

Pension Management Plan (Pension Obligation Bonds)

October 19, 2021



Overview











Benefits earned <u>this year</u> by employees

% of Payroll

\$6.7 Million

Benefits previously earned by employees + retirees

Fixed \$ Amount \$20 Million





Aarket Value

CalPERS Actuarial Report June 30, 2020



Amortization Bases for FY 22-23

		N	IISCELLANEOUS P	LAN		SAFETY PLAN				
	Year	Term	FY21-22	FY22-23		Year	Term	FY21-22	FY22-23	
1	2003	3	3,311,022	2,602,545	1	2008	18	(7,730,250)	(7,659,591)	
2	2004	4	(337,037)	(282,542)	2	2009	19	6,616,540	6,573,399	
3	2006	6	568,067	510,094	3	2010	20	1,292,627	1,287,247	
4	2009	9	3,399,633	3,204,010	4	2011	21	1,546,424	1,543,283	
5	2009	19	4,084,212	4,057,582	5	2012	22	2,440,208	2,439,973	
6	2009	9	120,475	113,542	6	2012	22	76,383,053	76,375,701	
7	2010	20	(2,830,122)	(2,818,342)	7	2013	23	44,577,316	44,483,117	
8	2011	11	4,399,142	4,221,638	8	2014	14	14,574,146	9,236,828	
9	2011	21	(2,561,182)	(2,555,981)	9	2014	24	(21,630,676)	(21,626,974)	
10	2012	22	1,864,336	1,864,157	10	2015	25	20,918,924	20,952,349	
11	2012	22	9,815,468	9,814,524	11	2016	16	8,124,206	8,074,530	
12	2013	23	33,280,610	33,210,282	12	2016	26	21,456,777	21,797,859	
13	2014	14	12,785,316	12,350,411	13	2017	17	9,324,623	9,452,200	
14	2014	24	(23,260,388)	(23,256,407)	14	2017	27	(9,275,019)	(9,547,233)	
15	2015	25	17,416,967	17,444,796	15	2018	18	4,074,841	4,206,376	
16	2016	16	5,043,546	5,012,707	16	2018	18	16,297,624	16,823,709	
17	2016	26	17,763,922	18,046,301	17	2018	28	2,626,697	2,738,341	
18	2017	17	4,855,531	4,921,963	18	2019	19	3,547,588	3,461,052	
19	2017	27	(10,611,338)	(10,922,772)	19	2019	19	1,602,989	1,678,944	
20	2018	18	2,358,931	2,435,077	20	2020	20		3,109,564	
21	2018	18	9,514,177	9,821,294	21	2020	20		8,053,429	
22	2018	28	(4,518,403)	(4,710,452)				\$ 196,768,638	\$ 203,454,106	
23	2019	19	(1,668,542)	(1,627,841)				ADP	\$ (5,000,000)	
24	2019	19	1,001,202	1,048,643				Demographic	3,989,501	
25	2020	20		879,937				Investment - 4.70%	14,082,492	
26	2020	20		6,029,063			\$-	\$ 282,564,183	\$ 294,868,334	
			\$ 85,795,545	\$ 91,414,228						



