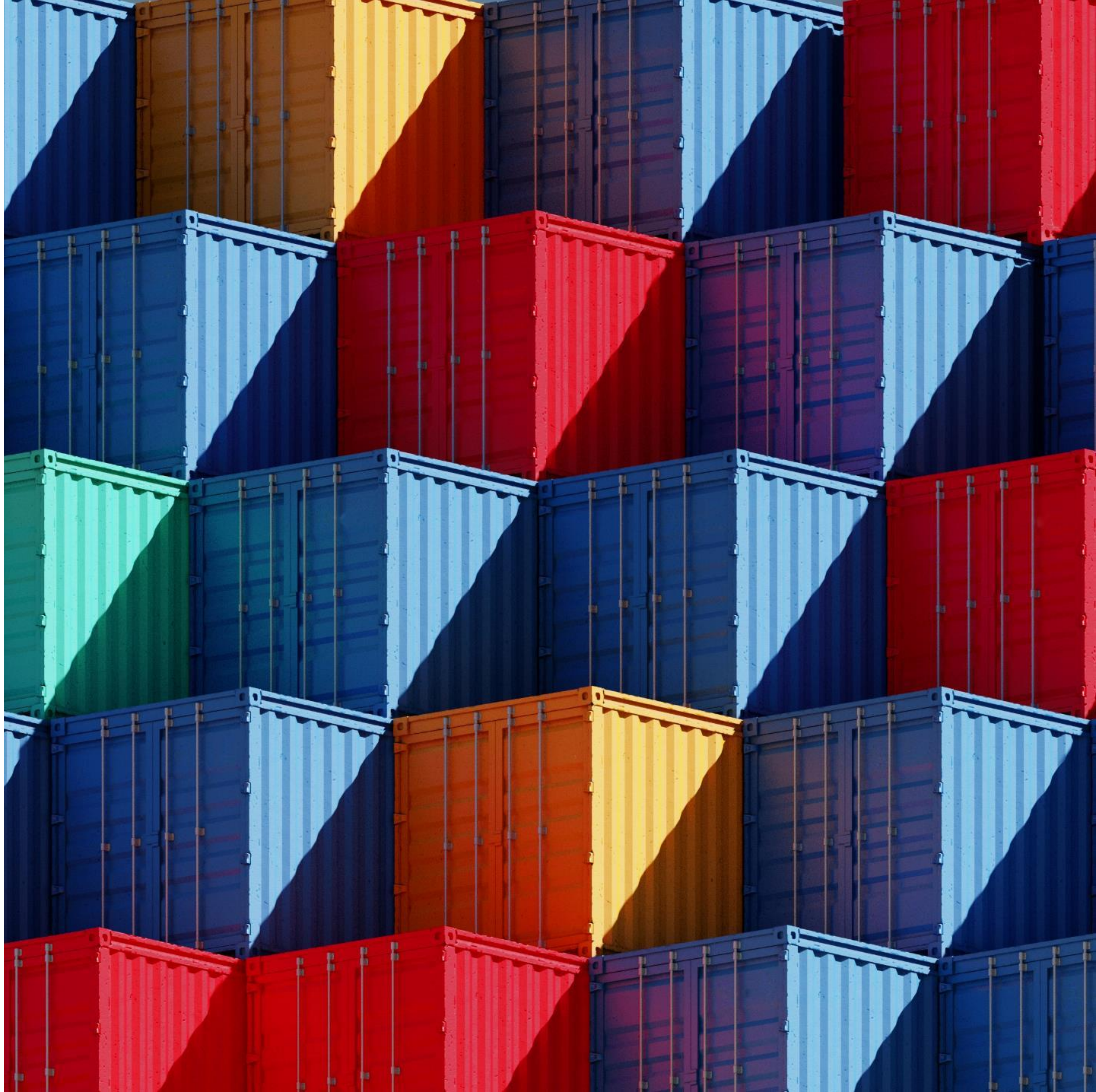
Asset-Liability Study: Results (DRAFT)

City of Novi, Michigan Retiree Health Care Plan (Novi)

March 2025



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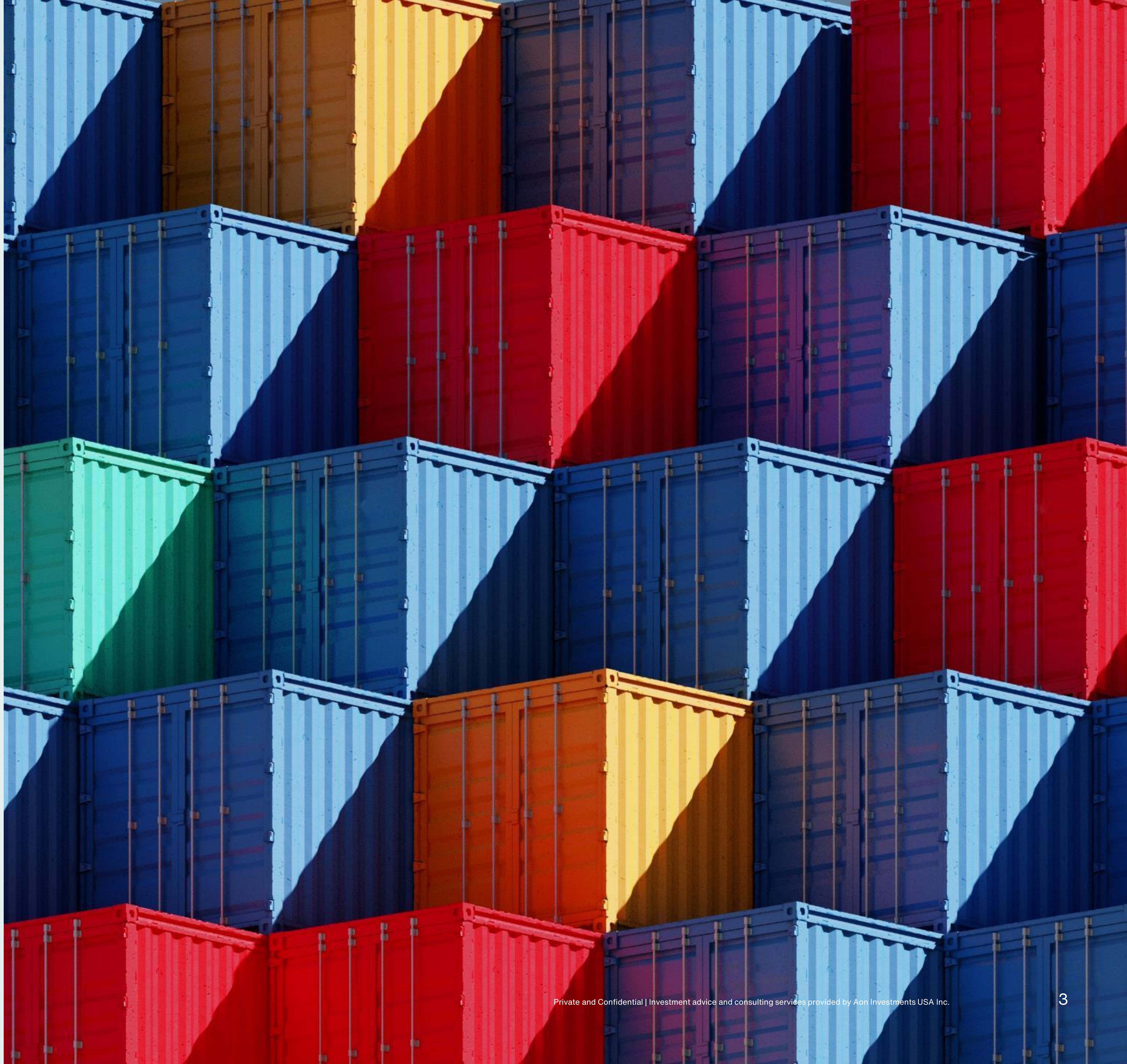
Overview



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Overview

Recap of prior discussions

- The consensus goals/objectives of the OPEB plan were described as follows:
  - Remain overfunded
    - There is utility to the existing surplus and the goal is to preserve and maintain it
  - Minimize contributions
    - Consider adjustments to the contribution policy to avoid tail-risk scenarios
  - Reduce portfolio volatility
    - Either by reducing risk and/or added diversification

Current State Overview

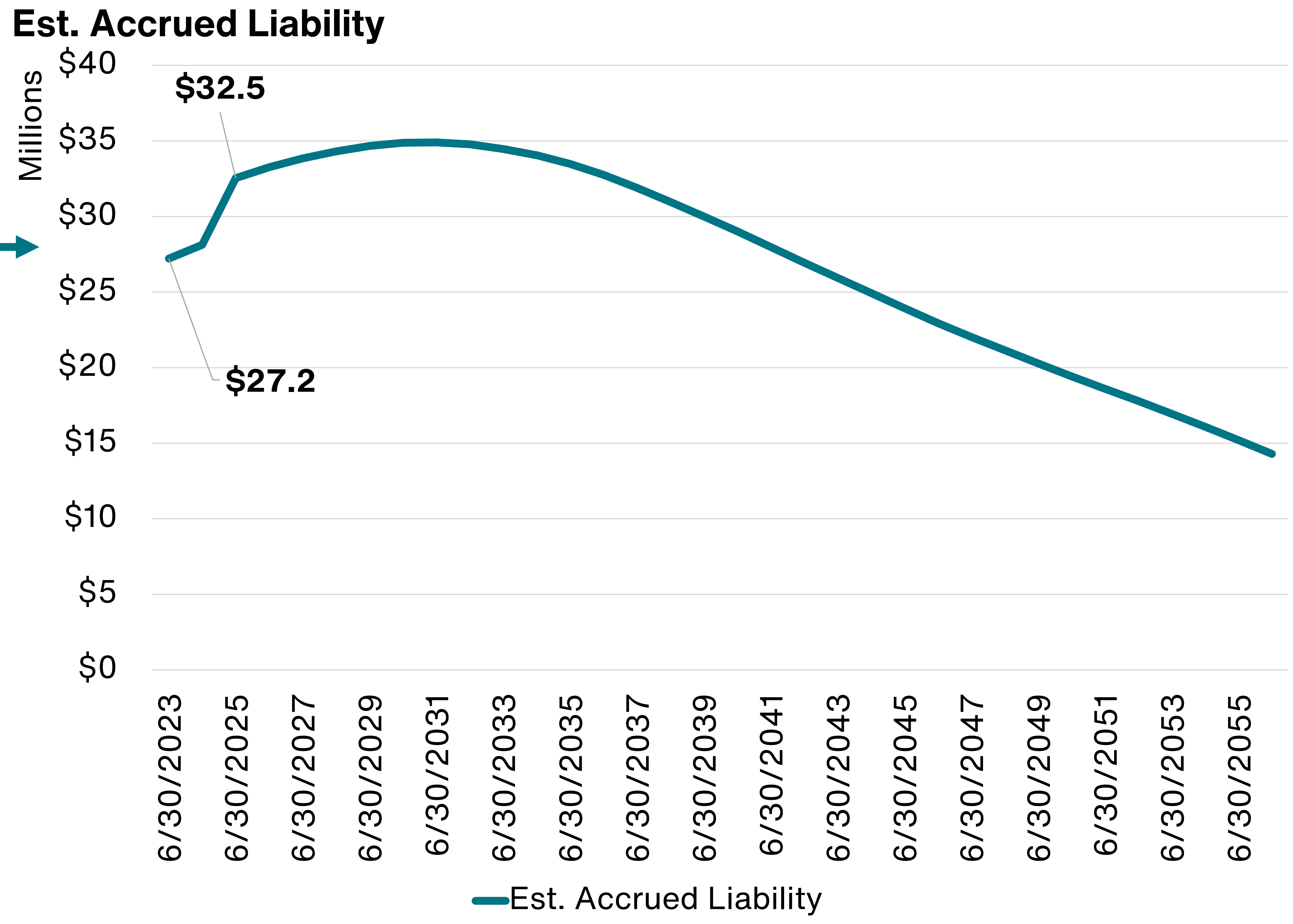
Plan is closed and maturing with a liability expected to arc downward in a decade

Evolution of Actuarial Liability

- Plan is closed to new entrants
- Based on information provided by the plan actuary, the liability is expected to peak a decade out before declining
  - For purposes of this study and based on feedback from the City of Novi, the actuarial assumed rate of return was reduced from 7.00% to 6.00% as of FYE 2025

Key items that will impact the asset-liability study

1. The long-term, decreasing liability will increase the volatility of funded ratio projections
2. Contributions are zero presently, but the formula behind it could lead to volatile tail-risk amounts



Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities.

Current State Overview
As of September 30, 2024

134.3%

Estimated funded ratio as of September 30, 2024

- Based on market value of assets using a 7.00% actuarial discount rate

6.45%

30-year expected return[1]

- Aon's assumption as of September 30, 2024 based on the allocation as of the same date
- Expected return falls short of the current actuarial assumed rate of return (7.00%) but in excess of the projected long-term actuarial assumed rate of return (6.00%)

+53 bps

Hurdle rate surplus

- Projected asset growth (contributions + investment returns) outpaces projected liability growth, which is expected to improve the near-term funded ratio

58%

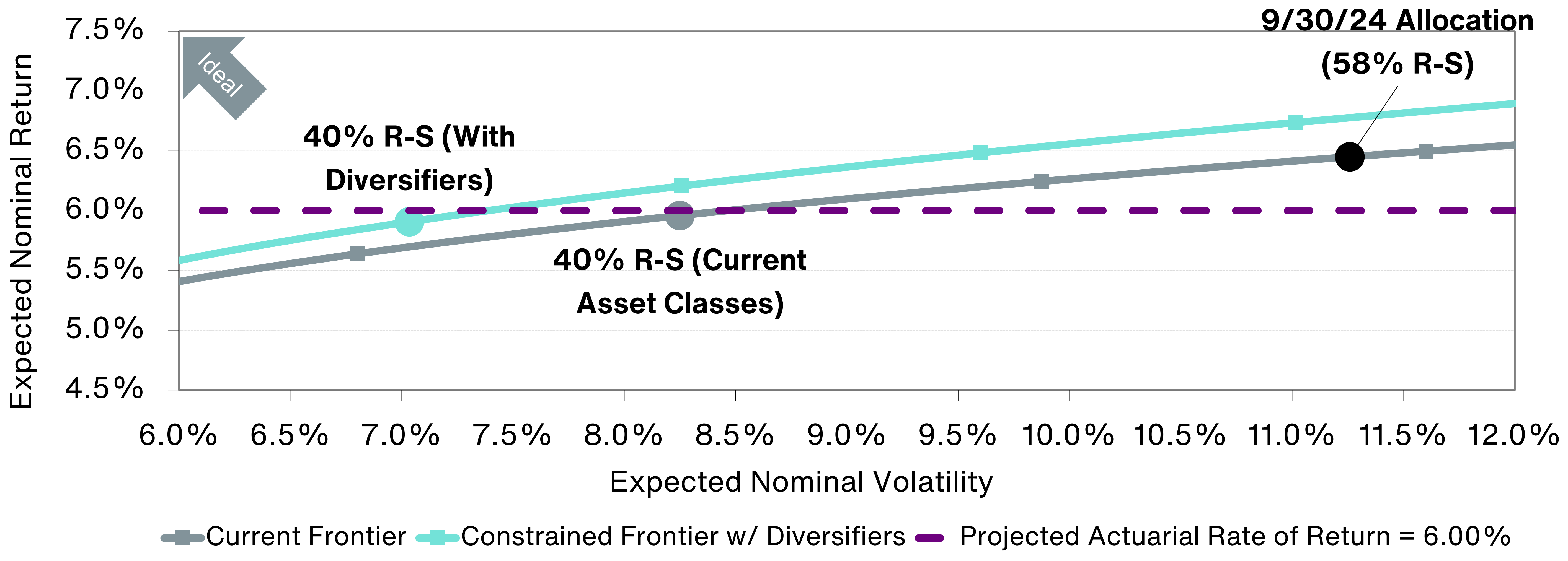
Level of return-seeking asset as of September 30, 2024

- Return-Seeking assets consist of domestic and international equity

[1] Expected returns are using Aon's Q4 2024 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Analysis includes $14,000 in expenses, assumed to be inclusive of investment consulting fees, paid from trust assets. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results. See appendix for capital market assumptions disclosure pages.

Portfolio Analysis

Lower volatility is expected with lowering the return-seeking asset level and/or additional diversification



Key Observations

- The 9/30/2024 allocation (58% return-seeking assets) has an expected return of **6.45%** which exceeds the long-term projected actuarial assumed rate of return (6.00%)
- Opportunities exist to reduce the portfolio volatility either through (1) dialing down the portfolio risk or (2) additional diversification – e.g., liquid return-seeking fixed income and open-end real assets

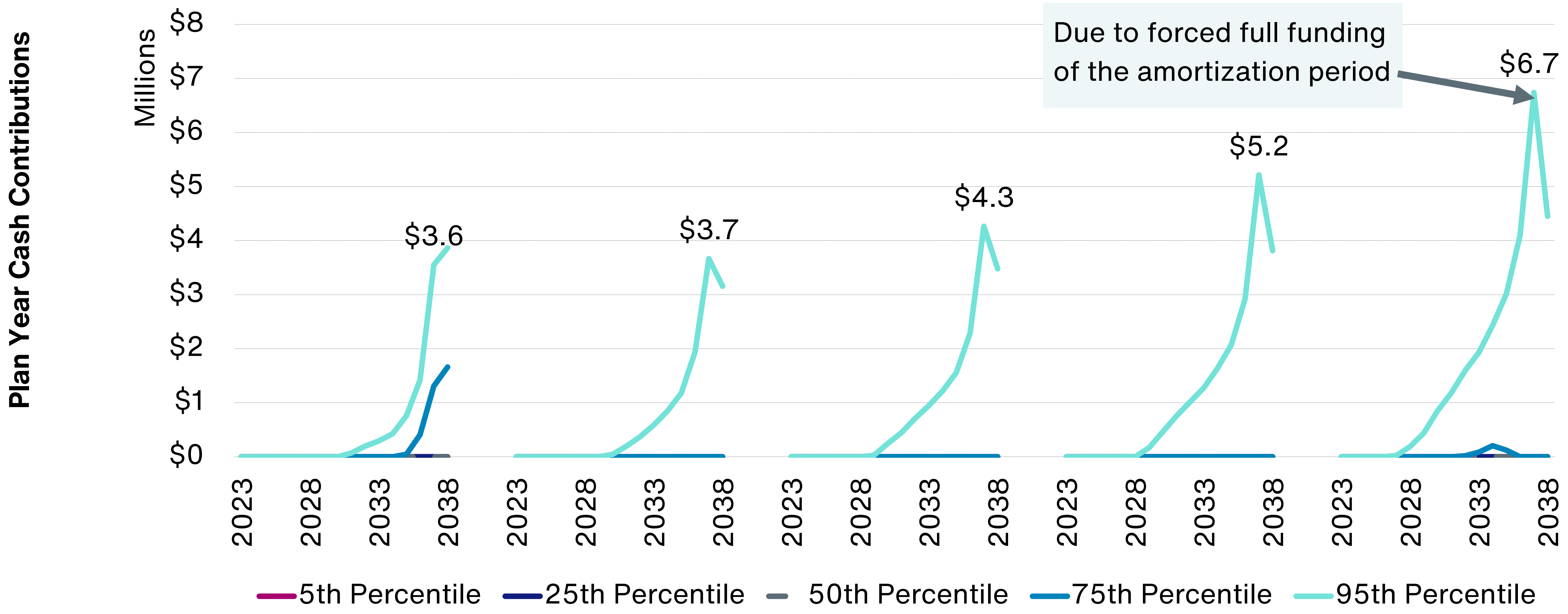
				Return-Seeking (R-S) Assets							Risk-Reducing / Safety Assets	
	Expected Nominal Return[1]	Expected Nominal Volatility	Sharpe Ratio	Public Equity	Private Equity	Liquid Alts	Liquid R-S Fixed Income	Illiquid R-S Fixed Income	Open-End Real Assets	Closed-End Real Assets	Cash	Core/Core Plus Bonds
9/30/24 Allocation (58% R-S)	6.45%	11.26%	0.24	58%	0%	0%	0%	0%	0%	0%	5%	37%
40% R-S (Current Asset Classes)	5.96%	8.25%	0.27	40%	0%	0%	0%	0%	0%	0%	5%	55%
40% R-S (With Diversifiers)	5.91%	7.03%	0.31	30%	0%	0%	4%	0%	6%	0%	5%	55%

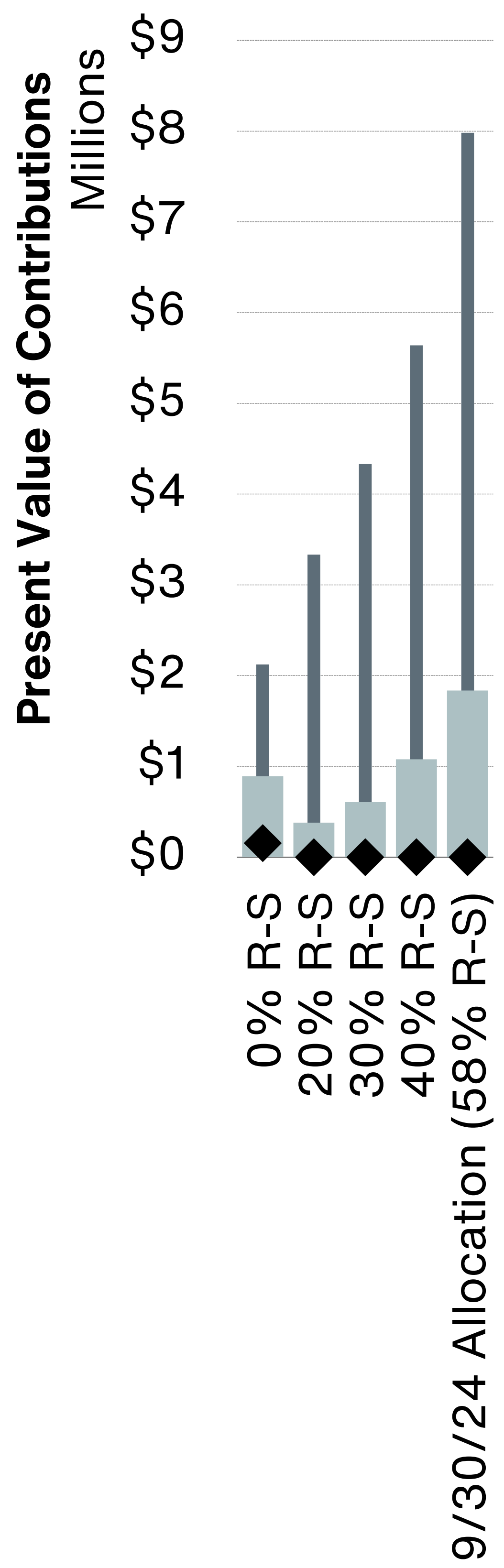
[1] Expected returns are using Aon's 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.

Totals may not sum to 100% due to rounding.

