

## 2022 LEOFF 2 Actuarial Valuation Results and Projection Analysis

### Presentation to: LEOFF Plan 2 Retirement Board

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### Today's Presentation

- 2022 Actuarial Valuation Report (AVR) results
  - Data, Assets, Asset Smoothing, Contribution Rates
- Projection Analysis and Stressing Testing
- Informational – No Board action needed today



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## Part 1: 2022 AVR

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### Difference Between Valuations and Projections

- Valuations
  - Deterministic (best estimate results)
  - Point-in-time snapshot of current plan measures
- Projections
  - Deterministic or stochastic (variable results)
  - 30 years of future valuations
  - Forecast of plan measures

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## Participant Data

LEOFF 2		
	2021	2022
<b>Actives</b>		
Headcount	18,683	18,625
Average Annual Salary	\$122,500	\$129,100
Average Age	42.3	41.7
Average Service	13.1	12.4
<b>Annuitants</b>		
Headcount	7,574	8,597
Average Annual Benefit	\$56,200	\$58,900
Actives to Annuitants	2.5	2.2

## Change in MVA

LEOFF 2	
<i>(Dollars in Millions)</i>	
<b>2021 Market Value</b>	<b>\$19,637</b>
Contributions	415
Disbursements	(499)
Investment Earnings*	37
Other Revenue**	22
Adjustments***	1
<b>2022 Market Value</b>	<b>\$19,612</b>

\*Investments returned 0.21% in FY 2022.

\*\*Includes additional annuity purchases and service credit purchases.

\*\*\*Adjusted to reflect the change in the estimated transfer of the BIA, measured on June 30, 2022, into the LEOFF 2 trust under SHB 1701.

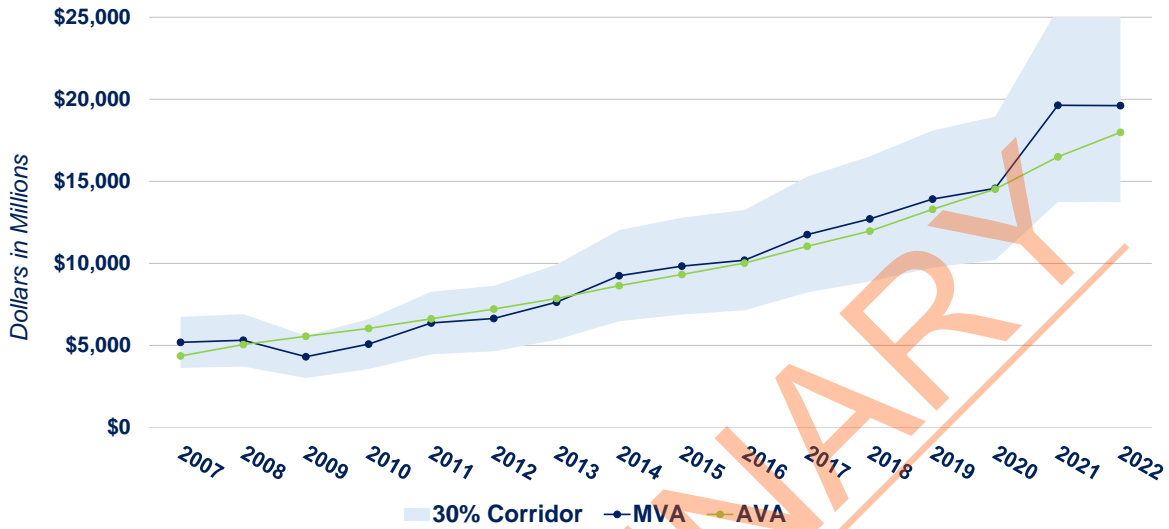
## Calculating 2022 AVA

Calculation of Actuarial Value of Assets				
LEOFF 2				
<i>(Dollars in Millions)</i>				2022
<b>MVA</b>				<b>\$19,612</b>
Plan Year Ending	Return on Assets	Years Deferred	Years Remaining	Amount Deferred*
6/30/2022	0.21%	7	6	(1,112)
6/30/2021	31.65%	8	6	2,643
6/30/2017	14.14%	7	1	97
<b>Total Deferral</b>				<b>1,628</b>
<b>AVA**</b>				<b>\$17,985</b>

\*Amount of asset gains and (losses) left to recognize, or apply, in future valuations.

\*\*AVA can never be less than 70% (\$13,729) or greater than 130% (\$25,496) of the MVA.

