



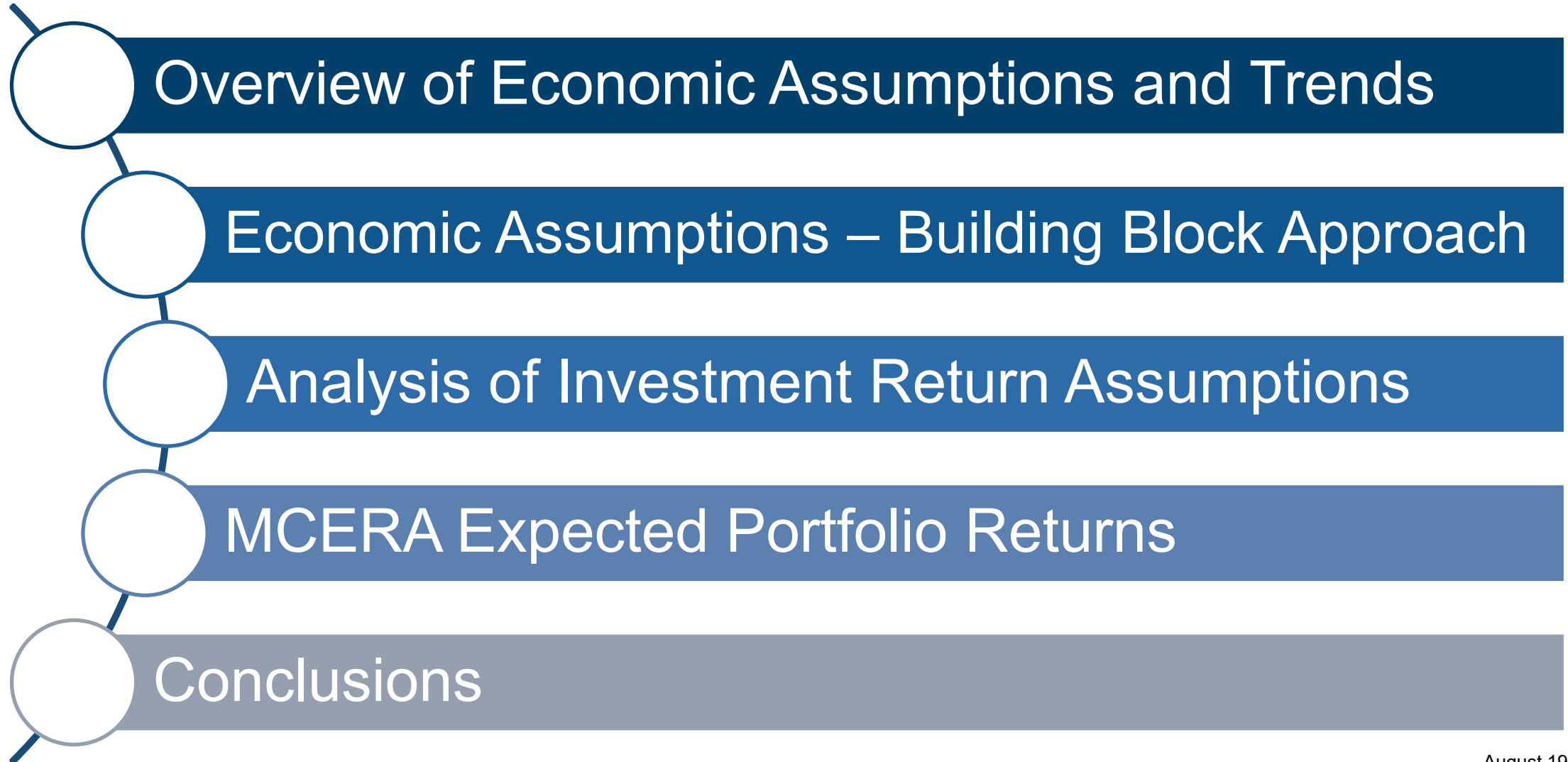
Expected Investment Return Analysis

Mendocino County Employees Retirement Association

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August 19, 2026





Economic Assumptions





**DISCOUNT
RATE**



**PRICE
INFLATION**



