UK National Accounts, The Blue Book: 2023

National accounts statistics including national and sector accounts, industrial analyses and environmental accounts.

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Notice

7 November 2023

We have corrected an inconsistency with Table 12.8. Unlike the rest of the timeseries, the 2022 value for Timber provisioning (FV5G) did not include woodfuel. We have removed the 2022 row to correct this and make the table consistent with the other UK Natural Capital Account tables (12.6 and 12.7).

31 January 2024

We have corrected an error whereby previously published data was omitted. Data was omitted in tables 4.3.8 and 4.3.11 for series FZOL, FZOO and FZRQ for years 1987-1996. Data was omitted in tables 4.3.8a and 4.3.11a for all series for years 1987-1993. No other data are impacted.

We have corrected an error in Table 12.8. The values for timber provisioning (FV5G) had been aggregated incorrectly so woodfuel was double counted. Table 12.6 has also been revised due to changes to the data provided by Forest Research for timber provisioning (FU2R).

We have corrected an error in the physical value of air pollution regulating (FV5K) in table 12.8. The previous version incorrectly excluded some physical removals due to errors in the aggregation of geographic areas. Total monetary values (annual and asset) are unaffected.

Chapters in this compendium

Compendium

An introduction to the UK National Accounts

Chapter summary and general overview of the national and sector accounts.

Table of contents

1 . Overview of the Blue Book

UK National Accounts, The Blue Book was first published in August 1952 and presents a full set of economic accounts (national accounts) for the UK. These accounts are compiled by the Office for National Statistics (ONS). They record and describe economic activity in the UK and are used to support the formulation and monitoring of economic and social policies.

Important notes on Blue Book 2023

Annual chain-linking

In most Blue Books, volume series are updated so their reference and last base years are moved forward by one year as part of the process of annual chain-linking. However, in Blue Book 2023 the reference and last base year have remained at 2019 for a third consecutive year.

The effect of the coronavirus (COVID-19) pandemic has led to very large movements in industry-level estimates of gross value added (GVA), so these structures are unlikely to reflect more "normal" times. Moving the last base year on to 2020 or 2021 would likely lead to some atypical movements in some of our volume series because the industry weights generated would not reflect the pattern of the economy in the following periods. In line with international guidance, we have kept the last base year under review and will inform users of our plans for Blue Book 2024.

Full release of Web Content Accessibility Guidelines (WCAG) spreadsheets

In Blue Book 2023 we have completed work started in Blue Book 2022 to produce our data tables in line with the Government Statistical Service (GSS) guidance on releasing statistics in spreadsheets. All data tables to be published as part of Blue Book 2023 have been reviewed and where necessary the presentational format has been restructured to improve their usability, accessibility and machine readability for our users.

As part of this restructure, tables for all chapters will also now be released together as separate worksheets in a single workbook file, rather than being published in separate workbook files.

Further information on these changes is available in the article Summary of changes to data table structure in Blue Book 2023.

Because of these changes, a PDF version of the UK National Accounts: Blue Book is no longer available.

Content of Blue Book 2023

Note that the chapter numbers refer to the worksheet numbering sequence in the accompanying data tables.

Chapter 1

Chapter 1 of the Blue Book provides a summary of the UK National Accounts, including explanations and tables covering the main national and domestic aggregates, for example:

- gross domestic product (GDP) at current market prices and chained volume measures

- GDP deflator

- gross value added (GVA) at basic prices

- gross national income (GNI)

- gross national disposable income (GNDI)

- population estimates

- employment estimates

- GDP per head

- the UK Summary Accounts (the goods and services account, production accounts, distribution and use of income accounts, and accumulation accounts)

Chapter 1 also includes details of revisions to data since Blue Book 2022.

Chapter 2

Chapter 2 includes:

- input–output supply and use tables

- analyses of GVA at current market prices and chained volume measures

- capital formation

- workforce jobs by industry

Chapters 3 to 7

Chapters 3, 4, 5, 6 and 7 provide:

- a description of the institutional sectors

- the sequence of the accounts and balance sheets

- an explanation of the statistical adjustment items needed to reconcile the accounts

- the fullest available set of accounts providing transactions by sectors and appropriate subsectors of the economy (including the rest of the world)

Chapters 8 to 11

Chapters 8, 9, 10 and 11 cover additional analysis and include:

- supplementary tables for gross fixed capital formation (GFCF), national balance sheet and public sector

- statistics for international purposes

Chapter 12

Chapter 12 covers the UK Environmental Accounts.

Chapter 13

covers flow of funds.

2 . Overview of the UK National Accounts and sector accounts

In the UK, priority is given to the production of a single gross domestic product (GDP) estimate using income, production and expenditure data. Further analysis is available on:

- income analysis at current prices

- expenditure analysis at both current prices and chained volume measures

- value added analysis compiled on a quarterly basis in chained volume measures only

Income, capital and financial accounts are produced for non-financial corporations, financial corporations, general government, households and non-profit institutions serving households (NPISH).

The accounts are fully integrated but with a statistical discrepancy (known as the statistical adjustment), shown for each sector account. This reflects the difference between the sector net borrowing or lending from the capital account and the identified borrowing or lending in the financial accounts, which should theoretically be equal.

Financial transactions and balance sheets are produced for the rest of the world sector in respect of its dealings with the UK.

An introduction to sector accounts

The sector accounts summarise the transactions of particular groups of institutions within the economy. They show how the income from production is distributed and redistributed, and how savings are used to add wealth through investment in physical or financial assets.

Institutional sectors

The accounting framework identifies two kinds of institutions: consuming units (mainly households) and production units (mainly corporations, non-profit institutions, or government).

Units can own goods and assets, incur liabilities and engage in economic activities and transactions with other units. All units are classified into one of five sectors:

- non-financial corporations

- financial corporations

- general government

- households and NPISH

- rest of the world

Types of transactions

There are three main types of transactions.

Transactions in products

Transactions in products are related to goods and services. They include output, intermediate and final consumption, gross capital formation, and exports and imports.

Distributive transactions

Distributive transactions transfer income or wealth between units of the economy. They include property income, taxes and subsidies, social contributions and benefits, and other current or capital transfers.

Financial transactions

Financial transactions differ from distributive transactions in that they relate to transactions in financial claims, whereas distributive transactions are unrequited. The main categories in the classification of financial instruments are:

- monetary gold and special drawing rights

- currency and deposits

- debt securities

- loans

- equity and investment fund shares or units

- insurance, pension and standardised guarantee schemes

- financial derivatives and employee stock options

- other accounts receivable or payable

3 . Summary of changes

A range of methodological improvements have been incorporated into Blue Book 2023. These affect current price and volume improvements and include:

- the introduction of new methodology to improve estimates of the impact of global supply chains

- the implementation of outstanding classification decisions affecting the public sector

- improvements to deflators in line with our deflator strategy

- data source and method changes to improve the international comparability of UK gross domestic product (GDP) estimates

- improvements to the measurement of volume output for non-market adult social care

Information about these improvements, and their associated data impacts, has been previously published in our Impact of Blue Book 2023 changes on gross domestic product article, Detailed assessment of changes to institutional sector accounts: 1997 to 2021 article and Detailed assessment of changes to balance of payments annual estimates: 1997 to 2021 article.

Globalisation

Blue Book 2023 incorporates the first set of improvements, focused on a small number of multinational enterprises, aimed at better accounting for globalisation impacts such as the complexity of economic ownership, business models and supply chains crossing national boundaries. While the overall effect on GDP is modest at this early stage, the cumulative effect will become evident as more multinational enterprises are accounted for in future Blue Book publications. For further information about the globalisation change, see our Globalisation in the context of the UK National Accounts: Blue Book 2023 article.

Public sector finances

To improve the alignment of the national accounts and public sector finances publications, Blue Book 2023 includes the effects of reclassifying several bodies from public corporations into central government. Blue Book 2023 also reflects the reclassification of certain central government property leases from operating to financial leases, following a review of the impact of the implementation of International Financial Reporting Standard 16 (IFRS16). For further information about the recording of central government leases, see our Recent and upcoming changes to public sector finance statistics: July 2022 article.

A set of public sector volume changes, which includes the introduction of new methods and data sources to estimate the volume output for non-market adult social care, has also been implemented.

Benchmarks and associated projects

Blue Book 2023 incorporates improvements to update or replace benchmarks in our data. Benchmarking refers to the use of fixed proportions based on less frequent data sources, or bespoke academic or market research, to address areas that are difficult to measure.

Improvements include:

- replacing the use of fixed proportions in calculating redundancies and severance payments for multiple industries

- introducing new methodology to update fixed proportions and forecasts for households' expenditure on smuggled cigarettes, tobacco and cigars

- improving the industrial classification of non-profit institutions serving households and the measurement of the higher education sector

- improved methods for measuring non-UK government personnel spending within the UK

- new data sources and methods for measuring rail passenger services

Deflator improvements

We have improved the effectiveness of the systems used in the compilation of the national accounts by developing a central compilation system for deflation measures, known as the deflator gateway system. This system provides a consistent and coherent application of deflators across national accounts.

Enhancements introduced this year include:

- introducing new methods to account for changes in the quality of computer hardware

- expanding the use of Services Producer Price Indices (SPPI) in the national accounts

- introducing new weighting methods for market output deflators

- introducing improved methods and data sources to estimate trade in services' travel deflators

Other method and data improvements

Blue Book 2023 has incorporated other method and data source improvements, including:

- new methods to measure the value of central government dwellings

- new data sources to improve the measurement of education-related travel exports, for further information see Section 4: Pink Book 2023, of our Methodological improvements to UK education services exports article

- updates to the estimation of businesses not covered by the Annual Business Survey (ABS) sample frame

- improvements to the treatment of own account software

4 . The basic accounting framework

The accounting framework provides a systematic and detailed description of the UK economy, including sector accounts and the input-output framework.

All elements required to compile aggregate measures, such as gross domestic product (GDP), gross national income (GNI), saving and the current external balance (the balance of payments) are included.

The economic accounts provide the framework for a system of volume and price indices, to allow chained volume measures of aggregates such as GDP to be produced. In this system, value added, from the production approach, is measured at basic prices (including other taxes less subsidies on production but not on products) rather than at factor cost (which excludes all taxes less subsidies on production).

The whole economy is subdivided into institutional sectors with current price accounts running in sequence from the production account through to the balance sheet.

The accounts for the whole UK economy and its counterpart, the rest of the world, follow a similar structure to the UK sectors, although several of the rest of the world accounts are collapsed into a single account as they can never be complete when viewed from a UK perspective.

5 . Table numbering system

The table numbering system is designed to show relationships between the UK, its sectors and the rest of the world. For accounts drawn directly from the European System of Accounts (ESA) 2010, a three-part numbering system is used; the first two digits denote the sector and the third digit denotes the ESA 2010 account. Not all sectors can have all types of account, so the numbering is not necessarily consecutive within each sector's chapter.

The rest of the world's identified components of accounts 2 to 6 are given in a single account numbered 2. UK whole economy accounts consistent with ESA 2010 are given in Section 1.6 as a time series and in Section 1.7 in a detailed matrix identifying all sectors, the rest of the world and the UK total.

The ESA 2010 code for each series is shown in the left-hand column, using the following prefixes:

- S for the classification of institutional sectors

- P for transactions in products

- D for distributive transactions

- F for transactions in financial assets and liabilities

- K for other changes in assets

- B for balancing items and net worth

Within the financial balance sheets, the following prefixes are used: AF for financial assets and liabilities, and AN for non-financial assets and liabilities.

6 . The purpose of an account

An account records and displays all flows and stocks for a given aspect of economic life. The sum of resources is equal to the sum of uses, with a balancing item to ensure this equality.

The system of economic accounts allows the build-up of accounts for different areas of the economy, highlighting, for example, production, income and financial transactions.

Accounts may be elaborated and set out for different institutional units or sectors (groups of units).

Usually a balancing item has to be introduced between the total resources and total uses of these units or sectors. When summed across the whole economy, these balancing items constitute significant aggregates.

7 . The integrated economic accounts

The integrated economic accounts of the UK provide an overall view of the economy. The accounts are grouped into four main categories:

- goods and services accounts

- current accounts

- accumulation accounts

- balance sheets

8 . The goods and services account (Account 0)

The goods and services account is a transactions account, balancing total resources, from outputs and imports, against the uses of these resources in consumption, investment, inventories and exports. No balancing item is required as the resources are simply balanced with the uses.

9 . Current accounts: the production and distribution of income accounts

The production account (Account I)

This account displays transactions involved in the generation of income by the activity of producing goods and services. The balancing item is value added (B.1). For the nation's accounts, the balancing items (the sum of value added for all industries) are, after the addition of taxes less subsidies on products, gross domestic product (GDP) at market prices or net domestic product when measured net of capital consumption. The production accounts are also shown for each industrial sector.

The distribution and use of income account (Account II)

This account shows the distribution of current income (value added) carried forward from the production account and has saving as its balancing item (B.8). Saving is the difference between income (disposable income) and expenditure (or final consumption).

The distribution of income compromises four sub-accounts:

- primary distribution of income account

- secondary distribution of income

- redistribution of income in kind

- use of income account

The allocation of primary income account (Account II.2.1)

Primary incomes are accrued to institutional units because of their involvement in production or their ownership of productive assets. They include property income (from lending or renting assets) and taxes on production and imports. They exclude taxes on income or wealth, social contributions or benefits, and other current transfers.

The primary distribution of income shows the way these are distributed among institutional units and sectors. The primary distribution account is divided into two sub-accounts: the generation and the allocation of primary incomes.

The secondary distribution of income account (Account II.2)

This account describes how the balance of primary income for each institutional sector is allocated by redistribution, through transfers such as taxes on income, wealth and so on, social contributions and benefits, and other current transfers. It excludes social transfers in kind.

The balancing item of this account is gross disposable income (B.6g), which reflects current transactions and explicitly excludes capital transfers, real holding gains and losses, and the consequences of events such as natural disasters.

The redistribution of income in kind account (Account II.3)

This account shows how gross disposable income of households, non-profit institutions serving households (NPISH), and government are transformed by the receipt and payment of transfers in kind. The balancing item for this account is adjusted gross disposable income (B.7g).

The use of income account (Account II.4)

The use of income account shows how disposable income is divided between final consumption expenditure and saving. In addition, the use of income account includes, for households and for pensions, an adjustment item (D. 8: adjustment for the change in pension entitlements), which relates to the way that transactions between households and pension funds are recorded.

The accumulation accounts (Account III)

These accounts cover all changes in assets, liabilities and net worth. The accounts are structured into two groups. The first group covers transactions that would correspond to all changes in assets, liabilities and net worth that result from transactions and are known as the capital account and the financial account. They are distinguished to show the balancing item net lending or borrowing.

The second group relates to all changes in assets, liabilities and net worth related to other factors, for example, the discovery or re-evaluation of mineral reserves or the reclassification of a body from one sector to another.

The capital account (Account III.1)

The capital account is presented in two parts.

The first part shows that saving (B.8g), the balance between national disposable income and final consumption expenditure from the production and distribution and use of income accounts, is reduced or increased by the balance of capital transfers (D.9) to provide an amount available for financing investment (in both non-financial and financial assets).

The second part shows total investment in non-financial assets. This is the sum of gross fixed capital formation (P. 51g), changes in inventories (P.52), acquisitions less disposals of valuables (P.53) and acquisitions less disposals of non-financial non-produced assets (NP). The balance on the capital account is known as net lending or borrowing. Conceptually, net lending or borrowing for all the domestic sectors represents net lending or borrowing to the rest of the world sector.

If actual investment is lower than the amount available for investment, the balance will be positive, representing net lending. Similarly, when the balance is negative, borrowing is represented. Where the capital accounts relate to the individual institutional sectors, the net lending or borrowing of a particular sector represents the amounts available for lending or borrowing to other sectors. The value of net lending or net borrowing is the same irrespective of whether the accounts are shown before or after deducting consumption of fixed capital (P.51c), provided a consistent approach is adopted throughout.

The financial account (Account III.2)

This account shows how net lending and borrowing are achieved by transactions in financial instruments. The net acquisitions of financial assets are shown separately from the net incurrence of liabilities. The balancing item is net lending or borrowing.

In principle, net lending or borrowing should be identical for both the capital account and the financial account. In practice, however, because of errors and omissions this identity is very difficult to achieve for the sectors and the economy as a whole. The difference is known as a statistical adjustment.

The other changes in assets account (Account III.3)

The other changes in assets account is concerned with the recording of changes in the values of assets and liabilities, and thus of the changes in net worth, between opening and closing balance sheets that result from flows that are not transactions, referred to as "other flows".

This account is further subdivided into: other changes in the volume of assets account, III.3.1, and revaluation account, III.3.2.

The other changes in the volume of assets account records the changes in assets, liabilities and net worth between opening and closing balance sheets that are neither because of transactions between institutional units, as recorded in the capital and financial accounts, nor holding gains and losses as recorded in the revaluation account. Examples include reclassifications and write-offs. The balancing item for this account is other changes in volume (B.102).

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 balancing item for this account is nominal holding gains and losses (B.103).

The balance sheet (Account IV)

The second group of accumulation accounts complete the sequence of accounts. These include the balance sheets and a reconciliation of the changes that have brought about the change in net worth between the beginning and end of the accounting period.

The opening and closing balance sheets show how total holdings of assets by the UK or its sectors match total liabilities and net worth (the balancing item). Various types of assets and liabilities can be shown in detailed presentations of the balance sheets. Changes between the opening and closing balance sheets for each group of assets and liabilities result from transactions and other flows recorded in the accumulation accounts or reclassifications and revaluations.

Net worth equals changes in assets less changes in liabilities.

The rest of the world account (Account V)

This account covers the transactions between resident and non-resident institutional units and the related stocks of assets and liabilities. Written from the point of view of the rest of the world, its role is similar to an institutional sector.

10 . Satellite accounts

Satellite accounts cover areas or activities not included in the central framework because they either add additional detail to an already complex system or conflict with the conceptual framework. The UK Environmental Accounts are satellite accounts linking environmental and economic data to show the interactions between the economy and the environment.

