



PERA Solvency Task Force

June 20, 2019

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Consulting Actuary

2019 Cost of Living Adjustment (Proposed)

Prior Gross Benefit		July COLA			New Gross Benefit			
\$	87,699,525	\$	1,710,273	\$	89,409,797			
	Benefit Amount	Recipient Count	PE	LE	JU	MA	VF	ERB
Regular Recipient COLA	\$ 82,263,268	32,791	30,211	160	27	23	-	2,370
QDRO Recipient COLA	\$ 3,306,658	907	903	1	-	-	-	3
First Time COLA	\$ 2,646,337	1,316	1,252	3	-	1	-	60
Suspended COLA (RTW)	\$ 1,193,534	366	362	-	1	2	-	1
Totals:	\$ 89,409,797	35,380	32,728	164	8	26	-	2,434

2019 Non-COLA Recipients

	Benefit Amount	Recipient Count
Regular Recipient	\$16,498,599	6,250
Survivor Recipient	\$614,636	503
VFF Recipient	\$208,208	1,422

Follow Up Information – Disability & Survivor Summary



Disability Retirement Summary

	FY2018	FY2017	FY2016	FY2015	FY2014
Number	1,396	1,310	1,236	1,142	1,072
Total Annual Benefits	\$ 24,969,203	\$ 22,854,825	\$ 20,973,020	\$ 18,962,651	\$ 17,208,549
Average Annual Benefit	\$ 17,886	\$ 17,446	\$ 16,968	\$ 16,605	\$ 16,053
Average Monthly Benefit	\$ 1,491	\$ 1,454	\$ 1,414	\$ 1,384	\$ 1,338
Average Age	57.37	56.77	56.25	55.79	55.25

\$104,968,248 Paid in Disability Benefits FY14 – FY18

- *PERA Disability Process is Independent of Social Security Disability Process*
- *Public Safety does not participate in Social Security, not eligible for Social Security Disability Benefit*
- *Disability Retirees can not earn more than \$15,000 annually on top of Disability Benefit, this is verified by PERA*

Survivor Retirement Summary

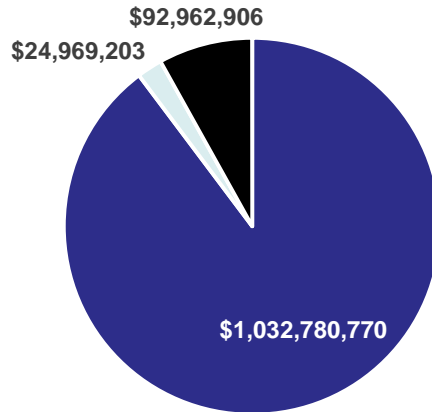
	FY2018	FY2017	FY2016	FY2015	FY2014
Number	4,741	4,571	4,497	4,347	4,100
Total Annual Benefits	\$ 92,962,906	\$ 86,976,330	\$ 82,839,408	\$ 77,921,850	\$ 71,697,600
Average Annual Benefit	\$ 19,608	\$ 19,028	\$ 18,421	\$ 17,925	\$ 17,487
Average Monthly Benefit	\$ 1,634	\$ 1,586	\$ 1,535	\$ 1,494	\$ 1,457
Average Age	69.53	69.13	69.15	69.02	68.97

