

South Central Connecticut Regional Water Authority
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or
****Dial-in by phone**
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Phone conference ID: 320 670 14#

AGENDA

Regular Meeting of Thursday, October 24, 2024 at 12:30 p.m.

- A. Safety Moment
- B. Public Comment: Statements limited to the legislative function of the Authority. The time limit granted to each speaker shall be three (3) minutes. Residents may address the Board.
- C. Meet as Pension & Benefit Committee: C. LaMarr
 - 1. Approve Minutes – July 25, 2024 meeting
 - 2. Quarterly Investment Performance Review: S. Kelliher, J. McLaughlin, and A. Kantapin
- D. Act on matters arising from committee meeting.
- E. Consent Agenda
 - 1. Approve Minutes – September 26, 2024 meeting
 - 2. Capital Budget Authorization - November 2024
 - 3. Capital Budget Transfer Notifications (no action required) – November 2024
 - 4. Monthly Financial Report – September 2024
 - 5. Accounts Receivable Update – September 2024
 - 6. Revisions to RWA Rules and Regulations
- F. Reports on RPB Committee meetings
- G. Business Updates: L. Bingaman
 - 1. RWAY CIS Update: P. Singh
 - 2. Monthly Business Highlights: L. Bingaman
- H. *Disposition Application (continuation) – 56 Squantuck Road, Seymour: S. Lakshminarayanan and J. Triana
- I. Blue Drop Acquisition Update: L. Bingaman and R. Kowalski - - *Upon 2/3 vote, convene in executive session pursuant to C.G.S. Section 1-200(6)(E) to discuss matters covered by Section 1-210(b)(5)(A)(B), pertaining to trade secrets and commercial and financial information.*
- J. Finance: R. Kowalski
 - 1. Consider and act on resolution authorizing term sheets for financing associated with Blue Drop - *Upon 2/3 vote, convene in possible executive session pursuant to C.G.S. Section 1-200(6)(E) to discuss matters covered by Section 1-210(b)(5)(B), pertaining to commercial and financial information.*
 - 2. Ten Year Model - *Upon 2/3 vote, convene in executive session pursuant to C.G.S. Section 1-200(6)(E) to discuss matters covered by Section 1-210(b)(5)(B), pertaining to commercial and financial information.*

** Members of the public may attend the meeting in person or via conference call. For information on attending the meeting and to view meeting documents, please visit <http://tinyurl.com/3hhtm38z>. For questions, contact the board office at jslubowski@rwater.com or by calling 203-401-2515.

*RPB member (Jamie Mowat Young) will be excused at Item H.

**South Central Connecticut Regional Water Authority
Pension & Benefit Committee**

Minutes of the July 25, 2024 Meeting

A regular meeting of the South Central Connecticut Regional Water Authority (“RWA”) Pension & Benefit Committee took place on Thursday, July 25, 2024, at 90 Sargent Drive, New Haven, Connecticut and via remote access. Chair LaMarr presided.

Committee members present – Mss. LaMarr and Sack, and Messrs. Borowy, Curseaden and Ricozzi
Management: Mss. Kowalski and Calo(R), and Messrs. Bingaman, Hill(R), Lakshminarayanan and Singh(R)
RPB: Ms. Campbell(R)
Morgan Stanley: Messrs. Kelliher(R), McLaughlin(R), and Kantapin(R)
Staff: Mrs. Slubowski

C. MEET AS PENSION & BENEFIT COMMITTEE

Chair LaMarr called the meeting to order at 12:31 p.m.

C.1 APPROVE MINUTES – APRIL 25, 2024 MEETING

On motion made by Mr. Curseaden, seconded by Mr. Ricozzi, and unanimously carried, the Committee approved the minutes its April 25, 2024 meeting.

Borowy	Aye
Curseaden	Aye
LaMarr	Aye
Ricozzi	Aye
Sack	Aye

C.2 QUARTERLY PERFORMANCE INVESTMENT REVIEW

Mr. Kelliher, the RWA’s investment advisor, reported on the Authority’s Pension Investment Performance for RWA’s Salaried and Union Pension Plans and its Voluntary Employees’ Beneficiary Association Plan (VEBA), for the period ended June 30, 2024. He also reviewed the asset allocations and market commentary.

C.3 401K ANNUAL UPDATE

Mr. McLaughlin, of Morgan Stanley, the RWA’s investment advisor provided an annual review of the RWA’s 401K Plan including investment options, asset values, and 401K plan initiatives and metrics.

At 1:06 p.m., on motion made by Mr. Curseaden and seconded by Mr. Ricozzi, the Committee voted to adjourn the meeting.

Borowy	Aye
Curseaden	Aye
LaMarr	Aye
Ricozzi	Aye
Sack	Aye

Catherine E. LaMarr, Chair

(R) = Attended remotely.

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Discussion Outline & Agenda

	Section
Market Commentary	I.
Asset Allocation & Investment Matrices	II.
Investment Results	III.
SCCTRWA Liability/Cash Flow Analysis: Summary	IV.
Appendix	
- Liability/Cash Flow Analysis: Detailed	V.
- Historical Cost Savings Discussion	
- Investment Holdings Analysis	

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Market Commentary





S&P 500 Index at inflection points

S&P 500 Price Index



Source: Compustat, FactSet, Federal Reserve, Refinitiv Datastream, Standard & Poor's, J.P. Morgan Asset Management. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. Forward price-to-earnings ratio is a bottom-up calculation based on IBES estimates and FactSet estimates since January 2022. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns.
 Guide to the Markets – U.S. Data are as of September 30, 2024.

J.P.Morgan
 ASSET MANAGEMENT

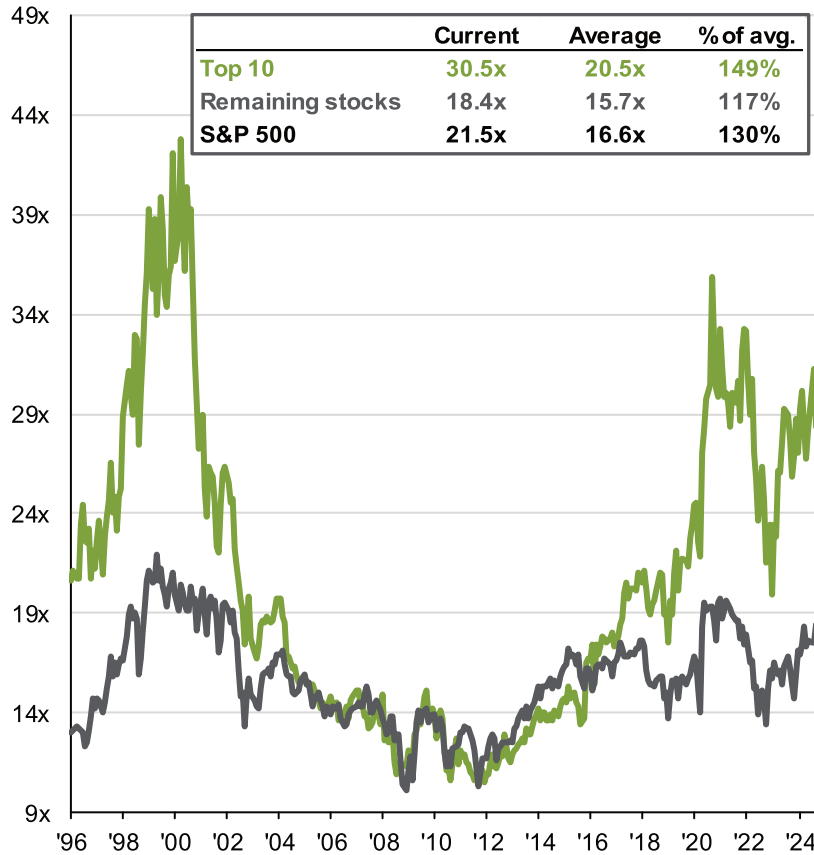


S&P 500: Index concentration and valuations

Equities

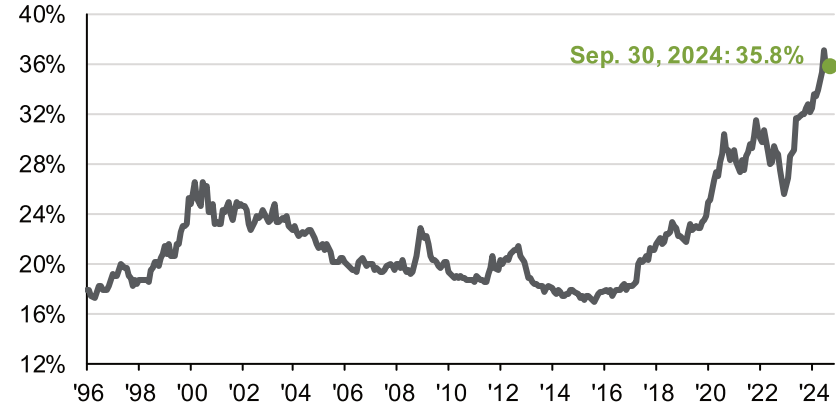
P/E ratio of the top 10 and remaining stocks in the S&P 500

Next 12 months, 1996 - present



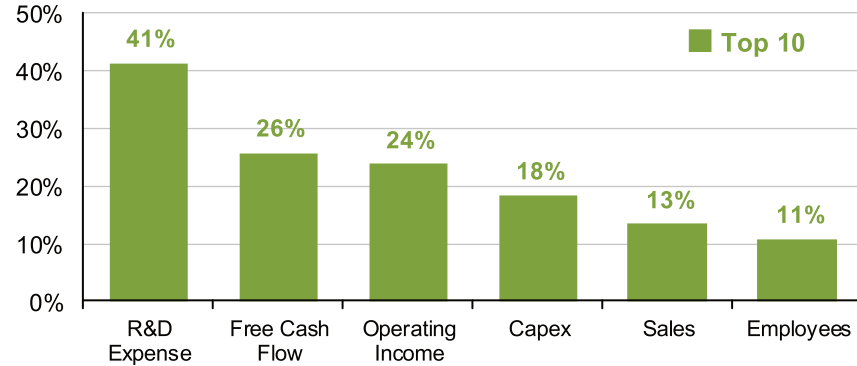
Weight of the top 10 stocks in the S&P 500

% of market capitalization of the S&P 500



Economic concentration in the S&P 500

% of S&P 500 metric, 2Q24



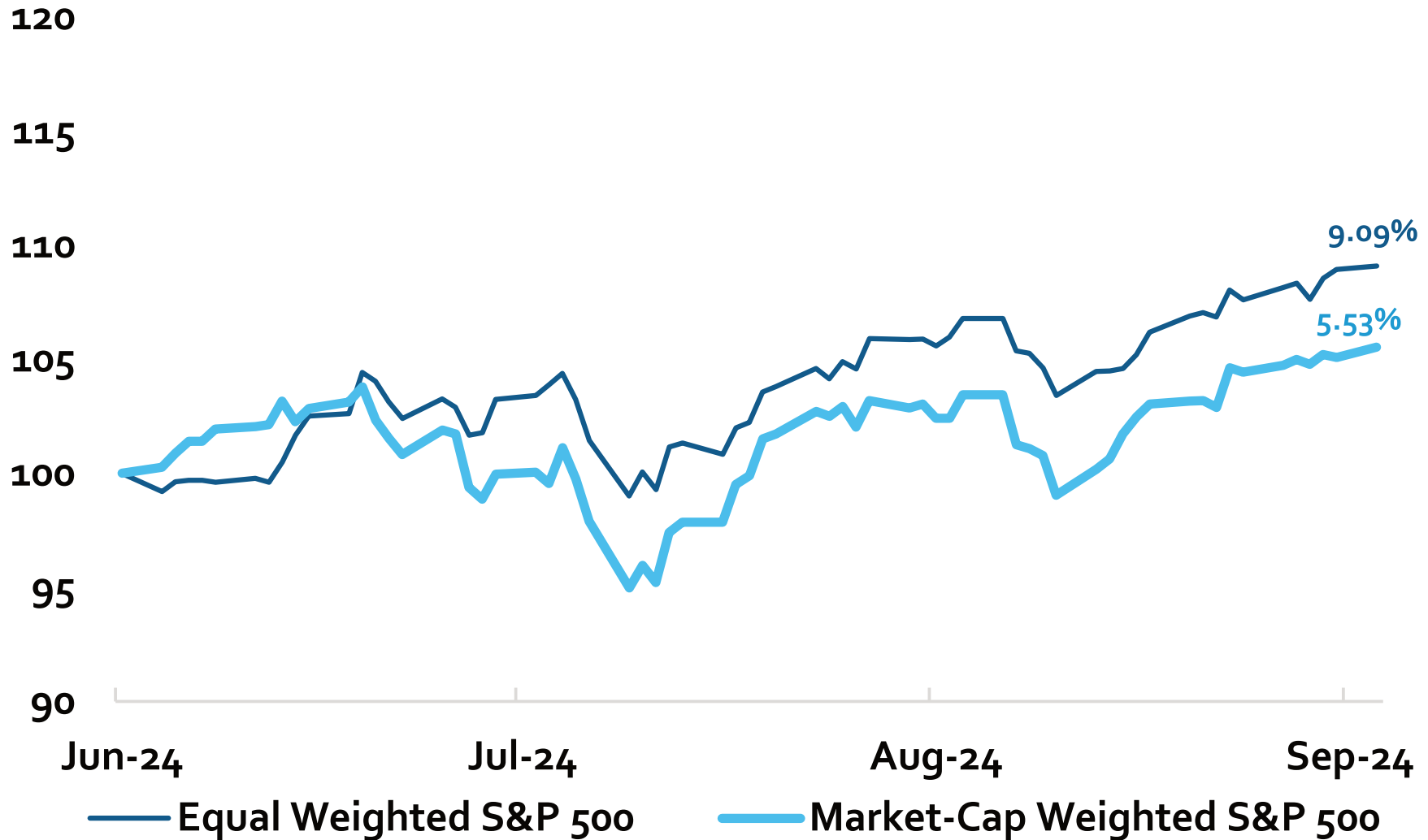
Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management. The top 10 S&P500 companies are based on the 10 largest index constituents at the beginning of each month. As of 9/30/2024, the top 10 companies in the index were AAPL (7.1%), MSFT (6.5%), NVDA (6.1%), AMZN (3.6%), GOOGL/GOOG (3.6%), META (2.5%), BRK.B (1.7%), AVGO (1.7%), TSLA (1.5%) and LLY (1.4%). The remaining stocks represent the rest of the 492 companies in the S&P500.
 Guide to the Markets – U.S. Data are as of September 30, 2024.

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S&P 500: Equal-Weighted vs. Market-Weight 3Q24 Performance

As of September 30, 2024

Market Cap-Weighted vs. Equal-Weighted Price Performance (Indexed)



Source: Bloomberg and Morgan Stanley Wealth Management GIO.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

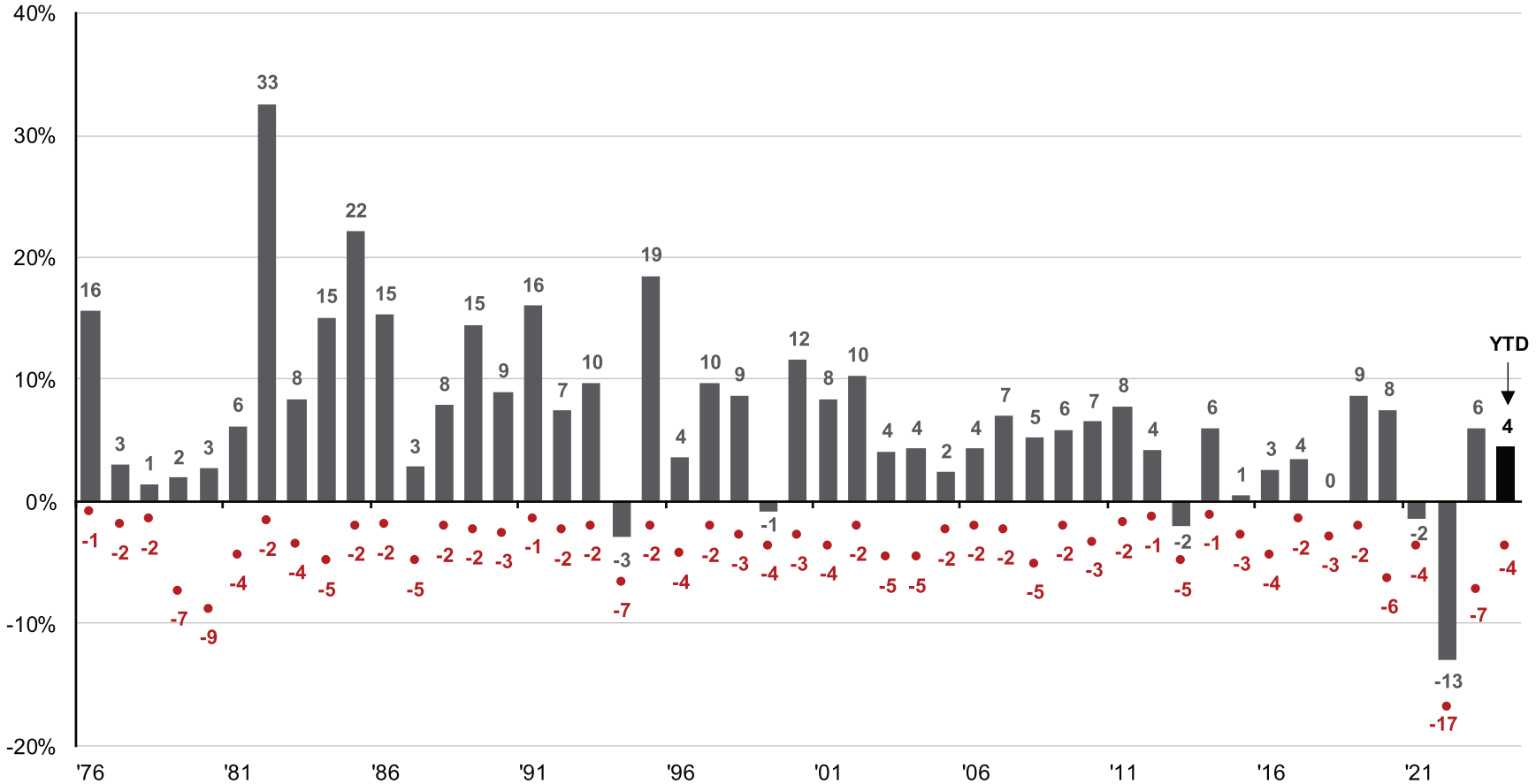


Bloomberg U.S. Agg. annual returns and intra-year declines

Fixed Income

Bloomberg U.S. Aggregate intra-year declines vs. calendar year returns

Despite average intra-year drops of 3.5%, annual returns were positive in 43 of 48 years



Source: Bloomberg, FactSet, J.P. Morgan Asset Management.
 Returns are based on total return. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1976 to 2023, over which time period the average annual return was 6.6%. Returns from 1976 to 1989 are calculated on a monthly basis; daily data are used afterward.
Guide to the Markets – U.S. Data are as of September 30, 2024.

