

# Mergers and Acquisitions (M&A) QMI

Quality and Methodology Information for the Mergers and Acquisitions Survey, detailing the strengths and limitations of these data, methods used and data uses and users.

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## 1. Output information

National Statistic	
Survey name	Mergers and Acquisitions M&A
Frequency	Quarterly
How compiled	ONS systems and statistical processes
Geographic coverage	UK and rest of the world
Related publications	Foreign direct investment involving UK companies: 2017 statistical bulletin

## 2. About this Quality and Methodology Information report

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

The information in this report will help you to:

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

## 3. Important points

- 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 categories of investment: inward investment (acquisitions of UK companies by foreign companies); outward investment (UK companies acquisitions of foreign companies); and domestic M&A (acquisitions of UK companies by other UK companies).
- M&A data that result in a change of ultimate control (more than 50% of voting power) of the target company are published in a quarterly statistical bulletin titled Mergers and acquisitions involving UK companies.
- M&A data are collected at both the immediate and the ultimate global level of share ownership.

- M&A microdata outputs are also used for foreign direct investment (FDI).
- The M&A survey outputs feed into the UK Balance of Payments and are included in the UK Financial Accounts.
- The sampling source for the M&A survey was changed in January 2018; <u>Bureau Van Dijk's Zephyr database</u> is now used as the starting point for deal identification.

## 4. Quality summary

#### Overview

#### Definition of mergers and acquisitions (M&A)

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 M&A survey is categorised into two distinct areas: cross-border mergers and acquisitions and UK domestic mergers and acquisitions.

#### **Cross-border mergers and acquisitions**

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

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

#### **UK domestic mergers and acquisitions**

Inquiry 088 – Domestic Acquisitions and Mergers (DAM). For example, UK companies acquiring or merging with other UK companies. Collectively, all three surveys are referred to as the Mergers and Acquisitions Survey (M&A).

#### **M&A transactions**

The M&A survey consists of the following transactions:

- mergers combination of two companies forming a new company
- demergers one company exiting ownership of a 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 disinvestment 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 (50.1% and more); data are produced and delivered to the national accounts for inclusion within the UK private non-financial corporations.
- The cross- border M&A estimates are a vital component of FDI inward and outward investment flows data, which feed into the UK Balance of Payments and UK Financial Accounts.
- M&A outputs are also used by the Foreign Direct Investment Surveys when creating new quarterly and annual sampling frames.
- Individual M&A transaction information is also used to estimate the counterpart in "portfolio" investment flows for monthly 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 M&A survey has a high degree of relevance across many user groups, meets the vast majority of user needs and all information currently collected and published is used.

## Strengths and limitations

#### Strengths of M&A data

- M&A is a unique financial survey in that there are no other similar sources of data collected by ONS.
- M&A surveys 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 historic time series starting from 1987.
- M&A deal information are collected and published to include companies within all the Standard Industrial Classifications 2007.
- Detailed M&A data are collected for deals of £100 million and more for both breakdown of transaction values and the method of funding.
- M&A microdata are produced and delivered annually to the Secure Research Service (previously known as the Virtual Microdata Laboratory (VML)).
- Quarterly M&A data statistics can be revised to reflect new information.
- Annual M&A microdata are produced and analysed by source of funding, expenditure and by geography or continents.
- Regular M&A economic articles are published to supplement the M&A quarterly releases.

#### Limitations of M&A data

- The quarterly M&A sample selections provided by Bureau Van Dijk (BvD) 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, including values
  for debt, expenses, assets and start-up costs, which should be removed; the 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 more) 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.
- Each separate Zephyr source extract is analysed and researched to identify demergers and disposal transactions as the source provider (BvD) does not identify these specific M&A transactions; therefore, the quarterly M&A data outputs consist of deals that must be "constructed" to overcome this issue.
- Data can be revised each quarter in light of 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.

