

Article

National Accounts articles: UK trade data impact assessment from new developments, 1997 to 2016

Provisional UK trade data impact assessment to current price and chained volume measures from 1997 to 2016, following implementation of new trade systems and subsequent developments.

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1 . Summary

This article is part of a series describing [changes to national accounts](#). It details improvements we are making to national accounts in Blue Book 2018 and Pink Book 2018 to ensure they continue to provide the best possible framework for analysing the UK economy and for comparing it with those of other countries. It details estimates of the indicative impact of changes to UK trade that will be introduced when revised figures for the quarterly gross domestic product (GDP), sector and financial accounts (SFA), and balance of payments (BoP) consistent with Blue Book and Pink Book 2018, are published on 29 June 2018.

An initial summary of planned changes for Blue Book and Pink Book 2018 was announced in [National Accounts articles: Latest developments to UK National Accounts and Balance of Payments – changes to be implemented for Blue Book and Pink Book 2018](#), published on 4 December 2017. The provisional impact of Blue Book 2018 changes to the current price UK trade balance was published in [National accounts articles: Impact of Blue Book 2018 changes on current price gross domestic product estimates, 1997 to 2016](#) on 13 April 2018.

This article brings together methodological and data improvements for the period 1997 to 2016 that are specific to UK trade. Figures are indicative at this stage and final quality assurance is currently being undertaken. All comparisons are made between Blue Book 2018 and [Quarterly national accounts: October to December 2017](#), unless otherwise specified. Figures for 2017 and more recent periods are not yet available and will be published in the Quarterly National Accounts (QNA) on 29 June 2018.

We have embarked upon and are delivering against an ambitious development plan for UK trade statistics. For Blue Book and Pink Book 2018 we have developed new systems for trade in goods and services, as outlined in section 4.2 of the [UK trade development plan](#). The introduction of our new systems and the improvements they will introduce is a big step forward for UK trade statistics, both in terms of quality and the detail at which we will be able to report trade figures on a regular basis, which are high priorities for our users. We have also made improvements to methods used to estimate net spread earnings, which feed into exports of services.

An important element of our planned improvements to trade statistics is to increase the granularity of trade in goods and services data. We published an article and experimental dataset [Trade in goods, country-by-commodity experimental data: 2011 to 2016](#) on 16 April 2018. The country-by-commodity dataset is closely aligned to, but not fully consistent with the Blue Book 2018 and Pink Book 2018 data included within this article. We are also planning to publish trade in goods and services by industry later in 2018.

2 . Provisional impact of improvements to the UK trade balance

Following the improvements we have made, provisional revisions to the UK trade balance range from a downward revision of £1.2 billion to the total trade deficit (goods and services) in 2001 to an upward revision of £9.8 billion in 2016 (Table 1). The £9.8 billion upward revision to the total trade deficit in 2016 means the deficit has been revised from £40.7 billion to £30.9 billion (Table 2). The main driver of the revision in 2016 came from improvements made to methods used to estimate net spread earnings, which feed into exports of services. The net spread earnings improvement revised trade in services exports back to 2004. This will account for the majority of the trade in services revisions for Blue Book and Pink Book 2018, along with the annual supply and use balancing process (that is, the process used to reconcile the three approaches to gross domestic product (GDP); income, output and expenditure).

Trade in goods annual revisions are a combination of improvements in data processing via our new system, a new delivery of administrative data from HM Revenue and Customs (HMRC) and an initial review of how we apply balance of payments (BoP) adjustments.

The provisional annual and quarterly UK trade data for Blue Book 2018 and Pink Book 2018 are included in the accompanying [dataset](#).

Table 1: Provisional revisions to current price total trade balance for Blue Book 2018 and Pink Book 2018, UK, £ billion

| | Trade balance | Of which: Trade in goods | Of which: Trade in services |
|------|----------------------|---------------------------------|------------------------------------|
| 1997 | 0.8 | 0.8 | 0.0 |
| 1998 | 1.1 | 1.1 | 0.0 |
| 1999 | 1.2 | 1.2 | 0.0 |
| 2000 | -0.6 | -0.7 | 0.0 |
| 2001 | -1.2 | -1.3 | 0.2 |
| 2002 | -0.3 | -0.4 | 0.1 |
| 2003 | 0.0 | 0.1 | 0.0 |
| 2004 | 0.8 | 0.6 | 0.2 |
| 2005 | 0.6 | 0.5 | 0.1 |
| 2006 | 0.9 | 0.9 | 0.0 |
| 2007 | 3.0 | 1.3 | 1.8 |
| 2008 | 6.1 | 2.7 | 3.3 |
| 2009 | 5.1 | 1.1 | 4.0 |
| 2010 | 6.1 | 1.6 | 4.5 |
| 2011 | 6.7 | 0.4 | 6.3 |
| 2012 | 7.8 | 2.0 | 5.8 |
| 2013 | 6.3 | 0.8 | 5.5 |
| 2014 | 7.2 | 1.1 | 6.1 |
| 2015 | 5.4 | 0.8 | 4.6 |
| 2016 | 9.8 | 2.8 | 6.9 |

Source: Office for National Statistics

Note:

1. Components may not sum to totals due to rounding.

Table 2 shows the provisional Blue Book 2018 and Pink Book 2018 data and the data currently published in the [Quarterly national accounts: October to December 2017](#) for exports, imports and the trade balance.

