



ASSET-LIABILITY STUDY

SAN BERNARDINO COUNTY
EMPLOYEES' RETIREMENT
ASSOCIATION

MARCH, 2026

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PURPOSE & METHODOLOGY OF AI STUDY



PURPOSE OF ASSET-LIABILITY STUDY

- **Review the current/projected financial status of the plan over long-term horizon**
- **Determine appropriateness of current asset allocation with consideration of:**
 - Expected progress of liabilities and cash flows/liquidity needs
 - Path of funded status
- **Test sensitivity of plan (Assets and Liabilities) to various range of outcomes**
 - Market performance across range of economic environments
 - Contribution volatility
 - Range of liquidity environments
- **Consider appropriate asset mixes and expected return on assets**
 - Assess return target against tradeoff of volatility/range of outcomes
 - Analyze inclusion/exclusion of various asset classes/strategies

FIRST PRINCIPLES

- **The funding of pension benefits is made possible through the combination of member and employer contributions and returns on investment**
- **The long-term expected return on assets drives the selection of an appropriate discount rate for public pension liabilities**
- **Expected return on assets is based on assumptions – actual experience will likely depart from those assumptions**
- **Long-term nature of pension obligations positions well-funded pension plans to take advantage of long-term investment opportunities**
- **It is critical and healthy for pension trustees to regularly review fundamental characteristics of the pension plan:**
 - Risk tolerance
 - Viability of long-term investment return
- **Risk is multi-dimensional and should be considered from different perspectives – Risk is not just volatility!**
 - Volatility, potential for drawdowns, illiquidity, exposure to economic factors, etc.
- **Return expectations are generally lower than historical returns, forcing many investors to reconsider both return expectations and appropriate levels of risk**

BALANCING THE PENSION EQUATION

- All the complexities of pension plans boil down to the classic equation:

$$C + I = B + E$$

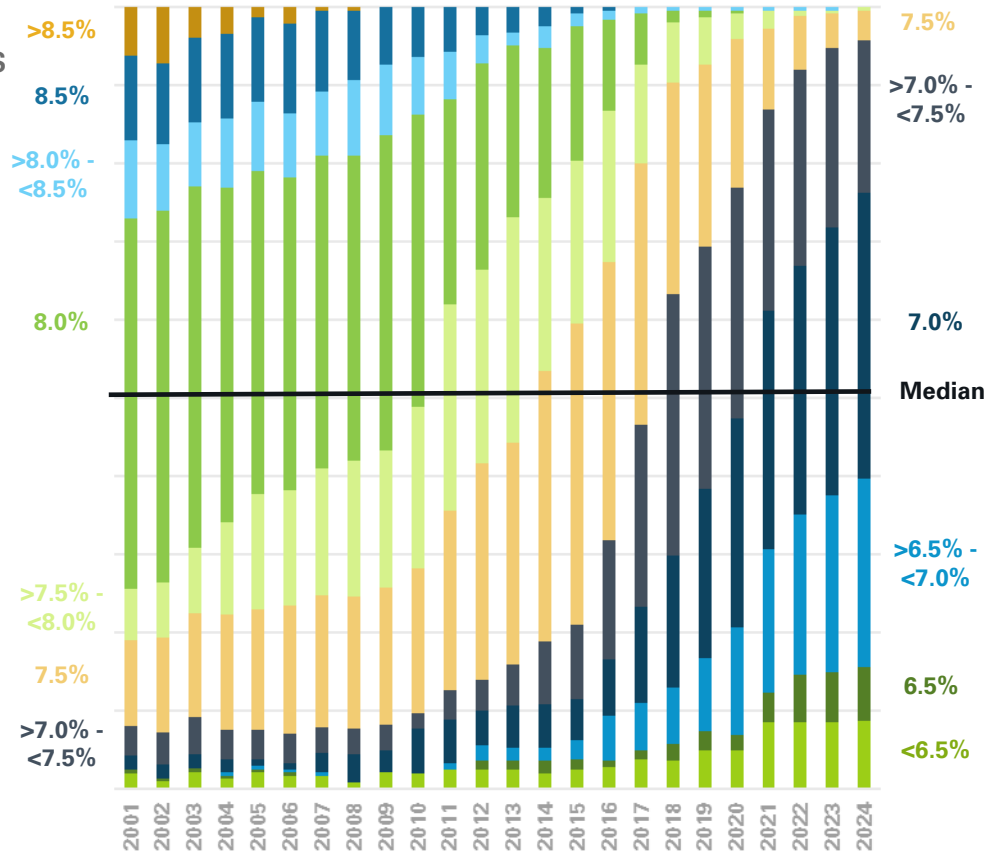
- Contributions (C), and Investment Earnings (I), Benefits (B), Expenses (E),

Plan Factor	Flexibility/Constraint
(C) Contributions	Funding policy will ideally offer flexibility to balance equation: - Dynamic or static contribution rates - Dynamic can adjust higher to meet actuarially recommended contribution, but slow to react - Recommended contribution obligations are assumed to be made each year
(I) Investment Return	Investment pool can be restructured to maintain target return - Increase risk and/or portfolio efficiency - Expected return (and risk level) could be scaled down over time as funded status improves allowing for maintenance of long-term plan stability - Low annual returns (below expectations) require adjusting other levers - Higher Contributions - Higher Investment Returns in later years
(B + E) Benefits & Expenses	Lower “C” and/or “I” can be offset with an equivalent reduction in outflows: - Vested benefits generally cannot be reduced - Non-vested benefits can be reduced, but challenging on many levels - Political, paternal, generational equity, etc.