See Environmental accounts for further information.

The limits of the national economy: economic territory, residence and centre of economic interest

Economic territory and residence of economic interest

The economy of the UK is made up of institutional units that have a centre of economic interest in the UK economic territory. These units are known as resident units, and it is their transactions that are recorded in the UK National Accounts.

UK economic territory

The UK economic territory includes:

- Great Britain and Northern Ireland (the geographic territory administered by the UK government within which persons, goods, services and capital move freely)

- any free zones, including bonded warehouses and factories under UK customs control

- the national airspace, UK territorial waters and the UK sector of the continental shelf

- the UK economic territory excludes Crown dependencies (Channel Islands and the Isle of Man)

ESA 2010 economic territory

Within the European System of Accounts (ESA) 2010, which the UK still follows, the definition of economic territory also includes territorial enclaves in the rest of the world. These include embassies, military bases, scientific stations, information or immigration offices and aid agencies used by the British government with the formal political agreement of the governments in which these units are located. However, it excludes any extra territorial enclaves, that is, parts of the UK geographic territory like embassies and United States military bases used by general government agencies of other countries, by the institutions of the EU, or by international organisations under treaties or by agreement.

Centre of economic interest

When an institutional unit engages and intends to continue engaging (normally for one year or more) in economic activities on a significant scale from a location (dwelling or place of production) within the UK economic territory, it is defined as having a centre of economic interest and is a resident of the UK.

If a unit conducts transactions on the economic territory of several countries, it has a centre of economic interest in each of them.

Ownership of land and structures in the UK is enough to qualify the owner to have a centre of interest in the UK.

Residency

Resident units are:

- households

- legal and social entities such as corporations and quasi corporations, for example, branches of foreign investors

- non-profit institutions

- government

- so-called "notional residents"

Travellers, cross-border and seasonal workers, crews of ships and aircraft, and students studying overseas are all residents of their home countries and remain members of their households.

When an individual leaves the UK for one year or more (excluding students and patients receiving medical treatment), they cease being a member of a resident household and become a non-resident, even on home visits.

11 . Production included in economic activity

Gross domestic product (GDP) is defined as the sum of all economic activity taking place in UK territory. In practice, a "production boundary" is defined, inside which are all the economic activities taken to contribute to economic performance. To decide whether to include a particular activity within the production boundary, the following factors are considered:

- Does the activity produce a useful output?

- Is the product or activity marketable and does it have a market value?

- If the product does not have a meaningful market value, can one be assigned (imputed)?

- Would exclusion (or inclusion) of the product of the activity make comparisons between countries over time more meaningful?

The following are recorded within the European System of Accounts (ESA) 2010 production boundary:

- production of individual and collective services by government

- own-account production of housing services by owner-occupiers

- production of goods for own final consumption, for example, agricultural products

- own-account construction, including that by households

- production of services by paid domestic staff

- breeding of fish in fish farms

- production forbidden by law, as long as all units involved in the transaction enter into it voluntarily

- production from which the revenues are not declared in full to the fiscal authorities, for example, clandestine production of textiles

The following fall outside the production boundary:

- domestic and personal services produced and consumed within the same household, for example, cleaning, the preparation of meals, or the care of sick or elderly people

- volunteer services that do not lead to the production of goods, for example, caretaking and cleaning without payment

- natural breeding of fish in open seas

12 . Prices used to value the products of economic activity

In the UK, a number of different prices may be used to value inputs, outputs and purchases. The prices are different depending on the perception of the bodies engaged in the transaction, that is, the producer and user of a product will usually perceive the value of the product differently. This means that the output prices received by producers can be distinguished from the prices paid by producers.

Basic prices

Basic prices are the preferred method of valuing output in the accounts.

They are the amount received by the producer for a unit of goods or services
minus any taxes payable
plus
any subsidy receivable as a consequence of production or sale.

The only taxes included in the price will be taxes on the output process, for example, business rates and Vehicle Excise Duty, which are not specifically levied on the production of a unit of output. Basic prices exclude any transport charges invoiced separately by the producer. When a valuation at basic prices is not feasible, producers' prices may be used.

Producers' prices

Producers' prices are basic prices
plus
those taxes paid per unit of output (other than taxes deductible by the purchaser such as Value Added Tax (VAT), invoiced for output sold)
minus
any subsidies received per unit of output.

Purchasers' or market prices

Purchasers' or market prices are the prices paid by the purchaser and include transport costs, trade margins and taxes (unless the taxes are deductible by the purchaser).

Purchasers' or market prices are producers' prices
plus
any non-deductible VAT or similar tax payable by the purchaser
plus
transport costs paid separately by the purchaser (not included in the producers' price).

The rest of the world: national and domestic

Domestic product (or income) includes production (or primary incomes generated and distributed) resulting from all activities taking place "at home" or in the UK domestic territory.

This will include production by any foreign-owned company in the UK, but exclude any income earned by UK residents from production taking place outside the domestic territory.

Gross domestic product (GDP)
equals
the sum of primary incomes distributed by resident producer prices.

The definition of gross national income (GNI) is GDP plus income received from other countries (notably interest and dividends), less similar payments made to other countries.

GDP
plus
net property income
equals
GNI.

This can be introduced by considering the primary incomes distributed by the resident producer units. Primary incomes, generated in the production activity of resident producer units, are distributed mostly to other residents' institutional units.

For example, when a resident producer unit is owned by a foreign company, some of the primary incomes generated by the producer unit are likely to be paid abroad. Similarly, some primary incomes generated in the rest of the world may go to resident units. It is therefore necessary to exclude that part of resident producers' primary income paid abroad, but include the primary incomes generated abroad but paid to resident units.

GDP (or income)
less
primary incomes payable to non-resident units
plus
primary incomes receivable from the rest of the world
equals
GNI.

GNI at market prices
equals
the sum of gross primary incomes receivable by resident institutional units or sectors.

National income includes income earned by residents of the national territory, remitted (or deemed to be remitted in the case of direct investment) to the national territory, no matter where the income is earned.

Real GDP (chained volume measures)
plus
trading gain
equals
real gross domestic income (RGDI).

RGDI
plus
real primary incomes receivable from abroad
less
real primary incomes payable abroad
equals
real GNI.

Real GNI (chained volume measures)
plus
real current transfers from abroad
less
real current transfers abroad
equals
real gross national disposable income (GNDI).

Receivables and transfers of primary incomes, and transfers to and from abroad, are deflated using the gross domestic final expenditure deflator.

13 . Gross domestic product: the concept of net and gross

The term gross means that, when measuring domestic production, capital consumption or depreciation has not been allowed for.

Capital goods are different from the materials and fuels used up in the production process because they are not used up in the period of account but are instrumental in allowing that process to take place. However, over time, capital goods wear out or become obsolete and in this sense gross domestic product (GDP) does not give a true picture of value added in the economy. When calculating value added as the difference between output and costs, we should also show that part of the capital goods are used up during the production process (the depreciation of capital assets).

Net concepts are net of this capital depreciation, for example:

GDP
minus
consumption of fixed capital
equals
net domestic product.

14 . Symbols used

In general, the following symbols are used:

.. denotes not available
– denotes nil or less than £500,000
£ billion denotes £1,000 million

15 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, [An introduction to the UK National Accounts, UK National Accounts, The Blue Book: 2023](#)

National accounts at a glance

A summary of recent trends and movements within the UK economy.

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Table of contents

1 . Overview

This section of the UK National Accounts, The Blue Book: 2023 edition looks at recent trends in the UK economy for a range of information that is published as part of the UK National Accounts.

All UK figures referred to in this section are consistent with Blue Book 2023, which contains methodological and data improvements that impacted estimates of the UK's gross domestic product (GDP). Though annual national accounts are able to take advantage of more detailed data and therefore achieve a higher level of accuracy, these statistics for the more recent years should still be considered provisional and remain subject to revision in future annual national accounts publications.

Revisions to historical data can still occur when there are either methods and/or source data changes that are required to ensure data comparability over time. The nature and impact of any such revisions will be communicated in line with the National Accounts Revisions Policy.

2 . Gross domestic product

There was a further increase in activity in the UK economy in 2022, as the economy continued to recover from the impacts of the coronavirus (COVID-19) pandemic (Figure 1).

Real gross domestic product (GDP) is estimated to have increased by 4.3% in 2022, following growth of 8.7% in 2021, the fastest rate of growth seen since the Second World War. Coronavirus restrictions eased throughout 2021, with most remaining restrictions lifted during early 2022.
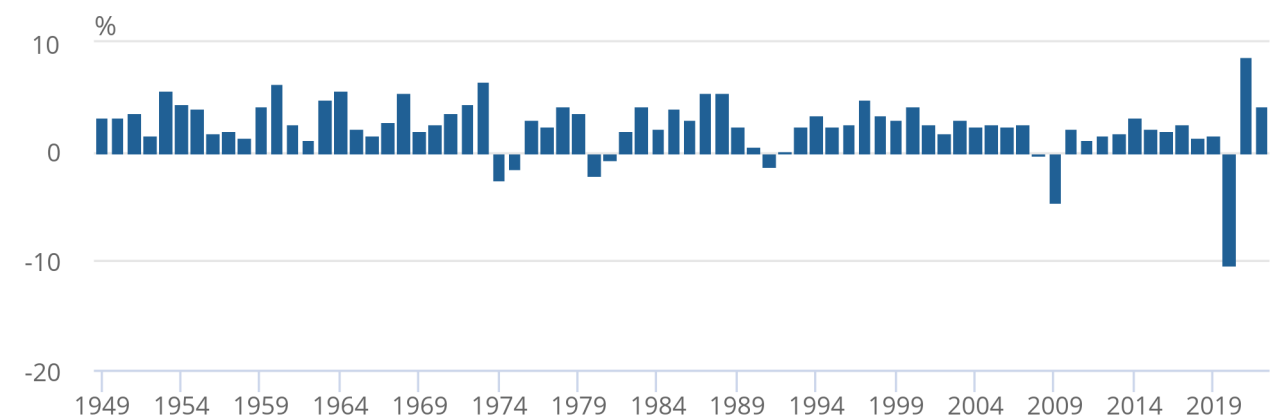
The significant impact of the pandemic primarily explains the 10.4% fall in economic activity in 2020, which was the largest annual fall in UK GDP in over 300 years. In 2022, real GDP was 1.7% above its pre-coronavirus (2019) level, having been 2.6% below in 2021.

Figure 1: The UK economy increased by 4.3% in 2022, following the 8.7% post-coronavirus rebound in 2021

Real annual gross domestic product growth, UK, 1949 to 2022

Figure 1: The UK economy increased by 4.3% in 2022, following the 8.7% post-coronavirus rebound in 2021

Real annual gross domestic product growth, UK, 1949 to 2022

Source: Blue Book 2023 from the Office for National Statistics

3 . Net domestic product

Gross domestic product (GDP) is a production concept, which is important for fiscal and monetary policymakers whose focus is concentrated on output and inflation. Net domestic product (NDP) is more appropriate from a welfare and sustainability perspective. It reflects the level of resources that are available for consumption or investment and is a rough proxy of the level of consumption that can be maintained while leaving capital assets intact.

As NDP takes into account the depreciation of capital assets, it is considered to be superior to GDP as a measure of well-being of a nation and serves as an important factor for determining the economic health of a country.
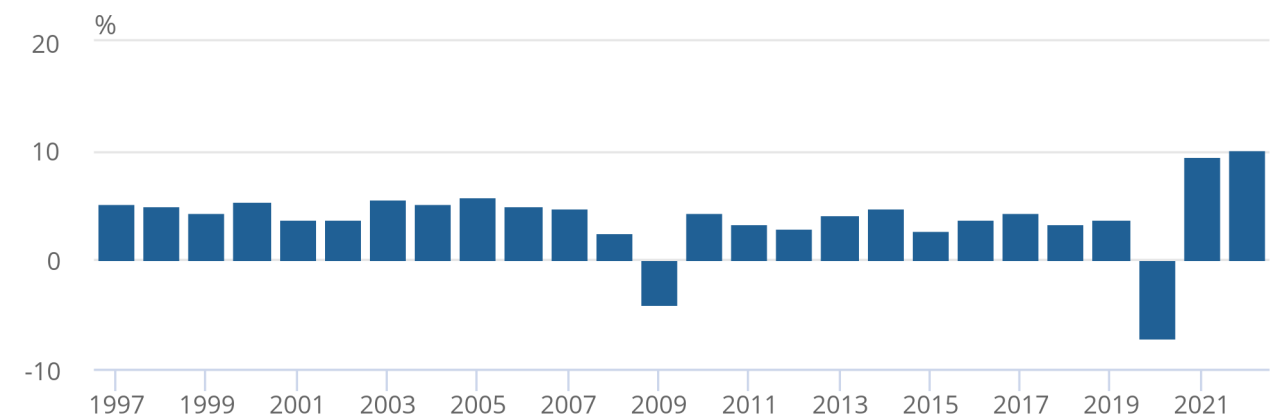
The UK's nominal NDP was estimated to have grown by 10.2% in 2022, following a post-coronavirus (COVID-19) pandemic rebound of 9.6% growth in 2021 (Figure 2). It should be noted that, as these are nominal measures, estimates of change will also capture any change in price.

Figure 2: The UK's nominal NDP grew by 10.2% in 2022, following a post-coronavirus rebound of 9.6% in 2021

Annual nominal net domestic product growth, UK, 1997 to 2022

Figure 2: The UK's nominal NDP grew by 10.2% in 2022, following a post-coronavirus rebound of 9.6% in 2021

Annual nominal net domestic product growth, UK, 1997 to 2022

Source: Blue Book 2023 from the Office for National Statistics

4 . Output produced in the UK economy

The coronavirus (COVID-19) pandemic had wide-ranging industry-level effects, which led to variations in the recovery of industries in 2021 and 2022. This reflects how public health restrictions and social distancing had a negative impact on those industries that were more reliant on physical interactions, including hospitality and retail, which might be considered as "high contact". Relatively "low contact" industries, such as information and communication, saw little or no initial contraction.

Accommodation and food service activities (24.3%), arts, entertainment and recreation (16.9%), and transport and storage (14.0%) saw the fastest estimated growth rates in 2022, continuing their 2021 rebound from the sharp contractions seen in 2020. This again reflected the pandemic restrictions in place in each of those years and their impact on these industries.

Despite having the fastest growth rates, accommodation and food service activities was the only industry of those three that had surpassed its 2019 output in 2022 (by 1.5%). Transport and storage, and arts, entertainment and recreation were 14.8% and 3.1% below their 2019 levels, respectively.

Overall, the industries that were estimated to have had the largest increases in output relative to pre-coronavirus (2019) levels in 2022 were information and communication (up 22.3%), professional, scientific and technical activities (up 11.1%), and water supply, sewerage, waste management and remediation activities (up 6.2%) (Figure 3). The industry with output furthest below 2019 output levels in 2022 was electricity, gas, steam and air conditioning supply (down 36.9%), where increases in the cost inputs, namely natural gas, have impacted on output volumes.
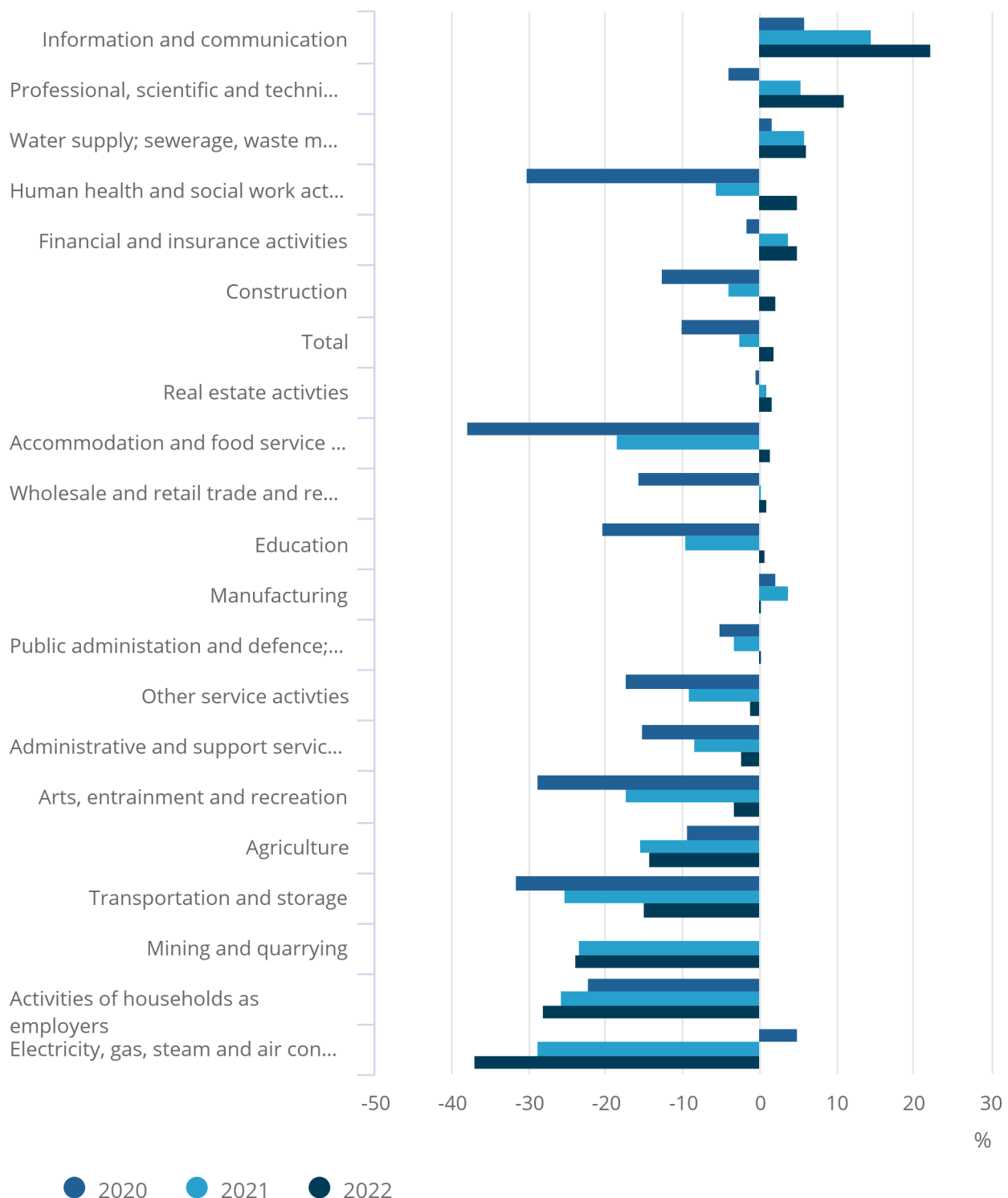
Figure 3: There has been wide-ranging variation in industry-level rebound volume growth with 12 industries recovering above their 2019 levels and 8 industries remaining below 2019 levels in 2022

