Mid-Cycle Public Employees' Retirement Fund Asset Liability Management Review

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March 18, 2024

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Summary

- Capital Market Assumptions (CMAs) have been updated utilizing 06/30/23 survey data

- 2021 ALM identified a limited ability to implement private equity deployment strategies

- Since then, capital deployment capacity has expanded faster than expected, leading to an increased upper constraint in the 2023 review

- <u>Recommendation:</u>
1. Review and adopt the CMAs
2. Approve an updated Strategic Asset Allocation for the PERF Policy Portfolio (Candidate Portfolio A)
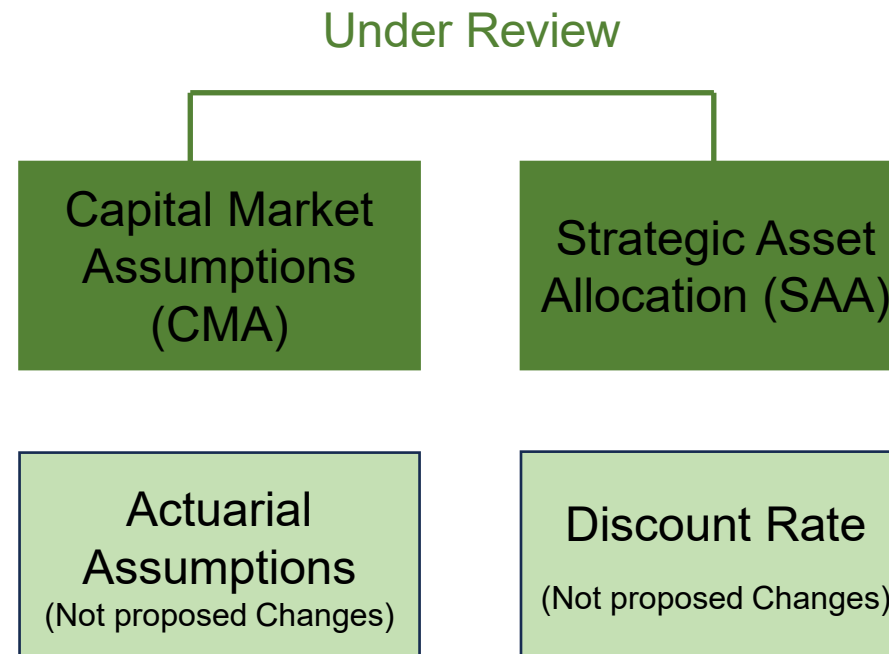
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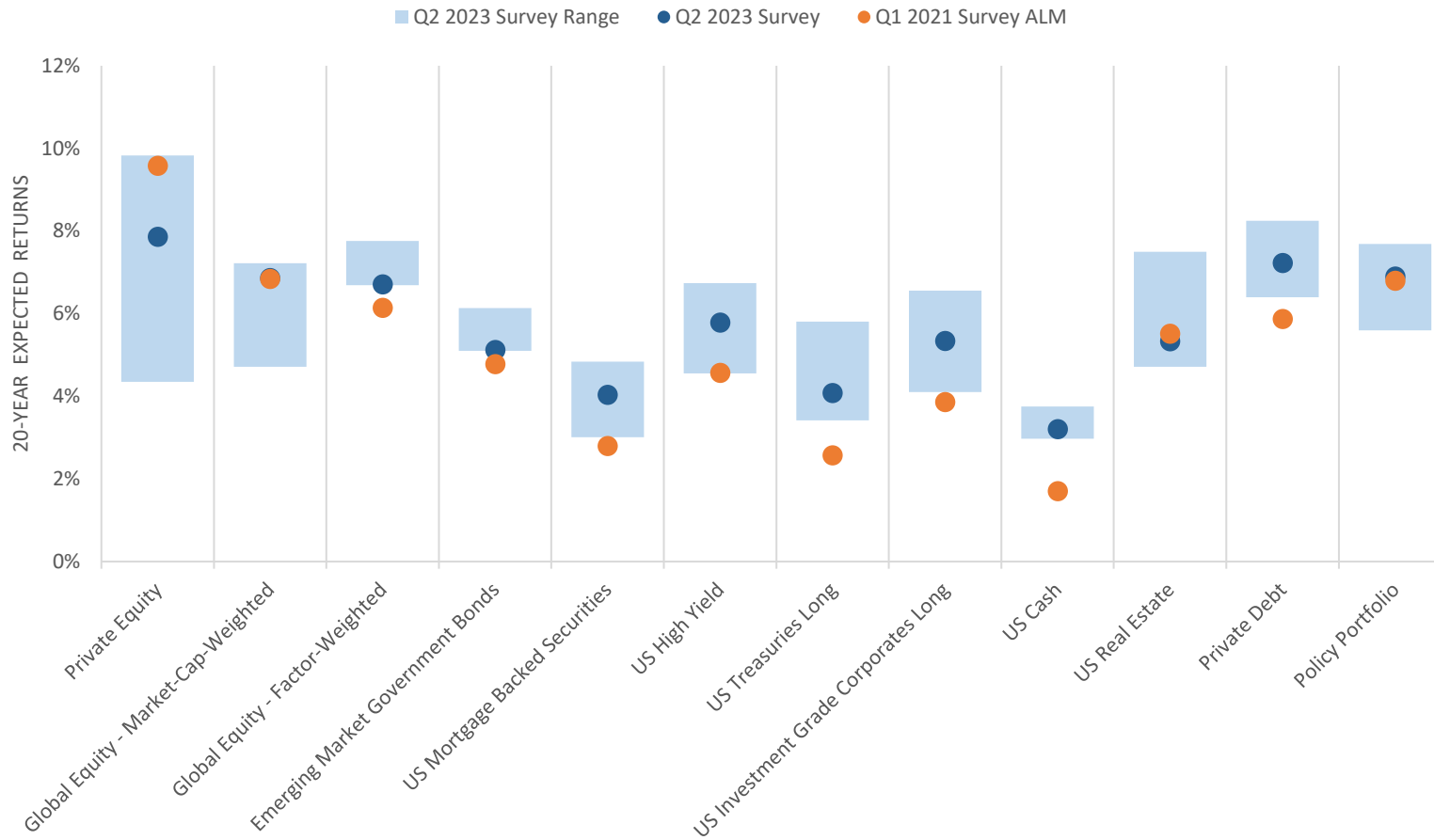# Key Functions Within the ALM Process
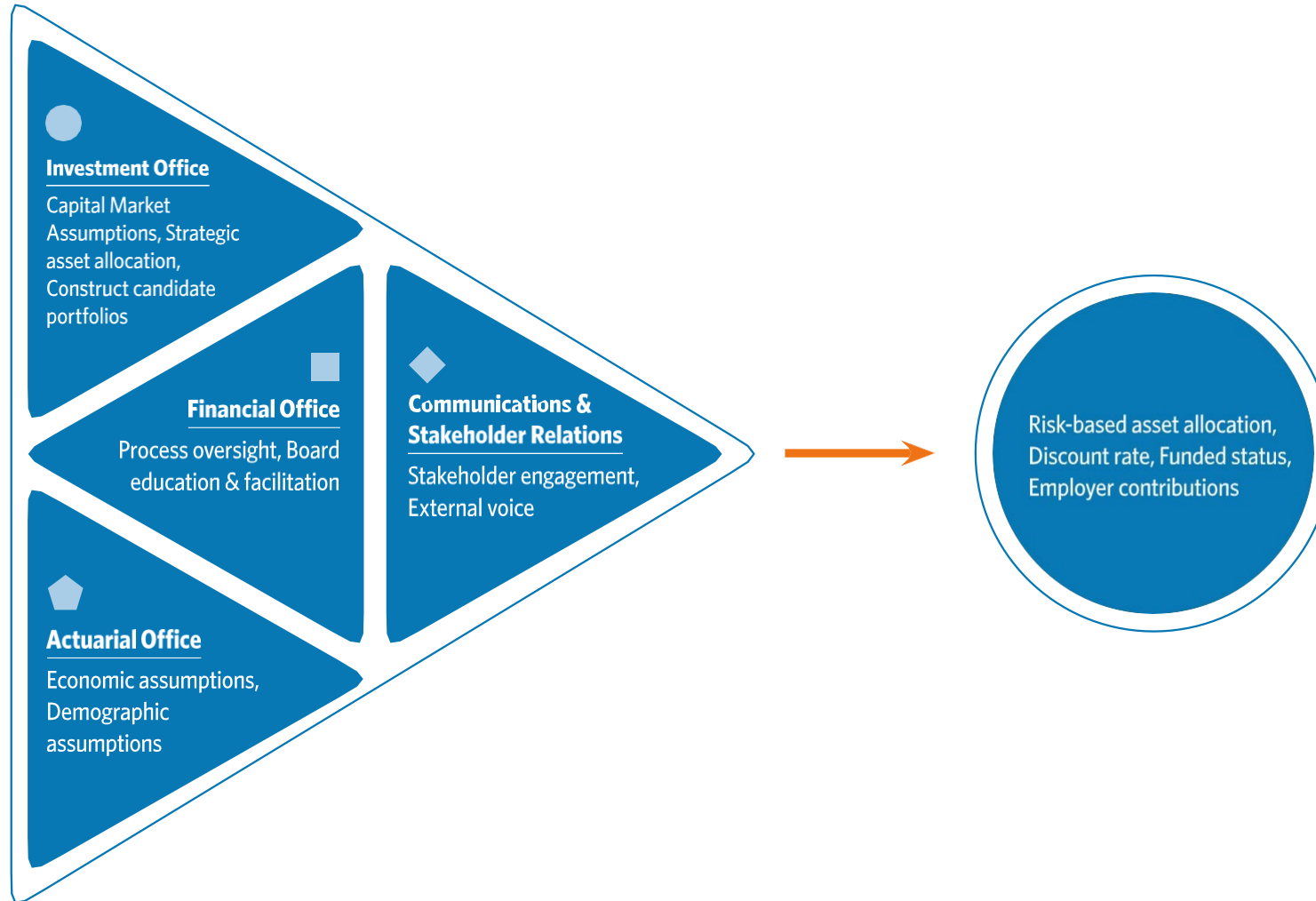
ALM Process Timeline

