



BARTEL
ASSOCIATES, LLC

**CITY OF SANTA CLARA
MISCELLANEOUS AND SAFETY PLANS**

CalPERS Actuarial Analysis – 6/30/19 Valuation

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February 9, 2021

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BACKGROUND

- Investment Losses
- CalPERS Contribution Policy
- Enhanced Benefits
- Demographics



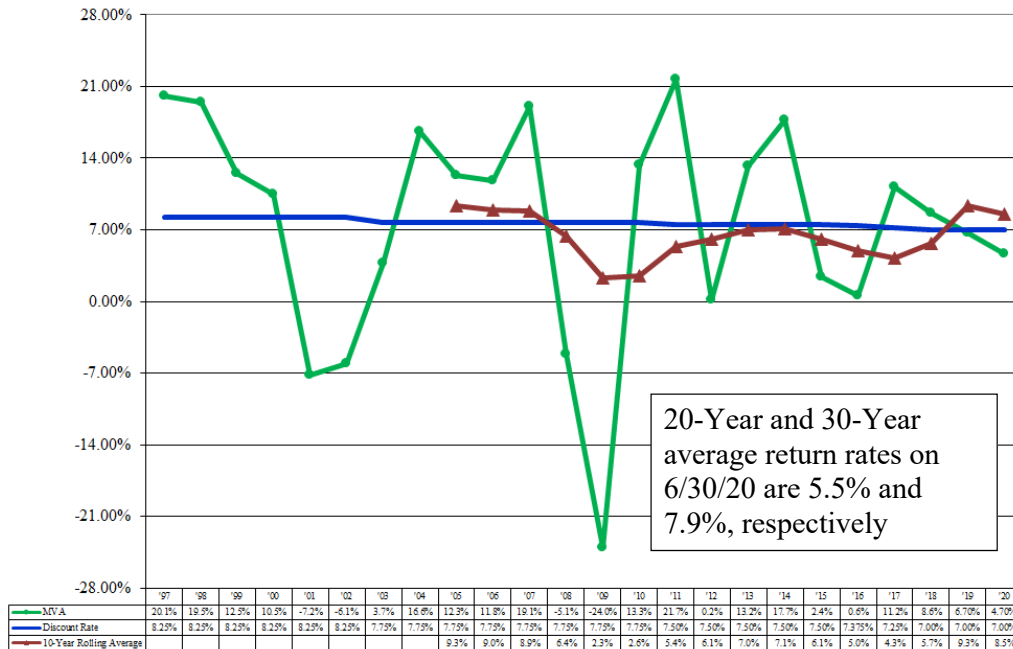
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BACKGROUND – INVESTMENT RETURN

Annual Return on Market Value of Assets



Returns (after 2001) shown are gross returns, unreduced for administrative expenses. The discount rate is based on expected returns net of administrative expenses.



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BACKGROUND – OLD CONTRIBUTION POLICY

- Effective with 2003 valuations:
 - Slow (15 year) recognition of investment losses into funded status
 - Rolling 30 year amortization of all (primarily investment) losses

- Designed to:
 - First smooth rates and
 - Second pay off UAL

- Mitigated contribution volatility



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BACKGROUND – ENHANCED BENEFITS

- At CalPERS, Enhanced Benefits implemented using all (future & prior) service
- Typically not negotiated with cost sharing
- City of Santa Clara

	Tier 1	PEPRA
● Miscellaneous	2.7%@55 FAE1	2%@62 FAE3
● Safety Police	3%@50 FAE1	2.7%@57 FAE3
● Safety Fire	3%@50 FAE3	2.7%@57 FAE3

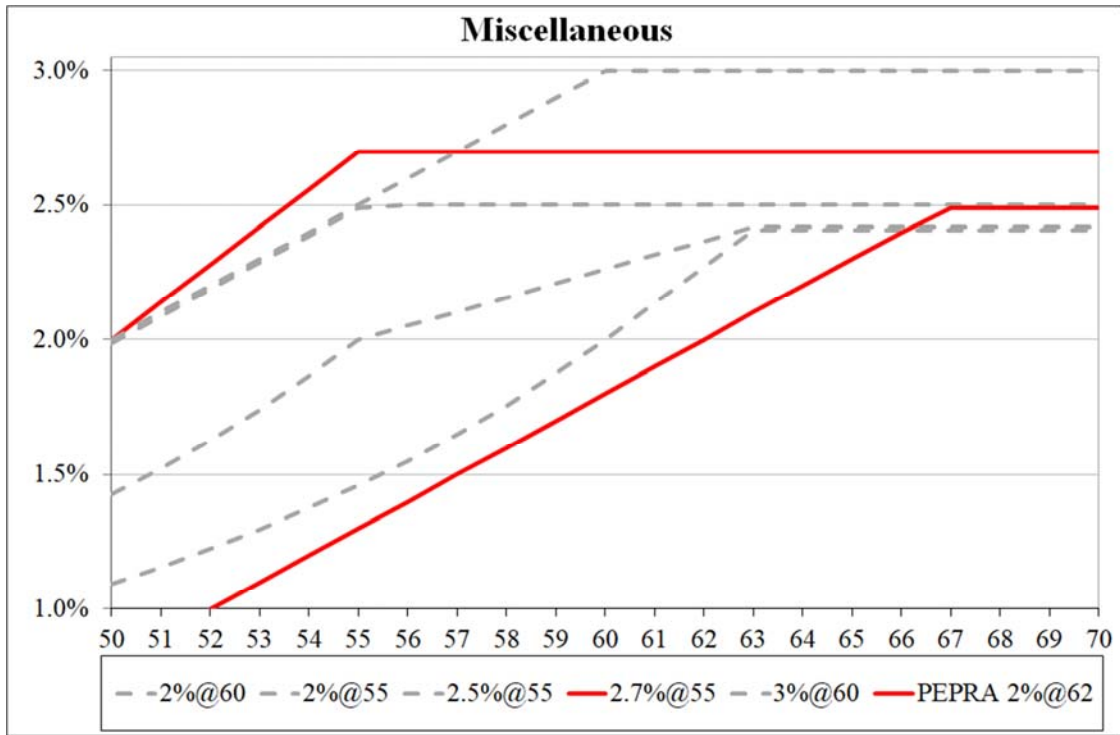
- Note:
 - FAE1 is highest one year (typically final) average earnings
 - FAE3 is highest three years (typically final three) average earnings
- PEPRA tier implemented for new employees hired after 1/1/13
 - Employee pays half of total normal cost
 - 2020 Compensation limit
 - Social Security participants: \$126,291
 - Non-Social Security participants: \$151,549



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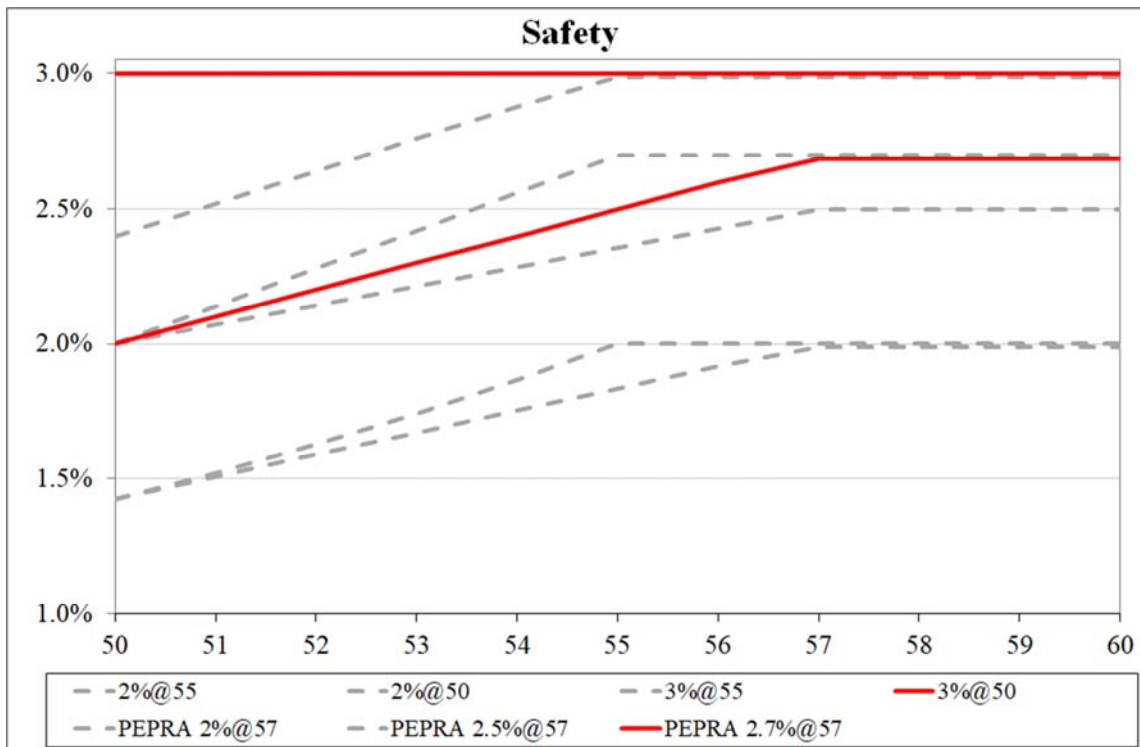
BACKGROUND – ENHANCED BENEFITS



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BACKGROUND – ENHANCED BENEFITS



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BACKGROUND – DEMOGRAPHIC

- Around the State
 - Large retiree liability compared to actives
 - State average: 56% for Miscellaneous, 65% for Safety
 - Declining active population and increasing number of retirees
 - Higher percentage of retiree liability increases contribution volatility

- City of Santa Clara percentage of liability belonging to retirees:
 - Miscellaneous 66%
 - Safety 72%



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BACKGROUND - CALPERS CHANGES

