

# Quality assurance of administrative data (QAAD) report for life insurance, non-life insurance and pension funding

Investigation of the administrative data sources used in the production of short-term economic output indicators by ONS's National Accounts and Economic Statistics Group.

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# 1 . Introduction

## 1.1 Background

National Accounts and Economic Statistics (NAES) within Office for National Statistics (ONS) collects data from the Association of British Insurers (ABI) for the activities of life, non-life insurance and pension funding. These data form one source in the calculation of gross domestic product (GDP (O)) for the UK.

This report outlines the process data take from initial collection through to the output of the release. It identifies potential risks in data quality and accuracy as well as details of how those risks are mitigated.

This report forms the latest in a series of quality assurance of administrative data (QAAD) reports produced by NAES to investigate the administrative data sources we use in the production of short-term economic output indicators as set out by the [UK Statistics Authority](#). As such, this report specifically focuses on administrative data used for life and non-life insurance (Standard Industrial Classification (SIC) 65.1) and pension funding (SIC 65.3) but does not aim to cover reinsurance (SIC 65.2), which is collected using financial surveys (a non-administrative data source). Separate industries where we apply administrative data will be considered in other QAAD reports in the series.

Further information relating to quality and methodology for the short-term economic output indicators can be found in our [Gross domestic product, preliminary estimate report](#).

## 1.2 Standard Industrial Classification (SIC) overview

The activities of financial services cover all activities under UK Standard Industrial Classification 2007: SIC 2007 division 65. This includes activities of underwriting of annuities and insurance policies and investing premiums to build up a portfolio of financial assets to be used against future claims. Provision of direct insurance and reinsurance are also included.

Based on the SIC 2007, the industry is classified to three groups:

- 65.1 – Insurance
- 65.2 – Reinsurance
- 65.3 – Pension funding

According to the Inter-Department Business Register (IDBR) there were 6,790 enterprises classified under division 65 in March 2017. This is an increase of approximately 785 enterprises (13.0%) from the previous year (March 2016).

Within division 65, there were 6,415 enterprises with fewer than five employees (94.0% of the division), compared with just 150 enterprises with 20 or more employees (2.2% of the division).

The majority of enterprises within division 65 were allocated to 65.3 – activities of pension funding, which equates to 5,830 enterprises (86.0% of the total division).

## 2 . Quality assurance of administrative data (QAAD) assessment

### 2.1 UK Statistics Authority QAAD toolkit

The assessment of our administrative data sources has been carried out in accordance with the [UK Statistics Authority Quality Assurance of Administrative Data Toolkit](#).

Each administrative data source investigated has been evaluated according to the toolkit's risk and profile matrix (Table 1), reflecting the level of risk to data quality and the public interest profile of the statistics.

Table 1: UK Statistics Authority quality assurance of administrative data (QAAD) risk and profile matrix

Level of risk of quality concerns	Public interest profile		
	Lower	Medium	Higher
Low	Statistics of lower quality concern and lower public interest [A1]	Statistics of low quality concern and medium public interest [A1/A2]	Statistics of a low quality concern and higher public interest [A1/A2]
Medium	Statistics of medium quality concern and lower public interest [A1/A2]	Statistics of medium quality concern and medium public interest [A2]	Statistics of medium quality concern and higher public interest [A2/A3]
High	Statistics of higher quality concern and lower public interest [A1/A2/A3]	Statistics of higher quality concern and medium public interest [A3]	Statistics of higher quality concern and higher public interest [A3]

Source: Office for National Statistics

The toolkit outlines four specific areas for assurance and the rest of this report will focus on these areas in turn. These are:

- operational context and administrative data collection
- communication with data supply partners
- quality assurance principles, standards and checks applied by data suppliers
- producer's quality assurance investigations and documentation

In the assurance of our data source, we have chosen to give a separate risk and profile matrix score (Table 1) for each of the four areas of assurance. This will allow us to focus our investigatory efforts on areas of particular risk or interest to our users (Table 2).