## Actuarial Value of Assets Less Volatile than Market Value



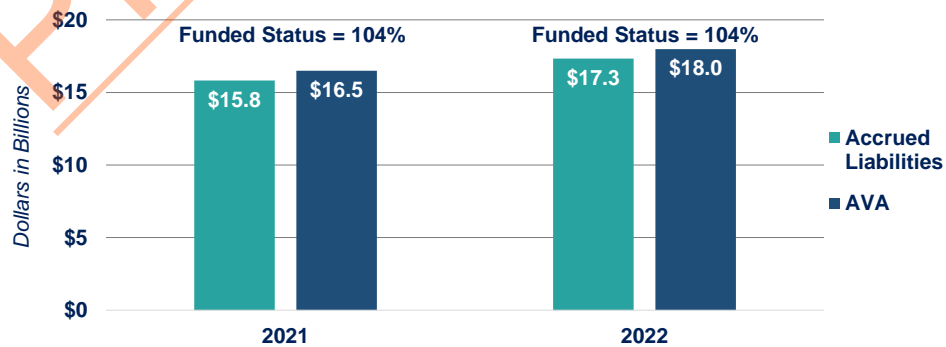
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## Liability and Funded Ratio Change from Last Valuation

LEOFF 2			
(Dollars in Millions)	2021	2022	Difference
Present Value of Future Benefits	\$21,075	\$23,018	\$1,943
Accrued Liability	\$15,819	\$17,336	\$1,518



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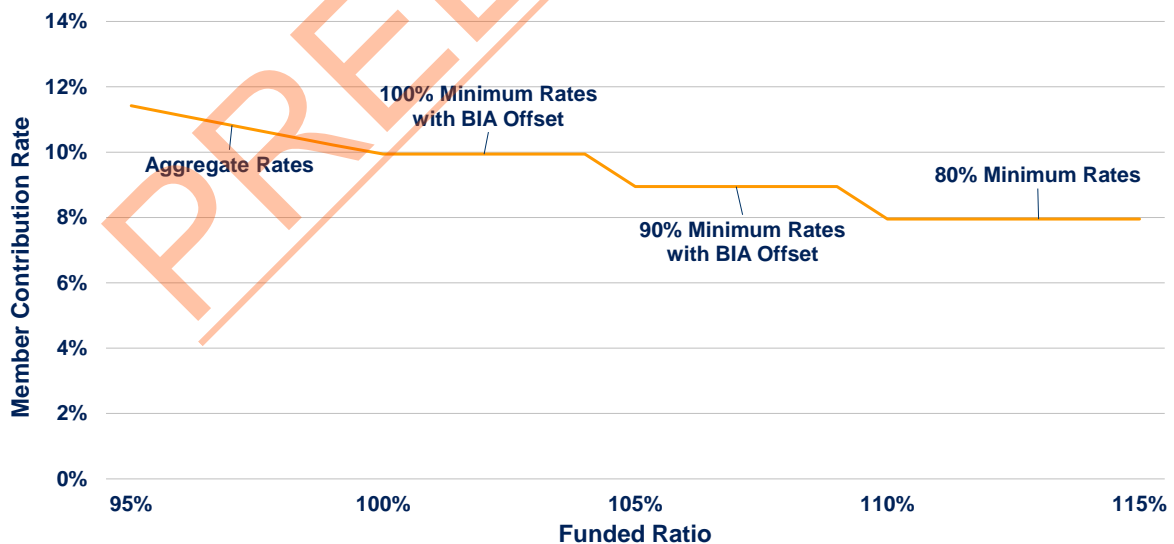
## Currently Adopted Contribution Rates

LEOFF 2 Contribution Rates	
	2021
Member	8.53%
Employer	5.12%
State	3.41%

- The Board adopted the current contribution rates for the 2023-25 and 2025-27 Biennia
  - Adopted rates for the 2025-27 Biennium may still be updated with the 2023 rate-setting valuation next summer
- 2023 valuation contribution rates will be calculated using funding policy from SHB 1701
  - Will include BIA rate offset, if applicable, calculated by OSA

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## Minimum Rate Policy Illustration