EXPECTED RETURN

- **Expected return and liability discount rate are closely linked for public pension plans**
 - Corporate DB: stringent regulations
 - Going-concern of government entities has historically provided comfort in public plans taking longer term approach
 - Expected returns are forward-looking
- **Historical market environment has led to downward trend in EROAs for public pensions**
 - Median 2024 EROA = 7.0%
- **Low expected returns put pressure on assumptions and outcomes but...**
 - Market re-pricing and higher inflation may push return expectations higher looking forward

Distribution of Investment Return Assumptions

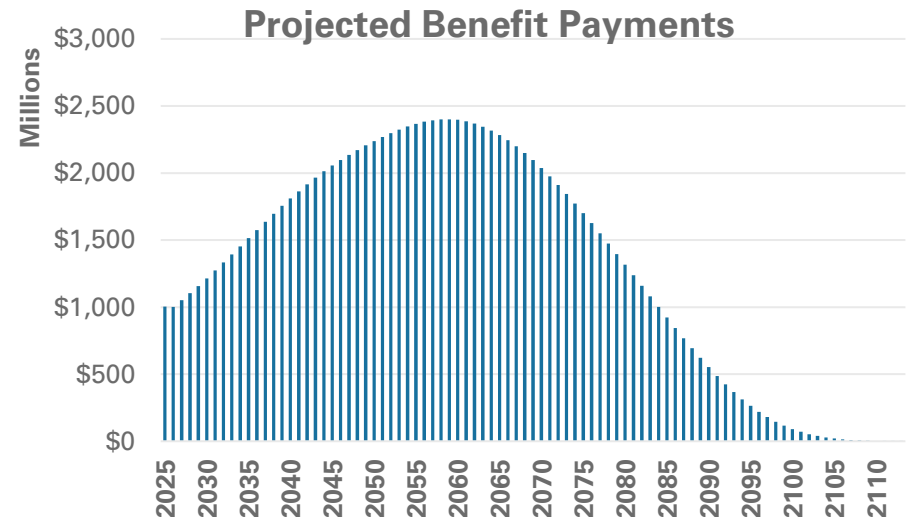
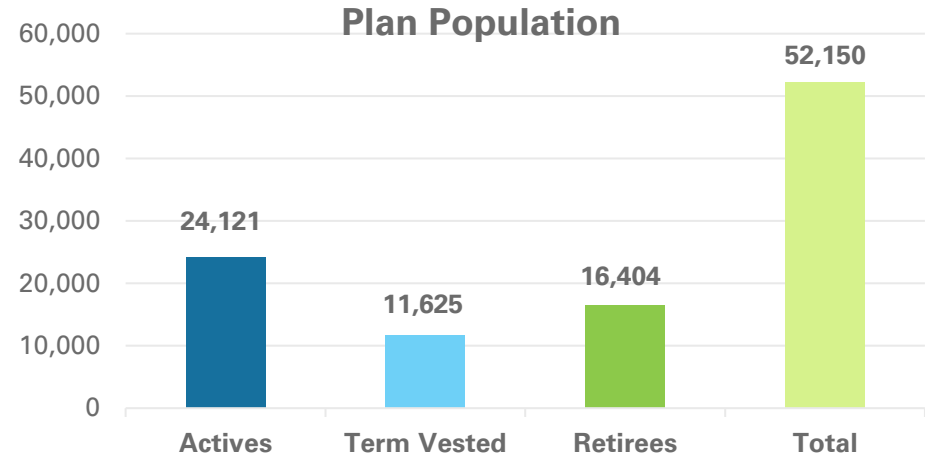


