

Quarterly Acquisitions and Disposals of Capital Assets Survey QMI

Quality and methodology information (QMI) for our Quarterly Acquisitions and Disposals of Capital Assets Survey (QCAS). Includes strengths and limitations, methods, and data uses and users.

Contact:
Gross Capital Formation team
gcf@ons.gov.uk
+44 1633 455250

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1 . Output information

- Statistical designation: accredited official statistics
- Survey name: Quarterly Acquisitions and Disposals of Capital Assets Survey (QCAS)
- Data collection: sample of around 24,500 businesses
- Frequency: quarterly
- How compiled: sample-based business survey
- Geographic coverage: UK
- Related publications: [Business investment in the UK bulletins](#)

2 . About this QMI report

This quality and methodology information report contains information on the quality characteristics of the data (including the European Statistical System's five dimensions of quality) as well as the methods used to create it.

The information in this report will help you to:

- understand the strengths and limitations of the data
- learn about existing uses and users of the data
- understand the methods used to create the data
- help you to decide suitable uses for the data
- reduce the risk of misusing data

3 . Important points

- We collect capital expenditure data (value of acquisitions and proceeds from disposals) on assets used in production through our [Quarterly Acquisitions and Disposals of Capital Assets Survey \(QCAS\)](#); these data contribute to our estimates for gross fixed capital formation (GFCF) and gross domestic product (GDP).
- QCAS is a quarterly investment indicator based on data from over 24,500 private businesses that have more than 19 employees.
- QCAS aligns with the [European System of Accounts \(ESA\) 2010](#) and the United Nations System of National Accounts (SNA) 2008.
- The previous Quarterly Capital Expenditure Survey (QCPX), which began in 1955 and became statutory in 1991, was redesigned as the QCAS in 2015.
- Data supplied from this survey make up around 60% of the data presented in our [Business investment in the UK bulletins](#); they also make up around 33% of the total value of GFCF, which is a component of the expenditure approach to measuring GDP.
- QCAS data are also used in the compilation of our capital stock estimates, our volume index of capital services estimates (the measure of capital input used for calculating [multi-factor productivity \(MFP\) estimates](#)), and our current price [input-output supply and use tables](#).

4 . Quality summary

Overview

Data provided by businesses in response to the Quarterly Acquisitions and Disposals of Capital Assets Survey (QCAS) are used to compile our estimates of business investment.

Around 24,500 questionnaires are sent to businesses each quarter. Questionnaires include 14 questions on acquisition and disposal of capital assets across all questionnaire types and are appropriate to the industry selected.

Uses and users

The main users of data from the QCAS are:

- the UK National Accounts
- other government departments and agencies, including the Bank of England, HM Treasury and the Office for Budget Responsibility
- devolved administrations
- the Organisation of Economic Cooperation and Development (OECD)

Strengths and limitations

The main strengths of QCAS are:

- providing timely insights into capital expenditure in the UK; estimates based on the survey are published quarterly, five to six weeks after the end of the relevant quarter
- giving breakdowns at asset level on businesses' capital expenditure
- achieving average response rates of 60% and 75%, respectively, for provisional and revised results over the past two years

The main limitation of QCAS is that large capital expenditure tends to be reported later in the data collection period than smaller capital expenditure. This means that larger expenditures are often included in our revised (month three) business investment bulletin but are not reported in time for the provisional (month two) release. This can result in upward revisions in the later estimates for business investment and gross fixed capital formation (GFCF). We add a bias adjustment to our provisional estimate to reflect this time lag.

Recent improvements

- We enhanced GFCF estimation and variables aligned with the European System of Accounts (ESA) 2010 in 2015.
- We reduced the sample size by 10% and increased sample rotation to nine quarters in 2017.
- We fully transitioned to online data collection and communication in 2020.

Provisional survey results are based on a lower response than revised survey results. They can be revised as later data become available, replacing estimates for non-response. QCAS does not sample businesses with fewer than 20 employees.

We estimate investment for businesses with fewer than 20 employees through benchmarking to our Annual Business Survey (ABS) because of its larger sample size (73,000 businesses).

5 . Quality characteristics of the data

This section describes the quality characteristics of the data and identifies issues that should be considered when using the statistics.

