

San Diego City Employees' Retirement System



Actuarial Review

Presentation to the San Diego City Council

March 21, 2023

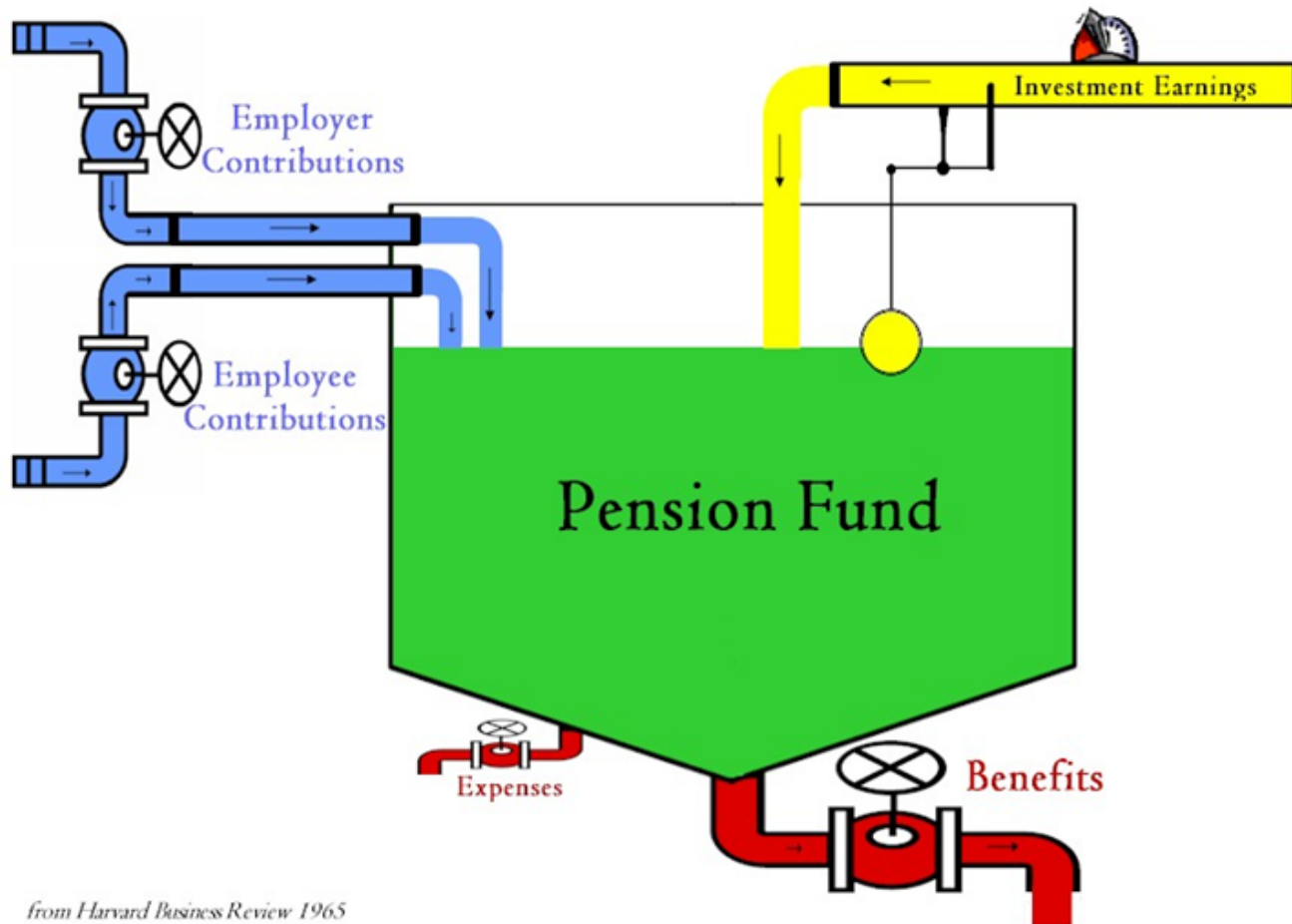
Gene Kalwarski, FSA, EA, MAAA, FCA

Anne Harper, FSA, EA, MAAA



- The Big Picture
- SDCERS Funding Policy
- Plan Risks
- A Peer Comparison of Public Retirement Systems

