CALPELRA
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BARTEL ASSOCIATES, LLC

CalPERS (Pension) Employer Contribution Rates: What Can You Expect?

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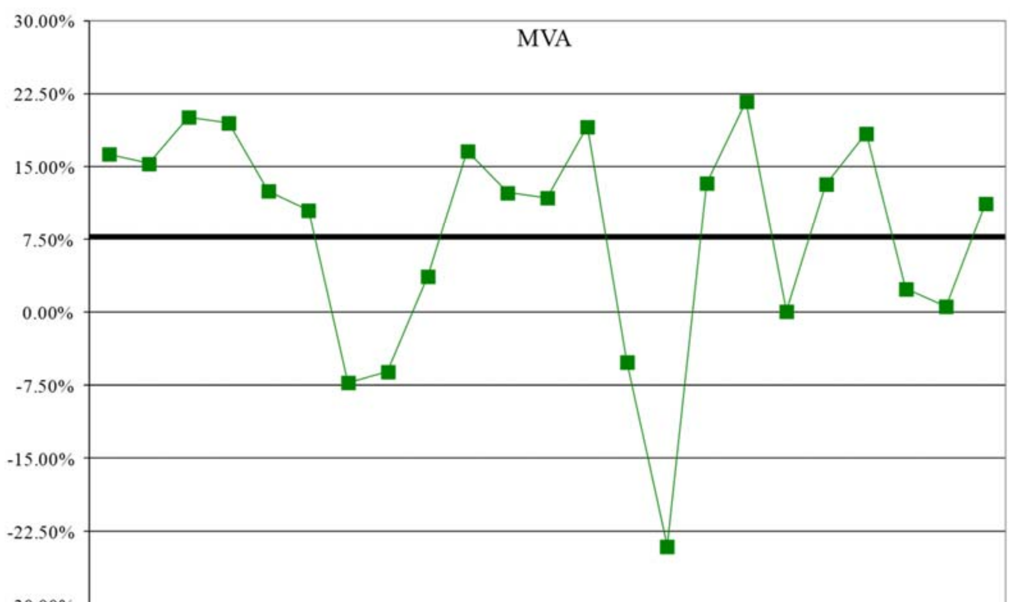
President
December 7, 2017

Agenda

How Did We Get Here?

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

Historical Investment Returns



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MVA	16.3%	15.3%	20.1%	19.5%	12.5%	10.5%	-7.2%	-6.1%	3.7%	16.6%	12.3%	11.8%	19.1%	-5.1%	-24.0	13.3%	21.7%	0.1%	13.2%	18.4%	2.4%	0.6%	11.2%

Enhanced Benefits

- At CalPERS, enhanced benefits implemented using all (future & prior) service
- Typically not negotiated with cost sharing

CalPERS Old 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
  - Second pay off UAL and
- Mitigated contribution volatility

Demographics

- Around the State
  - Large retiree liability compared to actives
  - Declining active population
- Common to have 60%-75% of liability for retirees

Recent CalPERS Changes

- Contribution Policy
- Assumptions
- Risk Mitigation Strategy
- Discount Rate
- Other

Contribution Policy Changes

- No asset smoothing
- 5-year ramp up
- All amortization bases have fixed amortization periods
  - No rolling amortization

Contribution Policy Changes

- June 30, 2013 Valuation (15/16 rates)
- Designed to:
  - First pay off UAL and
  - Second smooth rates
- Uses MVA so only one funded status/ratio
- If assumptions are met then:
  - Contributions go up in the short run but then come down
  - UAL will be paid off

Assumption Changes

- June 30, 2014 Valuation, 2016/17 rates
- No changes to economic assumptions
- Anticipate future mortality improvement
- Other, modest, changes to assumptions

Risk Mitigation Strategy

- Move to more conservative investments over time
  - Only when investment return is better than expected
- Lower discount rate in concert with investment allocation changes
- Essentially use ≈50% of investment gains to pay for cost increases
- Likely reduces discount rate 100 basis points over ≈20 years

