

Fairfax County Employees' Retirement System



2020 Actuarial Valuation

September 16, 2020

Presented By

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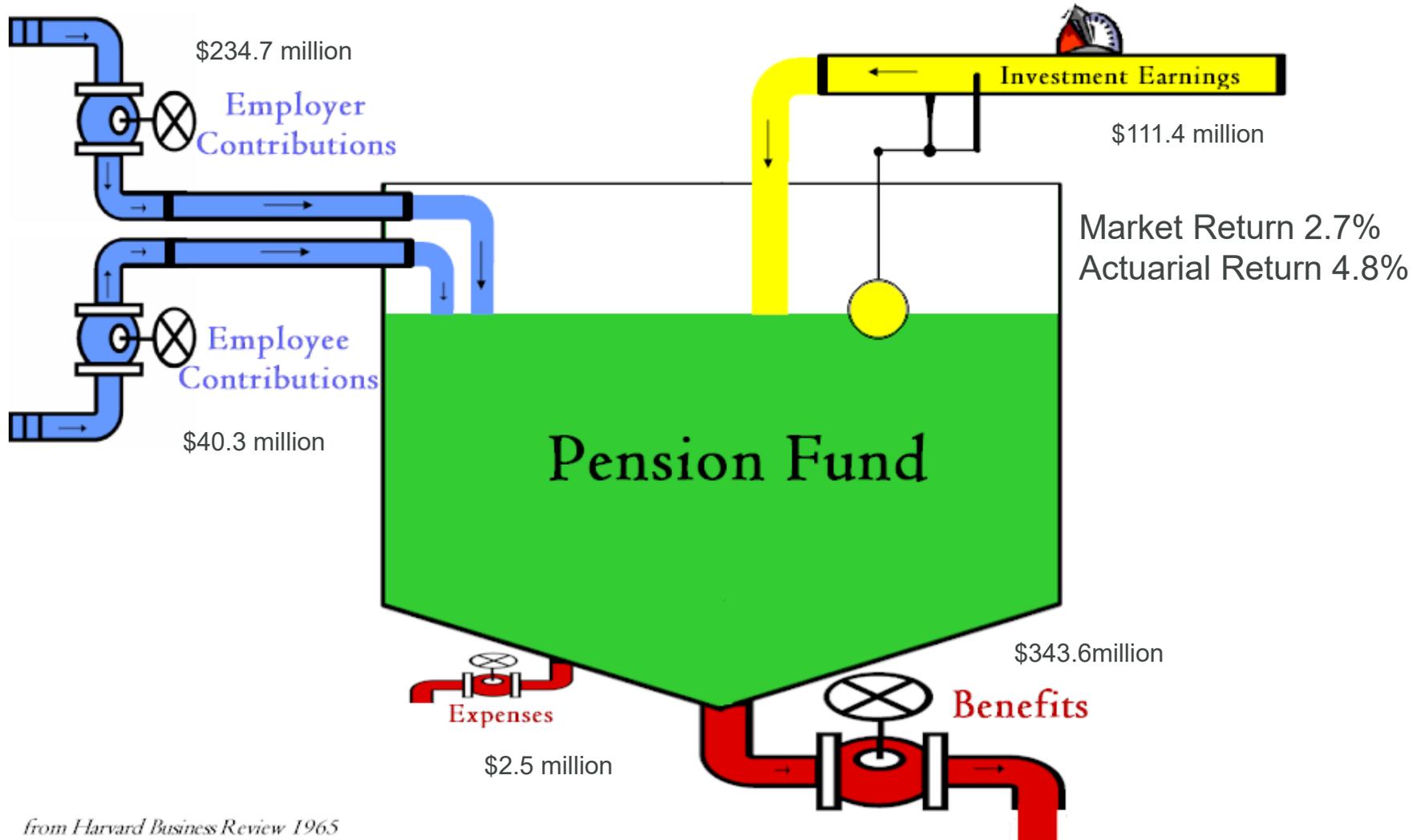


Topics for Discussion



- Historical Review
- Principal 6/30/2020 Valuation Results
- Stress Testing
- GASB 67/68