Asset-Liability Projection Analysis: Risk Tolerance

Contributions expected to be zero for allocations above 0% R-S; higher risk portfolios have increased volatility based on funding policy





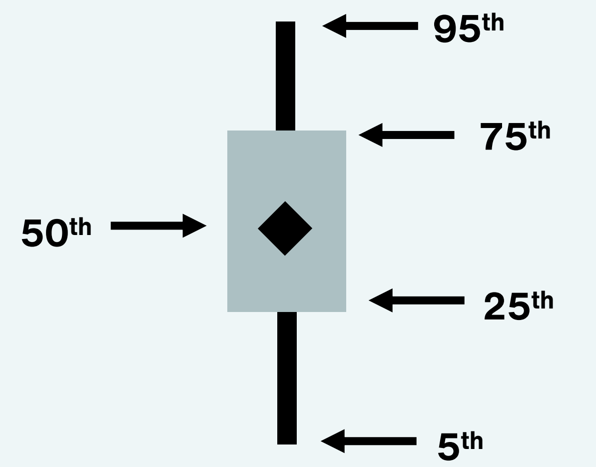
Strategy	0% R-S			20% R-S			30% R-S			40% R-S			9/30/24 Allocation (58% R-S)		
Year	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**
5th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
25th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
50th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
75th Percentile	$0.0	$0.0	$1.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.1	$0.0
95th Percentile	$0.0	$0.3	$3.9	$0.0	$0.6	$3.2	$0.0	$0.9	$3.5	$0.0	$1.3	$3.8	$0.2	$1.9	$4.4

Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

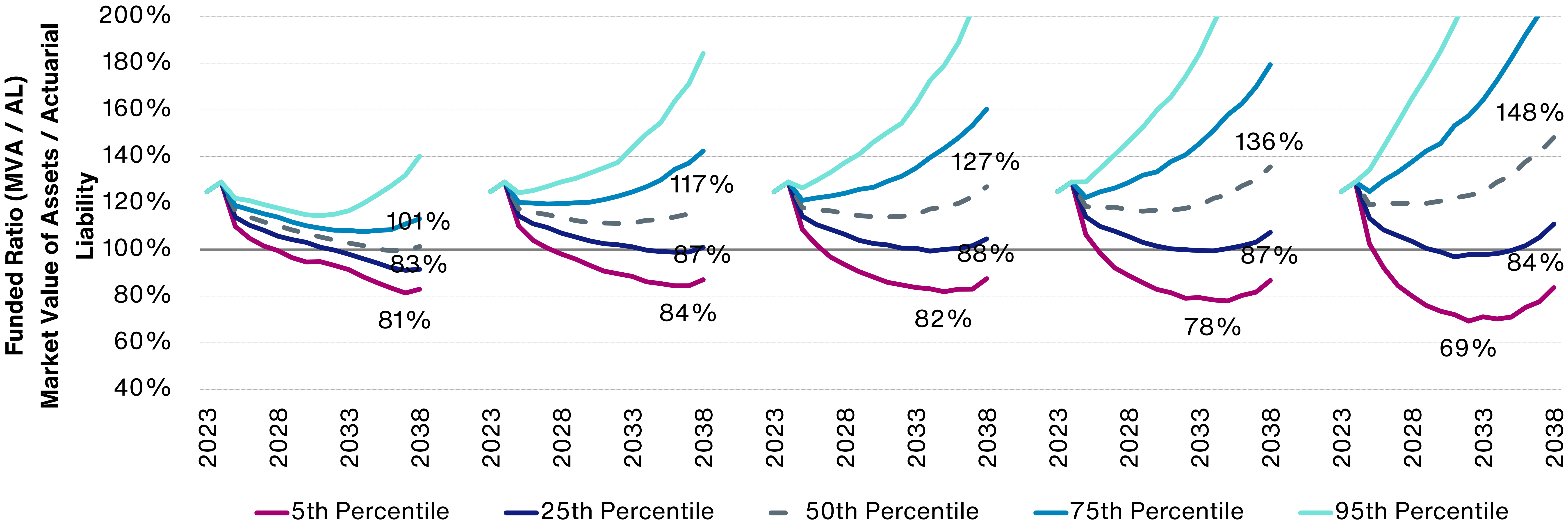
- Median contributions are expected to be zero
- However, the tail-risk is attributed to the fixed amortization date in the funding policy
- Tail-risk is further heightened with higher return-seeking strategies

Legend: Distribution of Outcomes



Asset-Liability Projection Analysis: Risk Tolerance

Plan expected to remain fully funded; lower risk strategies can narrow the range of future outcomes



Strategy	0% R-S			20% R-S			30% R-S			40% R-S			9/30/24 Allocation (58% R-S)		
Year	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**
5th Percentile	100%	91%	83%	98%	88%	87%	94%	84%	88%	89%	79%	87%	80%	71%	84%
25th Percentile	106%	98%	92%	107%	101%	101%	107%	101%	105%	106%	100%	107%	104%	98%	111%
50th Percentile	110%	103%	101%	114%	111%	117%	116%	115%	127%	117%	119%	136%	120%	125%	148%
75th Percentile	114%	108%	113%	120%	125%	142%	124%	135%	160%	129%	145%	179%	138%	164%	>200%
95th Percentile	118%	117%	140%	129%	144%	184%	137%	163%	>200%	146%	184%	>200%	165%	>200%	>200%
Probability > 100%	94%	65%	53%	91%	77%	76%	85%	76%	80%	82%	74%	82%	78%	73%	83%

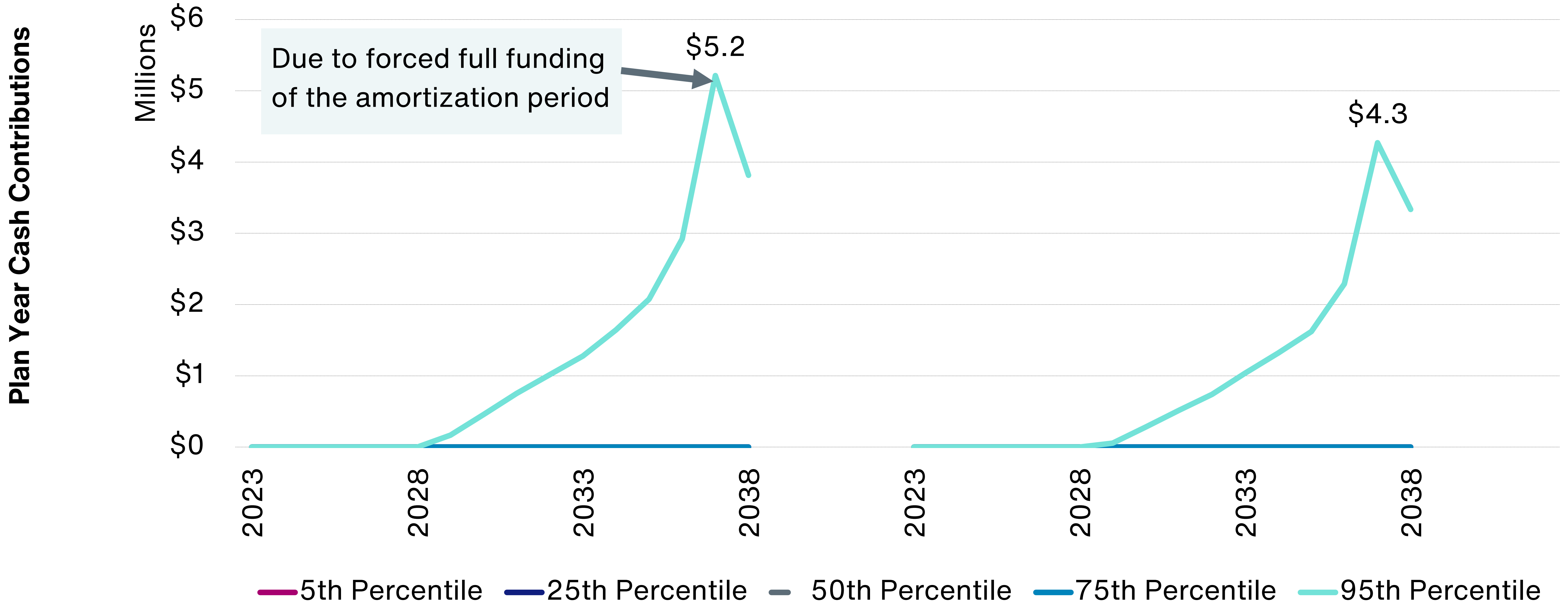
Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

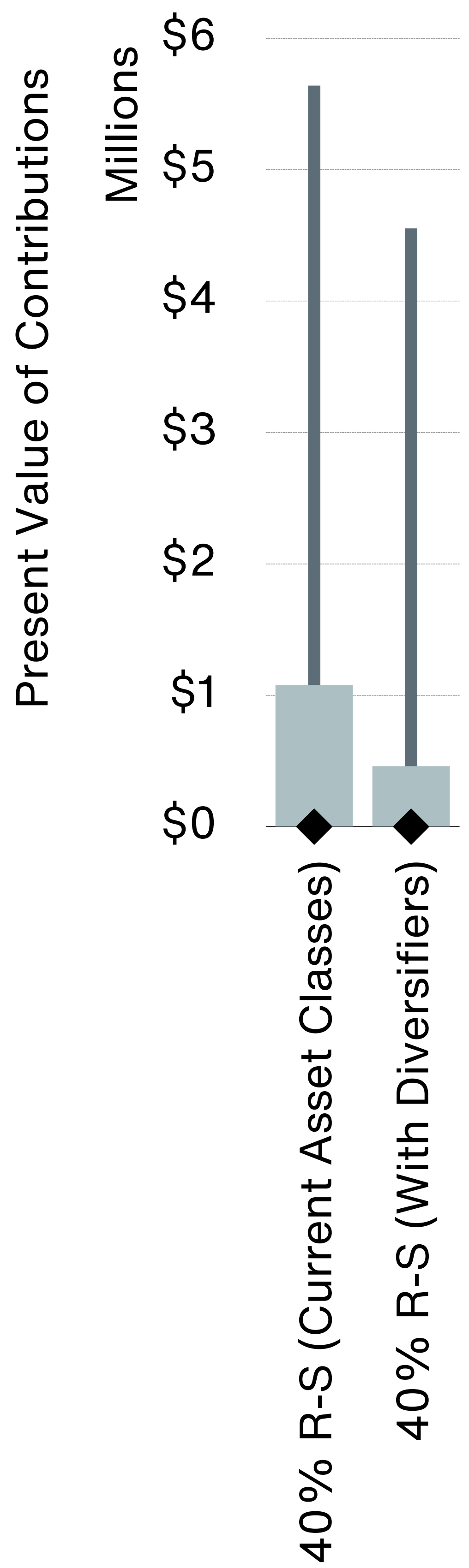
- Funded ratio decreases in FYE 2025 due to the projected decrease in the actuarial assumed rate of return from 7.00% to 6.00%
- The 9/30/2024 Allocation (58% R-S) is expected to largely move sideways over the next decade with a wide range of potential outcomes
- Lower return-seeking allocations narrow the range of future outcomes while reducing the median expectation

Asset-Liability Projection Analysis: Diversification

Additional diversification within the return-seeking portfolio is expected to further reduce contribution volatility



Strategy	40% R-S (Current Asset Classes)			40% R-S (With Diversifiers)		
Year	2028	2033	2038	2028	2033	2038
5th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
25th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
50th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
75th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
95th Percentile	$0.0	$1.3	$3.8	$0.0	$1.0	$3.3

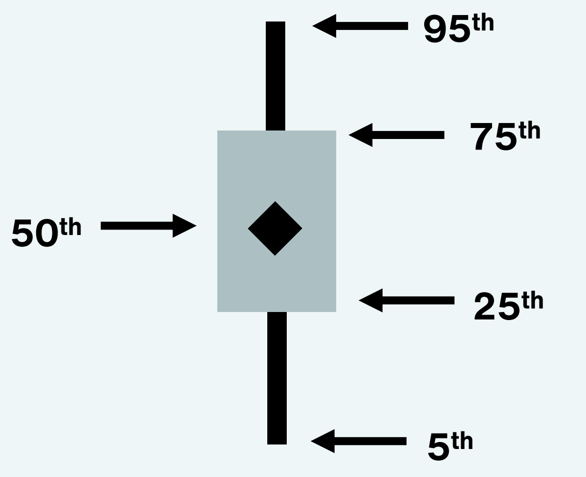


Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

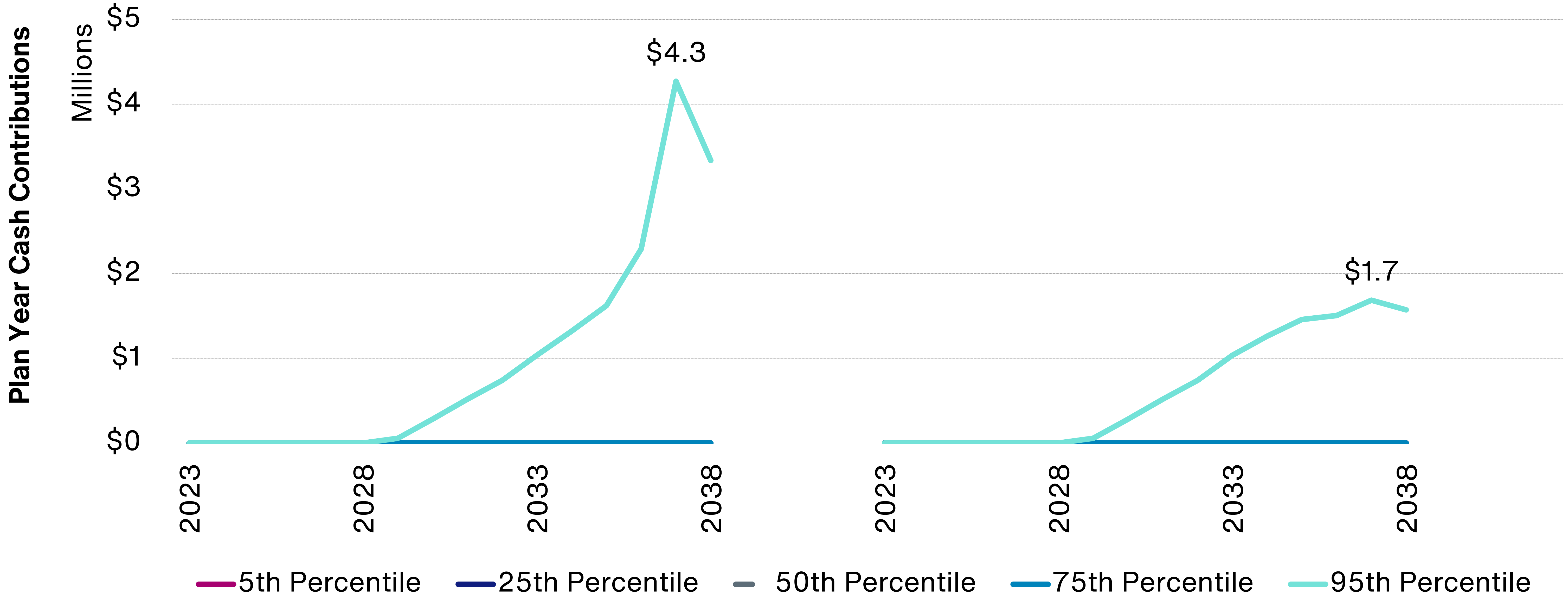
- Median contributions are expected to be zero
- Added diversification is expected to further reduce contribution volatility

Legend: Distribution of Outcomes

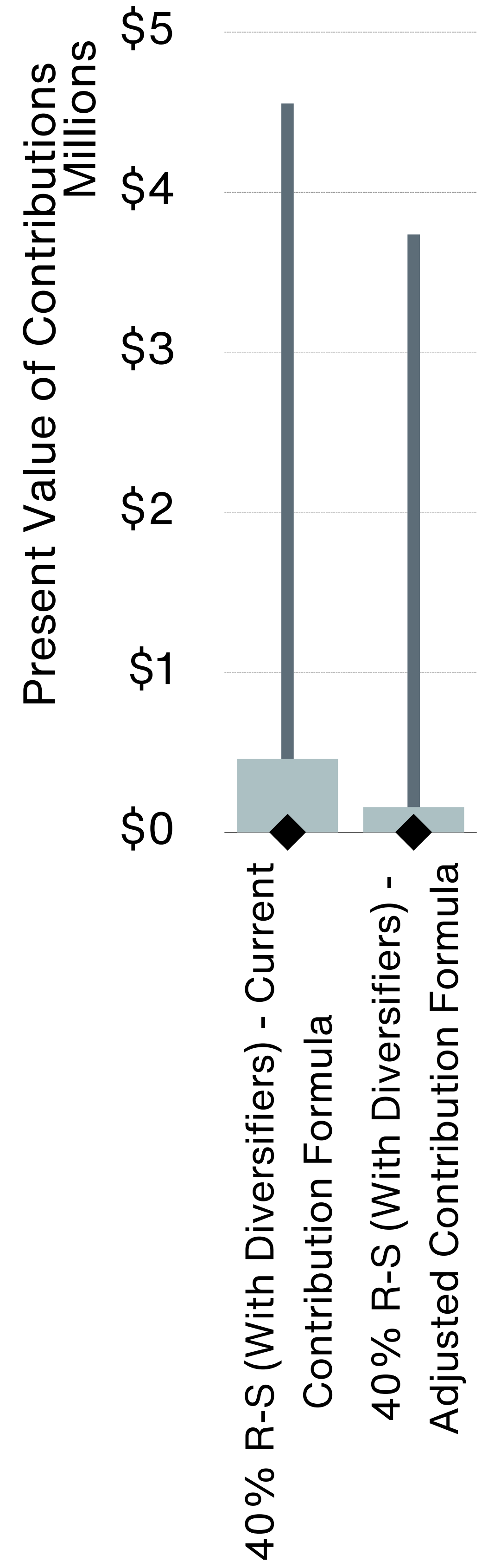


Asset-Liability Projection Analysis: Contribution Policy

Adjusting the contribution policy can smooth out patterns of future outcomes in the tail-risk scenarios



Strategy	40% R-S (With Diversifiers) – Current Contribution Formula			40% R-S (With Diversifiers) – Adjusted Contribution Formula		
Year	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**
5th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
25th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
50th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
75th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
95th Percentile	$0.0	$1.0	$3.3	$0.0	$1.0	$1.6

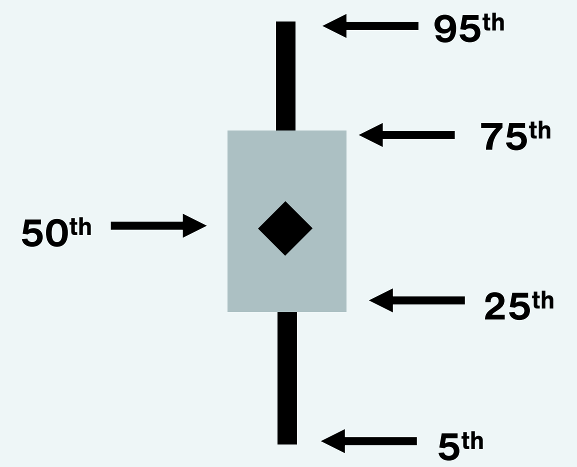


Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

- Median contributions are expected to be zero
- Adjusting the amortization period to be a minimum of 5 years and adopting layered amortizations is expected to smooth the pattern of contribution in the tail-risk scenarios

Legend: Distribution of Outcomes



Summary of Results

The City of Novi's Retiree Health Care Plan is currently overfunded with minimal-to-no contributions projected in the future. The following considerations from the asset-liability study are expected to strengthen Novi's position.