2021 November	**2022** July*	**2023** February	November	**2024** March	**2025** February	June	July*	September	November
Experience study results Discussion of candidate portfolios with discount rates Final approval of discount rate Final approval of strategic asset allocation	Effective date for strategic asset allocation	Educational sessions: concepts, framework, timeline	Discussion of mid-cycle review	Final approval of mid-cycle review asset allocation	Educational session: concepts, framework, timeline	Capital Market Assumptions Economic Assumptions	Educational sessions: ALM process & framework Investment funds risk assessment Gauging the funds' ability to tolerate market risk	Discussion of candidate portfolios with proposed discount rates	Experience study results Discussion of candidate portfolios with discount rates Final approval of discount rate Final approval of strategic asset allocation

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What is the Mid-Cycle Review

- An opportunity for the board to evaluate if the current financial landscape still aligns with decisions made during the prior ALM cycle.

Under Review

Capital Market Assumptions (CMA)

Strategic Asset Allocation (SAA)

Actuarial Assumptions
(Not proposed Changes)

Discount Rate
(Not proposed Changes)

Q2 2023 Capital Market Assumptions (CMA)

CMAs are based on our quarterly survey of 15 CMA providers, including institutional consultants and asset managers.

- Blue box is the range of responses for asset class returns (diversity of opinion)

- Blue dot is the median value of the responses for the asset class

- Orange dot is the median value used in the 2021 ALM analysis

CMAs: Asset Volatilities and Correlations

As of Q2 2023

Assets	Long-Term Volatility	Private Equity	Global Equity - Market-Cap-Weighted	Global Equity - Non-Cap-Weighted	Emerging Market Government Bonds	US Mortgage-backed Securities	US High Yield	US Treasuries Long	US Investment Grade Corporates Long	US Cash	US Real Estate	Private Debt
Private Equity	24.5%	1.0	0.6	0.6	0.2	0.1	0.3	0.1	0.2	0.1	0.3	0.4
Global Equity - Market-Cap-Weighted	16.8%	0.6	1.0	0.9	0.3	0.1	0.4	0.1	0.3	0.2	0.3	0.4
Global Equity - Non-Cap-Weighted	12.8%	0.6	0.9	1.0	0.4	0.2	0.4	0.2	0.3	0.2	0.3	0.5
Emerging Market Government Bonds	9.1%	0.2	0.3	0.4	1.0	0.4	0.6	0.6	0.8	0.2	0.3	0.2
US Mortgage-backed Securities	4.7%	0.1	0.1	0.2	0.4	1.0	0.2	0.6	0.5	0.4	0.1	0.2
US High Yield	10.0%	0.3	0.4	0.4	0.6	0.2	1.0	0.2	0.6	0.2	0.3	0.3
US Treasuries Long	11.0%	0.1	0.1	0.2	0.6	0.6	0.2	1.0	0.8	0.3	0.1	0.2
US Investment Grade Corporates Long	9.5%	0.2	0.3	0.3	0.8	0.5	0.6	0.8	1.0	0.3	0.2	0.2
US Cash	0.8%	0.1	0.2	0.2	0.2	0.4	0.2	0.3	0.3	1.0	0.2	0.3
US Real Estate	17.4%	0.3	0.3	0.3	0.3	0.1	0.3	0.1	0.2	0.2	1.0	0.2
Private Debt	11.7%	0.4	0.4	0.5	0.2	0.2	0.3	0.2	0.2	0.3	0.2	1.0

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10-yr Annualized Returns as of June 30, 2023

- Private Equity was PERF's TOP performing asset class in the ten years up to June 30, 2023

Asset Classes	10-yr Annualized Returns
Public Equity	8.9%
Private Equity	11.8%
Fixed Income	2.4%
Real Assets	7.7%
Total PERF	7.1%

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8

Increase Allocation to Private Equity

- Historically, CMAs favor a higher allocation to Private Equity in our portfolio construction process.

- Allocation to Private Equity was scaled back during 2021 ALM due to limited implementation capacity.

- Capital deployment capacity expanded post-2021 ALM, leading to an increased upper constraint in the 2023 review.

Board Action Needed

Recommendation:

1. Review and adopt CMAs
2. Approve an updated Strategic Asset Allocation for the PERF Policy Portfolio (Candidate Portfolio A)

Asset Classes	Current Policy		Candidate Portfolio A	
	Weights	Ranges	Weights	Ranges
Public Equity	42%	+/- 7%	37%	+/- 7%
Private Equity	13%	+/- 5%	17%	+/- 5%
Fixed Income	30%	+/- 6%	28%	+/- 6%
Private Debt	5%	+/- 5%	8%	+/- 5%
Real Assets	15%	+/- 5%	15%	+/- 5%
Leverage	-5%		-5%	
Geo Return[1]	6.9%		7.0%	
Survey Return Range	5.6%-7.7%		5.7%-7.7%	
CDaR[2]	21.5%		21.4%	
Volatility	11.2%		11.3%	

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(1) 20-Year geometric return net of 10bps admin expense.

(2) CDaR: Conditional Drawdown at Risk is an estimate of the average of the worst 10% potential loss that may transpire in any three-year period.

Appendix

Candidate Portfolios[1]

- Portfolio A mirrors the risk profile of the current Policy Portfolio but offers higher expected returns.

- Portfolios B and C deliver expected returns similar to the Policy Portfolio while providing lower risk profiles.

- The Simple Portfolio[2] requires unrealistic leverage to align with the expected return of the Policy Portfolio.