UAL

Miscellaneous Plan – "Layer Cake" Amortization Bases: CalPERS of loans @ 7.0%



Annual Payments UAL Liability Total UAL Payments = \$557 Million



Increase in Annual UAL Payments Cumulative Increase UAL Payments = \$75 Million







Funding Strategies







25-Year POB

25-Year POBs Hybrid Debt Service





25-Year POB Cash Flow

S		- POB Principal	Coupon	Interest	POB Debt Service	CalPERS UAL Payments	Budgetary Savings	Avoided UAL Costs	Savings	NPV Savings
	1 2023	5,260,000	1.06%	4,427,664	9,687,664	11,061,556	1,373,891	-	1,373,891	1,329,577
	2 2024	10,570,000	1.16%	8,799,573	19,369,573	23,660,836	2,753,539	1,537,725	4,291,264	4,018,899
	3 2025	10,695,000	1.50%	8,676,961	19,371,961	25,250,488	2,751,151	3,127,377	5,878,528	5,327,844
	4 2026	10,855,000	1.87%	8,516,536	19,371,536	25,250,162	2,751,576	3,127,050	5,878,626	5,156,080
	5 2027	11,060,000	2.07%	8,313,547	19,373,547	26,282,472	2,749,564	4,159,360	6,908,925	5,864,288
	6 202 8	11,285,000	2.34%	8,084,605	19,369,605	26,940,348	2,753,506	4,817,236	7,570,743	6,218,767
	7 2029	11,550,000	2.59%	7,820,536	19,370,536	27,502,068	2,752,575	5,378,956	8,131,532	6,463,966
	8 2030	11,850,000	2.67%	7,521,391	19,371,391	28,193,483	2,751,720	6,070,371	8,822,092	6,786,709
	9 2031	12,165,000	2.79%	7,204,996	19,369,996	28,903,911	2,753,115	6,780,800	9,533,915	7,097,738
1	0 2032	12,505,000	2.89%	6,865,593	19,370,593	29,064,583	2,752,519	6,941,472	9,693,991	6,984,129
1	1 2033	12,865,000	2.99%	6,504,198	19,369,198	29,193,256	2,753,913	7,070,145	9,824,058	6,849,542
1	2 2034	13,250,000	3.14%	6,119,535	19,369,535	28,658,937	2,753,577	6,535,825	9,289,402	6,267,860
1	3 2035	13,670,000	3.24%	5,703,485	19,373,485	28,398,022	2,749,627	6,274,911	9,024,538	5,892,743
1	4 2036	14,110,000	3.34%	5,260,577	19,370,577	27,726,631	2,752,535	5,603,519	8,356,054	5,280,253
1	5 2037	14,580,000	3.44%	4,789,303	19,369,303	26,115,442	2,753,809	3,992,331	6,746,140	4,125,435
1	6 2038	15,085,000	3.52%	4,287,751	19,372,751	25,090,159	2,750,361	2,967,048	5,717,408	3,383,566
1	7 2039	15,615,000	3.52%	3,756,759	19,371,759	23,990,520	2,751,353	1,867,408	4,618,761	2,645,221
1	8 2040	16,165,000	3.52%	3,207,111	19,372,111	23,207,941	2,751,001	1,084,830	3,835,831	2,125,968
1	9 2041	16,735,000	3.52%	2,638,103	19,373,103	23,787,132	2,750,009	1,664,021	4,414,030	2,367,519
2	0 2042	17,325,000	3.52%	2,049,031	19,374,031	20,690,721	1,316,690	-	1,316,690	683,444
2	1 2043	17,215,000	3.67%	1,439,191	18,654,191	18,656,336	2,145	-	2,145	1,078
2	2 2044	16,700,000	3.67%	807,400	17,507,400	17,511,321	3,921	-	3,921	1,906
2	3 2045	2,720,000	3.67%	194,510	2,914,510	2,917,462	2,952	-	2,952	1,389
2	4 2046	1,420,000	3.67%	94,686	1,514,686	1,515,149	463	-	463	211
2	5 2047	1,160,000	3.67%	42,572	1,202,572	1,207,726	5,154	-	5,154	2,271
2	6 <u>2048</u>	-			-	253,021		253,021	253,021	107,880
		\$ 296,410,000		\$ 123,125,607	\$ 419,535,607	\$ 551,029,683	\$ 52,240,670	\$ 79,253,406	\$ 131,494,076	\$94,984,281



32.2%

GFOA Advisory vs. POBs 2.0

POB

s 2.0

In-depth StudyPension Reform

Market Evolved

1. Complex instruments: swaps, CABs, derivatives, GICs

2. Increase debt burden / reduce flexibility: "soft to hard liability"

3. Not refundable "make-whole" call

4. Extend repayment or finance Normal Costs

5. Stand alone POBs not viewed as credit positive

6. Reinvestment of POB Proceeds: Market & Timing Risk 1. Plain Vanilla Fixed Rate Bonds

2. GASB 68 Liability - Balance Sheet

3. 10-year Call

4. Finance UAL Only (same term)

5. Credit Neutral / Plan & Study +

6. Dollar Cost Averaging / Multiple Strategies / Hedge



Evaluating Outcome of POBs



- Standard Refinancing: 7.0% vs 3.50%
- Fixed Dollar UAL Payments
- Existing Liability on Balance Sheet
- Actual Budgetary Savings
- Proceeds go to Federated Plan at time of Issuance



 Leverage Investment Position (50%):

2. Plan % Return

- increased benefit + return
- Increased liability return
- Returns during initial years most critical
- Market Timing Risk applies to all investments