### **Recent improvements**

#### Improvements in M&A coverage

Prior to 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 include:

- The Financial Times
- Guardian Business News
- InvestEgate
- Insider Media
- NewsNow
- Growth Business UK

From January 2018, <u>BvD's Zephyr database</u> has been used to identify M&A deals involving UK companies. This has seen the number of deals increase per quarter compared with those prior to 2018. Since a few high-value M&A transactions typically account for the majority of the value reported in any quarter; these deals are still surveyed. While the increased coverage will also affect deal values, the effect is not as large. Nevertheless, some caution is advised when interpreting any increase in activity in Quarter 1 (Jan to Mar) 2018 and thereafter – especially in terms of the number of deals.

#### New imputation methods for missing M&A deal values

In the past, ONS collected information on deals from companies directly involved in the transactions. Survey questionnaires were sent to relevant parties, and these were returned, queried and verified. In cases where surveys were not returned in a timely manner, deals were given alternative values found in the public domain, before revising in a future period once the survey questionnaire was returned.

Since Bureau van Dijk relies on press releases and news sources to gather information about M&A deals, there are instances where the value of a transaction is undisclosed to the public. ONS analysis reveals that for Quarter 1 2018, roughly 43% of viable Bureau van Dijk deals displayed no deal value, a percentage expected to remain stable for future quarters (47% in 2015, 45% in 2016, 43% in 2017). 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 values for deals 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. Due to the unequal 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 US 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.

Preliminary 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 Bureau van Dijk, 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

Previously, revisions to published data took place on a quarterly and annual basis. These mainly affected revisions in the number of deals, with relatively smaller revisions to values. There were multiple reasons for revisions, such as information from other ONS surveys (like the FDI survey), corrections to data supplied by the company themselves, late responses, late identification of deals, or unsuitable deal criteria for M&A activity. Moving to Bureau van Dijk 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 will be distributed and returned, ONS anticipates that even fewer large revisions will take place, since values for the smaller transactions are readily available. There is also an expectation that revisions to the number of M&A deals will be reduced, since all transactions are now identified from one comprehensive source at an early stage, whereas, under the previous process, new deals from multiple sources were often identified after the preliminary estimates were produced.

#### Conclusions and looking ahead

The use of Bureau van Dijk data for M&A has changed the sampling, coverage, imputation and revision processes for this survey. We are seeing an increase in coverage, with associated increases in the number and value of M&A deals, although some of these deals will be produced using imputation methods where deal values are unavailable in the public domain.

# 5. Quality characteristics of the Mergers and Acquisitions Survey data

#### Relevance

The Mergers and Acquisitions (M&A) Survey is comprised of statutory surveys, collecting information under the <u>Statistics of Trade Act 1947</u>. Detailed <u>Standard Industrial Classification 2007</u>: <u>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 transaction comprising of cash injections and cash redemptions

## **Accuracy and reliability**

The Mergers and Acquisitions (M&A) Survey uses Bureau Van Dijk (BvD) as the commercial source for identifying acquisitions, mergers, take-overs, disposals and demergers and is inevitably dependent on the accuracy of these data.

The M&A share and asset transactions with deal values £1 million and above are researched and analyses undertaken to identify any corresponding linked 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 required.

M&A share and asset transactions (involving UK companies) with deal values £100 million and above are issued with ONS statutory questionnaires in order that the granular 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 of £100 million and more are the main deals that, when aggregated, form the majority of the M&A quarterly statistics.

M&A transactions with deal values below £100 million are extracted from the <u>Zephyr database</u> and undergo further research and analysis:

- they 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 Foreign Direct Investment (FDI) Survey also collects acquisitions and disposal data. This ensures that M&A data that are not made available within the public domain are informed to ONS directly by the companies selected for the FDI surveys and therefore included in the final M&A data outputs.

#### Revisions to M&A data

The estimates for M&A quarterly data can be revised for many reasons:

- transactions can be identified as completed after the M&A survey closes for results
- changes and updates of M&A deal status and details of new transactions provided by Bureau Van Dijk (BvD)
- late responses and confirmation of data for previous non-respondents
- M&A transactions moving between quarters to reflect the date that the transaction was legally completed
- new "linked deals" identified from respondent information
- additional share and equity capital transactions reported on the Foreign Direct Investment (FDI) Survey returned quarterly and annual statutory questionnaires

## Coherence and comparability

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 Office for National Statistics (ONS) Approved Research Scheme.

