

Fairfax County Police Officers Retirement System



2021 Actuarial Valuation

September 9, 2021

Presented By
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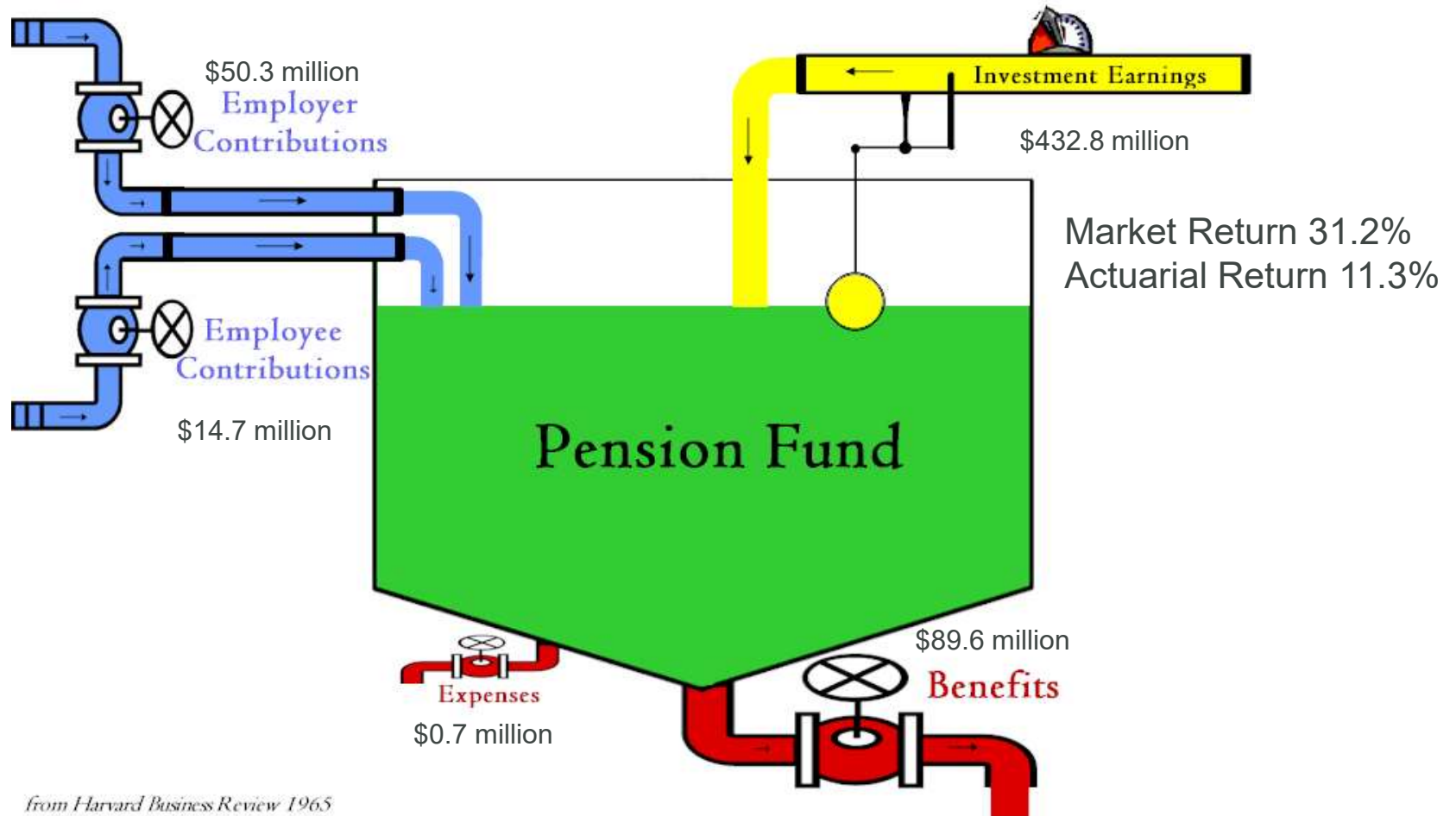


Topics for Discussion



- Historical Review
- Key Changes Since Prior Year
- Principal 6/30/2021 Valuation Results
- Stress Testing
- GASB 67/68