Annual output growth (volume gross value added) relative to 2019, UK, 2020 to 2022

Figure 3: There has been wide-ranging variation in industry-level rebound volume growth with 12 industries recovering above their 2019 levels and 8 industries remaining below 2019 levels in 2022

Annual output growth (volume gross value added) relative to 2019, UK, 2020 to 2022

Legend: 2020, 2021, 2022

5 . Spending in the UK economy

Households' final consumption expenditure was estimated to have risen by 4.9% in 2022, following a rise of 7.5% in 2021 (Figure 4), where it was boosted by the further easing of coronavirus (COVID-19) restrictions and a return to near normal levels of social consumption.
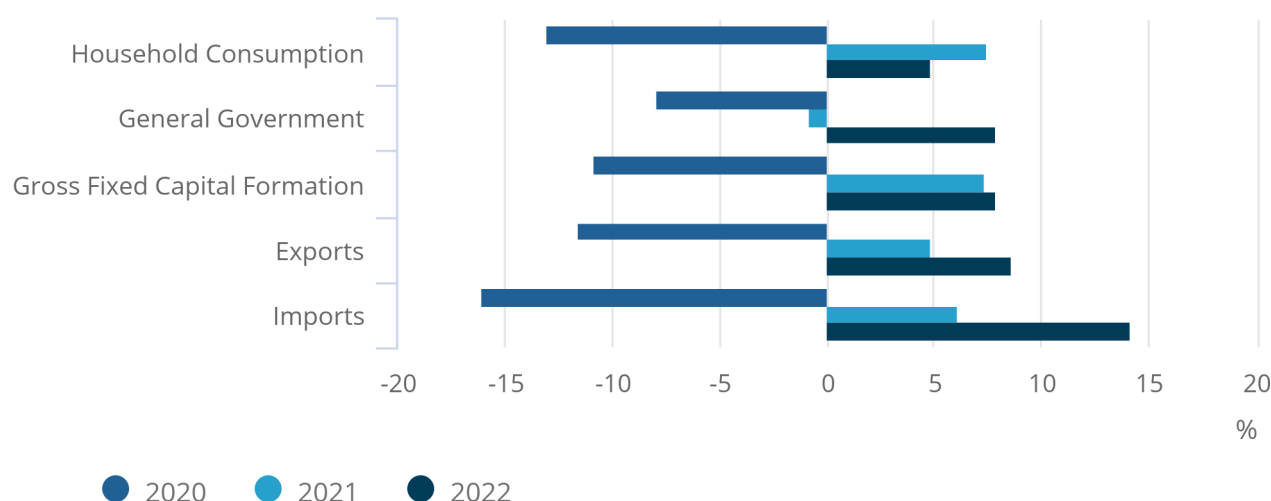
This was driven by a further increase in spending on restaurants and hotels (up 28.3% in 2022, following a rebound of 32.6% in 2021), and transport (up 16.2% in 2022, following a rise of 12.3% in 2021). In 2022, spending on restaurants and hotels was above 2019 levels, but spending on transport remains below 2019 levels, likely in part because of the continuation of [hybrid working](). Despite increases in overall real final consumption expenditure by households in the last two years, expenditure in 2022 remained 1.9% below its 2019 level.

Figure 4: All main types of expenditure recovered above their 2019 levels in 2022

Real expenditure growth relative to 2019 levels, UK, 2020 to 2022

Figure 4: All main types of expenditure recovered above their 2019 levels in 2022

Real expenditure growth relative to 2019 levels, UK, 2020 to 2022

Source: Blue Book 2023 from the Office for National Statistics

Real government consumption increased by 7.9% in 2022, following a 0.8% decline in 2021 and a 7.9% fall in 2020. This was driven by expenditure on education (up 15.4%) and expenditure by central government (up 9.6%). It is worth noting that although real government expenditure fell in 2020 and 2021, there were sharp 11.5% and 7.0% increases, respectively, in nominal terms because of additional spending on personal protective equipment (PPE), NHS Test and Trace, and increased use of agency staff. In 2022, nominal government consumption increased by 3.2%, slower than the increase in real government consumption, indicating a decrease in the price of government consumption.

Gross fixed capital formation was estimated to have increased by 7.9% in 2022, following an increase of 7.4% in 2021. This followed a fall of 10.8% in 2020, in which businesses faced lower turnover, cashflow issues and higher levels of economic uncertainty, which might have led to some postponement or cancellation in their planned investments. Growth in business investment accelerated in 2022, reaching 9.6%, having grown by 2% in 2021.

Trade volumes also continued to recover in 2022, as UK exports increased by 8.6% in real terms, while imports increased by 14.1%. This marked an acceleration in trade volumes following increases of 4.9% and 6.1% for imports and exports, respectively, in 2021. Both import and export volumes recovered to their pre-coronavirus (2019) position in 2022. These stronger growth rates again reflect the easing of coronavirus restrictions, both in the UK and abroad, which had impacted UK trade flows directly, for example, through travel restrictions, but also through wider disruption to global supply chains.

6 . Net lending and borrowing by institutional sectors

The change in estimates of institutional sectors' net lending and borrowing position between 2019 and 2022 is shown in Figure 5. The coronavirus (COVID-19) pandemic brought about large changes in income and expenditure, particularly for households and government.

In 2020, the largest change was for the government, whose net borrowing increased, primarily reflecting the fiscal cost of the policy response to the pandemic, as well as lower tax receipts because of the reduction in economic activity. This was largely offset by the increase in net lending by households. There was some unwinding of these lending and borrowing positions of households and government in 2021 and further unwinding in 2022.
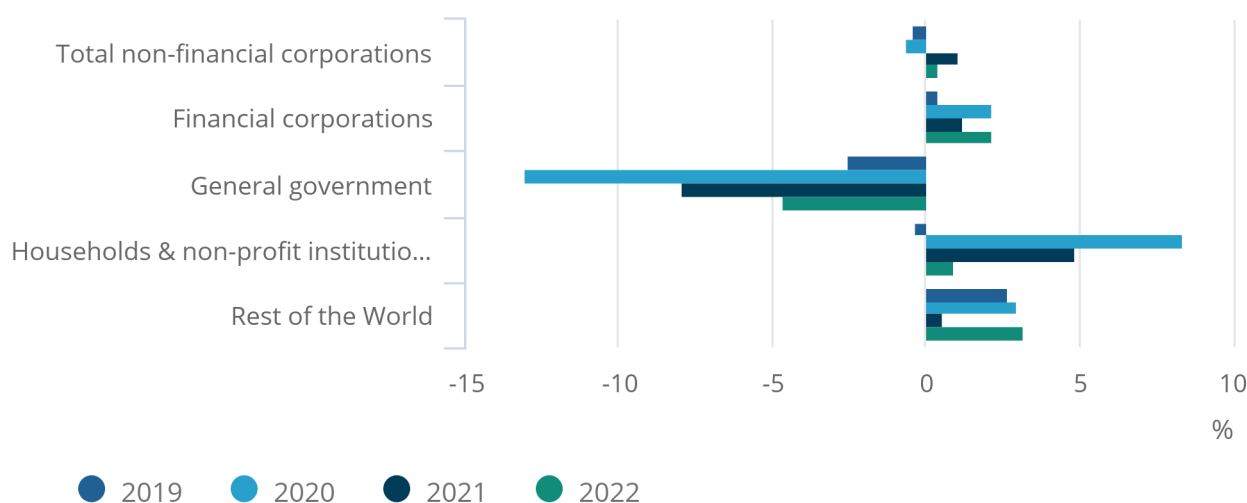
One phenomenon of the pandemic was the concept of forced savings, as coronavirus restrictions reduced the opportunities for consumer spending and household incomes were relatively protected by government policy. Having reached a record 16.6% in 2020, the UK's households' savings ratio fell in 2021 to 12.2% and fell further to 7.7% in 2022, but remains above its 2019 level (when it stood at 5.5%). This has been a common theme across developed economies.

Figure 5: Households and financial corporations maintained their improved financial position in 2022 relative to 2019, while government net borrowing remained above its 2019 level

Net lending and borrowing as a share of gross domestic product (capital account), UK, 2019 to 2022

Figure 5: Households and financial corporations maintained their improved financial position in 2022 relative to 2019, while government net borrowing remained above its 2019 level

Net lending and borrowing as a share of gross domestic product (capital account), UK, 2019 to 2022

Source: Blue Book 2023 from the Office for National Statistics

The reduced ability of households to spend money on consumption in 2020 led to a record increase in the holdings of currency and deposits as assets. In 2021, as the economy re-opened, households ran down their holdings of currency and deposits, and ran them down further in 2022, while also raising their borrowing of loans and debt securities (Figures 6a, 6b and 6c).
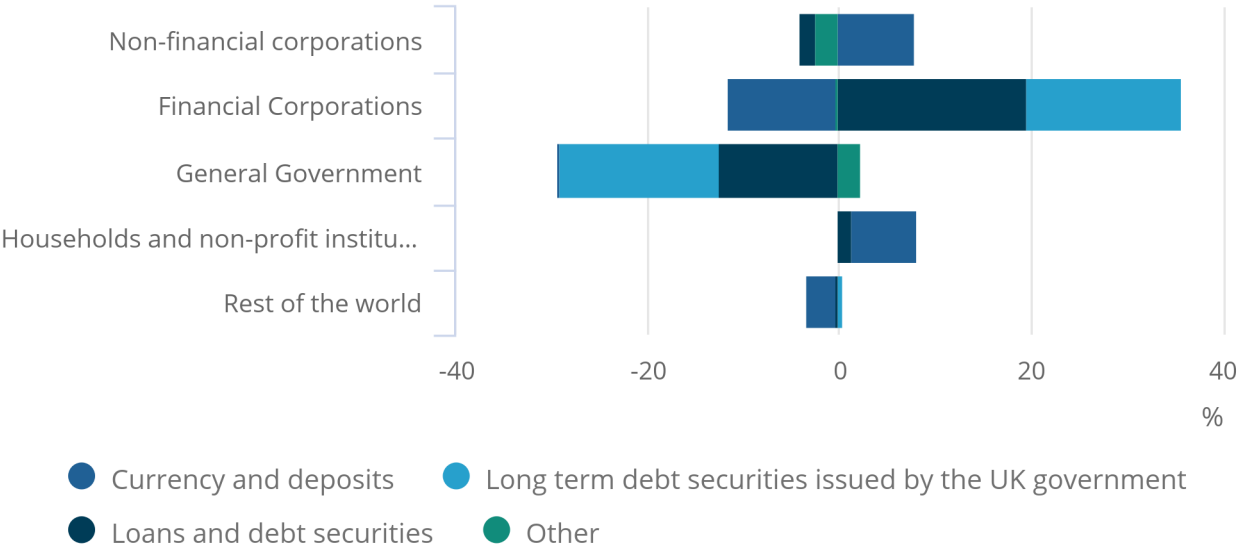
Non-financial corporations also experienced a fall in their holdings of currency and deposits between 2020 and 2021 and again between 2021 and 2022 as business activity increased. We have previously provided [analysis of the impact of the coronavirus pandemic on households and businesses' financial position](). Government became a net lender of long-term debt and securities, reversing its position from 2020 where it issued long-term debt to finance its increase in net borrowing. This unwinding in financial flows in 2021 and 2022 is reflected in the positions of financial corporations who typically lend to the government.

Figure 6a: Households and non-financial corporations deposited less money in 2022 and 2021 than in 2020, while government saw a fall in long-term debt securities issued

Differences in the net acquisition of assets between 2019 and 2020 (as a share of real gross domestic product), UK

Figure 6a: Households and non-financial corporations deposited less money in 2022 and 2021 than in 2020, while government saw a fall in long-term debt securities issued

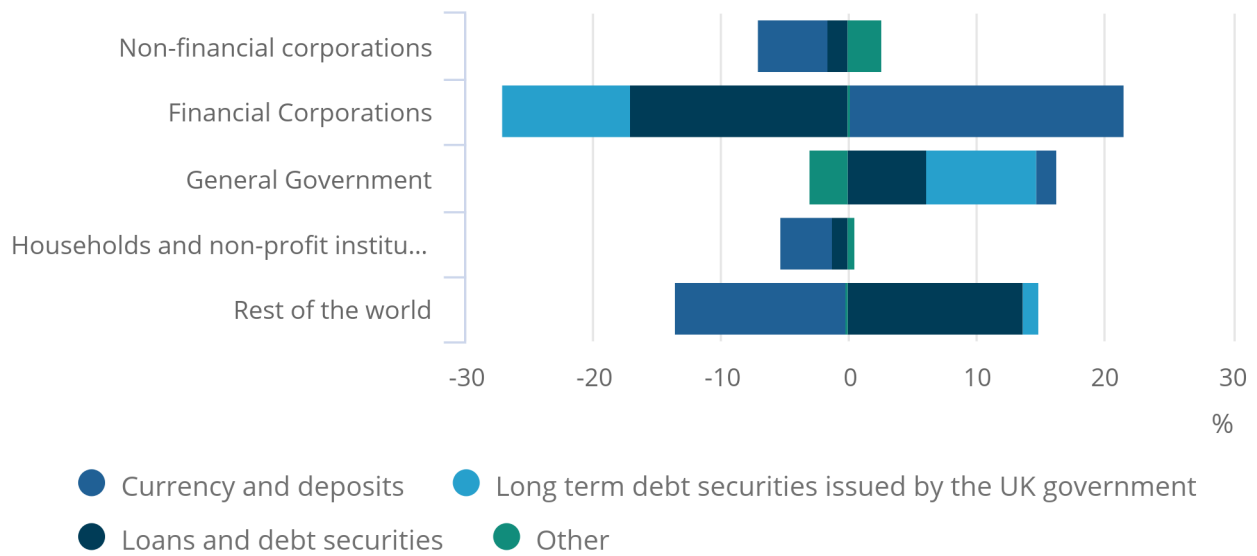Differences in the net acquisition of assets between 2019 and 2020 (as a share of real gross domestic product), UK

Source: Blue Book 2023 from the Office for National Statistics

Figure 6b

Differences in the net acquisition of assets between 2020 and 2021 (as a share of real gross domestic product), UK

Figure 6b

Differences in the net acquisition of assets between 2020 and 2021 (as a share of real gross domestic product), UK
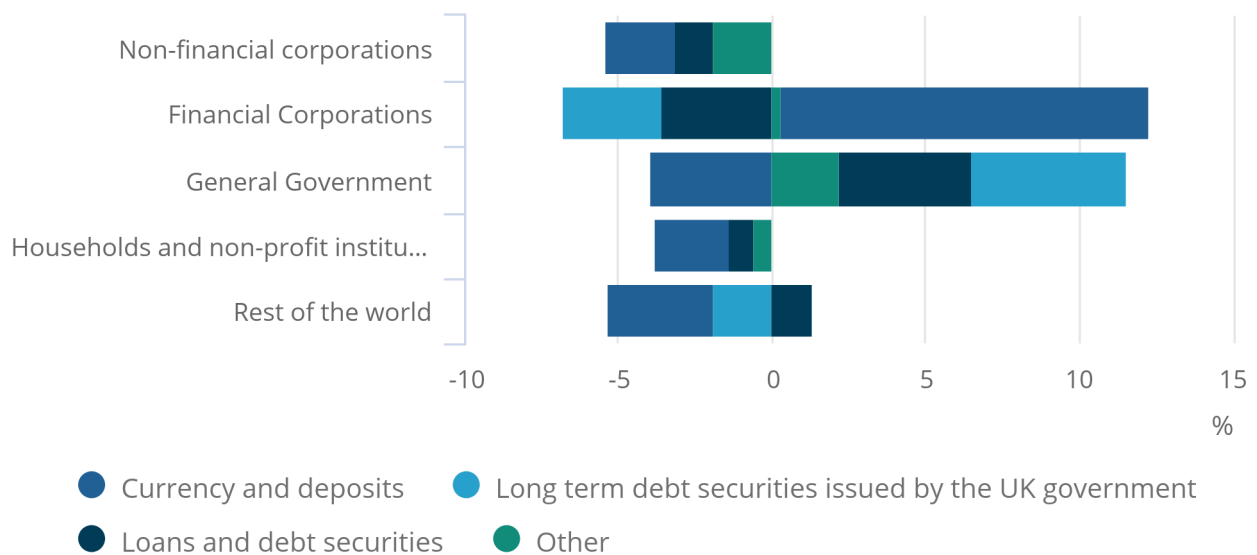

Source: Blue Book 2023 from the Office for National Statistics

Figure 6c

Differences in the net acquisition of assets between 2021 and 2022 (as a share of real gross domestic product), UK

Figure 6c

Differences in the net acquisition of assets between 2021 and 2022 (as a share of real gross domestic product), UK

Legend:
- Currency and deposits
- Long term debt securities issued by the UK government
- Loans and debt securities
- Other

Source: Blue Book 2023 from the Office for National Statistics

7 . International comparisons and terms of trade

All G7 economies experienced a further rise in real gross domestic product (GDP) in 2022 following a rise in 2021, recovering towards and in most cases beyond their 2019 levels (Figure 7).
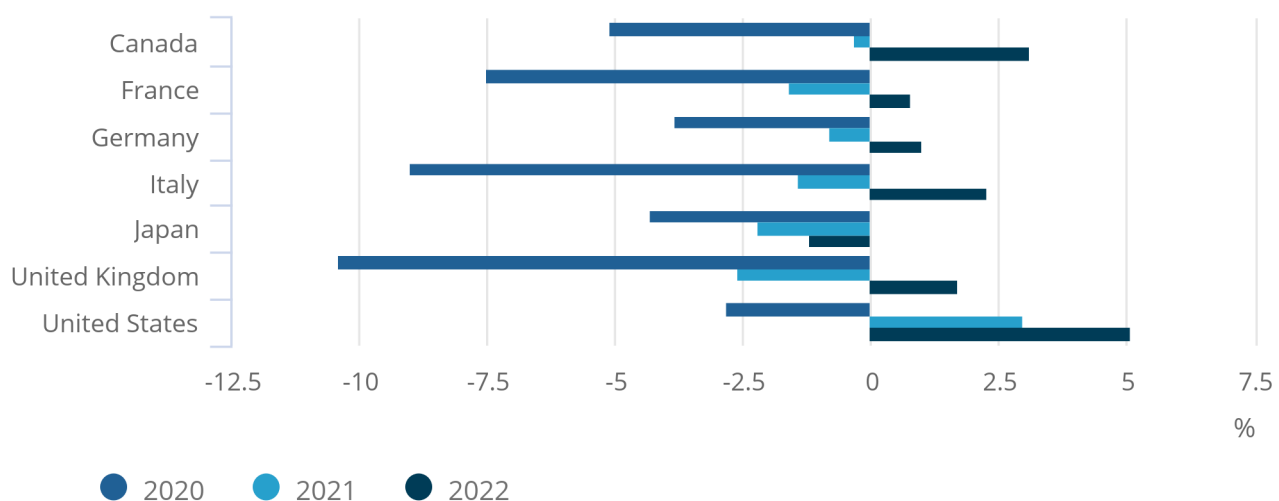
The variation between countries in 2022 reflects both the timing and stringency of coronavirus (COVID-19) impacts between 2020 and 2022, as well as the structural composition of these economies as they emerged from the pandemic. As noted previously, recent growth saw UK GDP surpass its 2019 level by 1.7% in 2022. Among G7 countries, the United States was furthest above its pre-coronavirus level in 2022, growing by 5.1% since 2019. On the other hand, despite growing in 2021 and 2022, Japan was the only G7 country to remain (1.2%) below its pre-coronavirus level of GDP.