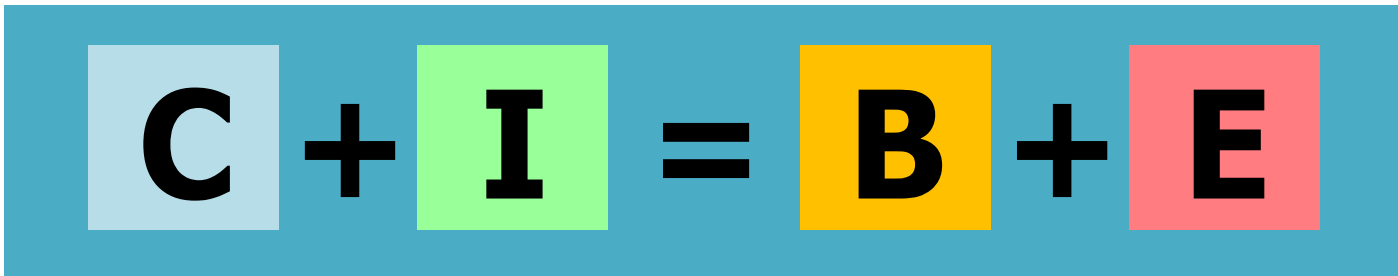
The Valuation Process



from Harvard Business Review 1965



Contributions + **I**nvestments



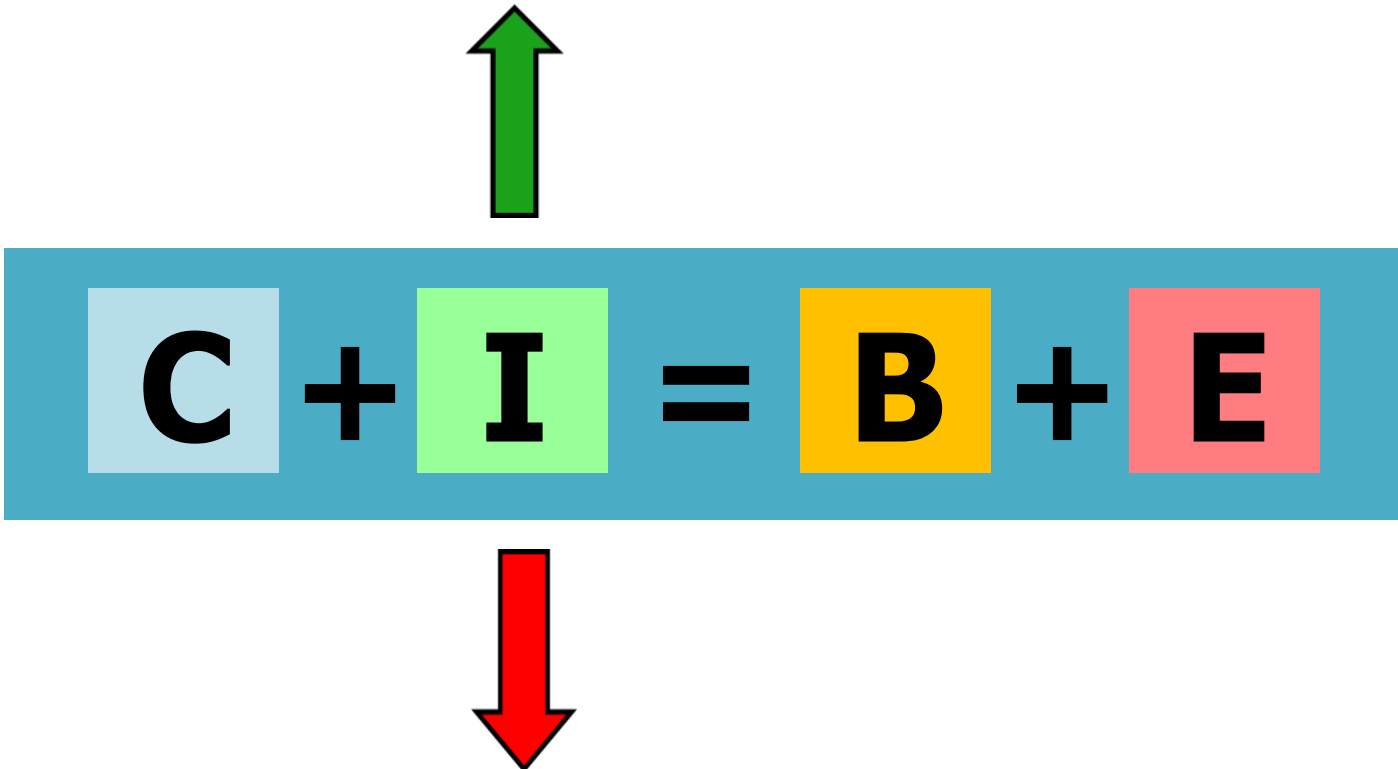
= **B**enefits + **E**xpenses

Actuaries Value the “B” and “E” parts



$$\mathbf{C} + \mathbf{I} = \mathbf{B} + \mathbf{E}$$

Tough to Predict the “I” Part

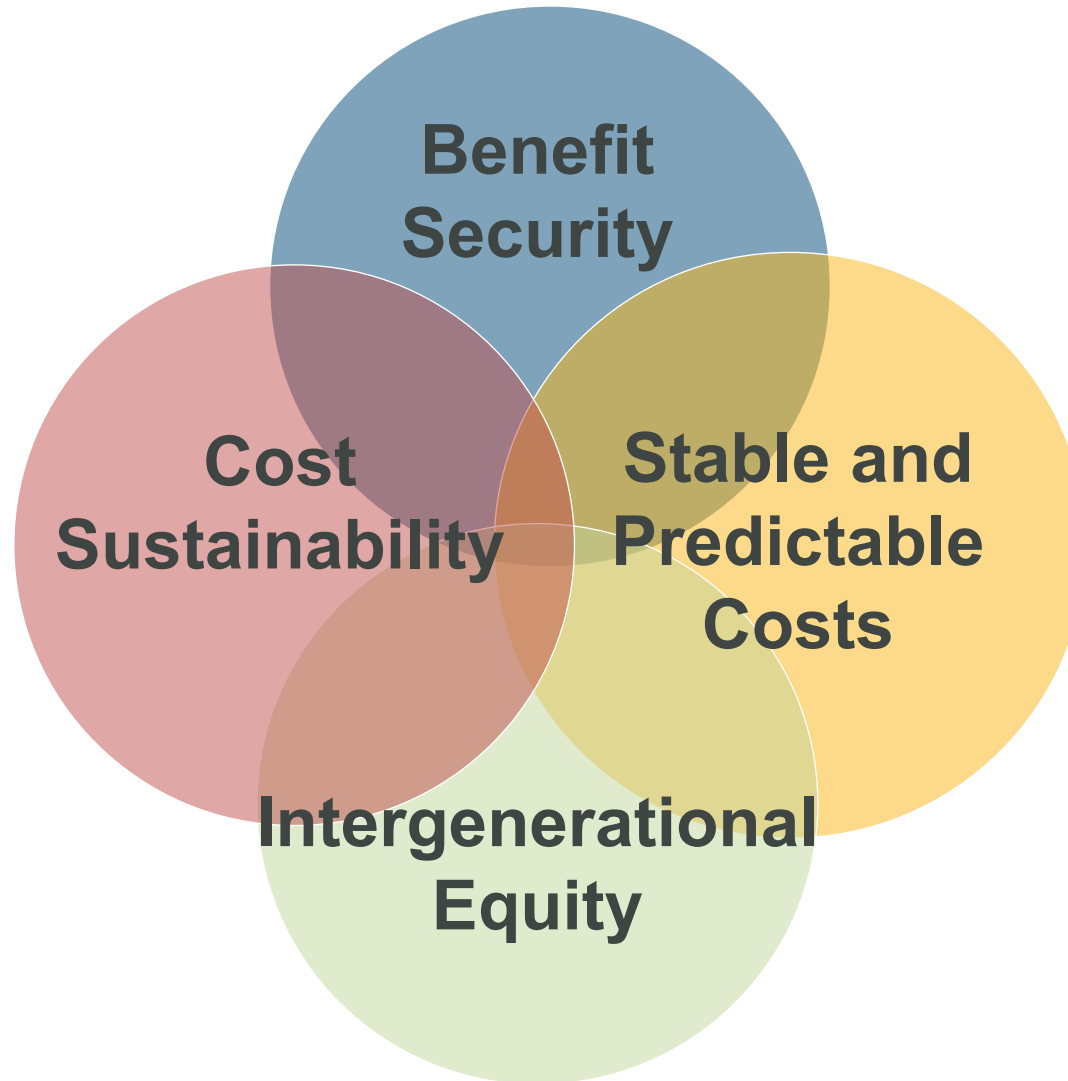


“C” is based on the Board’s policy



$$\mathbf{C} + \mathbf{I} = \mathbf{B} + \mathbf{E}$$

Balancing Funding Objectives



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The SDCERS Board has four funding objectives:

- 1. *Benefit Security*** - The setting of actuarial assumptions and methodologies should be based upon funding the Plan to avoid the risk of running out of assets to pay pension benefits.
- 2. *Stable and Predictable Costs*** - Contributions should be managed and controlled, consistent with other funding objectives and rules, so that costs remain stable and predictable over time for both cash-flow and investing purposes.
- 3. *Intergenerational Equity*** - The employee's pension should be funded by the generation of tax payers that receives the employee's services.
- 4. *Cost Sustainability*** - Establish a funding model providing employers the ability to pay their actuarially determined contribution through various economic cycles



Elements of SDCERS' Funding Policy:

1. Actuarial Assumptions
2. Actuarial Funding Method
3. Asset Smoothing Method
4. Amortization Method



- Economic Assumptions
 - ***Discount Rate (Investment Return)***
 - Inflation Rate
 - Salary Increase Rate
 - Merit Increases
 - Cost-of-Living Increase Rate
- Demographic Assumptions
 - ***Mortality Rates and Projected Improvement***
 - Retirement, Disability, Termination Rates
 - Other Miscellaneous Assumptions