The Actuarial Valuation Process

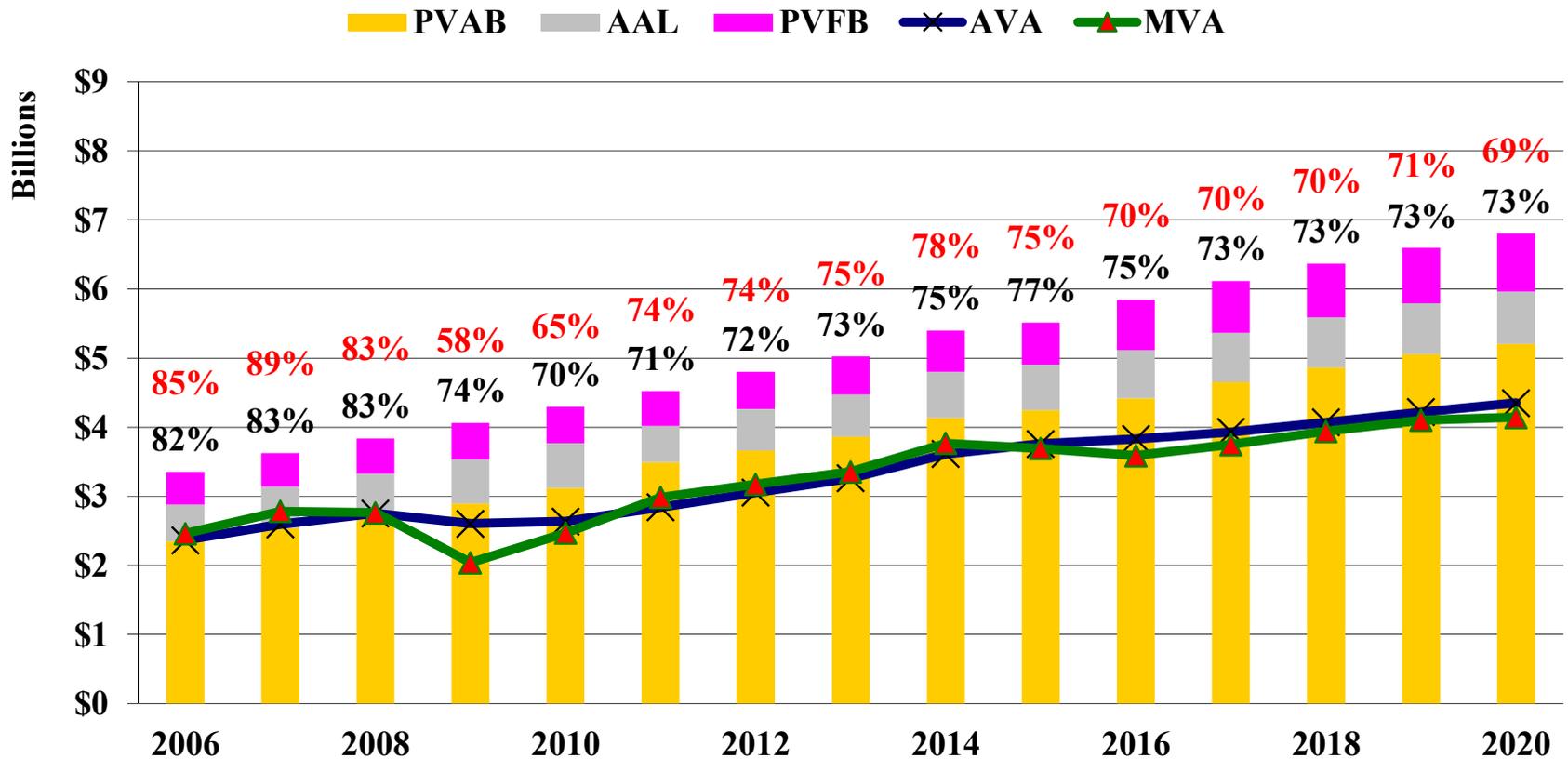


from Harvard Business Review 1965

Historical Review



Key Actuarial Indicators: Assets & Liabilities

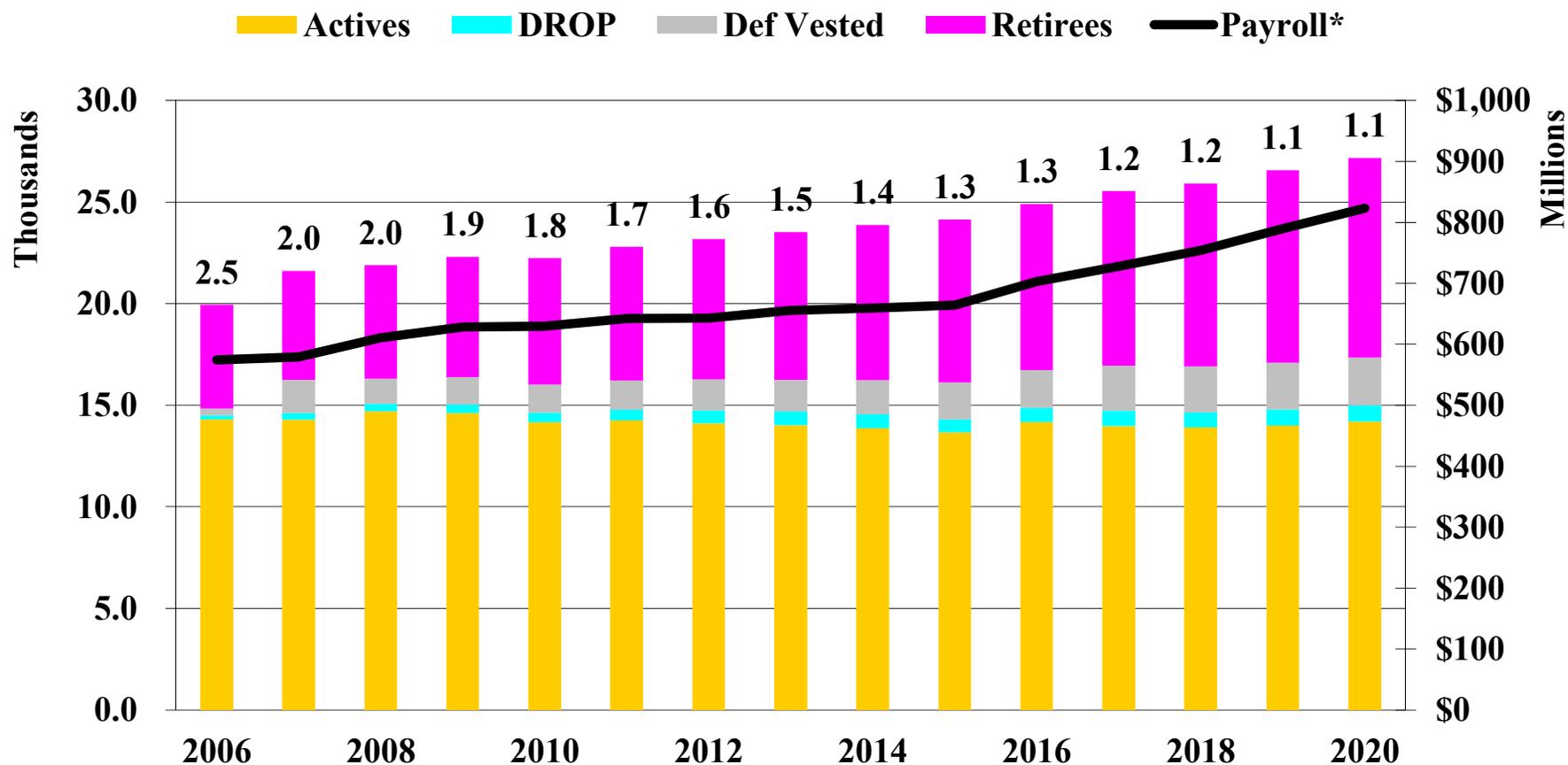


* Ratios in red represent the GASB funding ratio which uses Market Value of Assets. The ratios in black are based on Actuarial Value of Assets.