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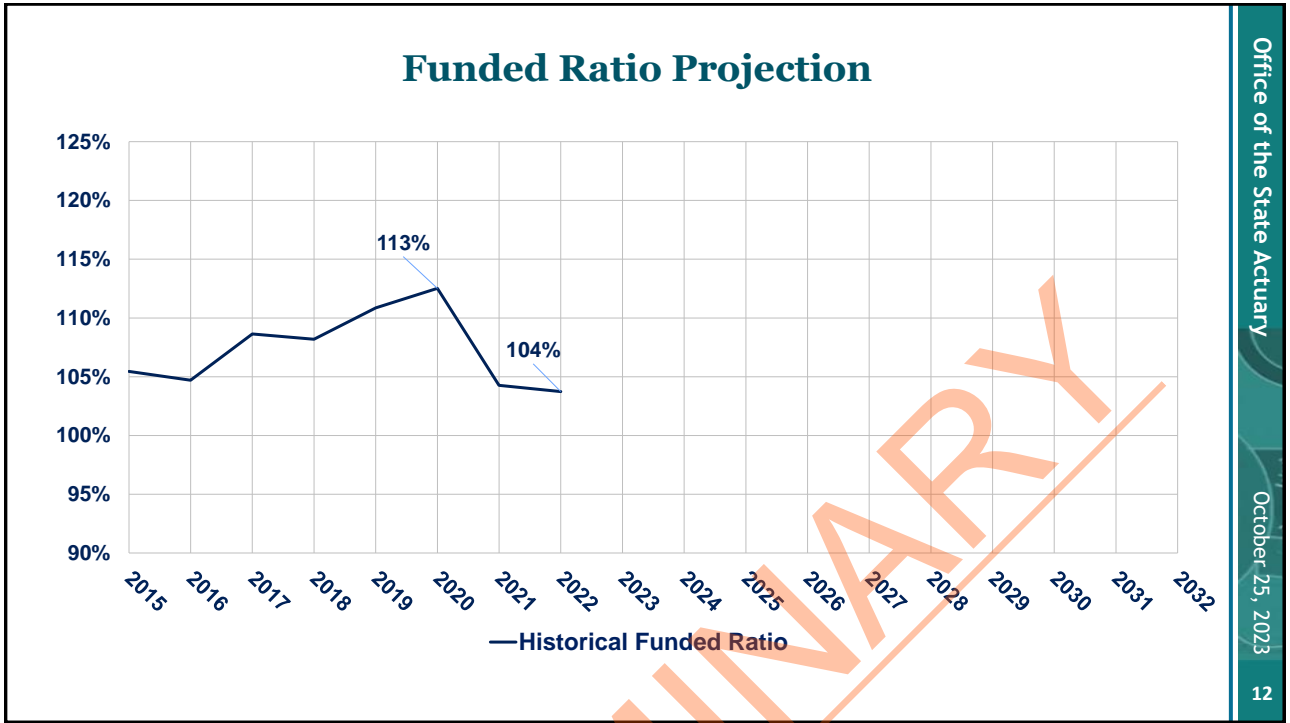
## Part 2: Projection Analysis and Stress Testing

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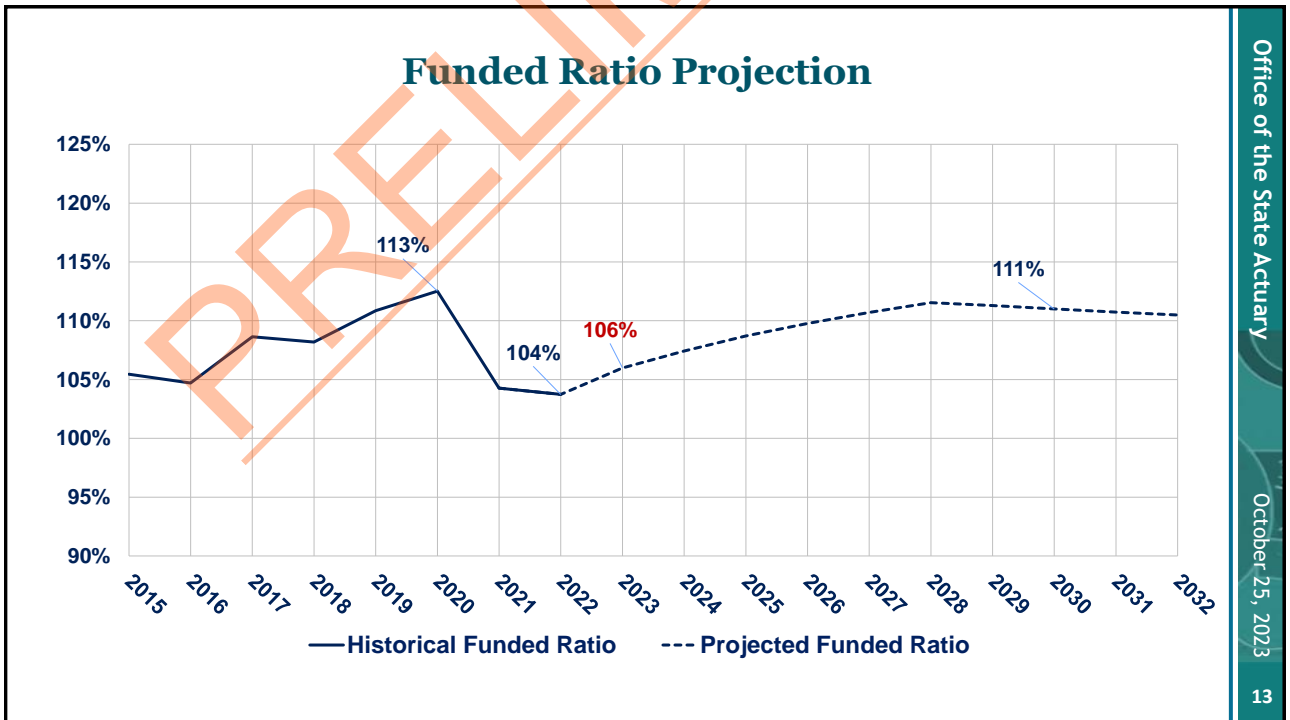
### What Are Projections?