Timing

	Valuation	First Impact	Full Impact
■ Contribution Policy	6/30/13	2015/16	2019/20
■ Assumptions	6/30/14	2016/17	2020/21
■ Risk Mitigation	Because based on investment gains timing is uncertain		

Ultimate Cost Increase

	Misc.	Safety
Next 15 Years		
■ Contribution Policy	≈ 7%	≈ 9%
■ Assumptions	≈ 4%	≈ 7%
■ Total	≈11%	≈16%
Next 25+ Years		
■ Risk Mitigation	≈ 8%	≈12%

Discount Rate

- Combination of

Expected Inflation	2.75%	2.50%
Real Rate of Return (above inflation)	4.75	4.50
Margin for Adverse Deviation	0.00	0.00
Total	7.50%	7.00%

- 7.5% based on 2010 Capital Market Assumption study (updated in '14) & current asset allocation
- 7.0% likely result of 2017 Capital Market Assumption study & updated asset allocation

Discount Rate

- CalPERS Board was told at the end of last year:
  - 2017 Capital Market Assumption Study real rate of return will likely be 50 basis points lower
  - Delivered by:
    - Outside investment advisors
    - CFO
    - CIO
    - Actuarial staff
- Based on above, Board reached a compromise deal lowering the discount rate

Discount Rate

- Decrease discount rate from 7½% to 7% over next 3 valuations, for public agencies:

	Rate	Initial	Full
• 6/30/16 val.	7.375%	18/19	22/23
• 6/30/17 val.	7.25%	19/20	23/24
• 6/30/18 val.	7.00%	20/21	24/25

  - Risk mitigation suspended until after 6/30/18

Discount Rate

	Misc.	Safety
Normal Cost	2.0%	3.5%
UAL	5.5	9.5
Total	7.5%	13.0%
Standard Deviation	1%	2%

Ultimate Cost Increase

	Misc.	Safety
Next 10-15 Years		
■ Contribution Policy	≈ 7%	≈ 9%
■ Assumptions	≈ 4%	≈ 7%
■ Subtotal	≈11%	≈16%
■ Discount Rate	≈ 8%	≈13%
■ Total	≈19%	≈29%

Where Are CalPERS Rates Going?

2024/25 Contribution Rates[1]

Cities/Towns		
Percentile	**Miscellaneous**	**Safety**
10th	18.8%	35.2%
25th	25.2	44.8
50th	30.8	54.0
75th	37.7	63.8
90th	43.0	76.0

1 CalPERS projected rates adjusted for 6/30/17 actual investment return and PEPRA.

2024/25 Contribution Rates[1]

Special Purpose Districts		
Percentile	**Miscellaneous**	**Safety**
10th	12.4%	22.7%
25th	16.1	30.3
50th	21.5	40.6
75th	28.0	48.7
90th	35.0	56.3

1 CalPERS projected rates adjusted for 6/30/17 actual investment return and PEPRA.

2024/25 Contribution Rates[1]

Counties		
Percentile	**Miscellaneous**	**Safety**
10th	24.0%	40.7%
25th	26.2	42.2
50th	28.7	48.1
75th	32.4	54.5
90th	36.4	58.4

[1] CalPERS projected rates adjusted for 6/30/17 actual investment return and PEPRA.

2024/25 Contribution Rates[1]

