

Article

National Accounts: Detailed assessment of changes to sector and financial accounts, 1997 to 2012

An indicative impact of changes to the main non-financial and financial accounts estimates, being introduced when revised figures for the UK National Accounts are published on 29 September 2017.

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1. Executive summary

This article provides an indicative impact of changes to the main non-financial and financial accounts (sector and financial accounts) estimates, being introduced when revised figures for the UK National Accounts, consistent with Blue Book 2017 and Pink Book 2017, are published on 29 September 2017. This article covers the period from 1997 to 2012.

This article includes the improvements already announced in the Impact of Blue Book 2017 changes on the Sector and Financial Accounts, 1997 to 2012, published on 19 April 2017, for the treatment of corporate bonds interest and the measurement of the household and non-profit institutions serving households sectors.

This article brings together these improvements as well as further methodological and other improvements for Blue Book 2017 and Pink Book 2017, which were announced in the article <u>National Accounts articles: Latest developments to national accounts and balance of payments – changes to be implemented for Blue Book 2017 and Pink Book 2017</u>, published on 21 September 2016. All of the improvements that impact on current price (or nominal) and chained volume (CVM or "real") gross domestic product (GDP) for the years 1997 to 2012 have already been published, on 16 February 2017 and 13 March 2017 respectively.

2. Introduction

This article is part of a <u>series</u> describing changes to national accounts and improvements that will be made on 29 September 2017 when we publish revised estimates, including gross domestic product (GDP), the sector and financial accounts and the Balance of Payments.

Changes will be made in line with international standards adopted by all EU member states and with worldwide best practice. These changes, as well as additional improvements that are being made, will ensure that the UK National Accounts continue to provide a reliable framework for analysing the UK economy and comparing it with the economies of other countries. This article focuses on the impact of methodological improvements to the sector and financial accounts. It provides a summary of each of the main improvements being implemented alongside the indicative overall impact and revisions to net lending or net borrowing.

The figures presented in this article are indicative estimates while final quality assurance is being undertaken. For that reason, indicative impacts have been given for the non-financial accounts and main economic indicators such as the saving ratio and real households' disposable income. However, for the financial accounts and financial balance sheets, only the institutional sectors and transactions affected are highlighted. Indicative impacts on the financial accounts and balance sheets will be published in August 2017.

The remainder of the article is structured as follows:

- Section 3 provides tables showing the indicative overall average impacts and revisions to the net lending or borrowing and other main aggregates in the non-financial accounts, by transaction and sector
- Section 4 provides detail about the publication of changes in volume of assets account and revaluation account
- Section 5 provides indicative estimates of the "cash" saving ratio for the household sector as defined in the "alternative measures of UK real households disposable income and the saving ratio"
- Appendix A provides charts showing the indicative estimates of the net lending or borrowing for the nonfinancial account, showing the impact of the changes to sectors

3. Methodological and other changes affecting the sector and financial accounts

3.1 Estimates of the impact on net lending or borrowing by sector

This article provides further information to the impacts on the net lending or net borrowing of the institutional sectors that were previously published in National Accounts articles: Impact of Blue Book 2017 changes on the Sector and Financial Accounts, 1997 to 2012 on 19 April 2017. In this article indicative impacts were provided for the saving ratio, net lending or net borrowing for certain sectors, current account balance and gross national income of bonds, and household and non-profit institutions serving household (NPISH) changes were provided. These impacts were from two of the most important improvements being made this year: treatment of corporate bonds interest, and measurement of the household and NPISH sectors. The following section sets out the average indicative impact (annually for 1997 to 2012) of these and all other changes introduced this year into the sector and financial accounts.

Table 1 sets out the indicative average impact of the changes being introduced into the sector and financial accounts for 1997 to 2012, when revised figures for the UK National Accounts, consistent with Blue Book 2017 and Pink Book 2017, are published on 29 September 2017.

Table 1: Latest indicative average impact of the changes to net lending or borrowing for the UK non-financial account (B.9n), by sector

UK, 1997 to 2012

£ billion

	Methodological changes and other improvements	Other changes	Indicative average revision to net lending or net borrowing for the non-financial account (B.9n)
Public corporations	-4.9	0.1	-4.8
Private non-financial corporations	-22.7	-4.0	-26.7
Financial corporations	-3.7	3.5	-0.2
Central government	0.4	-0.1	0.3
Local government	-0.4	0.0	-0.4
Households and non-profit institutions serving households	29.2	-6.1	23.1
Rest of the world	8.7	0.0	8.7