\$412,398,094 Paid in Survivor Benefits FY14 – FY18

Follow Up Information – Retired Membership as of FY2018

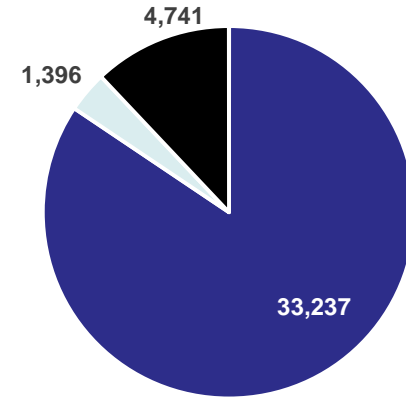


Distribution of Retiree Membership



■ Service Retirees ■ Disability Retirees ■ Survivors

Distribution of Retiree Membership

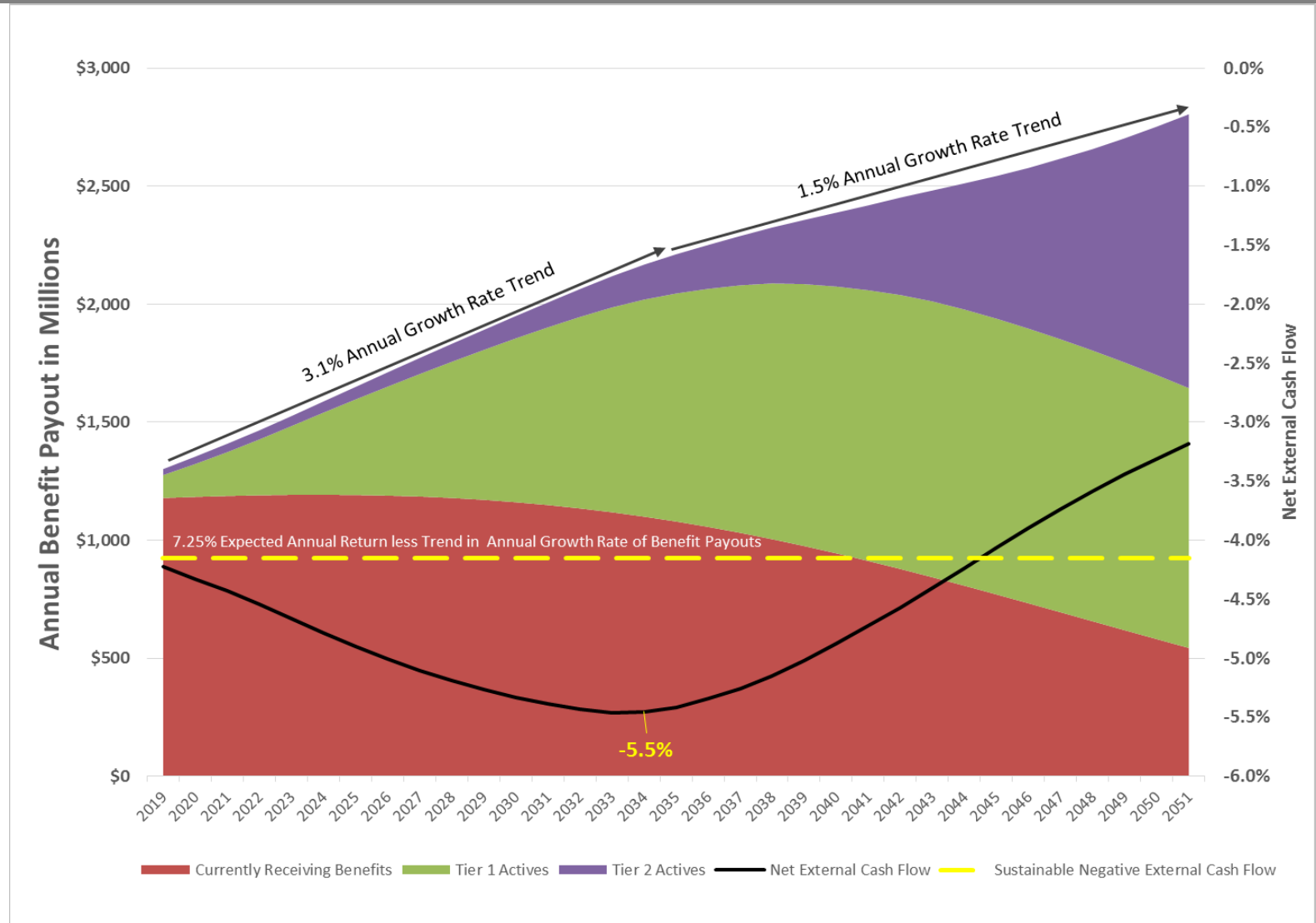


■ Service Retirees ■ Disability Retirees ■ Survivors

Retiree Additions/Removals FY2014 – FY2018