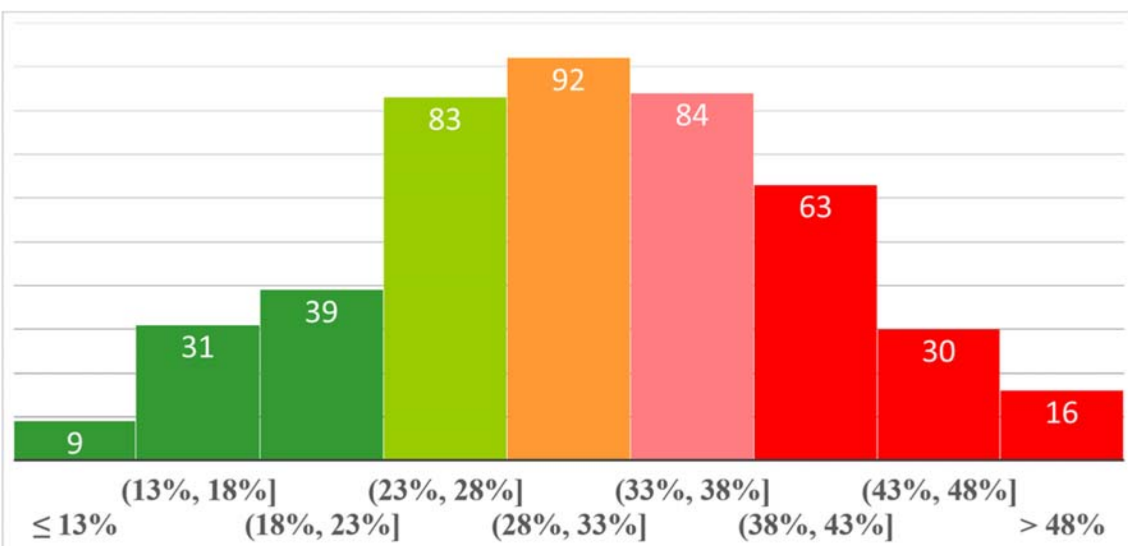
All Public Agencies		
Percentile	**Miscellaneous**	**Safety**
10th	13.5%	28.7%
25th	18.1	39.7
50th	24.8	50.2
75th	31.9	59.3
90th	39.3	70.5

[1] CalPERS projected rates adjusted for 6/30/17 actual investment return and PEPRA.

CalPERS Projected Rates

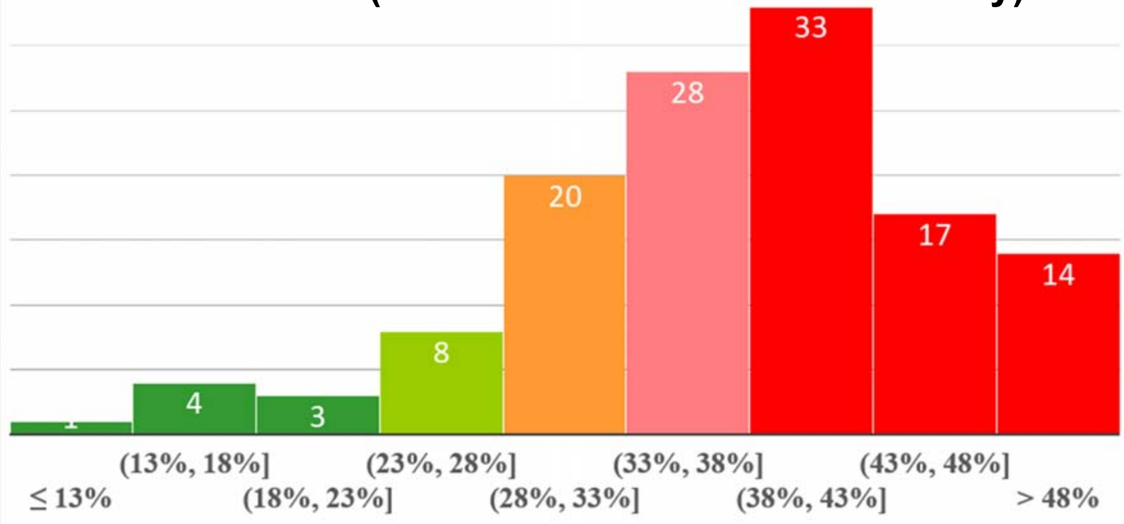
- Generally higher if:
  - Mature City with large retiree liability
  - Enhanced formulas for Classic employees
  - Did not implement an unenhanced 2nd benefit tier before PEPRA
- Generally lower if:
  - Younger City with small retiree liability
  - No enhanced formulas for Classic employees
  - Implemented an unenhanced 2nd benefit tier before PEPRA

