



City of Cincinnati Retirement System Investment Committee Meeting

Agenda

**December 4, 2024 / 12:00 P.M.
City Hall, Council Chambers and via Zoom**

Members

Sonya Morris, Chair
Aliya Riddle, Vice Chair
Bill Moller
Tom Gamel
Kathy Rahtz
Mark Menkhaus, Jr.
Monica Morton
Tom West
Seth Walsh

Staff

Jon Salstrom

Marquette

Brett Christenson

Law

Kevin Frank

Call to Order

Public Comment

Approval of Minutes

- November 6, 2024

Old Business

- Asset Allocation Recommendations (11-21)
- Investment Manager Recommendations(22-24)

Adjournment

Next Meeting: Thursday, February 5, 2026, 12:00 P.M. City Hall Council Chambers and via Zoom



**City of Cincinnati Retirement System
Investment Committee Meeting
Minutes
November 6, 2025 / 12:00 P.M.
City Hall – Council Chambers and remote**

Committee Members Present

Sonya Morris, Chair
Aliya Riddle, Vice Chair
Kathy Rahtz
Mark Menkhaus, Jr.
Monica Morton
Seth Walsh
Bill Moller
Tom Gamel
Tom West

Administration

Jon Salstrom

Marquette

Brett Christenson

Law

Kevin Frank

CALL TO ORDER

Chair Morris called the meeting to order at 12:08 p.m. and a roll call of attendance was taken. Committee Members Morris, Riddle, Rahtz, Menkhaus, Morton, Moller and West were present. Committee Members Gamel and Wash were absent.

PUBLIC COMMENT

No public comment.

APPROVAL OF MINUTES

Approval of the minutes of the Investment Committee meeting of November 6, 2025, was moved by Committee Member Moller and seconded by Committee Member Menkhaus. The minutes were approved by unanimous roll call vote.

Old Business

Update Investment Manager Contracts

- Private Equity: Both new investment manager contracts were completed since the last Committee meeting. WindRose was the final contract to be executed. Neither WindRose nor Sapphire has drawn capital yet, but initial capital calls are expected within the next few quarters.
- Index Transition: Most of the transition has been completed. The U.S. index transitions

were completed first. The ACWI ex U.S transition took additional time but is now largely finished. Approximately \$100,000 in the foreign accounts still needs to settle. All other transition activity is complete.

New Business

Current Market Environment Report

Brett Christenson from Marquette was in attendance to present.

3Q 2025 Market Summary:

- Fixed Income: Spreads continue tightening and valuations remain rich. Core bonds are appealing with yields around 4.5%. Corporate fundamentals are solid, but tight valuations leave little margin for error. Uncertainty persists due to the U.S. government shutdown, geopolitical tensions, and a large fiscal deficit.
- U.S. Equities: Small-cap earnings show signs of stabilization. A more accommodative monetary policy and lower interest rates could support returns. Growth-oriented stocks may benefit from innovation and stable earnings despite high valuations. Overall, conditions favor a cautious approach.
- Non-U.S. Equities: Europe benefits from defense spending trends, but valuations are already elevated. Emerging markets (e.g. Brazil, India) face U.S. trade policy challenges. Asian tech presents selective opportunities. Non-U.S. small caps appear attractive due to better valuations, tariff insulation, and stronger earnings.
- Real Assets: Core real estate continues its recovery with improved sentiment and transaction activity. The debt market is slowly reawakening. Infrastructure remains stable, offering income-oriented performance supported by regulated or contracted cash flows.
- Private Equity: Broader private equity markets face ongoing headwinds, but U.S. middle-market private equity is strong (steady flow, stable valuations). Weak exit activity and slow fundraising may dampen optimism. Outlook is neutral to mildly positive, especially in the middle-market segment.
- Private Credit: New issuance remains stable; distress is limited, but capital solutions may offer upside opportunities.

Quarterly Investment Report

Pension Fund Quarterly Activity Summary:

- The transition from Northern Trust index funds to BNY Mellon index funds began in late August with the three domestic equity funds. Transition of the Agg Bond fund occurred in September. Transition of the ACWI fund is currently in progress.
- The plan's Private Debt funds called \$8.4 million during 3Q25 while distributing \$1.3 million.
- The plan's Private Equity funds called \$7.1 million during 3Q25 while distributing \$7.2 million.

Committee Member Moller made a motion to accept and approve the Marquette quarterly

report and seconded by Committee Member Menkhaus. The motion was approved by unanimous roll call vote.

New Asset Allocation Recommendations

CRS aims to strengthen its portfolio's long-term resilience by emphasizing compounding, risk management, and liquidity. As markets continue to evolve, CRS is seeking to better balance return objectives with protection against volatility, inflation shocks, and correlated market selloffs—particularly environments like 2022 where rising inflation drove equities and bonds down simultaneously.

Core Objectives

- Build a more robust, cycle-resilient portfolio focused on long-term compounding.
- Improve protection against volatility and major drawdowns, especially in public markets.
- Address liquidity challenges by adding exposures that can provide accessible capital during market stress.
- Increase diversification across uncorrelated asset classes, adding more effective and efficient sub-categories of return drivers.
- Reduce reliance on traditional assets in environments with rising inflation or higher correlations.

CRS intends to allocate to all five proposed managers to fill the Hedge Fund and Opportunistic Credit allocations.

Scenario Analysis

The discussion covered a range of historical market stress events and deterministic hypothetical scenarios used to analyze portfolio resilience. These differ from stochastic Monte Carlo simulations because they apply fixed shocks rather than probability-driven outcomes.

Historical Scenarios Reviewed

- *2008 Financial Crisis (Oct 2007–Feb 2009)*: Global equities fell 40–50%; major financial institutions neared collapse. U.S. 10-year Treasury yield declined from 4.5% to 3.1%.
- *Black Monday (Oct 1987)*: Worldwide market crash; the Dow Jones fell 22.6% in a single day. U.S. 10-year Treasury yield dropped from 9.6% to 8.9%.
- *2011 U.S. Debt Ceiling Crisis (June–Sept 2011)*: Political standoff led to the first-ever U.S. credit rating downgrade. The S&P 500 declined 15%.
- *1994 Interest Rate Spike (Dec 1993–Dec 1994)*: Rapid Fed rate increases caused 30-year Treasury yields to rise ~200 bps; S&P 500 fell 1.5%.
- *1981 Volcker Rate Spike (July 1980–July 1981)*:
- Aggressive rate hikes pushed 10-year Treasury yields from 10.3% to 14.3%. Equities were resilient, rising over 7.5%.

Hypothetical Deterministic Scenarios

- *Interest Rates Rise 1% for One Year*: Parallel curve shift; rates rise 1% in year 1 only.
- *Interest Rates Rise 1% Annually for 3 Years*: Parallel curve shift each year for three

years.

- *Equities Decline 20% for One Year*: Broad equity selloff; corporate spreads widen 1%. Markets normalize after year 1.
- *Equities Decline 15% Annually for 3 Years*: Prolonged downturn with spreads widening 1% annually.
- *Perfect Storm for One Year*: Rates and spreads +1%; equities –20% in year 1; conditions normalize afterward.
- *Perfect Storm for Three Years*: Rates and spreads +1% annually; equities –15% each year.