- Recent contribution policy changes:
 - No asset smoothing
 - No rolling amortization
 - 5-year ramp up
- February 2018: CalPERS adopted new amortization policy
 - Applies only to newly established amortization bases
 - Fixed dollar amortization rather than % pay
 - Amortize gains/losses over 20 rather than 30 years
 - 5-year ramp up (not down) for investment gains and losses
 - No ramp up/down for other amortization bases
 - Minimizes total interest paid over time and pays off UAL faster
 - Effective June 30, 2019 valuation for 2021/22 contributions
- CalPERS Board changed the discount rate:

	<u>Rate</u>	<u>Initial Impact</u>	<u>Full Impact</u>
● 6/30/16 valuation	7.375%	18/19	22/23
● 6/30/17 valuation	7.25%	19/20	23/24
● 6/30/18 valuation	7.00%	20/21	24/25



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BACKGROUND - CALPERS CHANGES

- Risk Mitigation Strategy
 - Move to more conservative investments over time to reduce volatility
 - Only when investment return is better than expected
 - Lower discount rate in concert
 - Essentially use $\approx 50\%$ of investment gains to pay for cost increases
 - Likely get to 6.0% discount rate over 20+ years
 - Risk mitigation suspended from 6/30/16 to 6/30/18 valuation
 - Did not trigger for 6/30/19 valuation

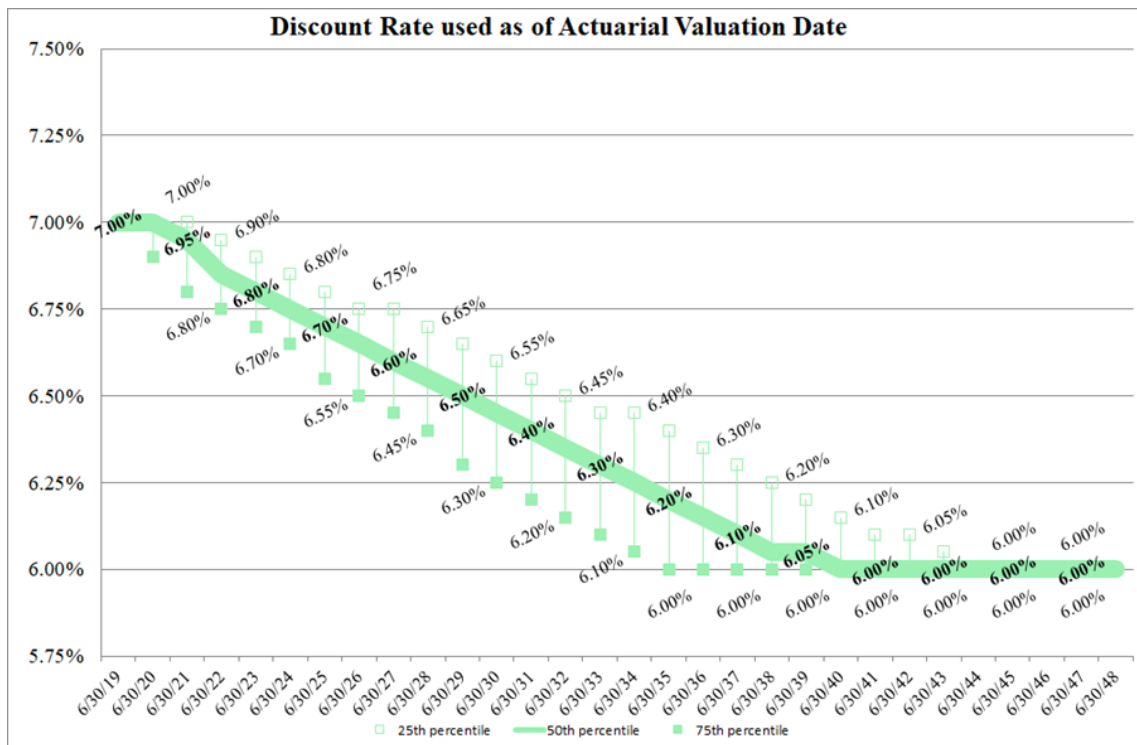


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BACKGROUND - CALPERS CHANGES



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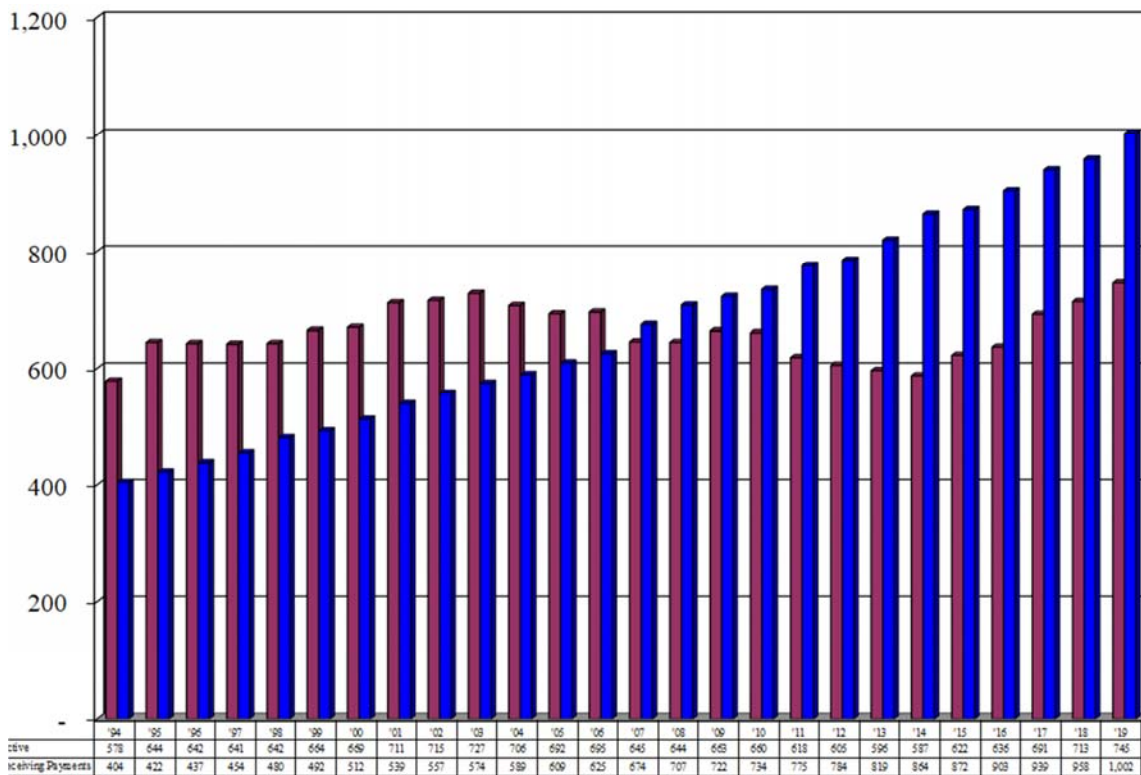
SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS

	1999	2009	2018	2019
Actives				
■ Counts	664	663	713	745
■ Average				
• Age	46	46	45	45
• City Service	12	12	9	9
• PERSable Wages	\$ 61,200	\$ 85,100	\$ 107,600	\$ 109,500
■ Total PERSable Wages	40,700,000	56,400,000	76,700,000	81,600,000
Inactive Members				
■ Counts				
• Transferred	147	224	245	253
• Separated	86	148	217	229
• Retired				
□ Service		553	785	820
□ Disability		62	65	66
□ Beneficiaries		107	108	116
□ Total	492	722	958	1,002
■ Average Annual City Provided Benefit for Service Retirees ¹		30,400	44,800	46,500

¹ Average City-provided pensions are based on City service & City benefit formula, and are not representative of benefits for long-service employees.



SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS



PLAN FUNDED STATUS - MISCELLANEOUS

	<u>June 30, 2018</u>	<u>June 30, 2019</u>
■ Actuarial Accrued Liability		
● Active	\$234,900,000	\$230,200,000
● Retiree	484,800,000	521,900,000
● Inactive	<u>31,600,000</u>	<u>34,200,000</u>
● Total	751,300,000	786,300,000
■ Assets	<u>458,600,000</u>	<u>479,300,000</u>
■ Unfunded Liability	292,700,000	307,000,000
■ Funded Ratio	61.0%	60.9%
■ Average funded ratio for CalPERS Public Agency Miscellaneous Plans	71.8%	72.2%

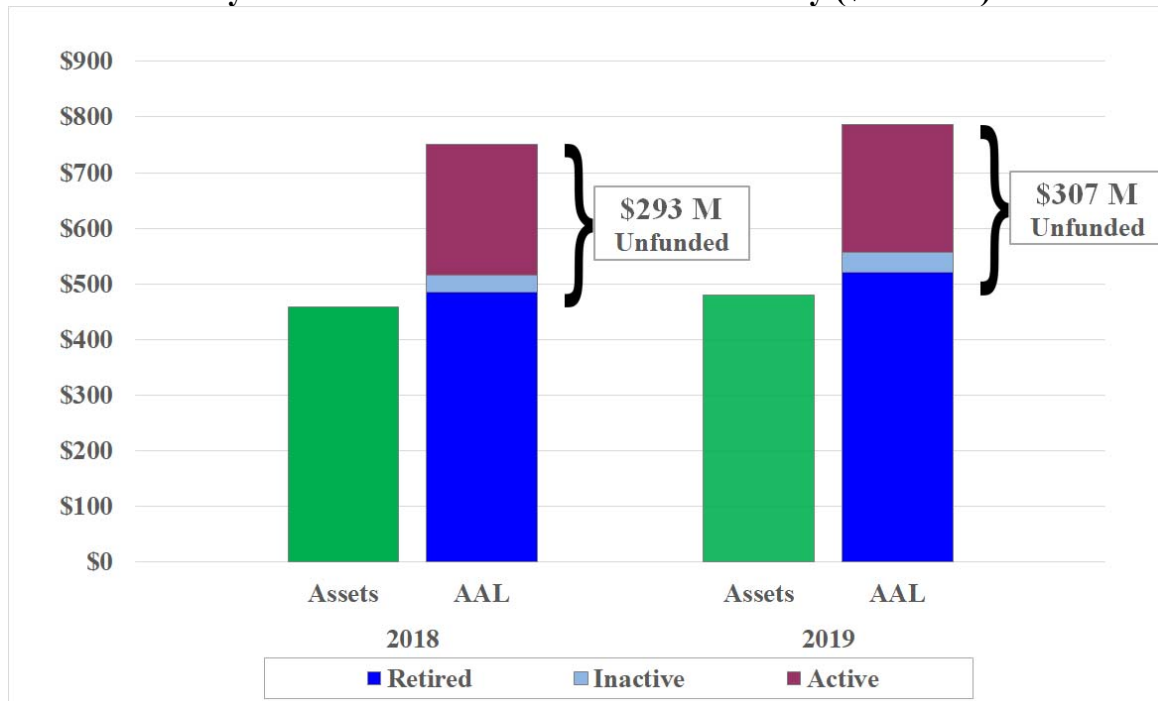


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PLAN FUNDED STATUS - MISCELLANEOUS

