

# Preliminary Comments on Actuarial Audit For LEOFF 2 Board

Daniel Wade, FSA, EA, MAAA

Gary Deeth, ASA, EA, MAAA

JUNE 15, 2022



# Agenda

- Your Milliman Team
- History
- Audit Process
- Reasonableness of Assumptions and Methodology
- Data and Assets
- Summary

# Your Milliman Team

- Nick, Daniel, and Gary
  - Have worked for public plans for many years
  - Serve some of the nation's largest public plans including Oregon PERS, Florida Retirement System, and CalSTRS



Gary Deeth



Daniel Wade



Nick Collier

# History

- Biennial audits
  - Previous audit in summer 2020 covered demographic experience study and biennial actuarial valuation
    - Milliman opined that actuarial work was reasonable and appropriate
      1. Good matches on liabilities and contribution rates
      2. Package of assumptions was reasonable
      3. OSA made one minor change prior to development of final results based on Milliman recommendation
  - This year performed a high-level review of 2021 Economic Experience Study

# Audit Process

- Goals
  - Verify financial conditions of systems are accurately reported
  - Confirm calculated contribution rates are accurate based on results of the valuation
  - Evaluate actuarial communication
- Replication audit
  - Most comprehensive approach
  - All calculations are independently replicated based on the same census data, assumptions, and methodology

## Audit Process (continued)

- Preliminary discussions with OSA
- Gather necessary information
- Data
  - Assess accuracy
  - Test for missing elements
  - Compare data provided by DRS to data used by OSA
- Review economic assumptions and methodology
- Actuarial Assets - independent replication

## Audit Process (continued)

- Valuation liability calculations
  - Check individuals
  - Perform full parallel valuation
  - Compare results to OSA
  - Reconcile differences (if any)
- Valuation funding calculations
  - Independent reconciliation of contribution rates
- Review of reports
  - Appropriate information and scope?
  - Easy to understand and find information?
  - Consistent with Actuarial Standards of Practice?

## Reasonableness of Assumptions – Investment Return Rate

- 7.0% return assumption is reasonable based on WSIB capital market expectations
  - OSA's 25-year simulations had a median return of 6.9% (based on WSIB simulated returns)
  - Decrease in investment rate of return assumption consistent with WSIB's declining return expectations
- Milliman modeled expected return
  - Based on Milliman's 12/31/2021 capital market assumptions and WSIB's target asset allocation, we project a 20-year median return of 6.85% per year and 25-year median return of 7.01%
- Bottom line
  - Move to 7.00% supported by models



## Reasonableness of Assumptions – Inflation & Wage Growth

- LEOFF 2 uses 2.35% for national inflation and 2.75% for WA state inflation
  - National inflation used as building block for investment return assumption
  - WA state inflation used as building block for salary and payroll increases
- Recent Inflation – 8.6% May 2021 to May 2022. Has increased since OSA study in September.
- Historical inflation – depends on when history begins

Horizon	10-Year	20-Year	50-Year	95-Year
Historical Inflation	2.1%	2.3%	3.9%	2.9%

- Breakeven inflation implied by TIPS yields in early June 2022 (10-year: 2.73% / 30-year: 2.47%)
- Long-term projection from 2022 Trustees Report for Social Security Administration is 2.40%
- Real wage growth decreased from 0.75% to 0.50%
  - Reasonable, but continue to monitor in light of recent tightening of labor market

## Membership Data

- Reviewed data supplied by DRS
  - Reviewed for reasonableness
  - Confirmed that all necessary information was included
- Reviewed data used in OSA's valuation
  - Performed independent data editing
    - Edits made for outliers and salary adjustments made for members who accrued less than one year of service.
    - Compared to preliminary participant data summary posted on OSA's website.
  - Conclusion
    - Data used by OSA in valuation looks complete and consistent with data supplied by DRS.

## Membership Data (continued)

LEOFF 2			
Data as of July 1, 2021			
	OSA	Milliman	Ratio OSA/Milliman
<b><i>Active Members</i></b>			
Total Number	18,683	18,685	100.0%
Total Salaries (millions)	\$ 2,289	\$ 2,289	100.0%
Average Age	42.3	42.3	100.0%
Average Service	13.1	13.1	100.0%
Average Salary	\$ 122,513	\$ 122,507	100.0%
<b><i>Retirees and Survivors</i></b>			
Total Number	7,574	7,575	100.0%
Average Monthly Pension	\$ 4,684	\$ 4,689	99.9%
<b><i>Terminated Members</i></b>			
Total Number Vested	1,115	1,116	99.9%
Total Number Non-Vested	2,626	2,627	100.0%

# Actuarial Value of Assets

- Smoothing method
  - Layered recognition of gains and losses, with length of recognition based on deviation from expectation (maximum of eight years)
  - Data provided by WSIB and DRS
    - Totals and breakdown by Plan taken from DRS data
    - Monthly cash flows taken from WSIB data.
    - End of Year total market values do not perfectly match between the two sources.
- Independent calculation by Milliman based on sources of data
- Asset method and calculations are reasonable

# Actuarial Value of Assets (continued)

June 30, 2021 actuarial value of assets before adjustment for transfer of Benefit Improvement Account into the LEOFF 2 trust under SHB 1701

OSA	Milliman
\$16,045 Million	\$16,044 Million

# Actuarial Liabilities

- In progress

## Summary

- Audit is in progress
- No issues to date
- New economic assumptions are reasonable
- Approach
  - Independent verification of results
  - Work with OSA to see if there are areas the work product can be improved
  - If any material differences exist, communicate “why” to LEOFF 2 Board
- Does the LEOFF 2 Board have any specific issues Milliman should address?

# Your Comments?





## Caveats and Disclaimers

Milliman's work product was prepared exclusively for the LEOFF 2 Board for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning OSA and DRS operations, and uses DRS data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.