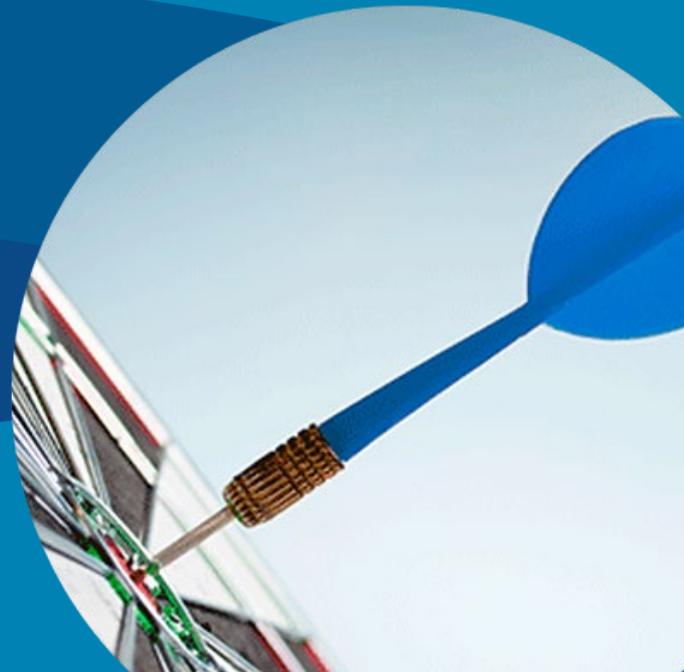




Bay County Employees' Retirement System December 31, 2022 Actuarial Valuations

**Board of Trustees Meeting
November 14, 2023**



Agenda

- Current Events
- Actuarial Valuation Process
- Highlights of 2022 Bay County Actuarial Valuations
- Questions

CURRENT EVENTS



Actuarial Standards “ASOPs” Generally

1

Actuarial Standards Board (ASB) develops standards for work in various actuarial practice areas (Life, Health, Pension, etc.)

Our work for the Bay County Retirement Systems (BCERS) must follow actuarial standards

2

Main Pension ASOPS

- ASOP 4: Measuring Pension Obligations
- ASOP 27: Selection of Economic Assumptions
- ASOP 35: Selection of Demographic and other non-economic Assumptions
- ASOP 44: Selection and use of Asset Valuation Methods
- ASOP 51 Assessment and disclosure of Risk

➔ Today's discussion focuses on ASOP 4

Summary of Notable Changes to ASOP 4

Point 1

Actuaries now must calculate and disclose a reasonable Actuarially Determined Contribution (ADC)

Point 2

Actuaries must disclose a Low-Default-Risk Obligation Measure (LDRM) in funding valuations

Revised standard effective for BCERS' 12/31/2023 valuations

Summary of Notable Changes to ASOP 4

Reasonable ADC

- Generally, plans which already develop an ADC following prior ASOP guidance are expected to meet the new reasonable ADC standard
- Plans which do not currently develop an ADC (some fixed rate plans, and some plans using statutory assumptions or methods) will be required to calculate a reasonable ADC

Summary of Notable Recent Changes to ASOP 4

Reasonable ADC -- Amortization

- Must amortize the UAAL within a reasonable time or
 - Must reduce the UAAL by a reasonable amount each year
- Actuary must assess whether or not UAAL will be fully amortized if all assumptions are met

