

# Sussex County Employee Pension Plan and Postemployment Benefits Plan



## 2024 Actuarial Valuations

November 21, 2024

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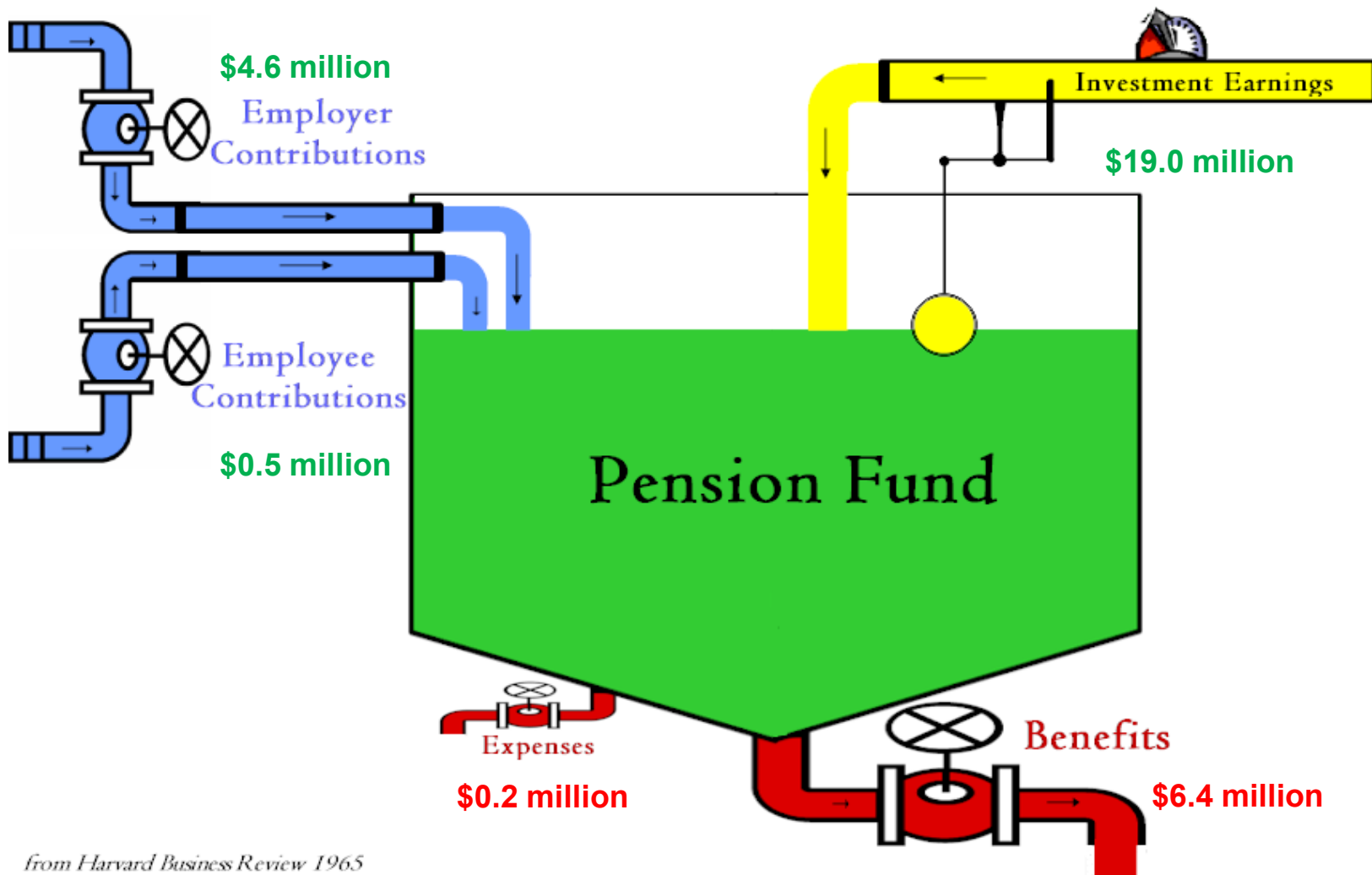


- 2024 Pension Actuarial Valuation
  - Historical Review
  - Identification and Assessment of Risk
  - Valuation Results
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- 2024 OPEB Actuarial Valuation
  - Historical Review
  - Valuation Results
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- Appendix – GASB 67/68/74/75