## 2.2 Assessment and justification against the QAAD risk and profile matrix

Table 2: QAAD risk and profile matrix assessment of administrative data used to measure life insurance, non-life insurance and pension funding

	Low [A1]	Medium [A2]	High [A3]
Operational context and administrative data collection	[A1]		
Communication with data supply partners		[A2]	
Quality assurance principles, standards and checks by data supplier	[A1]		
Producers quality assurance investigations and documentation	[A1]		

Source: Office for National Statistics

The risk of quality concern and public interest has been set as “low” due to the small contribution that the life, non-life and pension statistics feed into gross domestic product (0.1%). As such, a score of A1 is deemed appropriate for this data source.

All scoring was carried out by National Accounts and Economic Statistics (NAES) based on the level of risk of the data and interest of our users. Results for each area of assurance for investment and unit trusts are shown in Table 2. If you feel that this report does not adequately provide this level of assurance or you have any other feedback, please contact [stoi.development@ons.gov.uk](mailto:stoi.development@ons.gov.uk) with your concerns.

## 3 . Areas of quality assurance of administrative data

### 3.1 Operational context and administrative data collection (QAAD matrix score A1)

This relates to the need for statistical producers to gain an understanding of the environment and processes in which the administrative data are being compiled and the factors that might increase the risks to the quality of the administrative data.

#### 3.1.1 Association of British insurers’ data collection process

The Association of British Insurers (ABI) is a trade association made up of insurance companies in the UK. The ABI has over [250 member companies](#), and between them they provide 90% of insurance premiums sold in the UK and manage investments of £1.6 trillion. They formed in 1985 and include most household names and specialist providers, they are funded by members subscriptions on a not for profit basis.

Membership is open to all insurance companies that are eligible to transact insurance business, and are authorised by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA) The [ABI produces detailed annual statistics on the industry](#), which are free to members and can be purchased by others for a fee. For NAES, the data are provided free of charge, the ABI collects extensive data from insurers and long-term savings providers, covering everything from motor and property insurance to life assurance and pensions.

To manage the data collection process the ABI statistics team has its own custom-built SQL server called ABICAS. This is a centralised system used to send customised emails to all their members requesting data submission.

Data providers each submit data in the same way, emails sent out by ABI containing data templates for completion annually. The email also contains instructions, guidance notes and definitions to ensure data providers can complete and return data as accurately and timely as possible and in a consistent format. The guidance notes and definitions supplied with each template are as detailed as possible to ensure that different companies are correctly reporting each cell of data to a very consistent and high quality.

Their methodology for collecting data is consistent across all insurance markets collected. However, their coverage of different markets can change over time due to changes in ABI membership or the ability for a company to report data back to them. As the insurance market is constantly evolving, this can influence changes to templates or definitions between reporting periods. If company structure changes have brought about a large fluctuation between reporting periods, they report explicitly clear reasons in their summary and analysis of published results.

Coverage for the total market varies from product to product and varies depending on what type of data they are collecting, such as premiums, claims and profits. For the general insurance market, they collect 79% across all lines of business, however, for domestic motor and property, for which many of their statistics cover, this coverage is expected to be around 90%. In the long-term savings market, this coverage varies significantly between products for which they are unable to estimate for the whole market.

## **Strengths**

- 90% of insurance premiums sold and include most household names.
- Standardised electronic template provided on the website ensuring coherent collection system.
- Secure submission.

## **Weaknesses**

- ABI only receives data from clients that are subscribed to ABI membership.
- Changes to ABI membership could result in different insurance markets.

## **Next steps**

- NAES's aim is to maintain this level of knowledge of this area.

## **3.2 Communication with data supply partners (QAAD matrix score A2)**

This relates to the need to maintain effective relationships with suppliers (through written agreements such as service level agreements or memoranda of understanding), which include changes to management processes and the consideration of statistical needs when changes are being made to relevant administrative systems.

