



Employee Pensions

June 20, 2017



Total Compensation Overview

- Total compensation consists of three primary elements
- Salary – money that employees are paid
- Insurance - Medical, Dental, Vision, other
- Retirement (pension) costs

Components of Pension Costs

- Employer rate: the percentage of pay that the City pays CalPERS each year (in addition to wages)
 - 47.2% for Safety and 28.2% for Miscellaneous
- Employee rate: the employee share of cost
 - Classic Rate: 9% for Safety and 8% for Miscellaneous (City pays a portion)
 - PEPRA Rate: 11% for Safety and 6.25% for Miscellaneous



PERsable Wages

- Normal monthly rate of pay
- Not all compensation is “PERsable”
- Generally excludes:
 - Overtime allowances
 - Bonuses or one-time payments to an individual
 - Leave payouts

Pension Cost Trends

- Some key points to focus on during the presentation:
 - Significant increases over last 15 years
 - Unfunded liability increasing
 - Pension costs rising due to actuarial methodology changes, demographic assumption changes, de-risking policies
 - CalPERS investment returns under target
 - Projected FY 2017/18 and forward contribution rates up sharply



Time Line of Major Events

- 1999: SB400 adoption – State enhancements
- 2001: Sunnyvale enhanced Safety
- 2002: Stock market crash post-911 recovery
- 2003: Sunnyvale enhanced Miscellaneous
(took effect in 2008)
- 2008: Great Recession
- 2012: Sunnyvale adds 2nd Tier
- 2013: Public Employees Pension Reform Act (PEPRA) went into effect



Unfunded Liability

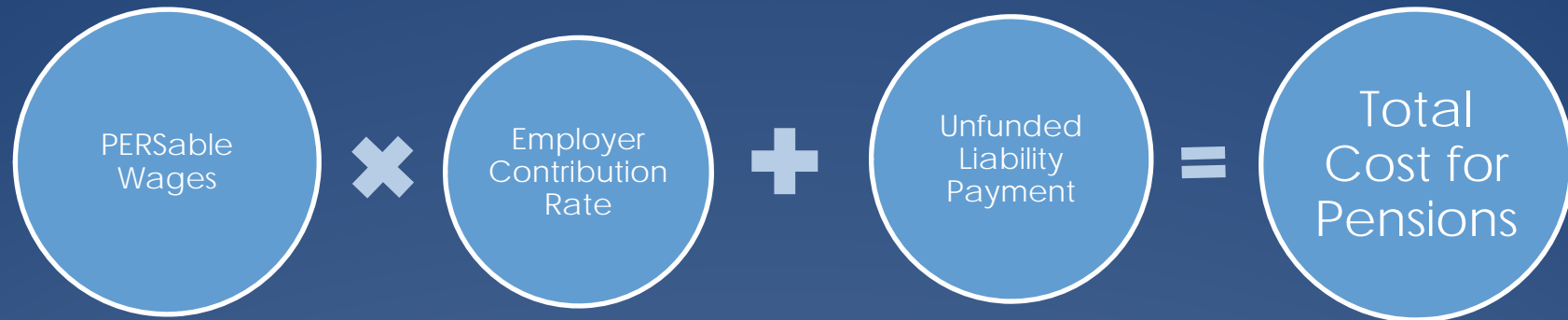
- Cost of benefits promised but not yet funded
- Current unfunded liability totals more than \$290M – up \$40M from the prior year
- Changes each year dependent on investment returns and employee demographics (for example, last year it went down \$19M)



How Sunnyvale Plans

- As a current practice, City contracts with Bartel to do an analysis of the CalPERS actuarial report to advise on the fiscal impact
- CalPERS reports come out each year and provide two years of projections
- Bartel projects long term rates
- City incorporates into long term financial plans

Including Long-Term Pension Costs in Twenty-Year Plan



What's the Issue/Why are we here?

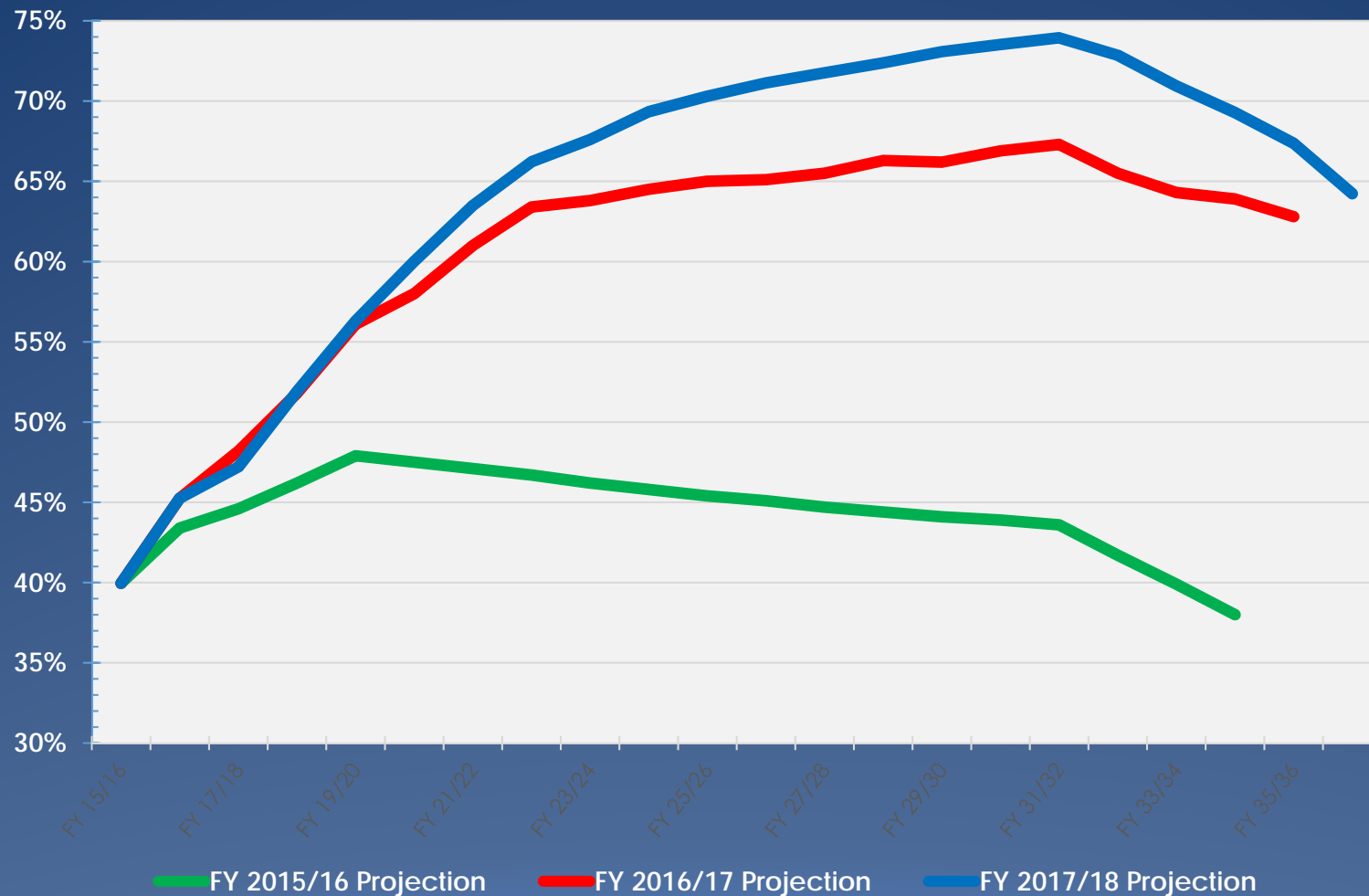
- Two consecutive years of very large Increases in projected rates
- With FY 2016/17 budget -
 - Miscellaneous rates increase from one to eleven percentage points
 - Safety rates increase between four and twenty-three percentage points
 - 20-Year Impact: \$167M
- 20-Year Impact: \$167M
 - (Average of \$8.4M per year!)

What's the Issue/Why are we here?

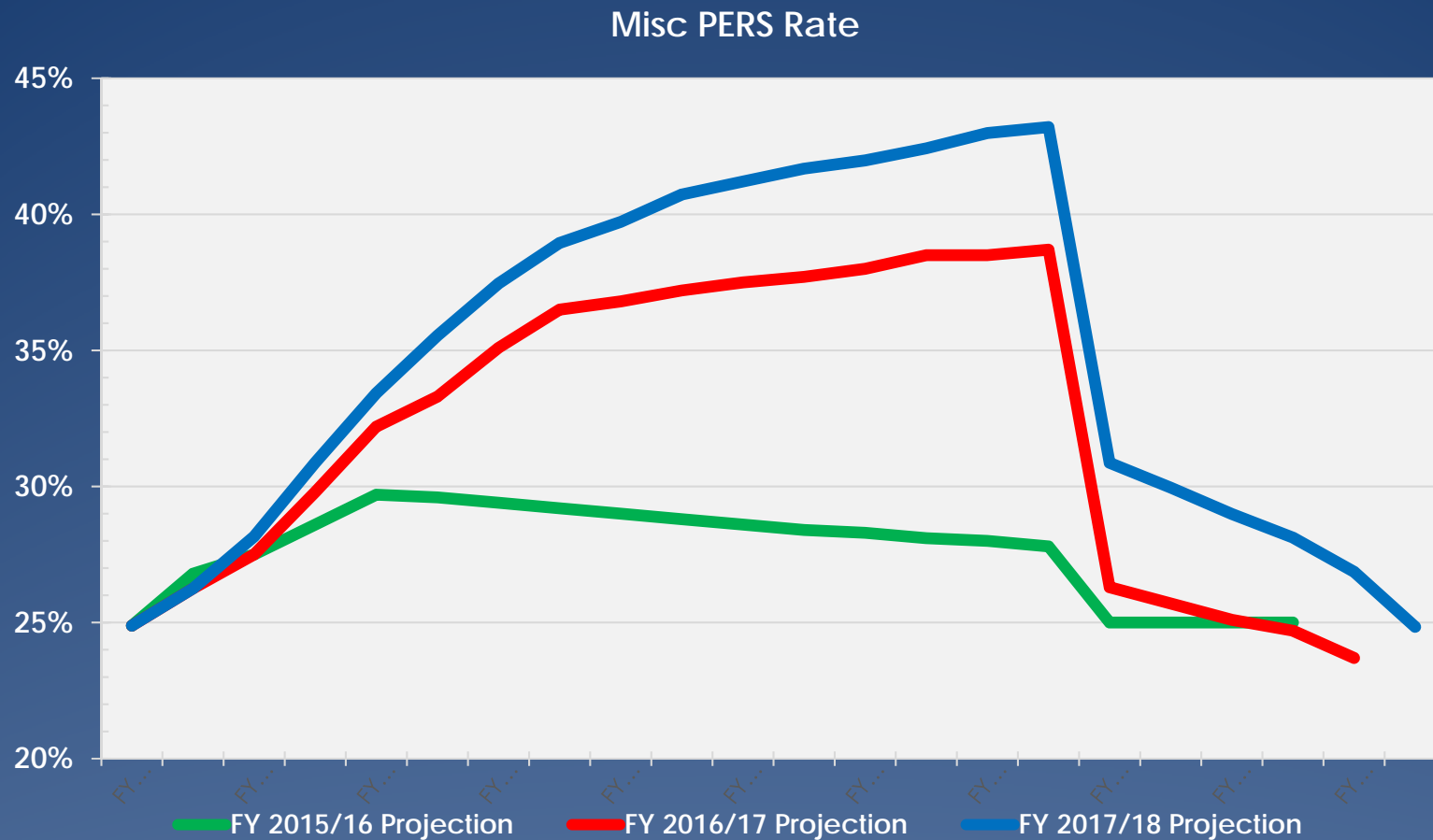
- With FY 2017/18 budget -
 - Miscellaneous rates increase an additional one to eight percentage points
 - Safety rates increase up to an additional seven percentage points
- 20-Year Impact: \$108M
 - Average of \$5.4M per year!