The Actuarial Valuation Process

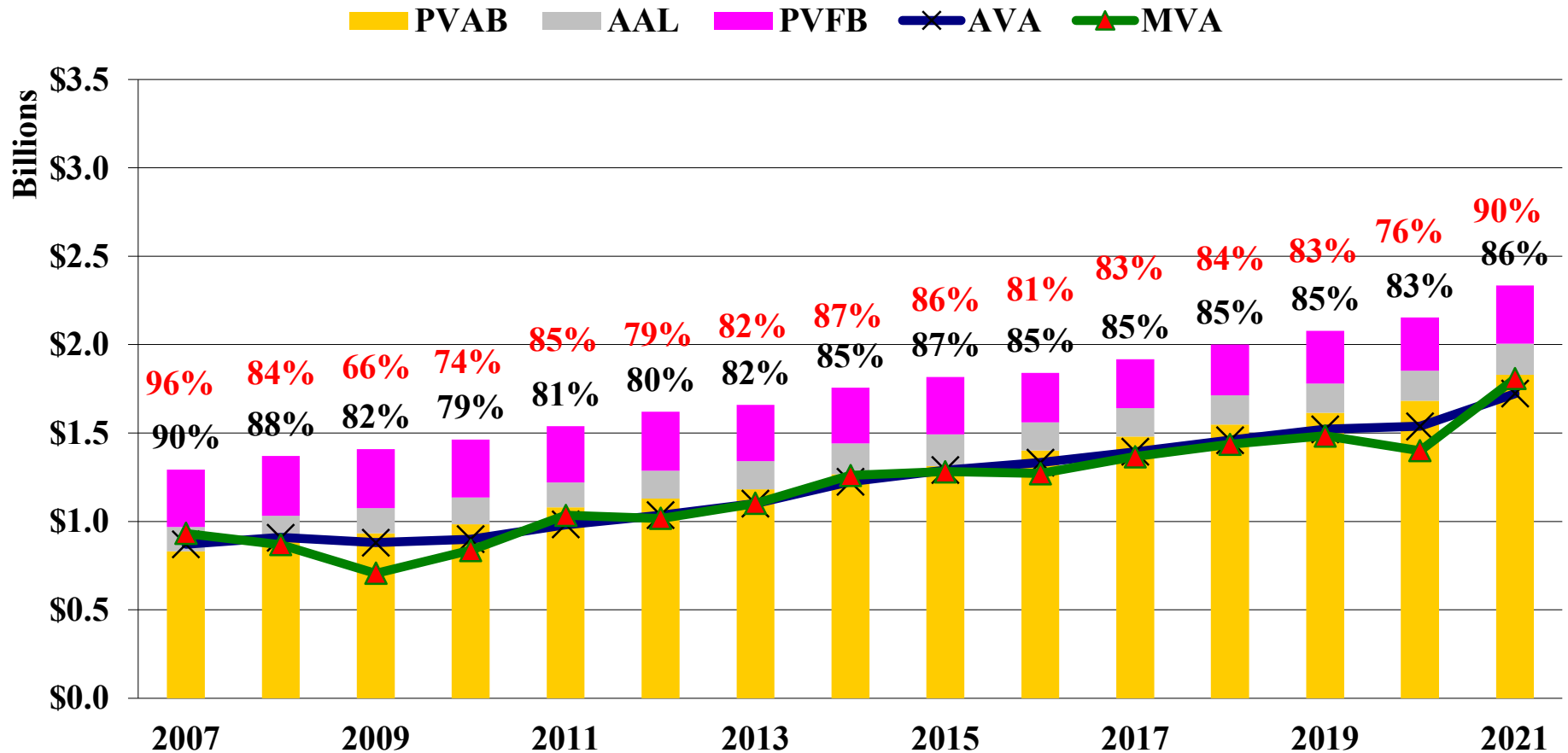


from Harvard Business Review 1965

Historical Review



Key Actuarial Indicators: Assets & Liabilities

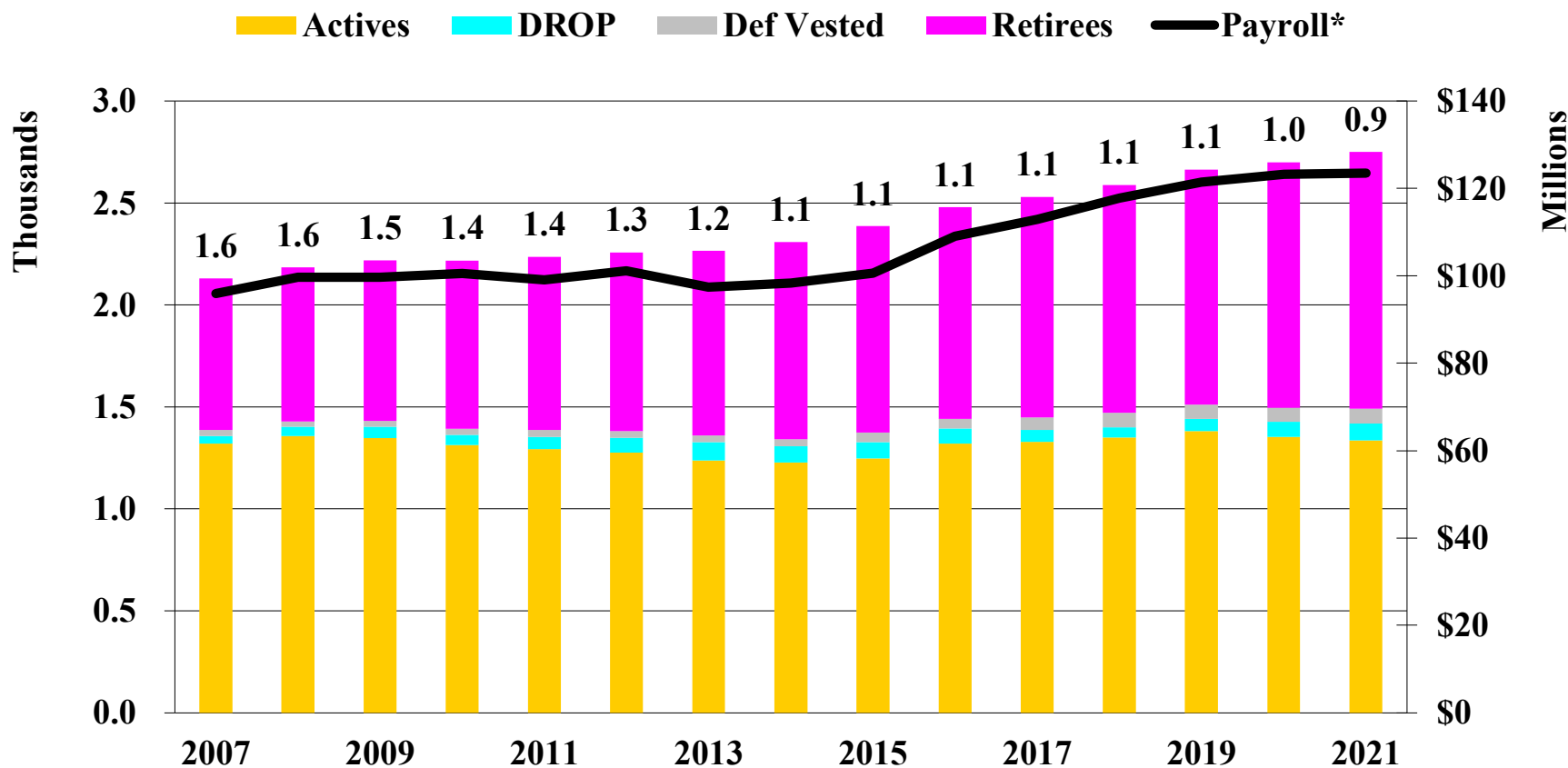


* Ratios in red represent the GASB funding ratio which uses Market Value of Assets. The ratios in black are based on Actuarial Value of Assets.