ASOP 4 – LDRDM

Most Attention Getting Addition to ASOP 4

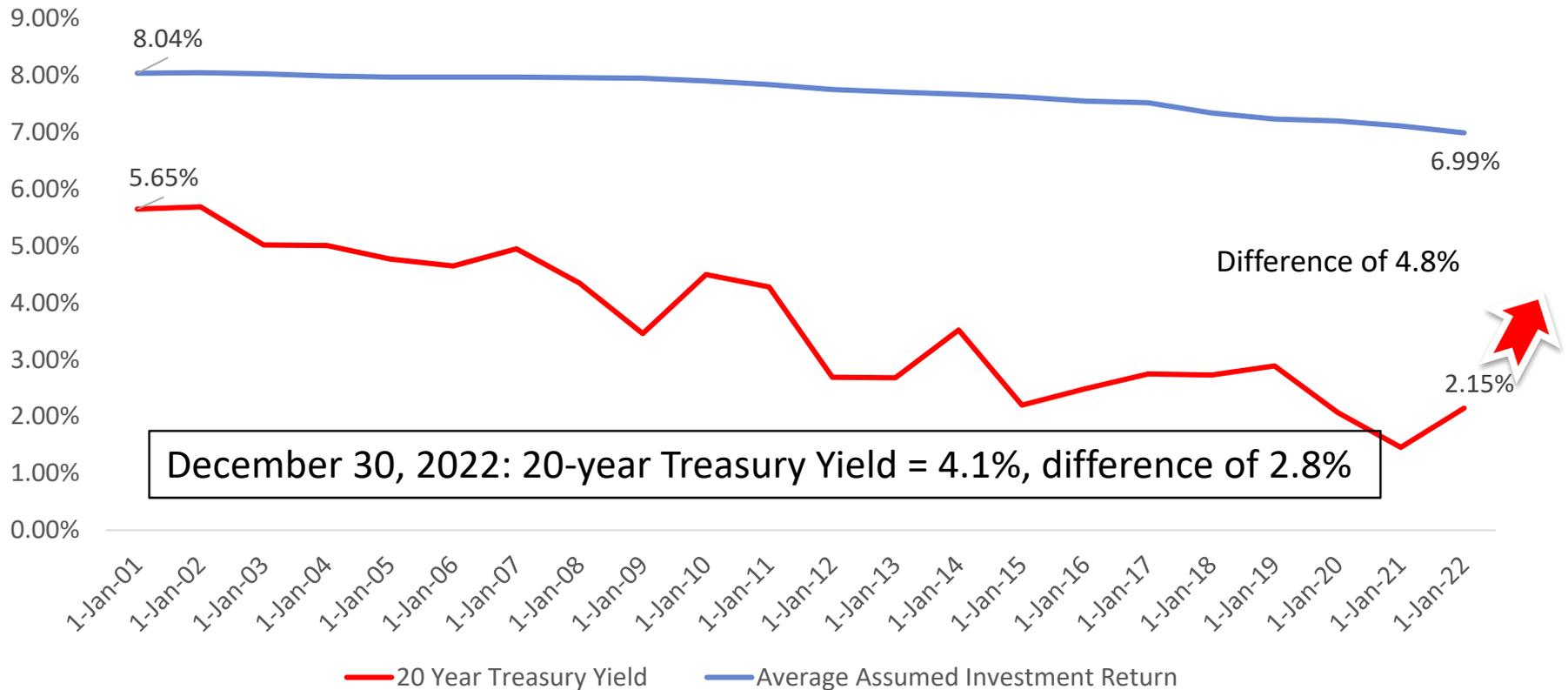


- Actuaries must calculate and disclose a liability using a discount rate or rates derived from
 - Low-default-risk fixed income securities
 - Whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future

Assumed Investment Returns vs. Risk-Free Yields

NASRA Fund Survey

Average Assumed Investment Return vs. Treasury Yields Over Time



Understanding LDRROM

Provides a more complete picture of the funded status and information regarding the security of benefits



- Difference between LDRROM and the valuation AAL can be seen as a measure of the expected savings generated by taking investment risk.
 - Do the expected savings justify the risk?
 - If not, consider what action should be taken

LDRROM Summary



- Additional Liability measure based on a Low default risk investment program
- Will NOT impact contributions, UAAL, funded ratio, or funding period
- Intended to help stakeholders better understand the funded status of the plan and the risks involved

