

Article

Alternative measures of UK households' income and saving: December 2016

Experimental Statistics on the impact of removing "imputed" transactions from real household disposable income and the saving ratio to better represent the economic experience of UK households.

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Table of contents

1. [Main points](#)
2. [Things you need to know about this release](#)
3. [Real households and non-profit institutions serving households \(NPISH\) disposable income](#)
4. [Households and non-profit institutions serving households \(NPISH\) saving ratio](#)
5. [Quality and methodology](#)

1 . Main points

- Real households and non-profit institutions serving households (NPISH) disposable income on a cash basis decreased by 0.7% in Quarter 3 (July to Sept) 2016, following an increase of 0.8% in Quarter 2 (Apr to June) 2016.
- In Quarter 3 2016 real households and NPISH disposable income on a cash basis was 10.4% higher than its pre-downturn peak in Quarter 3 2007.
- The saving ratio on a cash basis fell to negative 0.8% in Quarter 3 2016 from 0.6% in Quarter 2 2016.
- This was the first time that the saving ratio on a cash basis was negative since Quarter 1 2015, when it was negative 0.4%.

2 . Things you need to know about this release

This article provides an update to data for the experimental [Alternative measures of real households disposable income and the saving ratio: Sept 2016](#) that was published on 12 October 2016. These data estimate disposable income and the saving ratio less the transactions that are imputed and unobserved by households.

This article compares experimental cash-based measures of real households and non-profit institutions serving households (NPISH) disposable income and the saving ratio with the internationally comparable national accounts defined methodology as published in the [Quarterly National Accounts](#) and [Quarterly Sector Accounts](#).

The data within this article are consistent with the [Quarterly National Accounts](#) published on 23 December 2016.

Revisions in this bulletin are made in line with the [National Accounts Revisions Policy](#). The earliest period open for revision in this release is Quarter 1 (Jan to Mar) 2015.

This is an [experimental product](#) and we are reviewing the methodology used to produce the cash measures of real households and NPISH disposable income and the saving ratio. We welcome your feedback about the future content of the article and publication tables.

Definitions of the terminology used throughout this article and an explanation of the methodology used to calculate the cash measures of real households and NPISH disposable income and the saving ratio can be found in the Quality and methodology section of this article.

Details of the [policy governing the release of new data](#) are available from the [UK Statistics Authority](#).

3 . Real households and non-profit institutions serving households (NPISH) disposable income

What is real households and NPISH disposable income?

There are 2 measures of households and NPISH disposable income, in real terms or in current prices (also called nominal prices, where the effects of price changes have not been removed).

Households and NPISH gross disposable income (GDI) is the estimate of the total amount of income that households and NPISH have available from wages received, income of the self-employed, social benefits and net property income (income from financial assets, such as net 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 households and NPISH disposable income (RHDI). This is a measure of the real purchasing power of households and NPISH incomes, in terms of the quantity of goods and services they would be able to purchase. We use the households and NPISH final consumption expenditure implied deflator (an index of households and NPISH inflation, which is used to calculate real households and NPISH spending) to remove the effects of inflation.

We publish the official national accounts measure of RHDI within the [Quarterly Sector Accounts](#) bulletin.

Making adjustments to RHDI

The measure of real households and NPISH disposable income published within the [Quarterly Sector Accounts](#) contains transactions which, despite being required for compiling a sequence of internationally comparable National Accounts, are not directly observed by households.

For example, imputed rental represents the value of housing services that owner-occupiers derive from their homes. This is the amount that they would have to pay in rental to achieve the same consumption of housing services. Whilst this concept is important when measuring economic output, it is not expenditure (and income) directly observed by homeowners. As a result, the national accounts measure of RHDI can differ from the perceived experience of households.

