

Mergers and acquisitions involving UK companies (M&A) QMI

Quality and methodology information for the Mergers and acquisitions statistical bulletin, detailing the strengths and limitations of the data, methods used and data uses and users.

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1. Output information

- National Statistic: yes
- Survey name: Mergers and acquisitions involving UK companies (M&A)
- Data collection: external source supplier and statutory survey questionnaires
- Frequency: quarterly
- How compiled: ONS systems and statistical processes
- Geographic coverage: UK and rest of the world
- Related publications:
 - Foreign direct investment, overview of new survey questions, UK, Office for National Statistics.
 - Foreign direct investment involving UK companies, Office for National Statistics
 - Mergers and acquisitions involving UK companies, annual overview, Office for National Statistics
 - Balance of payments, UK statistical bulletins, Office for National Statistics

2. About this Quality and Methodology Information report

This quality and methodology report contains information on the quality characteristics of the data (including the European Statistical System 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

- The Office for National Statistics (ONS) Mergers and Acquisitions (M&A) Survey uses Moody's Bureau Van Dijk (BvD) Zephyr as the commercial source for identifying acquisitions, mergers, takeovers, disposals and demergers.
- M&A deal data are identified and collected at both the immediate and the ultimate level of share ownership.
- The Mergers and Acquisitions (M&A) Survey presents information and data on the timing, value, number and methods of funding of M&A transactions involving UK businesses with deal values of £1.0 million and above.
- M&A consists of three types of investment: inward investment (inbound M&A) and outward investment (outbound M&A), which leads to a holding exceeding 10% of the issued ordinary share capital, and domestic M&A, which leads to a holding exceeding 50% of the issued ordinary share capital.
- The M&A data that result in a change of ultimate control of more than 50% of voting power of the target company is published in an ONS quarterly statistical bulletin, Mergers and acquisitions involving UK companies.
- M&A metadata, which is a combination of ONS M&A survey data and M&A commercial administrative sourced data (BvD Zephyr) is produced for domestic, inward and outward M&A; the metadata for both inward and outward M&A are also used in the compilation of the estimates for foreign direct investment (FDI).
- M&A estimates are produced via a two-stage process: firstly, BvD Zephyr data are sourced to identify all
 deals of £1 million or more in value; secondly, the BvD data source provides data values for those deals,
 between £1 million and £100 million in value, and ONS M&A statutory survey data collection processes
 and produces the data for deals of £100 million or more.
- The M&A Survey outputs feed into the UK Balance of Payments and are included in the UK Financial Accounts.

4. Quality summary

Overview

Definition of mergers and acquisitions

When two companies come under one enterprise in order to expand and increase profit. They take the form of either an ordinary share purchase (most common) or an asset purchase (division or business).

The statistics produced for the Office for National Statistics (ONS) Mergers and Acquisitions (M&A) Survey are based on a combination of ONS M&A survey data (split into subsets referred to as "inquiries") and M&A commercial administrative sourced data (Moody's Bureau Van Dijk (BvD) (Zephyr)). The survey data inquiries are categorised into two distinct areas.

Cross-border mergers and acquisitions

Inquiry 089: Inward Cross Border Acquisitions and Mergers (CBAM Inward). For example, foreign companies acquiring, merging or selling UK companies. The title of the ONS statutory survey questionnaires are:

- Acquisitions of UK companies, shares and assets by foreign companies
- Disposals of UK companies, shares and assets by foreign companies

Inquiry 090: Outward Cross Border Acquisitions and Mergers (CBAM Outward). For example, UK companies acquiring, merging or selling foreign companies. The title of the ONS statutory survey questionnaires are:

- Acquisitions of foreign companies, shares and assets by UK companies survey
- Disposals of foreign companies, shares and assets by UK companies survey

UK domestic mergers and acquisitions

Inquiry 088: Domestic Acquisitions and Mergers (DAM). For example, UK companies acquiring or merging with other UK companies. The title of the ONS statutory survey questionnaire is:

Acquisitions of UK companies, shares and assets by other UK companies survey

Collectively, all three M&A Surveys are referred to as the ONS Mergers and Acquisitions Survey (M&A).

