

**BOARD OF PENSION TRUSTEES  
FOR THE  
CITY OF JACKSONVILLE RETIREMENT SYSTEM  
Thursday, February 27, 2025, at 2 PM  
City Hall Conference Room 3C**

**AGENDA**

**1. CALL TO ORDER**

**2. PUBLIC COMMENT**

**3. MINUTES**

- a. Copy of January 23, 2025, and February 6, 2025, Board of Trustees Minutes;  
RECOMMENDED ACTION: APPROVAL

**4. NEW BUSINESS**

- a. GEPP January 2025 Consent; PAC RECOMMENDED ACTION: APPROVAL  
b. COPP January 2025 Consent; COPAC RECOMMENDED ACTION: APPROVAL  
c. Discount rate comparison and discussion  
d. GEPP Eligibility Appeal

**5. INVESTMENT AND FINANCIAL MATTERS**

- a. Pinnacle SMID Growth Manager Update  
b. January Investment Performance Review  
c. 4th Quarter 2024 Investment Review  
d. Staff Update
  - Investment Activity Report
  - IPS Refresh - Moved to March

**6. OLD BUSINESS**

None

**7. ADMINISTRATIVE**

- a. Staff Update

**8. INFORMATION**

- a. Financial Discussion with Wellington – Large Cap Value scheduled for Thursday, March 6, 2025, at 12:30 PM (meet and greet starts at 12:00)  
b. Next regular BOT meeting scheduled for Thursday, March 27, 2025, at 2 PM

**9. PRIVILEGE OF THE FLOOR**

**10. ADJOURNMENT**

**BOARD OF PENSION TRUSTEES  
FOR THE  
CITY OF JACKSONVILLE RETIREMENT SYSTEM  
January 23, 2025**

**MINUTES**

**2:00 PM, held in Person in City Hall Conference Room 3C and via Zoom.**

**Members Present**

Jeffrey Bernardo, Chair  
Mike Weinstein (on behalf of Anna Brosche)  
David Kilcrease, Secretary  
Leah Hayes  
Kelli O'Leary (on behalf of Karen Bowling)  
Eric Smith (via Zoom)

**Members Not Present**

Sage Sullivan  
Julie Bessent  
Michelle Fletcher

**Staff Present**

Chris Cicero, Treasurer  
Eric Jordan, Financial Specialist  
Brennan Merrell, Chief Investment Officer  
Andy Robinson, Pension Administrator  
John Sawyer, OGC  
Hannah Wells, Assistant Pension Administrator

**Others Present**

Jordan Cipriani, RVK (via Zoom)  
Jake Gerbner, RVK (via Zoom)  
Samia Khan, RVK (via Zoom)  
Jim Voytko, RVK (via Zoom)

**1. CALL TO ORDER**

Chair Bernardo called the meeting to order at 2:00 PM.

**2. PUBLIC COMMENT**

**3. MINUTES**

Mr. Kilcrease motioned to approve the minutes. Ms. O'Leary seconded the motion. The Chair asked for discussion and there was none. The Chair took a vote, and the motion

passed unanimously.

#### **4. NEW BUSINESS**

##### **a. Consent agendas**

Mr. Kilcrease motioned to approve the consent agendas. Ms. O’Leary seconded the motion. The Chair asked for discussion. The Chair took a vote, and the motion passed unanimously.

#### **5. INVESTMENT AND FINANCIAL MATTERS**

Mr. Merrell provided a high-level overview of the preliminary investment flash report. The total fund was valued at approximately \$2.5 billion, down 1.23% MTD and down 0.41% FYTD. He clarified that these figures are preliminary due to the early scheduling of the board meeting for the holidays and assured the members that an updated flash report would be distributed once final numbers are available.

Mr. Merrell provided a detailed overview of the recently red-lined Investment Policy Statement (IPS) review. The updates were designed to align the IPS with the responsibilities already being carried out by the Board and the investment consultant. A discussion was held between OGC, RVK, staff, and members present for updates. After the discussion the Board agreed to postpone voting on the IPS until the February meeting, allowing additional time for a thorough review of the documents.

Ms. Khan provided a recap of the 2024 International Equity Structure Review. Chair Bernardo and Ms. Khan held a brief discussion on the materials provided. The board delayed voting on the proposal until February 27, 2025, a board meeting.

Ms. Khan reviewed the 2024 Strategic Initiatives and made note that all but three items were completed. Ms. Khan stated the Annual Risk Reporting, Pacing Studies, and US SMID Cap Growth Review has been moved to the 2025 Strategic Initiatives. Ms. Cipriani reviewed the 2025 Strategic Initiatives. RVK will be performing Annual Risk Reporting, Non-Core Real Estate Pacing Study, Private Credit Pacing Study, Asset Allocation Study, Ongoing Non-Core Real Estate Due Diligence and Recommendations, an Update to Comprehensive Review of Core Real Estate Allocation, US SMID Cap Growth Search, and a Potential Global Manager Search in 2025. The review of each initiative will assist the Board of Trustees in making well-informed decisions that seek to enhance outcomes for the City of Jacksonville. Ms. Khan mentioned if anyone would like to see any other project done to please let staff know.

Mr. Merrell stated the next investment workshop will be held February 6, 2025, with Harrison Street – Real Estate. He mentioned the HIG- Realty Fund V was completed by the December deadline. Lastly, he provided an update on ongoing cash flows related to capital calls and disbursements.

**6. OLD BUSINESS**

**7. ADMINISTRATIVE**

Mr. Robinson reported that the pension office processed a total of 783 retirement requests last year and has already approached 200 requests from January to the present. Additionally, he noted that 1099-R forms were available on the Jax Pension Portal and were mailed out on January 15, 2025. He also reminded the members that Mr. Hogan's appeal would be presented at the February 27, 2025, Board meeting. A discussion was held about liability insurance for members of the Board of Trustees. Mr. Robinson confirmed that the Board is currently covered under the City's General Liability Policy.

**INFORMATION**

The next regular BOT meeting is scheduled for Thursday, February 27, 2025, at 2 PM.

Investment due diligence workshop will be held Thursday, February 6, 2025, at 12:30 PM.

**8. PRIVILEGE OF THE FLOOR**

**9. ADJOURNMENT**

The Chair adjourned the meeting at 3:04 PM.

**BOARD OF PENSION TRUSTEES  
FOR THE  
CITY OF JACKSONVILLE RETIREMENT SYSTEM  
February 6, 2025**

**MINUTES**

**12:30 PM, held in Person in City Hall Conference Room 3C and via Teams.**

**Members Present**

Jeffrey Bernardo, Chair  
Leah Hayes  
Kelli O'Leary (on behalf of Karen Bowling) (via Teams)  
Sage Sullivan  
Julie Bessent

**Members Not Present**

Anna Brosche  
David Kilcrease  
Michelle Fletcher  
Eric Smith

**Staff Present**

Brennan Merrell, Chief Investment Officer  
Chris Cicero, Treasurer (via Teams)  
Eric Jordan, Financial Specialist – Treasury  
Tracy Flynn, Chief of Risk Management

**Others Present**

Kate Davis, Director of Portfolio Management, Harrison Street  
Anthony Potenza, Director of Investor Relations, Harrison Street

**1. CALL TO ORDER**

Chair Bernardo called the meeting to order at 12:30 PM.

This is a workshop for educational purposes. No votes will take place at the meeting.

**2. PUBLIC COMMENT**

There was none.

**3. INVESTMENT AND FINANCIAL MATTERS**

Harrison Street – Real Estate

Mr. Merrell introduced Kate Davis and Anthony Potenza from Harrison Street. Ms. Davis began the firm overview, explaining they began in 2005, have 288 employees, and manage assets of \$55 billion. Ms. Bessent asked about any personnel changes, and the representatives said there have been no major departures.

Ms. Davis stated that the Core Fund was started in 2011 as an open and perpetual life vehicle focused on alternative real estate. The Fund's investment committee is comprised mostly of partners. The 8-person portfolio management team manages 360+ assets. The in-house, 6-person accounting team aids operational efficiency. The Fund's net asset value is \$9.4 billion, with 25% loan-to-value, and 91% occupancy. Assets are located across the U.S., with 16% Midwest, 16% South, 29% West, and 39% East. Assets are diversified to comprise 27% Medical Office, 19% Senior Housing, 22% Student Housing, 18% Life Sciences, and 14% Self Storage. The firm plans to add a sixth sector—Data Centers—to their portfolio, and they are currently looking for opportunities therein. Ms. Davis explained that long-duration property leases are found within Medical Office, Life Sciences, and (upcoming) Data Centers, with the remaining sectors comprising the short-duration lease properties. Ms. Davis stated they were overweight in short-duration allocation, however, this has been advantageous since they can push rates more quickly for those properties.

The firm plans to gradually increase the data center allocation up to 12%. Prompted by Mr. Bernardo's questioning, Ms. Davis explained that they use demographic information, including population migration, to inform buying decisions. Regarding debt, the fund has a 4.4% weighted average interest rate, and 97% is fixed-rate or hedged. Ms. Davis pointed out that historical records show increased interest in alternatives, and she believes that trend will continue. The Fund's gross returns have lower standard deviation compared to the ODCE benchmark—3.12% compared to 5.02%. The funds beta is 0.48, which underscores the focus on alternatives rather than traditional core real estate. The fund has outperformed its benchmark since inception (currently by 47bps, net of fees) as well as over one, three, five, and ten-year periods. Ms. Davis reviewed specifics of sector allocations and provided case studies for each. The 124 Medical Office properties have 93% occupancy with an average lease term of 8.4 years. The 63 Senior Housing assets have 87% occupancy, and the housing types include 13% independent living, 59% assisted living, and 28% memory care. 62 Student Housing properties spread across 41 universities are 93% occupied with an average age of 8.26 years. The Life Sciences portfolio of 25 assets has a current occupancy of 99% with an average lease term of 11.5 years. The Storage portfolio of 88 assets has a current occupancy of 80%. In the first quarter of 2025 the firm expects to acquire properties in the Medical Office and Senior Housing sectors, and they are in the underwriting process for Student Housing and Data Center assets. The firm aims to sell 5-10% of the portfolio each year. Additional questions were asked and answered.

#### **4. OLD BUSINESS**

N/A

**5. ADMINISTRATIVE**

N/A

**6. INFORMATION**

The next regular BOT meeting is scheduled for Thursday, February 27, 2024, at 2 PM.

The investment due diligence workshop will be held Thursday, March 6, 2025, at 12:30 PM.

**7. PRIVILEGE OF THE FLOOR**

None

**8. ADJOURNMENT**

Chair Bernardo adjourned the meeting at 1:44 PM.

**GENERAL EMPLOYEES PENSION ADVISORY COMMITTEE  
FOR THE  
BOARD OF PENSION TRUSTEES**

January 2025

**CONSENT AGENDA FOR RECOMMENDED BENEFITS**

**ALL CALCULATIONS AND DOLLAR AMOUNTS HAVE BEEN AUDITED IN ACCORDANCE WITH THE ACCEPTED PROCEDURES.**

**1. TIME SERVICE RETIREMENTS**

Terry L Baker (JEA), effective December 28, 2024, in the monthly base amount of \$3,531.23 at the rate of 37.29% (14 years and 11 months)

Shelia D Counts (JSO), effective December 21, 2024, in the monthly base amount of \$3,042.05 at the rate of 78.33% (31 years and 4 months) 5% PLOP \$23,722.05

Carol A Higley (JEA), effective December 28, 2024, in the monthly base amount of \$6,532.32 at the rate of 55.21% (22 years and 1 month)

Deborah D LeCount (City), effective December 28, 2024, in the monthly base amount of \$3,323.10 at the rate of 77.50% (31 years) 60 months BACKDROP \$219,852.12

**2. VESTED RETIREMENTS**

**New Commencements**

**New Deferrals**

**3. SURVIVOR BENEFITS**

Booster L Kinsey, (Mary R Kinsey), effective November 13, 2024, in the monthly COLA base amount of \$2,926.17

Kenneth R Knight, (Sarah T Knight), effective December 19, 2024, in the monthly COLA base amount of \$2,829.21

Bonnie P Morgan, (Tommy B Morgan), effective December 16, 2024, in the monthly COLA base amount of \$4,509.53

Brian R Poole, (Vicki R Poole), effective December 10, 2024, in the monthly COLA base amount of \$2,642.53



Sabine Riddle, (Clifford A Riddle), effective November 24, 2024, in the monthly base amount of \$2,274.36

**4. RESTORATION OF SURVIVOR BENEFITS**

None

**5. CHILDREN/ORPHAN/GUARDIANSHIP BENEFITS**

**6. TIME SERVICE CONNECTIONS COMPLETED**

David G Blanton, 29 days completed in the amount of \$775.32

Clifton E Browning, 3.43 months completed in the amount of \$3,589.80

Kathleen H Brunner, 15.33 months completed in the amount of \$7,500.02

Jeffrey S Fontaine, 4.67 months completed in the amount \$1,820.36

John M Merrell, 47.13 months completed in the amount of \$41,264.53

Anthony J Smith, 2.27 months completed in the amount \$2,999.31

Shirley A Terrell, 60 months completed in the amount of \$22,405.26

**7. TIME SERVICE CONNECTIONS COMPLETED PURSUANT TO ORDINANCE 2000- 624-E (Independent Agency)**

**8. TIME SERVICE CONNECTIONS COMPLETED PURSUANT TO ORDINANCE 2003-573-E (Military)**

Kenneth DeJong, 12 months completed in the amount of \$16,438.50

Jeffrey S Fontaine, 24 months completed in the amount \$10,935.60

**9. REFUNDS**

Estate of Richard M Jefferson III (City), remaining contributions \$61,206.17

Cassy B Manning, (City), 8 years and 8 months, \$20,781.21

**10. DB TO DC TRANSFER**

Alexandria R Baker, (City), 28 years and 7 months in the amount of \$339,259.14

Clifton E Browning, (JEA), 22 years and 11 months in the amount of \$1,084,981.76

Archie B Cullen, Jr, (JFRD), 22 years and 6 months in the amount of \$835,756.37

David H Gilbert, (City), 11 years and 1 month in the amount of \$164,290.21

Iris L Jenkins, (JSO), 13 years and 9 months in the amount of \$77,206.84

Brian C Naples, (City), 8 years and 9 months in the amount of \$69,821.23

Robert S Ring, (JEA), 16 years and 3 months in the amount of \$381,886.75

Angela B Van Sickle, (City), 30 years and 0 months in the amount of \$1,313,456.08

Patricia Williams, (JEA), 11 years and 8 months in the amount of \$206,447.68

**11. OTHER PAYMENTS AND TIME CONNECTIONS**

**12. RE-RETIREE**

\_\_\_\_\_  
PAC Secretary Approval

\_\_\_\_\_  
Date

\_\_\_\_\_  
BOT Secretary Approval

\_\_\_\_\_  
Date

Notes and Comments regarding Approval:

**CORRECTIONAL OFFICERS PENSION ADVISORY COMMITTEE**

**January 2025**

**CONSENT AGENDA FOR RECOMMENDED BENEFITS**

**ALL CALCULATIONS AND DOLLAR AMOUNTS HAVE BEEN AUDITED IN ACCORDANCE WITH THE ACCEPTED PROCEDURES.**

**1. TIME SERVICE RETIREMENTS**

John S West (City), effective December 14, 2024, in the monthly base amount of \$3,614.31 at the rate of 60% (20 years)

**2. TIME SERVICE CONNECTIONS COMPLETED**

**3. REFUND OF CONTRIBUTIONS**

**4. SURVIVOR BENEFITS APPLICATION**

**5. CHILDREN/ORPHAN/GUARDIANSHIP BENEFITS**

**6. VESTED BENEFIT**

**7. TIME SERVICE CONNECTIONS COMPLETED PURSUANT TO ORDINANCE 2003-573-E (Military)**

**8. OFFICERS ENTERING DROP JANUARY 2025**

Marva L Lucas #61273

Gevonnia M Thurman #61264

Gary T Wakefield #5592

**9. Phase II Biweekly Distribution DROP Program**

**10. DROP Payments**

Michele A Anderson, \$96,211.68

\_\_\_\_\_  
COPAC Secretary Approval

\_\_\_\_\_  
Date

\_\_\_\_\_  
BOT Secretary Approval

\_\_\_\_\_  
Date



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## Memorandum

**To:** Board of Trustees - City of Jacksonville Retirement System

**From:** Jeffrey S. Williams, FCA, ASA, MAAA, EA

**Date:** February 21, 2025

**Re:** Preliminary October 1, 2024 Actuarial Valuation Results

The purpose of this memo is to provide preliminary actuarial valuation results as of October 1, 2024 for the City of Jacksonville's General Employees Retirement Plan (GERP) and Corrections Officers' Retirement Plan (CORP). All numbers contained herein are preliminary and subject to change.

As requested, we have also included results showing the effect of lower discount rates on the Plans' various funding metrics. In addition to the current Board-approved 6.50% discount rate, also shown are preliminary results at the requested discount rates of 6.375% and 6.25%.

This work was completed under the supervision of Jeffrey S. Williams. Mr. Williams meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

cc: Chris Cicero - City of Jacksonville  
Andrew Robinson - City of Jacksonville  
Matt Faems - Segal

### General Employees

	<b>Oct 1, 2023</b>	<b>Preliminary Oct 1, 2024 (6.50%)</b>	<b>Preliminary Oct 1, 2024 (6.375%)</b>	<b>Preliminary Oct 1, 2024 (6.25%)</b>
1. Employer Normal Cost	\$25.5 M	\$25.1 M	\$26.5 M	\$27.9 M
2. Actuarial Accrued Liability	3,765.2 M	3,820.8 M	3,872.3 M	3,924.9 M
3. Actuarial Value of Assets	2,030.2 M	2,051.7 M	2,051.7 M	2,051.7 M
4. Unfunded Actuarial Accrued Liability	1,735.0 M	1,769.1 M	1,820.6 M	1,873.2 M
5. Florida Chapter 112 determined contribution	153.4 M	158.5 M	162.3 M	166.1 M
<b>6. City's minimum required contribution</b>	<b>113.3 M</b>	<b>115.4 M</b>	<b>118.1 M</b>	<b>120.8 M</b>
7. Funded Percentage (AVA/AAL)	53.9%	53.7%	53.0%	52.3%
8. Market Value of Assets	1,940.4 M	2,143.0 M	2,143.0 M	2,143.0 M
9. Funded Percentage (MVA/AAL)	51.5%	56.1%	55.3%	54.6%

### Corrections Officers

	<b>Oct 1, 2023</b>	<b>Preliminary Oct 1, 2024 (6.50%)</b>	<b>Preliminary Oct 1, 2024 (6.375%)</b>	<b>Preliminary Oct 1, 2024 (6.25%)</b>
1. Employer Normal Cost	\$6.6 M	\$6.7 M	\$7.0 M	\$7.3 M
2. Actuarial Accrued Liability	570.8 M	595.8 M	605.6 M	615.6 M
3. Actuarial Value of Assets	273.1 M	291.3 M	291.3 M	291.3 M
4. Unfunded Actuarial Accrued Liability	297.6 M	304.5 M	314.3 M	324.3 M
5. Florida Chapter 112 determined contribution	29.0 M	30.2 M	31.0 M	31.8 M
<b>6. City's minimum required contribution</b>	<b>22.0 M</b>	<b>22.9 M</b>	<b>23.5 M</b>	<b>24.1 M</b>
7. Funded Percentage (AVA/AAL)	47.9%	48.9%	48.1%	47.3%
8. Market Value of Assets	265.0 M	308.3 M	308.3 M	308.3 M
9. Funded Percentage (MVA/AAL)	46.4%	51.7%	50.9%	50.1%



John Passios  
Portfolio Manager

Richard A. Rosen, CFA  
Portfolio Manager

Andrew Eras, CFA  
Director of Institutional Sales & Marketing

February 20, 2025

# *City of Jacksonville Retirement System*



# Experienced Investment Team

## *Stability and Expertise*

- ❑ 4 Member Portfolio Team
- ❑ Stable investment team with no departures since inception
- ❑ Current team responsible for long term track record
- ❑ Team utilizes collaborative approach to investment decisions

	<u>Years w/ Strategy</u>
Peter Marron, CFA, PM/Analyst	29
John Passios, PM/Analyst	29
Kimon Passios, PM/Analyst	29
Rich Rosen, CFA, PM/Analyst	7
Monica Jalife, CFA, Analyst	21
Max Schaul, CFA, Analyst	11
Ryan Byrne, Analyst	7

**Team members are majority shareholders & personally invested in strategy**



# Portfolio Funds: History & Status\*

Pinnacle Associates Ltd.  
Portfolio Funds: History and Status  
**7366 City of Jacksonville Retirement  
System**  
**A/C # XXX208**  
*From 02-15-10 to 01-31-25*

Beginning Portfolio Value on 02-15-10	24,976,318
Contributions	49,741,053
Withdrawals	-112,964,052
Adjusted Initial Value	<hr/> -38,246,680
Plus Investment Results	110,953,415
Ending Portfolio Value on 01-31-25	<hr/> 72,706,734

\*Net of Fees

# Performance Since Inception

Pinnacle Associates Ltd.  
**PERFORMANCE HISTORY**  
**NET OF FEES**  
**7366 City of Jacksonville Retirement System**  
**A/C # XXX208**  
**02-15-10 To 01-31-25**

Date	Market Value				Net Cash Flows	Time Weighted Rates Of Return (%)				
	Total	Cash & Equivalents	Equities	Fixed Income		Total	Cash & Equivalents	Equities	Fixed Income	Russell 2500 Growth Index w/ Income
02-15-10	24,976,318									
12-31-10	34,856,049	644,680	34,211,369		248,234	37.47	-0.34	38.54	0.00	31.53
12-31-11	31,439,946	606,631	30,833,315	0	-57,244	-9.65	-0.70	-9.86	0.00	-1.57
12-31-12	39,130,408	1,290,880	37,839,529	0	-57,481	24.44	-0.74	25.44	0.00	16.13
12-31-13	53,935,963	2,497,882	51,438,082	0	0	37.84	-0.71	39.63	0.00	40.65
12-31-14	48,020,930	1,458,463	46,562,468	0	-9,500,000	7.97	-0.79	8.09	0.00	7.05
12-31-15	81,772,585	1,895,283	79,877,302	0	33,557,811	-0.55	-0.91	-0.44	0.00	-0.19
12-31-16	85,358,971	1,826,778	83,532,193	0	7,934	4.37	-0.51	4.51	0.00	9.73
12-31-17	107,080,419	5,552,068	101,528,351	0	112,143	25.00	0.11	25.48	0.00	24.46
12-31-18	78,016,812	3,718,609	74,298,203	0	-19,997,317	-11.10	1.38	-11.85	0.00	-7.47
12-31-19	113,513,508	3,574,173	109,939,335	0	3,209,949	40.75	1.63	42.82	0.00	32.65
12-31-20	143,602,930	4,059,102	139,543,828	0	-4,990,023	32.58	0.05	31.69	0.00	40.47
12-31-21	161,213,368	4,956,427	156,256,941	0	2,425	12.11	-0.51	12.63	0.00	5.04
12-31-22	61,779,777	2,833,211	58,946,566	0	-68,338,988	-24.53	0.56	-25.93	0.00	-26.21
12-31-23	66,075,876	2,527,596	63,548,280	0	-4,499,689	14.95	4.15	14.90	0.00	18.93
12-31-24	70,101,201	2,223,125	67,878,076	0	7,123	6.08	5.12	6.00	0.00	13.90
01-31-25	72,706,734	2,021,971	70,684,764	0	2,528	3.56	0.24	3.66	0.00	3.82
<b>Cumulative TWR</b>										
02-15-10 to 01-31-25						428.98	8.09	438.87	0.00	479.97
Annualized						11.80	0.52	11.94	0.00	12.50

# Annualized Performance Since Inception\*

30-Jun-23					
	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since 2/15/2010</u>
7366 City of Jacksonville Retirement System	18.24	11.60	10.54	11.53	13.34
Russell 2500 Growth Index w/ Income	18.58	6.56	7.00	10.38	12.23
Pinnacle Alpha (Gross)	-0.34	5.04	3.54	1.15	1.11

30-Jun-24					
	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since 2/15/2010</u>
7366 City of Jacksonville Retirement System	2.34	-3.45	9.77	9.06	12.54
Russell 2500 Growth Index w/ Income	9.02	-4.11	7.58	8.77	12.00
Pinnacle Alpha (Gross)	-6.68	0.66	2.19	0.29	0.54

31-Dec-24					
	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since 2/15/2010</u>
7366 City of Jacksonville Retirement System	6.74	-2.00	7.18	9.04	12.36
Russell 2500 Growth Index w/ Income	13.90	-0.02	8.08	9.45	12.26
Pinnacle Alpha (Gross)	-7.16	-1.98	-0.90	-0.41	0.10

\*Gross of fees

# Portfolio Challenges

## ➤ Prolonged Global Industrial Slowdown

- Rapidly Rising Interest Rates: Sharp increase in financing costs has led to delayed capital projects and reduced spending across manufacturing, clean energy, and industrial technology sectors.
- Macroeconomic Risks: Persistent threats of recession continued to weigh heavily on economically sensitive industries
- Sector Impacts: Significant underperformance in Industrial and Technology sectors versus benchmark

## ➤ Communication Services

- Company specific developments at IRDM

## ➤ AI Infrastructure Volatility

- Fluctuating market sentiment has affected AI infrastructure companies
- Semiconductor and semi-capital equipment sector negatively impacted by fear of China trade restrictions

## ➤ Index Anomalies – Large Cap Stocks in Small Cap Indexes

- Impact of Large-Cap Stocks in Small-Cap Index: Super Micro Computer (SMCI) and MicroStrategy (MSTR) added 152 bps to R2500G performance in the first half of 2024
- SMCI & MSTR removed from Russell Indexes as of June 30, 2024.

# Performance Attribution



## Performance Attribution - Summary

Gross of Fees

12/31/2023 - 12/31/2024

Industry Sector	7366 City of Jacksonville Retirement			Russell 2500 Growth Index w/ Income			Variance		
	Average Weight	Base Return(%)	Contrib	Average Weight	Base Return(%)	Contrib	Stock Select	Group Weight	Total
Energy	5.30	46.30	1.96	3.35	-9.97	-0.39	2.89	-0.63	2.26
Consumer Discretionary	16.07	28.32	4.28	14.06	16.01	2.24	1.97	0.07	2.05
Real Estate	2.26	33.08	0.66	1.13	2.26	0.03	0.66	-0.15	0.52
Materials	0.89	-20.65	-0.14	4.16	0.51	0.04	-0.15	0.41	0.26
Consumer Staples	0.00	0.00	0.00	3.77	9.32	0.39	0.00	0.11	0.11
Utilities	0.00	0.00	0.00	1.10	5.10	0.11	0.00	0.03	0.03
Financials	2.49	41.41	0.92	7.72	28.08	2.12	0.33	-0.77	-0.44
Communication Services	7.55	-10.23	-1.00	1.83	14.20	0.23	-2.02	-0.11	-2.13
Health Care	11.03	-24.02	-2.80	20.78	4.80	1.24	-3.71	0.92	-2.79
Information Technology	38.46	7.67	2.97	23.74	19.15	4.26	-4.15	0.65	-3.49
Industrials	15.96	-1.18	-0.19	18.36	20.23	3.62	-3.41	-0.20	-3.61
<b>Total</b>	<b>100.00</b>	<b>6.67</b>	<b>6.67</b>	<b>100.00</b>	<b>13.90</b>	<b>13.90</b>	<b>-7.57</b>	<b>0.34</b>	<b>-7.23</b>

# We Have Been Through This Before

## SMID Cap Composite vs Russell 2500 Growth Index\*

### 1996 Relative Underperformance & Recovery

Underperformance starts	1/31/1996	
Underperformance ends	12/31/1996	
Length	11 months	
Recovery from Underperformance	3 months (Dec 1996)	
	<b>SMID</b>	<b>R25GI</b>
Valley depth	8.16%	14.72%
1-yr performance from valley	39.06%	14.76%
2-yr performance from valley	85.46%	18.31%

### 2000 Relative Underperformance & Recovery

Underperformance starts	12/31/1999	
Underperformance ends	2/29/2000	
Length	2 months	
Recovery from Underperformance	2 months (Feb 2000)	
	<b>SMID</b>	<b>R25GI</b>
Valley depth	9.89%	24.95%
1-yr performance from valley	-4.99%	-39.53%
2-yr performance from valley	-5.51%	-46.22%

### 2008 Relative Underperformance & Recovery

Underperformance starts	12/31/2007	
Underperformance ends	9/30/2008	
Length	9 months	
Recovery from Underperformance	9 months (Sep 2008)	
	<b>SMID</b>	<b>R25GI</b>
Valley depth	-23.51%	-19.01%
1-yr performance from valley	5.48%	-3.08%
2-yr performance from valley	26.52%	13.66%

### 2011 Relative Underperformance & Recovery

Underperformance starts	2/28/2011	
Underperformance ends	11/30/2011	
Length	9 months	
Recovery from Underperformance	29 months (Nov 2011)	
	<b>SMID</b>	<b>R25GI</b>
Valley depth	-15.92%	-6.61%
1-yr performance from valley	20.18%	12.55%
2-yr performance from valley	67.00%	57.16%

### 2016 Relative Underperformance & Recovery

Underperformance starts	12/31/2015	
Underperformance ends	8/31/2016	
Length	8 months	
Recovery from Underperformance	9 months (Aug 2016)	
	<b>SMID</b>	<b>R25GI</b>
Valley depth	-1.44%	6.64%
1-yr performance from valley	30.25%	15.57%
2-yr performance from valley	47.95%	50.46%

### 2020 Relative Underperformance & Recovery

Underperformance starts	12/31/2019	
Underperformance ends	10/31/2020	
Length	10 months	
Recovery from Underperformance	4 months (Oct 2020)	
	<b>SMID</b>	<b>R25GI</b>
Valley depth	1.15%	12.90%
1-yr performance from valley	53.10%	37.12%
2-yr performance from valley	17.16%	-0.42%

\*Returns are gross of fees

# SMID is Poised to Outperform

SMID Cap Composite vs Russell 2500 Growth Index\*

2024 Relative Underperformance & Recovery		
Underperformance starts	6/30/2023	
Underperformance ends	11/30/2024	
Length	17 months	
	SMID	R25GI
Valley depth	10.99%	30.19%
2-month performance from valley	-1.60%	-4.73%

\*Returns are gross of fees

# Rolling Returns

Monthly Rolling Return Period	Total Number of Periods	Pinnacle SMID (Gross)	Pinnacle SMID (Net)	Benchmark Russell 2500	Pinnacle Alpha (Gross)	Pinnacle Alpha (Net)	%Pinnacle (Gross) Outperformed
1 Year	341	17.59	16.45	11.44	<b>6.15</b>	<b>5.01</b>	59.24%
3 Year	325	15.17	14.05	9.42	<b>5.75</b>	<b>4.63</b>	73.54%
5 Year	309	14.21	13.09	9.12	<b>5.09</b>	<b>3.97</b>	84.79%
10 Year	249	13.34	12.23	8.97	<b>4.37</b>	<b>3.26</b>	98.80%
20 Year	129	13.17	12.06	8.49	<b>4.68</b>	<b>3.57</b>	100.00%

\*As of December 31, 2024



# Catalysts to Drive Alpha Going Forward

- **Interest Rates:** Anticipated stabilization or decline in interest rates should stimulate corporate investments and growth
- **Industrial Sector Recovery:** Early signs of recovery signaling a positive shift as capital projects and corporate spending in the industrial sector are expected to rebound, driven by improving macroeconomic conditions and creating tailwinds for future performance
- **Attractive Valuations:** Current small cap stock valuations present a compelling opportunity and positions the portfolio for potential gains
- **Government Funding Initiatives:** Delayed government projects are beginning to receive funding, providing a significant boost to infrastructure and related industries
- **AI-Driven Growth:** The ongoing adoption of AI technologies is poised to accelerate growth across multiple sectors, particularly in tech and industrials