Table 2: Total trade balance, exports and imports for Blue Book 2018 and Pink Book 2018 compared with current published data, UK, £ billion

| | Trade balance | | Exports | | Imports | |
|------|---------------|-----------|---------|-----------|---------|-----------|
| | BB18 | Published | BB18 | Published | BB18 | Published |
| 1997 | 4.6 | 3.8 | 241.0 | 239.9 | 236.4 | 236.0 |
| 1998 | -6.8 | -7.9 | 236.1 | 234.8 | 242.9 | 242.7 |
| 1999 | -14.8 | -16.0 | 244.3 | 243.0 | 259.1 | 259.0 |
| 2000 | -20.7 | -20.1 | 271.4 | 270.6 | 292.1 | 290.7 |
| 2001 | -27.1 | -26.0 | 278.6 | 278.7 | 305.7 | 304.6 |
| 2002 | -33.3 | -33.0 | 280.7 | 280.5 | 313.9 | 313.5 |
| 2003 | -30.0 | -30.0 | 294.0 | 293.8 | 323.9 | 323.8 |
| 2004 | -33.6 | -34.4 | 307.4 | 307.1 | 341.0 | 341.5 |
| 2005 | -35.0 | -35.6 | 343.0 | 342.2 | 378.1 | 377.8 |
| 2006 | -34.4 | -35.3 | 391.7 | 390.9 | 426.1 | 426.1 |
| 2007 | -35.0 | -38.1 | 383.3 | 382.0 | 418.4 | 420.1 |
| 2008 | -39.0 | -45.1 | 422.4 | 421.4 | 461.4 | 466.5 |
| 2009 | -28.3 | -33.5 | 402.0 | 399.6 | 430.3 | 433.1 |
| 2010 | -35.1 | -41.2 | 447.1 | 445.7 | 482.2 | 486.9 |
| 2011 | -18.5 | -25.2 | 500.7 | 498.9 | 519.1 | 524.0 |
| 2012 | -25.6 | -33.4 | 504.7 | 501.1 | 530.3 | 534.4 |
| 2013 | -29.0 | -35.4 | 523.5 | 519.9 | 552.6 | 555.3 |
| 2014 | -29.7 | -36.8 | 520.3 | 518.9 | 550.0 | 555.8 |
| 2015 | -27.0 | -32.4 | 519.6 | 517.2 | 546.6 | 549.5 |
| 2016 | -30.9 | -40.7 | 557.0 | 554.7 | 587.8 | 595.4 |

Source: Office for National Statistics

Note:

1. Components may not sum to totals due to rounding.

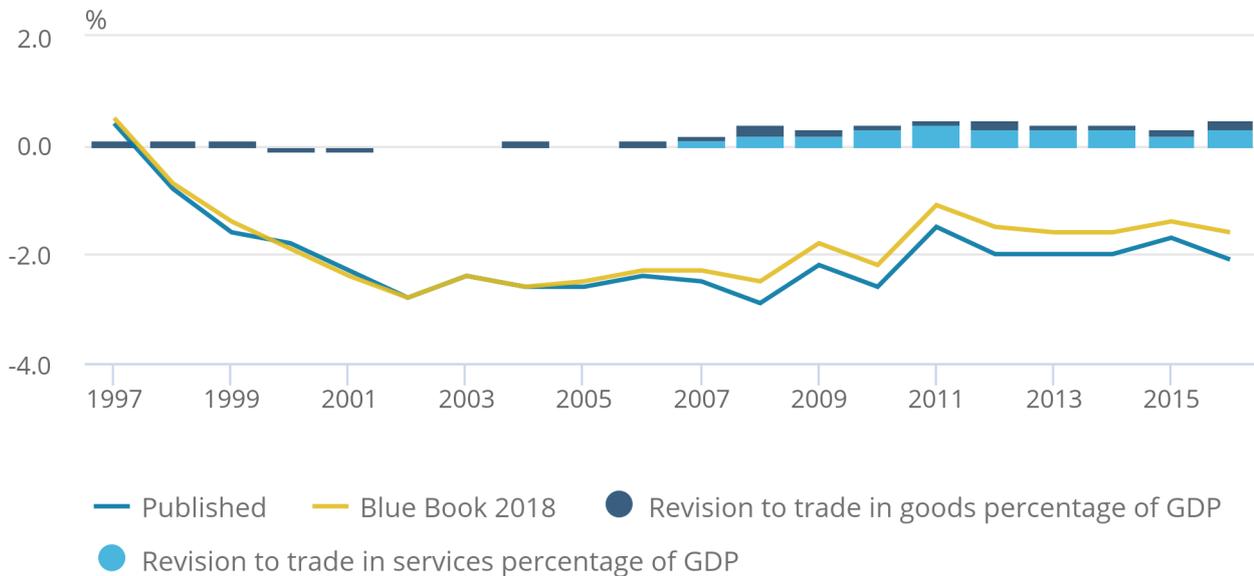
Figure 1 shows the provisional impact of Blue Book 2018 improvements to the current price annual trade balance as a percentage of GDP. From 2009 onwards, the revision to net trade is driven by trade in services, mostly from the net spread earnings revision for Blue Book 2018.