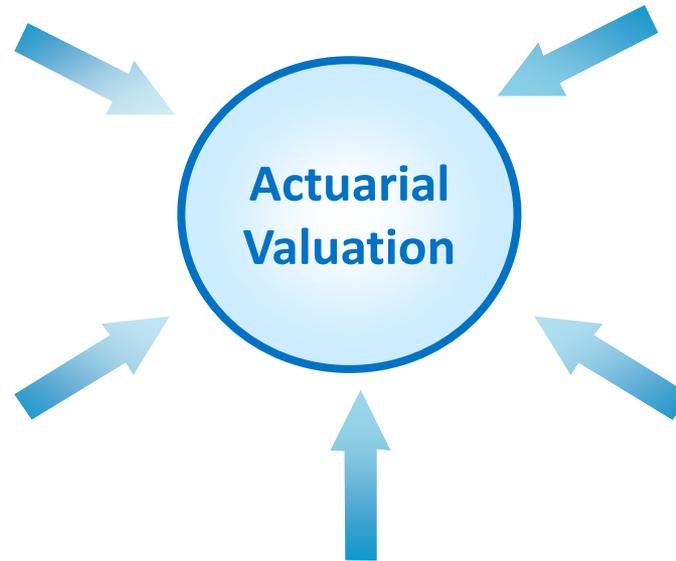
ACTUARIAL VALUATION PROCESS

Actuarial Valuation Process

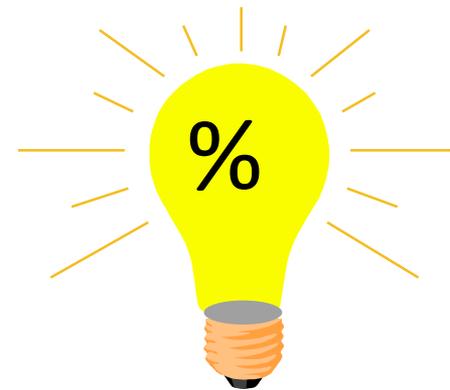
Member Data



Financial Data



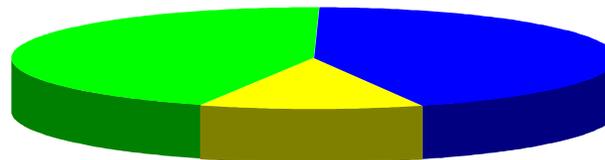
Actuarial Assumptions



Plan Provisions

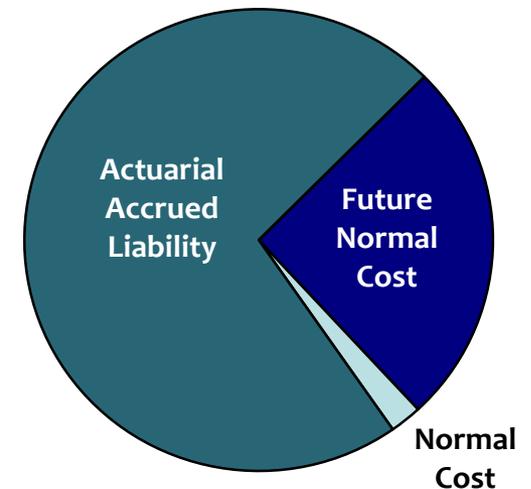


Actuarial Cost Method



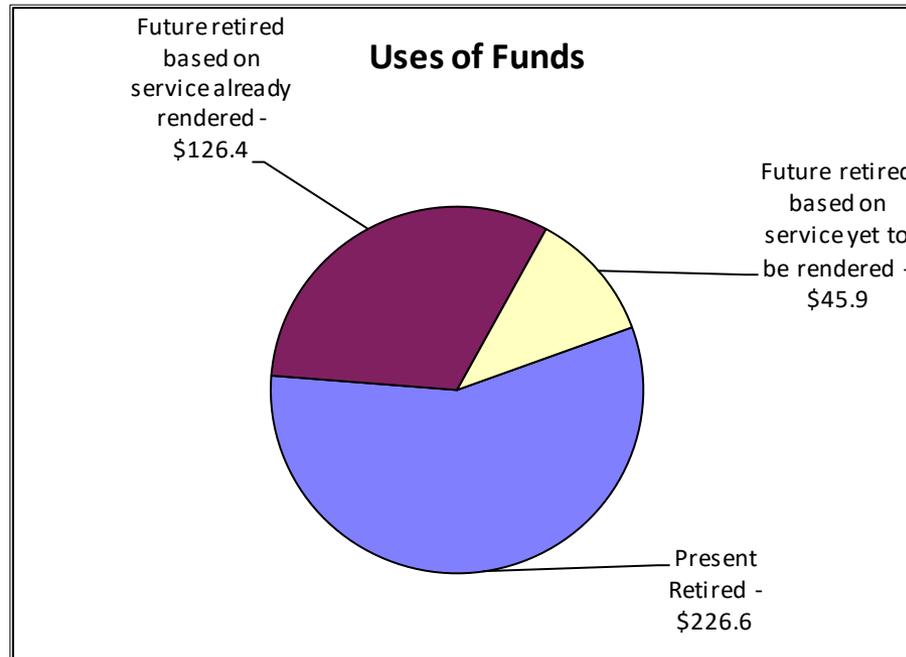
Actuarial Valuation Process

- Present Value of Future Benefits - Present Value (PV) of all Future Benefits payable to current participants (active, retired, terminated vested)
- Actuarial Liability - Portion of PV of Future Benefits allocated to prior years
- Normal Cost - Portion of PV of Future Benefits allocated to current year
- Future Normal Costs - Portion of PV of Future Benefits allocated to future years



Present Value of Future Benefits

\$398.9 Million* of Benefit Promises to Current and Future Retired Members – All Groups