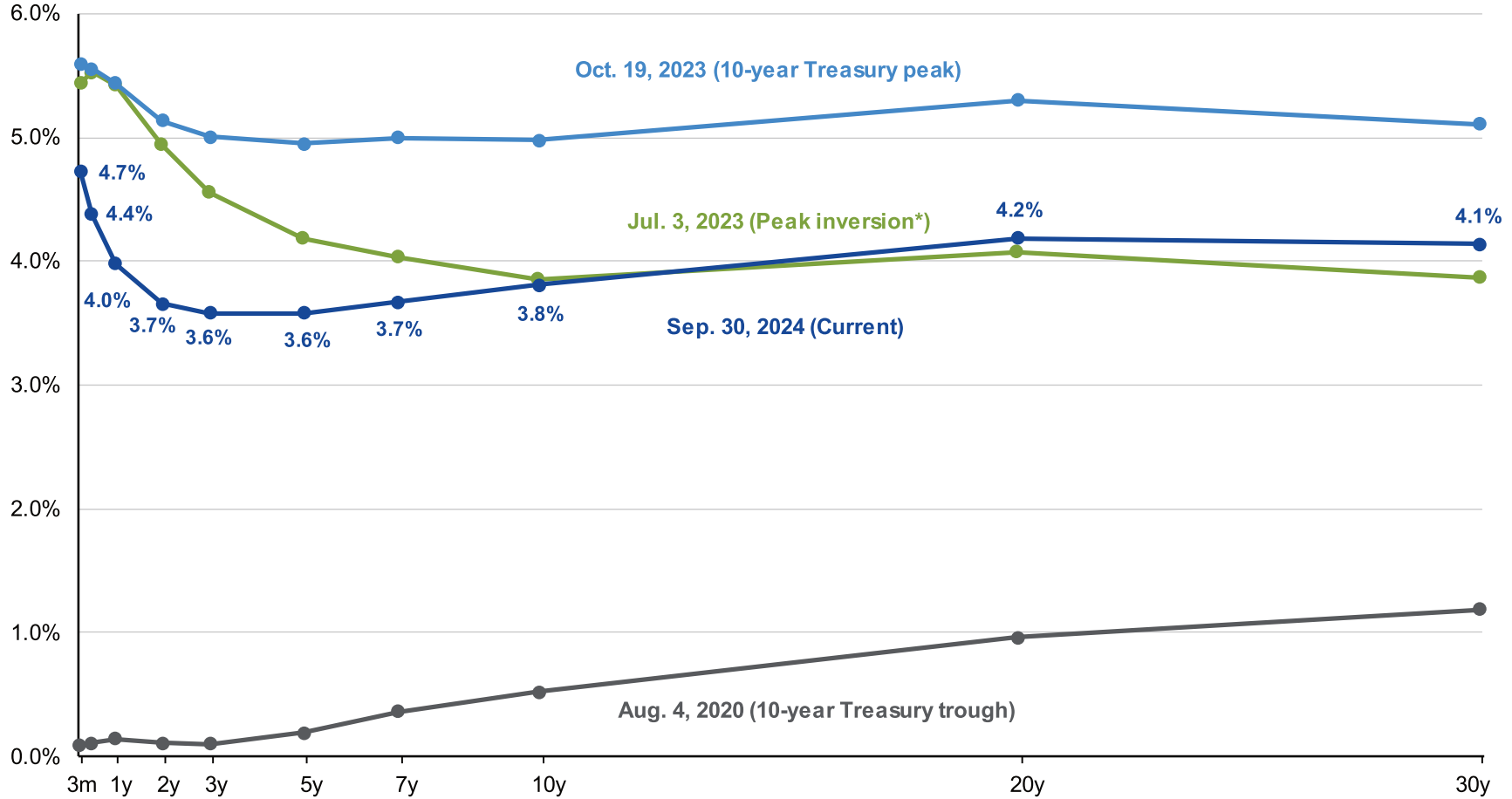
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Yield curve

Fixed Income

U.S. Treasury yield curve



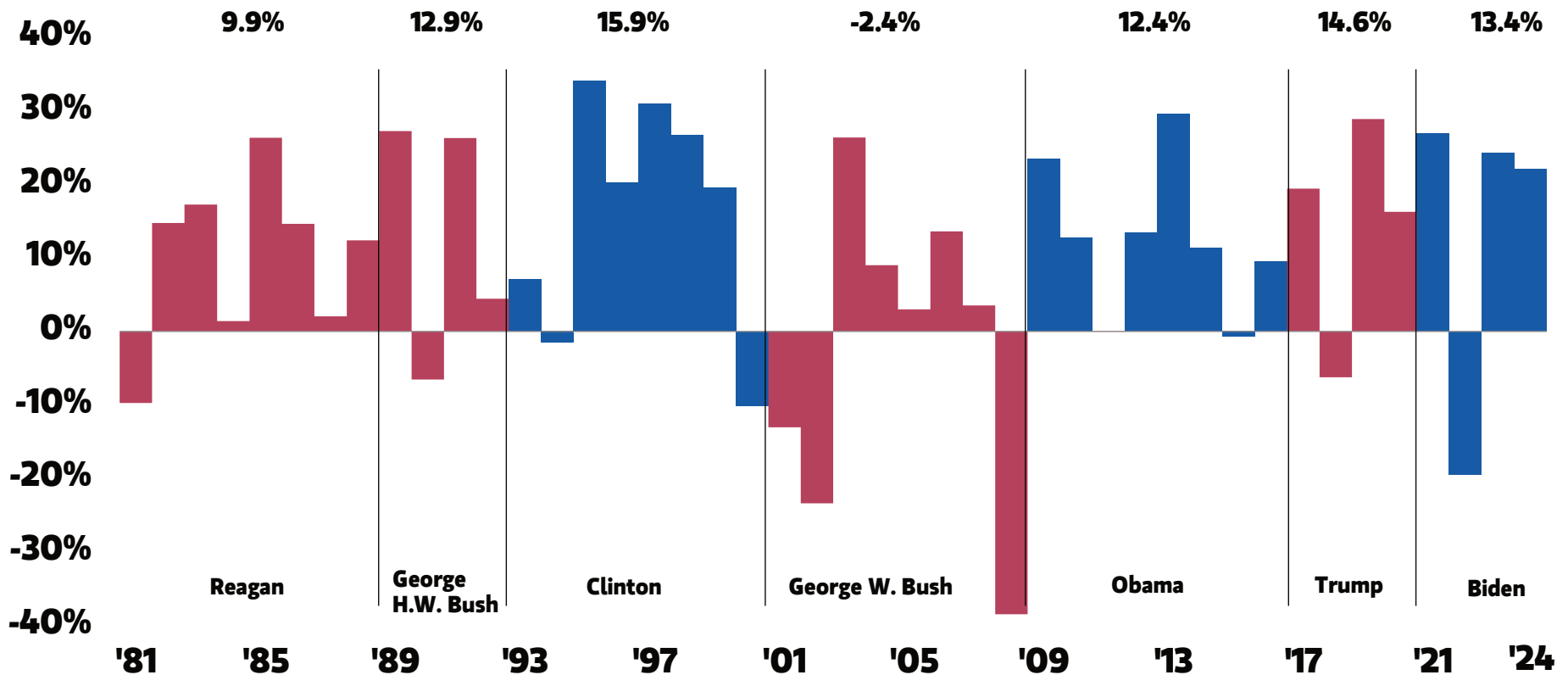
Source: FactSet, Federal Reserve, J.P. Morgan Asset Management. Analysis references data back to 2020. *Peak inversion is measured by the spread between the yield on a 10-year Treasury and 2-year Treasury. Guide to the Markets – U.S. Data are as of September 30, 2024.

S&P 500 Annual Returns by Presidential Administration

As of September 30, 2024

S&P 500 Annual Returns, Presidential Term Average

Democrat **Republican**



Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office

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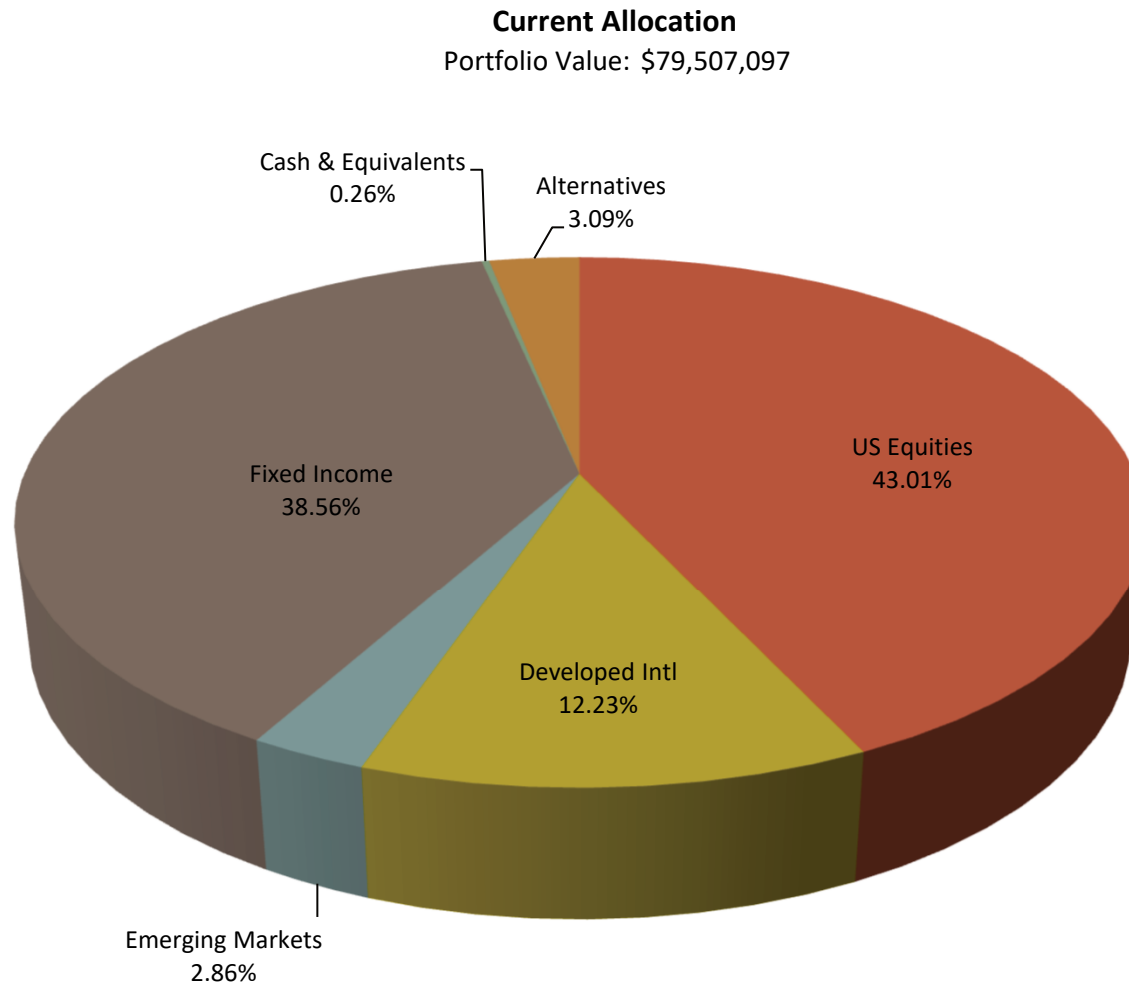
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Asset Allocation & Investment Matrices



SCCT Regional Water Authority - Salary & Union Plans



Total Equity	
	58.10%
% of Total Equity	
US Equity	= 74.03%
Intl Equity	= 25.97%
% of Intl Equity	
Developed Intl	= 81.05%
Emerging Markets	= 18.95%
Russell 3000 Style Analysis*	
Value	= 28.03%
Core	= 46.48%
Growth	= 25.49%
US Equity Style Analysis*	
Value	= 35.49%
Core	= 48.07%
Growth	= 16.44%

Assets as of 9/30/2024

Asset Allocation does not assure a profit or protect against loss in declining financial markets

The information and data contained in this report are from sources considered reliable,

but their accuracy and completeness is not guaranteed. This report has been prepared for illustrative purposes only

and is not intended to be used as a substitute for monthly transaction statements you receive on a regular basis

from Morgan Stanley & Co. Incorporated Please compare the data on this document carefully with your monthly statements

to verify its accuracy. The Company strongly encourages you to consult with your own accountants or other

advisors with respect to any tax questions."

*Equity Style Analysis provided by Morningstar "Asset Scan"

Data Source: Morgan Stanley & Morningstar

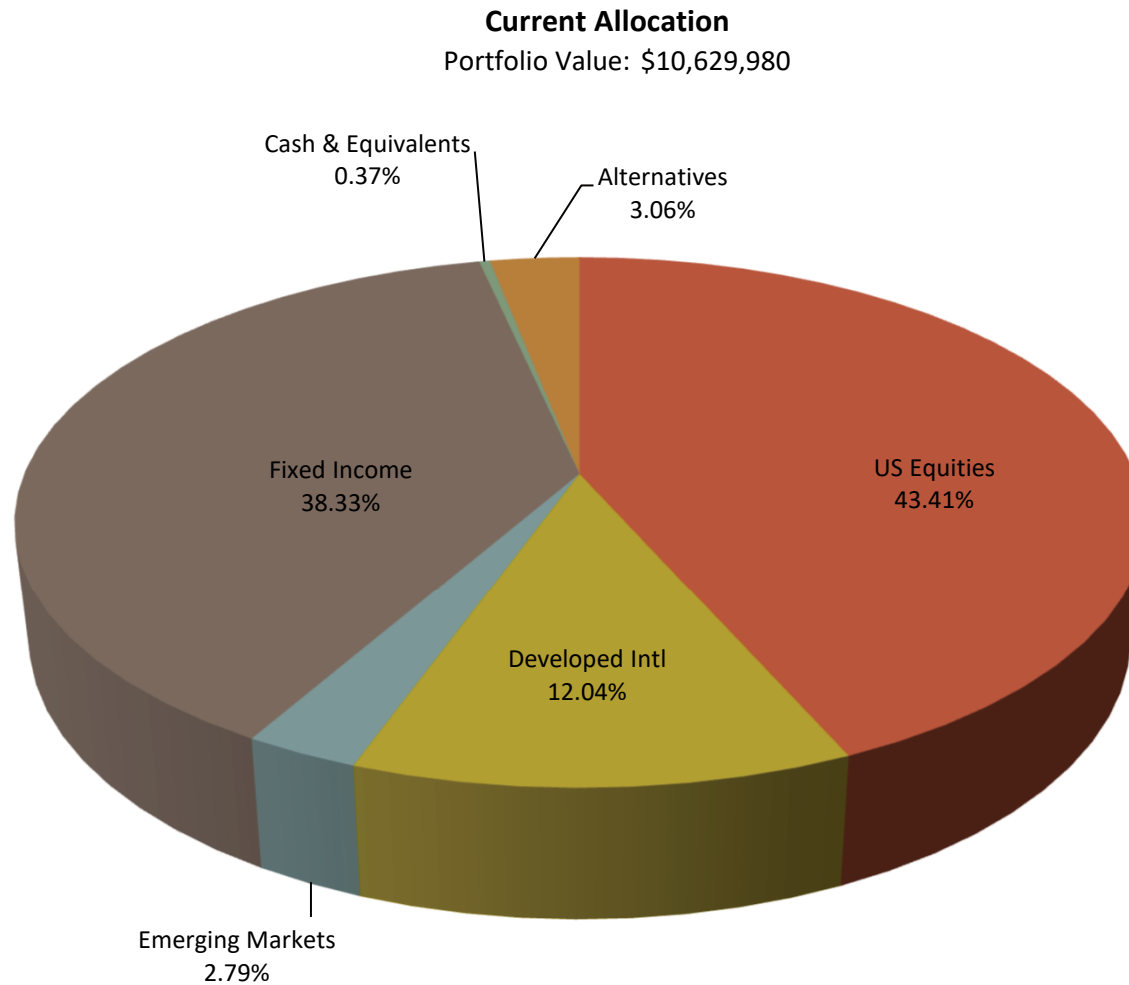
SCCT Regional Water Authority - Salary & Union Plans
 Asset Allocation Matrix Summary
 As of 9/30/2024

Benchmark vs Actual

	Benchmark	Actual	+/-
Russell 3000	42.00%	43.21%	1.21%
MSCI ACWI ex US	15.00%	14.70%	-0.30%
Bloomberg US Aggregate	31.00%	38.75%	7.75%
FTSE WGBI	3.00%	0.00%	-3.00%
HFRI FOF	5.00%	1.52%	-3.48%
Global Real Estate	2.00%	1.57%	-0.43%
Cash & Equivalents/T-Bills	2.00%	0.26%	-1.74%
Total	100.00%	100.00%	0.00%

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SCCT Regional Water Authority - VEBA Plan



Total Equity	
	58.24%
% of Total Equity	
US Equity	= 74.54%
Intl Equity	= 25.46%
% of Intl Equity	
Developed Intl	= 81.17%
Emerging Markets	= 18.83%
Russell 3000 Style Analysis*	
Value	= 28.03%
Core	= 46.48%
Growth	= 25.49%
US Equity Style Analysis*	
Value	= 35.46%
Core	= 48.07%
Growth	= 16.47%

Assets as of 9/30/2024

Asset Allocation does not assure a profit or protect against loss in declining financial markets

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*Equity Style Analysis provided by Morningstar "Asset Scan"

Data Source: Morgan Stanley & Morningstar

SCCT Regional Water Authority - VEBA Plan
 Asset Allocation Matrix Summary
 As of 9/30/2024

Benchmark vs Actual

	Benchmark	Actual	+/-
Russell 3000	42.00%	43.61%	1.61%
MSCI ACWI ex US	15.00%	14.44%	-0.56%
Bloomberg US Aggregate	31.00%	38.52%	7.52%
FTSE WGBI	3.00%	0.00%	-3.00%
HFRI FOF	5.00%	1.55%	-3.45%
Global Real Estate	2.00%	1.51%	-0.49%
Cash & Equivalents/T-Bills	2.00%	0.37%	-1.63%
Total	100.00%	100.00%	0.00%

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Investment Results



SCCT Regional Water Authority
Third Quarter Investment Results
June 30, 2024 - September 30, 2024

Account Number	Account Type	Beg. Asset Value 30-Jun-2024	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 30-Sep-2024	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$47,026,582	\$0	\$27,327	\$47,053,909	\$49,889,806	\$2,835,897	6.03%	6.12%
447-xxx451	Union	\$27,918,561	\$0	\$19,066	\$27,937,627	\$29,617,291	\$1,679,664	6.01%	6.11%
447-xxx456	VEBA	\$10,008,031	\$0	\$0	\$10,008,031	\$10,629,980	\$621,949	6.21%	6.31%
axx15a	Matrix Trust (Salaried)	\$721,397	(\$324,374)	\$0	\$397,023	\$397,023	\$0	-	-
axx15b	Matrix Trust (Union)	\$338,188	(\$229,107)	\$0	\$109,081	\$109,081	\$0	-	-
axx16	Matrix Trust(VEBA)	\$339,952	(\$195,990)	(\$46,393)	\$97,569	\$97,569	\$0	-	-
Consolidated		\$86,352,712	(\$749,472)	\$0	\$85,603,240	\$90,740,751	\$5,137,510	6.05%	6.14%

June 30, 2024 - September 30, 2024

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return (Current): 6.75% x (3/12) 1.69%

Guidelines/Benchmarks - Market Cap Weighted

Least Equity Risk: 34% R3000, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bill: 5.61%
 Strategic: 42% R3000, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bill: 6.07%
 Most Equity Risk: 44% R3000, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bill: 6.04%

Guidelines/Benchmarks - Equal Weighted

Least Equity Risk: 34% S&P 500 Equal Weighted, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bill: 6.75%
 Strategic: 42% S&P 500 Equal Weighted, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bill: 7.48%
 Most Equity Risk: 44% S&P 500 Equal Weighted, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bill: 7.53%

Russell 3000	6.23%
S&P 500	5.89%
S&P 500 Equal Weight	9.60%
Russell 1000 Value	9.43%
Russell 1000	6.08%
Russell 1000 Growth	3.19%
Russell 2000	9.27%
MSCI All Country World ex. US	8.06%
MSCI EAFE	7.26%
MSCI EM	8.72%
Bloomberg Aggregate	5.20%
Bloomberg Govt/Credit Intermediate	4.17%
HFRI Fund of Funds Index	1.08%
DJ Global World Real Estate	17.07%
FTSE WGBI Index	6.95%
30 Day T-Bill	1.36%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

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Data Source: Morgan Stanley & Morningstar

SCCT Regional Water Authority
Fiscal Year Investment Results
May 31, 2024 - September 30, 2024

Account Number	Account Type	Beg. Asset Value 31-May-2024	Net Deposits/Withdrawals	Transfers*	Net Invested	Ending Asset Value 30-Sep-2024	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$46,574,710	\$0	\$35,687	\$46,610,397	\$49,889,806	\$3,279,409	7.04%	7.16%
447-xxx451	Union	\$27,639,383	\$0	\$33,882	\$27,673,265	\$29,617,291	\$1,944,026	7.03%	7.15%
447-xxx456	VEBA	\$9,914,332	\$0	\$0	\$9,914,332	\$10,629,980	\$715,649	7.22%	7.34%
axx15a	Matrix Trust (Salaried)	\$828,045	(\$431,021)	\$0	\$397,023	\$397,023	\$0	-	-
axx15b	Matrix Trust (Union)	\$415,577	(\$306,496)	\$0	\$109,081	\$109,081	\$0	-	-
axx16	Matrix Trust(VEBA)	\$178,145	(\$34,183)	(\$46,393)	\$97,569	\$97,569	\$0	-	-
Consolidated		\$85,550,192	(\$771,701)	\$23,177	\$84,801,668	\$90,740,751	\$5,939,083	7.06%	7.18%

