



# **Actuarial Information/Valuations 101**

## **Julian Robinson, FSA, EA, MAAA**

### **CalPERS Senior Pension Actuary**

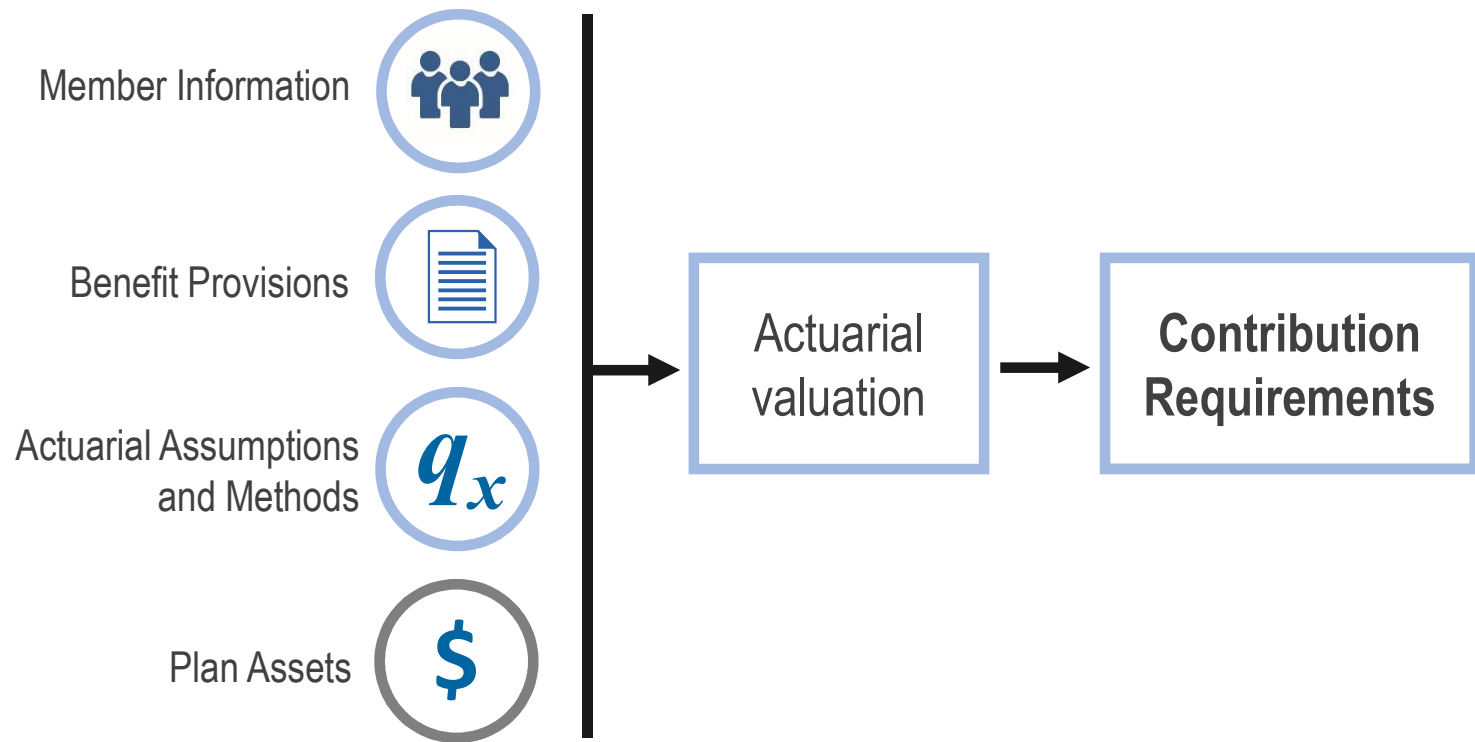


# Topics

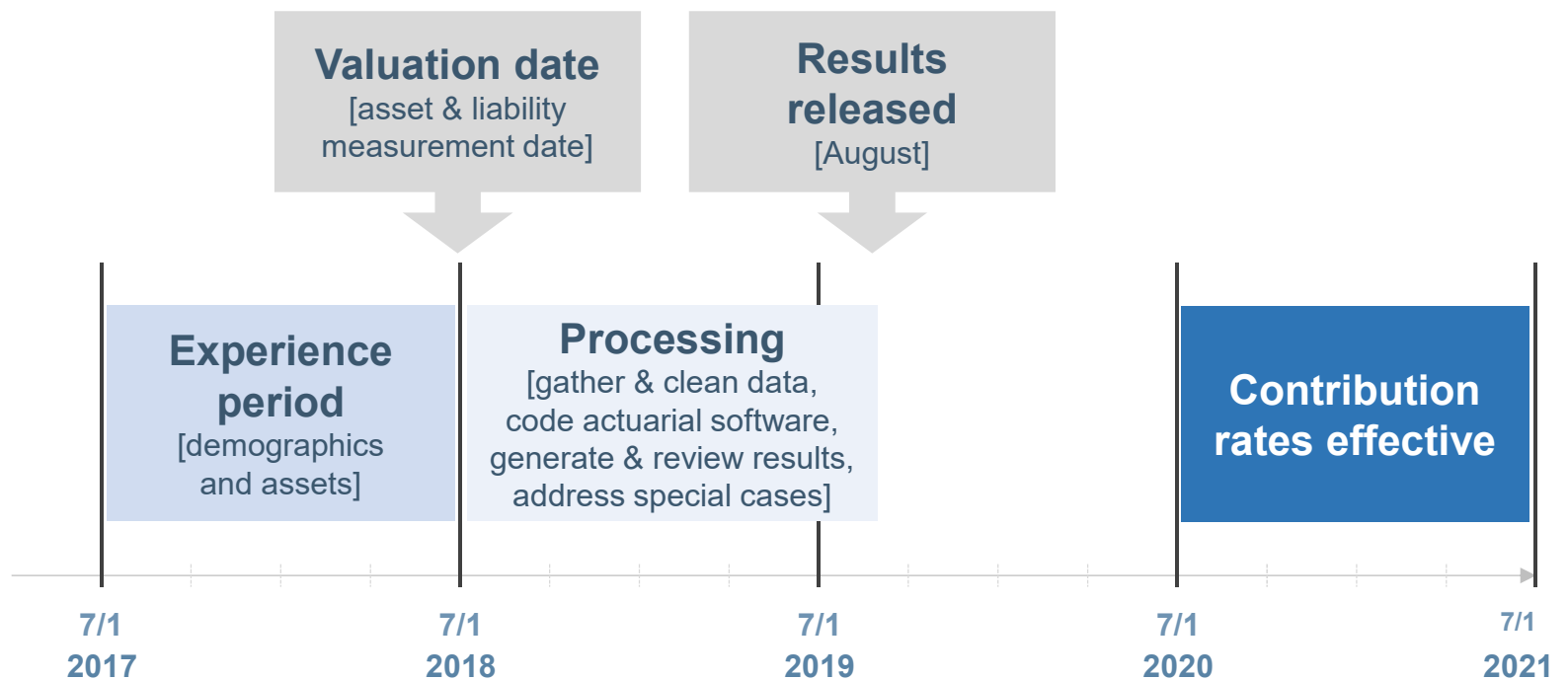
- Pension Funding Principles
- Non-pooled plans vs Pooled plans
- Actuarial Report Highlights
  - Contribution Requirements for FY 2019-20
  - Funded Status of the Plans
  - 5-Year Contribution Projections
  - Alternatives for proactively managing Unfunded Accrued Liabilities