1. Risk Tolerance

- As of 9/30/2024, Novi has a 58% return-seeking allocation
- Allocations 10% return-seeking assets and above are not expected to have contributions in the median scenario
- 40% return-seeking assets is expected to meet the projected, long-term actuarial assumed rate of return (6.00%) with minimal volatility
  - Portfolios below 40% return-seeking assets can provide narrower ranges of outcomes, but will start to erode the funded status
  - OPEB plans also have increased variability in costs making buffers warranted

2. Portfolio Diversification

- Return-seeking vs. risk-reducing assets is one lever to reduce portfolio volatility
  - Another lever is additional diversification within the return-seeking portfolio
- Novi should consider additional diversification into return-seeking fixed income and open-end real assets
  - Added diversification is expected to produce a similar level of return and smooth the pattern of future results, reducing portfolio volatility

3. Contribution Policy

- Novi currently has a funding policy that reduces the amortization period to 1 year, moving to immediate recognition of all (gains)/losses
  - This policy creates increased tail-risk scenarios
- Aon recommends the current decreasing amortization period stop at 5 years with layered amortization bases to smooth out potential contributions

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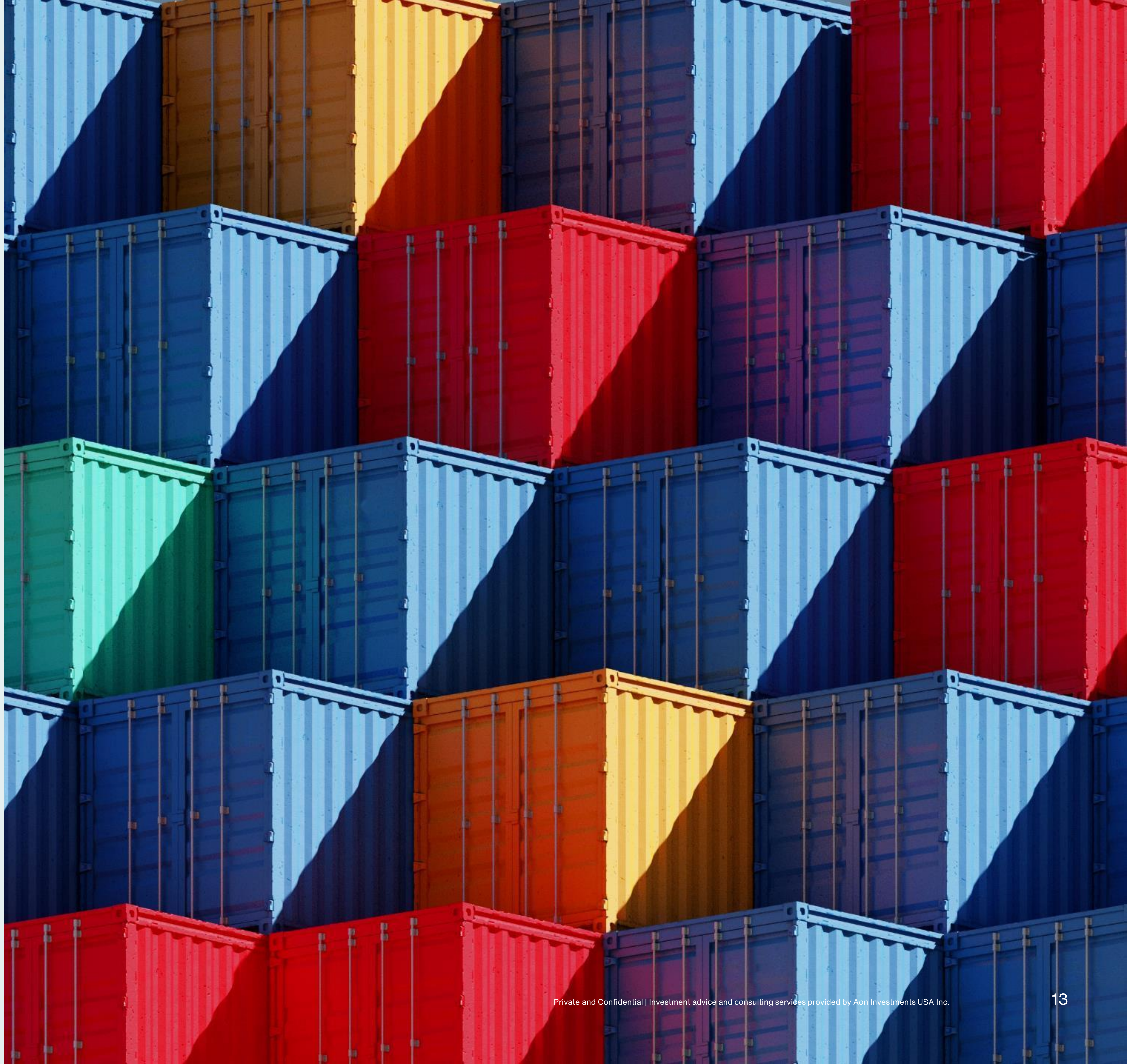
Analysis

- Current State Asset-Liability Profile
- Portfolio Analysis
- Asset-Liability Projection Analysis: Study Risk Tolerance
- Asset-Liability Projection Analysis: Study Impact of Diversification
- Asset-Liability Projection Analysis: Study Impact of Funding Policy



Current State Asset-Liability Profile

Section 2: Analysis

Current State Asset-Liability Profile (as of September 30, 2024)

Novi projects to have a hurdle rate surplus, increasing near-term funded status

Asset-Liability Snapshot

	As of 6/30/2023		Est. 9/30/2024	
Metric ($, Millions)	**Value**	**Fund %**	**Value**	**Fund %**
Market Value of Assets	$34.0	124.8%	$38.1	134.3%
Actuarial Value of Assets	$36.1	132.6%		
Liability Metrics				
Actuarial Liability (AL) – Funding[1]	$27.2		$28.3	

Asset-Liability Growth Metrics as of 9/30/2024

Metric ($, Millions)	**Value**	**% Liability**	**% Assets**
AL Discount Cost	$1.98	7.00%	5.21%
AL Normal Cost	$0.26	0.92%	0.68%
Plan Expenses[2]	$0.01	0.04%	0.03%
Total Liability Hurdle Rate	**$2.25**	**7.96%**	**5.92%**
Expected Return on Assets[3]	$2.45	8.67%	6.45%
Total Contributions	$0.00	0.00%	0.00%
Total Exp. Asset Growth	**$2.45**	**8.67%**	**6.45%**
Hurdle Rate (Shortfall)/Surplus	**$0.20**	**0.71%**	**0.53%**
Est. Benefit Payments	$2.51	8.85%	6.59%

Key Takeaways

- OPEB plan is estimated to be **134.3%** funded on a market value of assets basis as of September 30, 2024
- Asset hurdle rate of **5.92%**, via cash funding and investment returns, needed to maintain or improve funded status
- The total expected asset growth rate (EROA plus contributions) exceeds the liability hurdle rate by **53 bps**

Target Asset Allocation as of 9/30/2024

Metric ($, Millions)		**Value**	**Alloc %**
Return-Seeking	- Public Equity	$22.1	58%
	- Total	$22.1	58%
Risk-Reducing	- Cash & Short Duration Fixed Income	$1.9	5%
	- Core Bonds	$14.1	37%
	- Total	$16.0	42%
Total		$38.1	100%

[1] Based on a 7.00% discount rate consistent with the June 30, 2023 and June 30, 2024 actuarial valuation results.
[2] Analysis includes $14,000 in expenses, assumed to be inclusive of investment consulting fees, paid from trust assets.
[3] Expected returns are using Aon's Q4 2024 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results. See appendix for capital market assumptions disclosure pages.
Percentages may not sum to 100% due to rounding.

Asset Hurdle Rates

Growth needs of the plan adjust with funded status changes

What is the Asset Hurdle Rate?

Asset Hurdle Rate is the required rate of asset growth needed to keep pace with the growth of the Plan liabilities

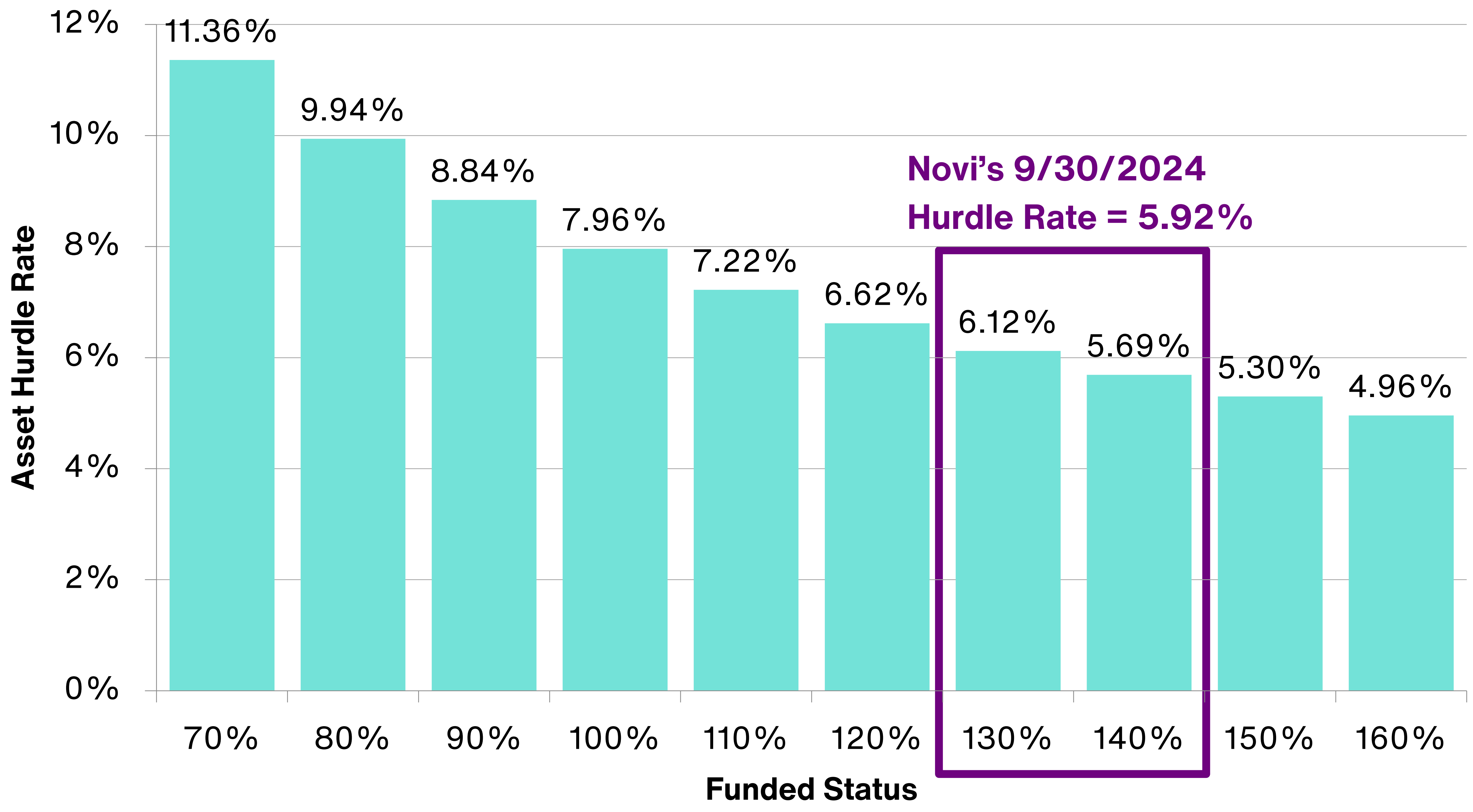
- Assets must grow at this rate or more in order to maintain or reduce a potential funding shortfall
- **Formula = (Normal Cost + Discount Cost + Expenses) / Funded Ratio**

Assets can grow in two ways:

- Investment returns
- Funding contributions

Asset hurdle rates are expected to decline as the funded status increases

Asset Hurdle Rates by Funded Status



Portfolio Analysis

Section 2: Analysis

Three Facets of Investment Strategy

Objectives dictate the investment strategy

	Asset-Only Focus	Asset-Liability Focus
1) Overall Asset Allocation • How much growth is needed – both now and in the future?	• Generally static investment strategies with higher levels of return-seeking assets to offset long-term costs	• Generally dynamic glide path strategies with declining return-seeking assets to "lock-in" funded ratio gains as they occur
2) Return-Seeking Portfolio • Can additional diversification benefit the plan?	• Outperform liabilities while mitigating downside risk • Diversify risk exposures • Capture illiquidity premium where prudent	
3) Risk-Reducing Portfolio • How should safety assets be constructed?	• Core fixed income to minimize portfolio volatility	• Long duration fixed income to minimize funded status volatility

There are two (2) types of investment strategy approaches for retirement plans:

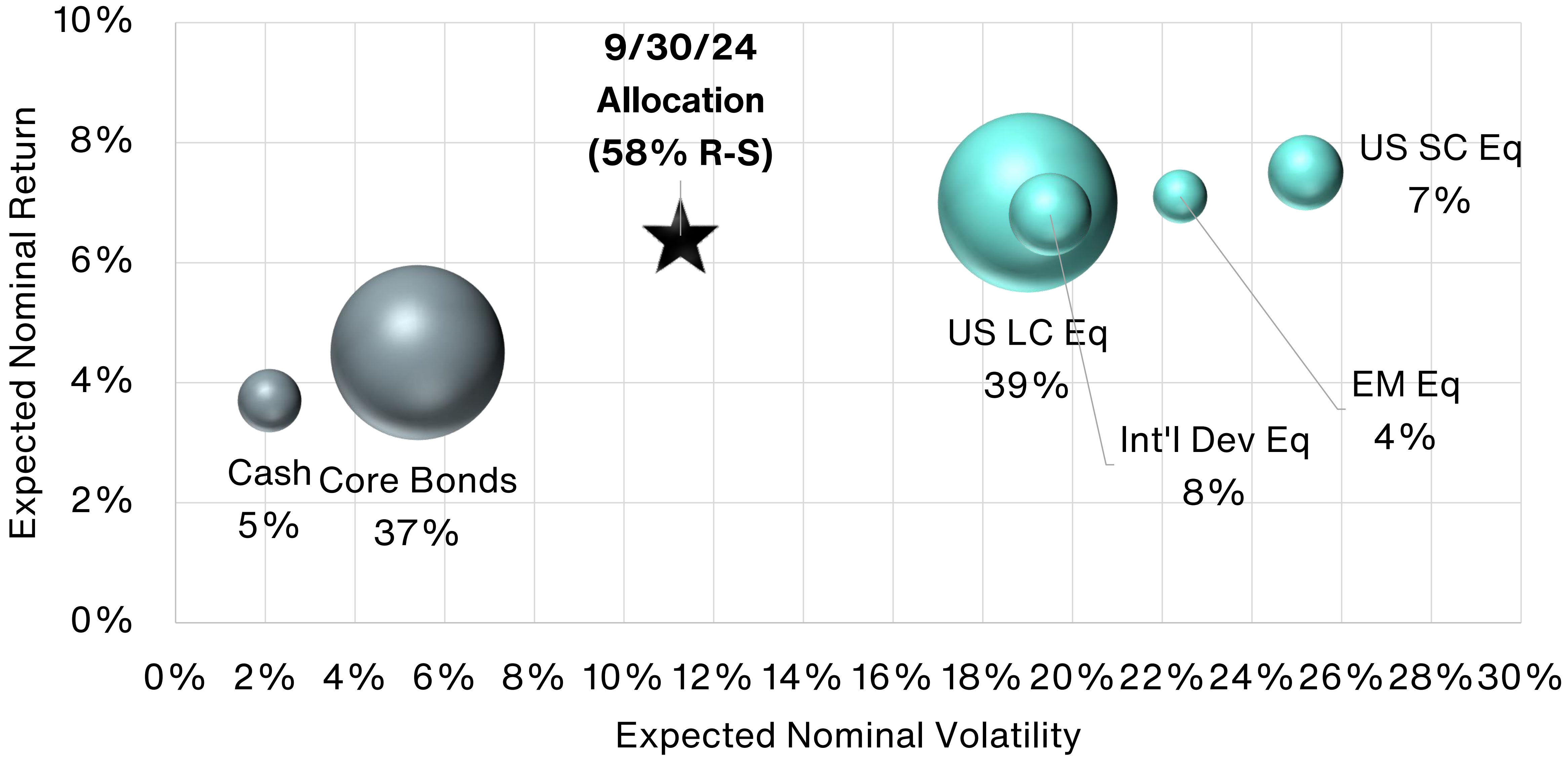
- **Asset-Only focus**
  - Generally used for total return investors – e.g., public sector plans - where discount rates are not marked-to-market
  - Goal is to minimize portfolio volatility with shorter/market duration fixed income as the risk-reducing asset
- **Asset-Liability focus**
  - Generally used for corporate plans where discount rates are marked-to-market
  - Goal is to minimize funded ratio volatility with longer duration fixed income as the risk-reducing asset

Key Observation

- Based on Novi's current investment strategy and focus on long-term cash funding, the Plan has an **Asset-Only** focus today

Portfolio Analysis

Current diversification results in an expected return of 6.45%[1]



Bubble size proportional to current asset allocation (i.e., larger bubbles = larger allocations); Asset classes are color coded:

- Equities (teal), Liquid Alternatives (blue), Return-Seeking Fixed Income (navy blue), Real Assets (purple), Safety (gray)

Asset Class – Target %	Expected Real Return[1]	Expected Nominal Return[1]	Expected Nominal Volatility
Equity			
Large Cap U.S. Equity – 39.2%	4.6%	7.0%	19.0%
Small Cap U.S. Equity – 6.9%	5.1%	7.5%	25.2%
Int'l Equity (Developed) – 8.3%	4.4%	6.8%	19.5%
Emerging Markets Equity – 3.6%	4.7%	7.1%	22.4%
Fixed Income			
Cash (Gov't) – 4.9%	1.4%	3.7%	2.1%
Core Fixed Income – 37.1%	2.2%	4.5%	5.4%
Portfolio Metrics (30-Year Assumptions)			
Total Fund	**4.08%**	**6.45%**	**11.26%**

[1] Expected returns are using Aon's 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.

Spectrum of Our Model Portfolios

Reflects our best ideas for a typical pension/OPEB plan

Aon's Model Portfolios reflect Aon's best ideas for a typical total return defined benefit plan across a range of circumstances noted below

Intended as a starting point for asset allocation analysis and decision-making and to be customized based on client-specific needs and circumstances

	Liquid	Less Liquid	More Illiquid	Unconstrained
Complexity	Simple			Complex
Costs	Low Cost			Higher Cost
Resources	Light Resources			Deep Resources
Governance	Modest Governance			Strong Governance
Liquidity	More Liquid			Less Liquid

As a general statement, moving from left-to-right on the above spectrum increases both investment portfolio return potential and risk-adjusted return potential, based on our capital markets modelling

- It also increases the reliance on "alpha" (manager skill) and reduces the emphasis on market "beta" (market risk premiums); alpha is not guaranteed

Our Process

Return-seeking portfolio construction

Goal: Outperform liabilities while mitigating downside risk

Key Concept: Diversify risk exposures; capture illiquidity premium where prudent

Equity

Equity beta is the primary driver of excess return over liabilities

Real Assets

Source of alternative income, inflation protection, and provides downside protection versus equity beta

Return-Seeking Fixed Income

Adds credit beta and provides downside protection versus equity beta

Liquid Alternatives

Absolute return and provides downside protection versus equity beta

Spectrum of Our Model Portfolios

Assumes 80% return-seeking portfolio; model portfolios scaled to desired risk tolerance

Aon Model Portfolio	**Liquid**	**Less Liquid**	**More Illiquid**	**Unconstrained**
Guidance on Choosing the Right Model Portfolio	Appropriate for pension/OPEB plans intending to access markets in a simple, low cost manner	Public pension/OPEB plans with modest governance structure and some appetite for illiquidity	Typical public pension/OPEB plan	Public pension/OPEB plans with strong governance structure and large appetite for illiquidity
Asset Allocation				
Total Return-Seeking Assets	**80.0%**	**80.0%**	**80.0%**	**80.0%**
Public Equity	60.0%	50.0%	45.0%	35.0%
Private Equity	--	5.0%	10.0%	15.0%
Liquid Alternatives	--	5.0%	7.5%	7.5%
Liquid Return-Seeking Fixed Income	7.5%	7.5%	5.0%	5.0%
Illiquid Fixed Income	--	--	2.5%	5.0%
Open-end Real Assets	12.5%	7.5%	5.0%	5.0%
Closed-end Real Assets	--	5.0%	5.0%	7.5%
Opportunity	0.0%	0-5%	0-10%	0-10%
Total Risk-Reducing Assets	**20.0%**	**20.0%**	**20.0%**	**20.0%**
Core/Core-Plus Fixed Income	20.0%	20.0%	20.0%	20.0%
Total Assets	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Aon's Model Portfolio Building Blocks

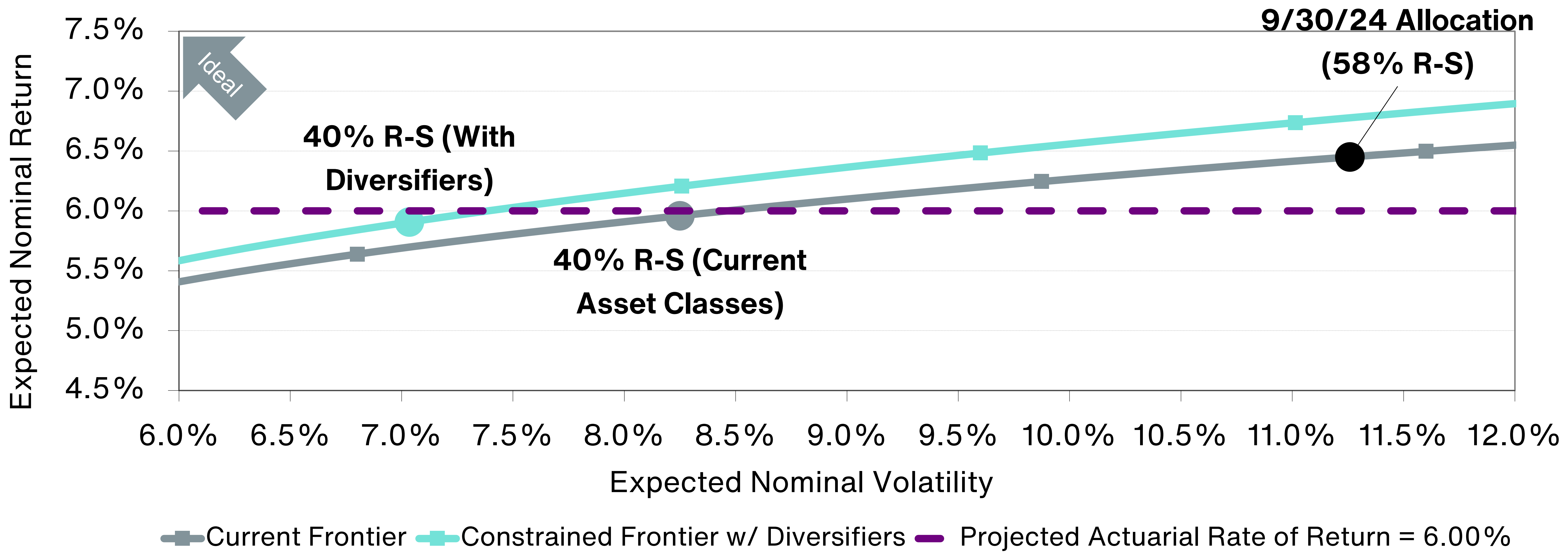
Return-Seeking Asset Views

Building Block	Aon's Views
Public Equity	• Base of return-seeking portfolio • Primary source of excess return • 5% overweight U.S. equity vs. non-U.S.
Private Equity	• Expected premiums for equity risk, illiquidity, and complexity/skill • Smaller portfolios can use fund of funds and secondaries • Diversify across sub-sectors/strategies (e.g., buyouts, venture capital, etc.) and vintage years for larger portfolios
Liquid Alternatives	• Diversifies by having less exposure to general economic growth (biggest driver of equity market returns) • Expected premiums for illiquidity and complexity/skill • Includes (but not limited to): equity hedge, event driven/distressed, macro, relative value, multi strategy, and orthogonal

Building Block	Aon's Views
Liquid Return-Seeking Fixed Income	• Diversifies public equities and core fixed income • Provides credit spread duration and additional yield • Rotates among credit sub-strategies including, but not limited to: high yield, emerging markets debt, bank loans, and securitized
Illiquid Fixed Income	• Expected illiquidity premium in addition to most of the benefits of liquid return-seeking fixed income • Base is direct corporate lending; also includes real estate debt/asset-backed lending and opportunistic credit
Open-End Real Assets	• Diversifies public equities- moderate correlation in most markets • Income and inflation protection • 50% core real estate / 50% core infrastructure
Closed-End Real Assets	• Expected illiquidity and risk premia in addition to most of the benefits of open-end real assets • Base is non-core real estate and infrastructure; also includes agriculture, farmland, timber, and opportunistic

Portfolio Analysis – Risk/Reward Spectrum

Lower volatility is expected with lowering the return-seeking asset level and/or additional diversification



Key Observations

- The 9/30/2024 allocation (58% return-seeking assets) has an expected return of **6.45%** which exceeds the long-term projected actuarial assumed rate of return (6.00%)
- Opportunities exist to reduce the portfolio volatility either through (1) dialing down the portfolio risk or (2) additional diversification – e.g., liquid return-seeking fixed income and open-end real assets