May 31, 2024 - September 30, 2024

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return (Current): 6.75% x (4/12)	2.25%
Guidelines/Benchmarks - Market Cap Weighted	
Least Equity Risk: 34% R3000, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	7.14%
Strategic: 42% R3000, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	7.77%
Most Equity Risk: 44% R3000, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	7.69%
Guidelines/Benchmarks - Equal Weighted	
Least Equity Risk: 34% S&P 500 Equal Weighted, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	6.99%
Strategic: 42% S&P 500 Equal Weighted, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	7.59%
Most Equity Risk: 44% S&P 500 Equal Weighted, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	7.51%
	Russell 3000 9.52%
	S&P 500 9.69%
	S&P 500 Equal Weight 9.10%
	Russell 1000 Value 8.40%
	Russell 1000 9.59%
	Russell 1000 Growth 10.15%
	Russell 2000 8.26%
	MSCI All Country World ex. US 7.96%
	MSCI EAFE 5.53%
	MSCI EM 13.01%
	Bloomberg Aggregate 6.19%
	Bloomberg Govt/Credit Intermediate 5.00%
	HFRI Fund of Funds Index 1.39%
	DJ Global World Real Estate 17.08%
	FTSE WGBI Index 6.92%
	30 Day T-Bill 1.81%

***Fiscal Year Transfers Balance of \$23,177: Matrix Trust transferred money to Morgan Stanley on 5/31/2024 (\$13,636.40 & \$9,540.10)**

***Morgan Stanley accounts did not receive those proceeds until 6/3/2024**

Performance for accounts held outside of Morgan Stanley are calculated using simple math

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SCCT Regional Water Authority
Year to Date Investment Results
December 31, 2023 - September 30, 2024

Account Number	Account Type	Beg. Asset Value 31-Dec-2023	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 30-Sep-2024	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$45,170,155	\$0	(\$653,308)	\$44,516,847	\$49,889,806	\$5,372,958	12.06%	12.35%
447-xxx451	Union	\$26,796,305	\$0	(\$362,776)	\$26,433,529	\$29,617,291	\$3,183,762	12.04%	12.33%
447-xxx456	VEBA	\$9,470,662	\$0	\$0	\$9,470,662	\$10,629,980	\$1,159,318	12.24%	12.53%
axx15a	Matrix Trust (Salaried)	\$191,440	(\$544,417)	\$750,000	\$397,023	\$397,023	\$0	-	-
axx15b	Matrix Trust (Union)	\$49,796	(\$370,715)	\$430,000	\$109,081	\$109,081	\$0	-	-
axx16	Matrix Trust(VEBA)	\$468,937	(\$207,452)	(\$163,916)	\$97,569	\$97,569	\$0	-	-
Consolidated		\$82,147,295	(\$1,122,584)	\$0	\$81,024,712	\$90,740,751	\$9,716,039	12.07%	12.36%

December 31, 2023 - September 30, 2024

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return (Current): 6.75% x (9/12) 5.06%

Guidelines/Benchmarks - Market Cap Weighted

Least Equity Risk: 34% R3000, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bill: 11.17%
 Strategic: 42% R3000, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bill: 12.89%
 Most Equity Risk: 44% R3000, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bill: 13.73%

Guidelines/Benchmarks - Equal Weighted

Least Equity Risk: 34% S&P 500 Equal Weighted, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bill: 9.31%
 Strategic: 42% S&P 500 Equal Weighted, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bill: 10.59%
 Most Equity Risk: 44% S&P 500 Equal Weighted, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bill: 11.32%

Russell 3000	20.63%
S&P 500	22.08%
S&P 500 Equal Weight	15.16%
Russell 1000 Value	16.68%
Russell 1000	21.18%
Russell 1000 Growth	24.55%
Russell 2000	11.17%
MSCI All Country World ex. US	14.21%
MSCI EAFE	12.99%
MSCI EM	16.86%
Bloomberg Aggregate	4.45%
Bloomberg Govt/Credit Intermediate	4.68%
HFRI Fund of Funds Index	5.98%
DJ Global World Real Estate	12.63%
FTSE WGBI Index	2.72%
30 Day T-Bill	4.13%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

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Data Source: Morgan Stanley & Morningstar

SCCT Regional Water Authority
Trailing Twelve Month Investment Results
September 30, 2023 - September 30, 2024

Account Number	Account Type	Beg. Asset Value 30-Sep-2023	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 30-Sep-2024	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$41,636,281	\$0	(\$598,467)	\$41,037,814	\$49,889,806	\$8,851,992	21.41%	21.84%
447-xxx451	Union	\$24,688,617	\$0	(\$324,814)	\$24,363,803	\$29,617,291	\$5,253,488	21.42%	21.84%
447-xxx456	VEBA	\$8,724,438	\$0	\$0	\$8,724,438	\$10,629,980	\$1,905,543	21.84%	22.27%
axx15a	Matrix Trust (Salaried)	\$344,210	(\$697,187)	\$750,000	\$397,023	\$397,023	\$0	-	-
axx15b	Matrix Trust (Union)	\$125,805	(\$446,724)	\$430,000	\$109,081	\$109,081	\$0	-	-
axx16	Matrix Trust(VEBA)	\$734,880	(\$380,592)	(\$256,719)	\$97,569	\$97,569	\$0	-	-
Consolidated		\$76,254,232	(\$1,524,503)	\$0	\$74,729,729	\$90,740,751	\$16,011,022	21.46%	21.89%

September 30, 2023 - September 30, 2024

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return (Current): 6.75% 6.75%

Guidelines/Benchmarks - Market Cap Weighted

Least Equity Risk: 34% R3000, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bill: 20.96%
 Strategic: 42% R3000, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bill: 23.68%
 Most Equity Risk: 44% R3000, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bill: 24.63%

Guidelines/Benchmarks - Equal Weighted

Least Equity Risk: 34% S&P 500 Equal Weighted, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bill: 18.80%
 Strategic: 42% S&P 500 Equal Weighted, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bill: 21.01%
 Most Equity Risk: 44% S&P 500 Equal Weighted, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bill: 21.83%

Russell 3000	35.19%
S&P 500	36.35%
S&P 500 Equal Weight	28.83%
Russell 1000 Value	27.76%
Russell 1000	35.68%
Russell 1000 Growth	42.19%
Russell 2000	26.76%
MSCI All Country World ex. US	25.35%
MSCI EAFE	24.77%
MSCI EM	26.05%
Bloomberg Aggregate	11.57%
Bloomberg Govt/Credit Intermediate	9.45%
HFRI Fund of Funds Index	9.32%
DJ Global World Real Estate	30.14%
FTSE WGBI Index	11.02%
30 Day T-Bill	5.56%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

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Data Source: Morgan Stanley & Morningstar

SCCT Regional Water Authority
Trailing Three Year Investment Results
September 30, 2021 - September 30, 2024

Account Number	Account Type	Beg. Asset Value 30-Sep-2021	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 30-Sep-2024	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$43,368,454	\$0	\$178,061	\$43,546,514	\$49,889,806	\$6,343,292	4.59%	4.96%
447-xxx451	Union	\$26,406,255	\$0	(\$546,898)	\$25,859,357	\$29,617,291	\$3,757,934	4.69%	5.07%
447-xxx456	VEBA	\$9,343,476	\$0	\$0	\$9,343,476	\$10,629,980	\$1,286,504	4.39%	4.77%
447-xxx626*	Skybridge (Salaried)	\$703,953	\$0	(\$704,240)	(\$287)	\$0	\$287	0.02%	0.02%
447-xxx627*	Skybridge (Union)	\$472,660	\$0	(\$472,852)	(\$192)	\$0	\$192	0.02%	0.02%
axx15a	Matrix Trust (Salaried)	(\$79,473)	(\$546,783)	\$1,023,279	\$397,023	\$397,023	\$0	-	-
axx15b	Matrix Trust (Union)	(\$99,177)	(\$1,160,695)	\$1,368,954	\$109,081	\$109,081	\$0	-	-
axx16	Matrix Trust(VEBA)	\$270,033	\$673,840	(\$846,304)	\$97,569	\$97,569	\$0	-	-
Consolidated		\$80,386,181	(\$1,033,639)	\$0	\$79,352,543	\$90,740,751	\$11,388,208	4.58%	4.96%

September 30, 2021 - September 30, 2024

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return (Current): 6.75%	6.75%
Actuarial Assumed Rate of Return (Prior to 5/31/2021): 7.00%	7.00%

Guidelines/Benchmarks - Market Cap Weighted

Least Equity Risk: 34% R3000, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	3.51%
Strategic: 42% R3000, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	4.57%
Most Equity Risk: 44% R3000, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	5.30%

Guidelines/Benchmarks - Equal Weighted

Least Equity Risk: 34% S&P 500 Equal Weighted, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	2.79%
Strategic: 42% S&P 500 Equal Weighted, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	3.68%
Most Equity Risk: 44% S&P 500 Equal Weighted, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	4.37%

Russell 3000	10.29%
S&P 500	11.91%
S&P 500 Equal Weight	8.18%
Russell 1000 Value	9.03%
Russell 1000	10.83%
Russell 1000 Growth	12.02%
Russell 2000	1.84%
MSCI All Country World ex. US	4.14%
MSCI EAFE	5.48%
MSCI EM	0.40%
Bloomberg Aggregate	-1.39%
Bloomberg Govt/Credit Intermediate	0.17%
HFRI Fund of Funds Index	2.25%
DJ Global World Real Estate	0.25%
FTSE WGBI Index	-4.41%
30 Day T-Bill	3.57%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

*447-xxx626 closed May 2022

*447-xxx627 closed July 2022

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SCCT Regional Water Authority
Trailing Five Year Investment Results
September 30, 2019 - September 30, 2024

Account Number	Account Type	Beg. Asset Value 30-Sep-2019	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 30-Sep-2024	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$35,443,944	\$0	(\$283,100)	\$35,160,845	\$49,889,806	\$14,728,961	7.21%	7.60%
447-xxx451	Union	\$22,137,724	\$0	(\$1,471,998)	\$20,665,726	\$29,617,291	\$8,951,564	7.27%	7.66%
447-xxx456	VEBA	\$7,377,600	\$0	\$237,532	\$7,615,132	\$10,629,980	\$3,014,848	7.09%	7.48%
447-xxx626*	Skybridge (Salaried)	\$658,768	\$0	(\$704,240)	(\$45,472)	\$0	\$45,472	1.34%	1.34%
447-xxx627*	Skybridge (Union)	\$442,336	\$0	(\$472,852)	(\$30,516)	\$0	\$30,516	1.33%	1.33%
axx15a	Matrix Trust (Salaried)	\$496,043	(\$1,886,996)	\$1,787,976	\$397,023	\$397,023	\$0	-	-
axx15b	Matrix Trust (Union)	\$187,186	(\$2,618,666)	\$2,540,561	\$109,081	\$109,081	\$0	-	-
axx16	Matrix Trust(VEBA)	\$303,795	\$1,427,653	(\$1,633,880)	\$97,569	\$97,569	\$0	-	-
Consolidated		\$67,047,398	(\$3,078,009)	\$0	\$63,969,389	\$90,740,751	\$26,771,361	7.16%	7.54%

September 30, 2019 - September 30, 2024

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return (Current): 6.75%	6.75%
Actuarial Assumed Rate of Return (Prior to 5/31/2021): 7.00%	7.00%

Guidelines/Benchmarks - Market Cap Weighted

Least Equity Risk: 34% R3000, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	6.61%
Strategic: 42% R3000, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	7.94%
Most Equity Risk: 44% R3000, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	8.87%

Guidelines/Benchmarks - Equal Weighted

Least Equity Risk: 34% S&P 500 Equal Weighted, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	5.78%
Strategic: 42% S&P 500 Equal Weighted, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	6.91%
Most Equity Risk: 44% S&P 500 Equal Weighted, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	7.80%

Russell 3000	15.26%
S&P 500	15.98%
S&P 500 Equal Weight	12.82%
Russell 1000 Value	10.69%
Russell 1000	15.64%
Russell 1000 Growth	19.74%
Russell 2000	9.39%
MSCI All Country World ex. US	7.59%
MSCI EAFE	8.20%
MSCI EM	5.75%
Bloomberg Aggregate	0.33%
Bloomberg Govt/Credit Intermediate	1.26%
HFRI Fund of Funds Index	5.26%
DJ Global World Real Estate	1.92%
FTSE WGBI Index	-2.05%
30 Day T-Bill	2.31%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

*447-xxx626 closed May 2022

*447-xxx627 closed July 2022

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SCCT Regional Water Authority
Trailing Eight Year Investment Results
September 30, 2016 - September 30, 2024

Account Number	Account Type	Beg. Asset Value 30-Sep-2016	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 30-Sep-2024	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$24,328,661	\$0	\$4,358,603	\$28,687,264	\$49,889,806	\$21,202,541	7.35%	7.76%
447-xxx451	Union	\$17,476,209	\$0	(\$1,161,945)	\$16,314,265	\$29,617,291	\$13,303,026	7.37%	7.78%
447-xxx456	VEBA	\$4,191,667	\$0	\$2,167,279	\$6,358,946	\$10,629,980	\$4,271,034	7.24%	7.65%
447-xxx626*	Skybridge (Salaried)	\$461,205	\$0	(\$604,240)	(\$143,036)	\$0	\$143,036	4.26%	4.26%
447-xxx627*	Skybridge (Union)	\$333,092	\$0	(\$432,852)	(\$99,760)	\$0	\$99,760	4.27%	4.27%
axx15a	Matrix Trust (Salaried)	\$277,398	\$2,591,783	(\$2,472,159)	\$397,023	\$397,023	\$0	-	-
axx15b	Matrix Trust (Union)	\$109,186	(\$2,574,992)	\$2,574,887	\$109,081	\$109,081	\$0	-	-
axx16	Matrix Trust(VEBA)	\$301,603	\$4,225,540	(\$4,429,574)	\$97,569	\$97,569	\$0	-	-
Consolidated		\$47,479,021	\$4,242,332	\$0	\$51,721,353	\$90,740,751	\$39,019,397	7.30%	7.70%

September 30, 2016 - September 30, 2024

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return (Current): 6.75%	6.75%
Actuarial Assumed Rate of Return (Prior to 5/31/2021): 7.00%	7.00%

Guidelines/Benchmarks - Market Cap Weighted

Least Equity Risk: 34% R3000, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	6.62%
Strategic: 42% R3000, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	7.81%
Most Equity Risk: 44% R3000, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	8.55%

Guidelines/Benchmarks - Equal Weighted

Least Equity Risk: 34% S&P 500 Equal Weighted, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	5.87%
Strategic: 42% S&P 500 Equal Weighted, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	6.89%
Most Equity Risk: 44% S&P 500 Equal Weighted, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	7.59%

Russell 3000	14.35%
S&P 500	15.00%
S&P 500 Equal Weight	12.15%
Russell 1000 Value	10.22%
Russell 1000	14.72%
Russell 1000 Growth	18.66%
Russell 2000	8.95%
MSCI All Country World ex. US	7.11%
MSCI EAFE	7.55%
MSCI EM	5.83%
Bloomberg Aggregate	1.30%
Bloomberg Govt/Credit Intermediate	1.68%
HFRI Fund of Funds Index	4.46%
DJ Global World Real Estate	4.04%
FTSE WGBI Index	-0.85%
30 Day T-Bill	2.00%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

*447-xxx626 closed May 2022

*447-xxx627 closed July 2022

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SCCT Regional Water Authority
 Since Inception (Fully Invested) Investment Results
 December 31, 2015 - September 30, 2024

Account Number	Account Type	Beg. Asset Value 31-Dec-2015	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 30-Sep-2024	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$22,078,953	\$0	\$5,224,246	\$27,303,200	\$49,889,806	\$22,586,606	7.41%	7.82%
447-xxx451	Union	\$16,143,219	\$0	(\$829,206)	\$15,314,014	\$29,617,291	\$14,303,277	7.44%	7.84%
447-xxx456	VEBA	\$2,919,401	\$0	\$3,195,838	\$6,115,239	\$10,629,980	\$4,514,741	7.25%	7.66%
447-xxx626*	Skybridge (Salaried)	\$0	\$0	(\$153,806)	(\$153,806)	\$0	\$153,806	3.31%	3.31%
447-xxx627*	Skybridge (Union)	\$0	\$0	(\$107,539)	(\$107,539)	\$0	\$107,539	3.31%	3.31%
axx15a	Matrix Trust (Salaried)	\$202,978	\$3,970,435	(\$3,776,390)	\$397,023	\$397,023	\$0	-	-
axx15b	Matrix Trust (Union)	\$147,576	(\$1,974,086)	\$1,935,591	\$109,081	\$109,081	\$0	-	-
axx16	Matrix Trust(VEBA)	\$269,858	\$5,316,446	(\$5,488,735)	\$97,569	\$97,569	\$0	-	-
Consolidated		\$41,761,987	\$7,312,795	\$0	\$49,074,781	\$90,740,751	\$41,665,969	7.36%	7.76%

December 31, 2015 - September 30, 2024

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return (Current): 6.75%	6.75%
Actuarial Assumed Rate of Return (Prior to 5/31/2021): 7.00%	7.00%

Guidelines/Benchmarks - Market Cap Weighted

Least Equity Risk: 34% R3000, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	6.75%
Strategic: 42% R3000, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	7.90%
Most Equity Risk: 44% R3000, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	8.52%

Guidelines/Benchmarks - Equal Weighted

Least Equity Risk: 34% S&P 500 Equal Weighted, 11% MSCI ACWxUS, 39% Bloomberg Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	6.17%
Strategic: 42% S&P 500 Equal Weighted, 15% MSCI ACWxUS, 31% Bloomberg Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	7.18%
Most Equity Risk: 44% S&P 500 Equal Weighted, 16% MSCI ACWxUS, 16% Bloomberg Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	7.77%

Russell 3000	14.06%
S&P 500	14.62%
S&P 500 Equal Weight	12.34%
Russell 1000 Value	10.50%
Russell 1000	14.37%
Russell 1000 Growth	17.72%
Russell 2000	9.50%
MSCI All Country World ex. US	7.18%
MSCI EAFE	7.09%
MSCI EM	7.12%
Bloomberg Aggregate	1.84%
Bloomberg Govt/Credit Intermediate	2.02%
HFRI Fund of Funds Index	4.02%
DJ Global World Real Estate	4.90%
FTSE WGBI Index	0.42%
30 Day T-Bill	1.85%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

*447-xxx626 closed May 2022

*447-xxx627 closed July 2022

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Morgan Stanley

THE KELLIHER CORBETT GROUP
AT MORGAN STANLEY

SCCTRWA Liability/Cash Flow Analysis: Summary



Liability/Cash Flow Analysis - Summary

<u>Salary Plan</u>			<u>Equities 10+ Years</u>		<u>Equities 8+ Years</u>		<u>Avg.</u>
<u>Liability Conscious Allocation</u>	<u>IPS Target</u>	<u>Actual Portfolio Allocation</u>	<u>Hybrid LDI Derived</u>	<u>Present Value LDI Derived</u>	<u>Hybrid LDI Derived</u>	<u>Present Value LDI Derived</u>	<u>Average All Methods</u>
Cash/Fixed	30%	35%	47%	44%	34%	34%	39%
Equity	55%	52%	40%	47%	53%	56%	49%
Alternative/Balanced	15%	13%	14%	9%	13%	10%	12%

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

Equities 10+ Years: Fixed Income used for years 0-7, Alternative/Balanced used for years 8-9

Equities 8+ Years: Fixed Income used for years 0-5, Alternative/Balanced used for years 6-7

For discussion purposes only

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Liability/Cash Flow Analysis - Summary

Salary Plan			Equities 10+ Years		Equities 8+ Years		Avg.
Liability Conscious Allocation	IPS Target	Actual Portfolio Allocation	Hybrid LDI Derived	Present Value LDI Derived	Hybrid LDI Derived	Present Value LDI Derived	Average All Methods
Cash/Fixed	30%	35%	47%	44%	34%	34%	39%
Equity	55%	52%	40%	47%	53%	56%	49%
Alternative/Balanced	15%	13%	14%	9%	13%	10%	12%

Union Plan			Equities 10+ Years		Equities 8+ Years		Avg.
Liability Conscious Allocation	IPS Target	Actual Portfolio Allocation	Hybrid LDI Derived	Present Value LDI Derived	Hybrid LDI Derived	Present Value LDI Derived	Average All Methods
Cash/Fixed	30%	35%	43%	40%	30%	29%	35%
Equity	55%	52%	43%	51%	57%	60%	53%
Alternative/Balanced	15%	13%	14%	10%	13%	10%	12%

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

Equities 10+ Years: Fixed Income used for years 0-7, Alternative/Balanced used for years 8-9

Equities 8+ Years: Fixed Income used for years 0-5, Alternative/Balanced used for years 6-7

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Liability/Cash Flow Analysis - Summary