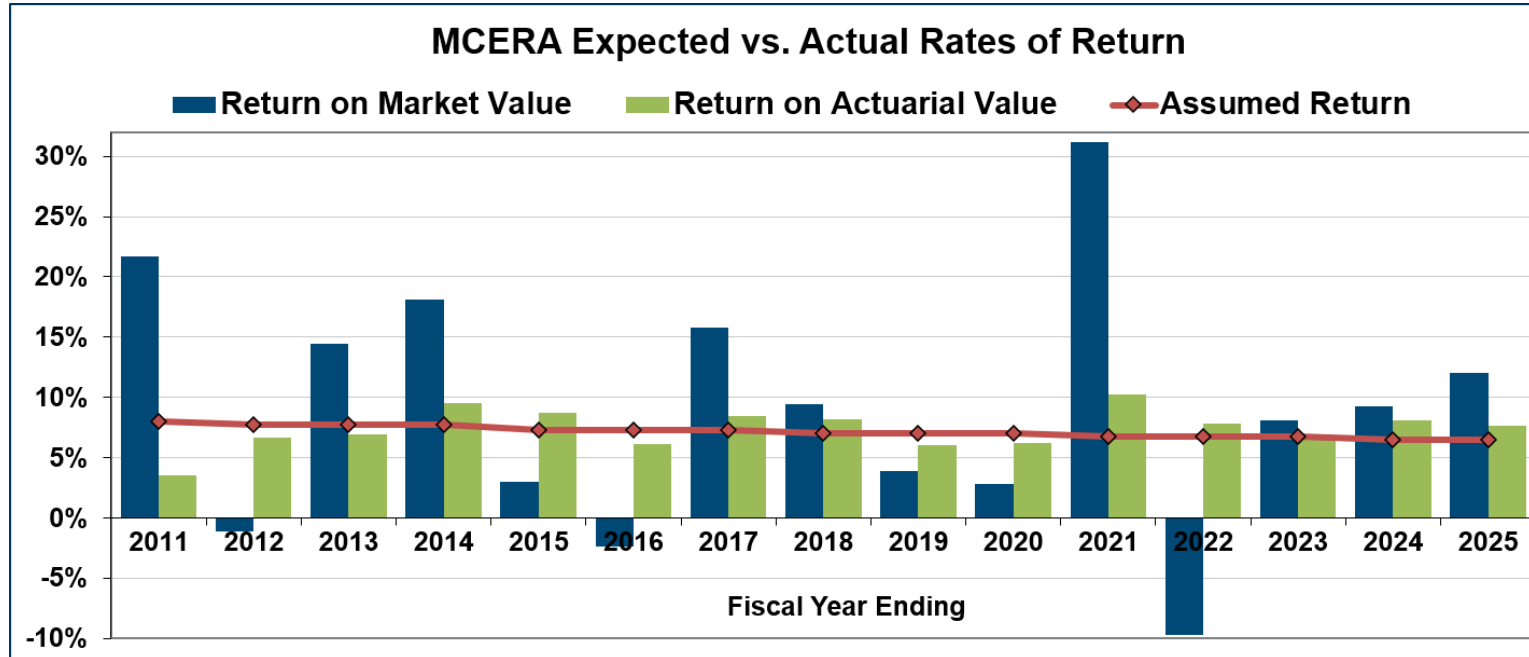
**WAGE
INFLATION**



**COST-OF-
LIVING
ADJUSTMENT**

Factors to consider when setting assumptions:

- Historical Experience
- Industry Trends
- **Plan Dynamics**
- **Future Expectations**
- **Board's Risk Tolerance/Preference**