# Portfolio Construction

## Exposure to Artificial Intelligence (AI)

### Direct:

- **Ambarella, Cognex, Tenable Holdings, Trimble**

### Indirect - Enablers of AI:

- Semiconductor Capital Equipment: **Lam Research, UltraClean Holdings, Ichor Holdings, Advanced Energy Industries, Coherent**
- Data Centers: **Digital Realty Trust, Coherent, Lumentum, Uniti, Bloom Energy, Uranium Energy, Vicor**
- Data/Information Security: **Commvault Systems**

### Users of AI:

- Accelerated drug discovery, improved probability of success: **SMID Biotechnology Companies**
- Route optimization, supply chain management: **Werner Enterprises, Canadian Pacific Railway**
- Power grid optimization: **Itron**
- Improved efficiency in energy exploration: **Diamondback Energy, Helmerich & Payne**
- Enhanced consumer ecommerce experience, user behavior analytics: **Royal Caribbean Cruises, United Parks & Resorts, Boyd Gaming, Las Vegas Sands**

## Promising Intermediate and Long-Term Investments

### Re-Shoring of Manufacturing capacity

- Companies' increased priority on dependable supply chains and predictability of shipments mean bringing supply chains closer to home: **Cognex, Stratasys, Werner Enterprises, Canadian Pacific, nLight, Coherent, FARO Technologies**

### Energy Security – A More Pragmatic Approach

- Countries will continue to pursue long-term environmental and decarbonization goals, while investing in traditional fuels as a bridge: **Bloom Energy, Plug Power, Array Technologies, Itron, Diamondback Energy, Helmerich & Payne, Golar LNG, Advanced Energy Industries, Uranium Energy, Energy Recovery**

### National Defense

- **AeroVironment, Kratos Defense & Security Solutions, Hexcel, nLight**

### Growth of semiconductors, foundation of all technological innovation

- **Lam Research, Qorvo, Ambarella, UltraClean Holdings, Ichor Holdings**

### Biotechnology

- Cutting edge research and technology (AI) to help develop innovative treatments for challenging diseases

### Accelerating Infrastructure Spending

- **Xylem, Itron, Trimble, Canadian Pacific, Werner Enterprises, Tutor Perini**

### Monetization of Global Sports Franchises

- **Madison Square Garden Sports, Manchester United PLC**

### Automotive Technology/Electric Vehicles

- **Ambarella, Qorvo, Coherent, Vishay Intertechnology, Rogers Corp.**

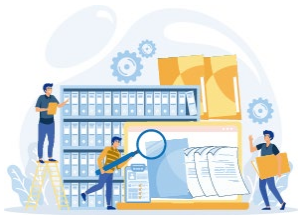
# Buys/Sells 2024

<i>Buys</i>		<i>Sells</i>	
<b><u>NEW POSITIONS</u></b>	<b><u>ADD TO EXISTING</u></b>	<b><u>COMPLETE SALE</u></b>	<b><u>PARTIAL SALE</u></b>
Bicycle Therapeutics Energy Recovery Inc Intellia Therapeutics IPG Photonics Kratos Defense and Security Solutions Uniti Group Uranium Energy Vicor Corp	Ambarella Bloom Energy Cerence Inc Cognex Corp Cytokinetics Inc Digital Realty trust Formfactor Inc Hexcel Corp IAC Inc Ionis Pharmaceuticals Iridium Communications Lindblad Expeditions Holdings Lumentum Holdings Manchester United PLC MP Materials Corp nLight Inc Plug Power Sage Therapeutics. Inc Sarepta Therapeutics Inc Ultragenyx Pham Inc United Parks & Resorts	3D Systems CAE Cerence Edgio Esperion Therapeutics EW Scripps Immunogen Spirit AeroSystems Sirius XM Holdings Inc	AeroVironment Bloom Energy Corp Boyd Gaming Corporation Coherent Itron Lam Research Macrogenics Manchester United OneSpa World Holdings Ltd Royal Caribbean Cruises Sarepta Therapeutics Vishay Intertechnology Xylem Inc



# Appendix

# Key Investment Principles



## Bottom-up, Fundamental Approach

Focus on owning the most promising growth opportunities at reasonable valuations



## High Active Share

We are not benchmark driven in our stock selection



## Strategic Market Cap Focus

Each new stock purchase must be below \$3bn market cap



## Long-term Investment View

Prioritize enduring value over short-term gains, with low portfolio turnover



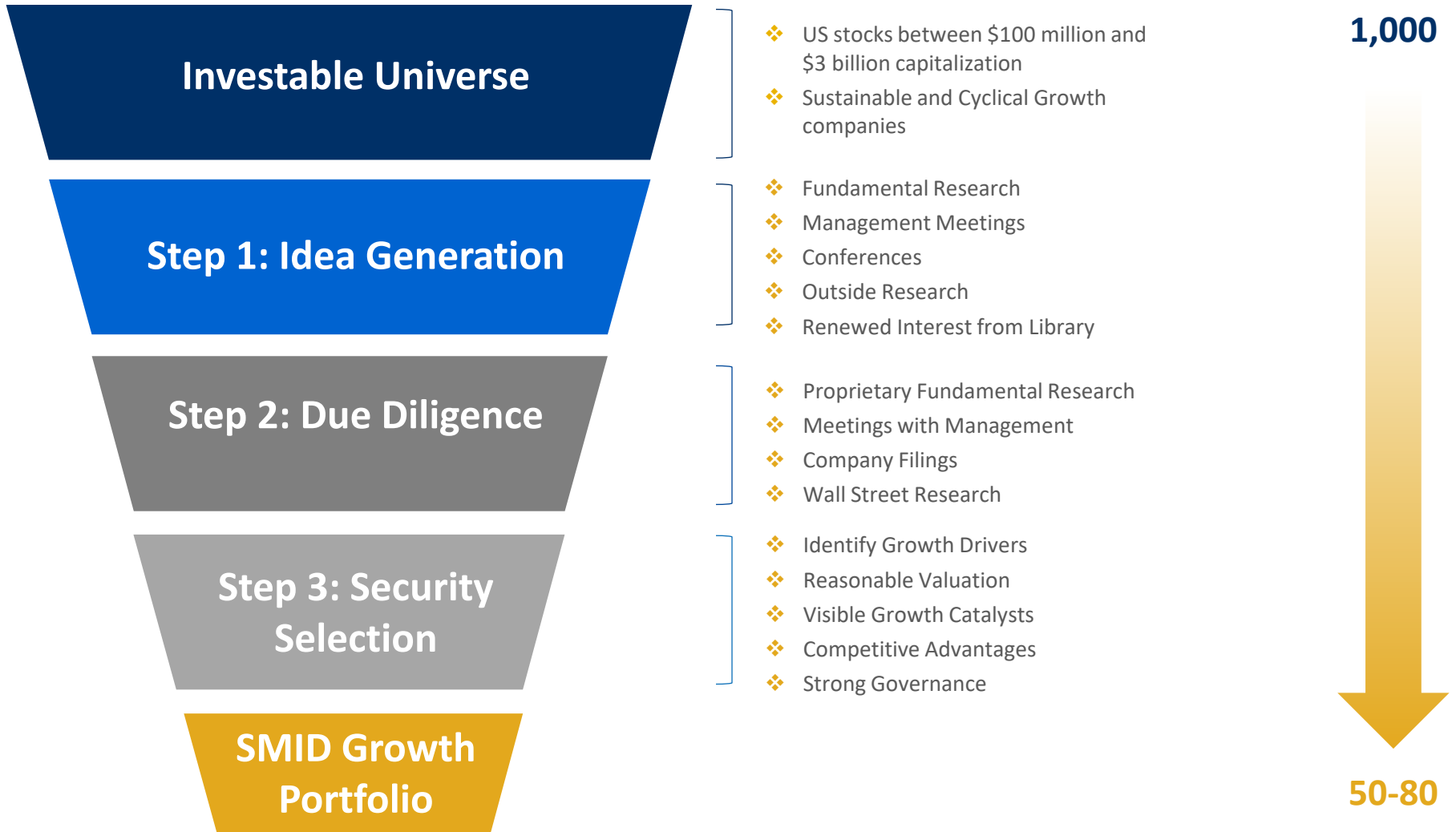
## We Do Not Chase Momentum

Invest in companies with strong growth fundamentals, capitalizing on market inefficiencies rather than speculative trends

# Hybrid Approach to Growth

- ❑ Universe includes two Growth Categories:
  - Sustainable Growth
  - Cyclical Growth
- ❑ Apply Fundamental, Bottom-Up Analysis
- ❑ Investment Criteria
  - Strong Growth
  - Reasonable Valuation
  - Visible Catalysts
- ❑ *Hybrid approach helps deliver alpha, even when growth asset class is out of favor, as it seeks durable long-term growth at reasonable valuations supported by visible catalysts*

# Investment Process



# Portfolio Construction

## Purchase Criteria:

- ❑ U.S. stocks between \$100 million and \$3 billion capitalization
- ❑ Portfolio typically holds between 50 - 80 stocks
- ❑ Individual equity position size up to 3% of the portfolio at purchase; 5% with appreciation
- ❑ Fully invested portfolio, with cash position a residual of the investment process
  - Cash typically below 5%
- ❑ All portfolios managed identically unless directed by client
  - Low dispersion between accounts

## Risk Controls:

- ❑ Industry: Individual Industry weight limited to 15% of portfolio at cost
- ❑ Stock: Maximum position size 5% of portfolio
- ❑ Biotechnology: Maximum position size 0.50% at purchase



# Sell Discipline

## ❑ Valuation

- Cyclical growth companies typically have rigid upside price objectives
- Price objective of sustainable growth companies can change over time

## ❑ Change in Company Fundamentals

- Active monitoring as the stock price fluctuates

## ❑ Portfolio Diversification

- Maximum position of any security at 5% of portfolio

## ❑ Sell is not triggered based on market capitalization alone

# Investment Team

## **PETER MARRON, CFA**

### **Executive Vice President/ Portfolio Manager**

Peter joined Pinnacle in 1993 after three years with Prudential Securities Investment Management as a Senior Portfolio Manager. Previous experience includes Bear Stearns Asset Management as Chief Investment Officer supervising \$3.5 billion in assets; Bernstein Macaulay Inc. as Director of Research & Institutional Portfolio Manager; and Lexington Investors, a private investment partnership as an Analyst. Other credentials: Member of the New York Society of Security Analysts; B.A. in Economics from Brooklyn College; M.B.A. in Finance from Pace University; Peter is also a CFA® charter holder. Peter is also a member of the Investment Committees of the Brooklyn College Foundation.

## **JOHN PASSIOS**

### **Executive Vice President/ Portfolio Manager**

John is a senior member of our domestic research team. John joined Pinnacle in 1986. He works closely with senior portfolio managers on equity portfolios. In this capacity, he conducts primary and secondary research on new purchases and implements these ideas throughout the portfolios. Previously, John worked for Salomon Brothers Inc. in their fixed income department. He graduated from the University of Connecticut in 1985 with a B.S. degree in Finance.

## **KIMON PASSIOS**

### **Executive Vice President/ Portfolio Manager**

Kimon's primary role is portfolio management and security analysis as a part of the firm's domestic research effort. Additionally, Kimon participates in Pinnacle's marketing and client servicing efforts for institutional and retail clients. Prior to joining Pinnacle in 1996, he was with Chase Manhattan Bank providing performance appraisals and analysis of the bank's Middle Market Banking, Private Banking and Foreign Exchange & Derivatives divisions to senior management. Kimon earned an M.B.A. in Finance from Fordham University and has a B.S. degree in Finance/Accounting from the University of Vermont.

## **RICHARD A. ROSEN, CFA**

### **Senior Vice President/ Portfolio Manager**

Rich joined Pinnacle in March 2018. Rich brings with him over 30 years of institutional experience, including institutional roles at Prudential, Advent Capital and MacKay Shields, where he was Senior Managing Director and managed a group responsible for \$3.5 billion of institutional assets. Most recently, Rich was Managing Member of Satucket Capital. Other credentials: Member of the New York Society of Security Analysts; B.A. from Drew University; M.B.A. in Finance from Boston University Graduate School of Management. Rich is a CFA charter holder. Rich is also a member of the Investment Committee of the Overlook Hospital Foundation.

# Why Pinnacle Associates

## Independent



We are an independent firm with more than **30 years of experience** and stability

## Tradition



We maintain a tradition of **bottom-up** fundamental analysis

## Longevity



We are proud of the **longevity** of our **SMID** investment team

## History



We have a strong track record of long-term **sustainable performance**

## Service



We are committed to providing the highest level of **client service** through client meetings, customized reporting, quarterly updates and access to Investment team members

# Disclosures

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Any references to indices, benchmarks or other measures of relative market performance are provided for comparison purposes only to assist clients and prospective clients in determining whether the strategy's performance meets their needs. Inclusion of an index or benchmark should not be construed as implying that an actual portfolio managed by the firm will achieve similar results. The historical performance results for any cited index usually reflects reinvested dividends, but does not reflect the deduction of an investment management fee, the deduction of which would have the effect of decreasing historical index performance results.

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RVK

# Monthly Performance Report

## City of Jacksonville Employees' Retirement System

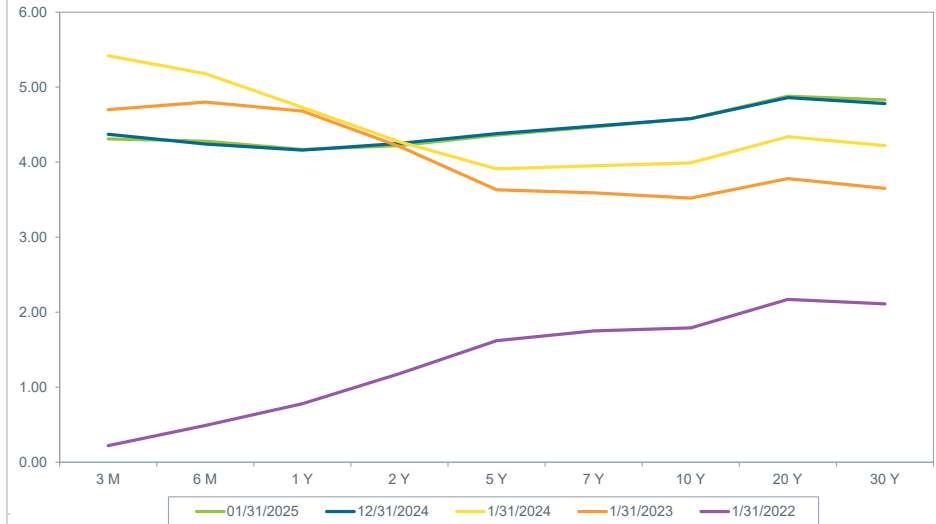
As of January 31, 2025

General Market Commentary

- During January, both domestic and international equity markets broadly traded higher, posting low to mid-single digit gains. Federal policy updates dominated headlines during the month as investors evaluated numerous policies, such as increased tariffs, which if implemented could have a notable impact on global markets and economies.
- While stocks generally posted positive returns during the month, toward the end of January many tech-oriented and AI-related stocks fell on news that a Chinese company, DeepSeek, developed an AI model for a fraction of the cost of its US-based competitors. In addition to taking less capital investment to develop, it is reported that DeepSeek also utilizes significantly less computing power than its competitors, which caused microchip developers and manufacturers in particular to trade lower toward the end of the month.
- The Federal Reserve held interest rates steady at their January 2025 meeting following three consecutive interest rate cuts, citing a stabilizing labor market but noted a continued focus on inflation, which remained somewhat elevated. Inflation, as measured by CPI, rose by 2.9% during 2024.
- Equity markets posted positive returns in January as the S&P 500 (Cap Wtd) Index returned 2.78% and the MSCI EAFE (Net) Index returned 5.26%. Emerging markets returned 1.79%, as measured by the MSCI EM (Net) Index.
- The Bloomberg US Aggregate Bond Index returned 0.53% in January, underperforming the 0.54% return by the Bloomberg US Treasury Intermediate Term Index. International fixed income markets returned 0.44%, as measured by the FTSE Non-US World Gov't Bond Index.
- Public real estate returned 1.04% in January and 4.24% over the trailing five-year period, as measured by the FTSE NAREIT Eq REITs Index (TR).
- The Cambridge US Private Equity Index returned 9.18% for the trailing one-year period and 15.33% for the trailing five-year period ending September 2024.
- Absolute return strategies returned 1.21% for the month and 9.62% over the trailing one-year period, as measured by the HFRI FOF Comp Index.
- The price of crude oil increased by 1.34% during the month but has decreased by 4.38% YoY.

Economic Indicators	Jan-25	Dec-24	Jan-24	10 Yr	20 Yr
Federal Funds Rate (%)	4.33	—	4.33	5.33	1.80
Breakeven Inflation - 5 Year (%)	2.54	▲	2.37	2.28	1.96
Breakeven Inflation - 10 Year (%)	2.39	▲	2.33	2.26	2.00
Breakeven Inflation - 30 Year (%)	2.37	▲	2.32	2.26	2.04
Bloomberg US Agg Bond Index - Yield (%)	4.86	▼	4.91	4.59	2.93
Bloomberg US Agg Bond Index - OAS (%)	0.30	▼	0.34	0.40	0.46
Bloomberg US Agg Credit Index - OAS (%)	0.75	▼	0.77	0.90	1.15
Bloomberg US Corp: HY Index - OAS (%)	2.61	▼	2.87	3.44	4.15
Capacity Utilization (%)	N/A	N/A	77.63	78.53	77.36
Unemployment Rate (%)	4.00	▼	4.10	3.70	4.65
PMI - Manufacturing (%)	50.90	▲	49.20	49.10	53.10
Baltic Dry Index - Shipping	735	▼	997	1,398	1,434
Consumer Conf (Conf Board)	104.10	▼	104.70	110.90	110.38
CPI YoY (Headline) (%)	3.00	▲	2.90	3.10	2.94
CPI YoY (Core) (%)	3.30	▲	3.20	3.90	3.01
PPI YoY (%)	N/A	N/A	3.30	1.00	2.77
M2 YoY (%)	N/A	N/A	3.90	-2.00	6.60
US Dollar Total Weighted Index	128.67	▼	129.49	120.77	115.49
WTI Crude Oil per Barrel (\$)	73	▲	72	76	62
Gold Spot per Oz (\$)	2,800	▲	2,612	2,037	1,344

Treasury Yield Curve (%)



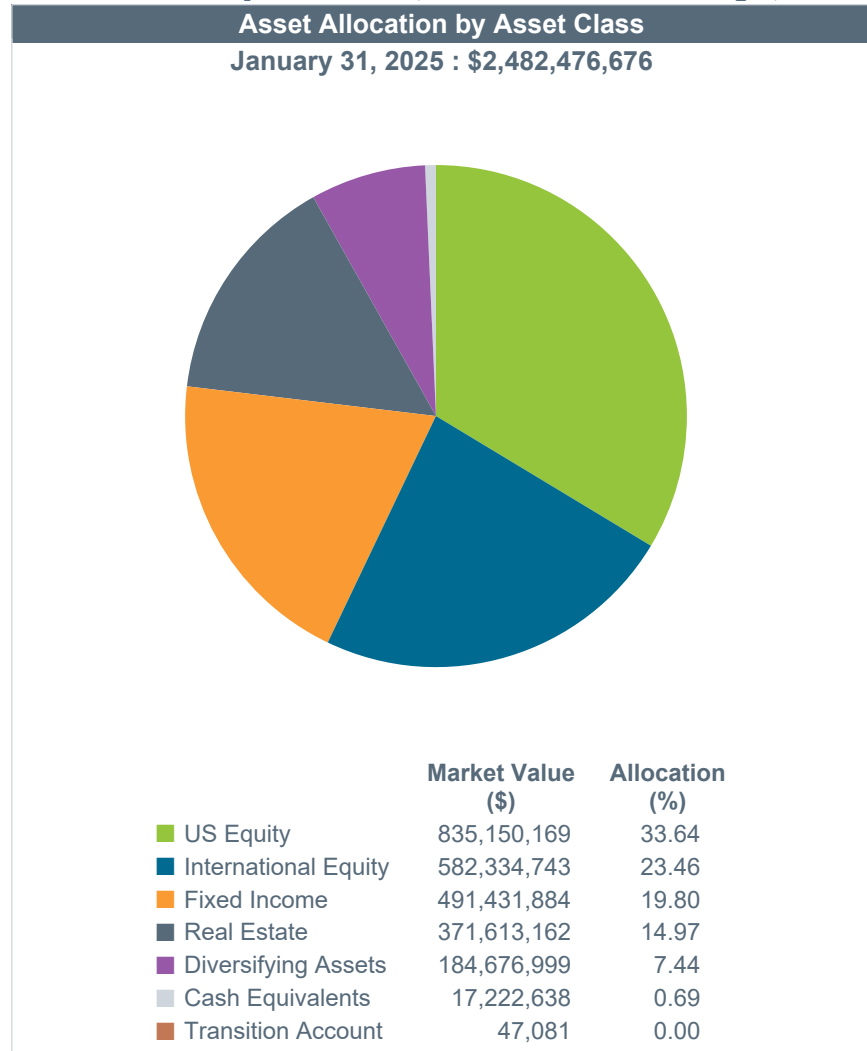
Treasury Yield Curve (%)	Jan-25	Dec-24	Jan-24	Jan-23	Jan-22			
3 Month	4.31	4.37	5.42	4.70	0.22			
6 Month	4.28	4.24	5.18	4.80	0.49			
1 Year	4.17	4.16	4.73	4.68	0.78			
2 Year	4.22	4.25	4.27	4.21	1.18			
5 Year	4.36	4.38	3.91	3.63	1.62			
7 Year	4.47	4.48	3.95	3.59	1.75			
10 Year	4.58	4.58	3.99	3.52	1.79			
20 Year	4.88	4.86	4.34	3.78	2.17			
30 Year	4.83	4.78	4.22	3.65	2.11			
Market Performance (%)	MTD	QTD	CYTD	1 Yr	3 Yr	5 Yr	7 Yr	10 Yr
S&P 500 (Cap Wtd)	2.78	2.78	2.78	26.38	11.91	15.17	13.38	13.76
Russell 2000	2.62	2.62	2.62	19.09	5.62	8.67	6.91	8.45
MSCI EAFE (Net)	5.26	5.26	5.26	8.65	5.12	6.25	4.14	5.69
MSCI EAFE SC (Net)	3.45	3.45	3.45	7.09	0.36	3.60	1.78	5.87
MSCI EM (Net)	1.79	1.79	1.79	14.75	-0.71	3.04	0.48	3.76
Bloomberg US Agg Bond	0.53	0.53	0.53	2.07	-1.52	-0.60	1.21	1.19
ICE BofAML 3 Mo US T-Bill	0.37	0.37	0.37	5.19	4.02	2.51	2.39	1.80
NCREIF ODCE (Gross)	N/A	N/A	N/A	-1.43	-2.32	2.87	3.99	5.88
FTSE NAREIT Eq REITs Index (TR)	1.04	1.04	1.04	14.62	0.48	4.24	6.58	5.15
HFRI FOF Comp Index	1.21	1.21	1.21	9.62	4.41	5.42	4.13	3.90
Bloomberg Cmtly Index (TR)	3.95	3.95	3.95	9.11	2.49	9.25	4.40	2.02

NCREIF performance is reported quarterly; MTD and QTD returns are shown as "N/A" on interim-quarter months and until available. Data shown is as of most recent quarter-end. Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. The previous month's CPI YoY is used as a proxy for the current YoY return until it becomes available.



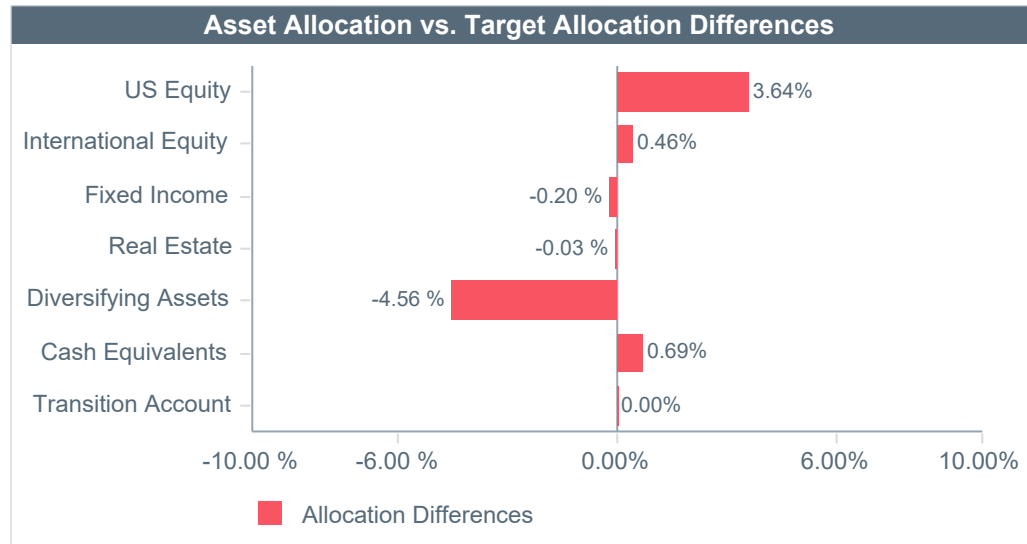
Total Fund

Asset Allocation by Asset Class, Asset Allocation vs. Target, and Schedule of Investable Assets



**Asset Allocation vs. Target Allocation**

	Market Value (\$)	Allocation (%)	Min (%)	Target (%)	Max (%)
<b>Total Fund</b>	<b>2,482,476,676</b>	<b>100.00</b>	<b>-</b>	<b>100.00</b>	<b>-</b>
US Equity	835,150,169	33.64	20.00	30.00	40.00
International Equity	582,334,743	23.46	13.00	23.00	25.00
Fixed Income	491,431,884	19.80	10.00	20.00	30.00
Real Estate	371,613,162	14.97	0.00	15.00	20.00
Diversifying Assets	184,676,999	7.44	0.00	12.00	20.00
Cash Equivalents	17,222,638	0.69	0.00	0.00	10.00
Transition Account	47,081	0.00	0.00	0.00	0.00



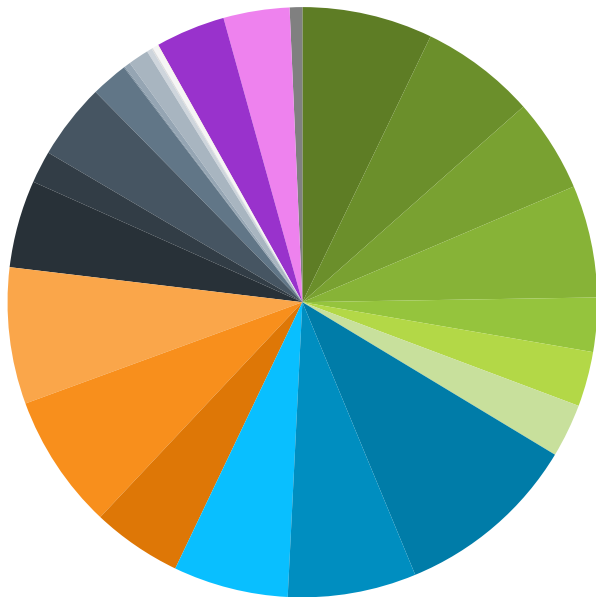
**Schedule of Investable Assets**

Periods Ending	Beginning Market Value (\$)	Net Cash Flows (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
CYTD	2,456,544,289	331,402	25,600,985	2,482,476,676	1.04
FYTD	2,475,947,332	954,021	5,575,322	2,482,476,676	0.23

Market values and performance shown are preliminary and subject to change. Performance shown is net of fees. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year for the COJ ends 09/30.



January 31, 2025 : \$2,482,476,676



	Market Value (\$)	Allocation (%)
Eagle Capital Large Cap Value (SA)	177,511,076	7.15
Wellington Select Equity Income Fund (SA)	156,813,247	6.32
BNYM DB Lg Cap Stock Idx NL (CF)	127,124,905	5.12
Loomis, Sayles & Co Lg Cap Grth (CF)	152,792,655	6.15
Kayne Anderson US SMID Value (SA)	73,478,785	2.96
Systematic Financial US SMID Value (SA)	74,713,955	3.01
Pinnacle Associates US SMID Cap Growth (SA)	72,715,548	2.93
Silchester Intl Val Equity (CF)	250,994,695	10.11
Bail Giff Intl Gro;4 (BGEFX)	174,858,768	7.04
Acadian Emg Mkts Eq II (CF)	156,481,280	6.30
Baird Core Fixed Income (SA)	122,170,170	4.92
Loomis Sayles Multisector Full Discretion (CF)	183,904,680	7.41
Schroder Flexible Secured Income LP (CF)	185,357,034	7.47
Harrison Street Core Property LP	119,006,554	4.79
PGIM Real Estate PRISA II LP	43,988,545	1.77
Principal US Property (CF)	103,251,853	4.16
UBS Trumbull Property LP	50,438,331	2.03
Vanguard RE Idx;ETF (VNQ)	1,352,658	0.05
Abacus Multi-Family Partners VI LP	8,389,059	0.34
H.I.G. Realty Partners IV (Onshore) LP	27,831,974	1.12
Bell Value-Add Fund VII (CF)	7,209,308	0.29
Hammes Partners IV LP	1,636,904	0.07
Blue Owl Digital Infrastructure Fund III-A LP	7,017,149	0.28
Ares US Real Estate Opportunity IV LP	1,490,828	0.06
Adams Street Private Equity (SA)	94,858,966	3.82
Hamilton Lane Private Credit (SA)	89,818,033	3.62
Dreyfus Gvt CM;Inst (DGCXX)	17,222,638	0.69
Transition Account	47,081	0.00

Market values shown are preliminary and subject to change. Allocations shown may not sum up to 100% exactly due to rounding. During 01/2025 IPI Partners was acquired by Blue Owl, the fund naming has been updated to match new ownership.