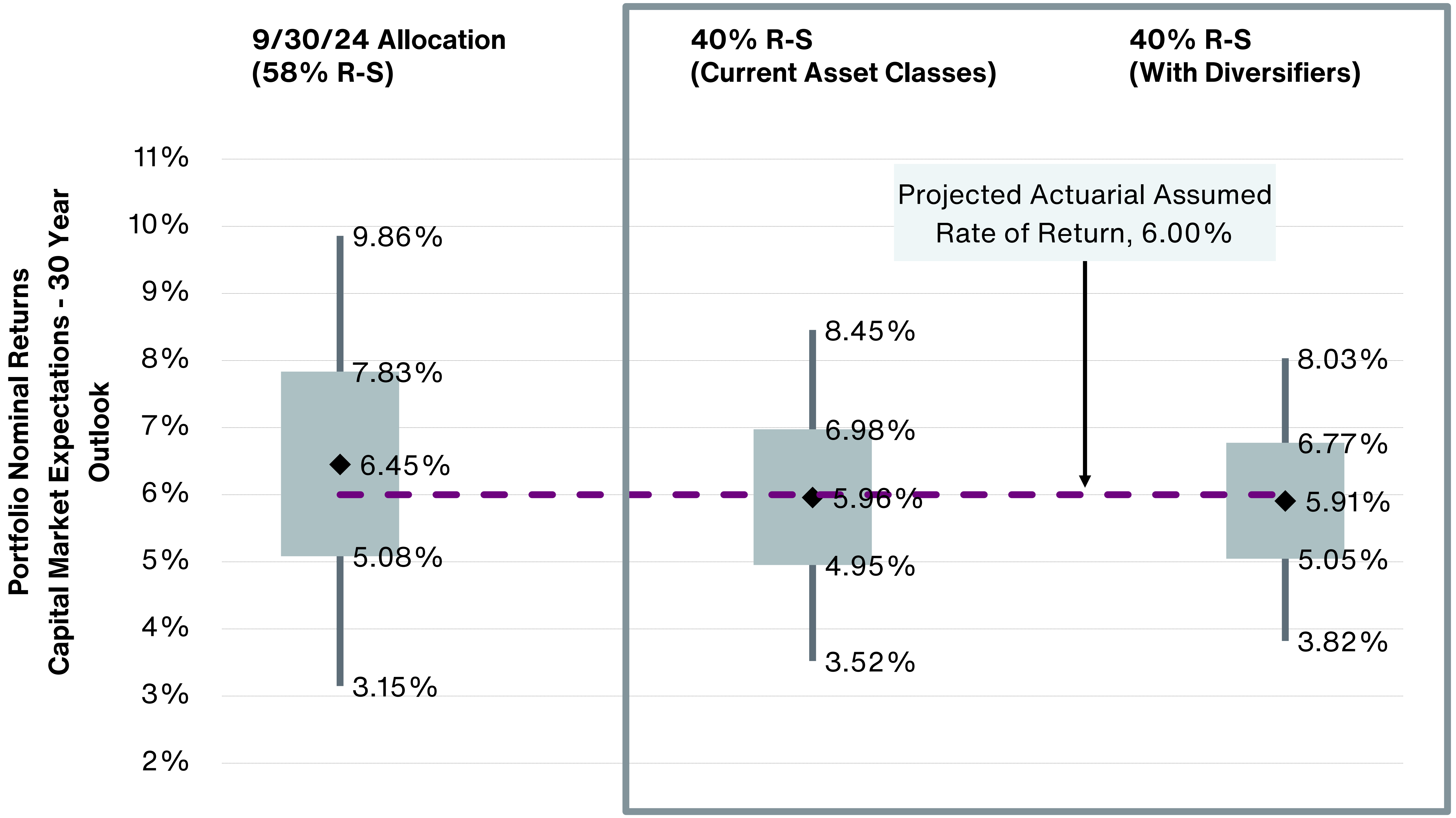
				Return-Seeking (R-S) Assets							Risk-Reducing / Safety Assets	
	Expected Nominal Return[1]	Expected Nominal Volatility	Sharpe Ratio	Public Equity	Private Equity	Liquid Alts	Liquid R-S Fixed Income	Illiquid R-S Fixed Income	Open-End Real Assets	Closed-End Real Assets	Cash	Core/Core Plus Bonds
9/30/24 Allocation (58% R-S)	6.45%	11.26%	0.24	58%	0%	0%	0%	0%	0%	0%	5%	37%
40% R-S (Current Asset Classes)	5.96%	8.25%	0.27	40%	0%	0%	0%	0%	0%	0%	5%	55%
40% R-S (With Diversifiers)	5.91%	7.03%	0.31	30%	0%	0%	4%	0%	6%	0%	5%	55%

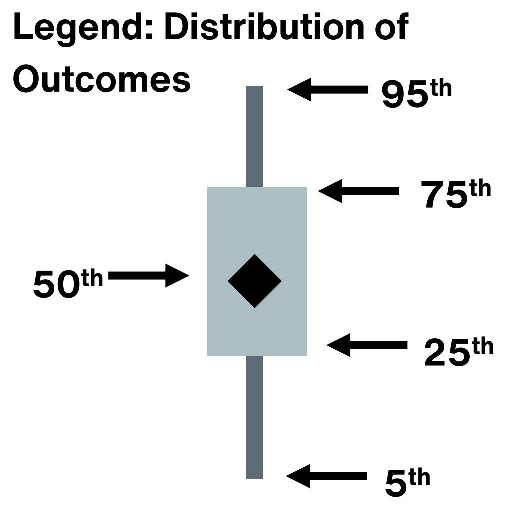
[1] Expected returns are using Aon's 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.

Totals may not sum to 100% due to rounding.

Portfolio Analysis – Range of Nominal Returns

Lower volatility portfolios and additional diversification are projected to narrow the range of future outcomes





[1] Expected returns are using Aon's 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.

Key Observation

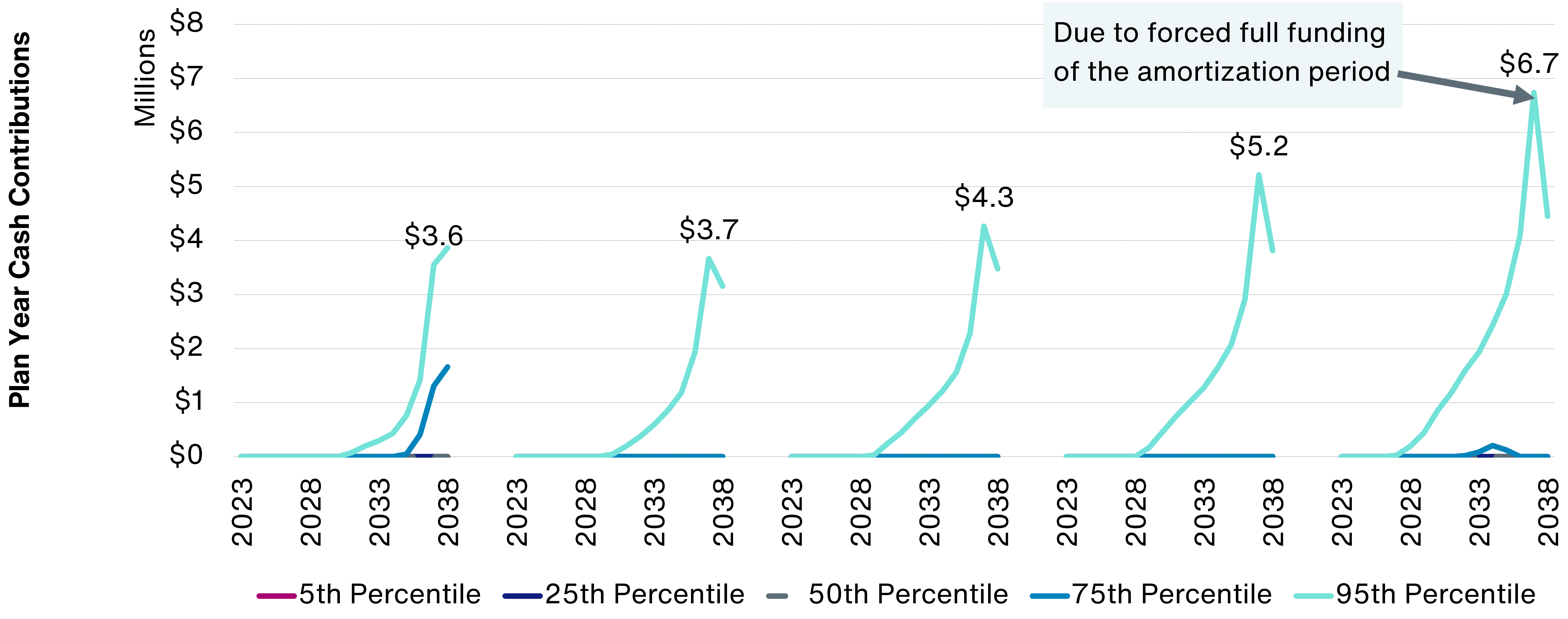
- Additional diversification via return-seeking fixed income and open-end real assets is expected to maintain a similar level of return but with reduced volatility

Asset-Liability Projection Analysis: Study Risk Tolerance

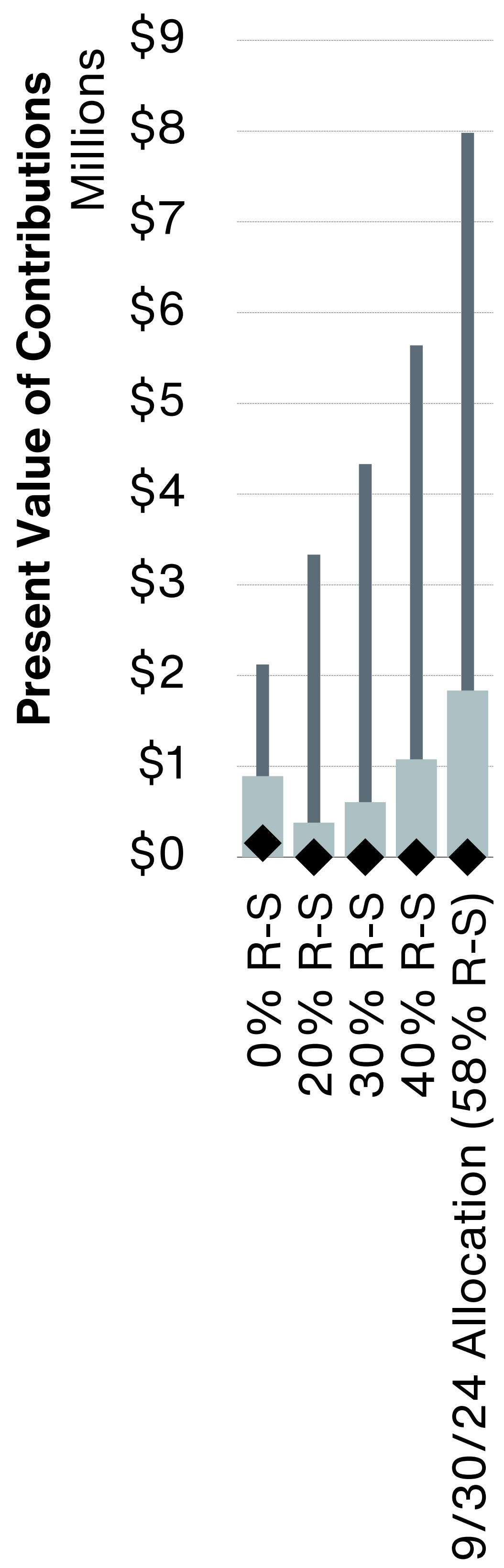
Section 2: Analysis

Asset-Liability Projection Analysis – Contributions

Contributions expected to be zero for allocations above 0% R-S; higher risk portfolios have increased volatility based on funding policy



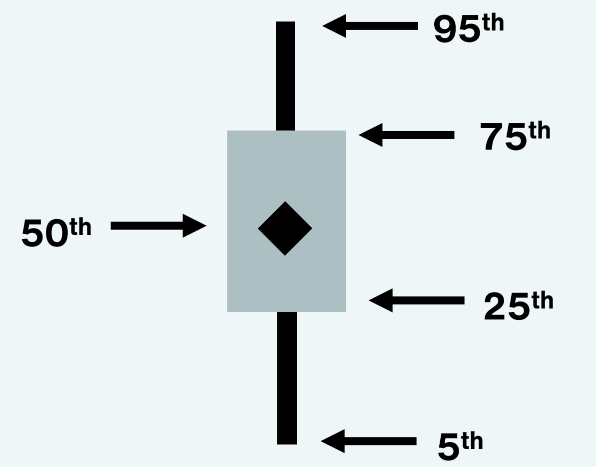
Strategy	0% R-S			20% R-S			30% R-S			40% R-S			9/30/24 Allocation (58% R-S)		
Year	2028	2033	2038	2028	2033	2038	2028	2033	2038	2028	2033	2038	2028	2033	2038
5th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
25th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
50th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
75th Percentile	$0.0	$0.0	$1.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.1	$0.0
95th Percentile	$0.0	$0.3	$3.9	$0.0	$0.6	$3.2	$0.0	$0.9	$3.5	$0.0	$1.3	$3.8	$0.2	$1.9	$4.4



Key Observations

- Median contributions are expected to be zero
- However, the tail-risk is attributed to the fixed amortization date in the funding policy
- Tail-risk is further heightened with higher return-seeking strategies

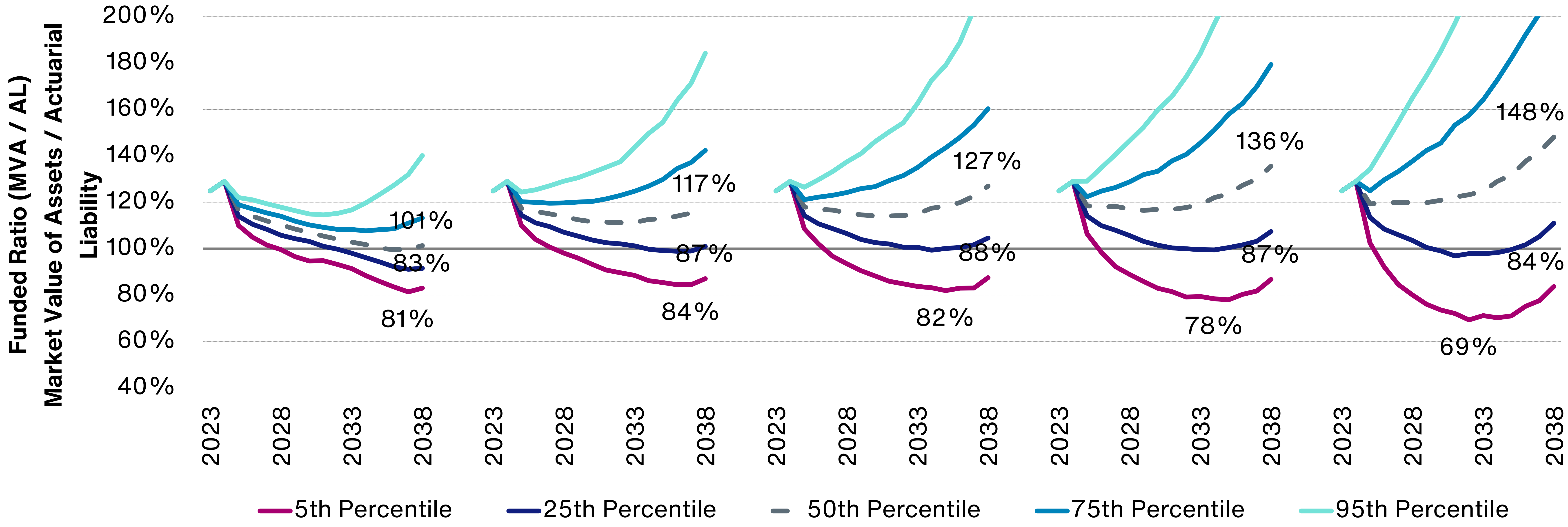
Legend: Distribution of Outcomes



Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Asset-Liability Projection Analysis – Funded Ratio

Plan expected to remain fully funded; lower risk strategies can narrow the range of future outcomes



Strategy	0% R-S			20% R-S			30% R-S			40% R-S			9/30/24 Allocation (58% R-S)		
Year	2028	2033	2038	2028	2033	2038	2028	2033	2038	2028	2033	2038	2028	2033	2038
5th Percentile	100%	91%	83%	98%	88%	87%	94%	84%	88%	89%	79%	87%	80%	71%	84%
25th Percentile	106%	98%	92%	107%	101%	101%	107%	101%	105%	106%	100%	107%	104%	98%	111%
50th Percentile	110%	103%	101%	114%	111%	117%	116%	115%	127%	117%	119%	136%	120%	125%	148%
75th Percentile	114%	108%	113%	120%	125%	142%	124%	135%	160%	129%	145%	179%	138%	164%	>200%
95th Percentile	118%	117%	140%	129%	144%	184%	137%	163%	>200%	146%	184%	>200%	165%	>200%	>200%
Probability > 100%	94%	65%	53%	91%	77%	76%	85%	76%	80%	82%	74%	82%	78%	73%	83%

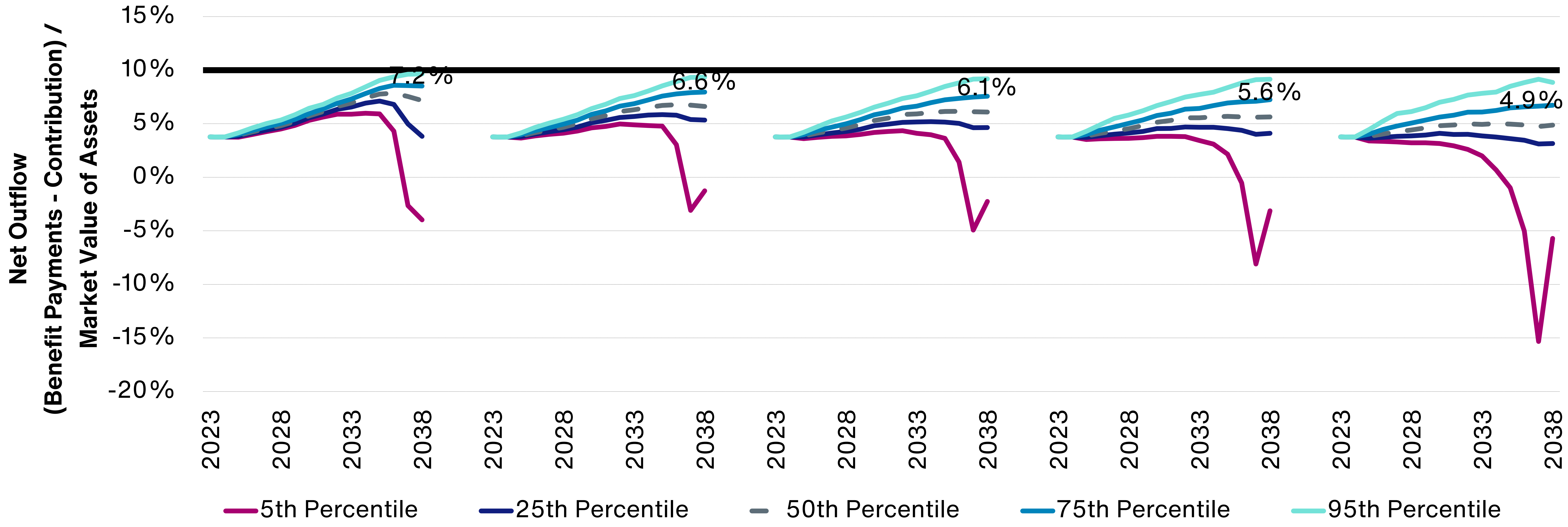
Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

- Funded ratio decreases in FYE 2025 due to the projected decrease in the actuarial assumed rate of return from 7.00% to 6.00%
- The 9/30/2024 Allocation (58% R-S) is expected to largely move sideways over the next decade with a wide range of potential outcomes
- Lower return-seeking allocations narrow the range of future outcomes while reducing the median expectation

Asset-Liability Projection Analysis – Net Outflow

Net outflows expected to grow steadily across investment strategies modeled



Strategy	0% R-S			20% R-S			30% R-S			40% R-S			9/30/24 Allocation (58% R-S)		
Year	2028	2033	2038	2028	2033	2038	2028	2033	2038	2028	2033	2038	2028	2033	2038
5th Percentile	4.5%	5.9%	-4.0%	4.1%	4.9%	-1.3%	3.9%	4.1%	-2.3%	3.6%	3.4%	-3.1%	3.2%	2.0%	-5.7%
25th Percentile	4.7%	6.6%	3.8%	4.4%	5.7%	5.3%	4.3%	5.2%	4.6%	4.1%	4.7%	4.1%	3.9%	3.9%	3.2%
50th Percentile	4.8%	6.9%	7.2%	4.7%	6.3%	6.6%	4.6%	5.9%	6.1%	4.5%	5.6%	5.6%	4.4%	4.9%	4.9%
75th Percentile	5.0%	7.3%	8.5%	5.0%	6.9%	8.0%	5.0%	6.6%	7.6%	5.0%	6.4%	7.2%	5.1%	6.1%	6.7%
95th Percentile	5.3%	7.8%	9.6%	5.4%	7.6%	9.4%	5.6%	7.6%	9.2%	5.8%	7.7%	9.2%	6.1%	7.8%	8.9%
Probability > 10%	<1%	<1%	2%	<1%	<1%	2%	<1%	<1%	2%	<1%	<1%	2%	<1%	<1%	3%

Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

- Net outflow expected to grows steadily across the policies modeled
- Lower growth portfolios with have slightly higher net outflow due to having lower overall assets
- Net outflows of 10%+ can put stress on fund liquidity over time; however, it is not likely over the projection period

Summary of Results

Portfolios	Portfolio Metrics (30-year CMAs)			Financial Results			
				15-year Ending Funded Ratio (MVA / AL)		15-year Present Value of Contributions ($ millions)	
	Expected Nominal Return[1]	Expected Nominal Volatility	Sharpe Ratio	Expected[2]	Downside[3]	Expected[2]	Downside[4]
9/30/24 Allocation (58% R-S)	6.45%	11.26%	0.24	148%	84%	$0.0	$8.0
Current Frontier							
0% Return-Seeking	4.47%	5.18%	0.15	101%	83%	$0.2	$2.1
10% Return-Seeking	4.89%	5.07%	0.24	108%	86%	$0.0	$2.2
20% Return-Seeking	5.28%	5.67%	0.28	117%	87%	$0.0	$3.3
30% Return-Seeking	5.64%	6.80%	0.29	127%	88%	$0.0	$4.3
40% Return-Seeking	5.96%	8.25%	0.27	136%	87%	$0.0	$5.6
50% Return-Seeking	6.24%	9.87%	0.26	143%	85%	$0.0	$7.0
60% Return-Seeking	6.50%	11.60%	0.24	149%	83%	$0.0	$8.2
70% Return-Seeking	6.72%	13.39%	0.23	156%	81%	$0.0	$9.5
80% Return-Seeking	6.90%	15.22%	0.21	161%	79%	$0.0	$11.0
90% Return-Seeking	7.06%	17.08%	0.20	166%	76%	$0.0	$12.4
100% Return-Seeking	7.23%	18.96%	0.19	171%	72%	$0.0	$13.6

[1] Expected returns are using Aon's 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.