We therefore consider “cash RHDI”. This measure removes imputed rentals and other imputed transactions resulting in a measure of RHDI that is a closer representation of disposable income as measured by social surveys. This is mainly achieved by following guidance within the [Organisation for Economic Co-operation and Development Framework for Statistics on the Distribution of Households Income, Consumption and Wealth](#) and the [United Nations Economic Commission for Europe \(UNECE\) Canberra Group Handbook on Household Income Statistics](#).

For a full list of those transactions that have been excluded from the cash measure of RHDI please see the Quality and methodology section of this article.

RHDI on a national accounts basis and RHDI on a cash basis both fell in Quarter 3 (July to Sept) 2016

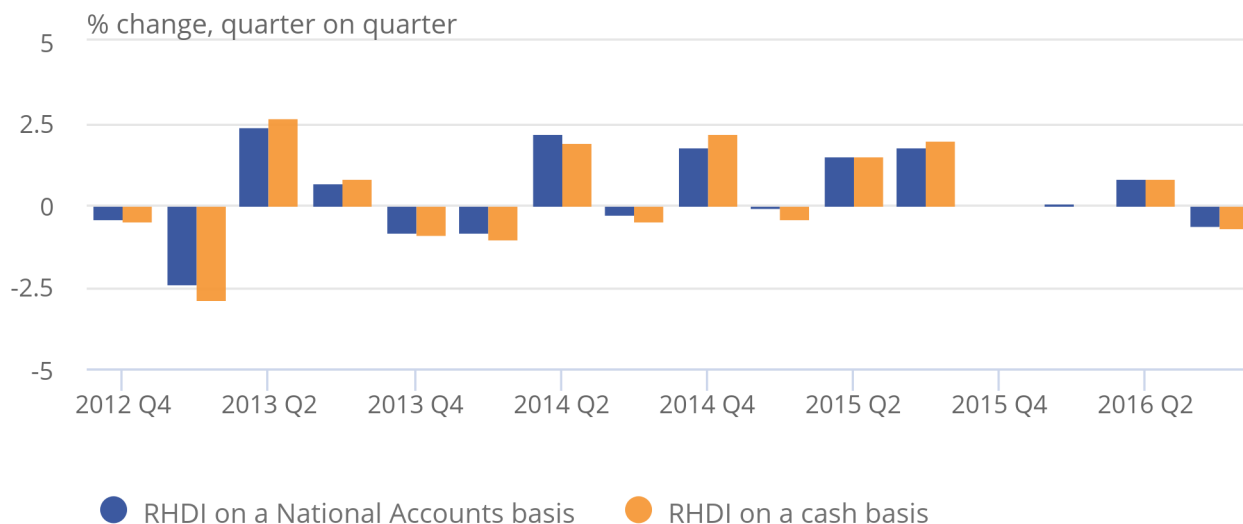
Real households and NPISH disposable income on a national accounts basis decreased by 0.6% in Quarter 3 (July to Sept) 2016, following an increase of 0.8% in Quarter 2 (Apr to June) 2016. On a cash basis, real households and NPISH disposable income decreased by 0.7% in Quarter 3 2016, following an increase of 0.8% in Quarter 2 2016. Real households and NPISH disposable income on a cash basis is now 10.4% higher than its pre-downturn peak in Quarter 3 2007.

Figure 1: RHDl on a national accounts basis and RHDl on a cash basis, percentage change quarter on quarter

UK, Quarter 4 (Oct to Dec) 2012 to Quarter 3 (July to Sept) 2016

Figure 1: RHDl on a national accounts basis and RHDl on a cash basis, percentage change quarter on quarter

UK, Quarter 4 (Oct to Dec) 2012 to Quarter 3 (July to Sept) 2016



Source: Office for National Statistics

The fall in RHDl on a cash basis of 0.7% in Quarter 3 2016 was due to a fall in gross disposable income on a cash basis of 0.2% and a rise in the households and NPISH final consumption expenditure implied deflator of 0.5%. The fall in gross disposable income on a cash basis was driven by a rise in taxes on income and wealth of £1.4 billion, falls in net social benefits other than transfers in kind of £1.0 billion and net miscellaneous transfers of £0.3 billion and other smaller changes throughout the accounts. This was partially offset by rises in wages and salaries of £1.6 billion, net property income of £0.7 billion and gross mixed income of £0.5 billion.

