



## Continuous Mortality Investigation

Institute and Faculty of Actuaries

# Data submissions to the CMI Assurances investigation

## Introduction

Historically the CMI specified detailed data requirements for its investigations. More recently it has adopted a flexible approach to data collection; to make it easier for insurers to submit data.

This document outlines the data we are seeking from insurers; in particular it incorporates changes to take account of the introduction of the General Data Protection Regulation (GDPR) in May 2018. These changes encourage firms to:

- Use a secure file transfer site for data submission;
- Round dates of birth to month and year; and
- Provide capped benefit amounts, above £1,000,000.

We have also introduced a mapping tool to convert postcodes to measures based on the Index of Multiple Deprivation (IMD) for each record, to facilitate analysis of claims experience by socio-economic status.

## What is the scope of the investigation?

The Assurances investigation covers mortality, accelerated critical illness and stand-alone critical illness cover under Term, Whole Life and Endowment assurance policies; however our current focus is on underwritten, non-rated term assurances (see “Investigation years”, in the Appendix, for more details on this).

This paper does not cover:

- Guaranteed acceptance business – policies for modest sums assured that are not subject to any medical underwriting. The Committee intends contacting offices known to have written guaranteed acceptance term assurance and whole life products to assess their appetite to participate in a specific exercise focussing on the mortality experience of this business and the data requirements may differ.
- Income Protection policies, which are analysed under a separate investigation.

## What data do we need to supply?

The CMI is adopting a flexible approach, similar to that used for the 2011-2015 analysis, issued alongside [Working Paper 108](#). This approach is intended to avoid areas that have previously proved problematical and to keep the number of compulsory fields to a minimum, thereby making data submission as easy as possible for offices whilst still providing valuable aggregated results.

Details of the data that the CMI needs are contained in the Appendix to this note.

## What will the CMI do with our data?

Initial checks will be applied to ensure that we understand the data you have supplied; this will be done as soon as possible and we will then let you know whether we are able to proceed. In some cases we will need to check our understanding of your data but we will seek to keep the number of queries to a minimum by focussing only on issues material to the results.

When the processing of your data is complete, we will send you a “data report”, summarising the assumptions and mappings that we have applied to your data, and office-specific results. These office-specific results will

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cover each individual year and each period for which data is submitted. You will be asked to review the data report and the results to ensure that we have not misinterpreted your data.

Once data collection is deemed complete, the CMI will produce aggregated (“all offices”) results for each calendar year and for each quadrennium. These results will be available to all CMI subscribers; as will commentary on key features contained in a Working Paper.

The CMI may also make high-level results available more widely, for example via articles in *The Actuary* magazine or presentations open to all members of the IFoA.

## Who will have access to our data?

Data submitted to the CMI, in any form, is subject to the [Terms and Conditions for Data Contributors](#), and is processed in accordance with CMI’s Data Handling Protocols which address both data protection considerations and protecting the confidentiality of individual contributors’ data. These are available on request.

## Contact Details

If you have any questions, please contact us on [assurances@cmilimited.co.uk](mailto:assurances@cmilimited.co.uk) or 020 7776 3820.

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## Appendix: CMI Assurances investigation – Data submission guidelines

### Flexibility

We recognise that the resources necessary to convert data from an office's own database(s) into a rigidly specified format may discourage a potential contributor. Clearly though, each office's data will have to be converted into a standard format before being combined with other offices' data; so the CMI Secretariat needs enough explanatory information regarding your data to enable us to format the data appropriately. An accompanying explanation of the data fields and approach used would be greatly appreciated.

If possible, we encourage you to submit data files that you use for other purposes, such as internal experience analyses; these should necessitate less work for you to submit data and should also mean that the results we send back to you are more consistent with your own results.

We suggest that offices consider the data they can submit and then contact the Secretariat at an early stage in their data preparation to agree whether the data meets the CMI's needs. In particular, it may be helpful if offices submit a small volume of "test" data to allow the Secretariat to provide an opportunity for any issues to be resolved in advance of preparing a full data submission.

### Personal data

Data supplied to the CMI must not include name, address or postcode of any policyholder. Consequently, the vast majority of records within a CMI dataset could not be related to a particular individual and would not, therefore, constitute "personal data" under data protection legislation. However, a few records may fall within the legal definition and we therefore:

- 1 Seek to minimise this likelihood by using rounded dates of birth and capping benefit amounts (see below) in the data we use; and
- 2 Treat all such data as if it were personal data from a legal and data security perspective.

### Principles

The CMI is seeking to compare incurred claims with exposure, calculated on a day-count basis where possible. In order to do this we require:

- Details of each life under each distinct benefit type;
- Details of when each policy went on-risk and off-risk; and
- Additional details regarding claims; the definition of these is considered further below.

In addition, we are seeking to analyse the experience:

- of "similar" product types, so require some product details;
- on an amounts-weighted basis, so require a measure of current benefit amount;
- by sum assured band, so require a measure of initial benefit amount;
- by distribution channel;
- by duration, so require benefits that are subject to new underwriting to be separated from the original policy (but non-underwritten increments should not generate a separate record);
- by year, so the data should allow us to calculate exposure and allocate deaths by calendar year; and
- by socio-economic status, as measured by the Index of Multiple Deprivation (IMD).

The principal analyses are intended to cover:

- Individual business only (not group).
- Assurances with a mortality and/or critical illness element only, not investment-only products.
- UK business, but small volumes of non-domestic business may be included.
- Underwritten policies issued at normal premium rates; however:
  - The Committee is keen to also produce high-level results for rated lives – it would therefore prefer ALL data to be submitted, with a rated/non-rated indicator.
  - Similarly, we are keen to receive data for guaranteed acceptance policies for future analysis; provided these are clearly identified as such.
  - Policies subject to exclusions can be included in data submissions, or excluded; however offices are requested to apply this consistently – in particular between in force records and claims. Please advise which approach you use.
- Direct business, gross of reinsurance.
- Single life and Joint life first event policies; Joint life second death policies should be excluded.