- Model produced by OSA to forecast the results of future valuations
- All future experience occurs as expected
  - Assumptions regarding future new members joining the plan
  - Includes actual June 30, 2023, investment return of 7.0%
- Stochastic projections model variability of investment earnings assumption
  - Includes 2,000 different scenarios of investment earnings
  - Investment return variability provided by WSIB
- Scenario stress testing provides plan impact for specific sequence of investment returns

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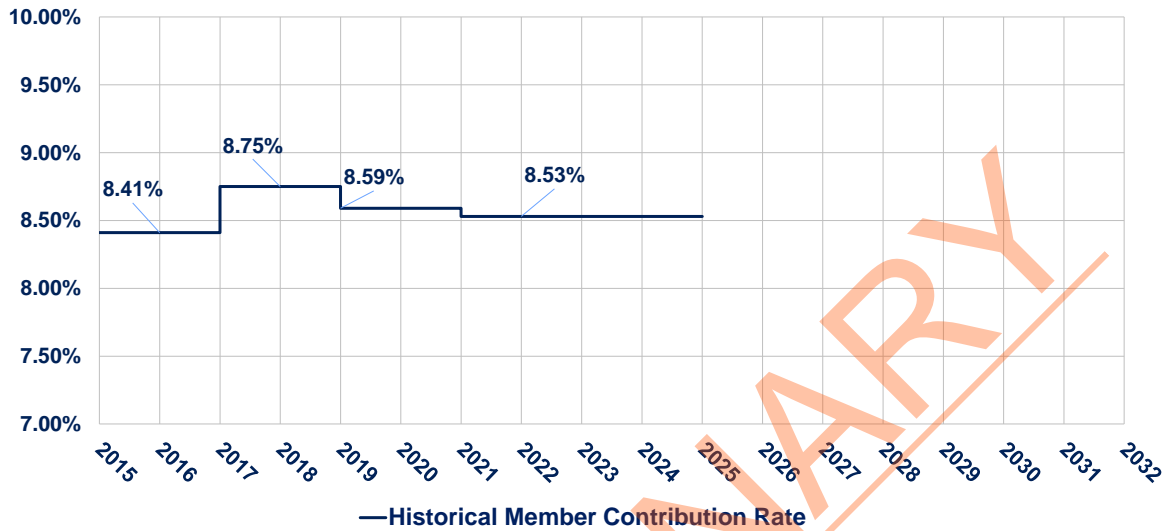
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## Member Contribution Rate Projection

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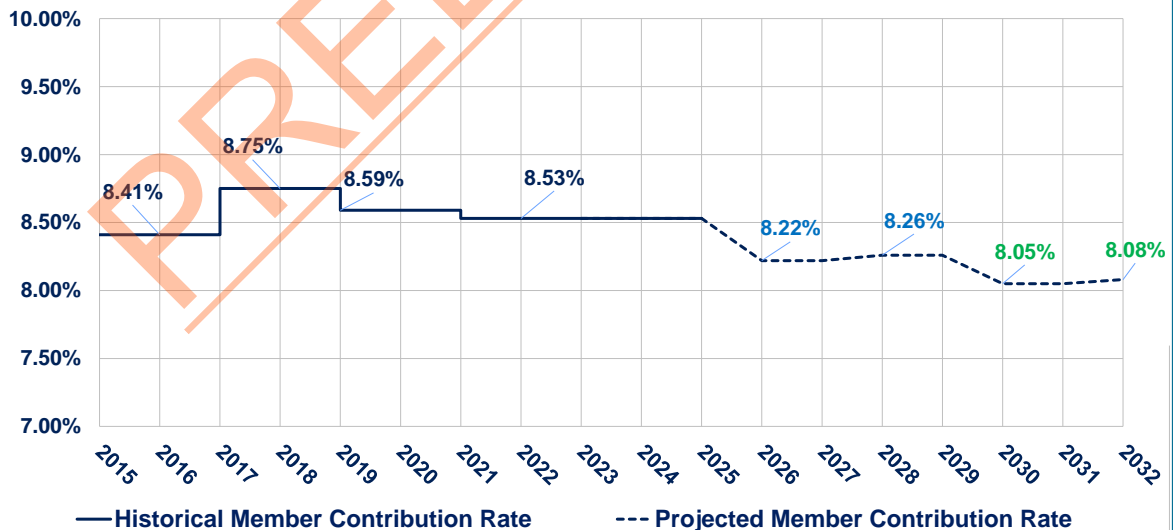
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## Member Contribution Rate Projection