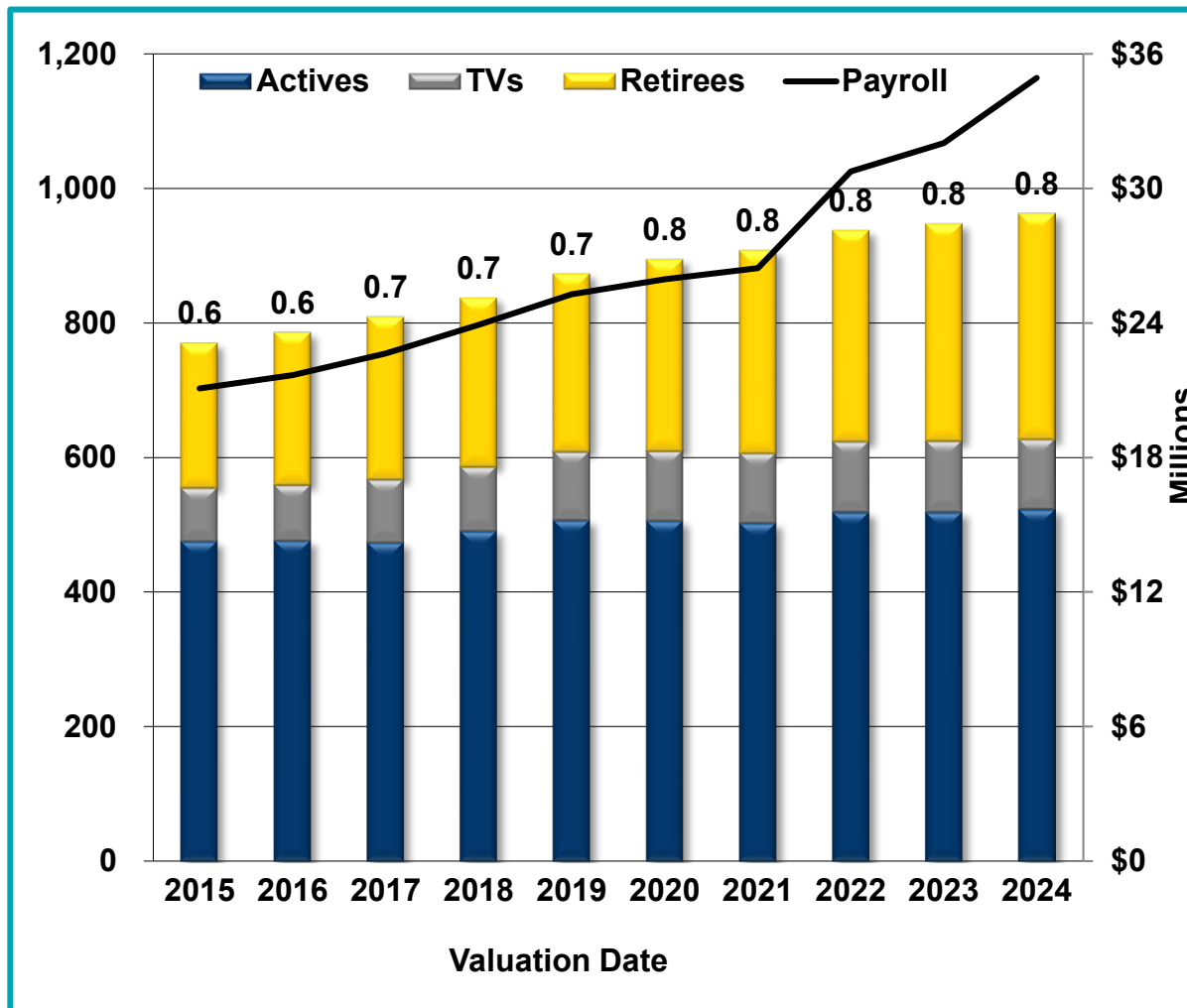
# 2024 Pension Actuarial Valuation

# The Actuarial Valuation Process

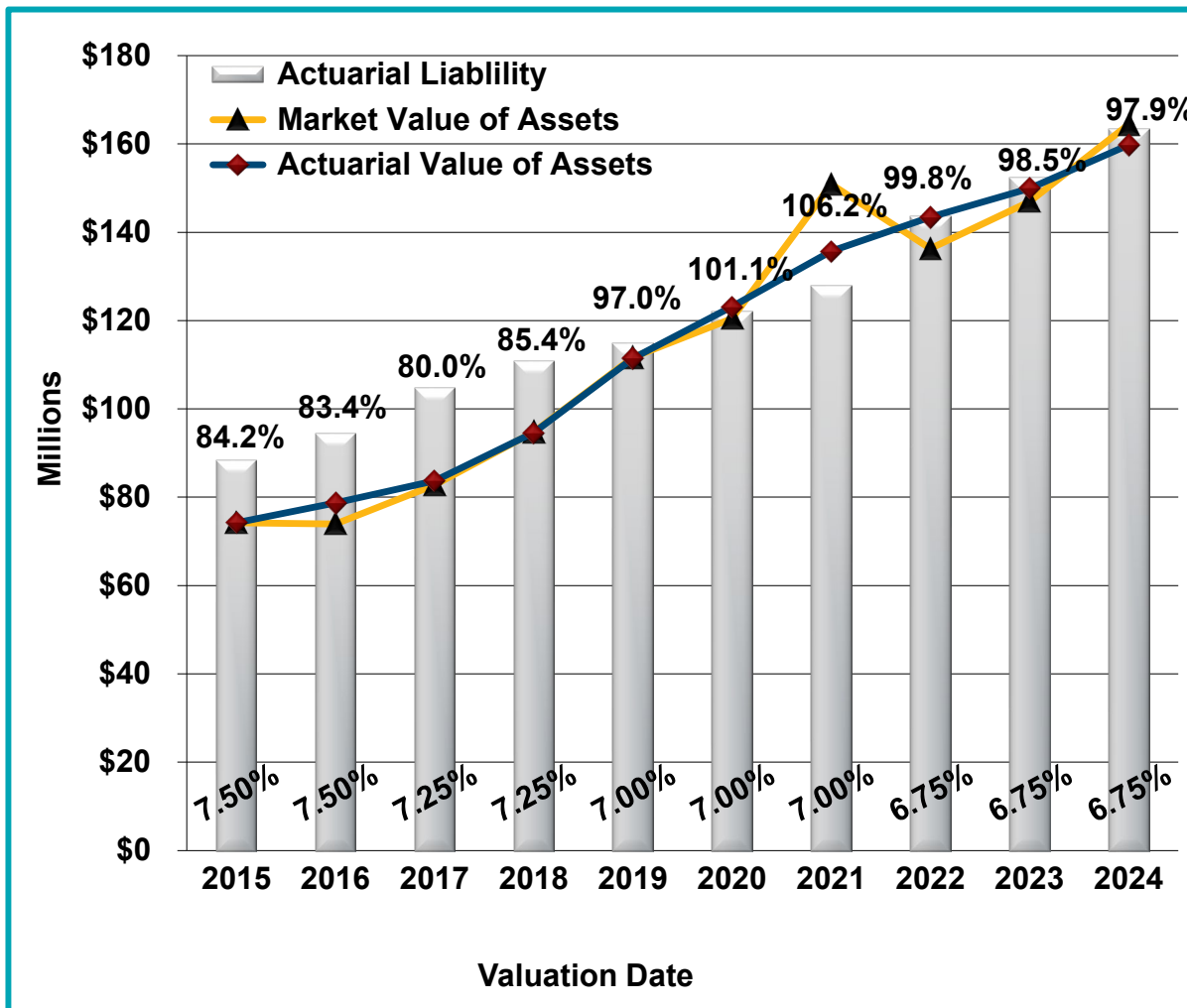


*from Harvard Business Review 1965*

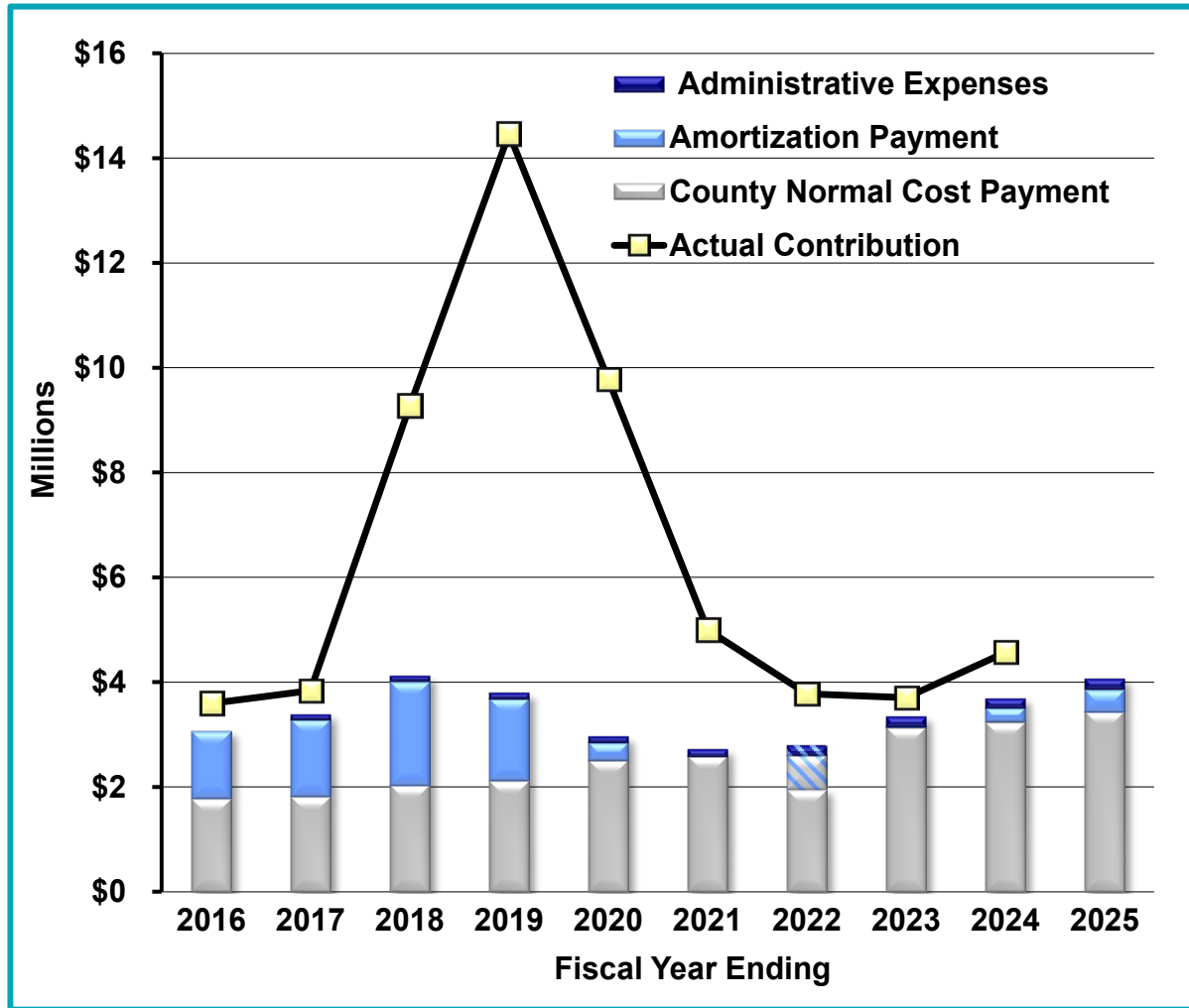
# Historical Trends – Participation



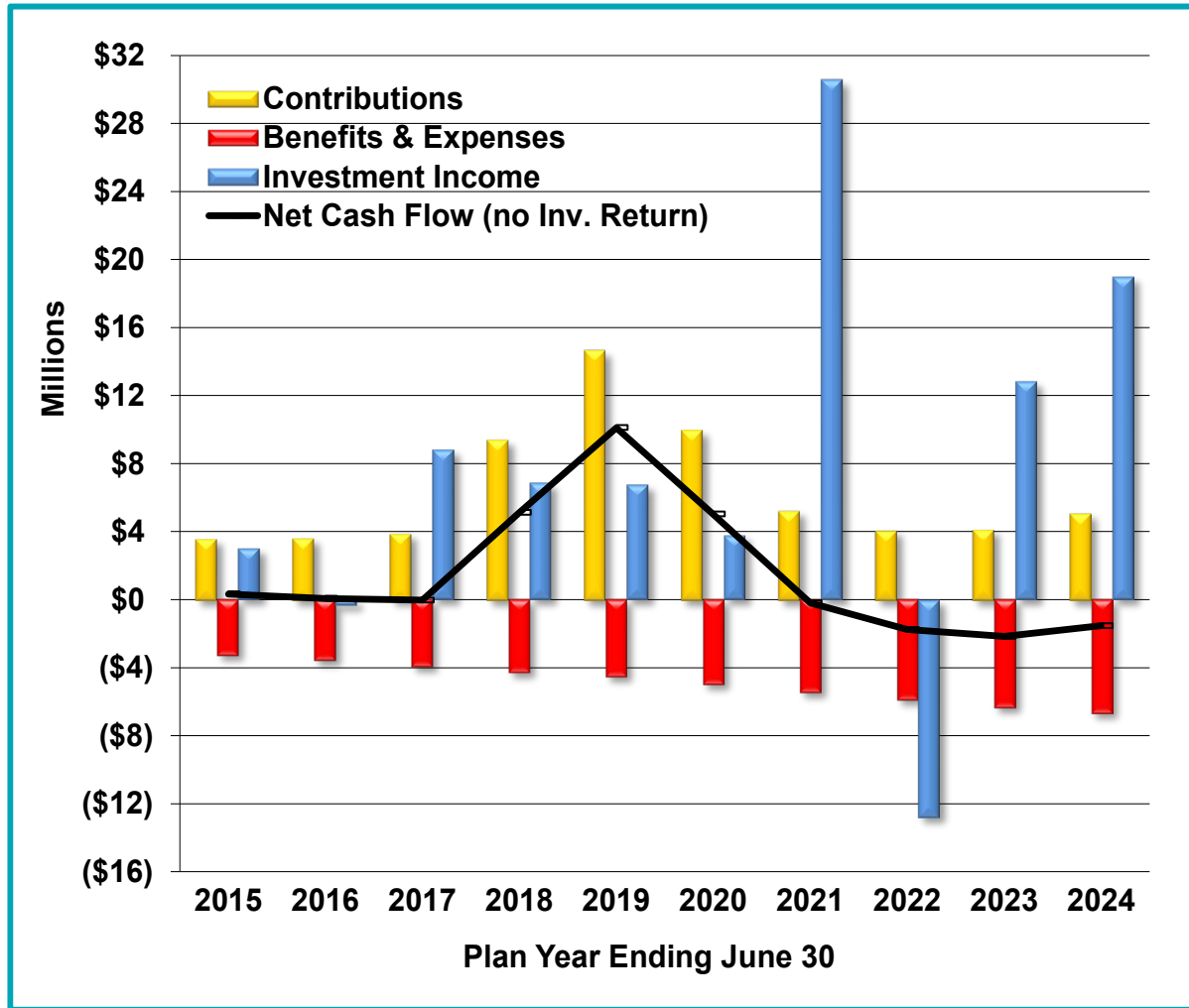
# Historical Trends – Assets and Liabilities



# Historical Trends – Contributions



# Historical Trends – Cash Flow





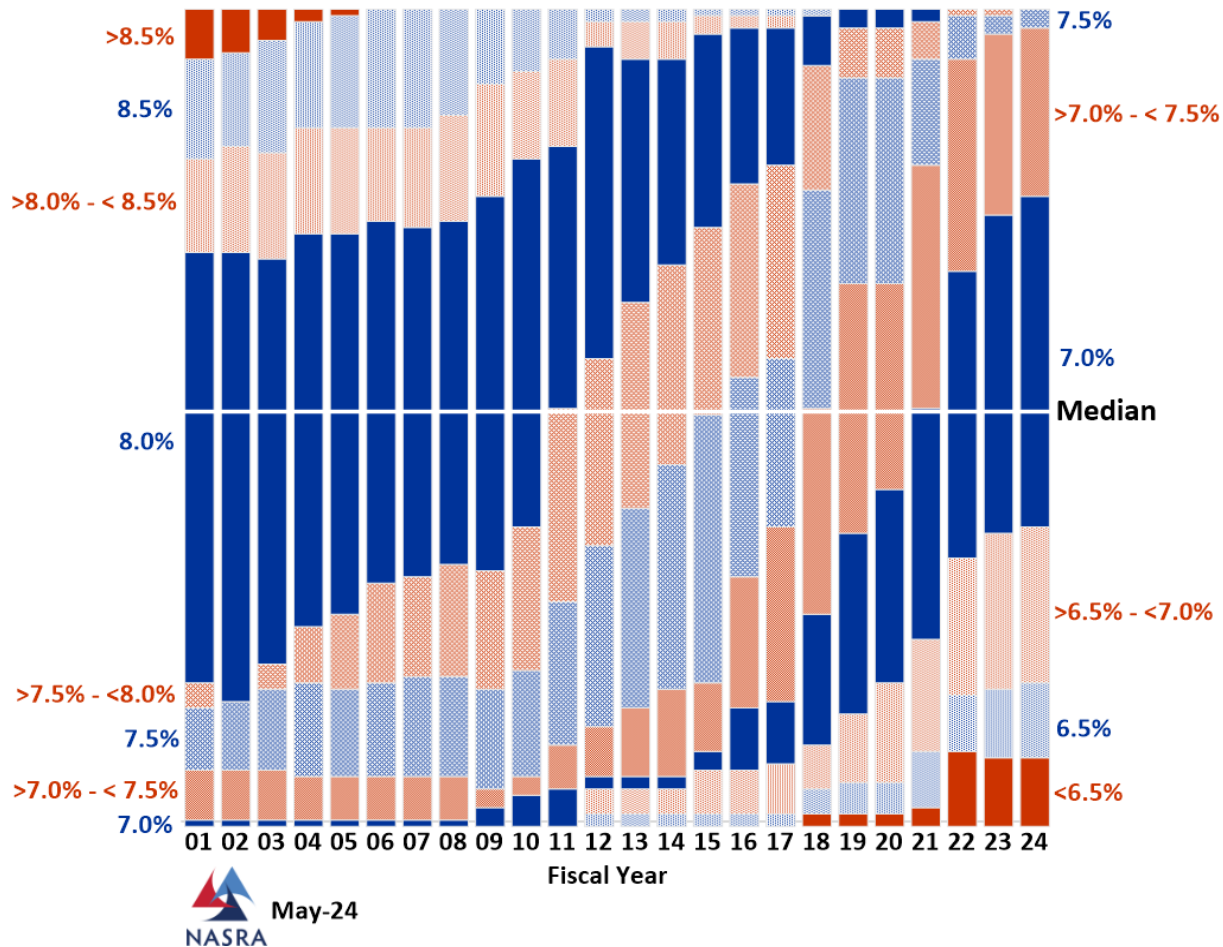


- Material risks identified:
  - **Investment Risk** – the potential for investment returns to be different than expected
  - **Interest Rate Risk** – the potential for interest rates to be different than expected
  - **Longevity and other Demographic Risk** – the potential for mortality and other demographic experience to be different than expected
  - **Assumption Change Risk** – the potential for the environment to change such that future valuation assumptions are different than the current assumptions