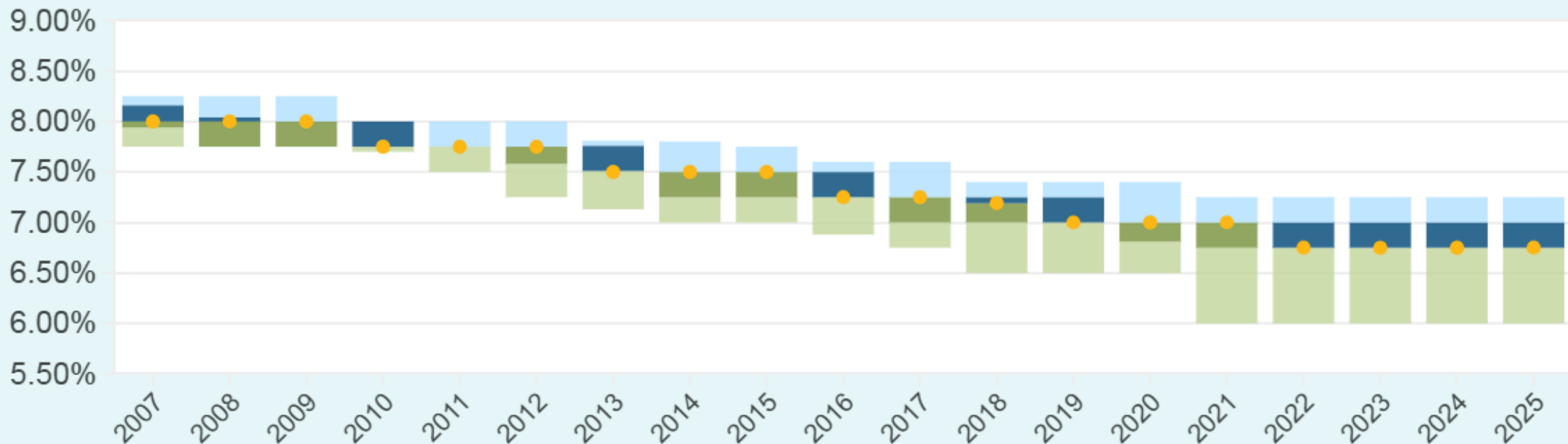
Geometric Average Return		
	Market Value	Assumed
5-Year	9.40%	6.65%
10-Year	7.55%	6.87%
15-Year	8.64%	7.15%

- The market value returns have been greater than the assumed return for the time periods shown above
- 9 of the last 15 years, the market value return has been greater than the assumed return; 60% of the time

California Public Retirement Systems - Distribution of Discount Rates

Gold Dot = Median

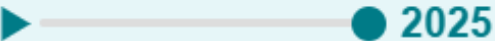
Percentiles of Distribution Min to 25th 25th to 50th 50th to 75th 75th to Max