New Investment Manager Recommendations

- Silver Point, founded in 2002 by former Goldman Sachs partners Ed Mulé and Bob O'Shea, is a leading investment firm specializing in stressed, distressed, and special situations corporate credit. The firm's flagship Silver Point Capital Fund invests across the full credit cycle using a combination of bottom-up fundamental credit research and top-down macro analysis.

Silver Point invests opportunistically across industries, geographies, capital structures, and market caps. The firm is 100% employee-owned by seven partners and is headquartered in Greenwich, Connecticut, with additional offices in New York and Chicago.

As of September 30, 2025, the firm managed approximately \$41 billion in AUM, including \$12 billion in its hedge fund strategies.

- FourSixThree Capital was founded in 2020 by Scott Balkan and Bill Kelly and is a 100% employee-owned investment firm based in New York. The firm maintains a long-standing strategic relationship with Leucadia Asset Management, a subsidiary of Jefferies Financial Group.

Leucadia provided \$200 million in seed capital at launch and continues to support the firm with global distribution and operational infrastructure. While Leucadia holds no ownership or governance rights, it retains a revenue-share arrangement tied to its seed investment. Its capital—locked up until March 2024—has since moved to a 12.5% quarterly investor-level gate, with any redemptions reducing future revenue-share distributions. Leucadia may periodically take profits from the investment, but its core capital commitment remains largely intact.

As of September 30, 2025, FourSixThree managed \$2.1 billion across its flagship fund, single-position co-investment vehicles, and a separately managed account run *pari passu* with the flagship strategy.

- Alyeska is a Chicago-based investment firm founded in October 2007 by Anand Parekh, formerly a Partner and Head of Global Equities at Citadel. Before Citadel, Parekh held

senior roles at Deutsche Bank within Global Markets, overseeing emerging markets, global risk management, and structured derivatives.

The firm began with \$1 billion in seed capital from Deutsche Bank and has since grown to approximately \$15 billion in assets under management. Alyeska is structured as a Delaware limited partnership and is 100% employee-owned, with Parekh holding the majority of the equity and senior portfolio managers owning smaller stakes.

- Whitebox Advisors is a multi-strategy alternative asset manager founded in 1999, investing globally across asset classes through fund vehicles and institutional accounts. The firm's headquarters and core operations are based in Minneapolis, with additional offices in Austin, New York, and London supporting portfolio management, trading, and operational functions.

Whitebox is primarily employee-owned, with CIO Robert Vogel holding a majority stake. Additional minority ownership stakes are held by Jacob Mercer, Paul Roos, Brian Lutz, and Nickolas Stukas. Dyal Capital, an affiliate of Neuberger Berman, owns a 20% minority equity interest.

The firm manages approximately \$7.5 billion in total AUM, including about \$3.1 billion in its flagship Multi-Strategy Fund.

- Kirkoswald Capital Partners is a global macro investment firm originally founded in 2013 as Abbeville Partners and rebranded in January 2018. The firm operates across multiple international offices, including London, New York, Singapore, Milan, Abu Dhabi, and the Bahamas.

Kirkoswald is led by Greg Coffey, a highly experienced macro investor with over 30 years in developed and emerging markets. Coffey previously held senior macro and EM trading roles at Moore Capital, GLG Partners, and Bankers Trust, and he maintains ultimate equity control of the firm.

The investment team spans specialists across rates, FX, credit, equities, and commodities, supported by dedicated research and operations staff. The structure promotes collaborative decision-making, with regional expertise contributing to a unified macro view led by Coffey.

As of August 31, 2025, Kirkoswald managed approximately \$9.1 billion in AUM, with about \$8.5 billion invested in its flagship hedge fund.

Adjournment

Following a motion to adjourn by Committee Member Moller and seconded by Committee Member Rahtz. The Committee approved the motion by unanimous roll call vote. The meeting was adjourned at 1:55 p.m.

Meeting video link: <https://archive.org/details/crs-investment-11-6-25>

Next Meeting: Thursday, February 5, 2025, at 12:00 P.M. City Hall Council Chambers and via Zoom

Secretary

DRAFT



Cincinnati Retirement

Monthly Report

Executive Summary
October 31, 2025



Total Fund Composite

9
Monthly Report
As of October 31, 2025

	Market Value	% of Portfolio	Policy %	Target Allocation	Difference	Last Month
Total Fund Composite						
Fixed Income Composite	522,152,435	20.8	22.5	564,647,242	-42,494,807	Beginning Market Value 2,511,128,042
Private Debt Composite	145,711,020	5.8	6.5	163,120,314	-17,409,294	Net Cash Flow -24,946,752
U.S. Equity Composite	670,001,011	26.7	28.5	715,219,840	-45,218,829	Gain/Loss 23,362,007
Non-U.S. Equity Composite	409,284,460	16.3	16.0	401,526,928	7,757,532	Ending Market Value 2,509,543,297
Volatility Risk Premium Composite	60,449,092	2.4	2.5	62,738,582	-2,289,490	
Real Estate Composite	149,555,354	6.0	6.0	150,572,598	-1,017,243	
Infrastructure Composite	254,978,758	10.2	10.0	250,954,330	4,024,428	
Private Equity Composite	282,819,020	11.3	8.0	200,763,464	82,055,556	
Total Fund Composite	2,509,543,297	100.0	100.0	2,509,543,297		

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	SI	Inception Date
Total Fund Composite	0.9	4.8	12.1	13.3	15.6	12.1	10.8	9.1	8.4	8.9	Jun 85
Target Benchmark	1.1	4.8	12.4	13.2	15.9	12.0	9.8	9.1	8.5	-	
Actuarial Rate 7.5%	0.6	1.8	6.2	7.5	7.5	7.5	7.5	7.5	7.5	7.5	
Fixed Income Composite	0.6	2.9	7.7	7.1	9.3	6.6	1.6	3.2	3.2	5.1	Dec 95
Blmbg. U.S. Aggregate Index	0.6	2.9	6.8	6.2	8.3	5.6	-0.2	2.3	1.9	4.3	
Private Debt Composite	0.0	0.1	3.3	5.7	8.2	10.0	5.3	-	-	5.2	Oct 20
Blmbg. U.S. Aggregate Index	0.6	2.9	6.8	6.2	8.3	5.6	-0.2	2.3	1.9	-0.3	
MSCI Private Capital Global Private Debt	0.0	0.0	5.5	6.1	8.0	8.7	9.6	7.7	7.8	9.5	
U.S. Equity Composite	1.9	8.2	16.2	19.5	27.9	19.6	17.9	13.8	12.7	10.0	Mar 89
Russell 3000 Index	2.1	8.1	16.8	20.8	29.1	21.8	16.7	15.3	14.1	11.2	
Non-U.S. Equity Composite	1.6	9.0	28.3	25.1	24.3	20.3	12.1	8.8	7.6	6.4	Jun 93
MSCI AC World ex USA (Net)	2.0	9.4	28.6	24.9	24.6	20.3	11.2	9.1	7.7	-	
Volatility Risk Premium Composite	1.7	5.5	9.3	11.9	13.8	12.9	-	-	-	7.6	Feb 22
Cboe S&P 500 PutWrite Index	2.2	5.6	6.4	11.2	14.5	13.6	12.4	8.4	7.7	8.5	
Real Estate Composite	0.1	1.4	3.3	4.4	-0.9	-4.2	3.9	3.9	5.4	4.8	Sep 07
NFI-ODCE	0.0	0.3	2.2	2.8	-1.8	-5.6	2.5	2.5	4.0	3.7	
NCREIF Property Index	0.0	1.2	3.7	4.6	0.5	-2.6	3.8	3.9	5.0	5.5	
Infrastructure Composite	-0.2	2.1	6.9	9.6	8.9	9.3	9.3	8.9	7.2	8.4	Sep 08
3 Month T-Bill +4%	0.7	2.1	7.0	8.5	9.1	9.0	7.2	6.8	6.2	5.4	
Private Equity Composite	0.0	1.0	5.3	7.4	8.0	7.1	13.4	12.4	12.4	8.8	Aug 93
MSCI Private Capital Global All Private Equity	0.0	0.0	6.1	7.0	7.5	6.1	12.4	13.2	13.7	14.9	

