

Article

# Impact of Blue Book 2022 changes on current price and volume estimates of gross domestic product

Methodological and data improvements that affect current price and chain volume measure of gross domestic product (GDP), 1997 to 2019.

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# 1 . Overview and main changes

The 2022 Annual National Accounts, also known as Blue Book 2022, will incorporate a wide range of improvements to sources and methods compared with previous editions. These include:

- measuring the economic contribution of the insurance industry using Solvency II regulatory data for the first time
- completing the transition to using the improved Financial Survey of Pension Schemes
- bringing through a package of sources and methods changes that improve the international comparability of the UK gross domestic product (GDP) estimates

We summarise estimates of the indicative annual impacts resulting from changes to sources and methods in this year's Blue Book for the period 1997 to 2019. These impacts include:

- average annual current price gross domestic product (GDP) growth for the period 1998 to 2007 being revised down from 5.0% to 4.9%; for the period 2010 to 2019 (so excluding the period disrupted by the financial crisis) it has been revised down from 3.8% to 3.7%
- average annual volume GDP growth over the period 1998 to 2007 remaining unchanged at 2.7%; average annual volume GDP growth has remained unchanged at 2.0% between 2010 and 2019

Revisions to 2020 will be included in the article [Impact of Blue Book 2022 changes on average quarterly domestic product, to be published on 25 July 2022](#).

## 2 . Scope of changes in Blue Book 2022

The changes described in this section are all expected to have a direct impact on current price gross domestic product (GDP) estimates. As such, they will also have indirect impacts on chain volume measure GDP estimates and the implied GDP deflator.

### Changes to the measurement of insurance and pensions

The Office for National Statistics (ONS) is introducing data from a new administrative data source, [Solvency II](#), to estimate data for insurance in the UK economy. We have also applied the appropriate methodologies, in line with international guidance, for each type of the insurance business.

In addition to taking on additional data from the [Financial Survey of Pension Schemes](#), the ONS is making methods changes to the way pensions are treated in the non-financial accounts. These include the estimation of pension scheme service charges, non-resident household pension provision, and employer pension contributions for private sector defined benefit pension schemes.

Improvements to insurance and pensions, which are largely shown as combined series in the National Accounts, will lead to changes across a range of transactions that impact GDP. These include output, intermediate consumption, household final consumption expenditure, imports and exports. Further information can be found in [our article that details insurance and pensions methods changes](#).

## Trade

In Blue Book 2022, we will introduce the methodological improvements to the travel and tourism estimates from the [International Passenger Survey \(IPS\)](#) that were outlined in our [Travel Trends: 2019 article](#). We will replace outdated estimates of sea disbursements exports with VesselsValue and HM Revenue and Customs (HMRC) data. This will complete the package of work to improve our estimates on disbursements (services auxiliary to transport not directly provided for the movement of goods or people) in the UK by foreign operators. Other modes of transport were completed in previous years.

Other changes affecting trade will include using HMRC data to improve our estimates of trade in goods with the Channel Islands and the Isle of Man. We will also be aligning our data on universities' exports of research and development services with those published by the Higher Education Statistics Agency.

## Other data improvements

In Blue Book 2022, we will improve several areas where our data sources were out of date. Some of these changes will improve underlying data quality but not impact our published GDP estimate. However, several of these changes will have an impact on transactions that feed into overall GDP, including:

- improved methods and data measuring the value of meals provided to staff working in catering establishments
- the introduction of new sources and methods to measure the value of self-build housing to the economy
- an improved treatment of the production of accommodation services by private schools and universities that are consumed by households
- updated estimates of prescription and dental charges paid by households
- the introduction of new sources and methods for measuring household spending on private residential and local authority care homes
- a revised treatment of the economic activity of trade unions in the National Accounts
- improved data on imports of financial services provided by the Bank of International Settlements (BIS)

## 3 . Indicative impacts of Blue Book 2022

## Gross domestic product (GDP) growth in current prices

Figure 1 shows indicative revisions to annual current price gross domestic product (GDP) growth from 1998 to 2019. These impacts show the estimated effect of the changes to sources and methods discussed above.