Develop Comprehensive Plan

2017 City Adopted Guidelines for Pension Rate Stabilization Program (PRSP) and OPEB 115 Trust

- Minimum Annual Contribution: \$250,000 Pension /\$250,000 OPEB
- 50% of excess Budget Reserves over 25% Fund Balance
- Investment Parameters for OPEB (115) Trust w PARS

Expand current Pension Funding Policies

- Financial metrics/targets:
 - Level of reserve and funding target levels
- How to use excess (1-time monies)
- Allocation of Additional Resources (ADPs)
- Potential Funding Solutions
 - Funding objectives
 - Minimum Savings Levels
 - Structuring guidelines



Appendix



POB Market





California POB Issues

CA Pension	Obl	igation	Bonds:	2017-2021
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Agency	Date	Par Value	Agency	Date	Par Value	Agency	Date	Par Value
1 Corona	9/27/2021	276,710,000	29 Downey	2/9/2021	113,585,000	57 Montebello	6/10/2020	153,425,000
2 San Anselmo	9/15/2021	9,285,000	30 Monterey Park	2/2/2021	106,335,000	58 Fort Ord	6/10/2020	30,405,000
3 County of Santa Cruz	9/2/2021	124,195,000	31 Bonita Sunnyside FD	2/1/2021	5,127,000	59 Grass Valley	6/1/2020	18,311,000
4 Santa Ana	8/25/2021	425,830,000	32 El Cajon	1/13/2021	147,210,000	60 Ontario	5/21/2020	236,585,000
5 Commerce	8/24/2021	27,875,000	33 Lake Valley FD	1/1/2021	10,952,522	61 Larkspur	5/14/2020	18,295,000
6 Buena Park	8/17/2021	96,385,000	34 Ukiah	12/17/2020	49,875,000	62 County of Riverside	5/6/2020	719,995,000
7 Sanger	8/10/2021	19,450,000	35 Coachella	12/8/2020	17,590,000	63 Carpinteria Valley WD	4/7/2020	23,145,000
8 San Fernando	8/5/2021	36,525,000	36 Penn Valley FD	12/1/2020	1,037,884	64 Richardson Bay SD	2/28/2020	2,383,000
9 Whittier	8/3/2021	133,895,000	37 Gardena	11/24/2020	101,490,000	65 Pasadena	2/26/2020	131,805,000
10 Covina	7/28/2021	62,795,000	38 Placentia	11/12/2020	52,950,000	66 Orange USD	12/19/2019	33,595,000
11 Redondo Beach	7/15/2021	226,180,000	39 Arcadia	10/27/2020	90,000,000	67 Monterey Co Reg FD	12/5/2019	20,250,000
12 Red Bluff	7/15/2021	18,540,000	40 Novato Sanitary Dist	10/13/2020	6,467,000	68 Pacifica	10/23/2019	9,685,000
13 Livermore	7/29/2021	12,875,000	41 Torrance	10/12/2020	349,515,000	69 Hawthorne	10/8/2019	121,865,000
14 Placer Hills FD	6/24/2021	1,000,000	42 Belvedere	10/1/2020	2,323,000	70 Marysville	9/24/2019	15,000,000
15 Turlock Mosquito Abate	6/22/2021	1,100,000	43 Borrego Springs Fire	10/1/2020	1,874,111	71 Glendora	9/5/2019	64,420,000
16 El Segundo	6/9/2021	144,135,000	44 Azusa	9/30/2020	70,075,000	72 Chowchilla	3/21/2019	10,500,000
17 Montecito FD	6/7/2021	8,263,240	45 Town of Fairfax	9/16/2020	9,402,000	73 Baldwin Park	3/6/2019	54,085,000
18 Auburn	6/3/2021	17,165,000	46 Pomona	8/20/2020	219,890,000	74 Calaveras County WD	2/1/2019	5,665,000
19 Oceano CSD	6/1/2021	906,000	47 West Covina	7/30/2020	204,095,000	75 Ridgecrest	12/18/2018	19,955,000
20 Willows	5/27/2021	8,510,000	48 San Bernardino	7/23/2020	5,945,000	76 La Verne	8/15/2018	54,265,000
21 Cental Marin Police Auth	5/11/2021	26,505,000	49 San Bernardino	7/23/2020	13,905,000	77 County of Tulare	6/25/2018	251,220,000
22 Corte Madera	4/29/2021	18,955,000	50 El Monte	6/30/2020	21,000,000	78 Monrovia	12/13/2017	111,545,000
23 Manhattan Beach	4/28/2021	91,275,000	51 Carson	6/18/2020	108,020,000	79 Inglewood	11/14/2017	52,795,000
24 San Benito County WD	4/1/2021	3,016,000	52 El Monte	6/18/2020	118,725,000	80 Belvedere	8/25/2017	2,655,000
25 Palos Verdes Library Dist	4/1/2021	5,924,000	53 North Co FD	6/18/2020	20,305,000	81 Brawley	7/20/2017	16,310,000
26 Huntington Beach	3/17/2021	363,645,000	54 Kensington Police	6/18/2020	4,544,000	82 Pomona	6/29/2017	50,475,000
27 Orange	3/3/2021	285,770,000	55 Inglewood	6/17/2020	101,620,000	83 Riverside	5/31/2017	31,960,000
28 Chula Vista	2/11/20/21	350,025,000	56 Riverside	6/11/2020	432,165,000	84 Town of Fairfax	1/1/2017	3,860,000