DISCLOSURES

Marquette Associates, Inc. ("Marquette") has prepared this document for the exclusive use by the client or third party for which it was prepared. The information herein was obtained from various sources, including but not limited to third party investment managers, the client's custodian(s) accounting statements, commercially available databases, and other economic and financial market data sources.

The sources of information used in this document are believed to be reliable. Marquette has not independently verified all of the information in this document and its accuracy cannot be guaranteed. Marquette accepts no liability for any direct or consequential losses arising from its use. The information provided herein is as of the date appearing in this material only and is subject to change without prior notice. Thus, all such information is subject to independent verification, and we urge clients to compare the information set forth in this statement with the statements you receive directly from the custodian in order to ensure accuracy of all account information. Past performance does not guarantee future results and investing involves risk of loss. No graph, chart, or formula can, in and of itself, be used to determine which securities or investments to buy or sell.

Account and Composite characteristics data is derived from underlying holdings uploaded to the Investment Metrics Platform ("Platform"); the Platform then uses data for the noted time period from Standard & Poor's (equity holdings) and ICE (fixed income holdings) to populate the reporting templates. Some securities, including cash equivalents, may not be accurately classified during this population process due to missing identifiers or unavailable data. As a result, characteristics in this report may differ from other data sources. For example, Bloomberg indices may include additional rating information which may differ from the S&P rating used by the Platform.

Forward-looking statements, including without limitation any statement or prediction about a future event contained in this presentation, are based on a variety of estimates and assumptions by Marquette, including, but not limited to, estimates of future operating results, the value of assets and market conditions. These estimates and assumptions, including the risk assessments and projections referenced, are inherently uncertain and are subject to numerous business, industry, market, regulatory, geo-political, competitive, and financial risks that are outside of Marquette's control. There can be no assurance that the assumptions made in connection with any forward-looking statement will prove accurate, and actual results may differ materially.

The inclusion of any forward-looking statement herein should not be regarded as an indication that Marquette considers forward-looking statements to be a reliable prediction of future events. The views contained herein are those of Marquette and should not be taken as financial advice or a recommendation to buy or sell any security. Any forecasts, figures, opinions or investment techniques and strategies described are intended for informational purposes only. They are based on certain assumptions and current market conditions, and although accurate at the time of writing, are subject to change without prior notice. Opinions, estimates, projections, and comments on financial market trends constitute our judgment and are subject to change without notice. Marquette expressly disclaims all liability in respect to actions taken based on any or all of the information included or referenced in this document. **The information is being provided based on the understanding that each recipient has sufficient knowledge and experience to evaluate the merits and risks of investing.**

Marquette is an independent investment adviser registered under the Investment Advisers Act of 1940, as amended. Registration does not imply a certain level of skill or training. More information about Marquette including our investment strategies, fees and objectives can be found in our ADV Part 2, which is available upon request or on our website.

Cincinnati Retirement Pension Fund

Public

Asset Allocation Study

Summary of Study Assumptions and Data Inputs

Client Name	Cincinnati Retirement Pension Fund
Plan Type	Public
Number of Runs Evaluated	1,000
Holding Period	120 Months
Most Recent Data Inputs	September 30, 2025
Market Value of Assets	\$2,506,610,979
Return Target	7.50%

Description of Software

Our asset allocation studies evaluate potential client portfolios under a variety of macroeconomic environments, which directly impact the performance of asset classes. The studies are built to analyze often overlooked — but critical — features of portfolio construction, including liquidity, rebalancing, and net cash flow. We offer customized reports and analytics to evaluate circumstances unique to each plan, such as spending policies for endowments and funding ratios for pension funds. More generally, our asset allocation studies offer a comprehensive and rigorous analysis that will formulate the most effective portfolios to achieve client goals. Specifically, the following initiatives are included in our asset allocation studies:

- Identify and quantify sources of risk, beyond the use of standard deviation as the sole risk metric
- Establish a forward-looking methodology that is not anchored by pre-determined expected returns, standard deviations, and correlations
- Recognize the illiquid nature of alternative asset classes, along with the liquidity needs of each client
- Incorporate the client's return goals, liabilities, and cash flows
- Allow for portfolio re-balancing to keep asset allocations within target ranges
- Allow for non-normal return patterns
- Reflect current economic conditions in the analysis.

Our software is based on a Monte Carlo simulation of macroeconomic factors, which are used to model monthly return outcomes of capital markets. The simulations are created by a powerful economic scenario generator ("ESG"), which is the driving force behind our asset allocation model. The economic scenario generator simulates the future performance of the capital markets and macro-economy; the underlying models are calibrated based on their long-term historical data series so that they will reproduce the kinds of volatility and stress scenarios that have been observed over the 20th and 21st centuries. The models are linked and correlated so that the behavior of different asset classes and economic variables is consistent within each random scenario.

Portfolio performance over the course of the study reflects projected net cash flows as well as overall portfolio composition, rebalancing rules, and beginning market value. When coupled with the simulated returns, these inputs provide the monthly market value of all asset classes for each proposed portfolio and of the total fund. We also calculate average annualized returns and standard deviations for each portfolio. These statistics allow us to calculate risk-adjusted returns that figure heavily into determining the recommended portfolio.

The results of the simulated capital market returns are shown below. It is important to note that these values represent output from the software simulations, and not deterministic views of future capital market performance. The first column is the average annualized 10-year return of all the simulations, and the second column is the average annualized 10-year volatility. The last five columns indicate the annualized 10-year return for the 5th, 25th, 50th, 75th, and 95th percentile; the higher the percentiles, the better the performance.