Source: Public Plans Data, NEPC

PLAN CHARACTERISTICS

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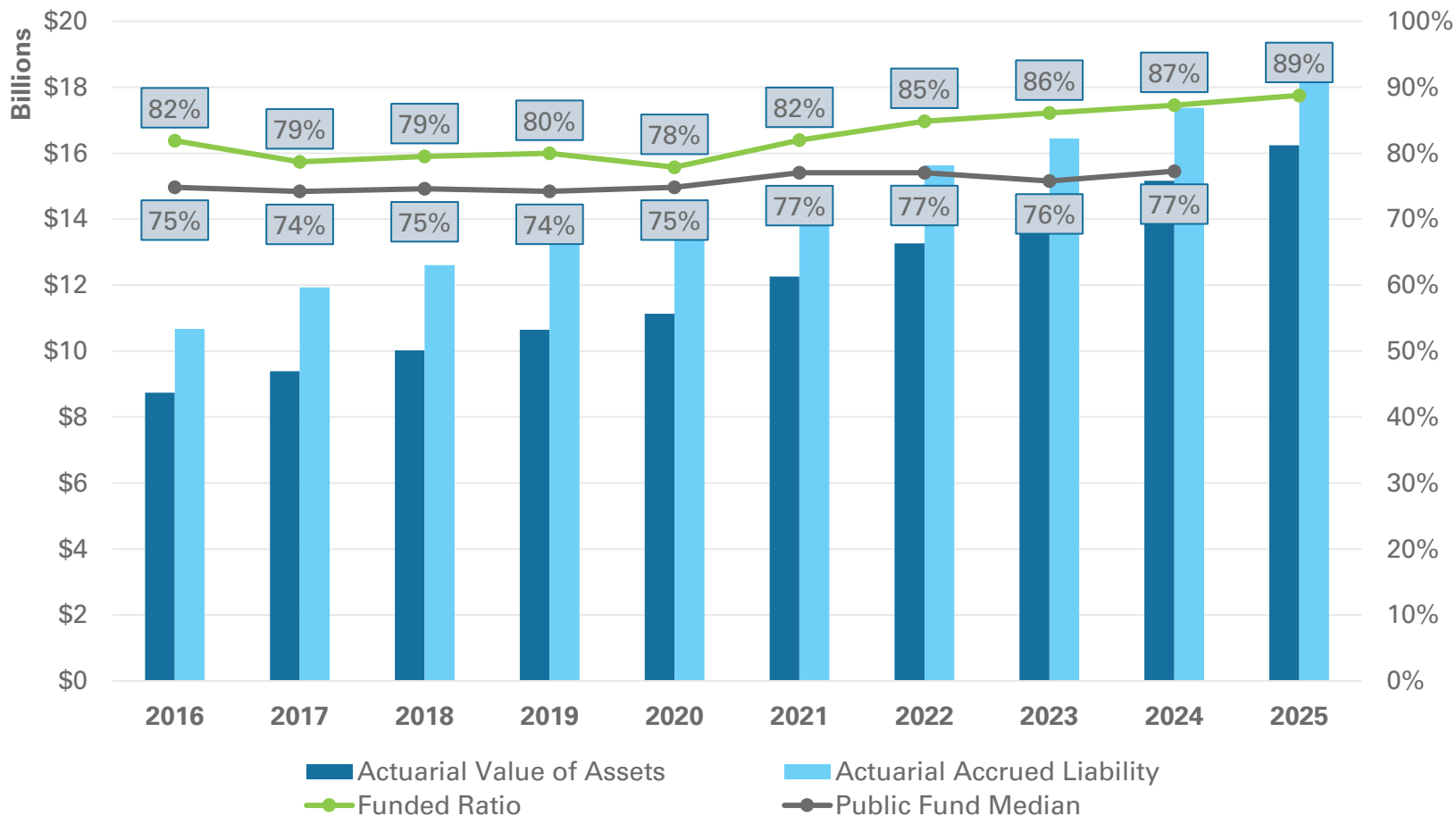
- **SBCERA offers a traditional percent of salary benefit to its members**
- **Plan demographics can be one indicator of plan health with active-to-retiree ratio being a key figure**
 - >1: positive impact
 - =1: steady state
 - <1: negative impact
 - **SBCERA: 1.5**
- **With a high active-to-retiree ratio, SBCERA has a demographic tailwind that can help maintain financial stability for the foreseeable future**



Source: Segal

FUNDING PROGRESS

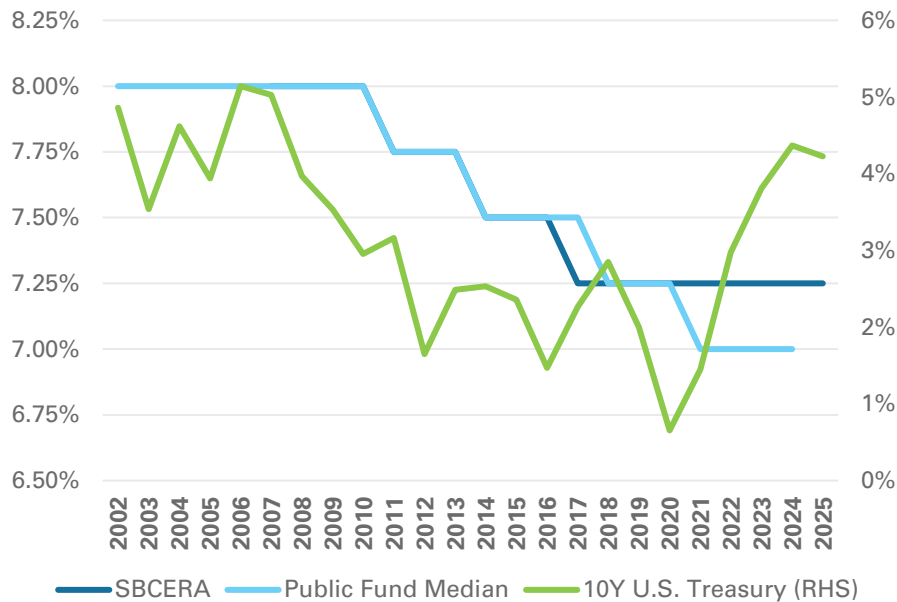
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ASSET-LIABILITY PROFILE

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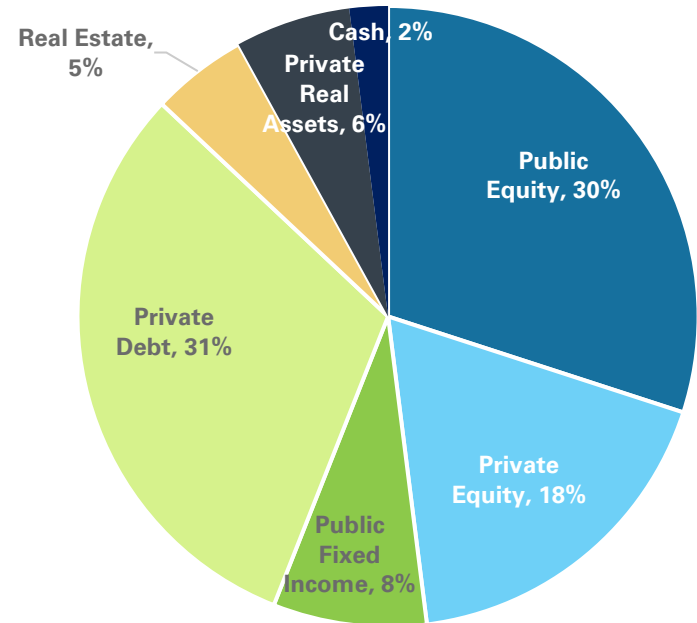
Investment Return Assumption



Source: Segal, Public Plans Data, FactSet

5-Yr Investment Performance	8.2%
10-Yr Investment Performance	8.4%
Investment Return Assumption	7.25%