CalPERS City Miscellaneous 2024/25 Projected Rates



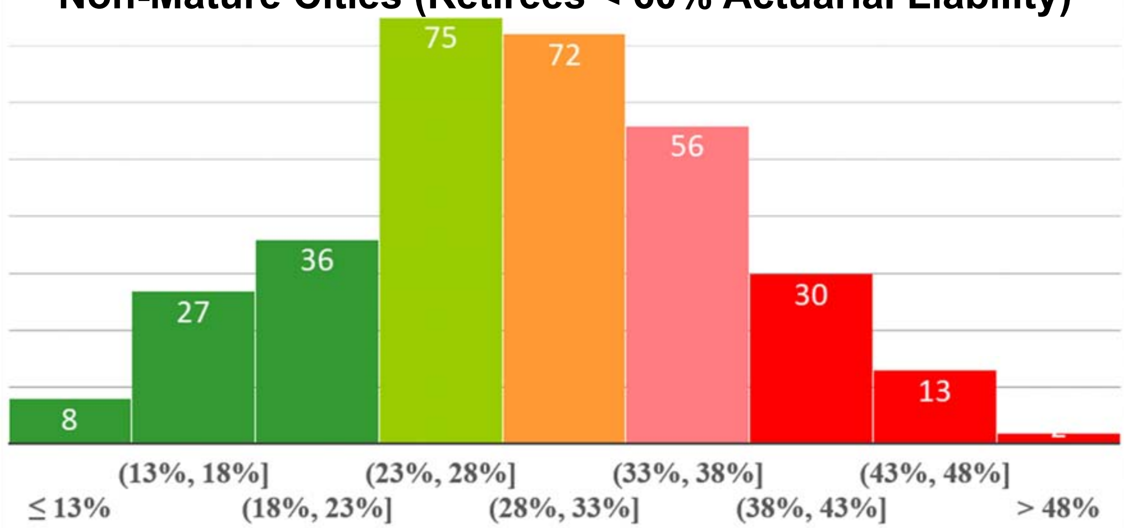
CalPERS City Miscellaneous 2024/25 Projected Rates

Mature Cities (Retirees > 60% Actuarial Liability)



CalPERS City Miscellaneous 2024/25 Projected Rates

Non-Mature Cities (Retirees < 60% Actuarial Liability)



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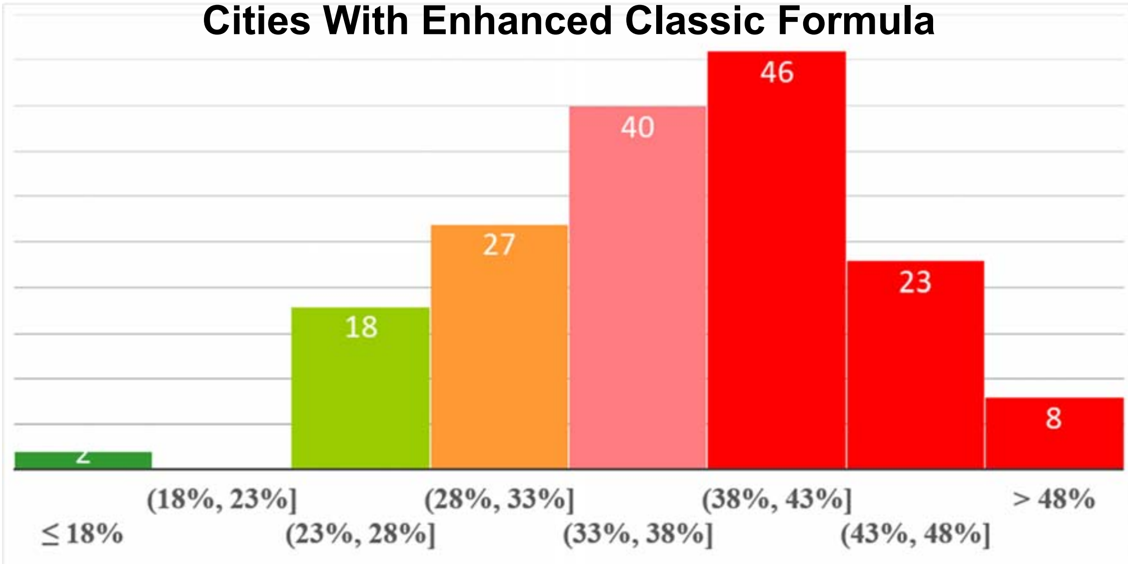