Figure 7: All G7 economies experienced a rise in real GDP in 2021 and 2022, recovering above their 2019 levels (with the exception of Japan)

Real gross domestic product relative to 2019, G7 countries, 2020 to 2022

Figure 7: All G7 economies experienced a rise in real GDP in 2021 and 2022, recovering above their 2019 levels (with the exception of Japan)

Real gross domestic product relative to 2019, G7 countries, 2020 to 2022

Source: Blue Book 2023 from the Office for National Statistics, Organisation for Economic Co-operation and Development

Notes:

1. OECD data correct as at 23rd October 2023.

Previous analysis highlighted the [challenges of making international comparisons of GDP during the coronavirus pandemic](#) and showed that it may be useful to compare nominal and real estimates of GDP, as well as estimates excluding government expenditure. Figure 8 shows that in the nominal space, the relative performance of G7 countries is broadly similar to real GDP, with Japan the only country yet to surpass its pre-coronavirus level of output, while Canada and the United States have seen the strongest rate of growth relative to 2019.

Nominal gross domestic product relative to 2019, G7 countries, 2020 to 2022

Figure 8: Nominal GDP in G7 countries except Japan had recovered to 2019 levels in 2022

Nominal gross domestic product relative to 2019, G7 countries, 2020 to 2022

Source: Blue Book 2023 from the Office for National Statistics, Organisation for Economic Co-operation and Development

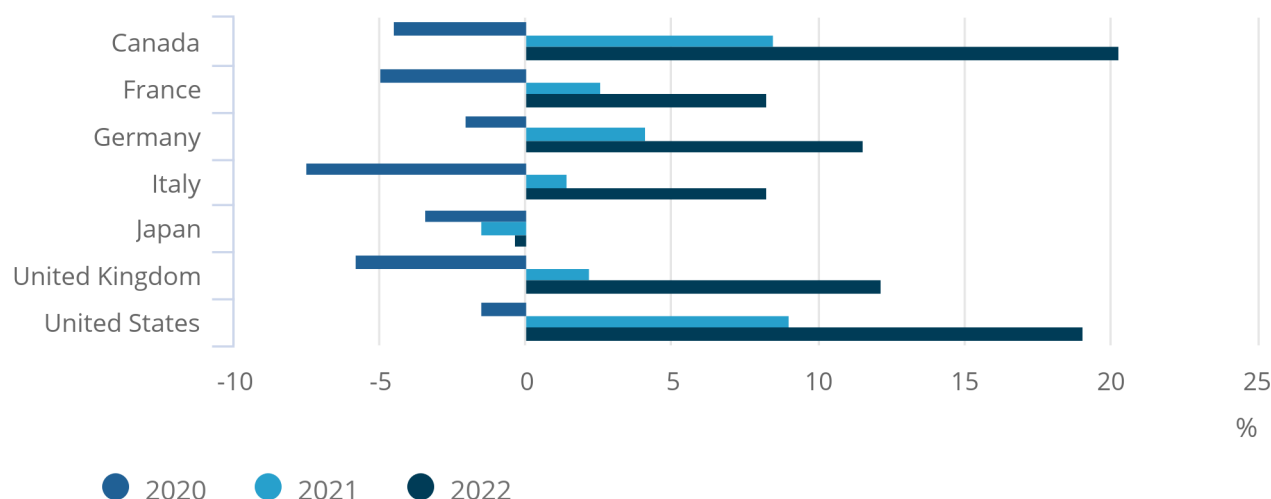**Notes:**

1. OECD data correct as at 23rd October 2023.

Considering both the real and nominal estimates of GDP also allows comparisons of the implied price of GDP, otherwise known as the implied GDP deflator. This represents the broadest measure of inflation in the domestic economy, reflecting changes in the price of all goods and services that comprise GDP.
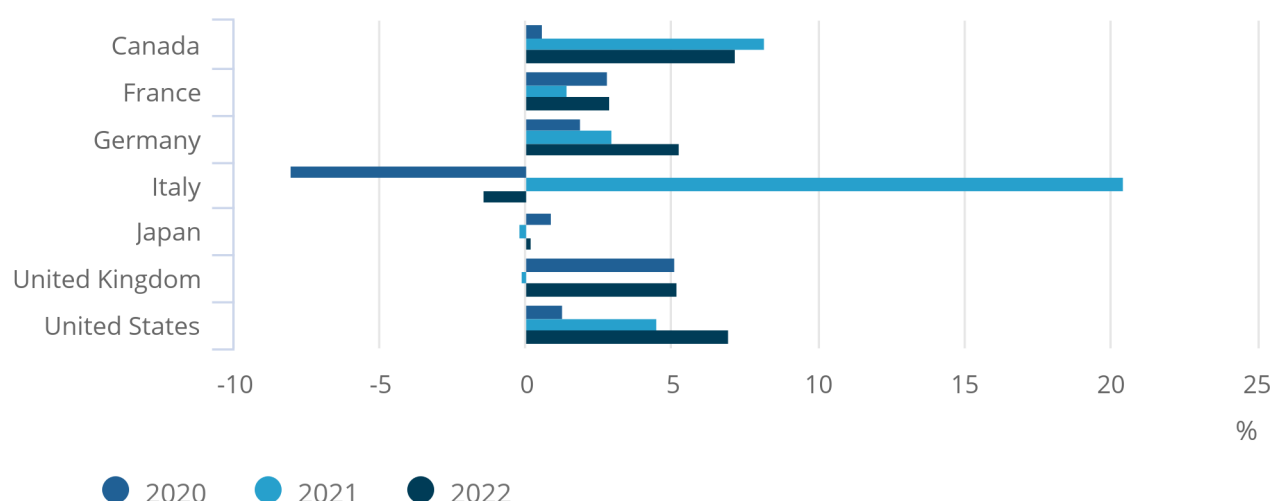
The UK's implied GDP deflator rose by 5.2% in 2022, which was the fourth-largest rise in the G7, behind Canada at 7.2%, the United States at 7.0% and Germany at 5.3% (Figure 9).

Figure 9: Measurement challenges have complicated the international comparability of the implied price of UK GDP over 2020, 2021 and 2022

Annual change in implied deflator, gross domestic product at market prices, G7 countries, 2020 to 2022

Figure 9: Measurement challenges have complicated the international comparability of the implied price of UK GDP over 2020, 2021 and 2022

Annual change in implied deflator, gross domestic product at market prices, G7 countries, 2020 to 2022

Source: Blue Book 2023 from the Office for National Statistics, Organisation for Economic Co-operation and Development

Notes:

1. OECD data correct as at 23rd October 2023.

The annual change in implied deflators in 2022 reflects high levels of inflation in some of these economies in 2022, following the onset of the conflict in Ukraine and the energy price shock that followed. Economies including the UK and Germany are more dependent on imported energy and other commodities in which production processes were particularly energy intensive.

As the UK is a net energy importer, its import prices increased by more than its export prices in response to the energy price shock in 2022. The terms of trade capture the rate of exchange between internationally traded goods and services produced by one country relative to another and are defined as the ratio between the index of export prices and the index of import prices, which shows how many imports an economy can purchase in its currency per unit of its exports.

A change in the terms of trade leads to a change in the purchasing power of a country, and this is captured by the difference between the change in real gross domestic income (GDI) and the change in real GDP, with a positive change indicating higher purchasing power and a negative change indication lower purchasing power.
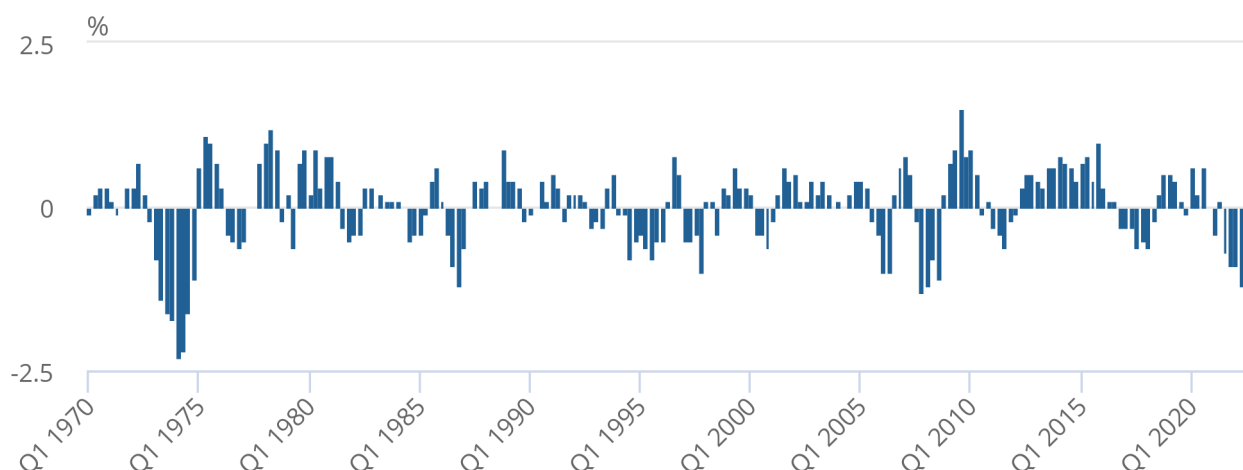
The UK experienced its largest negative terms-of-trade effect since the mid-1970s in 2022, in response to the energy price shock (Figure 10). That is, there was a decline in how much a unit of UK GDP can purchase on global markets.

Figure 10: The UK experienced the largest negative terms-of-trade effect since the mid-1970s in 2022

Percentage point difference in four-quarter growth rates of UK real gross domestic income and real gross domestic product, Quarter 1 (Jan to Mar) 1970 to Quarter 4 (Oct to Dec) 2022

Figure 10: The UK experienced the largest negative terms-of-trade effect since the mid-1970s in 2022

Percentage point difference in four-quarter growth rates of UK real gross domestic income and real gross domestic product, Quarter 1 (Jan to Mar) 1970 to Quarter 4 (Oct to Dec) 2022

Source: Blue Book 2023 from the Office for National Statistics

Given trends in global inflation in 2022, all open economies experienced a change in their purchasing power through this terms-of-trade effect. Figure 11 shows that 11 of 37 Organisation for Economic Co-operation and Development (OECD) countries experienced a positive impact on their purchasing power in 2022. Norway experienced the largest positive terms-of-trade effect, reflecting how much of its exports comprise oil. Canada and the United States, who are also net energy exporters, are the only countries in the G7 to have had a positive terms-of-trade effect over this period.

Figure 11: Norway experienced the largest positive terms-of-trade effect in 2022

International comparisons of the four-quarter change in real gross domestic income and real gross domestic product, Quarter 3 (July to Sept) 2022

Figure 11: Norway experienced the largest positive terms-of-trade effect in 2022

International comparisons of the four-quarter change in real gross domestic income and real gross domestic product, Quarter 3 (July to Sept) 2022

Source: Blue Book 2023 from the Office for National Statistics, Organisation for Economic Co-operation and Development

Notes:

1. OECD data correct as at 23rd October 2023.

8 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, National accounts at a glance: 2023, UK National Accounts, The Blue Book: 2023

Compendium

The industrial analyses

Analysis of the 10 broad industrial groups' contributions to gross value added, compensation of employees and workforce jobs, and summary supply and use tables.

Table of contents

1 . The industrial analysis

Analysis of the 10 broad industrial groups shows that in 2021, the government, health and education industries provided the largest contribution to gross value added (GVA) at current basic prices. These industries contributed 19.8% to the total GVA of £2,047 billion, with a value of £405 billion.

Of the remainder:

- distribution, transport, hotels and restaurants industries contributed 16.4%

- real estate industries contributed 13.0%

- professional, scientific and support industries contributed 12.9%

- production industries contributed 12.7%

Figure 1: Government, health and education provided the largest contribution to GVA in 2021

Breakdown of gross value added current basic prices, by industry, UK, 2021

Figure 1: Government, health and education provided the largest contribution to GVA in 2021

Breakdown of gross value added current basic prices, by industry, UK, 2021

Source: Blue Book 2023 from the Office for National Statistics

In 2021, of all goods and services within final demand:

- households consumed 44.6%

- government, both central and local, consumed 17.2%

- non-profit institutions serving households (NPISH) consumed 1.6%

- gross capital formation, by all sectors of the economy, consumed 13.8%

- 11.2% were exported goods and 11.6% were exported services

Figure 2: Households consumed nearly half of goods and services within final use in 2021

Composition of current price final use, UK, 2021

Figure 2: Households consumed nearly half of goods and services within final use in 2021

Composition of current price final use, UK, 2021

Source: Blue Book 2023 from the Office for National Statistics

The government, health and education industries showed the highest level of compensation of employees in 2021 at £313.6 billion (27.1%). The second-largest industry groupings, in terms of their contribution to total compensation of employees, were the distribution, transport, and hotels and restaurants industries at £235.7 billion (20.4%).

Figure 3: Government, health and education showed the highest level of compensation of employees in 2021

Breakdown of compensation of employees in current prices, by industry, UK, 2021

Figure 3: Government, health and education showed the highest level of compensation of employees in 2021

Breakdown of compensation of employees in current prices, by industry, UK, 2021

Source: Blue Book 2023 from the Office for National Statistics

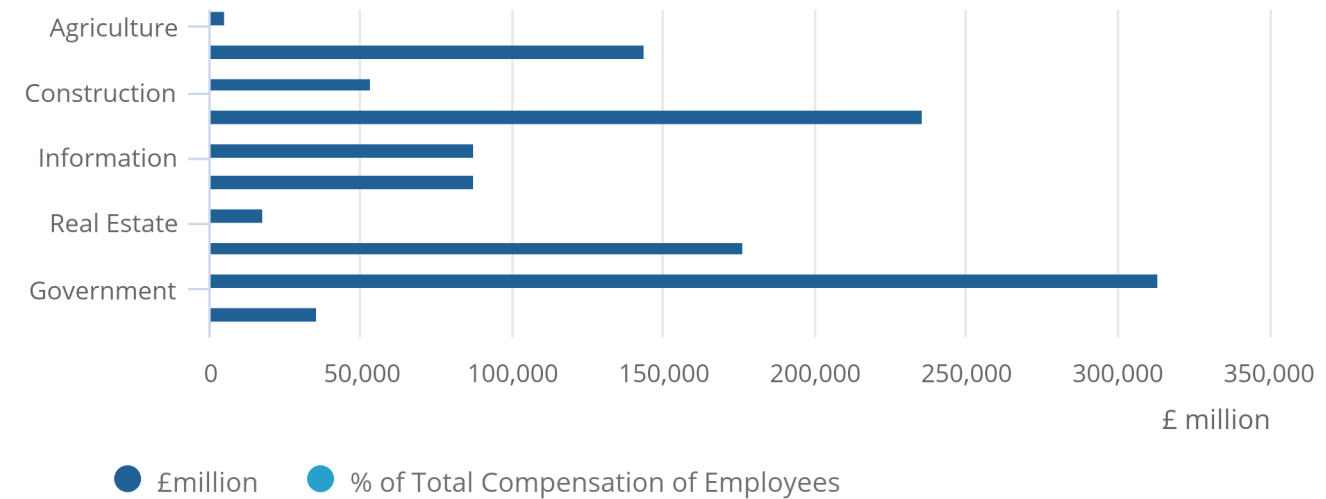# 2 . Input-output supply and use tables

The annual estimates included in UK National Accounts, The Blue Book: 2023 edition, incorporate the results of annual inquiries that become available in the first part of the year. To reassess these estimates, supply and use tables (SUTs) are prepared using all the available information on inputs, outputs, gross value added, income and expenditure. To produce consolidated sector and financial accounts requires preparation of "top-to-bottom" sector and sub-sector accounts to identify discrepancies in the estimates relating to each sector.