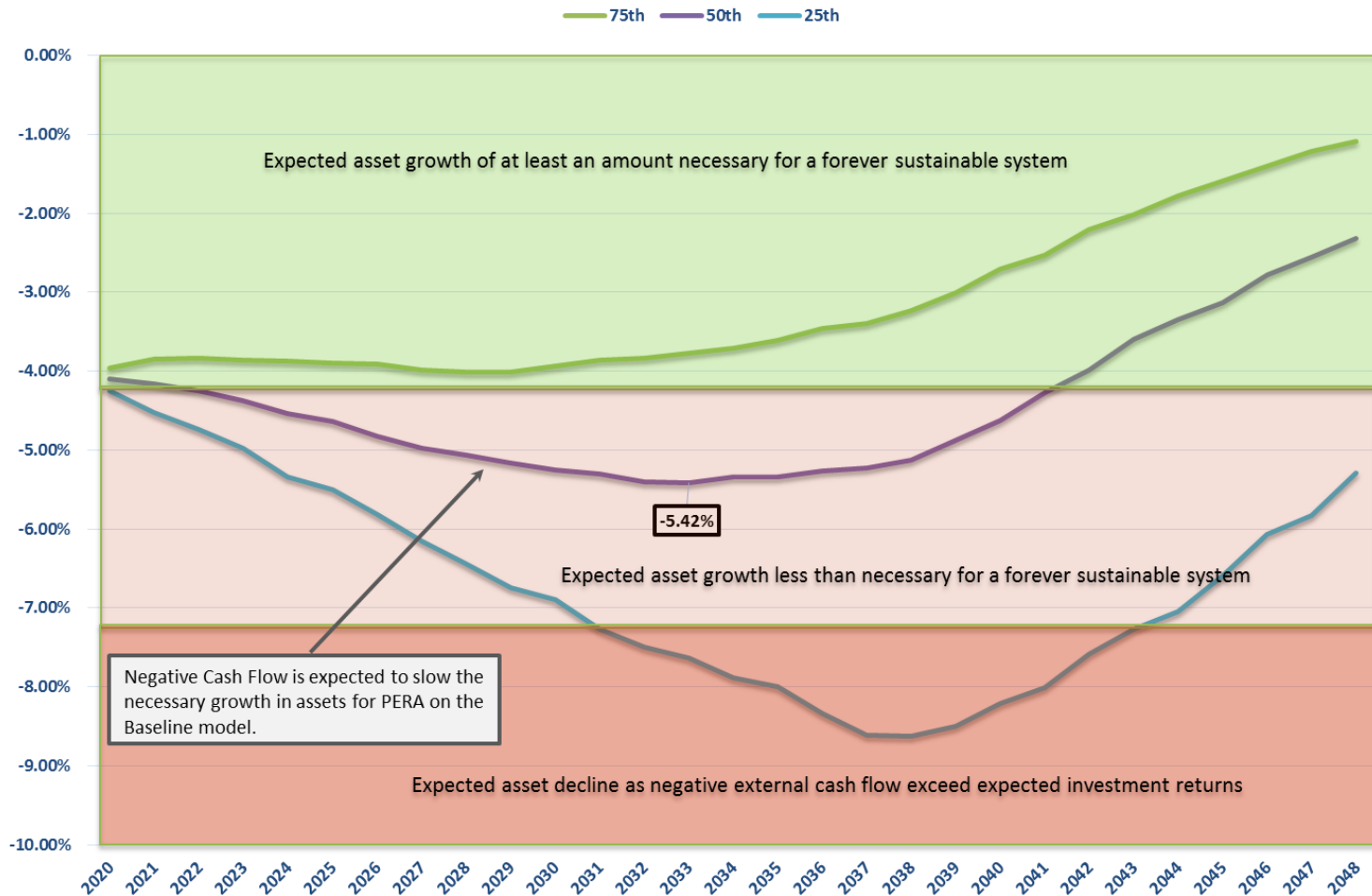
Valuation Date	Retirees Added	Annual Allowance	Retirees Removed	Annual Allowances	Difference
6/30/2018	2,205	\$78,429,024	842	\$19,870,163	\$58,558,861
6/30/2017	1,880	\$65,337,534	1,075	\$22,237,224	\$43,100,310
6/30/2016	2,424	\$73,129,315	890	\$18,716,830	\$54,412,485
6/30/2015	2,970	74,003,973	860	\$18,095,510	\$55,908,463
6/30/2015	2,443	\$81,759,730	744	\$15,370,329	\$66,389,401

