

Assumed Rate Change and Update to Mortality Assumption

Board Action

At its July 31, 2015 meeting, the PERS Board lowered the “assumed rate” to 7.5% effective January 1, 2016. To adhere to Oregon statute, the PERS Board also updated the mortality assumption to reflect observed increases in life-expectancy. A member would need to retire no later than December 1, 2015 to have the current assumed rate and mortality assumption used at retirement.

The assumed rate is the rate of investment return (including inflation) that the PERS Fund’s regular account is expected to earn over the long term. Oregon Administrative Rule 459-007-001(2) states that the assumed rate “means the actuarial assumed rate of return on investments as adopted by the Board for the most recent actuarial valuation.”

The PERS Board decides on the assumed rate based on: the long-term projection of investment returns based on the asset allocations of the Oregon Investment Council and the related capital market expectations; and independent analysis by PERS’ actuary, Milliman, of the projected returns from that asset allocation, over a long-term investment horizon.

The current assumed rate is 7.75% and has been in effect since January 1, 2014. The assumed rate is reviewed and adopted by the PERS Board every two years as part of the system’s Experience Study.

How the Assumed Rate and the Mortality Assumption are Used

The assumed rate is used when crediting Tier One regular accounts with annual earnings. Statute dictates that Tier One accounts must be credited with the assumed rate each year. However, the rate itself is subject to change by the PERS Board. Beginning in 2016, annual earnings will be credited based on the new rate of 7.5%.

The assumed rate is also used to credit pro-rated earnings to a Tier One member’s regular account upon retirement or a withdrawal, so those earnings will also be pro-rated at the new assumed rate.

When a Tier One or Tier Two member retires, his/her account is annuitized based on the assumed rate and the mortality assumption to determine the benefit provided under the Money Match and Formula Plus Annuity benefit calculations. The changes in the assumed rate and the mortality assumption necessitate updates to the actuarial equivalency factors (AEFs) used in benefit calculations. These changes will have an effect on Money Match and Formula Plus Annuity benefit calculations. The Full Formula calculation is based on final average salary, years of service, and a statutory factor. None of those elements are affected by the changes in the assumed rate and mortality assumption.

In addition, if a member elects a survivor benefit option, AEFs are applied and the changes to the assumed rate and mortality assumption would affect those factors.

AEFs are based on two primary variables: expected member and beneficiary life expectancy; and the assumed earnings rate (how much system assets will earn during retirement).

When either the mortality or earnings rate assumptions are changed by the Board, the AEFs must be updated. The recalculated AEFs are then used to calculate the benefits of future retirees. The actuary will report recommended changes to the AEFs to the Board in November 2015. Updated AEFs would become effective January 1, 2016, as required in statute.

NOTE: Monthly benefit payment amounts for members who retired before the assumed rate change (December 1, 2015 or earlier) will not be affected, as those benefits were set using the actuarial factors in place when they retired.

Effect on Employer Contribution Rates

The assumed rate also is used to discount projected system benefit payments, establishing liabilities that are used when setting employer contribution rates. The update to the mortality assumption also affects projected system benefit payments, and hence liabilities and employer contribution rates. With the earnings assumption being lowered and the mortality assumption update, the amount that must be contributed by employers will increase to cover both the reduced earnings expectations and the increase in projected benefit payments. Employer contribution rates are based on plan assets earning the assumed rate in the future. The rate changes reflecting the assumed rate and mortality assumption changes will become effective with the next rate setting valuation (e.g., the 2017-19 biennium).

Examples of New Assumed Earnings Rate and Mortality Assumptions (Tier One Members)

The examples below show how an assumed rate of 7.50% instead of the current 7.75%, and the updated mortality assumption, would affect a future retiree under the Money Match benefit calculation or Full Formula benefit calculation with different payment options.

Money Match Example Assumptions

Tier One Member; Age 59 ½; \$135,000 accumulated Tier One member contribution account balance as of June 30, 2015.

Example: Money Match, Assumed Rate of 7.50% instead of 7.75%, Updated Mortality Assumption			
Retirement Date	December 1, 2015	January 1, 2016	May 1, 2016
Assumed Rate	7.75%	7.50%	7.50%
Benefit	\$2,117	\$2,057	\$2,116

Full Formula Example #1 Assumptions

Tier One Member; Age 59; 30 years of service

	Example: Full Formula, Age 59, Different Option Payments				
	Option 1 Payment	Option 2 Payment w/ Spouse, same age		Option 2 Payment w/ Spouse, 4-years younger	
Retirement Date	Benefit	Option Factor	Benefit	Option Factor	Benefit
December 1, 2015	\$2,117	0.903	\$1,912	0.882	\$1,867
January 1, 2016	\$2,123	0.900	\$1,911	0.880	\$1,868

Full Formula Example #2 Assumptions

Tier One Member; Age 55; 30 years of service

	Example: Full Formula, Age 55, Different Option Payments				
	Option 1 Payment	Option 2 Payment w/ Spouse, same age		Option 2 Payment w/ Spouse, 4-years younger	
Retirement Date	Benefit	Option Factor	Benefit	Option Factor	Benefit
December 1, 2015	\$2,117	0.920	\$1,948	0.903	\$1,912
January 1, 2016	\$2,123	0.916	\$1,945	0.900	\$1,911