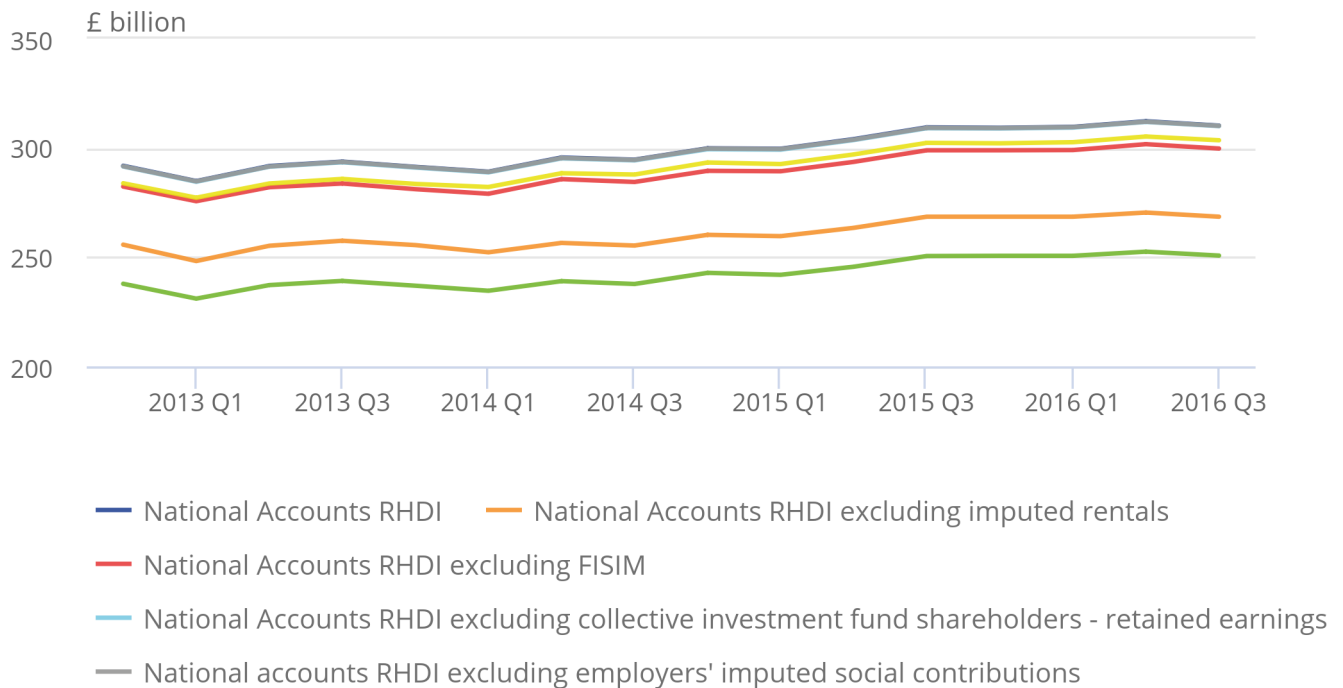
Gross disposable income on a cash basis fell by £544 million in Quarter 3 2016, compared with the previous quarter. The difference in levels reflects the removal of imputed transactions. The removal of imputed rentals from RHDl on a national accounts basis has the largest impact, whilst the removal of employers' imputed social contributions from RHDl on a national accounts basis has the smallest impact. Figure 2 shows the impacts of removing imputed transactions from the national accounts measure of RHDl to derive RHDl on a cash basis between Quarter 4 (Oct to Dec) 2012 and Quarter 3 2016.