The M&A Survey consists of the following transactions:

- mergers combination of two companies forming a new company
- demergers one company exiting ownership of the new company
- takeovers welcome and hostile
- acquisitions or investments purchase of ordinary shares and assets of a company by another company
- disposal or disinvestment selling of ordinary shares and assets of a company by another company
- joint ventures a business entity created by two or more parties with shared ownership
- cash injections or redemptions an investment or divestment of equity capital

Uses and users

- The Cross-Border Mergers and Acquisitions Survey (inward and outward M&A) data are used in the compilation of the estimates of flows data for foreign direct investment (FDI); these data meet the needs of FDI by collecting data on all acquisitions that lead to a holding of 10% or more of the issued share capital.
- The Domestic Mergers and Acquisitions Survey identifies M&A transactions of majority ordinary share ownership (50.01% and more); data are produced and delivered to UK National Accounts for inclusion within the UK private non-financial corporations data outputs.
- M&A outputs are also used by the Foreign Direct Investment Surveys when identifying new quarterly and annual sampling frames.
- Individual M&A transaction information is also used to estimate the counterpart in "portfolio" investment flows for monthly UK Balance of Payments.
- M&A information is used to update company structures on the ONS Inter-Departmental Business Register (IDBR).

Feedback from users has indicated that the information received from the ONS M&A Survey has a high degree of relevance across many user groups, meets many user needs and all information currently collected and published is used.

Strengths and limitations

Strengths of the M&A data

- The M&A Survey is the only ONS financial survey related to mergers and acquisitions involving UK companies. There are no other similar sources of data collected by the ONS.
- M&A data are conducted under the Organisation for Economic Co-operation and Development (OECD) legislation and included in the benchmark definition for FDI.
- M&A data have extensive historical time series data starting from 1987.
- M&A deal information is collected and published to include companies within all the Standard Industrial Classifications 2007.
- Detailed granular M&A data are collected for deals of £100 million and greater for both the breakdown and method of funding.
- M&A metadata are produced and delivered annually to the ONS Social Research Service.
- Quarterly M&A data are continually revised to enhance the quality of the outputs.
- Analysis of annual M&A microdata are produced by source of funding, expenditure and by geography or continents.
- Regular M&A economic articles are published to supplement the M&A quarterly statistical releases.

Limitations of the M&A data

- The quarterly M&A sample selections provided by Moody's Bureau Van Dijk ((BvD) Zephyr contain M&A transactions (deals valued below £100 million), which often do not state a deal value because there is no information in the public domain; estimation methodology is therefore applied to ensure deal values are included in M&A data outputs.
- The deal values stated in the source extracts are the total gross value for the transaction, which includes values for debt, expenses, assets and start-up costs, which should be removed as the ONS M&A Survey specifically looks to collect and publish data showing the values paid for only the ordinary shares that had been acquired or sold.
- M&A deals (£100 million and greater) are issued with M&A statutory questionnaires and therefore the total deal values supplied are net values where amounts for debt, expenses, assets and start-up costs are removed.
- Every separate BvD Zephyr data source extract is analysed and researched to identify demergers and disposal transactions, as the source provider does not identify these specific M&A transactions; therefore, the quarterly M&A data outputs consist of deals that are "constructed" to overcome this issue.
- Data are continually revised each quarter because of the source supplier providing new M&A information, deals being moved, amendment of deal values and occasionally deals that do not meet the requirements for the M&A Survey.
- Data for hedge funds, initial public offerings and venture capitalists are not identified or collected.

Improvements brought about by the inclusion of Bureau van Dijk data from 2018

Improvements in M&A coverage

Before January 2018, coverage for the M&A Survey was limited to information gathered from the financial press, specialised publications, websites specialising in M&A and websites of businesses regularly engaged in M&A activity. These included the Financial Times, Guardian Business News, InvestEgate, Insider Media, NewsNow and Growth Business UK.