City CalPERS Assets and Actuarial Liability (\$Millions)



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PLAN FUNDED STATUS - MISCELLANEOUS

Discount Rate Sensitivity

June 30, 2019

	Discount Rate		
	<u>7.00%</u>	<u>6.50%²</u>	<u>6.00%</u>
AAL	\$ 786,300,000	\$ 835,500,000	\$ 884,600,000
Assets	<u>479,300,000</u>	<u>479,300,000</u>	<u>479,300,000</u>
Unfunded Liability	307,000,000	356,200,000	405,300,000
Funded Ratio	60.9%	57.4%	54.2%

² Estimated by Bartel Associates.



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PLAN FUNDED STATUS - MISCELLANEOUS

Unfunded Accrued Liability Changes

■ Unfunded Accrued Liability on 6/30/18	\$292,700,000
■ Expected 6/30/19 Unfunded Accrued Liability	296,400,000
■ Other Changes	
• Asset Loss (Gain) (6.6% return for FY 2019)	1,900,000
• Contribution & Experience Loss (Gain)	<u>8,700,000</u>
• Total	<u>10,600,000</u>
■ Unfunded Accrued Liability on 6/30/19	307,000,000
■ Projected Unfunded Accrued Liability on 6/30/20	319,400,000

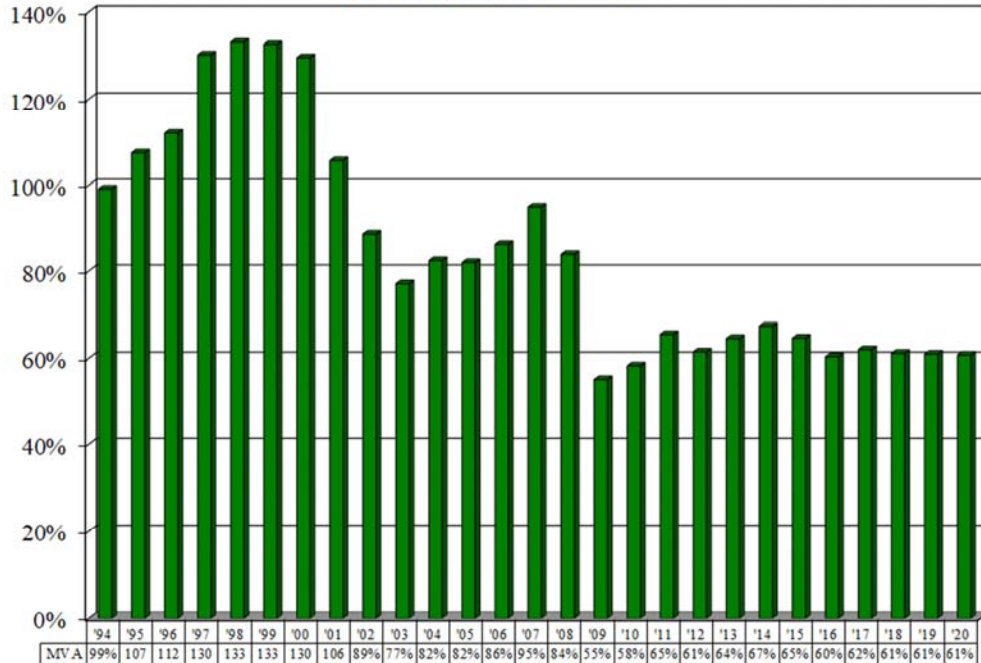


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FUNDED RATIO - MISCELLANEOUS

Historical Funded Ratio



6/30/20 funded status estimated

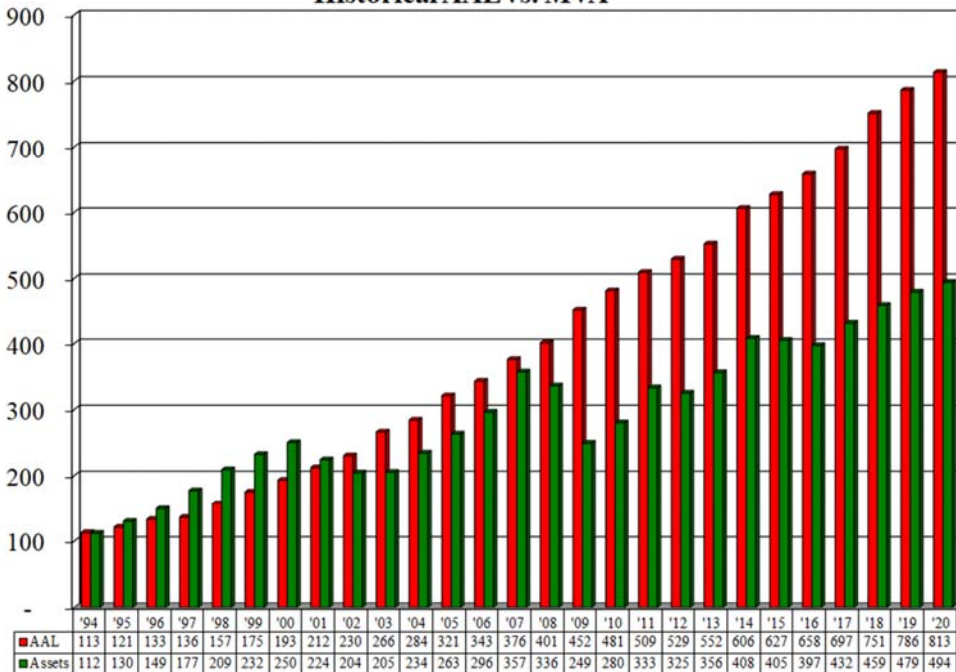


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FUNDED STATUS (MILLIONS) - MISCELLANEOUS

Historical AAL vs. MVA



6/30/20 funded status estimated

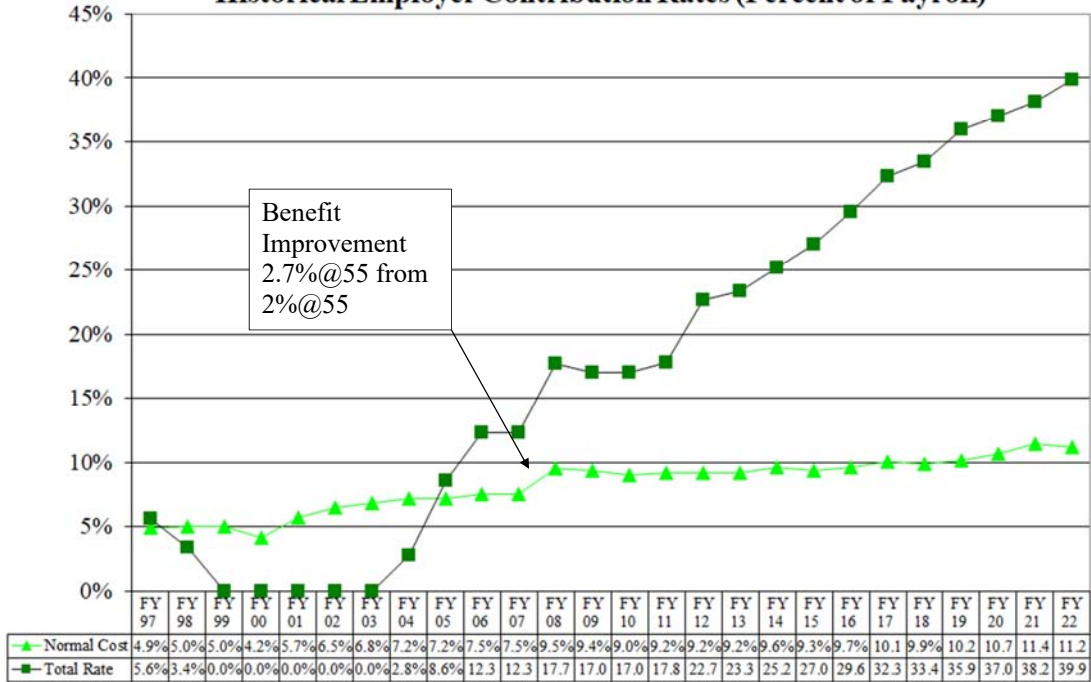


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CONTRIBUTION RATES - MISCELLANEOUS

Historical Employer Contribution Rates (Percent of Payroll)



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CONTRIBUTION RATES - MISCELLANEOUS

	<u>6/30/18</u> <u>2020/2021</u>	<u>6/30/19</u> <u>2021/2022</u>
■ Total Normal Cost	18.9%	18.6%
■ Employee Normal Cost	<u>7.5%</u>	<u>7.4%</u>
■ Employer Normal Cost	11.4%	11.2%
■ Amortization Payments	<u>26.7%</u>	<u>28.7%</u> ³
■ Total Employer Contribution Rate	38.2%	39.9%
■ 2020/21 Employer Contribution Rate		38.2%
● Payroll > Expected		(0.9%)
● 6/30/16 Discount Rate Change (4 th Year)		0.3%
● 6/30/17 Discount Rate & Inflation (3 rd Year)		0.3%
● 6/30/18 Discount Rate change (2 nd Year)		0.5%
● Other (Gains)/Losses		<u>1.5%</u>
■ 2021/22 Employer Contribution Rate		39.9%

³ Equivalent to 8.3% of UAL. One year, 7% interest on the UAL is 24.3% of payroll.