Source: Office for National Statistics

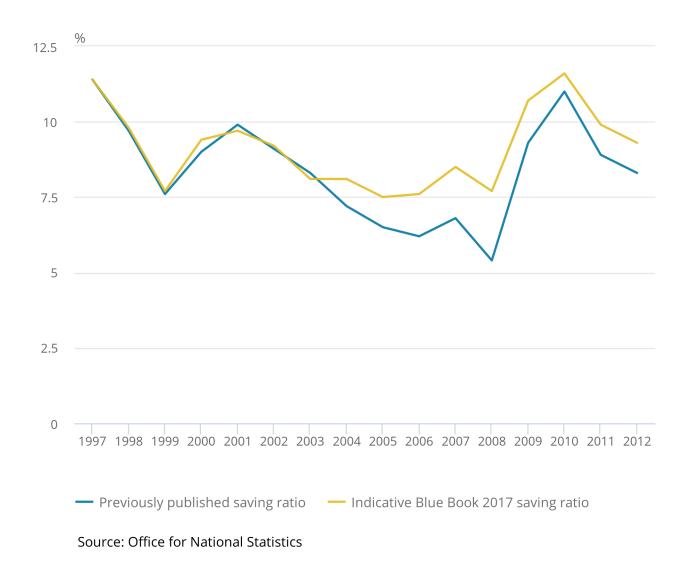
3.2 Impacts on the household and non-profit institutions serving households saving ratio and real household disposable income

Figure 1 shows the indicative revisions to the household and non-profit institutions serving households (NPISH) saving ratio for 1997 to 2012. Revisions to the saving ratio range from negative 0.3 percentage points in 2001 to 2.3 percentage points in 2008. The average revision to the saving ratio was 0.7 percentage points. This year we will introduce a household saving ratio and section 3.3.2 gives an indicative impact on this measure.

Figure 1: Indicative impact to the households and non-profit institutions serving households (NPISH) saving ratio

Figure 1: Indicative impact to the households and non-profit institutions serving households (NPISH) saving ratio

UK, 1997 to 2012



Source: Office for National Statistics

Table 2 gives a summary of the indicative impact to the saving ratio for the methodological changes that have been implemented for the sector and financial accounts, consistent with the Blue Book and Pink Book 2017. Details of these methodology changes can be found in section 3.3.

Table 2: Impact on households and non-profit institutions serving households saving ratio, percentage points, UK, 1997 to 2012

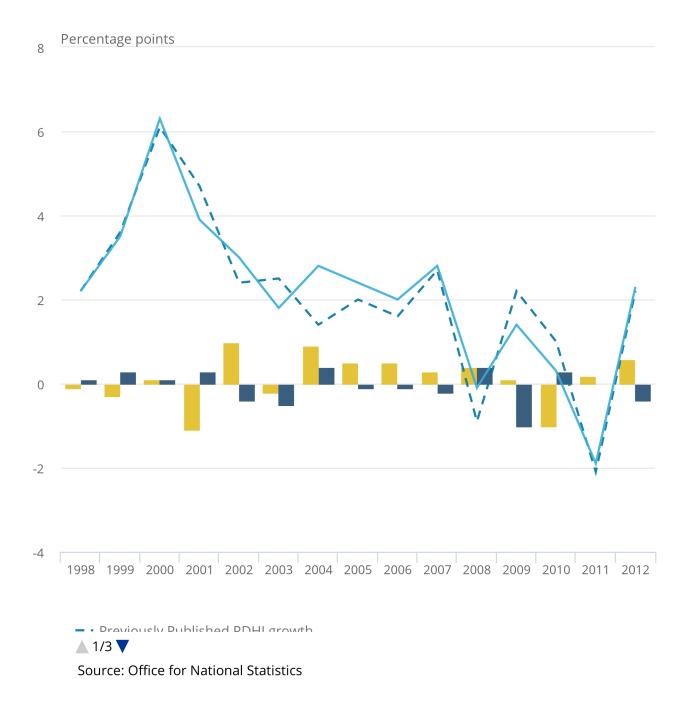
Average impact of changes for 1997 to 2012 Percentage points				
Household and NDISH onlit	1.3			
Household and NPISH split	1.3			
Actual rental and imputed rental	-0.1			
Education services	0.1			
Defined pension contributions	-0.1			
Source: Office for National Statistics				

Figure 2 shows the indicative revisions to real household and NPISH disposable income growth rates.

Indicative revisions to real household and non-profit institutions serving households (NPISH) disposable income growth

UK, 1997 to 2012

Indicative revisions to real household and non-profit institutions serving households (NPISH) disposable income growth



Source: Office for National Statistics

Notes:

1. Including the changing of the base year and the changes to the HN consumption deflator, which may change due to methodological changes to HN consumption.

3.3 Summary of the methodology improvements impacting sector and financial accounts

This section discusses the changes to the methodological improvements to the sector and financial accounts. Indicative impacts have been given for the non-financial accounts and main economic indicators such as the saving ratio and real households' disposable income. For presentational purposes, impacts over £0.1 billion are shown in the tables.

However, for the financial accounts and financial balance sheets, only the institutional sectors and transactions affected are highlighted whilst final quality assurance is undertaken.