In 2018, a new administrative data source, Bureau van Dijk (BvD), was introduced to improve sampling. It reports over 100,000 new deals annually resulting in an ever-growing database of current and historical transactions.

Analysis of this new data source revealed that, compared with the previous ONS approach, BvD identifies more M&A deals involving British companies. Using BvD data has therefore resulted in an increase in the number of deals covered and reported. The associated increase in deal values is not as significant, as previously the ONS had sufficient coverage of the largest transactions that generally dominate headline estimates. Nevertheless, some caution is advised when interpreting any increase in activity in Quarter 1 (January to March) 2018 and thereafter, especially in terms of the number of deals.

New imputation methods for missing M&A deal values

To accompany the introduction of BvD data, in 2018, the ONS developed a method of imputation to account for deals that displayed no values. In these cases it is necessary to assign a value to the deal by having an uplift factor to weight available deal values to account for deals with no deal values. The weight is used to calculate a value to distribute across the missing deals evenly within country groups. This process is conducted separately for domestic, inward and outward deals, as the average value is not uniform across these domains.

As M&A results are published by country groups, the process of imputing values takes special care to address this consideration. Because of to the number of deals with missing values originating from different country groups, some of which have no populated cases, the method of estimating for empty deal values relies on alternative country groupings. Outward M&A deals are estimated according to whether they originate from the UK or elsewhere, while inward deals have grouped Asian and African deals into one category but retain all other country groups. Domestic deals, all originating in the UK, have remained grouped together. Using these alternative groupings, we can ascertain potential values for deals in which no financial information was available.

Analysis of this imputation method for Quarter 1 2018 suggests that the imputed deal averages provide good deal estimation at country group levels and are in line with actual deal value averages determined by BvD, albeit at a slightly lower level. While the use of commercially available data has made the use of imputation necessary, the method is only required for a relatively small proportion of headline M&A values (less than 10%).

Smaller M&A revisions expected

Before 2018, revisions to published data took place on a quarterly and annual basis. These mainly affected revisions in the number of deals, with a small number of revisions to values. There were multiple reasons for revisions, such as information from other ONS surveys (such as the FDI Survey), corrections to data supplied by the company themselves, late response, late identification of deals, or unsuitable deal criteria for M&A activity.

Sourcing BvD to collect information on most M&A deals and imputing any missing deal values, means that only large value deals of over £100 million will require the dispatch of survey questionnaires. As fewer survey questionnaires are now distributed and returned, the quality of ONS M&A data has improved with fewer large revisions, since values for the smaller transactions are readily available. Revisions to the number of M&A deals have also reduced, since all transactions are now identified from one comprehensive source, which is Moody's BvD Zephyr.

Conclusions

The use of BvD Zephyr data for M&A has influenced the sampling, coverage, imputation and revision processes for this survey. We have noted an improvement in coverage, with associated increases in the number and value of M&A deals, although some of these deals are produced using imputation methods where deal values are unavailable in the public domain.

5. Quality characteristics of the statistical bulletin for mergers and acquisitions data

Relevance

(The degree to which the statistical outputs meet users' needs.)

The Mergers and Acquisitions (M&A) Survey comprises statutory surveys, collecting information under the <u>Statistics of Trade Act 1947</u>. Detailed <u>Standard Industrial Classification 2007 (SIC 2007)</u> information is also available.

Types of transactions covered by the Cross-Border Acquisitions and Mergers (CBAM) Surveys:

- acquisitions of ordinary shares with ownership in excess of 10% of the issued share capital
- disposals of ordinary shares from maximum 100% ownership of the issued share capital to the minimum level of ownership of 10%
- mergers of companies share ownership in excess of 10% of the issued share capital
- demergers of companies from maximum 100% ownership of the issued share capital to the minimum level of ownership of 10%
- · acquisitions and disposals of preference shares
- · acquisitions and disposals of goodwill and assets
- equity capital transactions comprising cash injections and cash redemptions

Types of transactions covered by the Domestic Acquisitions and Mergers (DAM) Survey:

- acquisitions of ordinary shares with ownership in excess of 50% of the issued share capital
- mergers of companies share ownership in excess of 50% of the issued share capital

Accuracy and reliability

(The degree of closeness between an estimate and the true value)

The Office for National Statistics (ONS) M&A Survey uses Moody's Bureau Van Dijk (BvD) Zephyr as the commercial source for identifying acquisitions, mergers, takeovers, disposals and demergers.

