

# SFRA Colloquium 2019 presentation

## Title

Clubbing together: How Club Vita helps pension schemes estimate their members' life expectancy

## Abstract

One of the major challenges for funding defined benefit pension schemes is estimating how long members will live (and so how long their pensions will be payable). Historically the actuarial profession used 'standard' mortality tables for these purposes. However there are a number of issues with this approach, including that the lives used to construct the standard tables may have quite different socio-economic profiles to a given pension scheme.

At Club Vita we came up with a better approach. By combining pension scheme data from 230 schemes we have built up a robust database of some 2.8 million lives and 1.4 million deaths, going back over 20 years, and covering around 1 in 4 defined benefit pensioners. We then use a number of covariates to split the data into different groupings of lives with similar socio-economic profiles. For each combination of covariates we then construct a mortality table to apply to that group of lives. Differences in life expectancy can be material, with a spread of 10 years from shortest to longest lived. Individual schemes can then 'map' their membership to the appropriate mortality tables, at an individual level, and so obtain a much better estimate of their particular scheme's life expectancy.

In this talk I will explore how we construct our data set, and the statistical modelling which underpins the construction of our bespoke mortality curves.

## Bio



Conor O'Reilly is Head of Analytics at Club Vita LLP. Having joined Hymans Robertson LLP in 1999 following graduation from Glasgow University, he qualified as a Fellow of the Faculty and Institute of Actuaries in 2006. He built up a wide experience of pension schemes, providing advice to a range of Trustee and Corporate clients. In 2010 he transferred to Club Vita LLP, where he analyses the mortality experience of member schemes, as well as working with insurers and reinsurers to help them understand the longevity risk in their portfolios. In addition, Conor is heavily involved with exploring appropriate assumptions for future improvements in mortality rates, as well as developing the in-house longevity modelling tools. He has co-authored a number of papers, including a look at how climate change might affect UK longevity, as well as a collaboration with the Pensions and Lifetime Savings Association, which looked at variation in trends in life expectancy for different socio-economic groups.

Club Vita LLP is the market leader in longevity analysis and monitoring. By pooling longevity data from 230 schemes it has created a rich data set of pension scheme experience. It provides statistical analysis for pension schemes to use with their actuaries on predictors of life expectancy, and helps insurers and reinsurers measure their longevity risk.