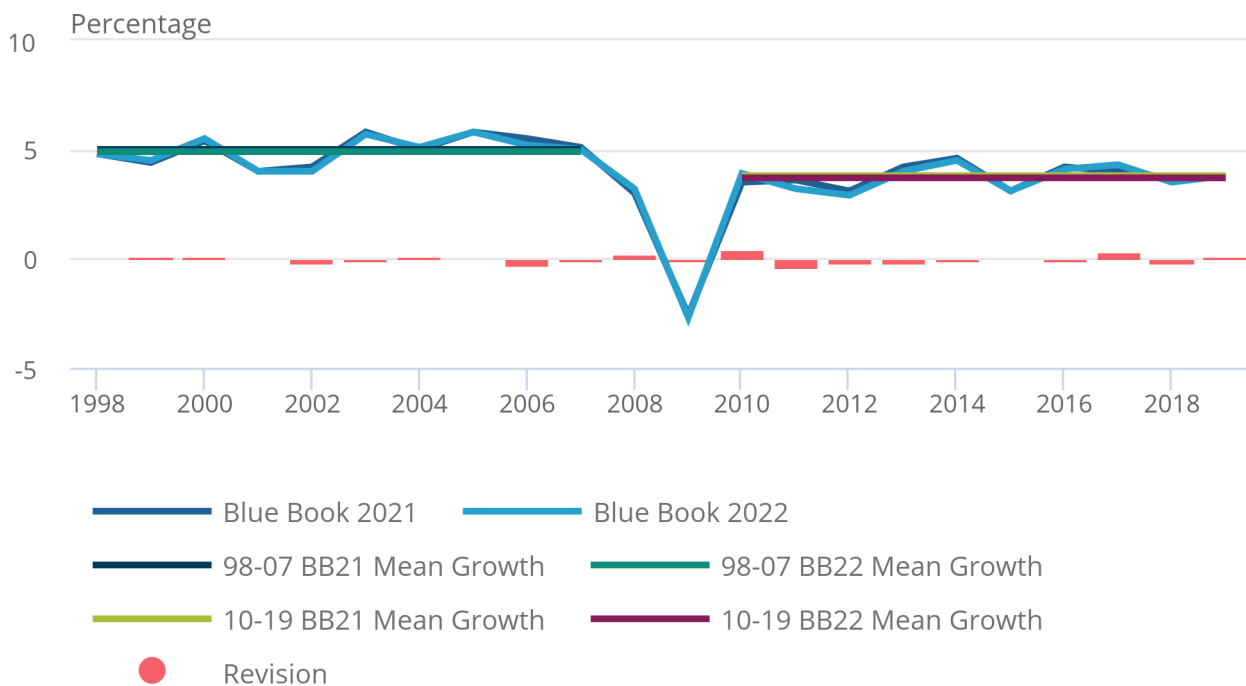
The average annual growth between 1998 and 2007 is anticipated to be revised slightly from 5.0% to 4.9%. Between 2010 and 2019 (so excluding the disruption of the financial crisis), the average annual growth between 2010 and 2019 is expected to be revised down from 3.8% to 3.7%. Revisions to GDP growth in individual years are estimated to range between negative 0.4 and positive 0.4 percentage points. The underlying picture around the financial crisis (2007 to 2010) will be broadly similar, with some revisions to specific years.

**Figure 1: Current price annual GDP growth sees minor revisions between 1998 and 2019**

Annual expected current price revisions to GDP, 1998 - 2019

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Annual expected current price revisions to GDP, 1998 - 2019



Source: Office for National Statistics – UK National Accounts, The Blue Book 2022 (indicative data)

Notes:

- Please note that 1998-2007 and 2010-2019 mean growths are calculated from unrounded data so may not reconcile with annual growth rates.