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## Scenario Stress Testing

Stress Test Investment Returns			
Fiscal Year	Expected	Scenario 1	Scenario 2
2024	7.0%	0%	6.0%
2025+	7.0%	7.0%	6.0%

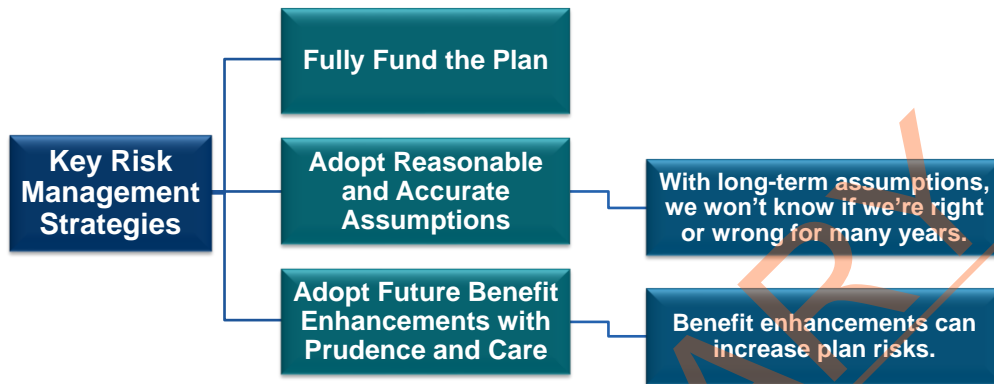
- **Scenario 1 – Shock Investment Return**
  - 2024 investment return of 0%
  - 7.0% return assumed for 2025 and beyond
- **Scenario 2 – Sustained Lower Investment Return**
  - 6.0% investment assumed return for 2024 and beyond
  - The plan assumed return remained unchanged at 7.0%

## Stress Test Results

Member Contribution Rates			
Biennium	Expected	Scenario 1	Scenario 2
2023-25	8.53%	8.53%	8.53%
2025-27	8.22%	8.22%	8.22%
2027-29	8.26%	8.26%	8.26%
2029-31	8.05%	8.30%	8.30%
2031-33	8.08%	9.34%	8.33%
2033-35	8.12%	9.39%	9.39%

- **Green** rates equal 80% minimum rate
- **Blue** rates equal 90% minimum rate with BIA offset
- **Red** rates equal 100% minimum rates with BIA offset

## Managing Pension Risk



## Summary

- The plan is considered healthy
  - Funded ratio decreased but still exceeds 100%
  - AVA is deferring over \$1.6 billion
  - Expect continued funded ratio improvement as deferred assets are recognized
- Contribution rates are expected to decrease over the next few biennia as funded ratio rises
- Stress test scenarios resulted in higher contribution rates, but funded ratio stayed near 100%
- The 2023 AVR results will be available next summer

**Questions? Please Contact: The Office of the State Actuary**

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**Thank You**



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## Disclosure

- This presentation is based on the [2022 AVR](#) and [Projections Model](#). Please see the links above for assumptions, methods, and data used to produce the results contained in this presentation.
- We prepared this presentation to inform LEOFF Plan 2 Board meeting discussions of the 2022 AVR and Projections Model results. Please do not use the results in this presentation for other purposes.
  - Please replace these results with updated results when available.
- Future contribution rates and funded ratios may deviate significantly from the projection results and stress testing presented here.
- Lisa A. Won, ASA, FCA, MAAA served as the reviewing and certifying actuary for the projection analysis in this presentation and meets the qualification standards of the American Academy of Actuaries to render the actuarial opinions provided.

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