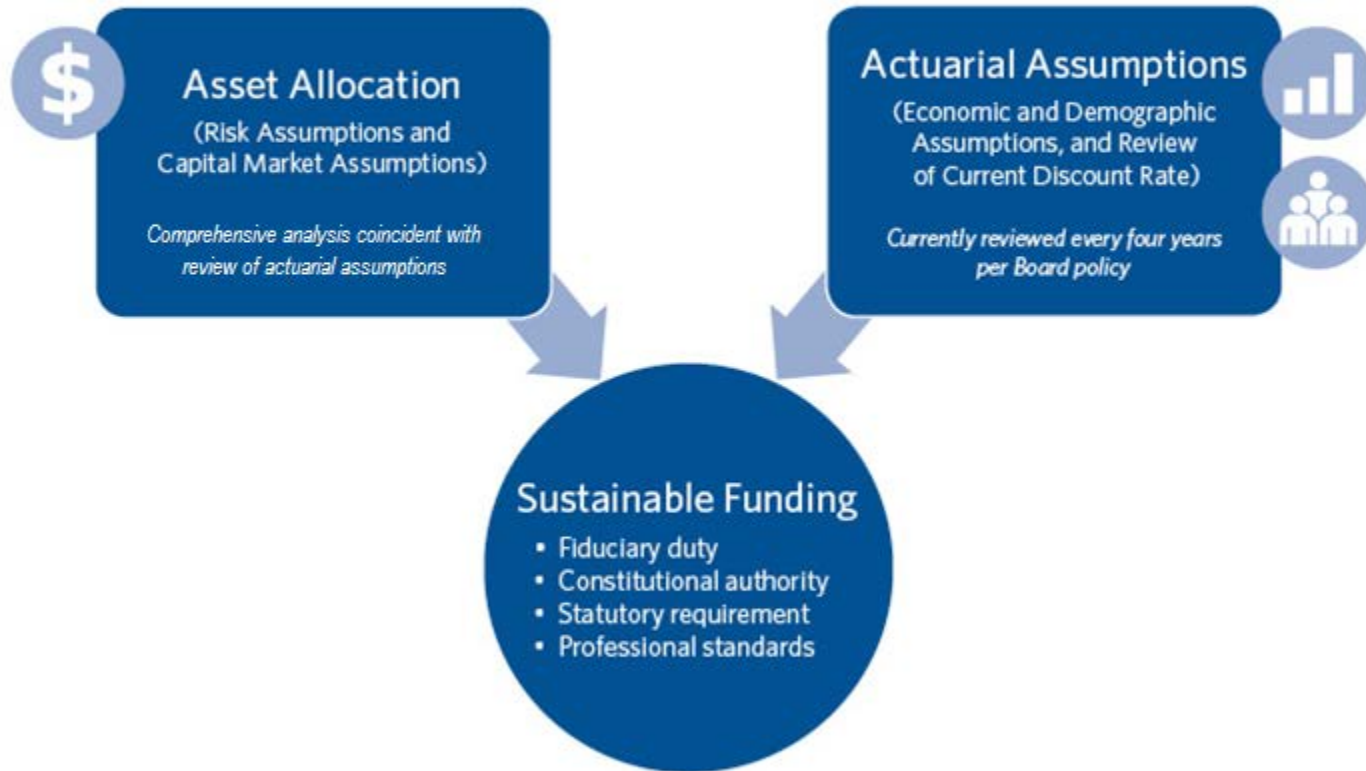




Experience Study & Actuarial Assumptions First Reading

November 14, 2017
Finance & Administration Committee

Why Are We Doing This Study Now?



Decisions Needed

- Two Types of Assumptions to select
 - Economic
 - Price inflation, wage inflation, payroll growth, investment return
 - Demographic
 - How long members work
 - What benefit will members receive (service retirement, disability retirement, death benefits, refund of contributions)
 - How long retirees live
 - Assumptions based largely on CalPERS experience

The Assumptions

Economic Assumptions

- Price Inflation – Expected annual increase in CPI-U
 - Reduce 0.25% from 2.75% to 2.50%
 - Two year phase-in (0.125% each) with discount rate phase-in
- Wage Inflation – Price inflation plus productivity increase
 - Reduce from 3.00% to 2.75% over two years
- Payroll Growth – Wage inflation plus/minus other factors
 - Reduce from 3.00% to 2.75% over two years

Economic Assumptions (continued)

- Long-term Expected Return on Assets
 - Used to determine the discount rate
 - Equal to price inflation plus real rate of return net of investment and administrative expenses
 - Expected real rate of return depends on asset allocation
 - Asset allocation outside the scope of the experience study

Demographic Assumptions

- Termination of Employment
 - Terminations with vested benefits
 - Higher contribution rates for most plans
 - No impact for State Industrial and Public Agency Police
 - Terminations with refund
 - Higher contribution rates for CHP and Public Agency Police
 - Lower contribution rates for Schools
 - Little or no impact for others

Demographic Assumptions

- Disability Retirement
 - Non-industrial disability retirement
 - Slightly lower contribution rates for most plans
 - No impact for Public Agency Police or CPO
 - Industrial disability retirement
 - Lower contribution rates for CHP and Public Agency Fire
 - Little or no impact for others

Demographic Assumptions

- Retirement Assumption
 - Higher contribution rates for State POFF and CHP
 - Lower contribution rates for PA Police, State Miscellaneous and Schools
 - Little or no impact for others