Asset Allocation



10-Year Expected Return	7.2%
30-Year Expected Return	8.7%
Expected Asset Volatility	10.9%

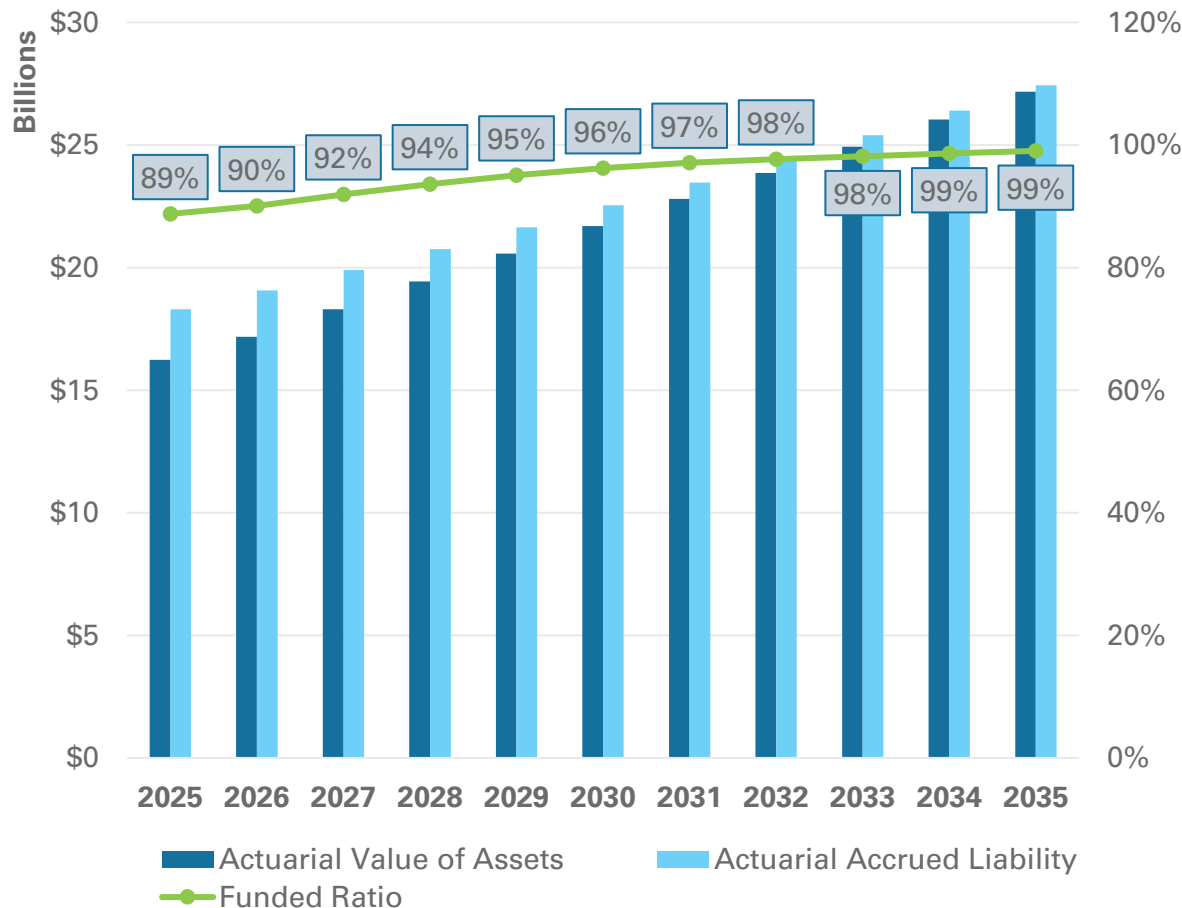
Notes: Investment performance based on NEPC Quarterly Performance Report as of December 31, 2025; Portfolio mean/variance assumptions based on NEPC's 12/31/2025 capital market assumptions for the Current Policy allocation