Figure 1: Provisional impact of Blue Book 2018 improvements to the current price annual trade balance as a percentage of gross domestic product

UK, 1997 to 2016

Figure 1: Provisional impact of Blue Book 2018 improvements to the current price annual trade balance as a percentage of gross domestic product

UK, 1997 to 2016



Source: Office for National Statistics

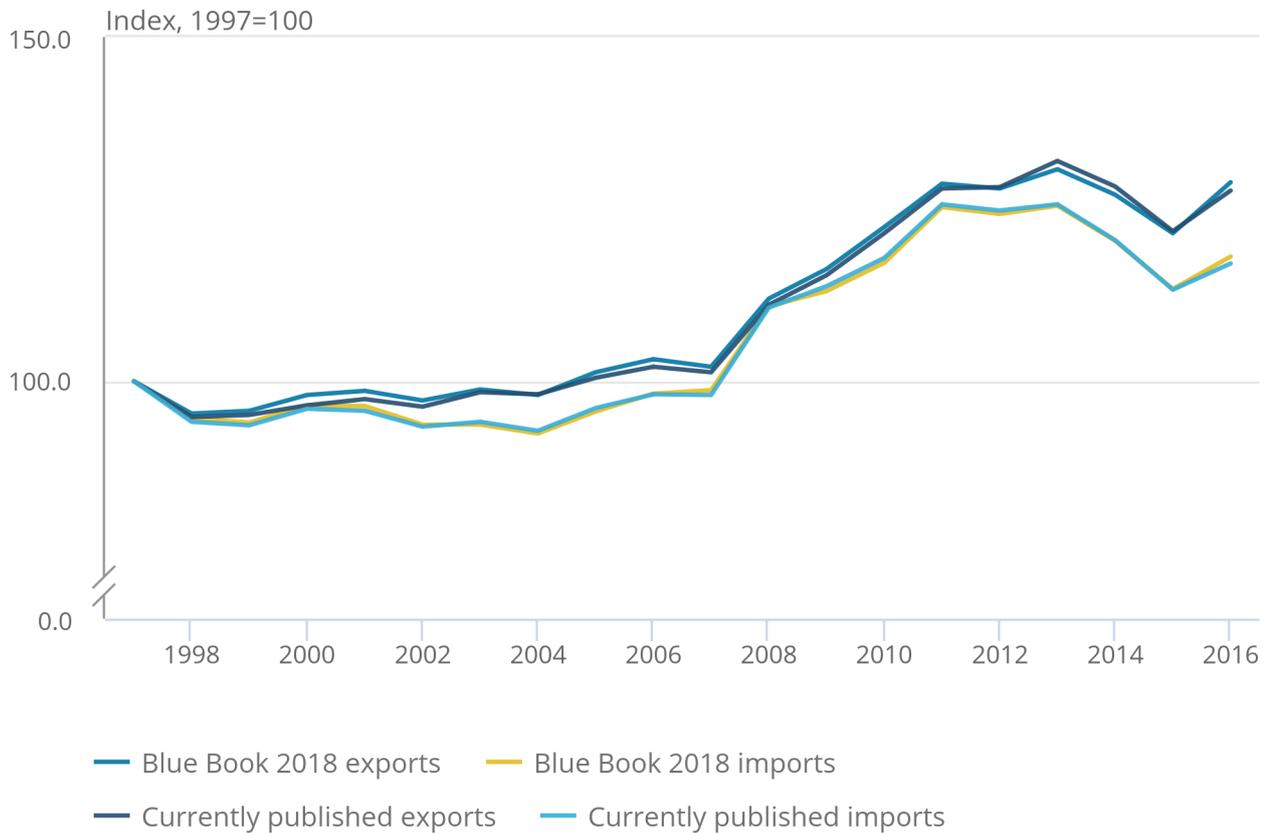
Figure 2 shows the provisional export and import implied deflators for Blue Book 2018 and Pink Book 2018 compared with the implied deflators currently published. There is very little movement seen as a result of the Blue Book 2018 and Pink Book 2018 improvements.