PERS Contribution Rate Projection

Safety PERS Rates



PERS Contribution Rate Projection



Consulting Actuary Track Record

- Confidence in Bartel projection is high

		Bartel Projection - Miscellaneous					
Rate Yr	Actual	6/30/2007	6/30/2008	6/30/2010	6/30/2011	6/30/2012	6/30/2013
FY 10/11	16.609%	15.200%					
FY 11/12	19.496%	22.000%	17.200%				
FY 12/13	20.091%	22.100%	17.700%				
FY 13/14	21.506%	22.300%	19.500%	20.500%			
FY 14/15	22.998%	22.400%	19.800%	20.800%	23.400%		
FY 15/16	24.887%	22.500%	20.200%	21.100%	23.600%	24.200%	
FY 16/17	26.254%			21.500%	23.800%	26.300%	26.500%



Actuary Consultant Presentation

Bartel Associates, LLC

John E. Bartel

June 20, 2017



CITY OF SUNNYVALE

MISCELLANEOUS AND SAFETY PLANS

BARTTEL
ASSOCIATES, LLC

**CalPERS Actuarial Issues – 6/30/15 Valuation
Final Results**

Presented by **John Bartel, President**
Prepared by Bianca Lin, Assistant Vice President
Wai Man Yam, Actuarial Analyst
Bartel Associates, LLC

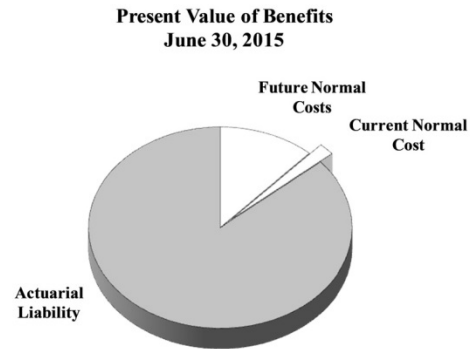
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Agenda

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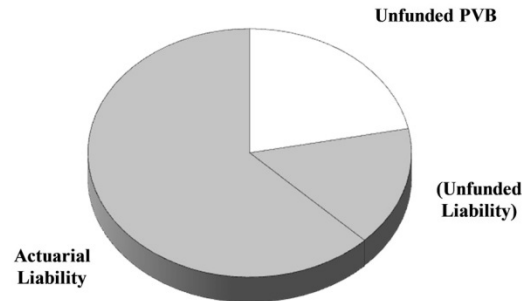
DEFINITIONS



- **PVB - Present Value of all Projected Benefits:**
 - Discounted value (at valuation date - 6/30/15), of all future expected benefit payments based on various (actuarial) assumptions
- **Actuarial Liability:**
 - Discounted value (at valuation date) of benefits earned through valuation date [value of past service benefit]
 - Portion of PVB “earned” at measurement
- **Current Normal Cost:**
 - Portion of PVB allocated to (or “earned” during) current year
 - Value of employee and employer current service benefit

DEFINITIONS

Present Value of Benefits
June 30, 2015



- **Target-** Have money in the bank to cover Actuarial Liability (past service)
- **Unfunded Liability** - Money short of target at valuation date
- **Excess Assets / Surplus:**
 - Money over and above target at that point in time
 - Doesn't mean you're done contributing
- **Super Funded:**
 - Assets cover whole pie (PVB)
 - If everything goes exactly like PERS calculated, you'll never have to put another (employer or employee) dime in

HOW WE GOT HERE

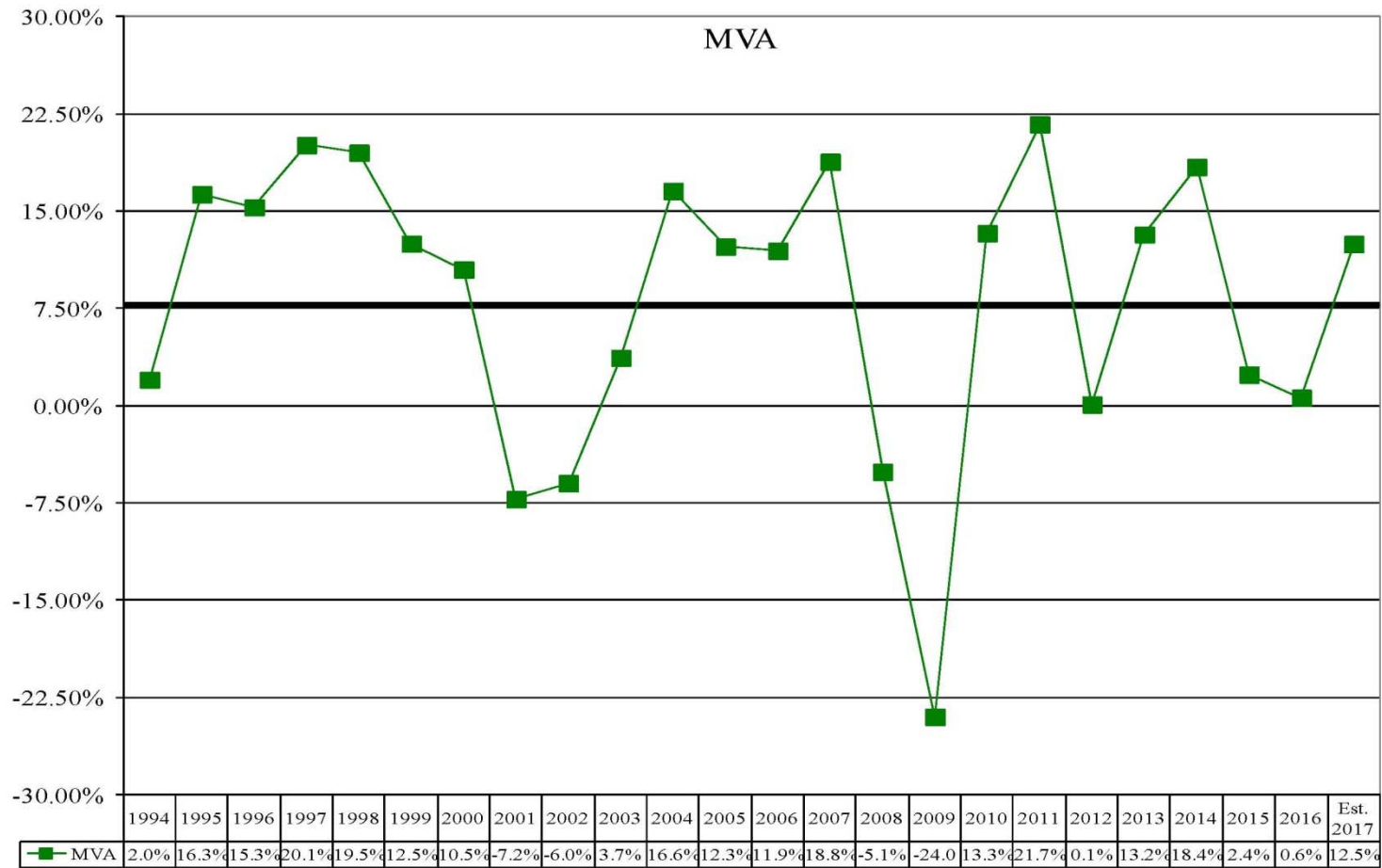
- Investment Losses
- Enhanced Benefits
- CalPERS Contribution Policy
- Demographics



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HOW WE GOT HERE – INVESTMENT RETURN



Above assumes contributions, payments, etc. received evenly throughout year.
 2017 return based on CalPERS return of 2.36% through 10/31/16, estimated return from 11/1/16 to 12/31/16 and assumed returns for 6 months



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HOW WE GOT HERE – ENHANCED BENEFITS

- CalPERS Enhanced Benefits were implemented using all (future & prior) service
- Typically Enhanced Benefits were not negotiated with employee cost sharing

■ District	Tier 1	Tier 2	PEPRA
● Miscellaneous	2.7% <u>@55</u>	2% <u>@60</u>	2% <u>@62</u>
● Safety	3% <u>@50</u>	3% <u>@55</u>	2.7% <u>@57</u>



HOW WE GOT HERE –OLD CONTRIBUTION POLICY

- Effective with 2003 valuations:
 - Slow (15 year) recognition of investment losses into funded status
 - Rolling 30 year amortization of all (primarily investment) losses
- Designed to:
 - First smooth rates and
 - Second pay off Unfunded Accrued Liability (UAL)
- Mitigated contribution volatility



HOW WE GOT HERE –OLD CONTRIBUTION POLICY

- Around the State
 - Large retiree liability compared to actives
 - Declining active population
- District percentage of liability belonging to retirees and inactives:
 - Miscellaneous 65%
 - Safety 70%



CALPERS CHANGES

- Contribution policy changes:
 - No asset smoothing
 - No rolling amortization
 - 5-year ramp up
 - Included in 6/30/13 valuation (first impact 15/16 rates; full impact 19/20)
- Assumption changes:
 - Anticipate future mortality improvement
 - Other, less significant, changes
 - Included in 6/30/14 valuation (first impact 16/17 rates; full impact 20/21)
- CalPERS Board will change their discount rate:

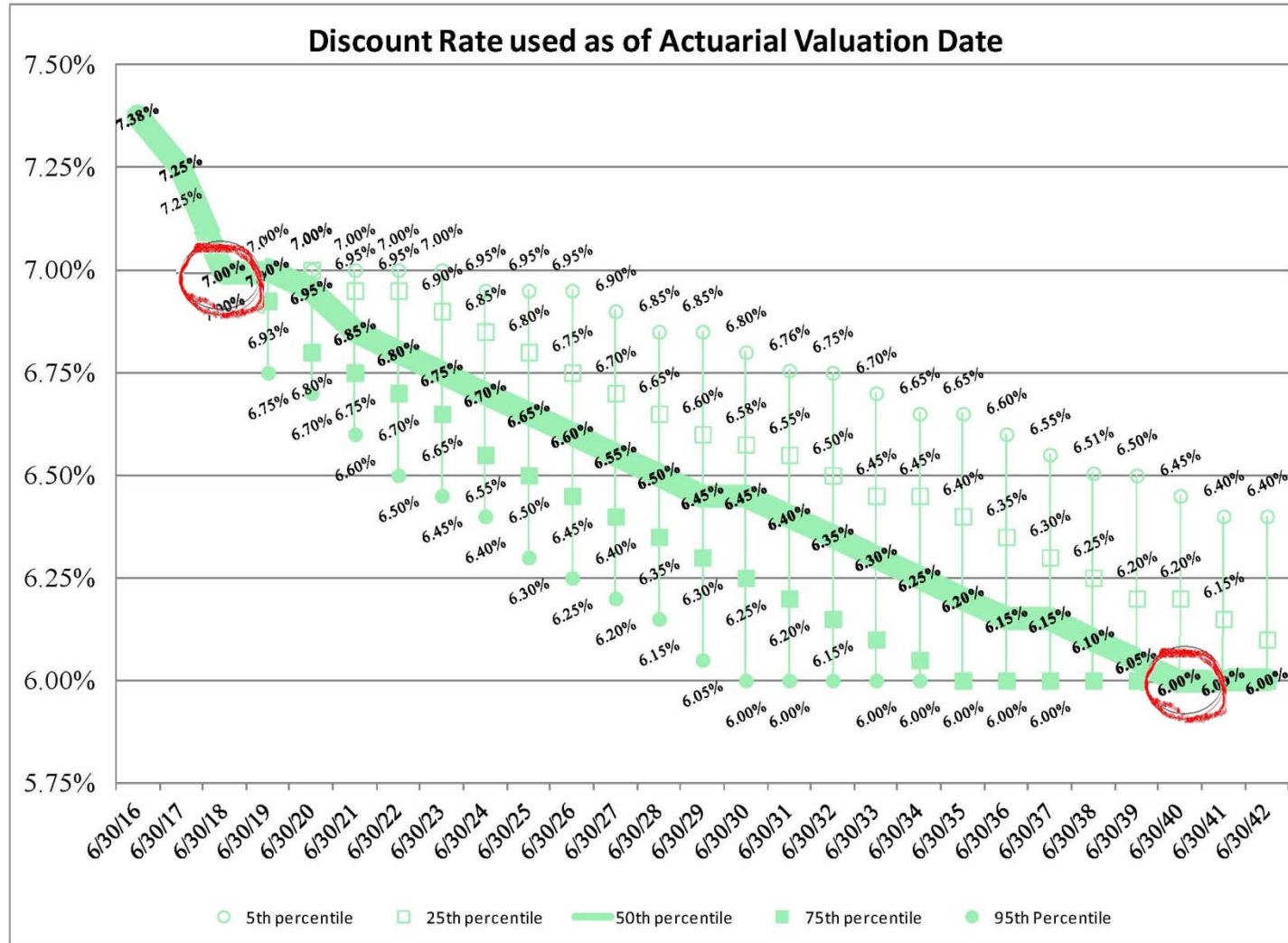
	<u>Rate</u>	<u>Initial</u>	<u>Full</u>
● 6/30/16 valuation	7.375%	18/19	22/23
● 6/30/17 valuation	7.25%	19/20	23/24
● 6/30/18 valuation	7.00%	20/21	24/25
● Risk mitigation suspended until 6/30/18			

CALPERS CHANGES

- CalPERS Board reviewing their Capital Market Assumptions next summer/fall
May result in further discount rate changes
- Risk Mitigation Strategy
 - Move to more conservative investments over time
 - Only when investment return is better than expected
 - Lower discount rate in concert
 - Essentially use $\approx 50\%$ of investment gains to pay for cost increases
 - Likely get to 6.0% over 20+ years



