

Sussex County Employee Pension Plan and Postemployment Benefits Plan



2020 Actuarial Valuations

November 19, 2020

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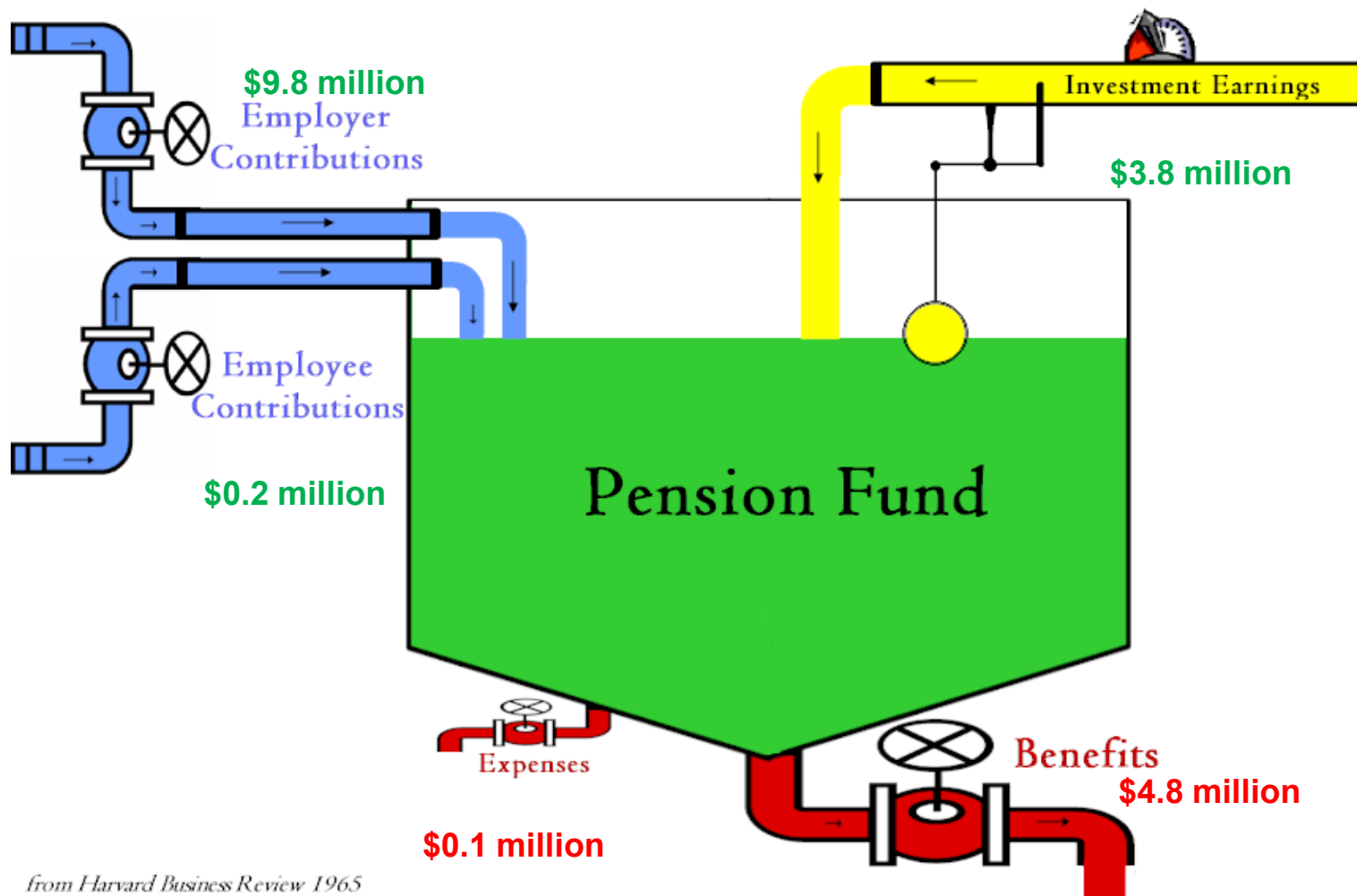


- 2020 Pension Actuarial Valuation
 - Historical Review
 - Identification and Assessment of Risk
 - Valuation Results
 - Projections
- 2020 OPEB Actuarial Valuation
 - Historical Review
 - Valuation Results
 - Projections
- Appendix – GASB 67/68/74/75



