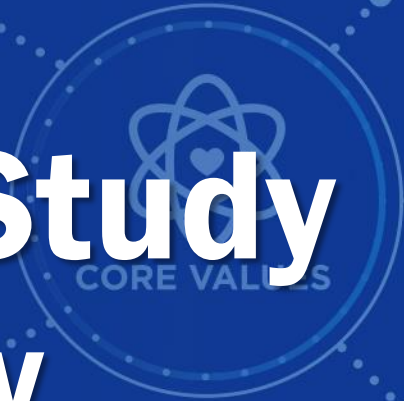




Experience Study Overview

ORSC Presentation August 12, 2021



Experience Study



- Actuarial assumptions and methods are used to measure and allocate future costs.
- It is important to have reasonable and realistic actuarial assumptions.
- Actuarial experience study assesses the reasonableness of the actuarial assumptions by comparing what actually happened during the study period (7/1/2015 through 6/30/2020) with what was expected to happen.
- Assumption changes are recommended if actual experience differs significantly from expected experience and that pattern is expected to continue.
- Assumption changes may also be recommended if the underlying circumstances have changed and/or are expected to be materially different.
- Actuarial assumptions reflect what is expected to happen over an extended period – 30 years – not what is expected to happen next year or in any one year.

Experience Study



- Two basic assumption categories
 - Economic assumptions
 - Demographic assumptions
- Economic assumptions estimate future economic outcomes based on mixture of past experience and future expectations.
 - Actuarial standards expressly advise the actuary not to give undue weight to recent experience.
- Assessment of demographic assumptions is grounded in comparing actual experience to expected results and assessing whether any deviation is expected to continue.

Economic Assumptions



- Price Inflation
- Investment Return
- Wage Inflation
- COLA
- Total Payroll Growth

Economic Assumptions



- Price Inflation

- Used as component for investment return assumption, wage inflation, payroll growth assumption.
- Reference point for COLA assumption.
- Was 3.0%.
- Current economic forecasts and bond market predict lower inflation over the next 30 years than long term historical average. Expectation is closer to experience over last 30 years (2.27%).
- New assumption is 2.4%.

Economic Assumptions



- Investment Return

- Most impactful assumption on valuation results.
- Comprised of price inflation and assumed real rate of return, net of investment and administrative expenses.
- Reflects most current asset allocation model.
- Was 7.50%.
- New assumption is 7.0%.

Economic Assumptions



- Wage Inflation

- Combination of price inflation and promotion/merit increases.
- Old assumption was 3.50%, which was 0.50% above the previous price inflation.
- New assumption is 3.25%, which is 0.85% above new price inflation assumption of 2.4%.

Economic Assumptions



- COLA

- Was 2.5% based on previous price inflation assumption and statutory cap.
- With new price inflation assumption of 2.4%, modeled average COLA over 30 years would be 1.85%.
- New assumption is 2.0%.

Economic Assumptions



- Total Payroll Growth

- Previous assumption was 3.50%.
- Experience over last 5+ years has been below 2%.
- Projected to continue to be less than 2%.
- New assumption is 1.75%.






Economic Assumptions



Item	Previous	Revised
Price Inflation	3.00%	2.40%
Investment Return	7.50%	7.00%
Wage Inflation	3.50%	3.25%
COLA	2.50%	2.00%
Total Payroll Growth	3.50%	1.75%

Economic Assumptions



Item	6/30/2020 Valuation	Revised	Impact on Funding Ratio
Price Inflation	3.00%	2.40%	
Investment Return	7.50%	7.00%	
Wage Inflation	3.50%	3.25%	
COLA	2.50%	2.00%	
Total Payroll Growth	3.50%	1.75%	

Demographic Assumptions



- Rates of Withdrawal
- Rates of Disability Retirement
- Rates of Retirement
- Rates of Pre- and Post-Retirement Mortality
- Rates of Salary Increase

Demographic Assumptions



- Rates of Withdrawal
 - Number of expected separations from service that occur prior to attaining eligibility for a retirement benefit.
 - Previous assumption overestimated number of withdrawals.
 - New assumption reflects actual experience.
- Rates of Disability Retirement
 - Percentage of employees expected to become disabled.
 - Actual experience was less than expected.
 - Rates tweaked but substantial margin for error maintained since impact of a disability can be meaningful.

Demographic Assumptions



- Rates of Retirement
 - Projects percentage of employees expected to retire in upcoming year.
 - Assumption overestimated retirement liability for certain groups and underestimated for others.
 - Assumption tweaked to better align with experience.
- Rates of Pre- and Post-Retirement Mortality
 - Expected mortality experience by status of active member or retiree.
 - Previous assumption slightly overestimated for some categories and slightly underestimated for others.
 - Assumption tweaked to better align with experience.
- Rates of Salary Increase
 - Previous assumption overestimated expected salary increases.
 - Assumption adjusted to reflect experience.

Results of Assumption Changes



Item	6/30/2020 Valuation	Revised
Funded Status (Basic Benefits)	71.49%	70.87%
Unfunded Accrued Liability	\$5,997,074,169	\$6,181,950,509
Amortization Period	24	27
Employee Contribution Rate	10%	10%
Employer Normal Cost Rate	.06%	1.95%
Employer Amortization	10.86%	11.99%

Health Care Assumptions



- Currently use 7.50% investment return and 3.50% wage growth assumption for accounting solvency projections. Currently use 5.25% investment return for Actuarially Determined Employer Contribution (ADEC), reflecting benefits are projected to be primarily pay-as-you-go.
- Use 7.00% investment return and 3.25% wage growth assumption for GASB 74/75 accounting solvency projections and funding purposes as assets invested same as Basic Benefits Plan.
- Participation assumptions
 - Actual experience exhibits lower pre-65 participation and higher post-65 participation for certain years of service brackets
 - Actual experience shows lower than expected participation of spouses.

Item	Previous	Revised
Funded Status	26.86%	38.23%
Solvency Period	2053 (32 years)	2049 (28 years)