Asset Class	Current Policy	Policy Target Return: Simple	Candidate Portfolio		
			A	B	C
			Policy Target CDaR: 21.5%	Policy Target Return: 6.9%	Target Return: 6.8%
Public Equity	42%	89%	37%	33%	31%
Private Equity	13%		17%	17%	17%
Fixed Income	30%	48%	28%	32%	34%
Private Debt	5%		8%	8%	8%
Real Assets	15%		15%	15%	15%
Leverage	5%	37%	5%	5%	5%
Geo Return	6.9%	6.9%	7.0%	6.9%	6.8%
Survey Return Range	5.6%-7.7%	5.0%-7.9%	5.7%-7.7%	5.7%-7.7%	5.6%-7.6%
CDaR	21.5%	34.6%	21.4%	20.1%	19.5%
Volatility	11.2%	16.4%	11.3%	10.9%	10.6%

(1) 20-Year geometric return net of 10bps admin expense.

(2) A "Simple Portfolio" is defined as a portfolio exclusively investing in public equity and fixed-income markets, with the application of leverage.

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Q3 2023 Capital Market Assumptions
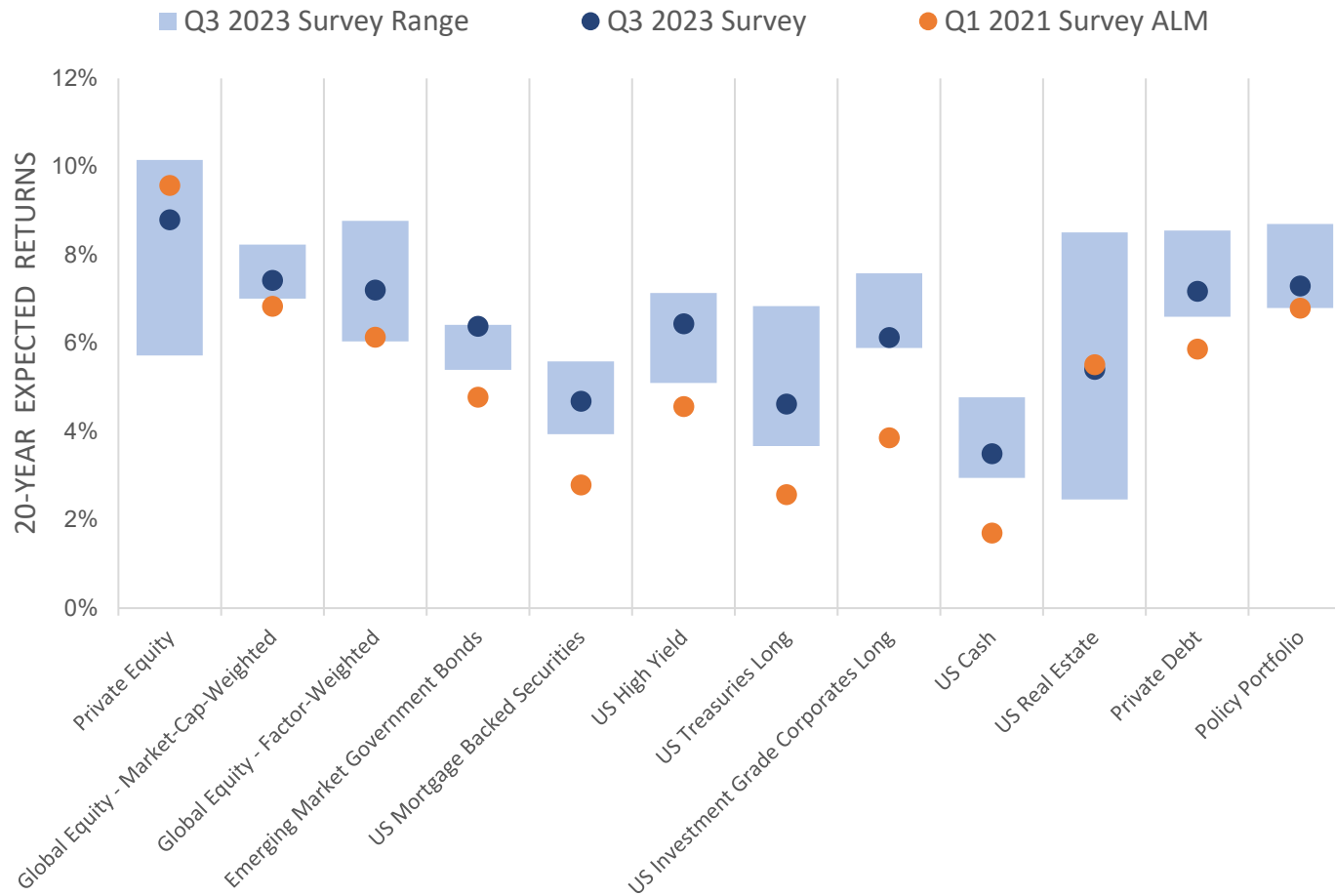
Our CMAs are based on our quarterly survey of 15 CMA providers, including institutional consultants and asset managers.