[2] Expected = 50th percentile outcome or central expectation across all 1,000 simulations

[3] Downside = 5th percentile outcome across all 1,000 simulations

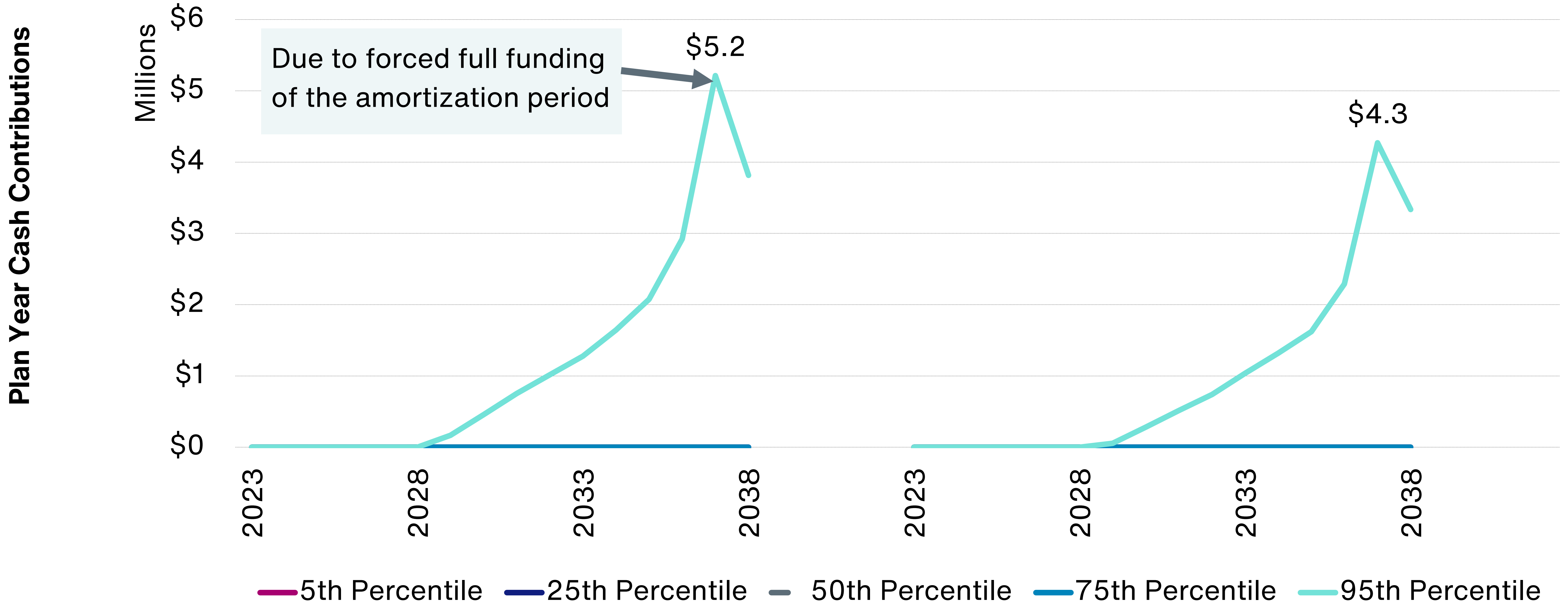
[4] Downside = 95th percentile outcome across all 1,000 simulations

Asset-Liability Projection Analysis: Study Impact of Diversification

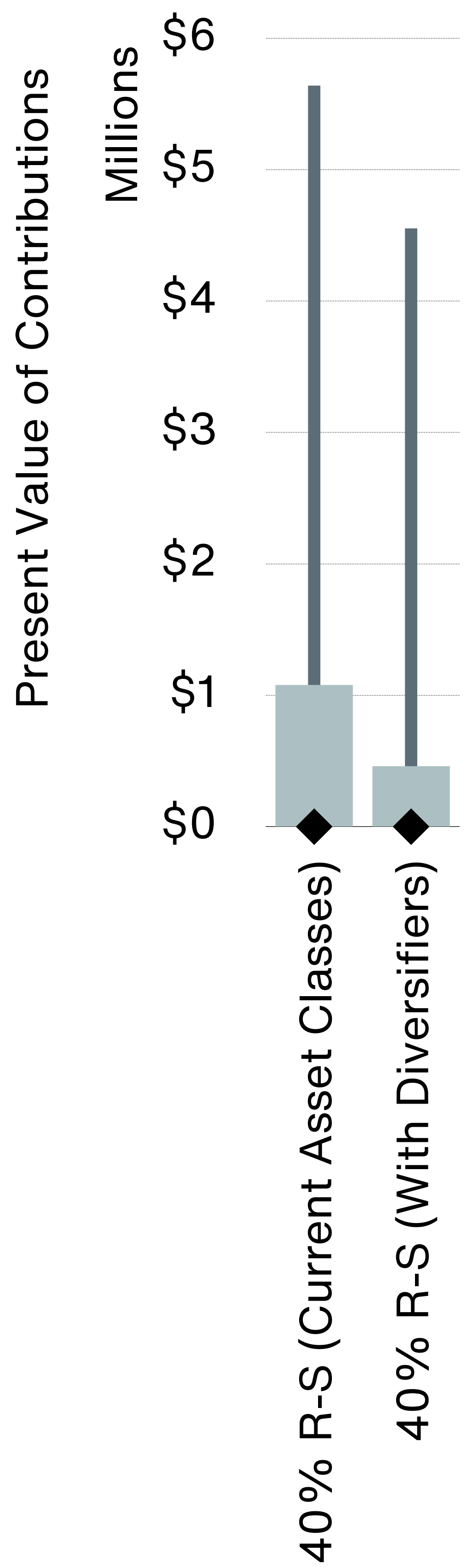
Section 2: Analysis

Asset-Liability Projection Analysis – Contributions

Contributions expected to be zero; additional diversification is expected to further reduce contribution volatility



Strategy	40% R-S (Current Asset Classes)			40% R-S (With Diversifiers)		
Year	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**
5th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
25th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
50th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
75th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
95th Percentile	$0.0	$1.3	$3.8	$0.0	$1.0	$3.3

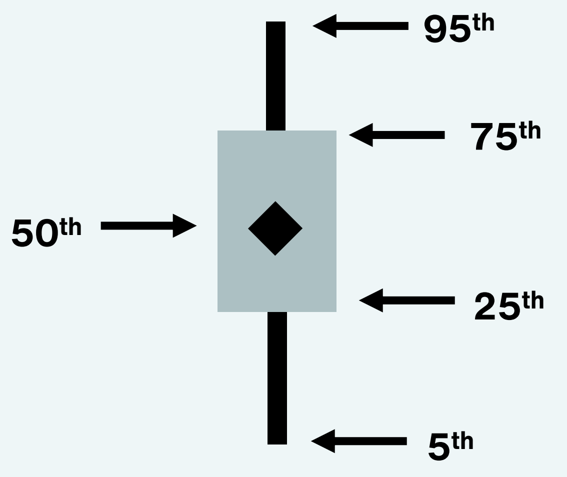


Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

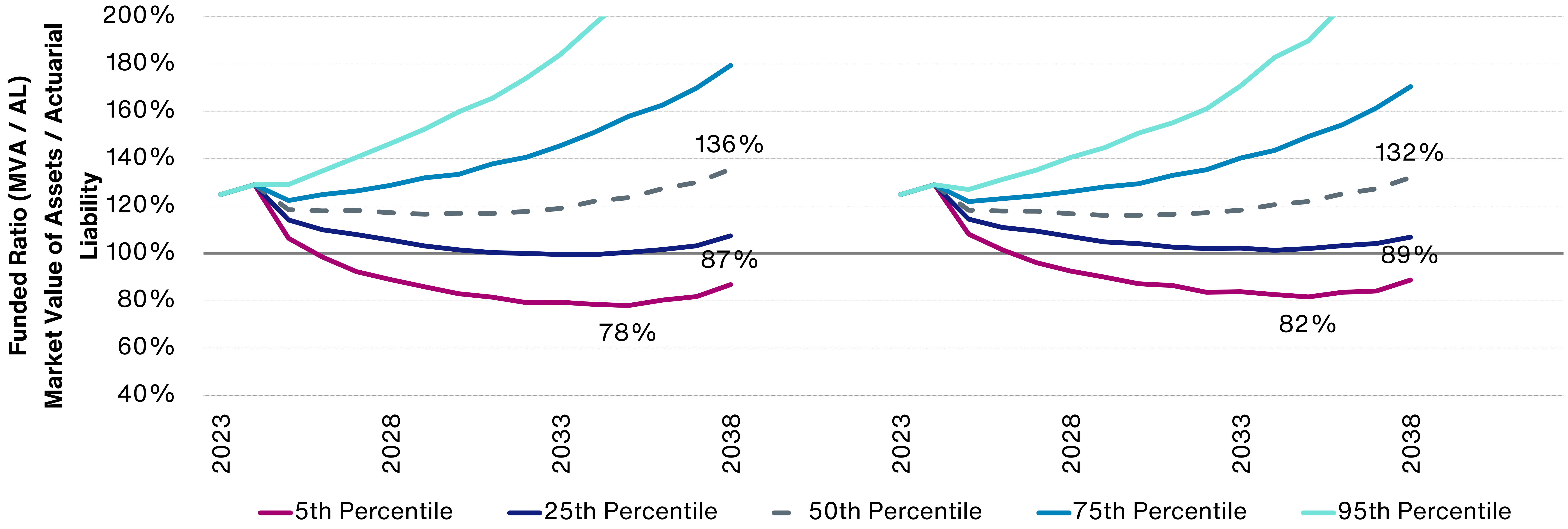
- Median contributions are expected to be zero
- Added diversification is expected to further reduce contribution volatility

Legend: Distribution of Outcomes



Asset-Liability Projection Analysis – Funded Ratio

Additional diversification is expected to further reduce funded ratio volatility



Strategy	40% R-S (Current Asset Classes)			40% R-S (With Diversifiers)		
Year	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**
5th Percentile	89%	79%	87%	93%	84%	89%
25th Percentile	106%	100%	107%	107%	102%	107%
50th Percentile	117%	119%	136%	117%	118%	132%
75th Percentile	129%	145%	179%	126%	140%	170%
95th Percentile	146%	184%	>200%	141%	171%	>200%
Probability > 100%	82%	74%	82%	85%	77%	83%

Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

- Funded ratio decreases in FYE 2025 due to the projected decrease in the actuarial assumed rate of return from 7.00% to 6.00%
- Added diversification is expected to further reduce funded ratio volatility

Summary of Results

Portfolios	Portfolio Metrics (30-year CMAs)			Financial Results			
	Expected Nominal Return[1]	Expected Nominal Volatility	Sharpe Ratio	15-year Ending Funded Ratio (MVA / AL)		15-year Present Value of Contributions ($ millions)	
				Expected[2]	Downside[3]	Expected[2]	Downside[4]
9/30/24 Allocation (58% R-S)	6.45%	11.26%	0.24	148%	84%	$0.0	$8.0
Constrained Frontier with Diversifiers							
0% Return-Seeking	4.47%	5.18%	0.15	101%	83%	$0.2	$2.1
10% Return-Seeking	4.86%	4.97%	0.23	107%	86%	$0.0	$2.1
20% Return-Seeking	5.24%	5.26%	0.29	115%	88%	$0.0	$2.7
30% Return-Seeking	5.58%	6.00%	0.31	123%	89%	$0.0	$3.5
40% Return-Seeking	5.91%	7.03%	0.31	132%	89%	$0.0	$4.6
50% Return-Seeking	6.21%	8.26%	0.30	138%	88%	$0.0	$5.5
60% Return-Seeking	6.48%	9.60%	0.29	147%	87%	$0.0	$6.7
70% Return-Seeking	6.74%	11.01%	0.28	153%	86%	$0.0	$7.7
80% Return-Seeking	6.97%	12.48%	0.26	159%	84%	$0.0	$8.8
90% Return-Seeking	7.18%	13.98%	0.25	163%	82%	$0.0	$9.8
100% Return-Seeking	7.41%	15.50%	0.24	170%	81%	$0.0	$11.0

[1] Expected returns are using Aon's 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.

[2] Expected = 50th percentile outcome or central expectation across all 1,000 simulations

[3] Downside = 5th percentile outcome across all 1,000 simulations

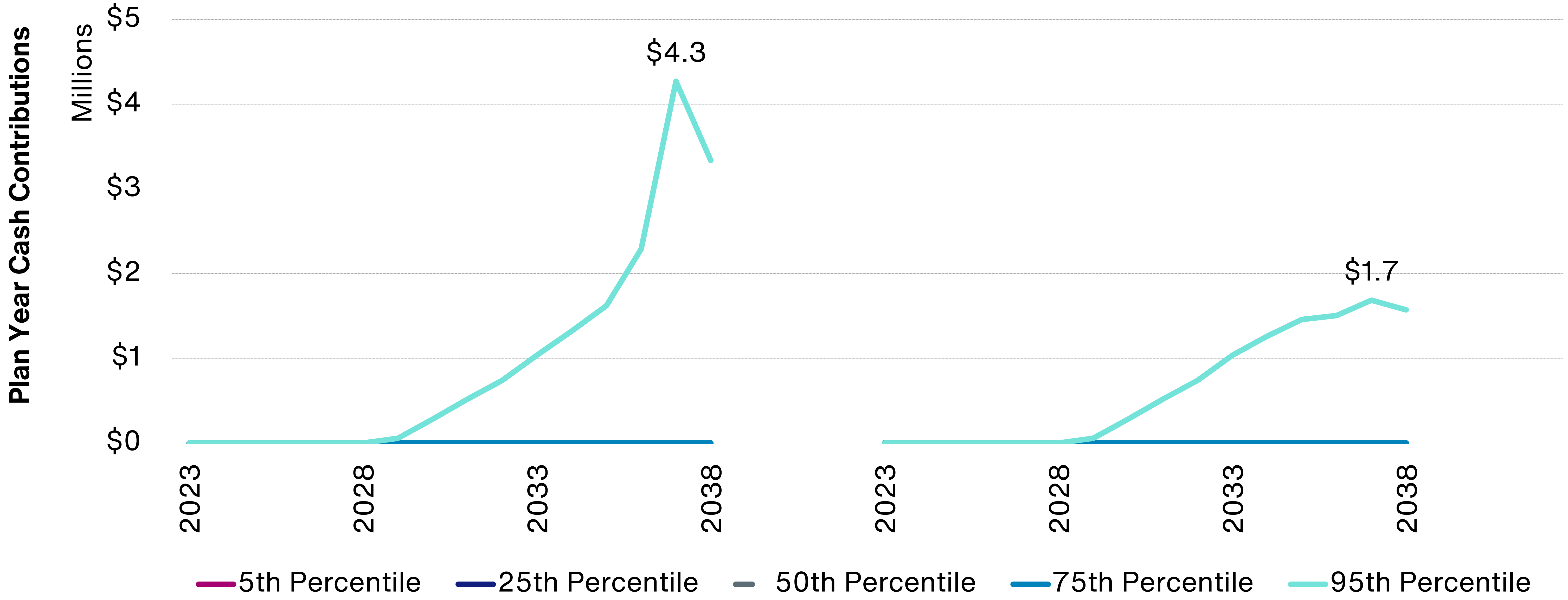
[4] Downside = 95th percentile outcome across all 1,000 simulations

Asset-Liability Projection Analysis: Study Impact of Funding Policy

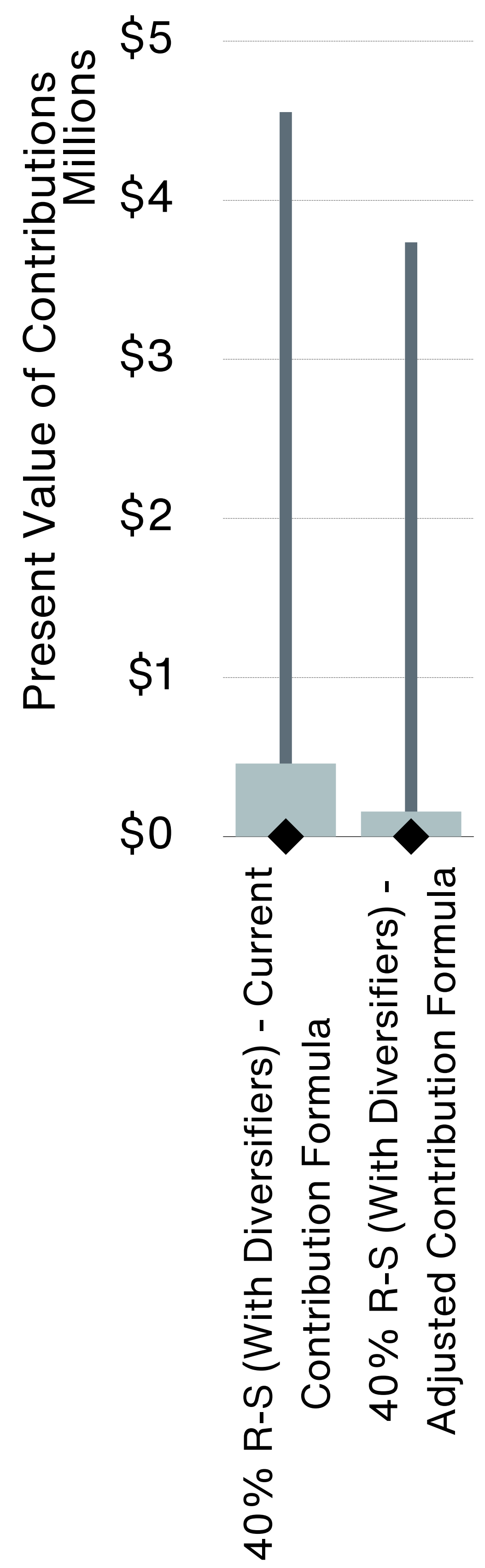
Section 2: Analysis

Asset-Liability Projection Analysis – Contributions

Adjusting the contribution policy can smooth out patterns of future outcomes in the tail-risk scenarios



Strategy	40% R-S (With Diversifiers) – Current Contribution Formula			40% R-S (With Diversifiers) – Adjusted Contribution Formula		
Year	**2028**	**2033**	**2038**	**2028**	**2033**	**2038**
5th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
25th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
50th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
75th Percentile	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
95th Percentile	$0.0	$1.0	$3.3	$0.0	$1.0	$1.6

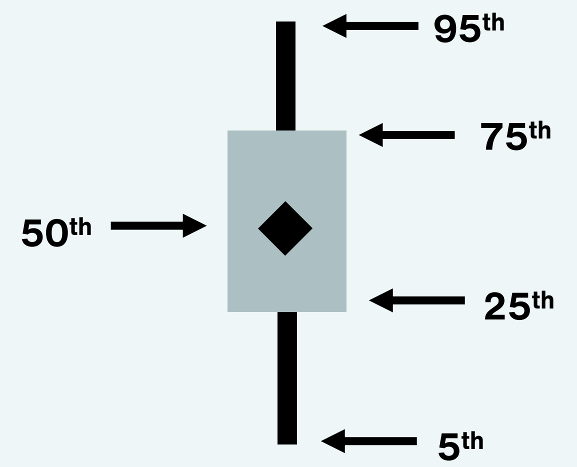


Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections in this material include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented.

Key Observations

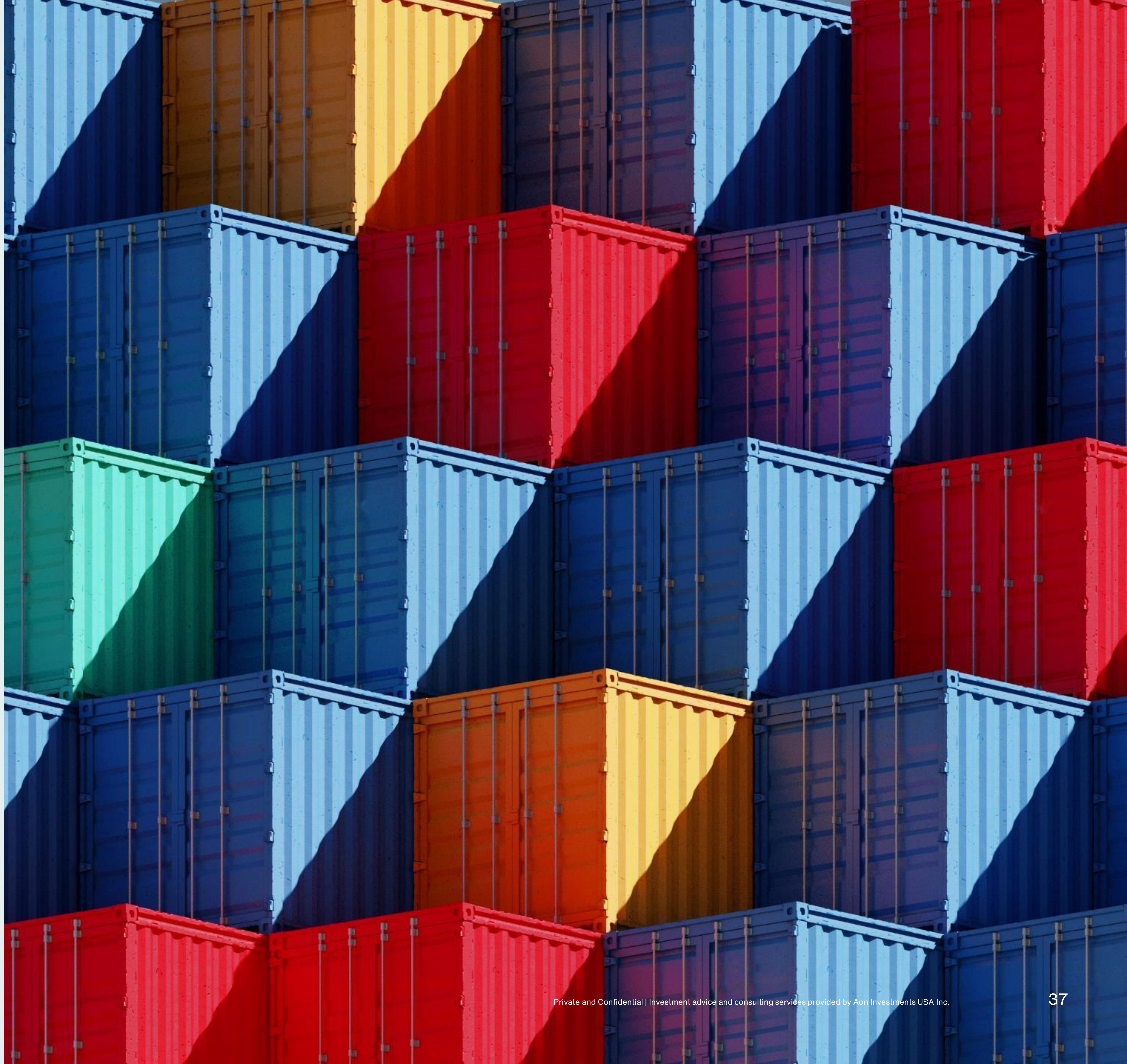
- Median contributions are expected to be zero
- Adjusting the amortization period to be a minimum of 5 years and adopting layered amortizations is expected to smooth the pattern of contribution in the tail-risk scenarios

Legend: Distribution of Outcomes



3

Summary & Conclusions



Summary & Conclusions

The City of Novi's Retiree Health Care Plan is currently overfunded with minimal-to-no contributions projected in the future. The following considerations from the asset-liability study are expected to further strengthen Novi's position.