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CONTRIBUTION PROJECTIONS - MISCELLANEOUS

- Market Value Investment Return:
 - June 30, 2020 4.7%⁴
 - Future returns based on stochastic analysis using 1,000 trials

<u>Single Year Returns at⁵</u>	<u>25th Percentile</u>	<u>50th Percentile</u>	<u>75th Percentile</u>
Current Investment Mix	0.1%	7.0%	14.8%
Ultimate Investment Mix	0.8%	6.0%	11.4%

 - Assumes investment returns will, generally be 6.5% (as compared to 7.0%) over the next 8 years and higher beyond that.
- Discount Rate decreases due to Risk Mitigation policy
- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Different from CalPERS projection

⁴ Gross return based on July 2020 CalPERS press release

⁵ Nth percentile means N percentage of our trials result in returns lower than the indicated rates.



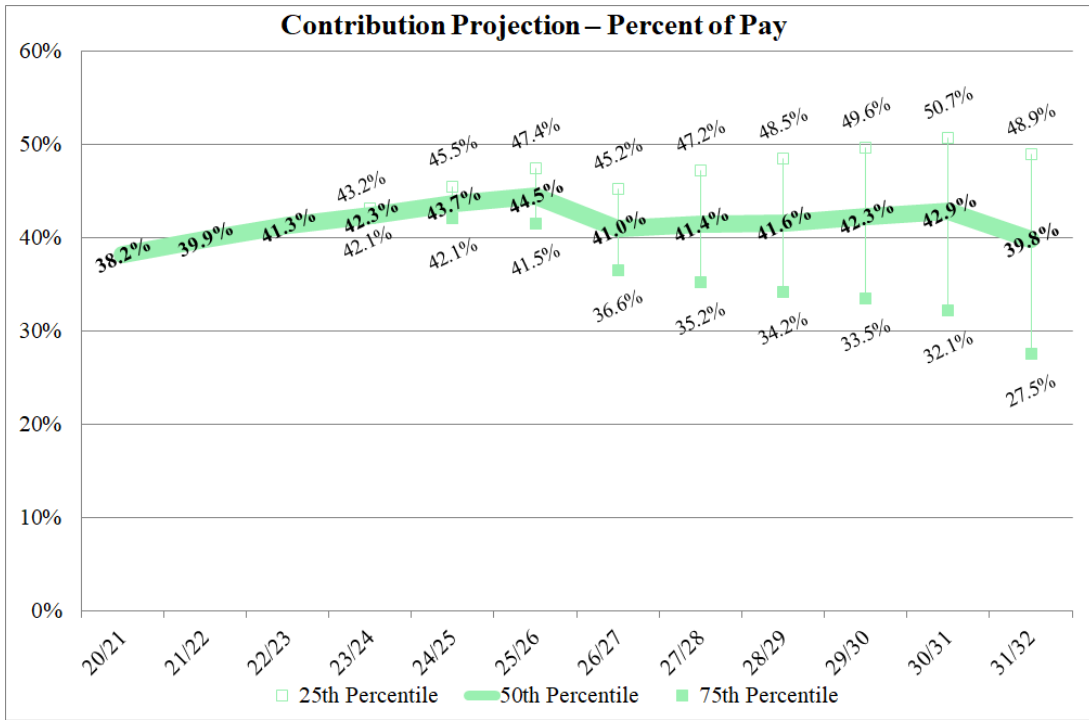
CONTRIBUTION PROJECTIONS - MISCELLANEOUS

- New hire assumptions:
 - 95.0% of 2020/21 new hires are PEPRAs members and 5.0% are Classic members
 - Percentage of PEPRAs member future hires to increase from 95.0% to 100% over 2 years
- 6/30/19 employee distribution:

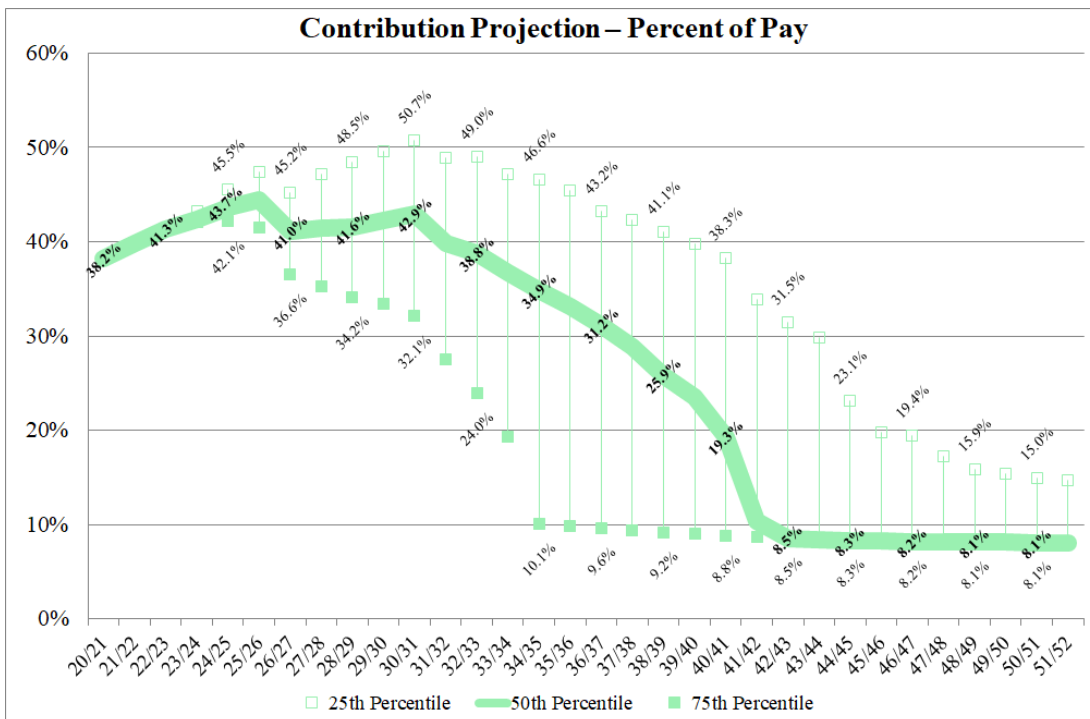
Benefit Tier	Count	6/30/19 Payroll
● 2.7%@55 FAE1	433	\$53,772,200
● 2%@62 FAE3 (PEPRA)	312	27,805,100