Historical Review



Plan Maturity Indicators: Participation

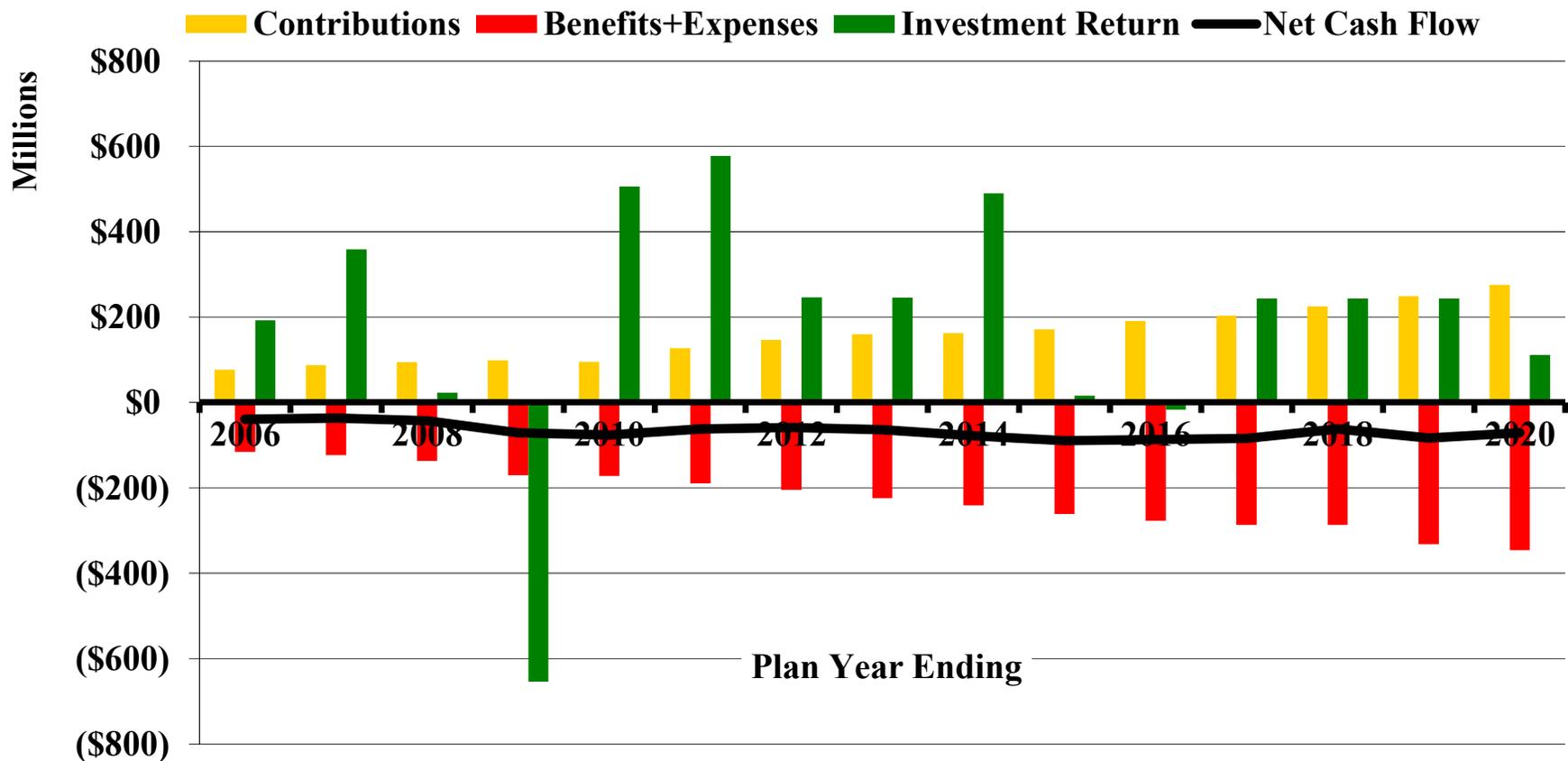


* Ratios represent the number of actives per inactive. The 2016 valuation used revised data techniques which no longer adjust for January - June retirements. There is a one-time increase in both active counts and covered payroll.

Historical Review



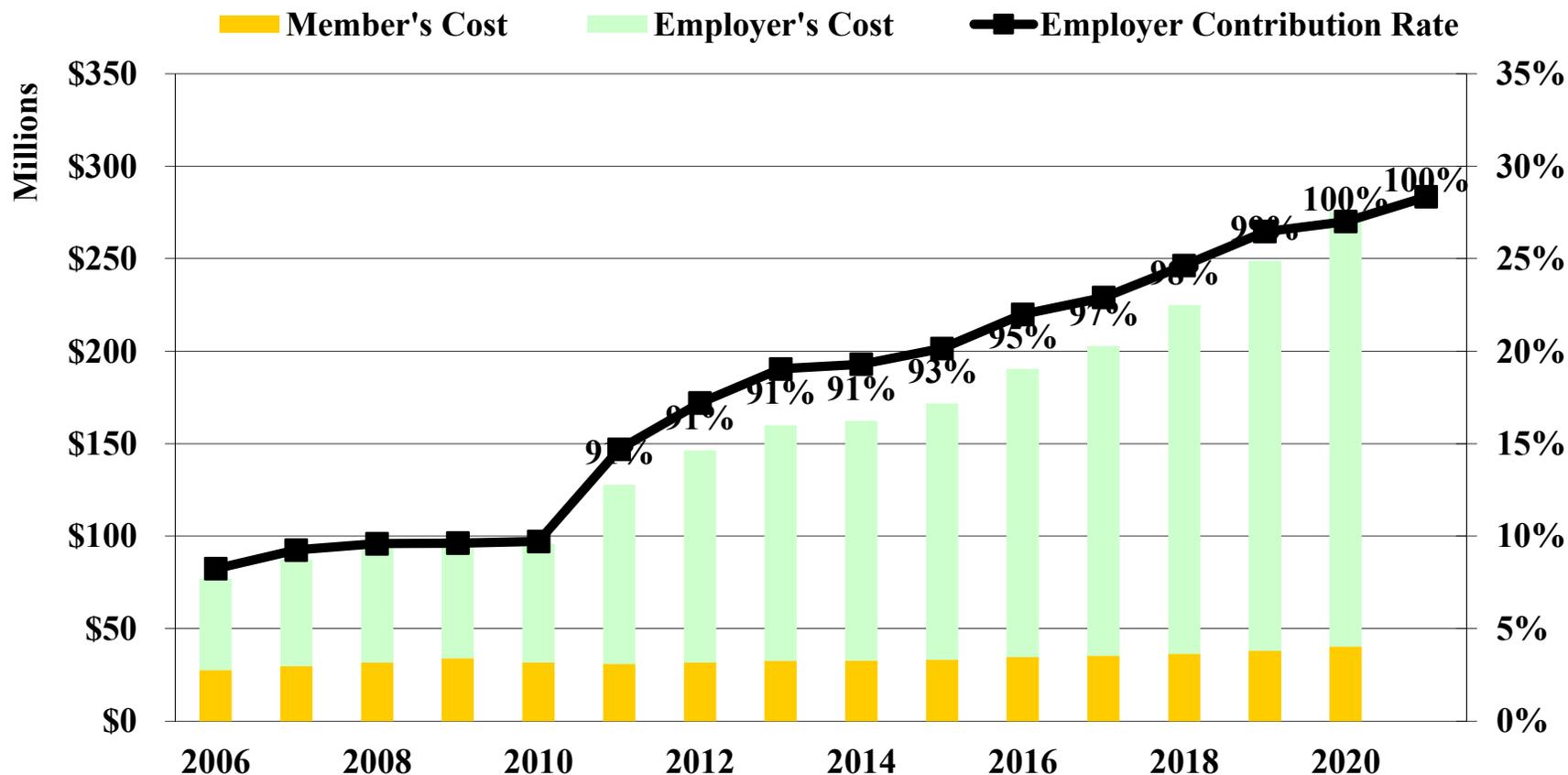
Plan Maturity Indicators: Annual Cash Flows