The latest annual SUTs provide estimates for the years 1997 to 2021. Data for 2021 are balanced for the first time. Data for 2019 and 2020 have been fully re-balanced. Data from 1997 to 2018 have been revised to incorporate changes required under new international standards and guidelines, as well as to make sure the data are comparable and meet user needs.

Table 2.1a: Summary supply and use tables 2018

Table 2.1b: Summary supply and use tables 2019

Table 2.1c: Summary supply and use tables 2020

Table 2.1d: Summary supply and use tables 2021

Further general information regarding the supply and use framework and the balancing process can be found in the UK National Accounts guidance and methodology.

3 . Current price analysis

The analyses of gross value added (GVA) and other variables by industry, shown in Worksheets 2.1, 2.1A and 2.2 in the accompanying dataset (XLSX, 3.3MB), reflect estimates based on Standard Industrial Classification 2007 (SIC 2007). These worksheets are based on current price data reconciled through the input-output supply and use framework from 1997 to 2021.

Estimates of total output and GVA are valued at basic prices, the method recommended by the European System of Accounts 2010 (ESA 2010). Therefore, the only taxes and subsidies included in the price will be those paid or received as part of the production process (such as business rates), rather than those associated with the production of a unit of output (such as Value Added Tax).

4 . Chained volume indices (2019=100) analyses

Worksheet 2.3 in the accompanying dataset (XLSX, 3.3MB) shows chained volume estimates of gross value added (GVA) at basic prices by industry. These GVA measures are based on appropriately deflated data that have been reconciled through the supply and use tables (SUTs) framework for the years 1997 to 2021.

These industry-level estimates from within the SUTs framework are much richer than those that currently feed into the industry short-term volume estimates. This not only reflects that the annual estimates are based on a wider range of annual surveys and administrative information, but that they are also measuring the correct concept of GVA, rather than turnover as a proxy indicator. Monthly and quarterly industry data in Blue Book 2023 are benchmarked to these annual volume estimates up to 2021.

Data from after the supply use balanced years (2022 onwards) are derived from the movements in the short-term measures of output (Index of Production, Index of Services, and so on).

5 . Workforce jobs by industry

Workforce jobs (WFJ) is the preferred measure of the change in jobs by industry. A person can have more than one job; the number of jobs is not the same as the number of people employed.

Worksheet 2.4 in the accompanying dataset (XLSX, 3.3MB) breaks down WFJ into 10 broad industry groupings on Standard Industrial Classification 2007 (SIC 2007).

The main component of WFJ is employee jobs. Estimates for employee jobs are obtained mainly from surveys of businesses selected from the Inter-Departmental Business Register (IDBR). All other business surveys collecting economic data also use this register.

The Labour Force Survey (LFS), a household survey, is used to collect self-employment jobs for all SIC sections, employee jobs for SIC sections A and T, and government-supported trainees for England. It codes respondents according to their own view of the industry they work in, therefore the industry breakdown is less reliable than that of the business surveys.

WFJ also includes His Majesty's Forces (within industry section O) and government-supported trainees. Government-supported trainees from the devolved administrations are sourced from administrative sources (split by industry using the LFS).

6 . Gross value added (GVA)

The UK National Accounts provide a comprehensive industry breakdown of gross value added (GVA), with activities grouped into 10 broad sections in accordance with Standard Industrial Classification 2007 (SIC 2007). This also includes supplementary information for the different components that make up GVA for each industry.

Under the income approach, GVA is split into compensation of employees (CoE), taxes less subsidies, gross operating surplus (GOS) and mixed income. Estimates of each industry's intermediate consumption and total output are also published, with the difference between the two equalling GVA.

This additional information allows for more detailed analysis of national output to be conducted. For example, CoE can be used to calculate how much of an industry's production income is spent on wages and salaries, and employers' social contributions. GOS data can be used to estimate how much profit is generated by companies after considering labour costs and taxes less subsidies.

7 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, [The industrial analyses, UK National Accounts, The Blue Book: 2023](#)

Compendium

Non-financial corporations

Public and private sector non-financial corporations.

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Release date:
31 October 2023

Next release:
To be announced

Table of contents

1 . Non-financial corporations

Non-financial corporations produce goods and services for the market and do not, as a primary activity, deal in financial assets and liabilities.

This sector includes retailers, manufacturers, utilities, business service providers (such as accountancy and law firms), caterers, haulage companies, airlines, construction companies and farms, among others.

The non-financial sector is broken down into two subsectors:

- public sector non-financial corporations

- private sector non-financial corporations

Worksheets 3.1.1 to 3.1.11 in the accompanying dataset (XLSX, 3.3MB) relate to non-financial corporations as a whole. Worksheets 3.2.1 to 3.2.11 in the accompanying dataset (XLSX, 3.3MB) relate to public non-financial corporations, which are government-owned or government-controlled trading businesses. Worksheets 3.3.1 to 3.3.11 in the accompanying dataset (XLSX, 3.3MB) relate to private non-financial corporations, which are trading businesses in the private sector. All the tables are downloadable as an Excel workbook.

Further information on sector classifications and classification decisions can be found in Economic statistics classifications.

2 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, Non-financial corporations, UK National Accounts, The Blue Book: 2023

Compendium

Financial corporations

Financial corporations including monetary financial institutions, insurance corporations and pension funds, and other financial corporations.

Correction

31 January 2024 09:30

We have corrected an error whereby previously published data was omitted. Data was omitted in tables 4.3.8 and 4.3.11 for series FZOL, FZOO and FZRQ for years 1987-1996. Data was omitted in tables 4.3.8a and 4.3.11a for all series for years 1987-1993. No other data are impacted.

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1 . Financial corporations

The financial corporations sector (S.12) consists of institutional units that are independent legal entities and market producers, and whose principal activity is the production of financial services. Such institutional units comprise all corporations and quasi corporations that are principally engaged in:

- financial intermediation (financial intermediaries)

- auxiliary financial activities (financial auxiliaries)

Also included are institutional units providing financial services, where most of either their assets or their liabilities are not transacted on open markets.

Financial intermediation is the activity in which an institutional unit acquires financial assets and incurs liabilities on its own account by engaging in financial transactions on the market. The assets and liabilities of financial intermediaries are transformed or repackaged in relation to, for example, maturity, scale or risk in the financial intermediation process. Auxiliary financial activities are activities related to financial intermediation, but which do not involve financial intermediation themselves.

Financial corporations are presented in the following groupings:

- monetary financial institutions (MFI)

- insurance corporations and pension funds (ICPF)

- financial corporations except MFI and ICPF

Further information on sector classifications and classification decisions can be found in our Public sector classification guide and forward work plan.

2 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, Financial corporations, UK National Accounts, The Blue Book: 2023

Compendium

General government

General government sector by central and local government.

Table of contents

1 . General government

The general government sector is made up of units providing services for collective or individual consumption that are not sold at market prices. These units are usually funded by compulsory payments from units in other sectors (taxes) and may be involved in the redistribution of national income (for example, benefits and State Pension).

The sector includes government departments and agencies, local authorities, the devolved administrations in Northern Ireland, Scotland and Wales, the state education system, the NHS, the armed forces and the police. Non-departmental public bodies are also included in the general government sector.

The UK National Accounts, The Blue Book: 2023 edition presents estimates for the general government sector and subsector breakdowns for:

- central government

- local government

You can find further information on sector classifications and classification decisions in our Public sector classification guide and forward work plan.

2 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, General government, UK National Accounts, The Blue Book: 2023

Compendium

Households and non-profit institutions serving households (NPISH)

Households, and non-profit institutions serving households sectors.

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Release date:
31 October 2023

Next release:
To be announced

Table of contents

1 . Households and non-profit institutions serving households

The households sector covers people living independently in residential accommodation and those living in communal establishments. Residential households are groups of people sharing the same living accommodation who share some or all of their income, and collectively consume certain types of goods and services, such as food, electricity or housing. Examples of communal establishments include prisons, student accommodation, care homes and boarding schools.

The households sector also includes self-employed (market producers) who do not form part of quasi-corporations, as well as individuals or groups of individuals who produce goods and non-financial services for their own final use.

Non-profit institutions serving households (NPISH) are institutions that:

- provide goods and services, either free or below market prices

- mainly derive their income from grants and donations

- are not controlled by the government

In the UK, the NPISH sector includes:

- charitable organisations

- trade unions

- religious organisations

- political parties

- universities and further education establishments

The UK National Accounts, The Blue Book: 2023 edition presents estimates for the households and NPISH sectors separately. To allow comparison with previous Blue Book publications, estimates for the combined households and NPISH sectors are also presented.

Further information on sector classifications and classification decisions can be found in our Public sector classification guide and forward work plan.

2 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, Households and non-profit institutions serving households, UK National Accounts, The Blue Book: 2023

Compendium

Rest of the world

Rest of the world sector including all institutions or individuals not resident in the UK that have economic interactions with resident units.

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1 . Rest of the world

The rest of the world sector includes all those institutions or individuals not resident in the UK that have economic interactions with resident units. It can include overseas corporations, charities, governments, or private individuals. The sector also includes foreign embassies and consulates on UK soil.

Further information on sector classifications and classification decisions can be found in our Public sector classification guide and forward work plan.

2 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, Rest of the world, UK National Accounts, The Blue Book: 2023

Gross fixed capital formation supplementary tables

Gross fixed capital formation estimates of net capital expenditure on fixed assets by public and private sectors.

Table of contents

1 . Gross fixed capital formation supplementary tables

Gross fixed capital formation (GFCF) is the estimate of net capital expenditure (acquisitions less the proceeds from disposals) on fixed assets by both the public and private sectors. Fixed assets are purchased assets used in production processes for more than one year.

Examples of capital expenditure include spending on:

- machinery and equipment

- transport equipment

- software

- artistic originals

- research and development

- new dwellings and major improvements to dwellings

- other buildings and major improvements to buildings

- structures, such as roads

In Blue Book 2023, we have updated a number of data sources feeding our GFCF estimates. This includes receiving revised air transport data from HM Revenue and Customs (HMRC), which affects our transport asset across the whole data time series. We also updated a number of data sources feeding our own-account software data, which includes our wages and salaries data from the Annual Survey of Hours and Earnings (ASHE), non-wage labour costs, which are estimated from the Annual Business Survey (ABS), and non-labour costs coming from the supply and use tables.

We have seen further changes from the continued improvement to the quality of estimates relating to government dwellings. As is usual during the Blue Book process, the opportunity was taken to review and improve national accounts balancing adjustments across all transactions. This included those indirectly affected by government dwellings, such as GFCF. In Blue Book 2023, GFCF estimates have been particularly affected by the balancing process, with a positive impact being seen across the data time series, affecting both the financial sector and whole economy.

Further changes include the incorporation of revised Annual Business Survey benchmarks for 2020 and new data for 2021.

2 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, [Fixed capital formation supplementary tables, UK National Accounts, The Blue Book: 2023](#)

Compendium

National balance sheet

A measure of the national wealth, or total net worth, of the UK, showing the estimated market value of financial assets.

Table of contents

1 . National balance sheet

The national balance sheet is a measure of the national wealth, or total net worth, of the UK. It shows the estimated market value of financial assets, for example, shares and deposits at banks, and non-financial assets such as dwellings and machinery.

Market value is an estimate of how much these assets would sell for, if sold on the market. The estimates are used for international comparisons, to monitor economic performance and inform monetary and fiscal policy decisions.

Financial assets and liabilities include:

- means of payment, such as currency

- financial claims, such as loans

- economic assets, which are close to financial claims in nature, such as shares

Produced non-financial assets include:

- dwellings

- buildings and other structures

- machinery and equipment

- certain farming stocks, mainly dairy cattle and orchards

- intellectual property products, such as computer software and databases, and research and development inventories

Non-produced assets include:

- contracts, leases and licences

- natural resources

Data sources include:

- annual reports of public corporations and major businesses

- industry publications

- other government departments and agencies

Where non-financial asset market valuations are not readily available, we use a proxy based on the UK net capital stocks data, modelled in the perpetual inventory method (PIM).

For central government, data are taken from returns made by government departments to HM Treasury.

Local authority housing is shown in the public non-financial corporations sector. This is because government-owned market activities are always treated as being carried out by public corporations, either in their own right or via quasi-corporations.

2 . Cite this chapter

Compendium

Public sector supplementary tables

The main taxes and social contributions payable by UK residents to central and local government and the European Union.

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Table of contents

1 . Introduction

The majority of government income is provided by taxes and social contributions. Worksheet 10.1 in the [accompanying dataset (XLSX, 3.3MB)](#) provides a breakdown of the main taxes and social contributions payable by UK residents to both the government (central and local government) and the EU.

2 . Taxes and social contributions payable by UK residents

Taxes on production are included in gross domestic product (GDP) at market prices.

Other taxes on production include taxes levied on inputs to production. These include national non-domestic rates, also known as business rates, and a range of compulsory unrequited levies that producers have to pay.

Taxes on products are taxes levied on the sale of goods and services; this includes Value Added Tax (VAT) and Fuel Duty. Taxes on income and wealth include Income Tax and Corporation Tax. Income Tax is the largest single source of tax revenue paid by UK residents. This category also includes a number of other charges payable by households including Council Tax, the BBC licence fee, and taxes such as Vehicle Excise Duty, which, when paid by businesses, are classified as taxes on production. The totals include tax credits and reliefs recorded as expenditure in the national accounts, such as Working Tax Credit and Child Tax Credit.

The European System of Accounts 2010 (ESA 2010) has a specific category of payments to the government called compulsory social contributions. These are payments associated with social security schemes, such as unemployment benefit and pensions. In the UK accounts this category includes all National Insurance contributions. Details of total social contributions and benefits are shown in Worksheets 5.2.4S and 5.3.4S in the [accompanying dataset (XLSX, 3.3MB)](#).

Capital taxes are taxes levied at irregular or infrequent intervals on the values of assets, gifts or legacies. In the UK, the main capital tax is Inheritance Tax.

Some UK taxes are recorded as the resources of the EU. These include taxes on imports, which were payable to the EU under the EU treaties before the UK leaving the EU.

3 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, [Public sector supplementary tables, UK National Accounts, The Blue Book: 2023](#)

Compendium

Statistics for international purposes

How the EU uses national accounts data in the calculation of gross national income, used to set the EU budget and member contributions.

Table of contents

1 . Overview

Data comparability between countries is crucial for administrative and economic purposes. The UK provides data to a range of international organisations, including the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD).

The EU also uses UK National Accounts data. Gross national income (GNI) is one of the four measures used by the EU and is calculated in accordance with the European System of Accounts (ESA). GNI is used to set the EU budget and to calculate part of member states' contributions to the EU budget. It is based on ESA 2010.

The following sections outline how the EU use our data.

2 . UK transactions with the institutions of the EU

Table 1 shows payments that flowed between the EU and the UK before the UK left the EU. The first part of the table shows the payments that flowed into the UK in the form of EU expenditure. The second part of the table shows the UK contribution to the EU budget, which depended on UK gross national income (GNI).

An explanatory article detailing the UK contribution to the EU budget was published on 30 September 2019. A further dataset on gross national income with usage notes was published on 9 December 2021 that explained differences between the UK GNI as published in the annual national accounts and the UK GNI used to calculate UK budget payments to the EU, known as GNI for EU own resource purposes. From Blue Book 2022, the content of the 9 December 2021 publication has been incorporated in Section 4: Calculation of UK GNI for UK own resource: 2010 to 2020.

Under the EU withdrawal agreement, the UK continues to make payments towards the EU budget for years up to 2020. Contributions are still to be finalised for the years 2010 to 2020 for both the UK and the EU member states (MS). This may mean additional payment flows between the UK and EU after 2020.

3 . Data to monitor government deficit and debt

The convergence criteria for the Economic and Monetary Union (EMU) are set out in the 1992 Treaty on European Union (The Maastricht Treaty). The treaty, plus the Stability and Growth Pact, require member states to avoid excessive government deficits – defined as general government net borrowing and gross debt as a percentage of gross domestic product (GDP). The treaty does not determine what constitutes "excessive". This is agreed by the Economic and Finance Council (ECOFIN).

Member states report their planned and actual deficits and the levels of their debt to the European Commission. Data to monitor excessive deficits are supplied in accordance with EU legislation. While the UK is no longer in the EU, data on UK government debt and deficit are still compiled and are consistent with previous releases.

The UK published the estimates of UK government debt and deficit in Table 1 in October 2023.

Table 1: General government deficit and debt, UK, calendar years 2016 to 2022

General Government deficit	2016	2017	2018	2019	2020	2021	2022
Deficit (£bn)	66.5	52.2	48.9	55.4	276.5	179.5	118.1
as % GDP[2]	3.3	2.5	2.3	2.5	13.1	7.9	4.7
General Government debt							
Debt[1] (£bn)	1,749.2	1,806.0	1,858.4	1,913.5	2,227.3	2,404.2	2,515.5
as % GDP[2]	87.8	86.7	86.3	85.7	105.8	105.3	100.4

Source: UK government debt and deficit from the Office for National Statistics

Notes

1. Debt is recorded as at the end of December each calendar year.

2. GDP - gross domestic product.

4 . Calculation of UK gross national income for EU own resource: 2010 to 2020

The [Agreement on the Withdrawal of the UK from the European Union (EU)](#) sets out, among other things, the UK's contribution to and participation in the EU budget. Article 136 states that "the applicable Union law concerning the Union's own resources relating to financial years until 2020 shall continue to apply to the UK after 31 December 2020, including where the own resources concerned are to be made available, corrected or subject to adjustments after that date".

The UK pays budget contributions to the EU for the years up to 2020. Contributions are still to be finalised for the years 2010 to 2020 for both the UK and the EU member states (MS).