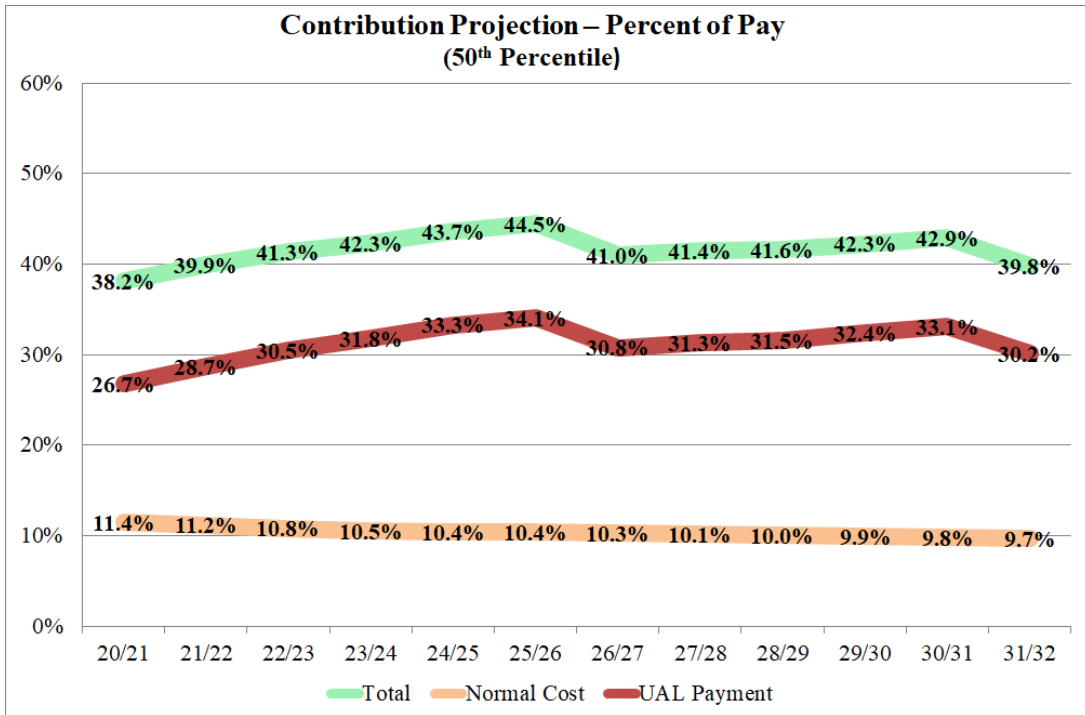
CONTRIBUTION PROJECTIONS - MISCELLANEOUS



CONTRIBUTION PROJECTIONS - MISCELLANEOUS



CONTRIBUTION PROJECTIONS - MISCELLANEOUS

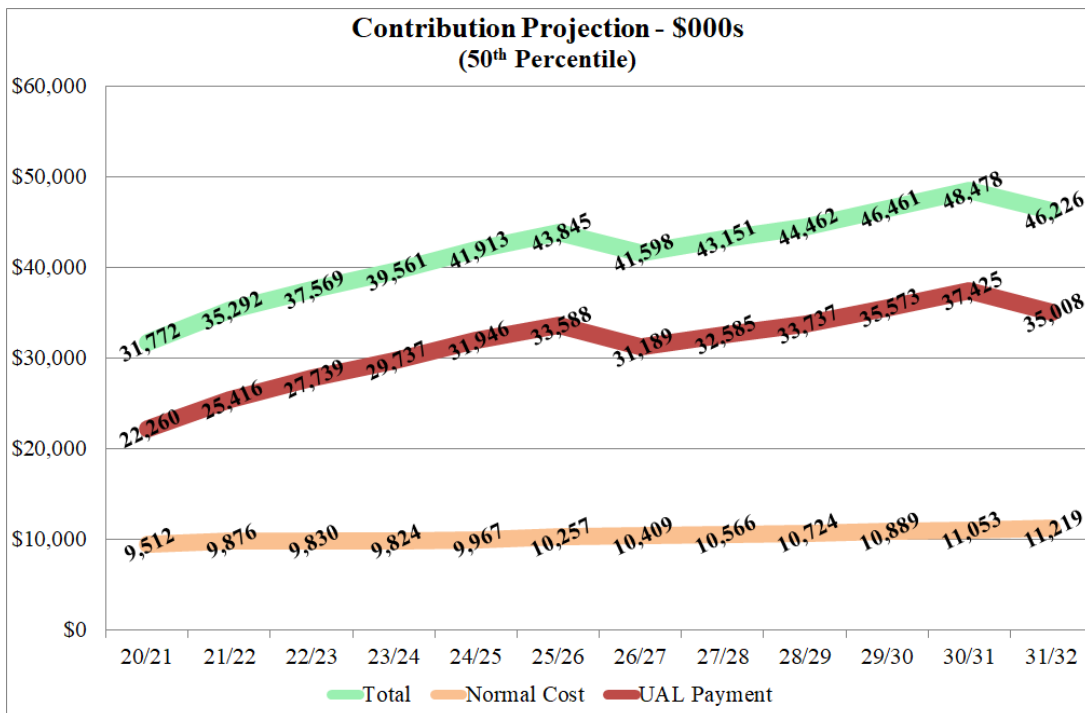


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CONTRIBUTION PROJECTIONS - MISCELLANEOUS



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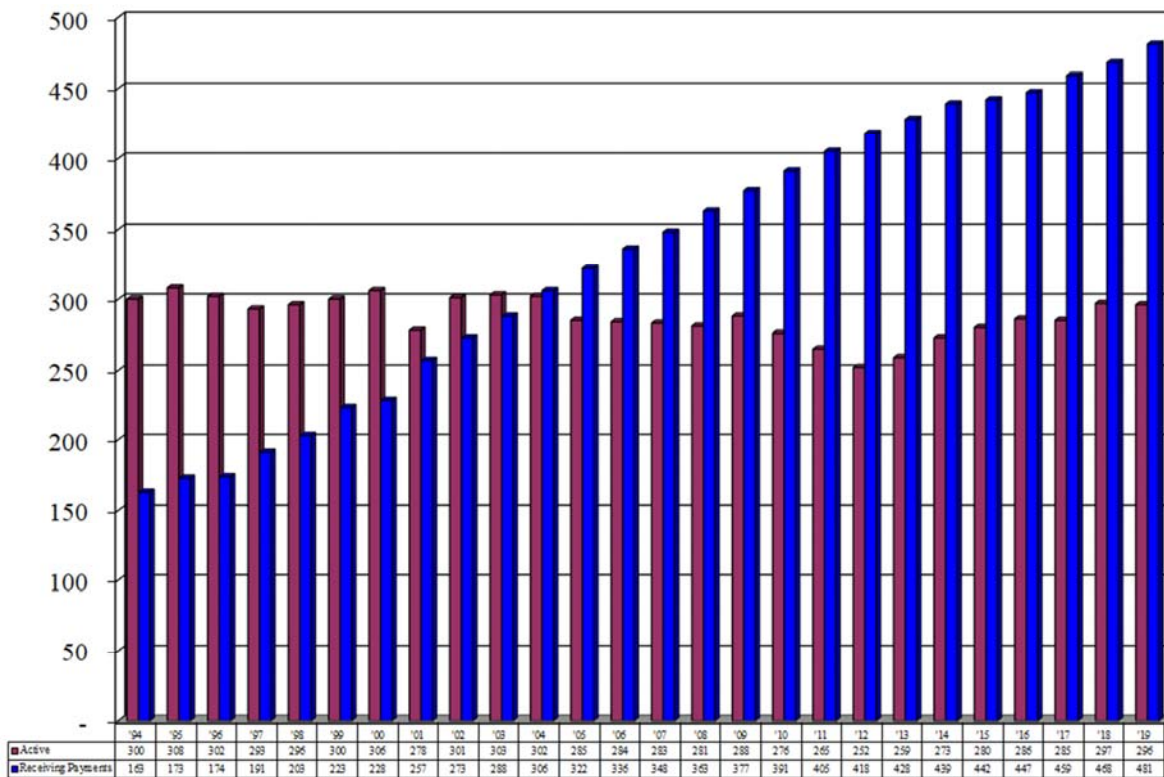
SUMMARY OF DEMOGRAPHIC INFORMATION - SAFETY

	1999	2009	2018	2019
Actives				
■ Counts	300	288	297	296
■ Average				
• Age	42	41	41	41
• City Service	14	13	11	11
• PERSable Wages	\$ 88,700	\$ 135,400	\$ 161,400	\$ 171,600
■ Total PERSable Wages	26,600,000	39,000,000	47,900,000	50,800,000
Inactive Members				
■ Counts				
• Transferred	17	28	29	33
• Separated	7	20	34	38
• Retired				
□ Service		200	261	274
□ Disability		127	146	148
□ Beneficiaries		50	61	59
□ Total	223	377	468	481
■ Average Annual City Provided Benefit for Service Retirees ⁶		74,900	99,000	101,600

⁶ Average City-provided pensions are based on City service & City benefit formula, and are not representative of benefits for long-service employees.



SUMMARY OF DEMOGRAPHIC INFORMATION - SAFETY



PLAN FUNDED STATUS - SAFETY

	<u>June 30, 2018</u>	<u>June 30, 2019</u>
■ Actuarial Accrued Liability		
● Active	\$ 221,500,000	\$ 226,800,000
● Retiree	556,600,000	588,700,000
● Inactive	<u>6,900,000</u>	<u>7,300,000</u>
● Total	785,000,000	822,800,000
■ Assets	<u>508,200,000</u>	<u>528,200,000</u>
■ Unfunded Liability	276,800,000	294,600,000
■ Funded Ratio	64.7%	64.2%
■ Average funded ratio for CalPERS Public Agency Safety Plans	68.3%	68.6%

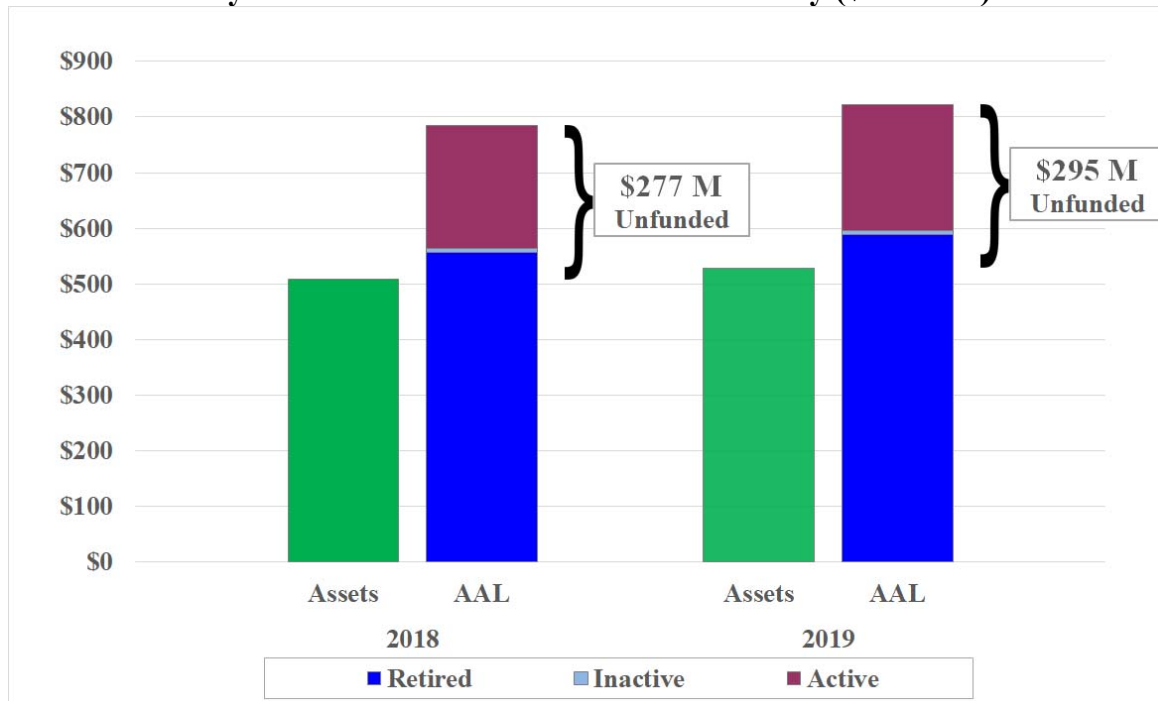


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PLAN FUNDED STATUS - SAFETY

City CalPERS Assets and Actuarial Liability (\$Millions)



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PLAN FUNDED STATUS - SAFETY

Discount Rate Sensitivity

June 30, 2019

	Discount Rate		
	<u>7.00%</u>	<u>6.50%⁷</u>	<u>6.00%</u>
AAL	\$ 822,800,000	\$ 877,600,000	\$ 932,300,000
Assets	<u>528,200,000</u>	<u>528,200,000</u>	<u>528,200,000</u>
Unfunded Liability	294,600,000	349,400,000	404,100,000
Funded Ratio	64.2%	60.2%	56.7%

⁷ Estimated by Bartel Associates.



