

Retiree Mortality Table FAQs

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Explanatory note: As part of its strategic plan, in 2013 the TMRS Board asked its consulting actuary to review the mortality tables used to calculate a member's retirement benefits. The tables in use had been adopted in the early 1980s and had not been updated to reflect improvements in mortality; i.e., people living longer. This FAQ provides information about the use of mortality tables in retirement benefit calculations, discusses the results of the 2013 mortality table study, and explains why the Board updated these tables.

How are TMRS retirement benefits calculated?

TMRS retirement benefits are calculated by combining a member's account balance, including interest credited to the member's account, with the employer match of the member's account balance. This combined sum is then divided by the appropriate annuity purchase rate (APR) to arrive at a monthly lifetime benefit for the member.

What is the Annuity Purchase Rate (APR)?

For TMRS purposes, the APR is the factor that converts the accumulated member account balance and city match into a monthly annuity based on the retirement option selected, the member's age, and, if applicable, the member's beneficiary's age. The APR is calculated by our consulting actuary and incorporates a "mortality table" to estimate how long a retiree is expected to live.

What is a "mortality table"?

A mortality table (also called a "lifetime expectancy" table) statistically predicts the remaining life expectancy of a member at a given age. The younger the member, the longer the remaining life expectancy. The older the member, the shorter the remaining life expectancy.

What mortality table is TMRS using in the APR calculation through 12/31/14?

The actuarial community periodically develops mortality tables that estimate life expectancies. The table in use through 2014 by TMRS for retirement benefit calculation purposes is a modified version of a table known as the UP-1984. This table, as modified, has a significant amount of "cushion" built into it to take into account future improvements in mortality; i.e., people living longer. The modified table, to a certain degree, anticipated that over time people will live longer.

Didn't the UP-1984 mortality table accurately estimate life expectancy?

Over time, the “cushion” built into the UP-1984 tables decreased to the point that, several years ago, the table no longer accurately reflected a member’s life expectancy at retirement. In other words, retirees are now living longer than previously expected and are collecting retirement benefits longer than estimated as well.

What would have been the consequences of continuing to use the UP-1984 table in the APR calculation beyond 2014?

Life expectancy is a factor in computing city contribution rates for their employees’ TMRS benefits. By using a mortality table to calculate retirement benefits that no longer accurately estimates a member’s life expectancy, city contribution rates would continue to increase to reflect the longer life expectancies.

Why did TMRS examine its APR mortality table?

TMRS’ consulting actuary periodically examines the actuarial assumptions used to calculate city contribution rates. Previously, the actuary reported that the mortality table no longer accurately estimated life expectancies. Based on this review, the actuary recommended adopting updated tables for use in calculating city contribution rates and suggested that the mortality tables used in the APR calculation be studied further. The TMRS Board adopted the actuary’s recommendation to use updated tables in calculating city contribution rates. In addition, as part of its strategic plan, the TMRS Board asked its consulting actuary to further review the mortality tables used in the APR calculation.

What did the actuarial studies find?

Our actuary initially presented its findings at the June Board meeting and provided several follow-up studies, posted on the website. The actuary found that the mortality tables used in calculating retirement benefits no longer accurately estimated life expectancies. Their studies documented that mortality has steadily improved nationwide for some time and is expected to continue to improve. The studies also pointed out that using older tables to calculate retirement benefits has caused city contribution rates to increase to take into account the additional time that benefits are being paid to retirees and concluded that city rates would have to increase further as mortality continues to improve.

What else did the studies say?

Our actuary discussed an updated mortality table based on recent data for TMRS retirees. The actuary also discussed a “generational mortality” table. The study provided a recommendation for an approach that was used to update the mortality tables.

What is a generational mortality table?

A generational mortality table is one that takes projected future mortality improvement into account for each individual member. Instead of basing everyone's benefits on the same APR factors, life expectancy is tied to the member's birth date and retirement date. Using a generational table is more accurate and allows adjustment over time to match changes in mortality rates.

What will the mortality table change do to my annuity calculation?

Updating mortality tables will have no effect on existing retirees or on the benefit of anyone who retires on or before December 31, 2014. Future retirees will see slightly smaller monthly benefits than they would have under the current table. The total amount of money (reserves) in each member's account will not be smaller, but the length of time the annuity is paid out will be longer, so monthly amounts will be somewhat smaller than they would have been under calculations made using the old mortality table.

What did TMRS do to mitigate the effects of this change?

TMRS has chosen to reduce the impact of the change on future retirees by phasing in the change. A 13-year phase-in period was recommended by the actuary and adopted by the Board. This 13-year phase-in will produce a gradual change that will ensure that any active member's benefit will continue to increase in future years, although the amount of the increase will be smaller due to the change in the APR than it would have been without the change.

How much longer do the updated tables project me to live?

Under generational tables, life expectancy varies based on birth year, but generally, the new tables project an average life to be between 1 to 4 years longer than under the current table.

Examples:

- For a person 55 years old in 2010, average life expectancy increases from 24.4 years to 28.7 years.
- For a person 65 years old in 2010, average life expectancy increases from 16.8 years to 19.3 years.

What will the changes do to my city's contribution rate?

Your city is currently paying a subsidy for improvements in life expectancy in the form of higher contribution rates. Since changes to the mortality tables have been made over a 13-year phase-

in period, this (a) minimizes the impact on the average member's future retirement annuity and (b) does not result in an increase in most cities' contribution rate. Over the long term, changing tables helps further stabilize city contribution rates.

What would have happened if TMRS had not changed the table?

Over time, city rates would have continued to increase. These additional expenditures in city budgets, in turn, could have led to reductions in a city's TMRS benefits.

When does the APR calculation change affecting retirement benefits take place?

Changes to the APR factors used in determining benefits will be implemented for members retiring January 2015 or later. These changes will be slowly phased in over 13 years, with all APR changes fully reflected in 2027 and later years.

Do TMRS' retirement estimates reflect the new tables?

Yes. Effective January 2014, the new factors were incorporated into our retirement estimate programs, including estimates generated through MyTMRS and on the member's 2013 Annual Statement. The factors will affect retirements after December 31, 2014. No current retiree's benefits will be affected.