The M&A share and asset transactions with deal values of £1 million and above are researched and analyses undertaken to identify any corresponding "linked" M&A transactions. For example, a UK target company may be sold by a foreign immediate and ultimate parent company. This would be categorised as inward disinvestment. The UK target company could then be subsequently acquired by a UK immediate or ultimate company and therefore a domestic acquisition will also be relevant.

M&A share and asset transactions (involving UK companies) with deal values of £100 million and greater are issued with ONS statutory questionnaires in order that the granular M&A data relevant to the method of funding and precise details of the deal can be collected. This is vital as M&A deals with values £100 million and greater are the main deals which, when aggregated, form the majority of the M&A quarterly results data outputs.

M&A transactions with deal values below £100 million are extracted from the Moody's BvD Zephyr database and undergo further research and analysis:

- deals are researched further to identify legitimacy and for any additional linked deals
- deals with no values are also researched for additional linked deals
- deals with no values undergo a statistical estimation process, using the median value for the total value of deals below £100 million

The M&A Survey also collects acquisitions, disposal and equity capital data from the inward and outward Foreign Direct Investment Survey (FDI) quarterly and annual survey questionnaires. This ensures that M&A data that are not made available within the public domain are made available to the ONS directly by the companies selected for the FDI Surveys and included in the final M&A metadata outputs.

Revisions to M&A data

The estimates for M&A quarterly data are continually revised for many reasons:

- transactions can be identified as completed after the ONS M&A Survey closes for results
- changes and updates of M&A deal status and details of new transactions provided by Moody's BvD Zephyr
- late response and confirmation of data for previously non-respondents
- M&A transactions moving between quarters as and when the deal has been legally completed
- new "linked deals" identified from respondent information
- additional asset, share and equity capital transactions reported on the Foreign Direct Investment (FDI)
 Survey returned quarterly and annual statutory questionnaires

Coherence and comparability

The Foreign Direct Investment (FDI) Survey collects data for M&A on a company consolidated level on both a quarterly and an annual basis. As the M&A cross-border surveys are conducted in "real time", the M&A data collected for each company acts as a quality check and data congruency for the share and loan data reported for the same company selected on the FDI quarterly and annual surveys.

Accessibility and clarity

(Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the release details, illustrations and accompanying advice.)

Mergers and Acquisitions data are published quarterly in the <u>Mergers and acquisitions involving UK companies</u> statistical bulletin.

Estimates for annual M&A data are produced yearly at the Quarter 4 (October to December) results period and revised at the following Quarter 1 (January to March) results period.

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

M&A time series data are available from 1969 for Domestic Mergers and Acquisitions, and 1987 for Cross-Border Mergers and Acquisitions Surveys. M&A microdata can be accessed via the Secure Research Service (SRS) under the ONS Approved Research Scheme.

Available formats for content published on our website but not produced by us, or referenced on our website but stored elsewhere, may vary. For further information please contact us via email at ma@ons.gov.uk

Timeliness and punctuality

(Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the gap between planned and actual publication dates.)

The <u>Mergers and acquisitions statistical bulletin</u> is published in the third month after the end of the survey period (for example, the first Tuesday in June for Quarter 1 (Jan to Mar)) and 10 weeks after the end of the reference period. Revised data are also published in these releases where companies provide more up-to-date information or where transactions are identified at a later date.

For more details on the Mergers and acquisitions statistical bulletin, the <u>release calendar</u> is available online and provides 12 months advance notice of release dates. In the unlikely event of a change to the pre-announced release schedule, public attention will be drawn to the change and the reasons for the change will be explained fully at the same time, as set out in the <u>Code of Practice for Statistics</u>.