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.



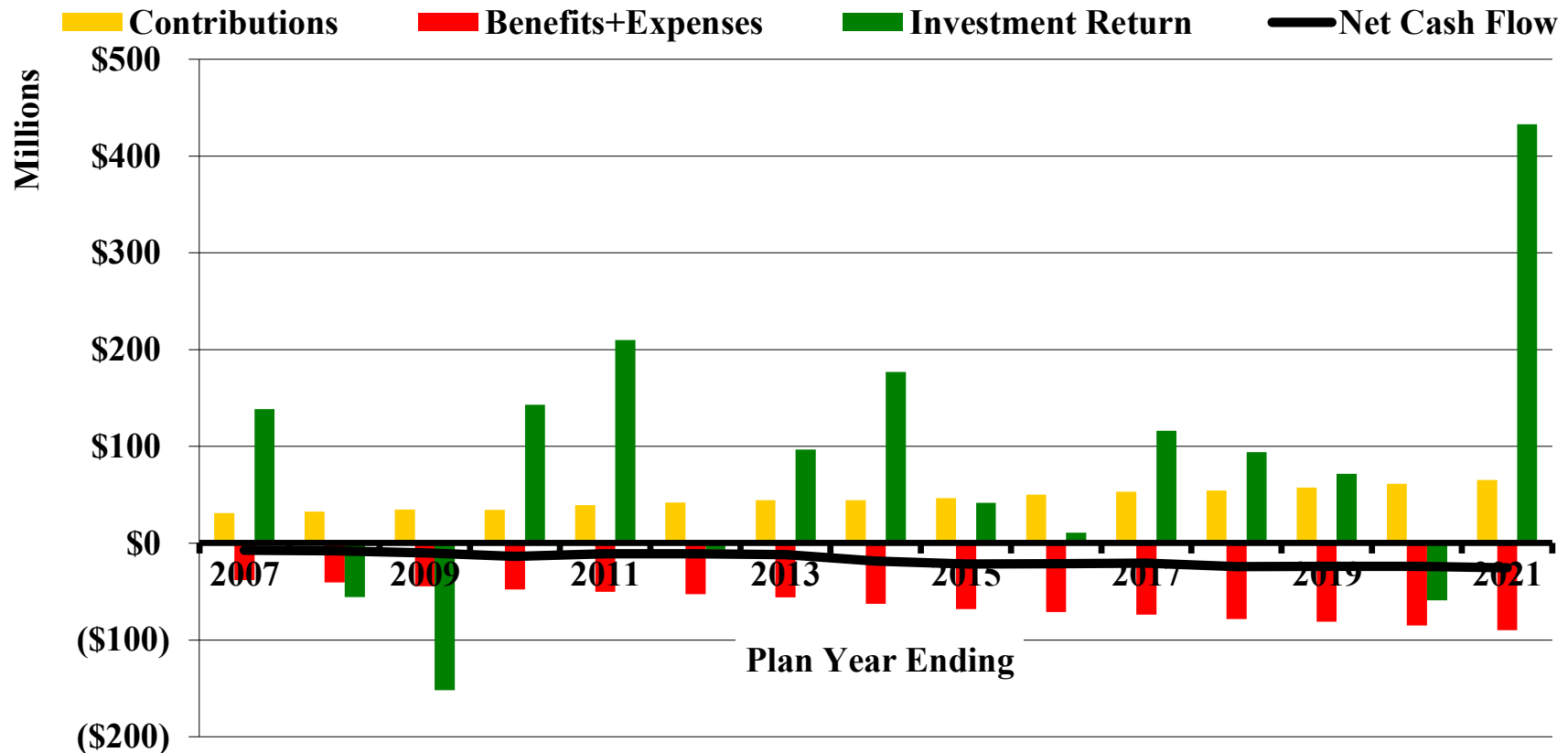
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Historical Review