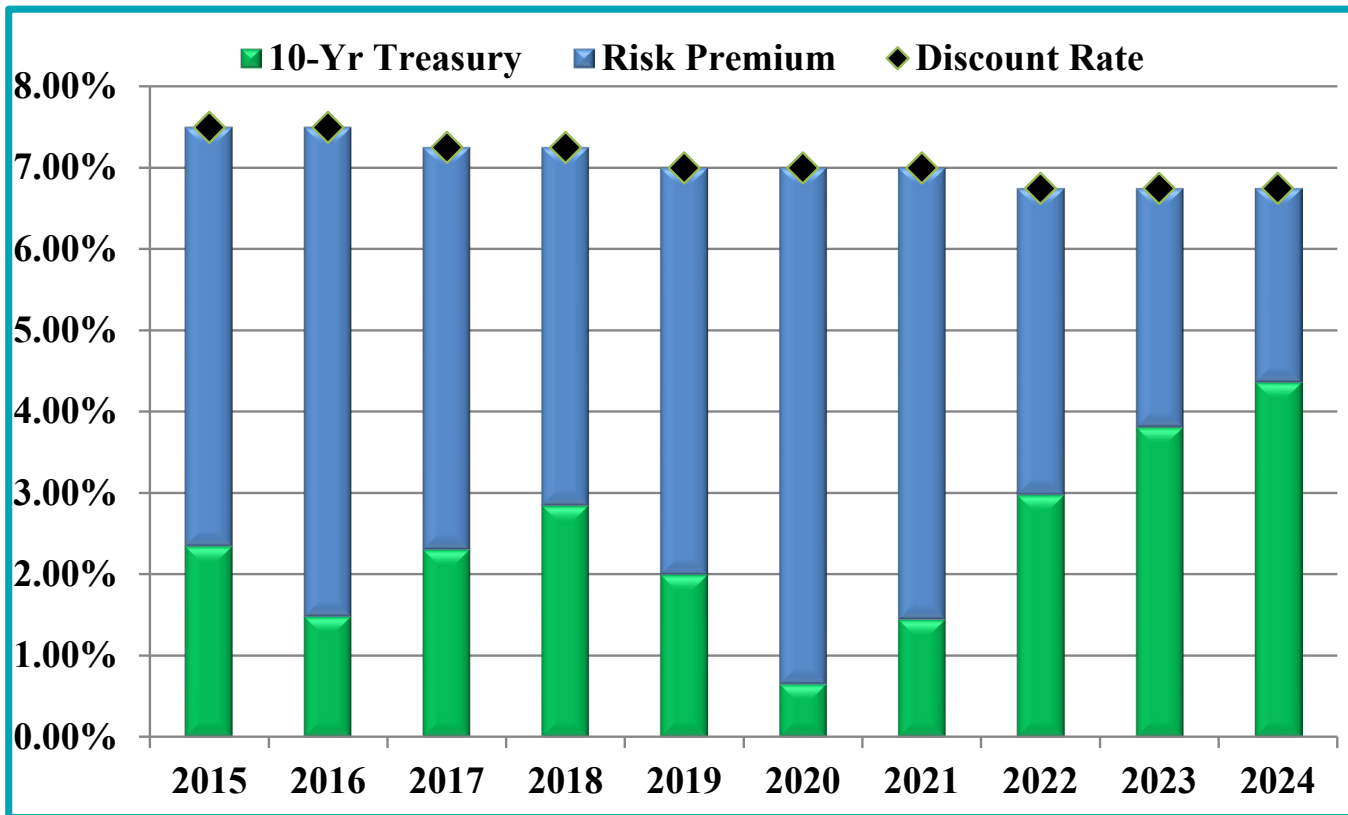
# Investment Risk



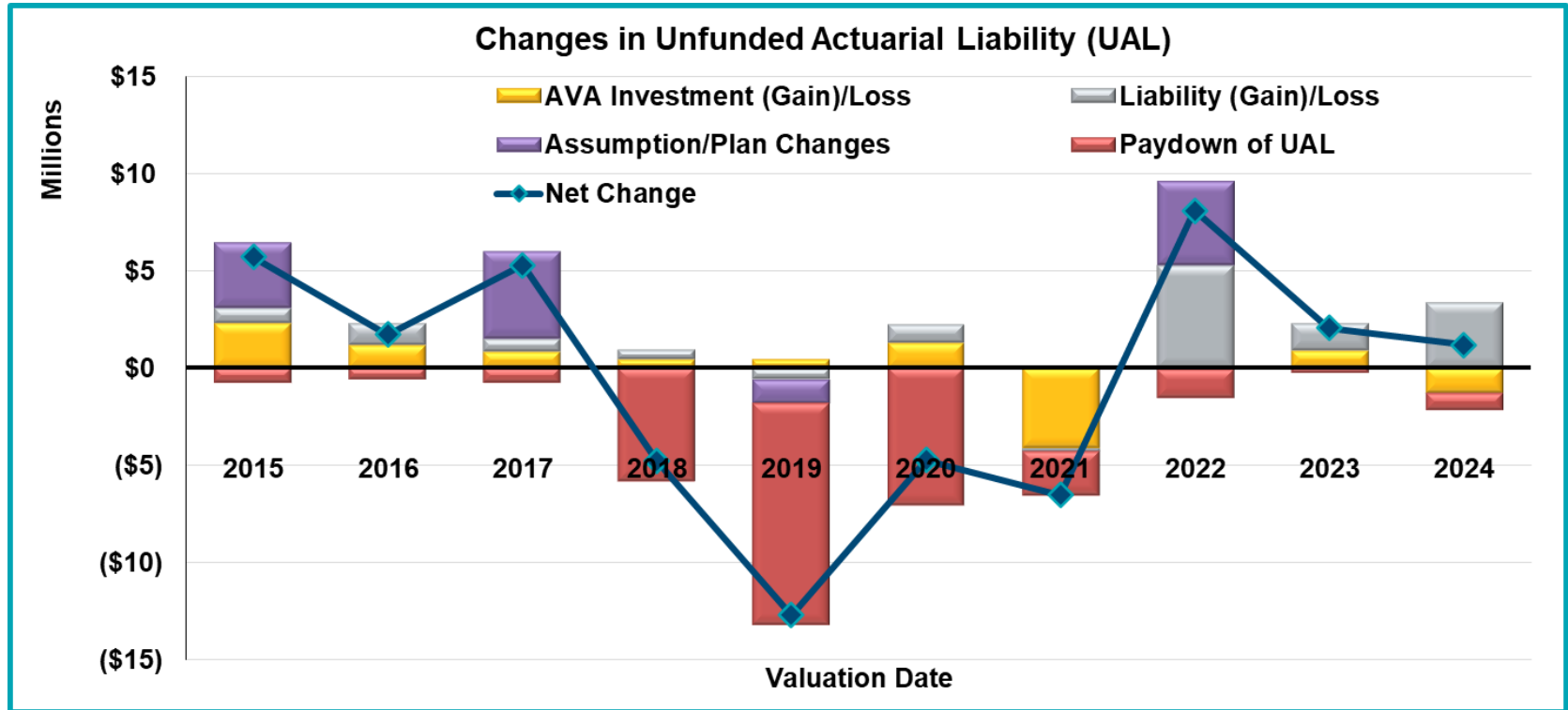
Distribution of Investment Return Assumptions  
FY 01 to present