		Average 10 Year		10 Year Annualized Returns				
Asset Class		Annualized Return	Annualized Volatility	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile
Fixed Income	Core Bonds	4.7%	5.2%	3.5%	4.2%	4.7%	5.2%	5.9%
	Core Plus	5.1%	5.6%	3.9%	4.6%	5.1%	5.6%	6.4%
	Opportunistic Credit	7.1%	8.0%	4.4%	5.9%	7.0%	8.2%	9.9%
U.S. Equity	All-Cap Core	7.2%	16.0%	-1.8%	4.2%	7.6%	10.7%	15.1%
	Large-Cap Value	7.0%	16.6%	-2.6%	4.1%	7.3%	10.6%	15.2%
	Small-Cap Value	7.9%	17.9%	-2.7%	4.6%	8.4%	12.0%	16.7%
Non-U.S.	Broad Non-US Equity	7.2%	21.3%	-4.7%	2.6%	7.7%	11.8%	18.4%
Hedge Funds	Global Macro	5.0%	8.1%	0.7%	3.2%	5.0%	6.7%	9.3%
	Market Neutral	5.4%	5.2%	2.4%	4.1%	5.5%	6.8%	8.6%
	Defensive Equity	6.6%	10.2%	1.5%	4.8%	6.8%	8.4%	11.1%
	Relative Value	6.3%	8.8%	0.9%	4.0%	6.2%	8.7%	12.0%
Real Assets	Core Real Estate	6.5%	5.4%	2.8%	5.0%	6.5%	8.1%	10.3%
	Opportunistic Real Estate	10.1%	12.4%	3.4%	7.2%	10.0%	12.8%	17.6%
	Global Infrastructure	7.0%	7.1%	3.0%	5.4%	7.2%	8.6%	10.6%
Private Markets	Private Debt - Levered	8.9%	9.8%	6.1%	7.8%	8.9%	9.9%	11.5%
	Private Equity - LBO	10.2%	13.8%	2.5%	7.1%	10.2%	13.3%	17.8%
	Private Equity - Venture Capital	11.6%	18.6%	1.6%	7.4%	11.6%	15.9%	21.6%

Portfolio Options

Asset Class	Current	Option A	Option B	Option C	Option D
Core Bonds	9.0%	9.0%	9.0%	9.0%	9.0%
Core Plus	11.5%	11.5%	10.0%	11.5%	10.5%
Opportunistic Credit	2.0%	3.0%	4.0%	4.0%	3.0%
Total Fixed Income	22.5%	23.5%	23.0%	24.5%	22.5%
All-Cap Core	24.0%	27.5%	27.0%	25.0%	24.0%
Large-Cap Value	2.5%	0.0%	0.0%	0.0%	0.0%
Small-Cap Value	2.0%	0.0%	0.0%	0.0%	0.0%
Total U.S. Equity	28.5%	27.5%	27.0%	25.0%	24.0%
Broad Non-US Equity	16.0%	16.0%	16.0%	15.0%	15.0%
Total Non-U.S. Equity	16.0%	16.0%	16.0%	15.0%	15.0%
Global Macro	0.0%	1.0%	1.0%	1.0%	1.0%
Market Neutral	0.0%	1.0%	1.5%	1.0%	1.0%
Defensive Equity	2.5%	1.0%	1.0%	1.0%	1.0%
Relative Value	0.0%	1.0%	1.5%	1.0%	1.0%
Total Hedge Funds	2.5%	4.0%	5.0%	4.0%	4.0%
Core Real Estate	4.0%	4.0%	4.0%	4.0%	4.0%
Opportunistic Real Estate	2.0%	2.0%	2.0%	2.0%	2.0%
Global Infrastructure	10.0%	7.0%	7.0%	7.0%	7.0%
Total Real Assets	16.0%	13.0%	13.0%	13.0%	13.0%
Private Debt - Levered	6.5%	8.0%	8.0%	6.5%	8.0%
Private Equity - LBO	6.4%	6.4%	6.4%	10.5%	12.0%
Private Equity - Venture Capital	1.6%	1.6%	1.6%	1.5%	1.5%
Total Private Markets	14.5%	16.0%	16.0%	18.5%	21.5%

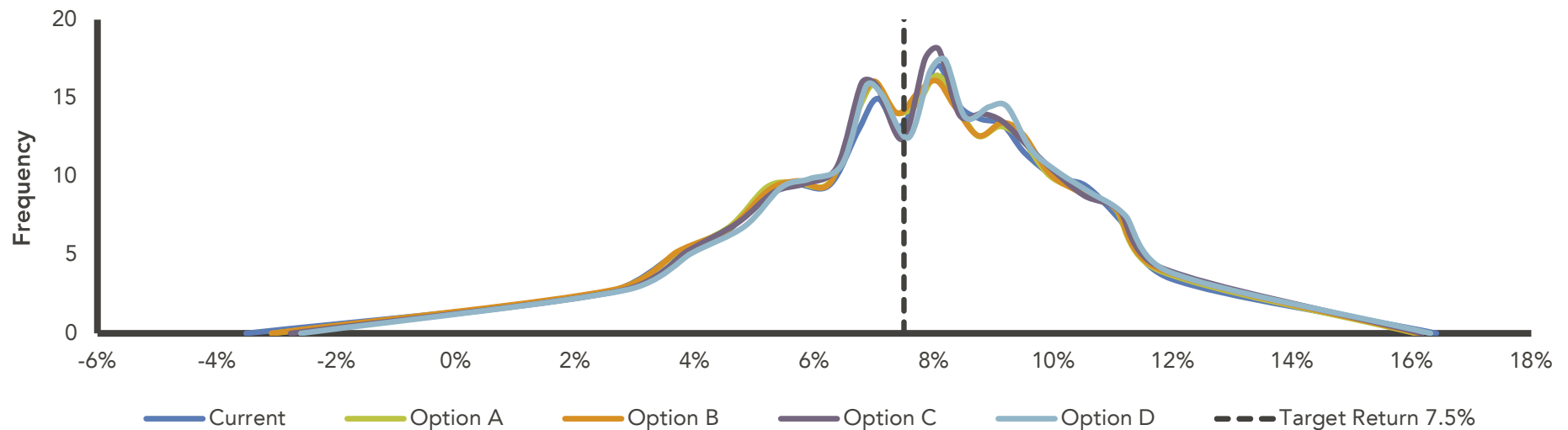
Portfolio Options

Asset Class	Current	Option A	Option B	Option C	Option D
Total Fixed Income	22.5%	23.5%	23.0%	24.5%	22.5%
Total U.S. Equity	28.5%	27.5%	27.0%	25.0%	24.0%
Total Non-U.S. Equity	16.0%	16.0%	16.0%	15.0%	15.0%
Total Hedge Funds	2.5%	4.0%	5.0%	4.0%	4.0%
Total Real Assets	16.0%	13.0%	13.0%	13.0%	13.0%
Total Private Markets	14.5%	16.0%	16.0%	18.5%	21.5%