The Foreign Direct Investment (FDI) Survey collects data for M&A on a consolidated level on both a quarterly and an annual basis. As the M&A cross-border survey is conducted in "real time", the M&A data collected for each company act 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

M&A data are published quarterly in the Mergers and acquisitions involving UK companies statistical bulletin.

Estimates for annual M&A data are produced yearly at the Quarter 4 (Oct to Dec) results period and revised at the following Quarter 1 (Jan to Mar) 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.

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 <a href="ma@ons.gov.uk">ma@ons.gov.uk</a>.

## **Timeliness and punctuality**

The Mergers and acquisitions involving UK companies statistical bulletin 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 release calendar 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 Code of Practice for Statistics.

## Concepts and definitions for the M&A Surveys

- 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 one component of the balance of payments.
- 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 UKregistered 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.
- 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 UK companies" refers to deals where the ultimate ownership
  remains in the UK and 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 UKregistered 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 of its subsidiaries.
- The acquisition of a subsidiary company means the purchase of part of a company.

Financing for M&A indirect foreign transactions considers 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
- share, bond and other capital or notes issued abroad
- a transaction may be funded by more than one method

## Geography

Geography groupings and changes to boundaries in the Mergers and Acquisitions Survey

Europe					
EU	Austria	Belgium	Bulgaria	Croatia	
	Cyprus	Czech Republic	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	
	Liechtensteir	n Macedonia, the Former Yugoslav Republic of	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 Americ	cas				
	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	USA	Venezuela	
Asia					
	Abu Dhabi	Afganistan	Armenia	Azerbaijan	Bahrain
	Bangladesh	Bhutan	Brunei Darussalam	Burma or Myannar	Cambodia

	China	Dubai	Georgia	Hong Kong	India
	Indonesia	Iran	Iraq	Israel	Japan
	Jordan	Kazakhstan	Kuwait	Kytgyzstan	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	Christmas Island
	Cocos (Keeling) Islands	Cook Islands	French Polynesia	French Southern and Antarctic Lands	Fiji
	Guam	Heard Island and Macdonald Islands	Kiribati	Marshall Islands	Micronesia, Federated States of
	Nauru	New Caledonia	New Zealand	Niue	Norfolk Island
	Northern	Palau	Papua New	D'tradian	0
	Mariana Islands	raiau	Guinea	Pitcairn	Samoa
	Mariana	South Georgia and South Sandwich Islands		Tonga	Tuvalu
Africa	Mariana Islands Solomon	South Georgia and South	Guinea	Tonga	
Africa	Mariana Islands Solomon Islands US Minor Outlying	South Georgia and South Sandwich Islands	Guinea Tokelau	Tonga	
Africa	Mariana Islands Solomon Islands US Minor Outlying Islands	South Georgia and South Sandwich Islands Vanuatu	Guinea  Tokelau  Wallis and Futuna	Tonga	Tuvalu  British Indian Ocean
Africa	Mariana Islands Solomon Islands US Minor Outlying Islands Algeria	South Georgia and South Sandwich Islands Vanuatu Angola	Guinea  Tokelau  Wallis and Futuna  Benin	Tonga	Tuvalu  British Indian Ocean Territory Central African
Africa	Mariana Islands Solomon Islands US Minor Outlying Islands Algeria Burkina Faso	South Georgia and South Sandwich Islands Vanuatu Angola Burundi	Guinea Tokelau Wallis and Futuna Benin Cameroon Congo	Tonga  Botswana  Cape Verde  Democratic Republic of the	Tuvalu  British Indian Ocean Territory Central African Republic
Africa	Mariana Islands  Solomon Islands  US Minor Outlying Islands  Algeria  Burkina Faso  Chad	South Georgia and South Sandwich Islands Vanuatu  Angola  Burundi  Comoros	Guinea Tokelau Wallis and Futuna Benin Cameroon Congo	Tonga  Botswana  Cape Verde  Democratic Republic of the Congo (Zaire)	Tuvalu  British Indian Ocean Territory Central African Republic Djibouti
Africa	Mariana Islands Solomon Islands US Minor Outlying Islands Algeria Burkina Faso Chad Egypt	South Georgia and South Sandwich Islands Vanuatu  Angola  Burundi  Comoros  Equatorial Guinea	Guinea Tokelau Wallis and Futuna Benin Cameroon Congo Eritrea	Tonga  Botswana  Cape Verde  Democratic Republic of the Congo (Zaire)  Ethiopia	Tuvalu  British Indian Ocean Territory Central African Republic Djibouti  Gabon Ivory Coast (Cote
Africa	Mariana Islands  Solomon Islands  US Minor Outlying Islands  Algeria  Burkina Faso  Chad  Egypt Gambia	South Georgia and South Sandwich Islands Vanuatu  Angola  Burundi  Comoros  Equatorial Guinea Ghana	Guinea Tokelau Wallis and Futuna Benin Cameroon Congo Eritrea Guinea	Tonga  Botswana  Cape Verde  Democratic Republic of the Congo (Zaire)  Ethiopia Guinea Bissau	Tuvalu  British Indian Ocean Territory Central African Republic Djibouti  Gabon Ivory Coast (Cote d'Ivoire)