Figure 2: Impacts of removing imputed transactions from the national accounts measure of RHDl to derive RHDl on a cash basis

UK, Quarter 4 (Oct to Dec) 2012 to Quarter 3 (July to Sept) 2016

Figure 2: Impacts of removing imputed transactions from the national accounts measure of RHDl to derive RHDl on a cash basis

UK, Quarter 4 (Oct to Dec) 2012 to Quarter 3 (July to Sept) 2016



Source: Office for National Statistics

RHDl on a cash basis has been revised from Quarter 1 (Jan to Mar) 2015

Since the publication of [Alternative measures of real households disposable income and the saving ratio: Sept 2016](#) there have been revisions to the RHDl on a cash basis from Quarter 1 (Jan to Mar) 2015 in line with the [National Accounts Revisions Policy](#).

RHDl on a cash basis has been revised up in each quarter between Quarter 1 2015 and Quarter 4 (Oct to Dec) 2015, and down in Quarter 1 2016 and Quarter 2 (Apr to June) 2016.

In Quarter 1 2015, cash RHDl was revised up by £1.3 billion. This was primarily due to an upward revision to net property income of £1.6 billion, partially offset by a downward revision to net social benefits other than transfers in kind of £0.2 billion and an upward revision to net non-life insurance of £0.2 billion. This resulted in an upward revision to cash RHDl growth to negative 0.4% from negative 0.9% in Quarter 1 2015.

In Quarter 2 2015, cash RHDl growth was revised down to 1.5% from 2.0%. Despite an upward revision to gross disposable income on a cash basis and an unchanged households and NPISH final consumption expenditure implied deflator, cash RHDl growth was revised down due to the upward revision to RHDl on a cash basis of £1.3 billion in Quarter 1 2015.

The largest revision to cash RHDl was in Quarter 1 2016 when it was revised down by £1.6 billion. This was primarily due to a downward revision to net social benefits other than transfers in kind of £1.4 billion, upward revisions to gross mixed income of £0.4 billion, net non-life insurance of £0.3 billion and net social contributions of £0.2 billion, partially offset by a fall in taxes on income and wealth of £0.1 billion. This resulted in a downward revision in cash RHDl growth to 0.0% from 0.9%.

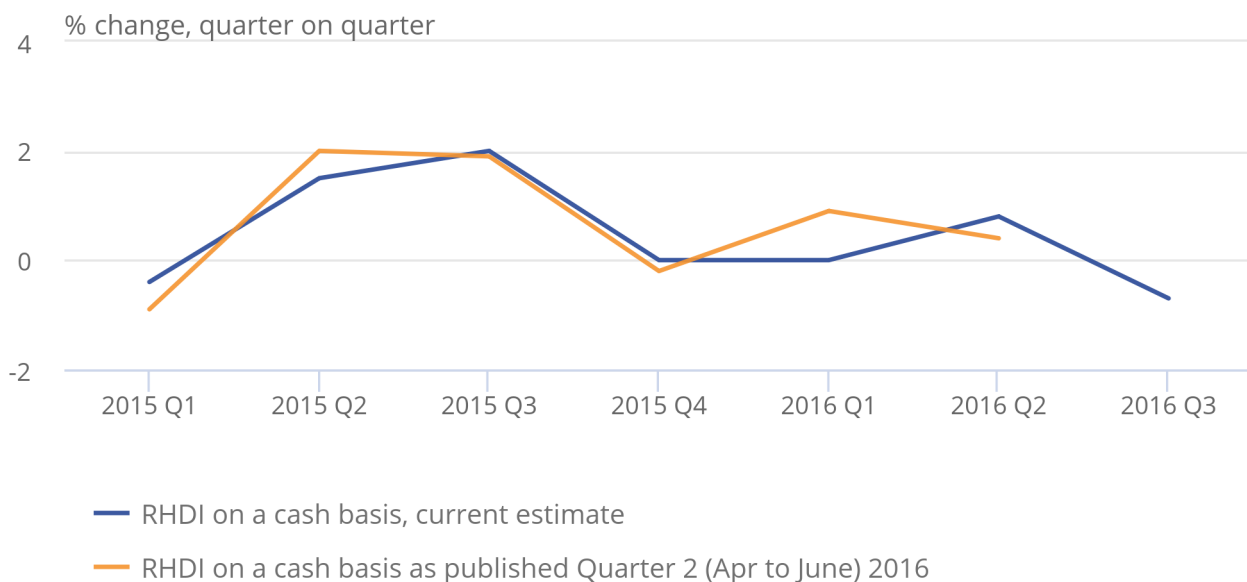
Figure 3 shows the current and previously published estimates of RHDl on a cash basis, quarterly growth rates.