Figure 2: Provisional impact on export and import implied deflators

UK, 1997 to 2016

Figure 2: Provisional impact on export and import implied deflators

UK, 1997 to 2016



Source: Office for National Statistics

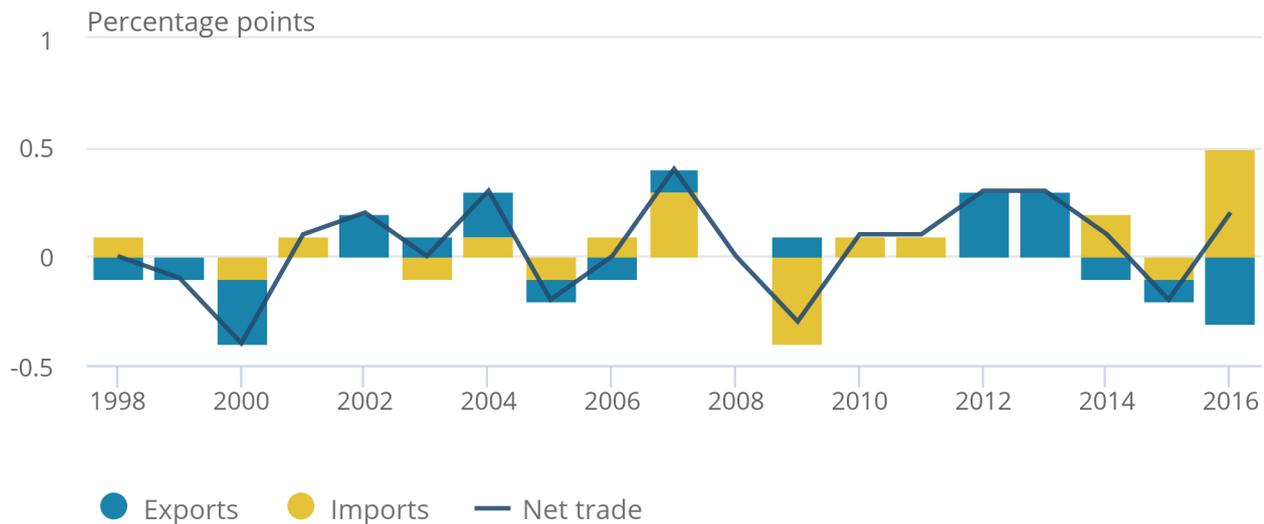
Figure 3 shows the provisional impact of Blue Book 2018 improvements for annual trade contributions to real GDP for exports, imports and net trade. Revisions to net trade contributions to real GDP range from a negative revision of 0.4 percentage points in 2000 to a positive revision of 0.4 percentage points in 2007. This article covers the impact of trade improvements to the GDP estimates and the full summary of changes to GDP for Blue Book 2018 is covered in [National Accounts articles: Impact on GDP current price and chained volume measure annual and quarterly estimates, 1997 to 2016](#), published 8 May 2018.

Figure 3: Provisional impact of Blue Book 2018 improvements to annual trade contributions to real gross domestic product

UK, 1997 to 2016

Figure 3: Provisional impact of Blue Book 2018 improvements to annual trade contributions to real gross domestic product

UK, 1997 to 2016



Source: Office for National Statistics

Notes:

1. The imports contribution has been inverted as imports has a negative impact on GDP (net trade equals exports less imports).

3 . Provisional impact of improvements to trade in goods

For Blue Book 2018 and Pink Book 2018, we are introducing the first phase of developments related to our new trade in goods system. In addition to improving the processing of data, the system will enable the production of more granular country-by-commodity data on a regular basis for the first time.

HM Revenue and Customs (HMRC) is the main source for our trade in goods data, delivering administrative data each month collected on an overseas trade statistics (OTS) basis; this measures the physical movement of goods in and out of the UK. Balance of payments (BoP) adjustments are then applied to the data so that they are on a change of economic ownership basis. In some instances, goods change economic ownership but do not leave or enter the UK, while not all goods that leave or enter the UK represent a change of economic ownership.