Economic Assumption History

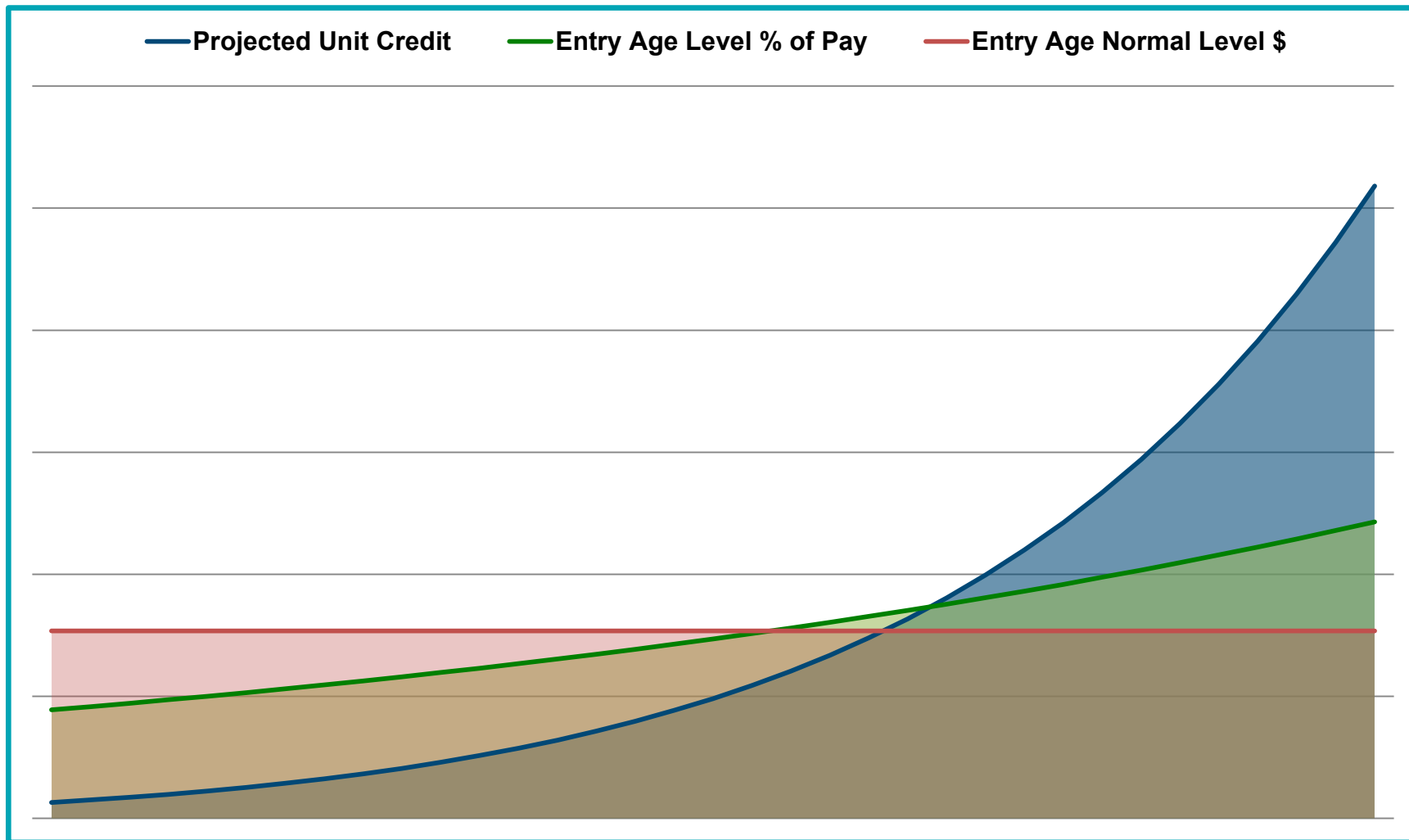


■ Discount Rate ■ Wage Inflation ■ COLA



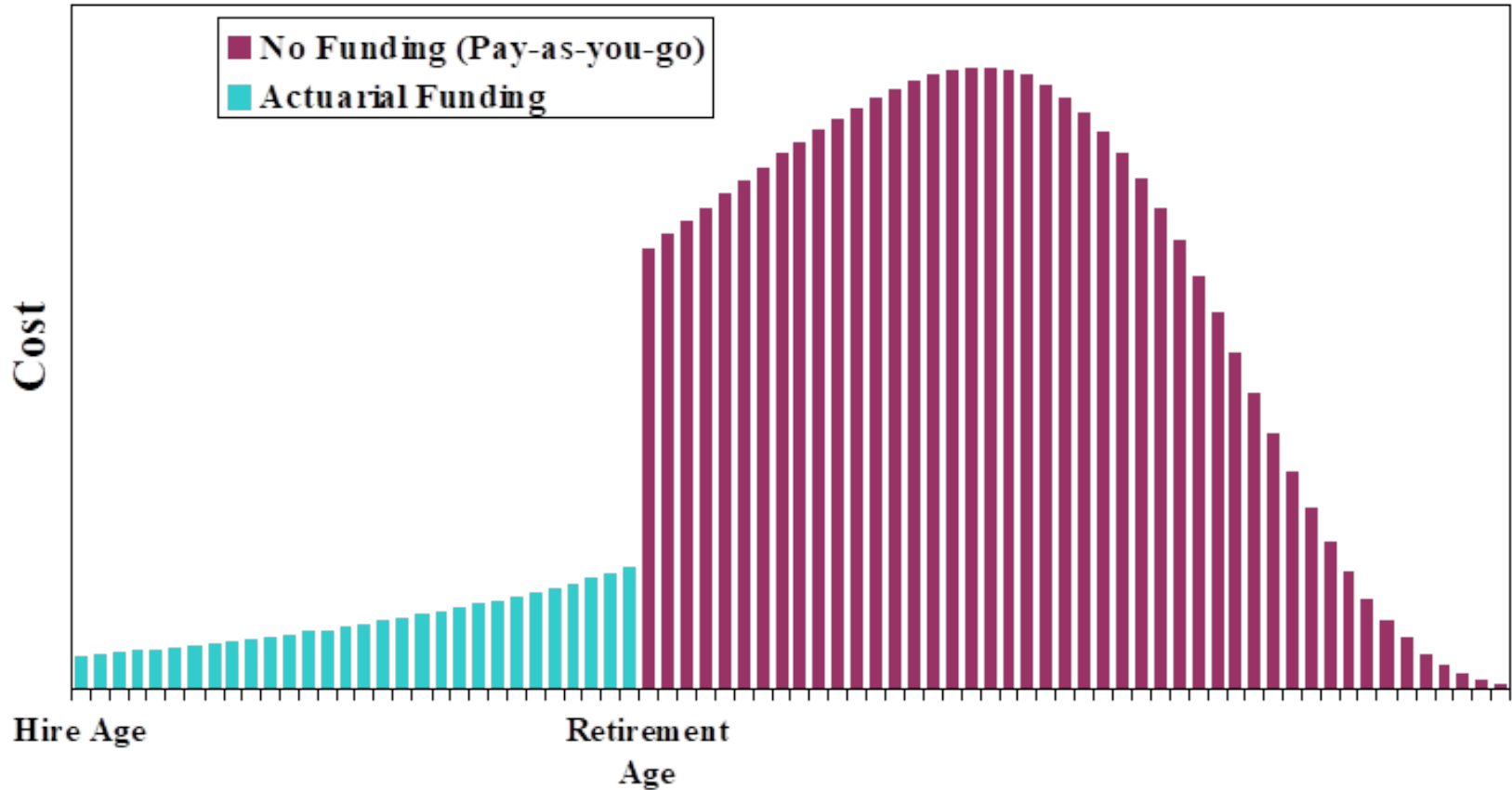
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Actuarial Cost Methods



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SDCERS Funding Policy – Normal Cost