CALPERS CHANGES



June 20, 2017



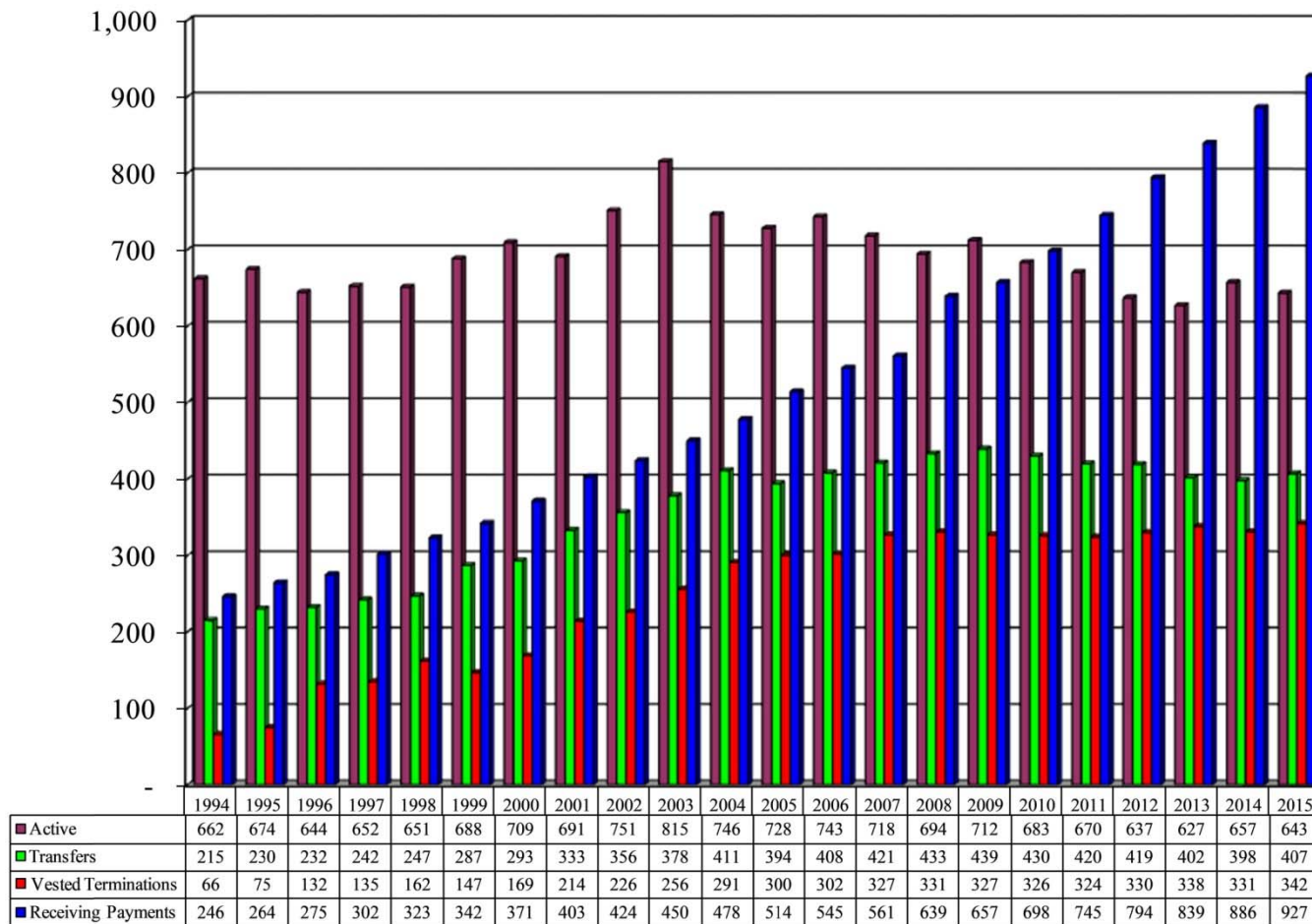
SUMMARY OF DEMOGRAPHIC INFORMATION - MISCELLANEOUS

	1995	2005	2014	2015
Actives				
■ Counts	674	728	657	643
■ Average				
• Age	43	45	47	47
• City Service	9	9	12	12
• PERSable Wages	\$43,800	\$72,700	\$83,300	\$84,500
■ Total PERSable Wages (millions)	32.2	58.3	59.8	59.4
Receiving Payments				
■ Counts				
• Service		425	754	792
• Disability		37	58	61
• Beneficiaries		52	74	74
• Total	264	514	886	927
■ Average Annual City Provided Benefit ¹				
• Service		\$17,500	\$27,400	\$28,300
• Disability		7,100	6,400	6,300
• Service Retirements in last 5 years		20,800	30,900	31,300

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

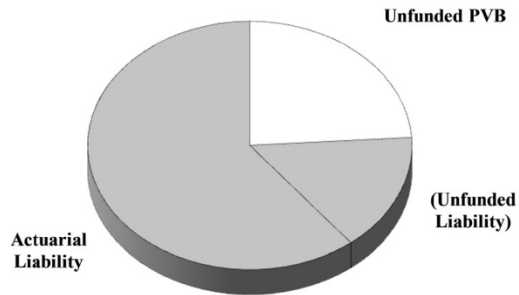


MEMBERS INCLUDED IN VALUATION - MISCELLANEOUS

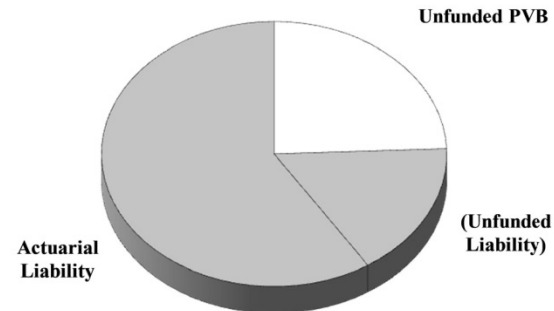


PLAN FUNDED STATUS - MISCELLANEOUS

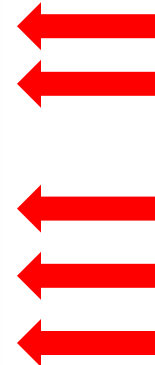
**Present Value of Benefits
June 30, 2014**



**Present Value of Benefits
June 30, 2015**



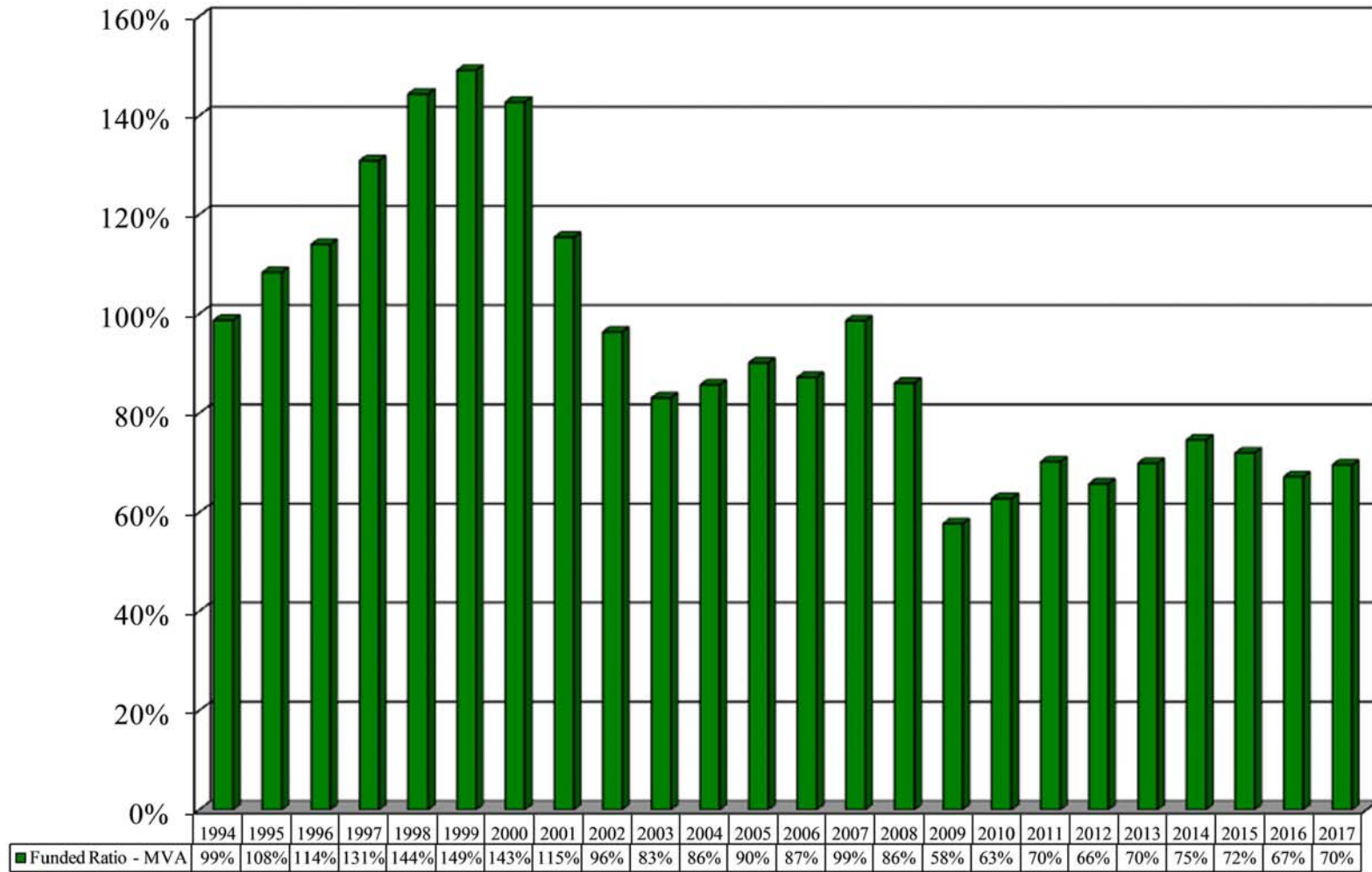
<u>June 30, 2014</u>		<u>June 30, 2015</u>	
\$ 185,200,000	Active AAL	\$ 182,800,000	
271,200,000	Retiree AAL	293,200,000	
<u>39,500,000</u>	Inactive AAL	<u>40,700,000</u>	
495,900,000	Total AAL	516,700,000	
<u>370,400,000</u>	Market Asset Value	<u>372,400,000</u>	
(125,500,000)	(Unfunded Liability)	(144,300,000)	



June 20, 2017



FUNDED RATIO - MISCELLANEOUS



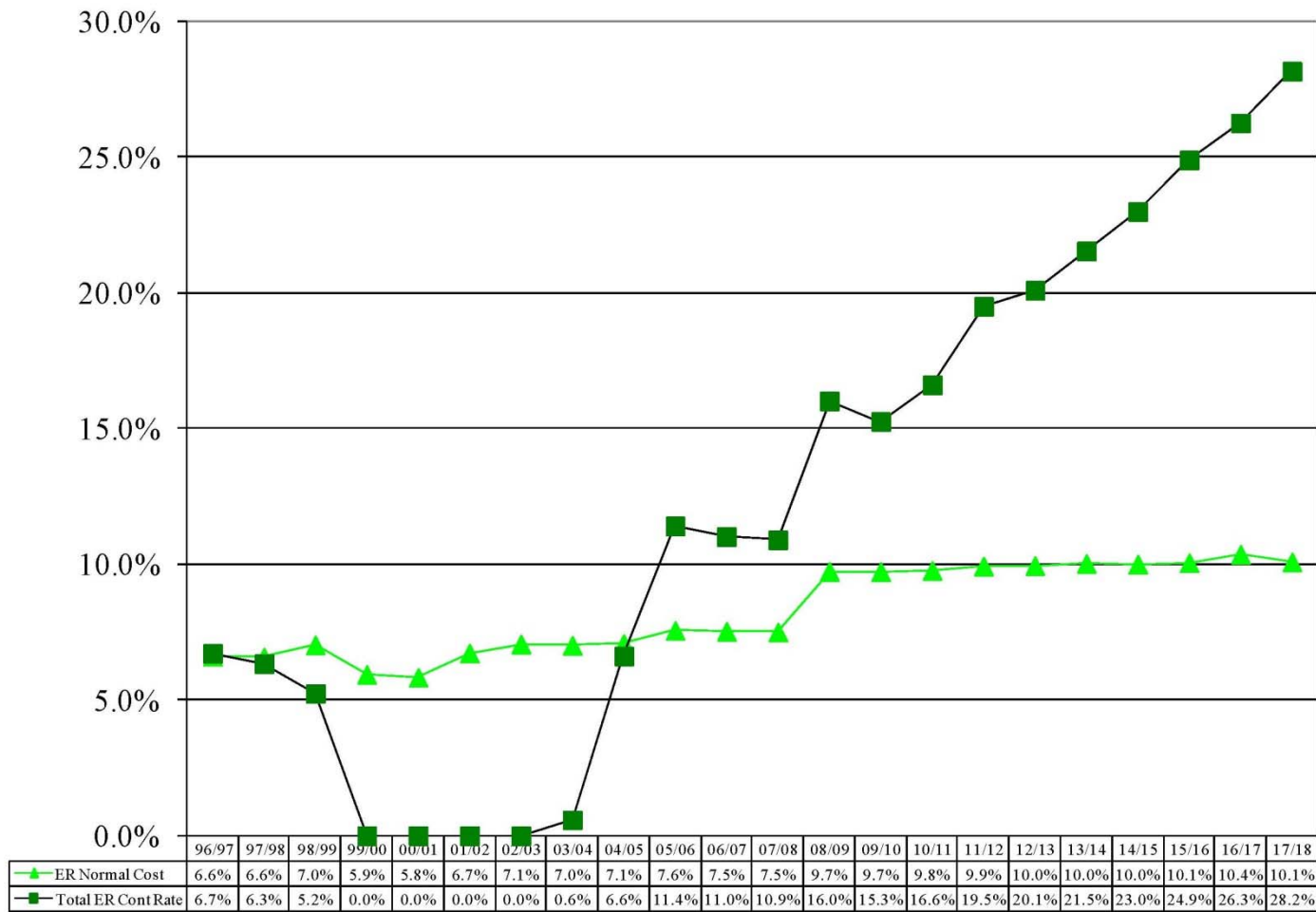
6/30/16 & 6/30/17 funded status estimated.