# Pension Funding Principles

# Development of Contribution Requirements



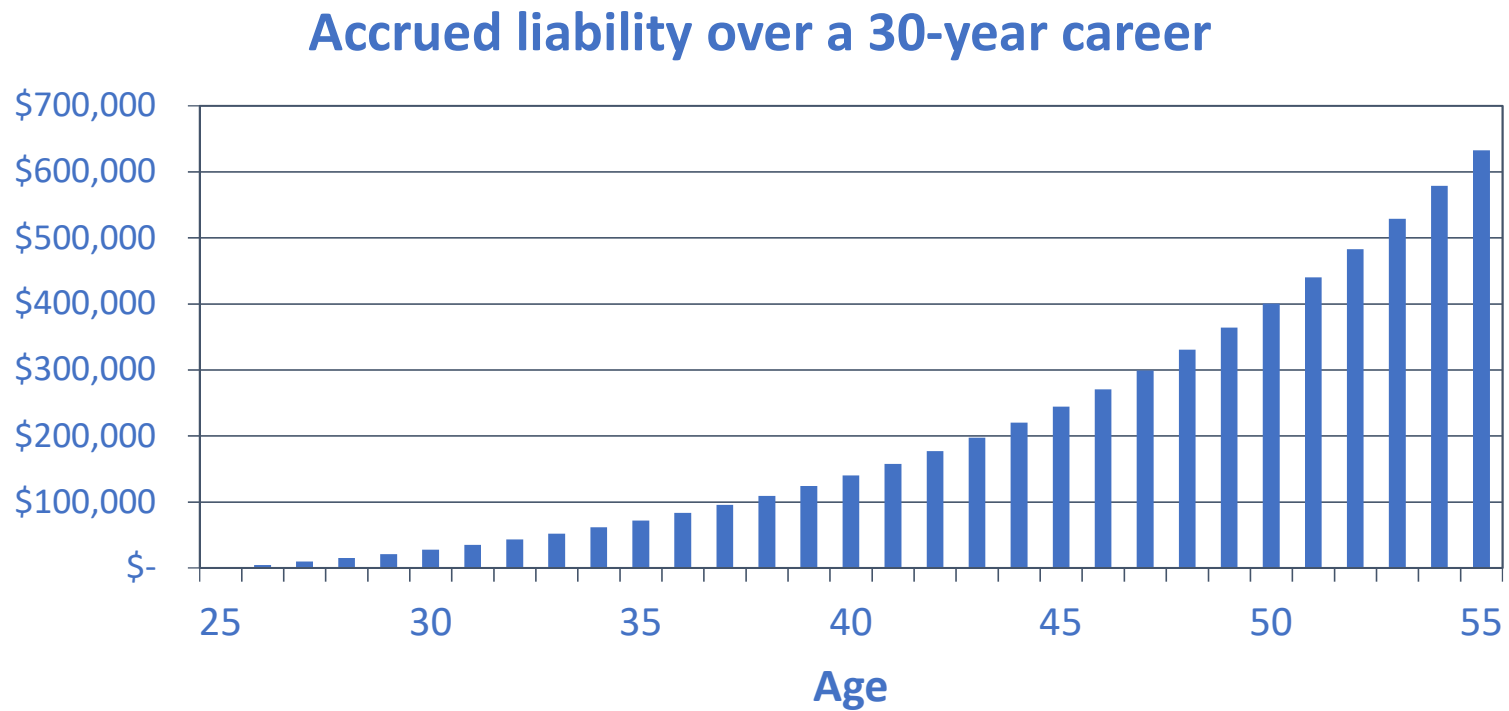
# Actuarial valuation timeline



# Normal Cost and Accrued Liability

- Service accrues each year for active members
  - Example 2% of salary each year in the 2% @ 62 benefit formula
- Normal Cost is the actuarially determined value of the annual accrual
  - Shared between Employer and Employee
- Accrued Liability is the total of all prior years' Normal Costs