- The light blue box represents the range of responses for asset class returns (diversity of opinion)
- The blue dot represents the median value of the responses for the asset class
- The orange dot represents the median values used in the 2021 ALM analysis

Survey results as of Q3 2023 are similar to those as of Q2 2023 and would not lead to any change in allocations in Candidate Portfolios had we used those as inputs to our portfolio construction process.

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13

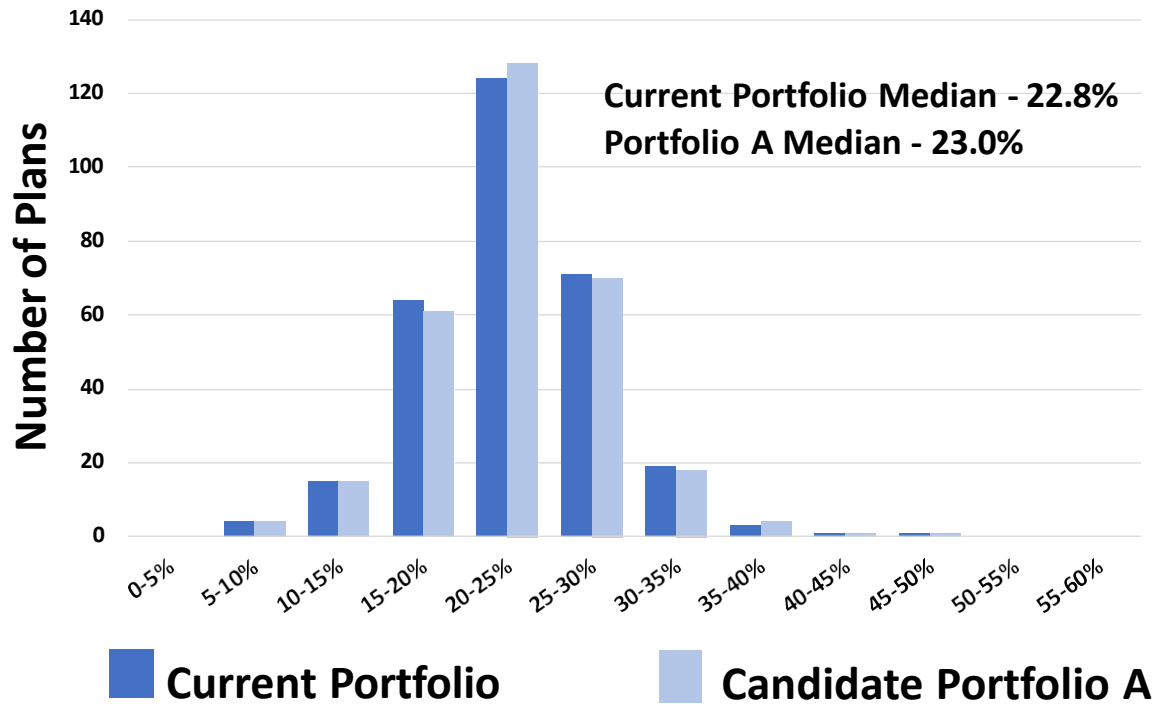# Investment Return Comparisons

Current vs. Portfolio A

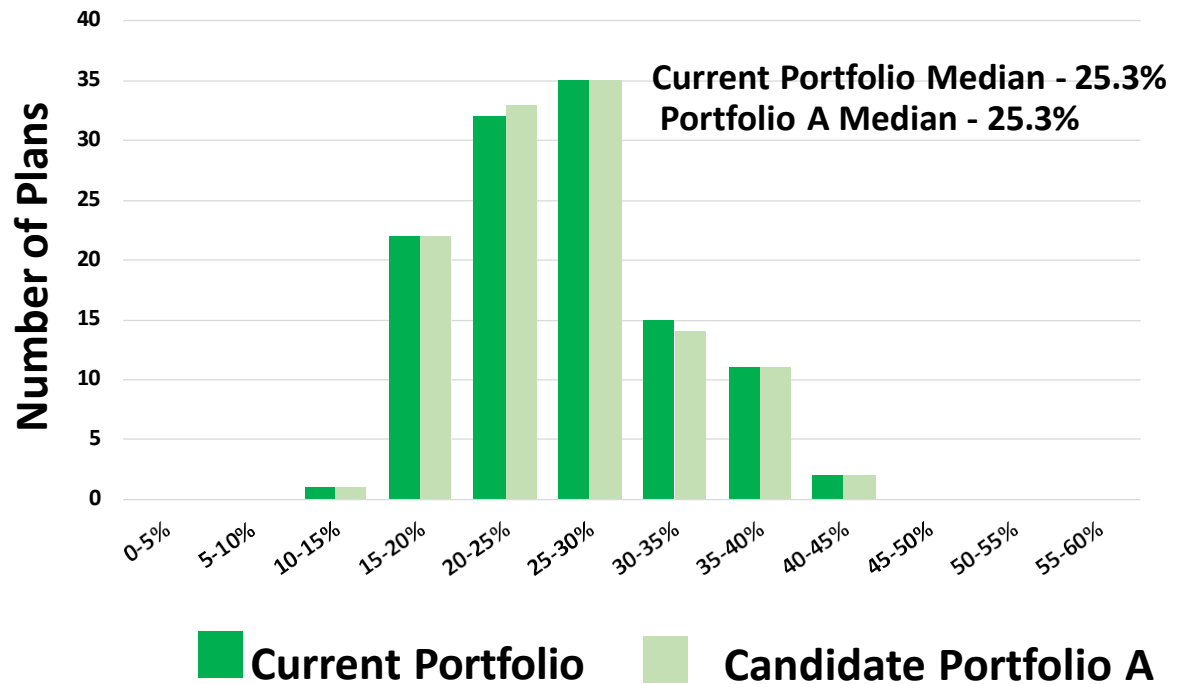|	Estimated Long-Term Return*	Probability of Average Return Exceeding**		
		6.8%	6.9%	7.0%
Current Portfolio	6.9%	49.7%	48.0%	46.4%
Portfolio A	7.0%	51.2%	49.6%	47.9%

* After reduction for assumed administrative expenses.
** Over a 20-year period.

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Probability of Falling Below 50% Funded

Distribution of Miscellaneous Non-Pooled Plans

Current Portfolio Median - 22.8%
Portfolio A Median - 23.0%

Current Portfolio   Candidate Portfolio A

Distribution of Safety Non-Pooled Plans

Current Portfolio Median - 25.3%
Portfolio A Median - 25.3%

Current Portfolio   Candidate Portfolio A

Employer Contribution Rates

Distribution of Miscellaneous Non-Pooled Plans

Current Portfolio Median - 23.1%
Portfolio A Median - 22.8%

Current Portfolio   Candidate Portfolio A

Distribution of Safety Non-Pooled Plans

Current Portfolio Median - 43.1%
Portfolio A Median - 42.6%

Current Portfolio   Candidate Portfolio A

Agenda Item 6b November Investment Committee

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