A practical framework for assessing basis risk in index-based longevity hedges

Abstract

Longevity swaps have been one of the major success stories of pension scheme de-risking in recent years. However, with some few exceptions, all of the transactions to date have been bespoke longevity swaps based upon the mortality experience of a portfolio of named lives. In order for this market to start to meet its true potential, solutions will ultimately be needed that provide protection for all types of members, are cost effective for large and smaller schemes, are tradable, and enable access to the wider capital markets. Index-based solutions have the potential to meet this need; however, concerns remain with these solutions. In particular, the basis risk emerging from the potential mismatch between the mortality of the index reference portfolio and the pension fund/annuity book being hedged is the stand out issue that has, to date, prevented many from progressing their consideration of index-based solutions.

In this presentation we introduce a general framework for assessing basis risk – identifying appropriate modelling approaches depending on the size of the pension fund/annuity book and the stability of its composition over time. Particular attention will be applied to the practicalities of applying the framework, including key modelling decisions and some case studies of the results of the framework on metrics of interest to pension funds/annuity books.

*Organisers: Please note this session complements the proposal entitled "*A comparative study of two-population mortality models for the assessment of basis risk in longevity hedges." *It takes the results of that systematic assessment and looks at the practical application. Attendance at the other proposal will not be a pre-requisite for this session - however, if accepted, scheduling this proposal after the other in the conference would be preferable.*