Historical Review



Key Actuarial Indicators: Contribution Rates

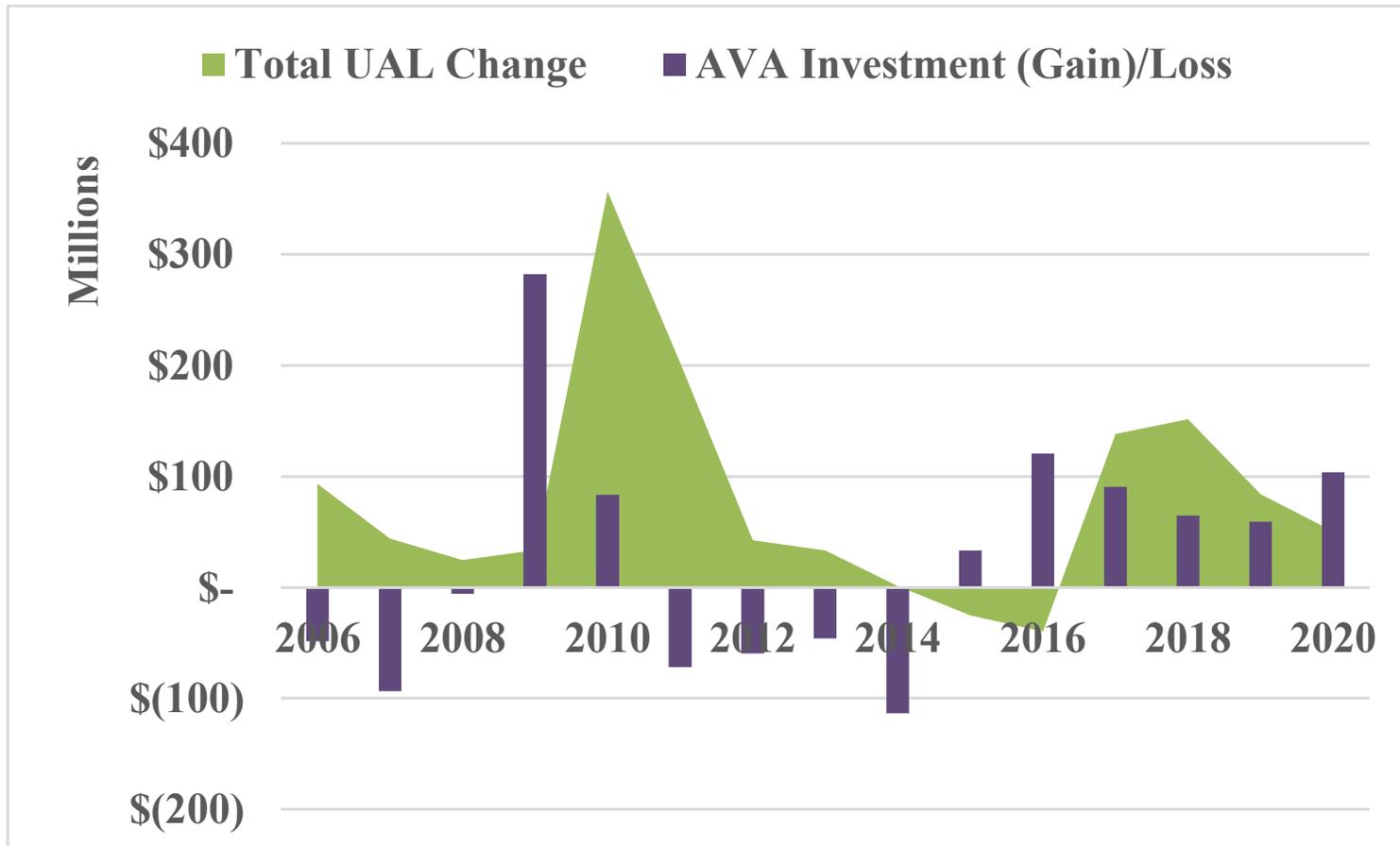


* Amounts shown in the bars above represent the amortization target funding ratio used in developing the contribution rate.