Figure 3: Current and previously published estimates of RHDl on a cash basis, percentage change quarter on quarter

UK, Quarter 1 (Jan to Mar) 2015 to Quarter 3 (July to Sept) 2016

Figure 3: Current and previously published estimates of RHDl on a cash basis, percentage change quarter on quarter

UK, Quarter 1 (Jan to Mar) 2015 to Quarter 3 (July to Sept) 2016



Source: Office for National Statistics

4 . Households and non-profit institutions serving households (NPISH) saving ratio

What is the saving ratio?

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

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

The saving ratio can be volatile and is sensitive to even relatively small movements to its components, particularly on a quarterly basis. This is because gross saving is a small difference between 2 numbers. It is therefore often revised at successive publications when new or updated data are included.

The saving ratio is considered to be an indicator of households and NPISH confidence. A rise in the saving ratio may be the result of an increase in income, a decrease in expenditure, or some combination of the two. A rise in the saving ratio may be an indication that households are acting more cautiously by spending less.

Conversely, a fall in the saving ratio may be an indication that households are more confident and spending more. Other factors such as interest rates and inflation should also be considered when interpreting the households and NPISH saving ratio.

The households and NPISH saving ratio is published in the [Quarterly Sector Accounts](#) bulletin.

Making adjustments to the saving ratio

There are additional adjustments required to calculate the saving ratio on the same “cash” basis as cash RHDI. Firstly, the adjustment for the change in pension entitlements is removed from the use of disposable income account. Secondly, imputed rentals of owner-occupiers and charges for financial intermediation services indirectly measured (FISIM) are removed from households and NPISH final consumption expenditure. For further information, please see the Quality and methodology section of this article.

The national accounts saving ratio and the cash saving ratio both fell in Quarter 3 (July to Sept) 2016

The saving ratio on a national accounts basis fell to 5.6% in Quarter 3 (July to Sept) 2016 from 6.1% in Quarter 2 (Apr to June) 2016. On a cash basis, the saving ratio fell to negative 0.8% in Quarter 3 2016 from 0.6% in Quarter 2 2016.