3.3.1 Improvements to the treatment of corporate bonds interest, shares and dividends

Corporate bond interest

As previously announced, we are making a substantial improvement to the calculation of interest paid and received on UK corporate bonds. This improvement is the end result of internal investigations into the plausibility of the current estimates and working with the Bank of England to better measure these payments. The result of this change is an increase to the size of these payments from 1998 onwards. As the UK economy by definition makes all corporate bond interest payments, and some of the payments are received by overseas owners of these bonds, the change results in an increase in the current account deficit and a reduction in gross national income (GNI). An article, Improvements to the treatment of Corporate Bonds Interest published on 19 April 2017, gives further details of this methodological change.

Share ownership and dividends

We are making two improvements to the treatment of shares and dividends in Blue Book 2017. The first is that dividend payments have been reprocessed from 2011 onwards, resulting in some dividends being captured for the first time and some double-counting being eliminated, with the overall impact being a rise in dividend payments in most periods.

We have also benchmarked estimates of UK-listed share asset holdings to our latest available share ownership survey data, up to and including 2014. This has the effect of reallocating these assets between different sectors, particularly to the rest of the world. The most significant effect of these two changes is an increase in share dividend payments from the UK to the rest of the world, increasing the current account deficit and reducing gross national income (GNI).

Tables 3 and 4 of the <u>indicative impact on sector and financial accounts</u> show the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

3.3.2 Separating estimates and improved measurement for the households and non-profit institutions serving households sectors

The European System of Accounts 2010 (ESA 2010) requires the presentation of separate estimates for the households sector and the non-profit institutions serving households (NPISH) sector. Currently, these two sectors are combined for most processing and presentation in the national accounts. Additionally, users have requested estimates for the households sector are published separately for a more representative view of what they are earning and saving, including the presentation of a saving ratio representing only the household sector.

The review of data and methods to produce this split provided an opportunity to refresh how we produce data on households and in particular their income. The largest component of household income remains earnings from employment, which is relatively easy to measure. But there are other components of income that have been more challenging to measure and have become increasingly important.

In particular, over the last decade or so, there has been strong growth in the number of self-employed people who have incorporated themselves; as well as paying themselves as employees, they also receive income in the form of dividends from the "company". There has been a significant increase in this type of activity in recent years, which means increasingly, households have been receiving more of their income from dividends. Although a number of improvements have been made to the measurement of the households and NPISH sectors, this improvement has by far the largest effect of all the changes being introduced in Blue Book 2017.

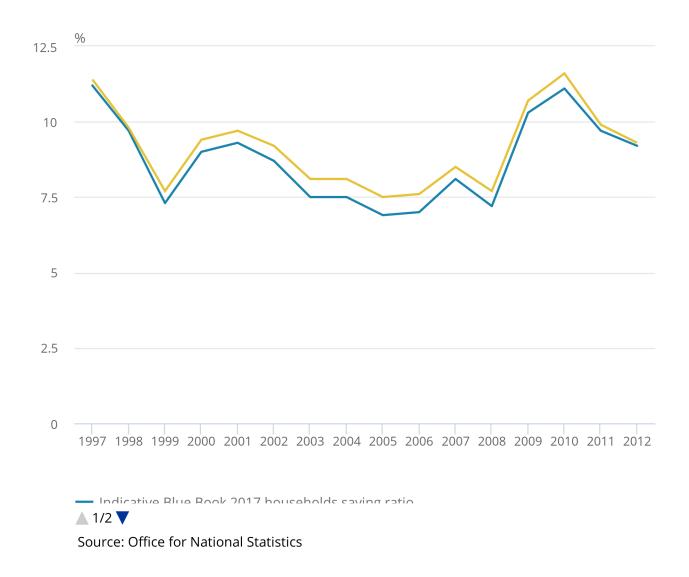
An article, <u>Improving the household, private non-financial corporations and non-profit institutions serving households sectors' non-financial accounts</u> published on 19 April 2017, gives further detail on the methodological changes being introduced in Blue Book 2017.

Tables 5 to 7 of the <u>indicative impact on sector and financial accounts</u> show the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

These methodological changes now enable us to produce a saving ratio specifically for the households sector, which is shown in Figure 3.

Figure 3: Indicative household saving ratio

UK, 1997 to 2012



Source: Office for National Statistics

See section 5 for the impact on the 'cash' households saving ratio.

3.3.3 Introduction of new securities dealers survey data

As part of our plans to enhance the UK Financial Accounts, we have introduced improvements to the measurement of the activities of securities dealers due to the introduction of an improved and expanded survey. Further details can be found in the Methods article on financial sub-sectorisation and the introduction of the new securities dealers survey data, which was published on 5 June 2017.

Table 8 of the <u>indicative impact on sector and financial accounts</u> shows the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

For the financial accounts and financial balance sheets there are impacts for private non-financial corporations, financial corporations, households and NPISH, and rest of the world sectors. The sectors impacted and transaction lines affected are highlighted in Tables 9 and 10 of the <u>indicative impact on sector and financial accounts</u>.

