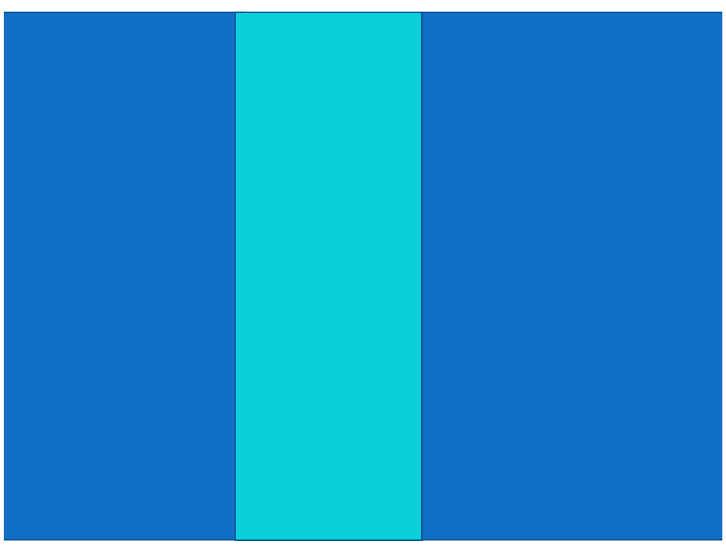
2018 CMTA Annual Conference
Defining and Cracking the Pension Nut

Kerry Worgan, FSA, FCIA, MAAA, Supervising Pension Actuary, CalPERS
Dan Matusiewicz, CCMT, CFIP, Finance Director & Treasurer, City of Newport Beach
Jasmine Nachtigall-Fournier, President, GovInvest & AdastraGov, Inc.
Michael Busch, CEO, Urban Futures Inc

April 25, 2018

2

Celebrities in the Stands Cam



Kiss Cam

2018 CMTA Annual Conference
Defining and Cracking the Pension Nut

Pension Funding – A Historical Perspective

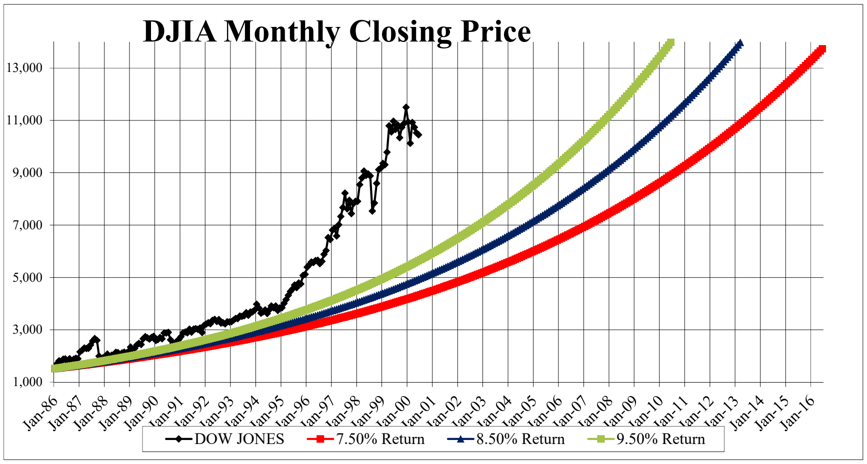
Kerry Worgan, FSA, FCIA, MAAA
Supervising Pension Actuary
CalPERS
April 25, 2018

“It’s like deja-vu, all over again.”
Yogi Berra

Today’s Topics

- Pension Funding Drivers
  - Investment Returns
  - Mortality
  - Benefits Provided
  - Funding Policy
- Case Study – City in Orange County
- What Does the Future Hold?

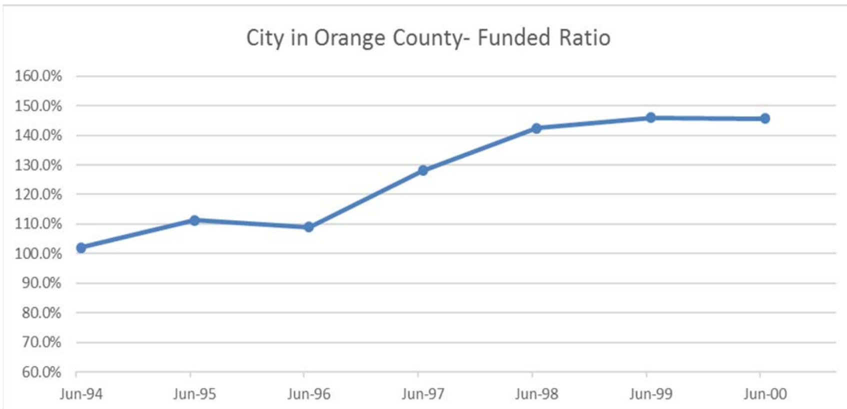
Pension Funding Drivers – Investment Returns



Pension Funding Drivers – Investment Returns

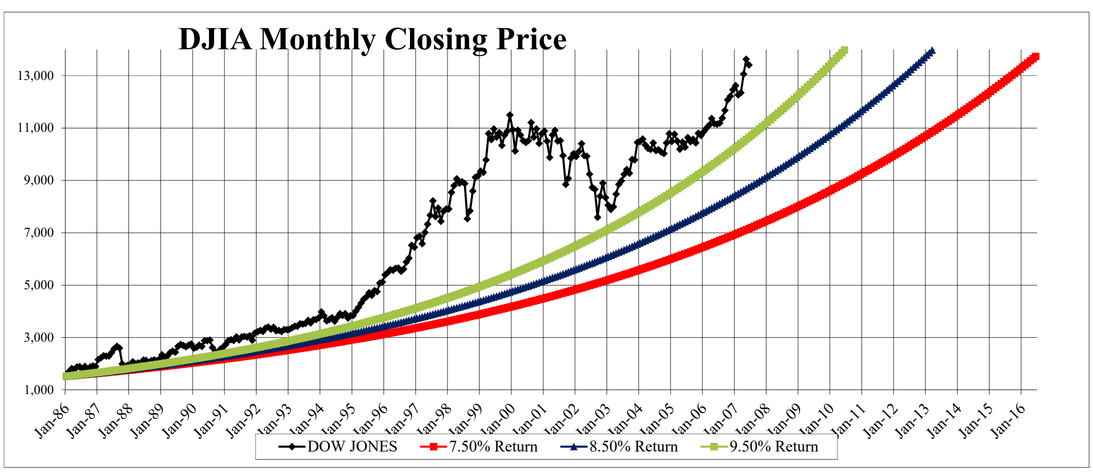
CalPERS Investment Returns	
1994-95	16.3%
1995-96	15.3%
1996-97	20.1%
1997-98	19.5%
1998-99	12.5%
1999-2000	10.5%
Average for Period	15.6%

Case Study – A City in Orange County



Pension Funding Drivers – Investment Returns

Correction and Growth

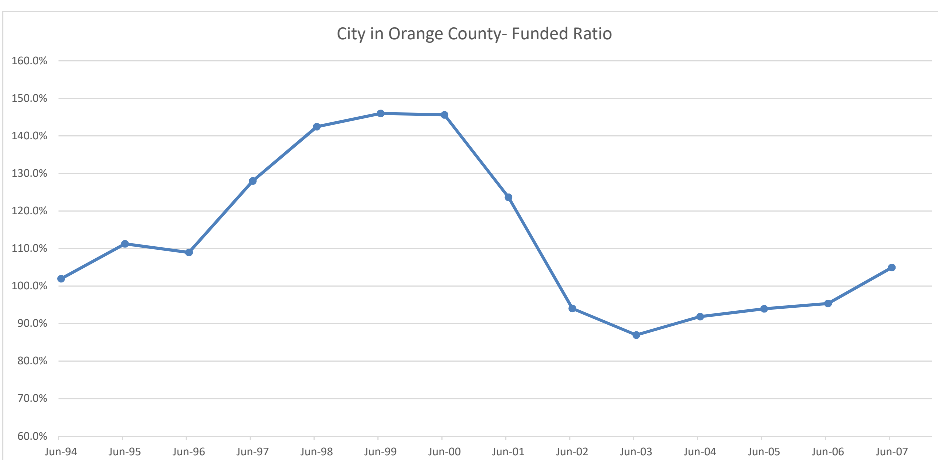


Pension Funding Drivers – Investment Returns
Correction and Growth

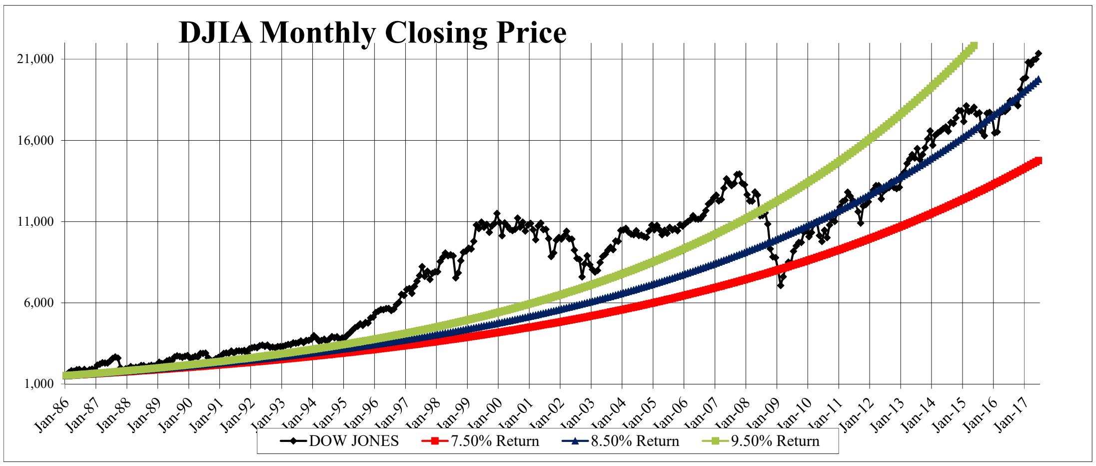
CalPERS Investment Returns	
2000-01	**-7.2%**
2001-02	**-6.1%**
2002-03	**3.7%**
2003-04	**16.6%**
2004-05	**12.3%**
2005-06	**11.8%**
2006-07	**19.1%**

Average for Period **6.7%**

Case Study – A City in Orange County
Correction and Growth



Pension Funding Drivers – Investment Returns
Correction and Growth – Part 2

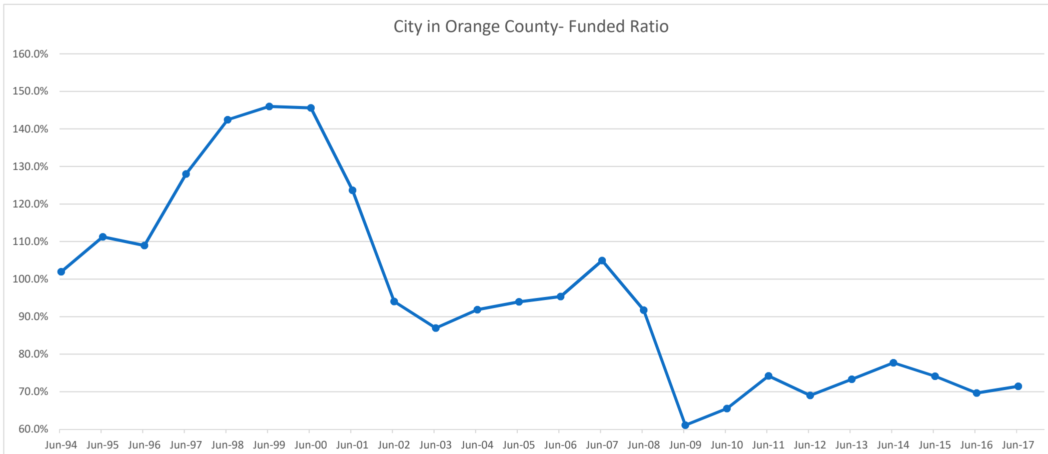


Pension Funding Drivers – Investment Returns
Correction and Growth – Part 2

CalPERS Investment Returns	
2007-08	-5.1%
2008-09	-24.0%
2009-10	13.3%
2010-11	21.7%
2011-12	0.2%
Average for Period	-0.1%

CalPERS Investment Returns	
2012-13	13.2%
2013-14	17.7%
2014-15	2.4%
2015-16	0.6%
2016-17	11.2%
Average for Period	8.8%