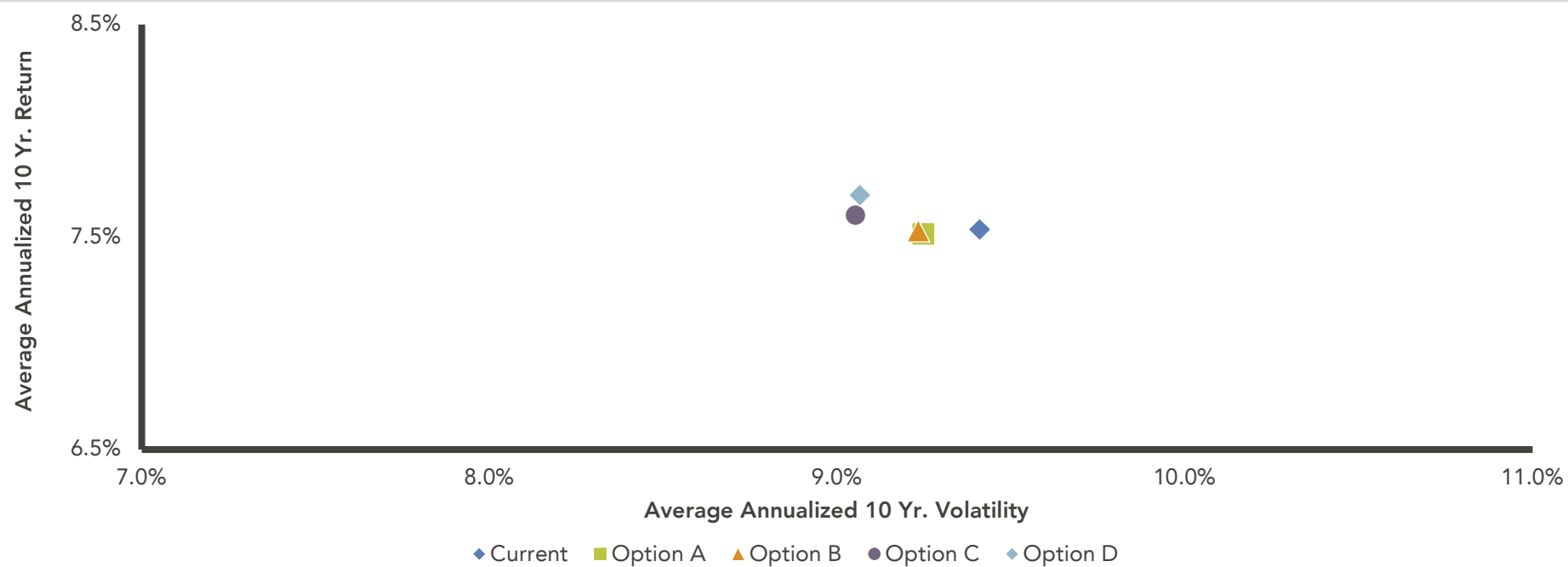
Summary of Portfolio Characteristics

	Current	Option A	Option B	Option C	Option D
Avg. Annualized 10 Yr. Return	7.53%	7.51%	7.53%	7.60%	7.70%
Avg. Annualized 10 Yr. Volatility	9.41%	9.25%	9.23%	9.05%	9.06%
Avg. Return/Avg. Volatility	0.80	0.81	0.82	0.84	0.85

Distribution of Average Annualized 10 Year Returns



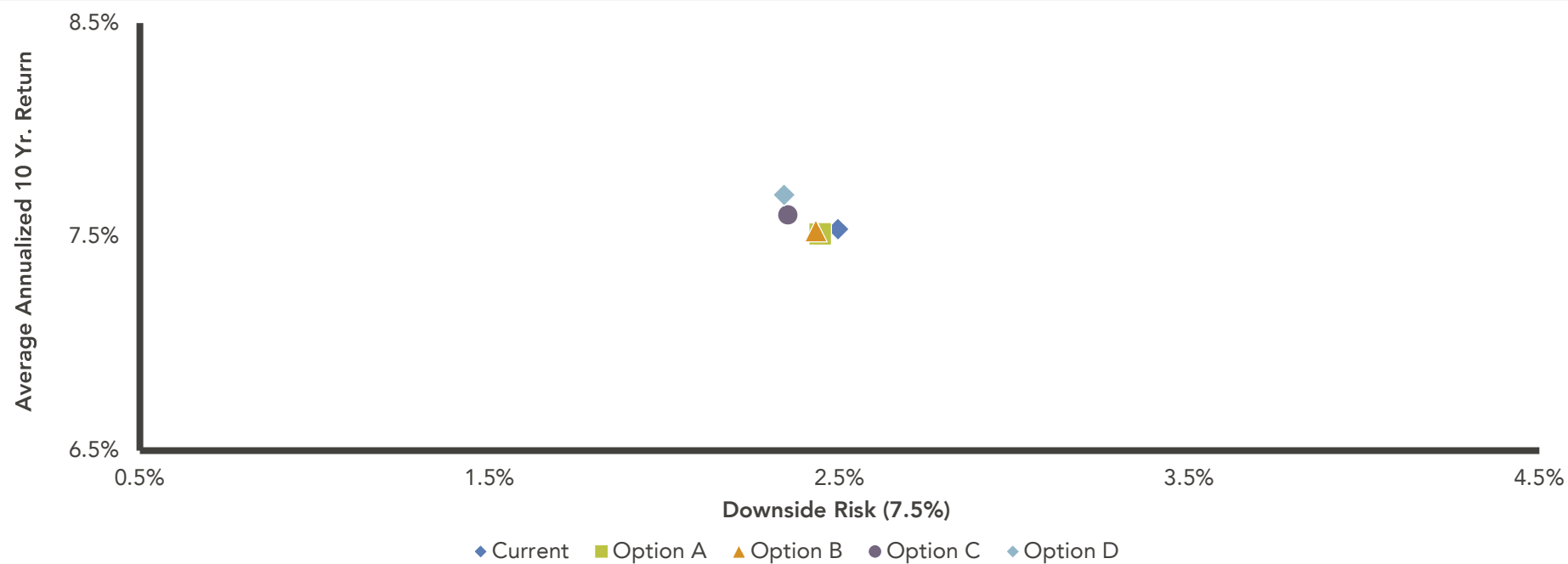
Average Annualized 10 Year Return/Volatility



Distribution of Average Annualized 10 Year Returns

Percentile	Current	Option A	Option B	Option C	Option D
Average (Mean)	7.5%	7.5%	7.5%	7.6%	7.7%
5%	2.4%	2.6%	2.6%	2.8%	2.8%
25%	5.7%	5.7%	5.7%	5.8%	5.9%
50%	7.8%	7.7%	7.7%	7.9%	7.9%
75%	9.5%	9.5%	9.5%	9.5%	9.6%
95%	12.0%	11.8%	11.8%	11.8%	12.0%