**City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)**

**As of January 31, 2025**

	Allocation		Performance (%)										
	Market Value (\$)	%	MTD	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Total Fund</b>	<b>2,482,476,676</b>	<b>100.00</b>	<b>1.04</b>	<b>1.04</b>	<b>1.04</b>	<b>0.23</b>	<b>10.56</b>	<b>3.89</b>	<b>6.52</b>	<b>5.46</b>	<b>6.65</b>	<b>6.33</b>	<b>07/01/1999</b>
Total Fund Policy Index			2.27	2.27	2.27	1.03	12.85	5.14	7.43	6.40	7.03	6.15	
Difference			-1.22	-1.22	-1.22	-0.81	-2.29	-1.26	-0.91	-0.94	-0.38	0.18	
Actual Allocation Index			2.41	2.41	2.41	0.61	11.76	3.65	6.16	N/A	N/A	N/A	
Difference			-1.37	-1.37	-1.37	-0.38	-1.20	0.24	0.36	N/A	N/A	N/A	
Actual Allocation Index (Net of Alts)			2.24	2.24	2.24	0.61	11.13	3.69	6.29	N/A	N/A	N/A	
Difference			-1.20	-1.20	-1.20	-0.38	-0.57	0.20	0.23	N/A	N/A	N/A	
<b>Total Equity</b>	<b>1,417,484,912</b>	<b>57.10</b>	<b>1.80</b>	<b>1.80</b>	<b>1.80</b>	<b>-0.14</b>	<b>16.37</b>	<b>7.01</b>	<b>10.22</b>	<b>8.04</b>	<b>9.67</b>	<b>6.98</b>	<b>07/01/1999</b>
<b>US Equity</b>	<b>835,150,169</b>	<b>33.64</b>	<b>3.09</b>	<b>3.09</b>	<b>3.09</b>	<b>5.51</b>	<b>23.12</b>	<b>10.65</b>	<b>13.52</b>	<b>11.69</b>	<b>12.18</b>	<b>8.01</b>	<b>07/01/1999</b>
US Equity Index			3.16	3.16	3.16	5.87	26.32	11.36	14.60	12.83	13.21	8.19	
Difference			-0.07	-0.07	-0.07	-0.37	-3.20	-0.71	-1.08	-1.14	-1.03	-0.18	
<b>International Equity</b>	<b>582,334,743</b>	<b>23.46</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-7.27</b>	<b>7.92</b>	<b>2.08</b>	<b>5.52</b>	<b>2.74</b>	<b>5.85</b>	<b>5.76</b>	<b>07/01/1999</b>
International Equity Index			4.03	4.03	4.03	-3.88	10.89	3.45	5.50	3.31	5.23	4.27	
Difference			-4.03	-4.03	-4.03	-3.39	-2.97	-1.36	0.01	-0.57	0.61	1.49	
<b>Fixed Income</b>	<b>491,431,884</b>	<b>19.80</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>-0.45</b>	<b>5.12</b>	<b>0.26</b>	<b>0.47</b>	<b>1.37</b>	<b>1.57</b>	<b>4.34</b>	<b>07/01/1999</b>
Fixed Income Index			0.60	0.60	0.60	-2.15	2.90	-1.03	-0.18	1.51	1.41	3.98	
Difference			-0.50	-0.50	-0.50	1.70	2.22	1.29	0.65	-0.14	0.16	0.36	
<b>Real Estate</b>	<b>371,613,162</b>	<b>14.97</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.60</b>	<b>-1.51</b>	<b>-1.86</b>	<b>2.15</b>	<b>3.15</b>	<b>4.82</b>	<b>4.78</b>	<b>12/01/2005</b>
Real Estate Index			0.02	0.02	0.02	1.05	-2.07	-3.03	2.06	3.13	4.98	5.04	
Difference			-0.02	-0.02	-0.02	-0.45	0.57	1.17	0.10	0.02	-0.16	-0.26	
<b>Core Real Estate</b>	<b>318,037,940</b>	<b>12.81</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.52</b>	<b>-1.98</b>	<b>-2.38</b>	<b>1.84</b>	<b>2.93</b>	<b>4.65</b>	<b>4.69</b>	<b>12/01/2005</b>
NCREIF ODCE Index (AWA) (Net)			0.00	0.00	0.00	0.96	-2.27	-3.14	1.99	3.08	4.94	5.02	
Difference			0.01	0.01	0.01	-0.44	0.29	0.76	-0.15	-0.16	-0.29	-0.33	
<b>Non-Core Real Estate</b>	<b>53,575,222</b>	<b>2.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>	<b>2.55</b>	<b>22.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>21.35</b>	<b>01/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			0.17	0.17	0.17	1.63	-0.31	-1.20	4.03	5.14	7.04	-1.12	
Difference			-0.16	-0.16	-0.16	-0.46	2.86	23.20	N/A	N/A	N/A	22.46	
<b>Diversifying Assets</b>	<b>184,676,999</b>	<b>7.44</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>4.27</b>	<b>7.78</b>	<b>10.36</b>	<b>13.50</b>	<b>8.50</b>	<b>5.62</b>	<b>8.27</b>	<b>03/01/2011</b>
Diversifying Assets Index			2.24	2.24	2.24	3.59	20.81	11.92	9.45	5.53	3.62	5.33	
Difference			-2.23	-2.23	-2.23	0.68	-13.03	-1.56	4.05	2.97	1.99	2.94	
<b>Cash Equivalents</b>	<b>17,222,638</b>	<b>0.69</b>	<b>0.38</b>	<b>0.38</b>	<b>0.38</b>	<b>1.53</b>	<b>5.19</b>	<b>4.20</b>	<b>1.75</b>	<b>N/A</b>	<b>N/A</b>	<b>1.81</b>	<b>09/01/2018</b>
FTSE 3 Mo T-Bill Index			0.38	0.38	0.38	1.62	5.36	4.18	2.59	2.44	1.83	2.51	
Difference			-0.01	-0.01	-0.01	-0.08	-0.17	0.01	-0.84	N/A	N/A	-0.69	

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City of Jacksonville Employees' Retirement System  
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	Allocation		Performance (%)										
	Market Value (\$)	%	MTD	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>US Equity</b>													
<b>Eagle Capital Large Cap Value (SA)</b>	<b>177,511,076</b>	<b>7.15</b>	<b>5.69</b>	<b>5.69</b>	<b>5.69</b>	<b>7.76</b>	<b>26.97</b>	<b>12.92</b>	<b>14.76</b>	<b>12.61</b>	<b>13.65</b>	<b>11.79</b>	<b>03/01/2007</b>
Russell 1000 Val Index			4.63	4.63	4.63	2.56	19.54	8.08	10.15	8.53	9.42	7.52	
Difference			1.06	1.06	1.06	5.20	7.43	4.84	4.61	4.08	4.22	4.28	
Russell 1000 Index			3.18	3.18	3.18	6.02	26.71	11.69	14.97	13.22	13.54	10.58	
Difference			2.51	2.51	2.51	1.74	0.26	1.24	-0.21	-0.62	0.11	1.21	
<b>Wellington Select Equity Income Fund (SA)</b>	<b>156,813,247</b>	<b>6.32</b>	<b>3.32</b>	<b>3.32</b>	<b>3.32</b>	<b>2.09</b>	<b>19.96</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>19.13</b>	<b>06/01/2023</b>
Russell 1000 Val Index			4.63	4.63	4.63	2.56	19.54	8.08	10.15	8.53	9.42	19.89	
Difference			-1.31	-1.31	-1.31	-0.47	0.43	N/A	N/A	N/A	N/A	-0.77	
<b>BNYM DB Lg Cap Stock Idx NL (CF)</b>	<b>127,124,905</b>	<b>5.12</b>	<b>3.18</b>	<b>3.18</b>	<b>3.18</b>	<b>6.01</b>	<b>26.75</b>	<b>12.11</b>	<b>15.20</b>	<b>N/A</b>	<b>N/A</b>	<b>15.15</b>	<b>05/01/2019</b>
Russell 1000 Index			3.18	3.18	3.18	6.02	26.71	11.69	14.97	13.22	13.54	14.95	
Difference			0.00	0.00	0.00	-0.01	0.04	0.42	0.23	N/A	N/A	0.19	
<b>Loomis, Sayles &amp; Co Lg Cap Grth (CF)</b>	<b>152,792,655</b>	<b>6.15</b>	<b>-0.09</b>	<b>-0.09</b>	<b>-0.09</b>	<b>9.42</b>	<b>30.29</b>	<b>16.23</b>	<b>18.13</b>	<b>15.59</b>	<b>N/A</b>	<b>17.33</b>	<b>08/01/2017</b>
Russell 1000 Grth Index			1.98	1.98	1.98	9.19	32.68	14.57	18.90	17.26	17.18	18.76	
Difference			-2.07	-2.07	-2.07	0.24	-2.40	1.65	-0.78	-1.67	N/A	-1.43	
<b>Kayne Anderson US SMID Value (SA)</b>	<b>73,478,785</b>	<b>2.96</b>	<b>2.94</b>	<b>2.94</b>	<b>2.94</b>	<b>2.15</b>	<b>15.51</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>6.43</b>	<b>03/01/2022</b>
Russell 2500 Val Index			3.40	3.40	3.40	3.13	18.07	6.82	9.98	7.49	8.44	6.43	
Difference			-0.47	-0.47	-0.47	-0.98	-2.56	N/A	N/A	N/A	N/A	0.00	
<b>Systematic Financial US SMID Value (SA)</b>	<b>74,713,955</b>	<b>3.01</b>	<b>2.71</b>	<b>2.71</b>	<b>2.71</b>	<b>2.66</b>	<b>18.94</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.56</b>	<b>03/01/2022</b>
Russell 2500 Val Index			3.40	3.40	3.40	3.13	18.07	6.82	9.98	7.49	8.44	6.43	
Difference			-0.70	-0.70	-0.70	-0.48	0.87	N/A	N/A	N/A	N/A	2.13	
<b>Pinnacle Associates US SMID Cap Growth (SA)</b>	<b>72,715,548</b>	<b>2.93</b>	<b>3.67</b>	<b>3.67</b>	<b>3.67</b>	<b>5.43</b>	<b>12.28</b>	<b>1.47</b>	<b>7.90</b>	<b>7.76</b>	<b>9.09</b>	<b>11.73</b>	<b>03/01/2010</b>
Russell 2500 Grth Index			3.82	3.82	3.82	6.34	20.99	6.13	8.87	8.68	10.04	12.30	
Difference			-0.16	-0.16	-0.16	-0.91	-8.71	-4.66	-0.97	-0.92	-0.94	-0.57	

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	Allocation		Performance (%)										
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<b>International Equity</b>													
<b>Silchester Intl Val Equity (CF)</b>	<b>250,994,695</b>	<b>10.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-8.92</b>	<b>1.79</b>	<b>4.38</b>	<b>5.89</b>	<b>3.04</b>	<b>5.91</b>	<b>8.30</b>	<b>06/01/2009</b>
MSCI EAFE Val Index (USD) (Net)			5.10	5.10	5.10	-2.38	11.15	7.28	6.92	3.41	4.86	5.78	
Difference			-5.10	-5.10	-5.10	-6.54	-9.36	-2.90	-1.04	-0.37	1.05	2.52	
<b>Bail Giff Intl Gro;4 (BGEFX)</b>													
<b>Bail Giff Intl Gro;4 (BGEFX)</b>	<b>174,858,768</b>	<b>7.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-5.78</b>	<b>11.94</b>	<b>-3.00</b>	<b>4.28</b>	<b>3.15</b>	<b>7.02</b>	<b>8.61</b>	<b>06/01/2009</b>
Baillie Gifford Index			4.25	4.25	4.25	-3.97	10.38	1.49	4.50	3.57	5.66	6.99	
Difference			-4.25	-4.25	-4.25	-1.81	1.56	-4.49	-0.22	-0.42	1.36	1.62	
Baillie Gifford Spliced Index			4.03	4.03	4.03	-3.88	10.89	3.45	5.50	3.68	5.36	6.46	
Difference			-4.03	-4.03	-4.03	-1.90	1.05	-6.44	-1.22	-0.52	1.66	2.15	
<b>Acadian Emg Mkts Eq II (CF)</b>													
<b>Acadian Emg Mkts Eq II (CF)</b>	<b>156,481,280</b>	<b>6.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-6.20</b>	<b>15.55</b>	<b>3.86</b>	<b>7.09</b>	<b>2.34</b>	<b>4.90</b>	<b>3.91</b>	<b>02/01/2011</b>
MSCI Emg Mkts Index (USD) (Net)			1.79	1.79	1.79	-6.36	14.75	-0.71	3.04	0.48	3.76	2.30	
Difference			-1.79	-1.79	-1.79	0.17	0.79	4.57	4.05	1.86	1.14	1.62	
<b>Fixed Income</b>													
<b>Baird Core Fixed Income (SA)</b>													
<b>Baird Core Fixed Income (SA)</b>	<b>122,170,170</b>	<b>4.92</b>	<b>0.55</b>	<b>0.55</b>	<b>0.55</b>	<b>-2.36</b>	<b>2.85</b>	<b>-1.08</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-1.12</b>	<b>03/01/2021</b>
Bloomberg US Agg Bond Index			0.53	0.53	0.53	-2.55	2.07	-1.52	-0.60	1.21	1.19	-1.56	
Difference			0.02	0.02	0.02	0.19	0.78	0.44	N/A	N/A	N/A	0.44	
<b>Loomis Sayles Multisector Full Discretion (CF)</b>													
<b>Loomis Sayles Multisector Full Discretion (CF)</b>	<b>183,904,680</b>	<b>7.41</b>	<b>-0.08</b>	<b>-0.08</b>	<b>-0.08</b>	<b>-1.15</b>	<b>5.11</b>	<b>0.90</b>	<b>2.41</b>	<b>3.23</b>	<b>3.49</b>	<b>5.41</b>	<b>11/01/2007</b>
Bloomberg Gbl Agg Bond Index			0.57	0.57	0.57	-4.56	0.25	-3.68	-2.10	-0.73	0.22	1.64	
Difference			-0.65	-0.65	-0.65	3.41	4.85	4.58	4.51	3.96	3.27	3.77	
<b>Schroder Flexible Secured Income LP (CF)</b>													
<b>Schroder Flexible Secured Income LP (CF)</b>	<b>185,357,034</b>	<b>7.47</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.58</b>	<b>6.67</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.05</b>	<b>10/01/2022</b>
SOFR+1.75%			0.51	0.51	0.51	2.13	7.03	5.95	4.30	N/A	N/A	6.85	
Difference			-0.51	-0.51	-0.51	-0.54	-0.36	N/A	N/A	N/A	N/A	1.20	
SOFR+5%			0.77	0.77	0.77	3.20	10.45	9.33	7.64	N/A	N/A	10.26	
Difference			-0.77	-0.77	-0.77	-1.62	-3.78	N/A	N/A	N/A	N/A	-2.21	

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<b>Core Real Estate</b>													
<b>Harrison Street Core Property LP</b>	<b>119,006,554</b>	<b>4.79</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>	<b>-0.43</b>	<b>1.13</b>	<b>3.43</b>	<b>4.42</b>	<b>N/A</b>	<b>5.50</b>	<b>11/01/2015</b>
NCREIF ODCE Index (AWA) (Net)			0.00	0.00	0.00	0.96	-2.27	-3.14	1.99	3.08	4.94	4.22	
Difference			0.00	0.00	0.00	-0.81	1.84	4.27	1.44	1.34	N/A	1.27	
<b>PGIM Real Estate PRISA II LP</b>	<b>43,988,545</b>	<b>1.77</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.08</b>	<b>-4.35</b>	<b>-4.37</b>	<b>1.24</b>	<b>3.24</b>	<b>5.12</b>	<b>5.08</b>	<b>01/01/2015</b>
NCREIF ODCE Index (AWA) (Net)			0.00	0.00	0.00	0.96	-2.27	-3.14	1.99	3.08	4.94	4.90	
Difference			0.00	0.00	0.00	0.12	-2.08	-1.23	-0.75	0.16	0.18	0.18	
<b>Principal US Property (CF)</b>	<b>103,251,853</b>	<b>4.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.08</b>	<b>-1.95</b>	<b>-3.30</b>	<b>2.40</b>	<b>3.66</b>	<b>5.68</b>	<b>6.31</b>	<b>01/01/2014</b>
NCREIF ODCE Index (AWA) (Net)			0.00	0.00	0.00	0.96	-2.27	-3.14	1.99	3.08	4.94	5.48	
Difference			0.00	0.00	0.00	0.11	0.31	-0.16	0.41	0.58	0.74	0.83	
<b>UBS Trumbull Property LP</b>	<b>50,438,331</b>	<b>2.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-0.16</b>	<b>-3.07</b>	<b>-4.80</b>	<b>-0.97</b>	<b>-0.27</b>	<b>2.04</b>	<b>3.52</b>	<b>01/01/2006</b>
NCREIF ODCE Index (AWA) (Net)			0.00	0.00	0.00	0.96	-2.27	-3.14	1.99	3.08	4.94	4.79	
Difference			0.00	0.00	0.00	-1.12	-0.80	-1.66	-2.96	-3.35	-2.90	-1.27	
<b>Vanguard RE Idx;ETF (VNQ)</b>	<b>1,352,658</b>	<b>0.05</b>	<b>1.65</b>	<b>1.65</b>	<b>1.65</b>	<b>-6.15</b>	<b>12.20</b>	<b>-1.38</b>	<b>3.06</b>	<b>5.84</b>	<b>4.47</b>	<b>10.67</b>	<b>12/01/2008</b>
Custom REITs Index			1.67	1.67	1.67	-6.07	12.35	-1.28	3.21	6.20	4.81	11.33	
Difference			-0.02	-0.02	-0.02	-0.08	-0.15	-0.10	-0.16	-0.36	-0.34	-0.66	

Market values and performance shown are preliminary and subject to change. Performance shown is net of fees and is annualized for periods greater than one year. Allocations may not sum up to 100% due to the exclusion of managers in liquidation. Please see the addendum for custom benchmark definitions. Fiscal year for the COJ ends 09/30. Schroder Flexible Secured Income Fund LP (CF), Harrison Street Core Property LP, PGIM Real Estate PRISA II LP, UBS Trumbull Property (CF), all non core Real Estate Managers, and Adams Street Private Equity (SA) valuations are available quarterly, adjusted for subsequent cash flows. Asset Valuations for Real Estate and Diversifying Assets are lagged/unlagged as reported by the System's book of record, BNY Mellon. Performance for NCREIF ODCE Index (AWA) (Net) is available on a quarterly basis. The Total Fund market value includes the Transition Account. Rounding is due to the fund and benchmark return differences not fully offsetting, resulting in numerical discrepancies.



City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)

As of January 31, 2025

	Allocation		Performance (%)										
	Market Value (\$)	%	MTD	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Non-Core Real Estate</b>													
<b>Abacus Multi-Family Partners VI LP</b>	<b>8,389,059</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.22</b>	<b>-39.39</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-41.81</b>	<b>10/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			0.17	0.17	0.17	1.63	-0.31	-1.20	4.03	5.14	7.04	-6.87	
Difference			-0.17	-0.17	-0.17	-0.41	-39.08	N/A	N/A	N/A	N/A	-34.95	
<b>H.I.G. Realty Partners IV (Onshore) LP</b>	<b>27,831,974</b>	<b>1.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.92</b>	<b>6.37</b>	<b>26.89</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>01/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			0.17	0.17	0.17	1.63	-0.31	-1.20	4.03	5.14	7.04	-1.12	
Difference			-0.17	-0.17	-0.17	-0.71	6.68	28.09	N/A	N/A	N/A	N/A	
<b>Bell Value-Add Fund VII (CF)</b>	<b>7,209,308</b>	<b>0.29</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-5.25</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-12.82</b>	<b>04/01/2023</b>
NCREIF ODCE Index (AWA) (Net) +2%			0.17	0.17	0.17	1.63	-0.31	-1.20	4.03	5.14	7.04	-4.71	
Difference			-0.17	-0.17	-0.17	-1.63	-4.93	N/A	N/A	N/A	N/A	-8.12	
<b>Hammes Partners IV LP</b>	<b>1,636,904</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.19</b>	<b>-50.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-59.30</b>	<b>10/01/2023</b>
NCREIF ODCE Index (AWA) (Net) +2%			0.17	0.17	0.17	1.63	-0.31	-1.20	4.03	5.14	7.04	-3.52	
Difference			-0.16	-0.16	-0.16	1.56	-50.49	N/A	N/A	N/A	N/A	-55.78	
<b>Blue Owl Digital Infrastructure Fund III-A LP</b>	<b>7,017,149</b>	<b>0.28</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>2.29</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>27.99</b>	<b>04/01/2024</b>
NCREIF ODCE Index (AWA) (Net) +2%			0.17	0.17	0.17	1.63	-0.31	-1.20	4.03	5.14	7.04	1.99	
Difference			-0.14	-0.14	-0.14	0.66	N/A	N/A	N/A	N/A	N/A	26.00	
<b>Ares US Real Estate Opportunity IV LP</b>	<b>1,490,828</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.00</b>	<b>11/01/2024</b>
NCREIF ODCE Index (AWA) (Net) +2%			0.17	0.17	0.17	1.63	-0.31	-1.20	4.03	5.14	7.04	1.46	
Difference			-0.17	-0.17	-0.17	N/A	N/A	N/A	N/A	N/A	N/A	-1.46	
<b>Diversifying Assets</b>													
<b>Adams Street Private Equity (SA)</b>	<b>94,858,966</b>	<b>3.82</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.59</b>	<b>4.49</b>	<b>7.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>18.93</b>	<b>11/01/2020</b>
S&P 500 Index+3%			3.04	3.04	3.04	6.30	30.17	15.26	18.62	16.78	17.17	20.82	
Difference			-3.04	-3.04	-3.04	-1.72	-25.68	-7.45	N/A	N/A	N/A	-1.90	
<b>Hamilton Lane Private Credit (SA)</b>	<b>89,818,033</b>	<b>3.62</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>3.94</b>	<b>11.62</b>	<b>8.73</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.14</b>	<b>04/01/2021</b>
ICE BofAML Gbl Hi Yld Index +2%			1.40	1.40	1.40	0.74	10.92	5.32	5.27	5.56	6.76	4.23	
Difference			-1.38	-1.38	-1.38	3.19	0.71	3.41	N/A	N/A	N/A	-0.09	
<b>Cash Equivalents</b>													
<b>Dreyfus Gvt CM;Inst (DGCXX)</b>	<b>17,222,638</b>	<b>0.69</b>	<b>0.38</b>	<b>0.38</b>	<b>0.38</b>	<b>1.53</b>	<b>5.19</b>	<b>4.03</b>	<b>2.55</b>	<b>2.41</b>	<b>1.83</b>	<b>1.66</b>	<b>05/01/2001</b>
FTSE 3 Mo T-Bill Index			0.38	0.38	0.38	1.62	5.36	4.18	2.59	2.44	1.83	1.65	
Difference			-0.01	-0.01	-0.01	-0.08	-0.17	-0.15	-0.04	-0.03	0.00	0.01	

Private equity funds tend to underperform in the early stages of their maturity; returns tend to improve as funds mature.

Market values and performance shown are preliminary and subject to change. Performance shown is net of fees and is annualized for periods greater than one year. Allocations may not sum up to 100% due to the exclusion of managers in liquidation. Please see the addendum for custom benchmark definitions. Fiscal year for the COJ ends 09/30. Schroder Flexible Secured Income Fund LP (CF), Harrison Street Core Property LP, PGIM Real Estate PRISA II LP, UBS Trumbull Property (CF), all non core Real Estate Managers, and Adams Street Private Equity (SA) valuations are available quarterly, adjusted for subsequent cash flows. Asset Valuations for Real Estate and Diversifying Assets are lagged/unlagged as reported by the System's book of record, BNY Mellon. Performance for NCREIF ODCE Index (AWA) (Net) is available on a quarterly basis. The Total Fund market value includes the Transition Account. Rounding is due to the fund and benchmark return differences not fully offsetting, resulting in numerical discrepancies.

**Performance Related Comments:**

- Performance is annualized for periods greater than one year.
- Performance and market values shown are preliminary and subject to change.
- The inception date shown indicates the first full month of performance following initial funding.
- The market value shown for the Transition Account includes JXP Transition, BNYM Transition, Loop Cap Transition, and residual assets from terminated managers.
- RVK began monitoring the assets of the City of Jacksonville Retirement System on 01/01/2019. Prior historical data was provided by the custodian and previous consultant.

**Custom Composite Benchmark Comments:**

- **Total Fund Policy Index:** The passive Total Fund Policy Index is calculated monthly and currently consists of 30% Russell 3000 Index, 23% MSCI ACW Ex US Index (USD) (Net), 20% Fixed Income Index, 15% Real Estate Index, and 12% Diversifying Assets Index.
- **Actual Allocation Index:** The Actual Allocation Index is calculated monthly, using beginning of month weights of each investment applied to its corresponding primary benchmark return. The Actual Allocation Index's Inception date is 01/2019 and prior performance is listed as "N/A".
- **Actual Allocation Index (Net of Alts):** The Actual Allocation Index (Net of Alts) is calculated monthly, using beginning of month weights of each investment applied to its corresponding primary benchmark return, with the exception of funds in the Core Real Estate, Non-Core Real Estate, and Diversifying Assets composites, which are represented by actual monthly composite returns. The Actual Allocation Index's Inception date is 01/2019 and prior performance is listed as "N/A".
- **US Equity Index:** The passive US Equity Index consists of 100% DJ US TSM Index through 06/2009 and 100% Russell 3000 Index thereafter.
- **International Equity Index:** The passive International Equity Index consists of 100% MSCI EAFE Index (USD) (Gross) through 01/2011 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- **Fixed Income Index:** The passive Fixed Income Index consists of 100% Bloomberg US Agg Bond Index through 10/2017 and 100% Bloomberg US Universal Bond Index thereafter.
- **Real Estate Index:** The active Real Estate Index is calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return.
- **Diversifying Assets Index:** The Diversifying Assets Index is calculated monthly and consists of 50% S&P MLP Index (TR)/50% NCREIF Timberland Index through 10/2017, 67% S&P MLP Index (TR)/33% NCREIF Timberland Index through 09/2020, and calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return thereafter.

**Custom Manager Benchmark Comments:**

- **Baillie Gifford Index:** The passive Baillie Gifford Index consists of 100% MSCI EAFE Grth Index (USD) (Net) through 10/2017 and 100% MSCI ACW Ex US Grth Index (USD) (Net) thereafter.
- **Baillie Gifford Spliced Index:** The passive Baillie Gifford Spliced Index consists of 100% MSCI EAFE Index (USD) (Net) through 11/2019 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- **Custom REITs Index:** The passive Custom REITs Index consists of 100% MSCI US REIT Index (USD) (Gross) through 01/2019 and 100% Vanguard Spl Real Estate Index thereafter.
- **Vanguard Spliced Real Estate Index:** The Vanguard Spl Real Estate Index consists of MSCI US REIT Index (USD) (Gross) adjusted to include a 2% cash position (Lipper Money Market Average) through 04/30/2009, MSCI US REIT Index (USD) (Gross) through 01/31/2018, MSCI US IM Real Estate 25/50 Transition Index through 07/24/2018, and MSCI US IM Real Estate 25/50 Index (Gross) thereafter.

# RVK

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RVK

# Quarterly Performance Report

## City of Jacksonville Employees' Retirement System

As of December 31, 2024



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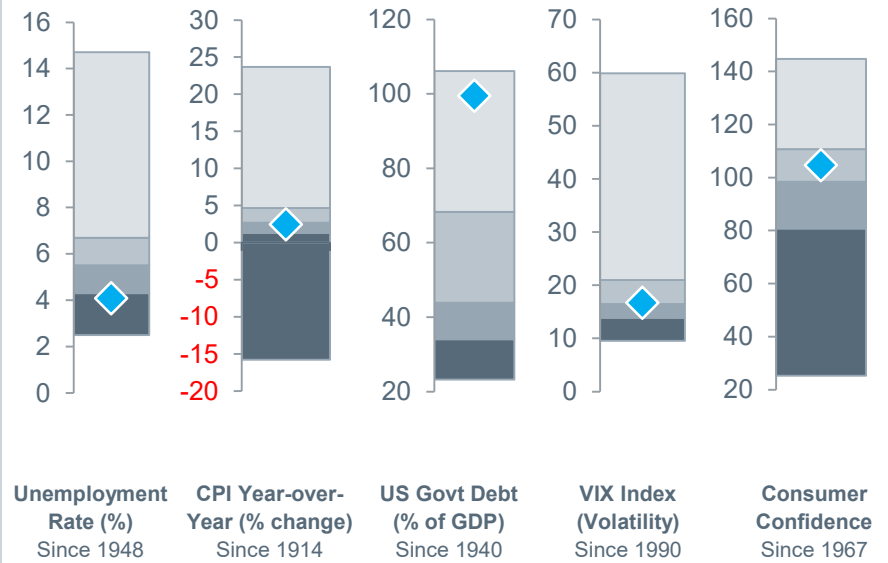
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# Capital Markets Review

**Fourth Quarter Economic Environment**

Despite multiple risks to economic growth—including persistent pockets of inflation, ongoing wars, and the prospect of renewed trade disruptions—risk assets delivered robust returns in 2024. For the calendar year, the MSCI All Country World Investable Market Index generated returns of 16.9%, primarily due to the returns of the US stock market and many of its largest companies. However, during Q4, investor sentiment for Chinese and other non-US securities weakened due to the trade measures expected from the second Trump administration, which caused global stock markets to experience a minor retracement. Credit spreads within debt markets continued to tighten throughout the year, leading to attractive returns for noninvestment grade, leveraged loan, securitized, and hard currency emerging markets debt. In December, the Organisation for Economic Co-operation and Development (OECD) Economic Outlook report forecasted global GDP growth of 3.2% for 2024, with a slight increase to 3.3% in 2025 and 2026. The year-over-year Headline Consumer Price Index change was 2.9% according to the December reading, representing a decline from 3.4% at the end of 2023. The Federal Open Markets Committee (FOMC) continued its trend of reducing the Federal Funds Rate with a 0.25% cut in December, following a 0.25% cut in November and 0.50% cut in September. The range for the Federal Funds Rate is now 4.25%–4.50%, down from its recent peak range of 5.25%–5.50%.

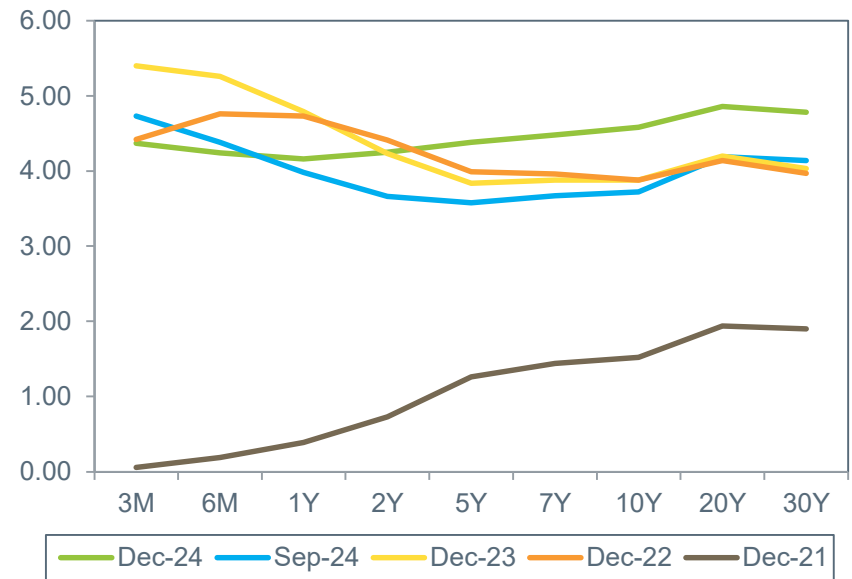
**Key Economic Indicators**



Economic Indicators	Dec-24	Sep-24	Dec-23	Dec-21	20 Yr
Federal Funds Rate (%)	4.33 ▼	4.83	5.33	0.07	1.68
Breakeven Infl. - 5 Yr (%)	2.37 ▲	2.06	2.14	2.91	1.93
Breakeven Infl. - 10 Yr (%)	2.33 ▲	2.16	2.17	2.59	2.09
CPI YoY (Headline) (%)	2.9 ▲	2.4	3.4	7.0	2.6
Unemployment Rate (%)	4.1 —	4.1	3.7	3.9	5.8
Real GDP YoY (%)	2.5 ▼	2.7	3.1	5.4	2.0
PMI - Manufacturing	49.2 ▲	47.2	47.4	58.8	52.9
USD Total Wtd Idx	129.49 ▲	121.53	118.77	115.37	104.49
WTI Crude Oil per Barrel (\$)	71.6 ▲	68.2	71.7	75.2	71.9
Gold Spot per Oz (\$)	2,612 ▼	2,636	2,068	1,829	1,335

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	2.41	25.02	25.02	14.53	13.10
Russell 2000	0.33	11.54	11.54	7.40	7.82
MSCI EAFE (Net)	-8.11	3.82	3.82	4.73	5.20
MSCI EAFE SC (Net)	-8.36	1.82	1.82	2.30	5.52
MSCI Emg Mkts (Net)	-8.01	7.50	7.50	1.70	3.64
Bloomberg US Agg Bond	-3.06	1.25	1.25	-0.33	1.35
ICE BofAML 3 Mo US T-Bill	1.17	5.25	5.25	2.46	1.77
NCREIF ODCE (Gross)	1.16	-1.43	-1.43	2.87	5.88
FTSE NAREIT Eq REIT (TR)	-6.21	8.73	8.73	4.27	5.73
HFRI FOF Comp	2.30	9.40	9.40	5.28	3.81
Bloomberg Cmdbty (TR)	-0.45	5.38	5.38	6.77	1.28

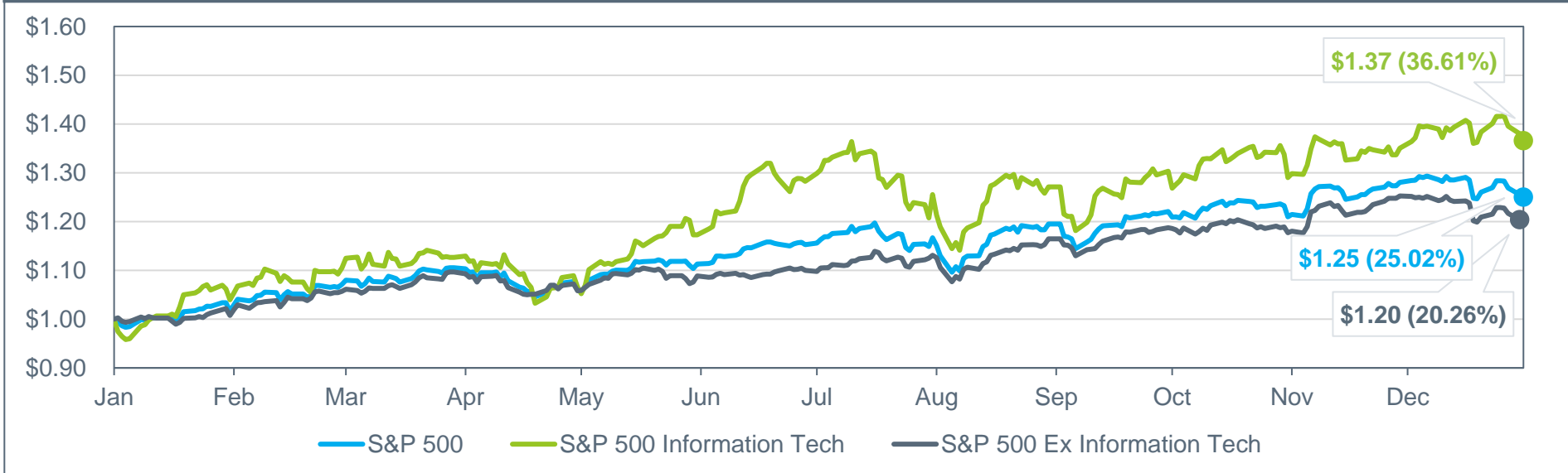
**Treasury Yield Curve (%)**



### 10 Year Treasury Yields



### S&P 500 Index Components: Growth of \$1



Source: Federal Reserve Bank of St. Louis and FactSet.  
 Treasury Yield Dates: Beginning: January 2, High: April 25, Low: September 16, End: December 31.