Case Study – A City in Orange County
Correction and Growth



Investment Returns – Forecasted Returns

- Future Returns = Discount Rates

Assets Required to Provide $1,000 Monthly Benefit from Age 65*

	MALE			FEMALE			
Year	Exp CF	Reserve	Increase	Exp CF	Reserve	Increase	Interest
1995	**$312,200**	**$129,100**		**$353,800**	**$136,800**		**8.50%**
2000	$312,200	**$131,700**	2.0%	$353,800	**$139,800**	2.2%	**8.25%**
2005	$312,200	**$137,200**	6.3%	$353,800	**$146,000**	6.7%	**7.75%**
2010	$312,200	**$137,200**	6.3%	$353,800	**$146,000**	6.7%	**7.75%**
2015	$312,200	**$140,100**	8.5%	$353,800	**$149,200**	9.1%	**7.50%**
2020	$312,200	**$146,200**	**13.2%**	$353,800	**$156,200**	**14.2%**	**7.00%**

**Using Current Mortality assumptions with 2% COLA*

Pension Funding Drivers - Mortality

Pension Funding Drivers – Mortality

Future Life Expectancy at Age 65

Year	Male	Incr.	Female	Incr.
1990	**15.1**		**18.9**	
1995	**15.6**	3.3%	**18.9**	0.0%
2000	**16.0**	2.6%	**19.0**	0.5%
2005	**16.9**	**5.6%**	**19.6**	**3.2%**
2010	**17.7**	**4.7%**	**20.3**	**3.6%**
2015	**18.0**	1.7%	**20.6**	1.5%
2020	**18.0**	0.0%	**20.6**	0.0% ?
Overall		**19.2%**		**9.0%**

Future Life Expectancy at Age 75

Year	Male	Incr.	Female	Incr.
1990	**9.4**		**12.0**	
1995	**9.7**	3.2%	**11.9**	-0.8%
2000	**9.8**	1.0%	**11.8**	-0.8%
2005	**10.4**	**6.1%**	**12.3**	**4.2%**
2010	**11.0**	**5.8%**	**12.9**	**4.9%**
2015	**11.2**	1.8%	**13.0**	0.8%
2020	**11.2**	0.0%	**13.0**	0.0% ?
Overall		**19.1%**		**8.3%**

Source : Center for Disease Control (CDC) summary statistics

Mortality and Investment Returns

- Future Returns = Discount Rates
- Mortality assumption by year

Assets Required to Provide $1,000 Monthly Benefit from Age 65*

	MALE			FEMALE			
Year	**Exp CF**	**Reserve**	**Increase**	**Exp CF**	**Reserve**	**Increase**	**Interest**
1995	**$241,100**	**$112,600**		**$310,300**	**$128,400**		**8.50%**
2000	$247,900	**$116,200**	3.2%	$317,500	**$132,300**	3.0%	**8.25%**
2005	$258,800	**$124,100**	10.2%	$315,900	**$138,200**	7.6%	**7.75%**
2010	$277,900	**$129,500**	15.0%	$321,600	**$139,400**	8.6%	**7.75%**
2015	$315,300	**$141,100**	25.3%	$353,200	**$149,100**	16.1%	**7.50%**
2020	$312,200	**$146,200**	**29.8%**	$353,800	**$156,200**	**21.7%**	**7.00%**

**Using Mortality assumption by year with 2% COLA*

Pension Funding Drivers – Benefits Provided

- Plan Amendments Increase Costs to Employers
  - Enhanced Benefit Formulas, Retroactive and Prospective
  - Employer Paid Member Contributions (EPMC)

- PEPRA – Effective January 1, 2013
  - Levelled the playing field
  - No retroactive improvements
  - Short-term staffing issues

Pension Funding Drivers – Benefits Provided

- PEPRA Impact

City in Orange County

Employer Contributions over next 30 Years ($M)

	no PEPRA	with PEPRA	Savings	%
Normal Cost	$165.3	$120.6	$44.7	27.0%
UAL Payments	$215.9	$209.4	$6.5	3.0%
Total Contributions	**$381.2**	**$330.0**	**$51.2**	13.4%

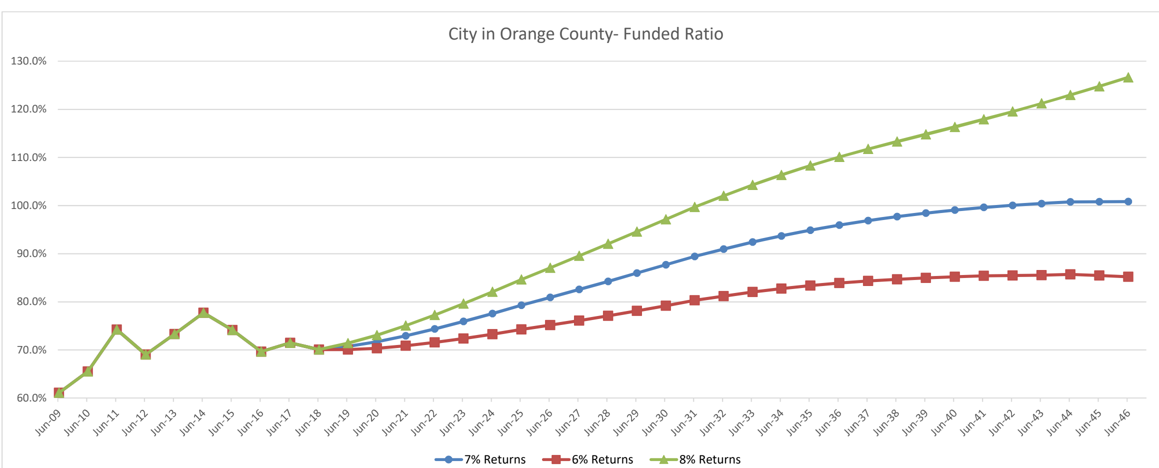
Pension Funding Drivers – Funding Policy

- Trade-off between Rate Stability and Benefit Security
  - 30 Year Rolling Amortization
  - Ramping creates Negative Amortization
  - Agencies can elect to pay more than the Minimum
- New Amortization Policy (effective 6/30/19)
  - 20 year period, reduces interest costs
  - Level Dollar payments
  - 5 Year Ramp for Asset Gains/Losses
  - Only applies to new Gains/Losses and Assumption changes

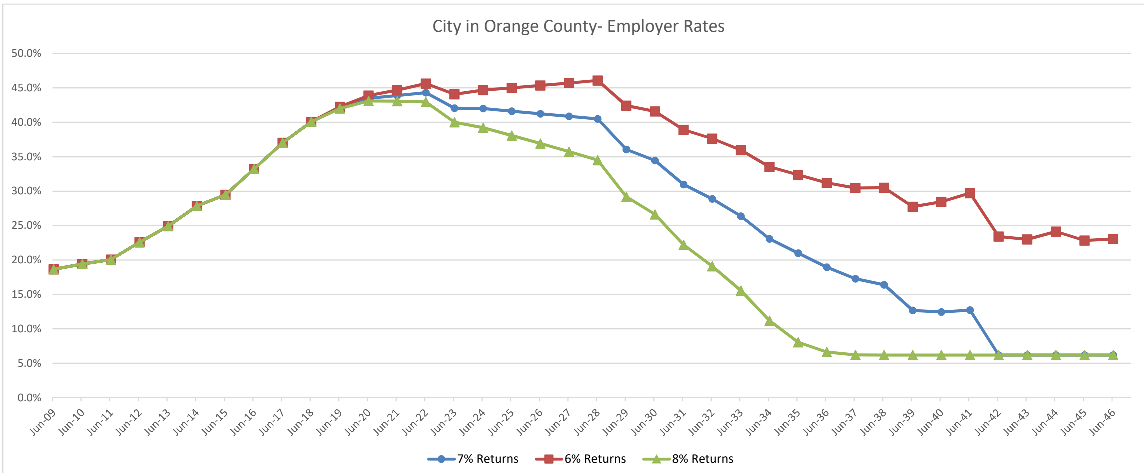
Pension Funding – Additional Factors

- Salary Increases
- Cost of Living Adjustments (COLA)
- Early Retirements
- Industrial Disability Retirements (IDR's)
- Entry Age
- Golden Handshakes

What Does the Future Hold?



What Does the Future Hold?



Pension Funding – Paying Down the UAL

- Cracking the Nut → Funding the Promised Benefits
- Most Efficiently, Paying More than the Minimum via :
  - "Fresh Start" – reducing the amortization period
  - Additional Discretionary Payments (ADP's)
- Actuarial Office Developing "ADP Tool"
  - Models ADP's, savings from applying to different bases
  - Provides 30 year schedule of UAL Payments
  - Projects UAL schedule at 6/30/18
  - Impact of Early Adoption of Amortization Policy
  - Should be available in August

Pension Funding – Paying Down the UAL

City in Orange County
777

Choose "Base" you want to paydown from dropdown list located in yellow cell below.

ASSET (GAIN)/LOSS 2016 RAMPED Remaining Periods: 30

UAL Schedule at Phased-In Rates				Phased-In Rates		Additional Payment at Phased-In Rates				
Year	Beginning Balance	Payment	Ending Balance	Interest	Salary	Additional Payment at midyear	Year	Beginning Balance	Payment	Ending Balance
16-17	$ 5,720,868	$ **164,862**	$ 5,971,949	7.375%	3.000%		16-17	$ 5,720,868	$ 164,862	$ 5,971,949
17-18	$ 5,971,949	$ **213,041**	$ 6,184,287	7.250%	2.875%	$ 100,000	17-18	$ 5,971,949	$ 213,041	$ 6,080,725
18-19	$ 6,184,287	$ **298,384**	$ 6,308,536	7.000%	2.750%	$ -	18-19	$ 6,080,725	$ 296,970	$ 6,199,188
19-20	$ 6,308,536	$ **377,513**	$ 6,359,631	7.000%	2.750%	$ -	19-20	$ 6,199,188	$ 374,606	$ 6,245,636
20-21	$ 6,359,631	$ **426,374**	$ 6,363,761	7.000%	2.750%	$ -	20-21	$ 6,245,636	$ 421,894	$ 6,246,420
21-22	$ 6,363,761	$ **481,837**	$ 6,310,808	7.000%	2.750%	$ -	21-22	$ 6,246,420	$ 475,699	$ 6,191,602
22-23	$ 6,310,808	$ **523,619**	$ 6,210,929	7.000%	2.750%	$ -	22-23	$ 6,191,602	$ 515,737	$ 6,091,532
23-24	$ 6,210,929	$ **538,019**	$ 6,089,163	7.000%	2.750%	$ -	23-24	$ 6,091,532	$ 529,919	$ 5,969,787
24-25	$ 6,089,163	$ **552,814**	$ 5,943,569	7.000%	2.750%	$ -	24-25	$ 5,969,787	$ 544,492	$ 5,824,445
25-26	$ 5,943,569	$ **568,017**	$ 5,772,057	7.000%	2.750%	$ -	25-26	$ 5,824,445	$ 559,466	$ 5,653,440
26-27	$ 5,772,057	$ **583,637**	$ 5,572,382	7.000%	2.750%	$ -	26-27	$ 5,653,440	$ 574,851	$ 5,454,550
27-28	$ 5,572,382	$ **599,687**	$ 5,342,128	7.000%	2.750%	$ -	27-28	$ 5,454,550	$ 590,659	$ 5,225,386
28-29	$ 5,342,128	$ **616,179**	$ 5,078,697	7.000%	2.750%	$ -	28-29	$ 5,225,386	$ 606,902	$ 4,963,378
29-30	$ 5,078,697	$ **633,124**	$ 4,779,297	7.000%	2.750%	$ -	29-30	$ 4,963,378	$ 623,592	$ 4,665,766
30-31	$ 4,779,297	$ **650,534**	$ 4,440,930	7.000%	2.750%	$ -	30-31	$ 4,665,766	$ 640,741	$ 4,329,582
31-32	$ 4,440,930	$ **668,424**	$ 4,060,372	7.000%	2.750%	$ -	31-32	$ 4,329,582	$ 658,361	$ 3,951,638
32-33	$ 4,060,372	$ **655,068**	$ 3,666,990	7.000%	2.750%	$ -	32-33	$ 3,951,638	$ 644,729	$ 3,561,340
33-34	$ 3,666,990	$ **640,472**	$ 3,261,170	7.000%	2.750%	$ -	33-34	$ 3,561,340	$ 629,848	$ 3,159,113
34-35	$ 3,261,170	$ **611,841**	$ 2,856,558	7.000%	2.750%	$ -	34-35	$ 3,159,113	$ 600,925	$ 2,758,649
35-36	$ 2,856,558	$ **581,151**	$ 2,455,370	7.000%	2.750%	$ -	35-36	$ 2,758,649	$ 569,935	$ 2,362,210
36-37	$ 2,455,370	$ **548,310**	$ 2,060,069	7.000%	2.750%	$ -	36-37	$ 2,362,210	$ 536,786	$ 1,972,309
37-38	$ 2,060,069	$ **340,861**	$ 1,851,685	7.000%	2.750%	$ -	37-38	$ 1,972,309	$ 329,020	$ 1,770,030
38-39	$ 1,851,685	$ **336,038**	$ 1,633,702	7.000%	2.750%	$ -	38-39	$ 1,770,030	$ 323,871	$ 1,558,917
39-40	$ 1,633,702	$ **345,279**	$ 1,390,902	7.000%	2.750%	$ -	39-40	$ 1,558,917	$ 332,777	$ 1,323,814
40-41	$ 1,390,902	$ **354,774**	$ 1,121,284	7.000%	2.750%	$ -	40-41	$ 1,323,814	$ 341,929	$ 1,062,787
41-42	$ 1,121,284	$ **303,731**	$ 885,592	7.000%	2.750%	$ -	41-42	$ 1,062,787	$ 290,532	$ 836,653
42-43	$ 885,592	$ **298,665**	$ 638,641	7.000%	2.750%	$ -	42-43	$ 836,653	$ 285,104	$ 600,305
43-44	$ 638,641	$ **264,086**	$ 410,173	7.000%	2.750%	$ -	43-44	$ 600,305	$ 250,151	$ 383,568
44-45	$ 410,173	$ **192,261**	$ 240,010	7.000%	2.750%	$ -	44-45	$ 383,568	$ 180,806	$ 223,390
45-46	$ 240,010	$ **116,285**	$ 136,524	7.000%	2.750%	$ -	45-46	$ 223,390	$ 107,458	$ 127,872
46-47	$ 136,524	$ **105,617**	$ 36,829	7.000%	2.750%	$ -	46-47	$ 127,872	$ 99,571	$ 33,826
47-48	$ 36,829	$ **38,096**	$ -	7.000%	2.750%	$ -	47-48	$ 33,826	$ 34,990	$ -
48-49	$ -	$ -	$ -	7.000%	2.750%	$ -	48-49	$ -	$ -	$ -