### **3.2.1 Association of British Insurers' communication with data providers**

The Association of British Insurers (ABI) maintains a strong, active relationships with its members throughout all areas of work. The statistics team are experts in their field and provide members with the following services:

- each member receives a personalised email with a nominated ABI expert responsible for data collection and contact for centralised statistics mailbox and phone number
- changes to templates or guidance notes are sent by email
- up-to-date timetable is provided on the website
- face-to-face meetings are offered if needed
- working groups organised with members to discuss large changes to data collection or templates
- expertise on current and future regulation, legislation and trends
- weekly updates on the main developments in the insurance sector along with market and product insight
- over 100 members groups ranging from committees to informal networks covering general insurance, long-term savings, protection and health
- free online access to ABI industry statistics including premium and claims data, benchmarking exercises, quarterly new business surveys, assets under management, plus many ad hoc collections to inform policy positions and historical data
- access to a private dedicated members area of the website with all the latest news, policy insight and research keeping members up-to-date in important industry developments; members benefit from high-profile campaigns on issues that matter to their industry

### **3.2.2 NAES communication with the Association of British Insurers**

National Accounts and Economic Statistics (NAES) receives automated email alerts to download the latest annual data from the ABI website. Supporting documentation is available to view on the web page, however, NAES does not have a formal service level agreement with ABI. The data used for gross domestic product (output approach (GDP(O))) is available on the website and the logistics of implementing and actively managing formal arrangements are considered both prohibitive and unnecessary for these data, considering the low weight it comprises.

No formal contact is in place, however, in the past whenever there has been a query about any of the data, there has been a contact email address accompanying each dataset, and both organisations have been forthcoming and helpful in providing further information. Further contact has been established through the writing of this report and we intend to maintain this level of communication.

#### **Strengths**

- ABI have comprehensive engagement with members.
- There is a nominated ABI expert for each data provider.
- Face-to-face meetings are offered if needed.
- ABI holds many events and facilitates promoting communication between members.

#### **Weaknesses**

- No direct, regular meetings or contact between NAES and ABI.
- Missing possible methodology changes that could affect the data.
- No service level agreement.

## Next steps

- NAES to maintain the newly established communication links developed during the writing of this report.
- NAES would benefit from being informed in advance of methodology and policy changes.

## 3.3 Quality assurance principles, standards and checks by data supplier (QAAD matrix score A1)

This relates to the validation checks and procedures undertaken by the data supplier, any process of audit of the operational system and any steps taken to determine the accuracy of the administrative data.

The Association of British Insurers (ABI) carry out checks on the consistency of data reported by their members. These checks are applied through the centralised system, starting with validation checks on the templates flagging significant changes. If a submission fails the validation checks, members are prompted to provide a reason for the changes, which may cover mathematical, computation or input errors. To assist with this, data providers are asked to submit comments alongside their data submission.

Once the data have passed through the validation process, the ABI extracts the data into custom-built quality assurance files. Each completed template is thoroughly quality assured by the statistics team by analysing each file against previous returns, analysing trends in the market and using their knowledge of the industry.

At the next stage, manual checking is carried out for errors and consistent reporting across product lines and major fluctuations at total level. The team compares recent submissions against many periods of timely data checking for accuracy, consistency across collections and trends against similar-sized companies' data.

Quality concerns are communicated back to members to check for reasons causing these trends. All queries are fully investigated, helping the statistics team to understand any potential market trends.

An important part of their quality assurance process is checking for large relative changes in a company submission and at total market level. However, they do not have specific tolerance levels that they use throughout their quality assurance process; this is because they expect to see different variations in each type of data being collected. They expect large companies to report consistent data from period to period whereas smaller companies are much more volatile.

### 3.3.1 Revisions

The ABI do not have a formal revision policy; however, they do have a management process in place, which allows them time to request their members to resubmit data, if any data are reported incorrectly. All incorrect submissions are then archived for reference. Where there may have been a change in the member's methodology, the team will ask the member to resubmit three years of submissions, to better understand the real trends outside of the methodology shifts.

The final output is compared with other data sources such as the Automobile Association and Confused.com for all their products. They also monitor their members' announcements, keeping up-to-date with current trends in the markets through their policy and media work. The Data Analytics team work closely with policy, communication and members who are actively engaged with major events and trends in the industry.

In addition, they look at the Office for National Statistics (ONS) crime statistics to understand the trends in their quarterly motor and property theft data and will compare publicly available data such as the Solvency and Financial Condition Report to quality assure data provided by their providers, including fraud, to analyse whether their data are supportive of these trends.