One source of improvements to our trade in goods data is a new delivery of data from HMRC covering the period 1998 to the present. Prior to a change in legislation on 1 May 2016, HMRC provided OTS data on a general trade basis, which includes all merchandise crossing the national boundary of the UK, including goods imported into and exported from customs warehouses and free zones. Imported goods are recorded whether or not at the time of importation they are intended for use in the UK or for re-export.

For UK trade data to be published on a BoP basis, adjustments were applied to adjust the data onto a special trade basis, where goods imported into customs warehouses and free zones are only recorded once they are removed and enter free circulation or certain customs procedures. Delivery of new data from HMRC that includes actual data for this adjustment enables us to remove our estimates; providing a better estimation of special trade data. More details on special and general trade can be found in the [Overseas trade statistics methodology paper \(PDF, 456.9KB\)](#), published July 2017.

Figures 4 and 5 show provisional revisions between Pink Book 2018 and the [Balance of payments, UK: Quarter 4 \(Oct to Dec\) 2017](#) publication by Standard International Trade Classification (SITC) commodity groups at a one-digit level.

In addition, a methodological change has been implemented for the allocation of low value trade – when a business does not need to declare to HMRC the commodity code number if individual transactions have a value of less than £175. More detail on low value trade as defined by HMRC can be found in the [Low value threshold information sheet \(PDF, 115.6KB\)](#).

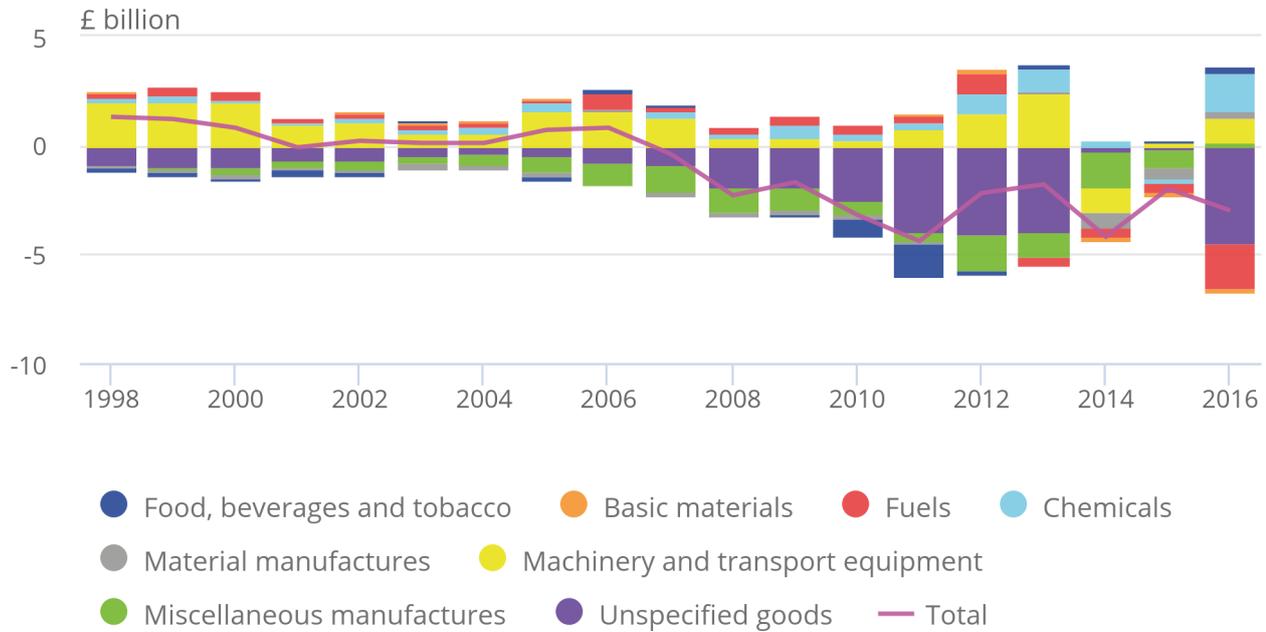
Previously, we included low value trade as a product within unspecified goods (SITC 9), but our recent developments mean that we have now been able to allocate low value trade to the relevant products within trade in goods. As this change is an improvement to the way in which low value trade is allocated across SITC commodity groups, it does not impact the overall total for trade in goods.