Relevance

Our [Quarterly Acquisitions and Disposals of Capital Assets Survey \(QCAS\)](#) focuses on assets used for production or services over a year, tracking their value changes each quarter. The survey excludes financial institutions, higher education, and new construction for housing and land.

The main information collected is broken down into six main types of assets:

- new construction work (excluding land and existing buildings and dwellings)
- vehicles
- other capital equipment (including plant, machinery, fixtures, and fittings)
- computer software, hardware and databases
- telecommunication equipment
- exploration expenditure

Accuracy and reliability

QCAS uses the [Inter-Departmental Business Register \(IDBR\)](#) for its sample and this is periodically optimised.

Response rates are targeted at 60% in the provisional stage, 80% in the revised stage, and 85% in the late stage. The late stage is the latest data vintage and is taken around three months after the revised results.

Businesses are reminded by email/electronic survey data collection and phone calls to meet these targets. The survey is conducted under the Statistics of Trade Act 1947 and enforcement action is taken against non-responders.

Sampling errors

Survey estimates are subject to various sources of error. Total error consists of two elements: the sampling error and the non-sampling error. Sampling errors occur because estimates are based on a sample, rather than a census. The results obtained for any single sample may, by chance, vary from the true values of the population. However, the variation would be expected to be zero on average over several repeats of the survey.

We minimise sampling error for QCAS by using a stratified random sample, which is reviewed and refined periodically. We continuously monitor for sampling error, with standard errors and coefficients of variation (CV) calculated for each output question asked.

The standard error gives an indication of the magnitude of the sampling error. We expect 95% of our estimates for a variable to be within two standard errors of the true unknown value for the population. This means the closer the standard error is to zero, the more accurate the estimate.

The coefficient of variation is the standard error of a variable divided by the survey estimate. It is used to compare the relative precision across surveys or variables. The closer the coefficient of variation is to zero, the more accurate the estimate is in percentage terms.

Non-sampling errors

Non-sampling errors are not easy to quantify. They include errors of coverage, measurement, processing, and non-response. Response rates give an indication of the likely effect of non-response error on estimates (for example, non-response bias).

Examples of non-sampling errors include:

- different approaches as to what businesses classify as capital and expenditure
- different ways businesses record stage payments for larger capital goods
- joint-venture businesses that may not be in scope of QCAS (because of low register employment) but may have large capital spend
- inconsistency in the way businesses allocate capital spend to asset types

Response accuracy

It is difficult to accurately quantify the effect of response inaccuracy. Questionnaires are tailored to the relevant industry so that businesses are only asked to respond to questions relevant to their industry. Data are put through an editing and validation process to help reduce inaccuracy.

Reliability or accuracy of the data can be affected by response rates to the survey. For example, a lower-than-normal response rate decreases the data on which to base the estimate in the short-term. This could lead to an increased chance of revisions in subsequent estimates.

Revisions

We compare our first published estimate from our [Business investment in the UK bulletin](#) and the final revised figure to produce revisions triangles. Revisions triangles can provide an indication of reliability. QCAS data are a main source of our Business investment estimates.

We revise our latest estimates and estimates from previous quarters in line with the National Accounts Revisions Policy. We take on late responses and revisions by businesses to revise their previously submitted data.

Response rates for the current quarter and earlier periods are published in our Business investment in the UK bulletins and reflect the response rates at the time of publication.

Large capital expenditure tends to be reported later in the data collection period than smaller capital expenditure. This means that larger expenditures are often included in the revised results but are not reported in time for the provisional results. This can lead to a tendency toward upward revisions in the later estimates for business investment and gross fixed capital formation (GFCF).

Following investigation of the impact of this effect, we introduced an approach to apply a bias adjustment in our provisional estimates from Quarter 3 (July to Sept) 2013. Any bias adjustment that is applied is later removed in the revised release.

This adjustment approach was suspended in Quarter 2 (Apr to June) 2020 because of uncertainties about the effect of the coronavirus (COVID-19) pandemic. However, after further investigation and analysis of its impact, the bias adjustment approach was reintroduced to business investment and GFCF in Quarter 4 (Oct to Dec) 2021.

The bias adjustment is calculated by using weighted averages of revisions based on data responses for the previous three years, where greater weight is given to revisions for more recent periods.