<u>Salary Plan</u>			<u>Equities 10+ Years</u>		<u>Equities 8+ Years</u>		<u>Avg.</u>
Liability Conscious Allocation	IPS Target	Actual Portfolio Allocation	Hybrid LDI Derived	Present Value LDI Derived	Hybrid LDI Derived	Present Value LDI Derived	Average All Methods
Cash/Fixed	30%	35%	47%	44%	34%	34%	39%
Equity	55%	52%	40%	47%	53%	56%	49%
Alternative/Balanced	15%	13%	14%	9%	13%	10%	12%

<u>Union Plan</u>			<u>Equities 10+ Years</u>		<u>Equities 8+ Years</u>		<u>Avg.</u>
Liability Conscious Allocation	IPS Target	Actual Portfolio Allocation	Hybrid LDI Derived	Present Value LDI Derived	Hybrid LDI Derived	Present Value LDI Derived	Average All Methods
Cash/Fixed	30%	35%	43%	40%	30%	29%	35%
Equity	55%	52%	43%	51%	57%	60%	53%
Alternative/Balanced	15%	13%	14%	10%	13%	10%	12%

<u>VEBA Plan</u>			<u>Equities 10+ Years</u>		<u>Equities 8+ Years</u>		<u>Avg.</u>
Liability Conscious Allocation	IPS Target	Actual Portfolio Allocation	Hybrid LDI Derived	Present Value LDI Derived	Hybrid LDI Derived	Present Value LDI Derived	Average All Methods
Cash/Fixed	30%	35%	62%	59%	44%	45%	52%
Equity	55%	52%	24%	30%	38%	41%	33%
Alternative/Balanced	15%	13%	15%	10%	18%	14%	14%

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

Equities 10+ Years: Fixed Income used for years 0-7, Alternative/Balanced used for years 8-9

Equities 8+ Years: Fixed Income used for years 0-5, Alternative/Balanced used for years 6-7

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Expected Asset Class Return Scenarios

55% Equity, 30% Fixed, 15% Alt/Balanced

Morgan Stanley Assumptions as of 3/31/2024

Asset Class	IPS Target Allocation	Morgan Stanley Long-Term Expected Real Rate of Return	Weighted Average Expected Return
Fixed Income	30.00%	3.70%	1.11%
US Equities	37.00%	8.40%	3.11%
Global Equities	4.00%	8.00%	0.32%
International Equities	14.00%	7.30%	1.02%
Alternative/Hedge/Swing	15.00%	6.10%	0.92%
Total	100.00%	-	6.48%

Historical as of 9/30/2024

Asset Class	IPS Target Allocation	Trailing 10 Year Historical Returns	Weighted Average Expected Return
Fixed Income	30.00%	1.84%	0.55%
US Equities	37.00%	12.83%	4.75%
Global Equities	4.00%	10.07%	0.40%
International Equities	14.00%	5.71%	0.80%
Alternative/Hedge/Swing	15.00%	3.66%	0.55%
Total	100.00%	-	7.05%

Projected & Historical Average: 6.76%

50% Equity, 35% Fixed, 15% Alt/Balanced

Morgan Stanley Assumptions as of 3/31/2024

Asset Class	IPS Target Allocation	Morgan Stanley Long-Term Expected Real Rate of Return	Weighted Average Expected Return
Fixed Income	35.00%	3.70%	1.30%
US Equities	34.00%	8.40%	2.86%
Global Equities	3.00%	8.00%	0.24%
International Equities	13.00%	7.30%	0.95%
Alternative/Hedge/Swing	15.00%	6.10%	0.92%
Total	100.00%	-	6.26%

Historical as of 9/30/2024

Asset Class	IPS Target Allocation	Trailing 10 Year Historical Returns	Weighted Average Expected Return
Fixed Income	35.00%	1.84%	0.64%
US Equities	34.00%	12.83%	4.36%
Global Equities	3.00%	10.07%	0.30%
International Equities	13.00%	5.71%	0.74%
Alternative/Hedge/Swing	15.00%	3.66%	0.55%
Total	100.00%	-	6.60%

Projected & Historical Average: 6.43%

Historical Return Proxies: Fixed Income = Bloomberg US Agg Bond TR USD, US Equities = Russell 3000 TR USD, Global Equities = MSCI World NR USD, International Equities = MSCI EAFE NR USD, Alternative/Hedge/Swing = HFRI Fund of Funds Composite

Source: Morgan Stanley Wealth Management Global Investment Committee, Morningstar

Estimates are for illustrative purposes only, are based on proprietary models and are not indicative of the future performance of any specific investment, index or asset class. Actual performance may be more or less than the estimates shown in this table. Estimates of future performance are based on assumptions that may not be realized. Investor Suitability: Morgan Stanley Wealth Management recommends that investors independently evaluate each asset class, investment style, issuer, security, instrument or strategy discussed. Legal, accounting and tax restrictions, transaction costs and changes to any assumptions may significantly affect the economics and results of any investment. Investors should consult their own tax, legal or other advisors to determine suitability for their specific circumstances. Investments in private funds (including hedge funds, managed futures funds and private equity funds) are speculative and include a high degree of risk.

Morgan Stanley

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Appendix



Morgan Stanley

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Liability/Cash Flow Analysis: Detailed



Liability/Cash Flow Analysis - Salaried Plan

Valuation		Gross Benefit	PV Benefit	Pension	Net Benefit	Present	Hybrid	Investment
Year	Duration	Payments (\$)	Payments (\$)	Contribution (\$)	Payments (\$)	Value (Net \$)	LDI (Net \$) ¹	Product
2024	0	\$ 4,599,925	\$ 4,599,925	\$ (1,858,865)	\$ 2,741,060	\$ 2,741,060	\$ 2,741,060	Cash Flow Matched
2025	1	\$ 4,399,133	\$ 4,120,983	\$ (1,709,097)	\$ 2,690,036	\$ 2,519,949	\$ 2,690,036	
2026	2	\$ 4,388,128	\$ 3,850,763	\$ (1,695,401)	\$ 2,692,727	\$ 2,362,979	\$ 2,692,727	Core Fixed Income
2027	3	\$ 4,480,448	\$ 3,683,178	\$ (1,677,897)	\$ 2,802,551	\$ 2,303,853	\$ 2,802,551	
2028	4	\$ 4,610,079	\$ 3,550,123	\$ (1,625,879)	\$ 2,984,200	\$ 2,298,068	\$ 2,984,200	
2024-2028	0-4	\$ 22,477,713	\$ 19,804,972	\$ (8,567,139)	\$ 13,910,574	\$ 12,225,910	\$ 13,910,574	
2029	5	\$ 4,672,364	\$ 3,370,586	\$ (1,563,205)	\$ 3,109,159	\$ 2,242,909	\$ 3,109,159	Plus Fixed Income
2030	6	\$ 4,744,700	\$ 3,206,352	\$ (1,483,610)	\$ 3,261,090	\$ 2,203,765	\$ 3,261,090	
2031	7	\$ 4,718,745	\$ 2,987,189	\$ (1,378,510)	\$ 3,340,235	\$ 2,114,527	\$ 3,340,235	Alternative/Balanced
2032	8	\$ 4,628,529	\$ 2,744,814	\$ (1,295,959)	\$ 3,332,570	\$ 1,976,283	\$ 3,332,570	
2033	9	\$ 4,827,027	\$ 2,681,535	\$ (1,222,723)	\$ 3,604,304	\$ 2,002,282	\$ 3,604,304	
2029-2033	5-9	\$ 23,591,365	\$ 14,990,476	\$ (6,944,007)	\$ 16,647,358	\$ 10,539,766	\$ 16,647,358	
2034	10	\$ 4,655,942	\$ 2,422,953	\$ (1,106,981)	\$ 3,548,961	\$ 1,846,880	\$ 1,846,880	US/Global Equity
2035	11	\$ 4,565,794	\$ 2,225,807	\$ (996,714)	\$ 3,569,080	\$ 1,739,913	\$ 1,739,913	
2036	12	\$ 4,699,987	\$ 2,146,355	\$ (924,122)	\$ 3,775,865	\$ 1,724,334	\$ 1,724,334	
2037	13	\$ 4,430,856	\$ 1,895,511	\$ (808,245)	\$ 3,622,611	\$ 1,549,745	\$ 1,549,745	
2038	14	\$ 4,312,157	\$ 1,728,093	\$ (727,256)	\$ 3,584,901	\$ 1,436,646	\$ 1,436,646	
2034-2038	10-14	\$ 22,664,736	\$ 10,418,719	\$ (4,563,318)	\$ 18,101,418	\$ 8,297,518	\$ 8,297,518	
2039	15	\$ 4,067,680	\$ 1,527,049	\$ (642,733)	\$ 3,424,947	\$ 1,285,760	\$ 1,285,760	US/Global Equity
2040	16	\$ 4,044,698	\$ 1,422,414	\$ (590,685)	\$ 3,454,013	\$ 1,214,686	\$ 1,214,686	
2041	17	\$ 3,919,412	\$ 1,291,203	\$ (509,505)	\$ 3,409,907	\$ 1,123,353	\$ 1,123,353	
2042	18	\$ 3,701,763	\$ 1,142,394	\$ (453,139)	\$ 3,248,624	\$ 1,002,552	\$ 1,002,552	
2043	19	\$ 3,488,768	\$ 1,008,587	\$ (398,192)	\$ 3,090,576	\$ 893,471	\$ 893,471	
2039-2043	15-19	\$ 19,222,321	\$ 6,391,647	\$ (2,594,254)	\$ 16,628,067	\$ 5,519,822	\$ 5,519,822	
2044-2048	20-24	\$ 15,222,513	\$ 3,660,424	\$ (1,355,165)	\$ 13,867,348	\$ 3,334,559	\$ 3,334,559	US/Global Equity
2049-2053	25-29	\$ 10,393,091	\$ 1,810,230	\$ (533,229)	\$ 9,859,862	\$ 1,717,354	\$ 1,717,354	
2054+	30+	\$ 12,884,466	\$ 1,312,453	\$ (138,828)	\$ 12,745,638	\$ 1,298,312	\$ 1,298,312	
Total		\$ 126,456,205	\$ 58,388,921	\$ (24,695,940)	\$ 101,760,265	\$ 42,933,240	\$ 50,725,497	

	Hybrid LDI	Present Value LDI		Actual Portfolio
Liability Conscious Allocation	Derived	Derived	IPS Target	Allocation
Cash/Fixed	47%	44%	30%	36%
Equity	40%	47%	55%	52%
Alternative/Balanced	14%	9%	15%	12%

***Salaried Plan 9/30/2024 Value: \$49,889,806**

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years

Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

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Liability/Cash Flow Analysis - Salaried Plan

Valuation Year	Duration	Gross Benefit Payments (\$)	PV Benefit Payments (\$)	Pension Contribution (\$)	Net Benefit Payments (\$)	Present Value (Net \$)	Hybrid LDI (Net \$) ¹	Investment Product
2024	0	\$ 4,599,925	\$ 4,599,925	\$ (1,858,865)	\$ 2,741,060	\$ 2,741,060	\$ 2,741,060	Cash Flow Matched
2025	1	\$ 4,399,133	\$ 4,120,983	\$ (1,709,097)	\$ 2,690,036	\$ 2,519,949	\$ 2,690,036	
2026	2	\$ 4,388,128	\$ 3,850,763	\$ (1,695,401)	\$ 2,692,727	\$ 2,362,979	\$ 2,692,727	Core Fixed Income
2027	3	\$ 4,480,448	\$ 3,683,178	\$ (1,677,897)	\$ 2,802,551	\$ 2,303,853	\$ 2,802,551	
2028	4	\$ 4,610,079	\$ 3,550,123	\$ (1,625,879)	\$ 2,984,200	\$ 2,298,068	\$ 2,984,200	Plus Fixed Income
2024-2028	0-4	\$ 22,477,713	\$ 19,804,972	\$ (8,567,139)	\$ 13,910,574	\$ 12,225,910	\$ 13,910,574	
2029	5	\$ 4,672,364	\$ 3,370,586	\$ (1,563,205)	\$ 3,109,159	\$ 2,242,909	\$ 3,109,159	Plus Fixed Income
2030	6	\$ 4,744,700	\$ 3,206,352	\$ (1,483,610)	\$ 3,261,090	\$ 2,203,765	\$ 3,261,090	
2031	7	\$ 4,718,745	\$ 2,987,189	\$ (1,378,510)	\$ 3,340,235	\$ 2,114,527	\$ 3,340,235	Alternative/Balanced
2032	8	\$ 4,628,529	\$ 2,744,814	\$ (1,295,959)	\$ 3,332,570	\$ 1,976,283	\$ 3,332,570	
2033	9	\$ 4,827,027	\$ 2,681,535	\$ (1,222,723)	\$ 3,604,304	\$ 2,002,282	\$ 3,604,304	US/Global Equity
2029-2033	5-9	\$ 23,591,365	\$ 14,990,476	\$ (6,944,007)	\$ 16,647,358	\$ 10,539,766	\$ 16,647,358	
2034	10	\$ 4,655,942	\$ 2,422,953	\$ (1,106,981)	\$ 3,548,961	\$ 1,846,880	\$ 1,846,880	US/Global Equity
2035	11	\$ 4,565,794	\$ 2,225,807	\$ (996,714)	\$ 3,569,080	\$ 1,739,913	\$ 1,739,913	
2036	12	\$ 4,699,987	\$ 2,146,355	\$ (924,122)	\$ 3,775,865	\$ 1,724,334	\$ 1,724,334	
2037	13	\$ 4,430,856	\$ 1,895,511	\$ (808,245)	\$ 3,622,611	\$ 1,549,745	\$ 1,549,745	
2038	14	\$ 4,312,157	\$ 1,728,093	\$ (727,256)	\$ 3,584,901	\$ 1,436,646	\$ 1,436,646	
2034-2038	10-14	\$ 22,664,736	\$ 10,418,719	\$ (4,563,318)	\$ 18,101,418	\$ 8,297,518	\$ 8,297,518	
2039	15	\$ 4,067,680	\$ 1,527,049	\$ (642,733)	\$ 3,424,947	\$ 1,285,760	\$ 1,285,760	US/Global Equity
2040	16	\$ 4,044,698	\$ 1,422,414	\$ (590,685)	\$ 3,454,013	\$ 1,214,686	\$ 1,214,686	
2041	17	\$ 3,919,412	\$ 1,291,203	\$ (509,505)	\$ 3,409,907	\$ 1,123,353	\$ 1,123,353	
2042	18	\$ 3,701,763	\$ 1,142,394	\$ (453,139)	\$ 3,248,624	\$ 1,002,552	\$ 1,002,552	
2043	19	\$ 3,488,768	\$ 1,008,587	\$ (398,192)	\$ 3,090,576	\$ 893,471	\$ 893,471	
2039-2043	15-19	\$ 19,222,321	\$ 6,391,647	\$ (2,594,254)	\$ 16,628,067	\$ 5,519,822	\$ 5,519,822	
2044-2048	20-24	\$ 15,222,513	\$ 3,660,424	\$ (1,355,165)	\$ 13,867,348	\$ 3,334,559	\$ 3,334,559	US/Global Equity
2049-2053	25-29	\$ 10,393,091	\$ 1,810,230	\$ (533,229)	\$ 9,859,862	\$ 1,717,354	\$ 1,717,354	
2054+	30+	\$ 12,884,466	\$ 1,312,453	\$ (138,828)	\$ 12,745,638	\$ 1,298,312	\$ 1,298,312	
Total		\$ 126,456,205	\$ 58,388,921	\$ (24,695,940)	\$ 101,760,265	\$ 42,933,240	\$ 50,725,497	

	Hybrid LDI Derived	Present Value LDI Derived	IPS Target	Actual Portfolio Allocation
Liability Conscious Allocation				
Cash/Fixed	34%	34%	30%	36%
Equity	53%	56%	55%	52%
Alternative/Balanced	13%	10%	15%	12%

***Salaried Plan 9/30/2024 Value: \$49,889,806**

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years

Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

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Liability/Cash Flow Analysis - Union Plan

Valuation		Gross Benefit	PV Benefit	Pension	Net Benefit	Present	Hybrid	Investment
Year	Duration	Payments (\$)	Payments (\$)	Contribution (\$)	Payments (\$)	Value (Net \$)	LDI (Net \$) ¹	Product
2024	0	\$ 2,081,986	\$ 2,081,986	\$ (1,062,438)	\$ 1,019,548	\$ 1,019,548	\$ 1,019,548	Cash Flow Matched
2025	1	\$ 2,217,340	\$ 2,077,133	\$ (771,946)	\$ 1,445,394	\$ 1,353,999	\$ 1,445,394	
2026	2	\$ 2,289,185	\$ 2,008,839	\$ (847,283)	\$ 1,441,902	\$ 1,265,319	\$ 1,441,902	Core Fixed Income
2027	3	\$ 2,351,637	\$ 1,933,155	\$ (802,325)	\$ 1,549,312	\$ 1,273,607	\$ 1,549,312	
2028	4	\$ 2,463,017	\$ 1,896,688	\$ (772,799)	\$ 1,690,218	\$ 1,301,581	\$ 1,690,218	
2024-2028	0-4	\$ 11,403,165	\$ 9,997,801	\$ (4,256,791)	\$ 7,146,374	\$ 6,214,053	\$ 7,146,374	
2029	5	\$ 2,518,739	\$ 1,816,953	\$ (728,828)	\$ 1,789,911	\$ 1,291,195	\$ 1,789,911	Plus Fixed Income
2030	6	\$ 2,582,889	\$ 1,745,414	\$ (658,313)	\$ 1,924,576	\$ 1,300,552	\$ 1,924,576	
2031	7	\$ 2,640,923	\$ 1,671,785	\$ (601,405)	\$ 2,039,518	\$ 1,291,077	\$ 2,039,518	Alternative/Balanced
2032	8	\$ 2,660,451	\$ 1,577,656	\$ (533,885)	\$ 2,126,566	\$ 1,261,060	\$ 2,126,566	
2033	9	\$ 2,699,781	\$ 1,499,746	\$ (474,436)	\$ 2,225,345	\$ 1,236,194	\$ 2,225,345	
2029-2033	5-9	\$ 13,102,783	\$ 8,311,554	\$ (2,996,867)	\$ 10,105,916	\$ 6,380,079	\$ 10,105,916	
2034	10	\$ 2,726,632	\$ 1,418,887	\$ (419,894)	\$ 2,306,738	\$ 1,200,382	\$ 1,200,382	US/Global Equity
2035	11	\$ 2,690,273	\$ 1,311,444	\$ (370,134)	\$ 2,320,139	\$ 1,131,012	\$ 1,131,012	
2036	12	\$ 2,640,247	\$ 1,205,674	\$ (301,876)	\$ 2,338,371	\$ 1,067,822	\$ 1,067,822	
2037	13	\$ 2,607,189	\$ 1,115,296	\$ (264,454)	\$ 2,342,735	\$ 1,002,169	\$ 1,002,169	
2038	14	\$ 2,561,144	\$ 1,026,322	\$ (238,784)	\$ 2,322,360	\$ 930,635	\$ 930,635	
2034-2038	10-14	\$ 13,225,485	\$ 6,077,623	\$ (1,595,142)	\$ 11,630,343	\$ 5,332,020	\$ 5,332,020	
2039	15	\$ 2,485,300	\$ 932,955	\$ (211,347)	\$ 2,273,953	\$ 853,618	\$ 853,618	US/Global Equity
2040	16	\$ 2,411,267	\$ 847,928	\$ (182,897)	\$ 2,228,370	\$ 783,612	\$ 783,612	
2041	17	\$ 2,323,215	\$ 765,306	\$ (164,359)	\$ 2,158,856	\$ 711,163	\$ 711,163	
2042	18	\$ 2,239,322	\$ 691,026	\$ (147,578)	\$ 2,091,744	\$ 645,485	\$ 645,485	
2043	19	\$ 2,141,774	\$ 619,133	\$ (127,132)	\$ 2,014,642	\$ 582,382	\$ 582,382	
2039-2043	15-19	\$ 11,600,878	\$ 3,856,348	\$ (833,313)	\$ 10,767,565	\$ 3,576,260	\$ 3,576,260	
2044-2048	20-24	\$ 9,133,722	\$ 2,196,568	\$ (389,784)	\$ 8,743,938	\$ 2,102,829	\$ 2,102,829	US/Global Equity
2049-2053	25-29	\$ 6,442,393	\$ 1,120,958	\$ (166,563)	\$ 6,275,830	\$ 1,091,977	\$ 1,091,977	
2054+	30+	\$ 8,066,817	\$ 807,578	\$ (11,127)	\$ 8,055,690	\$ 806,464	\$ 806,464	
Total		\$ 72,975,243	\$ 32,368,430	\$ (10,249,587)	\$ 62,725,656	\$ 25,503,682	\$ 30,161,840	