The gross national income (GNI) estimates, on which a large part of calculating budget payments are based, are produced for the UK by the Office for National Statistics (ONS) and published in the Blue Book. The calculation of GNI in both the UK and the MS is subject to verification by the European Commission's statistical arm, Eurostat. If Eurostat find an issue relating to the calculation of GNI they can place a reservation on a country's national accounts. This means that improvements to data sources, methods or both may need to be implemented.

The UK was initially subject to 23 reservations; 18 issues specific to the UK and five transversal issues applied to both the UK and all MS. Many MS also had a large number of country specific reservations, because of a major verification of sources and methods following the adoption of a new accounting framework in 2014 (the [European System of Accounting (ESA) 2010](#)). As of September 2023, 19 reservations on the UK National Accounts have now been lifted (15 specific reservations and four transversal reservations). It is expected that the remaining four reservations will be lifted before publication of the 2024 annual national accounts.

In the current GNI verification cycle, the earlier years still open for recalculating EU budget payments are now "time-barred" except for revisions related to the reservations. The GNI data released by the ONS in the annual national accounts often include routine revisions to methods and source data that impact the UK-published GNI estimates. These routine revisions must be excluded from GNI data notified to Eurostat (known as GNI for Own Resource purposes) in the years that have become "time-barred". This is a standard practice that also applies to all MS.

In line with one of the remaining transversal reservations, the ONS began work on addressing globalisation issues in the UK accounts during 2022. This is essentially a detailed review of how multinational enterprises are treated in the national accounts. Initial impacts from assessing a limited number of multinationals became available at Blue Book 2022. They were used in the calculation of UK GNI for Own Resource purposes (GNI OR) for 2018 to 2020 but were not incorporated in the published national accounts. This reservation only allows GNI OR to be adjusted in the years 2018 to 2020.

The globalisation adjustments have been refined during 2023 and are now incorporated in published gross domestic product (GDP) and GNI. In some cases, these adjustments extend earlier than 2018 to avoid data discontinuities. Consequently, GNI OR adjustments now apply to the years 2010 to 2017 since those years are time-barred for this reservation.

Further work on refining and enlarging adjustments for globalisation issues is scheduled to take place over several years. At appropriate points, these adjustments will be integrated into the calculation of published UK GDP and GNI, and may impact multiple years to avoid data discontinuities.

A further difference between published GNI and GNI OR applies to the years 2010 to 2013 when GNI OR is based on the previous international standard (the ESA 1995 accounting framework). There is a standard list of major changes between the ESA 1995 and ESA 2010 frameworks. This is used to estimate the impact of differences in definitions between them.

Eurostat publish UK and MS GNI for own resource estimates (currently only 2022-consistent data are available). Worksheet 11.2 in the [accompanying dataset (XLSX, 3.3MB)](#) shows the calculation of the differences between the UK GNI OR and the UK-published GNI estimates. It is produced for Eurostat each time the UK annual national accounts are updated.

We will publish a similar table in future years until all reservations are lifted. This will inevitably show further divergence between published and own resources versions of GNI.

5 . Cite this chapter

Compendium

Environmental accounts

Estimates of oil and gas reserves, energy consumption, atmospheric emissions, material flows and natural capital.

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Correction

7 November 2023 15:18

We have corrected an inconsistency with Table 12.8. Unlike the rest of the timeseries, the 2022 value for Timber provisioning (FV5G) did not include woodfuel. We have removed the 2022 row to correct this and make the table consistent with the other UK Natural Capital Account tables (12.6 and 12.7).

31 January 2024 09:30

We have corrected an error in Table 12.8. The values for timber provisioning (FV5G) had been aggregated incorrectly so woodfuel was double counted. Table 12.6 has also been revised due to changes to the data provided by Forest Research for timber provisioning (FU2R).

We have corrected an error in the physical value of air pollution regulating (FV5K) in table 12.8. The previous version incorrectly excluded some physical removals due to errors in the aggregation of geographic areas. Total monetary values (annual and asset) are unaffected.

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1 . Environmental accounts

- Environmental accounts are "satellite accounts" to the main UK National Accounts.

- They are compiled in accordance with the System of Environmental-Economic Accounting (SEEA), which closely follows the United Nations System of National Accounts (SNA).

- They measure the impact the economy has on the environment, how the environment contributes to the economy, and how society responds to environmental issues by using the accounting framework and concepts of the national accounts.

- They are used to inform sustainable development policy, model impacts of fiscal or monetary measures, and evaluate the environmental impacts of different sectors of the economy.

- Data are provided in units of physical measurement (mass or volume) and monetary units, where these are the most relevant or only data available.

In the accompanying dataset (XLSX, 3.3MB):

- Worksheets 12.1 to 12.5 show estimates of oil and gas reserves, energy consumption, atmospheric emissions and material flows

- Worksheets 12.6 to 12.8 show natural capital accounts

- Worksheets 12.9 to 12.12 show data on environmental taxes

More data, information and other environmental accounts (including fuel use, environmental goods and services sector and environmental protection expenditure) can be found on the UK Environmental Accounts release page.

2 . Oil and gas reserves

Worksheet 12.1 in the accompanying dataset (XLSX, 3.3MB) presents non-monetary estimates of the oil and gas reserves and resources in the UK.

In this dataset, "resources" are minerals that are potentially valuable and could eventually be extracted, whereas "reserves" refer to discovered minerals that are recoverable and commercially viable.

Discovered reserves can be proven, probable or possible depending on the level of certainty that, based on the available evidence, they can be technically and commercially producible:

- proven reserves have better than a 90% chance

- probable reserves have between a 50% and 90% chance

- possible reserves have between a 10% and 50% chance

Contingent resources are also shown in Worksheet 12.1. These are the quantities of oil and gas estimated to be potentially recoverable from known sites, but where the plans are not yet mature enough for commercial development. Potentially recoverable in this case means a better than 50% chance of being technically producible.

The North Sea Transition Authority (NSTA) also produce estimates for prospective resources – those undiscovered or "yet to find". Methodology for estimating this has changed over time so it is not possible to show a consistent data time series in Worksheet 12.1.

Oil is defined as both oil and the liquids that can be obtained from gas fields. Shale oil is not included in these estimates.

Gas includes that expected to be available for sale from dry gas fields, gas condensate fields, oil fields associated with gas, and a small amount from coal-bed methane projects. Shale gas is not included in these estimates. These reserves include onshore and offshore discoveries, but not flared gas or gas consumed in production operations.

Data are sourced from the NSTA and the Department for Energy Security and Net Zero (DESNZ).

3 . Energy consumption

Worksheet 12.2 in the accompanying dataset (XLSX, 3.3MB) presents energy consumption by industry for the UK.

Energy consumption is defined as the use of energy for power generation, heating and transport. This is essential to most economic activities, for example, as input for production processes.

The term "direct use of energy" refers to the energy content of fuel for energy at the point of use, allocated to the original purchasers and consumers of fuels. On the other hand, "reallocated use of energy" means that the losses incurred during transformation [note 1] and distribution [note 2] are allocated to the final consumer of the energy rather than incorporating it all in the electricity generation sector.

Fossil fuels are the main source of energy for consumption, although other sources (including nuclear, net imports, renewable [note 3] and waste sources) are becoming increasingly important.

Short-term fluctuations in energy consumption are often attributable to changes in temperature or gross domestic product (GDP). Longer term, the decline in energy consumption for these purposes has largely been driven by the switch away from coal by the energy supply and manufacturing industries to other, more efficient fuels, such as natural gas and, more recently, renewable sources.

Data are provided by Ricardo Energy and Environment.

Notes for: Energy consumption

1. Transformation losses are the differences between the energy content of the input and output product, arising from the transformation of one energy product to another.

2. Distribution losses are losses of energy product during transmission (for example, losses of electricity in the grid) between the supplier and the user of the energy.

3. Renewable sources include: solar photovoltaic, geothermal and energy from wind, wave and tide, hydroelectricity, wood, charcoal, straw, liquid biofuels, biogas from anaerobic digestion and sewage gas. Landfill gas, poultry litter and municipal solid waste combustion have also been included within this definition.

4 . Atmospheric emissions

Worksheets 12.3 and 12.4 in the accompanying dataset (XLSX, 3.3MB) show emissions of greenhouse gases, acid rain precursors (ARPs) and other pollutants by industry for the UK.

Greenhouse gases (GHG) are covered by the Kyoto Protocol. These gases contribute directly to global warming and climate change because of their positive radiative forcing effect. The potential of each GHG to cause global warming is assessed in relation to a given weight of CO_2, so all GHG emissions are measured as carbon dioxide equivalents (CO2e).

The greenhouse gases included in the worksheets are:

- carbon dioxide (CO2)

- methane (CH4)

- nitrous oxide (N2O)

- hydro-fluorocarbons (HFC)

- perfluorocarbons (PFC)

- nitrogen trifluoride (NF3)

- sulphur hexafluoride (SF6)

Other important atmospheric emissions include acid rain precursors (ARPs). Acid rain is caused primarily by emissions of sulphur dioxide (SO2), nitrogen oxides (NOX) and ammonia (NH3), and can have harmful effects on the environment. For comparability, all figures are weighted according to their acidifying potential and presented as sulphur dioxide equivalents (SO2e).

Emissions levels are influenced by factors such as gross domestic product (GDP) and UK temperatures. They are also influenced by policy initiatives, for example, those encouraging adoption of cleaner technologies or emissions standards on motor vehicles. Changes in energy consumption, particularly energy from fossil fuels, directly influence air emissions.

Data are provided by Ricardo Energy and Environment.

5 . Material flows

Worksheet 12.5 in the accompanying dataset (XLSX, 3.3MB) presents economy-wide material flow accounts, which estimate the physical flow of materials through the UK economy.

Domestic extraction is divided into four categories:

- biomass, which includes material of biological origin that is not from fossil, such as crops, wood and wild fish catch

- non-metallic minerals, which are mainly construction and industrial minerals, including limestone and gypsum, sand and gravel, and clays

- fossil energy materials and carriers, which include coal, peat [note 1], crude oil and natural gas

- metal ores, which include precious metals such as gold

Data are compiled from multiple sources including the Department for Environment, Food and Rural Affairs (Defra), the United Nations Food and Agriculture Organisation (FAO), the British Geological Survey (BGS), Eurostat and the Kentish Cobnuts Association.

Physical trade balance

The physical trade balance (PTB) shows the relationship between imports and exports and is calculated by subtracting the weight of exports from the weight of imports [note 2]. The UK has a positive PTB, meaning that more materials and products are imported than are exported suggesting that the UK may be becoming more reliant on the production of materials in other countries.

Material consumption

Direct material input (DMI) (domestic extraction plus imports) measures the total amount of materials that are available for use in the economy.

Domestic material consumption (DMC) (domestic extraction plus imports minus exports) measures the amount of materials used in the economy and is calculated by subtracting exports from DMI.

Notes for: Material flows

1. For fossil energy materials and carriers (which include coal, crude oil, natural gas and peat) peat estimates were not available from 2016.

2. The physical trade balance (imports minus exports) is defined in reverse to the monetary trade balance (exports minus imports). Physical estimates can differ quite significantly from monetary estimates.

6 . Natural capital

The natural capital accounts estimate the wealth of the UK's environment. These remain in development so are currently classed as Experimental Statistics.

The UK's natural wealth is reflected in the productivity of its soils, its access to clean water, and its mountains. Any natural resource or process that supports human life forms an important part of our natural capital. Natural capital is one part of a wider move to better understand wealth. In that respect, we are not only estimating what wealth the UK inherited in its islands and seas but what it might provide to future generations.

Natural capital monetary estimates should be interpreted as partial or minimal value of the services provided by the natural environment, as a number of services are not currently measured. Services provided by the natural environment that we can measure include timber provisioning, agricultural biomass provisioning, fish provisioning, water provisioning, coal, oil and gas provisioning, renewable electricity generation, air pollution regulating, greenhouse gas regulating, noise regulating, urban heat regulating and recreation. We will continue to work to include as much of the economic value of the natural world as possible. Our asset values are narrowly market driven and not an absolute "value" of the natural world. For more details please see the UK Natural Capital Accounts: 2022.

These estimates have been developed using updated methodologies, which means they are not comparable with those published previously. Full details of these updated methodologies will be published alongside our UK Natural Capital Accounts: 2023.

This is particularly important for our recreation and aesthetic (house prices) service where data from the Valuation Office Agency, HM Land Registry and Ordnance Survey are used to estimate the effect of proximity to public green space on house prices. A unique house-level dataset is produced by linking data, and machine learning techniques are then applied to flexibly model house prices. To obtain an estimate of the average effect of green and blue spaces on house price, we estimate the difference between the predicted price based on the real data and the predicted price if there were no green and blue spaces within 1,000 metres. This value is extended to cover all houses, not just those that have sold, to produce an asset value. Estimates relate to urban properties only, defined as built-up areas with a population of 5,000 or greater.

7 . Environmental taxes

Environmental taxes are those whose base is a physical unit, for example, a litre of petrol or a passenger flight, that has a proven negative impact on the environment. These taxes should reduce the activity, and therefore reduce negative environmental impacts. Increases in tax revenue can occur from either rising tax rates, increased activity, or both.

Other initiatives may promote environmentally-positive behaviour but are not considered an environmental tax under this definition. For example, charges on single-use plastic bags by retailers are not classified as a tax.

An environmental tax needs to be defined as a tax (and not another type of payment) in the System of National Accounts (SNA 2008). The National Tax List is published by the Office for National Statistics (ONS) using the European System of National and Regional Accounts (ESA 2010), which is consistent with the SNA. This definition is also explained in the Central Framework for the System of Environmental-Economic Accounting from the United Nations, which uses concepts, definitions and classifications consistent with the SNA.

Source data on aggregate revenue for each type of tax is provided to the ONS from HM Treasury, to enable compilation of public sector accounts. We then produce a breakdown of the aggregate by industry, including allocation to households and the rest of the world. To do so, we use a number of sources, including supply and use tables.

More information on this environmental taxes measure can be found in our Environmental accounts on environmental taxes QMI.

8 . More information

There is more information about environmental accounts on the UK Environmental Accounts release page.The residence adjustment is included, as the UK Environmental Accounts are based on a UK residence basis (as opposed to a territory basis). This is in line with national accounting principles, allowing environmental impacts to be compared on a consistent basis with economic indicators such as gross domestic product (GDP).UK figures for energy and air emissions on a territory basis are published by the Department for Energy Security and Net Zero (DESNZ). Energy and air emissions bridging tables are available, which show the difference between these estimates.

Further explanation of the differences can be found in our article on energy consumption and our article on net zero and the different official measures of the UK's greenhouse gas emissions.

Data rounded to thousand tonnes can be found on the UK Environmental Accounts release page.

9 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, Environmental accounts, UK National Accounts, The Blue Book: 2023

Compendium

Flow of funds

Estimates of stocks and flows of financial assets and liabilities by institutional sector and financial instrument.

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Table of contents

1 . Introduction

The tables in this chapter present estimates of stocks and flows of financial assets and liabilities by institutional sector and financial instrument.

Of these tables:

- Worksheet 13.1 in the [accompanying dataset (XLSX, 3.3MB)](#) presents flows (or transactions) of financial assets and liabilities for each institutional sector and lower-level financial instrument (financial account)

- Worksheet 13.2 in the [accompanying dataset (XLSX, 3.3MB)](#) presents levels (or stocks) of financial assets and liabilities for each institutional sector and lower-level financial instrument (balance sheet)

- Worksheets 13.3.1 to 13.3.8 in the [accompanying dataset (XLSX, 3.3MB)](#) present both financial flows and stocks by institutional sector and financial instrument

Estimates for all the institutional sectors are brought together in these tables to allow changes in assets and liabilities to be compared across the sectors. Estimates for each individual sector are also published in the appropriate sector pages in this publication.

These financial statistics are important for identifying the build-up of risks in the financial sector and for understanding financial connections among the institutional sectors and subsectors within the economy.

2 . Flow of funds

"Flow of funds" refers to the financial flows across sectors of the UK economy and the rest of the world. Information can be presented on debtor and creditor relationships and the changes in financial assets and liabilities in the economy. Flow of funds is based on the principle that the movement of all funds must be accounted for. Across the total economy (UK and the rest of the world), the total sources of funds must equal the total uses of funds, and every financial asset transaction must have a counterpart liability transaction.

Since the global financial crisis of the late 2000s, the international community has had an increased focus on the analysis of financial stability, and the development of improvements to the data that support that analysis. This is particularly important for those countries, such as the UK, that have a significant financial sector. An important area identified internationally for improvement is the development of flow of funds counterpart statistics. These improve our understanding of how each individual sector may be exposed to the risk that could build up in other sectors. These statistics support macro-economic analysis and financial stability policy.

Counterpart statistics are not currently presented in this publication. However, in response to the need for counterpart statistics, the Office for National Statistics (ONS) and the Bank of England started the joint Flow of Funds Project in 2014. More information on the project and the most recent experimental counterpart statistics are available in our [UK financial accounts experimental statistics flow of funds matrices: 2020 article](#), based on Blue Book 2020 data.

3 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, [Flow of funds, UK National Accounts, The Blue Book: 2023](#)

Compendium

Glossary

An A to Z definition of the main terms used within the national accounts.

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Table of contents

1 . A to B

Above the line

Transactions in the production, current and capital accounts that are above the net lending (positive) or net borrowing (negative) (financial surplus or deficit) line in the presentation used in the economic accounts. The financial transactions account is below the line in this presentation.

Accruals basis

A method of recording transactions based on when the exchange of ownership of the goods, services or financial asset occurs (see also cash basis). For example, Value Added Tax (VAT) accrues when the expenditure to which it relates takes place but HM Revenue and Customs (HMRC) receives the cash some time later. The difference between accruals and cash results in an asset and liability in the financial accounts, shown as amounts receivable or payable (F.7).