PERA's Cash Flow Challenge

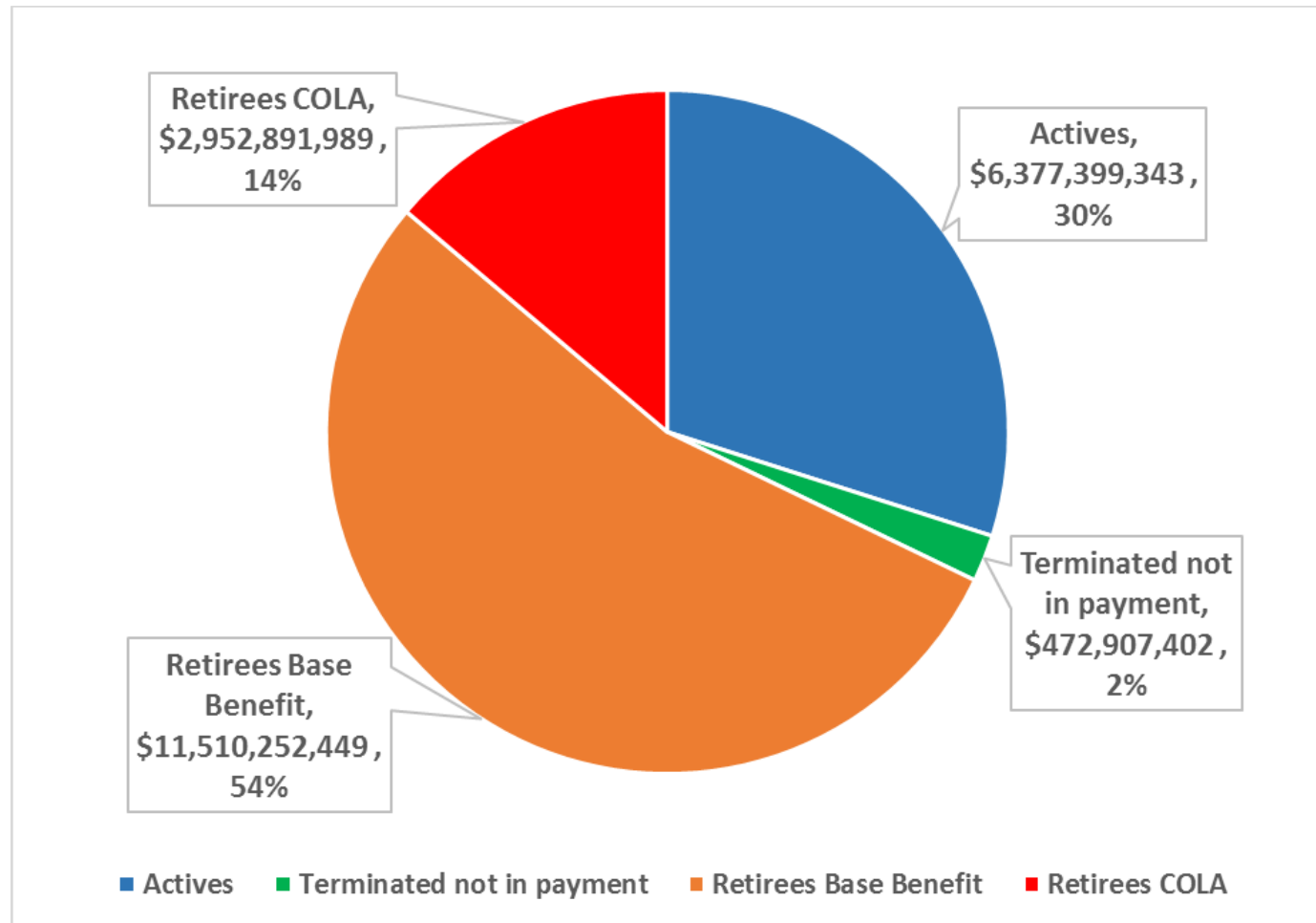


PERA's Cash Flow Challenge

**Net Percent of Negative External Cash Flow by Percentile Rank of Outcomes
Current Plan ALM**



Total Current Accrued Liability



Retiree liability expected to exceed assets by 2024

Expected Benefit Payments With and Without Current COLA

FYE	No COLA	COLA	Difference
2019	\$ 1,221,890,833	\$ 1,241,785,816	\$ 19,894,983
2020	1,261,280,275	1,301,765,951	40,485,676
2021	1,293,476,337	1,354,500,224	61,023,887
2022	1,327,703,268	1,409,245,488	81,542,220
2023	1,363,761,048	1,465,956,031	102,194,983
2024	1,402,672,736	1,526,229,428	123,556,692
2025	1,442,666,837	1,588,167,616	145,500,779
2026	1,481,848,909	1,649,650,847	167,801,938
2027	1,521,055,645	1,711,512,727	190,457,082
2028	1,559,030,743	1,772,259,922	213,229,179
Total	\$ 13,875,386,630	\$ 15,021,074,050	\$ 1,145,687,420

Combine Municipal Divisions 2018 Valuation Results With 25 Year Amortization



	General	Police	Fire	Combined
1. Total Valuation Payroll	\$ 928,666,178	\$ 213,105,900	\$ 131,019,607	\$ 1,272,791,685
2. Actuarial Accrued Liability	6,798,143,379	2,750,378,028	1,623,517,641	11,172,039,048
3. Actuarial Value of Assets	5,184,797,302	2,058,403,842	977,829,334	8,221,030,478