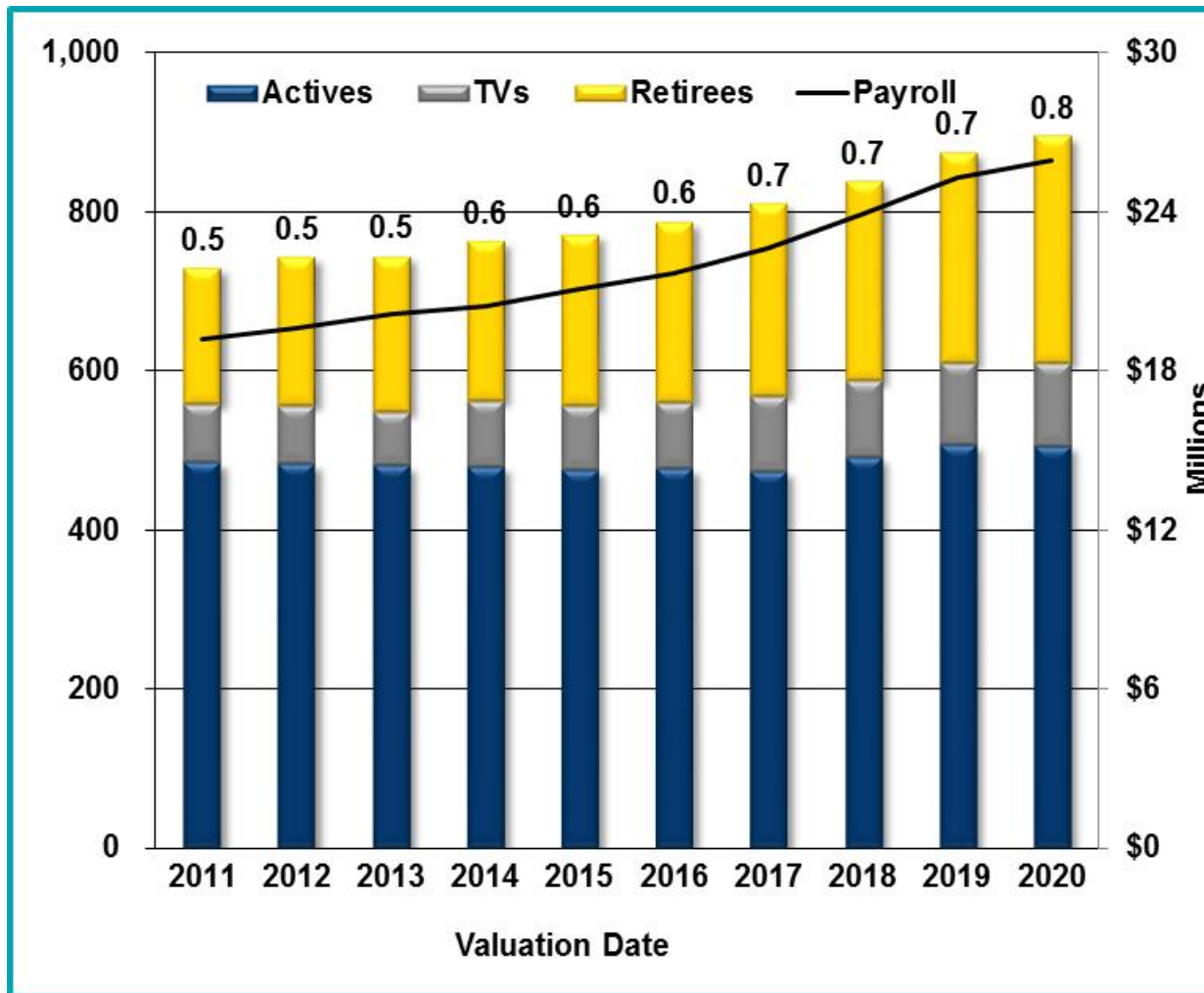
2020 Pension Actuarial Valuation

The Actuarial Valuation Process

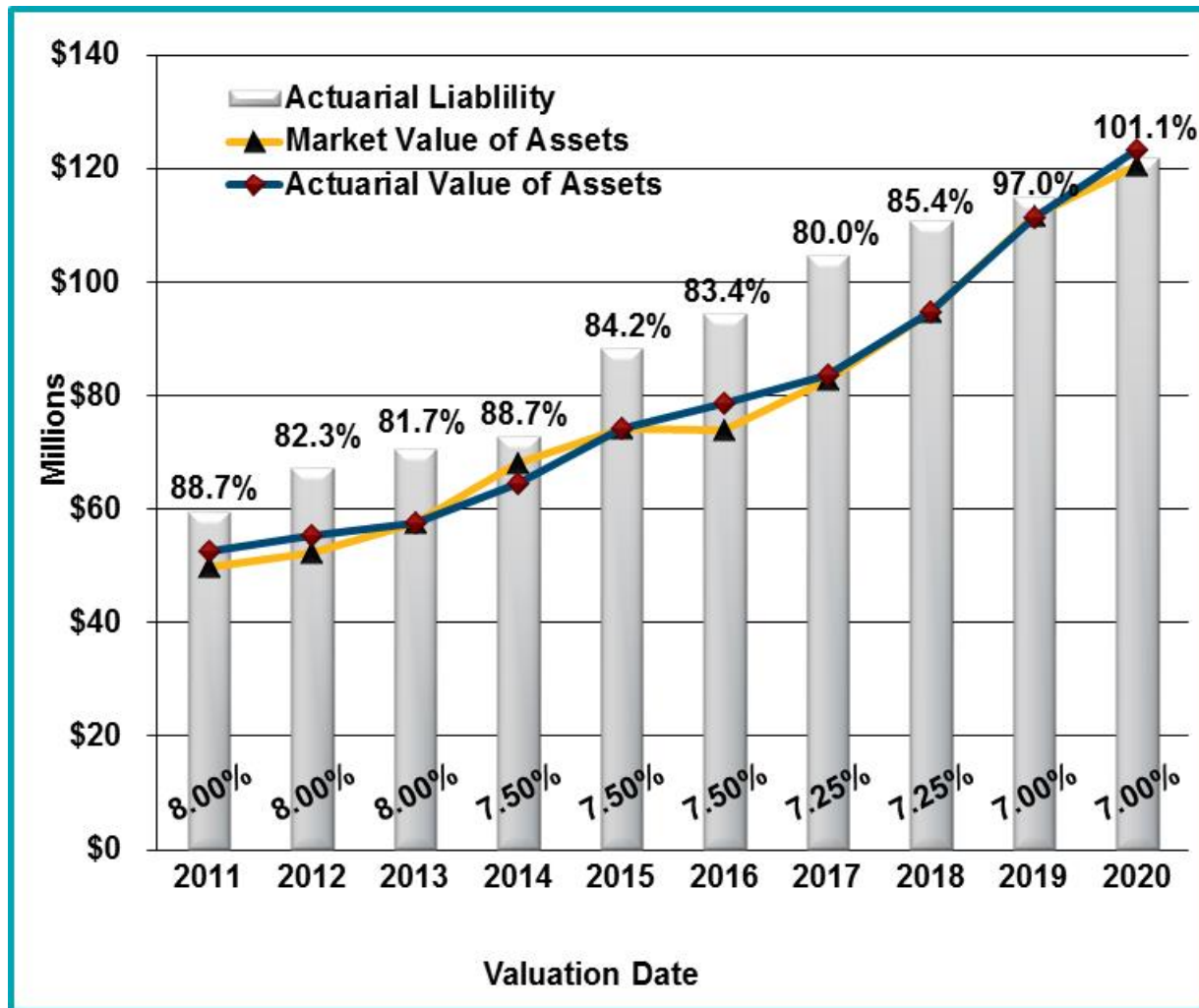


from Harvard Business Review 1965

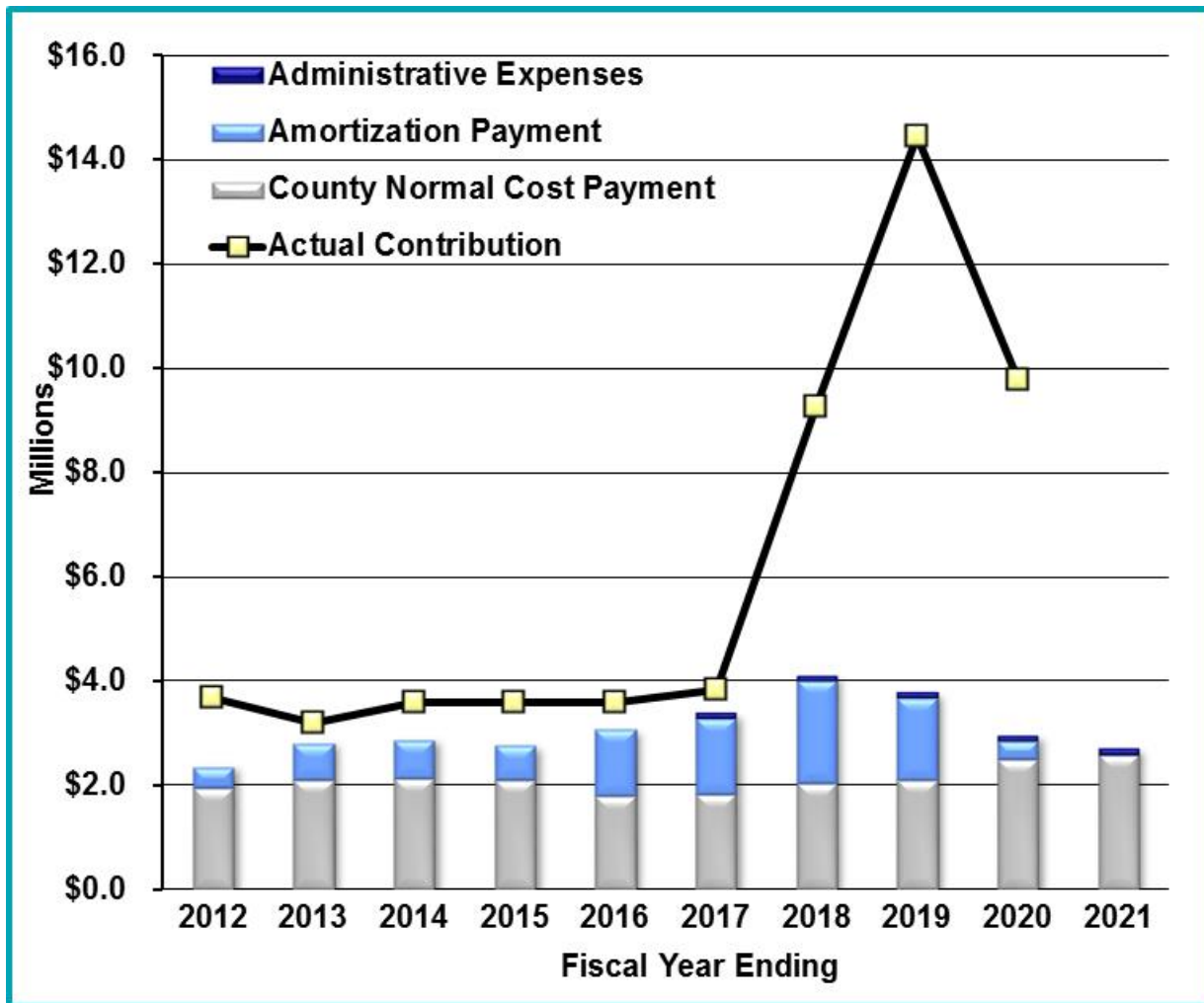
Historical Trends – Participation