Actual final consumption

The value of goods consumed, but not necessarily purchased, by a sector (see also final consumption expenditure, intermediate consumption).

Advance and progress payments

Payments made for goods in advance of completion and delivery of the goods and services. Also referred to as staged payments.

Asset boundary

A boundary separating assets included (for example, plant and factories, and non-produced assets such as land and water resources) and those excluded (such as natural assets not managed for an economic purpose) in creating core economic accounts.

Assets

Entities over which ownership rights are enforced by institutional units – individually or collectively – and from which economic benefits may be derived by owners holding them over a period of time.

Balancing item

An accounting construct obtained by subtracting the total value of the entries on one side of an account from the total value for the other side.

Balance of payments

A summary of the transactions between residents of a country and residents abroad in a given time period.

Balance of trade

The balance of trade in goods and services is a summary of the imports and exports of goods and services across an economic boundary in a given period.

Balance sheet

A statement, drawn up at a particular point in time, of the value of assets owned and of the financial claims (liabilities) against the owner of these assets.

Bank of England

This comprises S.121, the central bank subsector of the financial corporations sector.

Bank of England – Issue Department

This part of the Bank of England deals with the issue of bank notes on behalf of central government. It was formerly classified to central government, though it is now part of the central bank and monetary authorities sector. Its activities include, among other things, market purchases of commercial bills from UK banks.

Basic prices

These are the preferred method of measuring gross value added (GVA) and output. They reflect the amount received by the producer for a unit of goods or services, minus any taxes payable, plus any subsidy receivable on that unit as a consequence of production or sale (that is the cost of production including subsidies).

The only taxes included in the basic price are taxes on the production process – such as business rates and any Vehicle Excise Duty paid by businesses – that are not specifically levied on the production of a unit of output. Basic prices exclude any transport charges invoiced separately by the producer.

Below the line

The financial transactions account that shows the financing of net lending (positive) or net borrowing (negative) (formerly financial surplus or deficit).

Bond

A financial instrument that usually pays interest to the holder. Bonds are issued by governments and by companies and other institutions, for example, local authorities. Most bonds have a fixed date on which the borrower will repay the holder.

Bonds are attractive to investors because they can be bought and sold easily in a secondary market. Special forms of bonds include deep discount bonds, equity warrant bonds, Eurobonds and zero-coupon bonds.

British government securities

Securities issued or guaranteed by the UK government; these are also known as gilts.

2 . C to D

Capital

Capital assets are those that contribute to the productive process to produce an economic return. In other contexts, the word can include tangible assets (for example, buildings, plant and machinery), intangible assets and financial capital (see also fixed assets, inventories).

Capital formation

Acquisitions less disposals of fixed assets, improvement of land, change in inventories and acquisitions less disposals of valuables.

Capital stock

A measure of the cost of replacing the capital assets of a country held at a particular point in time.

Capital transfers

Transfers that are related to the acquisition or disposal of assets by the recipient or payer. They may be in cash or kind and may be imputed to reflect the assumption or forgiveness of debt.

Cash basis

The recording of transactions when cash or other assets are actually transferred, rather than on an accruals basis.

Certificate of deposit

A short-term, interest-paying instrument issued by deposit-taking institutions in return for money deposited for a fixed period. Interest is earned at a given rate. The instrument can be used as security for a loan if the depositor requires money before the repayment date.

Chained volume measures

Time series that measure economic activity in real terms (that is, excluding price effects). Series are calculated in the prices of the previous year and in current price, and these two-year series are then "chain linked" together. The advantage of the chain-linking method is that the previous period's price structure is more relevant than the price structure of a fixed period from further in the past.

Cost, insurance and freight (CIF)

The basis of valuation of imports for customs purposes, including the cost of insurance premiums and freight services. These need to be deducted to obtain the Free On Board (FOB) valuation consistent with the valuation of exports that is used in the economic accounts.

Classification of individual consumption by purpose (COICOP)

An international classification that groups consumption according to its function or purpose. The heading clothing, for example, includes expenditure on garments, clothing materials, laundry and repairs. It is used to classify the expenditure of households.

Combined use table

Table of the demand for products by each industry group or sector, whether from domestic production or imports, estimated at purchasers' prices. It displays the inputs used by each industry to produce their total output and separates out intermediate purchases of goods and services. The table shows which industries use which products: columns represent the purchasing industries; rows represent the products purchased.

Commercial paper

This is an unsecured promissory note for a specific amount, maturing on a specific date. The commercial paper market allows companies to issue short-term debt directly to financial institutions, which then market this paper to investors or use it for their own investment purposes.

Compensation of employees

Total remuneration payable to employees in cash or in kind. Includes the value of social contributions payable by the employer.

Conditional liabilities

Where the transfer of assets only takes place under certain defined circumstances, are known as contingent liabilities.

Consolidated accounts

Accounts drawn up to reflect the affairs of a group of entities. For example, a ministry or holding company with many different operating agencies or subsidiary companies may prepare consolidated accounts reflecting the affairs of the organisation as a whole and accounts for each operating agency or subsidiary.

Consolidated fund

An account of central government into which most government revenue (excluding borrowing and certain payments to government departments) is paid and from which most government expenditure (excluding loans and National Insurance benefits) is paid.

Consumption

See final consumption, intermediate consumption.

Consumption of fixed capital

The amount of capital resources used up in the process of production in any period. It is not an identifiable set of transactions but an imputed transaction, which can only be measured by a system of conventions.

Corporations

All bodies recognised as independent legal entities that are producers of market output and whose principal activity is the production of goods and services.

Counterpart

In a double-entry system of accounting, each transaction gives rise to two corresponding entries. These entries are the counterparts to each other, so the counterpart of a payment by one sector is the receipt by another.

Debenture

A long-term bond issued by a UK or foreign company and secured on fixed assets. A debenture entitles the holder to a fixed-interest payment or a series of such payments.

Deflators

A price index or other modifier used to remove the change in prices, commonly referred to as inflation, between any two given time periods. This allows the data in the two periods to be compared in real price terms.

Depreciation

A fall in the value of an asset or currency.

Derivatives (F.71)

Financial instruments whose value is linked to the value of another financial instrument, indicator or commodity. Unlike the holder of a primary financial instrument (for example, a government bond or a bank deposit), who has an unqualified right to receive cash (or some other economic benefit), the holder of a derivative has only a qualified right to receive such a benefit. Examples of derivatives are options and swaps.

Dividend and Interest Matrix (DIM)

This represents property income flows related to holdings of financial transactions. The gross flows are shown in D.4 property income.

Direct investment

Net investment by UK or foreign companies in their foreign or UK branches, subsidiaries or associated companies. A direct investment in a company means that the investor has a significant influence on the operations of the company, defined as having an equity interest in an enterprise resident in another country of 10% or more of the ordinary shares or voting stock.

Investment includes not only acquisition of fixed assets, stock building and stock appreciation but also all other financial transactions such as: additions to, or payments of, working capital; other loans and trade credit; and acquisitions of securities. Estimates of investment flows allow for depreciation in any undistributed profits. Funds raised by the subsidiary or associate company in the economy in which it operates are excluded as they are locally raised and not sourced from the parent company.

Discount market

The part of the market dealing with short-term borrowing. It is called the discount market because the interest on loans is expressed as a percentage reduction (discount) on the amount paid to the borrower. For example, for a loan of £100 face value, when the discount rate is 5%, the borrower will receive £95 but will repay £100 at the end of the term.

Double deflation

A method for calculating value added by industry chained volume measures, which takes separate account of the differing price and volume movements of input and outputs in an industry's production process.

Dividend

A payment made to company shareholders from current or previously retained profits. Dividends are recorded when they become payable.

3 . E to F

Economically significant prices

These are prices whose level significantly affects the supply of the good or service concerned. Market output consists mainly of goods and services sold at "economically significant" prices, while non-market output comprises those provided free or at prices that are not economically significant.

Employee stock options

An agreement made on a given date (the "grant" date) under which an employee may purchase a given number of shares of the employer's stock at a stated price (the "strike" price), either at a stated time (the "vesting" date) or within a period of time (the "exercise" period) immediately following the vesting date.

Enterprise

An institutional unit producing market output. Enterprises are found mainly in the non-financial and financial corporations sectors but exist in all sectors. Each enterprise consists of one or more kind-of-activity units.

Environmental accounts

A satellite account describing the relationship between the environment and the economy.

Equity

The ownership of a residual claim on the assets of the institutional unit that issued the instrument. Equities differ from other financial instruments in that they confer ownership of something more than a financial claim. Shareholders are owners of the company, whereas bond holders are merely outside creditors.

European System of National and Regional Accounts (ESA)

An integrated system of economic accounts; the European version of the System of National Accounts (SNA).

European Investment Bank

This was set up to assist economic development within the EU. Its members are the member states of the EU.

Exchange Cover Scheme (ECS)

A scheme introduced in 1969 whereby UK public bodies raise foreign currency from overseas residents, either directly or through UK banks, and surrender it to the Exchange Equalisation Account in exchange for sterling to finance expenditure in the UK. HM Treasury sells the borrower foreign currency to service and repay the loan at the exchange rate that applied when the loan was taken out.

Exchange Equalisation Account (EEA)

The government account with the Bank of England in which transactions in reserve assets are recorded. These transactions are classified to the central government sector. It is the means by which the government, through the Bank of England, influences exchange rates.

Export credit

Credit extended abroad by UK institutions, primarily in connection with UK exports but also including some credit in respect of third country trade.

Export Credit Guarantee Department (ECGD)

A non-ministerial government department, classified to the public corporations sector, the main function of which is to provide insurance cover for export credit transactions.

Factor cost

In the SNA 1968, this was the basis of valuation that excluded the effects of taxes on expenditure and subsidies.

Final consumption expenditure

The expenditure on those goods and services used for the direct satisfaction of individual needs or the collective needs of members of the community, as distinct from their purchase for use in the productive process. It may be contrasted with actual final consumption, which is the value of goods consumed, but not necessarily purchased, by that sector (see also intermediate consumption).

Financial auxiliaries (S.126)

Activities closely related to financial intermediation but that are not financial intermediation themselves, such as the repackaging of funds, insurance broking and fund management. Financial auxiliaries include insurance brokers and fund managers.

Financial corporations (S.12)

All bodies recognised as independent legal entities whose principal activity is financial intermediation and/or the production of auxiliary financial services.

Financial intermediation

The activity by which an institutional unit acquires financial assets and incurs liabilities on its own account by engaging in financial transactions on the market. The assets and liabilities of financial intermediaries have different characteristics so that the funds are transformed or repackaged with respect to maturity, scale or risk, for example, in the financial intermediation process.

Financial Intermediation Services Indirectly Measured (FISIM)

The implicit charge for the service provided by monetary financial institutions paid for by the interest differential between borrowing and lending rather than through fees and commissions.

Financial leasing

A form of leasing in which the lessee (the lease holder) contracts to assume the rights and responsibilities of ownership of leased goods from the lessor (the legal owner) for the whole (or virtually the whole) of the economic life of the asset. In the economic accounts, this is recorded as the sale of the asset to the lessee, financed by an imputed loan (F.42). The leasing payments are split into interest payments and repayments of principal.

Fixed assets

Produced assets that are themselves used repeatedly or continuously in the production process for more than one year. They comprise buildings and other structures, vehicles and other plant and machinery as well as plants and livestock that are used repeatedly or continuously in production, for example, fruit trees or dairy cattle. They also include intangible assets such as computer software, research and development, and artistic originals.

Flows

These reflect the creation, transformation, exchange, transfer or extinction of economic value. They involve changes in the volume, composition or value of an institutional unit's assets and liabilities. They are recorded in the production, distribution and use of income and accumulation accounts.

Free On Board (FOB)

A Free On Board (FOB) price excludes the cost of insurance and freight from the country of consignment but includes all charges up to the point of the exporting country's customs frontier.

Futures

Forward contracts traded on organised exchanges. They give the holder the right to purchase a commodity or a financial asset at a future date.

4 . G to H

Gilts

Bonds issued or guaranteed by the UK government. Also known as gilt-edged securities or British Government securities.

Globalisation

The revised concept of economic ownership first recommended by the System of National Accounts (SNA) in 2008 that proposes that imports and exports be recorded strictly when a change of ownership occurs, rather than when goods cross a border, to better reflect the nature of multinational enterprises.

Gold

The System of National Accounts (SNA) and the International Monetary Fund (IMF) (in the sixth edition of its Balance of Payments Manual) recognise three types of gold:

- monetary gold, treated as a financial asset

- gold held as a store of value, to be included in valuables

- gold as an industrial material, to be included in intermediate consumption or inventories

The present treatment is as follows.

In the accounts, a distinction is drawn between gold held as a financial asset (financial gold) and gold held like any other commodity (commodity gold). Commodity gold in the form of finished manufactures, together with net domestic and overseas transactions in gold moving into or out of finished manufactured form (as in for jewellery, dentistry, electronic goods, medals and proof – but not bullion – coins) is recorded in exports and imports of goods.

All other transactions in gold (that is, those involving semi-manufactures, for example, rods and wire, bullion, bullion coins, or banking-type assets and liabilities denominated in gold, including official reserve assets) are treated as financial gold transactions and included in the financial account of the balance of payments.

The UK has adopted different treatment to avoid distortion of its trade in goods account by the substantial transactions of the London bullion market.

Grants

Voluntary transfer payments. They may be current or capital in nature. Grants from the government or the EU to producers are subsidies.

Gross

Important economic series can be shown as gross (as in, before deduction of the consumption of fixed capital) or net (as in, after deduction). Gross has this meaning throughout this publication unless otherwise stated.

Gross domestic product (GDP)

The total value of output in the economic territory. It is the balancing item on the production account for the whole economy. Domestic product can be measured gross or net. It is presented in the accounts at market (or purchasers') prices.

Gross fixed capital formation (GFCF)

Acquisitions less disposals of fixed assets and the improvement of land.

Gross national disposable income

The income available to the residents arising from gross domestic product (GDP) and receipts from, less payments to, the rest of the world of employment income, property income and current transfers.

Gross national income (GNI)

The total value of goods produced and services provided by a country during one year, equal to the gross domestic product plus the net income from foreign investments.

Gross value added (GVA) (B.1g)

The value generated by any unit engaged in production and the contributions of individual sectors or industries to gross domestic product (GDP). It is measured at basic prices, excluding taxes less subsidies on products.

Holding companies

A purely financial concern that uses its capital solely to acquire interests (normally controlling interests) in a number of operating companies. Although the purpose of a holding company is mainly to gain control and not to operate, it will typically have representation on the boards of directors of the operating firms.

Holding companies provide a means by which corporate control can become highly concentrated through pyramiding. A holding company may gain control over an operating company, which itself has several subsidiaries.

Holding gains or losses

Profit or loss obtained by virtue of the changing price of assets being held. Holding gains or losses may arise from either physical or financial assets.

Households (S.14)

Individuals or small groups of individuals as consumers, and in some cases as entrepreneurs, producing goods and market services (where such activities cannot be hived off and treated as those of a quasi corporation).

5 . I to J

Imputation

The process of inventing a transaction where, although no money has changed hands, there has been a flow of goods or services. It is confined to a very small number of cases where a reasonably satisfactory basis for the assumed valuation is available.

Index-linked gilts

Gilts whose coupon and redemption value are linked to movements in the Retail Prices Index.

Institutional unit

The individual bodies whose data are amalgamated to form the sectors of the economy. A body is regarded as an institutional unit if it has decision-making autonomy in respect of its principal function and either keeps a complete set of accounts or is in a position to compile, if required, a complete set of accounts that would be meaningful from both an economic and a legal viewpoint.

Input-output

A detailed analytical framework based on supply and use tables. These are matrices showing the composition of output of individual industries by types of product and how the domestic and imported supply of goods and services is allocated between various intermediate and final uses, including exports.

Institutional sector

In the economic accounts, the economy is split into different institutional sectors, that is, units grouped according broadly to their role in the economy. The main sectors are: non-financial corporations, financial corporations, general government, households and non-profit institutions serving households (NPISH). The rest of the world is also treated as a sector for many purposes within the accounts.

Intellectual property products (AN.112)

Products including mineral exploration, computer software, research and development, and entertainment, literary or artistic originals. Expenditure on them is part of gross fixed capital formation. They exclude non-produced non-financial assets such as leases, transferable contracts and purchased goodwill, expenditure on which would be intermediate consumption.

Intermediate consumption

The consumption of goods and services in the production process. It may be contrasted with final consumption and capital formation.

International Monetary Fund (IMF)

A fund set up as a result of the Bretton Woods Conference in 1944, which began operations in 1947. It currently has 190 member countries (at time of publication) including most of the major countries of the world. The fund was set up to supervise the fixed exchange rate system agreed at Bretton Woods and to make available to its members a pool of foreign exchange resources to assist them when they have balance of payments difficulties. It is funded by member countries' subscriptions according to agreed quotas.

Inventories

Finished goods (held by the producer prior to sale, further processing or other use) and products (materials and fuel) acquired from other producers to be used for intermediate consumption or resold without further processing as well as military inventories.

6 . K to L

Kind-of-activity unit (KAU)

An enterprise, or part of an enterprise, that engages in only one kind of non-ancillary productive activity or in which the principal productive activity accounts for most of the value added. Each enterprise consists of one or more kind-of-activity units.

Liability

A claim on an institutional unit by another body that gives rise to a payment or other transaction transferring assets to the other body. Conditional liabilities, where the transfer of assets only takes place under certain defined circumstances, are known as contingent liabilities.

Life assurance

An insurance policy that, in return for the payment of regular premiums, pays a lump sum on the death of the insured. In the case of policies limited to investments that have a cash value, in addition to life cover, a savings element provides benefits that are payable before death. In the UK, endowment assurance provides life cover or a maturity value after a specified term, whichever is sooner.

Liquidity

The ease with which a financial instrument can be exchanged for goods and services. Cash is very liquid whereas a life assurance policy is less so.

Lloyd's of London

The international insurance and reinsurance market in London.

7 . M to N

Marketable securities

Securities that can be sold on the open market.