Total Payments $ 13,250,699
Total Interest $ 7,066,412

Total Payments $ 13,072,323
Total Interest $ 6,991,598
Total Savings **$ 178,376**

Pension Funding – Paying Down the UAL – Projecting 2018

City in Orange County
MVA at 6/30/2016 $ 17,711,231

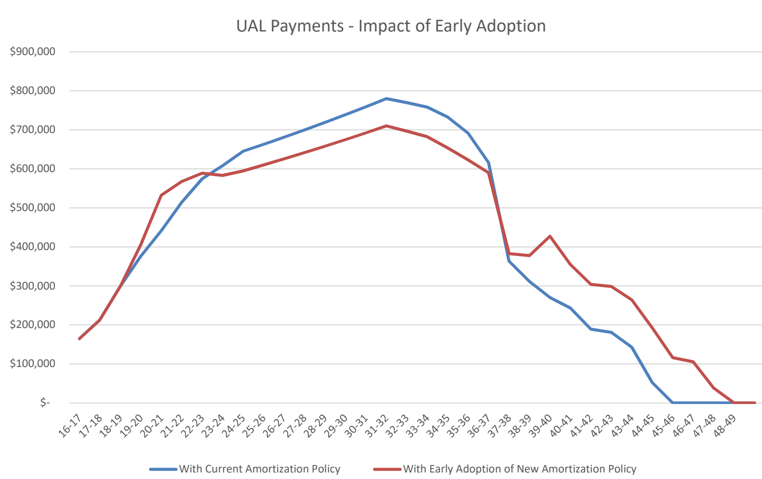
With Current Amortization Policy

			Return 11.20%				Return 8.00%			
	Projected	**Projected**	**Asset (Gain)/Loss 2017**		**Assumption Change 2017**		**Asset (Gain)/Loss 2018**		**Assumption Change 2018**	
FY	**Balance**	**Payments**	Balance	Payment	Balance	Payment	Balance	Payment	Balance	Payment
16-17	$ 5,720,868	$ **164,862**								
17-18	$ 5,692,579	$ **213,041**	$ (677,455)	$ -	$ 398,085	$ (15,101)				
18-19	$ 6,652,637	$ **298,384**	$ (726,570)	$ -	$ 442,585	$ (15,535)	$ (132,834)	$ -	$ 885,170	$ (31,070)
19-20	$ 6,857,880	$ **375,964**	**$ (777,430)**	$ (10,776)	**$ 489,636**	$ 9,228	$ (142,133)	$ -	$ 979,271	$ (31,925)
20-21	$ 6,982,054	$ **441,390**	$ (820,703)	$ (21,816)	$ 514,365	$ 18,757	**$ (152,082)**	$ (2,077)	**$ 1,080,843**	$ 20,152
21-22	$ 7,014,221	$ **514,265**	$ (855,586)	$ (33,623)	$ 530,969	$ 28,909	$ (160,579)	$ (4,268)	$ 1,135,657	$ 41,412
22-23	$ 6,973,256	$ **574,408**	$ (880,697)	$ (46,064)	$ 538,233	$ 39,605	$ (167,404)	$ (6,579)	$ 1,172,316	$ 63,827
23-24	$ 6,867,212	$ **608,152**	$ (894,697)	$ (59,164)	$ 534,942	$ 50,867	$ (172,317)	$ (9,013)	$ 1,188,355	$ 87,442
24-25	$ 6,718,840	$ **645,023**	$ (896,127)	$ (60,791)	$ 519,771	$ 52,266	$ (175,057)	$ (11,576)	$ 1,181,089	$ 112,309
25-26	$ 6,521,942	$ **662,761**	$ (895,973)	$ (62,462)	$ 502,090	$ 53,703	$ (175,336)	$ (11,894)	$ 1,147,592	$ 115,397
26-27	$ 6,292,912	$ **680,987**	$ (894,080)	$ (64,180)	$ 481,685	$ 55,180	$ (175,306)	$ (12,221)	$ 1,108,556	$ 118,571
27-28	$ 6,028,998	$ **699,714**	$ (890,277)	$ (65,945)	$ 458,324	$ 56,698	$ (174,936)	$ (12,557)	$ 1,063,504	$ 121,831
28-29	$ 5,727,238	$ **718,956**	$ (884,383)	$ (67,758)	$ 431,759	$ 58,257	$ (174,192)	$ (12,903)	$ 1,011,926	$ 125,182
29-30	$ 5,384,451	$ **738,727**	$ (876,199)	$ (69,622)	$ 401,720	$ 59,859	$ (173,039)	$ (13,258)	$ 953,272	$ 128,624
30-31	$ 4,997,217	$ **759,042**	$ (865,516)	$ (71,536)	$ 367,922	$ 61,505	$ (171,437)	$ (13,622)	$ 886,951	$ 132,161
31-32	$ 4,561,862	$ **779,916**	$ (852,104)	$ (73,504)	$ 330,055	$ 63,196	$ (169,347)	$ (13,997)	$ 812,329	$ 135,796
32-33	$ 4,074,441	$ **769,626**	$ (835,719)	$ (75,525)	$ 287,788	$ 64,934	$ (166,723)	$ (14,382)	$ 728,723	$ 139,530
33-34	$ 3,563,544	$ **758,180**	$ (816,096)	$ (77,602)	$ 240,765	$ 66,720	$ (163,517)	$ (14,777)	$ 635,402	$ 143,367
34-35	$ 3,028,725	$ **732,786**	$ (792,950)	$ (79,736)	$ 188,603	$ 68,555	$ (159,678)	$ (15,184)	$ 531,580	$ 147,310
35-36	$ 2,482,735	$ **691,334**	$ (765,977)	$ (81,929)	$ 130,891	$ 56,352	$ (155,149)	$ (15,601)	$ 416,412	$ 151,361
36-37	$ 1,941,405	$ **615,944**	$ (734,848)	$ (84,182)	$ 81,762	$ 43,426	$ (149,871)	$ (16,030)	$ 288,992	$ 124,419
37-38	$ 1,440,166	$ **363,520**	$ (699,209)	$ (86,497)	$ 42,565	$ 29,747	$ (143,781)	$ (16,471)	$ 180,522	$ 95,880
38-39	$ 1,164,949	$ **311,199**	$ (658,681)	$ (88,875)	$ 14,774	$ 15,283	$ (136,807)	$ (16,924)	$ 93,979	$ 65,678
39-40	$ 924,589	$ **270,312**	$ (612,855)	$ (91,319)	$ -	$ -	$ (128,878)	$ (17,389)	$ 32,620	$ 33,742
40-41	$ 709,697	$ **243,076**	$ (561,294)	$ (93,831)	$ -	$ -	$ (119,911)	$ (17,868)	$ -	$ -
41-42	$ 507,936	$ **188,961**	$ (503,525)	$ (96,411)	$ -	$ -	$ (109,823)	$ (18,359)	$ -	$ -
42-43	$ 348,029	$ **180,739**	$ (439,043)	$ (99,062)	$ -	$ -	$ (98,520)	$ (18,864)	$ -	$ -
43-44	$ 185,433	$ **142,917**	$ (367,305)	$ (101,787)	$ -	$ -	$ (85,903)	$ (19,383)	$ -	$ -
44-45	$ 50,579	$ **52,319**	$ (287,728)	$ (104,586)	$ -	$ -	$ (71,867)	$ (19,916)	$ -	$ -
45-46	$ (15,972)	$ -	$ (199,684)	$ (85,969)	$ -	$ -	$ (56,297)	$ (20,463)	$ -	$ -
46-47	$ (27,281)	$ -	$ (124,735)	$ (66,250)	$ -	$ -	$ (39,070)	$ (16,821)	$ -	$ -
47-48	$ (52,513)	$ -	$ (64,937)	$ (45,381)	$ -	$ -	$ (24,406)	$ (12,963)	$ -	$ -
48-49	$ (35,245)	$ -	$ (22,539)	$ (23,315)	$ -	$ -	$ (12,705)	$ (8,879)	$ -	$ -
	$ (4,410)	$ -	$ -				$ (4,410)	$ (4,562)	$ -	$ -
							$ -			
Total Payments		**13,818,605**		**(2,089,497)**		**953,047**		**(408,800)**		**2,072,068**