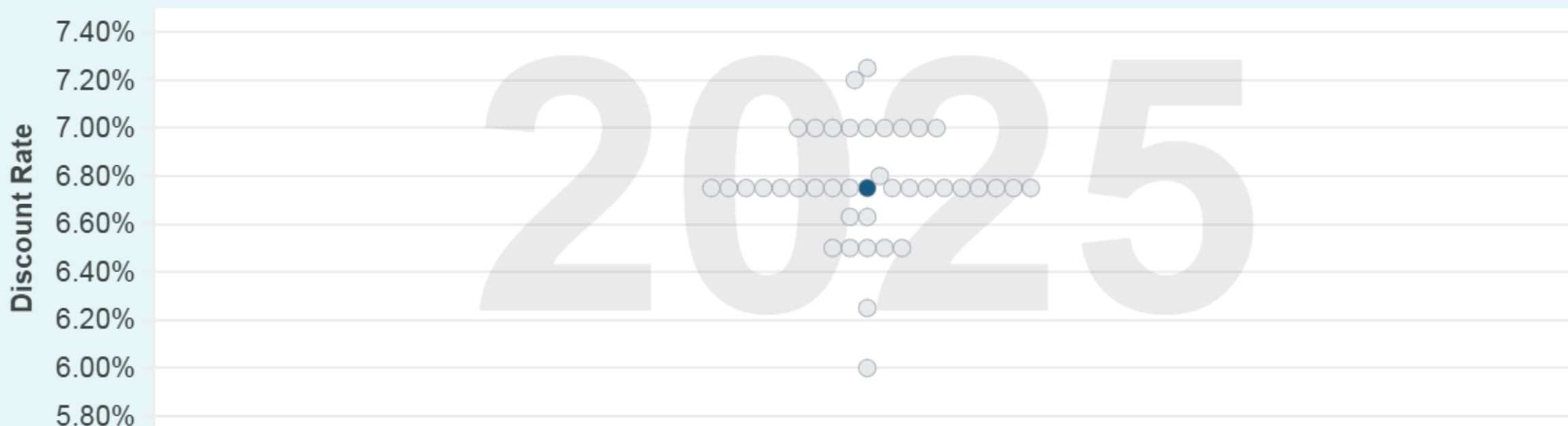


Bee Swarm of Discount Rates



Blue dot = Selected plan

Click arrow or drag slider to scroll through the years 

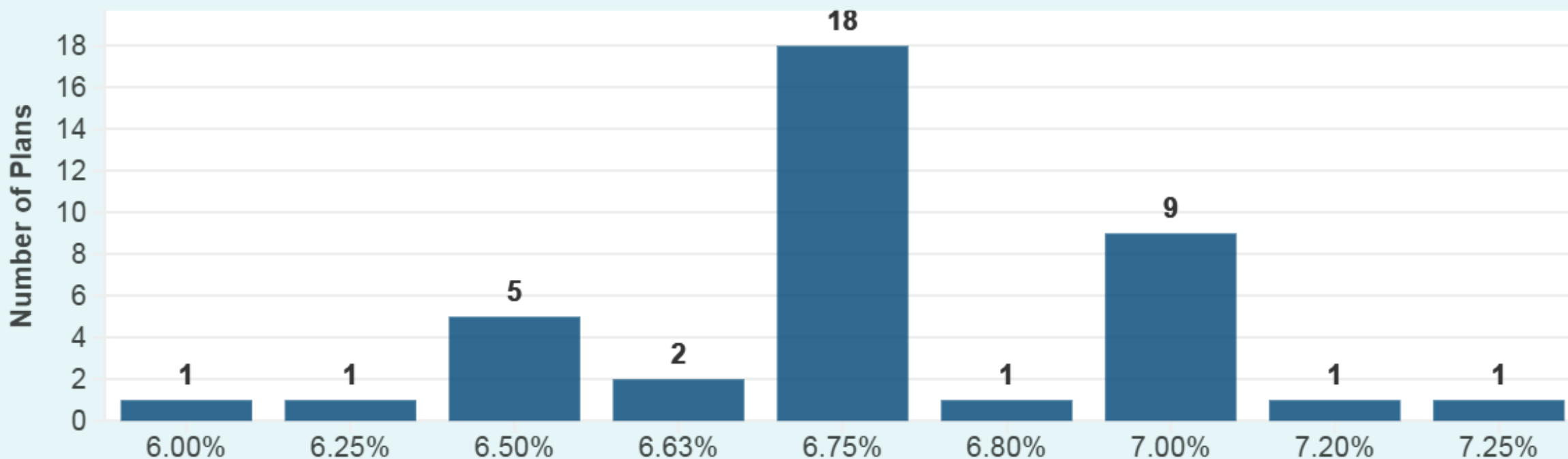


Hover over a dot to see that plan's data. Click dot to see a histogram for the year. Click X to return to floating bars.
Close the tab in the browser to return to the menu.

Histogram of Discount Rate Assumptions



2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
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Hover over a bar to see the plans counted in that bar. Click X to return to bee swarm. Close the tab in the browser to return to the menu.

Building block approach

- **Inflation** is the foundation for all economic assumptions
 - Price inflation assumption
- Wage inflation
 - **Inflation** + Real Wage Growth
- Cost-of-Living Adjustments (COLA)
 - **Inflation** (CPI) + West Region Adjustment
- Expected Return (Nominal)
 - **Inflation** + Real Return



Current Assumptions (adopted at the June 17, 2026 Board Meeting)

- **Inflation** assumption: **2.50%**
- Wage inflation: **3.00%**
 - Inflation + Real Wage Growth (0.50%)
- Cost-of-Living Adjustments (COLA): **2.75%**
 - Inflation + West Region Adjustment (0.25%)
- Expected Investment Return: **x.xx%**
 - Inflation + Real Return (**Undecided**)