Concepts and definitions (including list of changes to definitions)

- Mergers are acquisitions in which all or part of the payment is made in shares, such that the shareholders of the two companies become shareholders of a new, combined company group.
- Demergers are disposals where a company group divides into two or more separate companies in such a
 way that the shareholders of the restructured companies remain the same or retain the equivalent value
 shareholding in one of the newly independent companies; demergers are included in the statistics within
 disposals.
- Cross-border acquisitions are transactions where a company in one country acquires, either directly or indirectly, a controlling interest in a company in another country.
- Direct transactions are those where a company in one country acquires a controlling interest in a company incorporated in another country.
- Indirect transactions are those where a company uses an existing non-UK subsidiary to acquire a
 controlling interest in a company incorporated in another country; the acquiring non-UK intermediate
 company may be located in the same country in which the acquisition is being made or in a different
 country.
- Portfolio investments are purchases and/or sales of shares by an investor with less than 10% ownership of
 voting power and issued share capital; portfolio investment is collected by the ONS within the National
 Accounts Department and is one component of the financial account under Balance of Payments statistics.
- Acquisitions are transactions that involve one company purchasing the ordinary shares of a second company ("target company"); a target company is usually of a smaller size than the company undertaking the purchase.
- Acquisitions within the UK by other UK companies denote mergers and acquisitions involving only UK registered companies.
- Disposal is a term used to describe the action when a company or organisation sells or liquidates the ordinary shares of a second company ("target company").
- Where the acquired company was a subsidiary of another company the transaction is classified as a "sale between company groups".
- The phrase "acquisitions in the UK by other UK companies" refer to deals where the ultimate ownership remains in the UK; this heading does not cover the total number or value of deals where a UK company is the acquirer, when a foreign company acquires a UK company through one of its existing UK subsidiaries or a UK registered special purpose vehicle, that deal is shown as part of the data under "acquisitions in the UK by foreign companies".
- The acquisition of an independent company means the purchase of a company in its entirety the company itself and all its subsidiaries.
- The acquisition of a subsidiary company means the purchase of part of a company within a company group.

Financing - for M&A indirect foreign transactions there is the added complication of considering the movements of funds either as capital injection or in the form of loans between parent companies and their foreign subsidiaries making the acquisition; occasionally, the foreign subsidiary obtains the funds required partly or entirely outside the UK from sources such as: own resources, borrowing from banks and other local sources, or share, bond and other capital or notes issued abroad; M&A transactions may be funded by more than one method of finance.

Geography

EU

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czechia

Denmark

Estonia

Finland

France

Germany

Greece

Hungary

Irish Republic

Italy

Latvia

Lithuania

Luxembourg

Malta

Netherlands

Poland

Portugal

Romania

Slovakia

Slovenia

Spain

Sweden

Other European countries

Albania

Andorra

Belarus

Bosnia and Herzegovina

Faroe Islands

Gibraltar

Iceland

Kosovo

Liechtenstein

Republic of North Macedonia

Moldova

Montenegro

Norway

Russian Federation

San Marino

Serbia

Switzerland

Turkey

Ukraine

UK Offshore Islands (Guernsey, Jersey, other Channel Islands and Isle of Man)