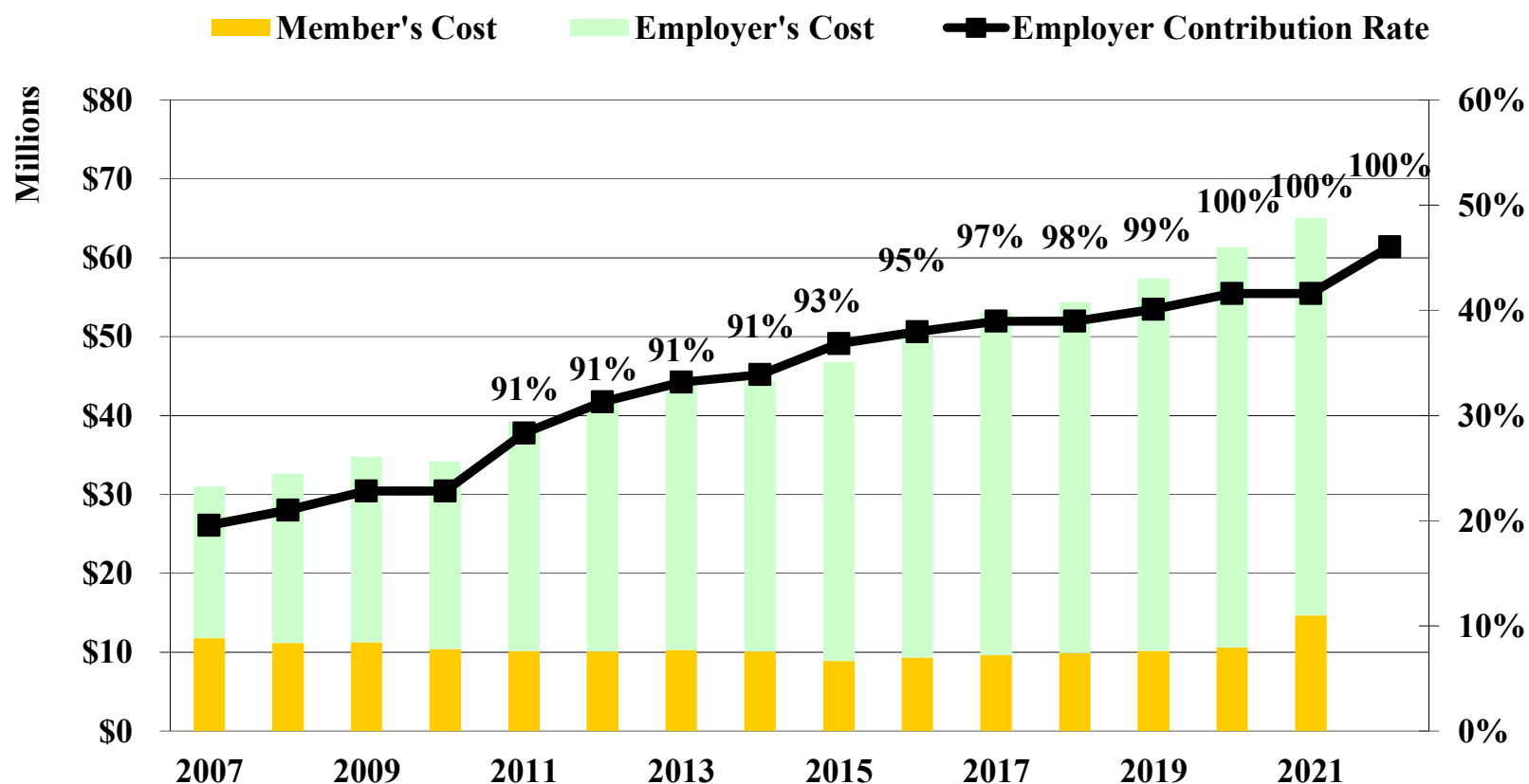
Plan Maturity Indicators: Annual Cash Flows



Historical Review



Key Actuarial Indicators: Contribution Rates

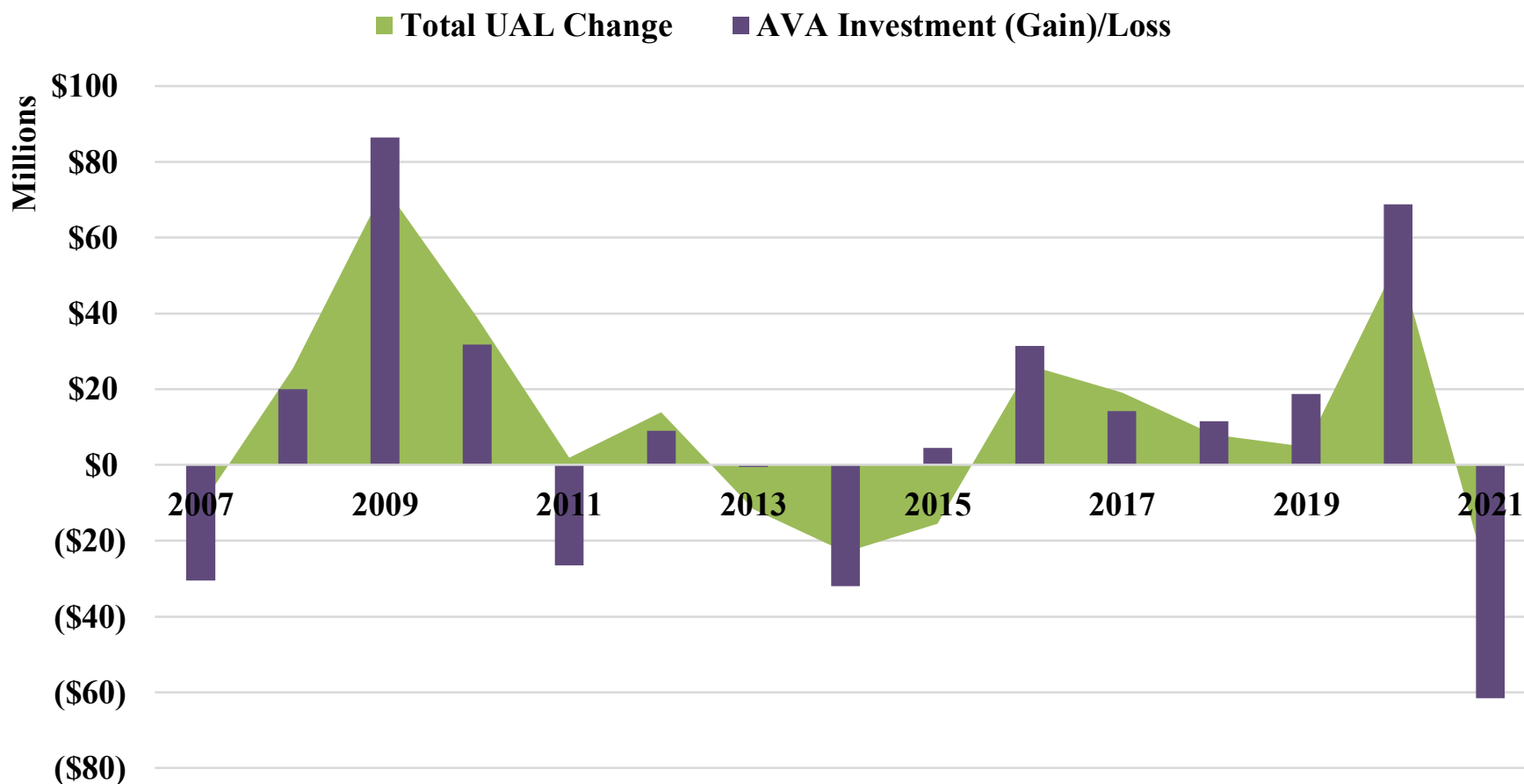


* Amounts shown above the bars represent the amortization target funding ratio used in developing the contribution rate.