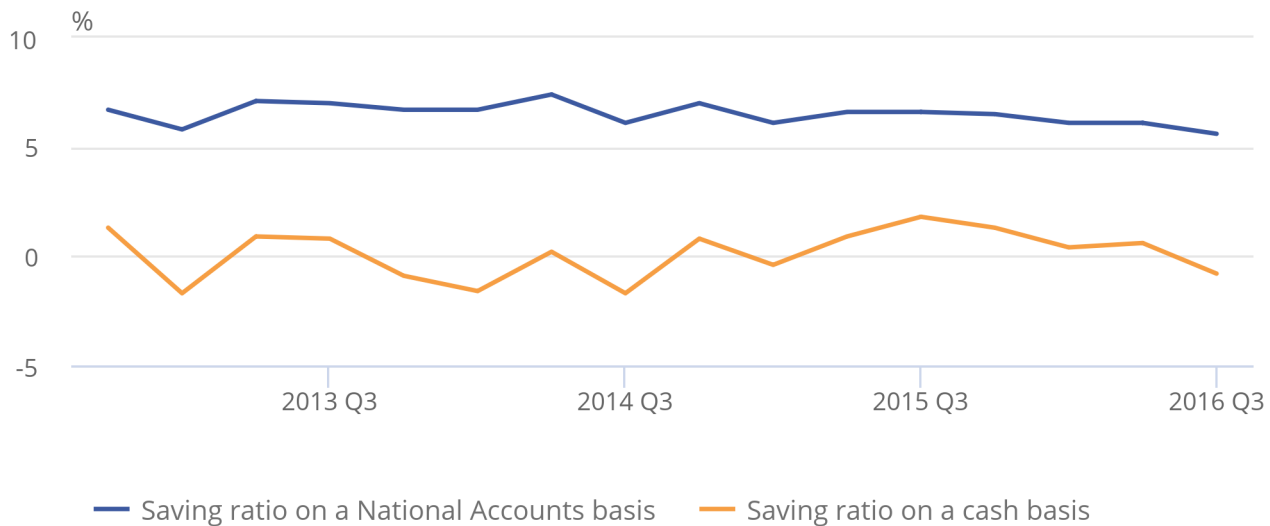
The saving ratio on a cash basis was negative in every quarter between Quarter 1 (Jan to Mar) 2004 and Quarter 3 2008 and has been negative in 6 of the last 15 quarters since Quarter 1 2013. It was last negative in Quarter 1 2015, when it was negative 0.4%. The saving ratio on a cash basis was last lower in Quarter 3 2014, when it was negative 1.7%.

Figure 4: National accounts saving ratio and cash saving ratio

UK, Quarter 4 (Oct to Dec) 2012 to Quarter 3 (July to Sept) 2016

Figure 4: National accounts saving ratio and cash saving ratio

UK, Quarter 4 (Oct to Dec) 2012 to Quarter 3 (July to Sept) 2016



Source: Office for National Statistics

The fall in the saving ratio on a cash basis in the latest quarter reflects an increase in final consumption expenditure of £3.2 billion and a fall in total available resources on a cash basis of £0.5 billion.

The fall in total available resources on a cash basis was driven by a rise in taxes on income and wealth of £1.4 billion, falls in net social benefits other than transfers in kind of £1.0 billion and net miscellaneous transfers of £0.3 billion and other smaller changes throughout the accounts. This was partially offset by rises in wages and salaries of £1.6 billion, net property income of £0.7 billion and gross mixed income of £0.5 billion.

The saving ratio on a cash basis fell by more than the saving ratio on a national accounts basis in Quarter 3 (July to Sept) 2016

In recent quarters, the saving ratio on a national accounts basis has followed a broadly similar trend to the saving ratio on a cash basis although there are differences in the extent to which the saving ratios have risen and fallen in each quarter.

The saving ratio on a national accounts basis fell by 0.5 percentage points in Quarter 3 (July to Sept) 2016. The saving ratio on a cash basis fell by 1.4 percentage points in Quarter 3 2016.

In Quarter 3 2016, on a national accounts basis, a rise in final consumption expenditure of £3.7 billion was partially offset by an increase in total resources of £2.0 billion resulting in a fall in gross saving of £1.7 billion. On a cash basis, a smaller rise in final consumption expenditure of £3.2 billion and a fall in total resources of £0.5 billion resulted in a fall in gross saving of £3.7 billion. Therefore gross saving fell by £2.0 billion more on a cash basis, leading the saving ratio on a cash basis to fall by more than the saving ratio on a national accounts basis.

The difference in the magnitude of the falls in the saving ratio in Quarter 3 2016 reflects a rise in the value of those transactions removed from the calculation of gross disposable income of £0.2 billion. It also reflects a rise in households' actual pension contributions of £1.1 billion, a fall in net social benefits other than transfers in kind of £1.0 billion, partially offset by rises in the FISIM and imputed rentals element of final consumption expenditure of £0.5 billion and a fall in social insurance service scheme charges of £0.2 billion.