	Hybrid LDI	Present Value LDI	Actual Portfolio	
Liability Conscious Allocation	Derived	Derived	IPS Target	Allocation
Cash/Fixed	43%	40%	30%	36%
Equity	43%	51%	55%	52%
Alternative/Balanced	14%	10%	15%	12%

***Union Plan 9/30/2024 Value: \$29,617,291**

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years

Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

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Liability/Cash Flow Analysis - Union Plan

Valuation		Gross Benefit	PV Benefit	Pension	Net Benefit	Present	Hybrid	Investment
Year	Duration	Payments (\$)	Payments (\$)	Contribution (\$)	Payments (\$)	Value (Net \$)	LDI (Net \$) ¹	Product
2024	0	\$ 2,081,986	\$ 2,081,986	\$ (1,062,438)	\$ 1,019,548	\$ 1,019,548	\$ 1,019,548	Cash Flow Matched
2025	1	\$ 2,217,340	\$ 2,077,133	\$ (771,946)	\$ 1,445,394	\$ 1,353,999	\$ 1,445,394	
2026	2	\$ 2,289,185	\$ 2,008,839	\$ (847,283)	\$ 1,441,902	\$ 1,265,319	\$ 1,441,902	Core Fixed Income
2027	3	\$ 2,351,637	\$ 1,933,155	\$ (802,325)	\$ 1,549,312	\$ 1,273,607	\$ 1,549,312	
2028	4	\$ 2,463,017	\$ 1,896,688	\$ (772,799)	\$ 1,690,218	\$ 1,301,581	\$ 1,690,218	Plus Fixed Income
2024-2028	0-4	\$ 11,403,165	\$ 9,997,801	\$ (4,256,791)	\$ 7,146,374	\$ 6,214,053	\$ 7,146,374	
2029	5	\$ 2,518,739	\$ 1,816,953	\$ (728,828)	\$ 1,789,911	\$ 1,291,195	\$ 1,789,911	Plus Fixed Income
2030	6	\$ 2,582,889	\$ 1,745,414	\$ (658,313)	\$ 1,924,576	\$ 1,300,552	\$ 1,924,576	
2031	7	\$ 2,640,923	\$ 1,671,785	\$ (601,405)	\$ 2,039,518	\$ 1,291,077	\$ 2,039,518	Alternative/Balanced
2032	8	\$ 2,660,451	\$ 1,577,656	\$ (533,885)	\$ 2,126,566	\$ 1,261,060	\$ 2,126,566	
2033	9	\$ 2,699,781	\$ 1,499,746	\$ (474,436)	\$ 2,225,345	\$ 1,236,194	\$ 2,225,345	US/Global Equity
2029-2033	5-9	\$ 13,102,783	\$ 8,311,554	\$ (2,996,867)	\$ 10,105,916	\$ 6,380,079	\$ 10,105,916	
2034	10	\$ 2,726,632	\$ 1,418,887	\$ (419,894)	\$ 2,306,738	\$ 1,200,382	\$ 1,200,382	US/Global Equity
2035	11	\$ 2,690,273	\$ 1,311,444	\$ (370,134)	\$ 2,320,139	\$ 1,131,012	\$ 1,131,012	
2036	12	\$ 2,640,247	\$ 1,205,674	\$ (301,876)	\$ 2,338,371	\$ 1,067,822	\$ 1,067,822	
2037	13	\$ 2,607,189	\$ 1,115,296	\$ (264,454)	\$ 2,342,735	\$ 1,002,169	\$ 1,002,169	
2038	14	\$ 2,561,144	\$ 1,026,322	\$ (238,784)	\$ 2,322,360	\$ 930,635	\$ 930,635	
2034-2038	10-14	\$ 13,225,485	\$ 6,077,623	\$ (1,595,142)	\$ 11,630,343	\$ 5,332,020	\$ 5,332,020	
2039	15	\$ 2,485,300	\$ 932,955	\$ (211,347)	\$ 2,273,953	\$ 853,618	\$ 853,618	US/Global Equity
2040	16	\$ 2,411,267	\$ 847,928	\$ (182,897)	\$ 2,228,370	\$ 783,612	\$ 783,612	
2041	17	\$ 2,323,215	\$ 765,306	\$ (164,359)	\$ 2,158,856	\$ 711,163	\$ 711,163	
2042	18	\$ 2,239,322	\$ 691,026	\$ (147,578)	\$ 2,091,744	\$ 645,485	\$ 645,485	
2043	19	\$ 2,141,774	\$ 619,133	\$ (127,132)	\$ 2,014,642	\$ 582,382	\$ 582,382	
2039-2043	15-19	\$ 11,600,878	\$ 3,856,348	\$ (833,313)	\$ 10,767,565	\$ 3,576,260	\$ 3,576,260	
2044-2048	20-24	\$ 9,133,722	\$ 2,196,568	\$ (389,784)	\$ 8,743,938	\$ 2,102,829	\$ 2,102,829	US/Global Equity
2049-2053	25-29	\$ 6,442,393	\$ 1,120,958	\$ (166,563)	\$ 6,275,830	\$ 1,091,977	\$ 1,091,977	
2054+	30+	\$ 8,066,817	\$ 807,578	\$ (11,127)	\$ 8,055,690	\$ 806,464	\$ 806,464	
Total		\$ 72,975,243	\$ 32,368,430	\$ (10,249,587)	\$ 62,725,656	\$ 25,503,682	\$ 30,161,840	

	Hybrid LDI	Present Value LDI		Actual Portfolio
Liability Conscious Allocation	Derived	Derived	IPS Target	Allocation
Cash/Fixed	30%	29%	30%	36%
Equity	57%	60%	55%	52%
Alternative/Balanced	13%	10%	15%	12%

***Union Plan 9/30/2024 Value: \$29,617,291**

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years

Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

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Liability/Cash Flow Analysis - VEBA

Valuation		Gross Benefit	PV Benefit	Pension	Net Benefit	Present	Hybrid	Investment
Year	Duration	Payments (\$)	Payments (\$)	Contribution (\$)	Payments (\$)	Value (Net \$)	LDI (Net \$) ¹	Product
2024	0	\$ 2,170,797	\$ 2,106,771	\$ (1,395,000)	\$ 775,797	\$ 752,915	\$ 775,797	Cash Flow Matched
2025	1	\$ 2,188,999	\$ 1,990,104	\$ (1,395,000)	\$ 793,999	\$ 721,855	\$ 793,999	
2026	2	\$ 2,289,142	\$ 1,949,553	\$ (1,395,000)	\$ 894,142	\$ 761,498	\$ 894,142	Core Fixed Income
2027	3	\$ 2,410,839	\$ 1,923,369	\$ (1,395,000)	\$ 1,015,839	\$ 810,437	\$ 1,015,839	
2028	4	\$ 2,535,925	\$ 1,895,234	\$ (1,395,000)	\$ 1,140,925	\$ 852,675	\$ 1,140,925	
2024-2028	0-4	\$ 11,595,702	\$ 9,865,031	\$ (6,975,000)	\$ 4,620,702	\$ 3,899,381	\$ 4,620,702	
2029	5	\$ 2,578,472	\$ 1,805,182	\$ (1,395,000)	\$ 1,183,472	\$ 828,546	\$ 1,183,472	Plus Fixed Income
2030	6	\$ 2,622,438	\$ 1,719,871	\$ (1,395,000)	\$ 1,227,438	\$ 804,989	\$ 1,227,438	
2031	7	\$ 2,557,065	\$ 1,570,958	\$ (1,395,000)	\$ 1,162,065	\$ 713,926	\$ 1,162,065	Alternative/Balanced
2032	8	\$ 2,368,674	\$ 1,363,202	\$ (1,395,000)	\$ 973,674	\$ 560,362	\$ 973,674	
2033	9	\$ 2,388,426	\$ 1,287,653	\$ (1,395,000)	\$ 993,426	\$ 535,578	\$ 993,426	
2029-2033	5-9	\$ 12,515,075	\$ 7,746,866	\$ (6,975,000)	\$ 5,540,075	\$ 3,443,401	\$ 5,540,075	
2034	10	\$ 2,358,149	\$ 1,190,942	\$ (1,395,000)	\$ 963,149	\$ 486,422	\$ 486,422	US/Global Equity
2035	11	\$ 2,251,929	\$ 1,065,384	\$ (1,395,000)	\$ 856,929	\$ 405,412	\$ 405,412	
2036	12	\$ 1,999,776	\$ 886,267	\$ (1,395,000)	\$ 604,776	\$ 268,027	\$ 268,027	
2037	13	\$ 1,965,986	\$ 816,199	\$ (1,395,000)	\$ 570,986	\$ 237,051	\$ 237,051	
2038	14	\$ 1,839,832	\$ 715,527	\$ (1,395,000)	\$ 444,832	\$ 172,999	\$ 172,999	
2034-2038	10-14	\$ 10,415,672	\$ 4,674,319	\$ (6,975,000)	\$ 3,440,672	\$ 1,569,910	\$ 1,569,910	
2039	15	\$ 1,792,209	\$ 652,933	\$ (1,395,000)	\$ 397,209	\$ 144,710	\$ 144,710	US/Global Equity
2040	16	\$ 1,637,581	\$ 558,875	\$ (1,395,000)	\$ 242,581	\$ 82,788	\$ 82,788	
2041	17	\$ 1,529,072	\$ 488,846	\$ (1,395,000)	\$ 134,072	\$ 42,863	\$ 42,863	
2042	18	\$ 1,375,213	\$ 411,857	\$ (1,395,000)	\$ (19,787)	\$ (5,926)	\$ (5,926)	
2043	19	\$ 1,256,454	\$ 352,497	\$ (1,395,000)	\$ (138,546)	\$ (38,869)	\$ (38,869)	
2039-2043	15-19	\$ 7,590,529	\$ 2,465,008	\$ (6,975,000)	\$ 615,529	\$ 225,566	\$ 225,566	
2044-2048	20-24	\$ 4,845,578	\$ 1,132,687	\$ (4,133,666)	\$ 711,912	\$ 166,414	\$ 166,414	US/Global Equity
2049-2053	25-29	\$ 3,532,513	\$ 594,157	\$ -	\$ 3,532,513	\$ 594,157	\$ 594,157	
2054+	30+	\$ 6,539,496	\$ 603,159	\$ -	\$ 6,539,496	\$ 603,159	\$ 603,159	
Total		\$ 57,034,565	\$ 27,081,227	\$ (32,033,666)	\$ 25,000,899	\$ 10,501,988	\$ 13,319,983	

	Hybrid LDI	Present Value LDI		Actual Portfolio
Liability Conscious Allocation	Derived	Derived	IPS Target	Allocation
Cash/Fixed	62%	59%	30%	36%
Equity	24%	30%	55%	51%
Alternative/Balanced	15%	10%	15%	13%

***VEBA Plan 9/30/2024 Value: \$10,629,980**

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years

Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

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Liability/Cash Flow Analysis - VEBA

Valuation		Gross Benefit	PV Benefit	Pension	Net Benefit	Present	Hybrid	Investment
Year	Duration	Payments (\$)	Payments (\$)	Contribution (\$)	Payments (\$)	Value (Net \$)	LDI (Net \$) ¹	Product
2024	0	\$ 2,170,797	\$ 2,106,771	\$ (1,395,000)	\$ 775,797	\$ 752,915	\$ 775,797	Cash Flow Matched
2025	1	\$ 2,188,999	\$ 1,990,104	\$ (1,395,000)	\$ 793,999	\$ 721,855	\$ 793,999	
2026	2	\$ 2,289,142	\$ 1,949,553	\$ (1,395,000)	\$ 894,142	\$ 761,498	\$ 894,142	Core Fixed Income
2027	3	\$ 2,410,839	\$ 1,923,369	\$ (1,395,000)	\$ 1,015,839	\$ 810,437	\$ 1,015,839	
2028	4	\$ 2,535,925	\$ 1,895,234	\$ (1,395,000)	\$ 1,140,925	\$ 852,675	\$ 1,140,925	Plus Fixed Income
2024-2028	0-4	\$ 11,595,702	\$ 9,865,031	\$ (6,975,000)	\$ 4,620,702	\$ 3,899,381	\$ 4,620,702	
2029	5	\$ 2,578,472	\$ 1,805,182	\$ (1,395,000)	\$ 1,183,472	\$ 828,546	\$ 1,183,472	Plus Fixed Income
2030	6	\$ 2,622,438	\$ 1,719,871	\$ (1,395,000)	\$ 1,227,438	\$ 804,989	\$ 1,227,438	
2031	7	\$ 2,557,065	\$ 1,570,958	\$ (1,395,000)	\$ 1,162,065	\$ 713,926	\$ 1,162,065	Alternative/Balanced
2032	8	\$ 2,368,674	\$ 1,363,202	\$ (1,395,000)	\$ 973,674	\$ 560,362	\$ 973,674	
2033	9	\$ 2,388,426	\$ 1,287,653	\$ (1,395,000)	\$ 993,426	\$ 535,578	\$ 993,426	US/Global Equity
2029-2033	5-9	\$ 12,515,075	\$ 7,746,866	\$ (6,975,000)	\$ 5,540,075	\$ 3,443,401	\$ 5,540,075	
2034	10	\$ 2,358,149	\$ 1,190,942	\$ (1,395,000)	\$ 963,149	\$ 486,422	\$ 486,422	US/Global Equity
2035	11	\$ 2,251,929	\$ 1,065,384	\$ (1,395,000)	\$ 856,929	\$ 405,412	\$ 405,412	
2036	12	\$ 1,999,776	\$ 886,267	\$ (1,395,000)	\$ 604,776	\$ 268,027	\$ 268,027	
2037	13	\$ 1,965,986	\$ 816,199	\$ (1,395,000)	\$ 570,986	\$ 237,051	\$ 237,051	
2038	14	\$ 1,839,832	\$ 715,527	\$ (1,395,000)	\$ 444,832	\$ 172,999	\$ 172,999	
2034-2038	10-14	\$ 10,415,672	\$ 4,674,319	\$ (6,975,000)	\$ 3,440,672	\$ 1,569,910	\$ 1,569,910	
2039	15	\$ 1,792,209	\$ 652,933	\$ (1,395,000)	\$ 397,209	\$ 144,710	\$ 144,710	US/Global Equity
2040	16	\$ 1,637,581	\$ 558,875	\$ (1,395,000)	\$ 242,581	\$ 82,788	\$ 82,788	
2041	17	\$ 1,529,072	\$ 488,846	\$ (1,395,000)	\$ 134,072	\$ 42,863	\$ 42,863	
2042	18	\$ 1,375,213	\$ 411,857	\$ (1,395,000)	\$ (19,787)	\$ (5,926)	\$ (5,926)	
2043	19	\$ 1,256,454	\$ 352,497	\$ (1,395,000)	\$ (138,546)	\$ (38,869)	\$ (38,869)	
2039-2043	15-19	\$ 7,590,529	\$ 2,465,008	\$ (6,975,000)	\$ 615,529	\$ 225,566	\$ 225,566	
2044-2048	20-24	\$ 4,845,578	\$ 1,132,687	\$ (4,133,666)	\$ 711,912	\$ 166,414	\$ 166,414	US/Global Equity
2049-2053	25-29	\$ 3,532,513	\$ 594,157	\$ -	\$ 3,532,513	\$ 594,157	\$ 594,157	
2054+	30+	\$ 6,539,496	\$ 603,159	\$ -	\$ 6,539,496	\$ 603,159	\$ 603,159	
Total		\$ 57,034,565	\$ 27,081,227	\$ (32,033,666)	\$ 25,000,899	\$ 10,501,988	\$ 13,319,983	

	Hybrid LDI	Present Value LDI		Actual Portfolio
Liability Conscious Allocation	Derived	Derived	IPS Target	Allocation
Cash/Fixed	44%	45%	30%	36%
Equity	38%	41%	55%	51%
Alternative/Balanced	18%	14%	15%	13%

***VEBA Plan 9/30/2024 Value: \$10,629,980**

¹Hybrid LDI uses Net Benefit Payment for years 0-10 and Present Value of Net Benefit Payment for subsequent years

Contributions based on ARC. ARC, discount rate and present value of benefit payments provided by Angell Pension Group.

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Morgan Stanley

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AT MORGAN STANLEY

Historical Cost Savings Discussion



Included in Morgan Stanley Advisory Fee

- Investment Policy Review
- Asset Allocation
- Fiduciary
- Custody
- Discretion
- Pension Asset/Liability Analysis
- Morgan Stanley Resources
- Manager Due Diligence
- Zero Commission Trading
- Agent Only Trades/No Principal Trades
- No Load/No 12b-1 Mutual Fund Trades (rebate when necessary)
- Institutional Share Class When Mutual Funds
- No Proprietary Managers
- Quarterly Trustee Meetings/Daily Guidance

Advisory Cost Comparison Over Time

December 2018 & Prior – 0.400% (\$56,800,971 – 12/31/2018)

December 2019 – 0.380% (\$69,017,372 – 12/31/2019)

December 2020 – 0.370% (\$75,372,140 – 12/31/2020)

December 2021 – 0.349% (\$83,881,408 – 12/31/2021)

March 2022 – 0.358% (\$79,080,282 – 3/31/2022)

June 2023 – 0.360% (\$77,908,841 – 6/30/2023)

September 2024 – 0.333% (\$90,137,077 – 9/30/2024)

Tiered Fee Schedule for Consolidated Assets of Salary, Union, and VEBA plans

Asset Level	Fee
\$0 - \$54,999,999.99	0.40%
\$55,000,000 - \$69,999,999.99	0.30%
\$70,000,000 - \$84,999,999.99	0.20%
\$85,000,000 - \$99,999,999.99	0.10%
\$100,000,000 or greater	0.025%

Investments Cost Analysis Comparison Over Time

12/31/2016 – 0.58%

12/31/2017 – 0.56%

12/31/2018 – 0.54%

12/31/2019 – 0.40%

12/31/2020 – 0.41%

12/31/2021 – 0.36%

03/31/2022 – 0.37%

06/30/2023 – 0.33%

09/30/2024 – 0.30%

28 basis points savings since 12/2016

Resulted in investment cost savings of approximately 48% since 12/2016

Investments Cost Analysis – 9/30/2024

SC CT Regional Water Authority Total Plan Cost Analysis

	Exp. Ratio	Assets	Total Annual Mgt Cost (\$)	%
Cash Equivalents				
Cash & Equivalents	0.00	\$ 243,209	\$ -	
		\$ 243,209	\$ -	0.00%
Bond				
Individual Bonds	0.00	\$ 17,678,122	\$ -	
Vanguard Short-Term Treasury ETF	0.04	\$ 165,256	\$ 66.10	
Guggenheim Limited Duration Instl	0.47	\$ 335,229	\$ 1,575.57	
Vanguard Short-Term Bond ETF	0.04	\$ 283,284	\$ 113.31	
Vanguard Interm-Term Bond ETF	0.04	\$ 2,578,373	\$ 1,031.35	
Fidelity Total Bond ETF	0.36	\$ 2,400,099	\$ 8,640.36	
Loomis Sayles Core Plus Bond Y	0.49	\$ 2,688,731	\$ 13,174.78	
PIMCO Income I2	0.60	\$ 5,891,430	\$ 35,348.58	
		\$ 32,020,524	\$ 59,950.06	0.19%
U.S. Equity				
Columbia Dividend Income Inst	0.65	\$ 4,090,610	\$ 26,588.96	
Vanguard Value ETF	0.04	\$ 6,402,355	\$ 2,560.94	
Invesco S&P 500® Equal Weight ETF	0.20	\$ 4,214,739	\$ 8,429.48	
Vanguard Total Stock Market ETF	0.03	\$ 9,995,548	\$ 2,998.66	
MFS Massachusetts Inv Gr Stk I	0.46	\$ 3,111,007	\$ 14,310.63	
Vanguard Russell 1000 Growth ETF	0.08	\$ 2,708,834	\$ 2,167.07	
iShares Core S&P Small-Cap ETF	0.06	\$ 1,228,080	\$ 736.85	
		\$ 31,751,173	\$ 57,792.60	0.18%
Global/International				
MFS Intl Diversification I	0.83	\$ 3,709,486	\$ 30,788.73	
Vanguard Total International Stock ETF	0.08	\$ 4,004,169	\$ 3,203.34	
Capital Group International Focus Eq ETF	0.54	\$ 3,628,814	\$ 19,595.59	
First Eagle Global I	0.86	\$ 3,752,865	\$ 32,274.64	
		\$ 15,095,333	\$ 85,862.30	0.57%
Balanced				
Capital Group Core Balanced ETF	0.33	\$ 4,111,020	\$ 13,566.37	
Janus Henderson Balanced I	0.66	\$ 4,136,526	\$ 27,301.07	
		\$ 8,247,546	\$ 40,867.44	0.50%
Alternative				
BlackRock Event Driven Equity Instl	1.29	\$ 1,249,744	\$ 16,121.70	
JPMorgan Hedged Equity I	0.58	\$ 124,033	\$ 719.39	
Cohen & Steers Global Realty I	0.90	\$ 1,405,515	\$ 12,649.63	
		\$ 2,779,292	\$ 29,490.72	1.06%
		\$ 90,137,077	\$ 273,963.12	0.30%

Assets as of 9/30/2024

*Expense Ratios = Prospectus Adjusted Expense Ratios

Source: Morningstar Advisor Workstation, Morgan Stanley

purposes only and is not intended to be used as a substitute for monthly transaction statements you receive on a regular basis from Morgan Stanley & Co. Incorporated Please compare the data on this document carefully with your monthly statements to verify its accuracy. The Company strongly encourages you to consult with your own accountants or other advisors with respect to any tax questions.