# Normal Cost and Accrued Liability



# Unfunded Accrued Liability (UAL) and Funded Status

$$\text{UAL (\$)} = \text{Accrued Liability} - \text{Market Value of Assets}$$

$$\text{Funded Status (\%)} = \frac{\text{Market Value of Assets}}{\text{Accrued Liability}}$$

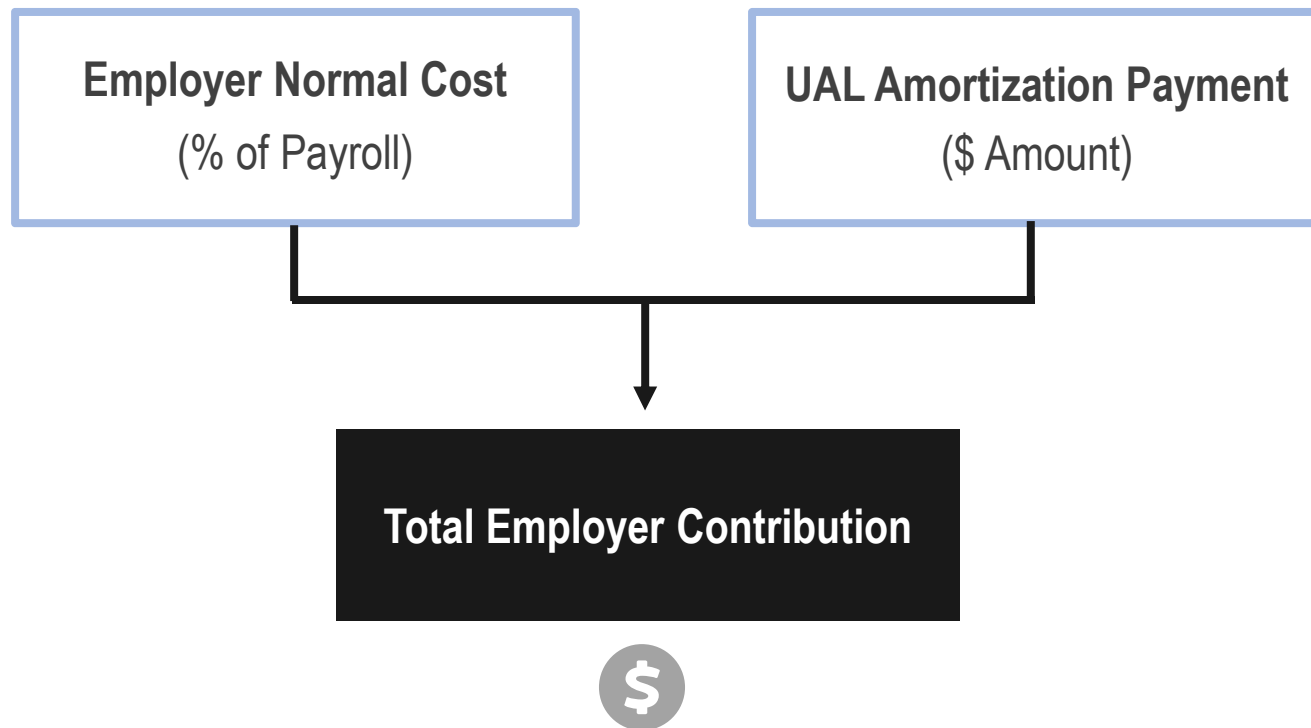


# Unfunded Accrued Liability (UAL) and Funded Status

$$\begin{array}{rcl} \text{UAL (\$)} & = & \text{Accrued Liability} - \text{Market Value of Assets} \\ \$50 \text{ million} & = & \$200 \text{ million} - \$150 \text{ million} \end{array}$$

$$\begin{array}{rclcl} \text{Funded Status (\%)} & = & \frac{\text{Market Value of Assets}}{\text{Accrued Liability}} & = & \frac{\$150 \text{ million}}{\$200 \text{ million}} = 75\% \end{array}$$

# Required Employer Contributions



# Non-Pooled Plans / Pooled Plans

# Pooled Plans vs Non-Pooled Plans

- Plans with less than 100 active members are combined into Risk Pools
  - Miscellaneous Risk Pool
  - Safety Risk Pool
- Aggregate data and experience of all pooled plans
  - Setting normal cost
    - Vary by plan formula and provisions
  - Pool's gains/losses allocated among pooled plans
    - proportionate share based on accrued liability

# Miscellaneous Pool – Section 2

## Risk Pool's Required Employer Contribution

		Fiscal Year 2019-20	Fiscal Year 2020-21
<b>Contribution in Projected Dollars</b>			
a) Risk Pool's Normal Cost	\$	430,072,060	\$ 458,877,681
b) Employee Contribution		<u>179,394,337</u>	<u>184,498,681</u>
c) Risk Pool's Gross Employer Normal Cost [(a) - (b)]	\$	250,677,723	\$ 274,379,000
d) Payment on Risk Pool's Amortization Bases		282,330,885	310,060,000
e) Total Required Employer Contribution* [(c) + (d)]	\$	533,008,608	\$ 584,439,000
* Total may not add up due to rounding			

## Risk Pool's Normal Cost by Benefit Formula

Normal Cost Contribution as Percentage of Projected Payroll for Fiscal Year 2020-21	Benefit Formula					
	2% at 62	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60
1) Total Normal Cost Contribution	14.482%	15.712%	17.392%	19.695%	21.471%	22.516%
2) Expected Employee Contribution	<u>6.750%</u>	<u>6.918%</u>	<u>6.908%</u>	<u>7.953%</u>	<u>7.956%</u>	<u>7.787%</u>
3) Total Employer Normal Cost Base Benefit [(1)-(2)]	7.732%	8.794%	10.484%	11.742%	13.515%	14.729%

Class 1 benefits as provided in Appendix C-1 are in addition to these costs.