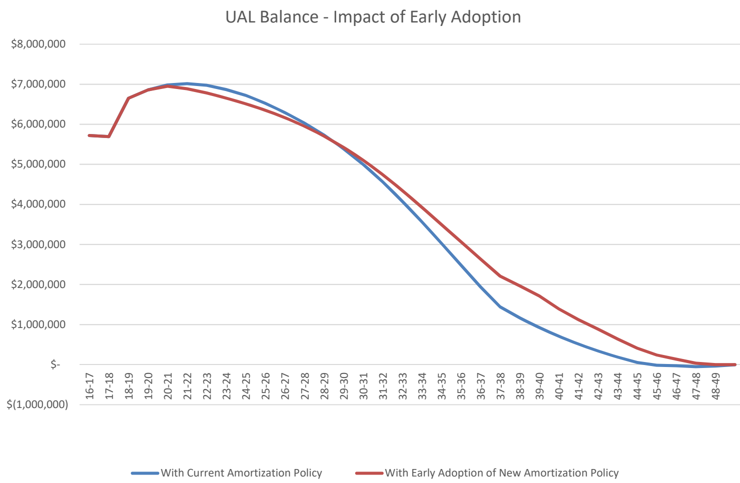
Projecting 2018 with new Amort. Policy

City in Orange County			With Early Adoption of New Amortization Policy								
MVA at 6/30/2016		$ 17,711,231									
			Return	11.20%			Return	8.00%			
	Projected	Projected	Asset (Gain)/Loss 2017		Assumption Change 2017		Asset (Gain)/Loss 2018		Assumption Change 2018		
FY	Balance	Payments	Balance	Payment	Balance	Payment	Balance	Payment	Balance	Payment	Difference
16-17	$ 5,720,868	**$ 164,862**									$ -
17-18	$ 5,692,579	**$ 213,041**	$ (677,455)	$ -	$ 398,085	$ (15,101)					$ -
18-19	$ 6,652,637	**$ 298,384**	$ (726,570)	$ -	$ 442,585	$ (15,535)	$ (132,834)	$ -	$ 885,170	$ (31,070)	$ -
19-20	$ 6,857,880	**$ 405,652**	**$ (777,430)**	$ (17,360)	**$ 489,636**	$ 45,500	$ (142,133)	$ -	$ 979,271	$ (31,925)	$ 29,687
20-21	$ 6,951,345	**$ 532,301**	$ (813,892)	$ (33,980)	$ 476,845	$ 44,602	**$ (152,082)**	$ (3,325)	**$ 1,080,843**	$ 98,630	$ 90,911
21-22	$ 6,887,323	**$ 567,449**	$ (835,716)	$ (50,970)	$ 464,088	$ 44,602	$ (159,288)	$ (6,650)	$ 1,054,479	$ 98,630	$ 53,183
22-23	$ 6,782,463	**$ 588,916**	$ (841,492)	$ (67,960)	$ 450,438	$ 44,602	$ (163,559)	$ (9,975)	$ 1,026,268	$ 98,630	$ 14,509
23-24	$ 6,648,055	**$ 583,001**	$ (830,099)	$ (84,949)	$ 435,832	$ 44,602	$ (164,690)	$ (13,300)	$ 996,083	$ 98,630	$ (25,151)
24-25	$ 6,510,359	**$ 594,471**	$ (800,334)	$ (84,949)	$ 420,205	$ 44,602	$ (162,460)	$ (16,626)	$ 963,785	$ 98,630	$ (50,552)
25-26	$ 6,351,158	**$ 609,674**	$ (768,485)	$ (84,949)	$ 403,483	$ 44,602	$ (156,635)	$ (16,626)	$ 929,226	$ 98,630	$ (53,087)
26-27	$ 6,165,087	**$ 625,294**	$ (734,406)	$ (84,949)	$ 385,590	$ 44,602	$ (150,401)	$ (16,626)	$ 892,247	$ 98,630	$ (55,693)
27-28	$ 5,949,834	**$ 641,344**	$ (697,942)	$ (84,949)	$ 366,445	$ 44,602	$ (143,732)	$ (16,626)	$ 852,681	$ 98,630	$ (58,370)
28-29	$ 5,702,911	**$ 657,836**	$ (658,926)	$ (84,949)	$ 345,960	$ 44,602	$ (136,595)	$ (16,626)	$ 810,344	$ 98,630	$ (61,121)
29-30	$ 5,421,645	**$ 674,780**	$ (617,178)	$ (84,949)	$ 324,041	$ 44,602	$ (128,959)	$ (16,626)	$ 765,045	$ 98,630	$ (63,947)
30-31	$ 5,103,161	**$ 692,191**	$ (572,509)	$ (84,949)	$ 300,588	$ 44,602	$ (120,789)	$ (16,626)	$ 716,574	$ 98,630	$ (66,851)
31-32	$ 4,744,374	**$ 710,081**	$ (524,712)	$ (84,949)	$ 275,493	$ 44,602	$ (112,047)	$ (16,626)	$ 664,710	$ 98,630	$ (69,835)
32-33	$ 4,341,967	**$ 696,725**	$ (473,569)	$ (84,949)	$ 248,641	$ 44,602	$ (102,692)	$ (16,626)	$ 609,216	$ 98,630	$ (72,901)
33-34	$ 3,925,207	**$ 682,129**	$ (418,847)	$ (84,949)	$ 219,910	$ 44,602	$ (92,683)	$ (16,626)	$ 549,837	$ 98,630	$ (76,051)
34-35	$ 3,494,371	**$ 653,498**	$ (360,294)	$ (84,949)	$ 189,168	$ 44,602	$ (81,973)	$ (16,626)	$ 486,301	$ 98,630	$ (79,288)
35-36	$ 3,062,994	**$ 622,808**	$ (297,642)	$ (84,949)	$ 156,273	$ 44,602	$ (70,514)	$ (16,626)	$ 418,318	$ 98,630	$ (68,526)
36-37	$ 2,633,166	**$ 589,967**	$ (230,605)	$ (84,949)	$ 121,076	$ 44,602	$ (58,252)	$ (16,626)	$ 345,577	$ 98,630	$ (25,976)
37-38	$ 2,207,220	**$ 382,518**	$ (158,875)	$ (84,949)	$ 83,415	$ 44,602	$ (45,132)	$ (16,626)	$ 267,743	$ 98,630	$ 18,997
38-39	$ 1,966,046	**$ 377,695**	$ (82,124)	$ (84,949)	$ 43,118	$ 44,602	$ (31,094)	$ (16,626)	$ 184,461	$ 98,630	$ 66,496
39-40	$ 1,712,979	**$ 427,284**	$ -	$ -	$ -	$ -	$ (16,073)	$ (16,626)	$ 95,350	$ 98,630	$ 156,972
40-41	$ 1,390,902	**$ 354,774**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 111,698
41-42	$ 1,121,284	**$ 303,731**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 114,770
42-43	$ 885,592	**$ 298,665**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 117,926
43-44	$ 638,641	**$ 264,086**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 121,169
44-45	$ 410,173	**$ 192,261**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 139,942
45-46	$ 240,010	**$ 116,285**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 116,285
46-47	$ 136,524	**$ 105,617**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 105,617
47-48	$ 36,829	**$ 38,096**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 38,096
48-49	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	**$ -**	$ -				$ -	$ -	$ -	$ -	
							$ -				
Total Payments		**14,287,514**		**(1,529,460)**		**892,929**		**(299,260)**		**1,940,681**	**468,909**

Projecting 2018 with new Amort. Policy



Projecting 2018 with new Amort. Policy



2018 CMTA Annual Conference
Defining and Cracking the Pension Nut

Analyzing the Nut

Dan Matusiewicz, CCMT CFIP
Finance Director & Treasurer
City of Newport Beach
April 25, 2018

"In baseball and in business there are three types of people.

- Those who make it happen,
- Those who watch it happen,
- And those who wonder what happened."

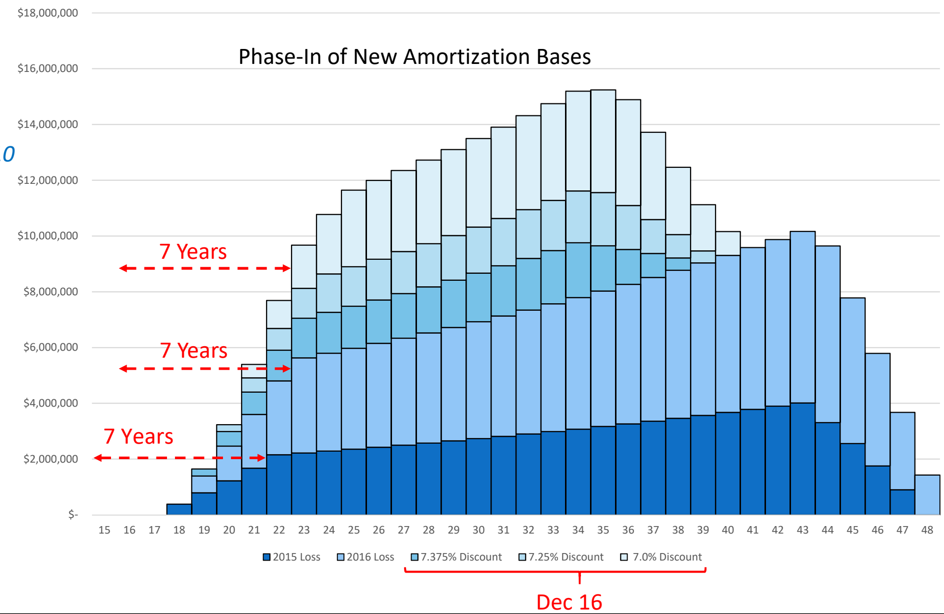
Tommy Lasorda

What to Analyze - Survival Tips

- Don't count on a legislative fix
- Look forward 7-10 years
- Ample time to prepare, that is if you are looking forward beyond current valuation
- Make room in your budget today
- Estimate and start paying on all known loss bases today
- Consider level-dollar payment strategy
- Target and pay down loss bases greater than 20 Yrs.
  (These have the most Negative Amortization)

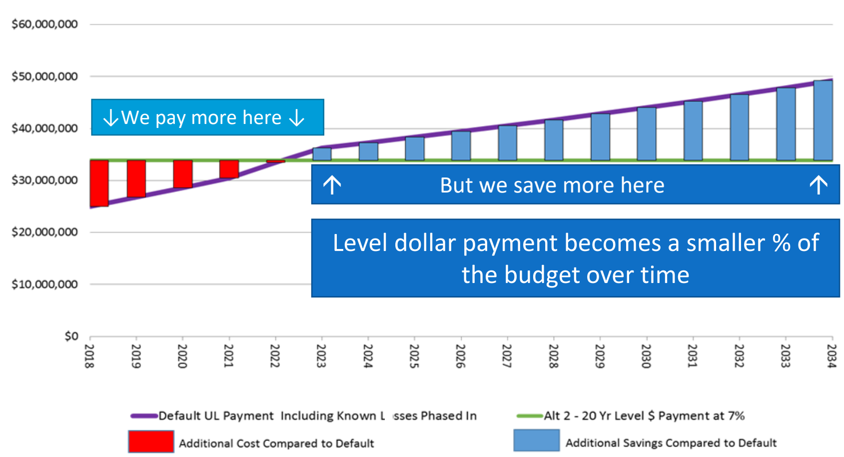
Look Ahead and Prepare Now

- *Imperative to develop the ability to look forward 7-10 years to quantify cumulative impact of ramping bases.*
- *Communicate future hurdles as they become known. It is less likely available funds will be spent on something else.*
- *Start accommodating future increases in your budget today!*



Level Dollar Payment Strategy

- *Paying more $$ now, while we can, allows us to avoid cumulative interest costs inherent in legacy amortization*
- *Schedules*
- *Avoids negative amortization*
- *Payment becomes a declining % of budget*
- *Compelling $ Savings*



Simple Approach

Aggregate All Known Bases – Pick Your Own Payment

Aggregate Current Bases

Look Forward add New Known Bases

Reason for Base		Date Est	Amort. Period	Balance 6/30/16	Balance 6/30/18	Expected Payment for 2018-19
Fresh Start Base		6/30/2013	16	315,404,215	310,839,455	27,002,683
2014 Experience Gain	18.4%	6/30/2014	28	(67,321,034)	(74,542,316)	(2,968,012)
2015 Experience Loss	2.4%	6/30/2015	29	26,783,915	30,596,931	824,650
2016 Experience Loss	.6%	6/30/2016	30	33,515,268	38,753,329	537,142
2016 Discount Rate Change 7.5% to 7.375%		6/30/2016	20	13,083,448	16,024,616	302,043
2017 Investment Experience Gain	*11.2%*	*6/30/2017*	*30*	*0*	*(27,217,335)**	*N/A*
2017 & 18 Discount Rate Change	*7.375% to 7.0%*	*6/30/2018*	*20*	*0*	*47,143,253**	*N/A*
Total				**321,465,812**	***332,391,730***	**25,698,506**

*Rough Estimates

Minimum Default Payment

Roughly $34.5 Million to pay off liability in 16 years

Estimated Known Investment Gains/Losses

Market Value of Assets $ 566,016,065 **Actual Return** 11.20%

Year	Current Amort Policy Asset (Gain)/Loss % of Pay 5 Yr Ramp Up/Down Balance	30 Payment	New Amort Policy Asset (Gain)/Loss Level $ 5Yr Ramp Up Balance	20 Payment	Payment Difference	Interest	Payroll
	$ (23,772,675)	$ -	$ (23,772,675)	$ -		7.000%	2.750%
	$ (25,436,762)	$ -	$ (25,436,762)	$ -	$ -	7.000%	2.750%
1	$ (27,217,335)	$ (371,730)	$ (27,217,335)	$ (595,079)	$ (223,349)	7.000%	2.750%
2	$ (28,738,028)	$ (763,905)	$ (28,506,994)	$ (1,190,158)	$ (426,254)	7.000%	2.750%
3	$ (29,959,501)	$ (1,177,368)	$ (29,271,374)	$ (1,785,238)	$ (607,869)	7.000%	2.750%
4	$ (30,838,787)	$ (1,612,994)	$ (29,473,706)	$ (2,380,317)	$ (767,322)	7.000%	2.750%
5	$ (31,329,008)	$ (2,071,690)	$ (29,074,647)	$ (2,975,396)	$ (903,706)	7.000%	2.750%
6	$ (31,379,066)	$ (2,128,661)	$ (28,032,098)	$ (2,975,396)	$ (846,735)	7.000%	2.750%
7	$ (31,373,696)	$ (2,187,199)	$ (26,916,571)	$ (2,975,396)	$ (788,197)	7.000%	2.750%
8	$ (31,307,398)	$ (2,247,347)	$ (25,722,958)	$ (2,975,396)	$ (728,049)	7.000%	2.750%
9	$ (31,174,242)	$ (2,309,149)	$ (24,445,791)	$ (2,975,396)	$ (666,247)	7.000%	2.750%
10	$ (30,967,836)	$ (2,372,651)	$ (23,079,223)	$ (2,975,396)	$ (602,745)	7.000%	2.750%
11	$ (30,681,295)	$ (2,437,899)	$ (21,616,995)	$ (2,975,396)	$ (537,497)	7.000%	2.750%
12	$ (30,307,203)	$ (2,504,941)	$ (20,052,410)	$ (2,975,396)	$ (470,455)	7.000%	2.750%
13	$ (29,837,576)	$ (2,573,827)	$ (18,378,305)	$ (2,975,396)	$ (401,569)	7.000%	2.750%
14	$ (29,263,819)	$ (2,644,607)	$ (16,587,013)	$ (2,975,396)	$ (330,789)	7.000%	2.750%
15	$ (28,576,683)	$ (2,717,334)	$ (14,670,330)	$ (2,975,396)	$ (258,062)	7.000%	2.750%
16	$ (27,766,219)	$ (2,792,061)	$ (12,619,480)	$ (2,975,396)	$ (183,335)	7.000%	2.750%
17	$ (26,821,724)	$ (2,868,842)	$ (10,425,070)	$ (2,975,396)	$ (106,554)	7.000%	2.750%
18	$ (25,731,691)	$ (2,947,736)	$ (8,077,051)	$ (2,975,396)	$ (27,661)	7.000%	2.750%
19	$ (24,483,748)	$ (3,028,798)	$ (5,564,671)	$ (2,975,396)	$ 53,402	7.000%	2.750%
20	$ (23,064,597)	$ (3,112,090)	$ (2,876,424)	$ (2,975,396)	$ 136,694	7.000%	2.750%

