



TO: Jacksonville City Council Members
FROM: Robert Dezube, FSA
RE: Mortality Assumptions
DATE: March 13, 2015

Mortality Assumptions

Recently, the Society of Actuaries' Retirement Plans Experience Committee (RPEC) released a new set of mortality tables (RP-2014) and an associated mortality improvement scale (MP-2014). These tables were developed based on recent mortality experience of participants in uninsured **private** retirement plans. The purpose of this paper is to address the applicability of these new tables and the potential impact on the analysis conducted on 2015-54. The 2015-54 Plan modifies benefits for members of the **public** Police and Fire Pension Fund (PFPF).

The RP-2014 Mortality Tables

To our knowledge, neither the Internal Revenue Service (IRS), Governmental Accounting Standards Board (GASB) or any other body which has oversight or influence on public plans have mandated use of the RP-2014 Tables. We also question whether future use of the 2014 table would be appropriate. The RP-2014 report notes that the initial healthy retiree data included data from only three large public sector plans, and that the experience from those plans was so disparate that the mortality committee felt it would not be appropriate to combine public sector and private sector data. Many actuaries, including myself, objected to the RP-2014 Table when it was first released, and provided our objections in writing to the Society of Actuaries.

On February 25, 2015, the *Wall Street Journal* published an article on the RP-2014 assumptions. As the article states, ***"[t]here are some key differences between corporate plans and public-sector plans. For one thing, corporate plans are required by the Internal Revenue Service to use mortality assumptions based on the society's data unless the plan is big enough to formulate assumptions specific to that plan. That requirement doesn't apply to government-sponsored plans, though some may still use the society's assumption"***. The article also notes that ***"public plans follow a different set of accounting rules from private plans. New government accounting rules currently going into effect change the way that many governments will have to calculate their pension obligations, but those rules don't change how the public plans deal with changes in mortality"***. The same article also states that the ***"society is now starting a separate study of the mortality of public-plan retirees."***

The selection of actuarial assumptions for public pension plans such as PFPF are based on Actuarial Standards of Practice promulgated by the American Academy Actuaries. The Actuarial Standards provide guidance to an actuary in developing and recommending assumptions. The basis of the assumptions should reflect the specific experience of the plan being measured. In instances where there is not credible experience, additional data should be included in the analysis. In reviewing mortality experience, large sets of data are required to conduct a fully credible analysis.

This is one reason the Society of Actuaries RPEC conducts a study approximately every 15 years, as it did in 2014. However, as noted above, the focus of RPEC has been experience from private retirement plans and specifically excludes data from public pension plans. With recent changes in the private retirement plan space – such as plan freezes, closing to new entrants, annuity buyouts, lump sum windows, cash balance conversions, and others – the data used in the RPEC study may not be representative of typical public plan experience. Due to this possibility, many public plan actuaries and plan sponsors have not adopted the new tables.

Generally, an actuary performs a formal experience study, which reviews the experience of that specific plan and recommends a set of actuarial assumptions. A board would then review and possibly adopt those assumptions, with or without adjustments. For PFPF, the most recent experience study conducted by Pension Board Consultants, Inc. covered the five year period from October 1, 2006 through October 1, 2011. Based on this experience study, the current mortality assumption is based on the RP-2000 Table with mortality improvement reflected using Scale AA up until the valuation date. The PFPF Plan Administrator has indicated that the next experience study will be conducted in 2015.

Potential Cost Impact on 2015-54

In estimating the savings of this plan, Milliman has utilized all of the PFPF-adopted assumptions, except where modifications are required due to specific changes in 2015-54.

If there are changes in any of the actuarial assumptions -- whether interest rates, mortality tables, or others – those changes would impact the liabilities and associated costs in **both** the baseline projections and 2015-54 Plan projections. For example, if the mortality improvement was extended beyond the valuation date to all future years (known as generational mortality improvement), the costs for the current plan would increase and likewise the cost of the 2015-54 Plan would increase. These costs would reflect a proportional increase in the gross normal cost (employer plus employee prior to adding any provision for administrative expenses). Since the gross normal cost is less under 2015-54, the dollar increase on 2015-54 would be less than the dollar increase on the current plan. **Therefore, if the PFPF Board were to adopt the new mortality assumptions, the analysis would show greater savings for each future hire.** Since the baseline plan has larger liabilities than 2015-54, we would expect its liabilities to increase more in absolute dollar amounts.¹

Mortality Tables used by Local and State Government Retirement Plans in Florida²

In determining the actuarially required contributions for a local government pension plan, the pension plan's board of trustees, with guidance from its professional advisors, chooses a mortality table to be applied in the valuation report. The table below shows the various mortality tables selected by the boards of local Florida municipality retirement plans and the frequency of use among the plans. RP-2000 is currently the table used by most plans:

¹ In general while the proportionately larger liability increase would be expected to generate larger amortization payments, the change to the 30 year layer amortization technique under the 2015-54 Plan would produce lower payments but for a longer period and hence the total dollars outlayed for amortization of the mortality table assumption change could increase.

² From Senate Analysis of SB 242

Mortality Table Selected	Number of local government plans using this table ³
1983 Group Annuity Mortality (GAM 83)	20
1994 Group Annuity Mortality (GAM 94)	10
1994 Group Annuity Mortality with Scale AA (GAR 94)	7
Uninsured Population 1994 (UP 94)	4
Retirement Plans 2000 (RP-2000)	437
Internal Revenue Service Prescribed ⁴	8
Other	3
Total	489

For the Florida Retirement System (FRS), the current mortality table reflects a lower life expectancy for members in their Special Risk (police and fire) class versus members in their Regular Class. Please note that the mortality tables currently used by the FRS and 445 of 489 Florida Plans are based on the RP-2000 mortality tables. The Assumption Conference which adopts the assumptions for the Florida Retirement System (FRS) valuation did not adopt the 2014 RP Table or the 2014 MP projections.

Recently, legislation has been introduced in the 2015 Florida Legislature (SB 216 and SB 242) that would require local Florida government pension plans to use mortality tables consistent with those used for the annual valuation of the FRS.

Conclusion

Milliman believes the actuarial assumptions used in any actuarial valuation should reflect the most recent experience of the plan and Actuarial Standards of Practice. Further, as noted previously, several actuaries including myself had expressed concern that the RP-2014 tables may not accurately reflect life expectancy specific to retirees in public pension plans as the 2014 tables only used data from private-sector plans to formulate their mortality assumptions.

To the extent that modifications are required to the mortality assumptions, there would be a proportionate impact on baseline costs and 2015-54 Plan costs. ***This would result in a greater difference between the normal cost of the two plans and amplify the positive impact of 2015-54.***

We believe that the current Milliman analysis dated January 27, 2015 provides a reasonable estimate of the cost impact of 2015-54, in accordance with Actuarial Standards, and the issue of the RP-2014 mortality tables should not hinder anyone's ability to make a decision on the plan in 2015-54.

I am a member of the American Academy of Actuaries and meet its qualifications to render this actuarial opinion.

³ The above list does not distinguish between general employees versus police and fire employees.

⁴ This is a version of RP-2000