



Society of Actuaries in Ireland

## Review of Mortality Basis for use in the Irish Courts

**November 2020**

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## 1 Introduction

- 1.1 This note has been prepared by the Demography Committee (Expert Witness sub-committee) of the Society of Actuaries in Ireland ("Society"). The note should be read in conjunction with ASP EXP-1 which provides guidance to an actuary instructed as an expert witness
- 1.2 The paper is provided to assist actuaries who work as expert witnesses in the Irish Courts and sets out a recommended mortality basis that should be used in the Courts for personal injury and fatal injury cases (and other cases where a general population mortality basis is required).
- 1.3 In the past actuaries acting as expert witnesses have informally agreed to adopt the most recent Irish Life Table as the appropriate mortality basis to use in the Courts. Typically no allowance has been made to date for future mortality changes.
- 1.4 Recently a number of actuaries have called for an allowance for mortality changes to be introduced and most now produce illustrative figures on this basis.
- 1.5 The sub-committee took the view that it was important that a single mortality basis should be adopted for use in the Courts which would be consistent with the recommendations and advice given by the Society in relation to mortality in use in other actuarial fields.
- 1.6 In making a recommendation in this regard, the sub-committee is setting a Table that represents a reasonable estimate of the future mortality likely to be experienced by average members of the population alive today and is based on projected mortality rates for Ireland as a whole.
- 1.7 The recommended basis is solely for those lives considered to exhibit the mortality of the average members of the population alive today. The view is held that the estimation of the life expectancy associated with an impaired life requires expert medical opinion.
- 1.8 This note considers the following:
  - Whether the Irish Life Table is the most appropriate mortality table to use for personal injury and fatal injury cases (and other cases as appropriate)
  - Whether allowance should be made for future changes in mortality and as such whether a cohort table should be used instead of a period table
  - If a cohort table should be used, what projection methodology should be used and what change assumptions should be used
- 1.6 The note concludes by recommending a mortality basis for use in the Irish Courts, and the occurrences that would lead to this being updated.

## **2 Appropriate Mortality Table to use for Personal Injury and Fatal Injury cases**

- 2.1 The current mortality basis used by actuarial expert witnesses in the Courts is the Irish Life Table No 16 (“ILT16”) based on the Irish general population experience from 2010-2012 with no allowance for future mortality changes.
- 2.2 The sub-committee was not aware that the population to which Court actions are subject to exhibit any noticeable selection effects compared to the general population and thus their view was that a general population mortality table should be employed.
- 2.3 As the Irish Life Table is the only credible Irish population mortality table readily available, the sub-committee concluded that the appropriate mortality table to use was the most recent Irish Life Table available (Irish Life Table No 17 or “ILT17” based on the Irish general population experience from 2015-2017).

## **3 Allowance for Mortality Changes**

- 3.1 Allowance for changes in life expectancy is now an established norm in the actuarial profession reflecting the fact that life expectancies have continued to change (improve) in the past and the view that this trend will continue in the future.
- 3.2 The sub-committee is not aware of any other actuarial field in Ireland where an allowance for mortality changes is not used, and noted that the Ogden Tables in the UK, which are used in the UK courts, have allowed for mortality changes for some years now.
- 3.3 The sub-committee thus concluded that the recommend mortality basis for use in the Irish Courts should allow for mortality changes.

## **4. Methodology and change rates**

- 4.1 After deciding that it was appropriate to allow for mortality changes the sub-committee then needed to decide what methodology to employ to allow for such changes, and what rate of change to use.
- 4.2 The sub-committee took the view that the methodology employed and assumptions used, while reflecting the sub-committee’s best estimate of future mortality trends, could not be in a format that would be overly complicated to apply or to explain to non-actuarial court practitioners.
- 4.3 The sub-committee noted the recent paper produced by the Demography Committee (Mortality Improvements Working Group) “Review of best estimate mortality projection methods”. Based on this, it concluded that the CSO projection methodology was the most appropriate method to use.
- 4.4 While there was some discussion about the rates of mortality change to be used, it was concluded that the rates underlying the 2018 CSO population projection (Population and Labour Force Projections 2017-2051) were the most appropriate to use at the current time. In concluding this, the sub-committee noted that it is likely that these rates (and the CSO methodology) will be used for the mortality change assumptions recommended by the Society for ASP LA-8, ASP PEN-12 and ASP PRSA-2, and also those that will be recommended to the Minister for Employment Affairs and Social Protection for use in the calculation of transfer values for retirement benefit schemes under the Pensions Act 1990.

## 5. Recommended Basis

5.1 The table below sets out the recommended mortality basis:

	<b>Males</b>	<b>Females</b>
Mortality Table	ILT17 (Males)	ILT17 (Females)
Initial rate of annual mortality change assumed (from 2017)*	-2.5%	-2.0%
Long-term rate of annual mortality change assumed*	-1.5%	-1.5%
Convergence period from initial rates of mortality change to long-term rate*	25 years	25 years

\* Rates of change to age 90, from age 91 rates of change trend linearly between the assumed rate at age 90 and 0% at age 100. A negative rate of change means that mortality rates reduce.

5.2 The sub-committee recommends that the mortality table and rates of mortality change should be updated in line with future Irish Life Table releases and CSO population mortality projections, and the overall basis reviewed periodically.



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