3.3.4 Expansion of financial sub-sector detail: separate identification of non-money market investment funds in the financial accounts and balance sheets

As part of our ongoing work programme to incorporate methodological improvements for the European System of Accounts 2010 (ESA 2010), we are introducing new methodology for estimating the transactions of the non-money market funds (S.124) sub-sector in the financial accounts and balance sheets. This has no impact on the estimates for the aggregated financial sector. A detailed explanation was published on 5 June 2017 in the article Financial sub-sectorisation and the introduction of the new securities dealers survey data.

3.3.5 Unfunded public sector pensions

There are different types of voluntary occupational pensions available to general government employees. The majority of public sector schemes in the UK are defined benefit and unfunded, where government has full responsibility for the deficit of the pension scheme. Following the transition to ESA 2010, the methodology applied to these schemes has been reviewed.

The term "imputed contributions" has been defined specifically in ESA 2010 (paragraph 4.10) as:

"The increase in benefit due to current period of employment less the sum of the employer's actual contribution, less the sum of any contribution by the employee, plus the costs of operating the scheme."

Most unfunded schemes for government employees regularly review and amend contribution rates with the view of ensuring both the sustainability of the schemes in the long-term and their affordability to the taxpayer. In accordance with the new definition, it has therefore been decided to remove an element of imputation related to the net cost of benefits payable to the existing retired members and treat the contributions set to meet the cost of accruing benefits as actual. This change will be included from 2006 as the pension reforms of that year provide the required data. Alongside this, a smaller-scale review of the data sources and processing has taken place.

There is no impact on the financial accounts or financial balance sheets for this change.

Table 11 of the <u>indicative impact on sector and financial accounts</u> shows the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

3.3.6 Public sector finance alignment changes

There are small changes to bring the UK National Accounts in line with public sector finances (PSF). PSF datasets usually incorporate latest data and methodological changes affecting the public finances ahead of national accounts, owing to an unrestricted revisions policy. In Blue Book 2017, we improved the consistency between the datasets by introducing the data for light dues, Air Travel Organisers' Levy (ATOL) protection contributions, changing the treatment of the fees charged by the British Transport Police in accordance with the latest statistical classification, as well as making other improvements to the coverage and presentation of departmental revenue and interest data.

Table 12 of the <u>indicative impact on sector and financial accounts</u> shows the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

There are indicative revisions to the financial accounts net lending or net borrowing for central government, ranging between negative £0.9 billion to £0.4 billion for the period 1997 to 2012. The assets transactions affected are F.7 financial derivatives and employee stock options and F.8 other accounts receivable. The liabilities transaction affected is F.8 other accounts receivable.

The financial balance sheet transactions impacted by the public sector finances alignment changes are F.8 other accounts receivable and payable for the period 1997 to 2012

3.3.7 Actual and imputed rental

For Blue Book 2017, there are improvements to private actual rentals, which make up the bulk of total actual rentals for housing. Other actual rentals, such as rentals to housing associations and public sector bodies are not changed.

The new approach for private actual rentals will bring consistency with the methods for <u>imputed rentals introduced</u> in <u>Blue Book 2016</u>. It will also allow us to remove the discontinuity in the current price data at 2010, which was due to an interim solution in place since Blue Book 2014.

The new approach uses Valuation Office Agency (VOA) data on private rental prices and similar data from the devolved administrations, instead of prices from the Living Costs and Food Survey (LCF). These administrative sources have much larger sample sizes than the LCF, which allows us to use an improved methodology using stratification. In addition, the new price data enables furnished and unfurnished properties to be separately identified.

As part of the process of bringing the sources and methods for private actual rentals in line with imputed rentals, we identified some further improvements to imputed rentals. These are being implemented in Blue Book 2017. They include improvements to the way that non-calendar year data for housing stocks and rental prices are mapped to calendar years.

Further details on the actual and imputed rental changes were published on 16 February 2017 in the article Changes to National Accounts: actual and imputed rental (Blue Book 2017).

There is no impact to the financial accounts or financial balance sheets from these methodological changes.

Table 13 of the <u>indicative impact on sector and financial accounts</u> shows the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

3.3.8 Gross fixed capital formation survey improvements

Following a quality review of software in gross fixed capital formation (GFCF), analysis has shown that elements in the estimates of purchased software – a component of intellectual property products (IPP) – have been double-counted from 2001. In 2001, purchased software data from the Quarterly Survey of Capital Expenditure was included in the UK National Accounts, but the previous modelled data used in estimates of purchased software was not discontinued. This case of double-counting also uncovered a discrepancy in the modelled data prior to 2001, so both will be amended for Blue Book 2017.

The IPP asset will also be impacted as a result of updated data for entertainment, literary or artistic originals. Revised data are available between 2007 and 2009 and new estimates have been sourced for 2010 and 2011, which replace current forecasted data.

Further details on the GFCF survey improvements were published on 16 February 2017 in the article <u>Annual improvements to gross fixed capital formation source data for Blue Book 2017</u>.

