

# Summary of Actuarial Assumptions and Methods

As of January 1, 2020

- a) The actuarial valuation was prepared using the entry age actuarial cost method. As described in the certification letter, the contribution rates are set based on the board's funding policy, which states the contribution rate will not be less than the amount needed to amortize the unfunded actuarial accrued liability of each System over a 20-year period from the valuation date (January 1, 2020).

In calculating this minimum, amortization payments are designed to remain level as a percent of payroll, and payroll is assumed to increase 2.90% per year. Under this method, actuarial gains and losses are identified and amortized as part of the unfunded actuarial accrued liability over a period that does not exceed 20 years.

- b) The future investment earnings of the assets of the Systems are assumed to accrue at an annual rate of 6.95%, compounded annually. This rate is made up of a 2.50% assumed inflation rate and a 4.45% assumed real rate of return. This assumption was adopted effective January 1, 2017.

- c) The total rates of assumed annual salary increase are shown on the actuarial schedule on page 173. The rates include increases due to promotion and longevity and a 3.25% per annum rate of increase in the general wage level of the membership. Salaries of judges are assumed to increase at 3.25%. All of these assumptions were adopted effective January 1, 2020.

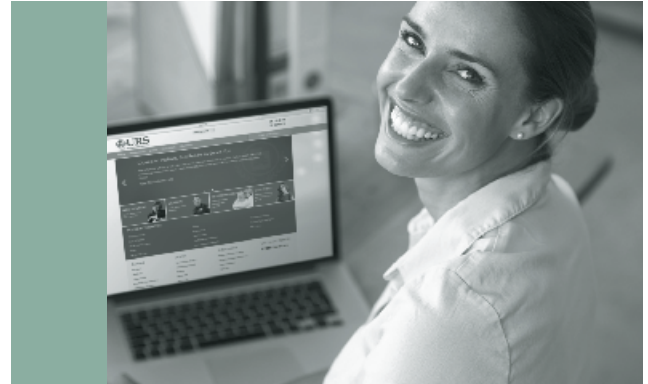
- d) Post-retirement benefit increases are based on the consumer price index (CPI), limited by the provisions of each System. The increases are assumed to be 2.5% for all Systems. Increases are based on the member's original retirement allowance except in the Judges Retirement System where increases are compounded. For current retirees who have received cumulative COLAs less than the total of annual CPI increases since retirement, higher COLAs are assumed, subject to the annual maximum (2.5% or 4% for Public Safety and 4% for all other Systems), as long as the member has "banked" CPI increases remaining.

- e) Tables of mortality rates for male members retired for service and beneficiaries were developed from actual experience of URS retirees. Mortality rates for female members retired for service and beneficiaries were developed from actual experience of the URS retirees.

The mortality basis is adjusted based upon the member's class and gender as shown to the right. These base rates are adjusted for future improvement in mortality using 80% of the ultimate rates from the published MP-2019 mortality improvement scale projected from the year 2020. All of these rates were adopted effective January 1, 2020. Mortality rates for active members use the PUB-2010 Employees Mortality Table for public employees, teachers, and public safety members, as applicable for each member's employee group. The assumptions were adopted effective January 1, 2020.

## Summary of Actuarial Assumptions and Methods *(Continued)*

As of January 1, 2020



### Retired Member Mortality

Class of Member

#### Educators and Judges

Men	2020URSM (90%)
Women	2020URSF (90%)

#### Public Safety and Firefighters

Men	2020URSM (110%)
Women	2020URSF (110%)

#### Local Government, Public Employees

Men	2020URSM (110%)
Women	2020URSF (110%)

*2020URSM = Constructed mortality table based on actual experience of male URS retirees multiplied by given percentage*

*2020URSF = Constructed mortality table based on actual experience of female URS retirees multiplied by given percentage*

**f)** Mortality among disabled members is based on 115% of the PUB-2010 Disabled Retiree Table for general employees for males, and 125% of the PUB-2010 Disabled Retiree Table for general employees for females. The rates for males and females are also adjusted for future improvement in mortality using 80% of the ultimate rates from the published MP-2019 mortality scale from the year 2010.

**g)** Other demographic assumptions regarding retirement, mortality, disablement, and termination from employment are illustrated in the following actuarial schedules.

The retirement assumptions illustrated for the Noncontributory and Contributory Retirement Systems (and the Tier 2 Public Employees Retirement System) are for members eligible for unreduced retirement benefits. The retirement assumptions illustrated for the Public Safety, Firefighters, and Judges Retirement Systems are for members of the Systems who are eligible to retire with 30 years of service (35 years of service for Tier 2). For public employees the rates vary by age and eligibility for reduced or unreduced retirement. For Public Safety, Firefighters, and Judges the rates vary by age and service groupings.

Rates of assumed termination from employment are assumed to vary by years of service. All terminating members who are not eligible for vested benefits are assumed to withdraw their contributions immediately. Vested members are assumed to withdraw their contributions and forfeit the right to further benefits at the rates illustrated.

**h)** The Retirement Board uses the expected rate of return method for calculating the actuarial value of assets. This method is based on the total earnings of the co-mingled investments and spreads the excess/shortfall of actual investment returns over or under the expected return over five years. One-fifth of the excess/shortfall is recognized each year. The actuarial values of assets under this method were calculated and reported to us by the Systems' staff.

**i)** All of the actuarial assumptions were renewed or adopted by the Retirement Board in 2020, as recommended by the actuary. The assumptions for Tier 2 members are the same as the Tier 1 members, except for retirement rates.