## Funded Status of the Risk Pool

		June 30, 2017	June 30, 2018
1. Present Value of Projected Benefits	\$	18,999,994,902	\$ 20,780,297,491
2. Entry Age Normal Accrued Liability	\$	15,944,026,687	\$ 17,461,594,826
3. Market Value of Assets (MVA)	\$	12,162,131,074	\$ 13,162,719,111
4. Unfunded Liability [(2) - (3)]		3,781,895,613	4,298,875,715
5. Funded Ratio [(3) / (2)]		76.3%	75.4%

## Risk Pool's Required Employer Contribution

		Fiscal Year 2019-20	Fiscal Year 2020-21
<b>Contribution in Projected Dollars</b>			
a) Risk Pool's Normal Cost	\$	460,050,248	\$ 502,268,849
b) Employee Contribution		<u>146,793,126</u>	<u>159,155,898</u>
c) Risk Pool's Gross Employer Normal Cost [(a) - (b)]	\$	313,257,122	\$ 343,112,951
d) Payment on Risk Pool's Amortization Bases		420,506,951	467,014,669
e) Total Required Employer Contribution* [(c) + (d)]	\$	733,764,073	\$ 810,127,620
* Total may not add up due to rounding			

## Risk Pool's Normal Cost by Benefit Formula

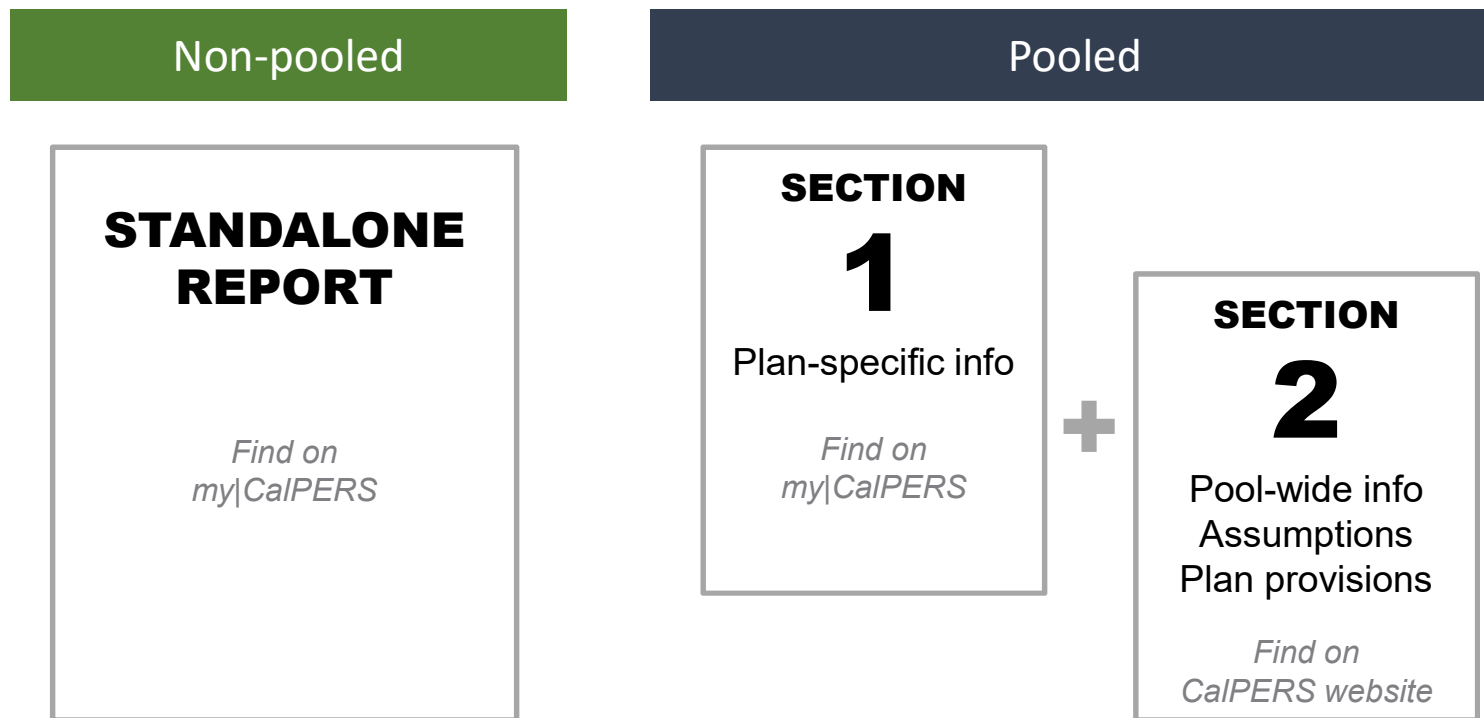
Normal Cost Contribution as Percentage of Projected Payroll for Fiscal Year 2020-21	Benefit Formula						
	2% at 57	2.5% at 57	2.7% at 57	2% at 55	2% at 50	3% at 55	3% at 50
1) Total Normal Cost Contribution	21.114%	24.927%	26.044%	21.745%	27.094%	29.572%	31.427%
2) Expected Employee Contribution	10.000%	12.500%	13.000%	6.935%	8.942%	8.987%	8.990%
3) Total Employer Normal Cost Base Benefit [1 -2]	11.114%	12.427%	13.044%	14.810%	18.152%	20.585%	22.437%

Class 1 benefits as provided in Appendix C-1 are in addition to these costs.