84 POBs totaling \$7.4 Billion in par

Funding Risk Mitigation Policy

- Funding Risk Mitigation Policy seeks to reduce CalPERS Funding risk over time.
 - Integrated view of pension assets and liabilities
 - Actively managing funding risk through an ALM framework
- When CalPERS significantly outperforms its target, triggers adjustments to
 - Discount Rate
 - Expected Investment Return
 - Strategic Asset Allocation

Determined by the Asset Liability Management Committee:

• CFO, Investment, Finance, Actuarial, Legal, and Stakeholder Relations

Returns Exceed Discount Rate	Reduce Discount Rate	Reduction Expected Investment Return
2.00%	0.05%	0.05%
7.00%	0.10%	0.10%
10.00%	0.15%	0.15%
13.00%	0.20%	0.20%
17.00%	0.25%	0.25%

ALM Meeting: November 15th Investment Committee & November 17th Full Board

* Change will be reflected in Event Year – June 20, 2021 Actuarial Report

Projected Impact FY 21- 6.80%



Normal Costs~ \$683,000 per year Portion to be paid by employees



	Pa	FY20 UAL ayments \$295 Million	FY21 Return 21.3%	Di	scount Rate 6.80%	Net Impact	Pr D	ojected FY21 UAL 6.80% viscount Rate
2023		22,123,111	-		-	-		22,123,111
2024		23,660,836	(1,706,173)		1,961,475	255,302		23,916,139
2025		25,250,488	(3,412,345)		1,961,475	(1,450,870)		23,799,618
2026		25,250,162	(5,118,518)		1,961,475	(3,157,043)		22,093,119
2027		26,282,472	(6,824,690)		1,961,475	(4,863,216)		21,419,256
2028		26,940,348	(8,530,863)		1,961,475	(6,569,388)		20,370,960
2029		27,502,068	(8,530,863)		1,961,475	(6,569,388)		20,932,680
2030		28,193,483	(8,530,863)		1,961,475	(6,569,388)		21,624,094
2031		28,903,911	(8,530,863)		1,961,475	(6,569,388)		22,334,523
2032		29,064,583	(8,530,863)		1,961,475	(6,569,388)		22,495,195
2033		29,193,256	(8,530,863)		1,961,475	(6,569,388)		22,623,868
2034		28,658,937	(8,530,863)		1,961,475	(6,569,388)		22,089,549
2035		28,398,022	(8,530,863)		1,961,475	(6,569,388)		21,828,634
2036		27,726,631	(8,530,863)		1,961,475	(6,569,388)		21,157,243
2037		26,115,442	(8,530,863)		1,961,475	(6,569,388)		19,546,054
2038		25,090,159	(8,530,863)		1,961,475	(6,569,388)		18,520,771
2039		23,990,520	(8,530,863)		1,961,475	(6,569,388)		17,421,132
2040		23,207,941	(8,530,863)		1,961,475	(6,569,388)		16,638,553
2041		23,787,132	(8,530,863)		1,961,475	(6,569,388)		17,217,744
2042		20,690,721	(8,530,863)		1,961,475	(6,569,388)		14,121,333
2043		18,656,336	(8,530,863)		1,961,475	(6,569,388)		12,086,948
2044		17,511,321	-		-	-		17,511,321
2045		2,917,462	-		-	-		2,917,462
2046		1,515,149	-		-	-		1,515,149
2047		1,207,726	-		-	-		1,207,726
2048		253,021	-		-	-		253,021
	\$	562,091,239	\$ (153,555,536)	\$	39,229,498	\$ (114,326,038)	\$	447,765,201
	\$	294,868,335	\$ (74,322,523)	\$	20,423,870	\$ (53,898,653)	\$	240,969,681