4. Unfunded Actuarial Accrued Liability (UAAL) (2 -3)	\$ 1,613,346,077	\$ 691,974,186	\$ 645,688,307	\$ 2,951,008,570
5. UAAL Amortization Payment (25 year funding)	\$ 104,151,971	\$ 44,671,429	\$ 41,683,375	\$ 190,506,775
a. Amortization Payment as a Percent of Payroll (5 / 1)	11.22 %	20.96 %	31.81 %	14.97 %
6. Total Normal Cost	\$ 131,545,530	\$ 48,588,408	\$ 33,528,110	\$ 213,662,048
a. Normal Cost as a Percent of Payroll (6 / 1)	14.16 %	22.80 %	25.59 %	16.79 %
7. Expected Administrative Expenses	\$ 4,643,331	\$ 1,065,530	\$ 655,098	\$ 6,363,959
a. Administrative Expense as a Percent of Payroll (7 / 1)	0.50 %	0.50 %	0.50 %	0.50 %
8. Actuarially Determined Contribution (ADC)	\$ 240,340,832	\$ 94,325,367	\$ 75,866,583	\$ 410,532,782
a. ADC Rate (5a + 6a +7a)	25.88 %	44.26 %	57.90 %	32.25 %
9. Expected Statutory Contribution Rates				
a. Employer Contribution Rate	10.03 %	18.91 %	21.80 %	12.73 %
b. Member Contribution Rate	13.47 %	17.21 %	17.55 %	14.52 %
c. Total Statutory Contribution Rate (a + b)	23.50 %	36.12 %	39.35 %	27.24 %
10. (Excess) Shortfall of Statutory Rates (8a - 9c)	2.38 %	8.14 %	18.55 %	5.01 %

Combine State Police with Municipal Police and Fire – 2018 Valuation Results With 25 Year Amortization