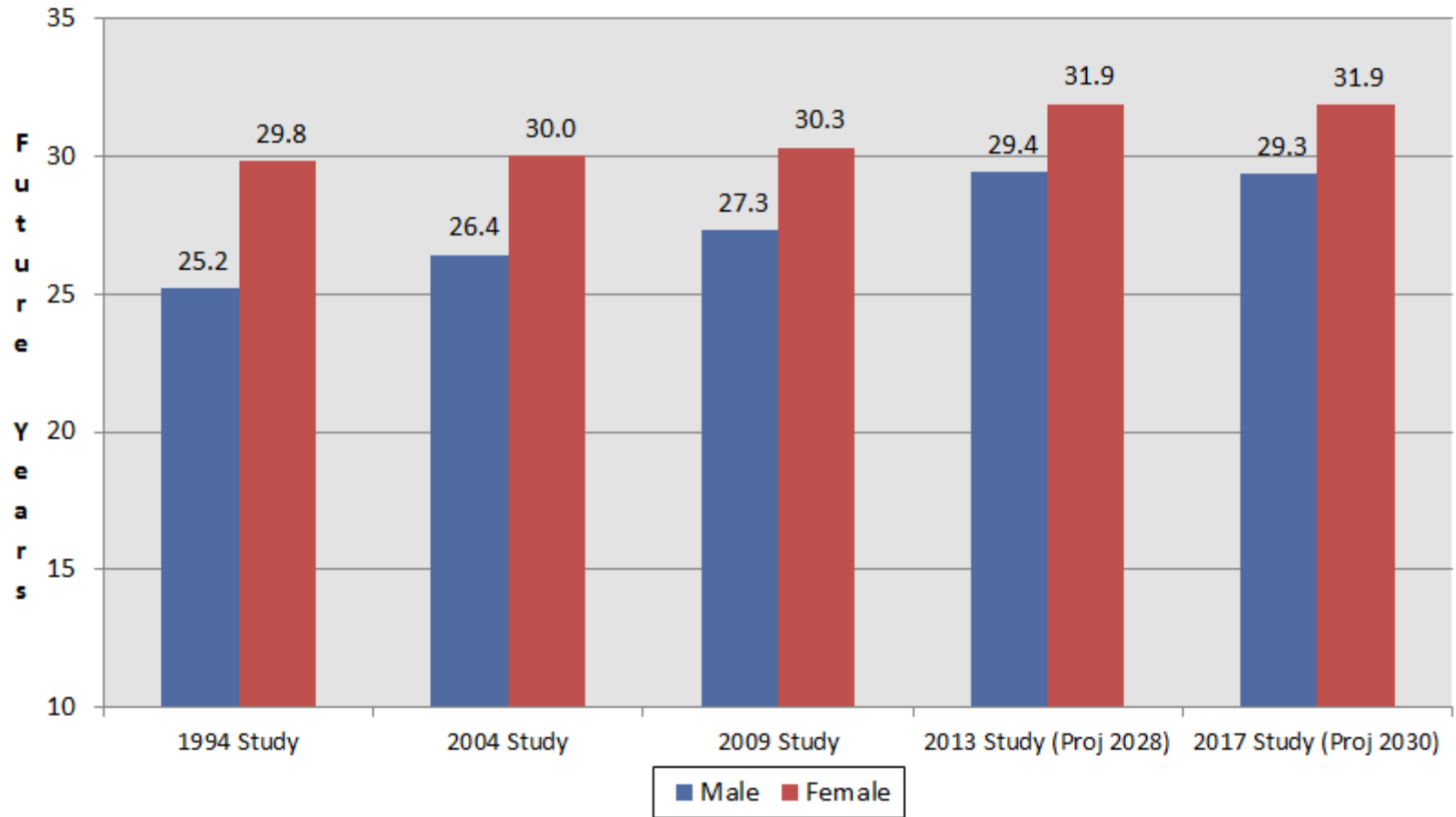
Demographic Assumptions

- Salary Scale
 - Higher contribution rates for CHP, State and PA Safety and Schools
 - Little or no impact for others

Demographic Assumptions

- Mortality
 - Proposed assumption based on CalPERS experience with 15 year static projection using 90% of Scale MP-2016
 - The proposed mortality rates are moderately lower at ages 50 through 62 and over age 91 for males and lower at ages 50 through 55, 68 through 77 and over age 92 for females, while moderately higher at the other ages.
 - Inclusion of expected future mortality improvement
 - Slightly higher contribution rates for safety groups and lower for miscellaneous

Male and Female Life Expectancy at Age 55 for Healthy Recipients



Mortality Assumption

Life expectancy (in years) for service retirees

Attained Age	Current Assumption (includes 20 year projection w/ Scale BB)		Proposed Assumption (includes 15 year projection w/ Scale MP-2016)	
	Male	Female	Male	Female
50	33.5	36.1	33.7	36.2
55	29.4	31.9	29.3	31.9
60	25.2	27.5	25.0	27.5
65	21.1	23.1	20.9	23.2
70	17.0	18.9	16.9	18.9

Impact on PEPRA Normal Cost

- Recommended assumptions will increase normal cost for some groups and decrease for others
 - The impact ranges from -1.0% to +0.1%
 - See attachment 2 page 2
 - Will most likely not trigger a change to the member rates
- Planned change in discount rate (7.5% to 7.0%) has a larger impact on the Normal Cost
 - PEPRA plans expected to see increases in normal cost more than 1% of payroll (2% to 3% for safety) over three years

Next Steps

- December Board Meeting
 - Investment Committee adopts new asset allocation targets and ranges
 - Board adopts new actuarial assumptions

Questions