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CONTRIBUTION RATES - MISCELLANEOUS



June 20, 2017



CONTRIBUTION RATES - MISCELLANEOUS

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June 20, 2017



CONTRIBUTION PROJECTIONS - MISCELLANEOUS

■ Market Value Investment Return:

- June 30, 2016 0.6%²
 - June 30, 2017 12.5%³
 - Future returns based on stochastic analysis using 1,000 trials
- | <u>Single Year Returns at⁴</u> | <u>25th Percentile</u> | <u>50th Percentile</u> | <u>75th Percentile</u> |
|---|-----------------------------------|-----------------------------------|-----------------------------------|
| ● 7.0% Investment Mix | 0.1% | 7.0% | 14.8% |
| ● 6.0% Investment Mix | 0.8% | 6.0% | 11.4% |
- Assumes investment returns will, generally be 6.5% (as compared to 7.0%) over the next 10 years and higher beyond that.

- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)

² Based on CalPERS press release on 7/18/16, preliminary investment return of 0.61%.

³ June 30, 2017 return based on CalPERS return of 2.36% through 10/31/16, estimated return from 11/1/16 to 12/31/16 and assumed returns for 6 months

⁴ Nth percentile means N percentage of our trials result in returns lower than the indicated rates.

CONTRIBUTION PROJECTIONS - MISCELLANEOUS

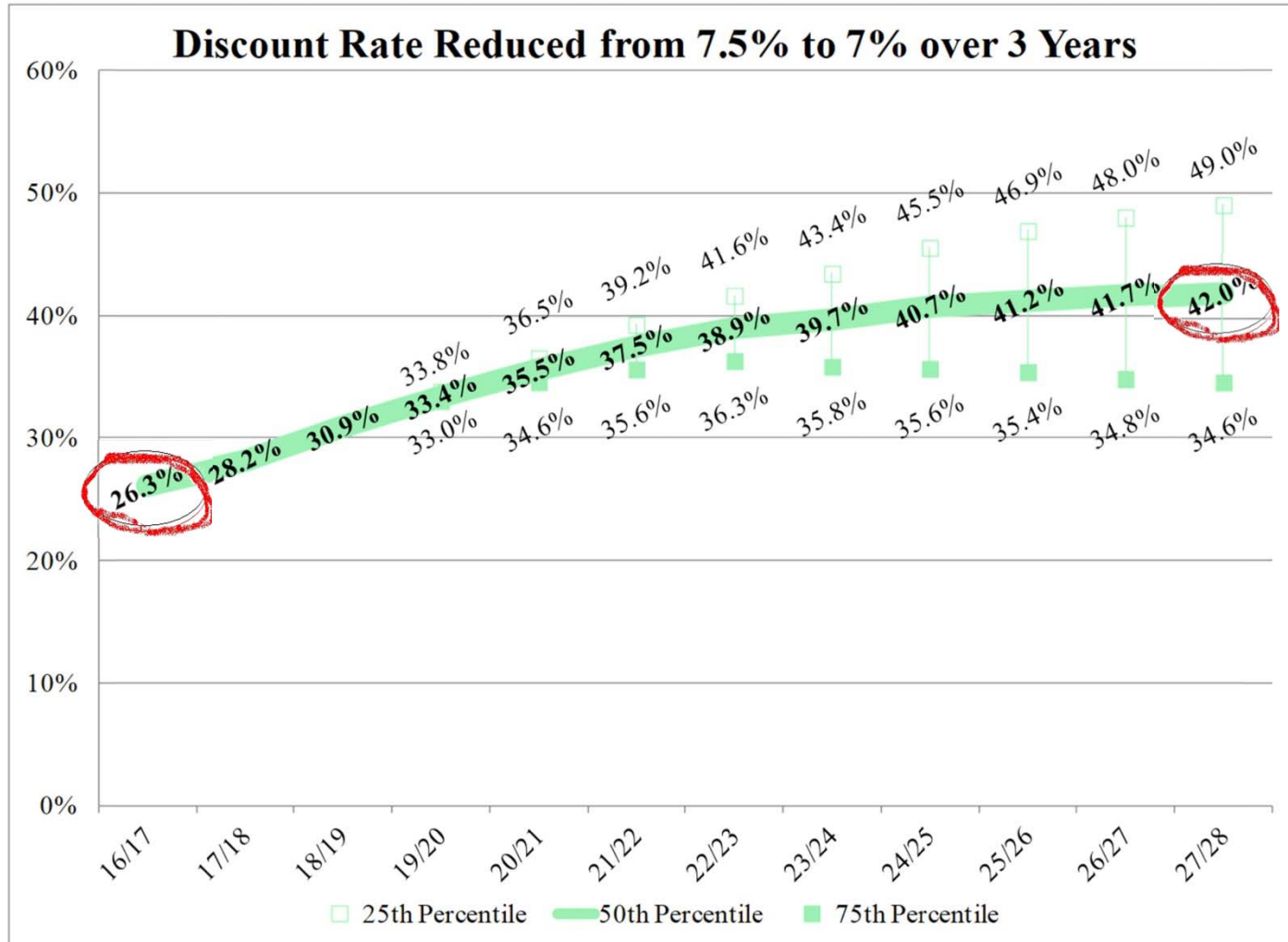
- New hire assumptions:
 - Assumes 36% of 2013 new hires will be Classic Members (2%@60) and 64% will be New Members with PEPRA benefits.
 - Assumes Classic Members will decrease from 36% to 0% of new hires over 20 years.