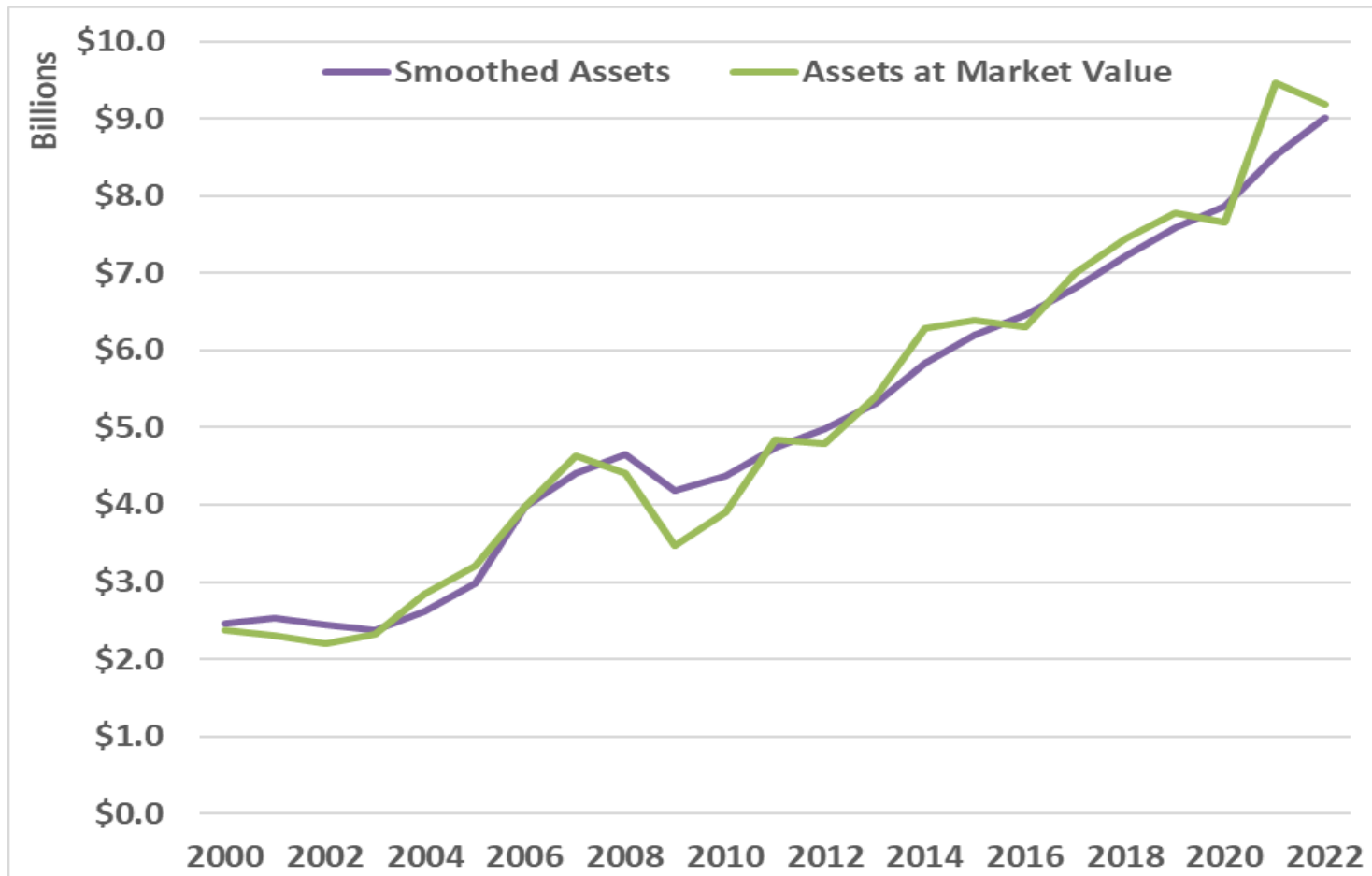


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SDCERS Asset Smoothing Method



Most plans employ asset smoothing to dampen the impact of market fluctuation on costs



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- Period
 - 15 years for annual gains and losses
 - 20 years for assumption and method changes
 - 5 years for City benefit changes
- Payment Pattern
 - Level % of pay for all open plans
 - Level \$ for City's closed non-police plans
- UAL Payment Floors Until Fully Funded
 - \$275.5 million
- Overriding limit = no negative amortization

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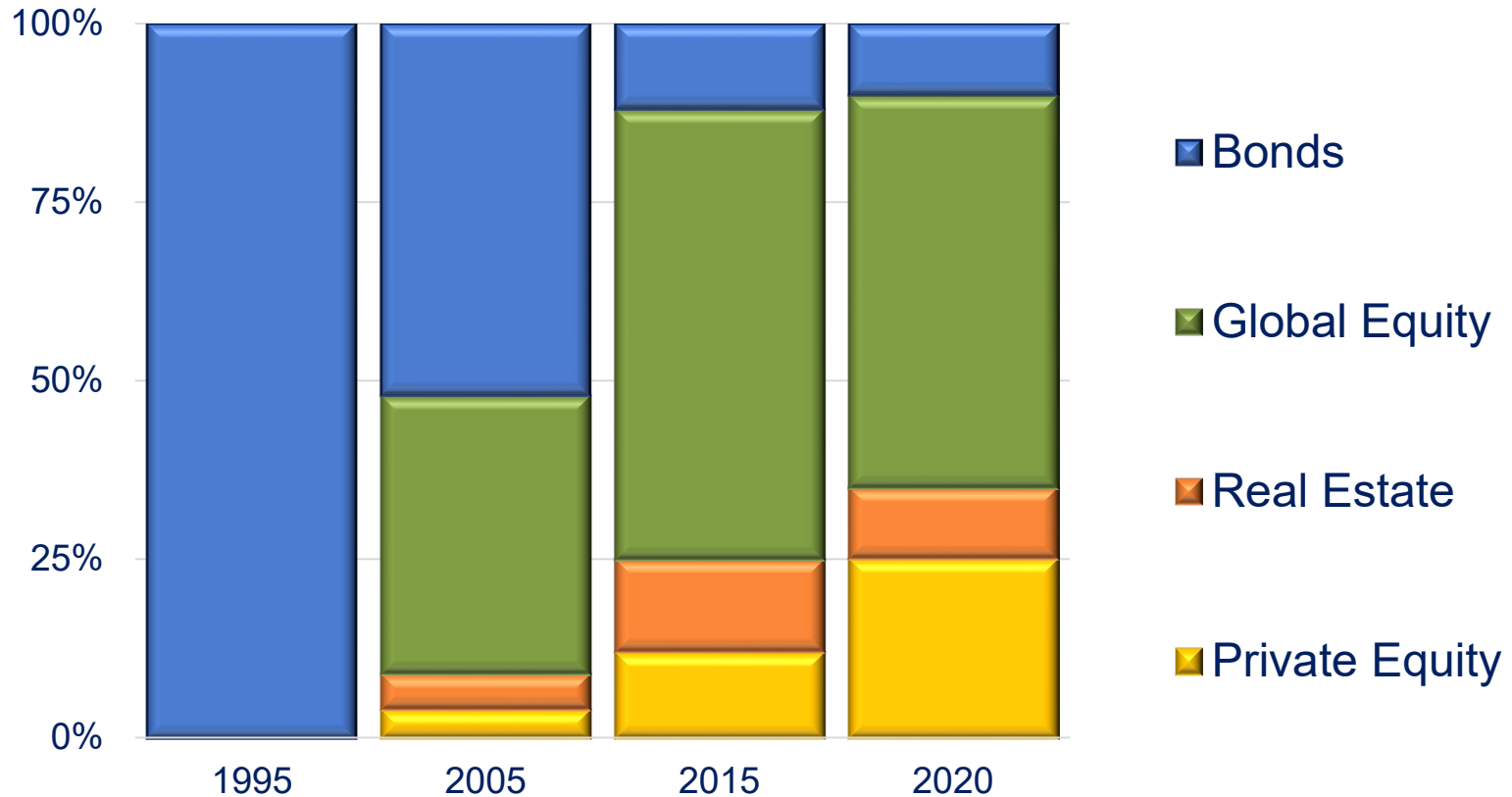


- Actual versus assumed investment returns
 - Variability in portfolio returns
 - Negative net cash flow
- Actual versus assumed experience
 - Mortality
 - Retirement rates
 - Disability rates
- Plan maturity and size relative to plan sponsor
- Changing economic environments and/or new demographic research → changing assumptions/risks