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PLAN FUNDED STATUS - SAFETY

Unfunded Accrued Liability Changes

■ Unfunded Accrued Liability on 6/30/18	\$276,800,000
■ Expected 6/30/19 Unfunded Accrued Liability	282,900,000
■ Other Changes	
• Asset Loss (Gain) (6.6% return for FY 2019)	2,300,000
• Contribution & Experience Loss (Gain)	<u>9,400,000</u>
• Total	<u>11,700,000</u>
■ Unfunded Accrued Liability on 6/30/19	294,600,000
■ Projected Unfunded Accrued Liability on 6/30/20	310,700,000

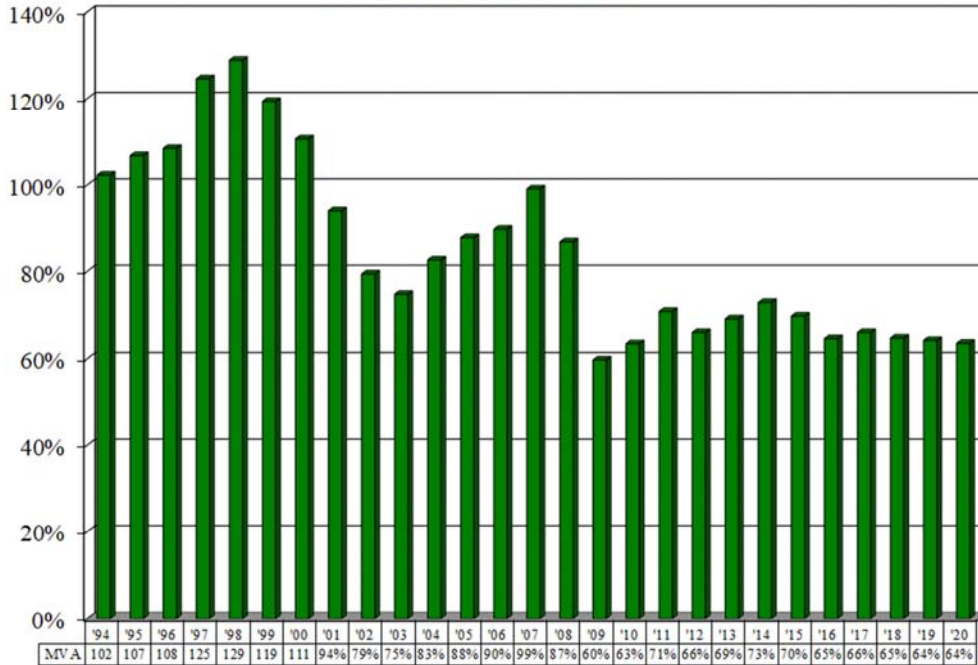


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FUNDED RATIO - SAFETY

Historical Funded Ratio



6/30/20 funded status estimated



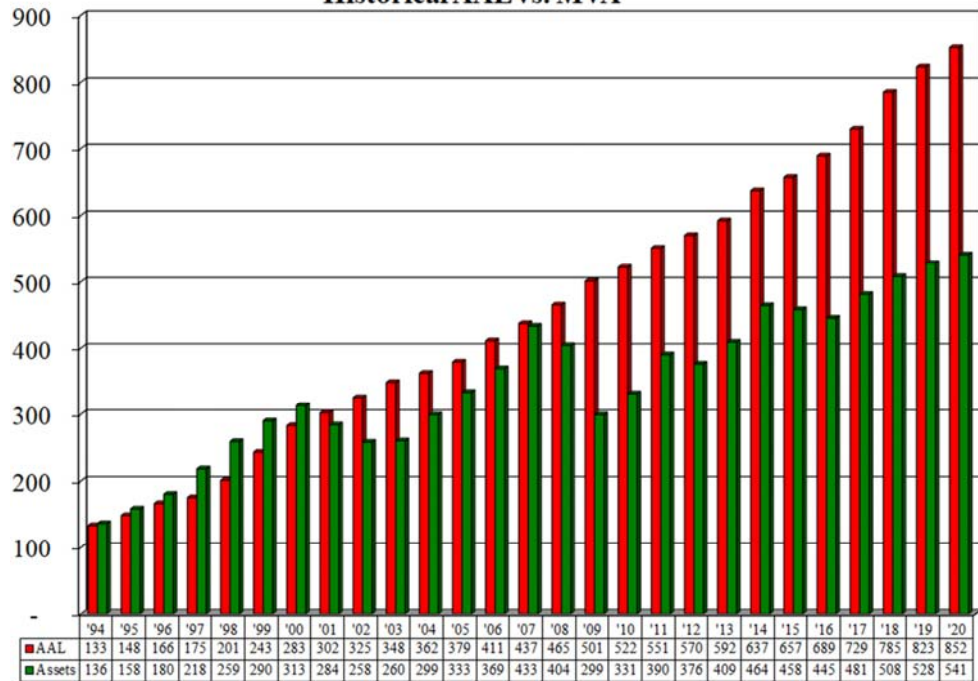
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FUNDED STATUS (MILLIONS) - SAFETY

Historical AAL vs. MVA



6/30/20 funded status estimated



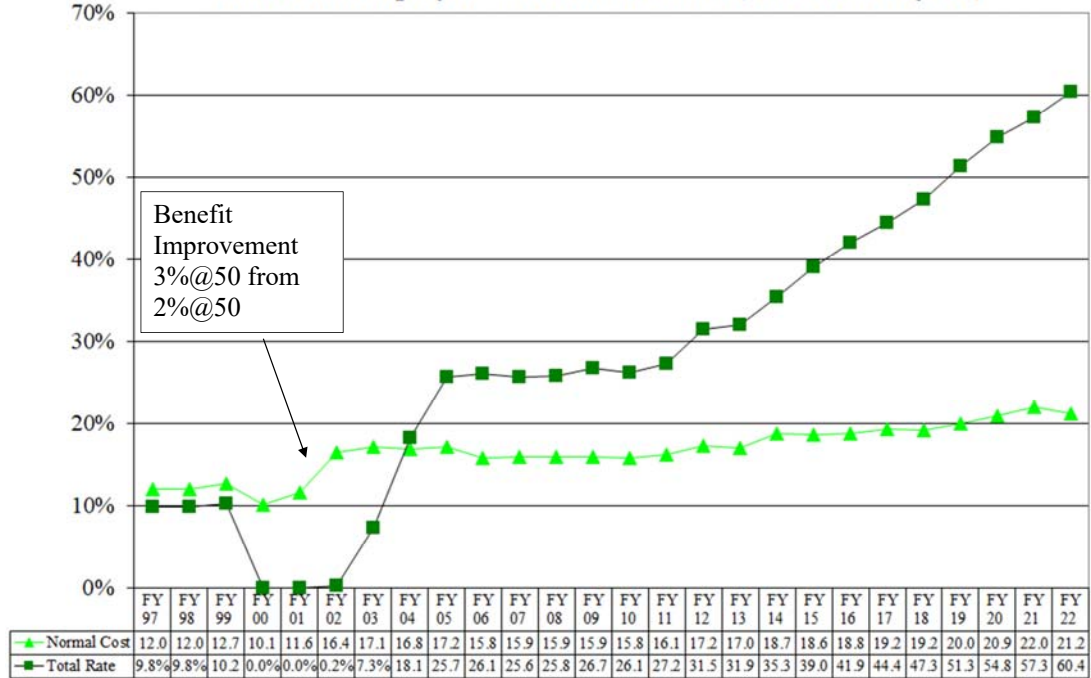
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CONTRIBUTION RATES - SAFETY

Historical Employer Contribution Rates (Percent of Payroll)



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CONTRIBUTION RATES - SAFETY

	<u>6/30/18</u> <u>2020/2021</u>	<u>6/30/19</u> <u>2021/2022</u>
■ Total Normal Cost	31.2%	30.8%
■ Employee Normal Cost	<u>9.2%</u>	<u>9.5%</u>
■ Employer Normal Cost	22.0%	21.2%
■ Amortization Payments	<u>35.3%</u>	<u>39.2%</u> ⁸
■ Total Employer Contribution Rate	57.3%	60.4%
■ 2020/21 Employer Contribution Rate		57.3%
● Payroll > Expected		(1.1%)
● 6/30/16 Discount Rate Change (4 th Year)		0.5%
● 6/30/17 Discount Rate & Inflation (3 rd Year)		0.5%
● 6/30/18 Discount Rate change (2 nd Year)		0.9%
● Other (Gains)/Losses		<u>2.3%</u>
■ 2021/22 Employer Contribution Rate		60.4%

⁸ Equivalent to 7.2% of UAL. One year, 7% interest on the UAL is 38.2% of payroll.



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CONTRIBUTION PROJECTIONS - SAFETY

- Market Value Investment Return:
 - June 30, 2020 4.7%⁹
 - Future returns based on stochastic analysis using 1,000 trials

<u>Single Year Returns at¹⁰</u>	<u>25th Percentile</u>	<u>50th Percentile</u>	<u>75th Percentile</u>
Current Investment Mix	0.1%	7.0%	14.8%
Ultimate Investment Mix	0.8%	6.0%	11.4%

 - Assumes investment returns will, generally be 6.5% (as compared to 7.0%) over the next 8 years and higher beyond that.
- Discount Rate decreases due to Risk Mitigation policy
- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Different from CalPERS projection

⁹ Gross return based on July 2020 CalPERS press release

¹⁰ Nth percentile means N percentage of our trials result in returns lower than the indicated rates.