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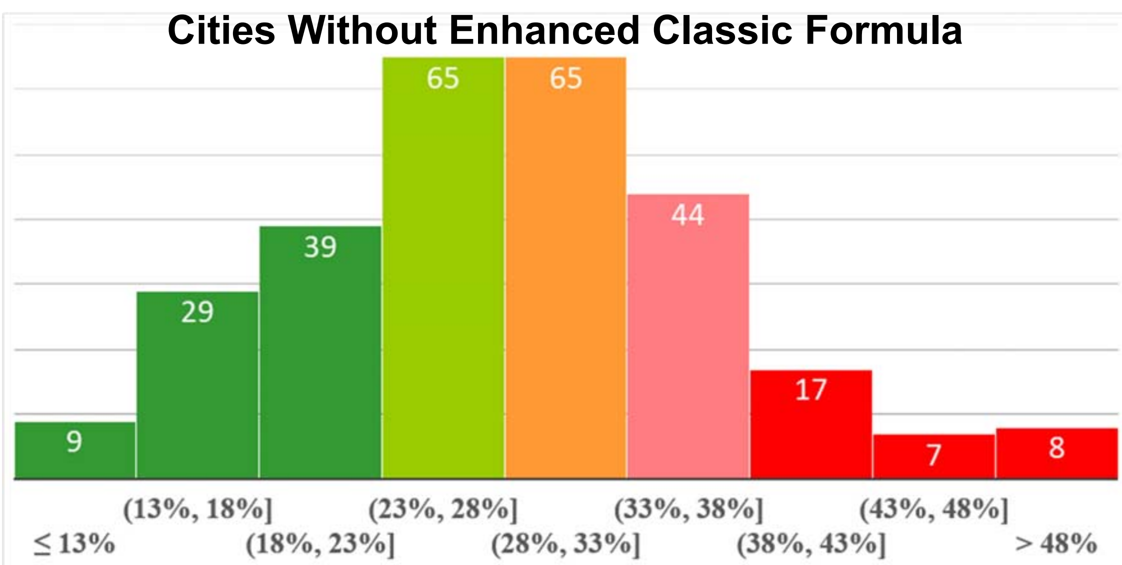
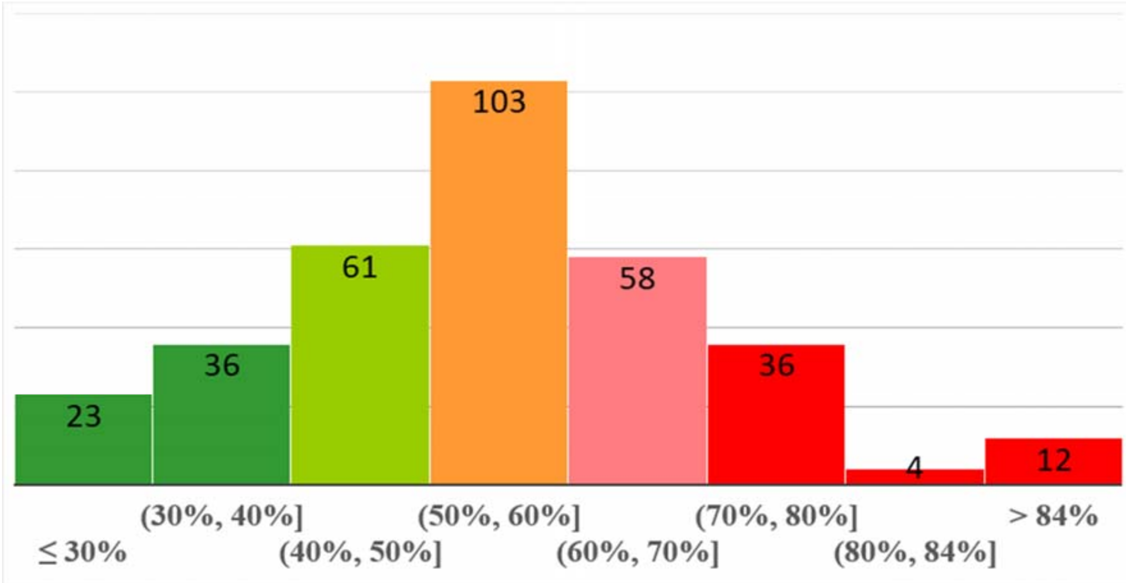