Amortization Schedules & Other Pension Resources
www.newportbeachca.gov/cmta

Estimate Future Discount Rate Assumption Changes

Analysis of Discount Rate Sensitivity

Miscellaneous Plan*

Sensitivity Analysis				
As of June 30, 2016	Plan's Normal Cost	Accrued Liability	Unfunded Accrued Liability	Funded Status
7.375% (current discount rate)	16.212%	$373,199,630	$119,670,621	67.9%
6.0%	22.472%	$444,859,075	$191,330,066	57.0%
7.0%	17.678%	$390,864,603	$137,335,594	64.9%
8.0%	14.090%	$346,423,577	$92,894,568	73.2%

~ $17,664,973

Safety Plan*

Sensitivity Analysis				
As of June 30, 2016	Plan's Normal Cost	Accrued Liability	Unfunded Accrued Liability	Funded Status
7.375% (current discount rate)	27.435%	$514,282,247	$201,795,191	60.8%
6.0%	37.926%	$609,636,123	$297,149,067	51.3%
7.0%	29.915%	$537,794,527	$225,307,471	58.1%
8.0%	23.827%	$478,619,081	$166,132,025	65.3%

~$23,512,280
~$41,177,253 New Loss Base 6/30/16
X 1.07^2
~$47,143,837 2 Year Roll forward

Pg. 22 of 6/30/16 Valuation – Non-pooled Plans

*Estimates likely to be less severe in 6/30/17 Valuations

Amortization of Assumption Change

OTHER GAIN/LOSS $ 41,177,253

Year	Current Amort Policy Other (Gain)/Loss % of Pay 5 Yr Ramp Up/Down: Balance	20: Payment	New Amort Policy Other (Gain)/Loss Level $ No Ramp Up/Down: Balance	20: Payment	Payment Difference	Interest	Payroll
	$ 41,177,253	$ -	$ 41,177,253	$ -		7.000%	2.750%
	$ 44,059,661	$ -	$ 44,059,661	$ -	$ -	7.000%	2.750%
1	$ 47,143,837	$ 878,979	$ 47,143,837	$ 4,302,021	$ 3,423,041	7.000%	2.750%
2	$ 49,534,682	$ 1,806,303	$ 45,993,861	$ 4,302,021	$ 2,495,718	7.000%	2.750%
3	$ 51,133,656	$ 2,783,964	$ 44,763,386	$ 4,302,021	$ 1,518,056	7.000%	2.750%
4	$ 51,833,257	$ 3,814,031	$ 43,446,779	$ 4,302,021	$ 487,990	7.000%	2.750%
5	$ 51,516,321	$ 4,898,646	$ 42,038,009	$ 4,302,021	$ (596,625)	7.000%	2.750%
6	$ 50,055,264	$ 5,033,359	$ 40,530,624	$ 4,302,021	$ (731,338)	7.000%	2.750%
7	$ 48,352,586	$ 5,171,776	$ 38,917,723	$ 4,302,021	$ (869,755)	7.000%	2.750%
8	$ 46,387,541	$ 5,314,000	$ 37,191,919	$ 4,302,021	$ (1,011,979)	7.000%	2.750%
9	$ 44,137,824	$ 5,460,135	$ 35,345,309	$ 4,302,021	$ (1,158,114)	7.000%	2.750%
10	$ 41,579,465	$ 5,610,289	$ 33,369,436	$ 4,302,021	$ (1,308,268)	7.000%	2.750%
11	$ 38,686,699	$ 5,764,571	$ 31,255,252	$ 4,302,021	$ (1,462,551)	7.000%	2.750%
12	$ 35,431,849	$ 5,923,097	$ 28,993,075	$ 4,302,021	$ (1,621,077)	7.000%	2.750%
13	$ 31,785,179	$ 6,085,982	$ 26,572,545	$ 4,302,021	$ (1,783,962)	7.000%	2.750%
14	$ 27,714,753	$ 6,253,347	$ 23,982,579	$ 4,302,021	$ (1,951,326)	7.000%	2.750%
15	$ 23,186,273	$ 6,425,314	$ 21,211,315	$ 4,302,021	$ (2,123,293)	7.000%	2.750%
16	$ 18,162,916	$ 6,602,010	$ 18,246,062	$ 4,302,021	$ (2,299,989)	7.000%	2.750%
17	$ 12,605,148	$ 5,426,852	$ 15,073,242	$ 4,302,021	$ (1,124,832)	7.000%	2.750%
18	$ 7,873,929	$ 4,182,068	$ 11,678,324	$ 4,302,021	$ 119,953	7.000%	2.750%
19	$ 4,099,139	$ 2,864,717	$ 8,045,762	$ 4,302,021	$ 1,437,304	7.000%	2.750%
20	$ 1,422,793	$ 1,471,748	$ 4,158,920	$ 4,302,021	$ 2,830,272	7.000%	2.750%
Total Payments		$ 91,771,188		$ 86,040,412	$ (5,730,776)		
Net Savings		$ (5,730,776)					

Amortization Schedules &
Other Pension Resources
www.newportbeachca.gov/cmta

Detailed Approach – Compares Default Min. to Alt. Schedule

Default Minimum Schedule

			Not included in 2016 Valuation Yet														
			Experience - 2016			Experience - 2017			Assumption - 2017			Assumption - 2018					
			.6% Investment Return			11.2% Investment Return			7.25% Discount Rate			7.0% Discount Rate					
			% of Pay			% of Pay			% of Pay			% of Pay					
			2 Ramps	30		2 Ramps	30		2 Ramps	20		2 Ramps	20		DEFAULT TOTALS		
Yr	Val Yr.	FY	Balance	Payment	Yr	Balance	Payment	Yr	Balance	Payment	Yr	Balance	Payment	Yr	UAL	Min. Payment	Interest
0	2015	2018	36,091,576	-											323,234,214	24,512,888	
1	2016	2019	38,753,329	537,141	30	-									321,672,015	25,698,507	7.375%
2	2017	2020	41,006,673	1,090,105	29	(27,217,335)	(371,727)	30	16,338,103	304,722	20				307,500,226	26,513,323	7.250%
3	2018	2021	42,749,527	1,636,855	28	(28,738,031)	(743,016)	29	17,166,563	614,310	19	30,805,734	574,557	20	332,519,636	27,776,434	7.00%
4	2019	2022	44,048,817	2,247,948	27	(29,981,111)	(1,147,960)	28	17,732,775	949,110	18	32,367,808	1,158,291	19	327,293,605	30,538,723	7.00%
5	2020	2023	44,806,939	2,894,233	26	(30,892,330)	(1,576,532)	27	17,992,303	1,303,444	17	33,435,409	1,789,560	18	318,969,638	33,009,481	7.00%
6	2021	2024	44,949,607	2,981,060	25	(31,424,017)	(2,029,784)	26	17,903,472	1,678,184	16	33,924,753	2,457,662	17	307,639,748	34,665,218	7.00%
7	2022	2025	45,012,447	3,070,492	24	(31,524,073)	(2,090,678)	25	17,420,788	1,728,529	15	33,757,259	3,164,240	16	293,944,216	36,338,023	7.00%
8	2023	2026	44,987,177	3,162,606	23	(31,568,144)	(2,153,398)	24	16,852,238	1,780,385	14	32,847,152	3,259,168	15	277,578,463	37,428,164	7.00%
9	2024	2027	44,864,854	3,257,485	22	(31,550,421)	(2,218,000)	23	16,190,250	1,833,797	13	31,775,143	3,356,943	14	258,958,853	38,551,009	7.00%
10	2025	2028	44,635,826	3,355,209	21	(31,464,634)	(2,284,540)	22	15,426,673	1,888,811	12	30,526,955	3,457,651	13	237,894,367	39,707,539	7.00%
11	2026	2029	44,289,678	3,455,865	20	(31,304,011)	(2,353,076)	21	14,552,739	1,945,475	11	29,087,220	3,561,380	12	214,179,618	40,898,765	7.00%
12	2027	2030	43,815,180	3,559,541	19	(31,061,251)	(2,423,669)	20	13,559,016	2,003,839	10	27,439,404	3,668,222	11	187,593,817	42,125,728	7.00%
13	2028	2031	43,200,225	3,666,328	18	(30,728,476)	(2,496,379)	19	12,435,360	2,063,954	9	25,565,724	3,778,269	10	157,899,658	43,389,500	7.00%
14	2029	2032	42,431,762	3,776,317	17	(30,297,195)	(2,571,270)	18	11,170,864	2,125,873	8	23,447,054	3,891,617	9	124,842,137	44,691,185	7.00%
15	2030	2033	41,495,732	3,889,607	16	(29,758,256)	(2,648,408)	17	9,753,804	2,189,649	7	21,062,828	4,008,365	8	88,147,273	46,031,920	7.00%
16	2031	2034	40,376,992	4,006,295	15	(29,101,800)	(2,727,860)	16	8,171,579	2,255,339	6	18,390,941	4,128,616	7	47,520,756	47,412,878	7.00%
17	2032	2035	39,059,238	4,126,484	14	(28,317,205)	(2,809,696)	15	6,410,649	2,322,999	5	15,407,633	4,252,475	6	2,646,477	6,156,754	7.00%
18	2033	2036	37,524,916	4,250,279	13	(27,393,037)	(2,893,987)	14	4,456,466	1,914,151	4	12,087,373	4,380,049	5	(2,668,029)	5,256,194	7.00%
19	2034	2037	35,755,138	4,377,787	12	(26,316,986)	(2,980,807)	13	2,788,405	1,478,682	3	8,402,732	3,609,160	4	(7,523,736)	3,393,769	7.00%
20	2035	2038	33,729,580	4,509,121	11	(25,075,805)	(3,070,231)	12	1,454,033	1,015,361	2	5,257,579	2,788,076	3	(10,900,394)	1,414,868	7.00%