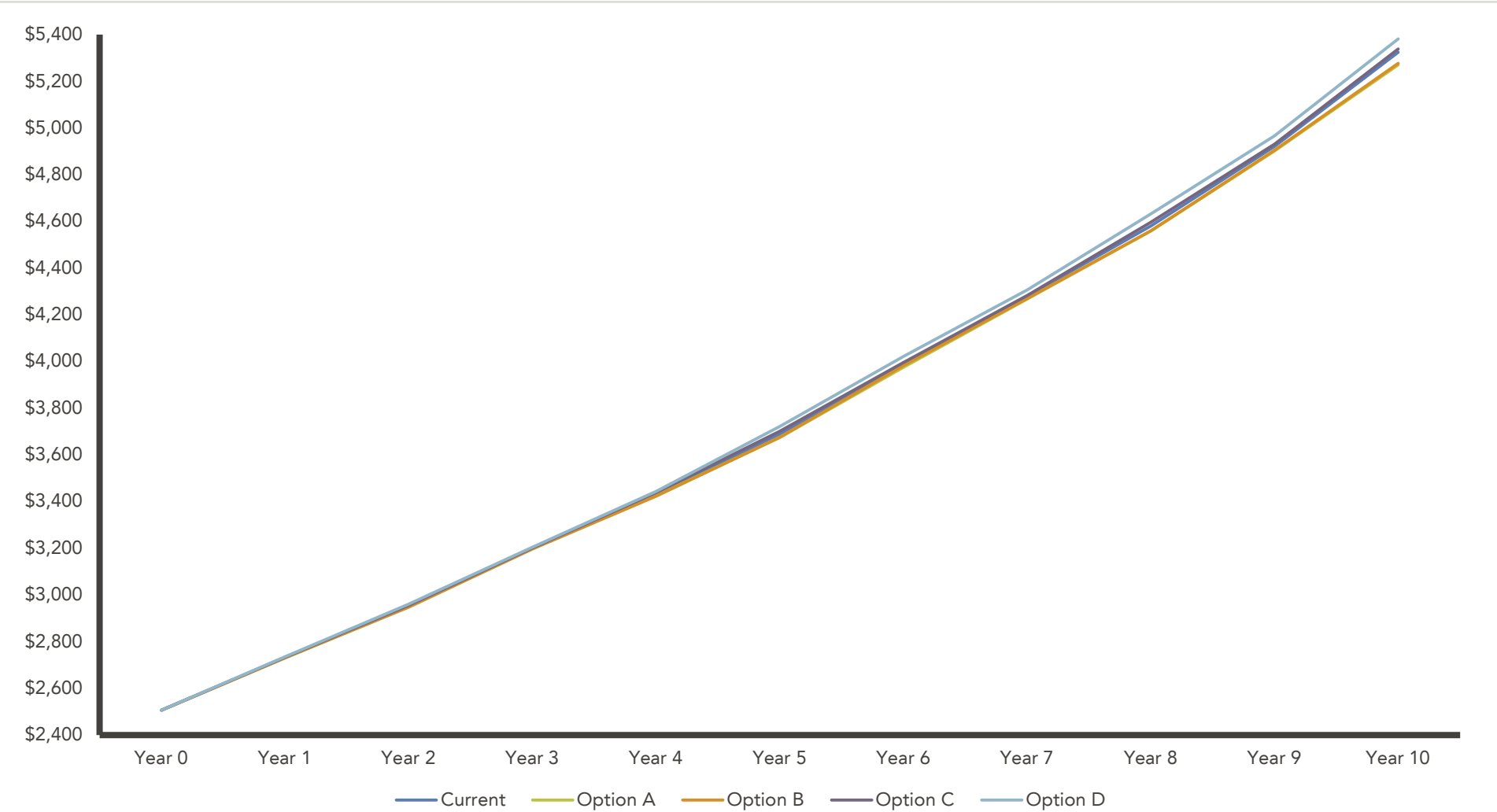
Average Annualized 10 Year Return/Downside Risk



Summary of Downside Risk

	Current	Option A	Option B	Option C	Option D
Downside Probability (7.5%)	46.0%	46.2%	46.1%	45.6%	44.1%
Downside Risk (7.5%)	2.5%	2.4%	2.4%	2.4%	2.3%
Downside Probability (0%)	1.4%	1.3%	1.3%	1.1%	1.1%
Downside Risk (0%)	1.5%	1.3%	1.3%	1.3%	1.2%

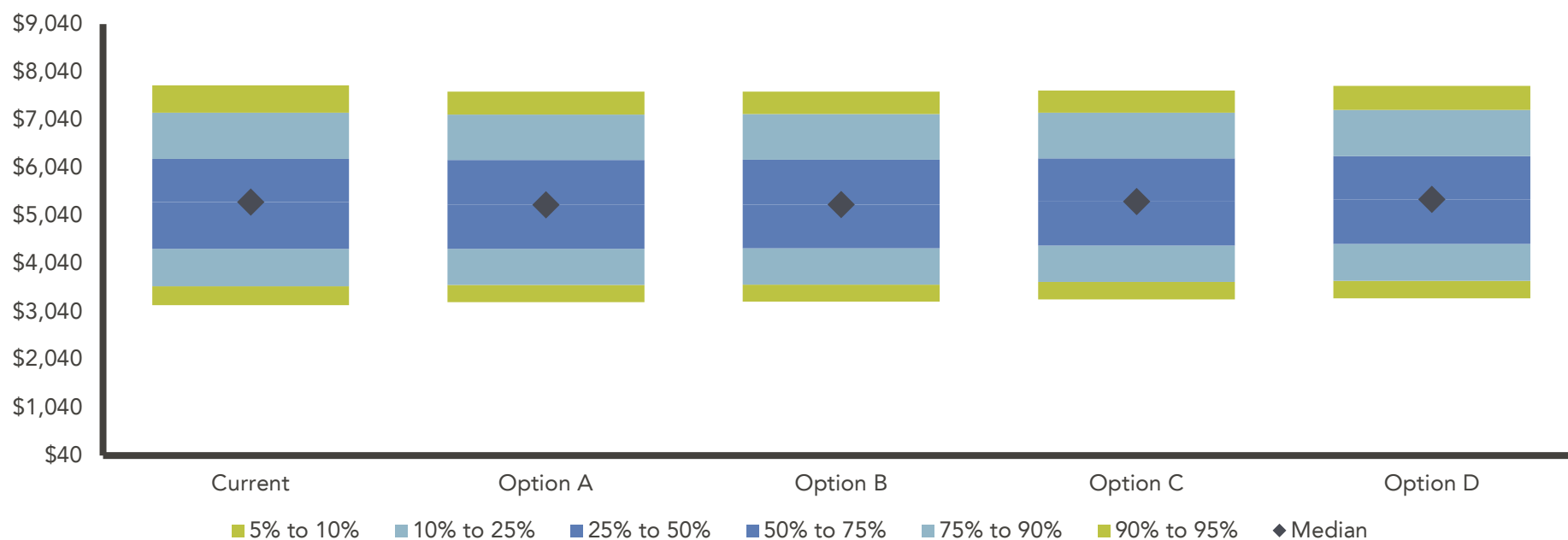
Projected Market Value Growth (\$ Millions)



Projected Year 10 Median Market Value (\$ Millions)

	Current	Option A	Option B	Option C	Option D
	\$5,324.9	\$5,271.3	\$5,277.1	\$5,338.6	\$5,381.4