Declining Interest Rates



Estimates of What Investors Need to Earn 7.5%

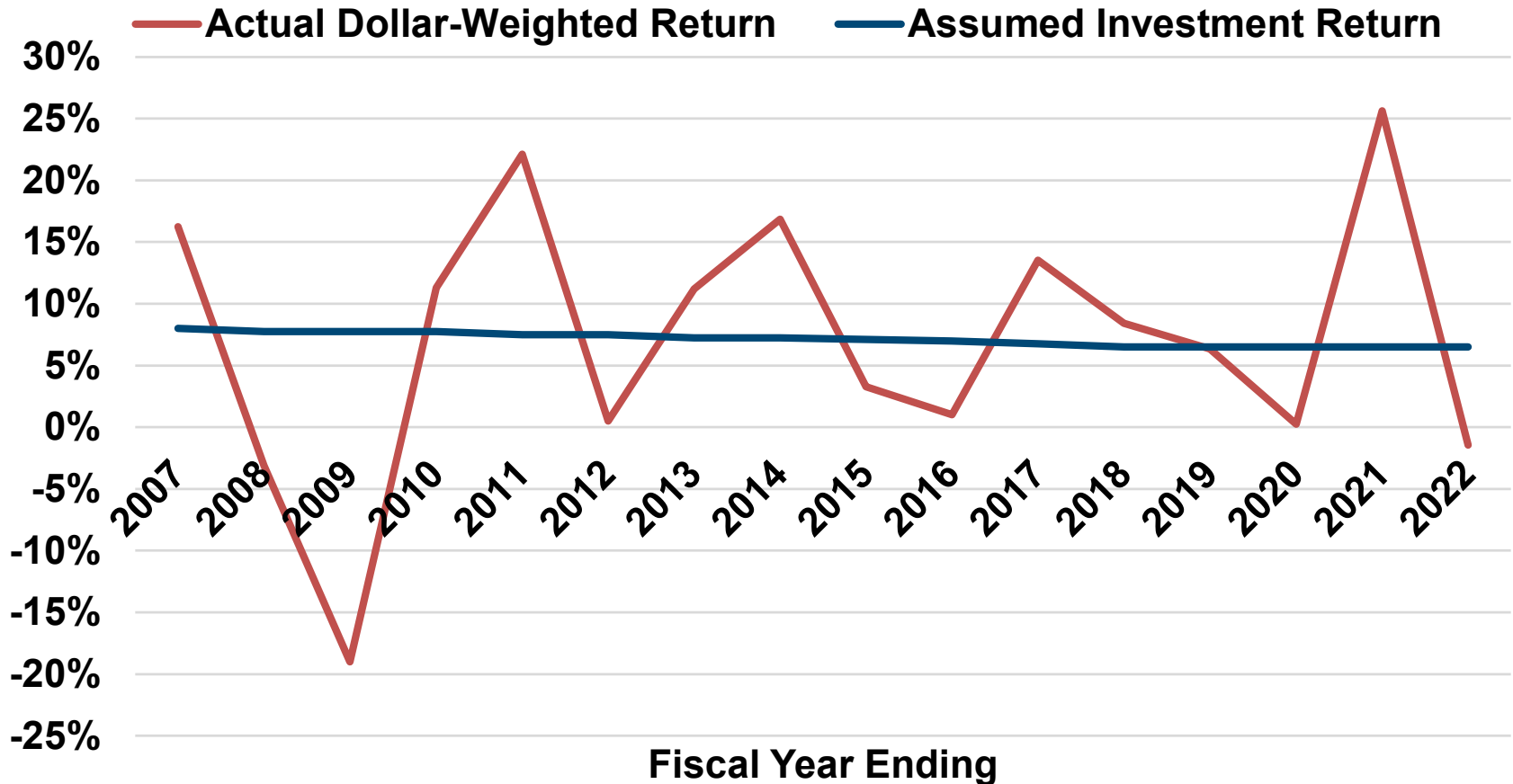


	1995	2005	2015	2020
Standard Deviation	6%	9%	17%	17%

Source: Wall Street Journal and SDCERS investment consultant, Aon. This is an example and not SDCERS data.

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Historical Return Experience



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Negative Cash Flow Risks



Starting Assets **\$ 9,457**
 Starting NCF **A**
 NCF Growth **A**

Market Cycle **downup**

\$20,000

\$18,000

\$16,000

\$14,000

\$12,000

\$10,000

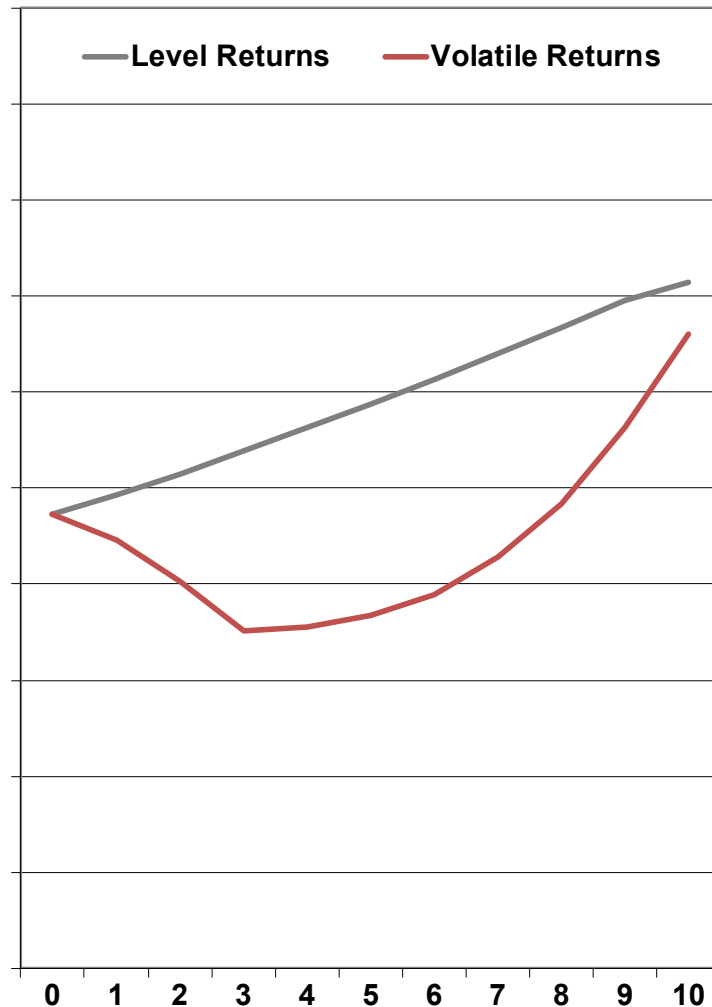
\$8,000

\$6,000

\$4,000

\$2,000

\$0



Year	New Cash Flow	Level Returns		Volatile Returns	
		Returns	Assets	Returns	Assets
1	\$(206.3)	6.50%	\$9,859	-3.49%	\$8,924
2	\$(207.0)	6.50%	\$10,286	-7.49%	\$8,057
3	\$(181.3)	6.50%	\$10,768	-10.49%	\$7,040
4	\$(205.7)	6.50%	\$11,256	4.02%	\$7,113
5	\$(224.4)	6.50%	\$11,756	6.51%	\$7,344
6	\$(242.1)	6.50%	\$12,270	9.51%	\$7,789
7	\$(259.5)	6.50%	\$12,800	13.51%	\$8,565
8	\$(275.3)	6.50%	\$13,348	16.51%	\$9,682
9	\$(290.5)	6.50%	\$13,915	19.51%	\$11,253
10	\$(516.6)	6.50%	\$14,287	22.51%	\$13,214

reported return = **6.50%** =time weighted= **6.50%**

actual return = **6.50%** =dollar weighted= **5.77%**

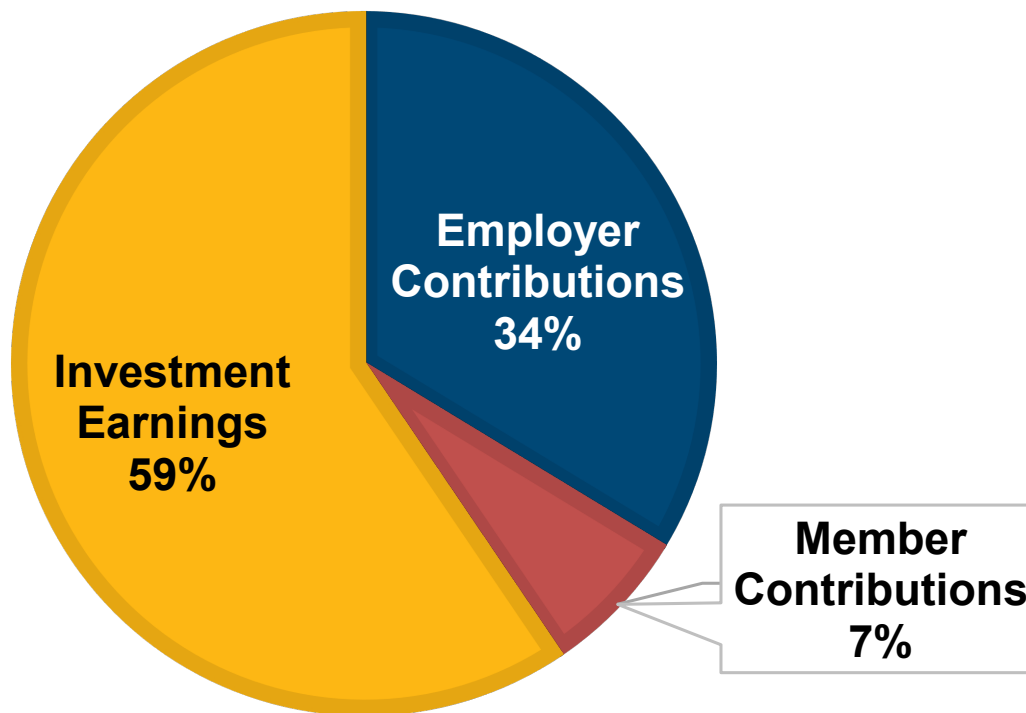
Asset Loss/(Gain) **\$1,073** or **-8%**

