

Ownership of UK quoted shares QMI

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1 . Methodology background

National Statistic	
Survey name	Ownership of UK quoted shares QMI
Frequency	Biennial
How compiled	Sample taken from third party data
Geographic coverage	UK
Sample size	200
Last revised	25 September 2013

2 . Executive summary

This report is part of a rolling programme of quality reports produced by Office for National Statistics (ONS) to accompany statistical outputs. The full programme of work being carried out on [statistical quality](#) is available. [Quality and Methodology Information reports](#) are overview notes that pull together important qualitative information on the various dimensions of quality, as well as providing a summary of methods used to compile the output.

The [Ownership of UK quoted shares statistical bulletin](#) shows the value of UK quoted shares analysed by sector of beneficial owner at a particular date, usually 31 December (the “beneficial owner” is the person or organisation who benefits from the dividends or increases in the share price). The main data sources for the estimates are [CREST](#) the electronic settlement system for equity share trading managed by Euroclear, combined with further analysis of share registers.

This document contains the following sections:

- Output quality
- About the output
- How the output is created
- Validation and quality assurance
- Concepts and definitions
- Other information, relating to quality trade-offs and user needs
- Sources for further information or advice

3 . Output quality

This report provides a range of information that describes the quality of the data, and details any points that should be noted when using the output.

We have developed [Guidelines for Measuring Statistical Quality](#); these are based upon the five European Statistical System (ESS) quality dimensions. This report addresses these quality dimensions and other important quality characteristics, which are:

- relevance
- timeliness and punctuality
- comparability and coherence
- accuracy
- output quality trade-offs
- assessment of user needs and perceptions
- accessibility and clarity

More information is provided about these quality dimensions in the following sections.

4 . About the output

Relevance

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

The Share Ownership Survey measures the ownership of ordinary shares in quoted companies in the UK. The outputs from the survey measure the total market value by sector of beneficial owner, the total market holding in Financial Times Stock Exchange (FTSE) 100 Index and other companies by sector of beneficial owner and the geographical analysis of total foreign-owned UK shares.

The main purpose of the Share Ownership Survey data is to populate the financial accounts within the [UK Quarterly National Accounts](#). The data currently supplied to national accounts meet their requirements as set out in the [European System of Accounts 2010 \(ESA 2010\)](#). However, the Share Ownership Survey is only carried out every 2 years and the national accounts data are published quarterly. The data collected are used to derive the asset breakdown for the transaction line F.514 (Quoted Shares) in the financial accounts.

Following concerns with the quality of the 2008 data, we conducted a methodological review and updated the allocation of pooled nominee holdings, which had previously been based on analysis conducted in 1997 (pooled nominee accounts are defined immediately following Table 1.1 on page 3). The updated, improved analysis was published in the 2010 bulletin. We then presented the results at the first meeting of the Ownership of UK Quoted Shares User and Expert Group in October 2012.

The data are widely used by people in the industry, the media and academia. External users' main concerns with the data reflect the extent to which the published data differ from the industry view, for example, for the insurance sector, or outside analyses. This assessment is based on meetings during 2013 with a number of important stakeholders following the first meeting of the User Group. The differences in view may in part be due to differences in definition (for example, the difference between the beneficial owner and the registered owner) but they may also be due to sample size. We continue to liaise with users to ensure that any differences in view are fully explored and reconciled. There is also some concern over the extent to which the data are comparable over time

As noted previously, the analysis of pooled nominee accounts conducted in 1997 was not updated until 2010. We have tried to ensure that the 2010 and 2012 data are comparable and may revisit earlier years when resources are available.

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.)

For more details on related releases, the [GOV.UK 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 [National Statistics Code of Practice](#).

The Share Ownership Survey takes place every 2 years and is normally based on the position at 31 December. The time lag between publication and the reference period is usually around 6 to 9 months but there have been longer lags in recent years.

The 2008 publication was delayed by 6 months because of the national accounts treatment of government interventions in the financial sector. There was also lengthy quality assurance against Waterlow (the main source for shares not held on CREST) to ensure that the data were correct. This process has been documented and improvements have been made to reduce the risk of this kind of delay in the future.

The 2010 publication was also delayed by 6 months. This delay was because of the methodological review mentioned previously and the additional work commissioned to implement the recommendations. The 2010 data were published on 28 February 2012. The 2012 data were published in September 2013, more in line with the normal timetable.