## Funded Status of the Risk Pool

		June 30, 2017	June 30, 2018
1. Present Value of Projected Benefits	\$	24,824,813,602	\$ 27,169,275,771
2. Entry Age Normal Accrued Liability	\$	20,966,498,823	\$ 22,931,327,835
3. Market Value of Assets (MVA)	\$	15,135,860,105	\$ 16,337,351,256
4. Unfunded Liability [(2) - (3)]		5,830,638,718	6,593,976,579
5. Funded Ratio [(3) / (2)]		72.2%	71.2%

# Accessing actuarial valuation reports



# Actuarial Report Highlights



## Common Questions

- What are my required contributions?
- Is my plan in good shape?
- Why did my required contributions change?
- Where are my required contributions headed?
- Are there any alternative UAL amortization schedules?
- Where are my PEPRA members?
- What additional information is available in the reports?

# Non-Pooled & Pooled Plans

What are my required contributions? – Cover page

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability	Employee PEPRA Rate
2020-21	10.362%	\$9,307,552	6.25%
<i>Projected Results</i>			
2021-22	10.4%	\$10,351,000	TBD

- Rates do not reflect any cost sharing information
- FY 2021-22 projection:
  - Doesn't reflect the FY 2018-19 asset loss

# Non-Pooled & Pooled Plans

## What are my required contributions? – Page 4

### Required Contributions

Required Employer Contribution		Fiscal Year
		2020-21
Employer Normal Cost Rate		10.362%
<i>Plus, Either</i>		
1) Monthly Employer Dollar UAL Payment	\$	775,629
<i>Or</i>		
2) Annual UAL Prepayment Option*	\$	8,997,950
Required PEPPRA Member Contribution Rate		6.25%
<i>The total minimum required employer contribution is the <b>sum</b> of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) <b>plus</b> the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars).</i>		
<i>* Only the UAL portion of the employer contribution can be prepaid (<b>which must be received in full no later than July 31</b>). Any prepayment totaling over \$5 million requires a 72-hour notice email to <a href="mailto:FCSD_public_agency_wires@calpers.ca.gov">FCSD_public_agency_wires@calpers.ca.gov</a>. Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change.</i>		
<i>In accordance with Sections 20537 and 20572 of the Public Employees' Retirement Law, if a contracting agency fails to remit the required contributions when due, interest and penalties may apply.</i>		
<i>For additional detail regarding the determination of the required contribution for PEPPRA members, see Appendix D. Required member contributions for Classic members can be found in Appendix B.</i>		

# Non-Pooled & Pooled Plans

## What are my required contributions?

- Employer Contribution comprised of 2 components
  1. Normal Cost Rate (% of Payroll)
  2. UAL Dollar Payment
  
- Annual UAL Prepayment Option
  - Only for UAL Dollar Payment component
  - Discount of a half year of interest
    - Avoid overpaying
  - Normal Cost Rate must be paid regularly throughout the year

# UAL Invoice July 1, 2019

Invoice Number: 100000010700007  
 Invoice Date: July 01, 2019  
 Payment Due Date: July 31, 2019

Description	Amount				
<p>Annual Unfunded Accrued Liability as of the June 30, 2017 Actuarial Valuation for Rate Plan Identifier 3.</p> <p>The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) plus the Employer Unfunded Accrued Liability Contribution Amount.</p> <p>Your agency's monthly amount due toward the Unfunded Accrued Liability is:</p> <table border="0"> <tr> <td>Amount</td><td>Due Date</td></tr> <tr> <td>\$698,720.00</td><td>July 31, 2019</td></tr> </table> <p>If you would like to prepay the entire Annual Payment toward your Plan's Unfunded Accrued Liability, you can submit the Annual Lump Sum Prepayment amount of \$8,096,284.00 to the invoice number above by July 31, 2019 instead of the monthly amount listed.</p> <p>Please refer to the June 30, 2017 Actuarial Valuation report for the details of this calculation. Reports are available at CalPERS On-Line or by visiting MyCalPERS.CA.GOV.</p> <p>Unfunded Accrued Liability contributions are to be paid in full by the payment due date each month. Payments that are not received in full on or before this date will be assessed interest on the total outstanding balance due (Public Employees' Retirement Law § 20572 (b)). Please note that this monthly statement is a demand for payment in accordance with Public Employees' Retirement Law § 20572 (a).</p> <p><b>For questions concerning your invoice, please call our CalPERS Customer Contact Center at 888 CalPERS (or 888-225-7377) and ask to be referred to the Financial Office.</b></p>	Amount	Due Date	\$698,720.00	July 31, 2019	
Amount	Due Date				
\$698,720.00	July 31, 2019				
<b>Total Due</b>	<b>\$698,720.00</b>				

# Non-Pooled & Pooled Plans

## Is my plan in good shape? – Page 5

### Plan's Funded Status

	June 30, 2017	June 30, 2018
1. Present Value of Projected Benefits	\$ 366,474,871	\$ 393,768,301
2. Entry Age Normal Accrued Liability	319,145,473	344,994,524
3. Market Value of Assets (MVA)	\$ 215,269,391	\$ 231,352,777
4. Unfunded Accrued Liability (UAL) [(2) – (3)]	\$ 103,876,082	\$ 113,641,747
5. Funded Ratio [(3) / (2)]	67.5%	67.1%

- Unfunded Liability = UAL = Unfunded Accrued Liability
- Funded Ratio is one indicator of the plan's health
- Information as of June 30, 2018



