



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*

# Omaha School Employees Retirement System Overview of 2021 Actuarial Projects

**Presented by: Cavanaugh Macdonald Consulting**

**Date: February 4, 2021**



# Today's Discussion



- Overview and general discussion of projects
  
- Actuarial projects this year include:
  - January 1, 2021 actuarial valuation (funding)
  - GASB 67 and 68 reports (accounting)
  - Quadrennial experience study report
  
- Proposed timeline

# Actuarial Funding Valuation



- Valuations are prepared every January 1 (September 1 prior to 2017)
  - Evaluate the financial health of the retirement system by measuring assets and liabilities
    - Funded ratio
    - Unfunded actuarial accrued liability
  - Determine the actuarial contribution rate for the current year using the Board's funding policy
  - Compare actuarial and statutory contribution rates
    - Calculate any additional contribution due from the School District for current fiscal year
  - Projections of future valuation results including funded status and expected contributions

# GASB (Accounting) Reports



- Two reports are issued: GASB 67 and GASB 68
- Information is used for financial reporting
  - GASB 67: used by the system (OSERS)
  - GASB 68: used by (paid by) the employer (School District)
- Measurement Date is fiscal year end (August 31)
- The January 1 funding valuation is used to calculate liabilities by rolling them forward from January 1 to August 31
- Audited assets for the fiscal year are used
- Net Pension Liability and Pension Expense are key results in these reports

# Experience Study



- By statute, required every four years
  - Study period will be calendar years 2017 through 2020
  - January 1, 2021 valuation must be performed in order to capture demographic experience during calendar year 2020
  - Important to the valuation process so we would still recommend it be performed even if not required statutorily
  
- Review of all actuarial methods and assumptions used in the valuation
  - Funding Policy includes the actuarial cost method, asset smoothing method and UAL amortization method
  - Assumptions reviewed include both economic and demographic assumptions

# Actuarial Assumptions



- Assumptions are just that – assumptions
  - Assumptions are used to bridge the gap between what we know on the valuation date and what will happen in the future.
  - Valuation projects liabilities and provides a funding plan for allocating those costs over time. It does not change the ultimate, actual cost of benefits.
  - To the extent actual experience differs over time from the actuarial assumptions, actual costs will also differ from projected costs.
  - Goal is for contribution rates to be relatively stable, which happens to the extent assumptions closely anticipate actual experience.
  - If assumptions are set too high or too low compared to actual experience, funding of the Plan's costs is shifted to earlier or later years than planned.

# Actuarial Assumptions



- No “correct” assumptions
  - Blend of both art and science
  - Range of acceptable assumptions – choose “best estimate” based on current information
  - Professional judgment involved (subjective)
  
- Assumptions are long-term estimates
  - Experience emerges short term (each year) and is evaluated over 4-year periods in each experience study
  - Year to year and period to period fluctuations are expected
  
- Can create challenges in interpreting data and assigning credibility

# Purpose of Experience Study



- Provides the basis for analyzing how well the existing assumptions modeled actual experience, which can be used to develop any recommended changes
- Actuary's role is to perform the analysis and make recommendations for each assumption
- As fiduciaries, the Board is responsible for the selection of actuarial assumptions
  - Board can adopt all, none, or some of actuary's recommendations

# Experience Studies



- Compare actual experience during study period with expected results based on current assumptions
  
- Past experience provides strong guidance for some assumptions (like mortality) and weak guidance for others (like investment return)
  
- Both science and art
  - Objective (science): number crunching of actual and expected numbers of members and rates of occurrence
  - Subjective (art): interpreting the information and deciding on appropriate changes



# Types of Assumptions

## What Are They?

### Economic

- Price Inflation
- COLA
- Investment Return
- Wage Inflation
- Individual Salary Increases
- Payroll Growth

