

Article

National Accounts articles: Impact of Blue Book 2018 changes on current price gross domestic product estimates, 1997 to 2016

The methodological and data improvements that impact on current price GDP for the period 1997 to 2016

Contact:
Robert Doody and Ed Ryall
robert.doody@ons.gov.uk
+44 (0)1633 45 5803

Release date:
13 April 2018

Next release:
To be announced

Table of contents

1. [Main points](#)
2. [Introduction](#)
3. [Impact of the changes on current price gross domestic product](#)
4. [Plans for future updates](#)

1 . Main points

- The Blue Book 2018 changes increase the level of gross domestic product (GDP) in current prices across all years, with the current price level in 2016 increasing by approximately £6.2 billion (0.3%) higher than previously estimated.
- The largest change to the level of current price GDP comes from improvements to the measurement of net spread earnings.
- The package of improvements, though, has little impact on growth, with average annual current price GDP growth between 1997 and 2016 remaining unrevised at 3.9%.

2 . Introduction

This article is part of a series describing changes to the national accounts, detailing the improvements that will be made in June 2018 to ensure that the UK National Accounts continue to provide the best possible framework for analysing the UK economy and for comparing it with those of other countries.

An initial summary of the changes for UK National Accounts, The Blue Book 2018 has already been announced in the article [National Accounts articles: Latest developments to national accounts and balance of payments - changes to be implemented for Blue Book 2018 and Pink Book 2018](#) published on 4 December 2017.

This first impact article focuses on the current price gross domestic product (GDP) changes for the period 1997 to 2016. Subsequent articles, as listed in Table 1, will focus on chained volume measure (CVM) GDP estimates, sector and financial accounts estimates and balance of payments estimates.

The improvements being described in this article are being made as part of the regular annual update of the Blue Book. The full dataset will be published as part of the Blue Book-consistent Quarterly national accounts to be published on 29 June 2018.

This article provides a summary of each of the improvements being implemented in Blue Book 2018 along with the estimated impact on annual current price GDP between 1997 and 2016. The total impacts of the changes that affect GDP are included in [Annex A of the accompanying dataset](#) with full detail for each change shown to the nearest £0.1 billion. A comparison of the new and current growth rates for annual current price GDP growth are shown in [Annex B of the accompanying dataset](#).

These figures are still indicative at this stage and final quality assurance is currently being undertaken. A near final version of these data will be provided in an updated article in May 2018 ahead of publication in the Blue Book consistent Quarterly national accounts to be published on 29 June 2018.

Figures for 2017 and more recent periods, and figures on a CVM basis are not yet available. CVM data are adjusted so that the effects of price changes are removed and these data are not processed until closer to the time of publication in order to take account of new data in the usual manner. Plans are to publish CVM data for 1997 to 2016 on 8 May 2018 as set out in Table 1.

Gross national income (GNI) is defined as GDP plus net income received from abroad. So revisions to GDP presented in this article would, all else equal, therefore change GNI. An article detailing revisions to the sector and financial accounts, including net property income, will be published on 1 June 2018 and will provide the overall impact on UK GNI up to 2016 due to changes in Blue Book and Pink Book 2018.

Estimates of GNI for the UK and other member states in the European Union (EU) form the basis for calculating contributions to the EU Budget by member states. Under the terms of the [draft Withdrawal Agreement](#) negotiated between the UK and the EU, it is planned that this will continue to apply for the remainder of the current EU Multi-annual Financial Framework 2014 to 2020. While the UK continues to make contributions based on GNI, Office for National Statistics (with other EU national statistical offices) will calculate and provide GNI in line with EU statistical standards on the national accounts and GNI. For these EU Budgetary purposes the period from 1997 to 2009 is closed to revision, so any revisions to GNI in these years will not affect the UK's contribution to the EU Budget.

3 . Impact of the changes on current price gross domestic product

The Blue Book 2018 changes being announced today (13 April 2018) have the combined impact of increasing the level of current price gross domestic product (GDP) in 2016 by approximately £6.2 billion, around 0.3%. Average annual current price GDP growth between 1997 and 2016 remains at 3.9%, unrevised from previously published data. The impact of these changes is generally to increase the level of current price GDP, although the growth rate revisions vary for individual years (as shown in [Annex A of the accompanying dataset](#)). Revisions to the growth rates of annual current price GDP range from negative 0.2 percentage points in 2000, to 0.3 percentage points in 2001 (as shown in [Annex B of the accompanying dataset](#)).

The main upward impacts on the level of GDP come from improvements to the methods used to estimate net spread earnings and gross fixed capital formation (GFCF) purchased software.

The following provides more details on the individual improvements that impact on current price GDP in Blue Book 2018.

Net spread earnings

Some companies make a return by trading in financial assets. They buy assets at a price that is typically lower than the prevailing market price and sell them at a price that is typically above the market price. These margins together are referred to as net spread earnings (NSE). In the national accounts, NSE are considered to be the estimate of the production/income associated with this trading. NSE do not include the income that comes from the ownership of these assets (that is, dividends), estimates for this aspect are therefore unaffected by this change.

Since its introduction in 2004, the Bank of England has collected NSE generated from trading in foreign exchange, securities and derivatives using its Profit and Loss (PL) form. This collection of NSE has proved challenging as it is not something the reporting units are required to report under financial regulations. The closest concept is trading profits, which encompasses other types of income alongside NSE. The Bank has recently emphasised the importance of these data and targeted some of the main reporters to ensure that NSE are correctly reported. This has led to more comprehensive coverage and the Bank has revised some of the previous estimates supplied to Office for National Statistics (ONS).