# Interest Rate Risk



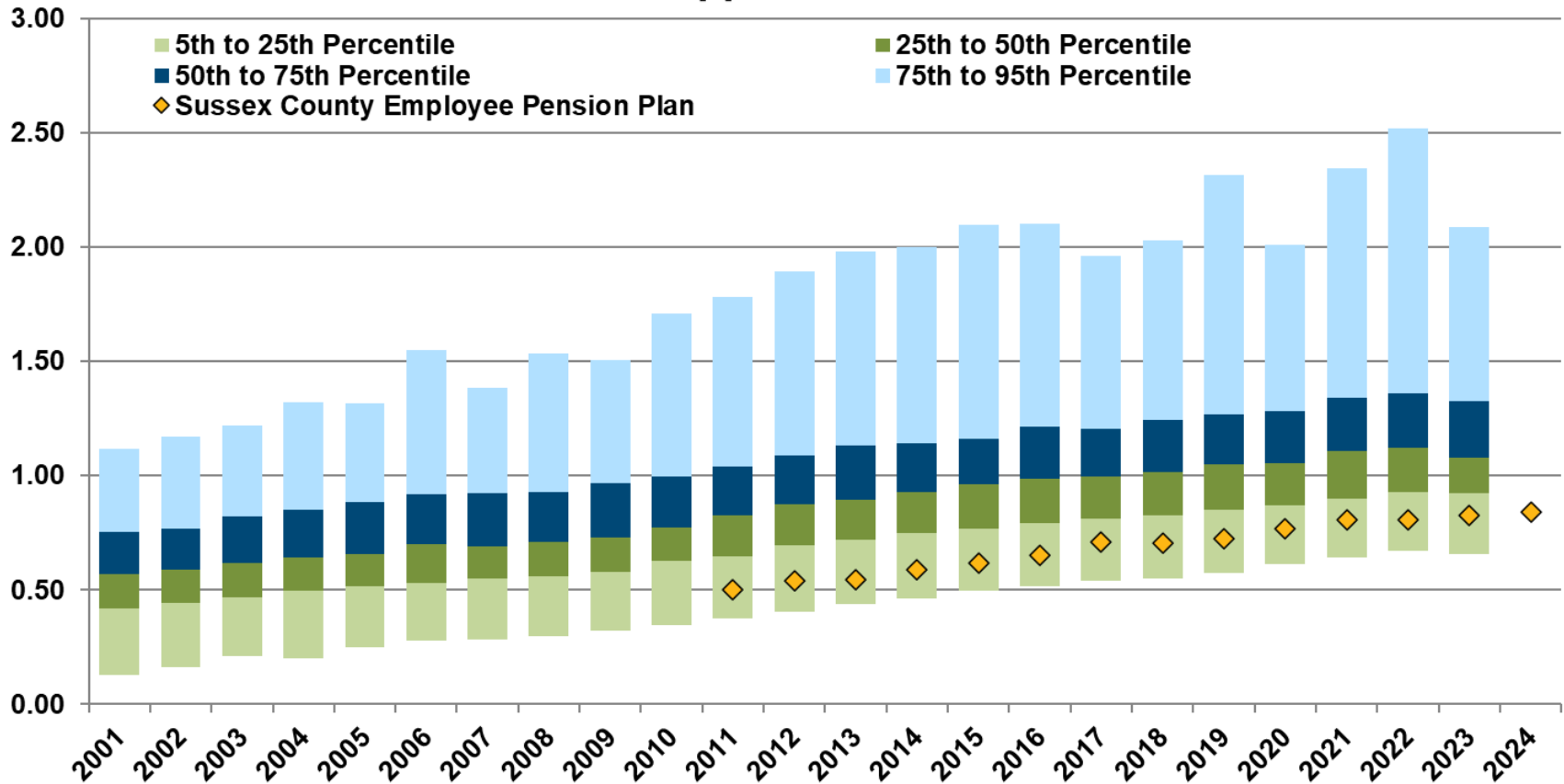
# Material Risks – Changes in UAL



# Plan Maturity Measures – Support Ratio



## Support Ratio

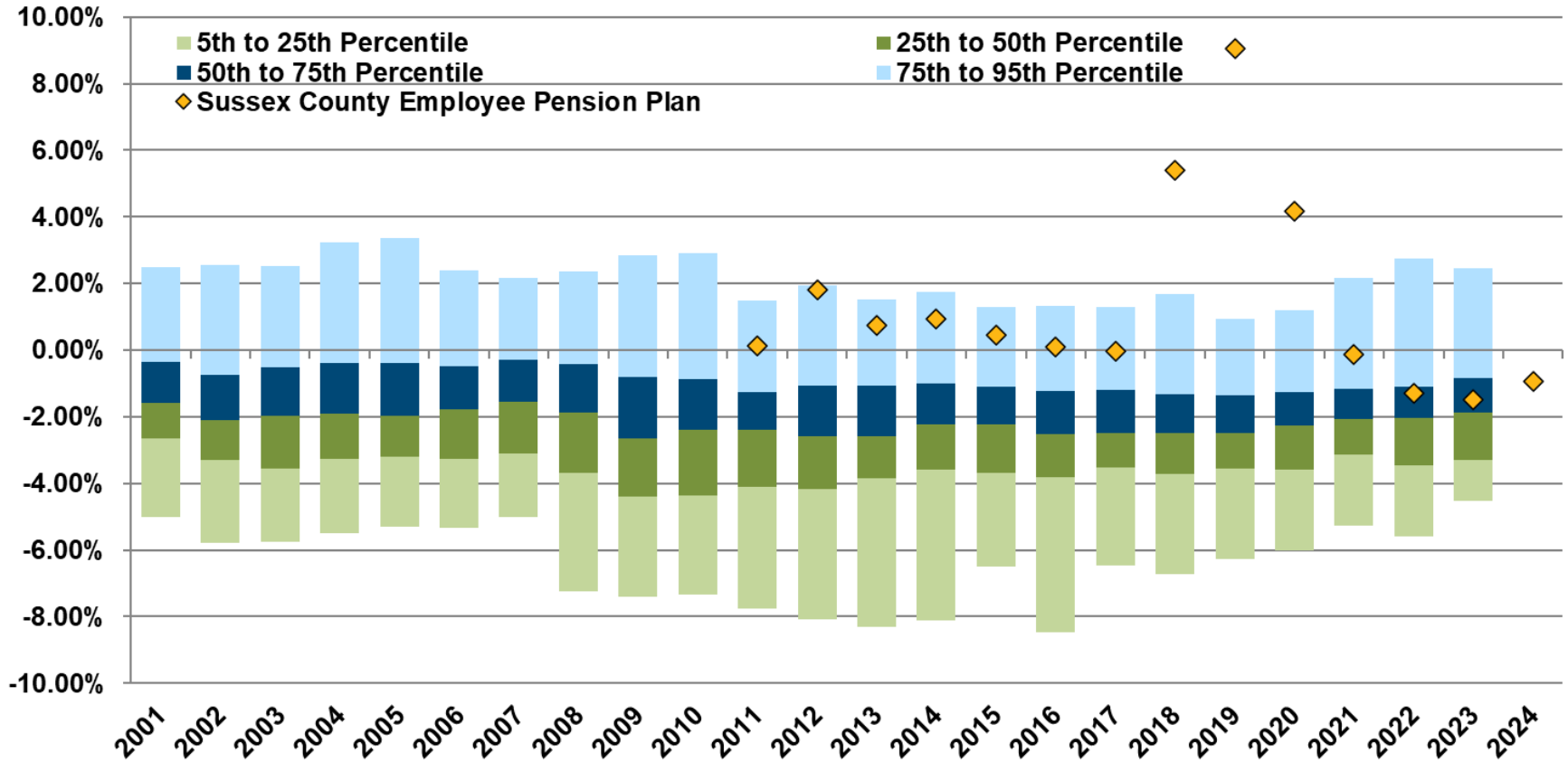


Survey Data from Public Plans Data as of 6/6/2024

# Plan Maturity Measures – Net Cash Flow



## Net Cash Flow Rate



Survey Data from Public Plans Data as of 6/6/2024



- Contributions
  - Actuarially Determined Contribution (ADC) increased from \$3.7 million to \$4.1 million
    - Primarily due to the demographic liability losses
- Unfunded actuarial liability (UAL) and funded status
  - UAL increased from \$2.3 million to \$3.5 million
  - Actuarial experience asset gain of \$1.3 million
    - 12.98% on market value (compared to 6.75% assumption)
    - 7.62% on actuarial value (assumes phase-in of 5-year asset smoothing)
  - Actuarial experience liability loss of \$3.4 million
  - Funded ratio (actuarial value of assets divided by actuarial liability) decreased from 98.5% to 97.9%

# 2024 Valuation – Participants



## Participant Information

	7/1/2023	7/1/2024	Percent Change
Number of Actives	519	523	0.8 %
Total Salary	\$32,019,688	\$34,921,960	9.1 %
Average Salary	\$61,695	\$66,772	8.2 %
Number of In-Pay	323	336	4.0 %
Total Benefits	\$6,289,399	\$6,716,210	6.8 %
Average Benefits	\$19,472	\$19,989	2.7 %
Number of Terminated Vested	106	104	-1.9 %
Total Benefits	\$1,002,196	\$965,505	-3.7 %
Average Benefits	\$9,455	\$9,284	-1.8 %