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SDCERS - CITY OF SAN DIEGO 9-YEAR REVENUE ANALYSIS FYE 2014-2022

■ Employer Contributions ■ Member Contributions ■ Investment Earnings



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- Member Contributions
 - Members pay predetermined contribution rate as a percentage of pay
 - Generally, covers employee's share of Total Normal Cost, dependent on entry age and plan tier
- City Contributions (ADC)
 - Employer share of Total Normal Cost
 - UAL Amortization Payment
 - Expected Administrative Expenses
 - Proposition B Funding, effective FY2024

Member Contributions

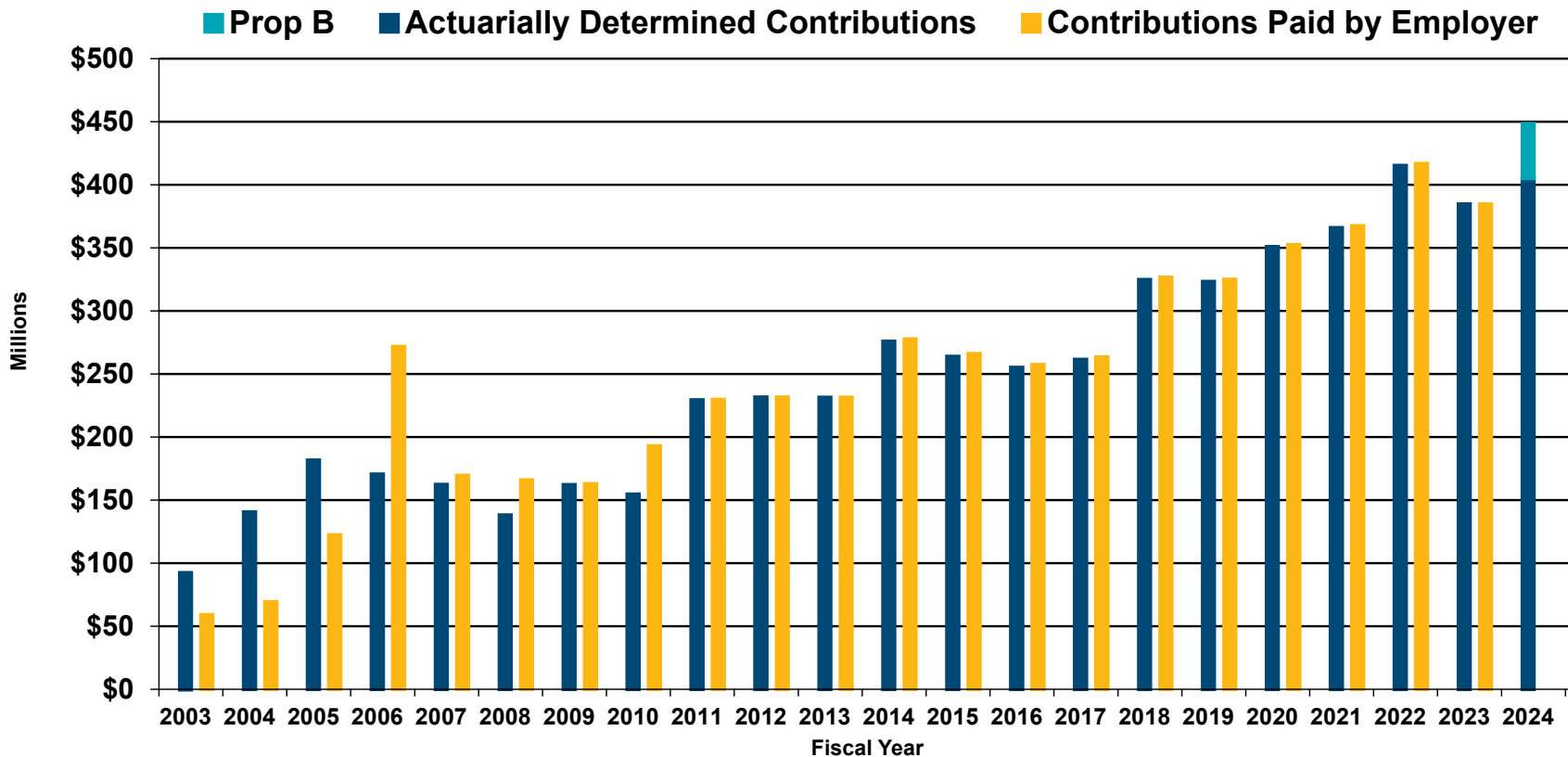


Member contribution rates vary by membership group, date of entry, and age at entry into SDCERS. Contribution rates, calculated in accordance with the “substantially equal” requirement, are payable as a percent of pensionable pay.

Membership Group	Current Range of Contribution Rates
Elected	9.05%
General	6.47% - 14.83%
Lifeguard	15.16% - 20.98%
Fire	15.16% - 22.14%
Police	11.57% - 22.22%

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City Contributions (ADC)



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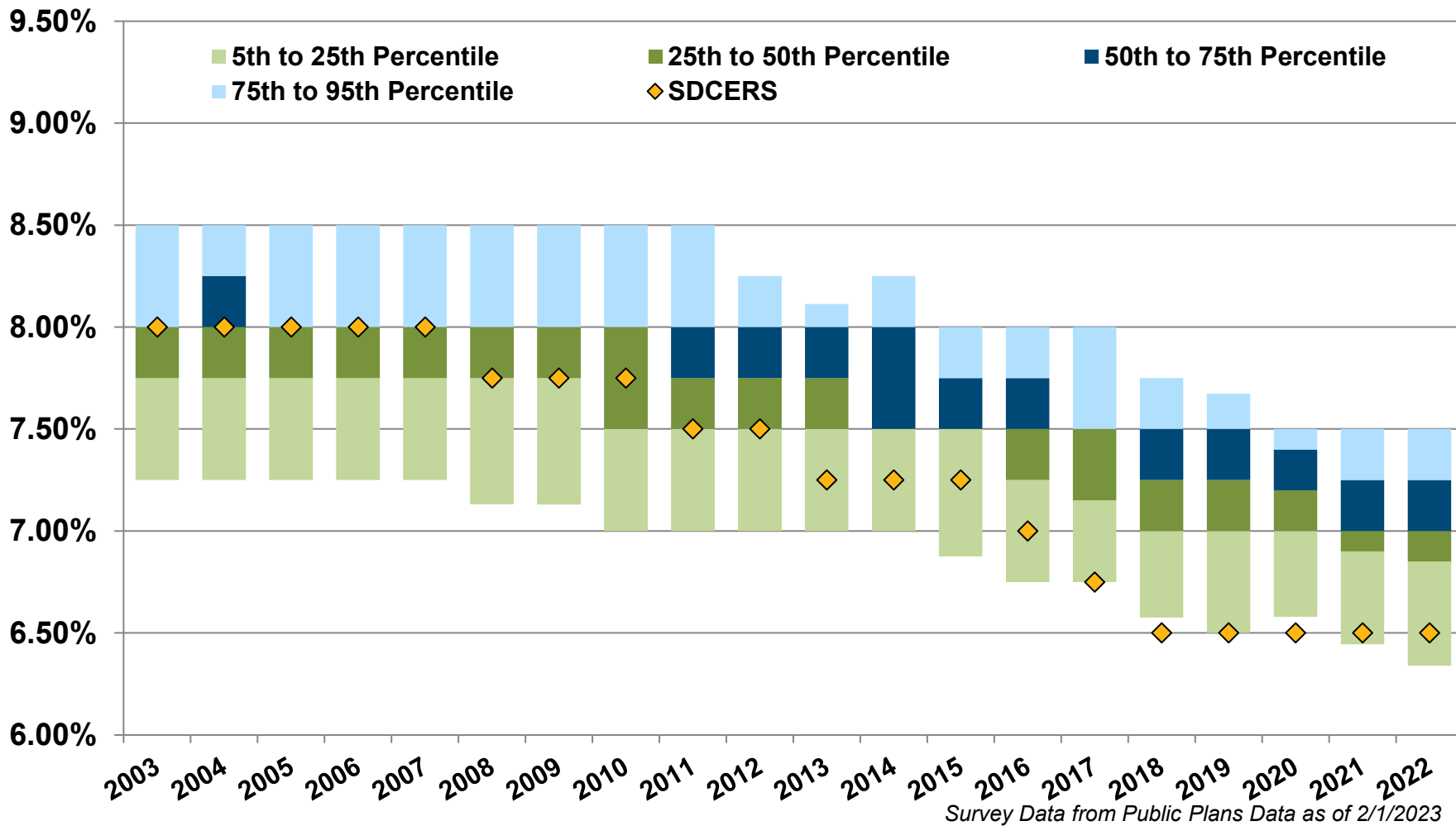