ASSET-LIABILITY PROJECTIONS



FUNDED RATIO PROJECTION

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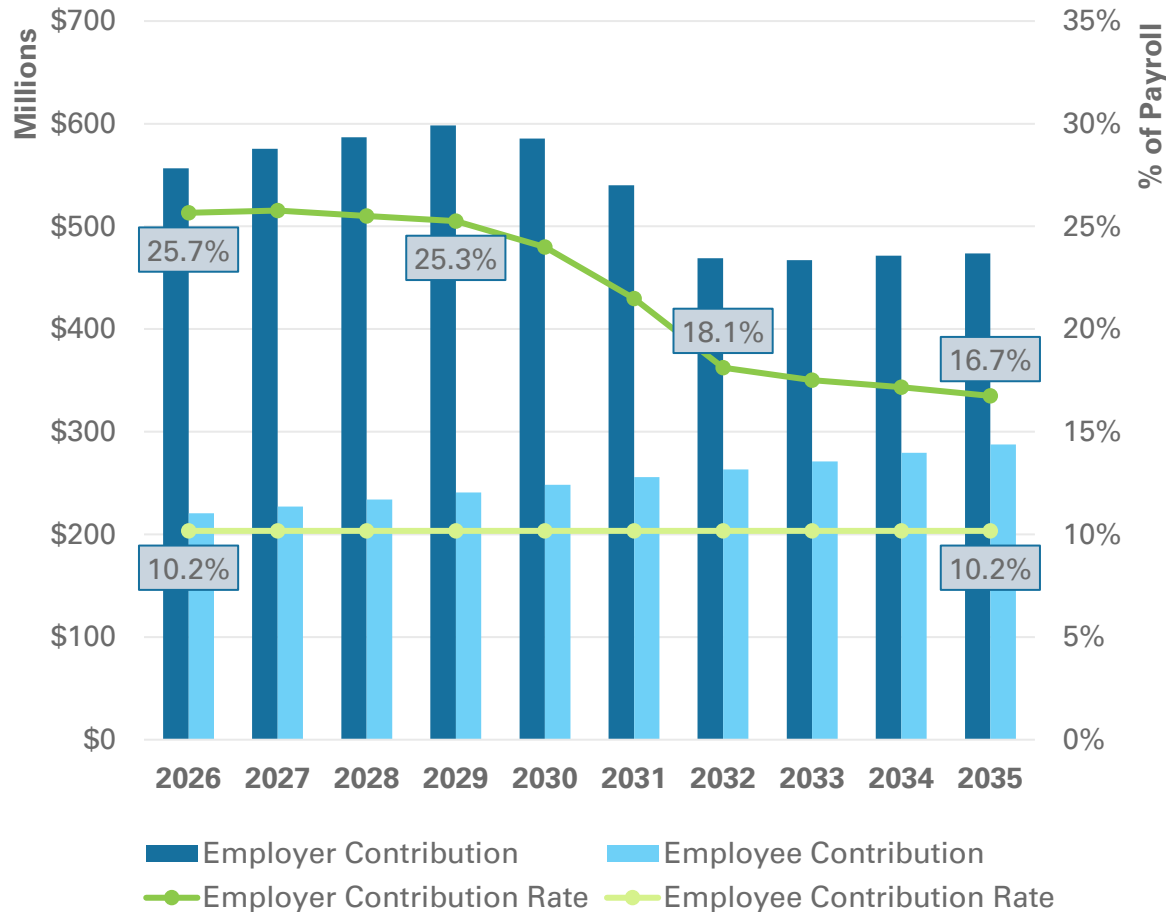


- **Funded ratio measures the amount of assets relative to liabilities with 100% being the ultimate goal**
- **Assets are smoothed to dampen the effect of investment volatility**
- **Liabilities measure the benefits earned by actives so far in their careers plus remaining benefits to be paid to retirees and inactives**

Notes: As of June 30; Assumes Current Policy allocation 10-year expected return of 7.2% per annum

CONTRIBUTION PROJECTION

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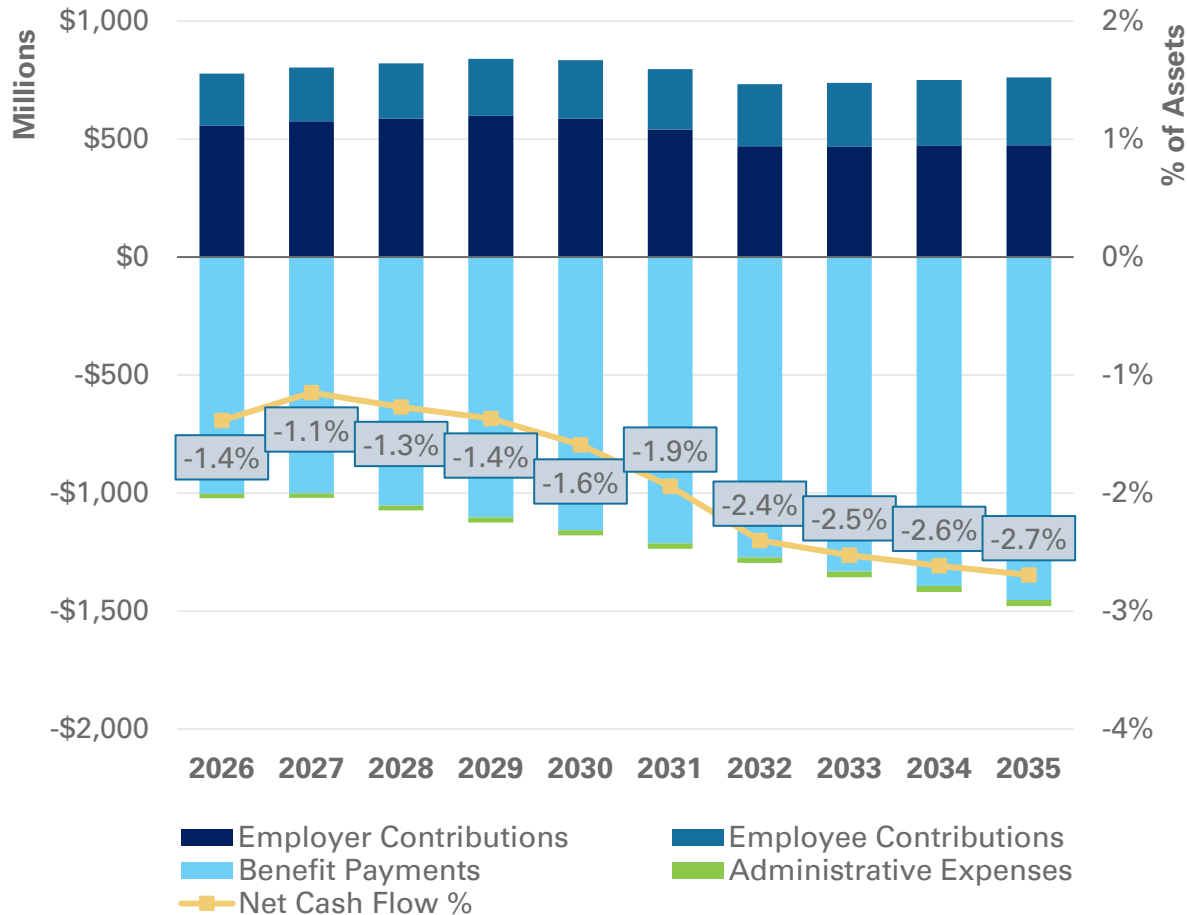