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CONTRIBUTION PROJECTIONS - MISCELLANEOUS



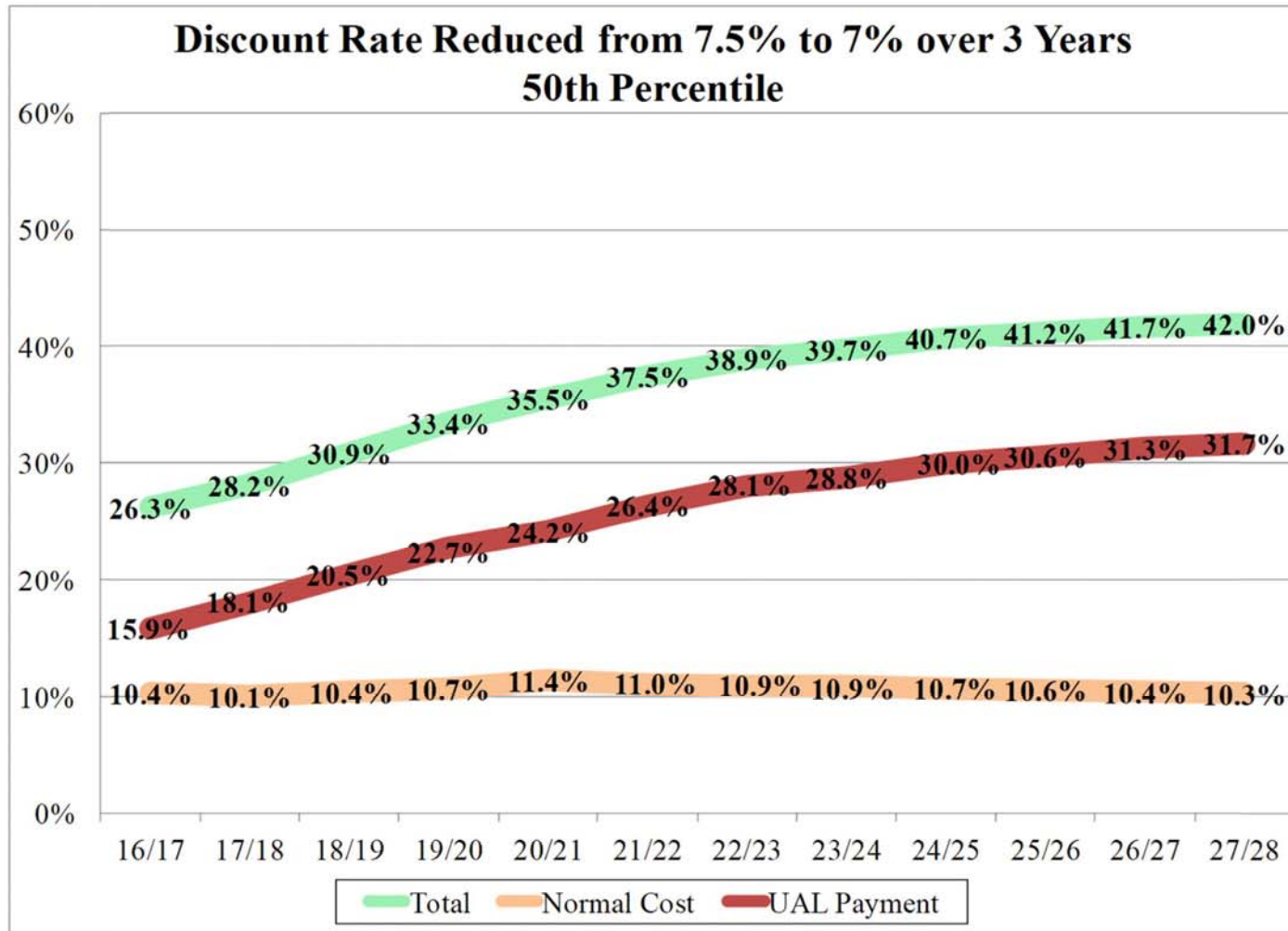
June 20, 2017



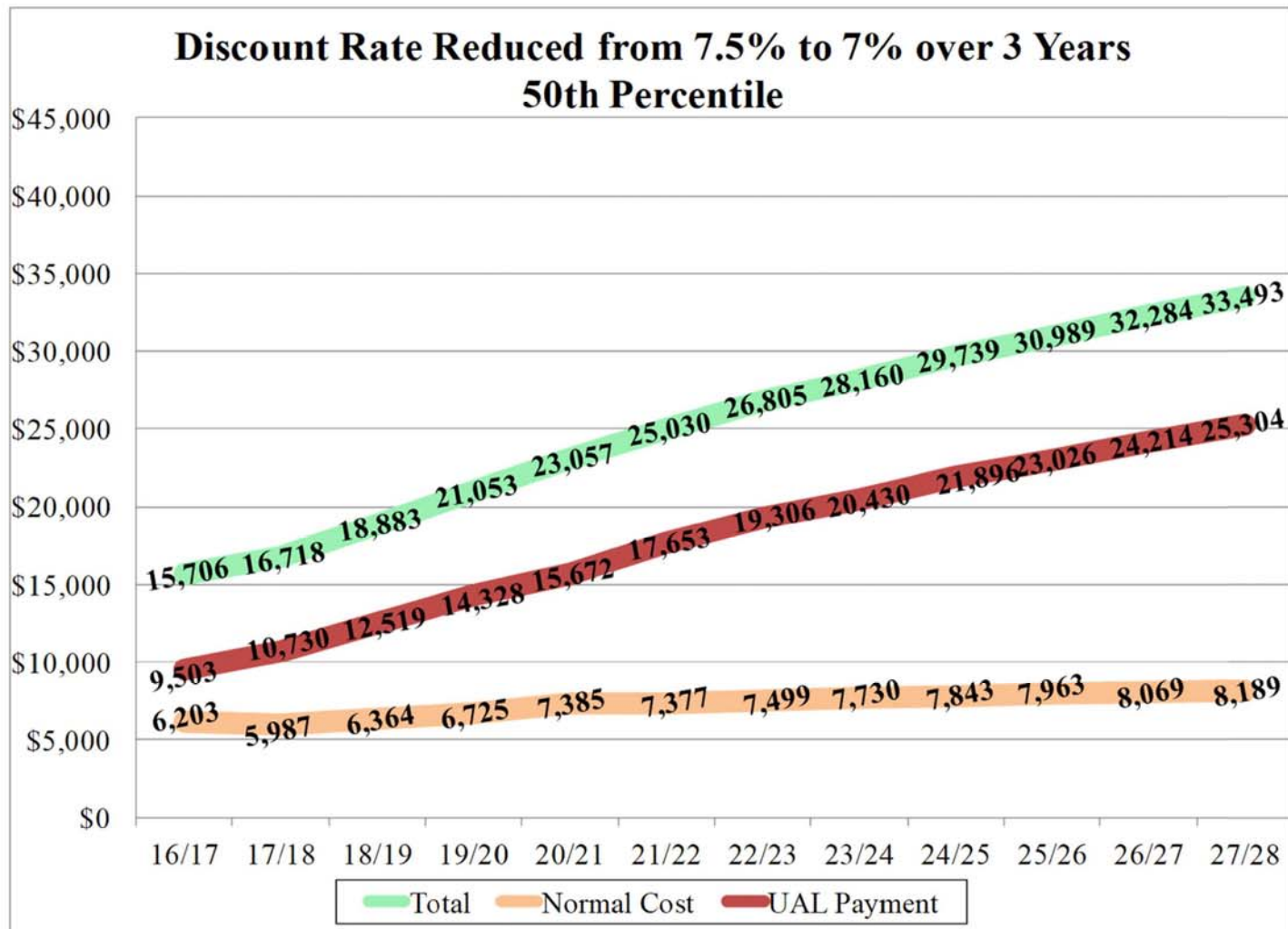
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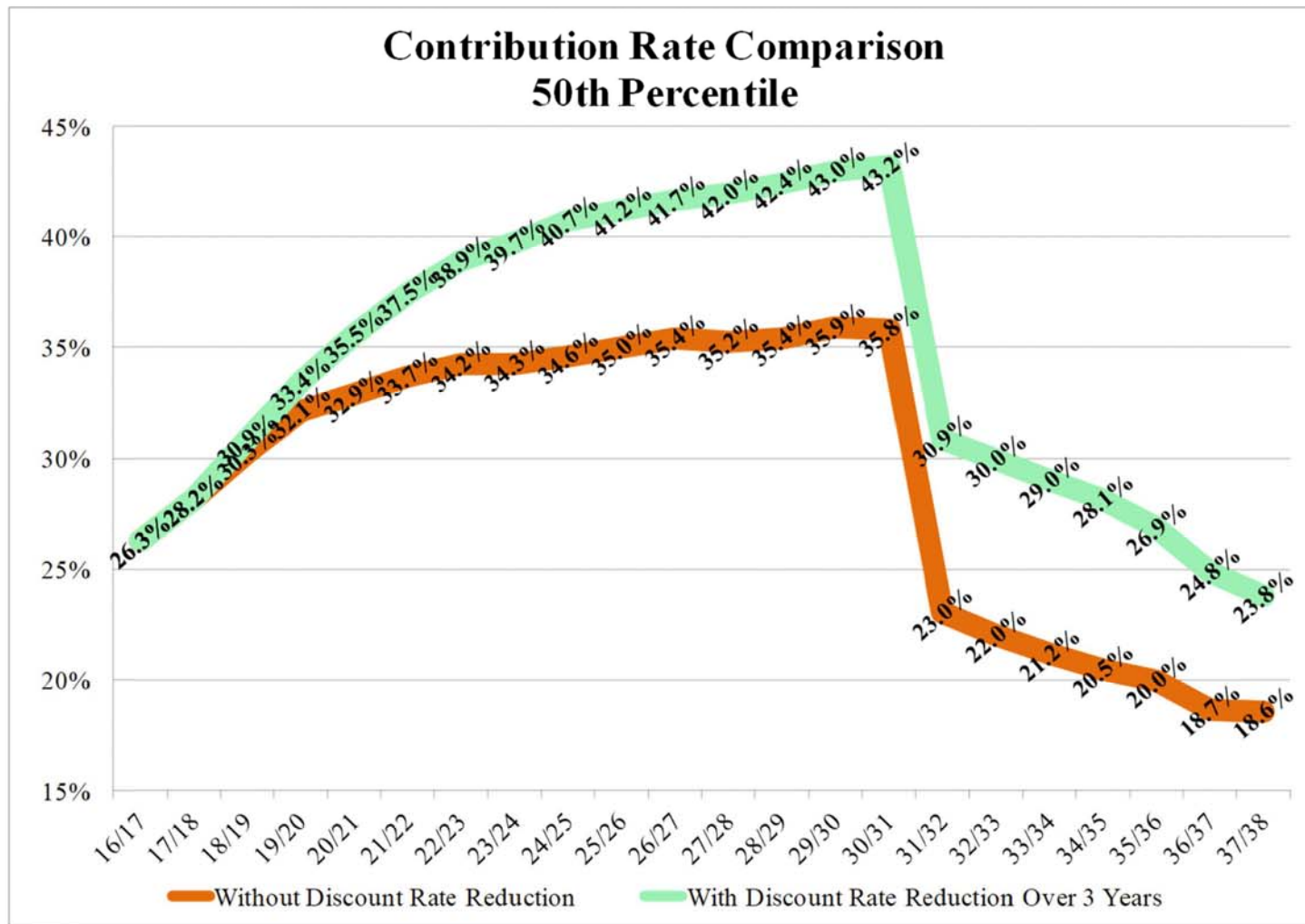
CONTRIBUTION PROJECTIONS - MISCELLANEOUS



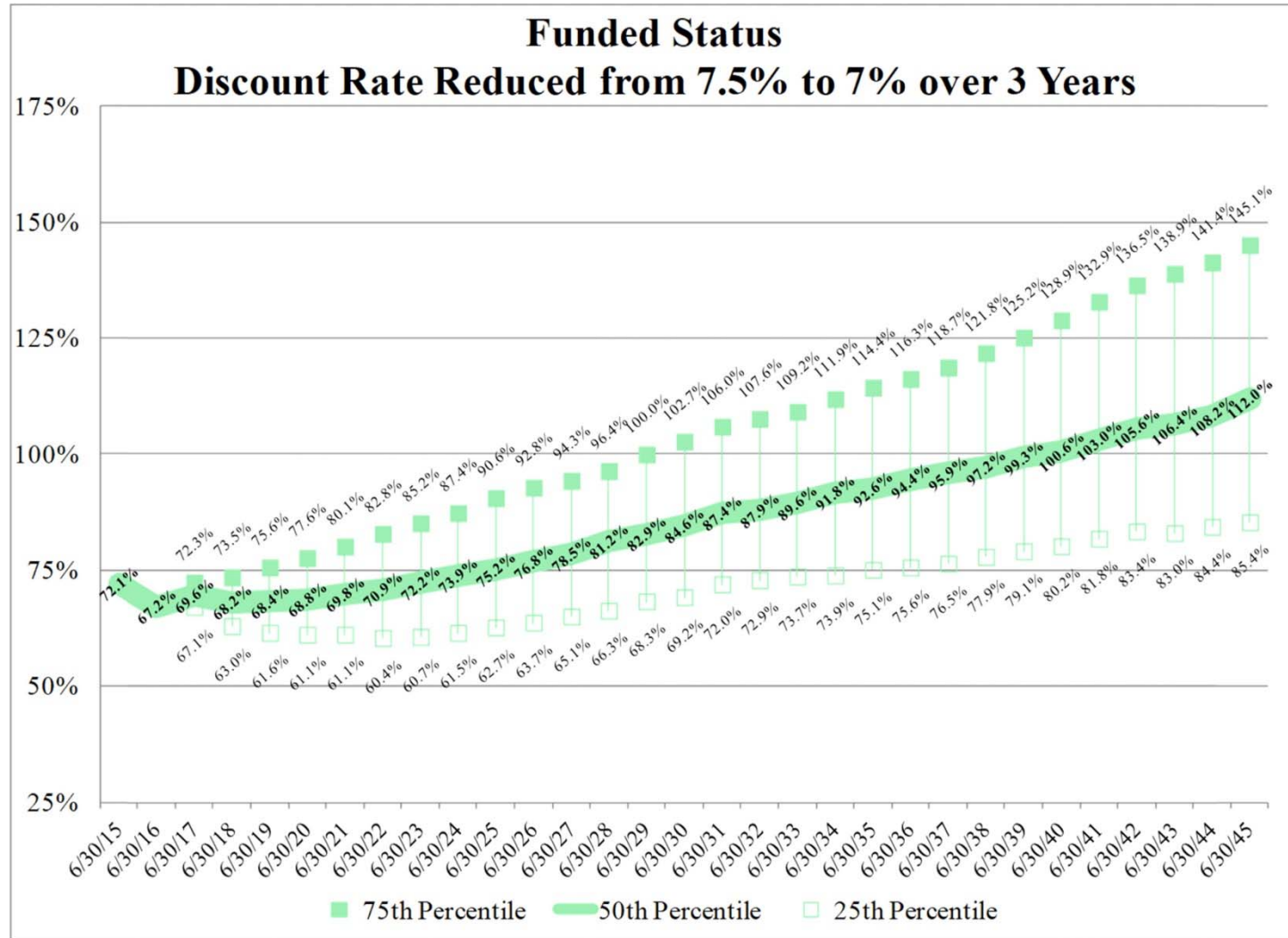
CONTRIBUTION PROJECTIONS - MISCELLANEOUS



CONTRIBUTION PROJECTIONS - MISCELLANEOUS



FUNDED STATUS - MISCELLANEOUS



June 20, 2017



SUMMARY OF DEMOGRAPHIC INFORMATION - SAFETY

	1995	2005	2014	2015
Actives				
■ Counts	216	225	189	195
■ Average				
• Age	39	40	42	42
• City Service	15	12	14	13
• PERSable Wages	\$67,600	\$118,900	\$153,500	\$156,600
■ Total PERSable Wages (millions)	15.9	29.4	31.7	33.4
Receiving Payments				
■ Counts				
• Service		109	174	181
• Disability		113	132	134
• Beneficiaries		35	51	52
• Total	158	257	357	367
■ Average Annual City Provided Benefit ⁵				
• Service		\$49,000	\$76,000	\$77,100
• Disability		45,000	65,100	67,900
• Service Retirements in last 5 years		71,400	93,200	92,800

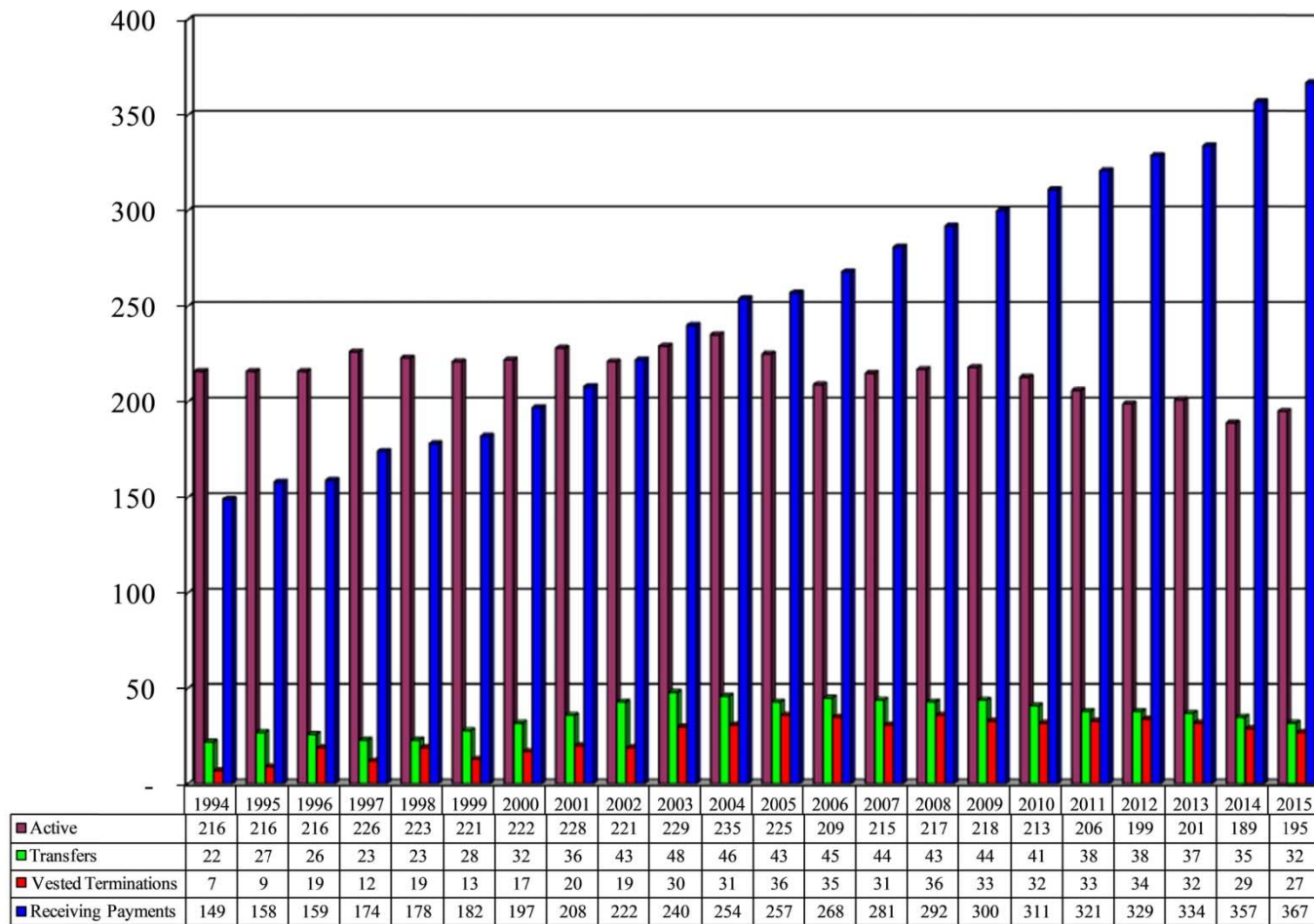
⁵ Average City provided pensions are based on City service & City benefit formula, and are not representative of benefits for long service employees.