Fourth Quarter Review

**Broad Market**

US equities began on a strong note in Q4, supported by easing monetary policy and optimism related to anticipated policies from the incoming administration. This positive momentum lasted through much of the quarter but was disrupted after the December FOMC meeting. During the meeting, guidance was provided that interest rates could remain higher than expected, triggering a sharp market correction. US markets still ended Q4 in positive territory, with the Russell 3000 Index gaining 2.6% in Q4 and 23.8% for the year.

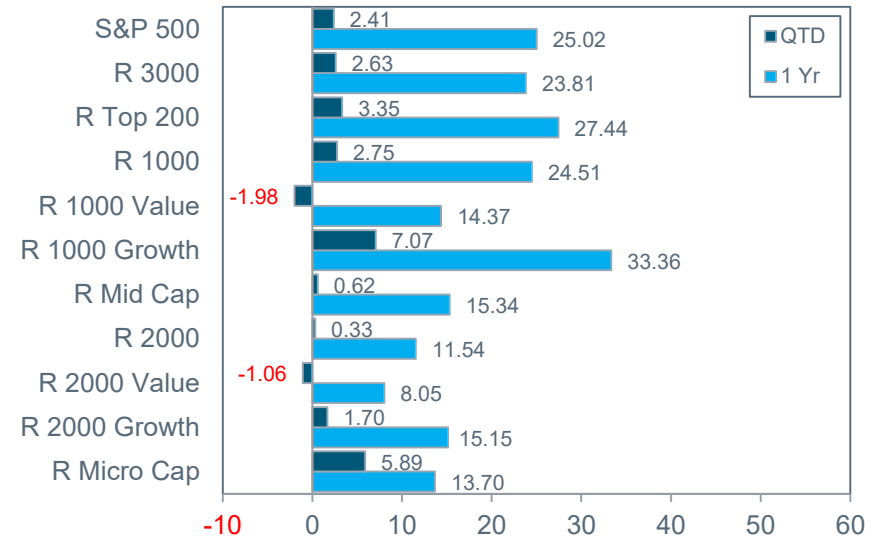
**Market Cap**

The Russell 1000 Growth Index gained 7.1%, while the Russell 2000 Value Index declined by -1.1%. Gains were concentrated in a few sectors, with only 4 of the 11 GICS sectors posting positive results.

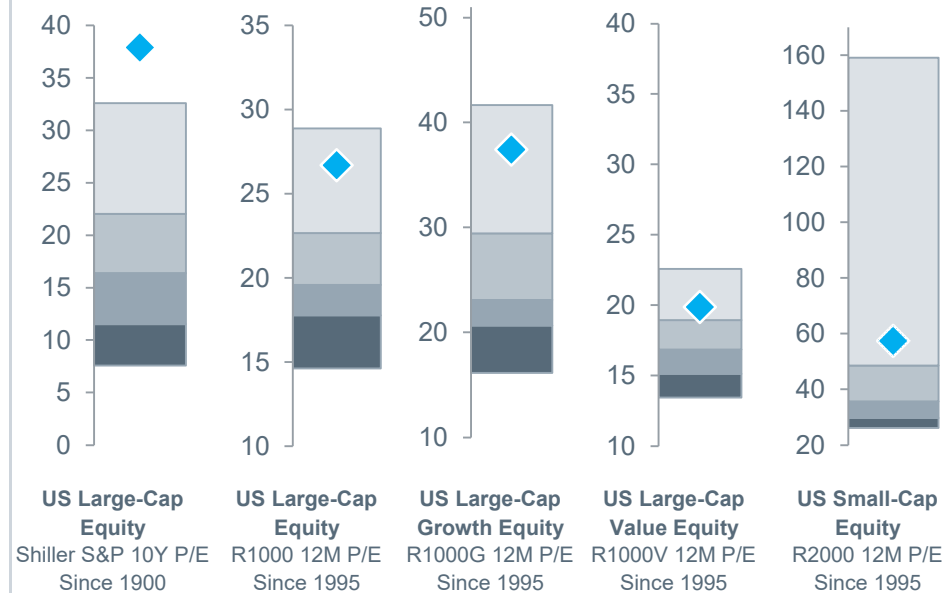
**Style and Sector**

Active managers faced headwinds during the quarter, with median core and growth managers underperforming across size spectrums. Value managers fared the best, with median large-cap and small-cap value managers generating incremental excess returns.

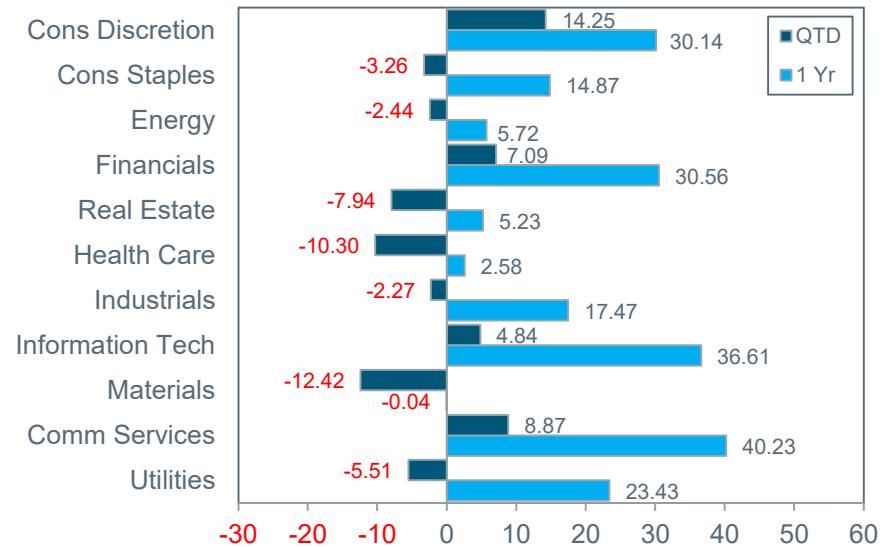
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)

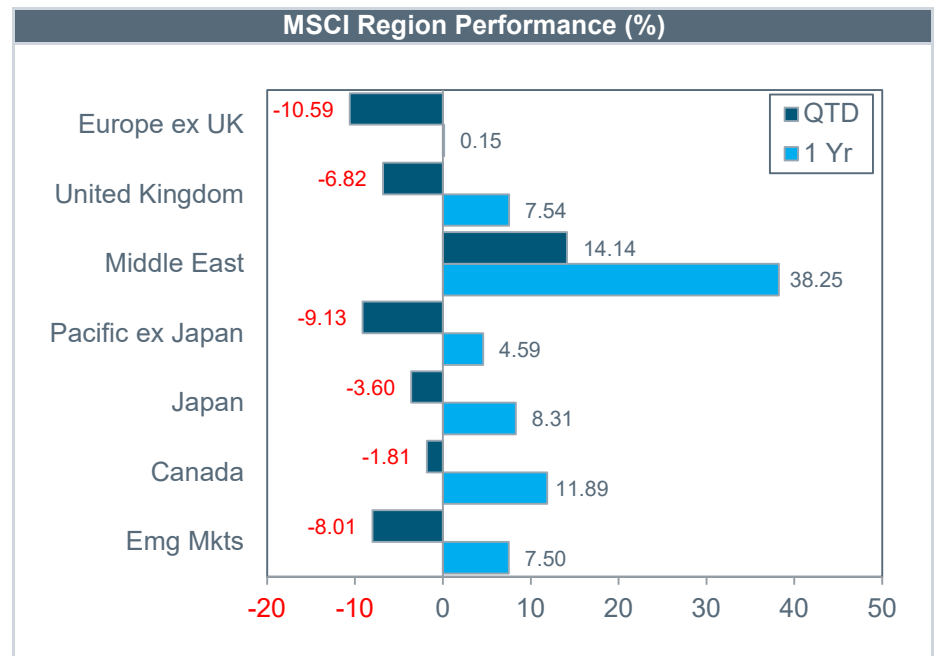
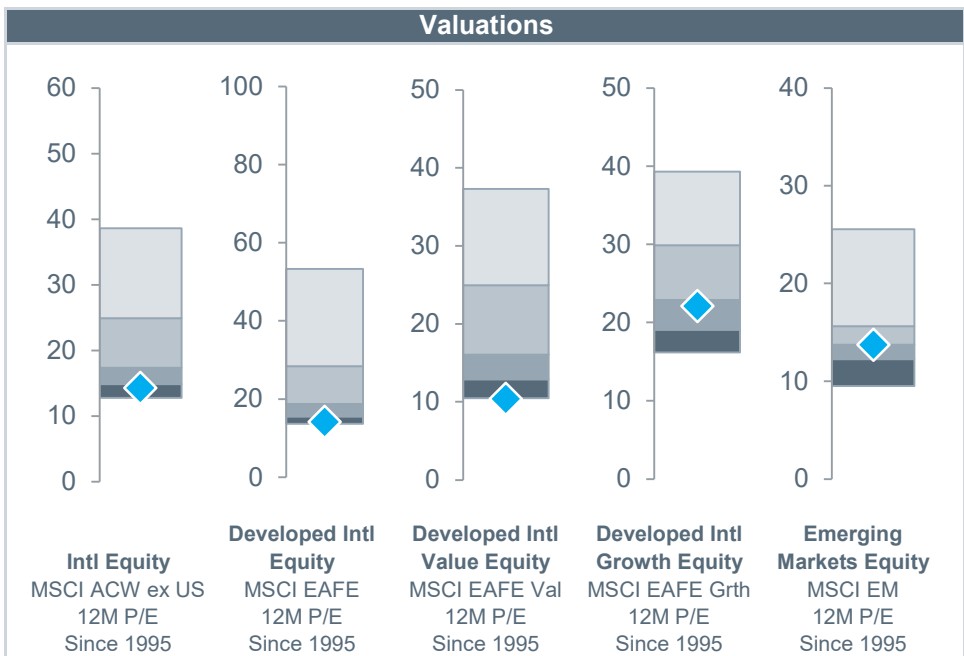
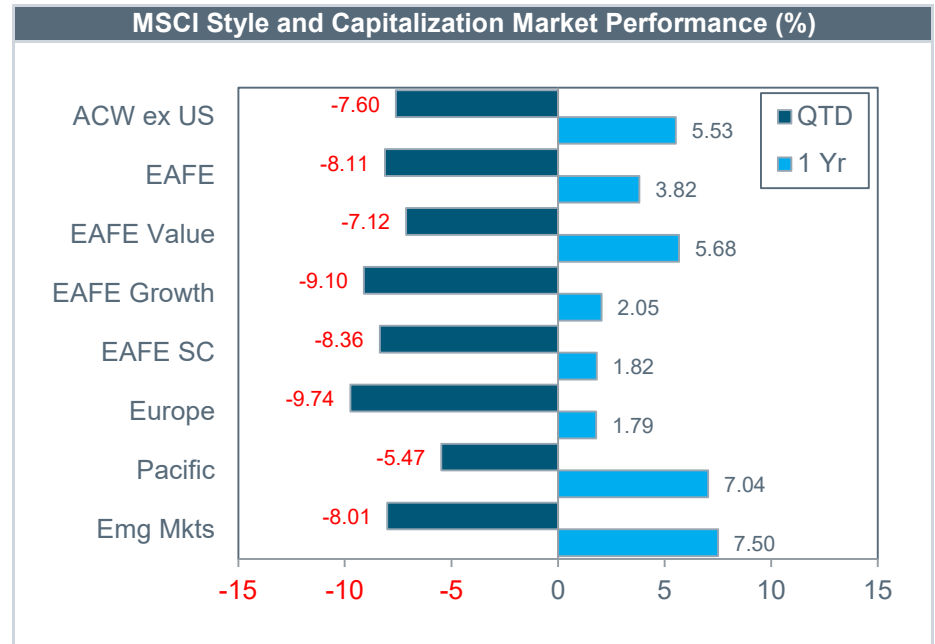


Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

### Fourth Quarter Review

**Developed Markets**  
 Developed international markets posted significant negative results in Q4, with the MSCI EAFE Index generating returns of -8.1% in Q4. International value stocks continued to outperform growth stocks during the quarter—outperforming by a wide margin for the year. Small-cap slightly underperformed large-cap stocks for Q4 and all of 2024. Most country returns finished the quarter in negative territory. Israel was a standout, with double-digit positive returns, while Singapore, Taiwan, and Austria posted more modest gains. European securities continue to struggle due to subdued investor sentiment and lackluster economic forecasts.

**Emerging Markets**  
 Emerging market slightly outperformed developed international markets for Q4. For 2024, emerging markets outperformed with the MSCI Emerging Markets Indexes returning 7.5% compared to 3.8% for the MSCI EAFE Index. Within emerging markets, growth stocks outperformed value stocks in Q4 and the year. Small-cap stocks outperformed large-cap stocks in Q4. China continues to dominate headlines. In Q4, returns for Chinese securities turned negative as investors worried about the impact of tariffs from the incoming Trump administration. Investors also became more skeptical of Chinese government stimulus efforts, which were previously buoying the market.



Valuation data courtesy of Bloomberg Professional Service.  
 P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.  
 All returns are shown net of foreign taxes on dividends.

**Fourth Quarter Review**

**Broad Market**

Treasury yields rose across most maturities in 2024, with a sharp increase in Q4, while the 2-year Treasury yield remained stable. The results of the US election boosted expectations for economic growth, inflation, and deficits, contributing to an increase in the premium for longer-dated debt. In 2024, investor focus was on the Treasury yield curve and spreads between key maturities commonly used as recession indicators. The inversion between the 2- and 10-year Treasuries ended in Q3 while the inversion between the 3-month and 10-year Treasuries ended in Q4. The Bloomberg US Aggregate Bond Index declined by -3.1% in Q4 but finished the year with a 1.3% gain.

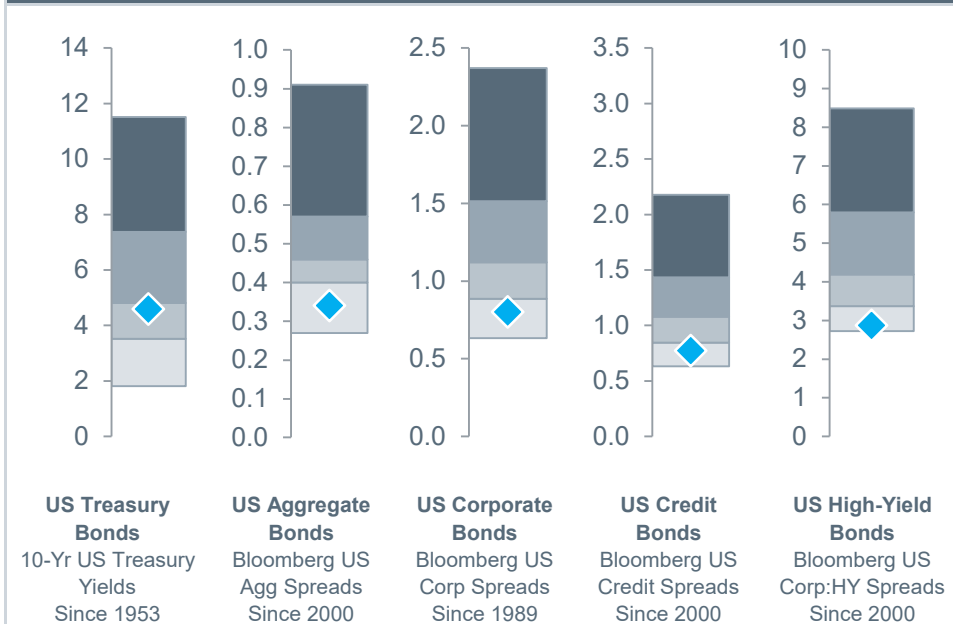
**Credit Market**

Risk assets showed resilience, with lower-rated bonds outperforming. The Bloomberg US Corporate Investment Grade Index posted -3.0% for Q4 and 2.1% for the year, while the Bloomberg US Corporate High Yield Index returned 0.2% in Q4 and 8.2% for the year.

**Emerging Market Debt**

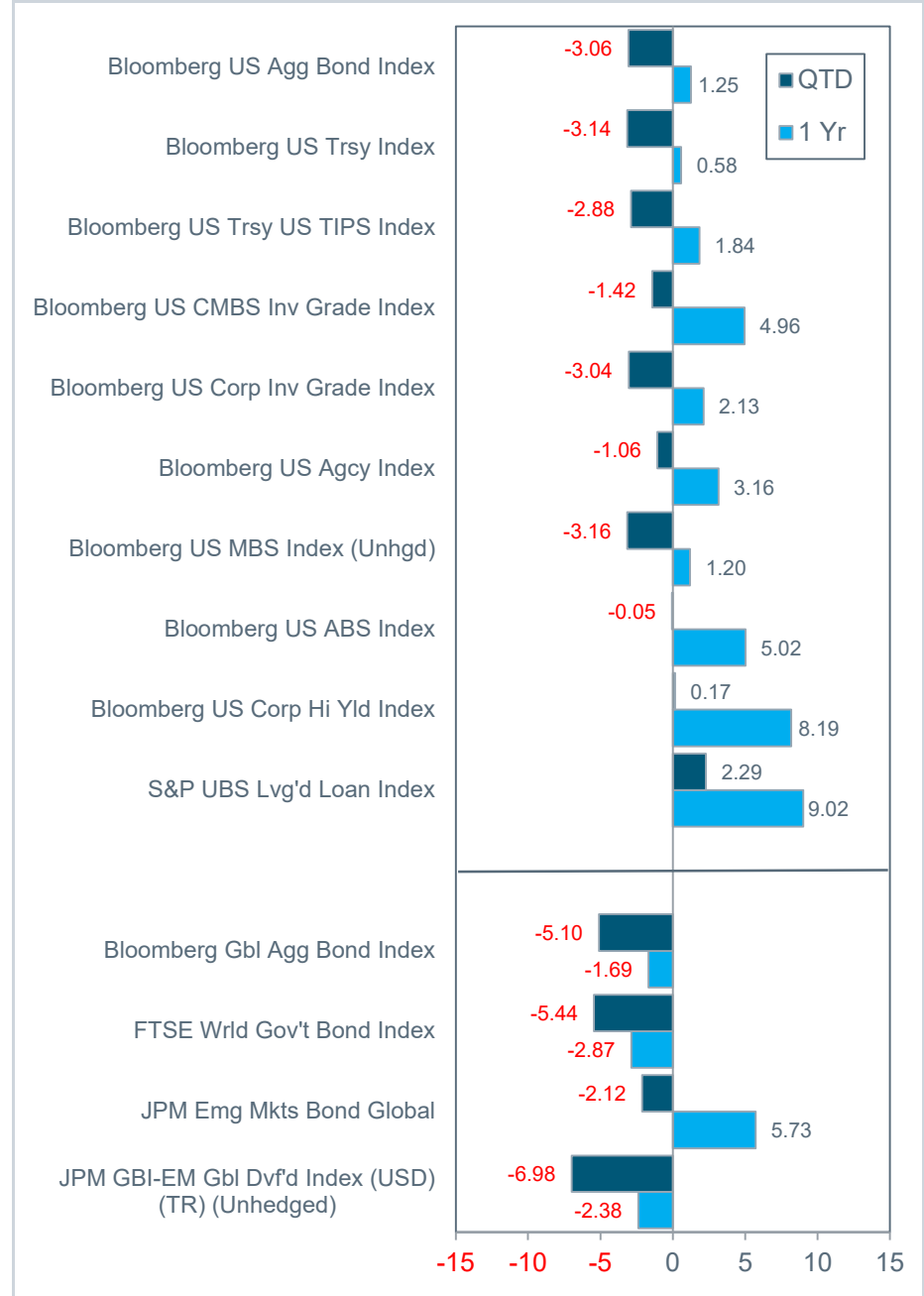
Emerging market debt had mixed results. The JPMorgan EMBI Global Diversified Index, tracking hard currency bonds, fell -1.9% in Q4 but gained 6.5% for the year. In contrast, local currency bonds struggled due to a strong US dollar, with the JPMorgan GBI-EM Global Diversified Index returning -7.0% in Q4 and -2.4% for the year.

**Valuations**



Valuation data courtesy of Bloomberg Professional Service. Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.

**Fixed Income Performance (%)**



Fourth Quarter Review - Absolute Return

General Market - Hedge Funds

Hedge funds finished the year strongly, with the HFR Composite Index returning 2.5% in Q4, resulting in a total return of 9.2% for 2024. All major strategy indices posted positive results during the quarter. Positive performance primarily came during November, as the US presidential election served as a positive catalyst for various strategies. The top performing strategy index in Q4 was Credit Arbitrage, with a return of 2.9%. Credit Arbitrage managers continued to find opportunities as volatility remained elevated due to the disparity of inflation expectations between policy makers and the bond market.

General Market - Global Tactical Asset Allocation (GTAA)

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely posted negative returns in Q4 to close a challenging year for long-biased active managers, as all underperformed a US-centric blend of 60% equity and 40% fixed income (60/40 blend) in Q4 and 2024. In Q4, the top performing long-biased GTAA strategies featured a higher allocation to US banks, high yield credit, and mega-cap companies that were less sensitive to interest rates. Underperforming peers tended to hold larger exposures to emerging markets and long duration government bonds.

Fourth Quarter Review - Real Assets

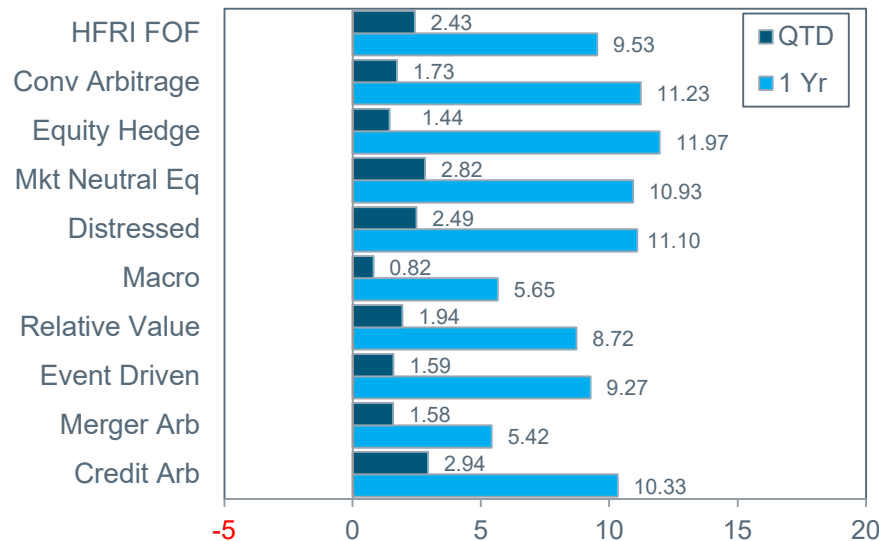
General Market - Diversified Inflation Strategies (DIS)

Diversified Inflation Strategies (DIS) closely monitored by RVK reported positive performance for the first three quarters of the year. However, this positive trend reversed in Q4 as rate-sensitive sectors faced pressure following the December FOMC meeting. DIS managers ended the year with negative absolute performance, underperforming a 60/40 blend in Q4 and for the year.

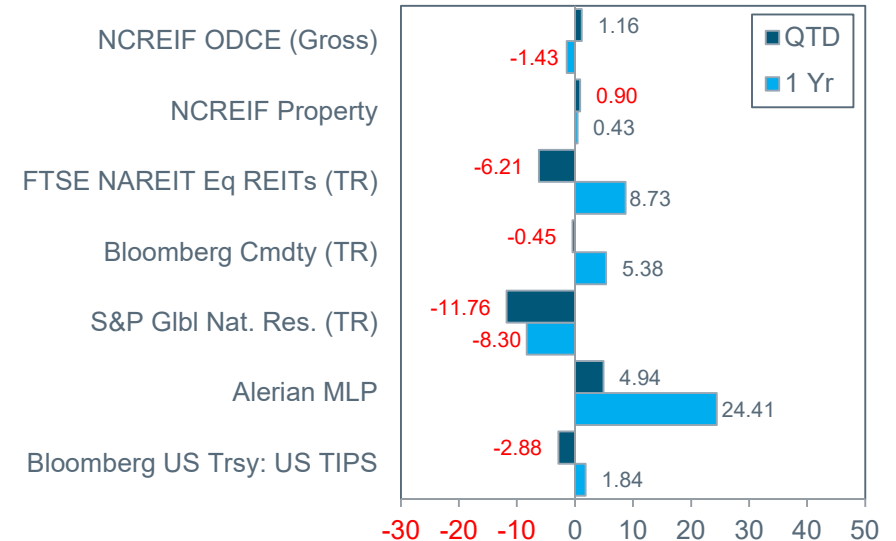
General Market - Real Estate

Core private real estate generated a 1.2% total return in Q4 (on a preliminary and gross of fee basis), as reported by the NFI-ODCE Index, with the total return comprised of 1.0% from income and 0.1% from price appreciation. Income returns were generally flat for quarter-over-quarter and remained slightly elevated compared to recent years. This is the first quarter of positive overall price appreciation returns after nine consecutive quarters of negative returns. Investors of publicly traded real estate significantly underperformed their private market counterparts. Publicly traded real estate securities delivered a total return of -8.2% in Q4, as measured by FTSE/NAREIT All REITs Index, finishing 2024 with a 4.9% return.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)





Annual Asset Class Performance

As of December 31, 2024

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	CYTD
Best	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	16.09	26.29	25.02
	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	7.47	18.24	11.54
	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	1.46	16.93	9.40
	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	16.12	22.17	-5.31	13.73	8.73
	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	12.34	14.82	-11.19	13.45	8.19
	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	19.59	10.99	11.26	-11.85	13.16	7.50
	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.42	10.88	10.10	-13.01	9.83	5.38
	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	7.82	6.17	-14.45	7.13	5.25
	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	8.72	7.51	5.96	-18.11	6.07	3.82
	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	8.43	7.11	5.28	-20.09	5.53	1.84
	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	8.39	1.19	0.05	-20.44	5.02	1.82
	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.79	7.69	0.67	-1.55	-21.39	3.90	1.25
	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.37	-7.91	-1.43
Worst	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	2.28	-8.00	-2.54	-27.09	-12.02	-4.15
	S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Net) - Int'l Dev.	MSCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - FI	Bloombrg US Corp Hi Yield - FI	Bloombrg US Trsy US TIPS - FI	Bloombrg US Gov Credit Lng - FI	NCREIF ODCE (Gross) - Real Estate	FTSE NAREIT Eq REITs Index (TR)	HFRI FOF Comp Index - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv	

NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.



# Total Fund

City of Jacksonville Employees' Retirement System  
Investment Manager Watch List

As of December 31, 2024

Watch List Managers	Date Added to Watch List	Benchmark	Peer Group	Inception Date	Quantitative Factors						Qualitative Factors	Last Meeting w/Staff or RVK	Rationale for Addition to Watch List
					Rolling 5-Year Return (NoF) for three consecutive quarters falls below the respective strategy benchmark			Rolling 5-Year Return (GoF) for three consecutive quarters falls in the bottom third of the respective Peer Group Universe			Meaningful Updates		
Domestic Equity					5-Years Ending Dec-2024	5-Years Ending Sept-2024	5-Years Ending Jun-2024	5-Years Ending Dec-2024	5-Years Ending Sept-2024	5-Years Ending Jun-2024			
Eagle Capital Large Cap Value (SA)	Mar-24	Russell 1000 Val Index	IM U.S. Large Cap Value Equity (SA+CF)	Mar-07	✓	✓	✓	✓	✓	✓	N/A	Dec-24	Investment team turnover

✓ = strategy exceeds the benchmark / falls in the top two thirds of the peer group over the stated trailing period.  
 ✗ = strategy does not exceed the benchmark / falls in the bottom third of the peer group over the stated trailing period.

**Organization, Team, Process, and AUM Developments**

**Eagle Capital Large Cap Value**

As previously communicated, Boykin Curry (Co-CIO) officially left the firm in May 2024 to launch his own investment firm. Eagle Capital's co-CIO structure led by Alec Henry as Managing CIO remains otherwise unchanged and RVK continues to view the leadership structure as having adequate depth and structure for future potential investment team succession events. Additionally, RVK continues to monitor the ongoing ownership succession planning around Ravenel Curry (Founder, Co-CIO). Eagle Capital has also followed through with its intended plan to deepen the group of supporting analysts with two new hires. Samuel Paglia (Senior Research Analyst) was hired in April, and Alex Frouman (Senior Research Analyst) was hired in June 2024. Strategy assets under management (AUM) ended the quarter at \$31.2 billion, an increase of \$0.5 billion since last quarter, with net flows outflows of \$122 million. No further significant personnel changes were announced during the quarter.