- Along with investment returns, contributions are the main financing mechanism of a pension plan
- With salary being the typical basis for benefits, payroll is used to measure the relative level of contributions
- By 2032, over \$700 million in unfunded liabilities will be fully amortized and employer contributions will decline as a result

Notes: For the year ending June 30; Assumes Current Policy allocation 10-year expected return of 7.2% per annum

NET CASH FLOW PROJECTION

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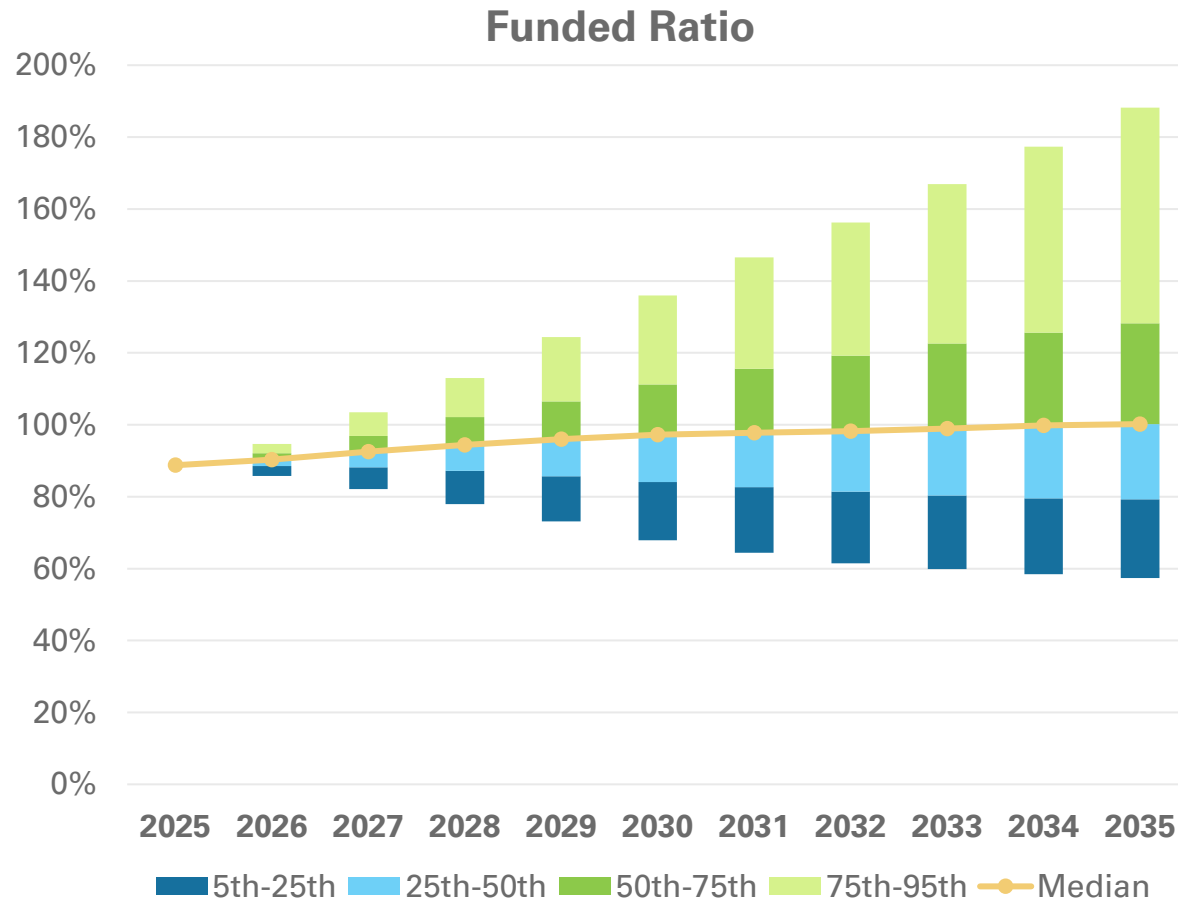


- **Negative cash flow is typical for a mature pension plan**
- **The level and consistency of cash flow is important when considering private market investments**
- **Improved funded status is a double-edged sword: lower contributions, but worse cashflow**
- **Net cashflow of -2% to -4% is typical and sufficient in sustaining sizable illiquid allocations**

Notes: For the year ending June 30; Assumes Current Policy allocation 10-year expected return of 7.2% per annum

STOCHASTIC ANALYSIS

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- **Stochastic analysis introduces the element of randomness to help quantify and illustrate investment risk**
- **Asset class returns are simulated 10,000 times over a 10-year period to illustrate the full range of outcomes markets may experience**
- **Those asset outcomes are filtered through asset-liability metrics to show their range of outcomes given investment uncertainty**

Notes: As of June 30; based on 10,000 simulations of the Current Policy mix assuming normally distributed returns