The bias adjustment applied in the provisional estimates is published in our Business investment in the UK provisional results bulletins.

Coherence and comparability

The QCAS was designed in accordance the [European System of Accounts \(ESA\) 2010 \(PDF, 6.4MB\)](#) and is consistent with the United Nations [System of National Accounts \(SNA\) 2008 \(PDF, 9.1MB\)](#). This means figures published by the UK are comparable with other countries using those systems. An important aspect of this is the use of [UK Standard Industrial Classification \(SIC\) 2007](#), which is consistent with the EU's [Statistical classification of economic activities in the European Community \(NACE\)](#).

Our QCAS, our [Annual Business Survey \(ABS\)](#) and our [Annual Acquisitions and Disposals of Capital Assets Survey \(ACAS\)](#) all collect data on acquisition and disposal of capital assets (capital expenditure).

ABS is an annual survey that collects data on capital expenditure for both produced assets used in production (GFCF) and non-produced assets, like land. The estimates of capital expenditure are published in our [Non-financial business economy, UK \(Annual Business Survey\) bulletins](#). Estimates include GFCF, non-produced assets and expenditure on existing buildings. The ABS has a large sample size (62,000 per year in Great Britain and 11,000 per year in Northern Ireland) and includes both privately and publicly owned businesses of all sizes.

As an annual survey, respondents typically provide audited account results, though not always for a calendar year. More detail on the data periods represented in ABS releases is available in our [ABS technical report: January 2024](#). ABS can provide detailed industry breakdowns, but only relatively high-level assets breakdowns, compared with QCAS and ACAS items. ABS data are used to validate data from the QCAS and ACAS.

ACAS is an annual survey that gathers detailed data on asset sub-components. It has a smaller sample size of 2,500 businesses with over 99 employees. It provides product breakdowns for asset price indices and balancing supply and use in the economy.

Accessibility and clarity

Our recommended format for accessible content is a combination of HTML webpages for narrative, charts and graphs, with data being provided in usable formats such as CSV and Excel. Our website also offers users the option to download the narrative in PDF format. In some instances, other software may be used or may be available on request.

For information regarding conditions of access to data, please see:

- our [Terms and conditions page](#) (for data on the website)
- the Open Government Licence [Copyright and reuse of published data page](#)
- the [Accessibility statement for the Office for National Statistics \(ONS\)](#)

Microdata can be accessed through the Secure Research Service (SRS) and the Integrated Data Service.

Basic quality information relevant to each release is available in the Data sources and quality sections of our Business investment in the UK bulletins.

Timeliness and punctuality

QCAS produces two sets of results per quarter. Provisional estimates for the current quarter are provided to the [national accounts](#) five to six weeks after the end of the quarter. Revisions for the current and previous quarters are delivered 9 to 10 weeks after quarter-end.

Provisional data are published in our Business investment in the UK: provisional results bulletin about six weeks after the end of the quarter. This publication is released in conjunction with the publication of our [Gross domestic product \(GDP\) first quarterly estimate, UK bulletin](#). Our revised Business investment in the UK: revised results bulletin contains estimates of the previous quarter's revised results, where applicable, and the current quarter's revised results. This is published roughly 12 weeks after the end of the quarter, alongside our [GDP quarterly national accounts, UK bulletin](#).

Our [Release calendar](#) gives 12 months' notice of release dates. Any changes to the schedule will be publicly communicated, along with explanations, following the [Code of Practice for Official Statistics](#).

Concepts and definitions

The statutory basis of the QCAS in Great Britain is the Statistics of Trade Act 1947. For Northern Ireland, QCAS is conducted under Section 1 of the Statistics of Trade and Employment (Northern Ireland) Order 1988. Non-response may result in penalties, detailed in Section 4 of the Order. This mirrors the approach of Great Britain, with businesses approached on a statutory basis.

The survey sample allocation is defined in accordance with Divisions 01 to 96 of the [Standard Industrial Classification \(SIC\) 2007](#). The main areas that are excluded are:

- financial activities (Groups 64 and 65)
- public administration and defence (Group 84)
- higher education (Group 85.4)
- public sector, including public corporation or nationalised body, central government, and local authority

Asset breakdowns requested in the survey are in accordance with those defined in the SNA 2008.