Distribution of Year 10 Market Values (\$ Millions)



Projected Year 10 Market Value Ranges (\$ Millions)

Percentile	Current	Option A	Option B	Option C	Option D
5%	\$3,178.2	\$3,236.1	\$3,252.4	\$3,293.1	\$3,318.9
10%	\$3,571.7	\$3,600.4	\$3,604.8	\$3,662.1	\$3,685.4
25%	\$4,350.5	\$4,350.5	\$4,364.0	\$4,419.2	\$4,455.9
50%	\$5,324.9	\$5,271.3	\$5,277.1	\$5,338.6	\$5,381.4
75%	\$6,226.6	\$6,203.4	\$6,208.8	\$6,238.8	\$6,285.0
90%	\$7,191.4	\$7,149.9	\$7,159.4	\$7,192.0	\$7,248.1
95%	\$7,761.1	\$7,632.2	\$7,627.3	\$7,651.2	\$7,751.5

Asset Allocation Study Disclosures

The sources of information used in this study are believed to be reliable. Marquette Associates, Inc. has not independently verified all of the data used in this study and its accuracy cannot be guaranteed. Estimates and projections of financial market performance do not guarantee future performance. Since the model used to create this report relies on market data, results will vary depending on the date of the study. Past study results do not guarantee future results and are subject to change as more data becomes available. As appropriate, Marquette Associates, Inc. reserves the right to adjust the model used to prepare the study to reflect improved accuracy of portfolio modeling techniques. Results may change if the model is adjusted.

While the asset allocation model incorporates average correlations between asset classes, this can vary depending on what is happening in the market. This is especially true when financial markets are in flux. For example, while we expect international equities to decline in a similar manner to domestic equities, the possibility exists — though unlikely — for the next bear market to be concentrated in the United States. Every market downturn has its own unique nuances, so while these scenarios demonstrate what might happen and how they could affect a portfolio, it is critical that the investor understands the unpredictable nature of financial markets and that any downturn will not exactly match the generic scenarios and investment decisions should not be made based on hypothetical scenarios. Models cannot capture every potential outcome across all economic scenarios. While re-balancing is incorporated in the construction of each portfolio, the model does not reflect transaction costs associated with re-balancing.

Total Portfolio Returns

The return and risk projections included in this document are based on a Monte Carlo simulation of macroeconomic factors, which are used to model monthly return outcomes of capital markets. The simulations are created by a powerful economic scenario generator that simulates the future performance of the capital markets and macro-economy and are updated quarterly; the underlying models are calibrated based on the long-term historical record, so that they will reproduce the kinds of volatility and stress scenarios that have been observed over the 20th and 21st centuries. The models are linked and correlated so that the behavior of different asset classes and economic variables is consistent within each random scenario.

Total portfolio returns are time weighted, using underlying asset class returns. This assumes that either passive or active management will match or exceed the returns of the indices. Returns are annualized returns based on the average 10-year returns generated in the 1,000 Monte Carlo simulations. The returns for the total portfolio are calculated by the following formula:

$$Ret_{t=i} = [(MV_{t=i} - MV_{t=i-1}) - NetCashFlow_{t=i} - Fee_{t=i}] / [MV_{t=i-1} + NetCashFlow_{t=i}]$$

Total Portfolio net cash flows ("NetCashFlow") are provided by the client or the client's actuary and assumed to occur at the beginning of the month.

Illiquid asset class management fees ("Fee") are assumed to occur at the beginning of the month

Returns for liquid asset classes:

It should be noted that returns for the liquid classes presented in the asset allocation studies are time weighted and net of management fees.

PREPARED BY MARQUETTE ASSOCIATES

180 North LaSalle St, Ste 3500, Chicago, Illinois 60601
CHICAGO BALTIMORE MILWAUKEE PHILADELPHIA ST. LOUIS

PHONE 312-527-5500
WEB MarquetteAssociates.com

CONFIDENTIALITY NOTICE: This communication, including attachments, is for the exclusive use of the addressee and contains proprietary, confidential and/or privileged information; any use, copying, disclosure, dissemination or distribution is strictly prohibited. Marquette Associates, Inc. retains all proprietary rights they may have in the information.

Marquette Associates, Inc. ("Marquette") has prepared this document for the exclusive use by the client or third party for which it was prepared. The information herein was obtained from various sources, including but not limited to third party investment managers, the client's custodian(s) accounting statements, commercially available databases, and other economic and financial market data sources.

The sources of information used in this document are believed to be reliable. Marquette has not independently verified all of the information in this document and its accuracy cannot be guaranteed. Marquette accepts no liability for any direct or consequential losses arising from its use. The information provided herein is as of the date appearing in this material only and is subject to change without prior notice. Thus, all such information is subject to independent verification and we urge clients to compare the information set forth in this statement with the statements you receive directly from the custodian in order to ensure accuracy of all account information. Past performance does not guarantee future results and investing involves risk of loss. No graph, chart, or formula can, in and of itself, be used to determine which securities or investments to buy or sell.

Forward-looking statements, including without limitation any statement or prediction about a future event contained in this presentation, are based on a variety of estimates and assumptions by Marquette, including, but not limited to, estimates of future operating results, the value of assets and market conditions. These estimates and assumptions, including the risk assessments and projections referenced, are inherently uncertain and are subject to numerous business, industry, market, regulatory, geo-political, competitive, and financial risks that are outside of Marquette's control. There can be no assurance that the assumptions made in connection with any forward-looking statement will prove accurate, and actual results may differ materially.

The inclusion of any forward-looking statement herein should not be regarded as an indication that Marquette considers forward-looking statements to be a reliable prediction of future events. The views contained herein are those of Marquette and should not be taken as financial advice or a recommendation to buy or sell any security. Any forecasts, figures, opinions or investment techniques and strategies described are intended for informational purposes only. They are based on certain assumptions and current market conditions, and although accurate at the time of writing, are subject to change without prior notice. Opinions, estimates, projections, and comments on financial market trends constitute our judgment and are subject to change without notice. Marquette expressly disclaims all liability in respect to actions taken based on any or all of the information included or referenced in this document. **The information is being provided based on the understanding that each recipient has sufficient knowledge and experience to evaluate the merits and risks of investing.**

This presentation does not constitute an offer to sell, or a solicitation of an offer to buy, any interest in any investment vehicle, and should not be relied on as such. Targets, ranges and expectations set forth in this presentation are approximations; actual results may differ.

ABOUT MARQUETTE ASSOCIATES

Marquette was founded in 1986 with the sole objective of providing investment consulting at the highest caliber of service. Our expertise is grounded in our commitment to client service — our team aims to be a trusted partner and as fiduciaries, our clients' interests and objectives are at the center of everything we do. Our approach brings together the real-world experience of our people and our dedication to creativity and critical thinking in order to empower our clients to meet their goals. Marquette is an independent investment adviser registered under the Investment Advisers Act of 1940, as amended. Registration does not imply a certain level of skill or training. More information about Marquette including our investment strategies, fees and objectives can be found in our ADV Part 2, which is available upon request and on our website. For more information, please visit www.MarquetteAssociates.com.