Table 14 of the <u>indicative impact on sector and financial accounts</u> shows the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

3.3.9 GFCF transfer costs

Gross fixed capital formation (GFCF) transfer costs have been affected by an update to the UK House Price Index (HPI). GFCF uses the UK HPI as part of the calculation of current price transfer costs data. A new HPI (with an associated back series) was introduced in 2016 and data based on this new methodology will be used in the compilation of GFCF for Blue Book 2017.

An improved method for the allocation of transfer costs will also be implemented. The new method assumes that those components where administrative sources are used (for example, Land Registry fees and Stamp Duty) are proportionally assigned to institutional sectors based on the pattern of acquisitions of dwellings and other buildings and structures.

Further information can be found in the Review of costs of ownership transfer and treatment in the UK National Accounts.

Table 15 of the <u>indicative impact on sector and financial accounts</u> shows the estimated indicative average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

3.3.10 Introduction of new gross fixed capital formation processing system

The gross fixed capital formation (GFCF) estimation system has been redeveloped in line with the 5-year strategy for the <u>UK National Accounts 2015 to 2020</u>, published in July 2015, and recommendations from the <u>Independent review of UK economic statistics</u>. This has resulted in methodological improvements, some of which were introduced in February 2017 in the quarterly national accounts. The remaining changes, which affect data from 1997, will be introduced in Blue Book 2017. At a sector level, the largest of these changes is the way in which dwellings data are split between private non-financial corporations (PNFCs) and households. A review of the available source data identified that the level of investment in dwellings by PNFCs was too small and that of households too high and so new proportions were calculated.

Table 16 of the <u>indicative impact on sector and financial accounts</u> shows the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

3.3.11 Improvements to measurement of illegal activities

New data for the number of users for individual drugs from the Crime Survey for England and Wales has been incorporated into our estimates of illegal activities. The data mainly replaces modelled data between 2000 and 2005.

Table 17 of the <u>indicative impact on sector and financial accounts</u> shows the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

3.3.12 Reclassification of English Housing Associations as public corporations

In October 2015, registered housing associations in England were reclassified from the private sector to public corporations, effective from July 2008. Further details on the reclassification of housing associations were published on 5 June 2017 in <u>Reclassification of English Housing Associations and other classification decisions</u>.

Tables 18 to 20 of the <u>indicative impact on sector and financial accounts</u> show the estimated average impact on the sectors and transactions affected by the revised methodology for the period 1997 to 2012.

3.3.13 Defined contribution pensions

We have improved the method for estimating defined contribution (DC) pension entitlements, with an estimate based on regulatory data on DC pension fund assets provided by The Pensions Regulator (TPR). The current method uses the defined benefit (DB) versus DC split for regular contributions to pension funds by employers and employees to calculate DC asset levels.

An article, <u>The UK Enhanced Financial Accounts: changes to defined contribution pension fund estimates in the national accounts; part 1 – the methods</u>, published on 16 January 2017, provides an explanation of the methodological changes.

Table 21 of the <u>indicative impact on sector and financial accounts</u> shows the estimated average impact on the sectors and transactions affected by the revised defined contribution methodology for the period 1997 to 2012.

For the financial accounts and financial balance sheets there are impacts due to the methodology changes implemented for Blue Book 2017. The sectors impacted and transaction lines affected are highlighted in Tables 22 and 23 of the indicative impact on sector and financial accounts.

3.3.14 Education services

We have included a new data source from the Higher Education Statistics Agency (HESA) for higher education tuition fees, which replaces the fees element currently sourced from the International Passenger Survey (IPS). This leads to an upward revision to export of services and an equal downward revision to household expenditure.

Table 24 of the <u>indicative impact on sector and financial accounts</u> shows the estimated indicative average impact on the sectors and transactions affected by the improved measurement of education services for the period 1997 to 2012.

3.3.15 Presentation of UK net contributions to the EU

The UK government's official contributions to the EU consist of customs duties, sugar levies and payments, which are calculated based on UK VAT and gross national income (GNI) levels. In addition to this, the UK is entitled to receive an abatement (officially known as the Fontainebleau abatement, but often referred to as the "rebate"), which lowers the UK's contribution to the EU budget.

The abatement is now shown as a separate series and recorded as a component of "VAT and GNI based EU own resources". In this presentation "VAT and GNI based EU own resources " is equal to the UK gross contributions to EU, less "abatement". "Current international co-operation" now excludes the abatement and has been footnoted to reflect this change.

These changes are presentational only and have no impact on the UK level statistical aggregates.

4. Publication of change in volume of assets account and revaluation account

From Blue Book 2017, we will publish the revaluations and other changes in the volume of asset accounts to allow users to analyse a complete sequence of national accounts.

The other changes in assets account is concerned with the recording of changes in the values of assets and liabilities, between opening and closing balance sheets that result from flows that are not transactions, referred to as "other flows". The revaluation account records holding gains or losses accruing during the accounting period to the owners of financial and non-financial assets and liabilities.

The UK has a legal requirement to transmit the revaluation and change in volume accounts to Eurostat for the period 2012 onwards, at the main sub-sector level by main financial instrument.