Historical Trends – Assets and Liabilities



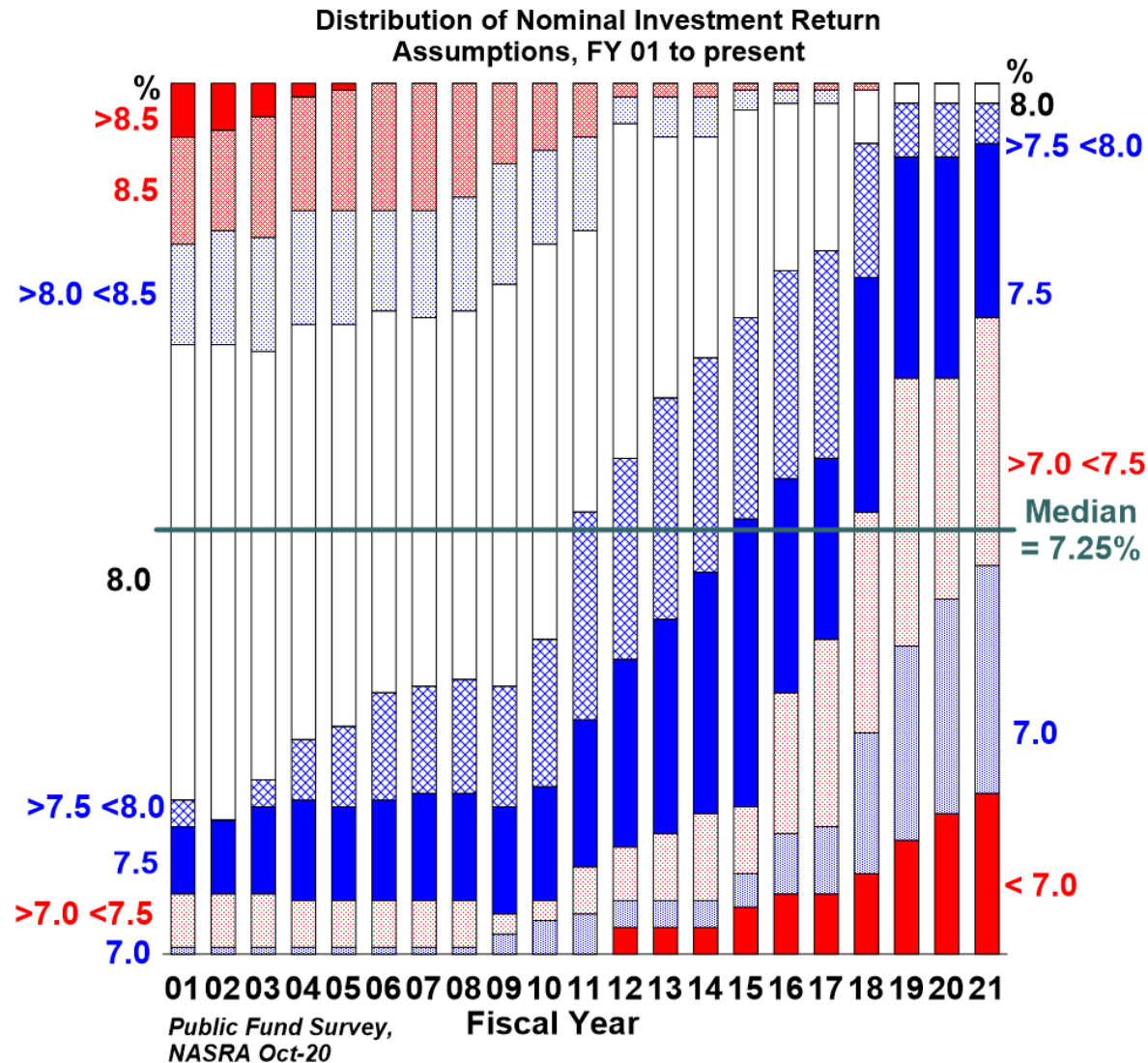
Historical Trends – Contributions





- 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



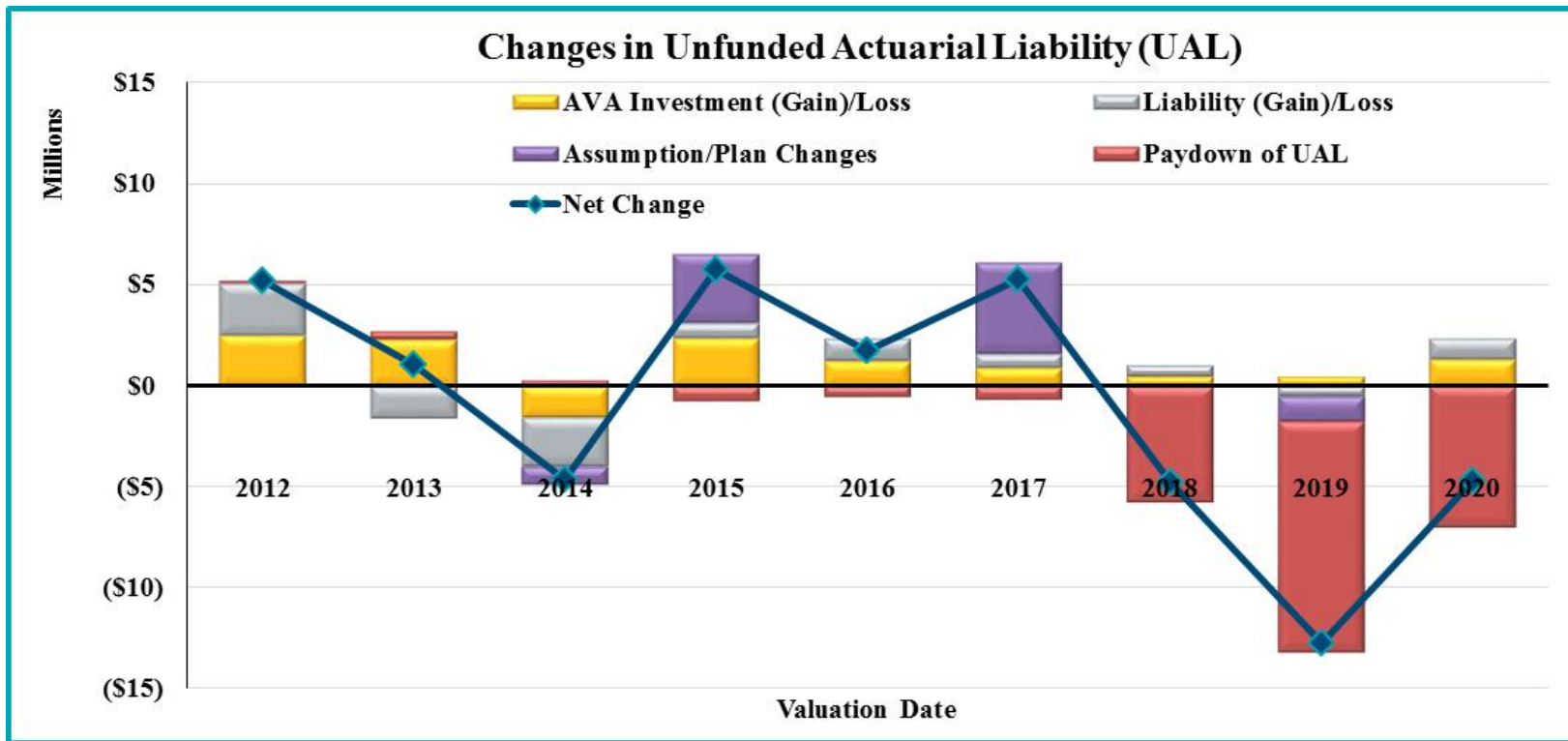
Source: 2020 Public Fund Survey Summary of Findings, NASRA