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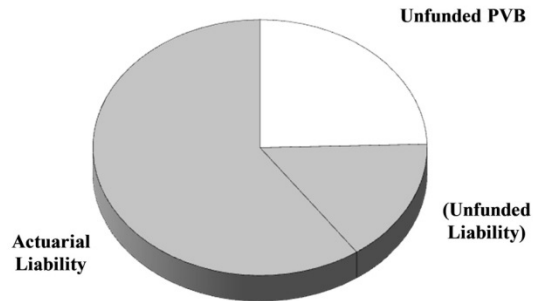


MEMBERS INCLUDED IN VALUATION - SAFETY

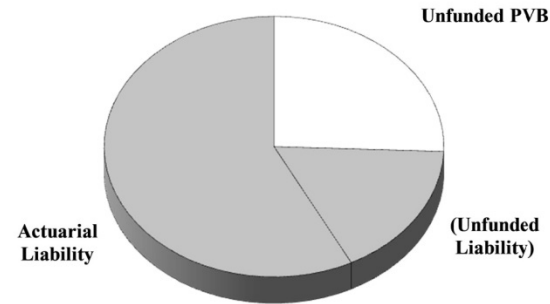


PLAN FUNDED STATUS - SAFETY

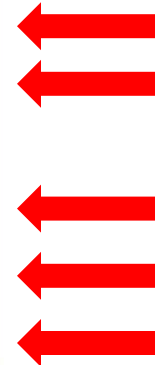
**Present Value of Benefits
June 30, 2014**



**Present Value of Benefits
June 30, 2015**



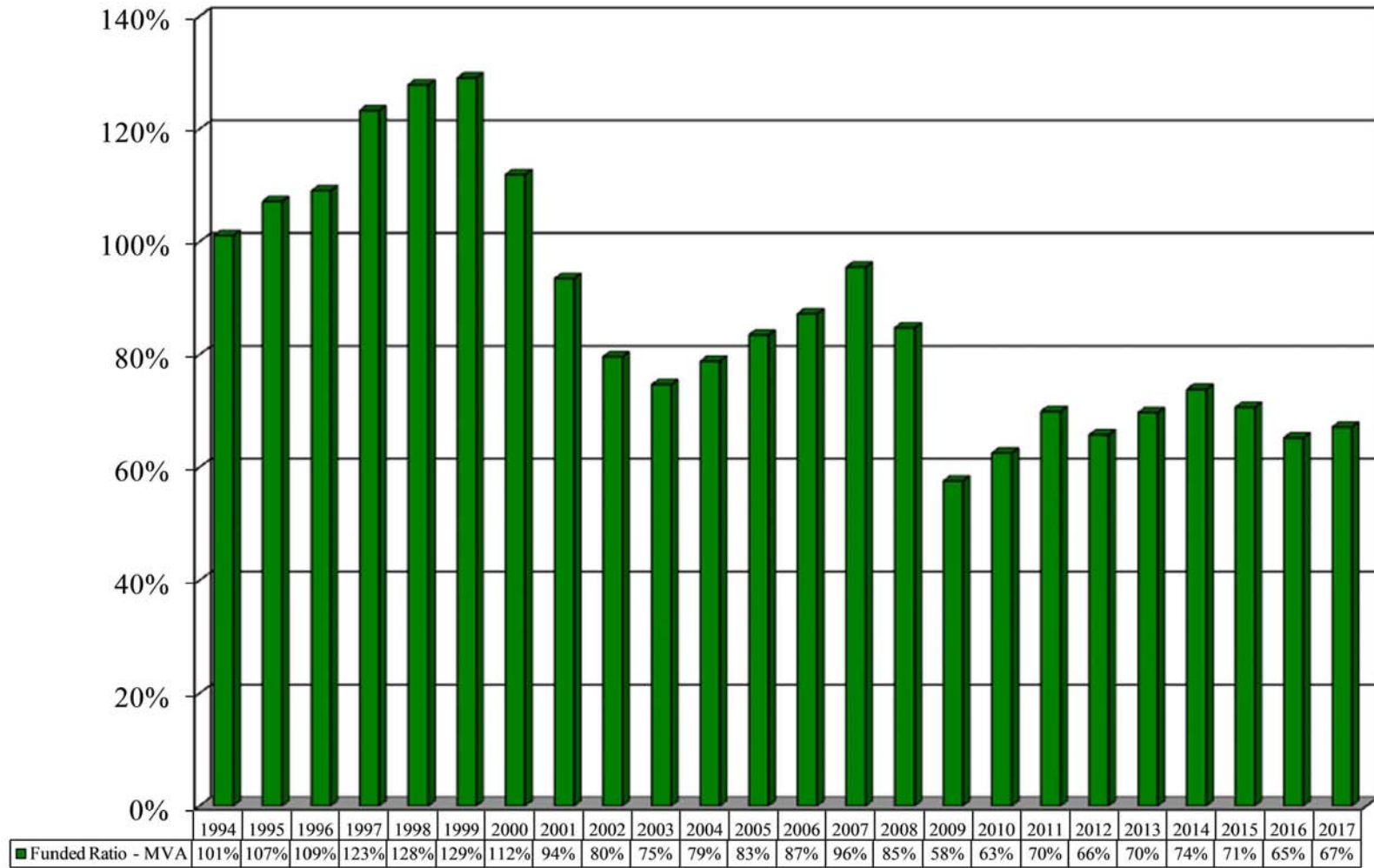
<u>June 30, 2014</u>		<u>June 30, 2015</u>	
\$ 147,200,000	Active AAL	\$ 149,100,000	
326,600,000	Retiree AAL	344,200,000	
<u>4,700,000</u>	Inactive AAL	<u>5,200,000</u>	
478,500,000	Total AAL	498,500,000	
<u>353,300,000</u>	Market Asset Value	<u>351,900,000</u>	
(125,200,000)	(Unfunded Liability)	(146,600,000)	



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FUNDED RATIO - SAFETY



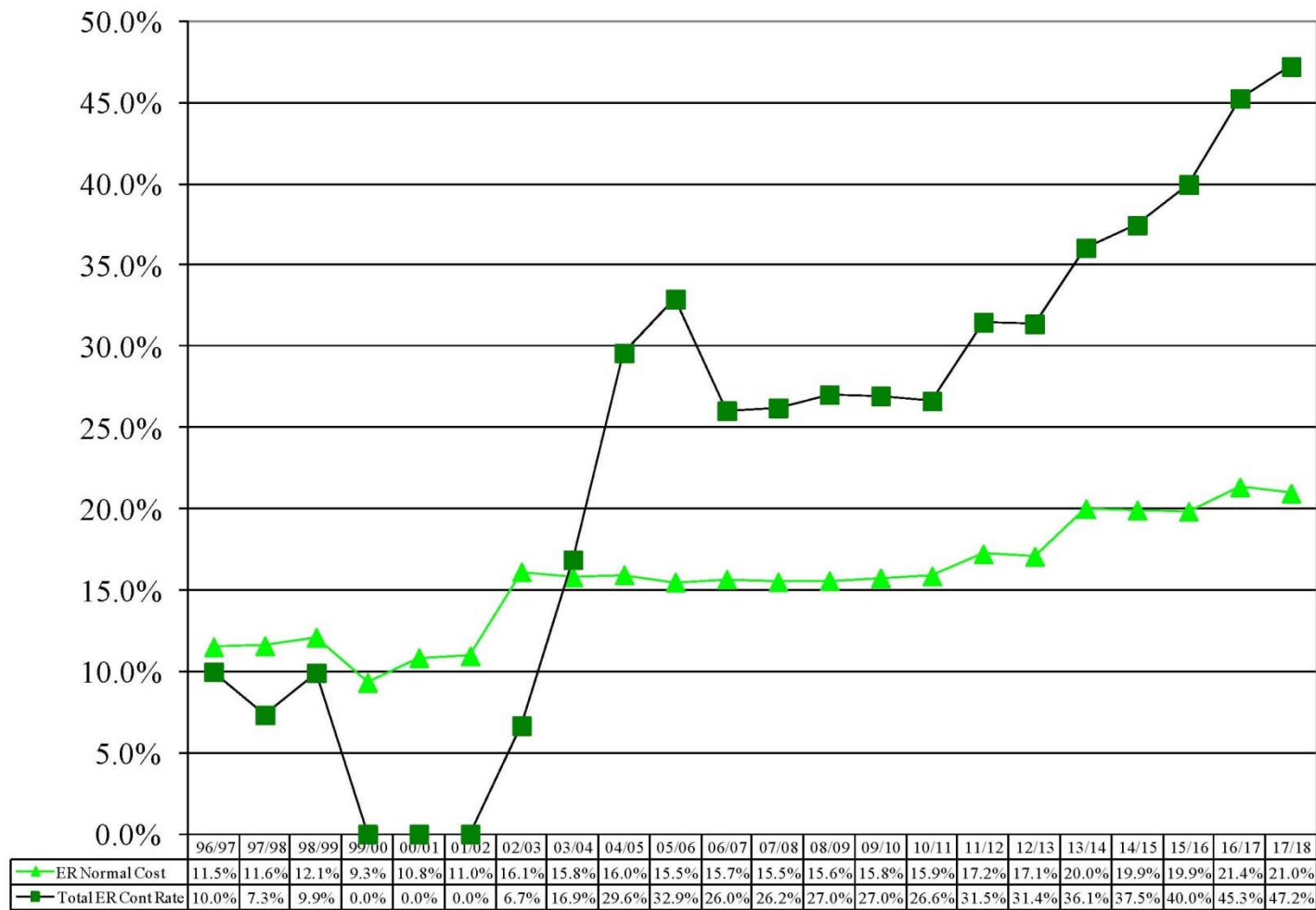
6/30/16 & 6/30/17 funded status estimated.



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CONTRIBUTION RATES – SAFETY



CONTRIBUTION RATES – SAFETY

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June 20, 2017



CONTRIBUTION PROJECTIONS - SAFETY

■ Market Value Investment Return:

- June 30, 2016 0.6%⁶
 - June 30, 2017 12.5%⁷
 - Future returns based on stochastic analysis using 1,000 trials
- | <u>Single Year Returns at⁸</u> | <u>25th Percentile</u> | <u>50th Percentile</u> | <u>75th Percentile</u> |
|---|-----------------------------------|-----------------------------------|-----------------------------------|
| ● 7.0% Investment Mix | 0.1% | 7.0% | 14.8% |
| ● 6.0% Investment Mix | 0.8% | 6.0% | 11.4% |
- Assumes investment returns will, generally be 6.5% (as compared to 7.0%) over the next 10 years and higher beyond that.

- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)
- Safety Tier 2 3%@55 effective 12/28/12

⁶ Based on CalPERS press release on 7/18/16, preliminary investment return of 0.61%.

⁷ June 30, 2017 return based on CalPERS return of 2.36% through 10/31/16, estimated return from 11/1/16 to 12/31/16 and assumed returns for 6 months

⁸ Nth percentile means N percentage of our trials result in returns lower than the indicated rates.

CONTRIBUTION PROJECTIONS - SAFETY

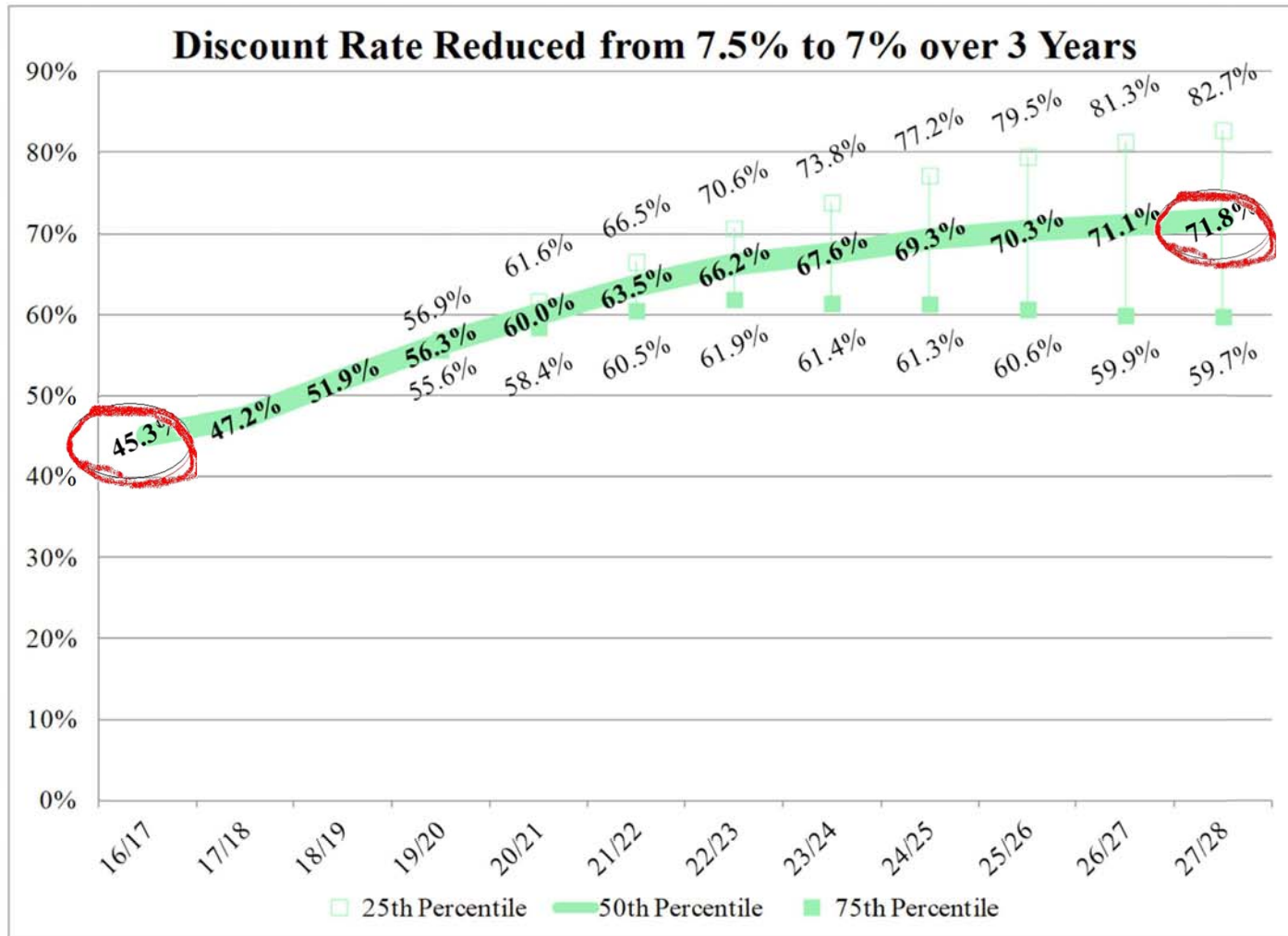
- New hire assumptions:
 - Assumes 32% of 2013 new hires will be Classic Members (3%@55) and 68% will be New Members with PEPRA benefits.
 - Assumes Classic Members will decrease from 32% to 0% of new hires over 10 years