November 26, 2025

To: Cincinnati Retirement System Board of Trustees
From: Jon Salstrom, Retirement Director
Subject: Investment Recommendation Memorandum

From the Asset Allocation study to be presented on Thursday, December 4, 2025, CRS and Marquette recommend adopting **Option D** (slightly revised from November's recommendation). Additionally, CRS and Marquette recommend hiring the 5 managers highlighted below to fulfill the structure and design within the opportunistic credit and hedge fund buckets.

Per the Investment Policy Statement, an asset allocation study will take place every 3-5 years with the last formal one conducted as of September 30, 2022. The proposed recommendations do not deviate from the current investment philosophy, only add to or subtract to existing asset classes, essentially keeping the portfolio passive in efficient markets and active in inefficient markets while building a diverse portfolio with reduced volatility and achieving our assumed rate of return.

The objective of the proposed asset allocation is to continue building a robust and resilient investment portfolio—one designed to perform well across market cycles and to emphasize the power of compounding returns over long-term horizons. CRS seeks to balance return, risk, and liquidity in an environment that continues to evolve.

The recommended allocation aims to enhance protection against volatility and drawdowns while maintaining sufficient liquidity. In particular, CRS seeks to reduce vulnerability to large market declines—such as those experienced in 2022 when rising inflation caused correlations among asset classes to increase. The proposed changes introduce more efficient and diversified sources of return across uncorrelated asset classes, effectively adding new tools to strengthen the portfolio's flexibility and resilience.

In the asset allocation study, moving from the current allocation to **Option D**, the recommendations can be categorized into three primary areas: **Growth Equity**, **Diversifying Returns**, and **Barbell Fixed Income**. Further details on the structure and design of these strategies are provided below.

1. Growth Equity (combining public and private equity)

CRS's equity allocation combines both public and private markets when determining the right mix. Public small-cap equities have experienced stagnation in recent years, with limited new issuance, while companies remain private for longer periods and typically enter the public markets as mid- or large-cap entities. At the same time, public market valuations are elevated, constraining expected returns over the next several years. Given these dynamics, CRS recommends increasing the allocation to **private equity** and reducing exposure to **public equity**. The total equity exposure remains approximately constant, but with an improved balance between opportunity and projected returns:

- **Current Portfolio:** 44.5% Public Equity + 8.0% Private Equity = **52.5% Total**
- **Option D:** 39% Public Equity + 13.5% Private Equity = **52.5% Total**

2. Diversifying Returns

We recommend increasing the **Hedge Fund** allocation to 4.0% from 2.5% and reducing **Global Infrastructure** from 10% to 7%. Hedge funds provide sources of return that are generally uncorrelated with traditional public equity and fixed income, and marginally enhancing the overall liquidity profile of the portfolio. This additional layer of diversification allows CRS to access capital from alternative sources during periods of market stress and to mitigate the impact of steep drawdowns. Reducing drawdowns over time supports more effective long-term compounding, which can improve both portfolio returns and the system's funded status.

3. Barbell Fixed Income

With nearly half of the Bloomberg Aggregate Index now composed of U.S. Treasuries, CRS recommends increasing exposure to specialized credit managers in our **opportunistic credit bucket (+1%)** and **private credit (+1.5%)** to achieve a more favorable risk/return profile within fixed income. Specialized credit managers have the ability to capitalize on complex or less-followed opportunities that traditional Core Plus and High Yield managers typically avoid. This segment of the market remains relatively inefficient, offering the potential for enhanced risk-adjusted returns. While total fixed income exposure (public and private credit) remains largely unchanged—**30.5% in Option D versus 29.0% currently**—the reallocation emphasizes areas of the market that are less efficient and more opportunistic in nature.

Structure and Design of Key Asset Classes

Opportunistic Credit

CRS currently lacks meaningful exposure to complex, distressed, and special-situation opportunities within high yield and bank loans. While Shenkman provides high-quality exposure in this area, the addition of **Silver Point** and **463** would expand coverage into niche, complex, and distressed credit opportunities in the below investment grade universe. Silver Point and 463 are complementary managers to Shenkman:

- **Silver Point** is a long-established leader in distressed, known for taking larger, controlling positions.
- **463** is a more nimble manager focused on smaller, catalyst-driven opportunities that have the potential to generate outsized returns.

Given CRS's scale, maintaining **two to four managers** should efficiently cover the breadth of the opportunity set within opportunistic credit.

Hedge Funds

The hedge fund universe represents a broad and diverse opportunity set. CRS's objective is to construct a complementary group of managers whose returns are uncorrelated with one another and with traditional public equity and fixed income markets. We recommend retaining **NB VRP**, which provides modest equity beta exposure, and adding the following managers:

- **Whitebox:** Credit-focused, multi-strategy
- **Alyeska:** Traditional long/short equity, beta-neutral
- **Kirkoswald:** Global macro strategy

This combination is designed to create a resilient and liquid hedge fund portfolio that enhances overall portfolio stability. Global macro managers, in particular, performed well in 2022 and continue to offer valuable diversification benefits. Throughout the due diligence process, CRS and Marquette emphasized transparency,

process discipline, and alignment on fees. The recommended managers were selected for their clarity of process, cultural alignment, and commitment to partnership.

Conclusion

These recommendations represent the culmination of a detailed, collaborative review process conducted by CRS and Marquette over the past 12 months. The proposed changes are designed to strengthen the portfolio's long-term return potential, enhance diversification, and improve liquidity management.

Summary of Changes (Changes below are all from current portfolio):

Portfolio A:

1. Terminate Large-Cap Value and Small-Cap Value equities, moving to Russell 3000 Index (27.5% total)
2. Reduce Infrastructure from 10% to 7% - long term terminate Ullico, keep IFM/JP
3. Increase Opportunistic Credit to 3% from 2% - add Silver Point and 463
4. Increase hedge funds to 4% from 2.5% - add Alyeska, Whitebox and Kirkoswald
5. Increase private debt to 8% from 6.5%

Portfolio B:

1. Reduce US equities by 1.5% to 27%
2. Reduce Core bond from 11.5% to 10.0%
3. Reduce Infrastructure from 10% to 7%
4. Increase opportunistic credit and hedge funds by 1% and 2.5% to 4% & 5%, respectively
5. Increase private debt from 6.5% to 8%

Portfolio C:

1. Reduce US equities by 3.5% to 25.0%
2. Reduce ACWI ex US by 1% to 15%
3. Reduce Infrastructure from 10% to 7%
4. Increase opportunistic credit to 4% from 2% & increase HFs to 4% from 2.5%
5. Increase PE to 12% from 8%

Portfolio D:

1. Reduce US equities by 4.5% to 24%
2. Reduce ACWI ex US by 1% to 15%
3. Reduce Core bond from 11.5% to 10.5%
4. Reduce Infrastructure from 10% to 7%
5. Increase opportunistic credit to 3% from 2% & increase HFs to 4% from 2.5%
6. Increase Private Debt to 8% from 6%
7. Increase private equity to 13.5% from 8%