CalPERS City Safety 2024/25 Projected Rates



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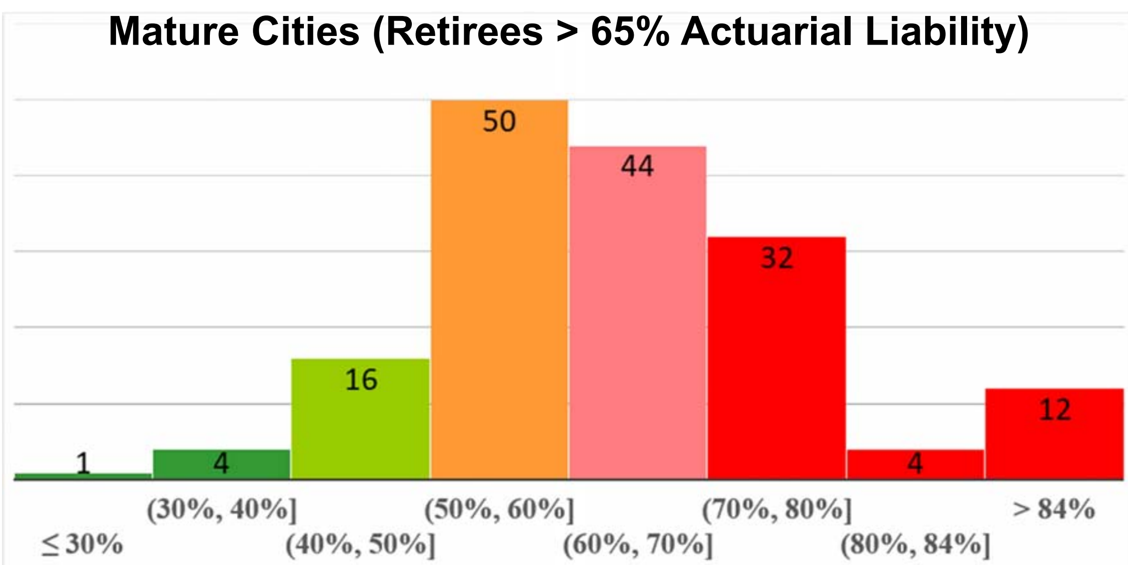