1. Risk Tolerance

- As of 9/30/2024, Novi has a 58% return-seeking allocation
- Allocations 10% return-seeking assets and above are not expected to have contributions in the median scenario
- 40% return-seeking assets is expected to meet the projected, long-term actuarial assumed rate of return (6.00%) with minimal volatility
  - Portfolios below 40% return-seeking assets can provide narrower ranges of outcomes, but will start to erode the funded status
  - OPEB plans also have increased variability in costs making buffers warranted

2. Portfolio Diversification

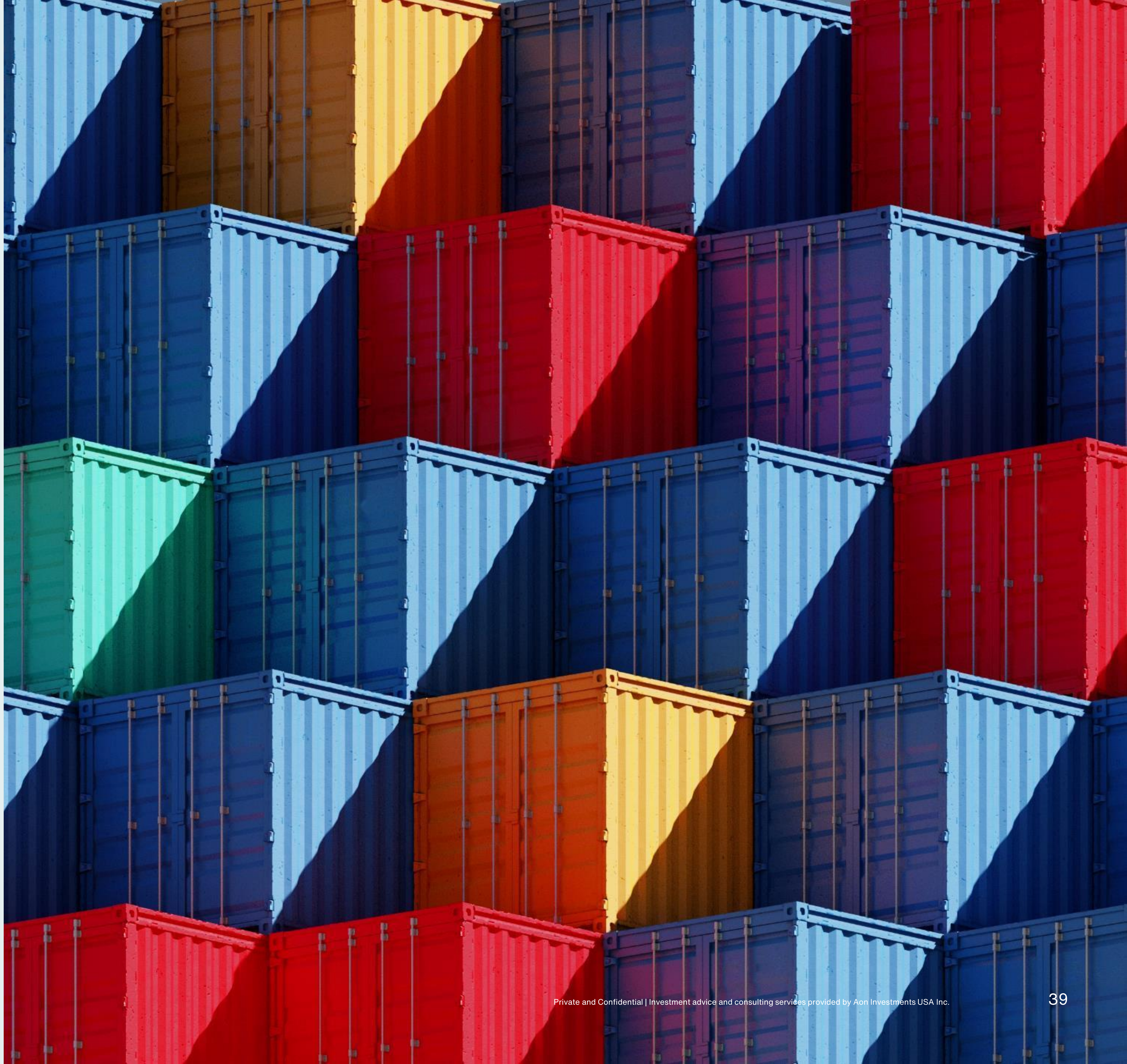
- Return-seeking vs. risk-reducing assets is one lever to reduce portfolio volatility
  - Another lever is additional diversification within the return-seeking portfolio
- Novi should consider additional diversification into return-seeking fixed income and open-end real assets
  - Added diversification is expected to produce a similar level of return and smooth the pattern of future results, reducing portfolio volatility

3. Contribution Policy

- Novi currently has a funding policy that reduces the amortization period to 1 year, moving to immediate recognition of all (gains)/losses
  - This policy creates increased tail-risk scenarios
- Aon recommends the current decreasing amortization period stop at 5 years with layered amortization bases to smooth out potential contributions

4

Appendix



Appendix
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Asset-Liability Management Overview

Section 4: Appendix

Asset-Liability Management Overview

What is an asset-liability study?

What?

A comprehensive toolkit for making decisions on a **fund's asset allocation and investment risk that align with the liabilities** those funds support

Why?

Aon believes optimal decisions regarding pension/OPEB plan management are made when they are based on a **clear understanding of the assets and liabilities** and how they interact

When?

Aon suggests conducting asset-liability studies every **3-5 years** depending on client specifics, or more frequently should circumstances dictate

How?

Identify future trends in the financial health of the fund based on economic uncertainties that may not be evident from an actuarial valuation

Asset-Liability Management Overview

Ultimate retirement benefit cost equation

The cost ultimately borne by the Plan will be represented by the financing equation shown below:

(Benefits Paid + Administrative Expenses) = (Investment Returns + Plan Funding (EE + ER))

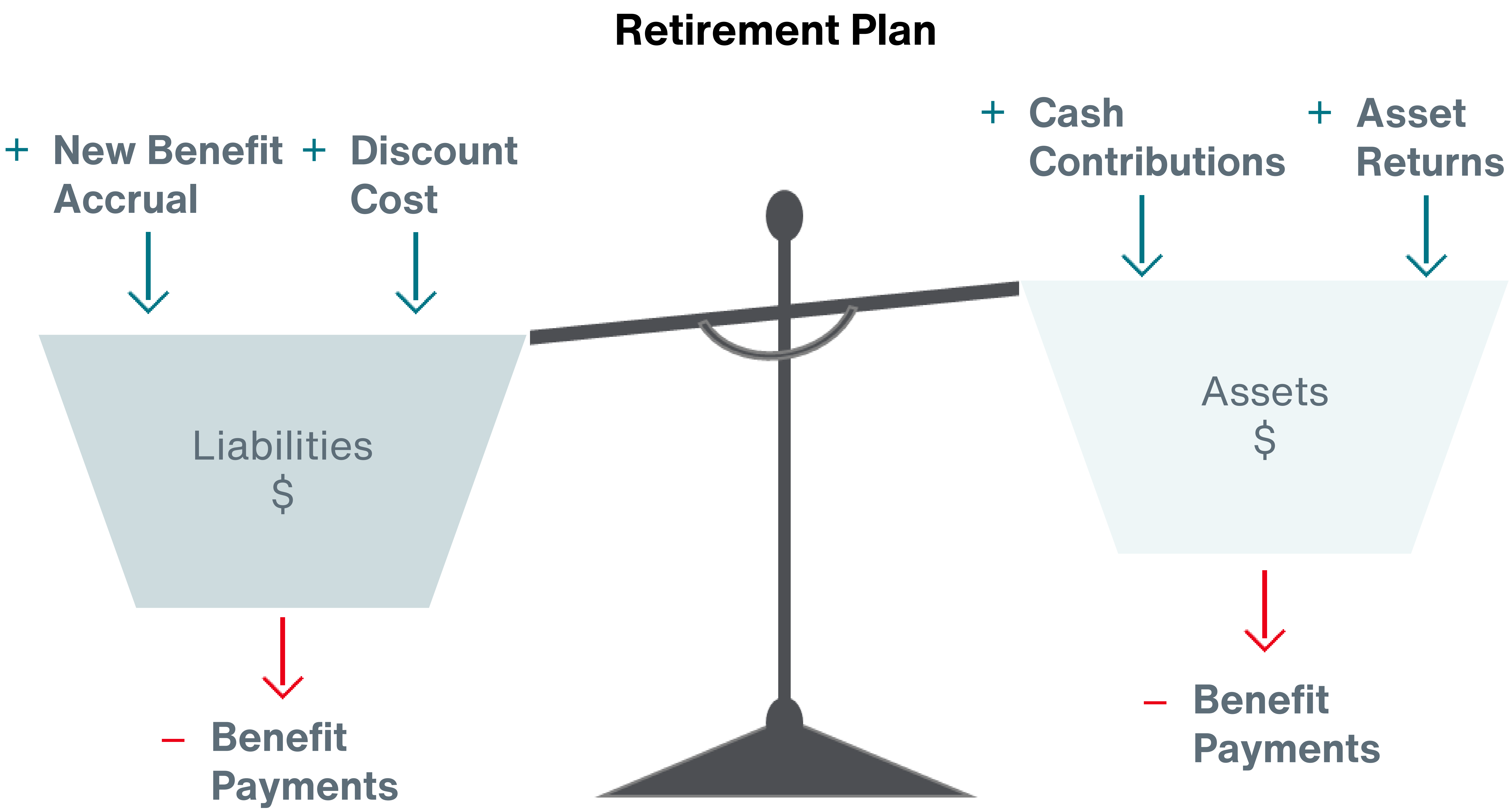
The asset-liability study will analyze the variability of future investment returns on the Plan financials

Higher than expected returns will result in lower future Plan costs

Lower than expected returns will result in higher future Plan costs

Asset-Liability Management Overview

Balance of liabilities and assets



Key Takeaways

Plan Liabilities will grow in two ways:

- New benefit accruals (or Normal Cost)
- One less year of interest discounting (or Discount Cost)

Assets will grow in two ways:

- Cash Contributions to the Plan
- Asset Returns

Both liabilities and assets will be reduced by benefits paid to participants

Asset-Liability Management Overview

Hurdle rate analysis: How are assets and liability expected to move in the coming year?

What is the Asset Hurdle Rate?

Asset Hurdle Rate is the required rate of asset growth needed to keep pace with the growth of the Plan liabilities

- Assets must grow at this rate or more in order to maintain or reduce a potential funding shortfall
- **Formula = (Normal Cost + Discount Cost + Plan Expenses) / Funded Ratio**

Assets can grow in two ways:

- Investment returns
- Funding contributions

Asset hurdle rates are expected to decline as the funded status increases

Sample Calculation

(1) Assets (in $MM)	$90
(2) Liabilities (in $MM)	$100
(3) Funded Ratio (= 1 / 2)	90%
(4) Liability Growth Rate	9%
(5) Asset Hurdle Rate (= 4 / 3)	10%

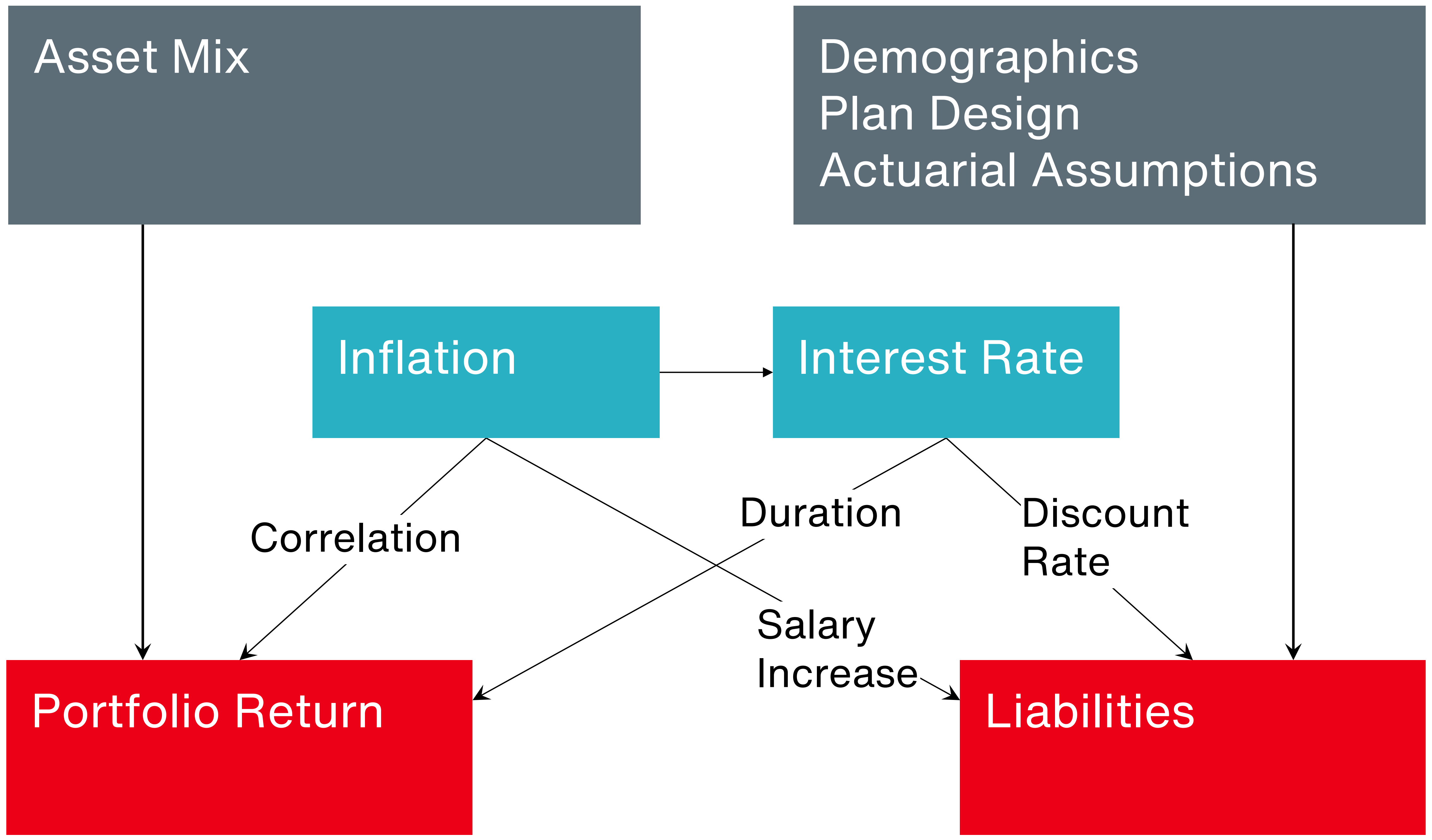
How Does the Asset Hurdle Rate Inform Future Projections?

Short-term funded ratio progress can be estimated from the asset hurdle rate analysis

- If investment returns + contributions exceed the asset hurdle rate, funded ratio can expect to grow
- If investment return + contributions fall short of the asset hurdle rate, funded ratio can expect to diminish

Asset-Liability Management Overview

Mechanics of the asset-liability modeling process



Contributions

Funded Ratio

Net Outflow

Key Features

Asset and liability modeling integrated in single platform

Integrates impact of key economic variables such as portfolio returns, inflation, and interest rates

- Flexibility in modeling parameters and output to client preferences

Stochastic and deterministic modeling performed

Asset-Liability Management Overview

Future projection approaches: Deterministic vs. stochastic forecasting

Deterministic Forecasting

Places certainty in the path of future outcomes

- Assumes a single future path, often with the assumption that actual experience will equal all actuarial assumptions resulting in no unexpected (gain)/loss

Stochastic Forecasting

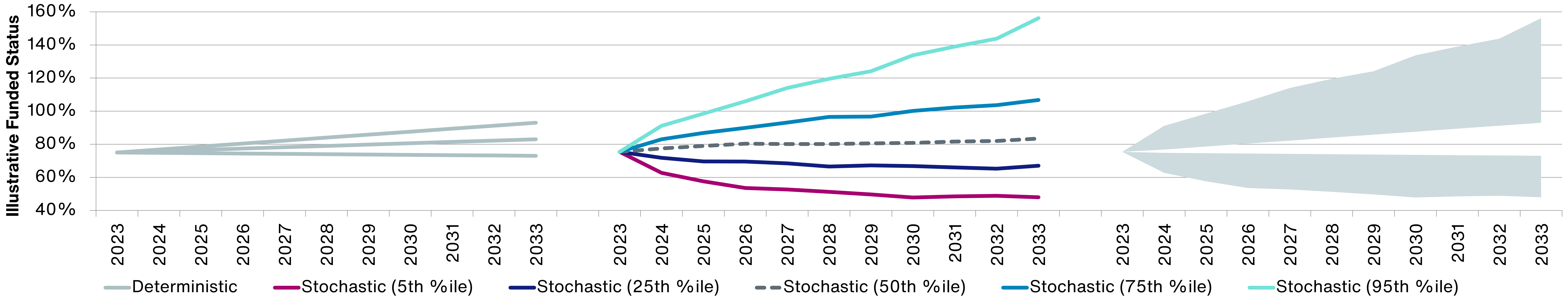
Embraces uncertainty by modeling a range of potential future outcomes

- Aon's approach utilizes up to 5,000 projection trials, representing a wide range of economic scenarios, and then ranks results of key variables into percentile distributions

Benefits of Stochastic Modeling

Encompasses a much broader view than deterministic forecasting alone (i.e., the shaded area below), especially in extreme cases which may potentially go unnoticed to stakeholders

- Shows impact of market expectations differing from actuarial assumptions
- Illustrates interplay of economic uncertainty with funding policies



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Actuarial Assumptions and Methods

Section 4: Appendix

Actuarial Assumptions and Methods

Data

- Actuarial information based on valuation reports provided by the plan actuary
- June 30, 2023 was used as the starting point of the study as it represents the most recent full actuarial valuation

Actuarial assumptions:

- Valuation Rate of Interest = 7.00% for FYE 2023-2024; 6.00% for FYE 2025+ per Novi
- Actuarial Value of Assets: determined by recognizing differences between actual and expected investment income over a closed five-year period with no corridor
- Contribution policy: normal cost plus a level dollar amortization
  - Excess assets are assumed to offset normal cost amounts
  - Amortization of Unfunded Actuarial Liability uses a closed, 14-year amortization period that will decrease to immediate recognition over time
- Plan expenses assumed to be $14,000 as of June 30, 2023, increasing annually with inflation
- All other assumptions as documented in the Actuarial Valuation Report as of June 30, 2023, unless noted otherwise

Projection Assumptions

- Estimated asset experience through September 30, 2024 was factored in based on the aggregate September 30, 2024 market values of assets from Morgan Stanley and Municipal Employees' Retirement System of Michigan (MERS)
- Because the plan is closed to new entrants, projections of future normal cost were assumed to decrease such that the actuarial accrued liability converges with the present value of future benefits

Additional Asset-Liability Analysis

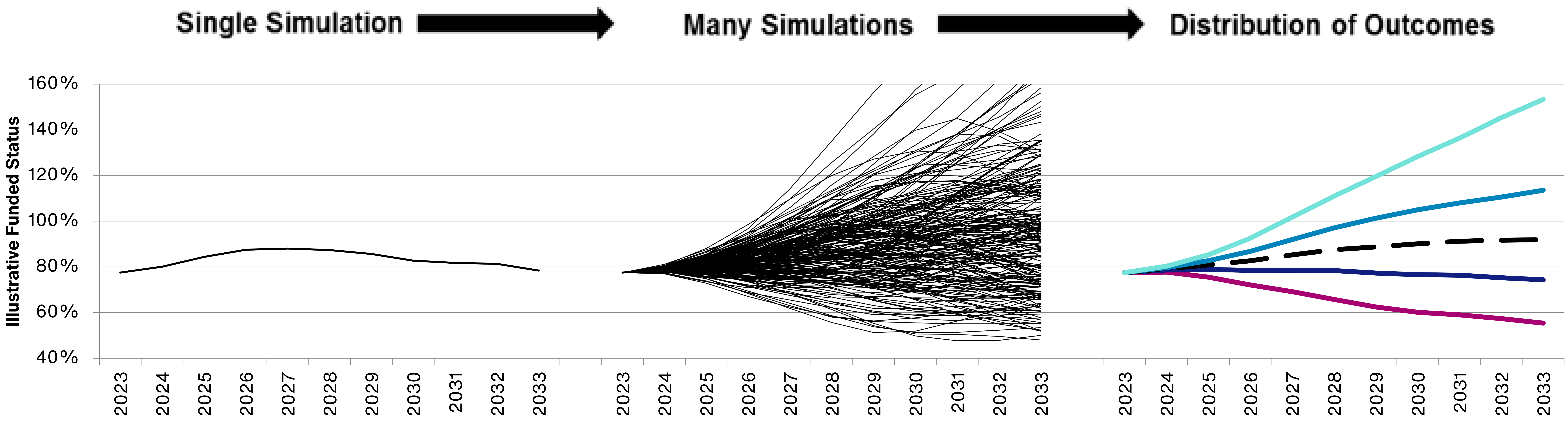
Section 4: Appendix

Asset-Liability Projection Analysis

Simulation overview (illustrative example)

Illustrative

- Thousands of simulations plotted in one graph would be impossible to interpret
- Instead, we rank the simulations at each point over the future
- This produces a distribution of outcomes illustrating the degree of uncertainty of a plan's financial position over the projection period
- Different investment strategies will produce different distributions of outcomes



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Capital Market Assumptions

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Aon's Capital Market Assumptions
Background

- Long-term (10- and 30-year forecasts) forward-looking assumptions (asset class geometric return, volatility, and correlations)
- Building block approach, primarily based on consensus expectations and market-based inputs
- Best estimates of annualized returns (50/50 better or worse)
- Market returns: no active management value added (except for certain assets classes, such as hedge funds)
- Net of investment fees
- Updated quarterly

Aon's Capital Market Assumptions

As of September 30, 2024

		10-Year CMAs				30-Year CMAs			
		Expected Real Return[1]	Expected Nominal Return[1]	Expected Nominal Volatility	Assumed Global Equity Beta	Expected Real Return[1]	Expected Nominal Return[1]	Expected Nominal Volatility	Assumed Global Equity Beta
	Equity								
1	Large Cap U.S. Equity	4.6%	6.9%	18.5%	0.98	4.6%	7.0%	19.0%	0.98
2	Small Cap U.S. Equity	4.8%	7.1%	24.5%	1.24	5.1%	7.5%	25.2%	1.24
3	Global Equity IMI	4.8%	7.1%	18.4%	1.00	4.8%	7.2%	18.9%	1.00
4	International Equity (Developed)	4.3%	6.6%	18.8%	0.89	4.4%	6.8%	19.5%	0.90
5	Emerging Markets Equity	4.8%	7.1%	22.0%	0.95	4.7%	7.1%	22.4%	0.94
6	US REITs	4.2%	6.5%	18.5%	0.69	4.1%	6.5%	19.0%	0.69
	Fixed Income								
7	Cash (Gov't)	1.6%	3.8%	1.3%	0.01	1.4%	3.7%	2.1%	0.01
8	Core Fixed Income	2.3%	4.5%	5.1%	0.01	2.2%	4.5%	5.4%	0.01
9	Core Plus Fixed Income	2.5%	4.8%	5.9%	0.02	2.5%	4.9%	6.4%	0.02
10	Multi-Asset Credit[2]	4.5%	6.8%	8.8%	0.29	4.5%	6.9%	9.0%	0.29
	Alternatives								
11	Direct Hedge Funds[2,3]	4.5%	6.8%	5.2%	0.21	4.3%	6.7%	5.6%	0.22
12	Private Equity	7.6%	10.0%	20.0%	0.66	7.6%	10.1%	20.4%	0.65
13	Open-End Real Assets	4.8%	7.1%	10.4%	0.23	4.8%	7.2%	10.7%	0.23
14	Closed-End Real Assets	6.7%	9.0%	16.1%	0.46	6.6%	9.1%	16.6%	0.46
15	Private Debt	5.9%	8.2%	16.0%	0.34	5.4%	7.8%	16.7%	0.34
	Inflation								
16	Inflation	0.0%	2.2%	1.7%		0.0%	2.3%	1.7%	

[1] Expected returns are using Aon's 10/30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.