Projected Impact FY 21- 6.75% + Price Inflator 2.25%





			FY20 UAL	EV21 Poture	Discount Pata:	Price Inflator		Projected FY21
6 759/			Payments \$295	21 2%	7 00% to 6 75%	from 2.50% to	Net Impact	UAL 6.50%
0.75%			Million	21.3%	7.00% 10 0.75%	2.25%		Discount Rate
Discount	1	2023	22,123,111	-	-	-	-	22,123,111
\$26.2	2	2024	23,660,836	(1,706,173)	2,514,217	1,063,634	808,045	24,468,881
Million	3	2025	25,250,488	(3,412,345)	2,514,217	1,063,634	(898,128)	24,352,360
	4	2026	25,250,162	(5,118,518)	2,514,217	1,063,634	(2,604,300)	22,645,861
	5	2027	26,282,472	(6,824,690)	2,514,217	1,063,634	(4,310,473)	21,971,999
Duine	6	2028	26,940,348	(8,530,863)	2,514,217	1,063,634	(6,016,646)	20,923,702
Price	7	2029	27,502,068	(8,530,863)	2,514,217	1,063,634	(6,016,646)	21,485,422
Inflator	8	2030	28,193,483	(8,530,863)	2,514,217	1,063,634	(6,016,646)	22,176,837
2.25%	9	2031	28,903,911	(8,530,863)	2,514,217	1,063,634	(6,016,646)	22,887,266
\$11 Million	10	2032	29,064,583	(8,530,863)	2,514,217	1,063,634	(6,016,646)	23,047,938
	11	2033	29,193,256	(8,530,863)	2,514,217	1,063,634	(6,016,646)	23,176,611
	12	2034	28,658,937	(8,530,863)	2,514,217	1,063,634	(6,016,646)	22,642,291
EVOA	13	2035	28,398,022	(8,530,863)	2,514,217	1,063,634	(6,016,646)	22,381,377
FT21	14	2036	27,726,631	(8,530,863)	2,514,217	1,063,634	(6,016,646)	21,709,985
Return	15	2037	26,115,442	(8,530,863)	2,514,217	1,063,634	(6,016,646)	20,098,796
21.15%	16	2038	25,090,159	(8,530,863)	2,514,217	1,063,634	(6,016,646)	19,073,513
(\$74.3)	17	2039	23,990,520	(8,530,863)	2,514,217	1,063,634	(6,016,646)	17,973,874
Million	18	2040	23,207,941	(8,530,863)	2,514,217	1,063,634	(6,016,646)	17,191,295
	19	2041	23,787,132	(8,530,863)	2,514,217	1,063,634	(6,016,646)	17,770,486
	20	2042	20,690,721	(8,530,863)	2,514,217	1,063,634	(6,016,646)	14,674,075
	21	2043	18,656,336	(8,530,863)	2,514,217	1,063,634	(6,016,646)	12,639,690
Net Impact	22	2044	17,511,321	-	-	-	-	17,511,321
(\$37)	23	2045	2,917,462	-	-	-	-	2,917,462
Million	24	2046	1,515,149	-	-	-	-	1,515,149
	25	2047	1,207,726	-	-	-	-	1,207,726
	26	2048	253,021	-	-	-	-	253,021
	-		\$ 562,091,239	\$ (153,555,536)	\$ 50,284,348	\$ 21,272,680	\$ (103,271,188)	\$ 458,820,051
	:		\$ 294,868,335	\$ (74,322,523)	\$ 26,191,567	\$ 11,080,283	\$ (37,050,673)	\$ 257,817, <u>661</u>



Base Selection – Cash Flow vs Savings requires Selection of Base when making



Budget / Cash Flow

Greater Total

POBs 1.0 vs. POBs 2.0





Additional Discretionary Payments City made \$5.0 million ADP savings \$7.75 Million Safety Base #8 was selected to have maximum impact on General Fund budget





Termination Payment





- Reduction in pension benefits must be offset by "comparable" benefits.
- Prevented legislative &ballot-based initiatives

the rule.