Vatican City State

The Americas

Anguilla

Antigua and Barbuda

Argentina

Aruba

Bahamas

Barbados

Belize

Bermuda

Bolivia

Bonaire, Sint Eustatius and Saba

Brazil

British Virgin Islands

Canada

Cayman Islands

Chile

Colombia

Costa Rica

Cuba

Curacao

Dominica

Dominican Republic

Ecuador

El Salvador Falkland Islands

Greenland

Grenada

Guatemala

Guyana Haiti

Honduras

Jamaica

Mexico

Montserrat

Nicaragua

Panama

Paraguay

Peru

Puerto Rico

St Kitts and Nevis

Saint Lucia

St Vincent and the Grenadines

Sint Maarten

Suriname

Trinidad and Tobago

Turks and Caicos Islands

US Virgin Islands

Uruguay

United States

Venezuela

Asia

Abu Dhabi

Afghanistan

Armenia

Azerbaijan

Bahrain

Bangladesh

Bhutan

Brunei Darussalam

Burma/Myanmar

Cambodia

China

Dubai

Georgia

Hong Kong

India

Indonesia

Iran

Iraq

Israel

Japan

Jordan

Kazakhstan

Kuwait

Kyrgyzstan

Laos

Lebanon

Macao

Malaysia

Maldives

Mongolia

Nepal

North Korea

Oman

Pakistan

Palestinian Territory

Philippines

Qatar

Saudi Arabia

Singapore

South Korea

Sri Lanka

Syria

Taiwan

Tajikistan

Thailand

Timor - Leste

Turkmenistan

United Arab Emirates

Uzbekistan

Vietnam

Yemen

Australasia and Oceania

American Samoa

Antarctica

Australia

Bouvet Island

Cocos (Keeling) Islands

Cook Islands

French Polynesia

French Southern and Antarctic Lands

Guam

Heard Island and Macdonald Islands

Kiribati

Marshall Islands

Nauru

New Caledonia

New Zealand

Niue

Northern Mariana Islands

Palau

Papua New Guinea

Pitcairn

Solomon Islands

South Georgia and South Sandwich Islands

Tokelau

Tonga

US Minor Outlying Islands

Vanuatu

Wallis and Futuna

Africa

Algeria

Angola

Benin

Botswana

British Indian Ocean Territory

Burkina Faso

Burundi

Cameroon

Cape Verde

Central African Republic

Chad

Comoros

Congo

Democratic Republic of the Congo (Zaire)

Djibouti

Egypt

Equatorial Guinea

Eritrea

Ethiopia

Gabon

Gambia

Ghana

Guinea

Guinea Bissau

Ivory Coast (Cote d'Ivoire)

Kenya

Lesotho

Liberia

Libya

Madagascar

Malawi

Mali

Mauritania

Mauritius

Morocco

Mozambique

Namibia

Niger

Nigeria

Rwanda

Sao Tome and Principe

Senegal

Seychelles

Sierra Leone

Somalia

South Africa

South Sudan

St Helena, Ascension and Tristan da Cunha

Sudan

Swaziland

Tanzania

Togo

Tunisia

Uganda

Zambia

Zimbabwe

Output quality

The M&A Survey response rates, by number of questionnaires returned, is approximately 98% with clearance of the data also 98%. To provide more accurate estimates, quarterly data are continuously revised and published, as detailed in Timeliness and punctuality earlier in this section.

Why you can trust our data

The ONS is the UK's largest independent producer of statistics and its national statistical institute. The Data Policies and Information Charter, available on the ONS website, detail how data are collected, secured and used in the publication of statistics. 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. You can find out more about our data policies on the ONS website.

The Mergers and Acquisitions Survey has National Statistics status, designated by the UK Statistics Authority in accordance with the <u>Statistics and Registration Service Act 2007</u>.

This designation signifies compliance with the Code of Practice for Statistics.

6. Methods used to produce the quarterly mergers and acquisitions data

How we collect the data, main data sources and accuracy

The mergers and acquisitions (M&A) deal data are collected on a weekly and quarterly basis by extracting the details of M&A transactions from one commercial source supplier Moody's Bureau Van Dijk (BvD) Zephyr. The Office for National Statistics (ONS) is given full access to the Zephyr M&A database, which enables the download of details for completed M&A deals and transactions.

Weekly extracts

The functionality of the BvD Zephyr M&A database is tailored for users to download M&A data for any time period. The weekly extracts are produced in order that M&A transactions with values of £100 million and greater are identified and are analysed for any subsequent linked deals. For example, the BvD Zephyr M&A database will contain the specific details of a domestic acquisition but analysis of the transaction can or will also identify an inward disposal transaction, which also needs to be recorded for inclusion in the data outputs.

