

New 'SAPS 3' mortality tables – a confusing message?

► In brief

- The S3 tables give longer life expectancies than the equivalent S2 tables
- This compares to recent versions of the CMI model which have given lower life expectancies in each subsequent model
- The SAPS tables are based on pension scheme members whereas the CMI model is based on the whole population
- Life expectancies have been improving for pension scheme members at a faster rate than the general population over recent years

Next steps

- Consider updating your valuation assumptions to use the S3 tables
- If you made an adjustment to the S2 tables it is likely that a new adjustment will need to be calculated
- If you did not make an adjustment to the S2 tables or use one of the 'sub-tables', decide whether this is still appropriate

The Continuous Mortality Investigation (CMI) published the 'S3' series mortality tables based on Self-Administered Pension Schemes (SAPS) data between 2009 and 2016 in December 2018. These show fewer deaths than expected compared to the 'S2' series mortality tables.

Background

Mortality data has been collected for pensioners from UK self-administered pension schemes dating back to 2000. The number of deaths in the data is divided by population size to give mortality rates at each age, which are then smoothed between each age and converted into a mortality table. The 'S2' series of mortality tables was published in 2014 based on data from 2004 to 2011.

In the 'S3' series there are 30 different mortality tables which include tables using all of the data for each sex and then tables for different retirement types, and tables weighted by number ('lives') and also by pension size ('amounts').

The SAPS tables have been widely used in the pensions industry in the UK. The Pensions Regulator's (TPR's) 2018 Scheme Funding Statistics survey showed that nearly all schemes now use the SAPS tables.

Increasing life expectancy

The tables commonly used in pension scheme valuations are based on all of the data from the series, weighted by pension size. The equivalent tables in the S3 series show that there have been relatively fewer deaths in the pensioner population than in the S2 series data suggesting that life expectancy has increased.

A confusing message?

'Hang on!', you may be thinking – 'when we have updated the CMI model to the most recent version, predicting how life expectancy will improve in the future, in recent years our pension liabilities have decreased – and yet now the new S3 tables appear to be suggesting the opposite?'

Why are the S3 tables giving longer life expectancies?

Differences in experience of underlying populations

The CMI model (used to predict future improvements to life expectancy) is based on the general population data for England and Wales. This compares to the SAPS tables which are based on only those people fortunate enough to have a defined benefit (DB) pension.

Research by the CMI has shown that whilst, on average, recent improvements in life expectancy in England and Wales have been slowing down, the slowdown has not been as significant for the SAPS population. Consequently the S3 tables give longer life expectancies than the S2 tables.

The underlying pensioner data

The underlying SAPS data has changed over time, as different schemes start (or stop) submitting data. In particular, a number of large public sector schemes have recently submitted data, which is therefore present in the data underlying the S3 tables and not in those underlying S2.

Current mortality rates versus future improvements to life expectancy

It is very easy to get confused between mortality rates and future improvements to life expectancy so it appears that different sources seem to be giving conflicting stories:

- The SAPS data shows that mortality rates have decreased (and therefore life expectancy has increased) between the data sets underlying the S2 and S3 tables.
- The England and Wales (E&W) data has shown that since around 2011 life expectancy has still increased in most years, but at a slower rate than was previously experienced and therefore projected.

To draw an analogy, if life expectancy were the speed of a car, the SAPS tables show that the car is travelling noticeably faster, however the E&W data shows that its acceleration has fallen.

The annual updates to the CMI projection model have led to liabilities decreasing over recent years (as the projections of future improvements to life expectancy are now less optimistic based on recent trends than before).

Impact of updating to S3 tables

At age 65 life expectancy is around 1.5% higher for males and 3% higher for females when calculated using the S3 tables based on all of the data from the series, weighted by pension size, compared to the equivalent S2 table projected to the same date. If you are using these tables and updating from S2 to S3, then, all other things being equal, your liabilities will increase (although the precise impact on your pension liabilities will depend on your other valuation assumptions and the membership of your scheme).

Should we use the S3 tables?

The information provided by the CMI alongside the S3 tables highlights that users of the tables should consider the appropriateness of the mortality assumptions for their population. Valuation regulations and guidance also require that mortality assumptions reflect the main characteristics of a scheme's membership.

Alternative S3 tables

Alongside the main tables there are tables that cover pensioners with different income levels. These include the 'light' tables for those with pensions of £20,000 p.a. and above for males and £8,000 p.a. and above for females.

New in this series are also the 'very light' tables for those with pensions of £40,000 p.a. and above for males and £16,000 p.a. and above for females. 'Middle' and 'heavy' income based tables are available as well as ill health and dependants tables. These sub-tables may be suitable for your scheme or sections of your scheme.

Bespoke adjustments

Some pension schemes make an adjustment to the standard mortality tables to allow for the fact that their members' life expectancy is not likely to be the same as the average of the SAPS population and none of the 'sub-tables' are suitable. This adjustment is often an overall percentage adjustment to the standard tables based on socio-economic factors such as industry, income and postcode of the members. For example, adjustments might be needed for schemes with Scottish members to reflect the fact that life expectancy in Scotland differs from that in England and Wales.

If an adjustment was made to the S2 tables in a previous valuation it is likely that the adjustment will need to be recalculated to use with the S3 tables. This is because the data underlying the S3 tables is different to the S2 tables and data on the impact of socio-economic factors on life expectancy is also likely to have been updated.

Industry and private sector analysis

The CMI provided some high-level analysis on differences between the mortality of the public and private sector data, and between different industry sectors. It shows that those who worked in the public sector (excluding local authority) and in finance had higher life expectancy than average whilst those working in industrials, consumer goods and consumer services had lower life expectancy. You may wish to consider this analysis when deciding on appropriate assumptions.

What next?

When your scheme carries out its next triennial actuarial valuation it is likely that you will update your mortality base table to the appropriate table from the S3 series. You should consider if any scheme specific adjustment should be made to the standard table to reflect the characteristics of your members.

For further information

Please get in touch with Natasha Hill.

 @xpsgroup.com

 01483 330 100

 company/
xpsgroup

 natasha.hill@
xpsgroup.co.uk