Peer Comparison of Public Retirement Systems

Discount Rate Assumption



Discount Rate

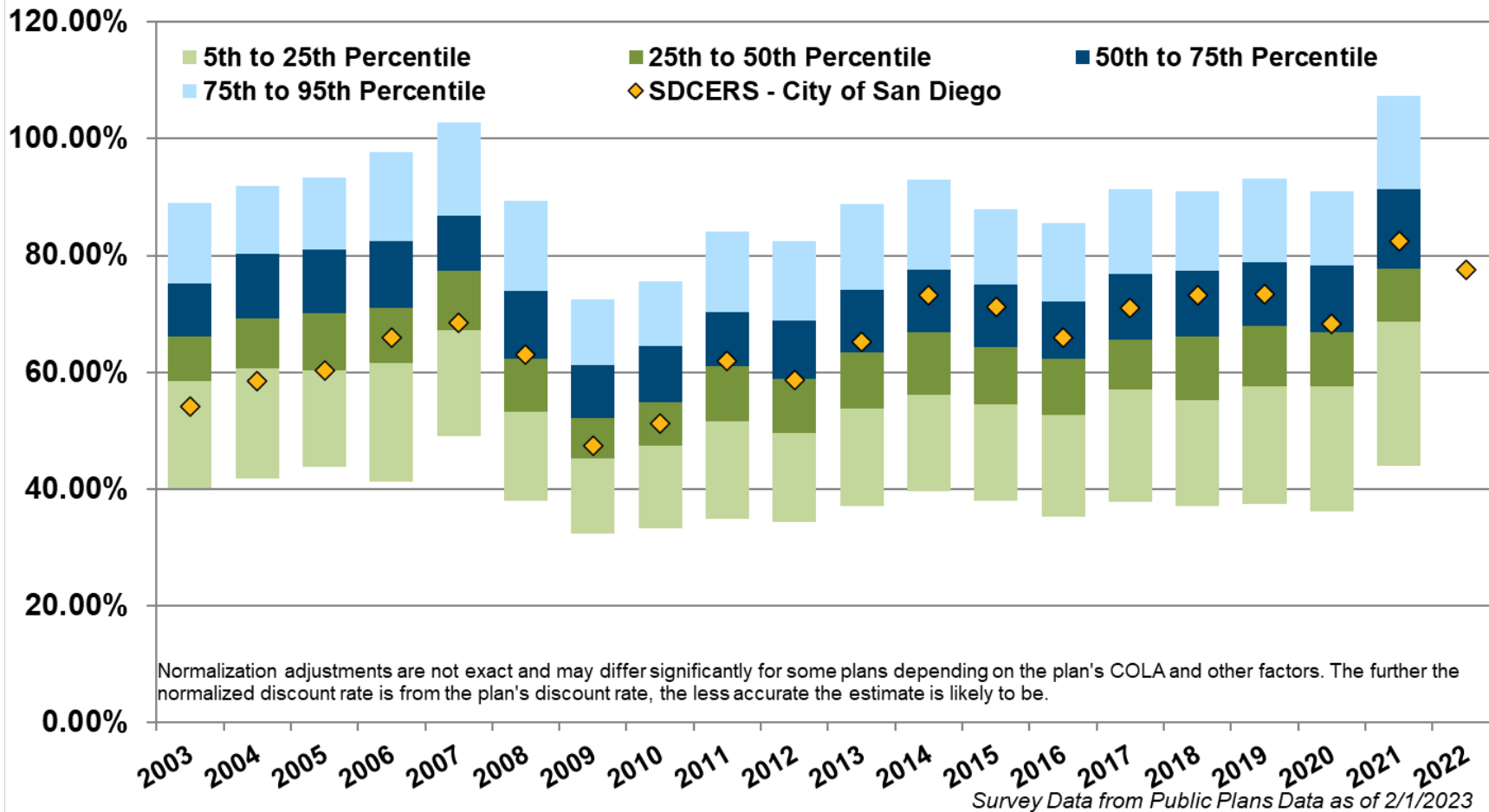


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Funding Ratio Comparisons



MVA Funded Ratio - Normalized



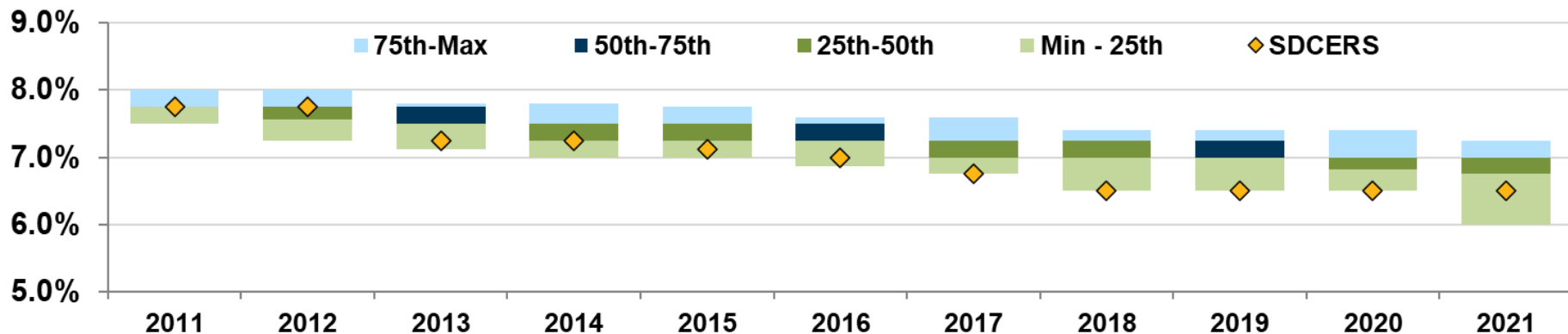
All results shown here were normalized to a 6.5% discount rate to compare to SDCERS-City of San Diego

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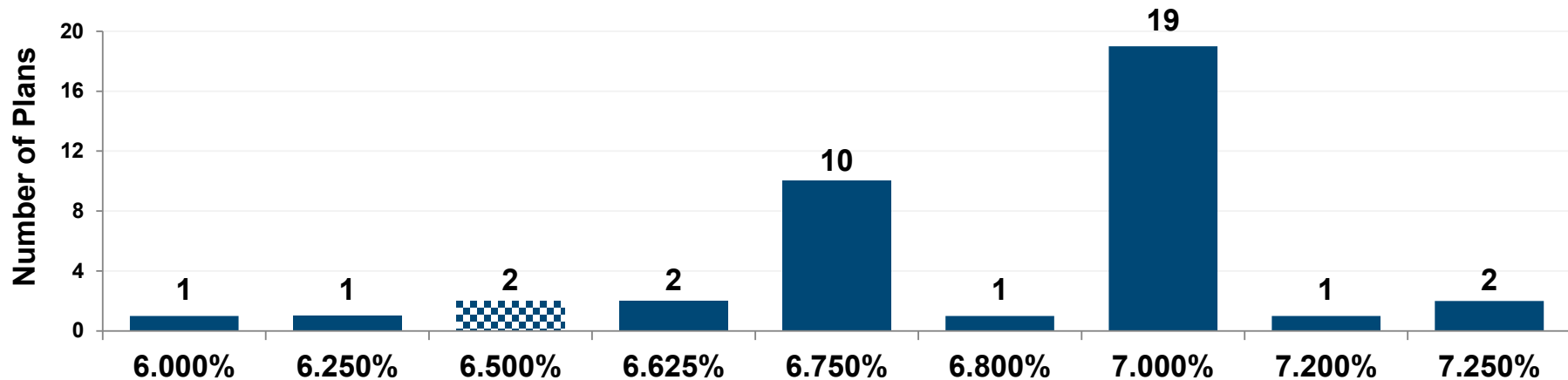
CA Comparison – Discount Rate