These accounts have been compiled using data already held in national accounts and from the Bank of England. These will be annual only and further details on the layout of the account will be published in a future article.

5. Alternative measures of the household saving ratio

For Blue Book 2017, there are methodological improvements made to the measurement of the household and non-profit institutions serving households (NPISH) sectors. As a result of the changes in methodology, we can update the estimate of the "cash" basis' household and NPISH saving ratio.

Within the sequence of accounts, there are transactions which, though important for compiling internationally comparable statistics, are not directly observed by households. As a result, the saving ratio estimated by following guidance from the European System of Accounts 2010 (ESA 2010) may differ from the experience of households. We therefore also estimate another saving ratio, "on a cash basis".

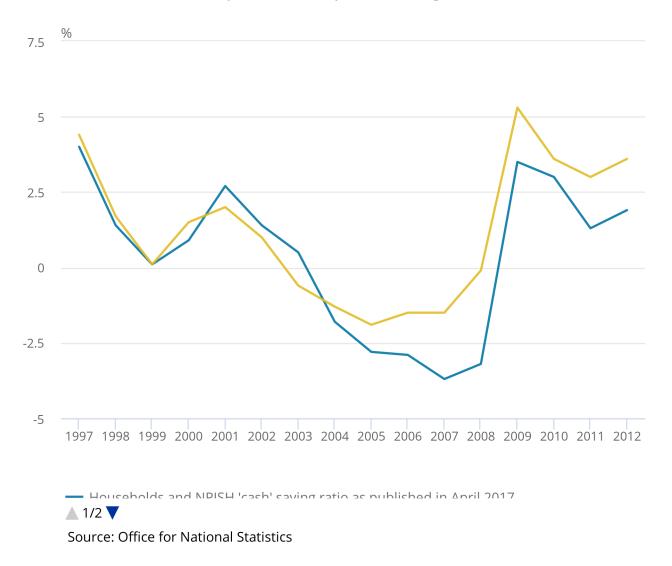
The saving ratio "on a cash basis" is an Experimental Statistic that estimates the amount of money households have available to spend or save, excluding imputed transactions (which households would not recognise as either income or expenditure), as a percentage of their gross disposable income.

Please note that this is an Experimental Statistic and we are reviewing the methodology used to estimate the saving ratio "on a cash basis". The estimates for the saving ratio "on a cash basis" presented in this article are based on the current methodology, which may be subject to change between the publication of this article and the publication of Blue Book 2017 consistent data.

Figure 4 shows the alternative measure of "cash" saving ratio published in April 2017 compared with the indicative "cash" saving ratio that will be presented from September 2017.

Figure 4: Comparison of the households and non-profit institutions serving households "cash" saving ratio (as published in April 2017) and the indicative households only "cash" saving ratio

Figure 4: Comparison of the households and non-profit institutions serving households " cash" saving ratio (as published in April 2017), and the indicative households only " cash" saving ratio



Source: Office for National Statistics

6 . Appendix A: Estimated lending or net borrowing by sector

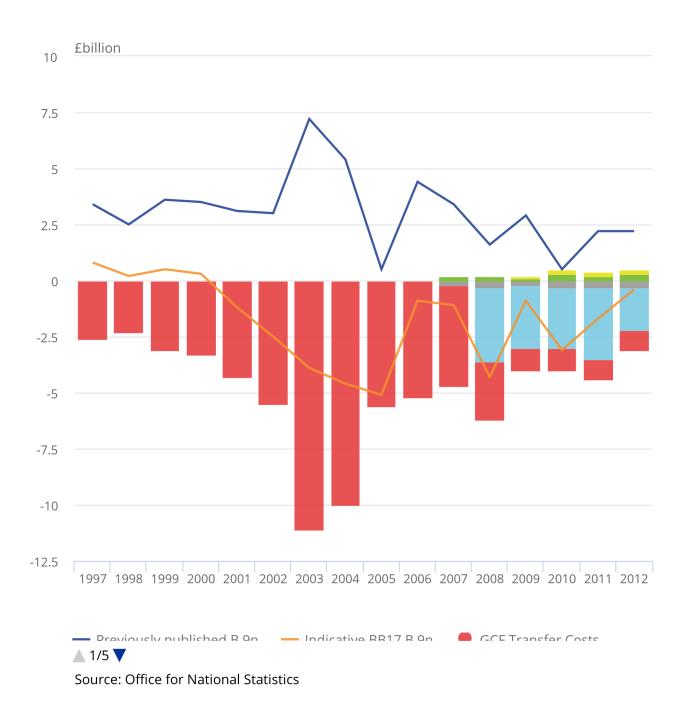
The figures in this section show the previously published, estimated current position and associated impact of changes for the non-financial net lending or borrowing position and the financial balance sheet financial net worth by sector.