Figure 4: Provisional annual revisions to exports of goods by Standard International Trade Classification commodity groups at a one-digit level¹

UK, 1998 to 2016

Figure 4: Provisional annual revisions to exports of goods by Standard International Trade Classification commodity groups at a one-digit level¹

UK, 1998 to 2016



Source: Office for National Statistics

Notes:

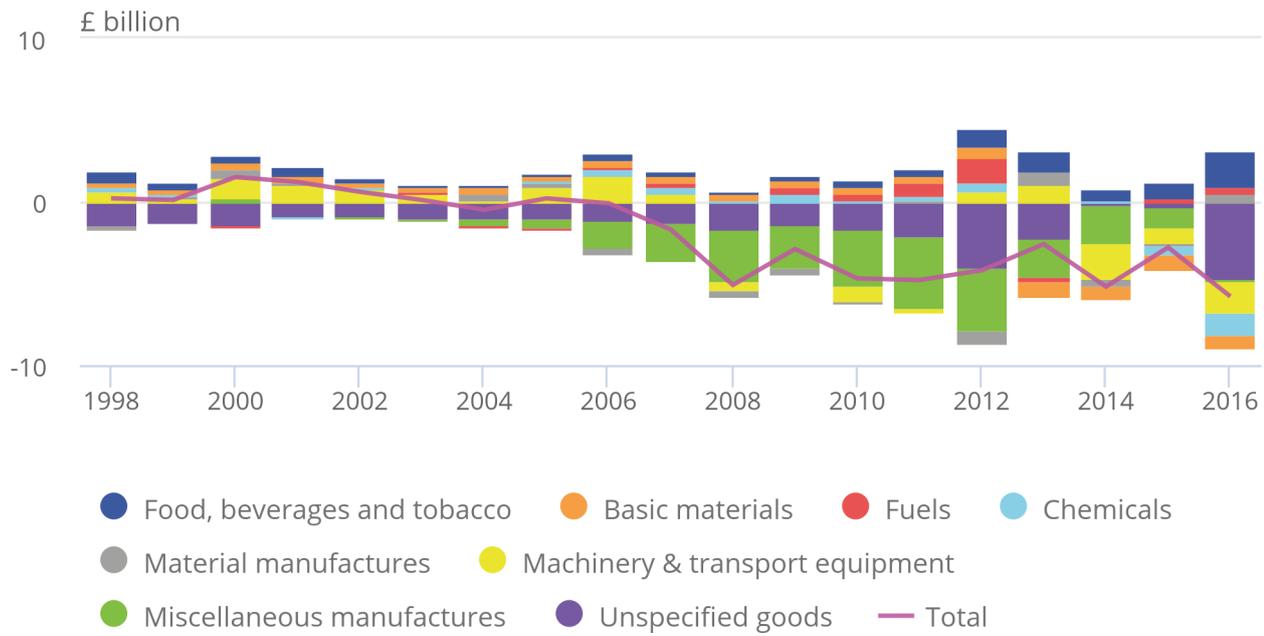
1. For presentational purposes some SITC commodity groups have been combined.

Figure 5: Provisional annual revisions to imports of goods by Standard International Trade Classification commodity groups at a one-digit level¹

UK, 1998 to 2016

Figure 5: Provisional annual revisions to imports of goods by Standard International Trade Classification commodity groups at a one-digit level¹

UK, 1998 to 2016



Source: Office for National Statistics

Notes:

1. For presentational purposes some SITC commodity groups have been combined.

Figure 6 shows provisional proportions of trade in goods to the EU for Blue Book 2018. The largest revision is a reduction of 1.5% to EU exports in 2015 and a reduction of 0.9% to EU imports in 2014 and 2015.

Figure 6: Provisional proportions of trade in goods to the EU for Blue Book 2018

UK, 1998 to 2016

Figure 6: Provisional proportions of trade in goods to the EU for Blue Book 2018

UK, 1998 to 2016



Source: Office for National Statistics

Table 3 shows the provisional top five export and import countries for trade in goods in 2016. There are no changes to the top five ranked countries in 2016 compared with Pink Book 2017.

Table 3: UK trade in goods provisional top five export and import countries, 2016

| Ranking | Export country | Import country |
|---------|-------------------------------|-------------------------------|
| 1 | United States inc Puerto Rico | Germany |
| 2 | Germany | China |
| 3 | France | United States inc Puerto Rico |
| 4 | Netherlands | Netherlands |
| 5 | Ireland | France |

Source: Office for National Statistics

4 . Provisional impact of improvements to trade in services

For Blue Book 2018 and Pink Book 2018, we are introducing the first phase of developments to streamline and improve the transparency of the trade in services system, enabling improvements to data processing and quality assurance of data.

Estimates of net spread earnings, which feed into trade in services exports, have also been revised. 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. The majority of trading that generate net spread earnings is with the rest of the world sector. Further detail on net spread earnings revisions for Blue Book 2018 can be found in [National Accounts articles: Impact of Bluebook 2018 changes on current price gross domestic product estimates, 1997 to 2016](#). The indicative revision to net spread earnings to trade in services exports ranges from £0.05 billion in 2006 to £6.1 billion in 2011.