Historical Review



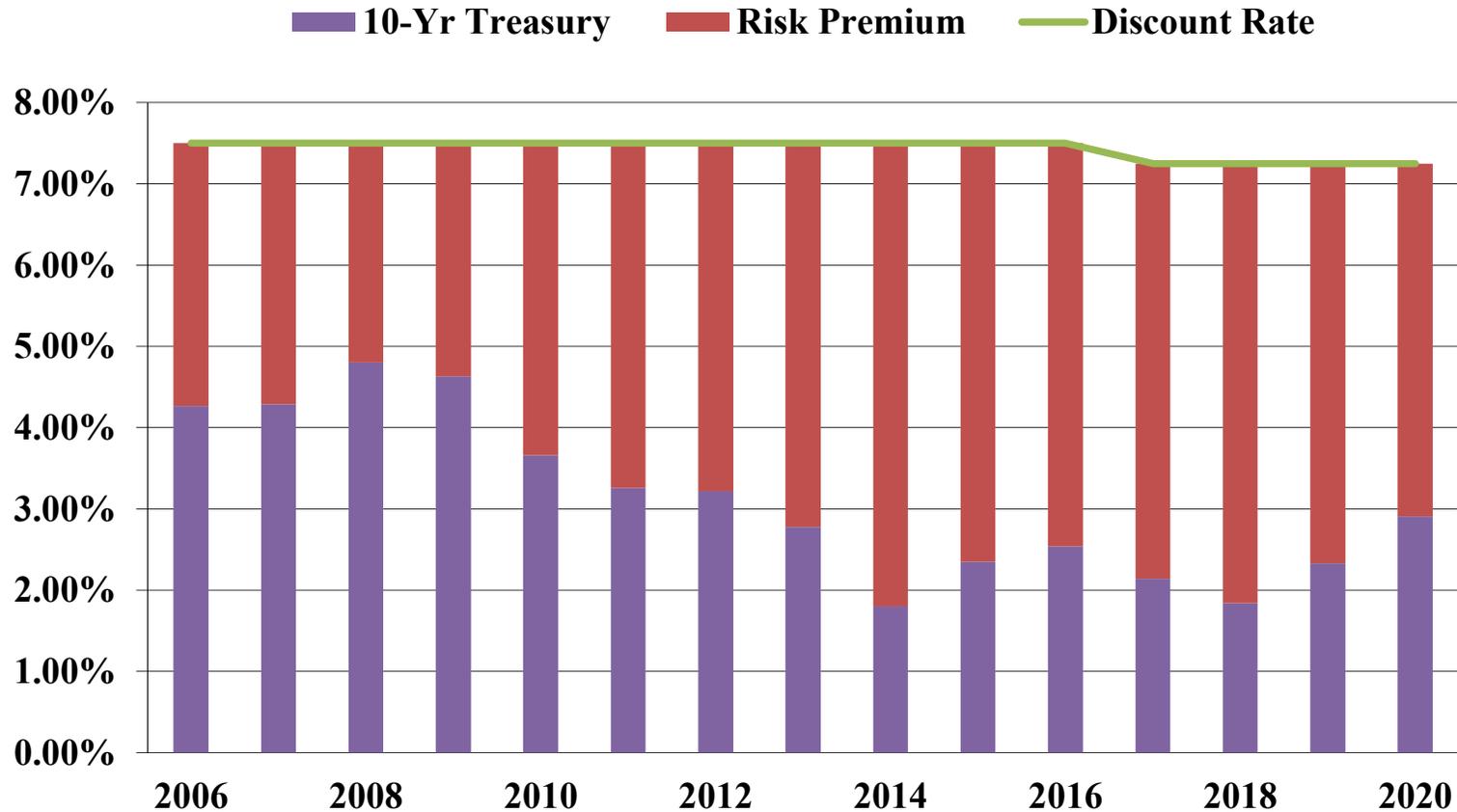
Key Risk Factors: Investment Risk



Historical Review



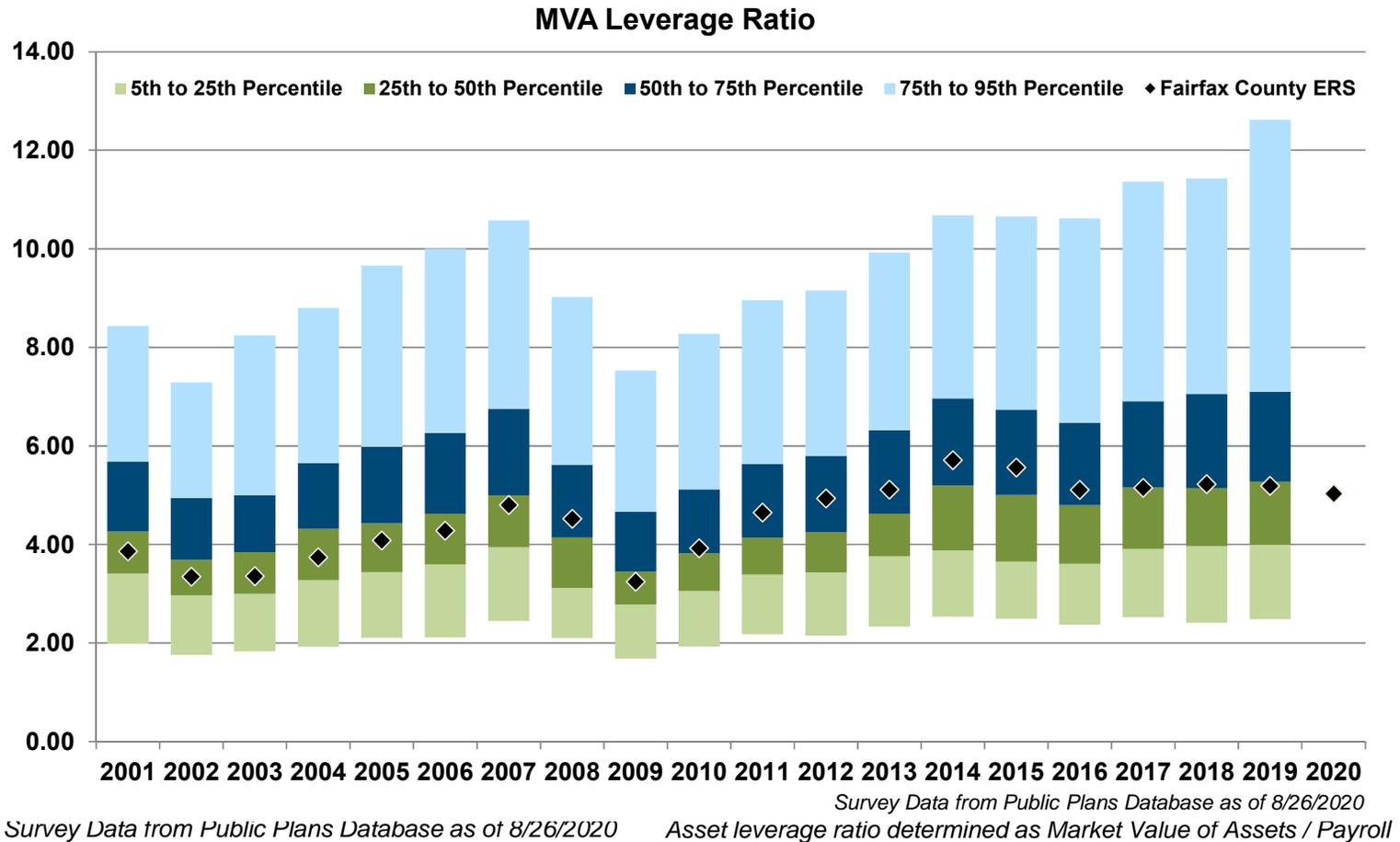
Key Risk Factors: Interest Rate



Historical Review



Key Risk Factors: Asset Leverage

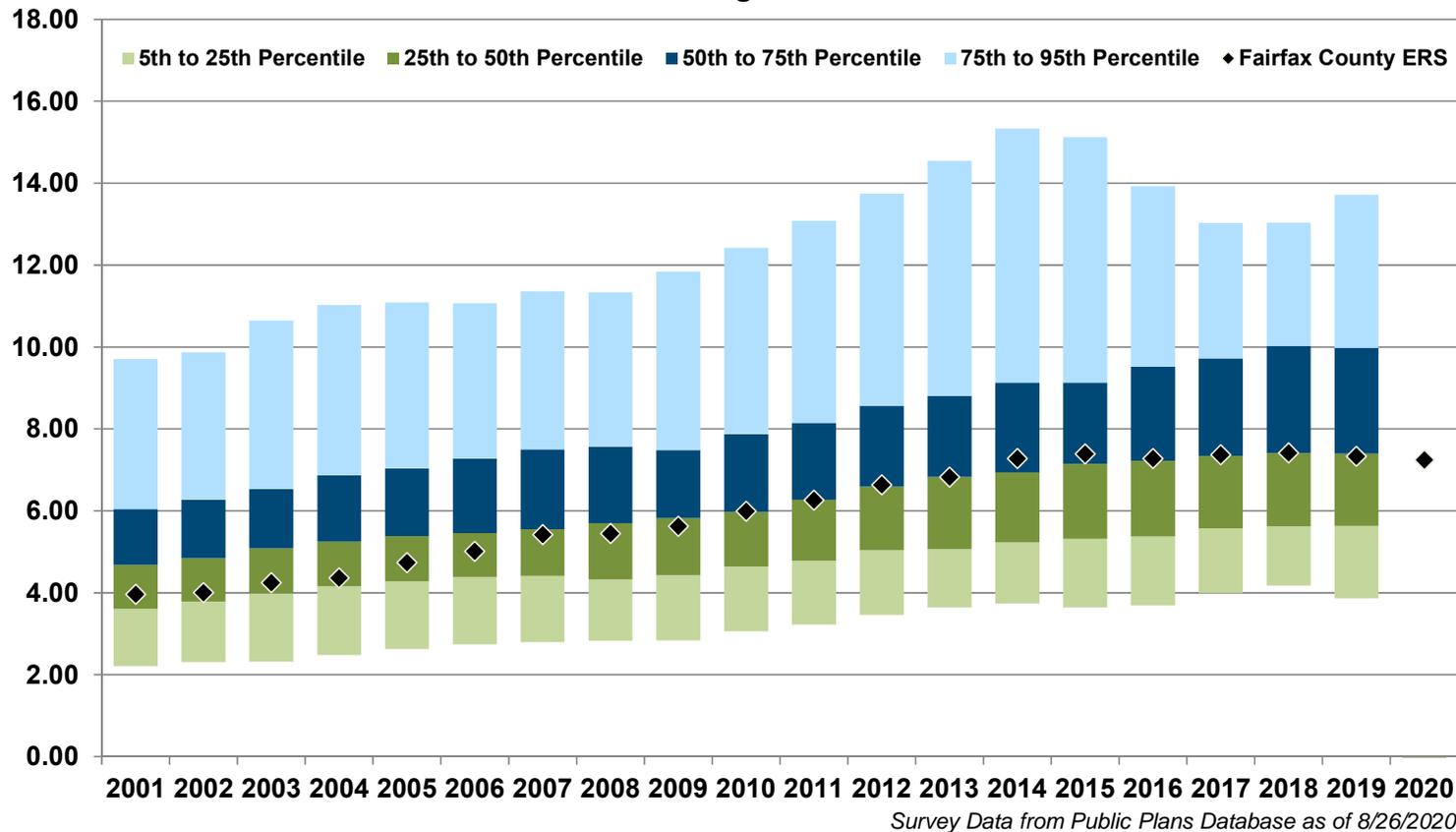


Historical Review



Key Risk Factors: Liability Leverage

AL Leverage Ratio



Survey Data from Public Plans Database as of 8/26/2020

Liability leverage ratio determined as Accrued Liability / Payroll

Principal 6/30/2020 Valuation Results



Key Statistics: Total Actives

	2019	2020	% Change
Number of Actives	14,000	14,204	1.5%
Number Active & DROP	14,806	14,989	1.2%
Total Salary	\$ 789 mil.	\$ 823 mil.	4.2%
Average Salary	\$ 56,414	\$ 57,939	2.7%

Reconciliation	Count	Average W2 Salary	
		2019	2020
Matches*	12,571	\$ 56,741	\$ 59,179
New	1,633	N/A	\$ 48,393
Left	1,429	\$ 53,533	N/A

* Expected average salary to increase 4.4% (\$59,238) vs. actual increase of 4.3%.

Principal 6/30/2020 Valuation Results



Key Statistics: County Actives

	2019	2020	% Change
Number of Actives	8,269	8,421	1.8%
Number Active & DROP	8,786	8,908	1.4%
Total Salary	\$ 576 mil.	\$ 608 mil.	5.6%
Average Salary	\$ 69,639	\$ 72,209	3.7%

Reconciliation	Count	<u>Average W2 Salary</u>	
		2019	2020
Matches*	7,517	\$ 69,749	\$ 73,297
New	904	N/A	\$ 63,163
Left	752	\$ 68,799	N/A

* Expected average salary to increase 4.0% (\$72,531) vs. actual increase of 5.1%.

Principal 6/30/2020 Valuation Results



Key Statistics: Schools Actives

	2019	2020	% Change
Number of Actives	5,731	5,783	0.9%
Number Active & DROP	6,020	6,081	1.0%
Total Salary	\$ 213 mil.	\$ 215 mil.	0.5%
Average Salary	\$ 37,297	\$ 37,160	(0.4)%

Reconciliation	Count	Average W2 Salary	
		2019	2020
Matches*	5,038	\$ 37,364	\$ 38,159
New	745	N/A	\$ 30,405
Left	693	\$ 36,810	N/A

* Expected average salary to increase 4.2% (\$38,949) vs. actual increase of 2.1%.

Principal 6/30/2020 Valuation Results