The team will work quickly to correct any errors spotted after publication with a revision note confirming date of correction.

## **Strengths**

- There is comprehensive quality assurance in place.
- There are both expert and automated validation checks.
- There is a management process in place that allows time for members to resubmit data.
- Members' submissions are checked both over different periods and across similar providers.
- Members are asked to resubmit or explain potential errors.
- Final data are compared with different data sources.

There are no perceived weaknesses or next steps.

## **3.4 Producer's quality assurance investigations and documentation (QAAD matrix score A1)**

This relates to the quality assurance conducted by the statistical producer, including corroboration against other data sources.

National Accounts and Economic Statistics (NAES) Group receives automated email alerts from the Association of British Insurers (ABI) allowing them sufficient time to download the annual data from the ABI website around September each year. This ensures NAES are able to investigate, analyse and query the data in time for publication within the preliminary estimate of gross domestic product (output approach) (GDP(O)). NAES confirmed the ABI data are published annually and one year behind; for their purposes, this is considered a long time lag for data feeding into short-term indicators.

NAES downloads eight of the annual tables published on the ABI website, for use as volume measure indicators. The tables used are as follows:

- term assurance and whole life insurance covering insurance policies set for a certain period and policies set for life
- protection insurance policies that protects against loss of income due to unemployment, illness or accident
- group protection insurance policies that provide financial benefit and rehabilitation support if an employee is unable to work because of long-term sickness
- life annuities are insurance contracts that insure against living too long, in return for a lump sum (the money saved in a pension pot)
- individual pensions are individual contracts between person and pension provider
- occupational pensions are pensions paid to a retired person by former employer
- private car exposure insurance covering individual's exposure to accidents
- exposure and claims covering risks

Following clear and up-to-date desk instructions, these data are pasted into the relevant columns in Excel. NAES have validation checks built into Excel to carry out summary checks including raw data and growth rates using graphs to spot trends. The same checks are carried out on the monthly revisions.

Data are then loaded into internal systems and the system forecasts any missing data to compensate for the time lag of the data. The system stores up to two years' worth of forecasted data. The system models the annual data into months by dividing the figures by 12 and considers the number of working days in each month. Adjustments to the data include seasonality and deflators and at this stage further checks are applied in Excel, visualising any skewed data.

After the first checking process, one calculation is used to aggregate a monthly figure for the whole of SIC 65. The final output is quality assured by two senior managers within the team, checking growth rates that feed into the top-level GDP(O).

User engagement is continual and the feedback tends to relate to the overall impact of the statistics rather than individual data sources used, and to date no specific feedback on the use of investment and unit trusts has been provided.

## **Strengths**

- NAES has established quality assurance principles in place.
- NAES compare data by looking at historical trends.
- The final output is quality assured by two senior managers.

## **Weakness**

- Time lag as ABI data are published annually.
- Excel-based system including cut and pasted data.

## **Next steps**

- NAES to consider the impact of investigating new data sources to eliminate the time lag.

## 4 . Summary

In investigating the administrative data sources for the activities of investment and unit trusts, National Accounts and Economic Statistics (NAES) consider the main strengths of the data for its purpose to be:

- 90% of insurance premiums sold and include most household names
- detailed knowledge and expertise of the financial industry by Association of British Insurers (ABI)
- comprehensive engagement with their members
- comprehensive quality assurance in place including: expert and automated validation checks, checked against different data sources

We believe current limitations of this data source are:

- time lag as ABI data are published annually
- data only taken from clients that are subscribed to ABI membership
- no direct, regular contact between NAES and ABI
- no service level agreement
- Excel-based system

In constantly seeking to improve our data sources we will be taking next steps to investigate these limitations and these will be communicated to users in future quality assurance of administrative data (QAAD) report updates for this topic.

However, despite these slight limitations based on the low risk of quality concerns and small contribution that the life, non-life insurance and pension funding statistics feed into the gross domestic product (GDP(O)) (0.1%), NAES consider this data source to fulfil the requirement of an A1 assurance rating.