* *Present value of future benefits; all divisions combined.*

Actuarial Valuation Process

$$\begin{array}{r} \text{Actuarial Accrued Liability} \\ - \text{Actuarial Value of Assets} \\ \hline \text{Unfunded Actuarial Liability} \end{array}$$

$$\text{Annual Contribution} = \text{Normal Cost} + \text{Amortization of the Unfunded Liability Requirement}$$

HIGHLIGHTS OF 2022 BAY COUNTY ACTUARIAL VALUATIONS



Highlights of 2022 BCERS Actuarial Valuations

	General	DWS	Library	Medical Care Facility	Sheriff's Department	Road Commission	Total	BABH
Participants								
Active	385	57	18	255	80	55	850	229
Retired	403	47	51	252	91	95	939	164
Terminated Vested	25	2	2	14	6	0	49	39
Total	813	106	71	521	177	150	1,838	432
Payroll	\$ 18,328,843	\$ 3,584,716	\$ 1,049,332	\$ 10,740,950	\$ 5,037,816	\$ 3,226,730	\$ 41,968,387	\$ 13,227,205
Actuarial Accrued Liability	118,403,060	20,707,166	12,333,369	60,765,097	38,275,108	35,656,572	286,140,372	66,857,263
Actuarial Value of Assets	151,622,571	18,461,601	14,711,082	72,731,479	49,991,107	34,920,469	342,438,309	69,910,264
Unfunded Actuarial Accrued Liability	(33,219,511)	2,245,565	(2,377,713)	(11,966,382)	(11,715,999)	736,103	(56,297,937)	(3,053,001)
Funded Ratio	128%	89%	119%	120%	131%	98%	120%	105%
Contribution Requirement								
Employer Normal Cost	5.80 %	9.86 %	\$ 90,547	5.49 %	8.82 %	9.41 %		6.20 %
Amortization Payment for ERIP [^]								1.29
Amortization Payment	(13.12)	4.45	(227,559)	(7.92)	(16.74)	1.74		(1.68)
Total	0.00 %	14.31 %	\$ 0	0.00 %	0.00 %	11.15 %	\$ 925,904	5.81 %

[^] Amortization payment associated with the Early Retirement Incentive Program (ERIP).

Highlights of 2022 BCERS Actuarial Valuations

Division	Valuation Year Fiscal Year	Contribution Rate	
		12/31/2021 1/1/2023	12/31/2022 1/1/2024
General County		0.00 %	0.00 %
DWS		12.99	14.31
Library		\$ 0	\$ 0
Medical Care Facility		0.00 %	0.00 %
Sheriff's Department		0.00	0.00
Road Commission		8.91	11.15
<hr/>			
BABH		4.17 %	5.81 %

Highlights of 2022 BCERS

Actuarial Valuations

- Reflects experience study changes to valuation assumptions and methods for the 2022 valuation
- There were no reported changes in benefit provisions

Highlights of 2022 BCERS

Actuarial Valuations

- The aggregate experience during 2022 was unfavorable, with overall losses
 - Investment return on the market value of assets for calendar year 2022 fell short of the assumed rate of return for the valuation
 - Additional losses due to larger than expected pay increases for all groups
- These losses were partially offset by more terminations than expected for all groups

Looking Ahead

Asset Smoothing — \$ in Thousands

	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Actual Investment Return	\$ (72,505)				
Assumed Investment Return	28,878				
Gain/(Loss) to be phased-in	(101,383)				
Phased-in recognition					
• Current year	\$ (20,277)				
• First prior year	7,380	\$ (20,277)			
• Second prior year	6,650	7,380	\$ (20,277)		
• Third prior year	9,528	6,650	7,380	\$ (20,277)	
• Fourth prior year	<u>(8,996)</u>	<u>9,528</u>	<u>6,650</u>	<u>7,380</u>	<u>\$ (20,277)</u>
Total recognized gain (loss)	\$ (5,715)	\$ 3,281	\$ (6,247)	\$ (12,897)	\$ (20,277)

Looking Ahead — Contributions

- Asset smoothing helps reduce the volatility of the employer contributions
 - The funding value of assets is 110% of market value
 - Remaining phase-in of past market gains/losses from previous valuations
- The Retirement System will continue to mature
 - More retirees than active employees
 - Normal for a prefunded retirement system

QUESTIONS

Disclaimers

- This presentation is one of many documents comprising the December 31, 2022 actuarial valuations of the Bay County Employees' Retirement System. This presentation should not be relied on for any purpose other than the purpose described in the valuation reports.
- Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Disclaimers

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