On a national accounts basis, rises in households' actual pension contributions and falls in net social benefits other than transfers in kind and the social insurance scheme service charge have no impact on total available resources as they are offset by the adjustment for the change in pension entitlements. This adjustment is excluded from the cash measure.

The saving ratio on a cash basis has been revised from Quarter 1 (Jan to Mar) 2015

Since the publication of [Alternative measures of real households disposable income and the saving ratio: Sept 2016](#) there have been revisions to the saving ratio on a cash basis from Quarter 1 (Jan to Mar) 2015 in line with the [National Accounts Revisions Policy](#).

The saving ratio on a cash basis has been revised up in each quarter between Quarter 1 (Jan to Mar) 2015 and Quarter 4 (Oct to Dec) 2015, down in Quarter 1 2016 and up in Quarter 2 (Apr to June) 2016.

In Quarter 1 2015, the saving ratio on a cash basis was revised up by 0.6 percentage points. This reflects an upward revision to total available resources on a cash basis of £1.4 billion and an increase in final consumption expenditure on a cash basis of £0.1 billion.

Between Quarter 2 2015 and Quarter 4 2015, the upward revisions to the saving ratio on a cash basis reflect upward revisions to total available resources on a cash basis and downward revisions to final consumption expenditure on a cash basis.

In Quarter 1 2016, the saving ratio on a cash basis was revised down by 0.6 percentage points. This reflects downward revisions to total available resources on a cash basis of £1.4 billion and final consumption expenditure on a cash basis of £0.1 billion.

In Quarter 2 2016, the saving ratio on a cash basis was revised up by 0.1 percentage points. This reflects downward revisions to final consumption expenditure on a cash basis of £1.1 billion and total available resources on a cash basis of £0.8 billion.

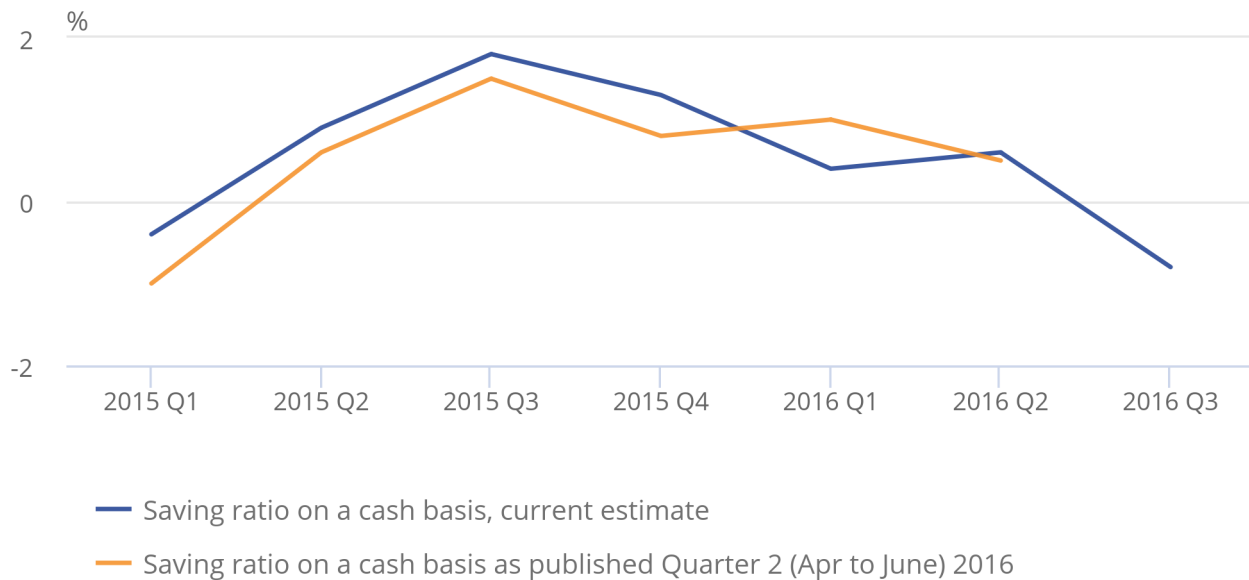
Figure 5 shows the current and previously published estimates of the saving ratio on a cash basis.