Historical Review



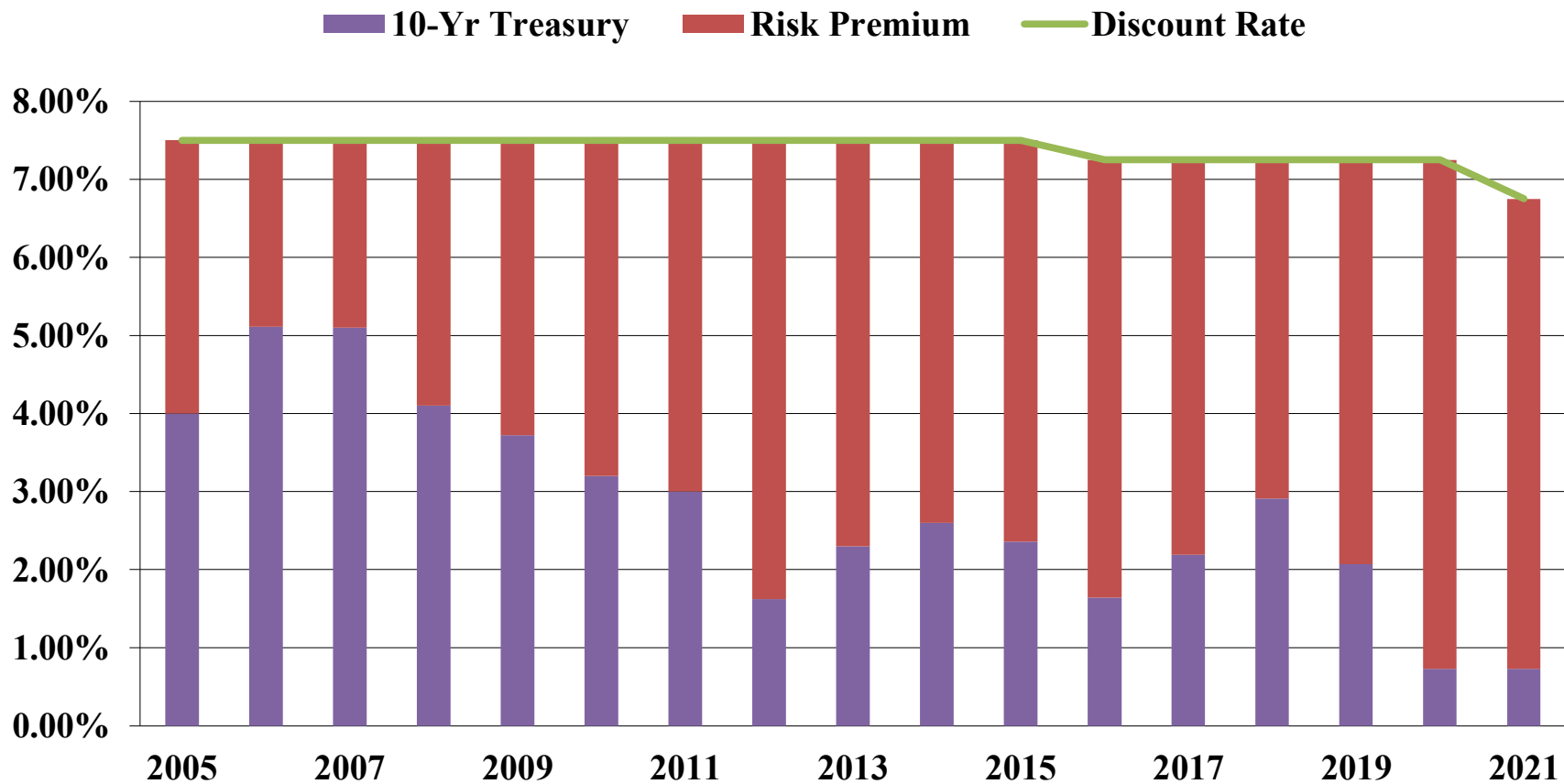
Key Risk Factors: Investment Risk



Historical Review



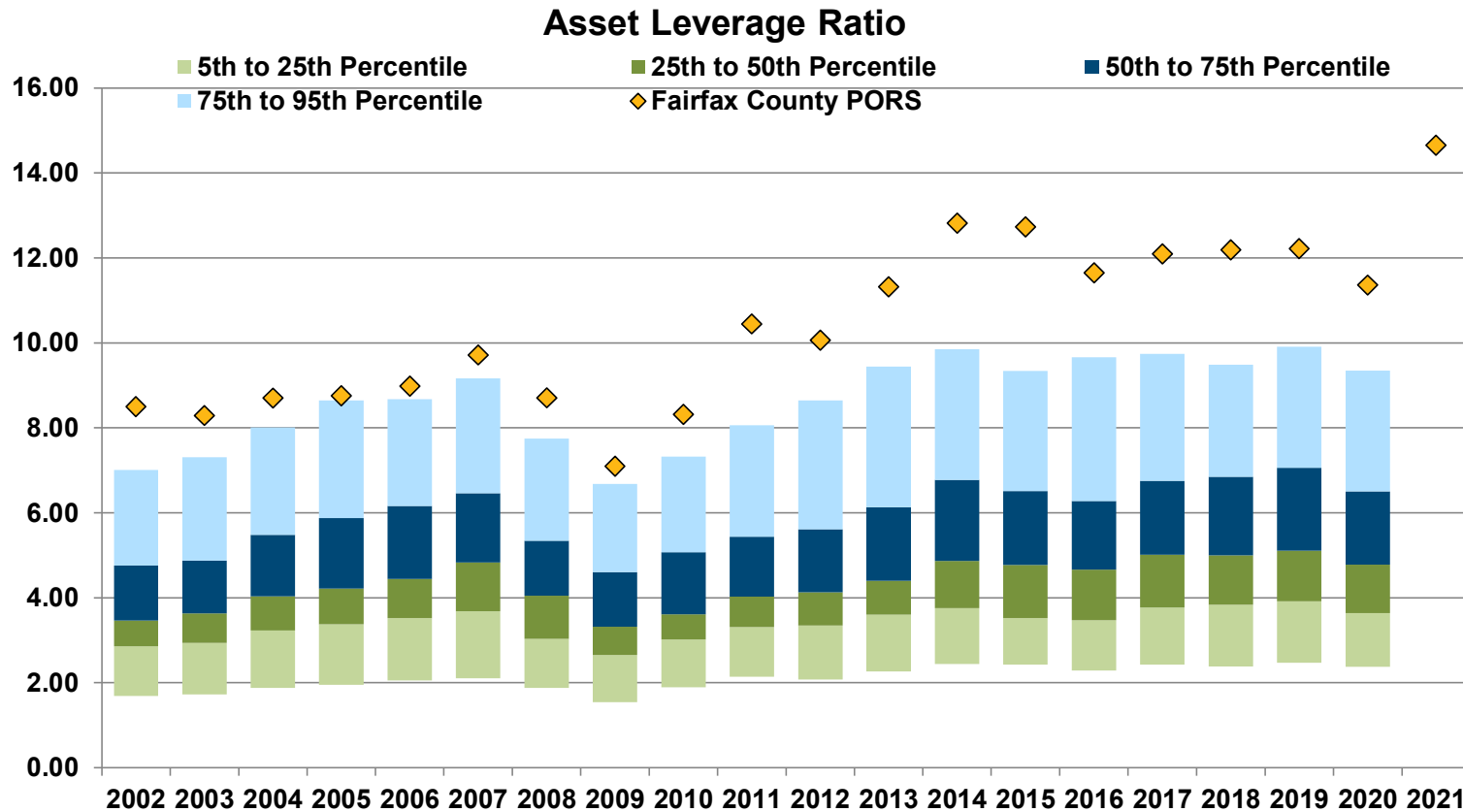
Key Risk Factors: Interest Rate



Historical Review



Key Risk Factors: Asset Leverage