Morgan Stanley

THE KELLIHER CORBETT GROUP
AT MORGAN STANLEY

Investment Holdings Analysis



Mutual Funds/ETFs

Results

Data as of 9/30/2024		Morningstar Category	Market Returns (%)						\$ Assets	% of Total
			3 Month	YTD	1-Yr	3-Yr	5-Yr	10-Yr		
Cash & Equivalents										
Cash & Equivalents										
			-	-	-	-	-	-	\$ 243,209	0.27%
Fixed Income										
Vanguard Short-Term Treasury ETF	Short Government	2.90	4.11	● 6.76	● 1.24	● 1.45	● 1.36	\$ 165,256	0.18%	
Cat: Short Government	Short Government	2.72	4.15	● 7.11	● 0.86	● 1.12	● 1.20			
Guggenheim Limited Duration Instl	Short-Term Bond	2.99	5.68	● 9.19	● 2.63	● 3.06	● 2.88	\$ 335,229	0.37%	
Vanguard Short-Term Bond ETF	Short-Term Bond	3.50	4.50	● 8.06	● 0.92	● 1.51	● 1.72	\$ 283,284	0.31%	
Cat: Short-Term Bond	Short-Term Bond	3.17	5.18	● 8.71	● 1.69	● 2.07	● 1.98			
Vanguard Interim-Term Bond ETF	Intermediate Core Bond	5.56	5.05	● 12.27	● -1.25	● 0.72	● 2.31	\$ 2,578,373	2.86%	
Cat: Intermediate Core Bond	Intermediate Core Bond	5.05	4.78	● 11.56	● -1.39	● 0.43	● 1.75			
Fidelity Total Bond ETF	Intermediate Core-Plus Bond	5.19	5.27	● 12.48	● -0.58	● 1.52	-	\$ 2,400,099	2.66%	
Loomis Sayles Core Plus Bond Y	Intermediate Core-Plus Bond	5.12	4.43	● 12.04	● -1.21	● 1.13	● 2.21	\$ 2,688,731	2.98%	
Cat: Intermediate Core-Plus Bond	Intermediate Core-Plus Bond	5.13	5.27	● 12.41	● -1.16	● 0.83	● 2.03			
PIMCO Income I2	Multisector Bond	4.53	6.37	● 12.62	● 2.33	● 3.51	● 4.26	\$ 5,891,430	6.54%	
Cat: Multisector Bond	Multisector Bond	4.38	6.74	● 12.86	● 1.41	● 2.66	● 3.13			
Idx: Bloomberg US Agg Bond TR USD	-	5.20	4.45	● 11.57	● -1.39	● 0.33	● 1.84			
Idx: Bloomberg US Govt/Credit Interm TR USD	-	4.17	4.68	● 9.45	● 0.17	● 1.26	● 1.96			
Idx: FTSE WGBI USD	-	6.95	2.72	● 11.02	● -4.41	● -2.05	● -0.15			
Sub-Total Fixed Income								\$ 14,342,402	15.91%	

- Green = exceeds peer group
- Yellow = trails peer group
- Red = fails to meet criteria (on watch/remove and/or replacement)

Orange = Fund position only held in VEBA

Assets as of 9/30/2024
See last page for important disclosure/disclaimer

Data Source: Morgan Stanley & Morningstar

Mutual Funds/ETFs

Results

Data as of 9/30/2024	Morningstar Category	Market Returns (%)								\$ Assets	% of Total
		3 Month	YTD	1-Yr	3-Yr	5-Yr	10-Yr				
US Equity											
Columbia Dividend Income Inst	Large Value	8.12	16.58	● 26.66	● 10.68	● 12.18	● 11.40	\$ 4,090,610	4.54%		
Vanguard Value ETF	Large Value	9.42	18.99	● 29.78	● 11.66	● 12.25	● 10.79	\$ 6,402,355	7.10%		
Cat: Large Value	Large Value	8.04	15.90	27.14	9.58	11.24	9.30				
Invesco S&P 500® Equal Weight ETF	Large Blend	9.53	14.97	● 28.55	● 7.96	● 12.62	● 10.86	\$ 4,214,739	4.68%		
Vanguard Total Stock Market ETF	Large Blend	6.17	20.59	● 35.25	● 10.12	● 15.18	● 12.78	\$ 9,995,548	11.09%		
Cat: Large Blend	Large Blend	5.94	19.35	32.84	10.14	14.30	11.83				
MFS Massachusetts Inv Gr Stk I	Large Growth	5.70	17.37	● 31.55	● 9.52	● 14.94	● 14.42	\$ 3,111,007	3.45%		
Vanguard Russell 1000 Growth ETF	Large Growth	3.17	24.47	● 42.13	● 11.96	● 19.65	● 16.42	\$ 2,708,834	3.01%		
Cat: Large Growth	Large Growth	3.70	21.92	38.83	7.39	16.08	13.73				
iShares Core S&P Small-Cap ETF	Small Blend	10.09	9.26	● 25.76	● 3.91	● 10.14	● 10.00	\$ 1,228,080	1.36%		
Cat: Small Blend	Small Blend	8.45	10.91	25.03	4.42	10.20	8.63				
Idx: Russell 3000 TR USD	-	6.23	20.63	35.19	10.29	15.26	12.83				
Idx: S&P 500 TR USD	-	5.89	22.08	36.35	11.91	15.98	13.38				
Idx: Russell 1000 Value TR USD	-	9.43	16.68	27.76	9.03	10.69	9.23				
Idx: Russell 1000 TR USD	-	6.08	21.18	35.68	10.83	15.64	13.10				
Idx: Russell 1000 Growth TR USD	-	3.19	24.55	42.19	12.02	19.74	16.52				
Idx: Morningstar DYF TR USD	-	9.33	18.55	23.60	11.91	8.74	8.60				
Idx: Russell 2000 TR USD	-	9.27	11.17	26.76	1.84	9.39	8.78				
Sub-Total US Equity								\$ 31,751,173	35.23%		

- Green = exceeds peer group
- Yellow = trails peer group
- Red = fails to meet criteria (on watch/remove and/or replacement)

Data Source: Morgan Stanley & Morningstar

Assets as of 9/30/2024
See last page for important disclosure/disclaimer

Mutual Funds/ETFs

Results

Data as of 9/30/2024	Morningstar	Market Returns (%)						\$	% of
	Category	3 Month	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Assets	Total
Global/International Equity									
MFS Intl Diversification I	Foreign Large Blend	9.23	15.13	25.31	4.04	8.18	7.08	\$ 3,709,486	4.12%
Vanguard Total International Stock ETF	Foreign Large Blend	8.03	13.59	24.92	4.04	7.79	5.45	\$ 4,004,169	4.44%
Cat: Foreign Large Blend	Foreign Large Blend	7.29	13.08	24.17	4.29	7.73	5.42		
Capital Group International Focus Eq ETF	Foreign Large Growth	4.99	13.59	24.89	-	-	-	\$ 3,628,814	4.03%
Cat: Foreign Large Growth	Foreign Large Growth	6.18	12.94	26.69	0.19	7.70	6.57		
First Eagle Global I	Global Allocation	9.96	18.49	27.29	9.27	9.94	7.85	\$ 3,752,865	4.16%
Cat: Global Allocation	Global Allocation	5.79	11.06	19.88	3.79	6.18	4.82		
Idx: MSCI ACWI Ex USA NR USD	-	8.06	14.21	25.35	4.14	7.59	5.22		
Idx: MSCI ACWI NR USD	-	6.61	18.66	31.76	8.09	12.19	9.39		
Idx: MSCI EAFE NR USD	-	7.26	12.99	24.77	5.48	8.20	5.71		
Idx: MSCI EM NR USD	-	8.72	16.86	26.05	0.40	5.75	4.02		
Sub-Total Global/International Equity								\$ 15,095,333	16.75%
Balanced									
Capital Group Core Balanced ETF	Moderate Allocation	4.98	15.17	26.73	-	-	-	\$ 4,111,020	4.56%
Janus Henderson Balanced I	Moderate Allocation	4.46	15.31	26.23	6.12	9.44	9.02	\$ 4,136,526	4.59%
Cat: Moderate Allocation	Moderate Allocation	5.34	12.27	21.99	4.89	8.01	6.89		
Idx: Bloomberg US Agg Bond TR USD	-	5.20	4.45	11.57	-1.39	0.33	1.84		
Idx: S&P 500 TR USD	-	5.89	22.08	36.35	11.91	15.98	13.38		
Sub-Total Balanced								\$ 8,247,546	9.15%
Alternative									
BlackRock Event Driven Equity Instl	Event Driven	2.60	2.80	6.56	2.95	3.55	4.53	\$ 1,249,744	1.39%
Cat: Event Driven	Event Driven	2.86	3.39	5.96	2.28	4.31	3.23		
JPMorgan Hedged Equity I	Options Trading	5.17	16.56	23.09	9.13	10.92	8.66	\$ 124,033	0.14%
Cat: Options Trading	Options Trading	3.34	10.77	18.80	7.19	7.37	4.89		
Cohen & Steers Global Realty I	Global Real Estate	15.07	12.78	29.19	1.11	3.38	5.99	\$ 1,405,515	1.56%
Cat: Global Real Estate	Global Real Estate	15.57	11.55	28.32	0.08	2.13	4.32		
Idx: S&P 500 TR USD	-	5.89	22.08	36.35	11.91	15.98	13.38		
Idx: Bloomberg US Agg Bond TR USD	-	5.20	4.45	11.57	-1.39	0.33	1.84		
Idx: Russell 3000 TR USD	-	6.23	20.63	35.19	10.29	15.26	12.83		
Idx: MSCI ACWI NR USD	-	6.61	18.66	31.76	8.09	12.19	9.39		
Idx: DJ Global World Real Estate TR USD	-	17.07	12.63	30.14	0.25	1.92	4.85		
Sub-Total Alternative								\$ 2,779,292	3.08%
Total								\$ 72,458,955	80.39%

- Green = exceeds peer group
- Yellow = trails peer group
- Red = fails to meet criteria (on watch/remove and/or replacement)

Data Source: Morgan Stanley & Morningstar

Assets as of 9/30/2024
See last page for important disclosure/disclaimer

Mutual Funds/ETFs

Statistics

Data as of 9/30/2024	Prospectus Net Expense Ratio	Prospectus Adj Expense Ratio	Beta 3 Yr vs. S&P or BBg Agg	Alpha 3 Yr vs. S&P or BBg Agg	Std Dev 3 Yr	R2 3 Yr vs. S&P or BBg Agg	P/E Ratio	P/B Ratio	Geo Avg Mkt Cap \$MM	Mstar Risk 5 Yr
Fixed Income										
Vanguard Short-Term Treasury ETF	0.04	0.04	0.25	-1.30	2.44	73	-	-	-	Below Avg
Cat: Short Government	0.59	0.59	0.33	-1.31	2.93	78	22.8	3.2	96452	-
Guggenheim Limited Duration Instl	0.50	0.47	0.35	0.56	3.11	84	-	-	-	Average
Vanguard Short-Term Bond ETF	0.04	0.04	0.41	-0.82	3.48	88	-	-	-	Average
Cat: Short-Term Bond	0.65	0.65	0.36	-0.31	3.24	81	23.1	3.4	18167	-
Vanguard Inter-Term Bond ETF	0.04	0.04	1.06	0.45	8.10	99	-	-	-	Above Avg
Cat: Intermediate Core Bond	0.56	0.56	0.97	-0.15	7.52	98	22.1	4.2	305419	-
Fidelity Total Bond ETF	0.36	0.36	0.99	0.73	7.60	98	-	-	-	Below Avg
Loomis Sayles Core Plus Bond Y	0.49	0.49	1.10	0.73	8.45	98	-	-	-	Above Avg
Cat: Intermediate Core-Plus Bond	0.75	0.75	0.99	0.18	7.70	96	-	-	-	-
PIMCO Income I2	0.93	0.60	0.78	2.56	6.61	83	-	-	-	Average
Cat: Multisector Bond	1.00	1.00	0.70	1.26	6.39	70	-	-	-	Average

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Orange = Fund position only held in VEBA

The Prospectus Adjusted Operating Expense Ratio is the percentage of fund assets paid for operating expenses and management fees. The expense ratio typically includes the following types of fees: accounting, administrator, advisor, auditor, board of directors, custodial, distribution (12b-1), legal, organizational, professional, registration, shareholder reporting, sub-advisor, and transfer agency. The ratio does reflect fee waivers in effect during the time period, and does not include interest and dividends on borrowed securities. The expense ratio does not reflect the fund's brokerage costs or any investor sales charges.

Data Source: Morgan Stanley & Morningstar

Mutual Funds/ETFs

Statistics

Data as of 9/30/2024	Prospectus Net Expense Ratio	Prospectus Adj Expense Ratio	Beta 3 Yr vs. S&P or BBg Agg	Alpha 3 Yr vs. S&P or BBg Agg	Std Dev 3 Yr	R2 3 Yr vs. S&P or BBg Agg	P/E Ratio	P/B Ratio	Geo Avg Mkt Cap \$MM	Mstar Risk 5 Yr
US Equity										
Columbia Dividend Income Inst	0.65	0.65	0.78	0.43	14.72	85	21.8	3.7	179841	Low
Vanguard Value ETF	0.04	0.04	0.80	1.30	15.68	78	20.8	2.9	132060	Below Avg
Cat: Large Value	0.90	0.90	0.83	-0.77	16.60	77	19.3	2.6	136414	-
Invesco S&P 500® Equal Weight ETF	0.20	0.20	0.98	-3.32	18.32	87	21.7	3.0	44048	High
Vanguard Total Stock Market ETF	0.03	0.03	1.01	-1.70	17.83	99	25.9	4.2	195489	Above Avg
Cat: Large Blend	0.77	0.77	0.95	-1.25	17.26	94	26.8	5.2	362945	-
MFS Massachusetts Inv Gr Stk I	0.46	0.46	0.99	-2.07	17.75	96	30.9	6.7	250236	Low
Vanguard Russell 1000 Growth ETF	0.08	0.08	1.14	-0.57	20.84	92	35.8	11.9	656743	Average
Cat: Large Growth	0.94	0.94	1.12	-4.56	21.28	87	35.4	9.3	541501	-
iShares Core S&P Small-Cap ETF	0.06	0.06	1.04	-6.98	22.03	68	17.4	1.9	3003	Above Avg
Cat: Small Blend	0.98	0.98	1.01	-6.47	21.09	70	18.5	2.4	5746	-

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Data Source: Morgan Stanley & Morningstar

Mutual Funds/ETFs

Statistics

Data as of 9/30/2024	Prospectus Net Expense Ratio	Prospectus Adj Expense Ratio	Beta 3 Yr vs. S&P or BBg Agg	Alpha 3 Yr vs. S&P or BBg Agg	Std Dev 3 Yr	R2 3 Yr vs. S&P or BBg Agg	P/E Ratio	P/B Ratio	Geo Avg Mkt Cap \$MM	Mstar Risk 5 Yr
Global/International Equity										
MFS Intl Diversification I	0.83	0.83	1.00	-0.05	16.68	96	16.6	1.9	41551	Below Avg
Vanguard Total International Stock ETF	0.08	0.08	1.03	-0.05	16.96	99	15.8	1.7	32995	Average
Cat: Foreign Large Blend	0.90	0.90	1.01	0.25	17.24	92	15.6	1.9	63573	-
Capital Group International Focus Eq ETF	0.54	0.54	-	-	-	-	23.8	3.1	76473	-
Cat: Foreign Large Growth	1.01	1.01	1.14	-3.47	20.12	85	23.4	3.6	78122	-
First Eagle Global I	0.86	0.86	1.02	5.46	13.54	89	19.0	2.0	63931	Above Avg
Cat: Global Allocation	1.14	1.14	0.93	0.19	12.54	87	19.6	2.5	102993	-
Balanced										
Capital Group Core Balanced ETF	0.33	0.33	-	-	-	-	24.7	4.6	213494	-
Janus Henderson Balanced I	0.66	0.66	0.96	2.43	12.64	91	29.8	7.4	452978	Average
Cat: Moderate Allocation	1.04	1.04	0.94	1.23	12.36	91	23.4	3.5	183618	-
Alternative										
BlackRock Event Driven Equity Instl	1.29	1.29	0.14	-1.59	3.74	40	21.8	2.7	18347	Average
Cat: Event Driven	1.75	1.75	0.15	-2.22	4.56	26	21.8	2.2	6807	-
JPMorgan Hedged Equity I	0.58	0.58	0.51	2.71	9.66	77	27.1	4.8	335673	Average
Cat: Options Trading	0.92	0.92	0.57	0.64	10.54	81	27.8	4.9	427178	-
Cohen & Steers Global Realty I	0.90	0.90	1.09	-6.57	20.02	81	26.1	1.6	19655	Average
Cat: Global Real Estate	1.13	1.13	1.07	-7.50	19.97	78	25.7	1.5	17617	-

