

# Mortality briefing, April 2024

## CMI releases its latest mortality improvement model

The Continuous Mortality Investigation (CMI) has released the latest version of its mortality improvement model, CMI\_2023. The default model results in slightly lower life expectancies when compared to the previous version, CMI\_2022.

### What is a mortality improvement model?

Mortality assumptions generally consist of two parts:

1. A mortality 'base table', which provides life expectancies at a specific date. [Read our February 2024 briefing](#) for further details.
2. A mortality 'improvement model', which predicts how life expectancies are expected to change in future.

The CMI produces a new improvement model each year to include the most recent mortality data.

### How does the CMI allow for the recent high levels of deaths?

Deaths in 2020 and 2021 were significantly higher than expected, and the CMI has placed no weight on the mortality data from these years in the default version of the new model.

Deaths in 2022 and 2023 were higher than in 2019 – the last pre-pandemic year – but not significantly so.

When choosing how to allow for experience from 2022 and 2023, the CMI has three options:

1. Place no weight, which assumes that experience from 2022 and 2023 gives no indication of future mortality trends
2. Place full weight, which assumes that experience from 2022 and 2023 is fully representative of future mortality trends
3. Something in between.

There is no 'correct' answer, so judgement is needed.

### What has the CMI proposed as a default?

The CMI has opted for option 3) as the default.

After considering the consultation responses, the CMI decided on a weight of 15%. This means that life expectancies from the default version of the model are slightly lower compared to the previous version.

### Didn't the CMI use a higher weighting last year?

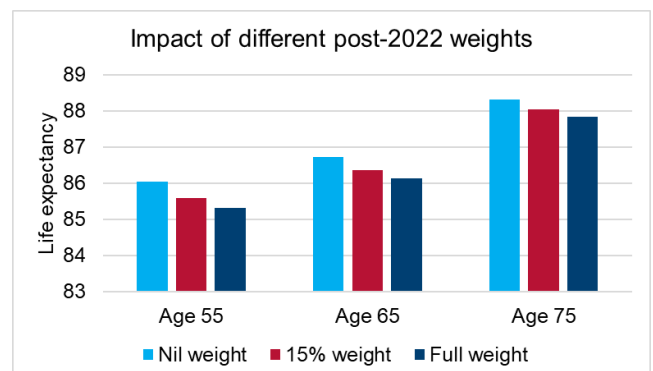
Yes. At face value, this looks to be a departure from the approach taken last year, where [25% weight was placed on experience from 2022](#). Unhelpfully, however, these weights are not linear.

Last year, placing a 25% weight on 2022 data resulted in life expectancies that were roughly halfway between a 0% and a 100% weight.

The proposed default of placing a 15% weight on 2022 and 2023 data results in life expectancies that **are a little over halfway between a 0% and a 100% weight.**

We show this in the chart below, in which we plot life expectancies across a range of ages.

Using a 15% weight on post 2022 experience, we can see that the proposed life expectancies lie roughly halfway between those calculated using nil and full weights.



### What does this mean for life expectancies?

The resulting life expectancies, using the CMI's default parameters, are slightly lower compared to the previous model. We show this in the table below for a 65 year old:

Model	Male	Female
CMI_2019	87.1	89.5
CMI_2020	87.1	89.5
CMI_2021	87.0	89.4
CMI_2022	86.5	88.9
CMI_2023	86.4	88.9

*Life expectancies as at 1 January 2024, derived using S3PxA mortality tables with a long-term rate of 1.25% pa*

### Were any alternatives considered?

The main alternative considered was to apply a higher weight of 25% to experience from 2022 and 2023. This would arguably have been consistent with the 25% weight applied in the 2022 version of the model, which would have reduced life expectancy by around one month. However, the CMI felt that this would have been too much of a "significant fall".

When consulting on the proposed model, the CMI initially proposed a weight of 10% on post 2022 data, rather than 15%, which would have left life expectancies relatively unchanged when compared to the previous version of the model. However, after reviewing the consultation responses, the CMI opted to place a slightly higher weight of 15% on post 2022 experience.

### Were there any other changes?

To try to reduce the number of extended parameters, the CMI has taken the following approach to weightings:

- Weights for 2020 and 2021 will be hidden in the background with a default value of 0% – although users can tweak these if they wish
- There will be a single weight placed on years from 2022 onwards – cleverly named the "Weight2022onwards" parameter.

### What should I be doing now?

Trustees who are midway through their valuation process should discuss with their advisers how adopting the latest model could impact their valuation results.

Care should also be taken in choosing a suitable 'base table', which can be done using mortality and postcode analysis. Trustees will want to ensure that their overall assumptions reflect the profile of the membership and include an appropriate level of prudence.

Employers with 31 December 2023 financial year-ends are likely to have completed their year-end accounts but should consider whether to adopt this model for next year's figures.

Employers with financial year-ends on or after 31 March 2024 should ask their advisers what impact allowing for CMI\_2023 will have on their defined benefit obligation.

### Get in touch

To discuss the contents of this briefing, and how it may impact your scheme, contact one of our mortality experts:



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