November 19, 2020

Interest Rate Risk



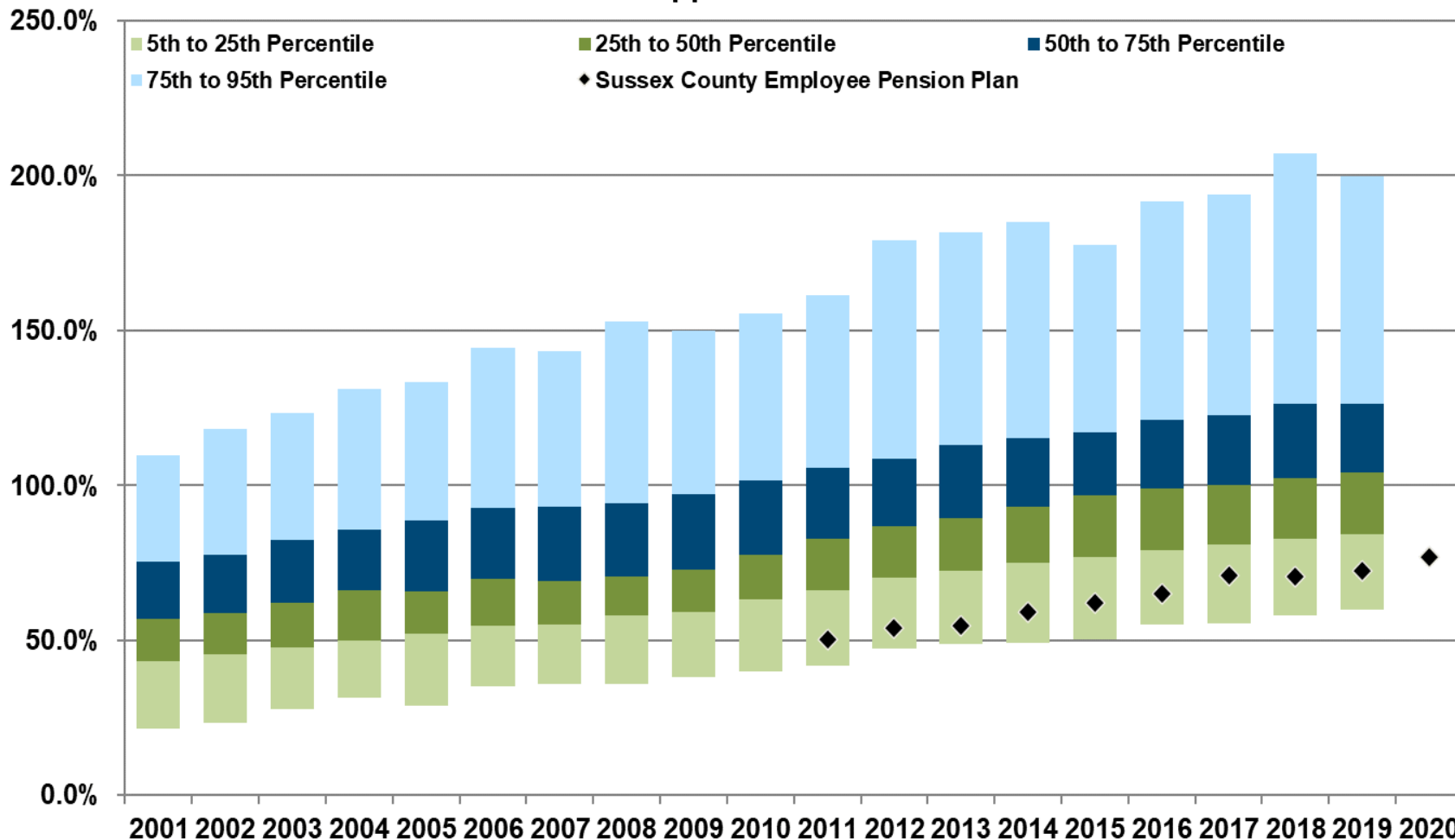
Material Risks – Changes in UAL



Plan Maturity Measures – Support Ratio

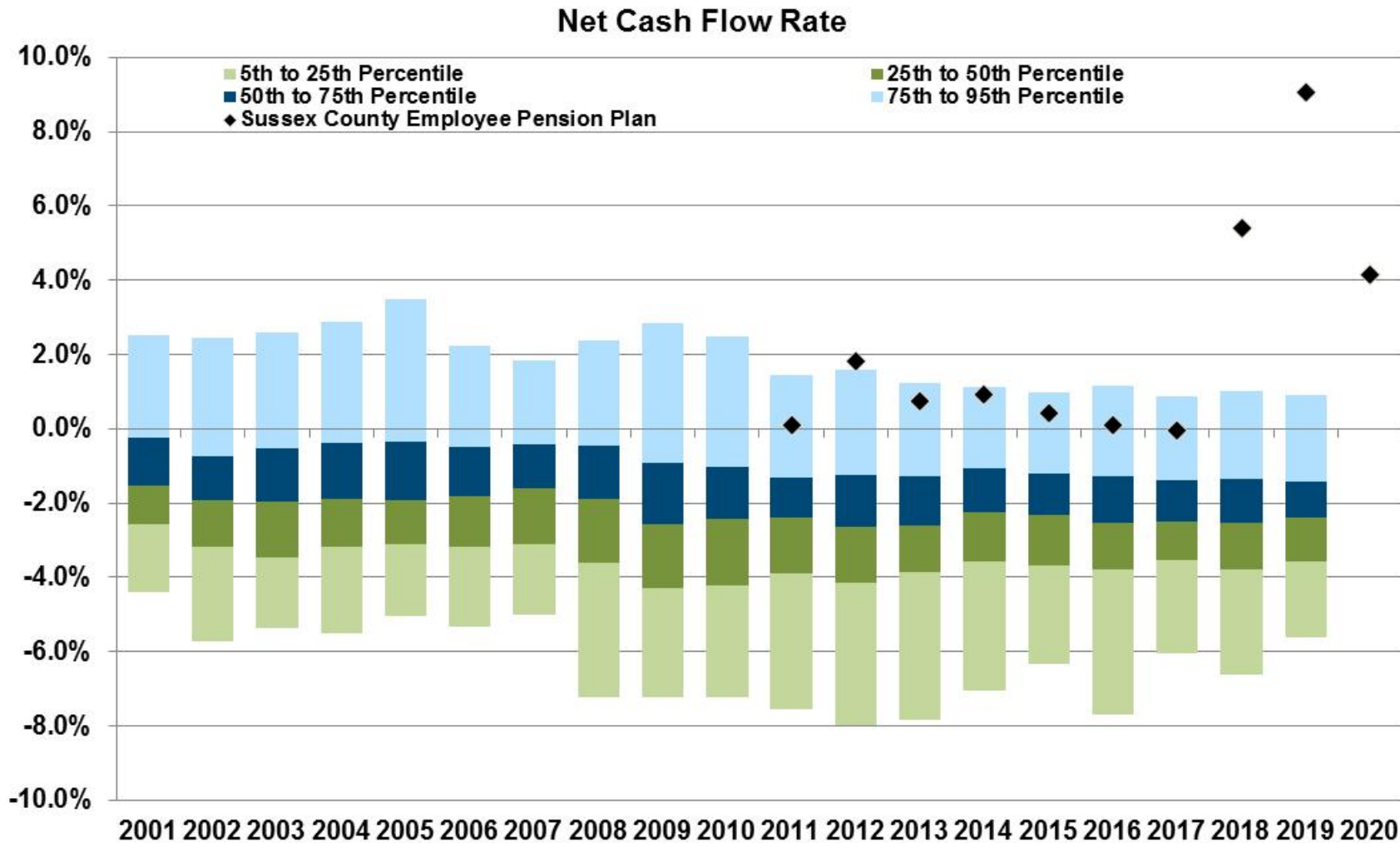


Support Ratio



Survey Data from Public Plans Database as of 9/15/2020

Plan Maturity Measures – Net Cash Flow



Survey Data from Public Plans Database as of 9/15/2020



- Contributions
 - Actuarially Determined Contribution (ADC) decreased from \$3.0 million to \$2.7 million
 - Primarily due to \$6.8 million in excess contributions paid in FY 2020
- Unfunded actuarial liability (UAL) and funded status
 - UAL decreased from \$3.4 million to \$(1.3) million
 - Actuarial experience asset loss of \$1.3 million
 - 3.3% on market value (compared to 7.00% assumption)
 - 5.9% on actuarial value (assumes phase-in of 5-year asset smoothing)
 - Actuarial experience liability loss of \$1.0 million
 - Funded ratio (actuarial value of assets divided by actuarial liability) increased from 97.0% to 101.1%

2020 Valuation – Participants



Participant Information

	7/1/2019	7/1/2020	Percent Change
