation of a "cash" measure of RHDI. However a different view is that decisions about paying interest, for example deciding whether or not to take out a loan, are taken after knowing how much disposable income you have.

Therefore throughout the following analysis we present cash RHDI on 2 different basis:

- 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

Figure 1: Net, gross interest and published RHDI per capital growth rates



Source: Office for National Statistics

Figure 1 shows the growth rates for household and NPISH cash RHDI per capita on a gross and net interest basis alongside the standard per capita as published in the UKEA, comparing quarter with the corresponding quarter in the previous year.

Comparing the level of RHDI per capita for each of the 3 measures in Quarter 1 (January to March) 2008, with the level of income in Quarter 2 (April to June) 2015, the published measure and the measure on a net interest cash basis estimate RHDI per capita to have risen by 2.3% and 1.6% respectively. However, cash RHDI per capita on a gross interest basis has fallen by 4.6%.

The main sustained period where the growth rates diverge is between Quarter 1 (January to March) 2009 and Quarter 4 (October to December) 2010. During this period, the growth rate for Cash RHDI per capita on a gross interest basis is significantly lower than for the other 2 measures.

The reason that the gross interest measure shows lower growth than the other "net" measures is that the gross interest measure excludes interest paid by households and NPISH from its calculation of income. So, when interest rates fell in 2008 and 2009, this measure recorded the fall in interest received by households but not the corresponding fall in interest paid by households. As the base rate has remained at 0.5% there has been little opportunity for the gross interest measure to show stronger growth than the other measures.

4. What is the saving ratio?

The saving ratio estimates the amount of money households and NPISH have available to save (known as gross saving) as a percentage of their total disposable income (known as total available resources).

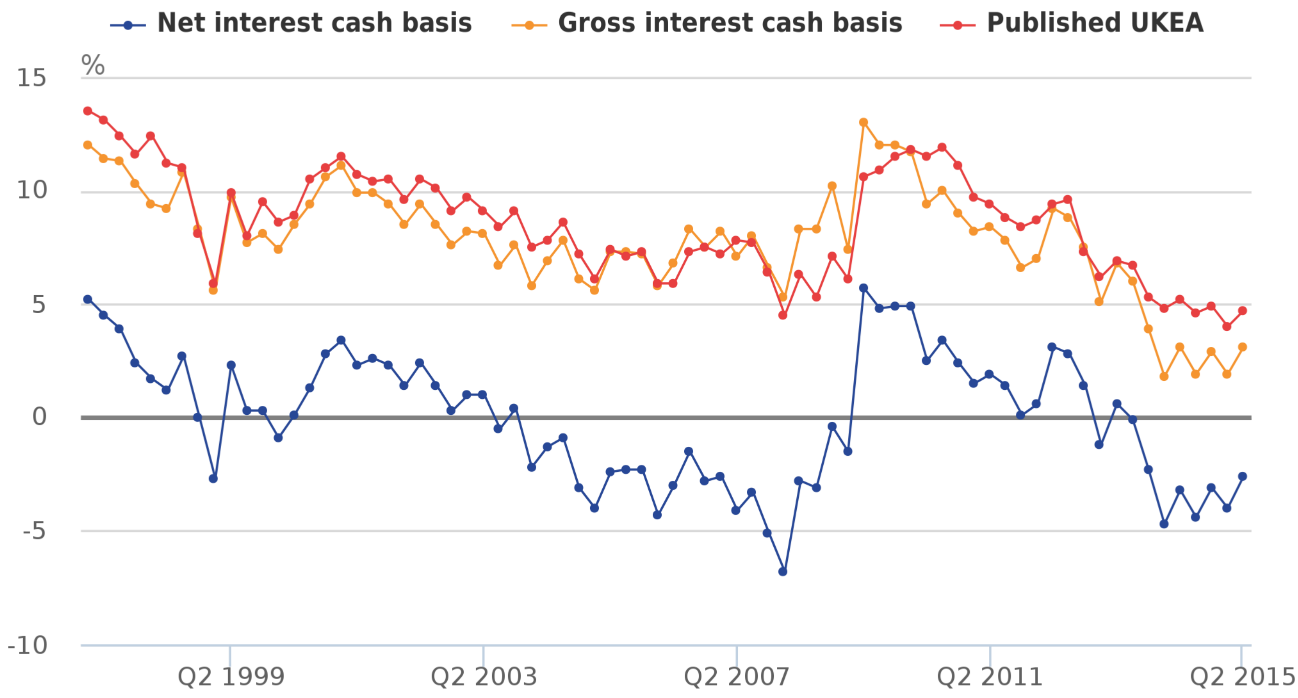
Gross saving is the difference between households’ and NPISH total available resources (mainly wages received, revenue of the self-employed, social benefits and net property income such as interest on savings and dividends from shares, less taxes on income and wealth) and their current consumption (expenditure on goods and services).

All of the components that make up gross saving and total available resources, are estimated in current prices (CP).

5. Making adjustments to the saving ratio

Following the cash RHDI approach, the components of the saving ratio were also assessed on whether they would be directly observed by households and then 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), imputed rentals of owner occupiers and charges for financial intermediation services indirectly measured (FISIM) from households' final consumption expenditure (P.3) (see Annex A).

Figure 2: Comparisons between latest published saving ratio and cash saving ratio on a net and gross interest basis



Source: Office for National Statistics

Figure 2 shows the national accounts consistent saving ratio alongside the 2 cash saving ratios; on a net and a gross interest basis.

The 3 measures follow broadly the same pattern throughout the timeseries from Quarter 1 (January to March) 1997 through to Quarter 2 (April to June) 2015. There is a decline in all the saving ratio measures from the beginning of 1997 through to Quarter 1 (January to March) 2008.

The estimates on a interest basis shows a negative saving ratio for Quarter 4 (October to December) 1998 to Quarter 1 (January to March) 1999, Quarter 1 (January to March) 2000 and from Quarter 1 (January to March) 2003 to Quarter 1 (January to March) 2009.

During these periods expenditure exceeded income. This can occur by either drawing down existing savings or by borrowing. We know that during this period there was an increase in consumer debt and in particular mortgage debt, so increases in borrowing are likely to have had an impact on falling saving ratios over this period.

From the beginning of Quarter 1 (January to March) 2008 to Quarter 2 (May to June) 2009 all 3 measures of the saving ratio rose sharply. There was greater economic and financial uncertainty which typically results in households cutting back on expenditure and increasing their level of saving.

From Quarter 2 (April to June) 2009 onwards, there has been an overall decline in the long term trend of the saving ratio estimate of all 3 measures. From Quarter 3 (July to September) 2013 to Quarter 1 (January to March) 2014 there was a sharp decrease in the net and gross interest measures compared to the published "official" saving ratio which reflects differences due to the removal of imputed transactions.

On a net basis, the cash saving ratio has remained negative between Quarter 3 (July to September) 2013 to Quarter 2 (April to June) 2015.

6. Background notes

1. This article is part of a developmental product and we are currently exploring options for the future content of this publication and would welcome feedback from users.

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3. 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

7. 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. Items in grey have been excluded from the calculations for the'cash' RHDI.

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

Secondary distribution of primary 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

Additional series that was removed from the calculation for the cash saving ratio.

Use of disposable income account

Resources		Uses	
Transaction	Code	Transaction	Code
Gross Disposable Income	B.6g	Individual consumption expenditure exc FISIM and imputed rent	P.31
Adjustments for the changes to pensions	D.8	Gross saving	B.8g

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 as 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 in 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) – The saving ratio calculated in this analysis excludes this adjustment as it is not something that is directly observed by households as saving. 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 reduced savings

- 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