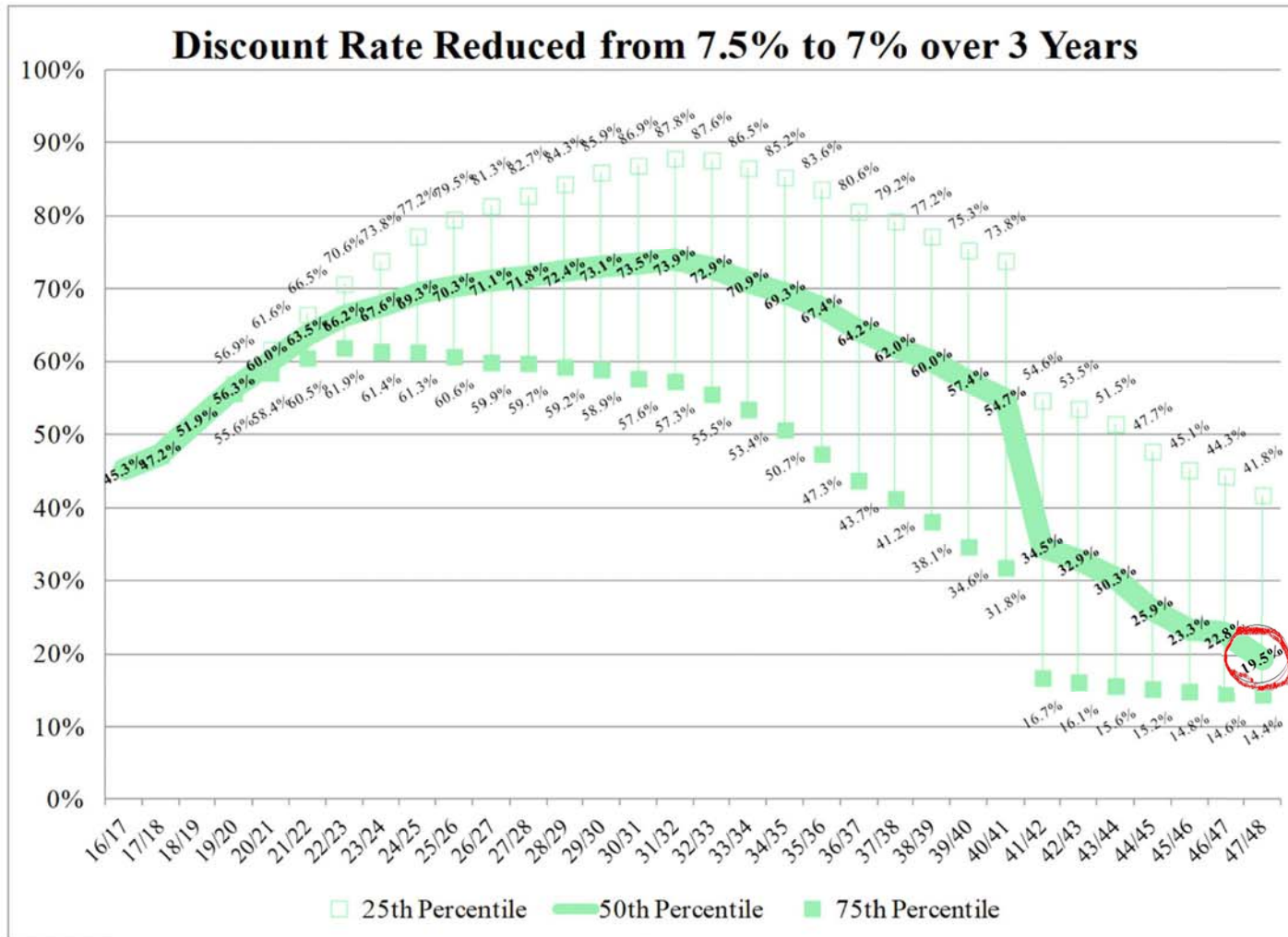
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CONTRIBUTION PROJECTIONS - SAFETY