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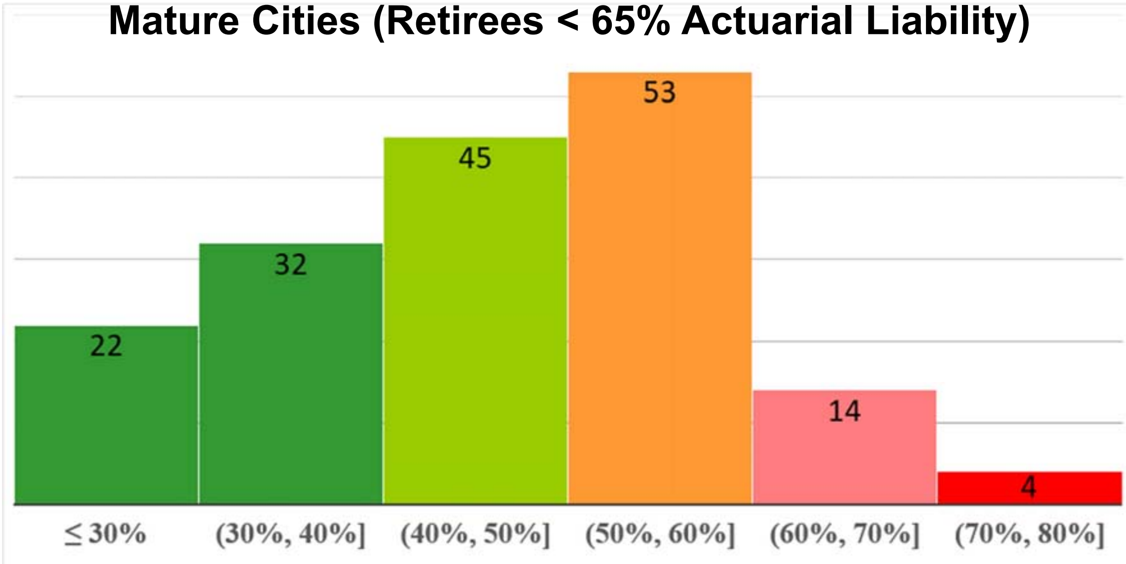
2024/25 Projected Rates



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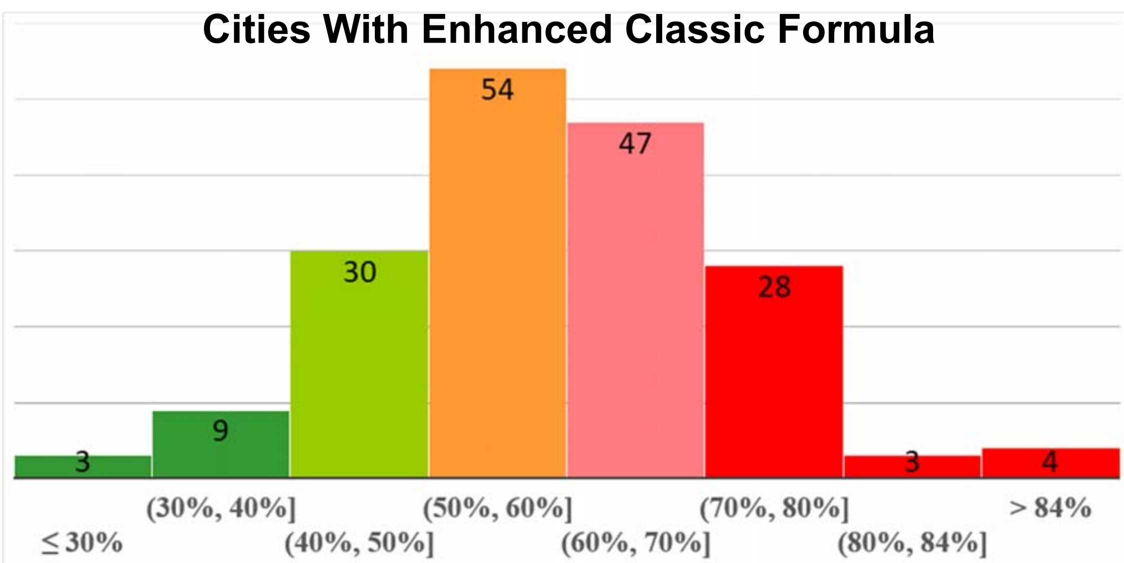
2024/25 Projected Rates