City of Jacksonville Employees' Retirement System  
 Asset Allocation, Performance & Schedule of Investable Assets

As of December 31, 2024

	Allocation		Performance (%)		Allocation		Performance (%)
	Market Value (\$)	%	QTD		Market Value (\$)	%	QTD
<b>US Equity</b>	<b>810,148,531</b>	<b>32.98</b>	<b>2.35</b>	<b>Core Real Estate</b>	<b>332,291,267</b>	<b>13.53</b>	<b>0.51</b>
Eagle Capital Large Cap Value (SA)	167,957,318	6.84	1.96	Harrison Street Core Property LP	119,006,554	4.84	0.15
Wellington Select Equity Income Fund (SA)	151,777,702	6.18	-1.19	PGIM Real Estate PRISA II LP	46,443,750	1.89	1.08
BNYM DB Lg Cap Stock Idx NL (CF)	123,207,128	5.02	2.74	Principal US Property (CF)	113,309,854	4.61	1.08
Loomis, Sayles & Co Lg Cap Grth (CF)	152,935,104	6.23	9.53	UBS Trumbull Property LP	52,200,385	2.12	-0.16
Kayne Anderson US SMID Value (SA)	71,383,037	2.91	-0.76	Vanguard RE Idx;ETF (VNQ)	1,330,724	0.05	-7.67
Systematic Financial US SMID Value (SA)	72,744,236	2.96	-0.05				
Pinnacle Associates US SMID Cap Growth (SA)	70,144,005	2.86	1.70	<b>Non-Core Real Estate</b>	<b>52,998,554</b>	<b>2.16</b>	<b>1.17</b>
				Abacus Multi-Family Partners VI LP	8,389,059	0.34	1.22
<b>International Equity</b>	<b>582,334,743</b>	<b>23.71</b>	<b>-7.27</b>	H.I.G. Realty Partners IV (Onshore) LP	26,822,565	1.09	0.92
Silchester Intl Val Equity (CF)	250,994,695	10.22	-8.92	Bell Value-Add VIII LP	6,425,161	0.26	0.00
Bail Giff Intl Gro;4 (BGEFX)	174,858,768	7.12	-5.78	Hammes Partners IV LP	1,682,218	0.07	3.19
Acadian Emg Mkts Eq II (CF)	156,481,280	6.37	-6.20	IPI Partners III-A LP	8,188,723	0.33	2.26
				Ares US Real Estate Opportunity IV LP	1,490,828	0.06	N/A
<b>Fixed Income</b>	<b>490,914,474</b>	<b>19.98</b>	<b>-0.55</b>				
Baird Core Fixed Income (SA)	121,497,613	4.95	-2.90	<b>Diversifying Assets</b>	<b>184,504,996</b>	<b>7.51</b>	<b>4.26</b>
Loomis Sayles Multisector Full Discretion (CF)	184,059,825	7.49	-1.07	Adams Street Private Equity (SA)	94,858,966	3.86	4.59
Schroder Flexible Secured Income LP (CF)	185,357,036	7.55	1.58	Hamilton Lane Private Credit (SA)	89,646,030	3.65	3.92
				<b>Cash Equivalents</b>	<b>3,302,291</b>	<b>0.13</b>	<b>1.15</b>
				Dreyfus Gvt CM;Inst (DGCXX)	3,302,291	0.13	1.15
				Transition Account	49,433	0.00	N/A

Schedule of Investable Assets (Total Assets)

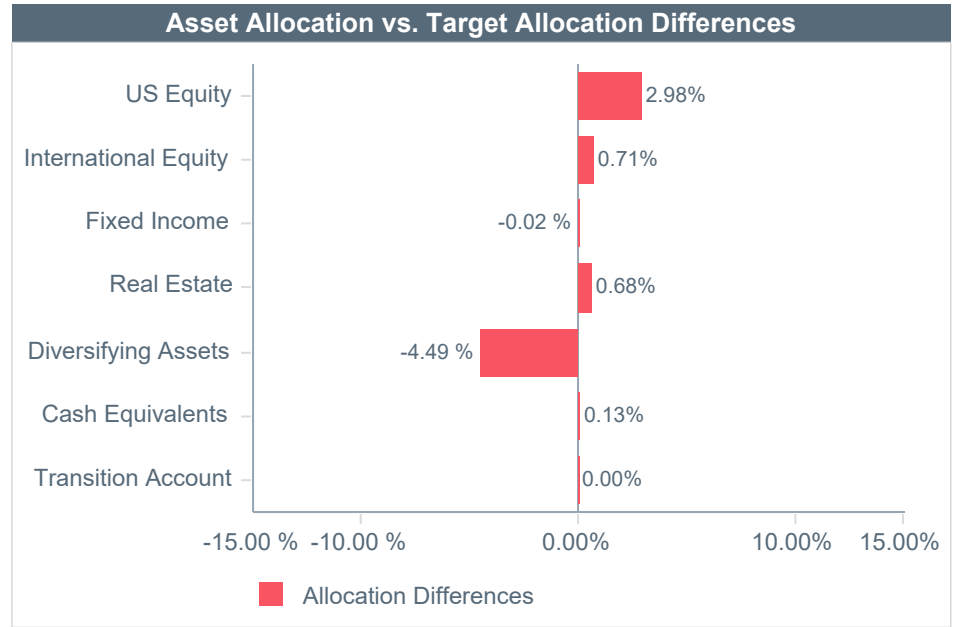
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
FYTD	2,475,947,332	622,619	-20,025,663	2,456,544,289	-0.81

Performance shown is net of fees. Allocations shown may not sum up to 100% exactly due to rounding. During 10/2024, Ares US Real Estate Opportunity IV LP received its first capital call.

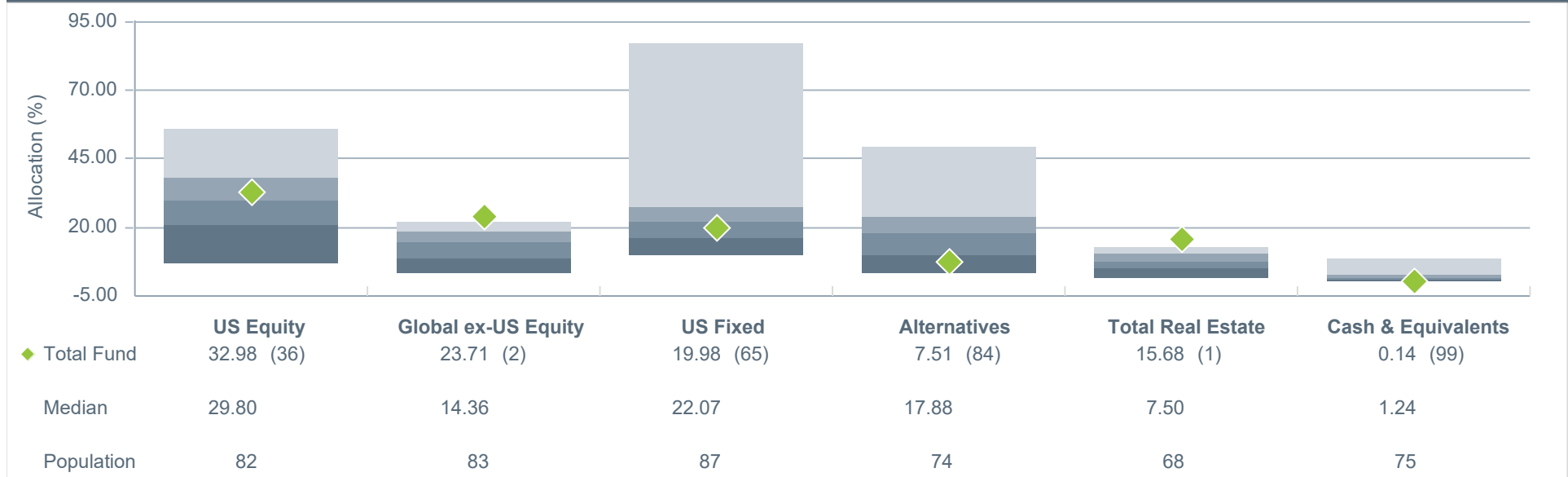
Total Fund vs. All Public Plans (\$1B to \$5B)

Asset Allocation vs. Target and Plan Sponsor Peer Group

Asset Allocation vs. Target Allocation					
	Market Value (\$)	Allocation (%)	Min (%)	Target (%)	Max (%)
<b>Total Fund</b>	<b>2,456,544,289</b>	<b>100.00</b>	<b>-</b>	<b>100.00</b>	<b>-</b>
US Equity	810,148,531	32.98	20.00	30.00	40.00
International Equity	582,334,743	23.71	13.00	23.00	25.00
Fixed Income	490,914,474	19.98	10.00	20.00	30.00
Real Estate	385,289,821	15.68	0.00	15.00	20.00
Diversifying Assets	184,504,996	7.51	0.00	12.00	20.00
Cash Equivalents	3,302,291	0.13	0.00	0.00	10.00
Transition Account	49,433	0.00	0.00	0.00	0.00



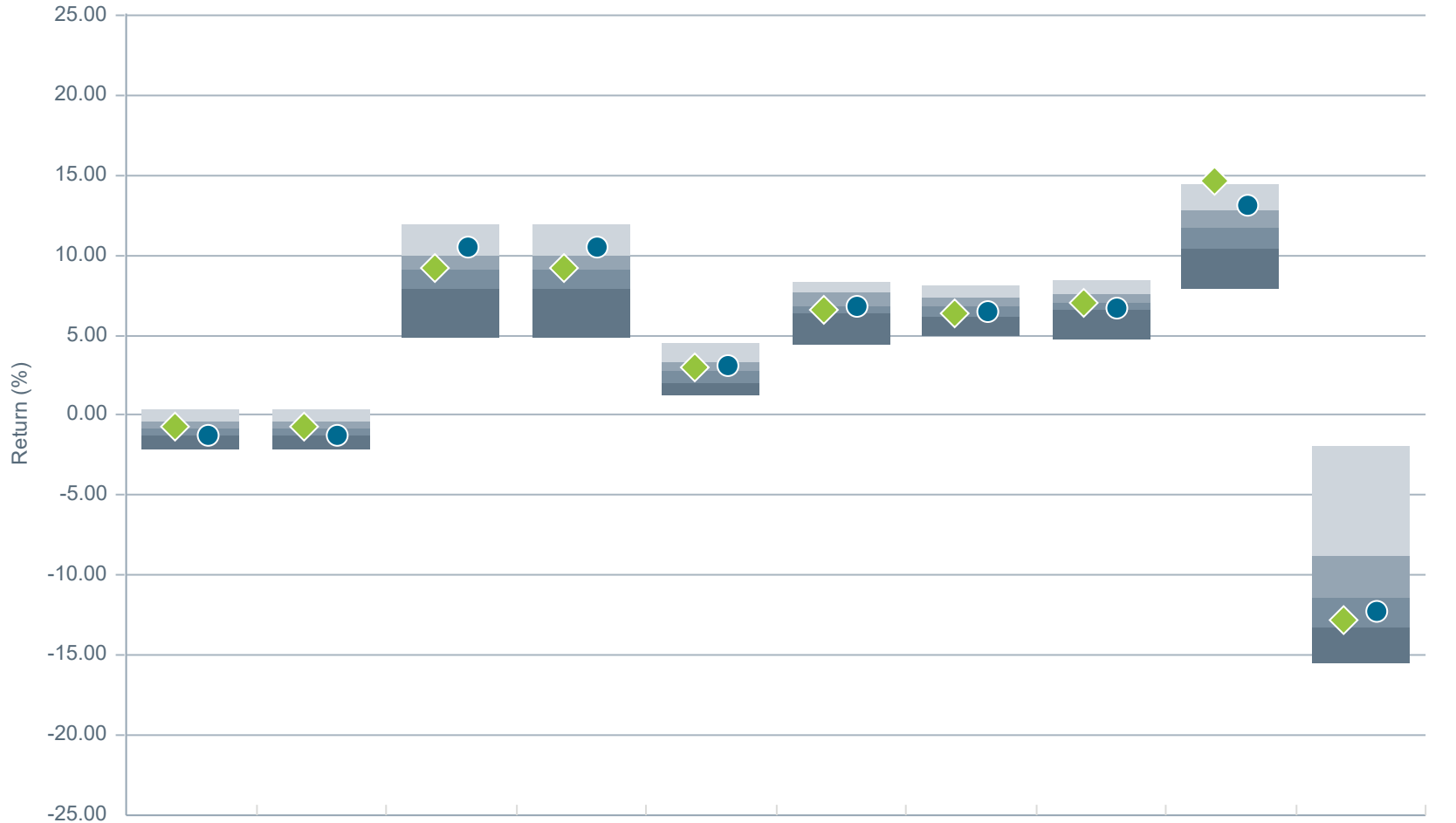
Asset Allocation vs. All Public Plans (\$1B to \$5B)



Allocations shown may not sum up to 100% exactly due to rounding. Parentheses contain percentile ranks.

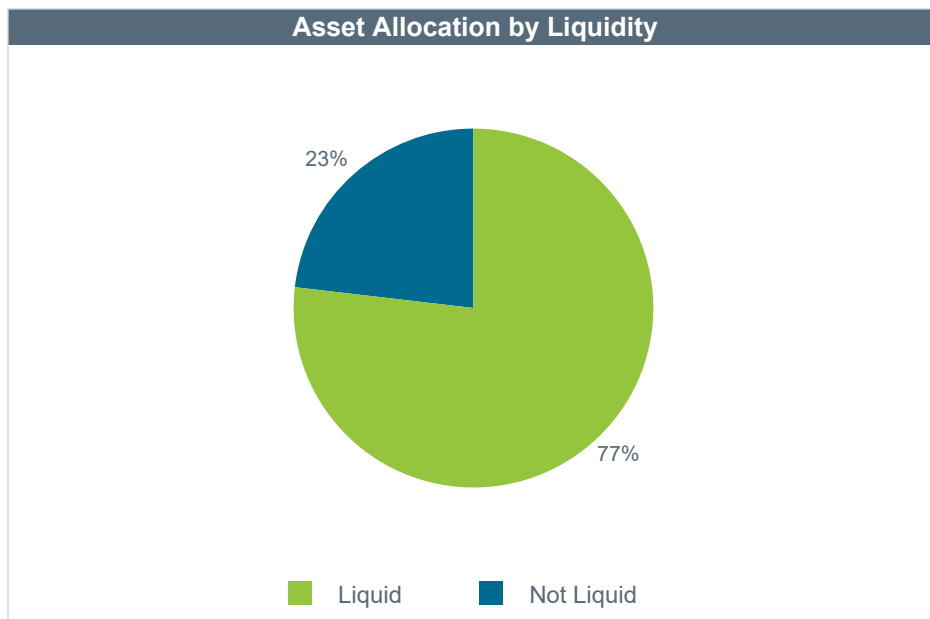
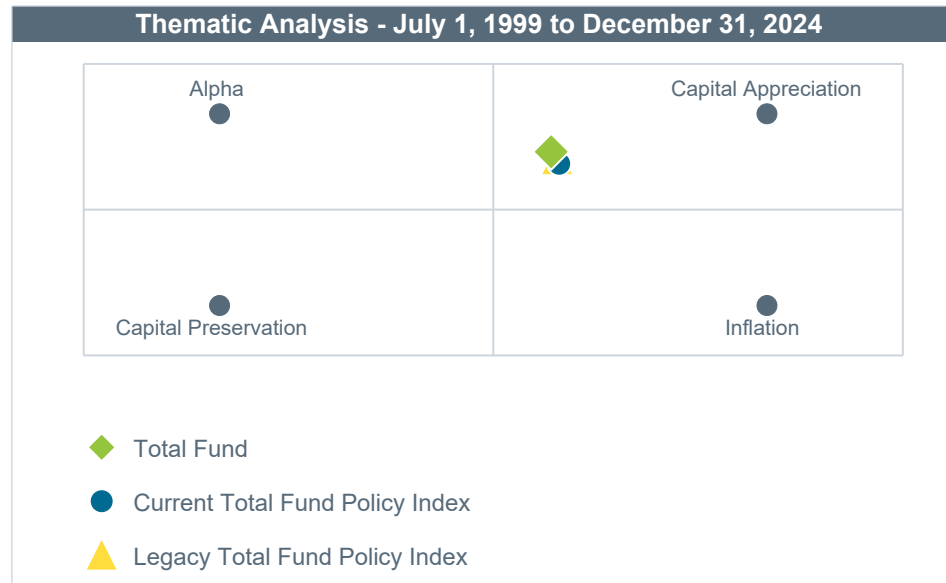
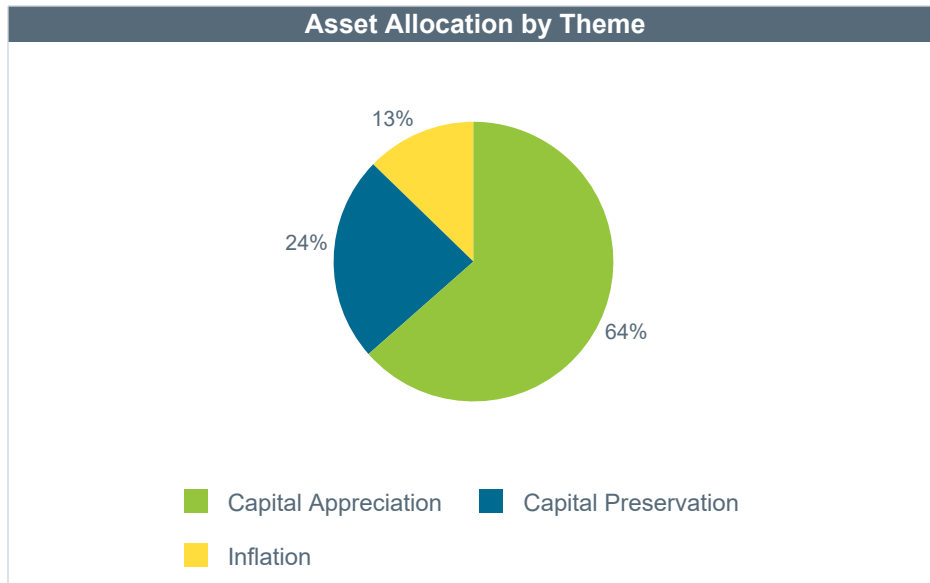
**City of Jacksonville Employees' Retirement System**  
**Total Fund vs. All Public Plans (\$1B to \$5B)**  
**Plan Sponsor Peer Group Analysis**

As of December 31, 2024



	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022
◆ Total Fund	-0.69 (34)	-0.69 (34)	9.16 (48)	9.16 (48)	2.95 (37)	6.55 (65)	6.42 (64)	6.97 (54)	14.63 (5)	-12.79 (69)
● Current Total Fund Policy Index	-1.21 (74)	-1.21 (74)	10.56 (19)	10.56 (19)	3.15 (29)	6.78 (54)	6.52 (61)	6.71 (66)	13.09 (22)	-12.23 (61)
5th Percentile	0.36	0.36	11.88	11.88	4.54	8.33	8.16	8.40	14.49	-1.85
1st Quartile	-0.34	-0.34	9.99	9.99	3.32	7.73	7.30	7.54	12.81	-8.79
Median	-0.83	-0.83	9.12	9.12	2.77	6.83	6.82	7.01	11.71	-11.38
3rd Quartile	-1.29	-1.29	7.86	7.86	2.00	6.36	6.19	6.57	10.35	-13.22
95th Percentile	-2.15	-2.15	4.89	4.89	1.28	4.36	4.92	4.72	7.85	-15.52

Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year for the COJ ends 09/30.

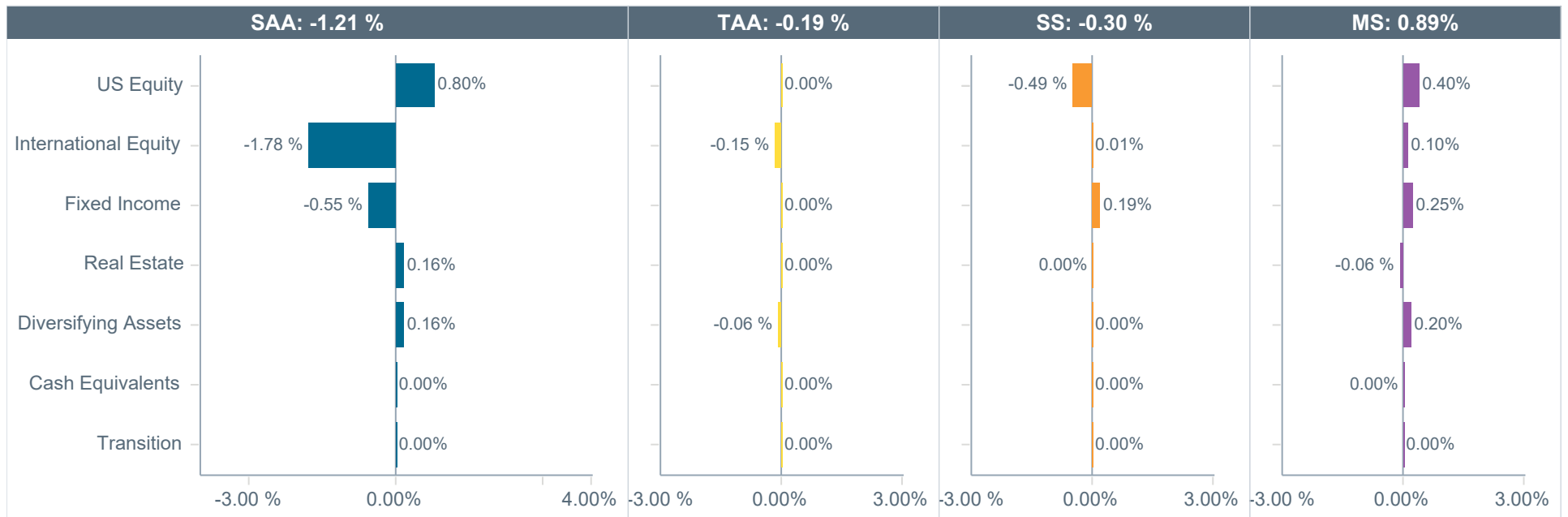
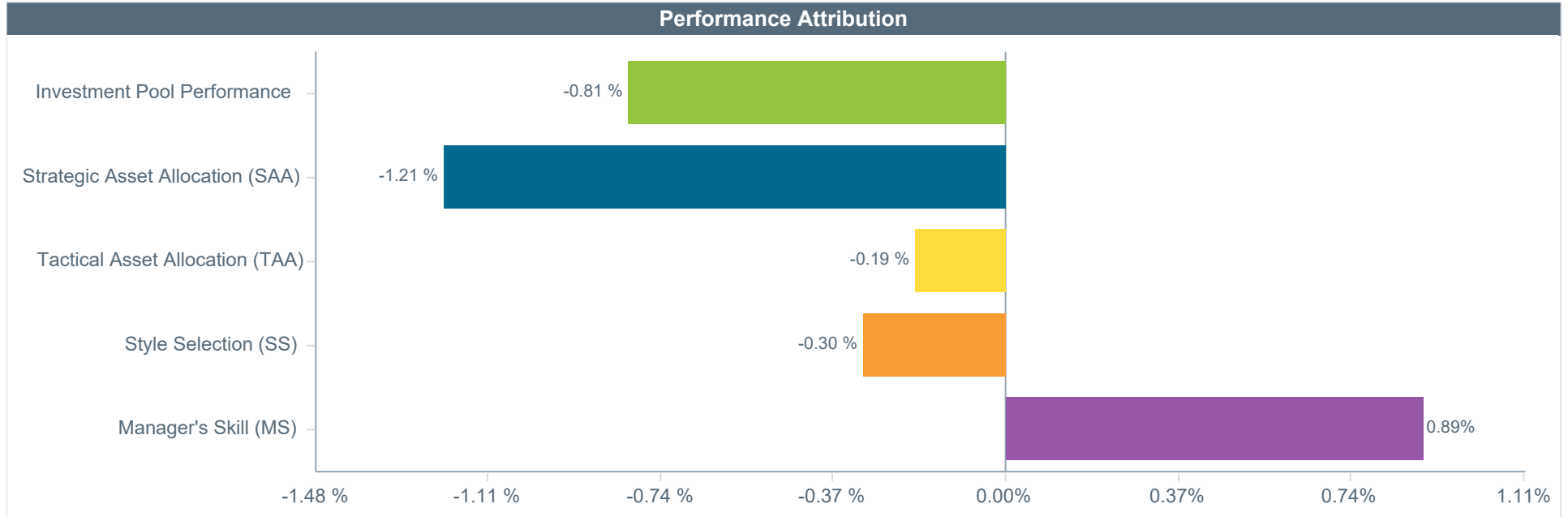


### Correlation Matrix - 10 Years

	A	B	C	D
A	1.00			
B	0.46	1.00		
C	-0.14	0.15	1.00	
D	0.42	0.81	0.22	1.00

A = HFRI EH: Equity Market Neutral Index (Alpha)  
 B = MSCI ACW Index (USD) (Gross) (Capital Appreciation)  
 C = Bloomberg US Govt Bond Index (Capital Preservation)  
 D = Real Return Custom Index (Inflation)

Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic, and custom index descriptions.



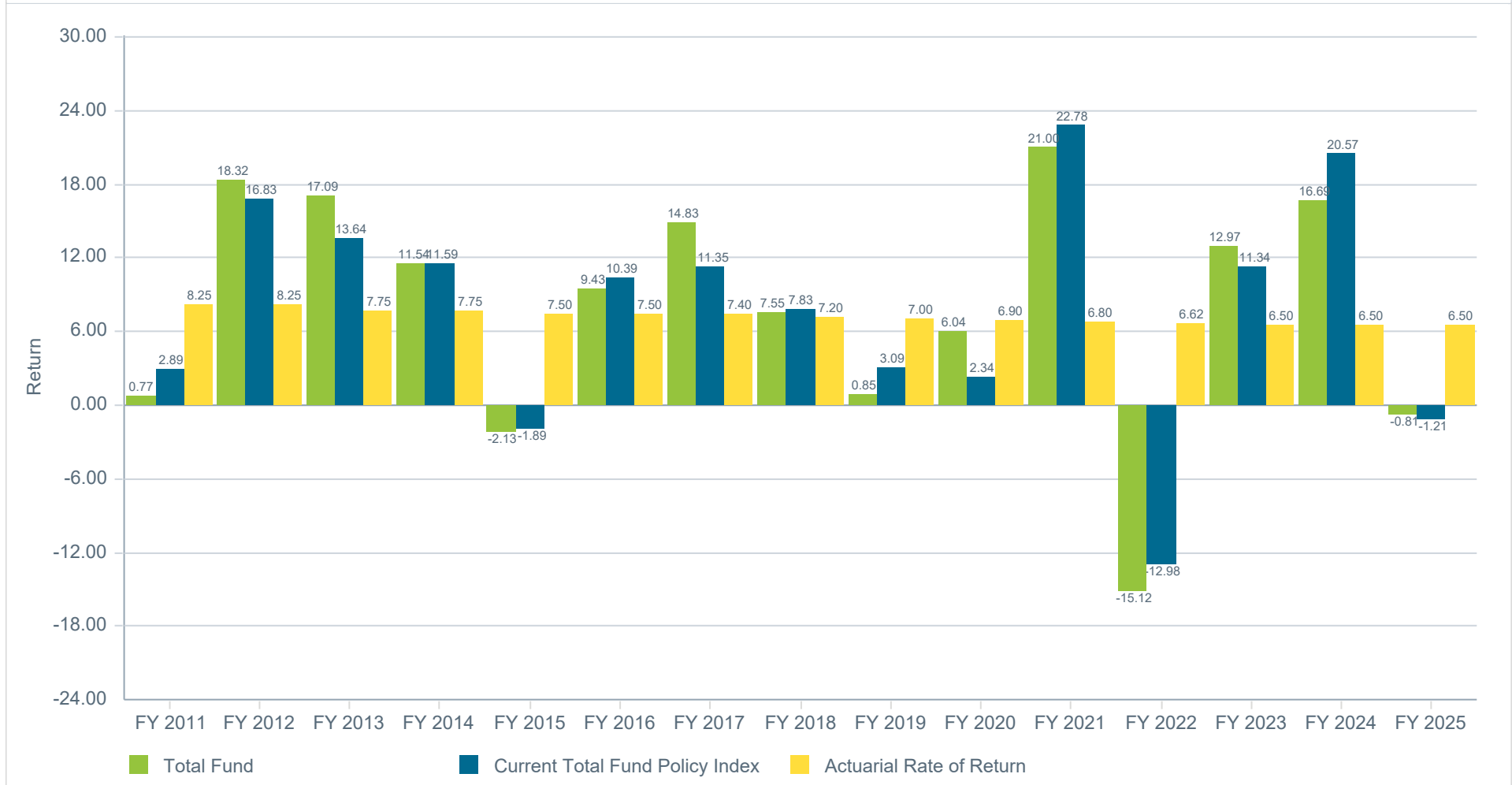
Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



City of Jacksonville Employees' Retirement System  
Historical Fiscal Year Returns

As of December 31, 2024

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FYTD
<b>Total Fund</b>	<b>0.77</b>	<b>18.32</b>	<b>17.09</b>	<b>11.54</b>	<b>-2.13</b>	<b>9.43</b>	<b>14.83</b>	<b>7.55</b>	<b>0.85</b>	<b>6.04</b>	<b>21.00</b>	<b>-15.12</b>	<b>12.97</b>	<b>16.69</b>	<b>-0.81</b>
Current Total Fund Policy Index	2.89	16.83	13.64	11.59	-1.89	10.39	11.35	7.83	3.09	2.34	22.78	-12.98	11.34	20.57	-1.21
Difference	-2.12	1.50	3.44	-0.05	-0.24	-0.96	3.49	-0.28	-2.25	3.70	-1.78	-2.14	1.64	-3.88	0.40
Actuarial Rate of Return	8.25	8.25	7.75	7.75	7.50	7.50	7.40	7.20	7.00	6.90	6.80	6.62	6.50	6.50	6.50
Difference	-7.48	10.07	9.34	3.79	-9.63	1.93	7.43	0.35	-6.15	-0.86	14.20	-21.74	6.47	10.19	-7.31



Performance shown is net of fees. Fiscal year for the COJ ends 09/30. The Fiscal Year Actuarial Rate of Return changed from 8.40% to 8.25% effective 10/01/2010, changed to 7.75% effective 10/01/2012, changed to 7.50% effective 10/01/2014, changed to 7.40% effective 10/01/2016, changed to 7.20% effective 10/01/2017, changed to 7.00% effective 10/01/2018, changed to 6.90% effective 10/01/2019, changed to 6.80% effective 10/01/2020, changed to 6.62% effective 10/01/2021, changed to 6.50% effective 10/01/2022, and stayed the same at 6.50% effective 10/01/2023 . Please see the Addendum for custom index definitions.