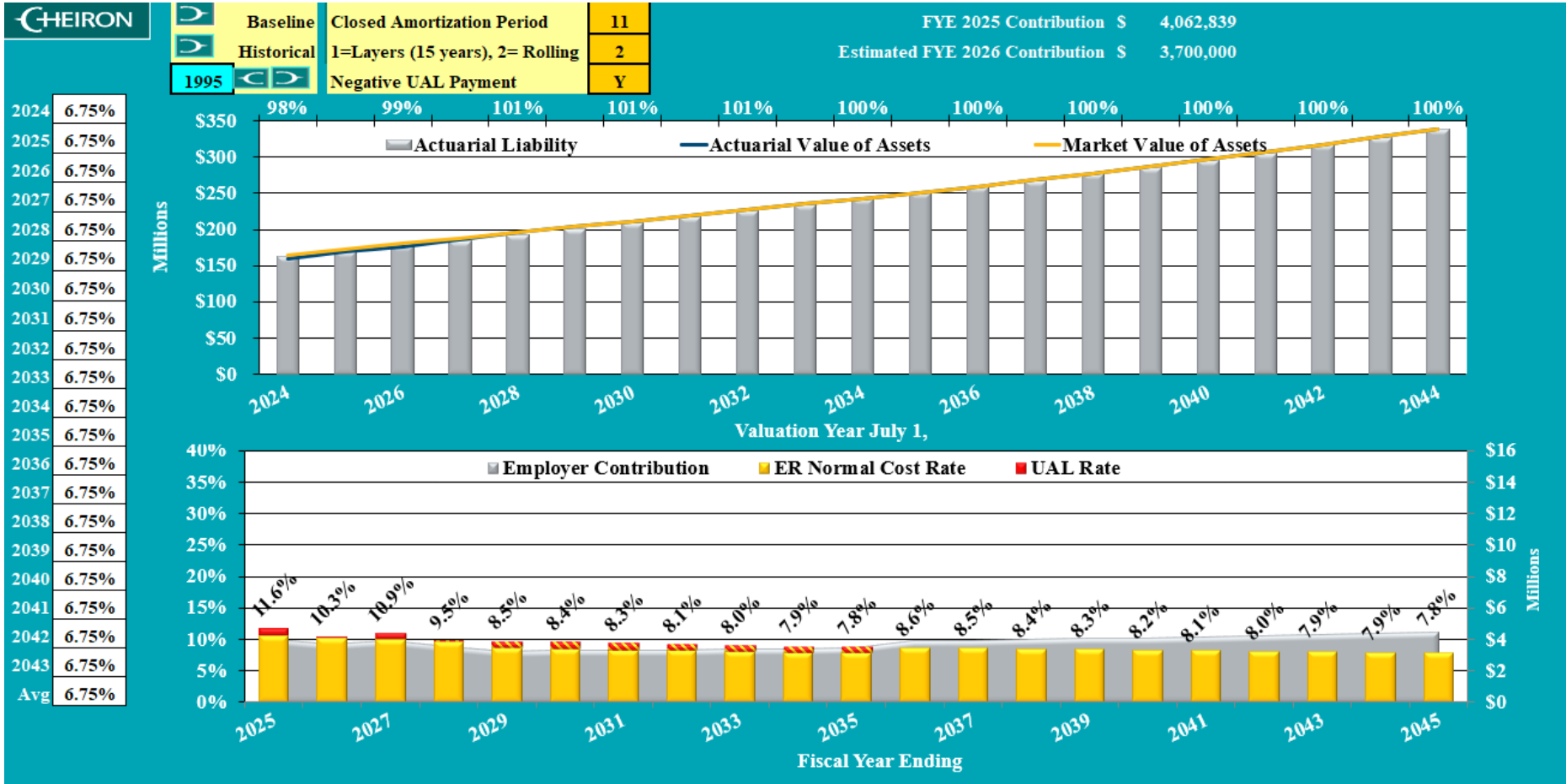
# 2024 Valuation – Principal Results



## Principal Results

	7/1/2023	7/1/2024
Actuarial Liability (AL)	\$152,230,175	\$163,249,579
Actuarial Values of Assets	149,940,488	159,767,302
Unfunded AL (UAL)	\$2,289,687	\$3,482,277
Actuarial Funded Ratio	98.5%	97.9%
Market Value of Assets	\$146,945,986	\$164,392,505
Market Funded Ratio	96.5%	100.7%
<b>FYE Contribution Applicable to</b>	<b>2024</b>	<b>2025</b>
Employer Normal Cost	\$3,237,042	\$3,430,743
UAL Amortization Payment	266,461	429,621
Administrative Expense	186,477	202,475
Total County Contribution	\$3,689,980	\$4,062,839
Contribution as a Percentage of Payroll	11.52%	11.63%

# Projected Outlook



# Required Disclosures



The purpose of this presentation is to present the July 1, 2024 Actuarial Valuation results for the Sussex County Employee Pension Plan. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

In preparing this presentation, we relied on information, some oral and some written, supplied by the Sussex County staff. This information includes, but is not limited to, the plan provisions, member data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, Data Quality.

The analysis was based on financial data through June 30, 2024 and the July 1, 2024 membership data. The July 1, 2024 Actuarial Valuation Report should be referred to for a summary of the plan provision, methods and assumptions, and other disclosure information. Future results may differ significantly from this presentation due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

The deterministic projections are based on our proprietary model P-Scan developed by our firm that utilize the results shown in the July 1, 2024 Actuarial Valuation Report. The projections assume continuation of the plan provisions and actuarial assumptions in effect as of July 1, 2024 and do not reflect the impact of any changes in benefits or actuarial assumptions that may be adopted after July 1, 2024 unless otherwise indicated. While the assumptions individually are reasonable for the underlying valuation that supports the projections, specifically for projection purposes, they are also considered reasonable in the aggregate. The future outcomes become increasingly uncertain over time, and therefore the general trends and not the absolute values should be considered in the review of these projections.

This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

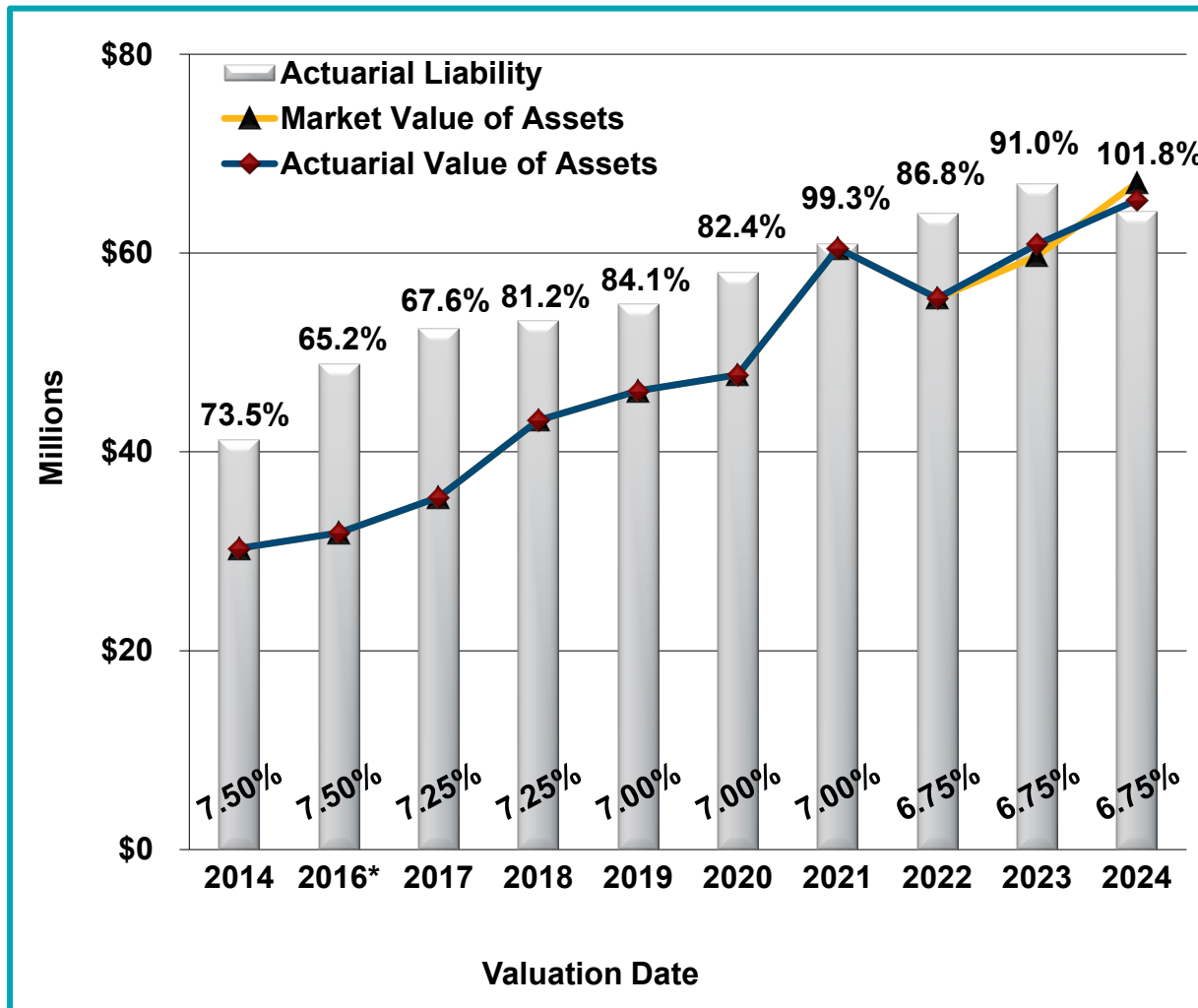
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Principal Consulting Actuary