## GDP growth in chain volume measures

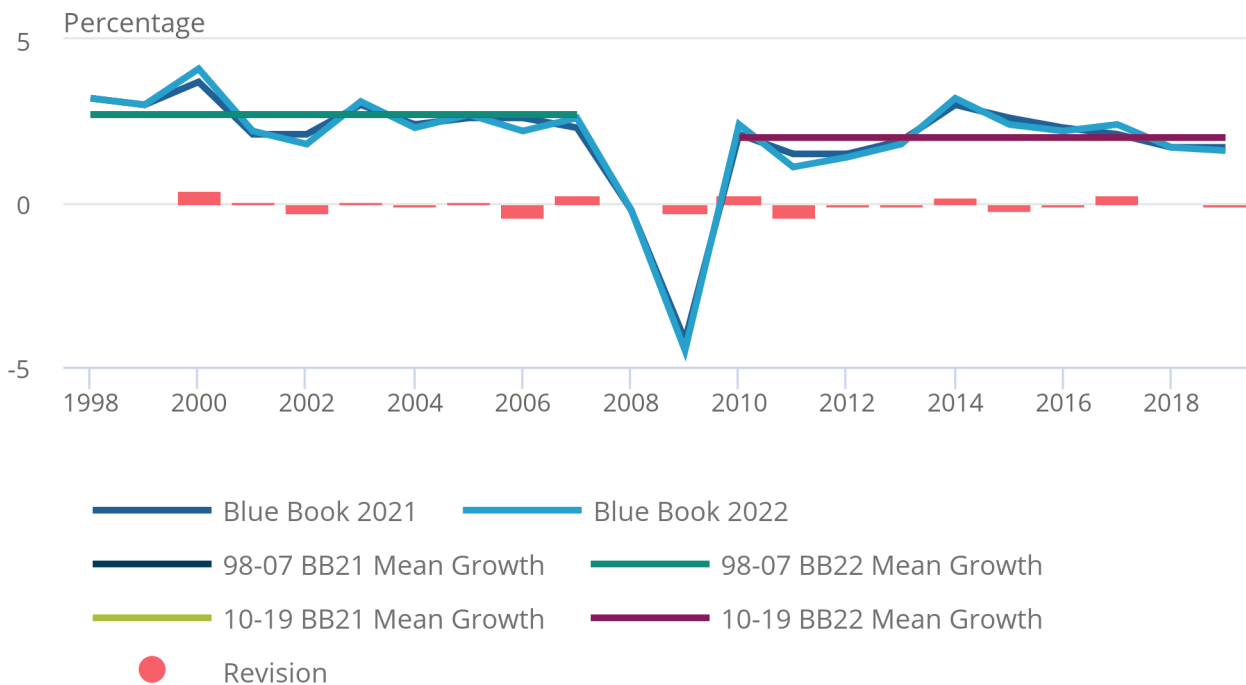
Figure 2 shows the estimated revisions to annual volume GDP growth. These indicative estimates show that annual volume GDP growth over the period 1998 to 2007 is likely to be unchanged from its Blue Book 2021 level of 2.7%. For the period 2010 to 2019, annual volume GDP growth is expected to remain at 2.0%. Annual revisions are anticipated to range between negative 0.4 and positive 0.4 percentage points. The majority of the changes to volume growth follow directly from the changes to current price growth described in this article.

### Figure 2: Average annual volume GDP growth between 1998 and 2019 is expected to be largely unchanged compared with our Blue Book 2021 estimates

#### Annual expected chain volume measure revisions to GDP, 1998 - 2019

Figure 2: Average annual volume GDP growth between 1998 and 2019 is expected to be largely unchanged compared with our Blue Book 2021 estimates

Annual expected chain volume measure revisions to GDP, 1998 - 2019



Source: Office for National Statistics – UK National Accounts, The Blue Book 2022 (indicative data)

#### Notes:

- Please note that 1998-2007 and 2010-2019 mean growths are calculated from unrounded data so may not reconcile with annual growth rates.

