

The possibility of a Longevity Index in the European Union under Solvency II guidelines

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ABSTRACT

We believe that proper calibration and well-defined algorithms are necessary for the construction of an adequate longevity index, it being for a given country or population, but the adequacy of a generalised longevity index it is less clear to us. Further to this, in our view, the use of a longevity index benchmark is not always suitable.

At the same time, while the mathematical model is important for the process of obtaining the index. Our investigations advocate the importance of the data collection source justification, the data cleansing and improvement, as well as, the analysis of the data.

Our work follows the guidelines set by Solvency II regarding the risk of an aging population and we understand that is the way to build a Lifemetric that meets best-estimate's requirements of objectivity, transparency, robustness and accuracy.

We also believe that, a longevity index should not represent a static scenario, as it would appear from the document submitted by Life and Longevity Markets Association (LLMA), it rather should extend to a dynamic scenario with the aim to reduce the risk of an aging population that generates long term benefits' payments in the future. The periodic calculation of a longevity index does not seem the best solution.

Finally, we have observed that the extreme longevity is clearly different in each country and considering that, at these ages, the long-term benefits intensify: the deviations due to the improvement in mortality are much more important than it might a priori seem. This circumstance would affect any longevity index to some extent.

The outcome of our research allows us to conclude that, a common index for all the European Union countries would not reflect, with sufficient guarantee, the longevity risk features of each European country.

KEYWORDS: Longevity index, Lifemetric, Graduation, Population, Mortality improvement and Forecasting.