City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Gross of Fees)

As of December 31, 2024

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Total Fund</b>	<b>2,456,544,289</b>	<b>100.00</b>	<b>-0.69</b>	<b>-0.69</b>	<b>9.16</b>	<b>9.16</b>	<b>2.95</b>	<b>6.55</b>	<b>6.42</b>	<b>6.97</b>	<b>6.65</b>	<b>07/01/1999</b>
Current Total Fund Policy Index			-1.21	-1.21	10.56	10.56	3.15	6.78	6.52	6.71	6.08	
Difference			0.51	0.51	-1.40	-1.40	-0.19	-0.22	-0.10	0.26	0.57	
Actual Allocation Index			-1.76	-1.76	8.77	8.77	1.53	5.46	N/A	N/A	N/A	
Difference			1.07	1.07	0.39	0.39	1.43	1.09	N/A	N/A	N/A	
Actual Allocation Index (Net of Alts)			-1.60	-1.60	7.82	7.82	1.89	5.64	N/A	N/A	N/A	
Difference			0.91	0.91	1.34	1.34	1.07	0.92	N/A	N/A	N/A	
All Public Plans (\$1B to \$5B) (Custom PG) Median			-0.83	-0.83	9.12	9.12	2.77	6.83	6.82	7.01	6.49	
Rank			34	34	48	48	37	65	64	54	29	
<b>Total Equity</b>	<b>1,392,483,274</b>	<b>56.68</b>	<b>-1.78</b>	<b>-1.78</b>	<b>14.18</b>	<b>14.18</b>	<b>5.00</b>	<b>9.91</b>	<b>9.26</b>	<b>9.87</b>	<b>7.27</b>	<b>07/01/1999</b>
<b>US Equity</b>	<b>810,148,531</b>	<b>32.98</b>	<b>2.48</b>	<b>2.48</b>	<b>20.54</b>	<b>20.54</b>	<b>7.78</b>	<b>13.18</b>	<b>12.67</b>	<b>12.09</b>	<b>8.24</b>	<b>07/01/1999</b>
US Equity Index			2.63	2.63	23.81	23.81	8.01	13.86	13.16	12.55	8.09	
Difference			-0.15	-0.15	-3.27	-3.27	-0.23	-0.69	-0.49	-0.45	0.15	
IM U.S. Equity (SA+CF) Median			0.95	0.95	16.14	16.14	6.00	11.40	10.74	10.77	9.56	
Rank			35	35	35	35	35	36	34	36	79	
<b>International Equity</b>	<b>582,334,743</b>	<b>23.71</b>	<b>-7.14</b>	<b>-7.14</b>	<b>6.36</b>	<b>6.36</b>	<b>1.31</b>	<b>5.24</b>	<b>4.27</b>	<b>6.50</b>	<b>6.14</b>	<b>07/01/1999</b>
International Equity Index			-7.60	-7.60	5.53	5.53	0.82	4.10	3.53	4.80	4.12	
Difference			0.45	0.45	0.83	0.83	0.49	1.13	0.74	1.70	2.02	
IM International Equity (SA+CF) Median			-7.33	-7.33	5.45	5.45	1.36	5.16	4.60	6.14	6.38	
Rank			46	46	43	43	51	50	60	40	59	
<b>Fixed Income</b>	<b>490,914,474</b>	<b>19.98</b>	<b>-0.44</b>	<b>-0.44</b>	<b>5.95</b>	<b>5.95</b>	<b>0.08</b>	<b>1.00</b>	<b>1.64</b>	<b>1.96</b>	<b>4.54</b>	<b>07/01/1999</b>
Fixed Income Index			-2.73	-2.73	2.04	2.04	-1.95	0.06	1.28	1.56	3.97	
Difference			2.29	2.29	3.91	3.91	2.03	0.94	0.35	0.39	0.57	
IM Global Fixed Income (SA+CF) Median			-1.29	-1.29	4.24	4.24	0.25	1.76	2.53	2.92	4.81	
Rank			35	35	37	37	53	61	63	64	53	
<b>Real Estate</b>	<b>385,289,821</b>	<b>15.68</b>	<b>0.70</b>	<b>0.70</b>	<b>-3.55</b>	<b>-3.55</b>	<b>-0.39</b>	<b>2.73</b>	<b>3.92</b>	<b>5.57</b>	<b>5.44</b>	<b>12/01/2005</b>
Real Estate Index			1.02	1.02	-2.09	-2.09	-3.04	2.05	3.13	4.98	5.06	
Difference			-0.32	-0.32	-1.46	-1.46	2.65	0.68	0.80	0.59	0.38	
<b>Core Real Estate</b>	<b>332,291,267</b>	<b>13.53</b>	<b>0.64</b>	<b>0.64</b>	<b>-4.13</b>	<b>-4.13</b>	<b>-0.88</b>	<b>2.43</b>	<b>3.71</b>	<b>5.41</b>	<b>5.36</b>	<b>12/01/2005</b>
NCREIF ODCE Index (AWA) (Gross)			1.16	1.16	-1.43	-1.43	-2.32	2.87	3.99	5.88	6.01	
Difference			-0.52	-0.52	-2.70	-2.70	1.44	-0.44	-0.28	-0.46	-0.65	
<b>Non-Core Real Estate</b>	<b>52,998,554</b>	<b>2.16</b>	<b>1.17</b>	<b>1.17</b>	<b>2.55</b>	<b>2.55</b>	<b>21.98</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>21.98</b>	<b>01/01/2022</b>
NCREIF ODCE Index (AWA) (Gross) +2%			1.66	1.66	0.54	0.54	-0.37	4.93	6.07	8.00	-0.37	
Difference			-0.50	-0.50	2.01	2.01	22.35	N/A	N/A	N/A	22.35	

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**City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Gross of Fees)**

**As of December 31, 2024**

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Diversifying Assets</b>	<b>184,504,996</b>	<b>7.51</b>	<b>4.33</b>	<b>4.33</b>	<b>8.46</b>	<b>8.46</b>	<b>13.84</b>	<b>13.25</b>	<b>9.53</b>	<b>5.87</b>	<b>8.82</b>	<b>03/01/2011</b>
Diversifying Assets Index			1.32	1.32	19.54	19.54	9.86	8.09	5.77	3.27	5.19	
Difference			3.01	3.01	-11.07	-11.07	3.98	5.16	3.76	2.59	3.62	
<b>Cash Equivalents</b>	<b>3,302,291</b>	<b>0.13</b>	<b>1.20</b>	<b>1.20</b>	<b>5.46</b>	<b>5.46</b>	<b>4.25</b>	<b>2.87</b>	<b>N/A</b>	<b>N/A</b>	<b>2.73</b>	<b>09/01/2018</b>
FTSE 3 Mo T-Bill Index			1.23	1.23	5.45	5.45	4.05	2.54	2.40	1.79	2.48	
Difference			-0.02	-0.02	0.02	0.02	0.20	0.33	N/A	N/A	0.25	

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	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date	
<b>US Equity</b>													
<b>Eagle Capital Large Cap Value (SA)</b>	<b>167,957,318</b>	<b>6.84</b>	<b>2.15</b>	<b>2.15</b>	<b>24.52</b>	<b>24.52</b>	<b>9.79</b>	<b>14.37</b>	<b>13.86</b>	<b>13.39</b>	<b>12.24</b>	<b>03/01/2007</b>	
Russell 1000 Val Index			-1.98	-1.98	14.37	14.37	5.63	8.68	8.41	8.49	7.28		
Difference			4.14	4.14	10.15	10.15	4.15	5.69	5.45	4.91	4.96		
Russell 1000 Index			2.75	2.75	24.51	24.51	8.41	14.28	13.58	12.87	10.44		
Difference			-0.59	-0.59	0.00	0.00	1.38	0.09	0.28	0.52	1.81		
IM U.S. Large Cap Value Equity (SA+CF) Median			-1.27	-1.27	15.66	15.66	7.52	10.87	10.14	9.90	8.83		
Rank			7	7	5	5	21	10	6	4	2		
<b>Wellington Select Equity Income Fund (SA)</b>	<b>151,777,702</b>	<b>6.18</b>	<b>-1.09</b>	<b>-1.09</b>	<b>14.17</b>	<b>14.17</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>18.19</b>	<b>06/01/2023</b>	
Russell 1000 Val Index			-1.98	-1.98	14.37	14.37	5.63	8.68	8.41	8.49	17.63		
Difference			0.89	0.89	-0.20	-0.20	N/A	N/A	N/A	N/A	0.56		
IM U.S. Large Cap Value Equity (SA+CF) Median			-1.27	-1.27	15.66	15.66	7.52	10.87	10.14	9.90	19.51		
Rank			45	45	59	59	N/A	N/A	N/A	N/A	66		
<b>BNYM DB Lg Cap Stock Idx NL (CF)</b>	<b>123,207,128</b>	<b>5.02</b>	<b>2.75</b>	<b>2.75</b>	<b>24.59</b>	<b>24.59</b>	<b>8.84</b>	<b>14.53</b>	<b>N/A</b>	<b>N/A</b>	<b>14.78</b>	<b>05/01/2019</b>	
Russell 1000 Index			2.75	2.75	24.51	24.51	8.41	14.28	13.58	12.87	14.55		
Difference			0.00	0.00	0.08	0.08	0.44	0.26	N/A	N/A	0.22		
IM U.S. Large Cap Core Equity (SA+CF) Median			2.31	2.31	24.42	24.42	8.88	14.34	13.57	12.97	14.61		
Rank			33	33	49	49	51	44	N/A	N/A	46		
<b>Loomis, Sayles &amp; Co Lg Cap Grth (CF)</b>	<b>152,935,104</b>	<b>6.23</b>	<b>9.70</b>	<b>9.70</b>	<b>34.78</b>	<b>34.78</b>	<b>14.59</b>	<b>19.06</b>	<b>17.63</b>	<b>N/A</b>	<b>18.22</b>	<b>08/01/2017</b>	
Russell 1000 Grth Index			7.07	7.07	33.36	33.36	10.47	18.96	18.08	16.78	18.68		
Difference			2.63	2.63	1.42	1.42	4.12	0.10	-0.45	N/A	-0.46		
IM U.S. Large Cap Growth Equity (SA+CF) Median			5.05	5.05	29.24	29.24	8.36	16.36	16.41	15.34	16.87		
Rank			5	5	24	24	2	17	21	N/A	19		
<b>Kayne Anderson US SMID Value (SA)</b>	<b>71,383,037</b>	<b>2.91</b>	<b>-0.61</b>	<b>-0.61</b>	<b>11.30</b>	<b>11.30</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>6.13</b>	<b>03/01/2022</b>	
Russell 2500 Val Index			-0.26	-0.26	10.98	10.98	3.81	8.44	7.17	7.81	5.37		
Difference			-0.35	-0.35	0.32	0.32	N/A	N/A	N/A	N/A	0.76		
IM U.S. SMID Cap Value Equity (SA+CF) Median			-0.77	-0.77	11.39	11.39	4.90	9.70	8.72	9.00	6.55		
Rank			43	43	52	52	N/A	N/A	N/A	N/A	56		
<b>Systematic Financial US SMID Value (SA)</b>	<b>72,744,236</b>	<b>2.96</b>	<b>0.11</b>	<b>0.11</b>	<b>14.27</b>	<b>14.27</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.43</b>	<b>03/01/2022</b>	
Russell 2500 Val Index			-0.26	-0.26	10.98	10.98	3.81	8.44	7.17	7.81	5.37		
Difference			0.37	0.37	3.29	3.29	N/A	N/A	N/A	N/A	3.05		
IM U.S. SMID Cap Value Equity (SA+CF) Median			-0.77	-0.77	11.39	11.39	4.90	9.70	8.72	9.00	6.55		
Rank			35	35	37	37	N/A	N/A	N/A	N/A	22		

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<b>Pinnacle Associates US SMID Cap Growth (SA)</b>	<b>70,144,005</b>	<b>2.86</b>	<b>1.85</b>	<b>1.85</b>	<b>6.72</b>	<b>6.72</b>	<b>-2.08</b>	<b>7.12</b>	<b>8.67</b>	<b>9.10</b>	<b>12.28</b>	<b>03/01/2010</b>
Russell 2500 Grth Index			2.43	2.43	13.90	13.90	-0.02	8.08	8.85	9.45	12.08	
Difference			-0.58	-0.58	-7.18	-7.18	-2.07	-0.96	-0.18	-0.36	0.19	
IM U.S. SMID Cap Growth Equity (SA+CF) Median			2.14	2.14	13.51	13.51	0.04	10.84	11.09	10.85	13.13	
Rank			55	55	85	85	67	90	91	91	85	

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	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>International Equity</b>												
<b>Silchester Intl Val Equity (CF)</b>	<b>250,994,695</b>	<b>10.22</b>	<b>-8.80</b>	<b>-8.80</b>	<b>0.99</b>	<b>0.99</b>	<b>5.24</b>	<b>5.61</b>	<b>4.25</b>	<b>6.62</b>	<b>8.98</b>	<b>06/01/2009</b>
MSCI EAFE Val Index (USD) (Net)			-7.12	-7.12	5.68	5.68	5.88	5.09	3.45	4.31	5.48	
Difference			-1.67	-1.67	-4.69	-4.69	-0.64	0.52	0.80	2.31	3.51	
IM EAFE Value (SA+CF) Median			-7.20	-7.20	6.02	6.02	3.81	5.54	4.67	5.80	7.17	
Rank			89	89	91	91	34	50	58	19	11	
<b>Bail Giff Intl Gro;4 (BGEFX)</b>	<b>174,858,768</b>	<b>7.12</b>	<b>-5.66</b>	<b>-5.66</b>	<b>8.49</b>	<b>8.49</b>	<b>-6.29</b>	<b>4.21</b>	<b>5.06</b>	<b>7.54</b>	<b>9.09</b>	<b>06/01/2009</b>
Baillie Gifford Index			-7.88	-7.88	5.07	5.07	-2.67	3.44	3.71	5.35	6.74	
Difference			2.22	2.22	3.42	3.42	-3.62	0.78	1.36	2.19	2.35	
Baillie Gifford Spliced Index			-7.60	-7.60	5.53	5.53	0.82	4.10	3.82	4.99	6.22	
Difference			1.94	1.94	2.96	2.96	-7.12	0.11	1.25	2.54	2.86	
IM ACWI Ex US Growth (SA+CF) Median			-7.04	-7.04	5.30	5.30	-1.47	5.02	4.96	6.61	8.37	
Rank			28	28	30	30	94	70	48	30	31	
<b>Acadian Emg Mkts Eq II (CF)</b>	<b>156,481,280</b>	<b>6.37</b>	<b>-6.07</b>	<b>-6.07</b>	<b>14.48</b>	<b>14.48</b>	<b>4.03</b>	<b>6.58</b>	<b>4.07</b>	<b>5.60</b>	<b>4.53</b>	<b>02/01/2011</b>
MSCI Emg Mkts Index (USD) (Net)			-8.01	-8.01	7.50	7.50	-1.92	1.70	1.38	3.64	2.18	
Difference			1.94	1.94	6.98	6.98	5.95	4.88	2.69	1.96	2.35	
IM Emerging Markets Equity (SA+CF) Median			-6.81	-6.81	8.13	8.13	-0.24	3.62	2.88	4.96	3.62	
Rank			40	40	18	18	23	29	34	34	26	
<b>Fixed Income</b>												
<b>Baird Core Fixed Income (SA)</b>	<b>121,497,613</b>	<b>4.95</b>	<b>-2.81</b>	<b>-2.81</b>	<b>2.57</b>	<b>2.57</b>	<b>-1.71</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-1.08</b>	<b>03/01/2021</b>
Bloomberg US Agg Bond Index			-3.06	-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35	-1.73	
Difference			0.26	0.26	1.32	1.32	0.70	N/A	N/A	N/A	0.65	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			-2.99	-2.99	1.91	1.91	-2.01	0.24	1.47	1.85	-1.31	
Rank			25	25	21	21	23	N/A	N/A	N/A	26	
<b>Loomis Sayles Multisector Full Discretion (CF)</b>	<b>184,059,825</b>	<b>7.49</b>	<b>-0.99</b>	<b>-0.99</b>	<b>5.79</b>	<b>5.79</b>	<b>0.45</b>	<b>3.22</b>	<b>3.67</b>	<b>4.02</b>	<b>5.81</b>	<b>11/01/2007</b>
Bloomberg Gbl Agg Bond Index			-5.10	-5.10	-1.69	-1.69	-4.52	-1.96	-0.64	0.15	1.62	
Difference			4.11	4.11	7.48	7.48	4.97	5.18	4.31	3.87	4.19	
IM Global Fixed Income (SA+CF) Median			-1.29	-1.29	4.24	4.24	0.25	1.76	2.53	2.92	2.97	
Rank			43	43	38	38	47	35	32	32	12	
<b>Schroder Flexible Secured Income LP (CF)</b>	<b>185,357,036</b>	<b>7.55</b>	<b>1.74</b>	<b>1.74</b>	<b>9.16</b>	<b>9.16</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.02</b>	<b>10/01/2022</b>
1 Month LIBOR+1.75%			1.66	1.66	7.25	7.25	5.86	4.36	4.24	3.67	6.94	
Difference			0.08	0.08	1.92	1.92	N/A	N/A	N/A	N/A	2.08	
1 Month LIBOR+5%			2.46	2.46	10.67	10.67	9.24	7.69	7.57	6.98	10.36	
Difference			-0.72	-0.72	-1.51	-1.51	N/A	N/A	N/A	N/A	-1.34	

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<b>Core Real Estate</b>												
<b>Harrison Street Core Property LP</b>	<b>119,006,554</b>	<b>4.84</b>	<b>0.15</b>	<b>0.15</b>	<b>-3.92</b>	<b>-3.92</b>	<b>1.98</b>	<b>3.59</b>	<b>5.09</b>	<b>N/A</b>	<b>5.81</b>	<b>11/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)			1.16	1.16	-1.43	-1.43	-2.32	2.87	3.99	5.88	5.19	
Difference			-1.01	-1.01	-2.49	-2.49	4.30	0.71	1.10	N/A	0.62	
<b>PGIM Real Estate PRISA II LP</b>	<b>46,443,750</b>	<b>1.89</b>	<b>1.27</b>	<b>1.27</b>	<b>-9.04</b>	<b>-9.04</b>	<b>-1.70</b>	<b>1.92</b>	<b>4.10</b>	<b>5.92</b>	<b>5.92</b>	<b>01/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)			1.16	1.16	-1.43	-1.43	-2.32	2.87	3.99	5.88	5.88	
Difference			0.11	0.11	-7.61	-7.61	0.62	-0.95	0.11	0.04	0.04	
<b>Principal US Property (CF)</b>	<b>113,309,854</b>	<b>4.61</b>	<b>1.28</b>	<b>1.28</b>	<b>-1.11</b>	<b>-1.11</b>	<b>-2.22</b>	<b>3.28</b>	<b>4.62</b>	<b>6.57</b>	<b>7.21</b>	<b>01/01/2014</b>
NCREIF ODCE Index (AWA) (Gross)			1.16	1.16	-1.43	-1.43	-2.32	2.87	3.99	5.88	6.46	
Difference			0.12	0.12	0.32	0.32	0.10	0.40	0.63	0.69	0.75	
<b>UBS Trumbull Property LP</b>	<b>52,200,385</b>	<b>2.12</b>	<b>0.06</b>	<b>0.06</b>	<b>-6.35</b>	<b>-6.35</b>	<b>-2.44</b>	<b>-0.24</b>	<b>0.49</b>	<b>2.90</b>	<b>4.43</b>	<b>01/01/2006</b>
NCREIF ODCE Index (AWA) (Gross)			1.16	1.16	-1.43	-1.43	-2.32	2.87	3.99	5.88	5.76	
Difference			-1.10	-1.10	-4.92	-4.92	-0.12	-3.11	-3.50	-2.98	-1.33	
<b>Vanguard RE Idx;ETF (VNQ)</b>	<b>1,330,724</b>	<b>0.05</b>	<b>-7.67</b>	<b>-7.67</b>	<b>4.80</b>	<b>4.80</b>	<b>-4.75</b>	<b>2.97</b>	<b>4.94</b>	<b>4.99</b>	<b>10.62</b>	<b>12/01/2008</b>
Custom REITs Index			-7.61	-7.61	5.05	5.05	-4.57	3.12	5.30	5.32	11.28	
Difference			-0.06	-0.06	-0.25	-0.25	-0.18	-0.15	-0.36	-0.33	-0.66	

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	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Non-Core Real Estate</b>												
<b>Abacus Multi-Family Partners VI LP</b>	<b>8,389,059</b>	<b>0.34</b>	<b>1.22</b>	<b>1.22</b>	<b>-39.39</b>	<b>-39.39</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-42.97</b>	<b>10/01/2022</b>
NCREIF ODCE Index (AWA) (Gross) +2%			1.66	1.66	0.54	0.54	-0.37	4.93	6.07	8.00	-6.40	
Difference			-0.44	-0.44	-39.94	-39.94	N/A	N/A	N/A	N/A	-36.57	
<b>H.I.G. Realty Partners IV (Onshore) LP</b>	<b>26,822,565</b>	<b>1.09</b>	<b>0.92</b>	<b>0.92</b>	<b>6.37</b>	<b>6.37</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>01/01/2022</b>
NCREIF ODCE Index (AWA) (Gross) +2%			1.66	1.66	0.54	0.54	-0.37	4.93	6.07	8.00	-0.37	
Difference			-0.74	-0.74	5.83	5.83	N/A	N/A	N/A	N/A	N/A	
<b>Bell Value-Add VIII LP</b>	<b>6,425,161</b>	<b>0.26</b>	<b>0.00</b>	<b>0.00</b>	<b>-5.25</b>	<b>-5.25</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-13.81</b>	<b>04/01/2023</b>
NCREIF ODCE Index (AWA) (Gross) +2%			1.66	1.66	0.54	0.54	-0.37	4.93	6.07	8.00	-4.23	
Difference			-1.66	-1.66	-5.79	-5.79	N/A	N/A	N/A	N/A	-9.58	
<b>Hammes Partners IV LP</b>	<b>1,682,218</b>	<b>0.07</b>	<b>3.19</b>	<b>3.19</b>	<b>-50.81</b>	<b>-50.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-61.67</b>	<b>10/01/2023</b>
NCREIF ODCE Index (AWA) (Gross) +2%			1.66	1.66	0.54	0.54	-0.37	4.93	6.07	8.00	-3.08	
Difference			1.53	1.53	-51.35	-51.35	N/A	N/A	N/A	N/A	-58.58	
<b>IPI Partners III-A LP</b>	<b>8,188,723</b>	<b>0.33</b>	<b>2.26</b>	<b>2.26</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>27.95</b>	<b>04/01/2024</b>
NCREIF ODCE Index (AWA) (Gross) +2%			1.66	1.66	0.54	0.54	-0.37	4.93	6.07	8.00	2.47	
Difference			0.60	0.60	N/A	N/A	N/A	N/A	N/A	N/A	25.49	
<b>Ares US Real Estate Opportunity IV LP</b>	<b>1,490,828</b>	<b>0.06</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.00</b>	<b>11/01/2024</b>
NCREIF ODCE Index (AWA) (Gross) +2%			1.66	1.66	0.54	0.54	-0.37	4.93	6.07	8.00	1.50	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.50	

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City of Jacksonville Employees' Retirement System  
 Asset Allocation & Performance (Gross of Fees)

As of December 31, 2024

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Diversifying Assets</b>												
<b>Adams Street Private Equity (SA)</b>	<b>94,858,966</b>	<b>3.86</b>	<b>4.64</b>	<b>4.64</b>	<b>5.46</b>	<b>5.46</b>	<b>13.30</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>19.35</b>	<b>11/01/2020</b>
S&P 500 Index +3%			3.17	3.17	28.77	28.77	12.21	17.96	17.25	16.50	20.41	
Difference			1.47	1.47	-23.31	-23.31	1.09	N/A	N/A	N/A	-1.06	
<b>Hamilton Lane Private Credit (SA)</b>	<b>89,646,030</b>	<b>3.65</b>	<b>4.00</b>	<b>4.00</b>	<b>11.92</b>	<b>11.92</b>	<b>9.35</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.43</b>	<b>04/01/2021</b>
ICE BofAML Gbl Hi Yld Index +2%			-0.65	-0.65	9.63	9.63	3.92	5.04	5.58	6.52	3.93	
Difference			4.65	4.65	2.29	2.29	5.43	N/A	N/A	N/A	4.50	
<b>Cash Equivalents</b>												
<b>Dreyfus Gvt CM;Inst (DGCXX)</b>	<b>3,302,291</b>	<b>0.13</b>	<b>1.20</b>	<b>1.20</b>	<b>5.47</b>	<b>5.47</b>	<b>4.09</b>	<b>2.67</b>	<b>2.52</b>	<b>1.90</b>	<b>1.70</b>	<b>05/01/2001</b>
FTSE 3 Mo T-Bill Index			1.23	1.23	5.45	5.45	4.05	2.54	2.40	1.79	1.64	
Difference			-0.02	-0.02	0.02	0.02	0.03	0.13	0.12	0.10	0.05	

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City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)

As of December 31, 2024

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Total Fund</b>	<b>2,456,544,289</b>	<b>100.00</b>	<b>-0.81</b>	<b>-0.81</b>	<b>8.67</b>	<b>8.67</b>	<b>2.47</b>	<b>6.06</b>	<b>5.91</b>	<b>6.45</b>	<b>6.31</b>	<b>07/01/1999</b>
Current Total Fund Policy Index			-1.21	-1.21	10.56	10.56	3.15	6.78	6.52	6.71	6.08	
Difference			0.40	0.40	-1.89	-1.89	-0.68	-0.72	-0.61	-0.26	0.23	
Actual Allocation Index			-1.76	-1.76	8.77	8.77	1.53	5.46	N/A	N/A	N/A	
Difference			0.96	0.96	-0.10	-0.10	0.94	0.60	N/A	N/A	N/A	
Actual Allocation Index (Net of Alts)			-1.60	-1.60	7.82	7.82	1.89	5.64	N/A	N/A	N/A	
Difference			0.79	0.79	0.85	0.85	0.58	0.42	N/A	N/A	N/A	
<b>Total Equity</b>	<b>1,392,483,274</b>	<b>56.68</b>	<b>-1.91</b>	<b>-1.91</b>	<b>13.61</b>	<b>13.61</b>	<b>4.46</b>	<b>9.36</b>	<b>8.71</b>	<b>9.30</b>	<b>6.93</b>	<b>07/01/1999</b>
<b>US Equity</b>	<b>810,148,531</b>	<b>32.98</b>	<b>2.35</b>	<b>2.35</b>	<b>19.96</b>	<b>19.96</b>	<b>7.24</b>	<b>12.65</b>	<b>12.14</b>	<b>11.53</b>	<b>7.91</b>	<b>07/01/1999</b>
US Equity Index			2.63	2.63	23.81	23.81	8.01	13.86	13.16	12.55	8.09	
Difference			-0.29	-0.29	-3.84	-3.84	-0.77	-1.21	-1.03	-1.01	-0.18	
<b>International Equity</b>	<b>582,334,743</b>	<b>23.71</b>	<b>-7.27</b>	<b>-7.27</b>	<b>5.80</b>	<b>5.80</b>	<b>0.77</b>	<b>4.67</b>	<b>3.70</b>	<b>5.91</b>	<b>5.78</b>	<b>07/01/1999</b>
International Equity Index			-7.60	-7.60	5.53	5.53	0.82	4.10	3.53	4.80	4.12	
Difference			0.33	0.33	0.27	0.27	-0.05	0.56	0.17	1.11	1.66	
<b>Fixed Income</b>	<b>490,914,474</b>	<b>19.98</b>	<b>-0.55</b>	<b>-0.55</b>	<b>5.55</b>	<b>5.55</b>	<b>-0.27</b>	<b>0.68</b>	<b>1.34</b>	<b>1.69</b>	<b>4.35</b>	<b>07/01/1999</b>
Fixed Income Index			-2.73	-2.73	2.04	2.04	-1.95	0.06	1.28	1.56	3.97	
Difference			2.18	2.18	3.51	3.51	1.68	0.63	0.05	0.12	0.39	
<b>Real Estate</b>	<b>385,289,821</b>	<b>15.68</b>	<b>0.59</b>	<b>0.59</b>	<b>-4.00</b>	<b>-4.00</b>	<b>-0.89</b>	<b>2.17</b>	<b>3.27</b>	<b>4.88</b>	<b>4.80</b>	<b>12/01/2005</b>
Real Estate Index			1.02	1.02	-2.09	-2.09	-3.04	2.05	3.13	4.98	5.06	
Difference			-0.43	-0.43	-1.91	-1.91	2.16	0.12	0.15	-0.09	-0.26	
<b>Core Real Estate</b>	<b>332,291,267</b>	<b>13.53</b>	<b>0.51</b>	<b>0.51</b>	<b>-4.63</b>	<b>-4.63</b>	<b>-1.40</b>	<b>1.86</b>	<b>3.05</b>	<b>4.72</b>	<b>4.71</b>	<b>12/01/2005</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	5.04	
Difference			-0.45	-0.45	-2.36	-2.36	1.74	-0.13	-0.04	-0.22	-0.33	
<b>Non-Core Real Estate</b>	<b>52,998,554</b>	<b>2.16</b>	<b>1.17</b>	<b>1.17</b>	<b>2.55</b>	<b>2.55</b>	<b>22.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>22.00</b>	<b>01/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-1.20	
Difference			-0.30	-0.30	2.86	2.86	23.20	N/A	N/A	N/A	23.20	
<b>Diversifying Assets</b>	<b>184,504,996</b>	<b>7.51</b>	<b>4.26</b>	<b>4.26</b>	<b>8.26</b>	<b>8.26</b>	<b>13.54</b>	<b>12.80</b>	<b>9.07</b>	<b>5.39</b>	<b>8.32</b>	<b>03/01/2011</b>
Diversifying Assets Index			1.32	1.32	19.54	19.54	9.86	8.09	5.77	3.27	5.19	
Difference			2.94	2.94	-11.28	-11.28	3.68	4.71	3.30	2.12	3.13	

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**City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)**

**As of December 31, 2024**

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Cash Equivalents</b>	<b>3,302,291</b>	<b>0.13</b>	<b>1.15</b>	<b>1.15</b>	<b>5.26</b>	<b>5.26</b>	<b>4.08</b>	<b>1.70</b>	<b>N/A</b>	<b>N/A</b>	<b>1.78</b>	<b>09/01/2018</b>
FTSE 3 Mo T-Bill Index			1.23	1.23	5.45	5.45	4.05	2.54	2.40	1.79	2.48	
Difference			-0.07	-0.07	-0.19	-0.19	0.03	-0.84	N/A	N/A	-0.70	

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City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)

As of December 31, 2024

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>US Equity</b>												
<b>Eagle Capital Large Cap Value (SA)</b>	<b>167,957,318</b>	<b>6.84</b>	<b>1.96</b>	<b>1.96</b>	<b>23.62</b>	<b>23.62</b>	<b>8.95</b>	<b>13.52</b>	<b>13.01</b>	<b>12.55</b>	<b>11.51</b>	<b>03/01/2007</b>
Russell 1000 Val Index			-1.98	-1.98	14.37	14.37	5.63	8.68	8.41	8.49	7.28	
Difference			3.94	3.94	9.25	9.25	3.31	4.84	4.59	4.06	4.23	
Russell 1000 Index			2.75	2.75	24.51	24.51	8.41	14.28	13.58	12.87	10.44	
Difference			-0.79	-0.79	-0.89	-0.89	0.54	-0.76	-0.58	-0.32	1.07	
<b>Wellington Select Equity Income Fund (SA)</b>	<b>151,777,702</b>	<b>6.18</b>	<b>-1.19</b>	<b>-1.19</b>	<b>13.74</b>	<b>13.74</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>17.78</b>	<b>06/01/2023</b>
Russell 1000 Val Index			-1.98	-1.98	14.37	14.37	5.63	8.68	8.41	8.49	17.63	
Difference			0.79	0.79	-0.63	-0.63	N/A	N/A	N/A	N/A	0.14	
<b>BNYM DB Lg Cap Stock Idx NL (CF)</b>	<b>123,207,128</b>	<b>5.02</b>	<b>2.74</b>	<b>2.74</b>	<b>24.56</b>	<b>24.56</b>	<b>8.82</b>	<b>14.50</b>	<b>N/A</b>	<b>N/A</b>	<b>14.75</b>	<b>05/01/2019</b>
Russell 1000 Index			2.75	2.75	24.51	24.51	8.41	14.28	13.58	12.87	14.55	
Difference			-0.01	-0.01	0.05	0.05	0.41	0.23	N/A	N/A	0.20	
<b>Loomis, Sayles &amp; Co Lg Cap Grth (CF)</b>	<b>152,935,104</b>	<b>6.23</b>	<b>9.53</b>	<b>9.53</b>	<b>33.96</b>	<b>33.96</b>	<b>13.79</b>	<b>18.33</b>	<b>16.96</b>	<b>N/A</b>	<b>17.56</b>	<b>08/01/2017</b>
Russell 1000 Grth Index			7.07	7.07	33.36	33.36	10.47	18.96	18.08	16.78	18.68	
Difference			2.46	2.46	0.60	0.60	3.31	-0.63	-1.12	N/A	-1.12	
<b>Kayne Anderson US SMID Value (SA)</b>	<b>71,383,037</b>	<b>2.91</b>	<b>-0.76</b>	<b>-0.76</b>	<b>10.67</b>	<b>10.67</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.54</b>	<b>03/01/2022</b>
Russell 2500 Val Index			-0.26	-0.26	10.98	10.98	3.81	8.44	7.17	7.81	5.37	
Difference			-0.50	-0.50	-0.32	-0.32	N/A	N/A	N/A	N/A	0.17	
<b>Systematic Financial US SMID Value (SA)</b>	<b>72,744,236</b>	<b>2.96</b>	<b>-0.05</b>	<b>-0.05</b>	<b>13.61</b>	<b>13.61</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.80</b>	<b>03/01/2022</b>
Russell 2500 Val Index			-0.26	-0.26	10.98	10.98	3.81	8.44	7.17	7.81	5.37	
Difference			0.21	0.21	2.62	2.62	N/A	N/A	N/A	N/A	2.43	
<b>Pinnacle Associates US SMID Cap Growth (SA)</b>	<b>70,144,005</b>	<b>2.86</b>	<b>1.70</b>	<b>1.70</b>	<b>6.08</b>	<b>6.08</b>	<b>-2.83</b>	<b>6.42</b>	<b>7.99</b>	<b>8.38</b>	<b>11.52</b>	<b>03/01/2010</b>
Russell 2500 Grth Index			2.43	2.43	13.90	13.90	-0.02	8.08	8.85	9.45	12.08	
Difference			-0.73	-0.73	-7.82	-7.82	-2.82	-1.66	-0.86	-1.08	-0.56	