[2] Alpha incorporated in Expected Nominal Return

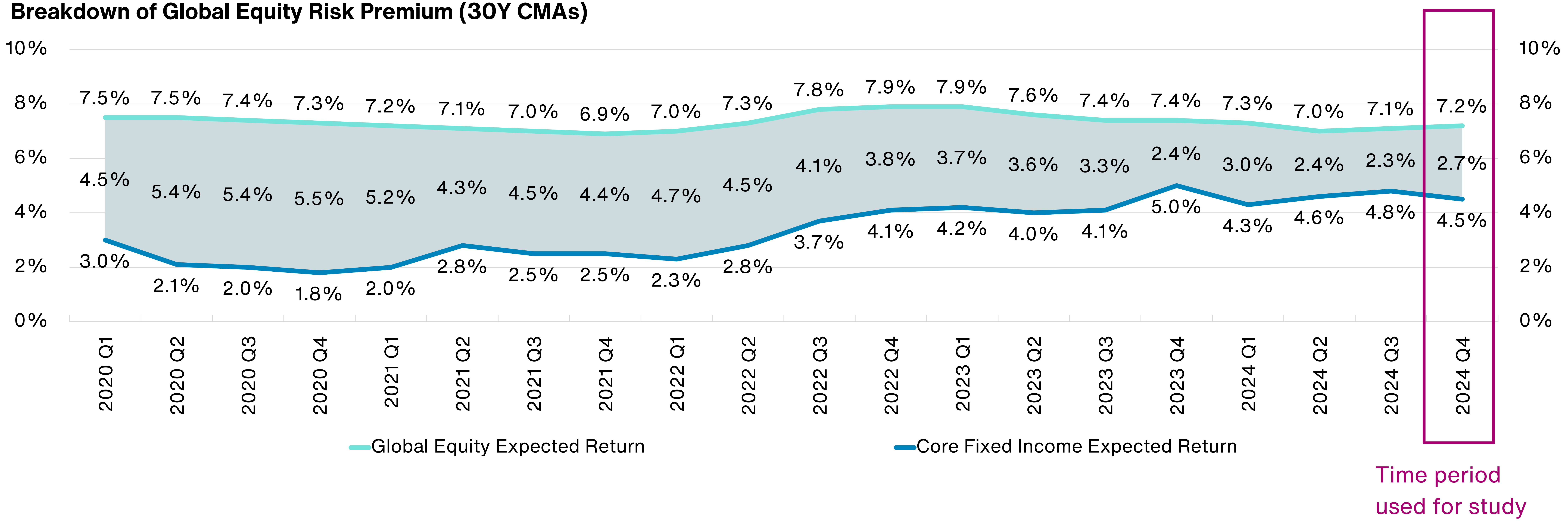
[3] Represents diversified portfolio of Direct hedge fund investments.

Capital Market Assumptions – Recent Changes

Equity risk premium[1] has decreased due to higher interest rates, fixed income returns

Below is a quarter-over-quarter historical look at the breakdown of the global equity risk premium[1] (defined as global public equity less core fixed income) using Aon's 30-year CMAs

Breakdown of Global Equity Risk Premium (30Y CMAs)



[1] Equity Risk Premium is defined as the excess return earned over bonds that compensates investors for taking on higher risk

Summary of Capital Market Assumptions

As of September 30, 2024

	Nominal Correlations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Large Cap U.S. Equity	**1.00**	0.93	0.98	0.78	0.70	0.70	0.09	0.03	0.07	0.57	0.75	0.59	0.39	0.51	0.38	0.08
2	Small Cap U.S. Equity	0.93	**1.00**	0.93	0.73	0.66	0.65	0.08	0.03	0.06	0.53	0.69	0.57	0.37	0.48	0.36	0.08
3	Global Equity IMI	0.98	0.93	**1.00**	0.87	0.79	0.69	0.09	0.03	0.07	0.60	0.75	0.60	0.41	0.53	0.39	0.09
4	International Equity (Developed)	0.78	0.73	0.87	**1.00**	0.73	0.57	0.05	0.02	0.06	0.55	0.63	0.52	0.37	0.47	0.33	0.10
5	Emerging Markets Equity	0.70	0.66	0.79	0.73	**1.00**	0.51	0.07	0.03	0.08	0.57	0.58	0.50	0.34	0.44	0.32	0.08
6	US REITs	0.70	0.65	0.69	0.57	0.51	**1.00**	0.10	0.03	0.06	0.39	0.54	0.45	0.44	0.50	0.27	0.07
7	Cash (Gov't)	0.09	0.08	0.09	0.05	0.07	0.10	**1.00**	0.41	0.36	0.12	0.22	0.10	0.18	0.18	0.01	0.41
8	Core Fixed Income	0.03	0.03	0.03	0.02	0.03	0.03	0.41	**1.00**	0.98	0.28	0.21	0.03	0.07	0.07	0.02	-0.01
9	Core Plus Fixed Income	0.07	0.06	0.07	0.06	0.08	0.06	0.36	0.98	**1.00**	0.43	0.29	0.07	0.08	0.09	0.17	-0.01
10	Multi-Asset Credit	0.57	0.53	0.60	0.55	0.57	0.39	0.12	0.28	0.43	**1.00**	0.66	0.34	0.23	0.30	0.66	0.12
11	Direct Hedge Funds	0.75	0.69	0.75	0.63	0.58	0.54	0.22	0.21	0.29	0.66	**1.00**	0.51	0.36	0.45	0.48	0.13
12	Private Equity	0.59	0.57	0.60	0.52	0.50	0.45	0.10	0.03	0.07	0.34	0.51	**1.00**	0.36	0.43	0.27	0.07
13	Open-End Real Assets	0.39	0.37	0.41	0.37	0.34	0.44	0.18	0.07	0.08	0.23	0.36	0.36	**1.00**	0.91	0.18	0.10
14	Closed-End Real Assets	0.51	0.48	0.53	0.47	0.44	0.50	0.18	0.07	0.09	0.30	0.45	0.43	0.91	**1.00**	0.22	0.11
15	Private Debt	0.38	0.36	0.39	0.33	0.32	0.27	0.01	0.02	0.17	0.66	0.48	0.27	0.18	0.22	**1.00**	0.08
16	Inflation	0.08	0.08	0.09	0.10	0.08	0.07	0.41	-0.01	-0.01	0.12	0.13	0.07	0.10	0.11	0.08	**1.00**

Aon Investments' Capital Market Assumptions

Explanation of Capital Market Assumptions—09/30/2024

The following capital market assumptions were developed by Aon's Global Asset Allocation Team and represent the long-term capital market outlook (i.e., 30 years) based on data at the end of the third quarter of 2024. The assumptions were developed using a building block approach, reflecting observable inflation and interest rate information available in the fixed income markets as well as Consensus Economics forecast and market data sources including, but not limited to MSCI, FactSet and Bloomberg. Our long-term assumptions for other asset classes are based on historical results, current market characteristics, and our professional judgment. Expected returns are using Aon 30 Year Capital Market Assumptions as of 09/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.

Inflation – Expected Level (2.3%)

Based on Consensus Economics long-term estimates and our near-term economic outlook, we expect U.S. consumer price inflation to be approximately 2.3% during the next 30 years.

Fixed Income		
Cash	1.4%	Over the long run, we expect the real yield on cash and money market instruments to produce a real return of 1.4% in a moderate to low-inflationary environment.
TIPS	1.9%	We expect intermediate duration Treasury Inflation-Protected Securities to produce a real return of about 1.9%.
Core Fixed Income (i.e., Market Duration)	2.2%	We expect intermediate duration Treasuries to produce a real return of about 1.4%. We estimate the fair value credit spread (credit risk premium - expected losses from defaults and downgrades) to be 0.8%, resulting in a long-term real return of 2.2%.

Aon Investments' Capital Market Assumptions

Explanation of Capital Market Assumptions—09/30/2024

Fixed Income		
Core Plus Bonds	2.5%	Modeled as 20% 5 duration gov't with real return of 1.4% and 80% 5 duration corporate bonds with real return of 2.5%.
Long Duration Bonds – Government and Credit	2.6%	We expect Treasuries with a duration of ~16 years to produce a real return of 2.2%. We estimate the fair value credit spread (credit risk premium - expected losses from defaults and downgrades) to be 0.4%, resulting in an expected real return of 2.6%.
Long Duration Bonds – Credit	3.1%	We expect Treasuries with a duration of ~16 years to produce a real return of 2.2%. We estimate the fair value credit spread (credit risk premium - expected losses from defaults and downgrades) to be 0.9%, resulting in an expected real return of 3.1%.
Long Duration Bonds – Government	2.2%	We expect Treasuries with a duration of ~16 years to produce a real return of 2.2% during the next 30 years.
High Yield Bonds	3.5%	We expect intermediate duration Treasuries to produce a real return of about 1.4%. We estimate the fair value credit spread (credit risk premium - expected losses from defaults and downgrades) to be 2.1%, resulting in an expected real return of 3.5%.
Bank Loans	3.8%	We expect cash to produce a real return of about 1.4%. We estimate the fair value credit spread (credit risk premium - expected losses from defaults) to be 2.4%, resulting in an expected real return of 3.8%.
Non-U.S. Developed Bonds: 50% Hedged	1.7%	We forecast real returns for non-US developed market bonds to be 1.7% over a 30-year period after adjusting for a 50% currency hedge. We assume a blend of one-third investment grade corporate bonds and two-thirds government bonds. We also produce assumptions for 0% hedged and 100% hedged non-US developed bonds.
Emerging Market Bonds (Sovereign; USD)	3.7%	We forecast real returns for emerging market sovereign bonds denominated in US dollars to be 3.7% over a 30-year period.
Emerging Market Bonds (Corporate; USD)	3.4%	We forecast real returns for emerging market corporate bonds denominated in US dollars to be 3.4% over a 30-year period.

Aon Investments' Capital Market Assumptions

Explanation of Capital Market Assumptions—09/30/2024

Emerging Market Bonds (Sovereign; Local)	3.1%	We forecast real returns for emerging market sovereign bonds denominated in local currency to be 3.1% over a 30-year period.
Liquid Return-Seeking Fixed Income Institutional Quality	4.5%	We assume real returns from beta exposure to high yield, bank loans and emerging market debt to add 3.7% plus 0.8% from alpha for institutional quality managers, over a 30-year period.
Liquid Return-Seeking Fixed Income Universe	3.7%	We assume real returns from beta exposure to high yield, bank loans and emerging market debt to add 3.7%. We assume no alpha from universe funds, over a 30-year period.
Private Debt-Direct Lending	5.4%	The base building block is bank loans 3.8% + spread 1.6% (net of management fees and performance incentives). There is 100% leverage included in the assumption with the nominal cost of financing at LIBOR + 2.5%.
Equities		
Large Cap U.S. Equity	4.6%	This assumption is based on 1.03 beta to global equities plus inflation and real cash return
Small Cap U.S. Equity	5.1%	Adding a 0.5% return premium for small cap U.S. equity over large cap U.S. equity results in an expected real return of 5.1%. This return premium is theoretically justified by the higher risk inherent in small cap U.S. equity versus large cap U.S. equity and is also justified by historical data.
Global Equity (Developed & Emerging Markets	4.8%	We employ a building block process to develop discounted cash flows using the developed and emerging markets that comprise the MSCI All-Country World Index. Our roll-up model produces an expected real return of 4.8% for global equity.
International (Non-U.S.) Equity, Developed Markets	4.4%	This assumption is based on 0.85 beta to global equities plus inflation and real cash return
Emerging Market Stocks	4.7%	This assumption is based on 1.14 beta to global equities plus inflation and real cash return

Aon Investments' Capital Market Assumptions

Explanation of Capital Market Assumptions—09/30/2024

Alternative Asset Classes		
Low Beta (Defensive) Hedge Funds	2.3%	Encompasses defensive/low volatility hedge fund strategies with low correlations to risk assets. This assumption represents median manager performance. 1% base fee + 10% performance fee is deducted from the return expectation.
Low Beta (Defensive) Hedge Funds Institutional Quality	3.3%	Represent defensive/low volatility hedge fund strategies with low correlations to risk assets. 1% base fee + 7% performance fee is deducted from return expectations. To use this category the funds must be institutional quality.
High Beta (Return Enhancing) Hedge Funds	3.3%	Encompasses return enhancing/higher volatility hedge fund strategies with higher correlations to risk assets. The assumption represents median manager performance. 1% base fee + 10% performance fee is deducted from the return expectations.
High Beta (Return Enhancing) Hedge Funds Institutional Quality	5.3%	Represents return enhancing/higher volatility hedge fund strategies with higher correlations to risk assets. 1% base fee + 7% performance fee is deducted from return expectations. To use this category the funds must be institutional quality.
Direct Hedge Funds Universe	2.8%	Generic hedge fund investments which represents a portfolio of diversified strategies. We assume 50% defensive/50% return enhancing strategies. 1% base fee + 10% performance fee is deducted from the return expectations.
Direct Hedge Funds Institutional Quality	4.3%	Generic hedge fund investments which represents a portfolio of top-tier diversified strategies. We assume 50% defensive institutional quality/50% return enhancing institutional quality strategies. To use this category the funds must be institutional quality. 1% base fee + 7% performance fee is deducted from the return expectations.
Core Real Estate	3.6%	Our real return assumption for core real estate is based a gross income of about 3.9%, management fees of roughly 1%, 25% leverage and future capital appreciation near the rate of inflation during the next 30 years. We assume a portfolio of equity real estate holdings that is diversified by property and by geographic region.
Non-Core Real Estate	5.3%	Core real estate is levered approximately 100% as the base building block for this assumption. We subtract financing costs for the leverage and 2% management costs. We also assume nominal alpha of 2% over core real estate. We assume a 50/50 mix of value-add and opportunistic investments.
U.S. REITs	4.1%	Our real return assumption for U.S. REITs is based on income of about 4.1% and future capital appreciation near the rate of inflation during the next 30 years. REITs are a sub-set of U.S. small/mid cap equity universe.

Aon Investments' Capital Market Assumptions

Explanation of Capital Market Assumptions—09/30/2024

Commodities	1.4%	Our commodity assumption is for a diversified portfolio of commodity futures contracts. Commodity futures returns are composed of three parts: spot price appreciation, collateral return, and roll return (positive or negative change implied by the shape of the future curve). We believe that spot prices will converge with CPI over the long run (i.e., 2.3%). Collateral is assumed to be Gov't cash (1.4%). Also, we believe the roll effect will be -2.3%, resulting in a real return of about 1.4% for commodities.
Private Equity	7.6%	Our private equity assumption reflects a diversified fund of funds with exposure to buyouts and venture capital.
Open-End Infrastructure	5.3%	Our open-end infrastructure assumption assumes a mix of 65% core, 25% value-add and 10% opportunistic strategies. Return formulated through estimates of income and capital growth, leverage, debt costs, taxes and management expenses.
Closed-End Infrastructure	6.4%	Our closed-end infrastructure assumption assumes a mix of 50% value-add, 35% opportunistic and 15% private equity strategies. Return formulated through estimates of income and capital growth, leverage, debt costs, taxes and management expenses.
eLDI	3.5%	Combination of various long credit strategies (1/6 real estate debt, 1/3 securitized debt, 1/6 CMOs, 1/3 private placements).
Open-End Real Assets	4.8%	Combination of 50% Core Real Estate and 50% Open-End Infrastructure
Closed-End Real Assets	6.6%	Combination of 50% Non-Core Real Estate and 50% Closed-End Infrastructure

Volatility/Correlation Assumptions

Assumed volatilities are formulated with reference to implied volatilities priced into option contracts of various terms, as well as with regard to historical volatility levels. For asset classes which are not marked to market (for example real estate), we "de-smooth" historical returns before calculating volatilities. Importantly, we consider expected volatility trends in the future – in recent years we assumed the re-emergence of an economic cycle and a loss of confidence in central bankers would lead to an increase in volatility. Correlation assumptions are generally similar to actual historical results; however, we do make adjustments to reflect our forward-looking views as well as current market fundamentals.

2024 Horizon Survey

Section 4: Appendix

2024 Horizon Survey Results

What is the Horizon Survey?

Since 2010, Horizon Actuarial Services, LLC has conducted a capital market assumption survey of investment firms to aid in determining reasonable assumptions for a pension plan's expected return on assets

- While Aon does not seek to change our approach based on how we stack up to peers, it is a helpful double-check to make sure we are not too far off from others in the industry

For the 2024 survey, 41 investment advisors participated.

How does Aon compare to the 2024 survey results?

Aon Investments' 2024 10-year assumptions for expected returns (as of March 31, 2024)

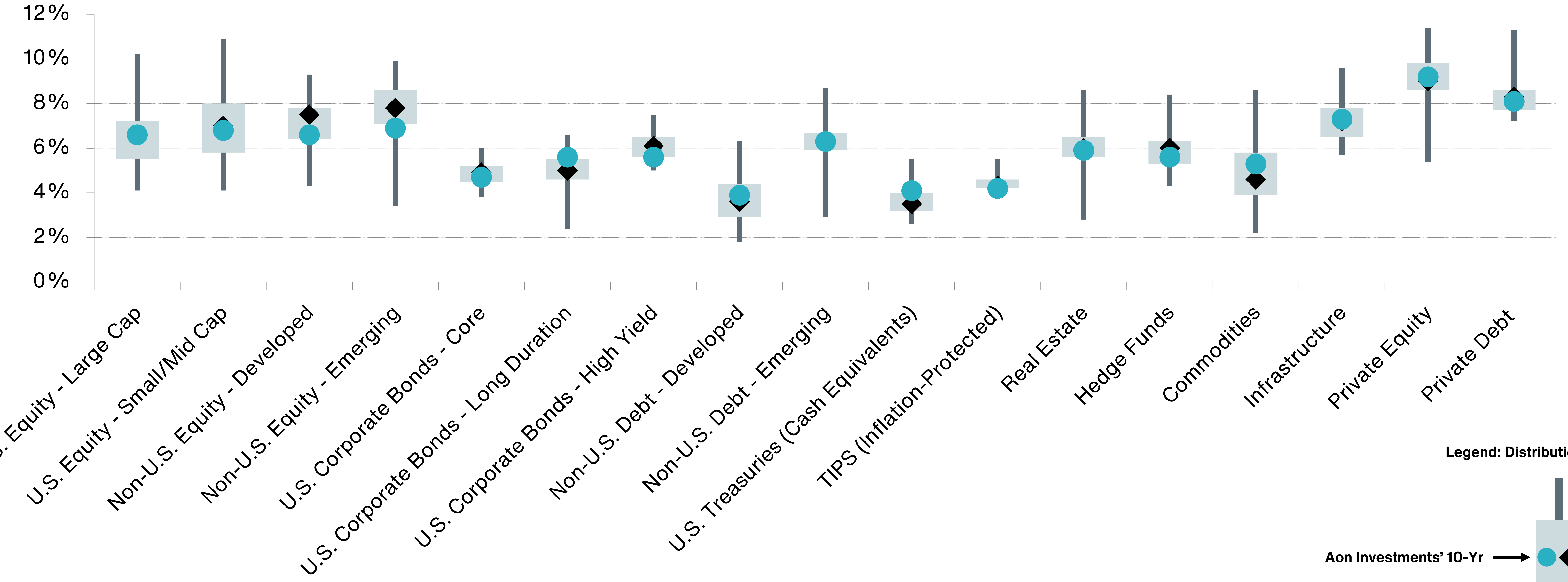
- ***Equities:*** approximately middle of the pack for U.S. Equities; lower for Non-U.S. Equities
- ***Fixed Income:*** approximately middle of the pack relative to the survey's median level; lower for U.S. High Yield; higher for Cash and Long Duration Credit
- ***Alternatives:*** approximately middle of the pack relative to the survey's median level; higher for Commodities

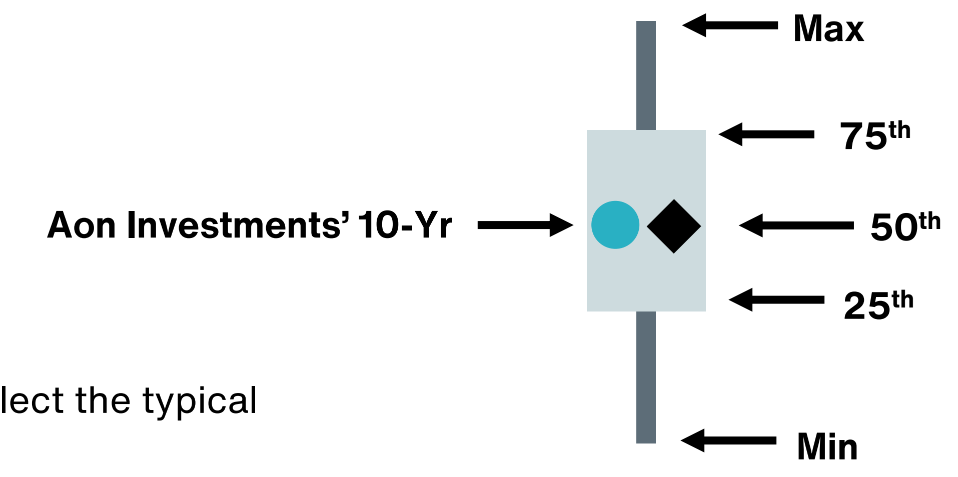
Source: Horizon Actuarial Solutions, LLC survey of 2024 capital market assumptions from 41 independent investment advisors

Aon Investments' Capital Market Assumptions vs. Horizon Survey

10-Year Assumptions

Expected Geometric Returns of 41 Investment Advisors (10-Year Forecast)





Source: Horizon Actuarial Solutions, LLC survey of 2024 capital market assumptions from 41 independent investment advisors
Aon Investments' expected returns are annualized over 10-years as of 2Q 2024 (3/31/2024). CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Not a guarantee of future results. Additional information regarding our capital market assumptions can be made available upon request.