Revisions to trade in services imports are as a result of the annual supply and use balancing process (that is, the process used to reconcile the three approaches to gross domestic product (GDP); income, output and expenditure).

Implementation of the new trade in services system has resulted in an improved process for the allocation of supply and use balancing adjustments. The allocation is applied based on the size of the unbalanced product data. This affects the apportionment of these adjustments across components of the Extended Balance of Payments (EBOPS) classification, the classification system we use to produce our services statistics.

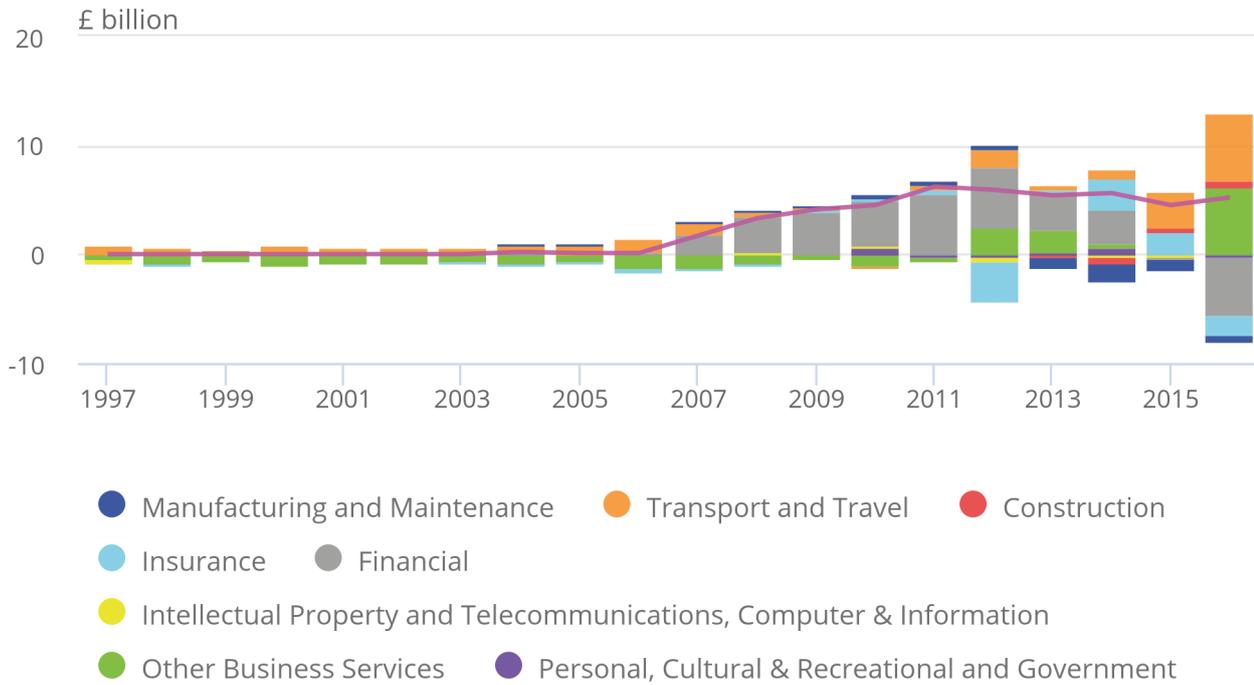
Figures 7 and 8 show provisional improvements between Pink Book 2018 and [Balance of payments, UK: October to December 2017](#) publication to trade in services by EBOPS classification. Exports of services has total revisions up to £6.2 billion in 2011, mostly as a result of revisions to net spread earnings. The net spread earnings improvement revised trade in services exports back to 2004.

Figure 7: Provisional annual revisions to exports of services by Extended Balance of Payments classification¹

UK, 1997 to 2016

Figure 7: Provisional annual revisions to exports of services by Extended Balance of Payments classification¹

UK, 1997 to 2016



Source: Office for National Statistics

Notes:

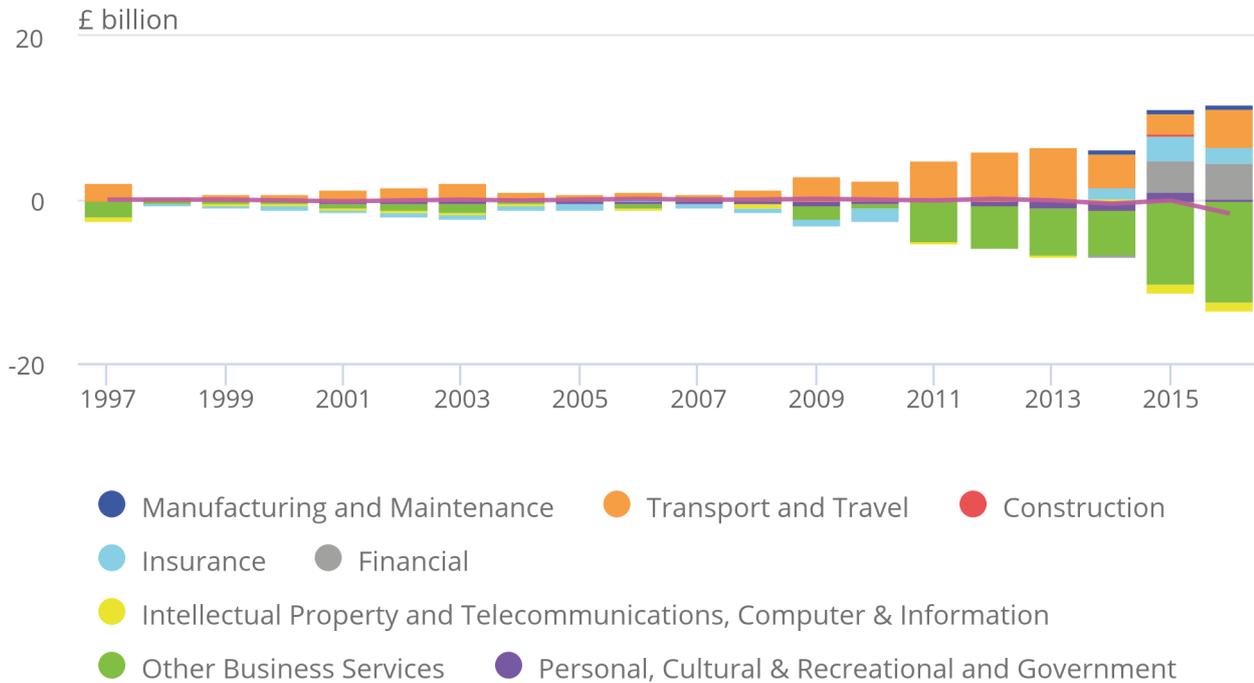
1. For presentational purposes some EBOPS have been combined.

Figure 8: Provisional annual revisions to imports of services by Extended Balance of Payments classification¹

UK, 1997 to 2016

Figure 8: Provisional annual revisions to imports of services by Extended Balance of Payments classification¹

UK, 1997 to 2016



Source: Office for National Statistics

Notes:

1. For presentational purposes some EBOPS have been combined.

5 . Concluding remarks

The package of planned revisions set out in this article introduces a number of improvements in line with our published [UK trade development plan](#). The work to expand and improve UK trade statistics is ongoing, with future planned developments including additional granularity of services data and trade by industry.

The UK trade in goods country-by-commodity data will be published monthly from July 2018. The full dataset will include monthly data back to 1998 and will be published via our “Customise my data” tool, which is being developed to deliver trade data. An experimental dataset was published covering the years 2011 to 2016 [Trade in goods, country-by-commodity experimental data: 2011 to 2016](#) on 16 April 2018.

6 . 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. Table 4 gives a schedule for the remaining articles leading up to the publication of Blue Book 2018 on 31 July 2018.

Table 4: Publication schedule for Blue Book and Pink Book 2018

| Content of Article | Date of publication |
|---|----------------------------|
| Impact on GDP current price and chained volume measure annual and quarterly estimates: 1997 to 2016 | Tuesday 8 May 2018 |
| Detailed assessment of changes to sector and financial accounts 1997-2016 | Friday 1 June 2018 |
| Detailed assessment of changes to Balance of payment annual estimates 1997-2016 | Friday 1 June 2018 |
| Quarterly National Accounts Quarter 1 (Jan to Mar) 2018 (consistent with Blue Book 2018) | Friday 29 June 2018 |
| Balance of Payments Quarter 1 (Jan to Mar) 2018 (consistent with Pink Book 2018) | Friday 29 June 2018 |
| UK quarterly sector accounts: Jan to Mar 2018 (consistent with Blue Book 2018) | Friday 29 June 2018 |
| Alignment between public sector finances and national accounts article: June 2018 | Friday 29 June 2018 |
| Blue Book 2018 | Tuesday 31 July 2018 |
| Pink Book 2018 | Tuesday 31 July 2018 |
| Input-Output supply and use tables, 2018 edition | Tuesday 31 July 2018 |

Source: Office for National Statistics

7 . Authors

James Wells and Hannah Denley.

8 . Exceptional pre-release access

The Bank of England was granted exceptional pre-release access ([letter exchange between Jonathan Athow and Ben Broadbent](#)) to this article at 12pm on 3 May 2018, so that they could consider this article at the Monetary Policy Committee meeting ending on 9 May 2018.