Recent decisions have
 more narrowly interpreted

PEPRA - New Employees

- 2.0% @ 62 Misc. &
- 2.7% @ 57% Safety
- 50% Normal

Tax Exempt Exchange

Tax-Exempt Bonds

- 1. Identify "Pay-Go" Capital Project(s)
- 2. Issue Tax-Exempt Bonds to finance CIP

Budget Exchange

- 3. Reallocate Capital Project Budget to UAL
- 4. Pre-Pay UAL Bases with similar term
- UAL payments pay bond debt service
- 7.0% CalPERS liability effectively refinanced using tax-exempt rates ~2.0%



Projected Impact of FY21on UAL



Axiom: Investment Returns exceed POB: Axiom: Rate of Return Exceeds Rate on POBs Oversimplifies - Market Timing is Critical



Compare ending portfolio balance two similar returns:

- 6.46% Loss Initial Years = \$20 Million
- 6.44% Gain Initial Years = \$108 Million



Monte Carlo Simulation



- Compares ending portfolio balance: POBs vs UAL payments
- 10,000 different (random) scenarios
 - CalPERS Return over 25-year period
 - Expect Return = 7.0% (Std. Dev. = 8.25%)

Monte Carlo Simulation

Probability of Success Expected NPV Portfolio Balance: + \$26 Million @ 7.0%

- Positive (Break-Even) = **79%**
- Ending Portfolio Balance POBs
 > UAL Payments

Probability of Success + 100bps
Expected NPV Portfolio Balance:
+ \$15 Million @ 7.0%

• Positive (Break-Even) = 67%



Random interest rates each year (25 years) used to determine ending portfolio values





POBs vs COPs

PENSION OBLIGATION BONDS

- Validation Required
- •+ 4-6 Months
- Invest with CalPERS
- •Credit Rating: AA
- •GFOA Advisory
- •No Borrowing limit

<u>Opportunity</u> <u>Cost</u>	
\$120 Million	
x 3.50%	
x4-6 months =	
\$1.4 Million \$2.1 Million	

CERTIFICATES OF PARTICIPATION

- •No Validation Required
- •No Waiting
- Dollar Cost Averaging
- •Credit Rating AA-
- •Leveraging City Assets
- Capacity



Growing Trend





Validation Process



Validation Process

<u>City Council – Approval to Proceed with Validation Filing</u>

- Selection of Bond Counsel
- Trust Indenture / BPA
- Resolution Authorize sale of POBs
- Amount & Good Faith Estimate
- **1.** File Validation Action with Alameda Superior Court
 - 2. Receive Order for Publication of Summons from the Court
 - 1-2 weeks
 - 3. Publication in Local Newspaper
 - 21 consecutive days
 - 4. Waiting Period to File Petition
 - 2-3 weeks (COVID even longer)
 - 5. Clerk enters hearing for Default Judgement
 - 15 days
 - 6. Hearing for Default Judgement
 - 7. 30-Day Appeal Period

Validation 4-6 Month Timeline



Pension Analysis Bonding Process

Validation Process



Mav	• Council workshop					
····· ,	Stakeholder/Community Meetings					
June	City Council Approval Commence Validation Process 		Legal Cou	nsel RFP		
July	 Develop Pension Funding Plan Leveraged Refunding Use of Reserves 		Written Respo Interviews, if r	nses necessary		
Aug	 Tax-Exempt Exchange Determine POB Structure Draft Pension Funding Policy Risk Analysis / Monte Carlo 	1.Indenture, Reso 2.Review Docum 3.Staff Report	olution & BPA ents	Court Filing Process • File Validation with Court • Receive Order for Publication • Publish – 21 days + 10 days		
Sept	 City Council 1on1s Stakeholder/Community Meetings 	Underwri • Written Respor • Interviews	iter RFP nses	Waiting Period - File Petition (2-6 Weeks)		
Oct	City Council Approval Underwriter + Pension Funding Policy 	POS & Rating I • 1 st Draft POS	Presentation	Enter De	fault Judgement dules Hearing	
Nov	City Council Approval • Approves POS & Amount of POBs	 Conference Cal 2nd Draft POS 1st Draft Bating 	I	Hearing for App	peal Period	
Dec	Sale of POBs Marketing / Investor Outreach Pre-Pricing / Sale Closing 	Conference Cal Rating Presenta	l ation	(1	30 Days)	