Market output

Output of goods and services sold at economically significant prices.

Merchant banks

Monetary financial institutions whose main business is primarily concerned with corporate finance and acquisitions.

Mixed income

The balancing item on the generation of income account for unincorporated businesses owned by households. The owner or members of the same household often provide unpaid labour inputs to the business. The surplus is therefore a mixture of remuneration for such labour and return to the owner as entrepreneur.

Monetary financial institutions (MFIs) (S.121 to S.123)

As defined by the European Central Bank, these consist of all institutional units included in the central bank (S. 121), deposit-taking corporations except the central bank (S1.22) and money market funds (S.123) subsectors.

Money market

The market in which short-term loans are made and short-term securities traded. "Short-term" usually applies to periods of under one year but can be longer in some instances.

NACE

The industrial classification used in the EU. Revision 2 is the "Statistical classification of economic activities in the European Community in accordance with Commission Regulation (EC) No. 1893/2006 of 20 December 2006".

National income

The total value of goods produced and services provided by a country during one year, equal to the gross domestic product (GDP) plus the net income from foreign investments.

Net

After deduction of the consumption of fixed capital. Also used in the context of financial accounts and balance sheets to denote, for example, assets less liabilities.

Net domestic product

Net domestic product (NDP) is equal to gross domestic product (GDP) minus the consumption of fixed capital (CFC). This considers the decline in the value of fixed assets that are used up in the production process, because of wear and tear, and obsolesecence.

Non-market output

Output of own account production of goods and services provided free or at prices that are not economically significant. Non-market output is produced mainly by the general government and non-profit institutions serving households (NPISH) sectors.

Non-observed economy

Certain activities that may be productive and also legal but are concealed from the authorities for various reasons, for example, to evade taxes or regulation. In principle these, as well as economic production that is illegal, are to be included in the accounts but are by their nature difficult to measure.

Non-profit institutions serving households (NPISH) (S.15)

An institutional sector consisting of non-profit institutions that provide goods or services to households for free or at prices that are not economically significant. These include bodies such as charities, universities, churches and trade unions.

8 . O to P

Operating leasing

The conventional form of leasing in which the lessee makes use of the leased asset for a period in return for a rental while the asset remains on the balance sheet of the lessor. The leasing payments are part of the output of the lessor and the intermediate consumption of the lessee (see also financial leasing).

Operating surplus

The balance on the generation of income account. Households also have a mixed income balance. It may be seen as the surplus arising from the production of goods and services before taking into account flows of property income.

Ordinary share

The most common type of share in the ownership of a corporation. Holders of ordinary shares receive dividends (see also equity).

Output for own final use (P.12)

Production of output for final consumption or gross fixed capital formation (GFCF) by the producer. Also known as own-account production.

Own-account production

Production of output for final consumption or gross fixed capital formation (GFCF) by the producer. Also known as output for own final use.

Par value

A security's face or nominal value. Securities can be issued at a premium or discount to par.

Pension funds (S.129)

The institutions that administer pension schemes. Pension schemes are significant investors in securities. Self-administered funds are classified in the financial accounts as pension funds. Those managed by insurance companies are treated as long-term business of insurance companies.

Perpetual inventory model (or method) (PIM)

A method for estimating the level of assets held at a particular point in time by accumulating the acquisitions of such assets over a period and subtracting the disposals of assets over that period. Adjustments are made for price changes over the period. The perpetual inventory model (PIM) is used in the UK National Accounts to estimate the stock of fixed capital and as such the value of the consumption of fixed capital.

Portfolio

A list of the securities owned by a single investor. In the balance of payments statistics, portfolio investment is investment in securities that does not qualify as direct investment.

Preference share

This type of share guarantees its holder a prior claim on dividends. The dividend paid to preference shareholders is normally more than that paid to holders of ordinary shares. Preference shares may give the holder a right to a share in the ownership of the company (participating preference shares). However, in the UK they usually do not, and are therefore classified as bonds (F.3).

Prices

See economically significant prices, basic prices, purchasers' prices.

Principal

The lump sum that is lent under a loan or a bond.

Production boundary

Boundary between production included in creating core economic accounts (such as all economic activity by industry and commerce) and production that is excluded (such as production by households that is consumed within the household).

Promissory note

A security that entitles the bearer to receive cash. These may be issued by companies or other institutions (see commercial paper).

Property income

Incomes that accrue from lending or renting financial or tangible non-produced assets, including land, to other units. See also tangible assets.

Public corporations (S.11001 and S.12001)

These are public trading bodies that have a substantial degree of financial independence from the public authority which created them. A body is normally treated as a trading body when more than half of its income is financed by fees. A public corporation is publicly controlled to the extent that the public authorities appoint a majority of the board of management or when public authorities can exert significant control over general corporate policy through other means.

Since the 1980s, many public corporations, such as the BT Group, have been privatised and reclassified within the accounts as private non-financial corporations. Public corporations can also exist in the financial sector.

Public sector

Central government, local government and public corporations.

Purchasers' prices

These are the prices paid by purchasers. They include transport costs, trade margins and taxes (unless the taxes are deductible by the purchaser from their own tax liabilities).

9 . Q to R

Quasi corporations

Unincorporated enterprises that function as if they were corporations. For the purposes of allocation to sectors and subsectors, they are treated as if they were corporations, that is, separate units from those to which they legally belong. Three main types of quasi corporation are recognised in the accounts:

- unincorporated enterprises owned by the government that are engaged in market production

- unincorporated enterprises (including partnerships) owned by households

- unincorporated enterprises owned by foreign residents

The last group consists of permanent branches or offices of foreign enterprises and production units of foreign enterprises that engage in significant amounts of production in the territory over long or indefinite periods of time.

Real national disposable income (RNDI)

Gross national disposable income adjusted for changes in prices and in the terms of trade.

Related companies

Branches, subsidiaries, associates or parents.

Related import or export credit

Trade credit between related companies included in direct investment.

Rental

The amount payable by the user of a fixed asset to its owner for the right to use that asset in production for a specified period of time. It is included in the output of the owner and the intermediate consumption of the user.

Rents (D.45)

The property income derived from land and subsoil assets. It should be distinguished in the current system from rental income derived from buildings and other fixed assets, which is included in output (P.1).

Repurchase agreement (repo or reverse repo)

This is short for "sale and repurchase agreement". One party agrees to sell bonds or other financial instruments to other parties under a formal legal agreement to repurchase them at some point in the future, usually up to six months, at a fixed price.

Reverse repos are the counterpart asset to any repo liability. Repo or reverse repo transactions are generally treated as borrowing or lending within other investment, rather than as transactions in the underlying securities.

The exception is for banks, where repos are recorded as deposit liabilities. Banks' reverse repos are recorded as loans, the same as for all other sectors. Legal ownership does not change under a "repo" agreement. It was previously treated as a change of ownership in the UK financial account but under the System of National Accounts (SNA) is treated as a collateralised deposit (F.22).

Reserve assets

Short-term assets that can be very quickly converted into cash. They comprise the UK's official holdings of gold, convertible currencies, special drawing rights and changes in the UK reserve position in the IMF. Also included between July 1979 and December 1998 are European Currency Units (ECUs) acquired from swaps with the European Monetary Cooperation Fund (EMCF), European Monetary Institute (EMI) and the European Central Bank (ECB).

Residents

These comprise general government, individuals, private non-profit-making bodies serving households and enterprises within the territory of a given economy.

Residual error

The term used in the former accounts for the difference between the measures of gross domestic product (GDP) from the expenditure and income approaches.

Resources and uses

The term resources refers to the side of the current accounts where transactions that add to the amount of economic value of a unit or sector appear. For example, wages and salaries are a resource for the unit or sector receiving them. Resources are by convention put on the right side or at the top of tables arranged vertically.

The left side (or bottom section) of the accounts, which relates to transactions that reduce the amount of economic value of a unit or sector, is termed uses. To continue the example, wages and salaries are a use for the unit or sector that must pay them.

Rest of the world

This sector records the counterpart of transactions of the whole economy with non-residents.

10 . S to T

Satellite accounts

Satellite accounts describe areas or activities not dealt with by core economic accounts. These areas or activities are considered to require too much detail for inclusion in the core accounts or they operate with a different conceptual framework. Internal satellite accounts re-present information within the production boundary. External satellite accounts present new information not covered by the core accounts.

Saving (B.8g)

The balance on the use of income account. It is that part of disposable income that is not spent on final consumption and may be positive or negative.

Secondary market

A market in which holders of financial instruments can resell all or part of their holding. The larger and more effective the secondary market for any particular financial instrument, the more liquid that instrument is to the holder.

Sector

See institutional sector.

Securities

Tradable or potentially tradable financial instruments.

Special drawing rights (SDRs) (F.12)

These are reserve assets created and distributed by decision of the members of the IMF. Participants accept an obligation to provide convertible currency to another participant, when designated by the IMF to do so, in exchange for special drawing rights (SDRs) equivalent to three times their own allocation.

Only countries with a sufficiently strong balance of payments are so designated by the IMF. SDRs may also be used in certain direct payments between participants in the scheme and for payments of various kinds to the IMF.

Special purpose entities (SPEs)

These are generally organised or established in economies other than those in which the parent companies are resident and engaged primarily in international transactions but in few or no local operations.

Special purpose entities (SPEs) are defined either by their structure (for example, financing subsidiary, holding company, base company or regional headquarters) or their purpose (for example, sale and regional administration, management of foreign exchange risk, or facilitation of financing of investment).

SPEs should be treated as direct investment enterprises if they meet the 10% criterion. They are an integral part of direct investment networks as are, for the most part, SPE transactions with other members of the group.

Staged payments

See advance and progress payments.

Standard Industrial Classification (SIC)

The industrial classification applied to the collection and publication of a wide range of economic statistics. The current version, Standard Industrial Classification (SIC) 2007, is consistent with NACE, revision 2. See NACE for further details.

Standardised guarantees

These are normally issued in large numbers, usually for fairly small amounts, along identical lines. There are three parties involved in these arrangements: the debtor, the creditor and the guarantor. Either the debtor or creditor may contract with the guarantor to repay the creditor if the debtor defaults. The classic examples are export credit guarantees and student loan guarantees.

Subsidiaries

Companies owned or controlled by another company. Under Section 1159 of the Companies Act (2006) this means, broadly speaking, that another company either:

- holds a majority of the voting rights

- is a member and has the right to appoint or remove a majority of its board of directors

- is a member and controls alone (pursuant to an agreement with other members) a majority of the voting rights

The category also includes subsidiaries of subsidiaries.

Subsidies (D.3)

Current unrequited payments made by general government or the EU to enterprises. Those made on the basis of a quantity or value of goods or services are classified as "subsidies on products" (D.31). Other subsidies based on levels of productive activity (for example, numbers employed) are designated "other subsidies on production" (D.39).

Suppliers' credit

Export credit extended overseas directly by UK firms other than to related concerns.

Supply table

Table of estimates of domestic industries' output by type of product. Compiled at basic prices and including columns for imports of goods and services, for distributors' trading margins and for taxes less subsidies on products. The final column shows the value of the supply of goods and services at purchasers' prices. This table shows which industries make which products: columns represent the supplying industries, rows represent the products supplied.

System of National Accounts (SNA)

The internationally agreed standard system for macroeconomic accounts. The latest version is described in SNA 2008.

Taxes

Compulsory unrequited transfers to central or local government or the EU. Taxation is classified in the following main groups: taxes on production and imports (D.2), current taxes on income wealth and so on (D.5), and capital taxes (D.91).

Technical reserves (of insurance companies) (F.61)

These reserves consist of prepaid premiums, reserves against outstanding claims, actuarial reserves for life insurance and reserves for with-profit insurance. They are treated in the economic accounts as the property of policy holders.

Terms of trade

Ratio of the change in export prices to the change in import prices. An increase in the terms of trade implies that the receipts from the same quantity of exports will finance an increased volume of imports, so measurement of real national disposable income needs to take account of this factor.

Transfers

Unrequited payments made by one unit to another. They may be current transfers (D.5 to D.7) or capital transfers (D.9). The most important types of transfers are taxes, social contributions and benefits.

Treasury bills

Short-term securities or promissory notes that are issued by the government in return for funding from the money market. Each week in the UK, the Bank of England invites tenders for sterling Treasury bills from the financial institutions operating in the market. European currency unit (ECU) or euro-denominated bills were issued by tender each month, but this programme has now wound down; the last bill was redeemed in September 1999. Treasury bills are an important form of short-term borrowing for the government, generally being issued for periods of three or six months.

11 . U to Z

Unit trusts

Institutions within subsector S.123 through which investors pool their funds to invest in a diversified portfolio of securities. Unit trusts give individual investors the opportunity to invest in a diversified and professionally managed portfolio of securities, without the need for detailed knowledge of the individual companies issuing the stocks and bonds. They differ from investment trusts in that the latter are companies in which investors trade shares on the stock exchange, whereas unit trust units are issued and bought back on demand by the managers of the trust.

Uses

See resources and uses.

Use table

See combined use table.

United Kingdom (UK)

Broadly, in the accounts, the United Kingdom (UK) comprises Great Britain plus Northern Ireland and that part of the continental shelf deemed by international convention to belong to the UK. It excludes the Channel Islands and the Isle of Man.

Valuables

Goods of considerable value that are not used primarily for production or consumption but are held as stores of value over time, for example, precious metals, precious stones, jewellery and works of art.

Valuation

See basic prices, purchasers' prices, factor cost.

Value added

The balance on the production account: output less intermediate consumption. Value added may be measured net or gross.

Value Added Tax (VAT) (D.211)

A tax paid by enterprises. In broad terms an enterprise is liable for VAT on the total of its taxable sales but may deduct tax already paid by suppliers on its inputs (intermediate consumption). Therefore, the tax is effectively on the value added by the enterprise. Where the enterprise cannot deduct tax on its inputs, the tax is referred to as non-deductible. VAT is the main UK tax on products (D.21).

12 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, Glossary, UK National Accounts, The Blue Book: 2023

Compendium

Background notes

Information about the compilation of the latest national accounts including quality and reliability issues.

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Release date:
31 October 2023

Next release:
To be announced

Table of contents

1 . Feedback

We welcome your feedback on this publication. If you would like to get in touch, please email us at blue.book. coordination@ons.gov.uk.

2 . Release policy

This release includes data up to 2023. Data are consistent with the Index of Production, Index of Services and Construction Output Price Indices and the current price trade in goods data within UK trade, both published on 12 October 2023, as well as the balance of payments, quarterly national accounts and UK Economic Accounts, published on 29 September 2023.

3 . Continuous improvement of sources, methods and communication

Throughout 2023 we have published a series of articles detailing changes that will affect Blue Book 2023. These can be found on the Office for National Statistics (ONS) website using the following keywords: BlueBook2023, BB23 and National Accounts.

4 . National accounts classification decisions

The UK National Accounts are produced under internationally agreed guidance and rules set out in the European System of Accounts: ESA 2010 (PDF, 6.4MB) and the accompanying Manual on Government Deficit and Debt – Implementation of ESA 2010 to 2016 edition (MGDD) (PDF, 3.8MB).

In the UK, we are responsible for the application and interpretation of these rules. Therefore, we make classification decisions based on the agreed guidance and rules.

5 . Economic context

We publish economic commentary, giving commentary on the latest gross domestic product (GDP) estimate and our other economic releases. The next commentary will be published on 22 December 2023.

6 . Important quality issues

Common pitfalls in interpreting the series include:

- expectations of accuracy and reliability in early estimates are often too high

- revisions are an inevitable consequence of the trade-off between timeliness and accuracy

- early estimates are based on incomplete data

Very few statistical revisions arise because of "errors" in the popular sense of the word. All estimates, by definition, are subject to statistical "error". In this context, the word refers to the uncertainty inherent in any process or calculation that uses sampling, estimation, or modelling. Most revisions reflect either the adoption of new statistical techniques or the incorporation of new information, which allow the statistical error of previous

estimates to be reduced. Only rarely are there avoidable "errors", such as human or system failures, and such mistakes are made clear when they do occur.

7 . The quality of Blue Book estimates

Unlike many of the short-term indicators we publish, there is no simple way of measuring the accuracy of the Blue Book dataset. All estimates, by definition, are subject to statistical uncertainty. For many well-established statistics, we measure and publish the sampling error and non-sampling error associated with the estimate, using this as an indicator of accuracy. Since sampling is typically done to determine the characteristics of a whole population, the difference between the sample and population values is considered a sampling error. Non-sampling errors are a result of deviations from the true value that are not a function of the sample chosen, including various systematic errors and any other errors that are not because of sampling.

The Blue Book dataset, however, is currently constructed from various data sources, some of which are not based on random samples or do not have published sampling and non-sampling errors available. This makes it very difficult to measure both error aspects and their impact on gross domestic product (GDP). While development work continues in this area, like all other G7 national statistical institutes (NSIs) we do not publish a measure of the sampling error or non-sampling error associated with this dataset.

8 . Reliability

Estimates for the most recent quarters are provisional and are subject to revision in the light of updated source information. We currently provide an analysis of past revisions in the gross domestic product (GDP) and other statistical bulletins that present data time series.

Our revisions to economic statistics page brings together our work on revisions analysis, linking to articles and revisions policies. Revisions to data provide one indication of the reliability of main indicators.

9 . Further information

You can see all of our latest releases on the Office for National Statistics (ONS) release calendar.

Details of the policy governing the release of new data are available from the UK Statistics Authority.

We are committed to ensuring that all information provided is kept strictly confidential and will only be used for statistical purposes. Further details regarding confidentiality can be found in the respondent charter for businesses and respondent charter for households.

10 . Code of Practice

National Statistics are produced to high professional standards set out in the Code of Practice for Statistics.They undergo regular quality assurance reviews to ensure that they meet user needs. They are produced free from any political interference.

11 . Cite this chapter

Office for National Statistics (ONS), released 31 October 2023, ONS website, compendium chapter, Background notes, UK National Accounts, The Blue Book: 2023