	State Police	Muni Police	Muni Fire	Combined
1. Total Valuation Payroll	\$ 87,391,378	\$ 213,105,900	\$ 131,019,607	\$ 431,516,885
2. Actuarial Accrued Liability	945,966,718	2,750,378,028	1,623,517,641	5,319,862,387
3. Actuarial Value of Assets	<u>1,231,975,474</u>	<u>2,058,403,842</u>	<u>977,829,334</u>	<u>4,268,208,650</u>
4. Unfunded Actuarial Accrued Liability (UAAL) (2 -3)	\$(286,008,756)	\$ 691,974,186	\$ 645,688,307	\$ 1,051,653,737
5. UAAL Amortization Payment (25 year funding)	\$ (18,463,723)	\$ 44,671,429	\$ 41,683,375	\$ 67,891,081
a. Amortization Payment as a Percent of Payroll (5 / 1)	(21.13)%	20.96 %	31.81 %	15.73 %
6. Total Normal Cost	\$ 19,879,816	\$ 48,588,408	\$ 33,528,110	\$ 101,996,334
a. Normal Cost as a Percent of Payroll (6 / 1)	22.75 %	22.80 %	25.59 %	23.64 %
7. Expected Administrative Expenses	\$ 436,957	\$ 1,065,530	\$ 655,098	\$ 2,157,585
a. Administrative Expense as a Percent of Payroll (7 / 1)	0.50 %	0.50 %	0.50 %	0.50 %
8. Actuarially Determined Contribution (ADC)	\$ 1,853,050	\$ 94,325,367	\$ 75,866,583	\$ 172,045,000
a. ADC Rate (5a + 6a +7a)	2.12 %	44.26 %	57.90 %	39.87 %
9. Expected Statutory Contribution Rates				
a. Employer Contribution Rate	25.58 %	18.91 %	21.80 %	21.14 %
b. Member Contribution Rate	<u>8.75 %</u>	<u>17.21 %</u>	<u>17.55 %</u>	<u>15.60 %</u>
c. Total Statutory Contribution Rate (a + b)	34.33 %	36.12 %	39.35 %	36.74 %
10. (Excess) Shortfall of Statutory Rates (8a - 9c)	(32.21)%	8.14 %	18.55 %	3.13 %

Optional Forms of Payment Under PERA

- Option A: Straight Life Annuity – monthly benefit for the life of the member only
- Option B: Joint and 100% Survivor Annuity – straight life annuity amount is decreased to provide a monthly amount for the life of the member and beneficiary
- Option C: Joint and 50% Survivor Annuity – straight life annuity amount is decreased to provide a monthly amount for the life of the member and 50% of that amount for the life of surviving beneficiary
- Options B and C are calculated to be actuarial equivalent to Option A (have the same present value)

Optional Forms of Payment Examples



- Age: 48
- Final Average Earnings: \$50,000
- Years of Service: 25
- Life Annuity Benefit Amount: \$3,125 per month
- Present Value: \$516,361

- Spouse Age: 45
- Option B Factor (Joint & 100% Annuity): 0.895468
- Option B Amount: \$2,798
- Present Value: \$516,361

Optional Forms of Payment Examples



- Age: 58
- Final Average Earnings: \$50,000
- Years of Service: 25
- Life Annuity Benefit Amount: \$3,125 per month
- Present Value: \$453,387

- Spouse Age: 55
- Option B Factor (Joint & 100% Annuity): 0.859803
- Option B Amount: \$2,687
- Present Value: \$453,387

Optional Forms of Payment Examples

100% J&S – No COLA for Survivor

- Age: 58
- Final Average Earnings: \$50,000
- Years of Service: 25
- Life Annuity Benefit Amount: \$3,125 per month
- Present Value: \$453,387