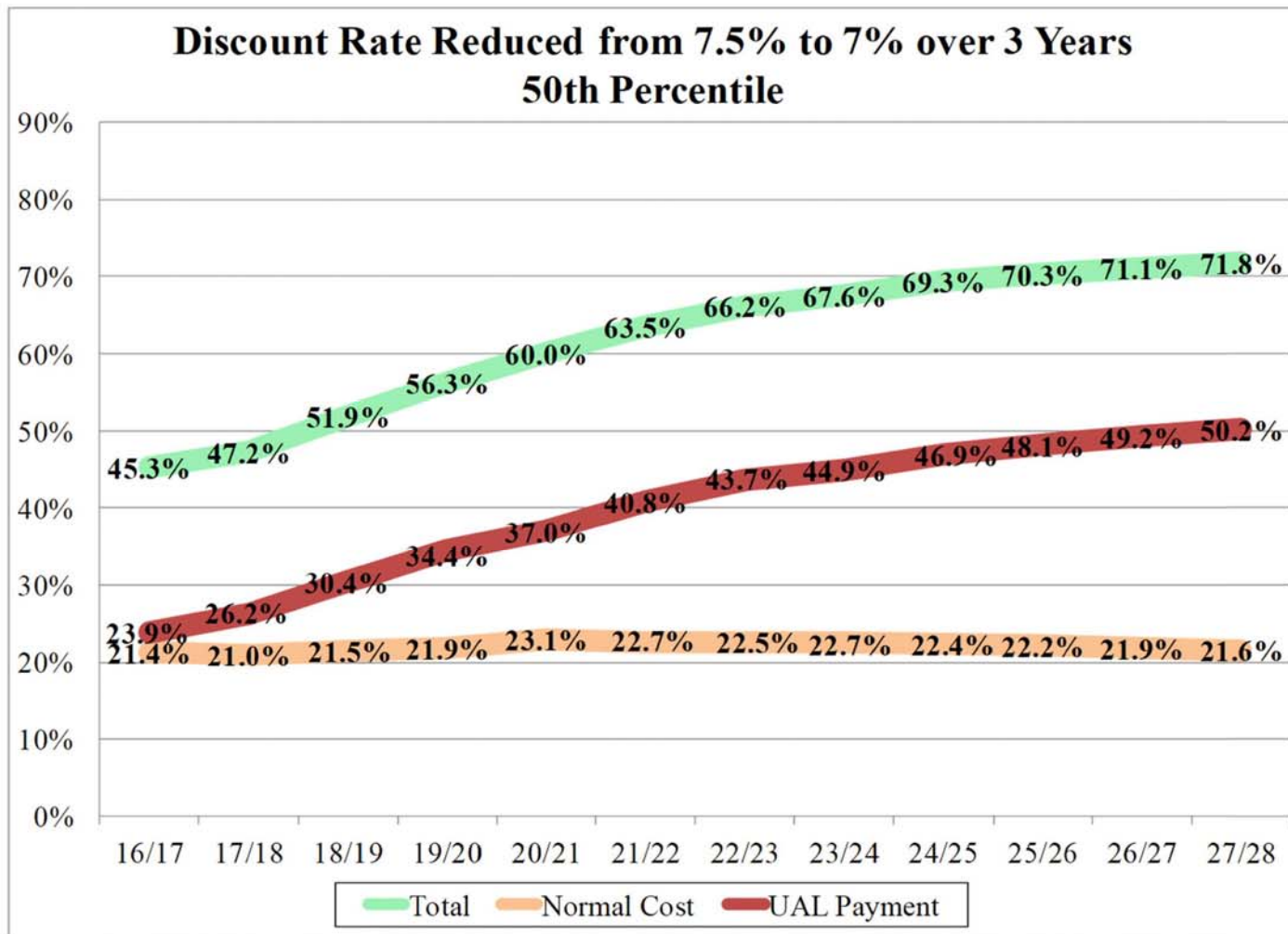
CONTRIBUTION PROJECTIONS - SAFETY



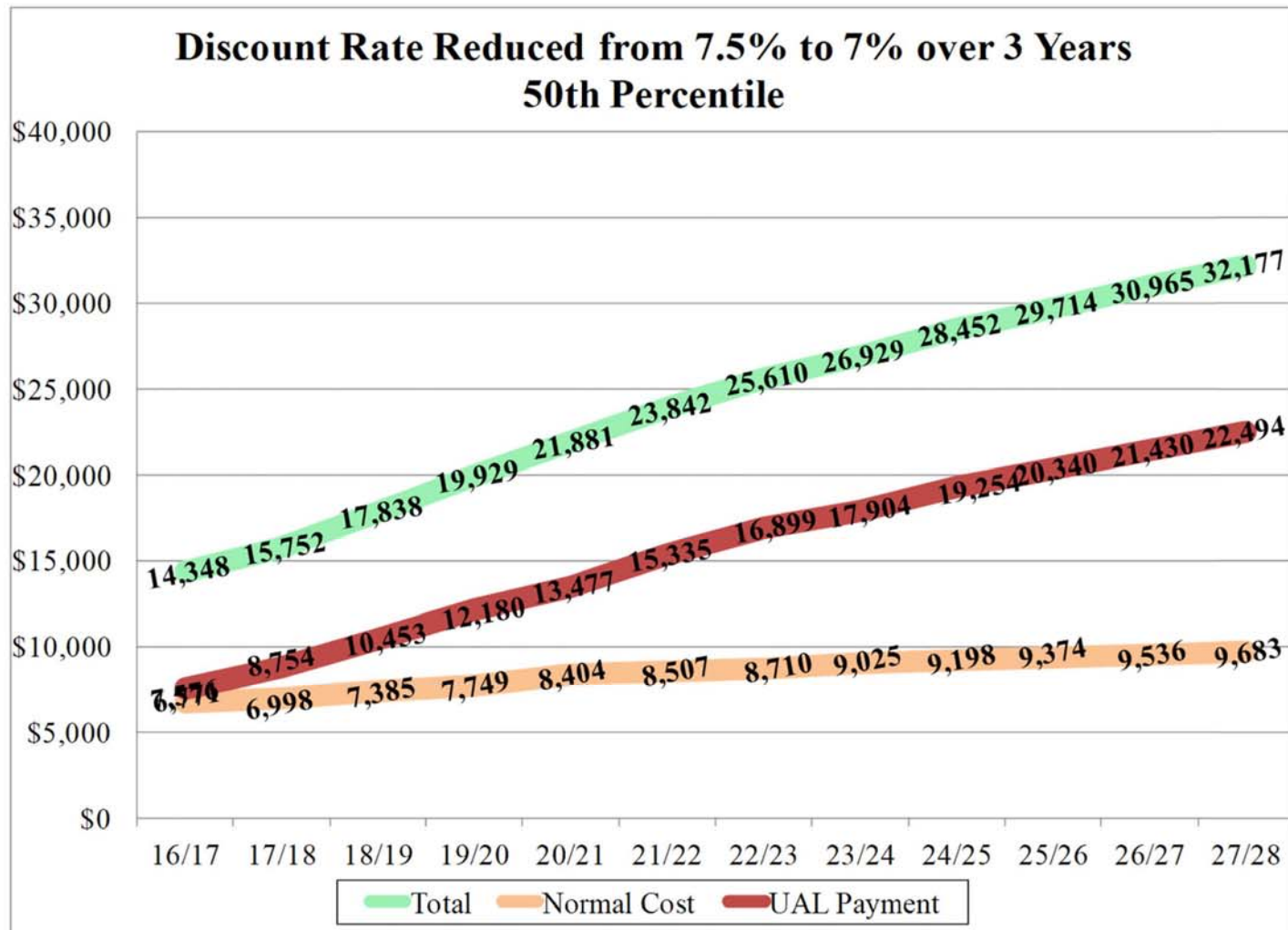
June 20, 2017



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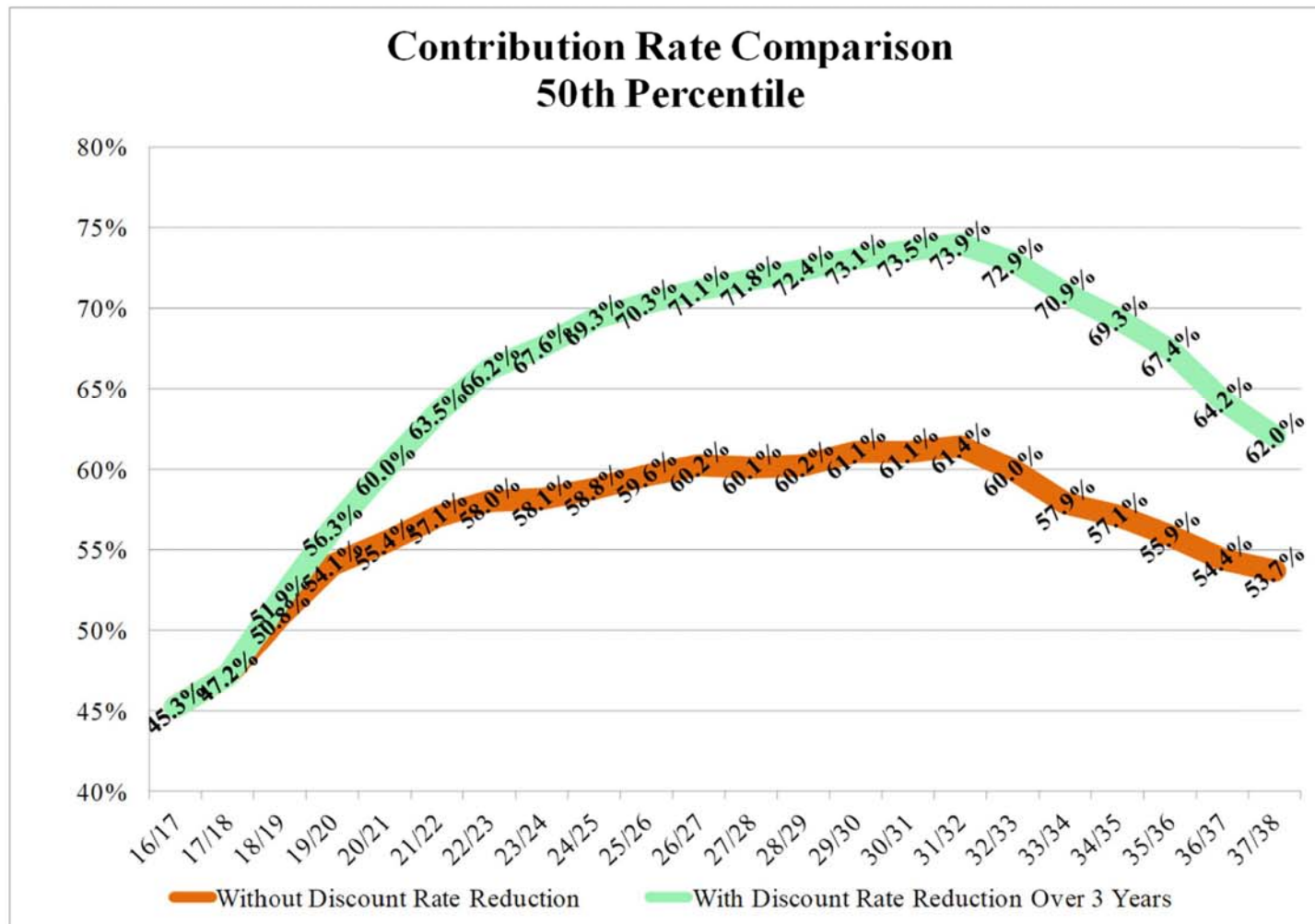
CONTRIBUTION PROJECTIONS - SAFETY



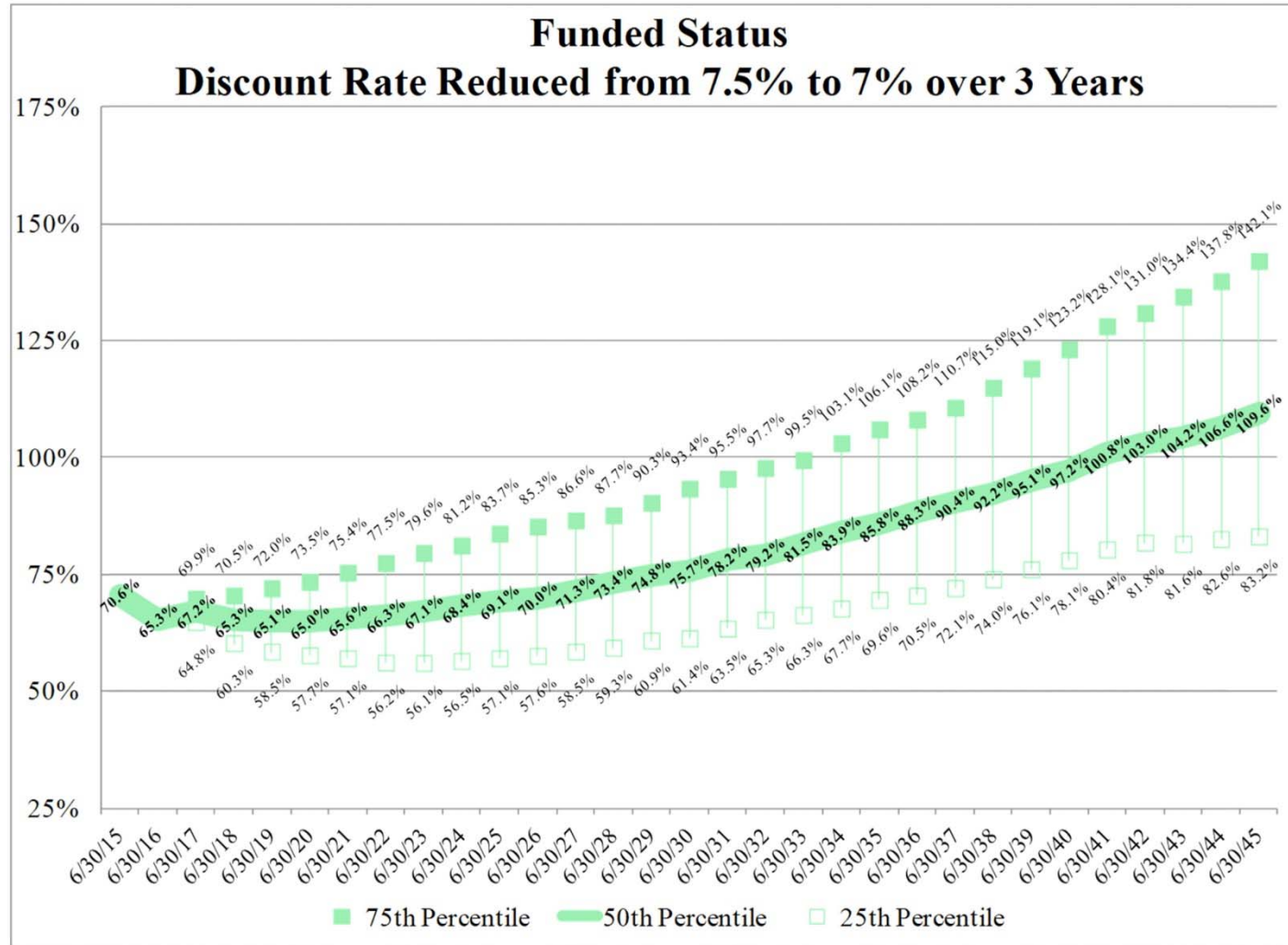
June 20, 2017



CONTRIBUTION PROJECTIONS - SAFETY



FUNDED STATUS - SAFETY



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PEPRA

- Target of 50% of total normal cost for everyone
- *New members* must pay greater of 50% of total normal cost or bargained amount if higher
- Employer cannot pay any part of *new member* required employee contributions
- Employer may impose current employees pay 50% of total normal cost (limited to certain amounts) if not agreed through collective bargaining by 1/1/18
- Miscellaneous Plan (7.5% discount rate):

	<u>Classic Members</u>		<u>New Members</u>
	Tier 1	Tier 2	PEPRA
	<u>2.7%<i>@</i>55</u>	<u>2.0%<i>@</i>60</u>	<u>2%<i>@</i>62</u>
● Employer Normal Cost	10.6%	6.9%	5.82%
● Member Normal Cost	<u>8.0%</u>	<u>7.0%</u>	<u>6.25%</u>
● Total Normal Cost	18.6%	13.9%	12.07%
● 50% Target	9.3%	7.0%	6.04%



PEPRA

■ Safety Plan (7.5% discount rate)

	<u>Classic Members</u>		<u>New Members</u>
	<u>Tier 1</u>	<u>Tier 2</u>	<u>PEPRA</u>
	<u>3% @ 50</u>	<u>3% @ 55</u>	<u>2.7% @ 57</u>
● Employer Normal Cost	22.1%	17.9%	10.64%
● Member Normal Cost	<u>9.0%</u>	<u>9.0%</u>	<u>11.00%</u>
● Total Normal Cost	31.1%	26.9%	21.64%
● 50% Target	15.6%	13.5%	10.82%



June 20, 2017



PEPRA

■ Miscellaneous Plan (7% discount rate):

	<u>Classic Members</u>		<u>New Members</u>
	<u>Tier 1</u>	<u>Tier 2</u>	<u>PEPRA</u>
	<u>2.7%@55</u>	<u>2.0%@60</u>	<u>2%@62</u>
● Employer Normal Cost	12.8%	8.4%	7.06%
● Member Normal Cost	<u>8.0%</u>	<u>7.0%</u>	<u>6.25%</u>
● Total Normal Cost	20.8%	15.4%	13.31%
● 50% Target	10.4%	7.7%	6.66%

■ Safety Plan (7% discount rate):

	<u>Classic Members</u>		<u>New Members</u>
	<u>Tier 1</u>	<u>Tier 2</u>	<u>PEPRA</u>
	<u>3%@50</u>	<u>3%@55</u>	<u>2.7%@57</u>
● Employer Normal Cost	26.1%	21.2%	11.64%
● Member Normal Cost	<u>9.0%</u>	<u>9.0%</u>	<u>12.00%</u>
● Total Normal Cost	35.1%	30.2%	23.64%
● 50% Target	17.6%	15.1%	11.82%



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PAYING DOWN THE UNFUNDED LIABILITY

■ Options

- Where do you get the money from?
 - ☐ Pension Obligation Bonds (POBs)
 - ☐ Borrow from General Fund
 - ☐ One time payments
- How do you use the money?
 - ☐ Give directly to CalPERS
 - ☐ Internal Service Fund
 - ☐ Irrevocable Supplemental (§115) Trust



PAYING DOWN THE UNFUNDED LIABILITY

- POBs
 - Usually thought of as interest arbitrage between expected earnings and rate paid on POB
 - No guaranteed savings
 - Including paying off CalPERS Side Fund
 - PEPPRA prevents contributions from dropping below normal cost
 - Savings offset when investment return is good



PAYING DOWN THE UNFUNDED LIABILITY

- Borrow from General Fund
 - Excess Reserves?
 - Pay GF back like a loan
 - Payments should come from all funds



PAYING DOWN THE UNFUNDED LIABILITY

- One time payments
 - Council/Board resolution to use a portion of one time money to reduce unfunded liability, e.g.
 - ☐ 1/3 to one time projects
 - ☐ 1/3 to replenish reserves and
 - ☐ 1/3 to pay down unfunded liability



PAYING DOWN THE UNFUNDED LIABILITY

- Make Payments to CalPERS
 - Treat as contribution gain
 - ☐ CalPERS default
 - ☐ Very modest short term contribution impact
 - Apply to all bases in proportion
 - ☐ Lowers payment
 - ☐ Does not shorten amortization period
 - Request shorter amortization period (Fresh Start)
 - ☐ Higher short term payments
 - ☐ Less interest and lower long term payments
 - ☐ PEPPRA prevents contributions from dropping below normal cost
 - Savings offset when investment return is good



PAYING DOWN THE UNFUNDED LIABILITY

- Make Payments to CalPERS (continued)
 - Target specific amortization bases
 - Paying off shorter amortization periods
 - Larger contribution savings over shorter period
 - 10 year base gets 12.5¢ for \$1
 - Less interest savings
 - Paying off longer amortization periods
 - Smaller contribution savings over longer period
 - 25 year base gets 6.6¢ for \$1
 - More interest savings