## Impacts on the implied deflator

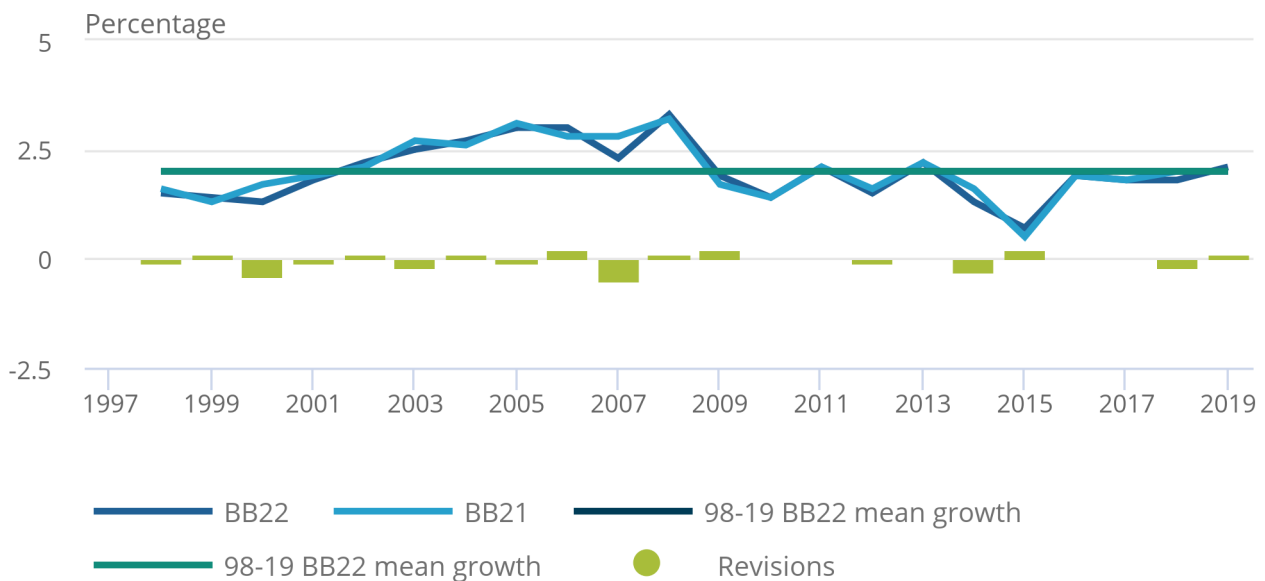
Figure 3 shows the estimated impacts of the revisions on the GDP deflator in Blue Book 2022, which represents the broadest measure of inflation across the whole economy. As Blue Book 2022 will contain few changes to existing deflators, the impacts shown in Figure 3 will be mostly on account of the indirect impacts of current price changes. We envisage that the annual average of the implied deflator between 1998 and 2019 will remain at 2.0%, unchanged from the Blue Book 2021 average.

**Figure 3: The annual implied GDP deflator is likely to see minor revisions between 1998 and 2019**

Annual expected revisions to growth in the implied deflator, 1998 - 2019

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Annual expected revisions to growth in the implied deflator, 1998 - 2019



Source: Office for National Statistics – UK National Accounts, The Blue Book 2022 (indicative data)

Notes:

1. Please note that 1998-2019 mean growths are calculated from unrounded data so may not reconcile with annual growth rates.

## Impacts of Blue Book 2022 on current price GDP levels by theme

Figure 4 shows the likely impact of the main Blue Book 2022 changes on the level of current price GDP. From 2006 onwards, these changes are generally anticipated to result in a lower level of GDP and are mostly explained by the improved estimates of the insurance and pensions industry. These show that the amount of insurance produced in the UK is smaller than previously understood. A greater share of that insurance is intermediately consumed by other businesses than previously thought, which reduces the amount of value those businesses add to the economy.