Detailed Approach – Compares Minimum vs Alt. Cash Flows

Proposed Alternative Schedule

FY 2018-19

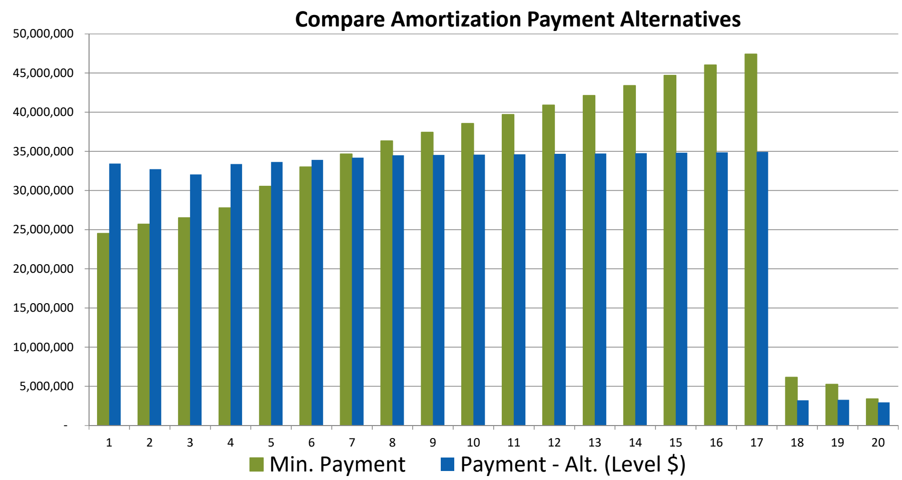
Min. Payment $25.6 Million

Proposed Pmt. $34.5 Million

			Not included in 2016 Valuation Yet															
			Experience - 2016			Experience - 2017			Assumption - 2017			Assumption - 2018						
			.6% Investment Return			11.2% Investment Return			7.25% Discount Rate			7.0% Discount Rate						
			Level $	20		Level $	20		Level $	20		Level $	20		Additional	ALTERNATIVE TOTALS		
Yr	Val Yr.	FY	Balance	Payment	Yr	Balance	Payment	Yr	Balance	Payment	Yr	Balance	Payment	Yr	Payment	UAL - Alt.	Alt. Pmt.	Interest
0	2015	2018	36,091,576	-		-	-		-	-		-	-		8,914,595	323,234,214	33,427,483	
1	2016	2019	20,938,734	$ 1,963,331	20	-	-		-	-		-	-		8,900,000	303,857,420	32,727,939	7.375%
2	2017	2020	20,423,536	$ 1,944,002	19	(27,217,335)	$ (2,529,177)	20	16,338,103	$ 1,518,222	20				-	281,978,516	32,050,357	7.250%
3	2018	2021	19,842,291	$ 1,906,959	18	(26,506,347)	$ (2,479,262)	19	15,911,309	$ 1,488,259	19	30,805,734	$ 2,811,118	20	-	300,854,633	33,379,158	7.000%
4	2019	2022	19,258,678	$ 1,906,959	17	(25,797,222)	$ (2,479,262)	18	15,485,634	$ 1,488,259	18	30,054,292	$ 2,811,118	19	-	287,842,703	33,631,571	7.000%
5	2020	2023	18,634,212	$ 1,906,959	16	(25,038,459)	$ (2,479,262)	17	15,030,161	$ 1,488,259	17	29,250,249	$ 2,811,118	18	-	273,919,938	33,904,539	7.000%
6	2021	2024	17,966,033	$ 1,906,959	15	(24,226,582)	$ (2,479,262)	16	14,542,805	$ 1,488,259	16	28,389,923	$ 2,811,118	17	-	259,022,580	34,193,434	7.000%
7	2022	2025	17,251,081	$ 1,906,959	14	(23,357,874)	$ (2,479,262)	15	14,021,334	$ 1,488,259	15	27,469,374	$ 2,811,118	16	-	243,082,407	$\boxed{34,498,967}$	7.000%
8	2023	2026	16,486,083	$ 1,906,959	13	(22,428,356)	$ (2,479,262)	14	13,463,360	$ 1,488,259	14	26,484,387	$ 2,811,118	15	-	226,026,421	34,540,015	7.000%
9	2024	2027	15,667,535	$ 1,906,959	12	(21,433,772)	$ (2,479,262)	13	12,866,329	$ 1,488,259	13	25,430,451	$ 2,811,118	14	-	207,776,517	34,582,294	7.000%
10	2025	2028	14,791,689	$ 1,906,959	11	(20,369,567)	$ (2,479,262)	12	12,227,504	$ 1,488,259	12	24,302,739	$ 2,811,118	13	-	188,249,119	34,625,841	7.000%
11	2026	2029	13,854,533	$ 1,906,959	10	(19,230,868)	$ (2,479,262)	11	11,543,963	$ 1,488,259	11	23,096,088	$ 2,811,118	12	-	167,354,804	34,670,695	7.000%
12	2027	2030	12,851,777	$ 1,906,959	9	(18,012,459)	$ (2,479,262)	10	10,812,573	$ 1,488,259	10	21,804,970	$ 2,811,118	11	-	144,997,886	34,716,894	7.000%
13	2028	2031	11,778,827	$ 1,906,959	8	(16,708,763)	$ (2,479,262)	9	10,029,986	$ 1,488,259	9	20,423,475	$ 2,811,118	10	-	121,075,984	34,764,480	7.000%
14	2029	2032	10,630,771	$ 1,906,959	7	(15,313,807)	$ (2,479,262)	8	9,192,618	$ 1,488,259	8	18,945,275	$ 2,811,118	9	-	95,479,549	34,813,493	7.000%
15	2030	2033	9,402,351	$ 1,906,959	6	(13,821,204)	$ (2,479,262)	7	8,296,634	$ 1,488,259	7	17,363,601	$ 2,811,118	8	-	68,091,364	34,863,976	7.000%
16	2031	2034	8,087,942	$ 1,906,959	5	(12,224,120)	$ (2,479,262)	6	7,337,931	$ 1,488,259	6	15,671,209	$ 2,811,118	7	-	38,786,005	34,915,974	7.000%
17	2032	2035	6,681,524	$ 1,906,959	4	(10,515,239)	$ (2,479,262)	5	6,312,119	$ 1,488,259	5	13,860,351	$ 2,811,118	6	-	7,429,272	3,215,362	7.000%
18	2033	2036	5,176,657	$ 1,906,959	3	(8,686,737)	$ (2,479,262)	4	5,214,500	$ 1,488,259	4	11,922,732	$ 2,811,118	5	-	6,724,335	3,270,527	7.000%
19	2034	2037	3,566,449	$ 1,906,959	2	(6,730,240)	$ (2,479,262)	3	4,040,048	$ 1,488,259	3	9,849,480	$ 2,811,118	4	-	5,970,054	2,937,186	7.000%
20	2035	2038	1,843,527	$ 1,906,959	1	(4,636,787)	$ (2,479,262)	2	2,783,385	$ 1,488,259	2	7,631,100	$ 2,811,118	3	-	5,162,972	2,582,139	7.000%

43

Modify Payment Schedule to Meet Agency Needs



Detail Analysis Checklist

- ❑ Replicate Current Amortization Schedules Annually
- ❑ Estimate & Add new known bases
- ❑ Evaluate bases longer than 20 Years
- ❑ Consider combining bases to create fewer and shorter amortization bases.
- ❑ Create a comparative amortization schedules
- ❑ Quantify Cost/Benefit of alternative schedules by preparing a PV analysis of current and proposed cash flows.
- ❑ Look forward 7-10 Years evaluate what your agency can afford to pay, make adjustments as necessary.
- ❑ Making use of the "additional discretionary payment " (ADP), "fresh start" or "partial fresh start" options.
- ❑ If making ADP, identify bases to apply payments to and consider making payments monthly (dollar cost avg.)
- ❑ Review plan with your actuary
- ❑ Educate your elected officials

2018 CMTA Annual Conference
Defining and Cracking the Pension Nut

Analyzing the Nut

Jasmine Nachtigall-Fournier
President
GovInvest & AdastraGov, Inc.
April 25, 2018

46

"The difference between the impossible and the possible lies in a person's determination.
Tommy Lasorda

47

Overview

1. **Long Term Planning**
   a. Development of Unfunded Liabilities
   b. Development of Annual Pension Costs

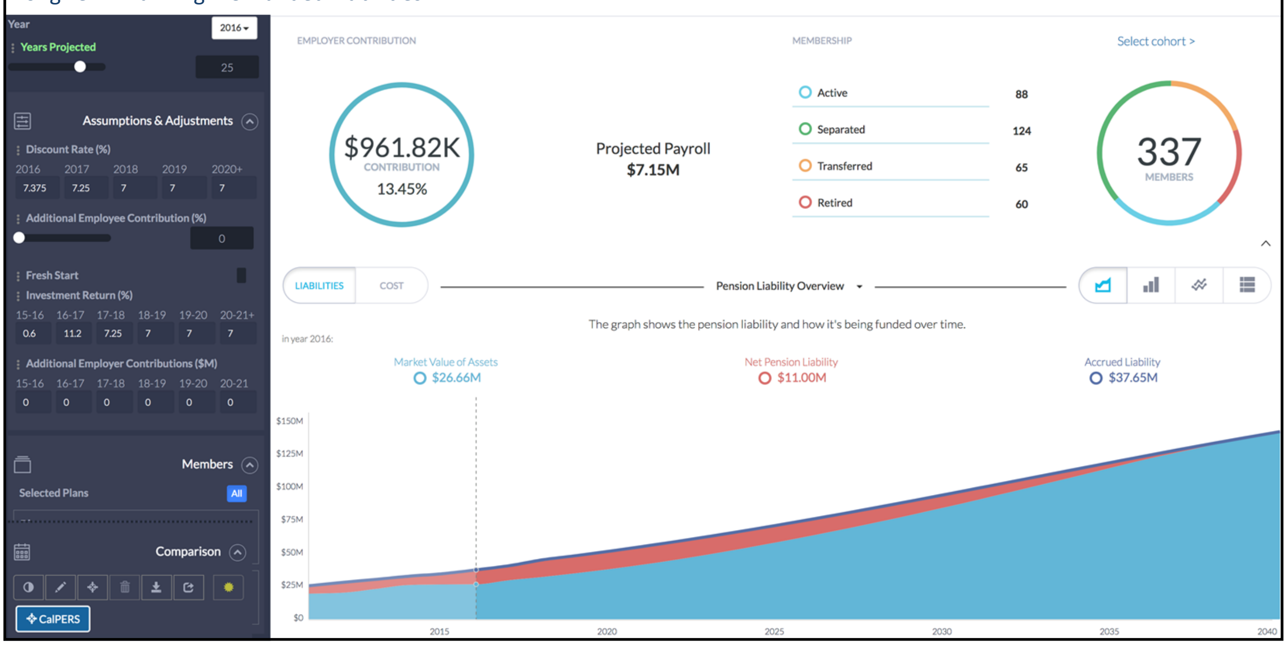
2. **Explore Funding Options**
   a. Fresh Start
   b. Additional Payments

3. **Budget for Expected Changes – Without Waiting for Your Valuations**
   a. Investment Returns
   b. Policy Changes

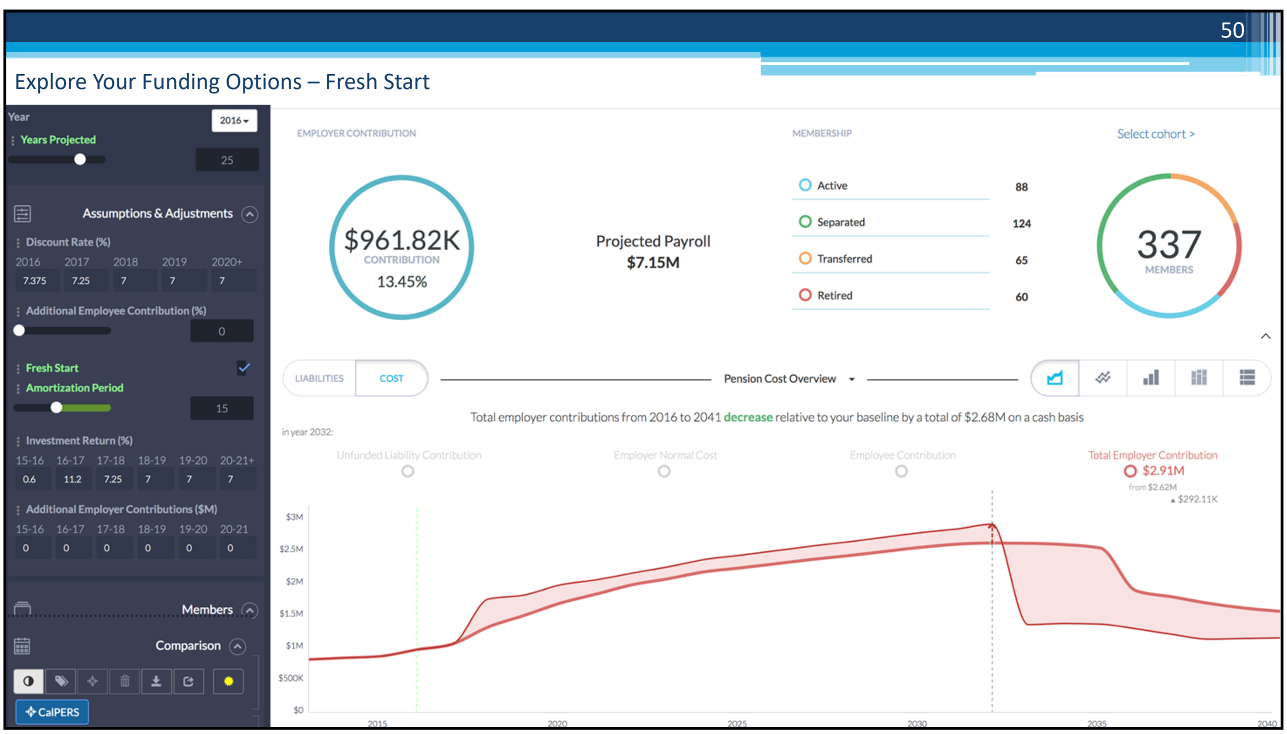
4. **Understand & Budget for the Impact of Bargaining Decisions**