Number of Actives	507	506	(0.2) %
Total Salary	\$25,270,591	\$25,943,699	2.7 %
Average Salary	\$49,843	\$51,272	2.9 %
Number of In-Pay	265	285	7.5 %
Total Benefits	\$4,465,324	\$5,025,146	12.5 %
Average Benefits	\$16,850	\$17,632	4.6 %
Number of Terminated Vested	102	104	2.0 %
Total Benefits	\$874,797	\$916,378	4.8 %
Average Benefits	\$8,576	\$8,811	2.7 %

2020 Valuation – Principal Results



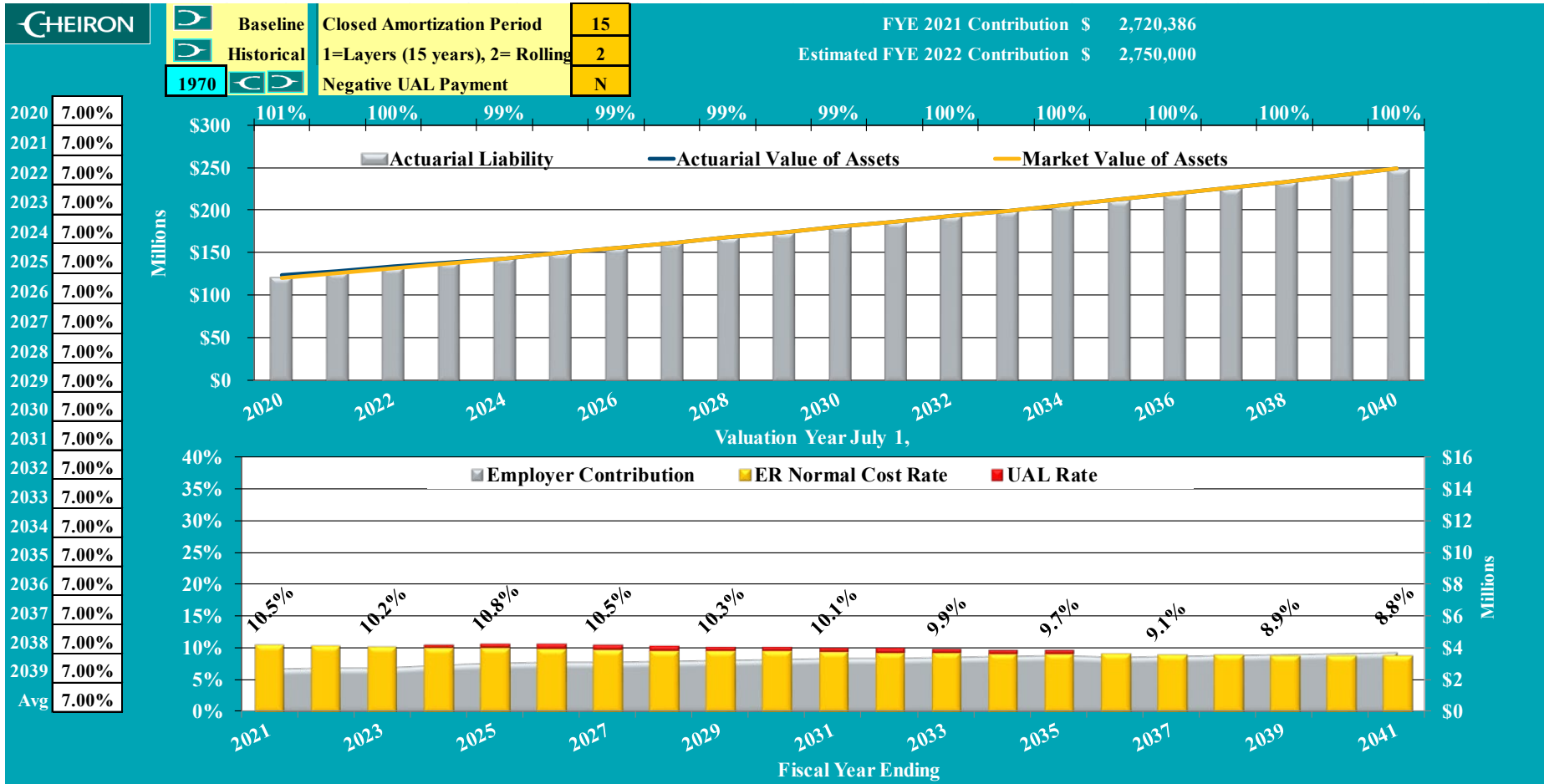
Principal Results

	7/1/2019	7/1/2020
Actuarial Liability (AL)	\$114,897,950	\$121,843,941
Actuarial Values of Assets	111,464,316	123,158,537
Unfunded AL (UAL)	\$3,433,634	\$(1,314,596)
Actuarial Funded Ratio	97.0%	101.1%
Market Value of Assets	\$111,650,661	\$120,459,235
Market Funded Ratio	97.2%	98.9%
FYE Contribution Applicable to	2020	2021
Employer Normal Cost	\$ 2,507,685	\$ 2,578,700
UAL Amortization Payment*	339,698	0
Administrative Expense	113,184	141,686
Total County Contribution	\$ 2,960,567	\$ 2,720,386
Contribution as a Percentage of Payroll	11.72%	10.49%

* Payment based on amortization of UAL, not less than \$0.