Public corporations

Figure 5: Public corporations net lending or net borrowing from the non-financial account UK, 1997 to 2012

Figure 5: Public corporations net lending or net borrowing from the non-financial account

UK, 1997 to 2012

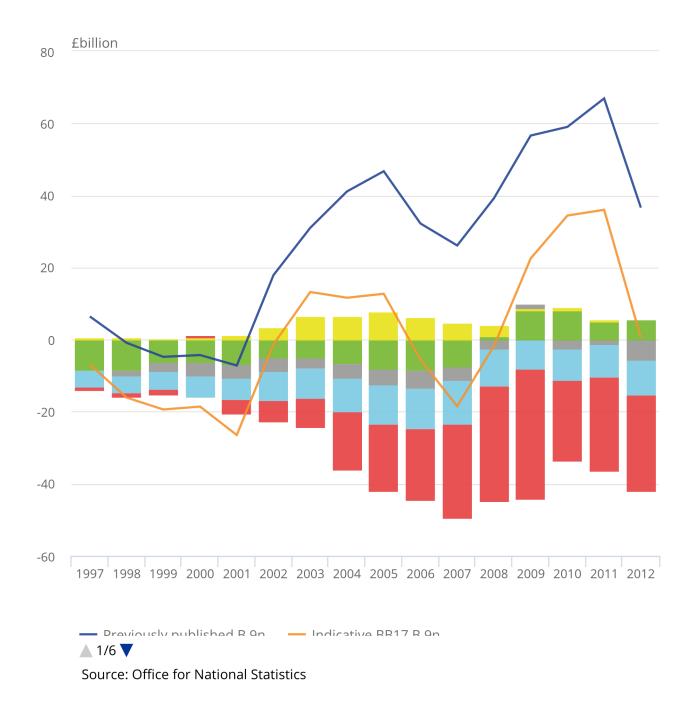


Private non-financial corporations

Figure 6: Private non-financial corporations net lending or net borrowing from the non-financial account UK, 1997 to 2012

Figure 6: Private non-financial corporations net lending or net borrowing from the non-financial account

UK, 1997 to 2012

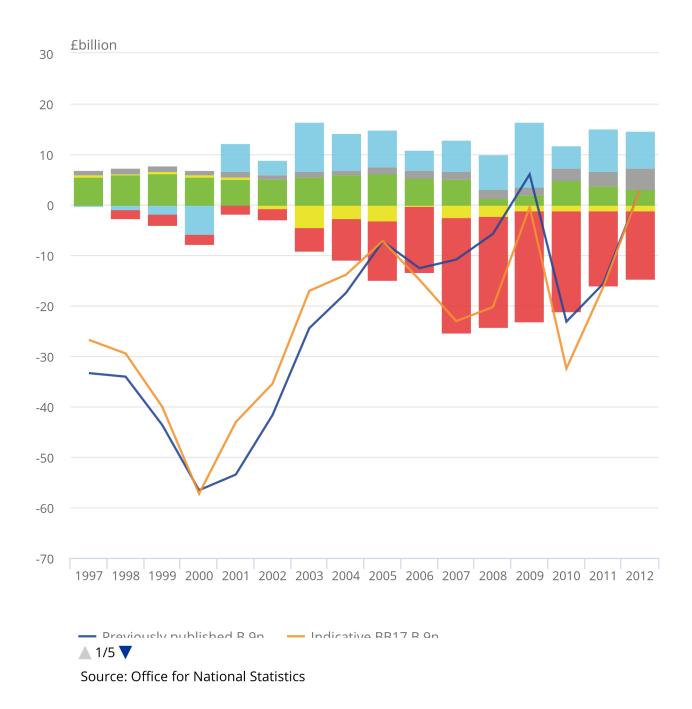


Financial corporations

Figure 7: Financial corporations net lending or net borrowing from the non-financial account UK, 1997 to 2012

Figure 7: Financial corporations net lending or net borrowing from the non-financial account