Geography

We compile estimates collected by the QCAS at UK level.

Why you can trust our data

We are the UK's largest independent producer of statistics and its national statistical institute. We treat the data that we hold with respect, keeping it secure and confidential, and we use statistical methods that are professional, ethical and transparent.

6 . Methods used to produce the data

Main data sources

Data are collected from responses from companies sampled for our [Quarterly Acquisitions and Disposals of Capital Assets Survey \(QCAS\)](#).

The [Inter-Departmental Business Register \(IDBR\)](#) is a comprehensive list of UK businesses used by government for statistical purposes. It is also an important data source for analyses of business activities. There are 2.8 million businesses on the IDBR and it is used as the sampling frame from which a stratified random sample is drawn.

The strata are defined by [UK Standard Industrial Classification \(SIC\) 2007](#) at two-digit class level for most industries and by employment size for businesses covered:

- 20 to 49 employees
- 50 to 99 employees
- 100 to 299 employees
- over 300 employees

Businesses with over 299 employees are permanently included in the sample. Businesses with between 20 and 299 employees are sampled on a rotating basis. Businesses with fewer than 20 employees are not sampled.

Results of the QCAS are weighted and aggregated at the industry level. Capital expenditure of larger businesses is given a weight of one and smaller businesses represent other businesses that are not sampled. Current price and chained volume measures are derived from the survey results, with both adjusted and unadjusted series available. Outliers are addressed, and volume estimates are adjusted for price changes using a [deflator](#).

How we process the data

Data collected from the QCAS are first processed at the individual respondent level and are then aggregated according to employment strata and further by industry and asset type.

How we analyse and interpret the data

Using aggregated totals, data movements are compared across different time periods. For example, the latest quarter is compared with the previous quarter, or latest estimates for a given quarter are compared with previous estimates for that same quarter. Any unusual movements or revisions identified are then followed up using information previously supplied by the respondent or through further contact, if necessary, to understand the reason for these movements.

Where non-response has made it necessary to use imputed or constructed values, these are reviewed to assess their appropriateness.

We also use other survey sources to validate movements, including our Annual Business Survey (ABS) and our Annual Acquisition and Disposals of Capital Assets Survey (ACAS). Publicly available company accounts can also be used to confirm or otherwise data movements.

How we quality assure and validate the data

QCAS has used an electronic questionnaire for data collection since 2020.

Responses from businesses are validated using rules built into our processing system. Once the data are placed onto the system, a series of credibility checks are applied to aid data validation.

Validation gates flag implausible data using previous responses. Failed data checks are reviewed by the validation team, who correct errors or contact the business for clarification, documenting all interactions for audit purposes. The data are stored in a database that builds a history of each contributing business.

How we disseminate the data

Data are used in the estimation of UK business investment twice quarterly, in combination with other data sources. They are published in our accompanying bulletin and datasets.

QCAS also feeds into the expenditure approach to measuring gross domestic product (GDP).

We publish aggregated estimates from the QCAS survey quarterly.

We also publish QCAS data in:

- our [QCAS investment made by energy industries dataset](#)
- our [QCAS split by industry and employment size bands dataset](#)

How we review and maintain the data processes

We periodically review our estimation methods, such as our non-response estimation and sample design, to ensure they are still relevant and appropriate.

7 . Other information

For further information, please email the Gross Capital Formation team at GCF@ons.gov.uk.

8 . Related links

[Business investment in the UK: April to June 2025 revised results](#)

Bulletin | Released 30 September 2025

Estimates of short-term indicators of investment in non-financial assets; business investment, and asset and sector breakdowns of total gross fixed capital formation.

[Business investment in the UK: April to June 2025 provisional results](#)

Bulletin | Released 30 September 2025

Estimates of short-term indicators of investment in non-financial assets; business investment, and asset and sector breakdowns of total gross fixed capital formation.

[GDP quarterly national accounts, UK: April to June 2025](#)

Bulletin | Released 30 September 2025

Revised quarterly estimate of gross domestic product (GDP) for the UK. Uses additional data to provide a more precise indication of economic growth than the first estimate.

9 . Cite this methodology

Office for National Statistics (ONS), released 8 October 2025, ONS website, methodology, [Quarterly Acquisitions and Disposals of Capital Assets Survey QMI](#)