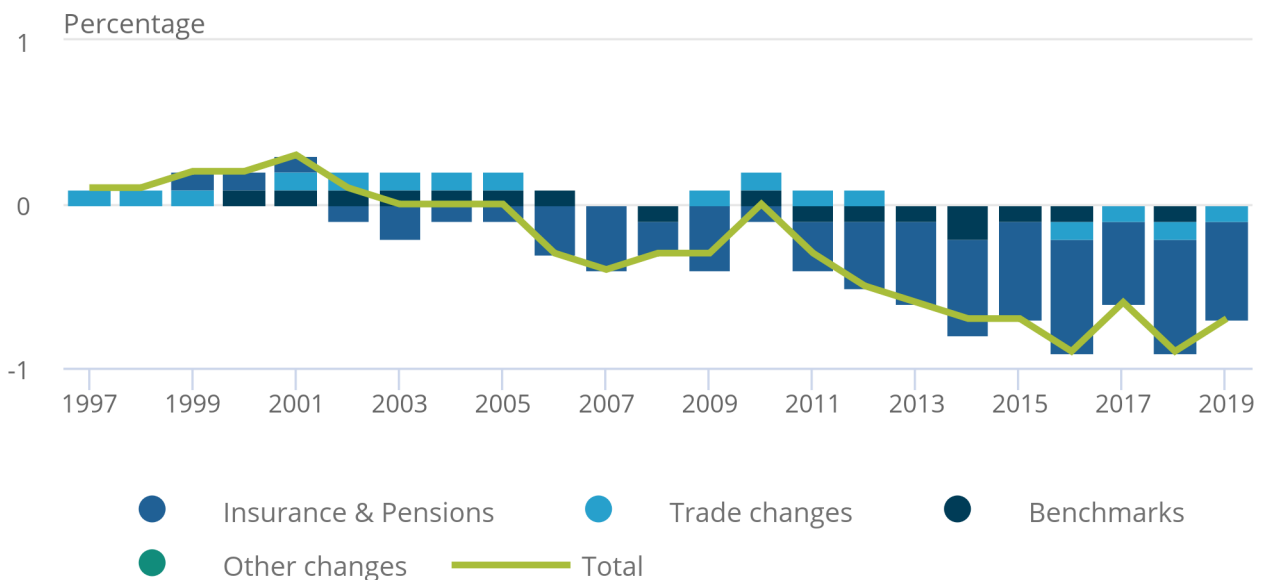
Between 2010 and 2019, the average reduction in the level of current price GDP is expected to be 0.6 percentage points, of which 0.5 percentage points will be accounted for by the insurance and pensions changes. Prior to 2006, the changes are likely to result in a slightly higher level of GDP overall, with broadly equal contributions from the updated benchmarks, the trade changes and the improvements to insurance and pensions.

### Figure 4: Improvements to insurance and pensions measurement in Blue Book 2022 will explain most of the expected annual current price GDP revisions

#### Annual expected revisions to current price GDP level by theme

Figure 4: Improvements to insurance and pensions measurement in Blue Book 2022 will explain most of the expected annual current price GDP revisions

Annual expected revisions to current price GDP level by theme



Source: Office for National Statistics – UK National Accounts, The Blue Book 2022 (indicative data)

## Impacts of Blue Book 2022 on trade

Figure 5 shows the expected cumulative impacts of changes affecting imports and exports on total UK net trade in goods and services. This includes both the items included in the trade package of work above and the impacts on imports and exports from other changes, such as insurance.