5 . How the output is created

Share ownership is measured using the Share Ownership Survey. For each survey, a sample of companies is taken from a database supplied by the London Stock Exchange. The typical sample size is around 200, with the top 85 or so largest companies in terms of market capitalisation automatically selected and the remaining companies drawn with their probability of selection proportional to their capitalisation. This design ensures large coverage in terms of market capitalisation and reduces the need for a larger sample, which would add to the cost of running the survey. So for 2012, for example, 200 companies were selected representing 83% of total UK market capitalisation. The sample comprised the 85 largest companies (representing 77% of total market capitalisation), each with market capitalisation greater than £2.2 billion, and 115 smaller listed companies.

For these sampled companies, the beneficial owners of shares are obtained. Since 1998, the data have been acquired from CREST. Each registered participant in CREST has to specify to which national accounts category the beneficial holder of the shares belongs. This information is used to estimate the value of UK quoted shares by sector of beneficial owner on a particular date.

This section details these sector categories, which follow [UK National Accounts](#) in line with the [European System of Accounts 2010 \(ESA 2010\)](#).

The CREST categories of beneficial ownership are as follows:

- individuals
- charities and churches
- insurance companies
- pension funds
- investment trusts
- unit trusts
- banks
- other financial institutions
- non-financial companies
- central government
- local government
- public corporations
- non-resident: owner in EU
- non-resident: owner outside EU
- multiple ownership: pooled nominees

The multiple ownership category covers all those accounts where the beneficial owners are from two or more of the other categories listed, and are referred to as pooled nominee accounts. These multiple sector ownership shareholdings and the remaining unidentified excluded shareholdings need to be apportioned across the sectors. The method used is described in the section on apportionment.

Additionally, there are excluded shares not held on CREST. These are shareholdings in material form, such as some shareholdings of company directors. This value is calculated as the difference between the total shares in issue on the London Stock Exchange and those held on CREST. These excluded shares are still required and the Waterlow Stock Exchange Yearbook is used to identify any major shareholdings, which are then assigned to the correct sector. Within the excluded shares are the central government shareholdings as a result of the government interventions in the financial sector. The value of these shareholdings is obtained from administrative data and is consistent with data published separately in the UK National Accounts.

The remaining excluded shares are allocated to two sectors: individuals (88.4%) and the rest of the world (11.6%). These percentages are based on analysis by Equiniti and Orient Capital.

Once all shareholdings are assigned, aggregated estimates for each sector of beneficial ownership are calculated for publication as follows. For large companies, the value of shareholdings in each company is added together. For the smaller companies, the percentage split by sector is calculated for each company, and then the average of these percentage splits is applied to the total value of shares accounted for by all smaller companies. The overall aggregate figures are then the sum of holdings in the large and smaller companies.

Apportionment of pooled nominee accounts

Up to and including the release of the 2008 publication, multiple sector ownership holdings (and any remaining unidentified excluded shareholdings) were apportioned across the sectors using fixed percentages, derived in 1997 (in 1997 considerable efforts were made to accurately identify the underlying shareholders and the category to which they belonged).

Following the release of [Share Ownership 2008](#), the Government Statistical Service (GSS) Methodology Advisory Service was commissioned to carry out a review of the methodology used in the Share Ownership Survey. The main recommendations of the review were:

- the need to update the fixed percentages used to allocate multiple ownership pooled accounts and excluded shares; following a competitive tendering exercise, this work was taken forward by Equiniti and implemented as part of the review
- the need to conduct future analyses of multiple ownership pooled accounts at regular intervals to ensure that it is kept up-to-date
- the scope for further improvements should be considered, and that external users' needs were an important aspect of this

The results of the review were published in [Share Ownership Methodology Review](#) in February 2012 and implemented in [Share Ownership 2010](#), published on 28 February 2012. The analysis by Equiniti is described in more detail in [Share Ownership Methodology](#) released in July 2013, as well as in the earlier Review paper.