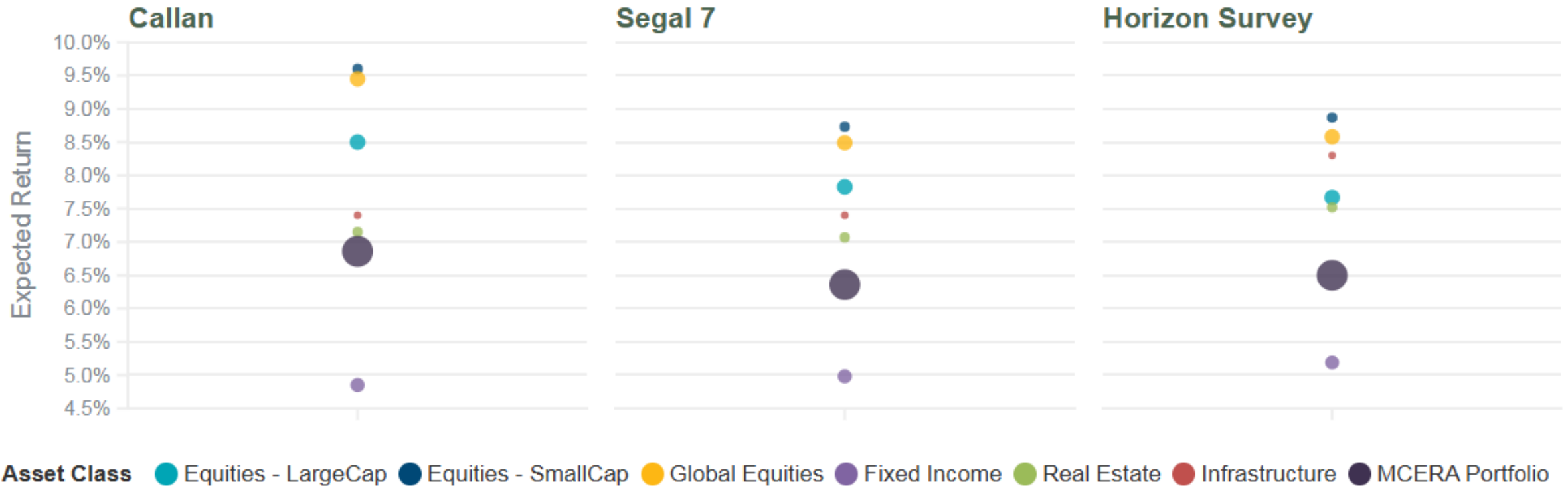
- Asset Allocation + Capital Market Assumptions → Expected Investment Return
 - Aggressive allocation may support higher assumed return than a conservative allocation, but with more risk and volatility
 - Higher assumed return → Lower expected contributions
 - Lower assumed return → Higher expected contributions
 - **Over time, contributions will depend on actual, not expected, investment returns**

- Collect capital market assumptions (CMAs) from investment consultants – expected returns, risk, and correlations
 - Callan (MERA's consultant)
 - 7 investment firms (including Callan)
 - Horizon Actuarial Services
 - Short-term (10-year) and Long-term (20-year) assumptions
- Adjust for administrative expenses of 0.30%
- Model MCERA's target portfolio using these assumptions

MCERA Target Portfolio ¹				
<i>(2026 Callan 10-Year Capital Market Assumptions)</i>				
Asset Category	Target Allocation	Arithmetic Return	Geometric Return	Standard Deviation
US Equity - Large Cap	25.90%	8.50%	7.25%	17.00%
US Equity - Small/Mid Cap	11.10%	9.60%	7.45%	22.00%
Global ex-U.S. Equity	25.00%	9.45%	7.45%	21.25%
Core U.S. Fixed Income	21.00%	4.85%	4.75%	4.40%
Core Real Estate	11.00%	7.15%	6.25%	14.00%
Core Infrastructure	6.00%	7.40%	6.35%	15.20%
MCERA Portfolio			7.16%	12.40%
MCERA Portfolio (net of administrative expenses)			6.86%	

¹ As shown on page 14 of Segal's Actuarial Experience Study Report as of June 30, 2025.

10-Year Expected Returns by Asset Class



Asset class expected returns are nominal, arithmetic returns.

MCERA portfolio returns have been converted to nominal, geometric returns, and are net of all expenses.

MCERA Target Portfolio¹ <i>(2026 Callan 10-Year Capital Market Assumptions)</i>				
Asset Category	Target Allocation	Arithmetic Return	Geometric Return	Standard Deviation
US Equity - Large Cap	25.90%	8.50%	7.25%	17.00%
US Equity - Small/Mid Cap	11.10%	9.60%	7.45%	22.00%
Global ex-U.S. Equity	18.25%	9.45%	7.45%	21.25%
Emerging Market Equity	6.75%	10.30%	7.45%	25.65%
Core U.S. Fixed Income	21.00%	4.85%	4.75%	4.40%
Core Real Estate	11.00%	7.15%	6.25%	14.00%
Core Infrastructure	6.00%	7.40%	6.35%	15.20%

The actual Global ex-U.S. Equity asset class allocation of 25% is split with 6.75% invested in Emerging Market Equities.

No impact on ' xp r r b h H r z S r y h m h h g h r xp return for the Emerging Market Equities.

