# Issue with SAPS data for 2012-2016

June 2022

## Summary

A large submission of data to the Self-Administered Pension Scheme (SAPS) investigation has been found to have incorrect pension amounts at death. This affects various CMI analyses of amounts-weighted mortality, including amounts-weighted “S3” Series mortality tables.

The note describes the nature of the incorrect data and the impact on CMI analyses so that Subscribers can consider whether to take any action. The CMI does not intend to update any existing analyses in light of the incorrect data. However, we have added prominent links to this note from the affected SAPS outputs and the relevant pages of the CMI website. We have not added any note to MPC outputs, as we do not consider the impact on these to be material.

## Incorrect data submission

The submission with incorrect data covers the period from April 2012 to April 2016. It is for a public sector scheme, categorised as “other public sector” rather than “local government” in CMI analysis.

The issue only affects the “Annual Pension at End” data field, so lives-weighted results are unaffected.

The submitted pension amounts at death are too low, so will understate amounts-weighted mortality. The data contributor has provided a broad indication of the understatement but is not able to provide a detailed corrected dataset. The understatement is thought to be similar throughout the period, rather than varying by year. We do not have information on whether the percentage understatement varies by pension amount or age.

## Affected CMI outputs

The affected submission has been used in the following CMI analyses:

- SAPS annual experience analyses for 2009-16, 2010-17, 2011-18, 2012-19 and 2013-20. (Working papers 104, 118, 126, 142 and 158)
- “S3” Series mortality tables (using the 2009-16 dataset) and accompanying analysis, including comparisons of public and private sector mortality. (Working papers 107 and 113)
- SAPS industry analysis for 2010-17. (Working paper 121)
- Mortality Projections Committee (MPC) interim update papers published in 2017, 2018, 2019, 2020 and 2021. (Working papers 103, 115, 127, 144 and 159)

The affected submission was not used in the analysis by region and IMD (Working paper 146) as the submission does not contain postcode.

The following page considers the impact for SAPS and MPC outputs separately.

## Impact on SAPS outputs

We have considered the materiality of this issue by looking at the impact on the 2009-2016 dataset, used for the "S3" Series tables, and the 2012-2019 dataset. In each case we have quantified the impact of the data issue by producing an estimated corrected dataset, based on the information provided by the contributor of the affected dataset, and comparing this to the published dataset.

Table 1 shows the relative increase in mortality when the estimated correction is applied. For example, mortality for normal health males in 2009-2016 was 101.1% of the S3NMA table for the dataset used and 102.0% of the S3NMA table for the corrected dataset; an increase of +0.9% (as 102.0% ÷ 101.1% = 100.9%).

**Table 1: Estimated relative increase in amounts-weighted mortality when the dataset is corrected**

| Gender<br>Dataset | Males<br>2009-2016 | Males<br>2012-2019 | Females<br>2009-2016 | Females<br>2012-2019 |
|---|---|---|---|---|
| All pensioners (P) | +1.4% | +1.1% | +4.3% | +2.8% |
| Normal health pensioners (N) | +0.9% | +0.7% | +3.4% | +2.3% |
| Ill-health pensioners (I) | +9.4% | +5.2% | +14.6% | +7.1% |
| Dependants (D) | +2.0% | +1.2% | +1.0% | +0.7% |

We would expect the impact on the 2010-2017 and 2011-2018 datasets to be somewhere between the impacts for the 2009-2016 and 2012-2019 datasets. The impact on the 2013-2020 dataset is likely to be smaller than for 2012-2019, as the former does not include the 2012 data affected by the data issue.

## Impact on MPC outputs

To consider the impact on annual mortality improvements included in MPC's annual interim update working papers, we have considered how the figures in the 2021 interim update (Working Paper 159) would change if the affected submission was excluded.

The timing of the submission, combined with the cautious way that the calculation method looks to reduce the impact of late-reported deaths, means that only mortality improvements for 2014 are affected. There can be a noticeable difference in mortality improvements for 2014. The biggest change, for males on an amounts-weighted basis, is from 4.0% p.a. with the affected data to 2.8% without it. However, this is still within the confidence interval, and users are likely to focus on averages over a longer period, which are less affected: the 2010-2019 average changes by only 0.1% p.a.