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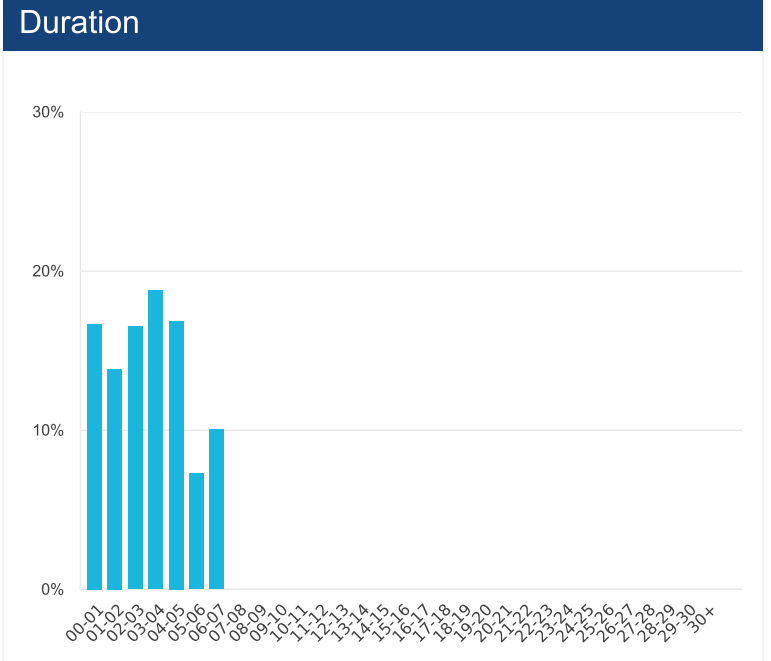
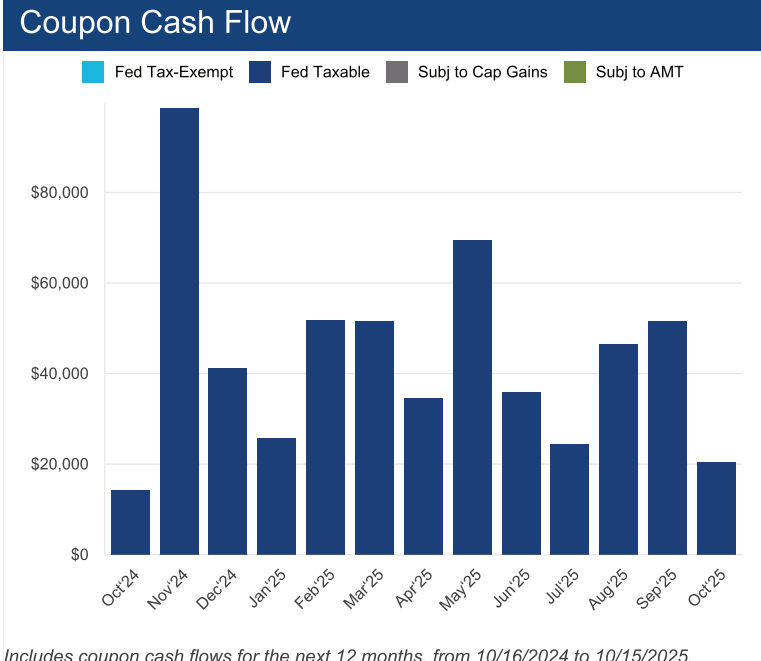
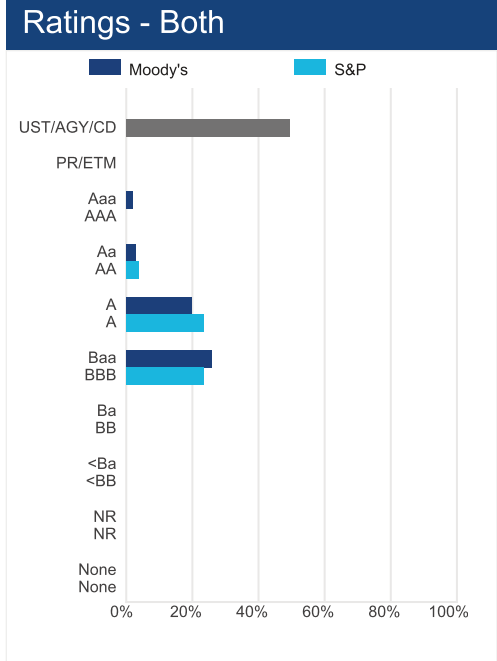
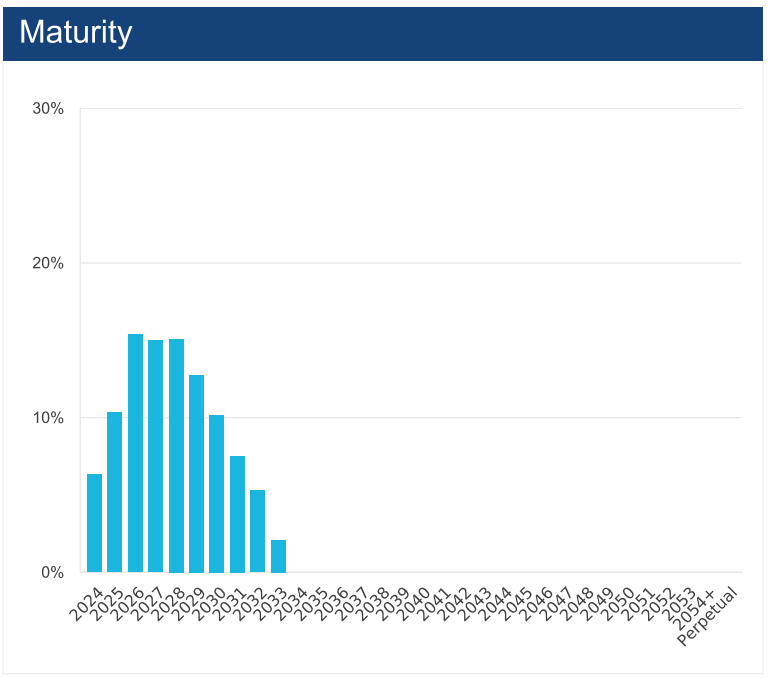
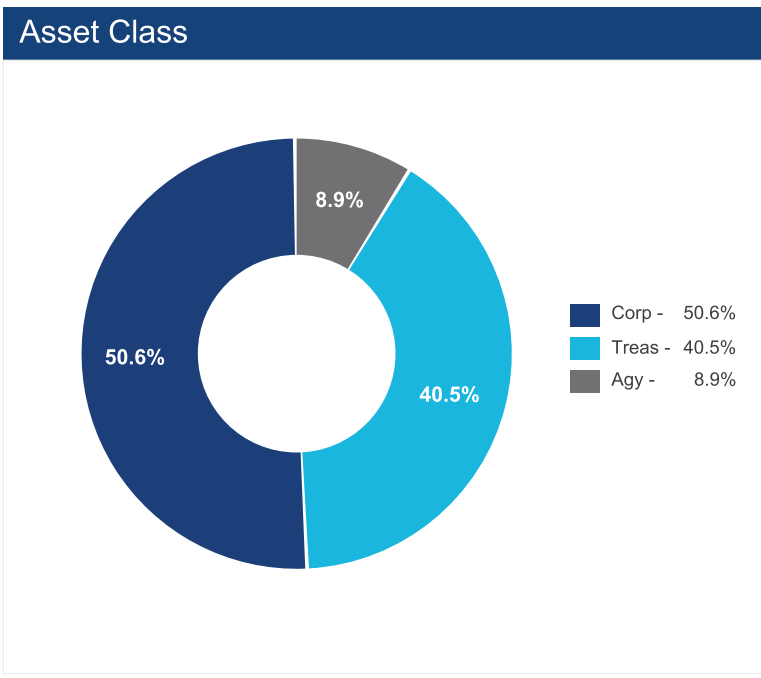
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Data Source: Morgan Stanley & Morningstar

Totals & Averages @ Market

Summary Totals	
Original Face	\$17,987,000
Current Face (Par)	\$17,987,000
Market Principal	\$17,393,133
Accrued Interest	\$163,428
Cash & Cash Alternatives	\$0
Fixed Income Funds	\$0
Equity Balance	\$0
Total Portfolio Value	\$17,556,562
Next 12mo Cpn Cash Flow	\$566,127
Generic Annual Cpn Cash Flow	\$606,986
Weighted Averages	
Coupon*	3.375%
Maturity**	3.56 yrs
Duration	3.21
Yield to Worst	4.292%
Yield to Maturity	4.293%
Market Price*	96.698
Tax Lots Holdings Included	130 of 130

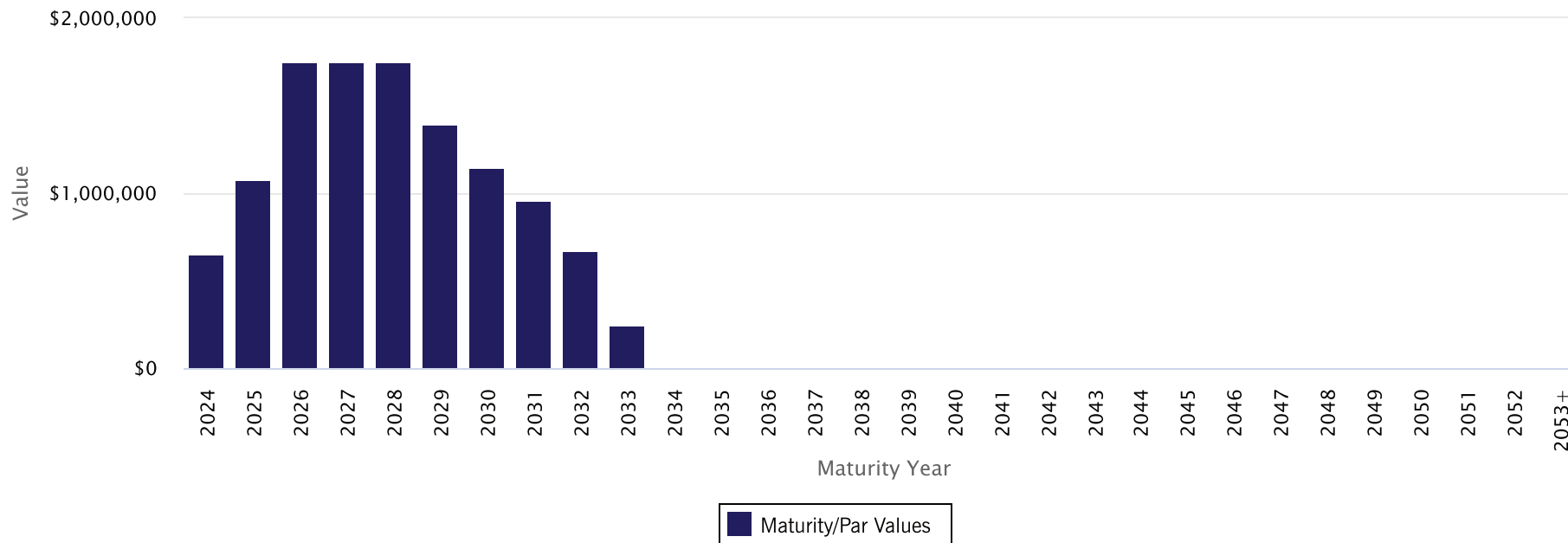
*Par-Wtd, all else Mkt-Wtd.
**Avg life used for principal paydowns, and perpetual securities are assigned a 40 year maturity.



Includes all tax lot holdings with recognized CUSIP, quantity, market price and full analytical calculations on reporting date. Includes coupon cash flows for the next 12 months, from 10/16/2024 to 10/15/2025. Projected Principal Paydowns for CMOs are produced by applying current pool speeds which are updated weekly. Assuming similar market conditions going forward, Projected Principal Paydowns for Pass-Thru securities are produced by calculating and applying concurrent historical speeds to future paydown schedules.

Bond Maturity Distribution Graph

BOND MATURITY DISTRIBUTION GRAPH

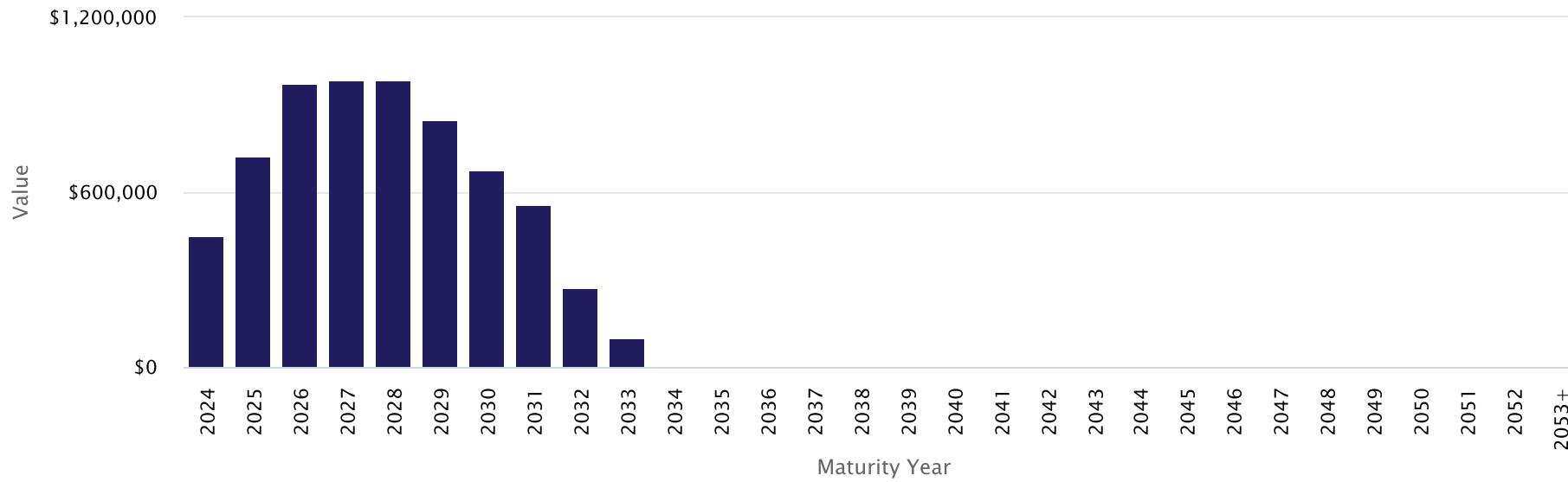


Year	Maturity/Par Values (\$)	% of Maturity/Par Value	# of Issues	Year	Maturity/Par Values (\$)	% of Maturity/Par Value	# of Issues	Year	Maturity/Par Values (\$)	% of Maturity/Par Value	# of Issues
2024	650,000.00	5.70	2	2034	-	-	0	2044	-	-	0
2025	1,075,000.00	9.42	6	2035	-	-	0	2045	-	-	0
2026	1,750,000.00	15.34	8	2036	-	-	0	2046	-	-	0
2027	1,750,000.00	15.34	8	2037	-	-	0	2047	-	-	0
2028	1,750,000.00	15.34	9	2038	-	-	0	2048	-	-	0
2029	1,400,000.00	12.27	7	2039	-	-	0	2049	-	-	0
2030	1,150,000.00	10.08	5	2040	-	-	0	2050	-	-	0
2031	960,000.00	8.41	4	2041	-	-	0	2051	-	-	0
2032	675,000.00	5.92	3	2042	-	-	0	2052	-	-	0
2033	250,000.00	2.19	1	2043	-	-	0	2053+	-	-	0

The Bond Maturity Distribution Graph does not include bonds held in mutual funds or ETFs, or bonds for which this information is not available.

Bond Maturity Distribution Graph



BOND MATURITY DISTRIBUTION GRAPH



■ Maturity/Par Values

Year	Maturity/Par Values (\$)	% of Maturity/Par Value	# of Issues	Year	Maturity/Par Values (\$)	% of Maturity/Par Value	# of Issues	Year	Maturity/Par Values (\$)	% of Maturity/Par Value	# of Issues
2024	450,000.00	6.84	2	2034	-	-	0	2044	-	-	0
2025	725,000.00	11.02	6	2035	-	-	0	2045	-	-	0
2026	972,000.00	14.78	8	2036	-	-	0	2046	-	-	0
2027	985,000.00	14.98	8	2037	-	-	0	2047	-	-	0
2028	985,000.00	14.98	9	2038	-	-	0	2048	-	-	0
2029	850,000.00	12.92	7	2039	-	-	0	2049	-	-	0
2030	675,000.00	10.26	5	2040	-	-	0	2050	-	-	0
2031	560,000.00	8.52	4	2041	-	-	0	2051	-	-	0
2032	275,000.00	4.18	3	2042	-	-	0	2052	-	-	0
2033	100,000.00	1.52	1	2043	-	-	0	2053+	-	-	0

The Bond Maturity Distribution Graph does not include bonds held in mutual funds or ETFs, or bonds for which this information is not available.



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Assets as of 9/30/2024

Data Source: Morningstar; as of 9/30/2024



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Glossary of Terms

Accrued Income: The dividends and interest earned but not yet received at both the beginning and end of each reporting period.

Advisory Account: An investment advisory relationship is designed for clients who prefer that their Financial Advisor act as an investment consultant, with their assets invested in a mutual fund asset allocation program or in a Advisory account that is directed by a professional money manager either at Morgan Stanley or at an external money management firm. There are important differences in your relationship with your Financial Advisor and Morgan Stanley in brokerage accounts and in advisory accounts. Additional information about these differences is available at <http://www.morganstanley.com/ourcommitment>

Annualized Standard Deviation: A measure of volatility, it quantifies how much a series of numbers, such as portfolio returns, deviates around its average. Since it measures the portfolio's investment volatility, the account's gross rate of return is used.

Brokerage Account: In a brokerage relationship, your Financial Advisor will work with you to facilitate the execution of securities transactions on your behalf. Your Financial Advisor also provides investor education and professional, personalized information about financial products and services in connection with these brokerage services. You can choose how you want to pay for these services and you will receive the same services regardless of which pricing option you choose. There are important differences in your relationship with your Financial Advisor and Morgan Stanley in brokerage accounts and in advisory accounts. Additional information about these differences is available at <http://www.morganstanley.com/ourcommitment>

Comparative Indices: A complete description of the comparative indices included in this Performance Report is available upon request.

Dollar-Weighted Return: Rate of return calculation methodology that reflects both the timing and magnitude of external contributions and withdrawals and measures the portfolio's performance. The return for each month is calculated as the average return on all dollars invested.

Gross Return: The return of the portfolio before the deduction of fees/commissions and other expenses.

Net Contributions/Withdrawals: The total value of capital contributed to or withdrawn from the account during the reporting period. The dollar amount represented by contribution or withdrawal transactions is excluded from the calculation of Portfolio Appreciation.

Net Invested Capital: The sum of the Total Beginning Value and the net of additional capital Contributions and Withdrawals for each reporting period.

Net Portfolio Appreciation: The total dollar gain/loss of the portfolio for each reporting period. The Net Portfolio Appreciation includes the impact of income received and is calculated as the difference between Net Invested Capital and Total Ending Value.

Net Return: The return of the portfolio for the period reduced by the amount of fees/commissions paid. The net of fees return is calculated gross of certain custody fees.

Time-Weighted Return: Rate of return calculation methodology that eliminates the impact of external contributions and withdrawals to the portfolio value and measures the manager's performance. Portfolio returns are calculated at least monthly and individual monthly returns are geometrically linked to calculate total cumulative return.

Total Beginning Value: The total market value of the portfolio, valued on a trade date basis, at the beginning of each reporting period. The Total Beginning Value includes Accrued Income.

Total Ending Value: The total market value of the portfolio, valued on a trade date basis, at the end of each reporting period. The Total Ending Value includes Accrued Income.

Weighted Average: The average in which each yield to be averaged is assigned a weight. These weightings determine the relative importance or frequency of each yield on the average.

This report is not an official account statement. The information in this report is not complete without the required disclaimer and glossary, which you should read carefully



All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

Equities:

The **Dow Jones Industrial Average** is a price-weighted average of 30 actively traded blue-chip U.S. stocks.

The **MSCI ACWI (All Country World Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

The **MSCI EAFE Index (Europe, Australasia, Far East)** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

The **MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The **MSCI Pacific Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region.

The **Russell 1000 Index**® measures the performance of the 1,000 largest companies in the Russell 3000.

The **Russell 1000 Growth Index**® measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 1000 Value Index**® measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 2000 Index**® measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

The **Russell 2000 Growth Index**® measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index**® measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 3000 Index**® measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The **Russell Midcap Index**® measures the performance of the 800 smallest companies in the Russell 1000 Index.

The **Russell Midcap Growth Index**® measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index**® measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

Fixed income:

The **Bloomberg 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The **Bloomberg Global High Yield Index** is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

The **Bloomberg Municipal Index**: consists of a broad selection of investment-grade general obligation and revenue bonds of maturities ranging from one year to 30 years. It is an unmanaged index representative of the tax-exempt bond market.

The **Bloomberg US Dollar Floating Rate Note (FRN) Index** provides a measure of the U.S. dollar denominated floating rate note market.

The **Bloomberg US Corporate Investment Grade Index** is an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures and secured notes that are rated investment grade (Baa3/BBB or higher) by at least two ratings agencies, have at least one year to final maturity and have at least \$250 million par amount outstanding. To qualify, bonds must be SEC-registered.

The **Bloomberg US High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The **Bloomberg US Mortgage Backed Securities Index** is an unmanaged index that measures the performance of investment grade fixed-rate mortgage backed pass-through securities of GNMA, FNMA and FHLMC.

The **Bloomberg US TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan Emerging Market Bond Global Index (EMBI)** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The **J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified)** is an expansion of the **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**. The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **U.S. Treasury Index** is a component of the U.S. Government index.



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Other asset classes:

The **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for the asset class.

The **Bloomberg Commodity Index** and related sub-indices are composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc

The **Cambridge Associates U.S. Global Buyout and Growth Index®** is based on data compiled from 1,768 global (U.S. & ex-U.S.) buyout and growth equity funds, including fully liquidated partnerships, formed between 1986 and 2013.

The **CS/Tremont Hedge Fund Index** is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US\$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC.

The **HFRI Monthly Indices (HFRI)** are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 4 main strategies, each with multiple sub strategies. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database.

The **NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance, and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

The **NFI-ODCE**, short for NCREIF Fund Index -Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted.

Definitions:

Investing in **alternative assets** involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

Distressed Restructuring Strategies employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings.

Investments in **emerging markets** can be more volatile. The normal risks of investing in foreign countries are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

The price of **equity** securities may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

Equity market neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Global macro strategies trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations.

There is no guarantee that the use of **long and short positions** will succeed in limiting an investor's exposure to domestic stock market movements, capitalization, sector swings or other risk factors. Using long and short selling strategies may have higher portfolio turnover rates. Short selling involves certain risks, including additional costs associated with covering short positions and a possibility of unlimited loss on certain short sale positions.

Merger arbitrage strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction.

Mid-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid-cap companies' stock has experienced a greater degree of market volatility than the average stock.

Price to forward earnings is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a share on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

Relative Value Strategies maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

Small-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.