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CONTRIBUTION PROJECTIONS - SAFETY

- New hire assumptions:
 - 95.0% of 2020/21 new hires are PEPRAs members and 5.0% are Classic members
 - Percentage of PEPRAs member future hires to increase from 95.0% to 100% over 2 years

- 6/30/19 employee distribution:

Benefit Tier	Count	6/30/19 Payroll
● 3%@50 FAE1 Police	118	\$22,108,300
● 3%@50 FAE3 Fire	103	19,017,000
● 2.7%@57 FAE3 (PEPRA) Police	35	4,624,200
● 2.7%@57 FAE3 (PEPRA) Fire	40	5,051,400

- EE Cost Sharing:
 - Police Safety Classic employees pay 2.25% toward employer rates

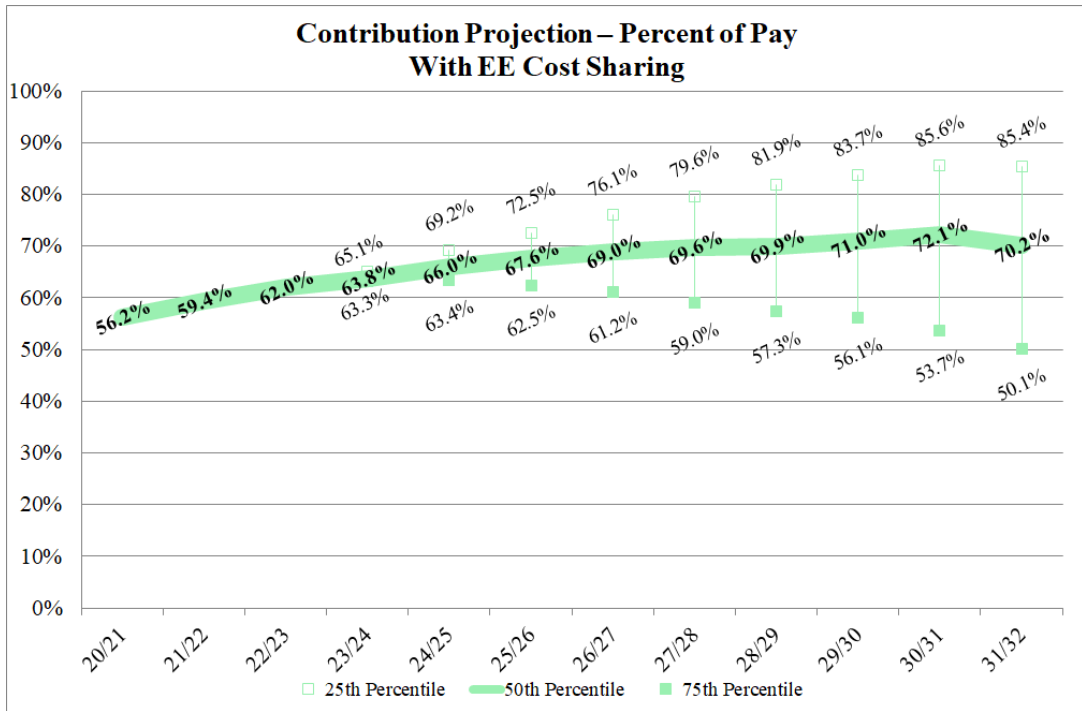


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CONTRIBUTION PROJECTIONS - SAFETY

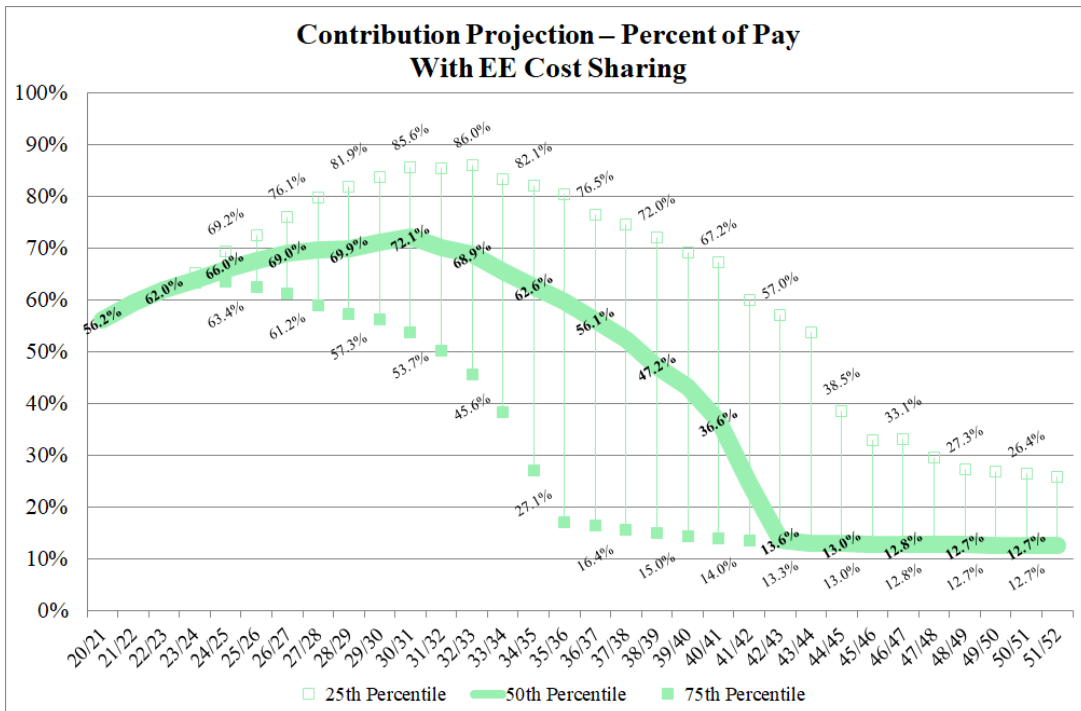


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CONTRIBUTION PROJECTIONS - SAFETY

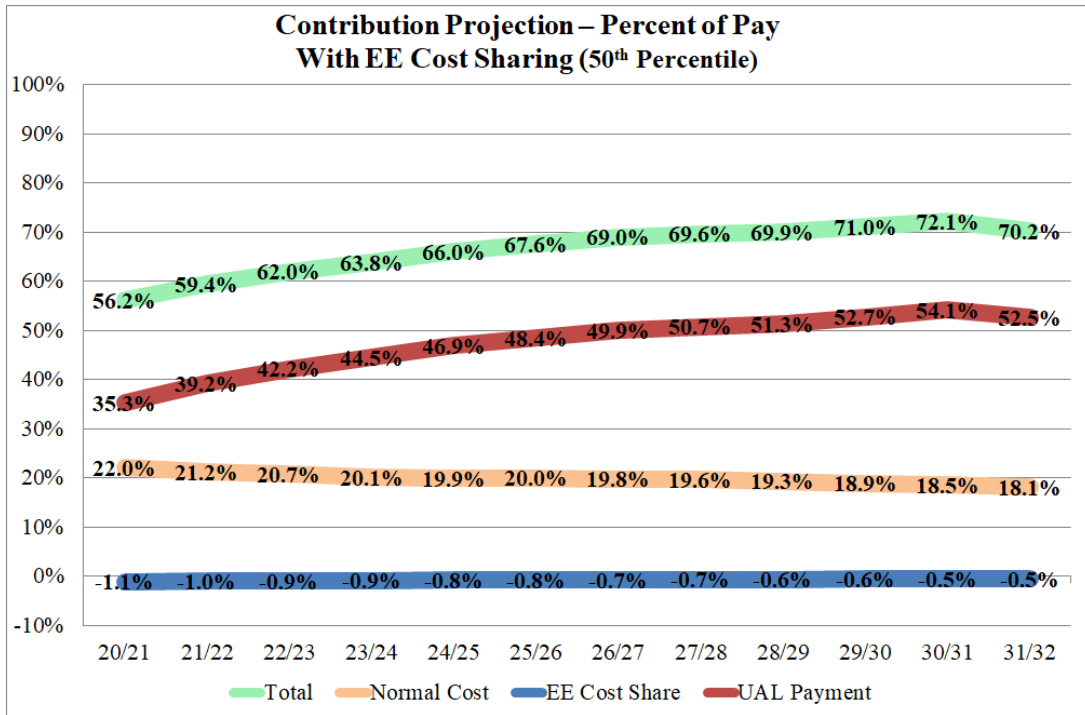


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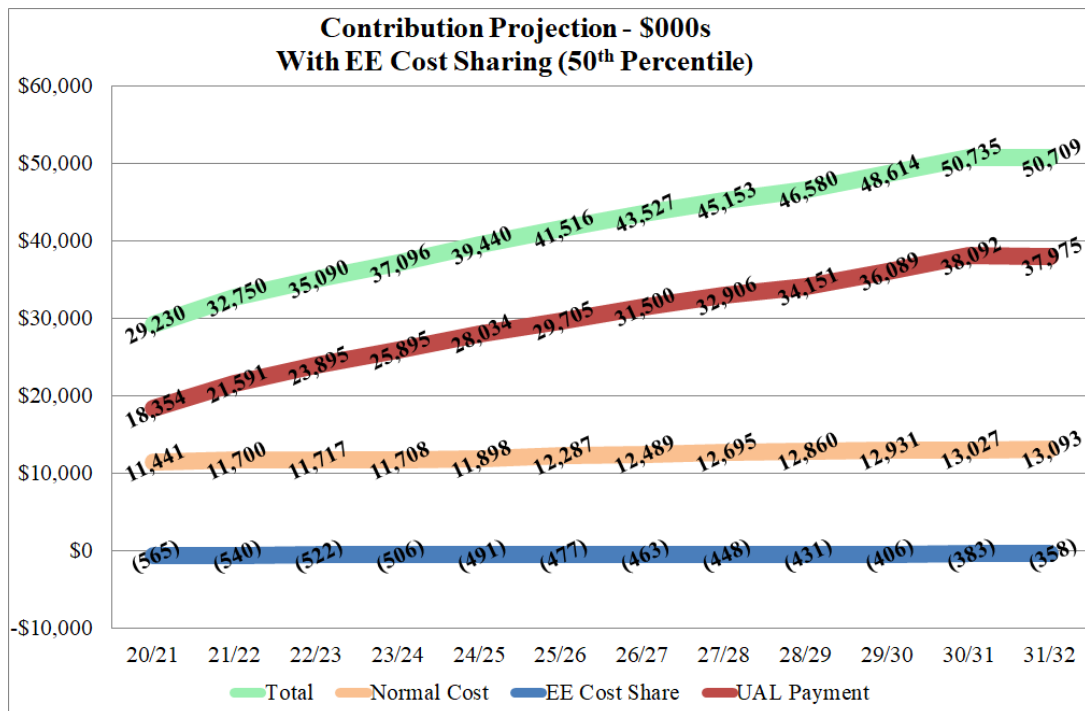
CONTRIBUTION PROJECTIONS - SAFETY