### Demographic

- Mortality
- Retirement
- Disability
- Termination

## Who Selects Them?

### Economic

- Board
- Actuary
- Staff
- Other Advisors

### Demographic

- Board Approves
- Mostly Actuary since data driven

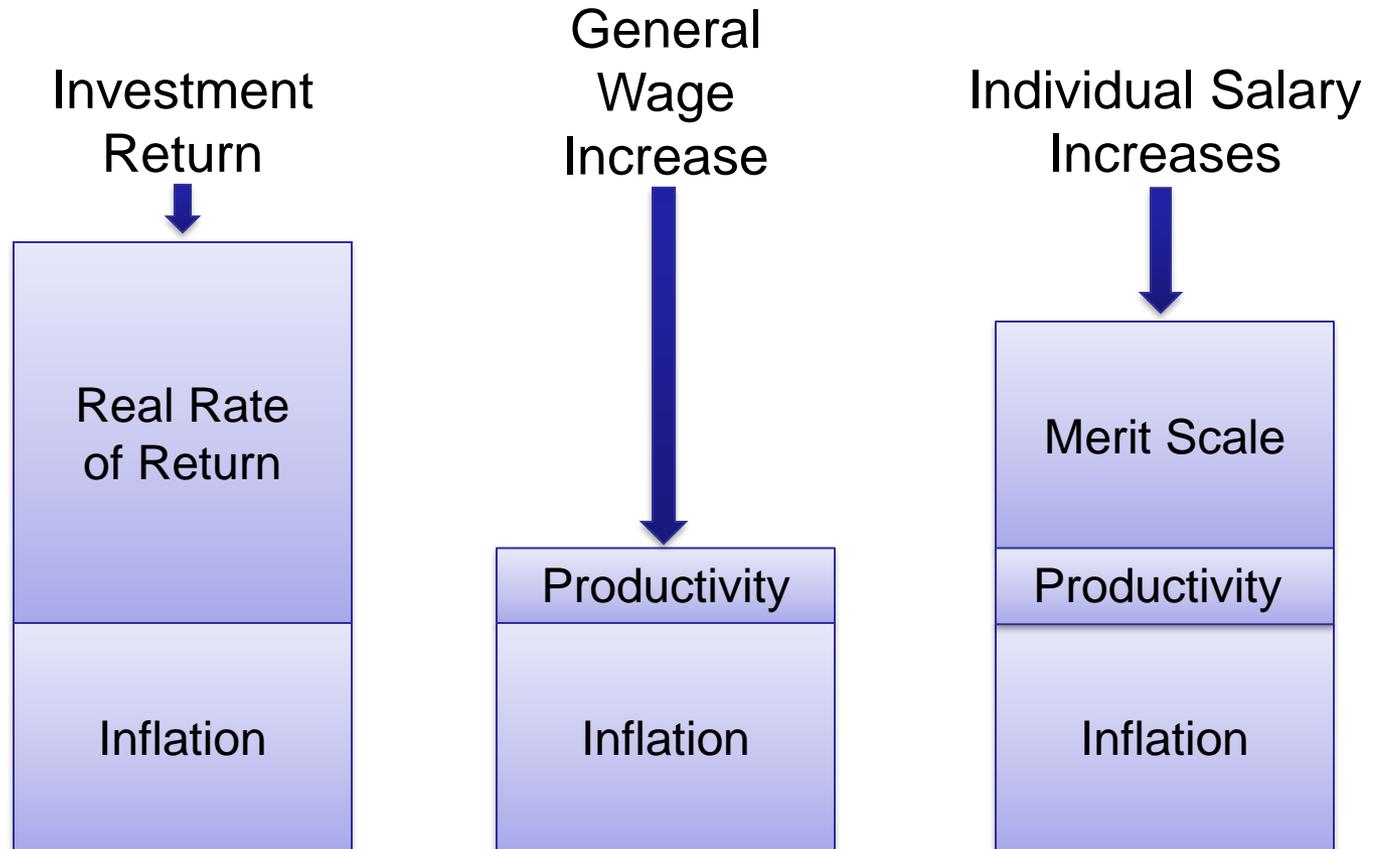
These are general types of assumptions, not necessarily OSERS' specific assumptions.

# Actuarial Standards of Practice (ASOP)



- Issued by the Actuarial Standards Board
- Credentialed actuaries must follow ASOPs
- Provide guidance to actuaries in the selection of assumptions used in valuing pension benefits
  - Economic assumptions (ASOP 27)
  - Demographic assumptions (ASOP 35)
- Foundation of all the work performed in an experience study

# Building Block Methodology



Note: inflation assumption and productivity must be consistent in all assumptions.

# OSERS Current Economic Assumptions



	Will be used in 1/1/2021 Valuation
Price inflation	2.75%
Real return	<u>4.75%</u>
Investment return	7.50%
Price inflation	2.75%
Real wage increase	<u>0.50%</u>
General wage increase	3.25%
Payroll growth	3.25%

# General Cost Impact of Assumption Change



- General cost impact of each change **in isolation**

Assumption	Change in Assumption	Typical Effect On Liabilities/Costs
Mortality	Decrease (longer life expectancy)	Increase
Retirement	Retire Later	Decrease
Disability	Lower Disability	Decrease
Termination	Increase	Decrease
Refund Election	Increase (more refunds)	Decrease

# Most Common Approaches for Developing Assumptions



Assumption	Basis
Mortality	Rates vary (increase) by age and gender
Retirement	Rates vary by type of retirement (early, normal) and by age and/or age/service
Disability	Rates vary (increase) by age
Termination	Rates vary with years of service. Higher rates in earlier employment period.
Refund Election	Can vary with age or years of service. Usually lower probability of refund if older or more years of service.

# Recent Mortality Studies



- New mortality tables released by Society of Actuaries early in 2019
  - Based exclusively on public plan data – first time ever!
  - Different tables for different jobs, i.e., teachers, public safety, general employees
  - Less “adjusting” is expected to be necessary with the Pub 2010 Tables as the basic mortality experience should be a better fit than the previous mortality tables which were developed using corporate plan data
  
- Will consider the new Pub 2010 Tables in this experience study, but the fit of the table to actual experience is what is most important
  - Ways to adjust mortality rates include:
    - ✓ Age setback or set forward
    - ✓ Adjustments for benefit levels (above/below median)

# Projected Timeline



- February 2021: 1/1/21 census data to CMC
- April 2021: asset information to CMC
- May 2021 Board meeting: valuation results presented
- June - August 2021: experience study analysis and recommendations developed
- September 2021 Board meeting: presentation of results to Board
- October/November 2021: Follow up on any outstanding issues. Board action to adopt the set of assumptions for the January 1, 2022 valuation
- October 2021: GASB 67 and 68 reports done