The majority of trading that generates NSE is with the rest of the world sector. In the supply and use framework the increase in output therefore results in an increase in exports of services across all years. [Annex C of the accompanying dataset](#) shows the Blue Book 2018 net trade position. In addition to the NSE change there are also smaller impacts on the net trade position from the development of the trade in goods processing system (see later in this section) and the usual take-on of updated data for 2014 to 2016 and subsequent supply and use balancing process.

GFCF-purchased software

A change was made in UK National Accounts, The Blue Book 2017 to correct the estimation of elements of purchased software, which were being double-counted from 2001 onwards along with discrepancies in the modelled data prior to 2001. During further quality assurance, we have identified that the 2017 adjustment did not fully address the issue and an additional amendment to other machinery and equipment, and information and communication technology (ICT) equipment is required. Purchased software will be unaffected by this additional amendment.

Pensions

Improvements have been made to the data and methods used to calculate figures for funded public sector employee pensions in the financial corporations sector, where the employer or “pension manager” is in local government or central government. These changes follow on from decisions made by the ONS Economic Statistics Classification Committee and improve the method for calculating employer-imputed social contributions, as defined in the European System of Accounts 2010 (ESA2010).

Employer-imputed social contributions reflect any shortfall in actual contributions received as well as possible experience effects, where the outcome differs from the modelling assumptions. The improved method will calculate employer-imputed social contributions to funded defined benefit pension schemes as a residual after accounting for balances, transactions and other flows on an actuarial basis, whereas the current method involves modelling them as a percentage of wages and salaries.

As a result of these changes:

- the estimate of compensation of employees (D.1) has changed – this affects the current price value of government output, of which compensation of employees (D.1) is a component; the majority of government output is provided free of charge or sold at economically insignificant prices and is therefore valued by summing the costs of production
- the estimate of the pension scheme service charge (D.61SC) has changed – this affects market output (P.11) for the financial corporations (S.12) sector

These improvements to funded public sector employee pension schemes were implemented in September 2017 to the [public sector finances](#) and have also been discussed in the methodology article accompanying the release of Table 29: Accrued-to-date pension entitlements in social insurance (specifically the text relating to [Column E](#)).

Trade in goods processing systems

Blue Book 2018 will include enhancements to the processing of UK trade data. As outlined in the [UK Trade Development Plan](#), a new processing system for trade in goods data has been developed. The new system has been built to provide faster and more streamlined processing for the monthly UK trade statistics, as well as the production of quarterly and annual trade statistics for other national accounts publications. This will also enable more detailed analysis of trade statistics. In particular, the new trade in goods system will provide more granular data for analysis – commodity by country on a balance of payments basis. The system will also be flexible to support future improvements to methods and data sources.

The new system produces more detailed statistics and, in aggregate, the impact on GDP and net trade compared with the previous system is generally small. There is some impact at the more detailed level, and to gross imports and exports. These changes arise mainly from processing data at a more granular level, but also a review of historical National Accounts conceptual adjustments. Further details will be published in the article ‘UK Trade data impact assessment from new developments’ due for publication on 8 May 2018.

Small improvements

Motor Vehicle Duty

Changes to payments of Motor Vehicle Duty (MVD) reflect households paying the tax as both producer and consumer. The previous treatment recorded all of the MVD paid by households as another current tax (D.59).

Rail for London

Changes are:

- reclassified from local government to public corporations
- introducing estimates of payments for non-market output (P.131) for Tube Lines Limited (TLL)
- utilised historic data for the entire TLL Group (affecting financial year ending 2009 to financial year ending 2012)

Government alignment

Government alignment brings the UK National Accounts in line with Government Finance Statistics (GFS). GFS datasets usually incorporate latest data and methodological changes affecting the public finances ahead of national accounts, owing to an unrestricted revisions policy. As noted previously, Blue Book 2018 improves the consistency between the datasets by reflecting the latest statistical classification decision to move Rail for London from local government to public corporations. Also included in this year's alignment were changes in payments to the Financial Services Compensation Scheme and payments of National Non-Domestic Rates.

4 . Plans for future updates

This article is part of a series of impact articles ahead of the Quarterly national accounts consistent with Blue Book 2018 publication on 29 June 2018. The focus here is on the years of 1997 to 2016 for current price gross domestic product (GDP) changes. The improvements described in this article will often also be applicable to subsequent years.

Table 1: Provisional publication schedule for Blue Book and Pink Book 2018

Content of article	Provisional date of publication
Impact of Blue Book 2018 changes on annual current price gross domestic product estimates, 1997 to 2016	13 April 2018
Impact of Blue Book 2018 changes on GDP current price and chained volume measure annual and quarterly estimates: 1997 to 2016 and associated methods articles	08 May 2018
UK Trade data impact assessment from new developments 1998 to 2016	08 May 2018
Detailed assessment of changes to Sector and Financial Accounts, 1997 to 2016	01 June 2018
Detailed assessment of changes to Balance of Payments annual estimates, 1997 to 2016	01 June 2018
UK quarterly national accounts: Jan to Mar 2018	29 June 2018
Alignment between public sector finances and national accounts article: June 2018	29 June 2018
Publication of Blue Book 2018 and Pink Book 2018	31 July 2018