Horizon 10-Year Expected Returns

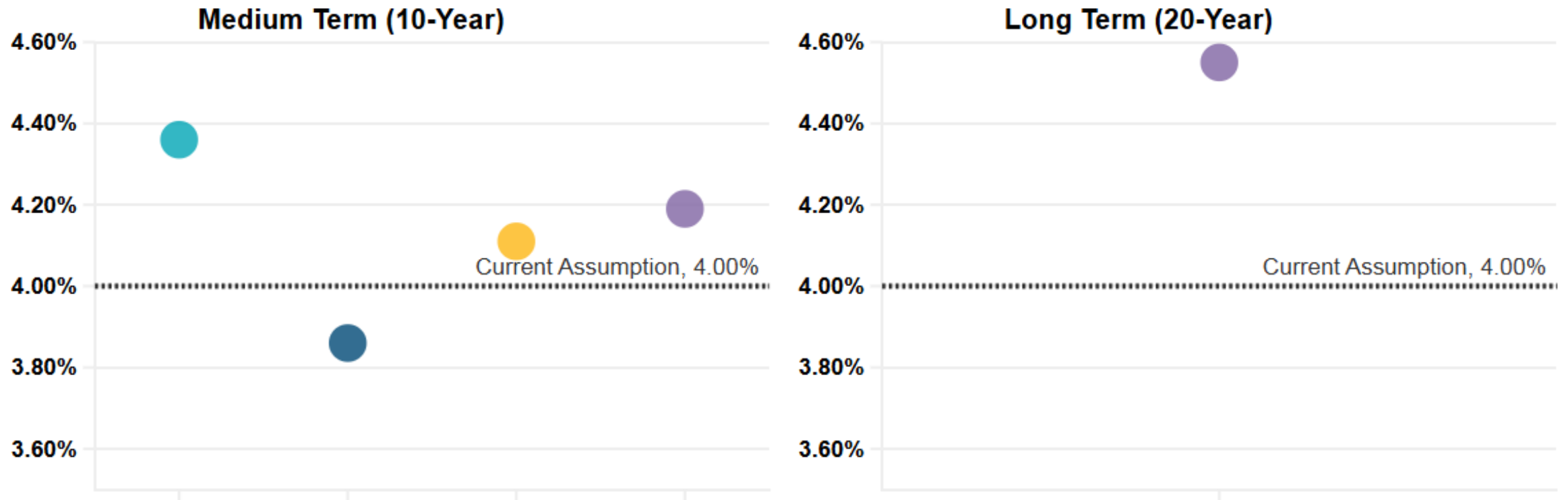


Asset class expected returns are nominal, arithmetic returns.

MCERA portfolio returns have been converted to nominal, geometric returns and are net of all expenses.

Expected Real Returns (for MCERA Target Portfolio)

Source ● Callan ● Segal 7 ● Horizon ● Horizon with EM



MCERA portfolio returns have been converted to real, geometric returns, net of all expenses.

August 19, 2026

MCERA Portfolio Return Expectations

Source	Geometric returns			Likelihood of Achieving Assumption	
	Real	Inflation	Nominal	6.50%	6.25%
Callan (10-year)	4.36%	2.50%	6.86%	51%	53%
Segal Survey (10-year)	3.86%	2.50%	6.36%	n/a	51%
Horizon Survey (10-year)	4.19%	2.38%	6.57%	51%	53%
Horizon Survey (20-year)	4.55%	2.40%	6.95%	55%	58%

Expected returns are net of all expenses.



- Likelihood of achieving returns at the current 6.50% assumption is over 50%
- Likelihood increases if the assumed rate of return is lowered to 6.25%
- Both 6.25% and 6.50% assumed rates of investment return are reasonable

- Assumed investment returns rates of 6.25% and 6.50% are both reasonable
- Process for determining the assumed rate of return is very complex, not conducive to using a rigid formulaic approach
- Assumption can be reasonable without being the single point estimate the actuary recommends



The purpose of this presentation is to discuss the investment rate of return assumptions to be used for the Mendocino County Employees Retirement Association (MCERA) June 30, 2026 actuarial valuation. This presentation was prepared exclusively for MCERA and its Board of Trustees for the purpose described herein. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

In preparing our presentation, we relied on information (some oral and some written) supplied by the MCERA and Segal. This information includes, but is not limited to, financial information. Future results may differ significantly from the current results shown in this presentation due to such factors as changes in capital market assumptions.

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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Thank You!

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