Discount Rate Trends
Cheiron Survey of California Systems



Distribution of Latest Discount Rates
Cheiron Survey of California Systems

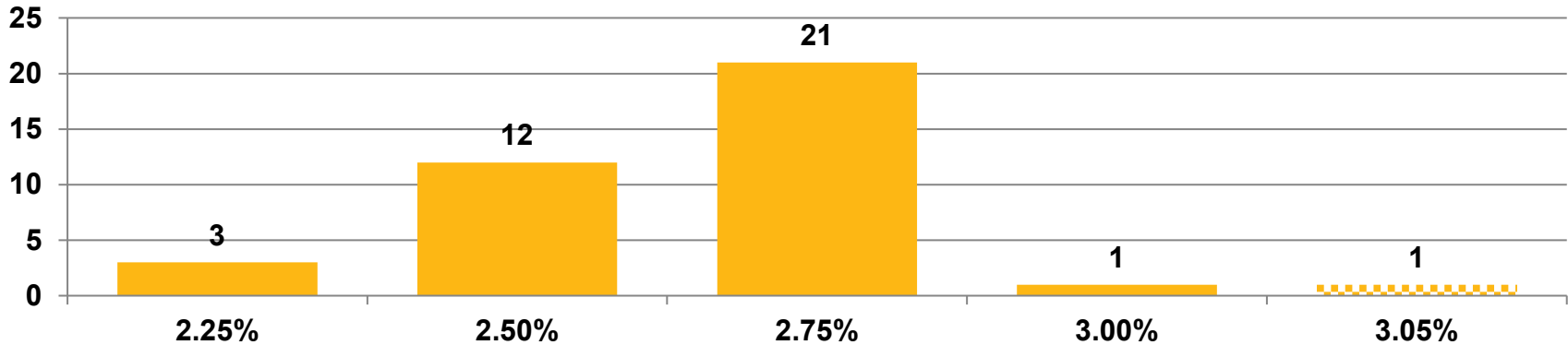


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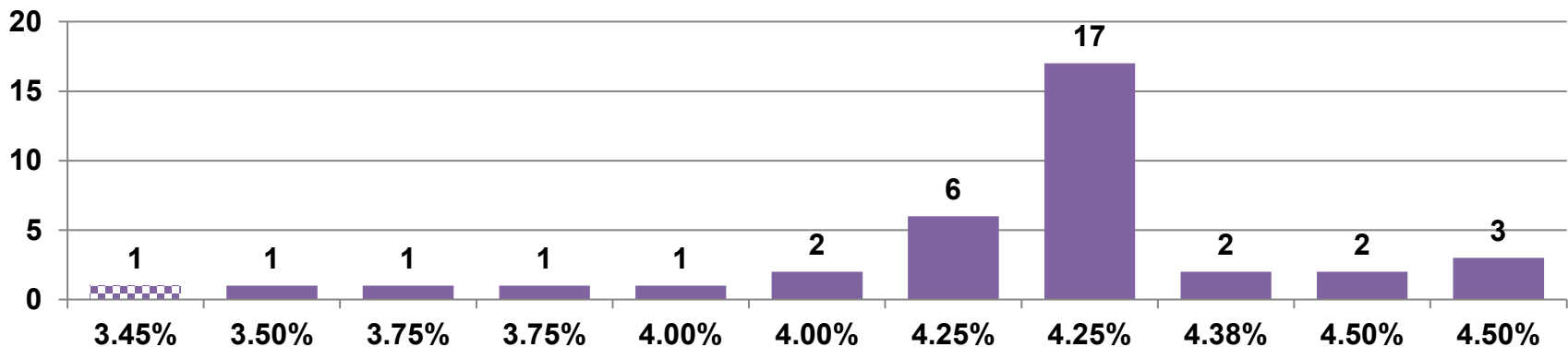
CA Comparison – Economic Assumptions



Distribution of Latest Price Inflation Assumptions Cheiron Survey of California Systems



Distribution of Latest Real Return Assumptions Cheiron Survey of California Systems

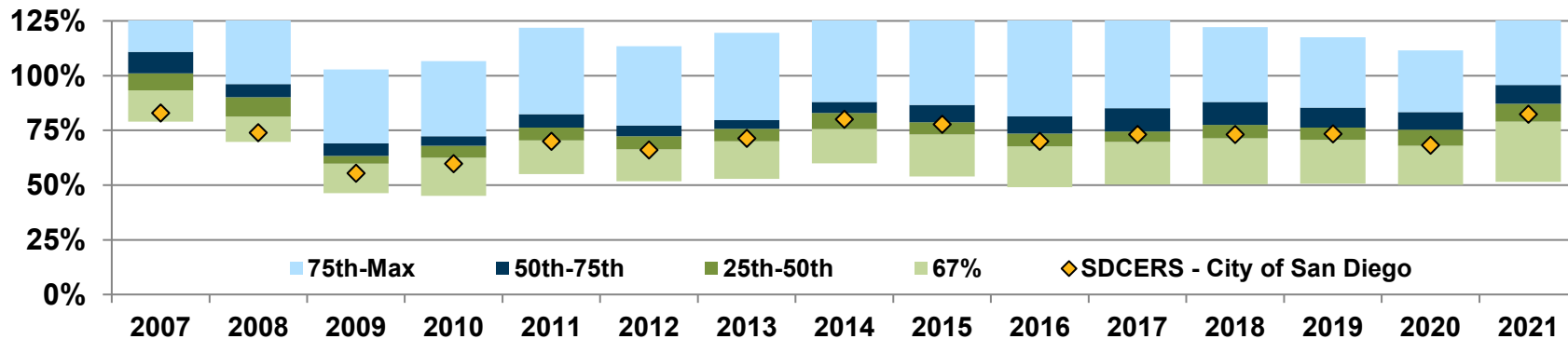


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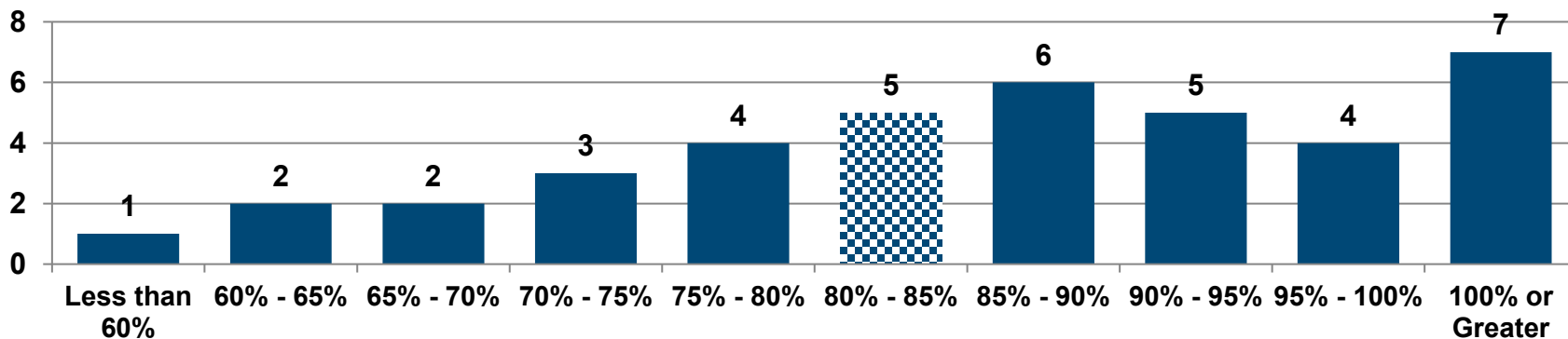
CA Comparison – Funded Ratio



Funded Status Trends - Market Value of Assets
Cheiron Survey of California Systems



Distribution of Latest Funded Status - Market Value of Assets
Cheiron Survey of California Systems



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Discussion



Required Disclosures



The purpose of this presentation is to provide educational training materials for the San Diego City Council on the San Diego City Employees' Retirement System. This presentation is for the use of the San Diego City Council and SDCERS in its education efforts.

This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

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