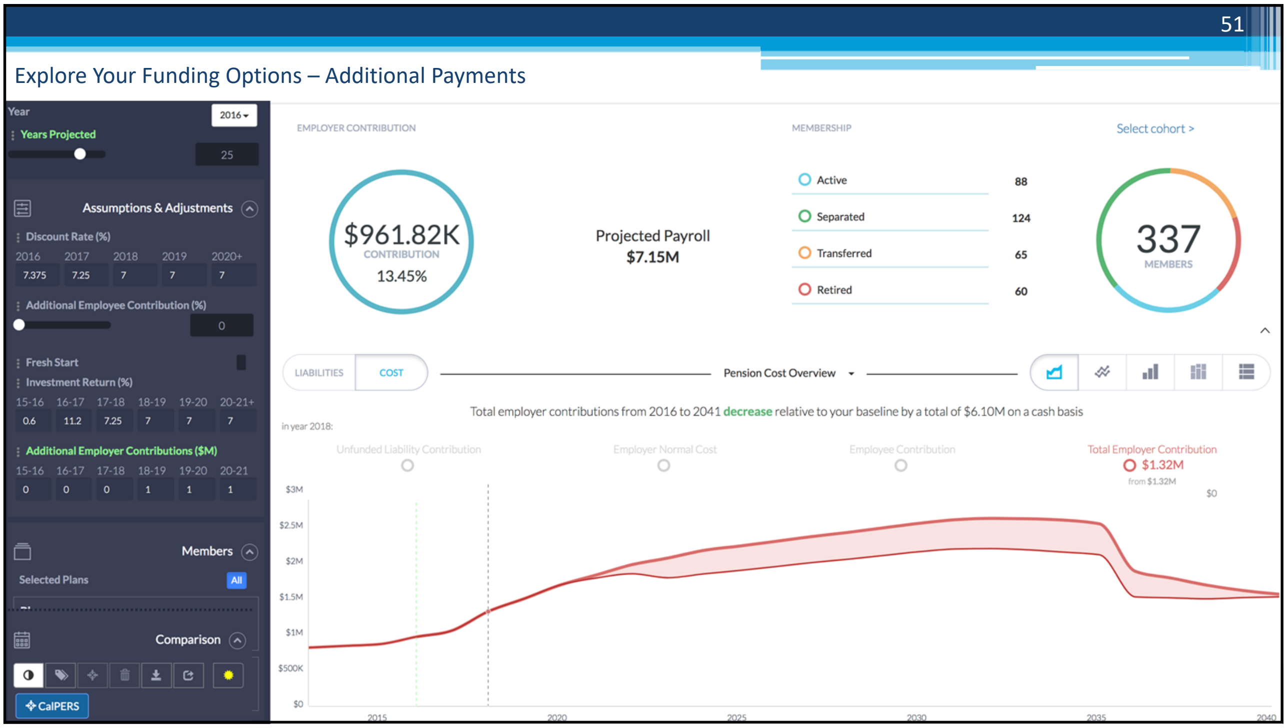
48

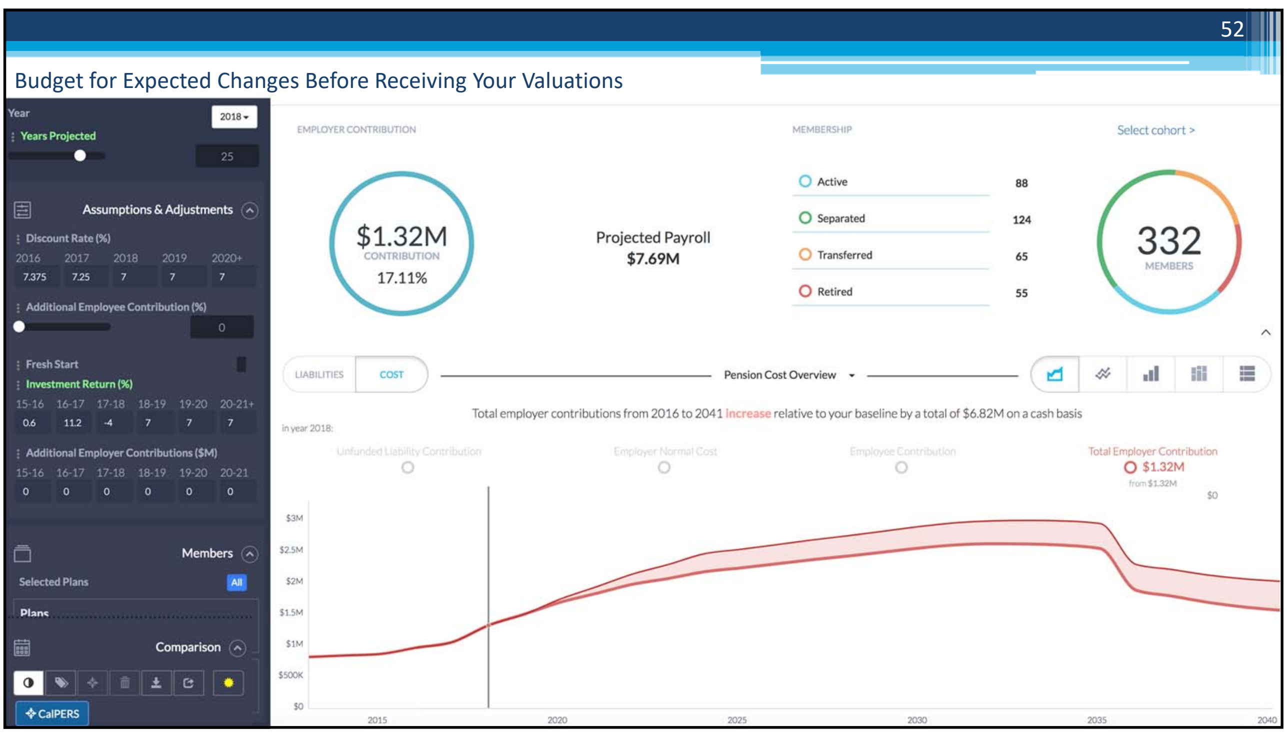
Long Term Planning – Unfunded Liabilities



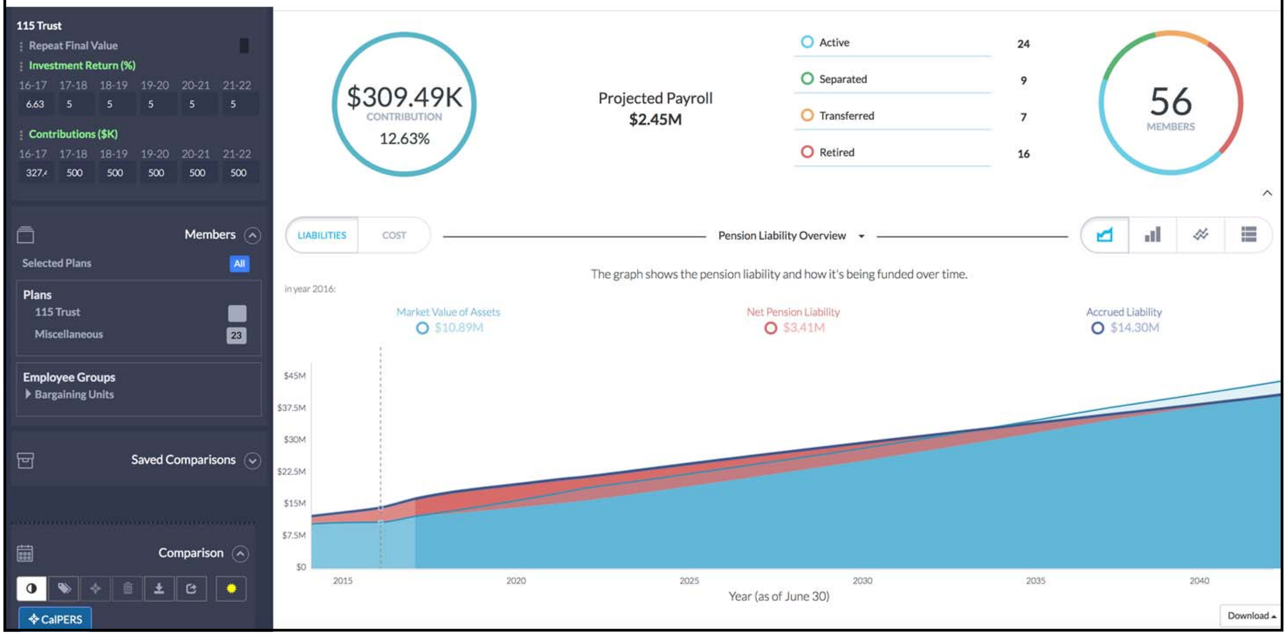

49
Long Term Planning – Annual Costs
Year
2016
Years Projected
25
Assumptions & Adjustments
Discount Rate (%)
2016 2017 2018 2019 2020+
7.375 7.25 7 7 7
Additional Employee Contribution (%)
0
Fresh Start
Investment Return (%)
15-16 16-17 17-18 18-19 19-20 20-21+
0.6 11.2 7.25 7 7 7
Additional Employer Contributions ($M)
15-16 16-17 17-18 18-19 19-20 20-21
0 0 0 0 0 0
Members
Selected Plans
All
Comparison
CalPERS
EMPLOYER CONTRIBUTION
$961.82K
CONTRIBUTION
13.45%
Projected Payroll
$7.15M
MEMBERSHIP
Active 88
Separated 124
Transferred 65
Retired 60
Select cohort >
337
MEMBERS
LIABILITIES
COST
Pension Cost Overview
This graph shows the main components of your annual pension costs.
in year 2016:
Unfunded Liability Contribution
$413.57K
Employer Normal Cost
$548.25K
Employee Contribution
$457.54K
Total Employer Contribution
$961.82K
$3.75M
$3M
$2.25M
$1.5M
$750K
$0
2015
2020
2025
2030
2035
2040


50
Explore Your Funding Options – Fresh Start
Year
2016
Years Projected
25
Assumptions & Adjustments
Discount Rate (%)
2016 2017 2018 2019 2020+
7.375 7.25 7 7 7
Additional Employee Contribution (%)
0
Fresh Start
Amortization Period
15
Investment Return (%)
15-16 16-17 17-18 18-19 19-20 20-21+
0.6 11.2 7.25 7 7 7
Additional Employer Contributions ($M)
15-16 16-17 17-18 18-19 19-20 20-21
0 0 0 0 0 0
Members
Comparison
CalPERS
EMPLOYER CONTRIBUTION
$961.82K
CONTRIBUTION
13.45%
Projected Payroll
$7.15M
MEMBERSHIP
Active 88
Separated 124
Transferred 65
Retired 60
Select cohort >
337
MEMBERS
LIABILITIES
COST
Pension Cost Overview
Total employer contributions from 2016 to 2041 decrease relative to your baseline by a total of $2.68M on a cash basis
in year 2032:
Unfunded Liability Contribution
Employer Normal Cost
Employee Contribution
Total Employer Contribution
$2.91M
from $2.62M
▲ $292.11K
$3M
$2.5M
$2M
$1.5M
$1M
$500K
$0
2015
2020
2025
2030
2035
2040

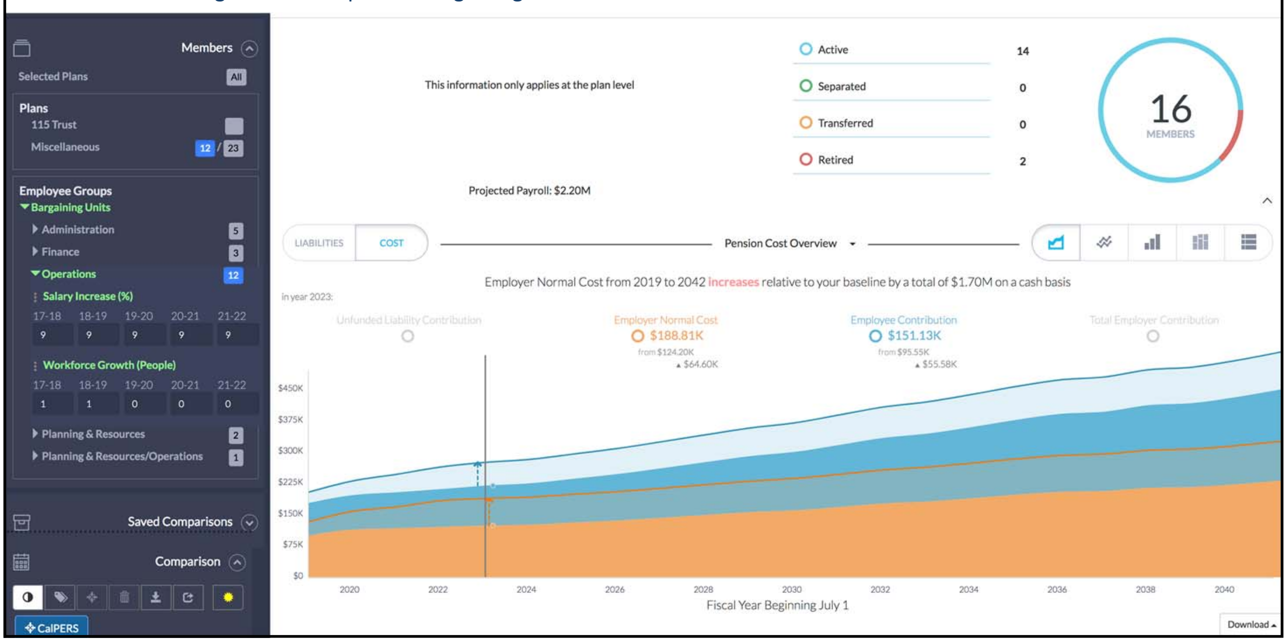

51
Explore Your Funding Options – Additional Payments
Year
2016
Years Projected
25
Assumptions & Adjustments
Discount Rate (%)
2016 2017 2018 2019 2020+
7.375 7.25 7 7 7
Additional Employee Contribution (%)
0
Fresh Start
Investment Return (%)
15-16 16-17 17-18 18-19 19-20 20-21+
0.6 11.2 7.25 7 7 7
Additional Employer Contributions ($M)
15-16 16-17 17-18 18-19 19-20 20-21
0 0 0 1 1 1
Members
Selected Plans
All
Comparison
CalPERS
EMPLOYER CONTRIBUTION
$961.82K
CONTRIBUTION
13.45%
Projected Payroll
$7.15M
MEMBERSHIP
Active 88
Separated 124
Transferred 65
Retired 60
Select cohort >
337
MEMBERS
LIABILITIES
COST
Pension Cost Overview
Total employer contributions from 2016 to 2041 decrease relative to your baseline by a total of $6.10M on a cash basis
in year 2018:
Unfunded Liability Contribution
Employer Normal Cost
Employee Contribution
Total Employer Contribution
$1.32M
from $1.32M
$0
$3M
$2.5M
$2M
$1.5M
$1M
$500K
$0
2015
2020
2025
2030
2035
2040