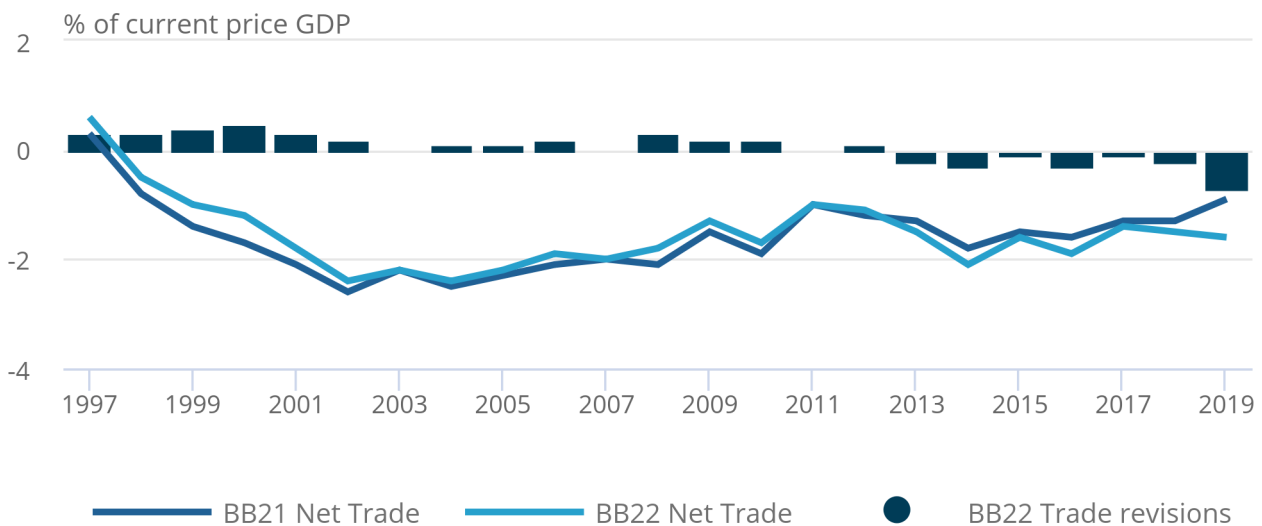
These impacts are likely to have a positive effect on net trade between 1997 and 2012; that is, they will narrow the UK's trade deficit. From 2013 onwards, the impact on net trade is anticipated to be negative. This is on account of the International Passenger Survey (IPS) methodology improvements leading to a substantial increase in imports. In 2019, the trade deficit is estimated to widen from negative 0.9% to negative 1.6%. The larger 2019 revision results from updated data provided by HM Revenue and Customs leading to a decrease in estimated goods exports, as explored in their [UK Trade: May 2021](#) bulletin.

### Figure 5: Revisions introduced in Blue Book 2022 are likely to reduce the trade deficit in early years but widen it from 2013 onwards

#### Annual expected changes to net trade as a percentage of GDP

Figure 5: Revisions introduced in Blue Book 2022 are likely to reduce the trade deficit in early years but widen it from 2013 onwards

Annual expected changes to net trade as a percentage of GDP



Source: Office for National Statistics – UK National Accounts, The Blue Book 2022 (indicative data)



## 4 . Future developments

In Blue Book 2022, the Office for National Statistics (ONS) will make significant improvements in measuring several aspects of the National Accounts. Use of Solvency II data represents a major improvement to the measurement of insurance activity, and methods changes will lead to an improved treatment of pensions in the UK National Accounts.

We will publish further indicative impacts of Blue Book 2022 on 25 July 2022. That article will provide a more in-depth insight into how we expect the components of the production, income, and expenditure approaches to measuring GDP to be revised. It will also include a preliminary view of the new quarterly profile of current price and volume estimates of GDP.

## 5 . Related links

[Impact of Blue Book 2021 changes on current price and volume estimates of gross domestic product](#)

Article | Released 28 June 2021

Methodological and data improvements that affect current price and chain volume measure of gross domestic product (GDP), 1997 to 2019.

[Proposed changes to be implemented in Blue Book and Pink Book 2022](#)

Article | Released 13 January 2022

Planned scope and content of the UK National Accounts, the Blue Book and UK Balance of Payments, the Pink Book 2022 editions.

[Travel Trends: 2019](#)

Article | Released 22 May 2020

Contains details of methods changes relating to the International Passenger Survey (IPS)

[Insurance and pensions methods changes: 1997 to 2020](#)

Article | Released 20 June 2022

Improvements in calculating estimates for the insurance companies and pension funds subsector. Changes to the financial and non-financial accounts resulting from methods and data source changes.