Introduction

There are two sources of mortality tables in Israel. Firstly, population mortality tables are published annually by the Central Bureau of Statistics for a rolling 5-year period. The underlying annual rates appear in the HMD. There are separate tables for Jews, Arabs and the total population.

Secondly, the Israel Government Actuary publishes mortality tables every few years based on observed experience of public pension funds. These tables are used by the pension funds for pricing and valuation, and tables are also produced for insurance companies for annuities and guaranteed annuity options. Since 2001, the tables include improvement factors.

It should be noted that most insurance plans with a savings element sold by insurance companies in Israel include a guaranteed annuity option (GAO) to convert the accumulated savings at retirement to an annuity at a fixed rate (which depends on the year of retirement, but cannot be changed by the company). The investment risk after retirement is borne by the policyholder, but the longevity risk falls on the company. For policies issued since 2001, GAOs only apply to single-life annuities payable for 20 years certain and thereafter for the lifetime of the annuitant. GAOs issued in the past offered a range of options.

New developments in 2012

In July 2012, the Government Actuary published a draft position paper on longevity based on a study of mortality and morbidity experience in the old and new pension funds for the period 2006-2010. It is expected that a directive based on the paper will come into force in 2013, replacing the current directive from 2007.

The principal proposals are as follows:

Adoption of new mortality tables for pension funds and insurance companies:

The pension tables are based on the experience study, for active lives, pensioners and widows. No credible experience is yet available for annuitants in insurance companies, so as in the previous study the rates for insurance companies are derived from the corresponding pension tables, taking into account the socio-economic differences and the inclusion of disabled lives in the pension study.

Active mortality has no practical benefit for insurance, since there is no statutory table for reserving, although it is interesting to note that for ages 35-60 there is very little change (after adjustment to the new base year of 2008). For annuitant mortality the following tables compares the old and new rates:
Other pension tables

The tables for disability, mortality of disabled lives, marriage rates and age differences between spouses have also been revised. Again there is no direct influence on insurance, but the new disability rates will enable the pension funds to reduce the cost of disability cover, increasing the differential compared to insurance products.

Mortality improvements

The current reserving basis (for insurance and pension liabilities) is based on the “α – f” methodology published by the CMI in 1999, adjusted to changes in the Israeli population at the time of the previous position paper.

The new paper notes that in general, population mortality improvements in Israel have been more rapid than implied by the current improvement factors:
The paper mentions three possibilities: leaving the existing factors unchanged, keeping the existing methodology but updating the underlying factors to more recent experience, or adopting the new CMI models published by the Institute from 2009 onwards. The third option would lead to a very significant increase in future improvements. The compromise recommendation is to adopt the second choice.

However, the “long-term mortality improvement”, one of the key parameters of the CMI model, is taken into account in the revised “safety margin” (also called “negative scenario”) for insurance reserves, which defines that the annual improvement in mortality will not be less than 0.75% for males or 1% for females.

As before, there are separate tables for the “golden cohort” for males (but the years of birth have been changed from 1931-1949 to 1929-1945). There is no distinction for females, to preserve continuity.

Calculations of annuity reserves at retirement, on the basis commonly used for new policies, are as follows:
These changes are not dramatic in themselves, but companies will have to set up a reserve to allow for the change.

The most severe effect is in respect of annuity options on policies issued before 2001 with GAOs calculated on a(55) rated -3/-2. If, for example, the current reserve is for a shortfall of 12%, this will now increase to about 13%, leading to an increase of about 8% in the deficiency reserve. There is a certain amount of flexibility in discounting the reserves based on future profits, but many companies are already close to maximum utilization of this concession.
The changes mandate a significant increase in insurance companies’ reserves (which has already been reported in the half-year financial statements) and a reduction in embedded values. Some of the smaller companies do not have such liabilities from the past, and they will hardly be affected.

**GAOs in the future**

As a result of these changes, the paper proposes curtailing GAOs on new policies to be sold from January 2013, noting the enormous risks that insurance companies take upon themselves in an unpredictable environment, with no possibility of transferring the risk to reinsurers.

The paper proposes that from next year, companies will not be allowed to guarantee conversion factors for lives under age 55, and from this age onwards any guarantees will have to be priced and charged separately (presumably as an additional annual fee). This limitation, unlike the proposals on new mortality tables, has already been issued as a draft circular, including the stipulation that sales of the current policies in 2012 cannot exceed 150% of the corresponding new business sold in 2011.

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