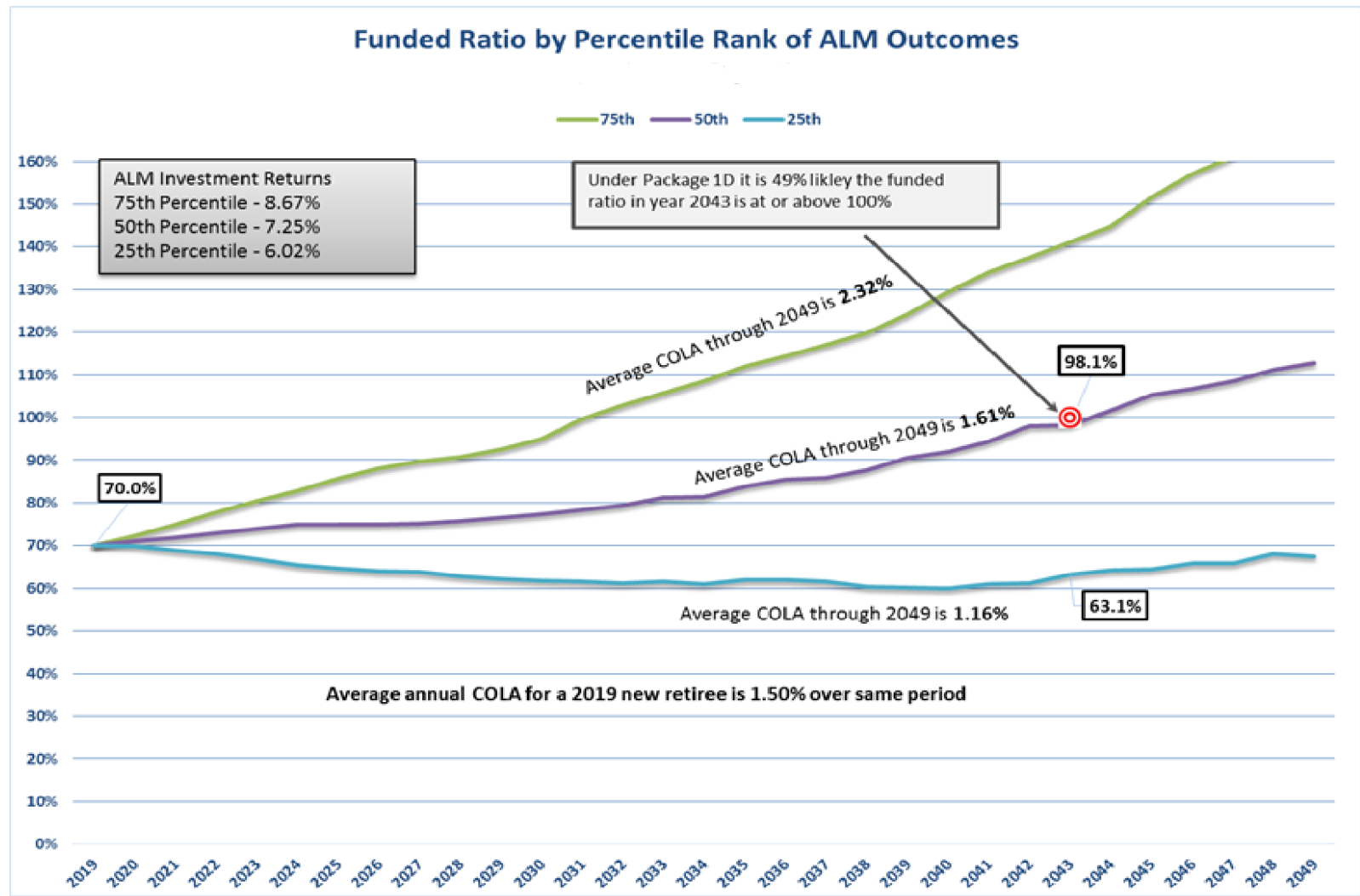
- Spouse Age: 55
- Factor - Joint & 100% No COLA for Spouse: 0.888617
- Option B Amount: \$2,777
- Present Value: \$453,387

Example Impact of Alternative COLA Model with Contribution Increases



- Risk Shared COLAs for current and future retirees based on investment returns and funded ratio capped at 2.5%
 - ***Cap increases to 5.0% once PERA funded ratio is at least 100%***
- Minimum COLA 0.5%
- COLAs suspended for 3 years (FYs 2021, 2022, 2023)
- 7 full calendar year COLA waiting period reduced to 2 full year waiting period
- Increase employee and employer contributions
 - ***4% increase split evenly by employee/employer (2.0% each) beginning 7/1/2020***
 - ***Phased in over 4 year period (1.0% per year)***

Example Impact of Alternative COLA Model with Contribution Increases



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