Key Statistics: Retired/Disabled/Beneficiaries

	2019	2020	% Change
Number Retired / Disabled / Beneficiaries	9,468	9,824	3.8%
Base Benefits	\$ 252 mil.	\$ 263 mil.	4.5%
Average Base Benefit	\$ 26,604	\$ 26,794	0.7%

Reconciliation	Count	Average Base Benefit	
		2019	2020
Matches*	9,204	\$ 26,767	\$ 26,834
New**	620	N/A	\$ 26,232
Left	264	\$ 27,419	N/A

* Expected average benefit to increase 2.5% (\$26,842) vs. actual increase of 0.2%.

** 245 of the 726 new retirees came from active status.

Principal 6/30/2020 Valuation Results



Key Statistics: DROP

	2019	2020	% Change
Number of DROP	806	785	(2.6)%
Total DROP Benefits	\$ 27.3 mil.	\$ 25.5 mil.	(6.4)%
Pre-Social Security Benefits	\$ 11.3 mil.	\$ 10.8 mil.	(1.8)%
Average DROP Base Benefit	\$ 33,823	\$ 32,514	(3.9)%

Reconciliation	Count	Average Benefit	
		2019	2020
Matches*	510	\$ 33,889	\$ 33,912
New	275	N/A	\$ 30,527
Left	296	\$ 34,279	N/A

* Expected average benefit to increase 2.5% (\$34,600) vs. actual increase of 0.1%.

Principal 6/30/2020 Valuation Results



KEY RESULTS		(\$ in millions)	
Valuation Date	6/30/2019	6/30/2020	
Actuarial Accrued Liability	\$ 5,791	\$ 5,961	
Actuarial Value of Assets	\$ 4,220	\$ 4,349	
Unfunded Actuarial Liability	\$ 1,571	\$ 1,612	
Funded Ratio AVA/AL	72.9%	73.0%	
Funded Ratio MVA/AL	70.8%	69.5%	

Fiscal Year for Contribution	2021	2022
County Contribution Rate	28.10%/28.35%*	28.88%

* Rate cannot be lower than the County's current contribution rate.

Principal 6/30/2020 Valuation Results



Changes in Liabilities/Assets

	(\$ in millions)		
	Liability	Actuarial Assets	UAL
6/30/2019	\$ 5,791	\$ 4,220	\$ 1,571
Expected Change	175 *	232 **	(57)
Assumption/Method Changes	0	0	0
Plan Changes	0	0	0
Expected at 6/30/2020	\$ 5,966	\$ 4,452	\$ 1,514
Actual at 6/30/2020	\$ 5,961	\$ 4,349	\$ 1,612
(Gain) / Loss	\$ (5)	\$ 103	\$ 98
Contribution Impact (% of pay)	(0.06%)	1.20%	1.14%

* Liability change includes Normal Cost, Benefits, and Interest.