Sao Tome Senegal Seychelles Sierra Leone Somalia

and Principe

South Africa South Sudan St Helena, Sudan Swaziland

Ascension and Tristan da Cunha

Tanzania Togo Tunisia Uganda Zambia

Zimbabwe

Source: Office for National Statistics - Mergers and Acquisitions Survey

## **Output quality**

The M&A survey response rates, by number of questionnaires returned, is approximately 98% with clearance of 98%. Revisions to quarterly (and annual) estimates may happen to provide more accurate estimates, as detailed in the Timeliness and punctuality section.

## Why you can trust our data

ONS is the UK's National Statistics Institute and is the country's largest independent producer of statistics. 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 data that we hold with respect, keeping these secure and confidential, and we use statistical methods that are professional, ethical and transparent. More information about our data policies is available.

The Mergers and Acquisitions Survey has National Statistics status, designated by the UK Statistics Authority in accordance with the Statistics and Registration Service Act 2007. This designation signifies compliance with the Code of Practice for Statistics, which has recently been updated and focuses on trustworthiness of data in greater depth.

# 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) Survey deal data are collected on a weekly and quarterly basis by extracting the details of M&A transactions from one commercial source supplier, currently Bureau Van Dijk (BvD). Office for National Statistics (ONS) is given full access to the <a href="Zephyr M&A database">Zephyr M&A database</a>, which enables the download of details for completed M&A deals.

#### Weekly extracts

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

#### **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 Zephyr database. The values of the M&A transactions in these extracts range from small deals (below £1 million) through to large valued transactions in excess of £100 million.

The quarterly M&A transactions with values £100 million and greater are rechecked against the weekly data extracts. 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 extract was produced.

M&A deals with values below £100 million are used for further research and analysis.

## How we process these data

Once M&A data for transactions of £100 million and more have been identified and analysis completed, arrangements are then made to issue of the relevant M&A statutory questionnaires. The M&A questionnaires are returned to 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 M&A data outputs.

#### How we analyse and interpret these data

#### **Quarterly analysis**

M&A data outputs are analysed by 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**

M&A data outputs are analysed by the following categories for domestic, inward and outward M&A:

- · 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 these data

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

#### How we disseminate these data

M&A data are disseminated primarily through publication of statistical bulletins and ad hoc releases on the ONS website. The publication schedule is detailed under the ONS policy for Timeliness and punctuality. M&A publishes regular statistical bulletins, 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 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 <u>Zephyr data extracts</u>, 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 is reviewed on a yearly basis before a formal contract is awarded.

Data processes are reviewed by Statistical Research Officer regularly to ensure efficient work procedures, processes and systems are maintained.