Because both deals are above the value of £100 million, statutory M&A questionnaires are issued for the purpose of collecting the "granular" M&A data and information. Once the M&A deal data have been exported from the BvD Zephyr M&A database, statistical code is run, which disseminates the transactions into separate files for further investigation, analysis and statistical results processing.

Quarterly extracts

The M&A results are produced on a consistent quarterly basis as the first step in the M&A results process. Therefore, it is essential that the M&A transactions for the entire quarterly period (for example 1 January to 31 March) are extracted from the BvD Zephyr M&A database. The values of the M&A transactions in these extracts range from small deals (below £1 million) to transactions exceeding £100 million.

The quarterly M&A transactions with values of £100 million and greater are re-checked against the weekly data extracts from the BvD Zephyr M&A database. This ensures that these deals are compatible with the M&A Survey requirements and to identify if any new deals have been reported since the initial extract was produced.

For deals with values below £100 million, a statistical process is run, which disseminates the data into files for further research and analysis.

How we process the data

Once the M&A data for transactions of £100 million and greater have been identified and analysis completed, arrangements are then made to issue the relevant M&A statutory questionnaires. The questionnaires are returned to the ONS by companies for data validation and businesses will be re-contacted where substantial data changes are identified.

The M&A data are then aggregated by data analysts who conduct a further phase of validation checks. These represent in-depth micro-level investigation and analysis, and respondents may receive further queries if important changes are highlighted, which would have an impact on the M&A data outputs.

How we analyse and interpret the data

Quarterly analysis

The M&A data outputs are produced in the following categories for domestic, inward and outward M&A:

- aggregated number of acquisitions
- aggregated number of disposals
- aggregated value of acquisitions
- · aggregated value of disposals

Annual analysis

- aggregated by source of funding for acquisitions and disposals
- aggregated by funds realised for acquisitions and disposals
- aggregated by continents for acquisitions and disposals
- aggregated by category of expenditure domestic M&A only
- summary of net cross-border M&A (inward and outward)

How we quality assure and validate the data

Data are quality assured throughout the data collection, processing and analysis processes through regular consistency checks, investigation of anomalies, ensuring disclosure procedures and reviewing data sources. These checks are presented at regular ONS curiosity meetings, where important internal stakeholders are able to interrogate the data and explore any anomalies or interesting findings. External stakeholders, for example, other government departments, also have regular opportunities to analyse the data and share feedback with ONS colleagues.

How we disseminate the data

M&A data are disseminated primarily through publication of statistical bulletins and ad-hoc releases on the ONS website (<u>Mergers and acquisitions involving UK companies statistical bulletins</u>) with releases increasingly promoted through the use of ONS social media accounts.

We employ consistent disclosure control procedures ahead of publication, as detailed in this section.

The Government Statistical Service defines statistical disclosure control as follows:

"Statistical disclosure control (SDC) is the term used to cover the many methods of safeguarding the confidentiality of the information about individuals and businesses. Information obtained from surveys or administrative data is usually given in confidence. SDC is applied to ensure that individuals, businesses or other statistical units cannot be identified from published data, whether record level data or tables. This will involve modifying data so that the risk of identification is reduced to an acceptable level."

How we review and maintain the data processes

Future revision of the imputation process for the M&A survey may be required. This may be necessary to ensure that M&A transactions in the Moody's Bureau Van Dijk (BvD) Zephyr data extracts, which have no values announced in the public domain, are given a unique value for each transaction rather than applying a median value for all transactions.

The commercial source provider of M&A data (<u>Moody's Bureau Van Dijk Zephyr</u>) is reviewed on a yearly basis before a formal contract is awarded.

Data processes for the M&A surveys are reviewed regularly to ensure efficient work procedures, processes and systems are maintained.

7. Other information

Bureau Van Dijk Zephyr

Office for National Statistics

Email us: ma@ons.gov.uk

8. Cite this methodology

Office for National Statistics (ONS), released 5 May 2023, ONS website, methodology, <u>Mergers and acquisitions involving UK companies (M&A) Quality and Methodology Information</u>