Share ownership 2012

The work undertaken by Equiniti for the 2010 survey was updated for the 2012 results, published in September 2013. Equiniti and Orient Capital successfully tendered for the work. A number of further improvements were made to the methodology:

- the sample size was increased; the coverage of the pooled nominee holdings increased from £288 billion in the 2010 survey to nearly £500 billion in the 2012 survey
- the analysis was extended to single as well as pooled nominee accounts; the total size of the holdings analysed was over £760 billion, over one-half of the total shares on the Stock Exchange (in terms of market capitalisation)
- the sample was made more representative in terms of the relationship between the distribution by sector in the sample and the distribution in the population; for example, if 20% of the companies in the population were classified as financial companies, then an attempt was made to include a similar percentage in the sample – in the work for the 2010 survey, this aspect was not incorporated

The work on the 2012 results also benefitted from the use of Orient Capital's advanced technology, which allowed beneficial ownership data to be processed automatically rather than manually input, improving efficiency and leaving more time for the detailed analysis. The work by Equiniti and Orient Capital on the 2012 survey is described in more detail in [Share Ownership Methodology](#).

Presentation of share ownership 2012

The work undertaken by Equiniti and Orient Capital resulted in further improvements to the quality of the share ownership results. It also resulted in discontinuities between the estimates for 2012 and the data published for 2010 – the estimates were not initially directly comparable, in the sense that changes between the two years could not be attributed to changes in share ownership in the real world.

It is important that the data for successive surveys are on the same basis. The earlier work was therefore revisited with the aim of making the analysis for 2010 more comparable. The results of this work were presented in [Share Ownership 2012](#) published in September 2013.

6 . Validation and quality assurance

Accuracy

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

Quality checks are carried out throughout the process of producing the share ownership results. The following notes describe the main checks used in compiling the 2012 results.

The quality of the categorisation on CREST was raised as a possible issue at the first meeting of the User Group in October 2012. Following the meeting, a joint letter from Euroclear and Office for National Statistics (ONS) was sent to CREST clients emphasising the importance of the sector allocation on CREST and asking them to review their member account categorisation.

Following the drawing of the 2012 sample, checks were carried out by ONS to remove duplicate data and to ensure that companies were allocated to the correct sector. The sample was then agreed with Equiniti and Orient Capital. During the detailed analysis that followed, Equiniti and Orient Capital had their own validation procedures:

- each share register was loaded into their database to match and cross-reference the non- pooled registered holders
- all pooled nominee responses were audited prior to auto-processing, with each beneficial owner tagged geographically and by type according to the categories provided by ONS
- each pooled account was cross-referenced against CREST; a number of accounts considered pooled by Equiniti and Orient Capital were added to the list of pooled nominees
- major shareholders data were validated by reviewing the London Stock Exchange Regulatory News Service announcements
- broker holdings were audited to monitor proprietary trading and market-making positions

In some cases there can be significant differences between positions announced to the market and positions that appear on the register. In general, these were resolved by taking the positions on the register but only following detailed investigation as to the reasons for the differences.

The emerging results were discussed with ONS at regular intervals. One of the main concerns was to ensure that the results were accurate in the sense that they reflected what was happening in the real world – the improvements introduced this year increased the quality of the data from this perspective. In addition, there was a need to ensure comparability over time and extensive follow-up work was conducted this year to discern the reasons for the differences between the results for 2012 and the published results for 2010.

Following this detailed work by Equiniti and Orient Capital, ONS produced results for the total population – both pooled and non-pooled – and the non-pooled results were then cross-checked against Equiniti and Orient Capital analysis of non-pooled holdings.

The results went through a final quality assurance process where they were formally signed off by the deputy director responsible for the survey.

The quality of the share ownership results for 2012 is likely to be high. The sample is representative and provides a high coverage, steps have been taken to reduce the main source of non-sampling errors and there has been significant input to the work by Equiniti and Orient Capital, who are recognised experts in the field.

Sampling error

Sampling errors will arise when estimates are based on a sample rather than the whole population. In 2012, the Share Ownership Survey collected data from a sample of 200 companies, representing 83% of total market capitalisation. The sample comprised the 85 largest companies and 115 small companies – errors in the estimates will arise to the extent that the 115 small companies were unrepresentative of smaller companies in total, for example, in the proportion of beneficial owners classified to the insurance sector.

Non-sampling error

Non-sampling error can arise due to errors in measurement and process. The primary data source for the Share Ownership Survey is CREST. Each registered participant in CREST has to specify, when setting up their account, to which national accounts category the beneficial owners of the shares belongs. This information drives the allocation of the results and it is important that it is accurate and regularly maintained: a joint letter from Euroclear and ONS was sent to CREST clients in November 2012 emphasising the importance of the sector allocation on CREST and asking them to review their member account categorisation.