# Non-Pooled & Pooled Plans

## Why did my required contributions change? – Page 14

### (Gain)/Loss Analysis 6/30/17 – 6/30/18

#### 1. Total (Gain)/Loss for the Year

a) Unfunded Accrued Liability (UAL) as of 6/30/17	\$	103,876,082
b) Expected Payment on the UAL during 2017-18		5,988,830
c) Interest through 6/30/18 $[(1a) - ((1.0725)^{1/2} - 1) \times (1b)]$		7,317,719
d) Expected UAL before all other changes $[(1a) - (1b) + (1c)]$		105,204,971
e) Change due to plan changes		0
f) Change due to assumption change		9,174,400
g) Change due to method change		2,590,327
h) Expected UAL after all other changes $[(1d) + (1e) + (1f) + (1g)]$		116,969,698
i) Actual UAL as of 6/30/18		113,641,747
j) Total (Gain)/Loss for 2017-18 $[(1i) - (1h)]$	\$	(3,327,951)

#### 2. Contribution (Gain)/Loss for the Year

g) Contribution (Gain)/Loss $[(2e) - (2f)]$	\$	345,954
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#### 3. Asset (Gain)/Loss for the Year

j) Asset (Gain)/Loss $[(3h) - (3i)]$	\$	(2,587,464)
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#### 4. Liability (Gain)/Loss for the Year

a) Total (Gain)/Loss (1j)	\$	(3,327,951)
b) Contribution (Gain)/Loss (2g)		345,954
c) Asset (Gain)/Loss (3j)		(2,587,464)
d) Liability (Gain)/Loss $[(4a) - (4b) - (4c)]$	\$	(1,086,441)

- Expected liability and asset values compared with actual values
- Explains changes to the UAL amount

# Pooled Plans

Why did my required contributions change?

## Gain/Loss Analysis

- Gain/Loss Analysis performed for entire pool
- Share of Gain/Loss allocated to each plan in the pool
- Appears in Section 2 Reports
  - Available on CalPERS website [www.calpers.ca.gov](http://www.calpers.ca.gov) Forms & Publications



## Section 2

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**Actuarial Valuation  
as of June 30, 2017  
for CalPERS**

## Miscellaneous Risk Pool

**Required Contributions  
for Fiscal Year  
July 1, 2019 – June 30, 2020**



# Non-Pooled & Pooled Plans

## Where are my required contributions headed? – Pg 5

	Required Contribution	Projected Future Employer Contributions (Assumes 7.00% Return for Fiscal Year 2018-19)				
Fiscal Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Normal Cost %	10.362%	10.4%	10.4%	10.4%	10.4%	10.4%
UAL Payment	9,307,552	10,351,000	11,229,000	11,785,000	12,344,000	11,654,000
<i>Total as a % of Payroll*</i>	<i>34.8%</i>	<i>36.8%</i>	<i>38.3%</i>	<i>38.9%</i>	<i>39.5%</i>	<i>37.1%</i>
<i>Projected Payroll</i>	<i>38,057,134</i>	<i>39,103,705</i>	<i>40,179,057</i>	<i>41,283,981</i>	<i>42,419,290</i>	<i>43,585,821</i>

\*Illustrative only and based on the projected payroll shown.

- Assumes expected return for FY2018-19 and thereafter
- No demographic gains or losses after 6/30/18 included
- Total as % of Payroll for illustration purposes only

# Discount Rate Change

- On December 21, 2016 the CalPERS Board adopted a 7% discount rate with a 3-year phase-in
  - 7.375% to be used 6/30/2016
  - 7.25% to be used 6/30/2017
  - **7.00% to be used 6/30/2018**
- Affects all non-pooled and pooled actuarial valuations
- Lower discount rates result in higher accrued liabilities and normal costs
- Full impact of 7.00% discount rate takes 7 years due to phase-in procedures

# Other Changes

- New Actuarial Valuation System
  - Methodology improvements
    - Small increase in liabilities
    - Amortized over 20 years, with phase-in ramp
- Effective for June 30, 2018 valuation
  - Inflation assumption 2.50%
    - 2.50% for 6/30/18 valuation
  - Payroll growth 2.75%
    - 2.75% for 6/30/18 valuation
  - Demographic assumptions
    - Updated assumptions used in June 30, 2017 valuation
      - Mortality rates
      - Early Retirement rates
- Effective for June 30, 2019 valuation
  - New Amortization Policy
    - First affects FY 2021-22 rates for public agencies
    - Prospective only (existing bases not affected)

# Non-Pooled & Pooled Plans

Are there any alternative UAL Amortization Schedules?

## Amortization Schedule and Alternatives

- Schedule of Required UAL Amortization Payments
- Two sample Fresh Start Alternatives
  - Pay off UAL more rapidly
  - Other alternatives available