Survey Data from Public Plans Database as of 6/28/2021

Survey Data from Public Plans Database as of 6/28/2021

Asset leverage ratio determined as Market Value of Assets / Payroll

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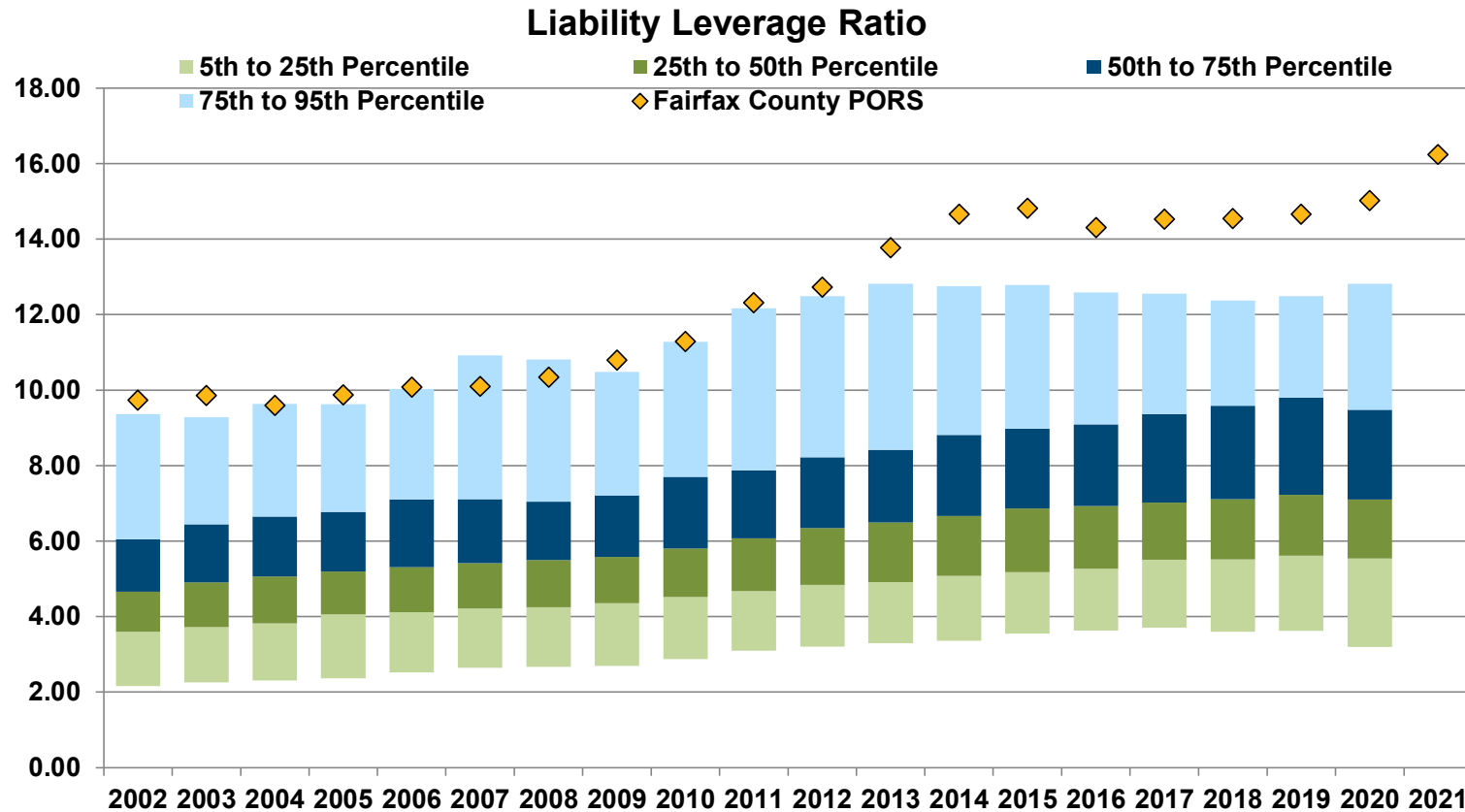