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City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)

As of December 31, 2024

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>International Equity</b>												
<b>Silchester Intl Val Equity (CF)</b>	<b>250,994,695</b>	<b>10.22</b>	<b>-8.92</b>	<b>-8.92</b>	<b>0.44</b>	<b>0.44</b>	<b>4.65</b>	<b>5.01</b>	<b>3.66</b>	<b>6.02</b>	<b>8.35</b>	<b>06/01/2009</b>
MSCI EAFE Val Index (USD) (Net)			-7.12	-7.12	5.68	5.68	5.88	5.09	3.45	4.31	5.48	
Difference			-1.80	-1.80	-5.25	-5.25	-1.23	-0.07	0.21	1.70	2.87	
<b>Bail Giff Intl Gro;4 (BGEFX)</b>	<b>174,858,768</b>	<b>7.12</b>	<b>-5.78</b>	<b>-5.78</b>	<b>7.97</b>	<b>7.97</b>	<b>-6.75</b>	<b>3.71</b>	<b>4.54</b>	<b>6.99</b>	<b>8.65</b>	<b>06/01/2009</b>
Baillie Gifford Index			-7.88	-7.88	5.07	5.07	-2.67	3.44	3.71	5.35	6.74	
Difference			2.11	2.11	2.90	2.90	-4.07	0.27	0.84	1.64	1.91	
Baillie Gifford Spliced Index			-7.60	-7.60	5.53	5.53	0.82	4.10	3.82	4.99	6.22	
Difference			1.82	1.82	2.44	2.44	-7.57	-0.40	0.73	2.00	2.43	
<b>Acadian Emg Mkts Eq II (CF)</b>	<b>156,481,280</b>	<b>6.37</b>	<b>-6.20</b>	<b>-6.20</b>	<b>13.87</b>	<b>13.87</b>	<b>3.45</b>	<b>5.98</b>	<b>3.48</b>	<b>4.99</b>	<b>3.93</b>	<b>02/01/2011</b>
MSCI Emg Mkts Index (USD) (Net)			-8.01	-8.01	7.50	7.50	-1.92	1.70	1.38	3.64	2.18	
Difference			1.81	1.81	6.36	6.36	5.37	4.28	2.10	1.36	1.76	
<b>Fixed Income</b>												
<b>Baird Core Fixed Income (SA)</b>	<b>121,497,613</b>	<b>4.95</b>	<b>-2.90</b>	<b>-2.90</b>	<b>2.31</b>	<b>2.31</b>	<b>-1.94</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-1.29</b>	<b>03/01/2021</b>
Bloomberg US Agg Bond Index			-3.06	-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35	-1.73	
Difference			0.17	0.17	1.06	1.06	0.47	N/A	N/A	N/A	0.44	
<b>Loomis Sayles Multisector Full Discretion (CF)</b>	<b>184,059,825</b>	<b>7.49</b>	<b>-1.07</b>	<b>-1.07</b>	<b>5.44</b>	<b>5.44</b>	<b>0.09</b>	<b>2.85</b>	<b>3.30</b>	<b>3.63</b>	<b>5.45</b>	<b>11/01/2007</b>
Bloomberg Gbl Agg Bond Index			-5.10	-5.10	-1.69	-1.69	-4.52	-1.96	-0.64	0.15	1.62	
Difference			4.03	4.03	7.12	7.12	4.61	4.81	3.94	3.48	3.83	
<b>Schroder Flexible Secured Income LP (CF)</b>	<b>185,357,036</b>	<b>7.55</b>	<b>1.58</b>	<b>1.58</b>	<b>8.48</b>	<b>8.48</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.36</b>	<b>10/01/2022</b>
1 Month LIBOR+1.75%			1.66	1.66	7.25	7.25	5.86	4.36	4.24	3.67	6.94	
Difference			-0.07	-0.07	1.24	1.24	N/A	N/A	N/A	N/A	1.41	
1 Month LIBOR+5%			2.46	2.46	10.67	10.67	9.24	7.69	7.57	6.98	10.36	
Difference			-0.88	-0.88	-2.19	-2.19	N/A	N/A	N/A	N/A	-2.00	

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City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)

As of December 31, 2024

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Core Real Estate</b>												
<b>Harrison Street Core Property LP</b>	<b>119,006,554</b>	<b>4.84</b>	<b>0.15</b>	<b>0.15</b>	<b>-3.92</b>	<b>-3.92</b>	<b>1.98</b>	<b>3.43</b>	<b>4.75</b>	<b>N/A</b>	<b>5.55</b>	<b>11/01/2015</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	4.26	
Difference			-0.81	-0.81	-1.65	-1.65	5.12	1.44	1.67	N/A	1.29	
<b>PGIM Real Estate PRISA II LP</b>	<b>46,443,750</b>	<b>1.89</b>	<b>1.08</b>	<b>1.08</b>	<b>-9.68</b>	<b>-9.68</b>	<b>-2.35</b>	<b>1.24</b>	<b>3.24</b>	<b>5.12</b>	<b>5.12</b>	<b>01/01/2015</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	4.94	
Difference			0.12	0.12	-7.41	-7.41	0.78	-0.75	0.16	0.18	0.18	
<b>Principal US Property (CF)</b>	<b>113,309,854</b>	<b>4.61</b>	<b>1.08</b>	<b>1.08</b>	<b>-1.90</b>	<b>-1.90</b>	<b>-3.00</b>	<b>2.45</b>	<b>3.78</b>	<b>5.71</b>	<b>6.35</b>	<b>01/01/2014</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	5.52	
Difference			0.11	0.11	0.36	0.36	0.13	0.46	0.70	0.77	0.83	
<b>UBS Trumbull Property LP</b>	<b>52,200,385</b>	<b>2.12</b>	<b>-0.16</b>	<b>-0.16</b>	<b>-7.11</b>	<b>-7.11</b>	<b>-3.19</b>	<b>-0.97</b>	<b>-0.27</b>	<b>2.04</b>	<b>3.53</b>	<b>01/01/2006</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	4.81	
Difference			-1.13	-1.13	-4.85	-4.85	-0.05	-2.96	-3.35	-2.90	-1.27	
<b>Vanguard RE Idx;ETF (VNQ)</b>	<b>1,330,724</b>	<b>0.05</b>	<b>-7.67</b>	<b>-7.67</b>	<b>4.80</b>	<b>4.80</b>	<b>-4.75</b>	<b>2.97</b>	<b>4.94</b>	<b>4.99</b>	<b>10.62</b>	<b>12/01/2008</b>
Custom REITs Index			-7.61	-7.61	5.05	5.05	-4.57	3.12	5.30	5.32	11.28	
Difference			-0.06	-0.06	-0.25	-0.25	-0.18	-0.15	-0.36	-0.33	-0.66	

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City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)

As of December 31, 2024

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Non-Core Real Estate</b>												
<b>Abacus Multi-Family Partners VI LP</b>	<b>8,389,059</b>	<b>0.34</b>	<b>1.22</b>	<b>1.22</b>	<b>-39.39</b>	<b>-39.39</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-42.97</b>	<b>10/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-7.18	
Difference			-0.24	-0.24	-39.08	-39.08	N/A	N/A	N/A	N/A	-35.79	
<b>H.I.G. Realty Partners IV (Onshore) LP</b>	<b>26,822,565</b>	<b>1.09</b>	<b>0.92</b>	<b>0.92</b>	<b>6.37</b>	<b>6.37</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>01/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-1.20	
Difference			-0.54	-0.54	6.68	6.68	N/A	N/A	N/A	N/A	N/A	
<b>Bell Value-Add VIII LP</b>	<b>6,425,161</b>	<b>0.26</b>	<b>0.00</b>	<b>0.00</b>	<b>-5.25</b>	<b>-5.25</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-13.39</b>	<b>04/01/2023</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-5.02	
Difference			-1.46	-1.46	-4.93	-4.93	N/A	N/A	N/A	N/A	-8.38	
<b>Hammes Partners IV LP</b>	<b>1,682,218</b>	<b>0.07</b>	<b>3.19</b>	<b>3.19</b>	<b>-50.81</b>	<b>-50.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-61.67</b>	<b>10/01/2023</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-3.88	
Difference			1.73	1.73	-50.49	-50.49	N/A	N/A	N/A	N/A	-57.79	
<b>IPI Partners III-A LP</b>	<b>8,188,723</b>	<b>0.33</b>	<b>2.26</b>	<b>2.26</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>27.95</b>	<b>04/01/2024</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	1.82	
Difference			0.80	0.80	N/A	N/A	N/A	N/A	N/A	N/A	26.14	
<b>Ares US Real Estate Opportunity IV LP</b>	<b>1,490,828</b>	<b>0.06</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.00</b>	<b>11/01/2024</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	1.29	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.29	

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City of Jacksonville Employees' Retirement System  
 Asset Allocation & Performance (Net of Fees)

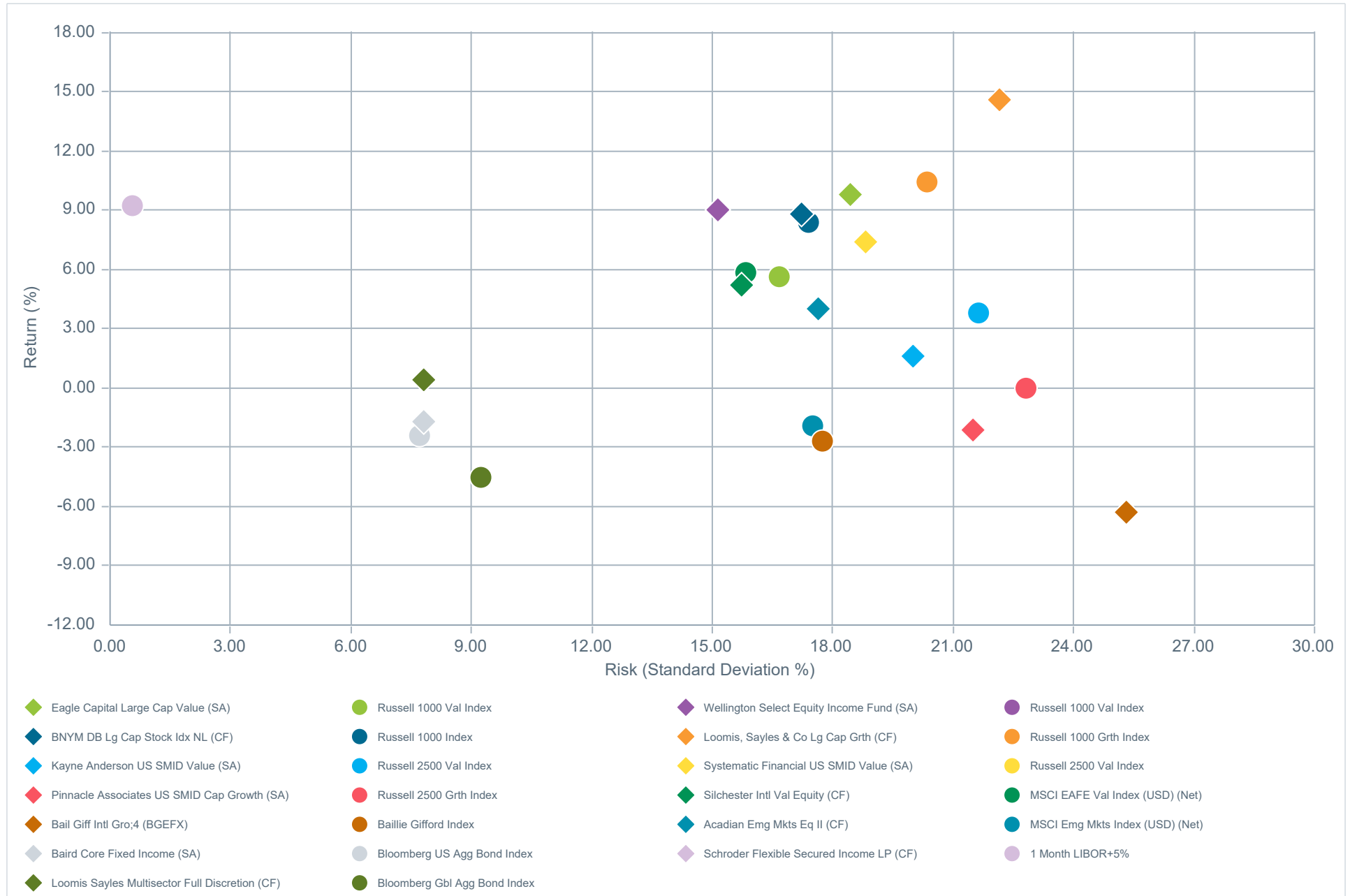
As of December 31, 2024

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Diversifying Assets</b>												
<b>Adams Street Private Equity (SA)</b>	<b>94,858,966</b>	<b>3.86</b>	<b>4.59</b>	<b>4.59</b>	<b>5.41</b>	<b>5.41</b>	<b>13.28</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>19.34</b>	<b>11/01/2020</b>
S&P 500 Index +3%			3.17	3.17	28.77	28.77	12.21	17.96	17.25	16.50	20.41	
Difference			1.42	1.42	-23.36	-23.36	1.07	N/A	N/A	N/A	-1.07	
<b>Hamilton Lane Private Credit (SA)</b>	<b>89,646,030</b>	<b>3.65</b>	<b>3.92</b>	<b>3.92</b>	<b>11.54</b>	<b>11.54</b>	<b>8.49</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.22</b>	<b>04/01/2021</b>
ICE BofAML Gbl Hi Yld Index +2%			-0.65	-0.65	9.63	9.63	3.92	5.04	5.58	6.52	3.93	
Difference			4.57	4.57	1.91	1.91	4.57	N/A	N/A	N/A	0.29	
<b>Cash Equivalents</b>												
<b>Dreyfus Gvt CM;Inst (DGCXX)</b>	<b>3,302,291</b>	<b>0.13</b>	<b>1.15</b>	<b>1.15</b>	<b>5.26</b>	<b>5.26</b>	<b>3.92</b>	<b>2.50</b>	<b>2.37</b>	<b>1.79</b>	<b>1.65</b>	<b>05/01/2001</b>
FTSE 3 Mo T-Bill Index			1.23	1.23	5.45	5.45	4.05	2.54	2.40	1.79	1.64	
Difference			-0.07	-0.07	-0.19	-0.19	-0.14	-0.04	-0.03	0.00	0.01	

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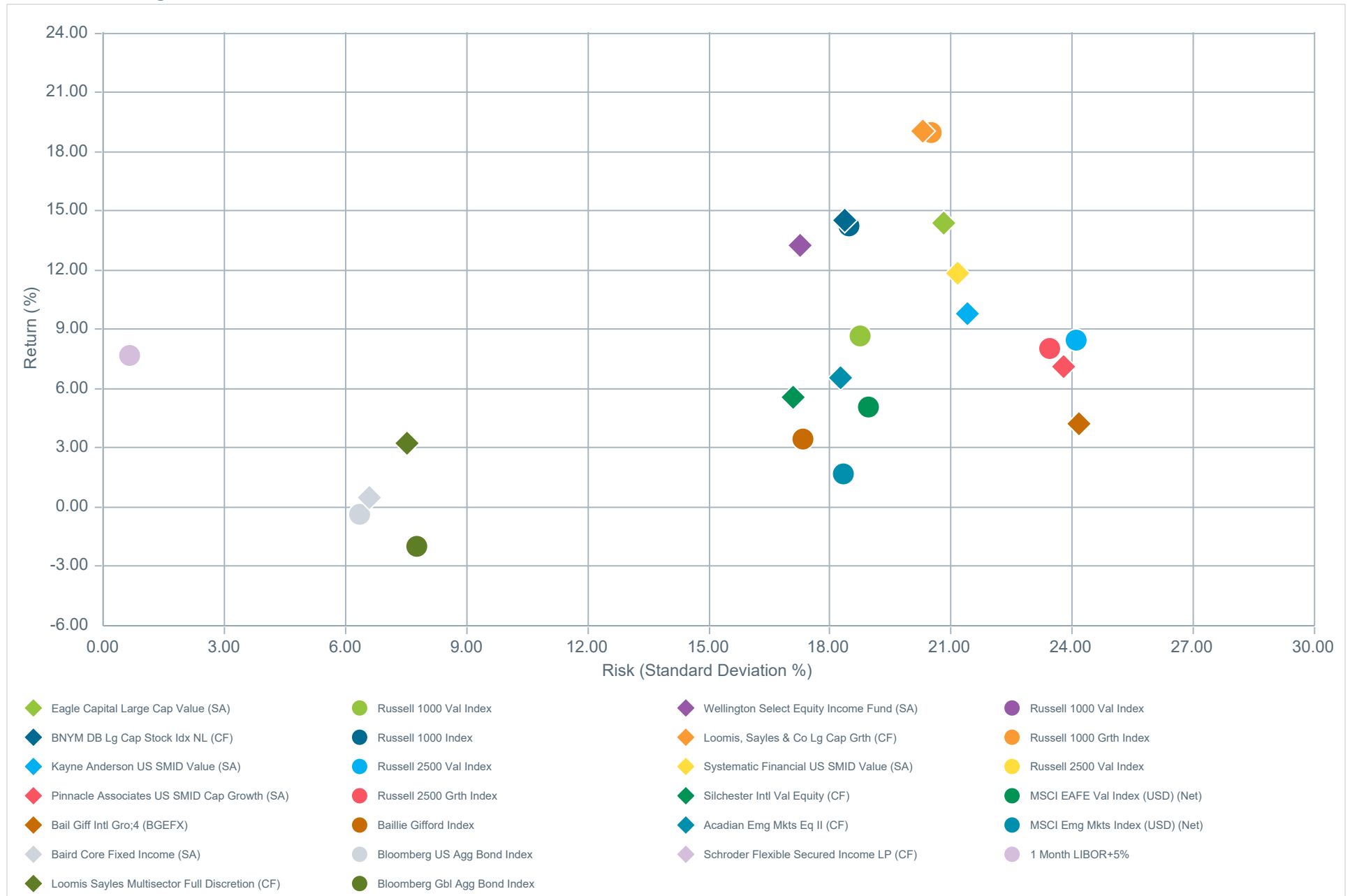




Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Managers with less history than the specified time period are backfilled with product specific performance, except for Schroder Flexible Secured Income Fund. Please see the Addendum for custom index definitions.

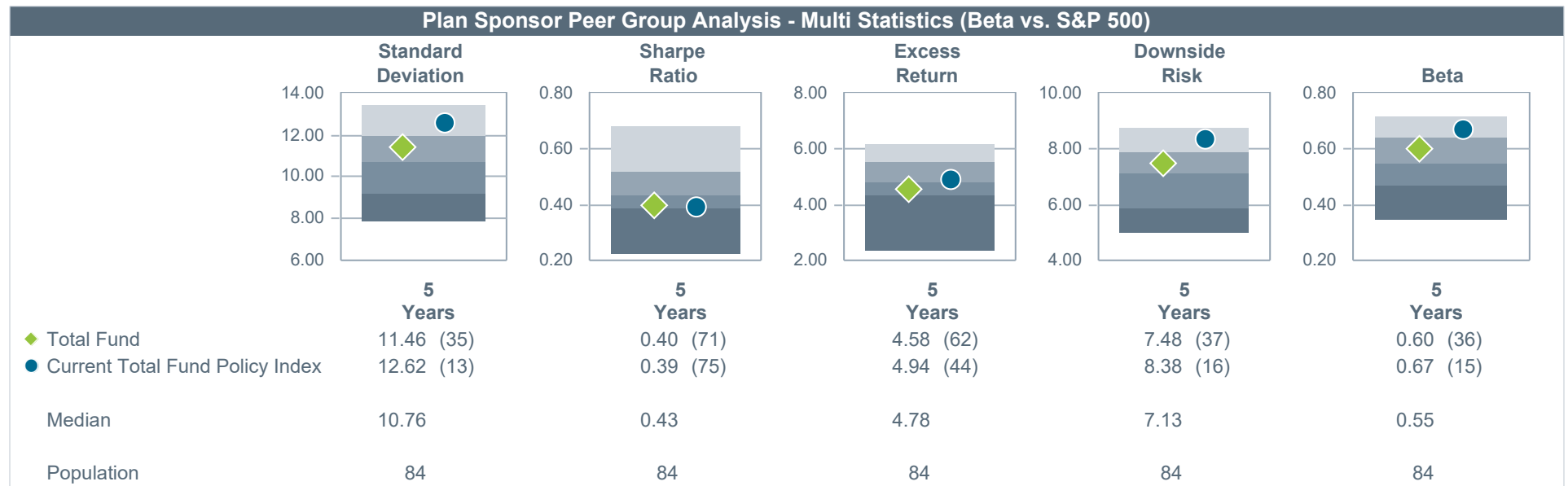
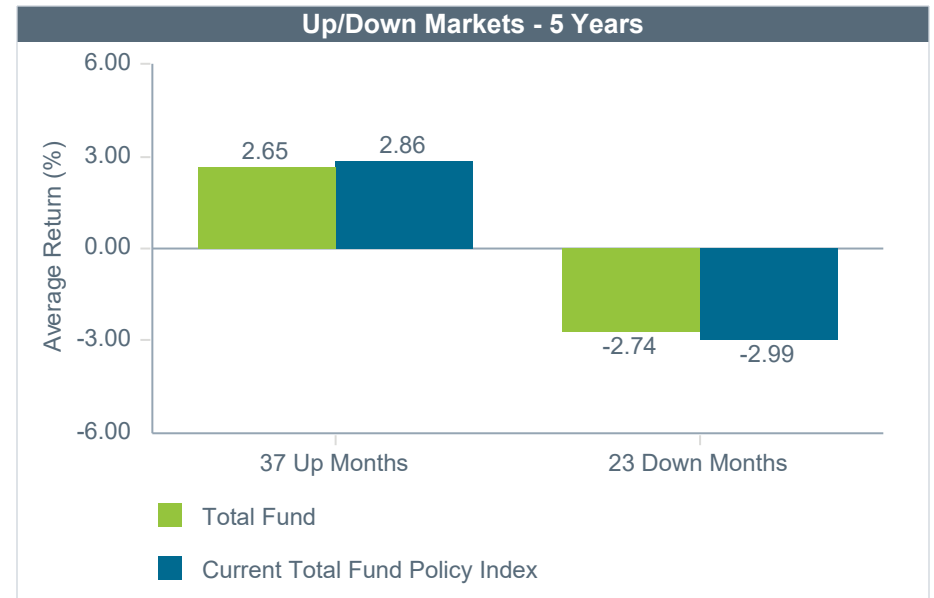
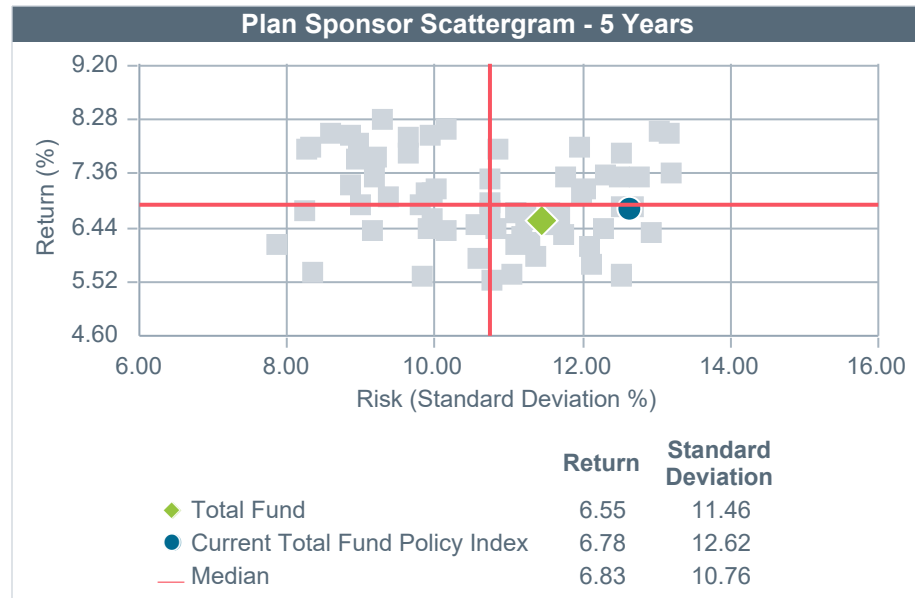
**City of Jacksonville Employees' Retirement System**  
**Risk and Return**  
**Traditional Managers**

5 Years Ending December 31, 2024

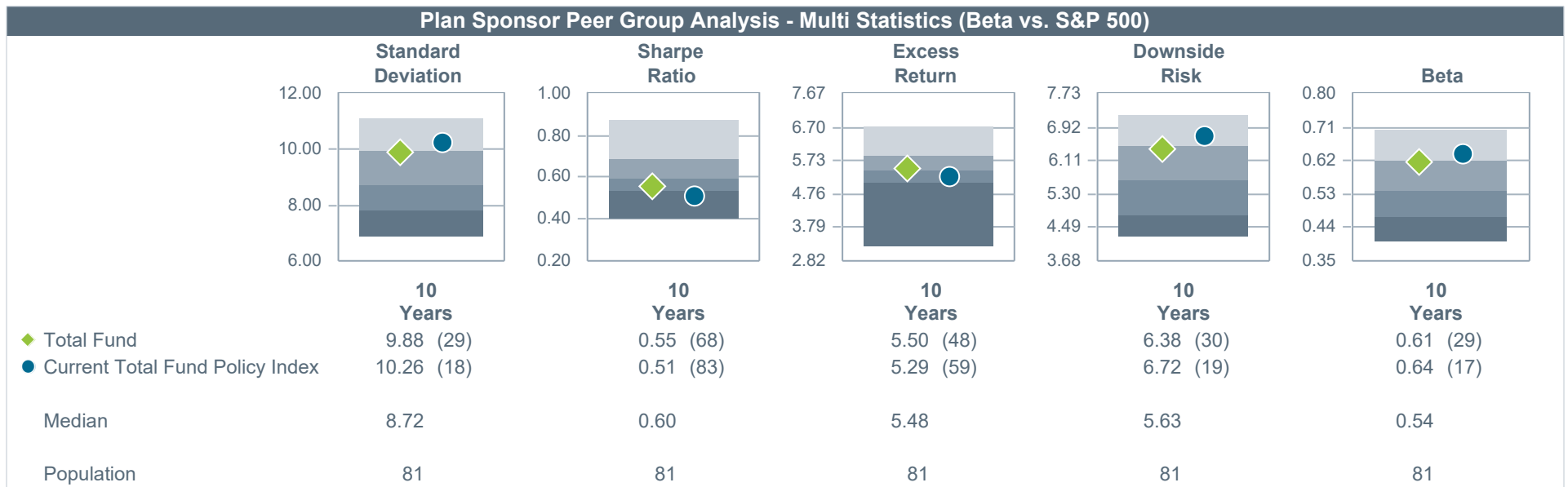
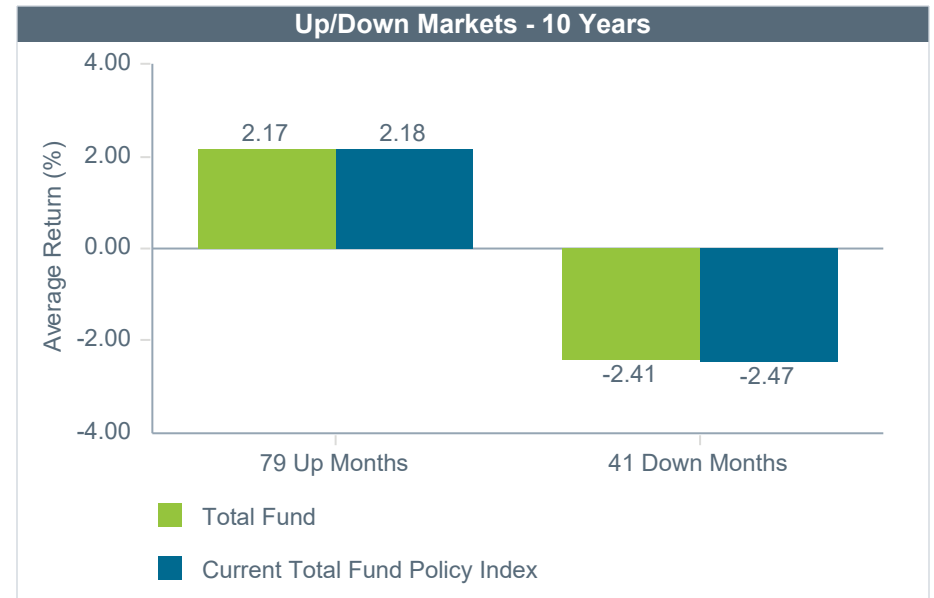
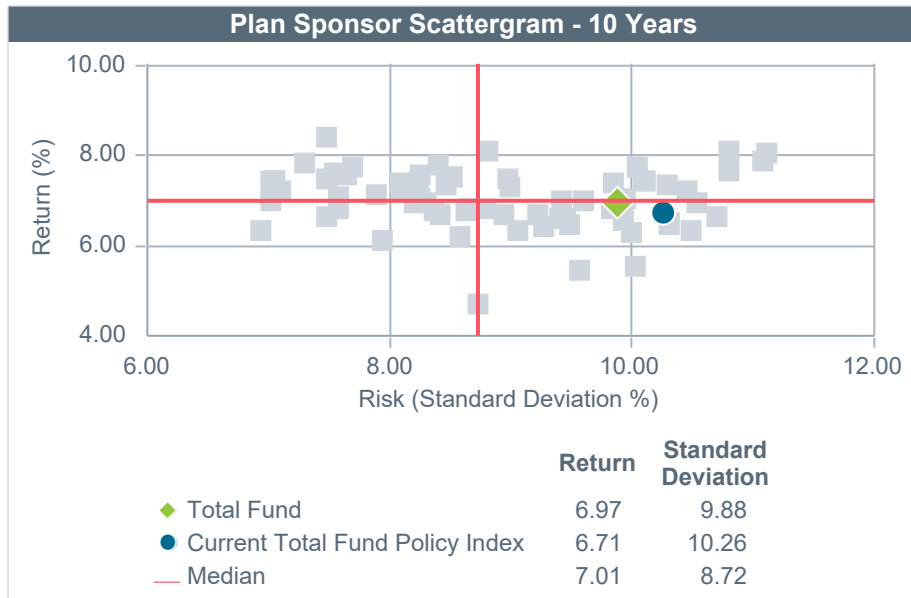