Non-sampling errors may also arise in the analysis of share registers. Identifying the true beneficial owners is a specialised undertaking and in recent years this task has been undertaken by Equiniti (2010) and Equiniti and Orient Capital (2013).

Comparability and coherence

(Comparability is the degree to which data can be compared over time and domain for example, geographic level. Coherence is the degree to which data derived from different sources or methods, but referring to the same topic, are similar.)

Data for share ownership are currently available for 1963, 1969 1975, 1981, 1989 to 1994 annually, 1997 to 2004 annually, 2006, 2008, 2010 and 2012.

The Channel Islands and the Isle of Man have been classified to overseas since 1997; before then they were classified to the relevant domestic sector. The data for the periods from 1998 are broadly comparable as they use the CREST system. The main effect of the move to CREST was that some companies previously classified to unit trusts and investment trusts became classified as other financial institutions.

The work by Equiniti in 2010 updated the allocation of pooled nominee holdings to sectors, effectively introducing a break in the series from 2010 (prior to this work the allocations are based on proportions dating from 1997). The work undertaken by Equiniti and Orient Capital in 2013 resulted in further improvements but it also resulted in discontinuities between the estimates for 2012 and the data published for 2010. The earlier work was therefore revisited with the aim of making the analysis for 2010 more comparable. The results of this work were presented in [Share Ownership 2012](#) published in September 2013.

A separate publication, [MQ5: Investment by Insurance Companies, Pension Funds and Trusts](#) reports investment in UK quoted shares by insurance companies at £217.5 billion in 2010, £63.9 billion higher than the figure reported in the Share Ownership Bulletin. The MQ5 data include unquoted as well as quoted shares but the size of this is relatively small and only explains part of the discrepancy. The difference could possibly be attributed to funds and other investment instruments run by insurance companies, which the 2010 Share Ownership Survey classifies as other financial institutions. In addition, the analysis of share registers to identify the true ownership of pooled nominee accounts classed pension funds run by insurance companies as pension funds, whereas on CREST any non-pooled holdings of this type would be classified as insurance companies.

7 . Concepts and definitions

(Concepts and definitions describe the legislation governing the output and a description of the classifications used in the output.)

The outputs are compliant with the [National Statistics Code of Practice](#) and legislation relating to the release is contained within the [Statistics and Registration Service Act \(2007\)](#).

The international standard for estimates used in the national accounts is the [System of National Accounts, 2008 \(SNA 2008\)](#), published in close co-operation with Eurostat, the Organisation for Economic Co-operation and Development (OECD), the United Nations, and the World Bank. The EU has published its own set of standards, the [European System of Accounts 2010](#), which is consistent with SNA 2008 and upon which the UK's National Accounts are based.

A link to the ONS classification homepage is given in [Guide to Classifications](#). This includes a link explaining the [Standard Industrial Classification 2007 \(SIC 2007\)](#), the structure underlying the sector breakdown used in the Share ownership bulletin.

8 . Other information

Assessment of user needs and perceptions

(The processes for finding out about uses and users, and their views on the statistical products.)

Following the methodological review and the publication of Share ownership 2010, we set up a User and Expert Group to discuss the methodology on the ownership of UK quoted shares, in particular, to share current procedures and methods, and to discuss with important users and experts any concerns and opportunities for improvement.

The User Group met in October 2012. Office for National Statistics (ONS), Euroclear and Equiniti took the group through the methodology used to compile the share ownership results. The main conclusions from the meeting were that:

- it was important to ensure that the categorisation on CREST was accurate
- the sample size was perhaps less of an issue, although any future work should account for outliers as they may have a characteristic that was different to the rest of the market
- any future analysis of share registers should be extended to include investigation of single as well as pooled nominee accounts

A User Perception survey was attached to the 2010 share ownership bulletin released on 28 February 2012. Only three, partial, responses were received. Based on two responses, users were generally happy with the timeliness, ease of access, clarity and relevance of the data but there were concerns with the accuracy of the data and it was felt that there were issues with comparability and coherence. The presentation and commentary were felt to be fair to good. The User Perception survey was repeated in 2013.

9 . Sources for further information or advice

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.)

Our recommended format for accessible content is a combination of HTML web pages for 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 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 shareownership@ons.gsi.gov.uk.

More information regarding conditions of access to data is available:

- [Terms and conditions \(for data on the website\)](#)
- [Copyright and reuse of published data](#)
- [Access to microdata via the Virtual Microdata Laboratory \(VML\)](#)
- [Accessibility](#)