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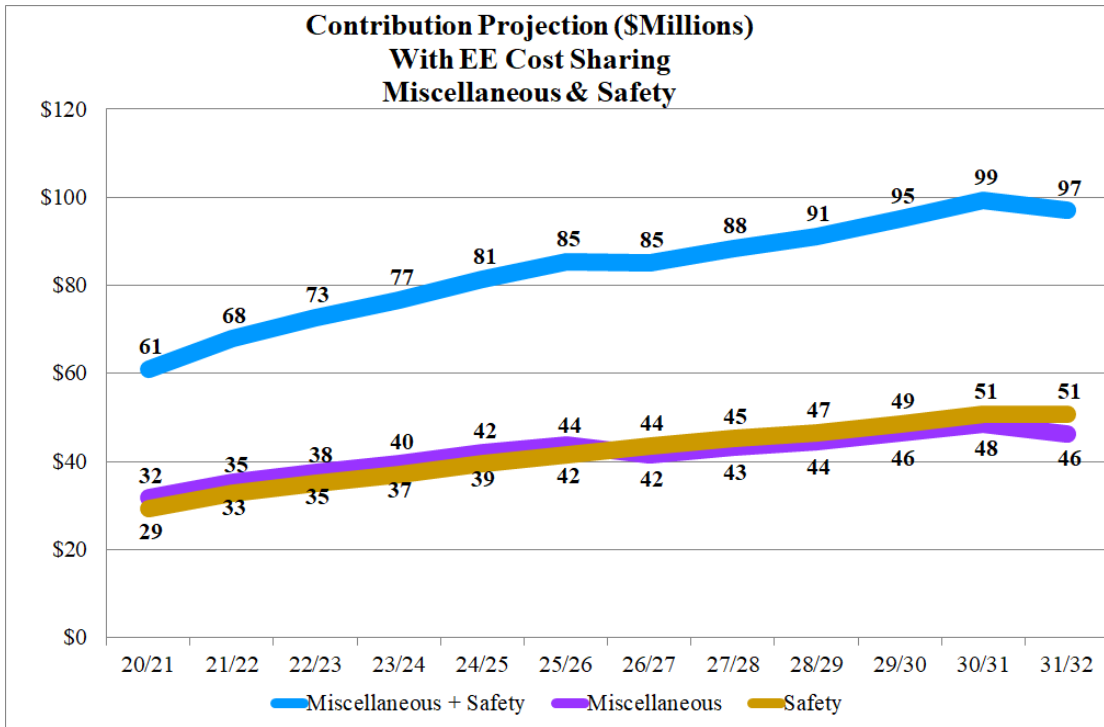
CONTRIBUTION PROJECTIONS - SAFETY



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COMBINED MISCELLANEOUS AND SAFETY



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COMBINED MISCELLANEOUS AND SAFETY

Funded Status Summary on June 30, 2019 (Amounts in \$Millions)

	Miscellaneous	Safety	Total
■ AAL	\$ 786	\$ 823	\$ 1,609
■ Assets	<u>479</u>	<u>528</u>	<u>1,007</u>
■ Unfunded AAL	307	295	602
■ Funded Ratio	60.9%	64.2%	62.6%



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LEAVING CALPERS

- Participation in CalPERS is governed by State law and CalPERS rules
- The following are considered “withdrawing” from CalPERS:
 - Exclude new hires from CalPERS & giving them a different pension
 - Stop accruing benefits for current employees
- “Withdrawal” from CalPERS:
 - Treated as plan termination
 - Liability increased for conservative investments
 - Liability increased for future demographic fluctuations
 - Liability must be funded immediately by withdrawing agency
 - Otherwise, retiree benefits are cut



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LEAVING CALPERS

CalPERS Termination Estimates on June 30, 2019 (Amounts in Millions)

Discount Rate	Ongoing Plan	Termination Basis	
	7.00%	1.75%	3.25%
Miscellaneous			
Actuarial Accrued Liability	\$ 786	\$ 1,514	\$ 1,230
Assets	<u>479</u>	<u>479</u>	<u>479</u>
Unfunded AAL (UAAL)	307	1,035	751
Safety			
Actuarial Accrued Liability	\$ 823	\$ 1,704	\$ 1,358
Assets	<u>528</u>	<u>528</u>	<u>528</u>
Unfunded AAL (UAAL)	295	1,176	830
Total			
Unfunded AAL (UAAL)	602	2,211	1,581
Funded Ratio	62.6%	31.3%	38.9%



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IRREVOCABLE SUPPLEMENTAL (§115) PENSION TRUST

- Can only be used to:
 - Reimburse City for CalPERS contributions
 - Make payments directly to CalPERS
- Investments significantly less restricted than City investment funds
 - Fiduciary rules govern Trust investments
 - Usually, designed for long term returns
- Assets don't count for GASB accounting
 - Are considered Employer assets
- Over 100 trusts established, mostly since 2015
 - Trust providers: PARS, PFM, Keenan
 - California Employers' Pension Prefunding Trust (CEPPT) effective July 2019
 - Strategy 1: 48% stocks / 52% bonds
 - Strategy 2: 22% stocks / 78% bonds



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IRREVOCABLE SUPPLEMENTAL (§115) PENSION TRUST

- More flexibility than paying CalPERS directly
 - City decides if and when and how much money to put into Trust
 - City decides if and when and how much to withdraw to pay CalPERS or reimburse Agency
- Funding strategies typically focus on
 - Reducing the unfunded liability
 - Fund enough to make total CalPERS UAL = 0
 - Make PEPRAs required payments from Trust when overfunded
 - Stabilizing contribution rates
 - Mitigate expected contribution rates to better manage budget
 - Combination
 - Use funds for rate stabilization/budget predictability
 - Target increasing fund balance to pay off UAL sooner



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IRREVOCABLE SUPPLEMENTAL (§115) PENSION TRUST

- Consider:
 - How much can you put into Trust?
 - Initial seed money?
 - Additional amounts in future years?
 - When do you take money out?
 - Target budget rate?
 - Year target budget rate kicks in?
 - Before or after CalPERS rate exceeds budgeted rate?



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COMPARISON OF OPTIONS

- | ■ Supplemental Trust | ■ CalPERS |
|--|--|
| ● Flexible | ● Locked In |
| ● Likely lower long-term return | ● Likely higher long-term return |
| ● Investment strategy choice | ● No investment choice |
| ● Does not reduce net pension liability for GASB reporting | ● Reduces net pension liability for GASB reporting |
| ● More visible | ● More restricted |

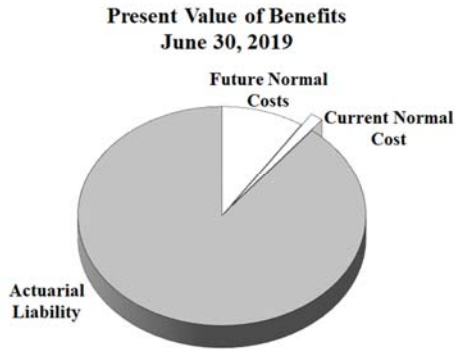


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DEFINITIONS

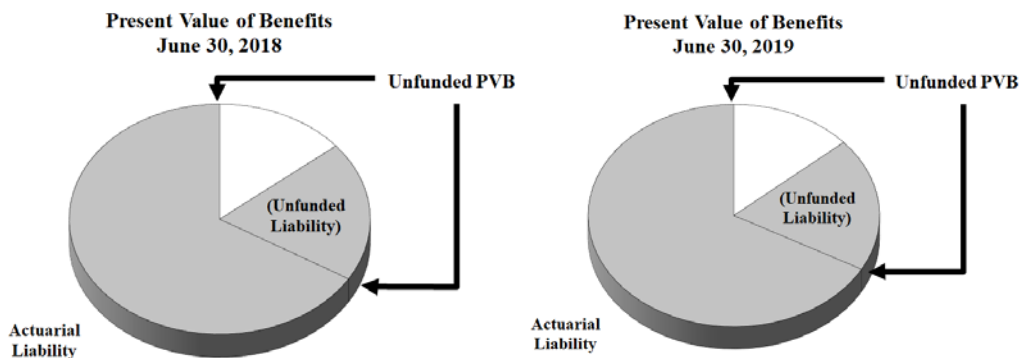


- **PVB - Present Value of all Projected Benefits:**
 - The value now of amounts due to be paid in the future
 - Discounted value (at valuation date - 6/30/19), of all future expected benefit payments based on various (actuarial) assumptions

- **Current Normal Cost (NC):**
 - Portion of PVB allocated to (or “earned” during) current year
 - Value of employee and employer current service benefit
- **Actuarial Liability (AAL):**
 - Discounted value (at valuation date) of benefits earned through valuation date [value of past service benefit]
 - Portion of PVB “earned” at measurement



DEFINITIONS



- **Target-** Have money in the bank to cover Actuarial Liability (past service)
- **Unfunded Liability (UAAL or UAL) - Money short of target at valuation date**
 - If all actuarial assumptions were always exactly met, then the plan assets would always equal AAL
 - Any difference is the unfunded (or overfunded) AAL
 - Every year, the actuary calculates the difference between the expected UAAL and Actual UAAL. This is a new layer or amortization base
 - Each new layer gets amortized (paid off) over a period of time as part of the contribution [rate]



ACTUARIAL CERTIFICATION

This report presents analysis of the City of Santa Clara's CalPERS pension plans. The purpose of this report is to provide the City:

- Historical perspective on the plan investment returns, assets, funded status and contributions.
- Projections of likely future contributions and the impact of investment volatility

The calculations and projections in this report are based on information contained in the City's June 30, 2019 and earlier CalPERS actuarial valuation reports. We reviewed this information for reasonableness, but do not make any representation on the accuracy of the CalPERS reports.

Future investment returns and volatility are based on Bartel Associates Capital Market model which results in long term returns summarized on pages 23 and 41.

Future results may differ from our projections due to differences in actual experience as well as changes in plan provisions, CalPERS actuarial assumptions or methodology. Other than variations in investment return, this study does not analyze these.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. As members of the American Academy of Actuaries meeting the Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,



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February 9, 2021



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