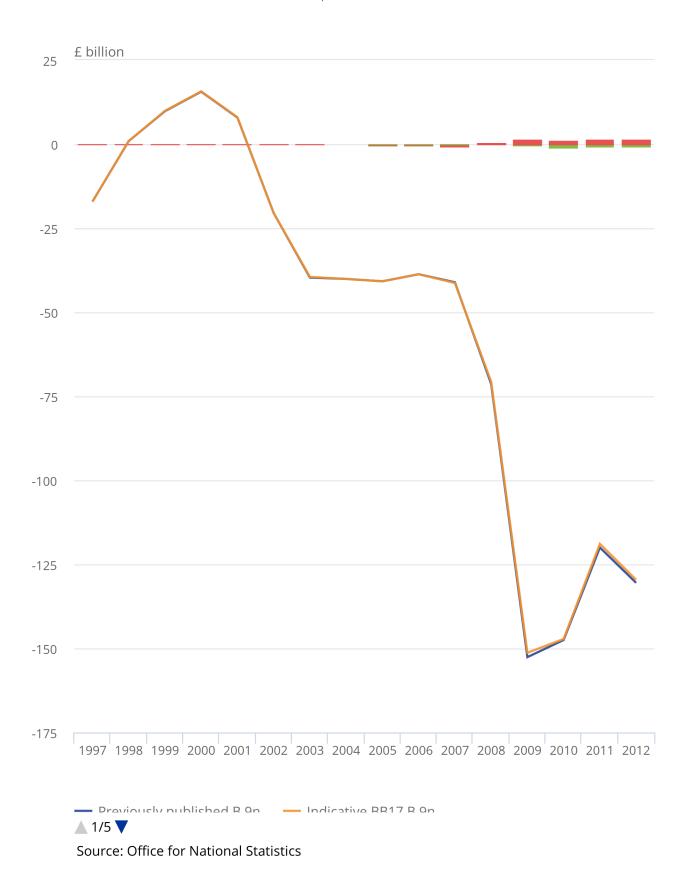
UK, 1997 to 2012



Central government

Figure 8: Central government net lending or net borrowing from the non-financial account

Figure 8: Central government net lending or net borrowing from the non-financial account

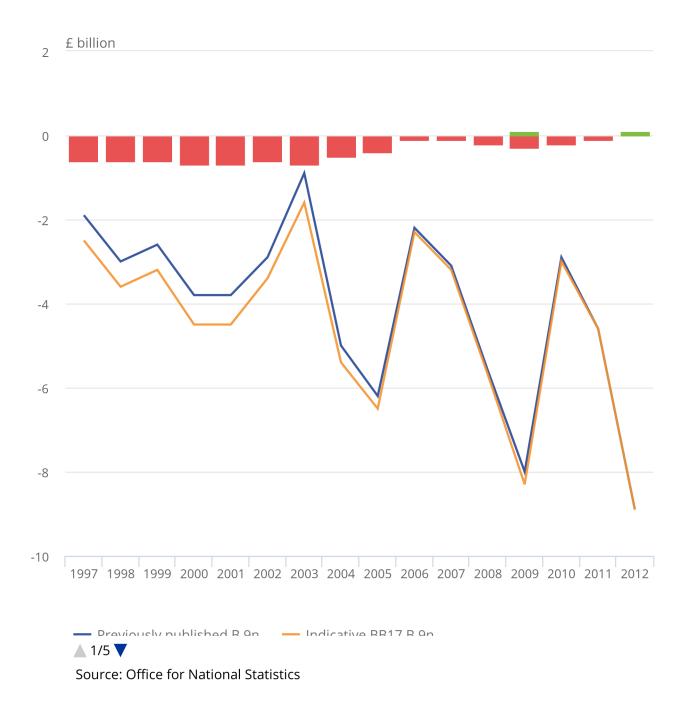


Local government

Figure 9: Local government net lending or net borrowing from the non-financial account UK, 1997 to 2012

Figure 9: Local government net lending or net borrowing from the non-financial account

UK, 1997 to 2012

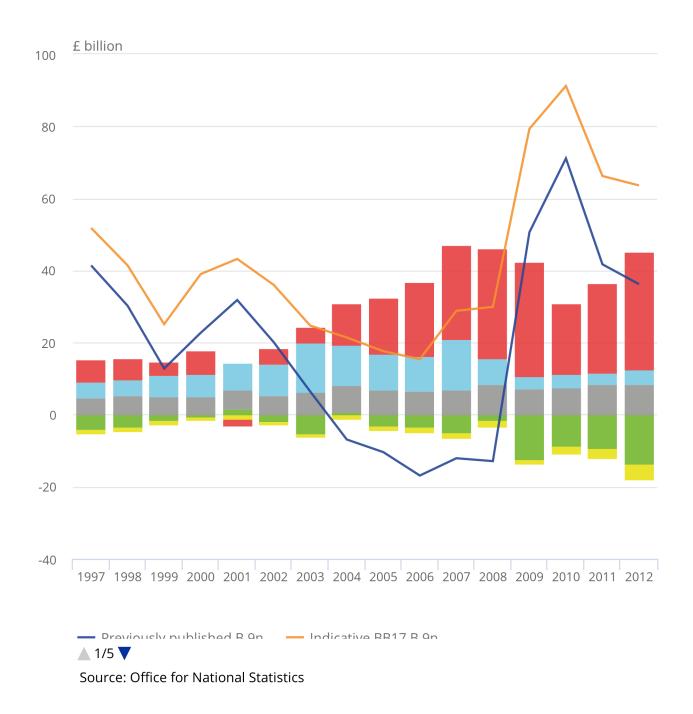


Households and non-profit institutions serving households (NPISH)

Figure 10: Households and non-profit institutions serving households (NPISH) net lending or net borrowing from the non-financial account

UK, 1997 to 2012

Figure 10: Households and non-profit institutions serving households (NPISH) net lending or net borrowing from the non-financial account



Rest of the world

Figure 11: Rest of the world net lending or net borrowing from the non-financial account UK, 1997 to 2012

Figure 11: Rest of the world net lending or net borrowing from the non-financial account

UK, 1997 to 2012