** Asset change includes Contributions, Benefits, and Interest.

Principal 6/30/2020 Valuation Results



Sources of Liability Loss/(Gain)

	(\$ in millions) Liability Loss/(Gain)
Salary Increases	\$ 7
New Hires/Rehires	10
COLA 0.4% vs assumed 2.5%	(56)
DROP/Retirement	19
Delayed recognition of disabilities	5
Other	10
Total Net Loss/(Gain)	\$ (5)

	Actual	Expected	Difference
DROP	275	183	92
Retirement	<u>181</u>	<u>240</u>	<u>(59)</u>
Total	456	423	33

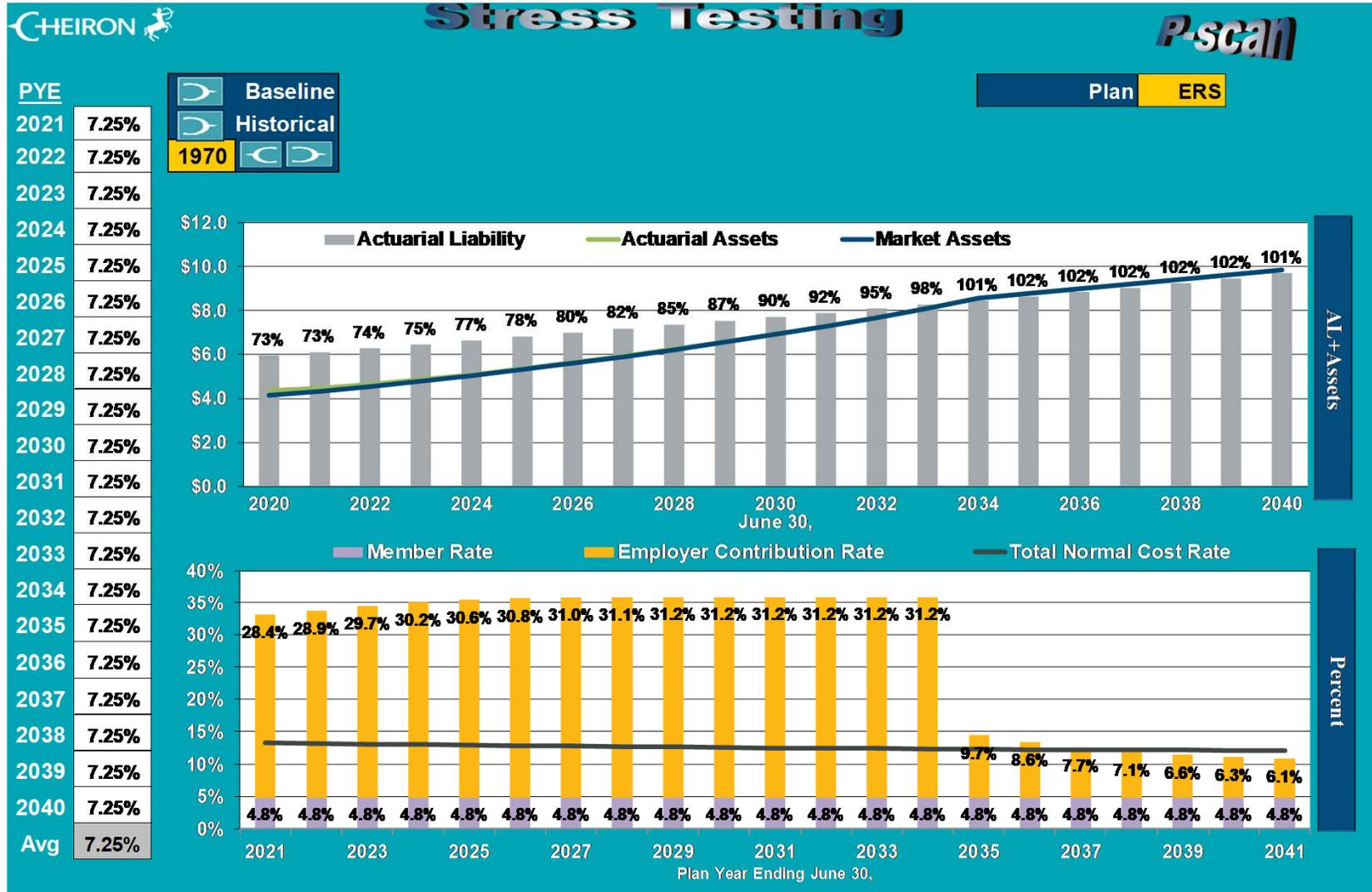
Principal 6/30/2020 Valuation Results



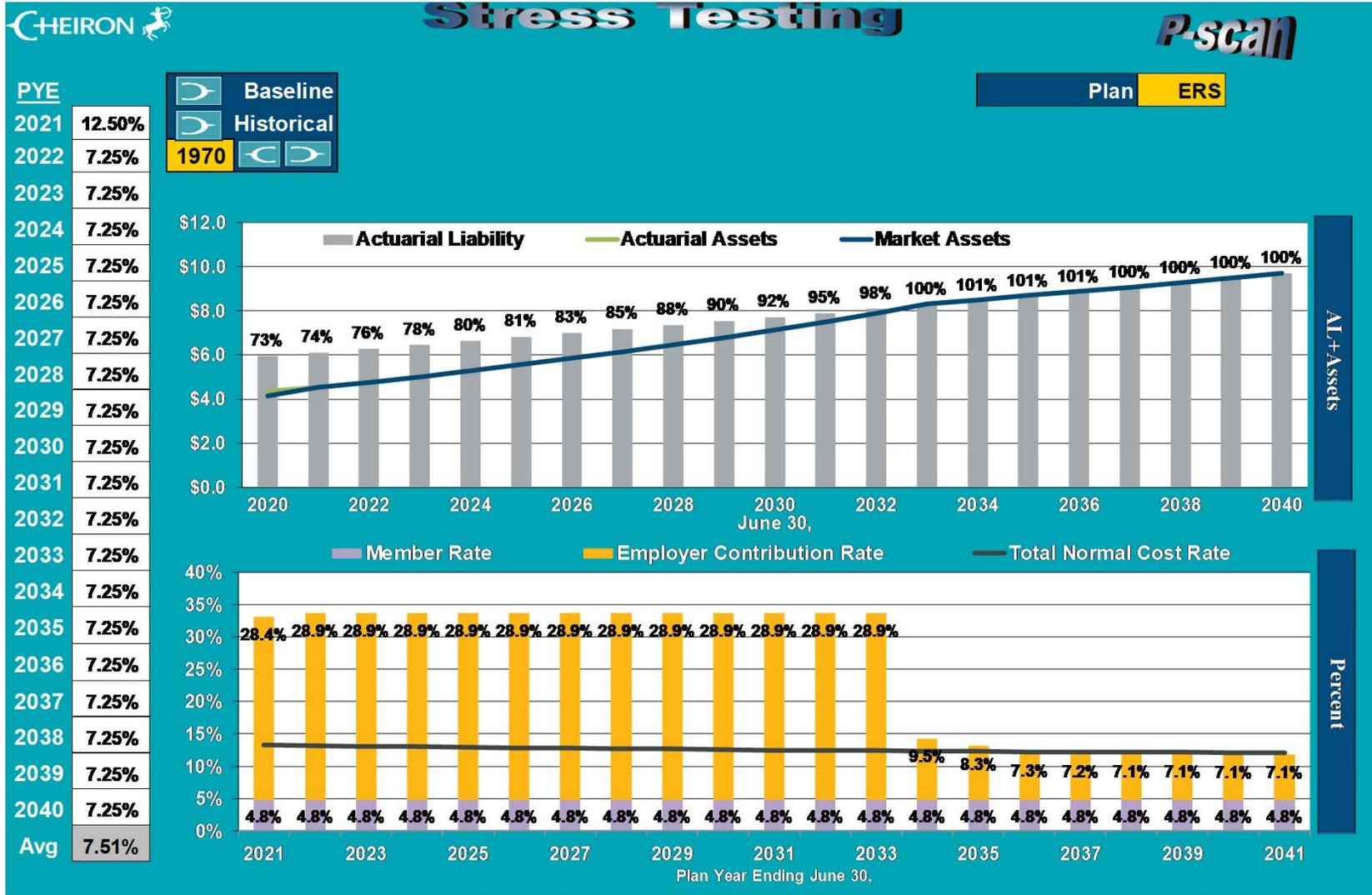
Contribution Rate

For Fiscal Year	2021	2022
Normal Cost	8.32%	8.40%
Amortized Charges	19.53%	20.23%
Expense	<u>0.25%</u>	<u>0.25%</u>
Base County Rate	28.10%	28.88%
Hold at Previous Rate, if higher	28.35%	NA
Estimated Dollar Amount of Contribution (in millions)	\$230	\$244

Baseline Projection Assuming No Continued Recovery



2021 Return Needed for Level Future Contribution Rate



FY 2020 System Disclosure



Change in Collective Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/2019	\$ 5,791,680,570	\$ 4,101,637,346	\$ 1,690,043,224
Changes for the year:			
Service cost	103,313,271		103,313,271
Interest	415,148,914		415,148,914
Changes of benefits			0
Differences between expected and actual experience	(5,460,817)		(5,460,817)
Changes of assumptions			0
Contributions - employer		234,743,643	(234,743,643)
Contributions - member		40,327,359	(40,327,359)
Net investment income		111,442,161	(111,442,161)
Benefit payments	(343,615,855)	(343,615,855)	0
Administrative expense		(2,471,445)	2,471,445
Net changes	<u>169,385,513</u>	<u>40,425,863</u>	<u>128,959,650</u>
Balances at 6/30/2020	<u>\$ 5,961,066,083</u>	<u>\$ 4,142,063,209</u>	<u>\$ 1,819,002,874</u>

Required Disclosures



In preparing this presentation, we relied on information (some oral and some written) supplied by the Fairfax County Retirement Administration Agency. This information includes, but is not limited to, the Plan provisions, employee 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 actuarial assumptions, data, and methods are those used in the preparation of the latest actuarial valuation report prepared for these plans as of June 30, 2020.

The assumptions reflect our understanding of the likely future experience of the System, and individually represent our best estimate of future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the Plan could vary from our results. Future results may differ significantly from the current results presented in 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 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.