# Non-Pooled & Pooled Plans

## Non-Pooled p16 / Pooled p9

### Schedule of Amortization Bases

Reason for Base	Date Established	Ramp Up/Down 2020-21	Escalation Rate	Amortization Period	Balance 6/30/18	Expected Payment 2018-19	Balance 6/30/19	Expected Payment 2019-20	Balance 6/30/20	Scheduled Payment for 2020-21
ASSUMPTION CHANGE	06/30/03	No Ramp	2.750%	5	\$5,231,668	\$875,464	\$4,692,298	\$898,804	\$4,091,029	\$916,316
ASSETS CHANGE	06/30/03	No Ramp	2.750%	5	\$(95,801)	\$(16,031)	\$(85,924)	\$(16,459)	\$(74,914)	\$(16,779)
METHOD CHANGE	06/30/04	No Ramp	2.750%	6	\$(393,725)	\$(58,797)	\$(360,466)	\$(60,370)	\$(323,251)	\$(61,524)
BENEFIT CHANGE	06/30/04	No Ramp	2.750%	6	\$48,286	\$7,211	\$44,207	\$7,404	\$39,642	\$7,545
BENEFIT CHANGE	06/30/05	No Ramp	2.750%	6	\$10,232,055	\$1,528,018	\$9,367,705	\$1,568,880	\$8,400,582	\$1,598,877
ASSUMPTION CHANGE	06/30/09	No Ramp	2.750%	11	\$10,472,427	\$1,059,828	\$10,109,202	\$1,088,440	\$9,690,955	\$1,106,915
SPECIAL (GAIN)/LOSS	06/30/09	No Ramp	2.750%	21	\$2,060,040	\$141,397	\$2,057,981	\$145,255	\$2,051,786	\$147,104
SPECIAL (GAIN)/LOSS	06/30/10	No Ramp	2.750%	22	\$1,973,395	\$132,093	\$1,974,894	\$135,699	\$1,972,769	\$137,373
ASSUMPTION CHANGE	06/30/11	No Ramp	2.750%	13	\$4,835,079	\$440,315	\$4,718,069	\$452,233	\$4,580,540	\$459,510
SPECIAL (GAIN)/LOSS	06/30/11	No Ramp	2.750%	23	\$(2,962,217)	\$(193,676)	\$(2,969,232)	\$(198,969)	\$(2,971,263)	\$(201,346)
PAYMENT (GAIN)/LOSS	06/30/12	No Ramp	2.750%	24	\$380,312	\$24,293	\$381,805	\$24,991	\$382,681	\$25,280
(GAIN)/LOSS	06/30/12	No Ramp	2.750%	24	\$8,987,687	\$574,830	\$9,022,216	\$590,550	\$9,042,901	\$597,382
(GAIN)/LOSS	06/30/13	100% →	2.750%	25	\$34,757,761	\$1,842,978	\$35,284,413	\$2,366,771	\$35,306,115	\$2,395,060
ASSUMPTION CHANGE	06/30/14	100% →	2.750%	16	\$17,419,681	\$958,333	\$17,647,752	\$1,312,539	\$17,525,393	\$1,666,476
(GAIN)/LOSS	06/30/14	100% →	2.750%	26	\$(22,215,361)	\$(885,582)	\$(22,854,383)	\$(1,213,159)	\$(23,199,289)	\$(1,534,097)
(GAIN)/LOSS	06/30/15	80% ↗	2.750%	27	\$14,527,735	\$392,012	\$15,139,176	\$604,181	\$15,573,949	\$814,581
ASSUMPTION CHANGE	06/30/16	60% ↗	2.750%	18	\$5,492,929	\$103,653	\$5,770,214	\$212,983	\$5,953,818	\$324,155
(GAIN)/LOSS	06/30/16	60% ↗	2.750%	28	\$15,737,855	\$218,389	\$16,613,602	\$448,813	\$17,312,298	\$680,350
ASSUMPTION CHANGE	06/30/17	40% ↗	2.750%	19	\$5,313,894	\$(345,534)	\$6,043,290	\$114,148	\$6,348,244	\$231,491
(GAIN)/LOSS	06/30/17	40% ↗	2.750%	29	\$(6,598,729)	\$0	\$(7,060,640)	\$(98,095)	\$(7,453,415)	\$(198,124)
METHOD CHANGE	06/30/18	20% ↗	2.750%	20	\$2,590,327	\$(29,559)	\$2,802,226	\$(30,372)	\$3,029,799	\$56,489
ASSUMPTION CHANGE	06/30/18	20% ↗	2.750%	20	\$9,174,400	\$(264,947)	\$10,090,671	\$(272,234)	\$11,078,619	\$206,557
(GAIN)/LOSS	06/30/18	20% ↗	2.750%	30	\$(3,327,951)	\$0	\$(3,560,908)	\$0	\$(3,810,172)	\$(52,039)
<b>TOTAL</b>					<b>\$113,641,747</b>	<b>\$6,504,688</b>	<b>\$114,868,168</b>	<b>\$8,082,033</b>	<b>\$114,548,816</b>	<b>\$9,307,552</b>

# Amortization Schedule and Alternatives

			<u>Alternate Schedules</u>			
<u>Current Amortization Schedule</u>			<u>15 Year Amortization</u>		<u>10 Year Amortization</u>	
Date	Balance	Payment	Balance	Payment	Balance	Payment
6/30/2020	114,548,816	9,307,552	114,548,816	10,331,583	114,548,816	14,123,831
6/30/2021	112,939,424	10,350,751	111,880,160	10,615,702	107,957,429	14,512,236
6/30/2022	110,138,282	11,229,284	108,730,804	10,907,634	100,502,875	14,911,323
6/30/2023	106,232,302	11,785,087	105,059,016	11,207,594	92,113,684	15,321,384
6/30/2024	101,477,972	12,344,372	100,819,923	11,515,802	82,713,079	15,742,722
6/30/2025	95,812,311	11,653,627	95,965,279	11,832,487	72,218,596	16,175,647
6/30/2026	90,464,568	10,156,114	90,443,228	12,157,880	60,541,678	16,620,477
6/30/2027	86,291,522	10,435,407	84,198,045	12,492,222	47,587,240	17,077,541
6/30/2028	81,537,458	10,722,383	77,169,853	12,835,758	33,253,201	17,547,173
6/30/2029	76,153,761	11,017,246	69,294,331	13,188,742	17,429,988	18,029,720
6/30/2030	70,088,196	11,320,219	60,502,394	13,551,432		
6/30/2031	63,284,643	10,139,714	50,719,852	13,924,096		
6/30/2032	57,225,969	9,957,014	39,867,044	14,307,009		
6/30/2033	50,932,172	9,102,777	27,858,452	14,700,452		
6/30/2034	45,081,436	8,707,862	14,602,278	15,104,714		
6/30/2035	39,229,653	8,110,458				
6/30/2036	33,586,206	7,067,605				
6/30/2037	28,626,452	6,489,855				
6/30/2038	23,917,147	5,874,979				
6/30/2039	19,514,221	5,402,300				
6/30/2040	15,292,034	5,098,308				
6/30/2041	11,088,745	4,131,703				
6/30/2042	7,591,091	3,683,044				
6/30/2043	4,312,696	3,458,673				
6/30/2044	1,036,906	1,072,584				
<b>Total</b>		<b>208,618,918</b>		<b>188,673,107</b>		<b>160,062,054</b>
<b>Interest Paid</b>		<b>94,070,102</b>		<b>74,124,291</b>		<b>45,513,238</b>
<b>Estimated Savings</b>				<b>19,945,811</b>		<b>48,556,864</b>