Case Studies



Fund Allocation - ADP



17% of UAL =





Leveraged Refunding





\$1.0 Million UAL Savings

Leveraged Refunding: Up-Front Savings



2.0X

City of Arcadia:

2001 & 2011 TABs

- \$10.3 Million Refunding
 \$4.9 Million Savings
- 10% share of savings
- \$498,000 up-front **ADP**

Safety Base #15 (25 Years)

• \$1.0 Million Savings

Tax Exempt Exchange + ADP



85% Funding Target

Placer County Water:

- Merged Bases
 - Restructure cash flows
- ADPs from Reserves
 - \$11.5 Million

 - Base #9 (85%)
 Savings = \$28.9 Million
- Bonding Capacity / Coverage
- Tax-Exempt Exchange
 - \$10.2 million (20 years)
 Base #9,10,4,21
 Savings = \$11 Million
- Combined Savings
 - \$40 Million

CalPERS Investment Risk



<u>El Cajon:</u>

- Market Timing Risk: Issue Multiple POBs
- Rising % rates between series
 - Select longer bases on POB 1- \$150 Million
 - POB 2 shorter maturity, less % risk - \$55 Million



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Effect of Leverage & Compounding



CalPERS Pension Costs

Miscellaneous

UAL Payment = 22.9%

Employee Share = 7.4%

Employee Concession = 1.7% Normal Costs = 10.3% (Net = 8.6%)

> Base Salary 100%

3 Components:

- UAL Payment
 - Fixed \$ Annual Payment
 - Catch-up or "past due" payments

Employee Share of Normal Cost EPMC

Paid by employees% of Payroll

- Normal Costs =
 - Benefits Earned during the Year
 - % of Payroll

Safety (Police)

UAL Payment = 48.6%

Employee Share = 9.5%

Employee Concession = 5.7%

Normal Costs = 20.8% (Net = 15.1%)

> Base Salary 100%

Primary Contributing Factors

Measures to Address Pensions

- 1. Local Ballot Measure F 2018
 - 1/2 Sales Tax (9.75%)
 - \$4.2 Million
- 2. Bargaining Unit Concessions
 - 1.7% Misc. Classic Normal Costs
 - 5.7% Safety Classic Normal Costs
- 3. Service Delivery & Levels of Service
 - Outsource ?????
- 4. Pension Stabilization Fund 115
 - \$6.9 Million Balance
 - 75% of excess above 25% General Fund Reserve
- 5. Develop Plan + Funding Policies Address Pension Liabilities
 - In process
- 6. Pension Obligation Bonds (POBs)
 - Under consideration

Started at Peak of Market – Implemented....

CalPERS Cannot Out Earn the

CalPERS 2018 Strategic Asset Allocation

Develop Pension Management Plan & Implementation

CalPERS Return

Likelihood of Political Solution

Local Agency UAL

Local Agencies (PERF A) \$80 Billion 70%

Pool > 100 (PERF C) \$9.6 Billion 72%

OPEB \$9.3 Billion 61%

₽

Local Agency CalPERS UAL = (**\$90 Billion**) PERFA = \$138.7 Billion - State \$58.7 Billion

PERFC (Risk Pool)= Misc. \$3.8 Billion + Safety = \$5.8 Billion

OPEB Trusts – including Water, Sewer, Cities, Counties, Fire: \$15.2 B – \$6 B = \$9.3 B NOL

* Only for CERBT Trusts (No PARS)

State has Greater Burdens

State Employee UAL \$58.7 Billion 67%

School Pool (PERF B) \$23.6 Billion 72%

State OPEB \$85.6 Billion 1%

Combined Unfunded Liabilities = (\$300 Billion)

UC Regents \$10.9 Billion 85%

OPEB \$18.6 Billion Pay-go CalSTRS \$102 Billion 66% **2017 State CalPERS Actuarial Valuation** \$6.3 Billion Annual Contribution

2018 State OPEB Actuarial Valuation

Discount Rate = 4.25% since pay-go NOL @ 7.0% = \$56 billion \$2.2 Billion "Pay-Go" Benefit Payments

2017 CalSTRS Actuarial Valuation 2% @ 60/62

\$325 million MPP (OPEB) pay-go

2017 University California Regents

Actuarial Valuation 27% of payroll -\$3 billion annual contribution.

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