Figure 5: Current and previously published estimates of the saving ratio on a cash basis

UK, Quarter 1 (Jan to Mar) 2015 to Quarter 3 (July to Sept) 2016

Figure 5: Current and previously published estimates of the saving ratio on a cash basis

UK, Quarter 1 (Jan to Mar) 2015 to Quarter 3 (July to Sept) 2016



Source: Office for National Statistics

5 . Quality and methodology

Transactions that feature in the calculation of gross disposable income and the saving ratio

To calculate gross disposable income we have to work through the allocation of primary income account and secondary distribution of income account of the households and non-profit institutions serving households (NPISH) sector, adding up all the resources and subtracting all the uses in each of the accounts.

The transactions in grey in the tables have been excluded from the calculations of cash RHDl and the cash saving ratio in line with the [OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth](#).

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		
Earnings on property income	D.423		
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 income account

Resources		Uses	
Transaction	Code	Transaction	Code
Balance of gross primary income	B.5g	Taxes on income	D.51
Employers' imputed social contributions	D.612	Other current taxes	D.59
Social security benefits in cash	D.621	Employers' actual social contributions	D.611
Other social insurance benefits	D.622	Employers' imputed social contributions	D.612
Social assistance benefits in cash	D.623	Households' actual social contributions	D.613
Non-life insurance claims	D.72	Households' social contribution supplements	D.614
Miscellaneous current transfers	D.75	Social insurance scheme service charge	D.61SC
		Other social insurance benefits	D.622
		Social assistance benefits in cash	D.623
		Net non-life insurance premiums	D.71
		Miscellaneous current transfers	D.75
		Gross disposable income	B.6g

Use of disposable income account

Additional transactions used to calculate the saving ratio.

Resources		Uses	
Transaction	Code	Transaction	Code
Gross disposable income	B.6g	Individual consumption expenditure excluding FISIM and imputed rental	P.31
Adjustments for the changes to pensions	D.8		
		Gross saving	B.8g

For information on all of these transactions, please see the [European System of Accounts 2010](#).

Adjustments to transactions that calculate real households and NPISH disposable income

Allocation of primary income account

Gross operating surplus (B.2g) – This is comprised almost entirely of imputed rental, a national accounts concept that estimates the value to owner-occupiers of living in their own home. This is not expenditure or income that households would observe 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 is not seen by households until they draw their pension, which falls under a separate transaction.

FISIM resource and use (P.119) – FISIM, or financial intermediation services indirectly measured, refers to charges made by financial corporations acting as intermediaries that 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 RHDl.

Income payable on pension entitlements (D.442) – This comprises the earnings that 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 in the accounts and as such have been excluded from cash RHDl.

Retained earnings attributable to collective investment fund shareholders (D.4432) – This represents the earnings made by collective investment funds that 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. Again, this is a transfer that households do not directly observe and as such it has been excluded from cash RHDl.

Secondary distribution of income account

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 have therefore been excluded from cash RHDl. (See [Canberra Group Handbook](#)).

Employers' actual social contributions (D.611) and employers' imputed social contributions (D.612) – Excluded as these transactions are the use counterparts 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.

Additional adjustments to transactions that calculate the saving ratio

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

Households and NPISH individual consumption expenditure (P.31) – To calculate saving, households and NPISH expenditure is deducted from households and NPISH disposable income. To reflect some of the changes made to the measurement of RHDl above, there are also corresponding changes that need to be made to the measurement of households and NPISH expenditure. Imputed rental of owner-occupiers and FISIM are deducted from expenditure as they are not directly observed by households.