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Historical Review



Key Risk Factors: Liability Leverage



Survey Data from Public Plans Database as of 6/28/2021

Survey Data from Public Plans Database as of 6/28/2021

Liability leverage ratio determined as $\text{Accrued Liability} / \text{Payroll}$

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Key Changes



- Experience Study completed in early 2021 and presented June 9, 2021
 - Mortality
 - Retirement/DROP/Termination/Disability rates
 - Salary increase
 - Investment return
 - General wage increase
 - Cost-of-Living
 - Administrative expenses

Recognize Additional Investment Gains



- Exceptional returns through 2021 (31.18%)
- Smoothing process only recognizes 1/3 of gains or losses
- There are \$123 million of untapped gains after reflecting the smoothing for the current year
- A portion of these untapped gains could be used to buy down the interest rate to 6.75% and offset other assumption changes
 - Use \$38.7 to keep rate at 46.04% used for FY 2022
 - FY 2023 contribution of \$58
- Precedence set in 1998 valuation where Board voted to hold back \$94 million of gains to cushion a market correction that occurred after the valuation date but before the report was finalized
- Gain recognition was also accelerated in 2014 to smooth cost of assumption changes

Principal 6/30/2021 Valuation Results



Key Statistics: Actives

	2020	2021	% Change
Number of Actives	1,353	1,335	(1.3)%
Number Active & DROP	1,427	1,417	(0.7)%
Total Salary	\$ 123.2 mil.	\$ 123.4 mil.	0.1%
Average Salary	\$ 91,094	\$ 92,460	1.5%

Reconciliation	Count	Average W2 Salary	
		2020	2021
Matches*	1,247	\$ 90,506	\$ 94,719
New	88	N/A	\$ 57,704
Left	106	\$ 98,049	N/A

* Expected average salary to increase 4.2% (\$94,281) vs. actual increase of 4.7%.

Principal 6/30/2021 Valuation Results



Key Statistics: Retired/Disabled/Beneficiaries

	2020	2021	% Change
Number Retired / Disabled / Beneficiaries	1,202	1,261	4.9%
Base Benefits	\$ 79.1 mil.	\$ 85.2 mil.	7.7%
Average Base Benefit	\$ 65,837	\$ 67,582	2.7%

Reconciliation	Count	Average Base Benefit	
		2020	2021
Matches*	1,179	\$ 66,005	\$ 67,731
New**	82	N/A	\$ 63,864
Left	23	\$ 52,041	N/A

* Expected average benefit to increase 2.5% (\$67,655) vs. actual increase of 2.6%.

** 29 of the 82 new retirees came from active status.

Principal 6/30/2021 Valuation Results



Key Statistics: DROP

	2020	2021	% Change
Number of DROP	74	82	10.8%
Total DROP Benefits	\$ 6.1 mil.	\$ 7.0 mil.	13.8%
Average DROP Benefit	\$ 82,563	\$ 84,807	2.7%

Reconciliation	Count	Average Benefit	
		2020	2021
Matches*	42	\$ 83,496	\$ 85,627
New	40	N/A	\$ 82,828
Left	32	\$ 80,878	N/A

* Expected average benefit to increase 2.5% (\$85,583) vs. actual increase of 2.6%.

Principal 6/30/2021 Valuation Results



KEY RESULTS

(\$ in millions)

Valuation Date

6/30/2020

6/30/2021

6.75% with gain recognition

Actuarial Accrued Liability	\$ 1,851	\$ 2,005
Actuarial Value of Assets	\$ 1,538	\$ 1,724
Unfunded Actuarial Liability	\$ 313	\$ 281
Funded Ratio AVA/AL	83.0%	86.0%
Market Value of Assets	\$ 1,401	\$ 1,808
Funded Ratio MVA/AL	75.6%	90.2%

Fiscal Year for Contribution

2022

2023

County Contribution Rate	46.04%	46.04%
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Principal 6/30/2021 Valuation Results



Changes in Liabilities/Assets

	(\$ in millions)		
	Liability A	Actuarial Assets B	UAL C = A - B
6/30/2020	\$ 1,851	\$ 1,538	\$ 313
Expected Change	78 *	85 **	(7)
Assumption/Method Changes	56	39	17
Plan Changes	0	0	0
Expected at 6/30/2021	\$ 1,985	\$ 1,662	\$ 323
Actual at 6/30/2021	\$ 2,005	\$ 1,724	\$ 281
(Gain) / Loss	\$ 20	\$ (62)	\$ (42)
Contribution Impact (% of pay)	1.47%	(4.57%)	3.10%

* Liability change includes Normal Cost, Benefits & Interest.