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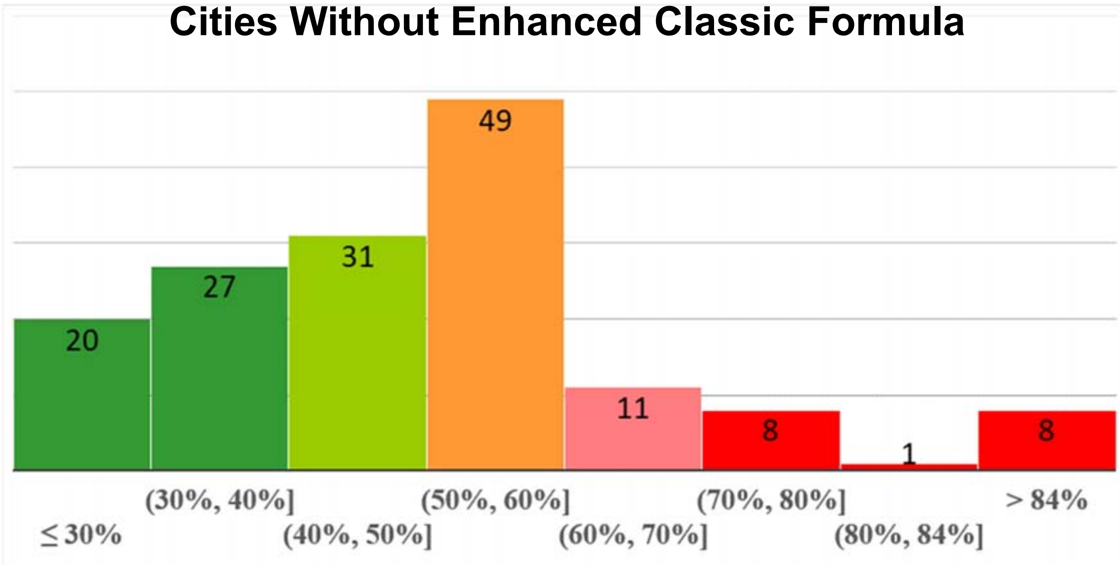
2024/25 Projected Rates



Paying Down Unfunded Liability & Rate Stabilization

- Where Do You Get the Money From?
- How Do You Use the Money?

Where Do You Get the Money?

- Pension Obligation Bonds (POBs)
- Borrow from General Fund
- One time payments

POBs

- Usually thought of as interest arbitrage between **expected** earnings and rate paid on POB
- No guaranteed savings
- PEPRA prevents contributions from dropping below normal cost
  - Savings offset when investment return is good
- GFOA White Paper

Borrow from General Fund

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

One Time Payments

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

How Do You Use the Money?

- Give directly to CalPERS
- Establish an Internal Service Fund
- Establish an Irrevocable Supplemental (§115) Pension Trust

Give Directly to CalPERS

- Treat as Contribution Gain
  - CalPERS default
  - Very modest short term impact
- Apply to all bases in proportion:
  - Lowers payment
  - Does not shorten amortization period

Give Directly to CalPERS

- Request shorter amortization period
  - Does not require additional payment
  - Higher short term payments
  - Less interest and lower long term payments
- PEPRA prevents contributions from dropping below normal cost
  - Savings offset when investment return is good

Give Directly to CalPERS

- Target specific amortization bases
  - Paying off shorter amortization bases
    - Larger annual contribution savings over shorter period
    - Less interest savings compared to paying off longer amortization bases
  - Paying off longer amortization bases
    - Smaller annual contribution savings over longer period
    - More interest savings compared to paying off shorter amortization bases

Internal Service Fund

- Could be used for rate stabilization
- Restricted investments:
  - Likely low (0.5%-1.0%) investment returns
  - Short term/high quality investments
  - Designed for preservation of principal
- Assets could be used by Board/Council for other purposes
- Does not reduce GASB 68 Net Pension Liability

Irrevocable Suppl. Pen. Trust

- IRC §115
- Normally used for rate stabilization
- Will not reduce GASB 68 Net Pension Liability
- Investments significantly less restricted than agency investment funds:
  - Designed for long term returns
  - Likely much higher (4%-5%) investment returns than agency investment funds

Irrevocable Suppl. Pen. Trust

- > 100 agencies
  - PARS, PFM & Keenan
- Can't be used by agency for other purposes
- Can only be used to :
  - Reimburse for pension contributions
  - Make payments directly to pension system
- Does not reduce Net Pension Liability

Irrevocable Suppl. Trust

- Can mitigate:
  - Investment volatility
  - Impact of plan becoming over funded
- Requires modest seed contribution to trust (≈10% of annual dollar contribution)