ASSET ALLOCATION PROFILES

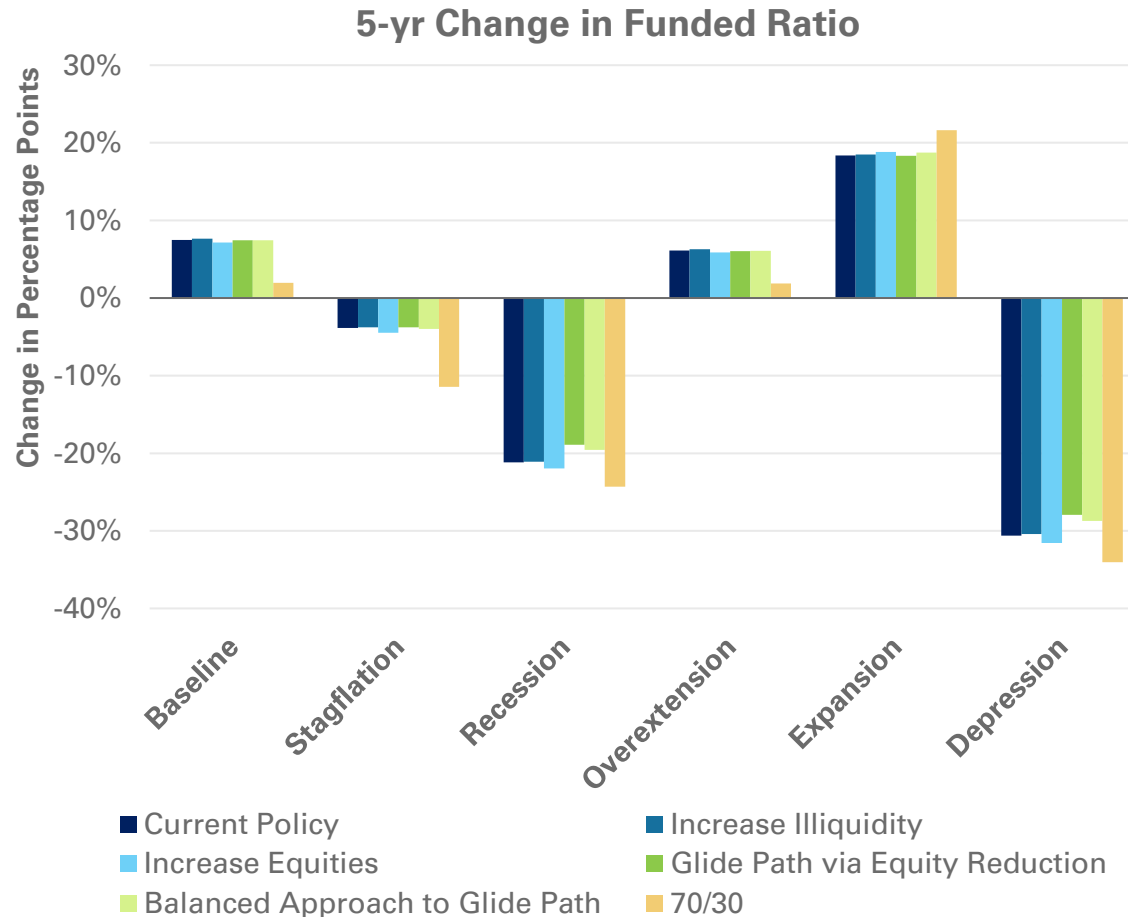
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	Current Policy	Increase Illiquidity	Increase Equities	Glide Path via Equity Reduction	Balanced Approach to Glide Path	70/30
Cash	2%	2%	2%	2%	2%	0%
Total Cash	2%	2%	2%	2%	2%	0%
US Large-Cap Equity	14.5%	13.5%	16.5%	13.5%	13.5%	0%
US Small/Mid-Cap Equity	2.5%	2.5%	3.5%	2.5%	2.5%	0%
Non-US Developed Equity	7.0%	7.0%	7.0%	7.0%	7.0%	0%
Emerging Market Equity	6.0%	6.0%	6.0%	5.0%	6.0%	0%
Global Equity	0.0%	0.0%	0.0%	0.0%	0.0%	70%
Non-US Private Equity	2.0%	2.0%	2.0%	2.0%	2.0%	0%
Private Equity*	16.0%	17.0%	15.0%	15.0%	16.0%	0%
Total Equity	48%	48%	50%	45%	47%	70%
US Aggregate Bond	2%	2%	2%	2%	2%	30%
Emerging Market External Debt	6%	5%	6%	6%	5%	0%
Private Debt*	31%	32%	30%	31%	30%	0%
US Long-Term Government/Credit	0%	0%	0%	3%	3%	0%
Total Fixed Income	39%	39%	38%	39%	37%	30%
Real Estate – Core*	2.5%	2.0%	2.5%	2.5%	2.5%	0%
Real Estate – Non-Core*	2.5%	3.0%	2.5%	2.5%	2.5%	0%
Private Real Assets - Natural Resources*	6%	6%	5%	6%	6%	0%
Total Real Assets	11%	11%	10%	11%	11%	0%
Expected Return 10 years	7.2%	7.3%	7.1%	7.2%	7.2%	5.1%
Expected Return 30 years	8.7%	8.8%	8.6%	8.7%	8.7%	6.8%
Standard Deviation	10.9%	10.8%	11.1%	10.4%	10.6%	13.1%
Sharpe Ratio 10 years	0.31	0.32	0.30	0.33	0.32	0.10
Sharpe Ratio 30 years	0.48	0.49	0.47	0.50	0.49	0.26

Notes: Standard deviation reflects smoothed volatility measure for private market asset classes denoted by *