** Asset change includes Contributions, Benefits & Interest.



Principal 6/30/2021 Valuation Results



Sources of Liability Loss/Gain

	(\$ in millions) Liability Loss/(Gain)
Salary Increases	\$ 6
New Hires	1
COLA 2.6% vs assumed 2.5%	1
Retirement/DROP	5
Increase in service credits	5
Decrement	2
Total Net Loss/(Gain)	\$ 20

	Actual	Expected	Difference
DROP	40	27	13
Retirement	<u>28</u>	<u>13</u>	<u>7</u>
Total	68	44	17

Principal 6/30/2021 Valuation Results



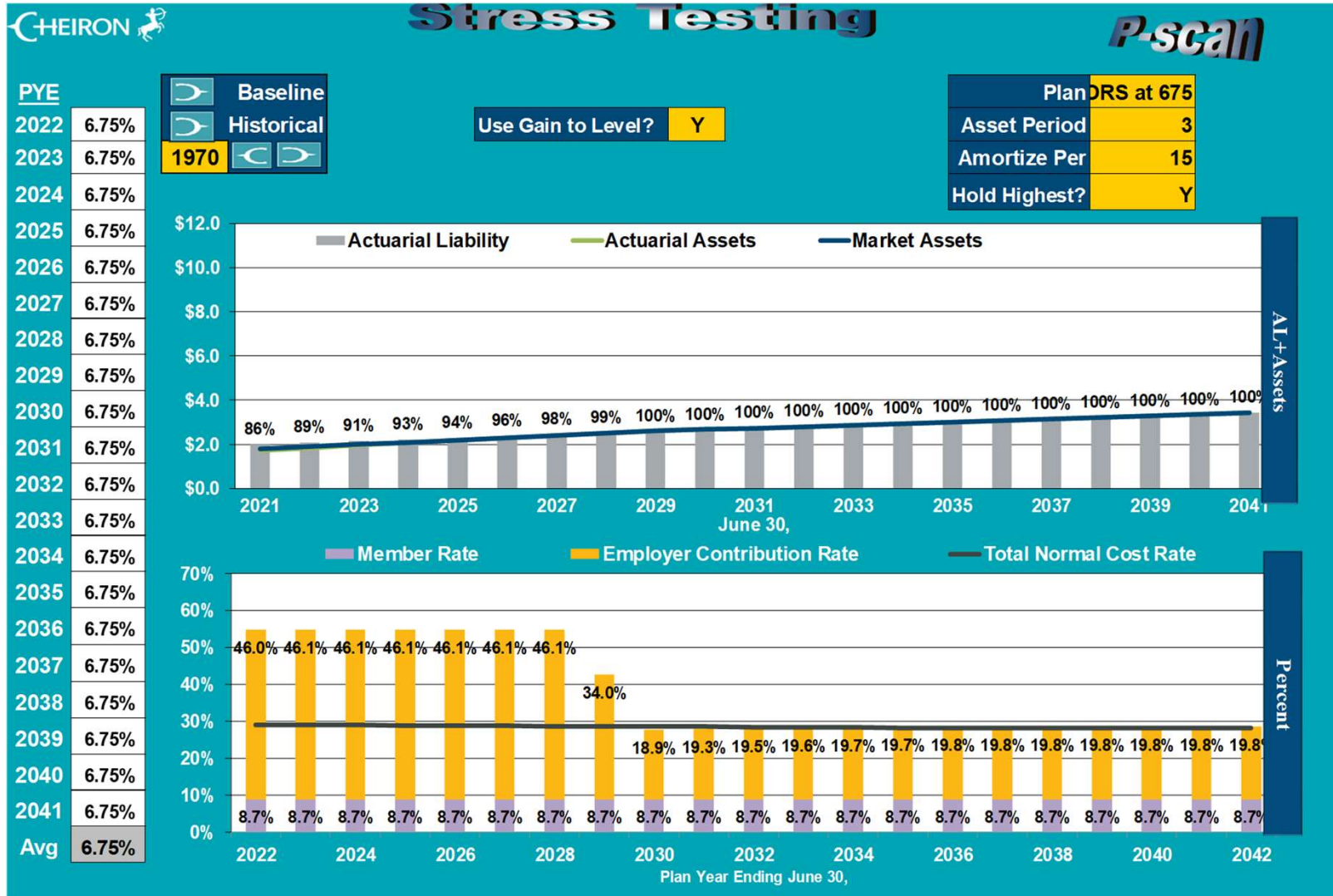
Contribution Rate

For Fiscal Year	2022	2023
Normal Cost	18.49%	20.16%
Amortized Charges	27.15%	25.38%
Expense	<u>0.40%</u>	<u>0.50%</u>
Base County Rate	46.04%	46.04%

Estimated Dollar Amount of Contribution (in millions)	\$58	\$58
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* Rate cannot be lower than the County's current contribution rate.

Baseline Projection



FY 2021 System Disclosure



Change in Net Pension Liability

Increase (Decrease)

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/2020	\$ 1,851,586,671	\$ 1,400,564,931	\$ 451,021,740
Changes for the year:			
Service cost	33,525,774		33,525,774
Interest	133,480,180		133,480,180
Changes of benefits			
Differences between expected and actual experience	19,812,467		19,812,467
Changes of assumptions	55,913,508		
Contributions - employer		50,348,130	(50,348,130)
Contributions - member		14,687,984	(14,687,984)
Net investment income		432,834,316	(432,834,316)
Benefit payments	(89,580,356)	(89,580,356)	0
Administrative expense		(665,959)	665,959
Net changes	<u>153,151,573</u>	<u>407,624,115</u>	<u>(254,472,542)</u>
Balances at 6/30/2021	<u>\$ 2,004,738,244</u>	<u>\$ 1,808,189,046</u>	<u>\$ 196,549,198</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, 2021.

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 Police Officers 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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