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Unless otherwise stated, all Data are as of September 30, 2024 or most recently available.

Guide to the Markets – U.S.

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J.P.Morgan
ASSET MANAGEMENT

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The **Global Investment Committee** is a group of seasoned investment professionals who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend model portfolio weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

The GIC Asset Allocation Models are not available to be directly implemented as part of an investment advisory service and should not be regarded as a recommendation of any Morgan Stanley investment advisory service. The GIC Asset Allocation Models do not represent actual trading or any type of account or any type of investment strategies and none of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, advisory fees, fund expenses) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models which, when compounded over a period of years, would decrease returns.

Adverse Active AlphaSM 2.0 is a patented screening and scoring process designed to help identify high-quality equity and fixed income managers with characteristics that may lead to future outperformance relative to index and peers. While highly ranked managers performed well as a group in our Adverse Active Alpha model back tests, not all of the managers will outperform. Please note that this data may be derived from back-testing, which has the benefit of hindsight. In addition, highly ranked managers can have differing risk profiles that might not be appropriate for all investors.

Our view is that Adverse Active Alpha is a good starting point and should be used in conjunction with other information. Morgan Stanley Wealth Management's qualitative and quantitative investment

manager due diligence process are equally important factors for investors when considering managers for use through an investment advisory program. Factors including, but not limited to, manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors.

The proprietary **Value Score** methodology considers an active investment strategies' value proposition relative to its costs. From a historical quantitative study of several quantitative markers, Value Score measures perceived forward-looking benefit and computes (1) "fair value" expense ratios for most traditional investment managers across 40 categories and (2) managers' perceived "excess value" by comparing the fair value expense ratios to actual expense ratios. Managers are then ranked within each category by their excess value to assign a Value Score. Our analysis suggests that greater levels of excess value have historically corresponded to attractive subsequent performance.

For more information on the ranking models, please see Adverse Active AlphaSM 2.0: Scoring Active Managers According to Potential Alpha and Value Score: Scoring Fee Efficiency by Comparing Managers' "Fair Value" and Actual Expense Ratios. The whitepapers are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on AAA, please see the Adverse Active Alpha Ranking Model and Selecting Managers with Adverse Active Alpha whitepapers. The whitepaper are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

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If your account is invested in mutual funds or exchange traded funds (collectively "funds"), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund's share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at www.morganstanley.com/ADV.

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may effect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instances, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at www.morganstanley.com/ADV, or contact your Financial Advisor / Private Wealth Advisor.

Conflicts of Interest: GIMA's goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth

Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients' assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. Separately, certain strategies managed or sub-advised by us or our affiliates, including but not limited to MSIM and Eaton Vance Management ("EVM") and its investment affiliates, may be included in your account. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA's evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS&Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts, and managers in various advisory programs.

Morgan Stanley Wealth Management, managers, MS & Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account.

Morgan Stanley charges each fund family we offer a mutual fund support fee, also called a "revenue-sharing payment," on client account holdings in fund families according to a tiered rate that increases along with the management fee of the fund so that lower management fee funds pay lower rates than those with higher management fees.

Consider Your Own Investment Needs: The model portfolios and strategies discussed in the material are formulated based on general client characteristics including risk tolerance. This material is not intended to be an analysis of whether particular investments or strategies are appropriate for you or a recommendation, or an offer to participate in any investment. Therefore, clients should not use this material as the sole basis for investment decisions. They should consider all relevant information, including their existing portfolio, investment objectives, risk tolerance, liquidity needs and investment time horizon. Such a determination may lead to asset allocation results that are materially different from the asset allocation shown in this profile. Talk to your Financial Advisor about what would be an appropriate asset allocation for you, whether Morgan Stanley Pathway Funds is an appropriate program for you.

No obligation to notify – Morgan Stanley Wealth Management has no obligation to notify you when the model portfolios, strategies, or any other information, in this material changes.

For index, indicator and survey definitions referenced in this report please visit the following: <https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions>

The Morgan Stanley Pathway Funds, Firm Discretionary UMA Model Portfolios, and other asset allocation or any other model portfolios discussed in this material are available only to investors participating in Morgan Stanley Consulting Group advisory programs. For additional information on the Morgan Stanley Consulting Group advisory programs, see the applicable ADV brochure, available at www.morganstanley.com/ADV or from your Morgan Stanley Financial Advisor or Private Wealth Advisor. To learn more about the Morgan Stanley Pathway Funds, visit the Funds' website at <https://www.morganstanley.com/wealth-investmentsolutions/cgcm>. Consulting Group is a business of Morgan Stanley.

Morgan Stanley Pathway Program Asset Allocation Models There are model portfolios corresponding to five risk-tolerance levels available in the Pathway program. Model 1 is the least aggressive portfolio and consists mostly of bonds. As the model numbers increase, the models have higher allocations to equities and become more aggressive. Pathway is a mutual fund asset allocation program. In constructing the Pathway Program Model Portfolios, Morgan Stanley Wealth Management uses, among other things, model asset allocations produced by Morgan Wealth Management's Global Investment Committee (the "GIC"). The Pathway Program Model Portfolios are specific to the Pathway program (based on program features and parameters, and any other requirements of Morgan Stanley Wealth Management's Consulting Group). The Pathway Program Model Portfolios may therefore differ in some respects from model portfolios available in other Morgan Stanley Wealth Management programs or from asset allocation models published by the Global Investment Committee.

The type of mutual funds and ETFs discussed in this presentation utilizes nontraditional or complex investment strategies and/or derivatives. Examples of these types of funds include those that utilize one or more of the below noted investment strategies or categories or which seek exposure to the following markets: (1) commodities (e.g., agricultural, energy and metals), currency, precious metals; (2) managed futures; (3) leveraged, inverse or inverse leveraged; (4) bear market, hedging, long-short equity, market neutral; (5) real estate; (6) volatility (seeking exposure to the CBOE VIX Index). Investors should keep in mind that while mutual funds and ETFs may, at times, utilize nontraditional investment options and strategies, they should not be equated with unregistered privately offered alternative investments. Because of regulatory limitations, mutual funds and ETFs that seek alternative-like investment exposure must utilize a more limited investment universe. As a result, investment returns and portfolio characteristics of alternative mutual funds and ETFs may vary from traditional hedge funds pursuing similar investment objectives. Moreover, traditional hedge funds have limited liquidity with long "lock-up" periods allowing them to pursue investment strategies without having to factor in the need to meet client redemptions and ETFs trade on an exchange. On the other hand, mutual funds typically must meet daily client redemptions. This differing liquidity profile can have a material impact on the investment returns generated by a mutual fund or ETF pursuing an alternative investing strategy compared with a traditional hedge fund pursuing the same strategy.

Nontraditional investment options and strategies are often employed by a portfolio manager to further a fund's investment objective and to help offset market risks. However, these features may be complex, making it more difficult to understand the fund's essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage."

Please consider the investment objectives, risks, fees, and charges and expenses of mutual funds, ETFs, closed end funds, unit investment trusts, and variable insurance products carefully before investing. The prospectus contains this and other information about each fund. To obtain a prospectus, contact your Financial Advisor or Private Wealth Advisor or visit the Morgan Stanley website at www.morganstanley.com. Please read it carefully before investing.

Money Market Funds: You could lose money in money market funds. Although money market funds classified as government funds (i.e., money market funds that invest 99.5% of total assets in cash and/or securities backed by the U.S government) and retail funds (i.e., money market funds open to natural person investors only) seek to preserve value at \$1.00 per share, they cannot guarantee they will do so. The price of other money market funds will fluctuate and when you sell shares they may be worth more or less than originally paid. Money market funds may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits. A money market fund investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or other government agency. The Fund's sponsor has no legal obligation to provide financial support to the Fund, and you should not expect that the sponsor will provide financial support to the Fund at any time.

Investors should carefully consider the investment objectives, risks, charges and expenses of a money market fund before investing. The prospectus contains this and other information about the money market fund. To obtain a prospectus, contact your Financial Advisor or visit the money market fund company's website. Please read the prospectus carefully before investing.

Exchange Funds are private placement vehicles that enable holders of concentrated single-stock positions to exchange those stocks for a diversified portfolio. Investors may benefit from greater diversification by exchanging a concentrated stock position for fund shares without triggering a taxable event. These funds are available only to qualified investors and may only be offered by Financial Advisors who are qualified to sell alternative investments. Before investing, investors should consider the following:

- Dividends are pooled
- Investors may forfeit their stock voting rights
- Investment may be illiquid for several years
- Investments may be leveraged or contain derivatives
- Significant early redemption fees may apply
- Changes to the U.S. tax code, which could be retroactive (potentially disallowing the favorable tax treatment of exchange funds)
- Investment risk and potential loss of principal

KEY ASSET CLASS CONSIDERATIONS AND OTHER RISKS

Investing in the markets entails the risk of market volatility. The value of all types of investments, including stocks, mutual funds, exchange-traded funds ("ETFs"), closed-end funds, and unit investment trusts, may increase or decrease over varying time periods. To the extent the investments depicted herein represent **international securities**, you should be aware that there may be additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be magnified in **emerging markets and frontier markets**. Some funds also invest in foreign securities, which may involve currency risk. There is no assurance that the fund will achieve its investment objective. **Small- and mid-capitalization companies** may lack the financial resources, product diversification and competitive strengths of larger companies. In addition, the securities of small- and mid-capitalization companies may not trade as readily as, and be subject to higher volatility than, those of larger, more established companies. The value of **fixed income securities** will fluctuate and, upon a sale, may be worth more or less than their original cost or maturity value. Bonds are subject to interest rate risk, call risk, reinvestment risk, liquidity risk, and credit risk of the issuer. **High yield bonds** are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. In the case of **municipal bonds**, income is generally exempt from federal income taxes. Some income may be subject to state and local taxes and to the federal alternative minimum tax. Capital gains, if any, are subject to tax. **Treasury Inflation Protection Securities' (TIPS)** coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation. There is no guarantee that investors will receive par if TIPS are sold prior to maturity. **Environmental, Social and Governance ("ESG") investments** in a portfolio may experience performance that is lower or higher than a portfolio not employing such practices. Portfolios with ESG restrictions and strategies as well as ESG investments may not be able to take

advantage of the same opportunities or market trends as portfolios where ESG criteria is not applied. There are inconsistent ESG definitions and criteria within the industry, as well as multiple ESG ratings providers that provide ESG ratings of the same subject companies and/or securities that vary among the providers. Certain issuers of investments may have differing and inconsistent views concerning ESG criteria where the ESG claims made in offering documents or other literature may overstate ESG impact. ESG designations are as of the date of this material, and no assurance is provided that the underlying assets have maintained or will maintain and such designation or any stated ESG compliance. As a result, it is difficult to compare ESG investment products or to evaluate an ESG investment product in comparison to one that does not focus on ESG. Investors should also independently consider whether the ESG investment product meets their own ESG objectives or criteria. There is no assurance that an ESG investing strategy or techniques employed will be successful. Past performance is not a guarantee or a dependable measure of future results. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein. **Options** and margin trading involve substantial risk and are not appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, **closed-end funds** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. Shares of closed-end funds frequently trade at a discount from their NAV which may increase investors' risk of loss. The risk of loss due to this discount may be greater for investors expecting to sell their shares in a relatively short period after completion of the public offering. This characteristic is a risk separate and distinct from the risk that a closed-end fund's net asset value may decrease as a result of investment activities. NAV is total assets less total liabilities divided by the number of shares outstanding. At the time an investor purchases or sells shares of a closed-end fund, shares may have a market price that is above or below NAV. Portfolios that invest a large percentage of assets in only one industry **sector** (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

Structured Investments are complex and not appropriate for all investors. An investment in Structures Investments involve risks. These risks can include but are not limited to: (1) Fluctuations in the price, level or yield of underlying instruments, interest rates, currency values and credit quality, (2) Substantial or total loss of principal, (3) Limits on participation in appreciation of underlying instrument, (4) Limited liquidity, (5) Issuer credit risk and (6) Conflicts of Interest. There is no assurance that a strategy of using structured product for wealth preservation, yield enhancement, and/or interest rate risk hedging will meet its objectives.

Alternative Investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; Risks associated with the operations, personnel, and processes of the manager; and Risks associated with cybersecurity. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management's interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley Wealth Management can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund. Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice. All expressions of opinion are subject to change without notice and are not intended to be a forecast of future events or results. Further, opinions expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management. This is not a "research report" as defined by FINRA Rule 2241 or a "debt research report" as defined by FINRA Rule 2242 and was not prepared by the Research Departments of Morgan Stanley Smith Barney LLC or Morgan Stanley & Co. LLC or its affiliates. Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing. While the HFRI indices are frequently used, they have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and the index may omit funds, the inclusion of which might significantly affect the performance shown). The HFRI indices are based on information self-reported by hedge fund managers that decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe and may be biased in several ways. Composite index results are shown for

illustrative purposes and do not represent the performance of a specific investment. Individual funds have specific tax risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice. Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Wealth Management and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley Wealth Management or any of its affiliates, (3) are not guaranteed by Morgan Stanley Wealth Management and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Wealth Management is a registered broker-dealer, not a bank. This material is not to be reproduced or distributed to any other persons (other than professional advisors of the investors or prospective investors, as applicable, receiving this material) and is intended solely for the use of the persons to whom it has been delivered. This material is not for distribution to the general public. Past performance is no guarantee of future results. Actual results may vary. SIPC insurance does not apply to precious metals, other commodities, or traditional alternative investments. In Consulting Group's advisory programs, alternative investments are limited to US-registered mutual funds, separate account strategies and exchange-traded funds (ETFs) that seek to pursue alternative investment strategies or returns utilizing publicly traded securities. Investment products in this category may employ various investment strategies and techniques for both hedging and more speculative purposes such as short-selling, leverage, derivatives and options, which can increase volatility and the risk of investment loss. Alternative investments are not appropriate for all investors.

Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

A majority of Alternative Investment managers reviewed and selected by GIMA pay or cause to be paid an ongoing fee for distribution from their management fees to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase an interest in an Alternative Investment and in some instances pay these fees on the investments held by advisory clients. Morgan Stanley Wealth Management rebates such fees that are received and attributable to an Investment held by an advisory client and retains the fees paid in connection with investments held by brokerage clients. Morgan Stanley Wealth Management has a conflict of interest in offering alternative investments because Morgan Stanley Wealth Management or our affiliates, in most instances, earn more money in your account from your investments in alternative investments than from other investment options.

It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 260 basis points or more annually depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, "blow ups," or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. However, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial "lift" or upwards bias.

Hedge Funds of Funds and many funds of funds are private investment vehicles restricted to certain qualified private and institutional investors. They are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They may be highly illiquid, can engage in leverage and other speculative practices that may increase volatility and the risk of loss, and may be subject to large investment minimums and initial lockups. They involve complex tax structures, tax-inefficient investing and delays in distributing important tax information. Categorically, hedge funds and funds of funds have higher fees and expenses than traditional investments, and such fees and expenses can lower the returns achieved by investors. Funds of funds have an additional layer of fees over and above hedge fund fees that will offset returns. An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. An investment in a **target date portfolio** is subject to the risks attendant to the underlying funds in which it invests, in these portfolios the funds are the Consulting Group Capital Market funds. A target date portfolio is geared to investors who will retire and/or require income at an approximate year. The portfolio is managed to meet the investor's goals by the

pre-established year or "target date." A target date portfolio will transition its invested assets from a more aggressive portfolio to a more conservative portfolio as the target date draws closer. An investment in the target date portfolio is not guaranteed at any time, including, before or after the target date is reached. **Managed futures** investments are speculative, involve a high degree of risk, use significant leverage, are generally illiquid, have substantial charges, subject investors to conflicts of interest, and are appropriate only for the risk capital portion of an investor's portfolio. Managed futures investments do not replace equities or bonds but rather may act as a complement in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors.

As a diversified global financial services firm, Morgan Stanley engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley therefore engages in activities where Morgan Stanley interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund. All expressions of opinion are subject to change without notice and are not intended to be a forecast of future events or results. **Private Markets:** As part of the Morgan Stanley Private Markets – Access program, Morgan Stanley will be limited solely to a role as an introducer and will not be serving as a placement agent or adviser. Eligible investors must enroll in the program in order to see any investment opportunities. Investments require independent evaluation, due diligence, review & analysis. Neither Morgan Stanley nor any of its affiliates is making any recommendation to purchase or take any action of any sort and is not providing any advice on investments. Investors are asked to work directly with the issuer/sponsor and with your own independent (non-Morgan Stanley) financial, legal, accounting, tax, and other professional advisors to evaluate the investment opportunity.

Investors are responsible for complying with the terms of any applicable exemption from securities law requirements and any potential Private Company issuer restrictions for any sale of Private Company shares, and you must obtain your own legal counsel to advise you in connection with such requirements and Private Company issuer restrictions. You should consult with your third-party advisors regarding the risks of transacting in Private Company shares, including the risk of transacting in a market with little or no price transparency or liquidity. Morgan Stanley provides no opinion or view on the valuation of any Private Company shares, or the sufficiency, fairness or competitiveness of any price obtained. Private Securities do not trade on any national securities exchange and, as such, any potential liquidity (i.e., the potential for any buying interest that might satisfy your sell interest) in such Private Company shares is very limited.

Virtual Currency Products (Cryptocurrencies)

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and may result in a loss of the entire investment. Risks and considerations include but are not limited to:

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. The price of Digital Assets could decline rapidly, and **investors could lose their entire investment.**
- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.
- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor's subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.
- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.
- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.

- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.
- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund's or product's ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.
- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset.
- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from "airdrops" with respect to, or "forks" in, a Digital Asset's blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a "fork" in the Digital Asset blockchain could materially decrease the price of such Digital Asset.
- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products' use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.
- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result, like other investors have, you can lose some or all of your holdings of Digital Assets.
- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.
- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human tracking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting off entirely the ability to use or trade Digital Asset products.
- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.

Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets. Past performance is no guarantee of future results. Actual results may vary.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

Indices are unmanaged and investors cannot directly invest in them. They are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Composite index results are shown for illustrative purposes only, generally do not represent the performance of a specific investment, may not, for a variety of reasons, be an appropriate comparison or benchmark for a particular investment and may not necessarily reflect the actual investment strategy or objective of a particular investment. Consequently, comparing an investment to a particular index may be of limited use.

Artificial intelligence (AI) is subject to limitations, and you should be aware that any output from an AI-supported tool or service made available by the Firm for your use is subject to such limitations, including but not limited to inaccuracy, incompleteness, or embedded bias. You should always verify the results of any AI-generated output.

To obtain **Tax-Management Services**, a client must complete the Tax-Management Form, and deliver the signed form to Morgan Stanley. For more information on Tax-Management Services, including its features and limitations, please ask your Financial Advisor for the Tax Management Form. Review the form carefully with your tax advisor. Tax-Management Services: (a) apply only to equity investments in separate account sleeves of client accounts; (b) are not available for all accounts or clients; and (c) may adversely impact account performance. Tax-management services do not constitute tax advice or a complete tax-sensitive investment management program. There is no guarantee that tax-management services will produce the desired tax results.

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Variable annuities are long-term investments designed for retirement purposes and may be subject to market fluctuations, investment risk, and possible loss of principal. All guarantees, including optional benefits, are based on the financial strength and claims-paying ability of the issuing insurance company and do not apply to the underlying investment options. Optional riders may not be able to be purchased in combination and are available at an additional cost. Some optional riders must be elected at time of purchase. Optional riders may be subject to specific limitations, restrictions, holding periods, costs, and expenses as specified by the insurance company in the annuity contract. If you are investing in a **variable annuity** through a tax-advantaged retirement plan such as an IRA, you will get no additional tax advantage from the variable annuity. Under these circumstances, you should only consider buying a variable annuity because of its other features, such as lifetime income payments and death benefits protection. Taxable distributions (and certain deemed distributions) are subject to ordinary income tax and, if taken prior to age 59½, may be subject to a 10% federal income tax penalty. Early withdrawals will reduce the death benefit and cash surrender value.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Ultrashort-term fixed income asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk. Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk. The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value. MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV, and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention. **Physical precious metals** are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions. Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage. Principal is returned on a monthly basis over the life of a **mortgage-backed security**. Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. **Asset-backed securities** generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision.

Credit ratings are subject to change.

Duration, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. The majority of \$25 and \$1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per \$25 or \$1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price. The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk. The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield. Some \$25 or \$1000 par **preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Companies paying **dividends** can reduce or cut payouts at any time.

Nondiversification: For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time. Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Any type of **continuous or periodic investment plan** does not assure a profit and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fluctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.

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