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Consulting Actuary



# 2024 OPEB Actuarial Valuation

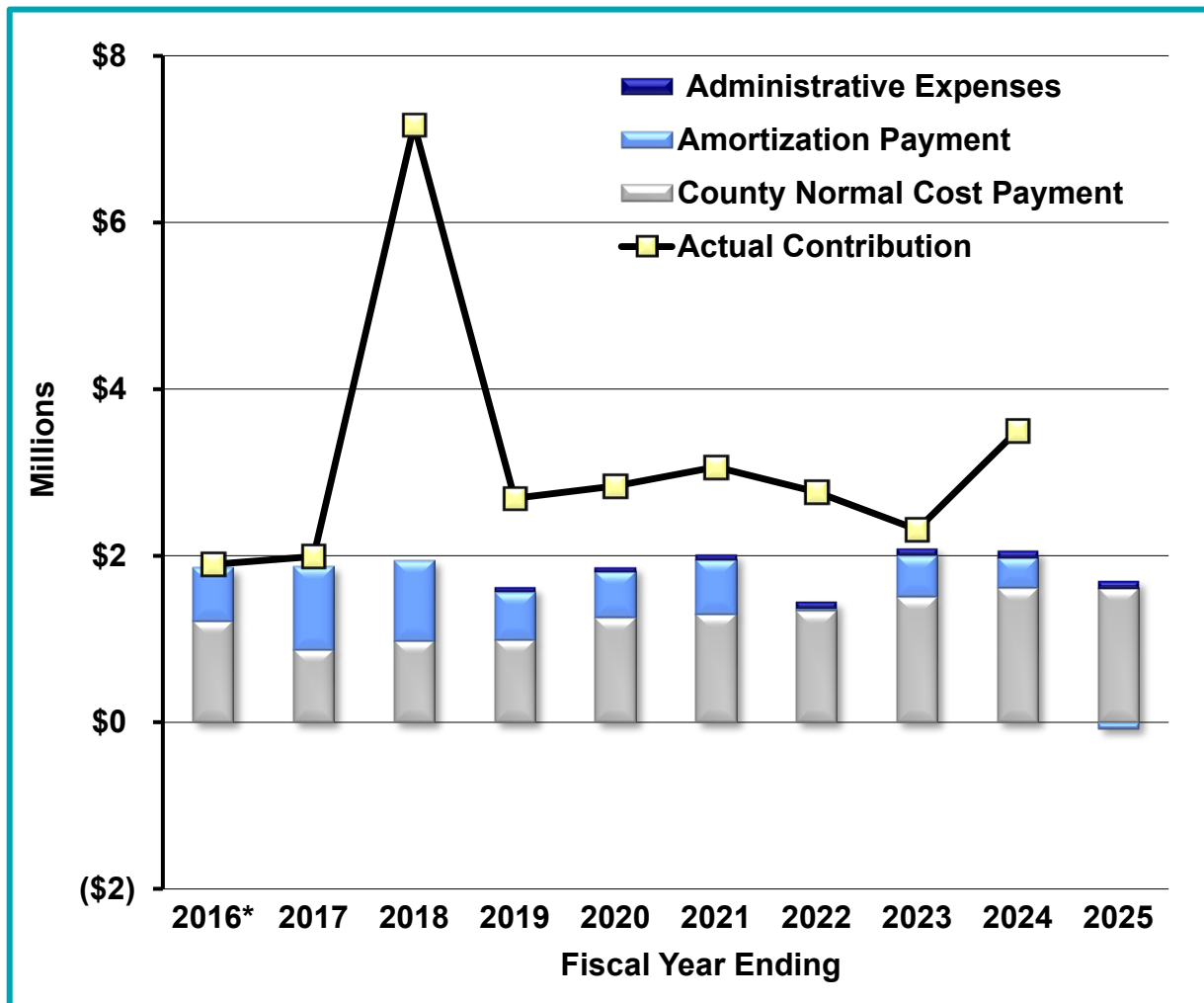
# Historical Review – Assets and Liabilities



Funding ratio based on AVA Smoothed Method starting in 2023

\* Valuation date change to 6/30 from 12/31.

# Historical Review – Contributions



# 2024 Valuation – Principal Results



## Principal Results

	7/1/2023	7/1/2024
Active Employees	489	517
Retirees	218	225
Disabled	11	9
Survivors	25	26
<b>Total Participants</b>	<b>743</b>	<b>777</b>
Actuarial Liability (AL)	\$ 66,931,089	\$ 64,168,398
Assets (AVA)	60,896,720	65,342,560
Unfunded AL (UAL)	\$ 6,034,369	\$ (1,174,162)
Actuarial Funded Ratio	91.0%	101.8%
<b>FYE Contribution Applicable to</b>	<b>2024</b>	<b>2025</b>
Employer Normal Cost	\$ 1,586,171	\$ 1,583,828
UAL Amortization Payment	341,257	(68,239)
Interest	130,101	102,302
Total County Contribution	\$ 2,057,529	\$ 1,617,891
Contribution as a Percentage of Payroll	6.83%	4.70%
Covered Payroll	\$ 30,131,794	\$ 34,453,002

# Actuarial Asset Smoothing – 4-years



Development of Actuarial Value of Assets (AVA)		
Market Value of Assets at June 30, 2023		\$ 59,711,846
Employer Contributions		3,504,709
Employee Contributions		0
Benefit Payments and Refunds		(3,714,650)
Administrative Expenses		<u>(85,629)</u>
Expected Return at 6.75%		4,020,737
Expected Value at June 30, 2024		\$ 63,437,013
Actual Value of Assets at June 30, 2024		<u>67,091,654</u>
Investment Gain/(Loss)		\$ 3,654,641
	<b>Total</b>	<b>Excluded</b>
	<b>Gain/(Loss)</b>	<b>Portion</b>
Exclude 20% of 2021 Gain/(Loss)	\$ 8,997,204	\$ 1,799,441
Exclude 40% of 2022 Gain/(Loss)	(9,430,393)	(3,772,157)
Exclude 60% of 2023 Gain/(Loss)	1,330,162	798,097
Exclude 80% of 2024 Gain/(Loss)	3,654,641	<u>2,923,713</u>
Total Excluded Gain/(Loss) for AVA Calculation		\$ 1,749,094
Market Value of Assets at June 30, 2024		67,091,654
Total Gain/(Loss) Excluded		<u>1,749,094</u>
Actuarial Value of Assets at June 30, 2024		\$ 65,342,560