This presentation was prepared exclusively for the Fairfax County Employees' Retirement System Board for the purposes described herein. 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 any other user.

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Principal Consulting Actuary

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Consulting Actuary





Appendices

Principal 6/30/2020 Valuation Results



Key Statistics: County Retired/Disabled/Beneficiaries

	2019	2020	% Change
Number Retired / Disabled / Beneficiaries	5,794	6,032	4.1%
Base Benefits	\$ 186 mil.	\$ 196 mil.	5.2%
Average Base Benefit	\$ 32,130	\$ 32,474	1.1%

Reconciliation	Count	Average Base Benefit	
		2019	2020
Matches*	5,661	\$ 32,250	\$ 32,436
New	371	N/A	\$ 33,065
Left	133	\$ 27,041	N/A

* Expected average benefit to increase 2.5% (\$33,056) vs. actual increase of 0.6%.

Principal 6/30/2020 Valuation Results



Key Statistics: Schools Retired/Disabled/Beneficiaries

	2019	2020	% Change
Number Retired / Disabled / Beneficiaries	3,674	3,792	3.2%
Base Benefits	\$ 66 mil.	\$ 67 mil.	2.5%
Average Base Benefit	\$ 17,847	\$ 17,721	(0.7)%

Reconciliation	Count	Average Base Benefit	
		2019	2020
Matches*	3,543	\$ 17,962	\$ 17,883
New	249	N/A	\$ 15,417
Left	131	\$ 14,756	N/A

* Expected average benefit to increase 2.5% (\$18,411) vs. actual increase of (0.4)%.

Principal 6/30/2020 Valuation Results



Key Statistics: County DROP

	2019	2020	% Change
Number of DROP	517	487	(5.8)%
Total DROP Benefits	\$ 20.8 mil.	\$ 18.7 mil.	(10.0)%
Pre-Social Security Benefits	\$ 8.8 mil.	\$ 8.1 mil.	(8.0)%
Average DROP Base Benefit	\$ 40,195	\$ 38,396	(4.5)%

Reconciliation	Count	Average Benefit	
		2019	2020
Matches*	317	\$ 39,906	\$ 39,928
New	170	N/A	\$ 35,538
Left	200	\$ 40,652	N/A

* Expected average benefit to increase 2.5% (\$40,904) vs. actual increase of 0.1%.

Principal 6/30/2020 Valuation Results



Key Statistics: Schools DROP

	2019	2020	% Change
Number of DROP	289	298	3.1%
Total DROP Benefits	\$ 6.6 mil.	\$ 6.7 mil.	2.5%
Pre-Social Security Benefits	\$ 2.5 mil.	\$ 2.7 mil.	8.7%
Average DROP Base Benefit	\$ 22,771	\$ 22,640	(0.6)%

Reconciliation	Count	Average Benefit	
		2019	2020
Matches*	193	\$ 24,006	\$ 24,029
New	105	N/A	\$ 20,088
Left	96	\$ 20,288	N/A

* Expected average benefit to increase 2.5% (\$24,606) vs. actual increase of 0.1%.