November 19, 2020

Projected Outlook



Required Disclosures



The purpose of this presentation is to present the July 1, 2020 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 user.

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.

The analysis was based on financial data through June 30, 2020 and the July 1, 2020 membership data. The July 1, 2020 actuarial valuation report should be referred to for a summary of the methods and assumptions. 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 projections were based on the same membership data and financial information as was used for the actuarial valuation. The projections assume continuation of the plan provisions and actuarial assumptions in effect as of July 1, 2020 and do not reflect the impact of any changes in benefits or actuarial assumptions that may be adopted after July 1, 2020 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.

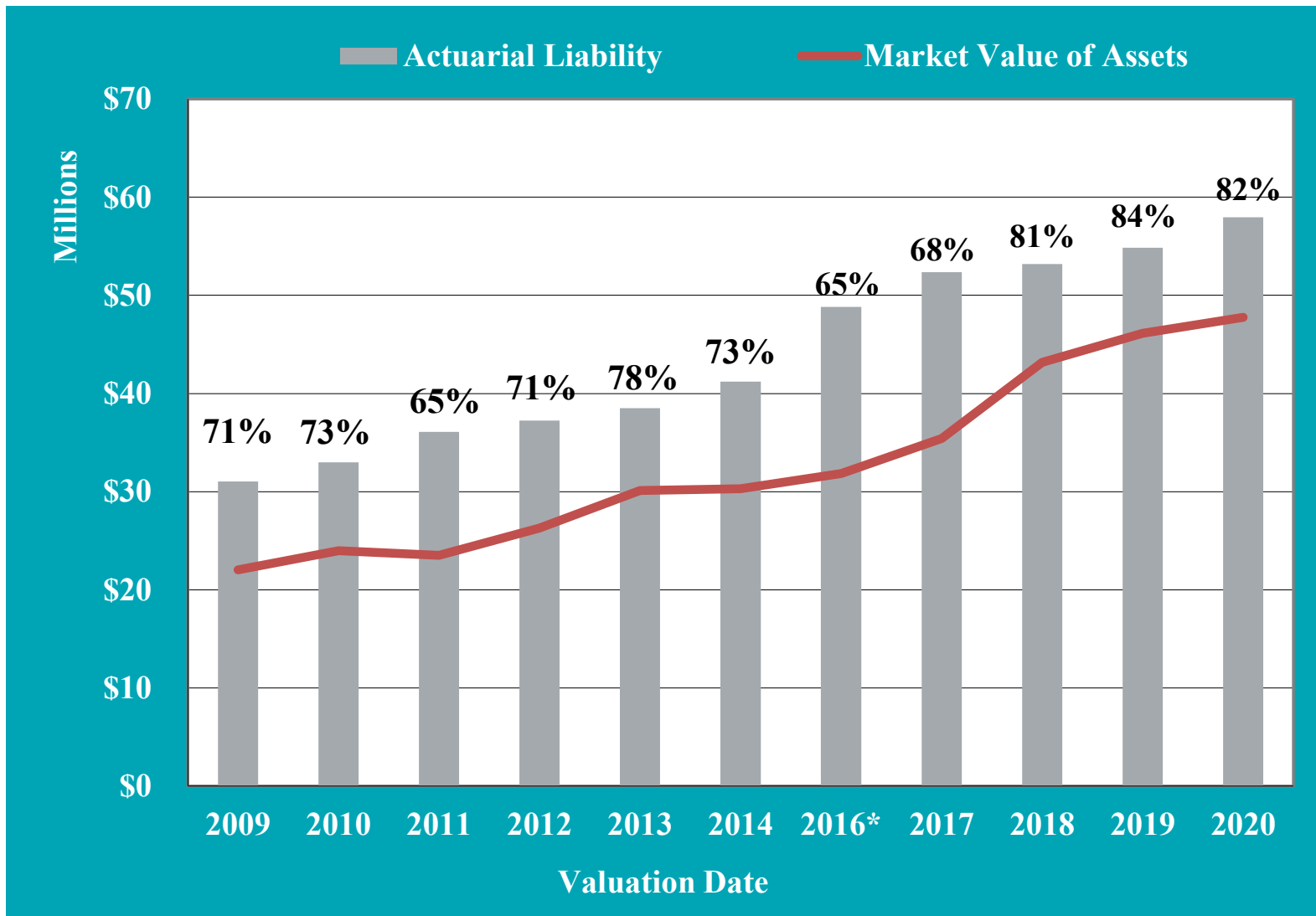
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Principal Consulting Actuary

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Associate Actuary



2020 OPEB Actuarial Valuation

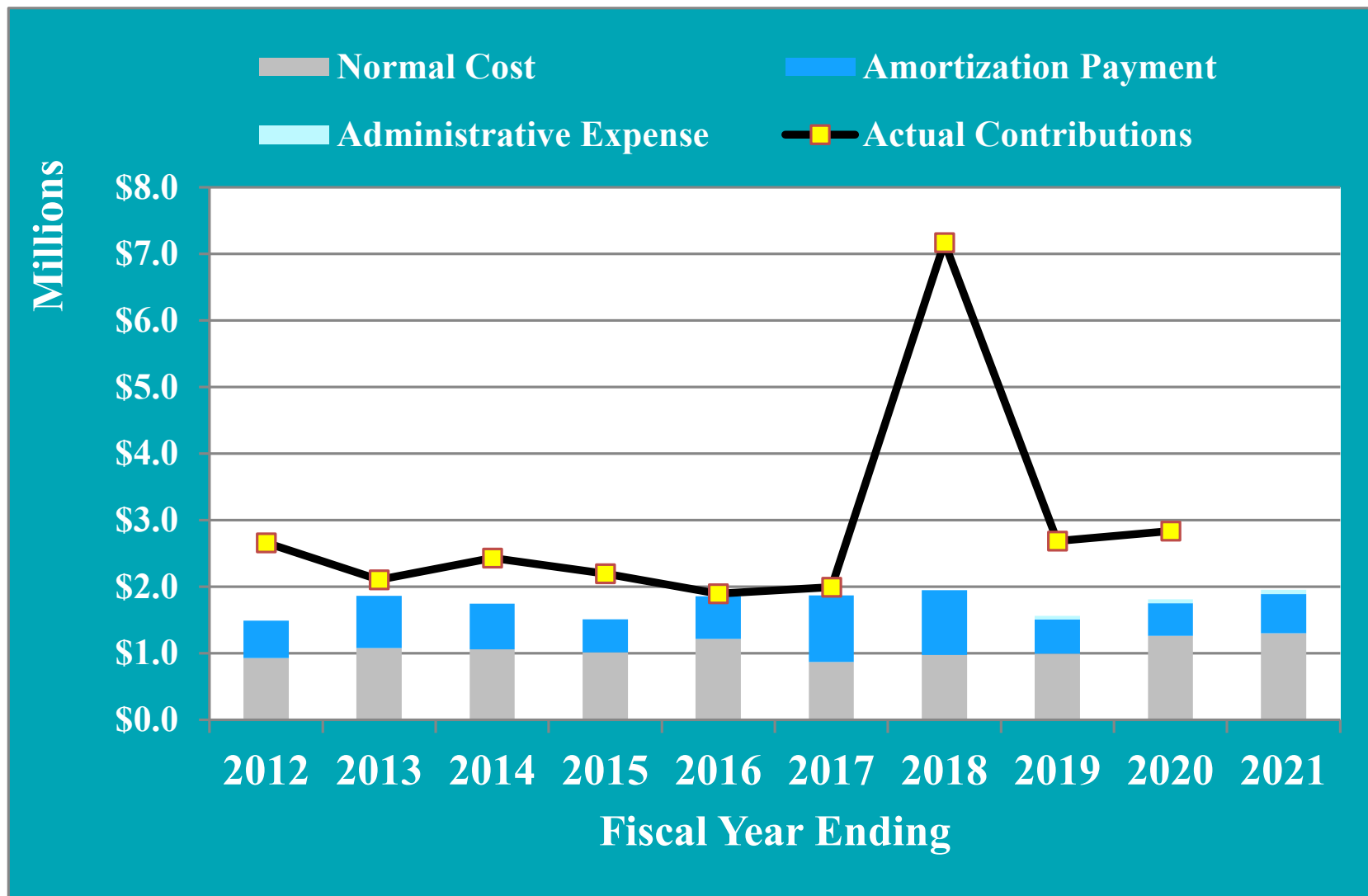
Historical Review – Assets and Liabilities