# Projected Outlook – Baseline

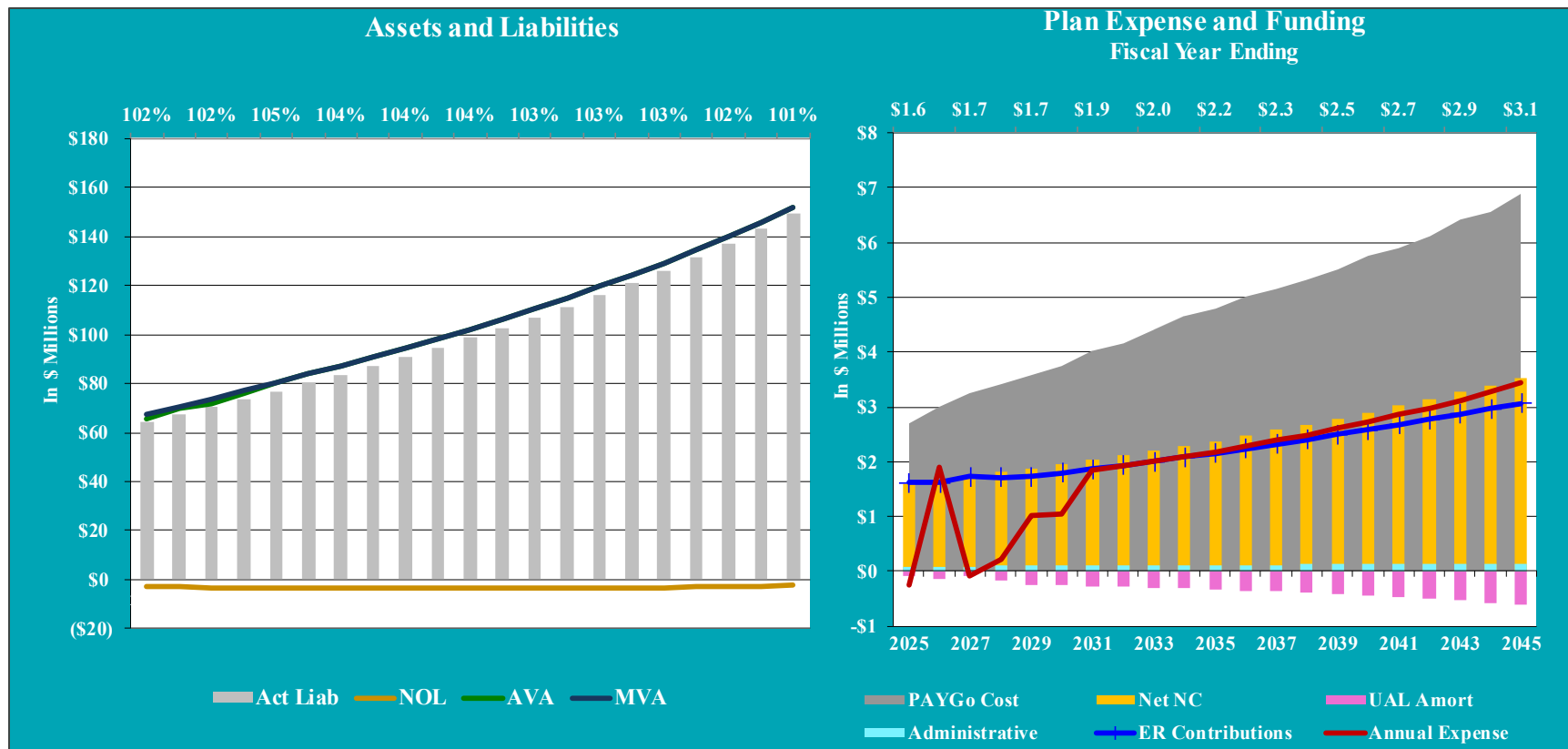


## Projection assumptions:

6.75% discount rate

ADC contributions

24 year closed amortization



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The purpose of this presentation is to present the July 1, 2024 OPEB valuation and GASB 74/75 results for the Sussex County Postemployment Benefit Plan. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

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This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as a credentialed actuary, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

John Colberg, FSA, EA, MAAA  
Principal Consulting Actuary

Gaelle Gravot, FSA, MAAA  
Principal Consulting Actuary

Ryan Benitez, ASA, MAAA  
Consulting Actuary



# Appendix – GASB 67/68/74/75



- County first adopted GASB 67 in the June 30, 2014 financial statements
- Similar actuarial methods and assumptions used in developing the actuarial liability for funding purposes
- Assets will differ from funding since GASB requires using market value with no smoothing (funding uses 5-year smoothing)
- Discount rate for GASB 67 is 6.75% (same as funding)
  - Projections indicated that plan assets are expected to cover all future benefit payments for current plan members (if not, some blending with a municipal bond index (3.93% for 2024) would have been required)



- Under GASB 68, the pension expense is equal to the change in the plan’s net pension liability (NPL), with adjustments for deferrals
  - Chart on next page shows the pension expense development two ways for both the 2024 and 2023 plan years
  - The County’s FY 2024 expense will be based on the County’s 2024 plan year results
- Treatment of deferrals
  - Asset gains or losses recognized over 5 years
  - Liability gains or losses and assumption changes recognized over average future working lifetime (6 years for the Plan)
  - No deferrals on plan changes
  - Deferred gains called “deferred inflows”; deferred losses called “deferred outflows”



## Sensitivity of Net Pension Liability to Changes in Discount Rate

	1% Decrease 5.75%	Discount Rate 6.75%	1% Increase 7.75%
Total Pension Liability	\$ 185,332,562	\$ 163,249,579	\$ 145,037,060
Plan Fiduciary Net Position	<u>164,392,505</u>	<u>164,392,505</u>	<u>164,392,505</u>
Net Pension Liability	<u>\$ 20,940,057</u>	<u>\$ (1,142,926)</u>	<u>\$ (19,355,445)</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	88.7%	100.7%	113.3%



Calculation of Pension Expense		
	Measurement Year Ending	
	2024	2023
Change in Net Pension Liability	\$ (6,427,115)	\$ (2,079,889)
Change in Deferred Outflows	2,179,075	4,811,722
Change in Deferred Inflows	4,309,466	(315,737)
Employer Contributions	<u>4,568,242</u>	<u>3,703,694</u>
<b>Pension Expense</b>	<b>\$ 4,629,668</b>	<b>\$ 6,119,790</b>
<b>Pension Expense as % of Payroll</b>	<b>13.26%</b>	<b>19.11%</b>
<b>Operating Expenses</b>		
Service cost	\$ 3,756,517	\$ 3,571,368
Employee contributions	(538,465)	(447,964)
Administrative expenses	<u>197,537</u>	<u>181,929</u>
Total	\$ 3,415,589	\$ 3,305,333
<b>Financing Expenses</b>		
Interest cost	\$ 10,315,190	\$ 9,732,972
Expected return on assets	<u>(9,867,922)</u>	<u>(9,126,620)</u>
Total	\$ 447,268	\$ 606,352
<b>Changes</b>		
Benefit changes	\$ 0	\$ 0
Recognition of assumption changes	514,749	514,747
Recognition of liability gains and losses	1,745,108	1,271,927
Recognition of investment gains and losses	<u>(1,493,046)</u>	<u>421,431</u>
Total	\$ 766,811	\$ 2,208,105
<b>Pension Expense</b>	<b>\$ 4,629,668</b>	<b>\$ 6,119,790</b>



- Similar actuarial methods and assumptions used in developing the actuarial liability for funding purposes
- GASB 74/75 requires using market value of assets
- Discount rate for GASB 74 is 6.75%

	Change in Net OPEB Liability		
	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (Asset) (a) - (b)
<b>Balances at 6/30/2023</b>	\$ 66,931,089	\$ 59,711,846	\$ 7,219,243
<b>Changes for the year:</b>			
Service cost	1,510,151		1,510,151
Interest	4,496,461		4,496,461
Changes of benefits	0		0
Differences between expected and actual experience	1,311,489		1,311,489
Changes of assumptions	(6,366,142)		(6,366,142)
Contributions - employer		3,504,709	(3,504,709)
Contributions - member		0	0
Net investment income		7,675,378	(7,675,378)
Benefit payments	(3,714,650)	(3,714,650)	0
Administrative expense		(85,629)	85,629
<b>Net changes</b>	<u>(2,762,691)</u>	<u>7,379,808</u>	<u>(10,142,499)</u>
<b>Balances at 6/30/2024</b>	<u>\$ 64,168,398</u>	<u>\$ 67,091,654</u>	<u>\$ (2,923,256)</u>



# GASB 75 – 2024 OPEB Expense



	Measurement Year Ending	
	2024	2023
Change in Net OPEB Liability	\$ (10,142,499)	\$ (1,233,778)
Change in Deferred Outflows	589,878	1,661,883
Change in Deferred Inflows	6,721,617	(566,685)
Employer Contributions	<u>3,504,709</u>	<u>2,313,623</u>
<b>OPEB Expense</b>	<b>\$ 673,705</b>	<b>\$ 2,175,043</b>
<b>OPEB Expense as % of Payroll</b>	<b>1.96%</b>	<b>7.22%</b>
<b>Operating Expenses</b>		
Service cost	\$ 1,510,151	\$ 1,409,835
Employee contributions	0	0
Administrative expenses	<u>85,629</u>	<u>79,172</u>
Total	\$ 1,595,780	\$ 1,489,007
<b>Financing Expenses</b>		
Interest cost	\$ 4,496,461	\$ 4,304,176
Expected return on assets	<u>(4,020,737)</u>	<u>(3,712,615)</u>
Total	\$ 475,724	\$ 591,561
<b>Changes</b>		
Benefit changes	\$ 0	\$ 0
Recognition of assumption changes	(1,425,238)	(515,789)
Recognition of liability gains and losses	665,597	478,241
Recognition of investment gains and losses	<u>(638,158)</u>	<u>132,023</u>
Total	\$ (1,397,799)	\$ 94,475
<b>OPEB Expense</b>	<b>\$ 673,705</b>	<b>\$ 2,175,043</b>



# CHEIRON



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***Cheiron** (pronounced kī·ron), the immortal centaur from Greek mythology, broke away from the pack and was educated by the gods. Cheiron became a mentor to classical Greek heroes, then sacrificed his immortality and was awarded in eternity as the constellation Sagittarius.*