ECONOMIC SCENARIOS – FUNDED RATIO

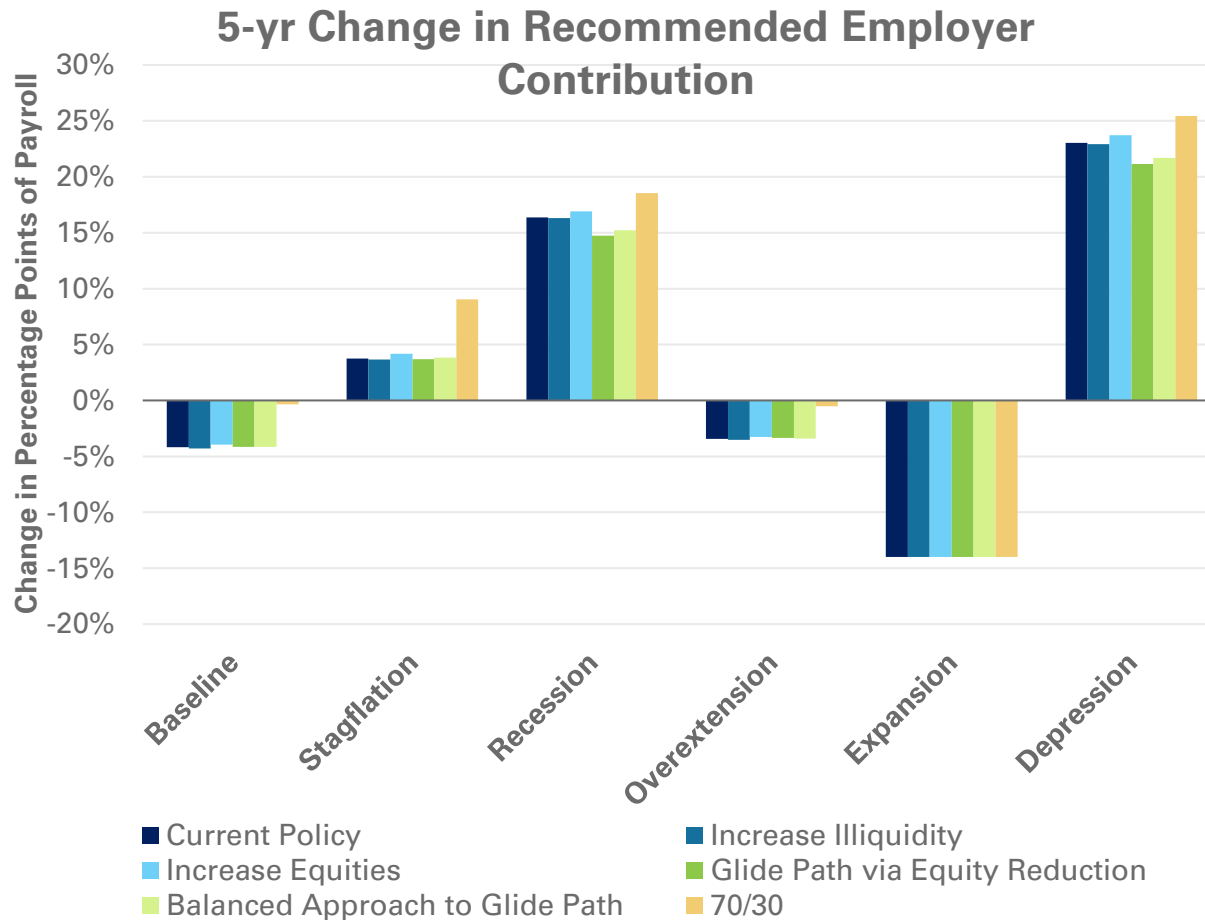
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Notes: Scenarios reflect a 5-year market cycle; change in funded ratio is relative to 88.8% as of June 30, 2025

ECONOMIC SCENARIOS – CONTRIBUTIONS

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Notes: Scenarios reflect a 5-year market cycle; change in recommended employer contribution is relative to 25.7% as of June 30, 2025

CONCLUSIONS

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- **Investment outperformance and aggressive funding commitments have been drivers of recent funded status gains**
 - From 78% in 2020 to 89% in 2025
 - 8.2% return over the last 5 years, 8.4% over the last 10 years as of December 31, 2025
- **NEPC's capital market assumptions project achieving the assumed investment return of 7.25% over the next 10 years obtainable given the Current Policy mix**
 - NEPC's capital market assumptions are beta only
 - 10-year expected return: 7.2%
 - 30-year expected return: 8.7%
- **With improved funded status comes with it less aggressive contribution levels, therefore SBCERA must be diligent in managing changes in cashflow profile**
 - Analyzing liquidity and private market pacing should be done annually
- **NEPC believes the plan, given its demographic and cashflow profile, can sustain the current level of illiquids in the portfolio for the next 10 years**
 - Demographic tailwind and health cashflow profile
 - Should these change materially, the level of illiquids may require reevaluation

APPENDIX



ASSUMPTIONS AND METHODS

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- **Deterministic and stochastic return projections are based on NEPC's 12/31/2025 capital market assumptions**
- **Asset-liability projections follow a roll-forward methodology based on the June 30, 2025, Actuarial Valuation Report published by Segal**
 - Benefit payment projected provided by Segal
 - Other than those described herein, all assumptions remain unchanged from the valuation report
 - No gains or losses are assumed other than those attributed to investment experience
- **Employer contributions based on stated funding policy**
 - Normal cost share plus layered amortizations of unfunded liability
 - Amortization layers considered fully amortized if UAAL becomes negative
 - Negative amortization only allowed if surplus exceeds liability in excess of 20%
- **Employee contributions assumed to remain level as a % of payroll**
- **Administrative expenses assumed to remain level as a % of payroll**

INFORMATION DISCLAIMER

Past performance is no guarantee of future results.

NEPC, LLC is an investment consulting firm. We provide asset-liability studies for certain clients but we do not provide actuarial services. Any projections of funded ratio or contributions contained in this report should not be used for budgeting purposes. We recommend contacting the plan's actuary to obtain budgeting estimates.

The goal of this report is to provide a basis for substantiating asset allocation recommendations. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.

Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.

The projection of liabilities in this report uses standard actuarial projection methods and does not rely on actual participant data. Asset and liability information was received from the plan's actuary, and other projection assumptions are stated in the report.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

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