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

November 19, 2020

Historical Review – Contributions



2020 Valuation – Principal Results



Principal Results		
	7/1/2019	7/1/2020
Active Employees	484	480
Retirees	171	186
Disabled	12	12
Survivors	20	20
Total Participants	687	698
Actuarial Liability (AL)	\$ 54,869,840	\$ 57,965,311
Assets	46,138,833	47,761,963
Unfunded AL (UAL)	\$ 8,731,007	\$ 10,203,348
Actuarial Funded Ratio	84.1%	82.4%
FYE Contribution Applicable to	2020	2021
Employer Normal Cost	\$ 1,228,249	\$ 1,273,239
UAL Amortization Payment	461,520	550,822
Interest	118,284	127,684
Total County Contribution	\$ 1,808,053	\$ 1,951,745
Contribution as a Percentage of Payroll	7.48%	7.90%
Covered Payroll	\$ 24,181,316	\$ 24,696,338

Projected Outlook – Baseline



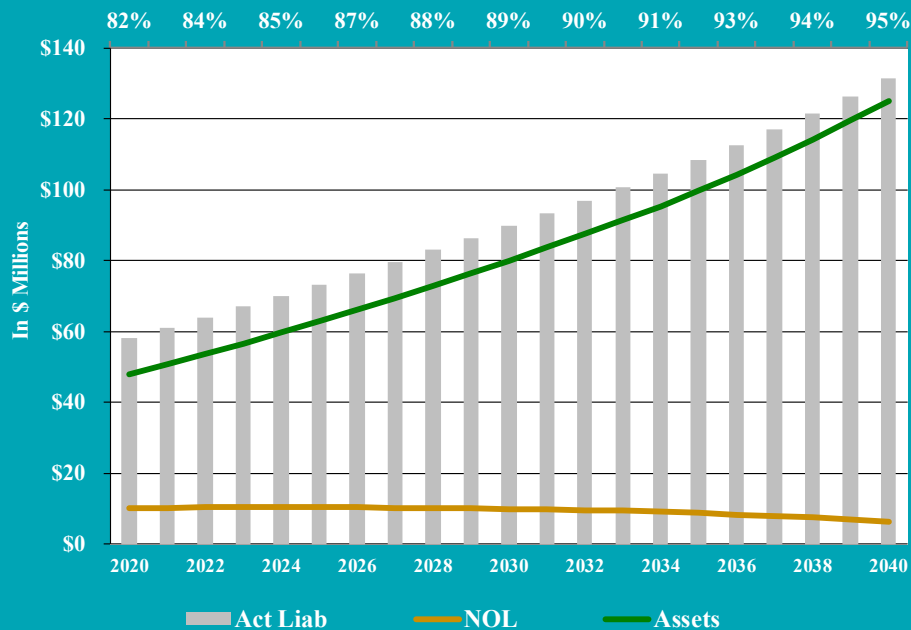
Projection assumptions:

7.00% discount rate

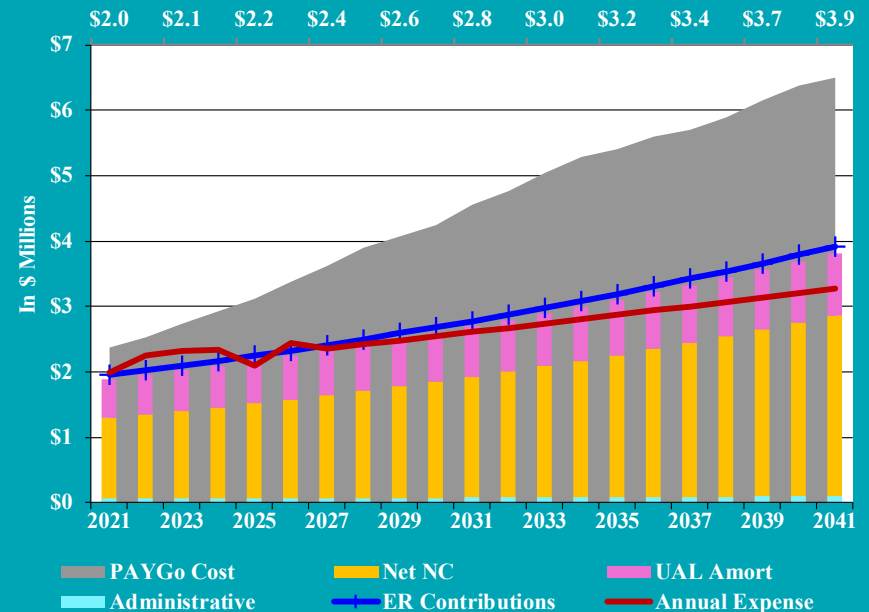
ADC contributions (7.90% of payroll, increasing slightly to 8% of payroll)

28 year closed amortization

Assets and Liabilities



Plan Expense and Funding Fiscal Year Ending



Projected Outlook – Budgeted Contributions



Projection assumptions:

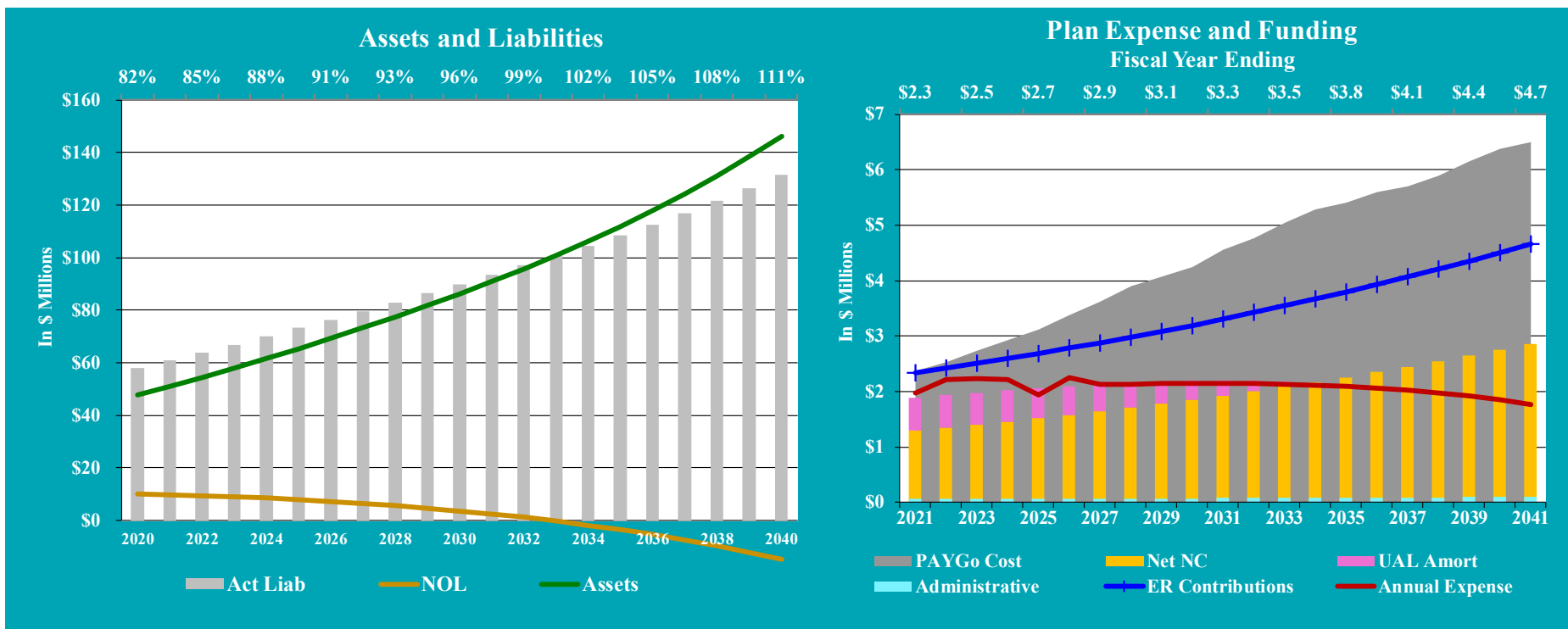
7.00% discount rate

Budgeted contributions of 9.50% of pay

28 year closed amortization

100% funding reached in 13 years

Assets projected to grow to cover 111% of expected liabilities by 2040



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The purpose of this presentation is to present the July 1, 2020 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 user.

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.

The analysis was based on financial data through June 30, 2020 and the July 1, 2020 membership data. The July 1, 2020 OPEB valuation and/or GASB 74/75 report should be referred to for a summary of the methods and assumptions. 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.

This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and my 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, I 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. I am not an attorney, and my firm does not provide any legal services or advice.

Margaret Tempkin, FSA, EA, MAAA
Principal 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 7.00% (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 (2.21% for 2020) 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 2020 and 2019 plan years
 - The County’s FY 2020 expense will be based on the County’s 2020 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 6.00%	Discount Rate 7.00%	1% Increase 8.00%
Total Pension Liability	\$ 138,125,746	\$ 121,843,941	\$ 108,379,307
Plan Fiduciary Net Position	<u>120,459,235</u>	<u>120,459,235</u>	<u>120,459,235</u>
Net Pension Liability	<u>\$ 17,666,511</u>	<u>\$ 1,384,706</u>	<u>\$ (12,079,928)</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	87.2%	98.9%	111.1%

GASB 68 – Results



Calculation of Pension Expense

	Measurement Year Ending	
	2020	2019
Change in Net Pension Liability	\$ (1,862,583)	\$ (12,748,325)
Change in Deferred Outflows	(2,462,482)	1,356,270
Change in Deferred Inflows	(479,942)	1,654,326
Employer Contributions	<u>9,779,296</u>	<u>14,462,910</u>
Pension Expense	\$ 4,974,289	\$ 4,725,181
Pension Expense as % of Payroll	19.17%	18.70%
Operating Expenses		
Service cost	\$ 2,714,022	\$ 2,271,361
Employee contributions	(211,354)	(172,315)
Administrative expenses	<u>138,230</u>	<u>110,423</u>
Total	\$ 2,640,898	\$ 2,209,469
Financing Expenses		
Interest cost	\$ 8,066,691	\$ 8,037,883
Expected return on assets	<u>(7,988,401)</u>	<u>(7,230,839)</u>
Total	\$ 78,290	\$ 807,044
Changes		
Benefit changes	\$ 0	\$ 0
Recognition of assumption changes	336,558	336,558
Recognition of liability gains and losses	600,681	435,011
Recognition of investment gains and losses	<u>1,317,862</u>	<u>937,099</u>
Total	\$ 2,255,101	\$ 1,708,668
Pension Expense	\$ 4,974,289	\$ 4,725,181



- 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 7.00%

Change in Net OPEB Liability

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balances at 6/30/2019	\$ 54,869,840	\$ 46,138,833	\$ 8,731,007
Changes for the year:			
Service cost	1,177,365		1,177,365
Interest	3,824,207		3,824,207
Changes of benefits	0		0
Differences between expected and actual experience	2,351,755		2,351,755
Changes of assumptions	(1,377,792)		(1,377,792)
Contributions - employer		2,835,463	(2,835,463)
Contributions - member		0	0
Net investment income		1,727,777	(1,727,777)
Benefit payments	(2,880,064)	(2,880,064)	0
Administrative expense		(60,046)	60,046
Net changes	<u>3,095,471</u>	<u>1,623,130</u>	<u>1,472,341</u>
Balances at 6/30/2020	<u>\$ 57,965,311</u>	<u>\$ 47,761,963</u>	<u>\$ 10,203,348</u>

GASB 74 – 2020 Results Sensitivity



Sensitivity of Net OPEB Liability to Changes in Discount Rate

	1% Decrease 6.00%	Discount Rate 7.00%	1% Increase 8.00%
Total OPEB Liability	\$ 66,464,524	\$ 57,965,311	\$ 51,032,759
Plan Fiduciary Net Position	<u>47,761,963</u>	<u>47,761,963</u>	<u>47,761,963</u>
Net OPEB Liability	<u>\$ 18,702,561</u>	<u>\$ 10,203,348</u>	<u>\$ 3,270,796</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	71.9%	82.4%	93.6%

Sensitivity of Net OPEB Liability to Changes in Healthcare Cost Trend Rates

	1% Decrease	Healthcare Trend	1% Increase
Total OPEB Liability	\$ 50,443,998	\$ 57,965,311	\$ 67,370,942
Plan Fiduciary Net Position	<u>47,761,963</u>	<u>47,761,963</u>	<u>47,761,963</u>
Net OPEB Liability	<u>\$ 2,682,035</u>	<u>\$ 10,203,348</u>	<u>\$ 19,608,979</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	94.7%	82.4%	70.9%

GASB 75 – 2020 OPEB Expense



Calculation of OPEB Expense

	Measurement Year Ending	
	2020	2019
Change in Net OPEB Liability	\$ 1,472,341	\$ (1,266,256)
Change in Deferred Outflows	(2,875,691)	233,121
Change in Deferred Inflows	602,398	(216,627)
Employer Contributions	<u>2,835,463</u>	<u>2,687,134</u>
OPEB Expense	\$ 2,034,511	\$ 1,437,372
OPEB Expense as % of Payroll	8.24%	5.94%
Operating Expenses		
Service cost	\$ 1,177,365	\$ 925,928
Employee contributions	0	0
Administrative expenses	<u>60,046</u>	<u>53,118</u>
Total	\$ 1,237,411	\$ 979,046
Financing Expenses		
Interest cost	\$ 3,824,207	\$ 3,829,471
Expected return on assets	<u>(3,226,118)</u>	<u>(3,131,352)</u>
Total	\$ 598,089	\$ 698,119
Changes		
Benefit changes	\$ 0	\$ 0
Recognition of assumption changes	(243,387)	(46,560)
Recognition of liability gains and losses	321,547	(14,416)
Recognition of investment gains and losses	<u>120,851</u>	<u>(178,817)</u>
Total	\$ 199,011	\$ (239,793)
OPEB Expense	\$ 2,034,511	\$ 1,437,372



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