Aon Investments vs. Peers (2024 Horizon Survey)

10-Year Assumptions

	Horizon Survey[1]		Aon Investments[2]		Difference	
	10-Year Assumptions		10-Year Assumptions		Aon Investments – Horizon Survey	
Asset Class	**Expected Return**	**Expected Risk**	**Expected Return**	**Expected Risk**	**Expected Return**	**Expected Risk**
U.S. Equity - Large Cap	6.6%	16.5%	6.6%	18.0%	0.0%	1.5%
U.S. Equity - Small/Mid Cap	7.0%	20.6%	6.8%	24.0%	-0.2%	3.4%
Non-U.S. Equity – Developed	7.5%	18.1%	6.6%	19.1%	-0.9%	1.0%
Non-U.S. Equity – Emerging	7.8%	23.6%	6.9%	22.0%	-0.9%	-1.6%
U.S. Fixed Income – Core	4.9%	5.9%	4.7%	5.0%	-0.2%	-0.9%
U.S. Fixed Income - Long Duration Corp	5.0%	11.0%	5.6%	9.9%	0.6%	-1.1%
U.S. Fixed Income - High Yield	6.1%	9.9%	5.6%	10.5%	-0.5%	0.6%
Non-U.S. Fixed Income – Developed	3.6%	7.3%	3.9%	6.1%	0.3%	-1.2%
Non-U.S. Fixed Income – Emerging	6.3%	10.8%	6.3%	11.0%	0.0%	0.2%
Treasuries (Cash Equivalents)	3.5%	1.1%	4.1%	1.4%	0.6%	0.3%
TIPS (Inflation-Protected)	4.3%	6.1%	4.2%	4.3%	-0.1%	-1.8%
Real Estate	6.0%	16.6%	5.9%	15.0%	-0.1%	-1.6%
Hedge Funds	6.0%	8.0%	5.6%	5.2%	-0.4%	-2.8%
Commodities	4.6%	17.8%	5.3%	17.0%	0.7%	-0.8%
Infrastructure	7.2%	16.0%	7.3%	14.5%	0.1%	-1.5%
Private Equity	9.0%	22.6%	9.2%	20.0%	0.2%	-2.6%
Private Debt	8.3%	12.0%	8.1%	16.6%	-0.2%	4.6%
Inflation	2.4%	1.9%	2.2%	1.7%	-0.2%	-0.2%

[1] **Notes (Horizon Survey):**
Source: Horizon Actuarial survey of 2024 capital market assumptions from 41 independent investment advisors. The survey was conducted by Horizon Actuarial Services, LLC, an independent consulting firm specializing in providing actuarial and consulting services to multiemployer benefit plans. Aon does not guarantee the accuracy or completeness of this information and cannot be held accountable for inaccurate data provided by third parties. Reliance upon information in this material is at the sole discretion of the reader.

Expected returns are median annualized (geometric). Please see following slide for additional information on this survey methodology.

[2] **Notes (Aon Investments' Assumptions):**
Aon Investments' assumptions are for 3/31/2024

- U.S. Equity - Small/Mid Cap assumptions represents Aon's assumption for U.S. Small Cap
- U.S. Fixed Income - Long Duration assumptions represents Aon's assumption for Long Duration Credit
- Non-U.S. Fixed Income - Developed assumptions represents Aon's assumption for Non-U.S. Fixed Income - Developed (50% Hedged)
- Non-U.S. Fixed Income - Emerging assumptions represents Aon's assumption for Emerging Market Bonds - Sovereign USD
- Real Estate assumptions represents Aon's assumption for Core Real Estate
- Hedge Fund assumptions represents Aon's assumption for Direct Hedge Funds (Universe)

Expected returns are using Aon's Q2 2024 10-Year Capital Market Assumptions as of 3/31/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are geometric (long-term compounded; rounded to the nearest decimal). Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results. Additional information regarding our capital market assumptions can be made available upon request.

Survey Methodology

A description of the methodology used by Horizon Actuarial Services, LLC in conducting their survey is outlined in the 2024 version of the report found online at the link below:

- https://www.horizonactuarial.com/survey-of-capital-market-assumptions

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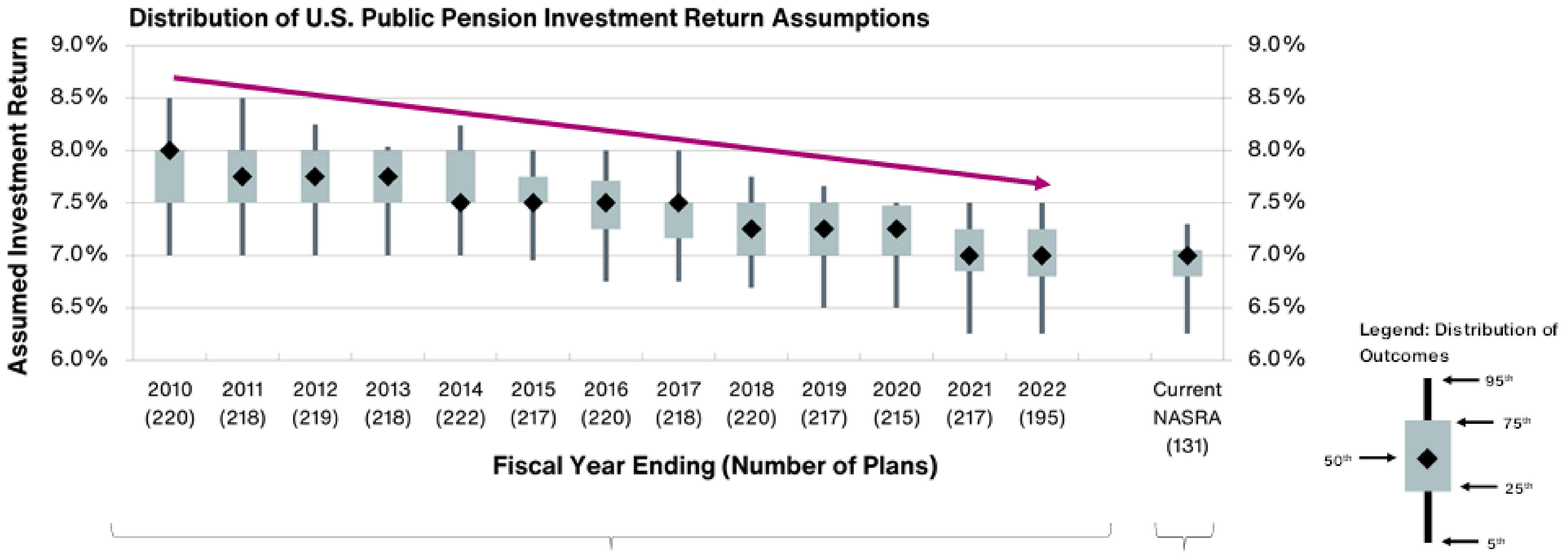
Expected Rates of Return: A Whipsaw Effect?

Section 4: Appendix

Expected Rates of Return: A Whipsaw Effect?

What should rising CMAs mean for a plan's expected return on assets assumption?

1. Recent history has seen a steady decline in actuarial assumed rates of return



Source: Public Pensions Data

Source: NASRA

2. Decisions regarding the assumed rate of return should balance the following perspectives:

Investment

- Set investment strategy within goals/objectives/risk tolerance of the plan
- Strategy serves as one input to be considered

Actuarial

- Utilize both qualitative and quantitative measures such as
  - Future financial outcomes
  - Use of the assumed rate of return
  - A range of acceptable returns
  - History of assumption changes
  - Consulting industry trends
  - Peer data

Governmental

- Incentives may exist to increase return (ultimately lower funding needed) or lower the return (to increase funding)

3. Conclusions

- The movement to lower rates of return has subsided and we do not expect there to be a similar push to increase rates higher just yet
  - One approach may be a cautious, wait-and-see mindset
- While the downward trend in actuarial rates of return was partly attributed to historical differences from CMAs, plan sponsors would be wise to ensure similar dislocations do not exist going forward
  - Those whose investment strategy produces an expected return north of the actuarial rate of return may have support for rate increases
  - Those who faced pressure to lower assumptions in the past may have support for maintaining those levels

Glossary of Terms

Section 4: Appendix

Glossary of Terms

AVA	Actuarial value of assets (i.e., incorporates smoothing of gains and losses)
Asset Growth Rate or “Hurdle Rate”	The required rate of growth of the assets (through both contributions and investment returns) to keep pace with the growth of the liability
Current Frontier	Uses the Plan’s mix of asset classes within the return-seeking allocation, then dials the return-seeking allocation up and down from 0% to 100% to illustrate forecasted returns at various return-seeking / safety asset mixes
Economic Cost	Present value of forecasted future contributions + present value of funding shortfall/(surplus) at the end of the projection period
Liability Growth Rate	The projected growth of the liability over the coming year as measured by the sum of the normal cost (new benefit accruals) and discount/interest cost (one less year of discounting at the time value of money)
MVA	Market value of assets (i.e., un-smoothed/economic reality)
Return-Seeking Assets (“R-S”)	All non “safety” assets
Risk-Reducing/Safety Assets	Assets where the primary function is risk control/downside mitigation.
Target Asset Allocation	The allocation of assets between return-seeking assets and safety assets

About This Material

Section 4: Appendix

About This Material

This material includes a summary of calculations and consulting related to the finances of the **City of Novi, Michigan** (Novi). The following variables have been addressed:

- Contributions, Funded Ratio, Hurdle Rate, Net Outflow

This analysis is intended to assist the Investment Committee with a review of the associated issues and options, and its use may not be appropriate for other purposes. This analysis has been prepared solely for the benefit of the Investment Committee. Any further dissemination of this report is not allowed without the written consent of Aon Investments USA Inc.

Our calculations were generally based on the methodologies identified in the actuary's valuation report for Novi. We believe the methodology used in these calculations conforms to the applicable standards identified in the report.

Models are used to develop alternative scenarios based on the underlying valuation model and project financial results under those scenarios. The models were developed by experts outside and within Aon. Where outside models were used, the models were reviewed by experts within Aon. The models were selected as appropriate for these projections by the undersigned.

Experience different than anticipated could have a material impact on the ultimate costs of the benefits. In addition, changes in plan provisions or applicable laws could have a significant impact on cost. Actual experience may differ from our modeling assumptions.

Our calculations were based on data provided by the plan actuary. The actuarial assumptions and methods and plan provisions reflected in these projections are the same as those used for the 2023 and 2024 fiscal year actuarial valuations for Novi as noted in the actuarial reports, except where noted in this report. Unless specifically noted, our calculations do not reflect any other changes or events after June 30, 2024. Reflecting events after June 30, 2024 would impact the results of the projection.

In conducting these projections, we have relied on plan design, demographic and financial information provided by other parties, including the plan's actuary and plan sponsor. While we cannot verify the accuracy of all of the information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results.

These projections have been conducted in accordance with generally accepted actuarial principles and practices, including applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board. The undersigned actuary is familiar with the near-term and long-term aspects of pension/OPEB valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no colleague of Aon Investments USA Inc. providing services to Novi has any direct financial interest or indirect material interest in Novi. Thus, we believe there is no relationship existing that might affect our capacity to prepare and certify this report for Novi.

Aon Investments USA Inc.

Phil Kivarkis FSA, CFA

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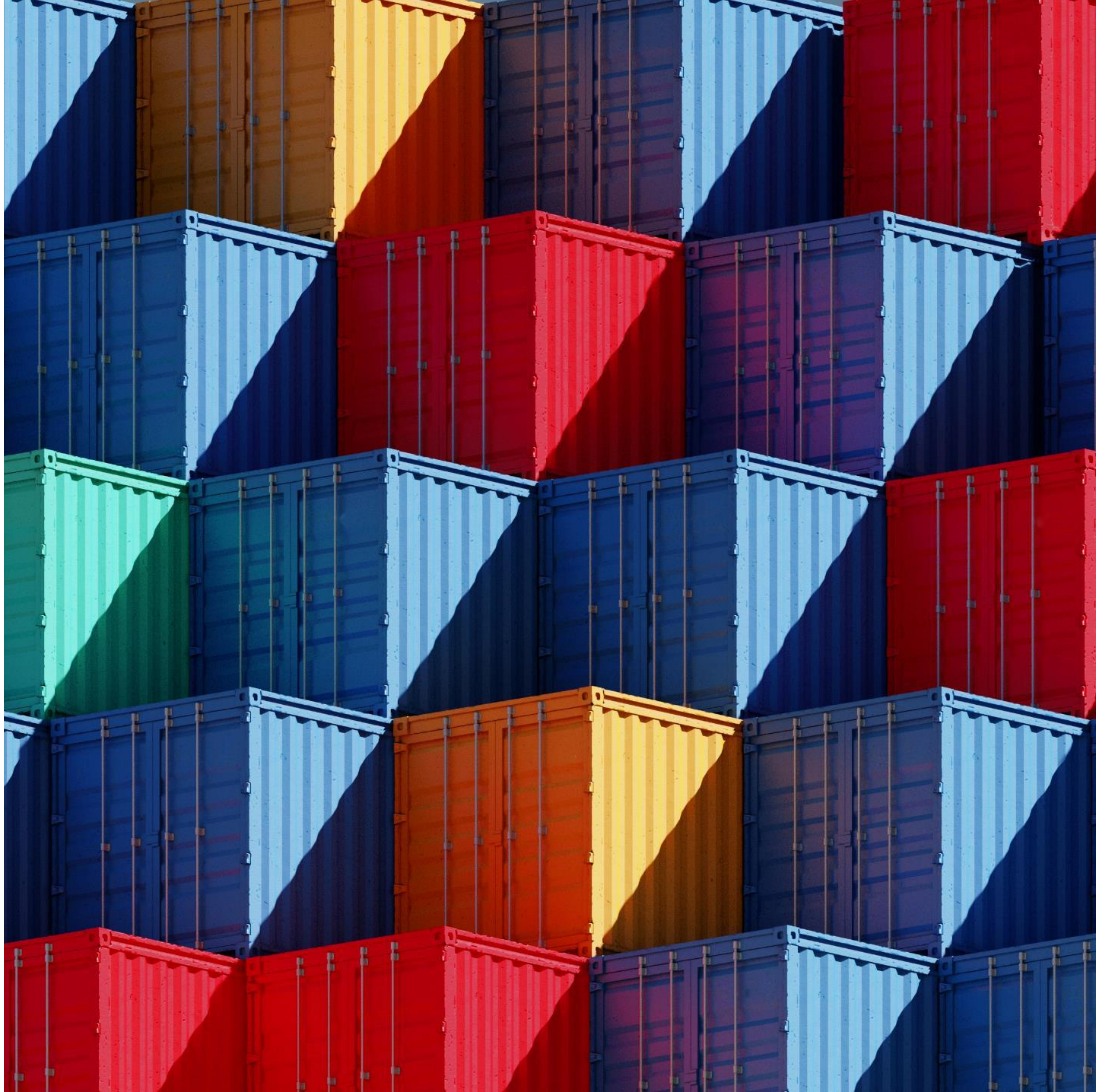
ATTN: Aon Investments Compliance Officer

Key Recommendations from OPEB Asset-Liability Study (DRAFT)

City of Novi, Michigan Retiree Health Care Plan (Novi)

March 2025



Novi’s Collective Goals/Objectives of the OPEB Asset-Liability Study

The consensus goals/objectives of the OPEB plan were described as follows:

- Remain overfunded
  - There is utility to the existing surplus and the goal is to preserve and maintain it

- Minimize contributions
  - Consider adjustments to the contribution policy to avoid tail-risk scenarios

- Reduce portfolio volatility
  - Either by reducing risk and/or added diversification

Key Findings from the OPEB Asset-Liability Study

Current State Overview

- The City of Novi's Retiree Health Care Plan is overfunded as of 9/30/2024
  - Estimated to 134.3% funded based on a market value of plan assets
- Due to the overfunding, no contributions are expected in the coming years
  - While contributions are zero today, there are elements of the funding policy that can cause risk in adverse economic scenarios
- The following recommendations from the asset-liability study are expected to strengthen Novi's current position

Recommendations

1. Risk Tolerance
   - Currently 58% return-seeking (R-S) assets
   - 20-40% R-S assets is the zone of solutions that is expected to keep the Plan overfunded while minimizing contributions
     - 40% R-S is selected from that range as a potential solution due to its alignment with the expected long-term actuarial assumed rate of return (6.00%)

2. Portfolio Diversification
   - Public equities make up the current R-S portfolio
   - Additional diversification – via return-seeking fixed income and open-end real assets – is expected to smooth the pattern of future returns and further reduce volatility

3. Contribution Policy
   - Current policy is to amortize (gains)/losses over a declining period, eventually reaching immediate recognition
   - Recommendation is to decrease the period down to 5 years and then create laddered amortization bases to reduce contribution volatility

Risk Tolerance

Novi's allocation as of 9/30/2024 is expected to result in an ever-increasing funded ratio

- Taking some risk off the table is expected to increase the likelihood of remaining overfunded, reduce the portfolio's volatility, and reduce the probability of any future contributions

A 40% return-seeking portfolio aligns with the expected long-term actuarial rate of return (6.00%)

- The current expected return is 7.00% but feedback from Novi is that it will be decreasing to 6.00%
- Portfolios below 40% return-seeking assets can provide narrower ranges of outcomes, but will start to erode the funded status

	9/30/2024 Allocation	40% Return-Seeking Assets
Return-Seeking (R-S) %	58%	40%
New Asset Classes	N/A	No
Expected Return[1]	6.45%	5.96%
Portfolio Volatility	11.26%	8.25%
Probability of 100% Funded after 15 Years	80.7%	81.1%
Probability of Contributions During 15 Years	38.0%	34.3%

[1] Expected returns are using Aon's 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.
Totals may not sum to 100% due to rounding.

Portfolio Diversification

Novi's return-seeking allocation as of 9/30/2024 is primarily public equity

- Diversifying into additional asset classes is expected to further reduce the portfolio's volatility, increase the probability of staying overfunded, and decrease the probability of any future contributions

Additional diversification is recommended in the following asset classes:

- **Return-Seeking Fixed Income**
  - o Diversifies public equities and core fixed income
  - o Rotates among credit sub-strategies including, but not limited to: high yield, emerging markets debt, bank loans, and securitized
- **Open-Ended Real Assets**
  - o Diversifies public equities
  - o Income and inflation protection
  - o Modeled as 50% core real estate / 50% core infrastructure

	9/30/2024 Allocation	40% Return-Seeking Assets	40% Return-Seeking Assets with Diversification
Return-Seeking %	58%	40%	40%
New Asset Classes	N/A	No	Yes
Expected Return[1]	6.45%	5.96%	5.91%
Portfolio Volatility	11.26%	8.25%	7.03%
Probability of 100% Funded after 15 Years	80.7%	81.1%	82.2%
Probability of Contributions During 15 Years	38.0%	34.3%	30.1%

[1] Expected returns are using Aon's 30-Year Capital Market Assumptions as of 9/30/2024. CMAs contain projections about future returns on asset classes. Our CMA projections are designed to reflect the typical cost of implementing an investment program. Expected returns are calculated using weighted allocations of the underlying CMAs. Expected Returns are geometric (long-term compounded; rounded to the nearest decimal) assuming portfolio weights are rebalanced annually. Expected returns presented are models and do not represent the returns of an actual client account. Your actual returns will be reduced by your advisory fees and other expenses you may incur as a client. Aon's advisory fees are described in Part 2A of Aon's Form ADV. Not a guarantee of future results.
Totals may not sum to 100% due to rounding.

Contribution Policy

Novi's current contribution policy amortizes gains/loses over a declining period

- This period will decrease until it reaches one year, or immediate recognition
- Contributions could be volatile under immediate recognition, especially in pessimistic outcomes

Recommend continue decreasing the period down to 5 years, then create a laddered amortization

- This will smooth contributions in volatile scenarios compared to the current funding policy

	Current Funding Policy	Recommended Funding Policy
Policy	Amortize (gains)/losses over period declining from 14 years to 1 year	Continue declining period until 5 years, then laddered 5-year amortization bases
Pessimistic Outcome Annual Contribution in 2037[1] (1-in-20 likelihood downside event)	$4.3 million	$1.7 million
Pessimistic Outcome – Present Value of Total Contributions over next 15 Years[1,2] (1-in-20 likelihood downside event)	$4.6 million	$3.7 million
Expected Contributions Over Next 15 Years[1]	$0	$0

[1] Projections assumes Projections assume a discount rate of 7.00% for FYE 2023-24 and 6.00% for FYE 2025+ for OPEB liabilities for all investment policies studied. Projections include estimated expenses paid from plan assets, assumed to start at $14,000 annually increased with inflation, which is assumed to be inclusive of investment management fees. Actual fees and expenses may differ from those presented. See Asset-Liability Study: Results presentation for more information.
[2] Present value measured at 7.00%
Figures shown are based on the 40% Return-Seeking Assets with Diversification portfolio

Summary of Results

Given Novi's strong funding position, there can be a range of appropriate solutions that balances Novi's desire to (1) remain fully funded, (2) minimize contributions, and (3) minimize portfolio

Our analysis highlights that a range from 20% to 40% return-seeking assets balances these objectives

The 40% return-seeking portfolio (shown to the right) was selected from that range due to its alignment with the projected long-term actuarial rate of return (6.00%), which is expected to keep the funded ratio steady over time

Aon recommends revisiting the asset allocation with another asset-liability in 3-5 years, or sooner if circumstances warrant

Asset Class	Target Allocation
Return-Seeking Assets	
- Public Equity	30%
- Liquid Return-Seeking Fixed Income	4%
- Open-End Real Assets	6%
Risk-Reducing Assets	
- Risk-Reducing Fixed Income	60%
Total	100%

Next Steps

Following the decision on the target asset allocation, the next steps would be as follows:

1. Document in Investment Policy Statement (IPS)
2. Update rebalancing policy
3. Define benchmarks
4. Other – including manager selection and transition plan

An example for inclusion in the IPS could be the following:

Asset Class	Minimum[1]	Target Allocation	Maximum[1]	Recommended Benchmark
Return-Seeking Assets				
- Public Equity	27%	30%	33%	Public Equity Benchmark[2]
- Liquid Return-Seeking Fixed Income	1%	4%	7%	Return-Seeking Fixed Income Benchmark[3]
- Open-End Real Assets	1%	6%	11%	NCREIF ODCE Index
Risk-Reducing Assets				
- Risk-Reducing Fixed Income	57%	60%	63%	Bloomberg Barclays Aggregate Bond Index
Total		100%		Weighted average of asset class benchmarks[4]

[1] The portfolio may be outside of allowable ranges during the transition to the new target allocation
[2] Benchmarked as 85% ACWI / 15% Russell 3000
[3] Benchmarked as 1/3 High Yield Bonds, 1/3 Bank Loans, 1/3 Emerging Market Debt
[4] During transition period, the Total Fund benchmark would be weighted at actual portfolio weights until long term targets are reached

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