## Structure of data files

The CMI is happy to accept data files in a number of structures, including:

- “Movements” data, indicating when policies go on-risk and off-risk within each calendar year.
- “Census” data, comprising in force data at the end of each 31 December (including the prior year) and a listing of claims.
- “Policy history” files, including the complete history of a policy in a single record.

Other approaches may also be acceptable – but please discuss them with us first!

## Essential data items

The data items that we regard as essential are:

- Record identifier, to enable ready identification of a record should a query arise.
- Gender.
- Date of birth (see below).
- Smoker status (except for mortality-only policies which were written on undifferentiated premiums).
- Record type (i.e. In force, exit or claim, dependent on the structure of data that is supplied).
- Policy number (or other unique identifier).
- Details of the type of cover (see below).
- Policy Commencement Date.
- Initial Benefit Amount, to allow analysis by amount band (see below).
- Current Benefit Amount, to allow analysis weighted by amounts (see below).
- Whether a policy/life is rated (unless you only supply data on “standard rates” cases).
- Date and type of exit, if applicable (for census data, only claims will be supplied). Our preferred field for the date of claim is the date of death (or diagnosis of a critical illness).

Please talk to us if any of these data items cannot be supplied; other fields may provide the information that we need.

## Desirable data items

The following additional data fields are particularly desirable:

- Territory of the life insured at outset (unless the data can be regarded as UK).
- Joint Life/Single Life indicator.
- Level of rating, where a policy/life is rated (if these are included).
- Distribution Channel – distinguishing between Bancassurance, IFA/Multi-tie, Single-tie, Direct sales and Unknown (unless the data can be regarded as being from a single channel, in which case please advise us of this alongside the data extract).
- Cause of claim:
  - For mortality-only cover, this should distinguish between death and terminal illness.
  - For critical illness cover, this should be a high-level indicator of the condition triggering the claim (including death under accelerated cover).
- Socio-economic indicators – we are keen to receive a measure based on the Index of Multiple Deprivation (IMD) for each record and have made available a postcode mapping tool along with supporting documentation on the [CMI Data](#) page of the IFoA website.

## Dates of birth

To reduce the likelihood of individuals being identifiable, we encourage firms to always use “16” as the value for “dd”. However we will accept and process data submissions containing:

- Exact values, but will replace “dd” with “16” for the purposes of our analyses.
- Dates with quarterly- or half-yearly rounding; if so, please advise us of the rounding used.

Note: We do not think that the dates of commencement, claim or exit would be well-known, so this should not make a person more identifiable. We therefore request the exact date here.

## Types of cover

The Secretariat needs to be able to identify Endowment, Whole Life and Term Assurance, separately between mortality-only, accelerated critical illness and stand-alone critical illness. Further segregation of Term Assurances, in particular – for example, between Level and Decreasing – is desirable.

We also request clear identification of any guaranteed acceptance business.

## Benefit amounts

As with exact date of birth, we recognise that very high amounts potentially increase the chance of certain people becoming identifiable. Consequently, for both the initial and the current amount, we encourage firms to provide a value of “9999999” for any record with an amount over £1,000,000 and we will then re-weight these values in our analyses. However we will accept and process data submissions containing exact values, but will replace this with the substitute value for the purposes of our analyses.

## Claims

We are seeking valid claims, in accordance with the policy terms, settled in each investigation year. If the date of settlement is not available then claims should be identified based upon an alternative date (e.g. date of admission); however the approach used by an office should be consistent between years. No claim should be either omitted or double-counted.

The following should not be submitted as claims:

- Claims arising during a free cover period,
- Ex-gratia claims, and
- Partial payments (e.g. for angioplasty) under critical illness policies where the main cover remains in force (however claims where the amount is reduced due to non-disclosure should be included).

## Investigation years

Our current focus is on underwritten, non-rated term assurances and we are currently seeking data for the years 2007 to 2017:

- Offices that have previously submitted data are usually asked to re-submit the most recent year of their previous submission (to capture any late-reported deaths) and we are currently seeking data for the subsequent years to 2017.
- Although we have released “all offices” results for 2007-2010 (alongside [Working Paper 75](#) in 2014) and 2011-2015 (alongside [Working Paper 108](#) in 2018), we are still keen to receive data as far back as 2007 from offices that have not previously submitted data if the data is of good quality and this does not involve significant work for the office.

Our intention is to return to regular annual reporting of experience for underwritten, non-rated term assurances before we report again on whole life and endowment assurance policies (results for 2007 to 2010 were also included in [Working Paper 75](#)) and before we extend our scope to rated lives and guaranteed acceptance policies. However we are happy to accept data from offices that wish to submit data sooner.

## Methods of submitting data

We are happy to accept data from your secure file transfer site or you can use the Barnett Waddingham site – please email us on [assurances@cmilimited.co.uk](mailto:assurances@cmilimited.co.uk) to agree the more convenient approach – in the following file formats:

- Text/CSV – commas should separate each field or the file should be arranged in fixed width format.
- Spreadsheet.
- Database – we request that database formats are Microsoft Access. For offices using different database software, we suggest that data be converted into Text/CSV.

Alternatively, data can be submitted by email but this should ONLY be done if you are confident that the data submission does not include any personal data. Where e-mail is used, the attaching file should, where possible, be compressed. We encourage data contributors to encrypt and password-protect all data files. Passwords should be provided separately (by telephone) from the data.

The Secretariat may be able to accept other commonly used form of electronic data transmission but please contact us beforehand to check.