52
Budget for Expected Changes Before Receiving Your Valuations
Year
2018
Years Projected
25
Assumptions & Adjustments
Discount Rate (%)
2016 2017 2018 2019 2020+
7.375 7.25 7 7 7
Additional Employee Contribution (%)
0
Fresh Start
Investment Return (%)
15-16 16-17 17-18 18-19 19-20 20-21+
0.6 11.2 -4 7 7 7
Additional Employer Contributions ($M)
15-16 16-17 17-18 18-19 19-20 20-21
0 0 0 0 0 0
Members
Selected Plans
All
Plans
Comparison
CalPERS
EMPLOYER CONTRIBUTION
$1.32M
CONTRIBUTION
17.11%
Projected Payroll
$7.69M
MEMBERSHIP
Active 88
Separated 124
Transferred 65
Retired 55
Select cohort >
332
MEMBERS
LIABILITIES
COST
Pension Cost Overview
Total employer contributions from 2016 to 2041 increase relative to your baseline by a total of $6.82M on a cash basis
in year 2018:
Unfunded Liability Contribution
Employer Normal Cost
Employee Contribution
Total Employer Contribution
$1.32M
from $1.32M
$0
$3M
$2.5M
$2M
$1.5M
$1M
$500K
$0
2015
2020
2025
2030
2035
2040

What About Section 115 Trusts?

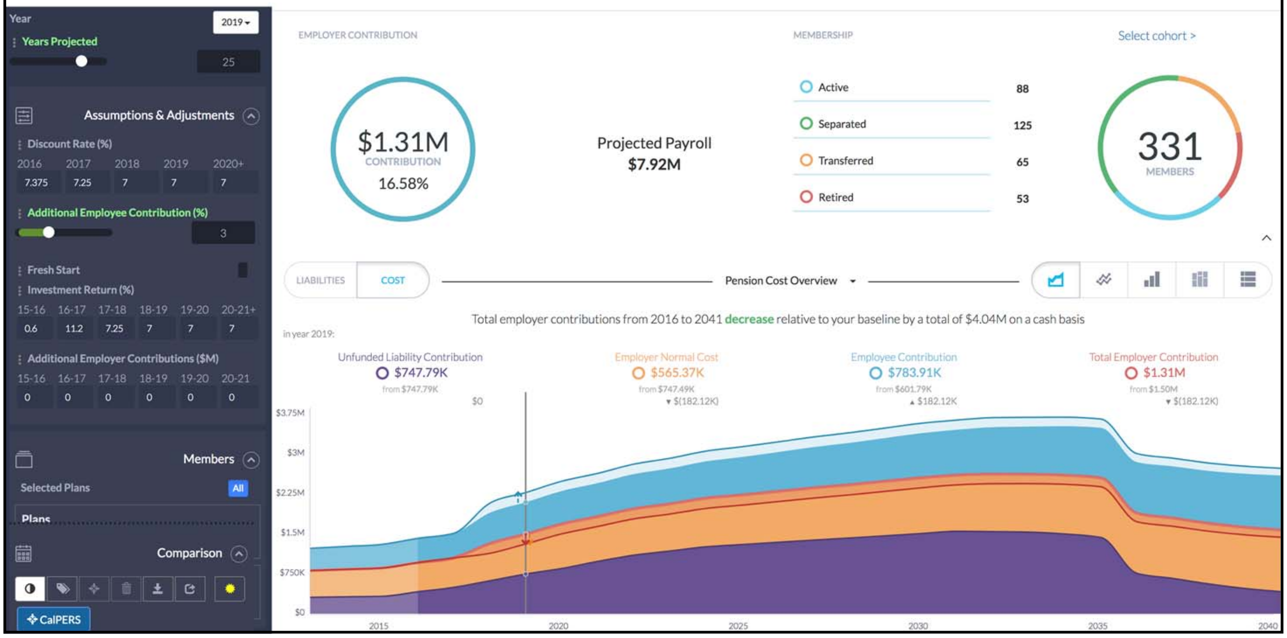


Understand and Budget for the Impact of Bargaining Decisions



55

Understand and Budget for the Impact of Bargaining Decisions



2018 CMTA Annual Conference
Defining and Cracking the Pension Nut

Cracking the Nut

Michael Busch
CEO
Urban Futures Inc
April 25, 2018

57

“It’s ain’t over till it’s over.”
Yogi Berra

58

Cracking the Nut – Checklist of Solutions & Practical Approaches

What exactly is the “nut” we need to crack?

Over the next 6-years CalPERS participating cities will need to increase their payments by roughly 87% from $3.1B in 2017-18 to $5.8B by 2024-25.

“We cannot solve our problems with the same thinking we used to create them.”

Albert Einstein

Cracking the Nut – Checklist of Solutions & Practical Approaches

Solutions fall into two (2) basic categories:

Cost Containment: Process of maintaining organizational costs within a specified budget; restraining expenditures to meet organizational or project financial targets.

Cost Recovery: Recoupment of the purchase price of a capital or qualified asset or service provided through depreciation, user fees and taxes over a prescribed period.

Confronting The Issue

Public agencies must develop and implement a plan to pay down the UAL. Paying more than the minimum payment will have long-term benefits

Where will these additional or reallocated funds come from? To further evaluate each opportunity, the options can be broken down into three (3) opportunity groups:

1) **Policy Opportunities**;
   - Implementation of Fiscal Policies Leading to Budget Efficiencies
   - Changes in Service Delivery
   - Labor Negotiations

2) **Administrative Opportunities**; and
   - Raise Taxes and Fees

3) **Voter Approved Opportunities**
   - Local Ballot Measure

Implementation of Fiscal Policies Leading to Budget Efficiencies

Public agencies should review and amend its Financial/Fiscal policies as financial goals and objectives may have changed.

Operational Efficiencies

Utilize contract staff when current or higher level services can be obtained at lower cost.

Staff each department according to adopted service levels, utilizing consultants and temp help instead of hiring staff for special projects or peak workload periods.

Develop agreements with the other public agencies to combine certain operations and provide program assistance where appropriate.

Allocate vacancy savings and one-time revenue to one-time needs; including pensions

Implementation of Fiscal Policies Leading to Budget Efficiencies

Real Property Asset Management

Evaluate and program surplus real property into a revenue generating asset

Consider joint development projects and P3 opportunities

New Services

Add new services only when a funding source is identified

Require agreements for specific services & monitor effectiveness on an ongoing basis.

Fiscal Management

Charge fees for services that reflect the true cost of providing such services

Fully account for the cost of enterprise operations to avoid any subsidy by the General Fund

Managing outstanding debt and refinance when the market supports lower interest costs

Changes in Service Delivery

In an effort to provide essential services to the community, public agencies need to “re-boot” its approach to funding services and to pass all expenses through a categorization and prioritization process to help elected officials determine funding priorities over the next several fiscal years.

A four phase priority budget process should be implemented as follows:

Phase 1- Break functions/programs (i.e., expenses) down into three categories, (a) mandated/legally required, (b) basic, and (c) enhanced

Changes in Service Delivery (con't.)

Phase 2- Prioritize the functions/programs within each of the categories (except for mandated/legally required functions/programs)

Phase 3- Fund only those top priority functions/programs, until anticipated revenues are all allocated out for the fiscal year

Phase 4-Develop and implement a formal stakeholder and resident budget participation process that brings both parties into the process and allows them to give suggestions and recommendations to the staff and elected officials on budget priorities and basic services.

Contract Service Delivery Options

Fire Department / EMS
Fleet Maintenance
Solid Waste Collection
Street Sweeping
Right of Way Cleanup
Engineering
Inspection
Information Technology
Graffiti Abatement
Traffic Signal Maintenance
Street Maintenance
Custodial Maintenance
Park Maintenance
Code Enforcement
Treasury Management

Labor Negotiations

GUIDING PRINCIPLES

Organizational Integrity: Agree to the adherence of moral and ethical principles placing emphasis on the betterment of the organization over individual results.

Social Responsibility: Agree to the principle that the organization serves to the betterment of the community and not be solely devoted to interests of the organization.

Transparency: Transparency permits the employees, elected officials, and community a greater understanding of an agency's operations, including which parts of the organization are most and least efficient. This, in turn, places greater pressure on the organization to communicate openly and to produce acceptable results in all facets of a agency's operations and negotiations.

Labor Negotiations (Con't)

Open up the books to labor groups to gain buy-in

Accept that benefits may never be as good going forward

Look at total compensation and cost out all labor proposals

Evaluate the benefits of short and long-term agreements

Look at OPEB and other contractual obligations

Cost sharing of pension costs are on the rise (public safety is paying 14% in some communities)

Is job sharing an opportunity in your organization?

Raise Taxes and Fees

Maintain Full Cost Allocation Plan: Cities must prepare a Cost Allocation Study and modified its master fee schedule accordingly. As a best practice, cities should amend the master fee schedule every 2-3 years.

The Landscaping and Lighting Act of 1972 (Streets & Highways §22500) allows local governmental agencies to form Landscape & Lighting Maintenance Districts for the purpose of financing the costs and expenses of landscaping and lighting public areas.

Community Facilities Districts (Mello-Roos) and 1913/1915 Act (Government Code 53311-53368.3) was created to provide an alternate method of financing needed improvements and services.

Raise Taxes and Fees (1972 Act)

How is a Landscape Lighting District Formed? The sponsoring agency conducts a study, prepares an engineer's report, proposes the formation of a district and the levy of assessments. Affected property owners are then notified and a public hearing is held. In order to approve the district, a majority vote of affected property owners through an assessment balloting procedure is required.

How is the Annual Charge Determined? Each district establishes a benefit formula and each parcel in the service area is assessed according to the benefit it receives from the services and improvements.

Special Requirements for Increased Charges. Under Prop. 218, to increase an existing assessment, the agency must give written notice to all affected property owners, hold a public hearing and an assessment ballot vote. A majority vote is required to approve the rate increase.

Raise Taxes and Fees (CFD's & 1913/1915 Act)

How is a CFD Formed? A CFD is created by a sponsoring local government agency when services funding is a standard condition of approval for new development. A CFD cannot be formed without a two-thirds majority vote within the proposed boundaries. Once approved a special tax lien is placed against each property within the CFD.

How is the Annual Charge Determined? Every district has a maximum allowable assessment which is established at the time of district formation. The maximum assessment is based on cost projections to cover the cost of services within each district.

Special Requirements for Increased Charges: Most District's include an annual adjustment in an effort to balance on-going district costs. To increase an existing assessment without an inflator the agency must give written notice to all affected property owners, hold a public hearing and an assessment ballot vote. A majority vote is required to approve the rate increase

Local Ballot Measure

Given the current economic pressure most cities are under over the next five to ten years local agencies may have no option but to go to the voters

General Revenue Tax Measures requiring a majority approval have a history of higher approval ratings (avoid special taxes if possible).

To be successful, the most important things to implement in any measure process: 1) the need for extensive polling, 2) the need for voter education efforts,3) hiring of experienced consultants to guide the City, 4) presenting a united City front before going to voters

Options: Sales Tax, TOT, Parcel Tax or UUT

Lessons Learned From A Financial Crisis

Can't operate in a crisis based on fear—stalls progress

Develop list of critical tasks and strategy early, hold regular team meetings and go to work.

Begin decision making in a crisis by asking, "what is the right thing to do"

Review all administrative and policy options before moving to a ballot measure

Questions and Answers