# Managing Employer Contributions

## How much will I save with my ADP?

- Excel tool developed to estimate savings for Additional Discretionary Payments (ADP) and Fresh Starts
- Instructional Video
  - <https://youtu.be/2eas7r6VYTw>
- Contact your actuary if you are interested in this tool

# Non-Pooled Plans

## Where are my PEPRA members?

- Non pooled plans include PEPRA members
- Non pooled plans require the same **employer** rate for all members in the plan
- Non pooled plans require differing **employee** rates
  - Classic member rate is set by statute
  - PEPRA member rate can be found in Appendix D

		Basis for Current Rate		Rates Effective July 1, 2020			
Rate Plan Identifier	Benefit Group Name	Total Normal Cost	Member Rate	Total Normal Cost	Change	Change Needed	Member Rate
99999	Miscellaneous PEPRA Level	12.591%	6.250%	12.995%	0.404%	No	6.250%



# Non-Pooled Plans

## Normal Cost for Each Group/Tier

- Appendix D

<b>Rate Plan Identifier</b>	<b>Benefit Group Name</b>	<b>Total Normal Cost FY 2020-21</b>	<b>Number of Actives</b>	<b>Payroll on 6/30/2018</b>
99991	Miscellaneous First Level	19.932%	243	21,864,601
99999	Miscellaneous PEPRA Level	12.995%	114	8,476,637
99992	Miscellaneous Second Level	16.780%	39	4,753,515

## Pooled Plans

### Where are my PEPRA members?

- Separate report for PEPRA members
- Separate contributions for pooled PEPRA members

# Non-Pooled & Pooled Plans

Additional information – NP p23 / P p15

## Discount Rate Sensitivity

Sensitivity Analysis				
As of June 30, 2018	Plan's Normal Cost	Accrued Liability	Unfunded Accrued Liability	Funded Status
7.0% (current discount rate)	17.795%	\$344,994,524	\$113,641,747	67.1%
6.0%	22.515%	\$391,244,464	\$159,891,687	59.1%
8.0%	14.229%	\$306,773,438	\$75,420,661	75.4%

# Non-Pooled & Pooled Plans

Additional information – NP p23 / P p15

## **Mortality Rate Sensitivity**

<b>As of June 30, 2018</b>	<b>Current Mortality</b>	<b>10% Lower Mortality Rates</b>	<b>10% Higher Mortality Rates</b>
a) Accrued Liability	\$344,994,524	\$351,987,471	\$338,548,851
b) Market Value of Assets	\$231,352,777	\$231,352,777	\$231,352,777
c) Unfunded Liability (Surplus) [(a)-(b)]	\$113,641,747	\$120,634,694	\$107,196,074
d) Funded Status	67.1%	65.7%	68.3%

# Non-Pooled & Pooled Plans

Additional information – NP p23 / P p15

## **Inflation Rate Sensitivity**

<b>As of June 30, 2018</b>	<b>Current Inflation Rate</b>	<b>-1% Inflation Rate</b>	<b>+1% Inflation Rate</b>
a) Accrued Liability	\$344,994,524	\$321,559,410	\$362,482,795
b) Market Value of Assets	\$231,352,777	\$231,352,777	\$231,352,777
c) Unfunded Liability (Surplus) [(a)-(b)]	\$113,641,747	\$90,206,633	\$131,130,018
d) Funded Status	67.1%	71.9%	63.8%

# Other Information



$q_x$

## **Actuarial Assumptions**

- **Appendix A**



## **Benefit Provisions**

- non-pooled: **Appendix B**
- pooled: **page 18**



## **Participant Data**

- non-pooled: **Appendix C**
- pooled: **page 18**



## **PEPRA Member Rate**

- non-pooled: **Appendix D-2**

# Unanswered Questions?

- Contact the actuary assigned to the plan
  - Call the Customer Contact Center at 888 CalPERS (or 888-225-7377)
- Actuary is named on page 1 of the report
- Page 1 includes important certification

report page 1

## Actuarial Certification

To the best of our knowledge, this report is complete and accurate, and we disclose, fully and fairly, the funded condition of the Miscellaneous Retirement Plan. The valuation is based on the member and financial data as of July 1, 2010, and the benefits under this plan with CalPERS as of July 1, 2010. In our opinion, the valuation has been performed in accordance with standards of practice prescribed by the Actuarial Standards of Practice, and the assumptions and methods are internally consistent and reasonable. This report is prepared for the CalPERS Board of Administration according to provisions of the California Retirement Law.

The undersigned is an actuary for CalPERS, a member of the Society of Actuaries and meets the Qualification Standards of the Society of Actuaries.

*John Doe*

JOHN DOE, FSA, EA, MAAA  
Senior Pension Actuary, CalPERS

# Discussion / Q&A