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Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

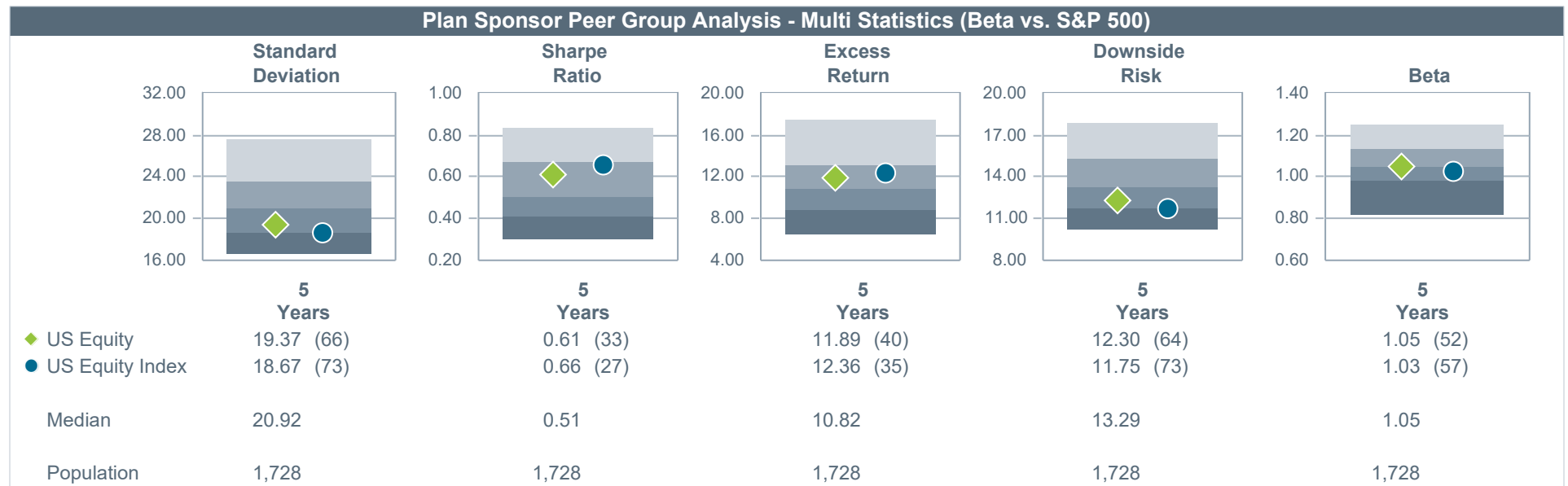
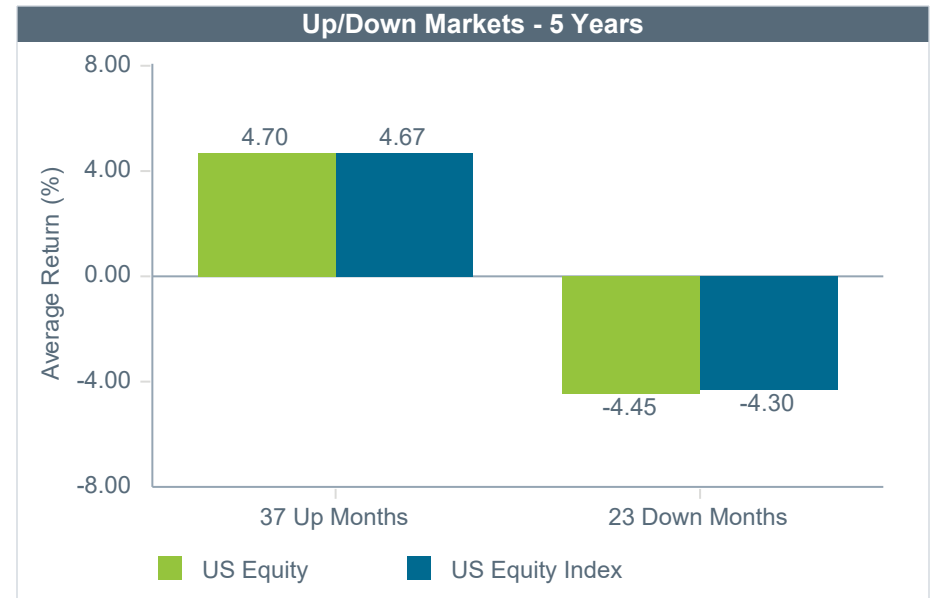
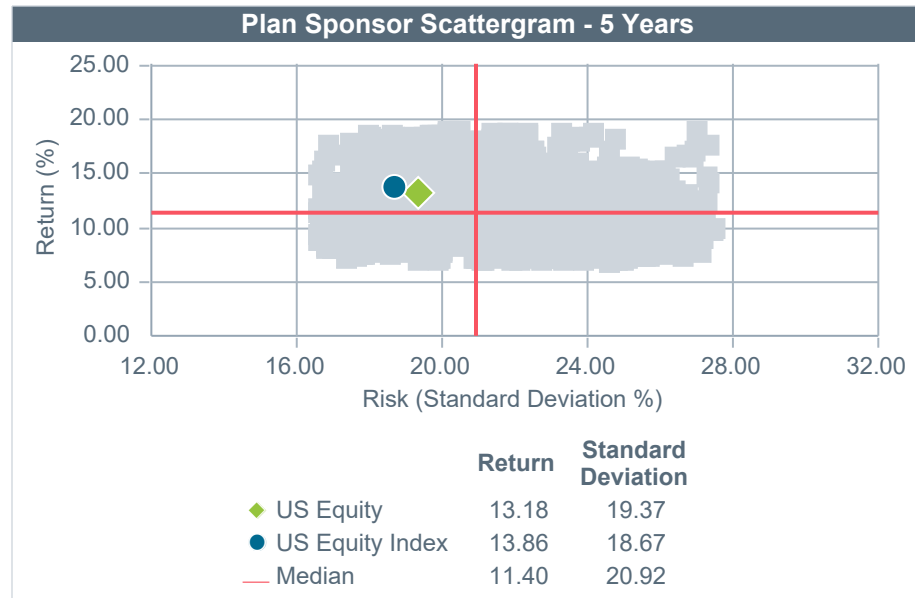
# Composite Profiles

City of Jacksonville Employees' Retirement System  
 US Equity vs. IM U.S. Equity (SA+CF)  
 Peer Group Analysis

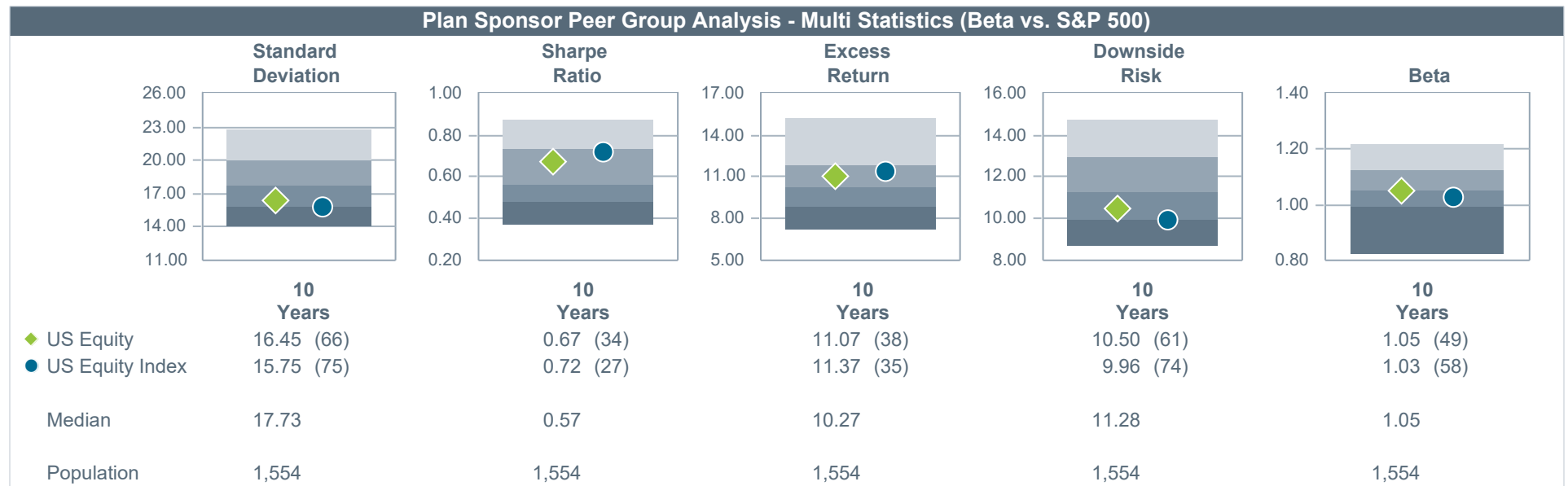
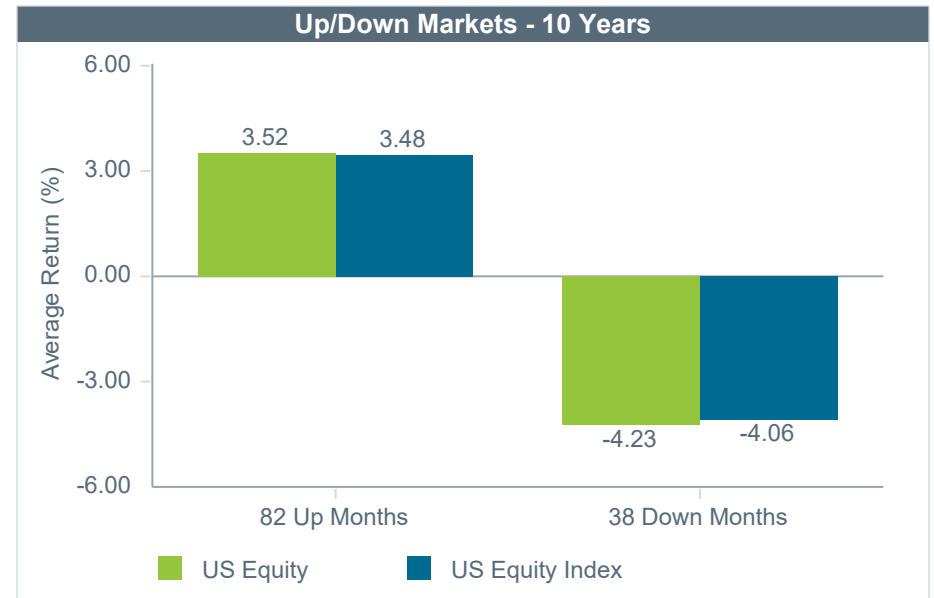
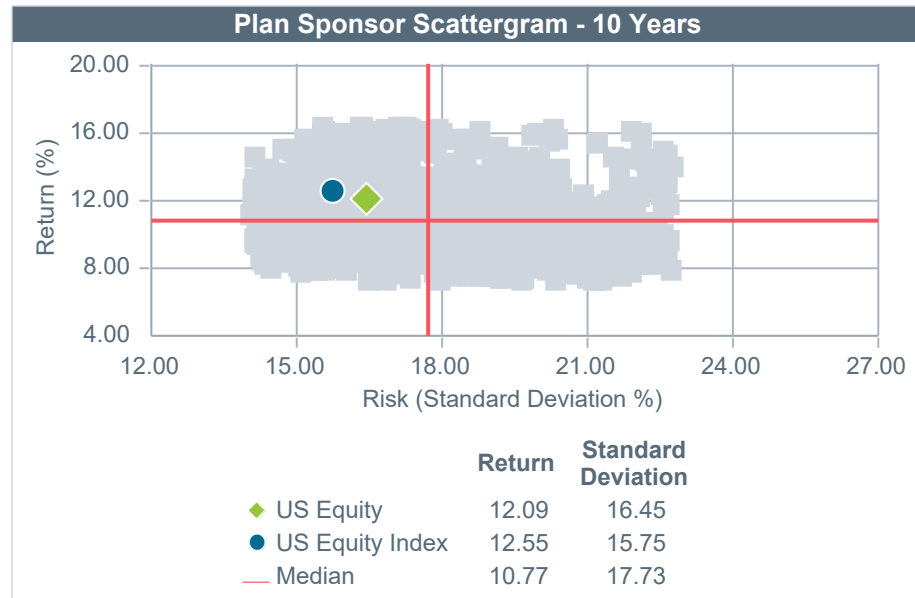
As of December 31, 2024



Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year for the COJ ends 09/30.



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

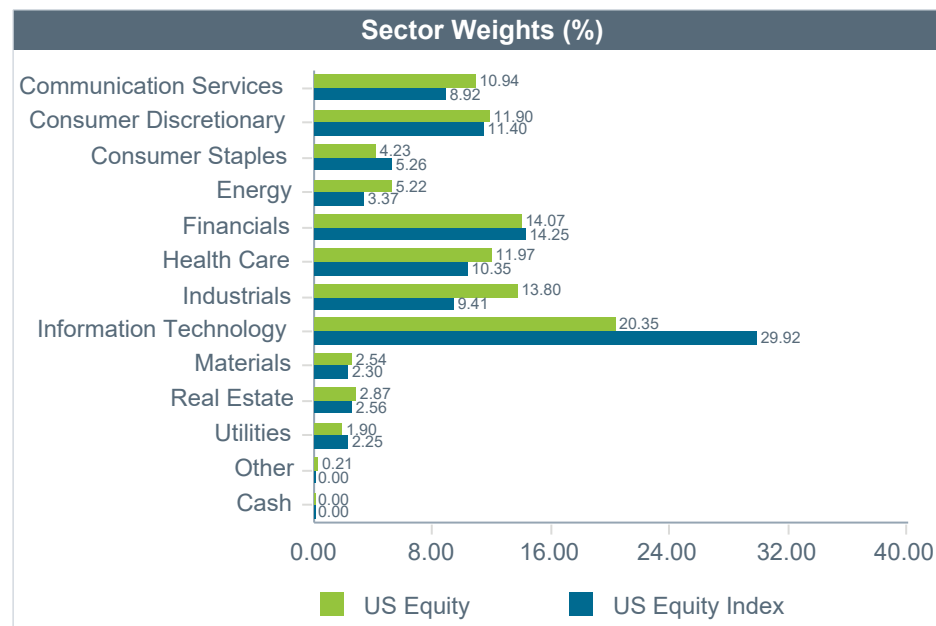
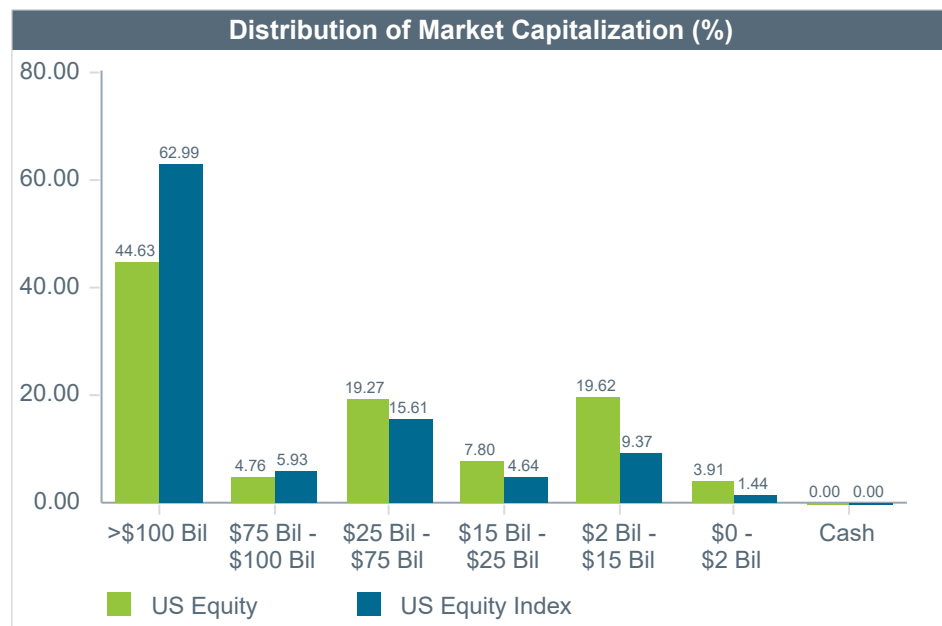


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Amazon.com Inc	3.86	3.64	0.22	17.74
Meta Platforms Inc	3.18	2.27	0.91	2.36
Microsoft Corp	2.80	5.54	-2.74	-1.85
NVIDIA Corporation	2.71	5.55	-2.84	10.59
Conocophillips	2.65	0.23	2.42	-5.15
Tesla Inc	2.06	1.98	0.08	54.36
Alphabet Inc	2.01	1.63	0.38	14.04
Visa Inc	1.70	0.88	0.82	15.16
UnitedHealth Group Incorporated	1.69	0.82	0.87	-13.16
Netflix Inc	1.25	0.67	0.58	25.67
% of Portfolio	23.91	23.21	0.70	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	536,569	951,638
Median Mkt. Cap (\$M)	12,950	2,248
Price/Earnings Ratio	23.56	26.20
Price/Book Ratio	3.51	4.71
5 Yr. EPS Growth Rate (%)	14.98	20.08
Current Yield (%)	1.42	1.29
Beta (5 Years, Monthly)	1.02	1.00
Number of Securities	1,153	2,973
Active Share	59.24	N/A



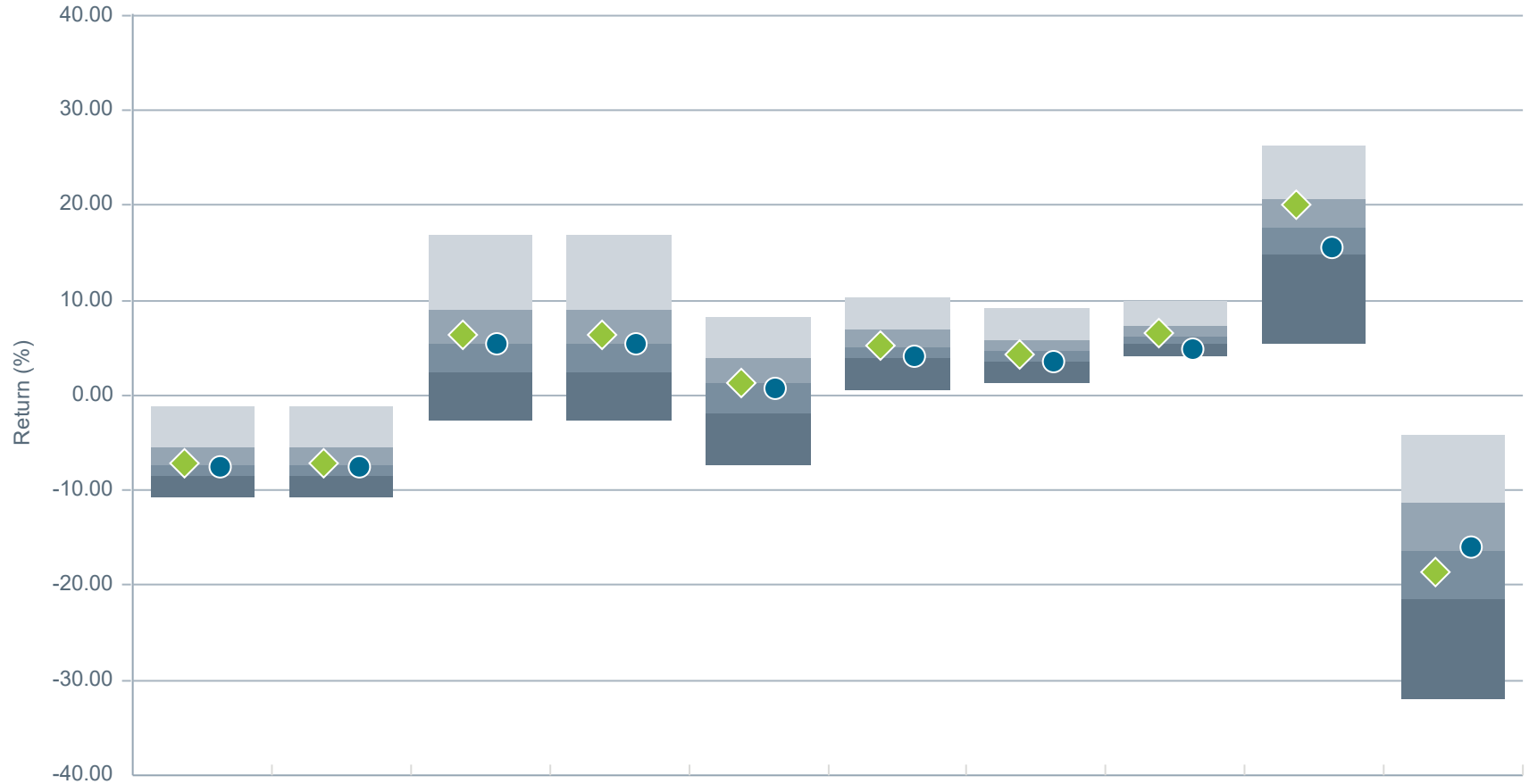
Style Map with History (12 Months)



Calculation is based on monthly periodicity. This is a return based calculation. Performance prior to manager inception date is backfilled with product specific returns.

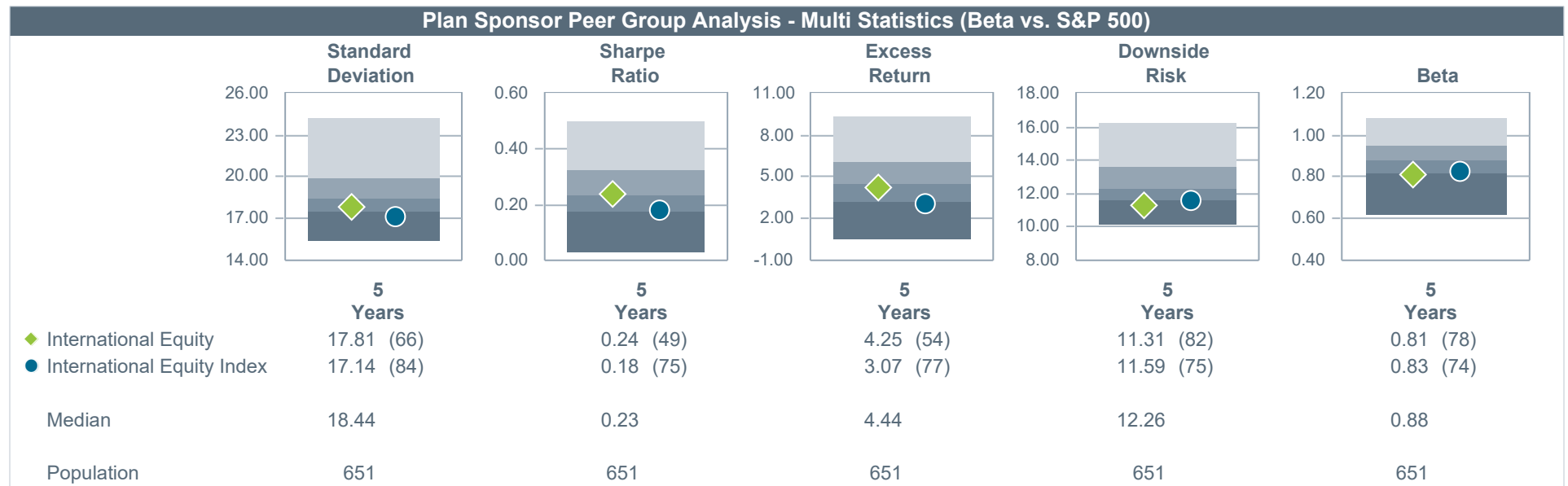
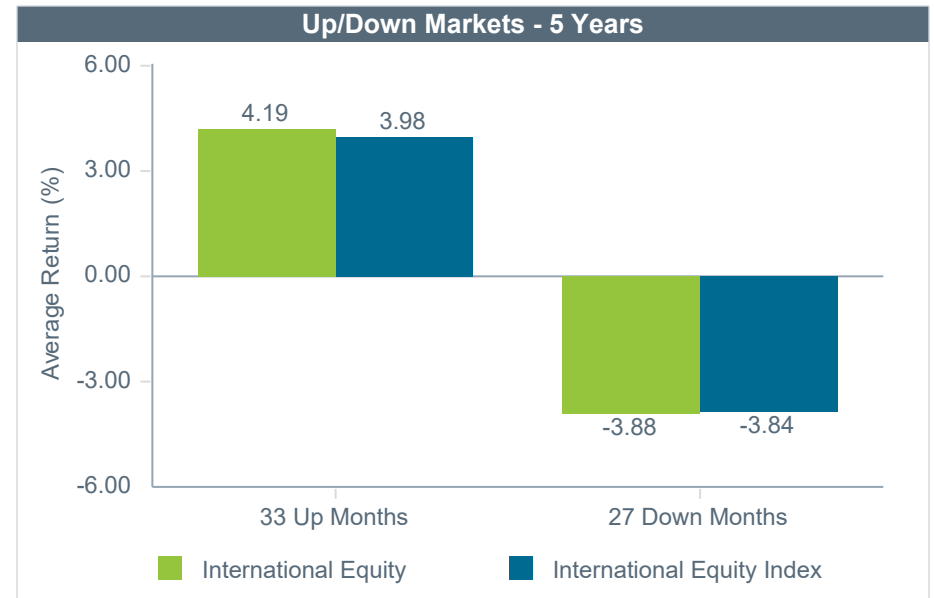
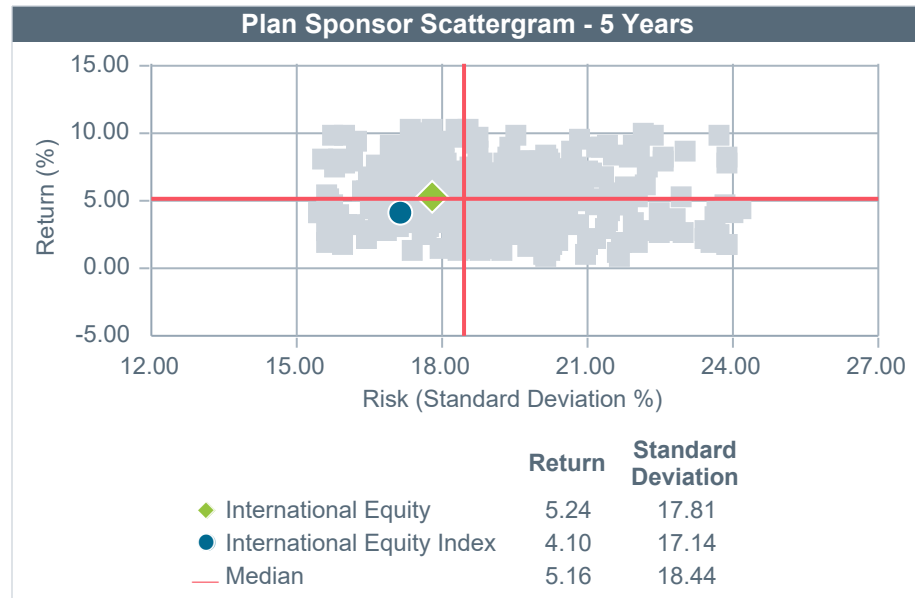
City of Jacksonville Employees' Retirement System  
 International Equity vs. IM International Equity (SA+CF)  
 Peer Group Analysis

As of December 31, 2024

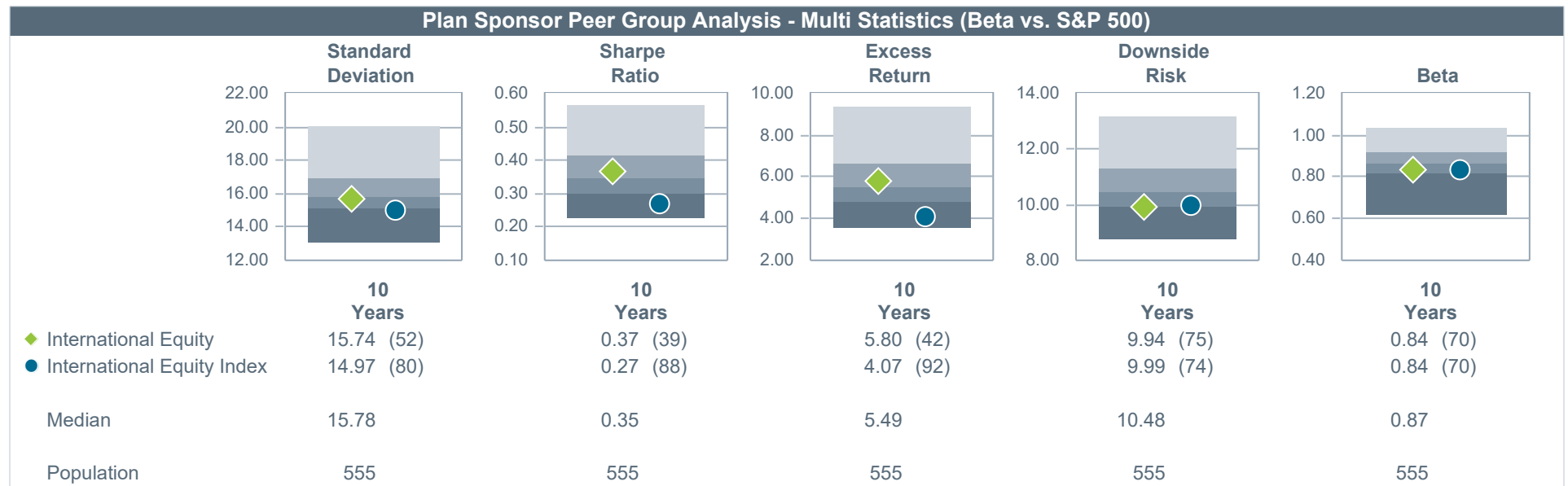
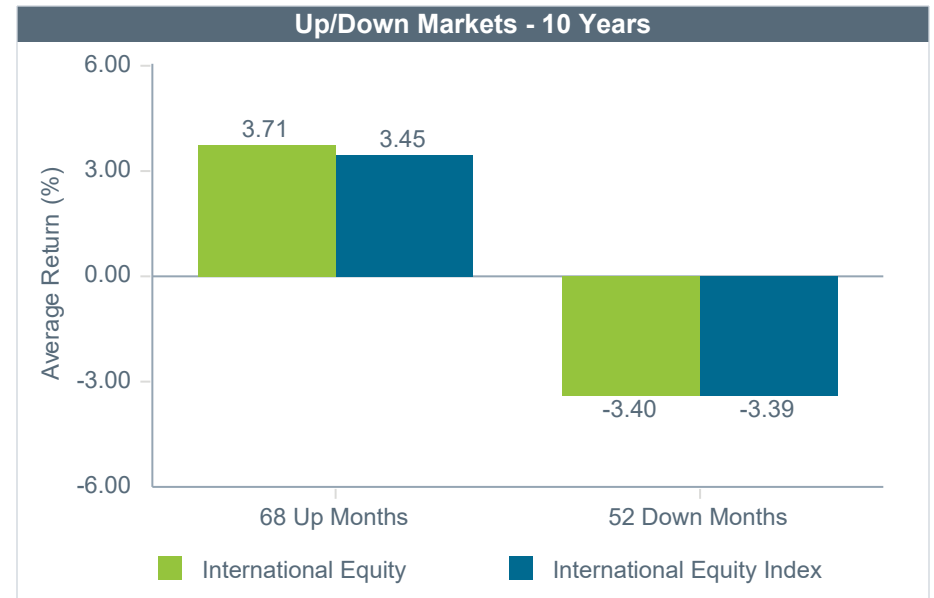
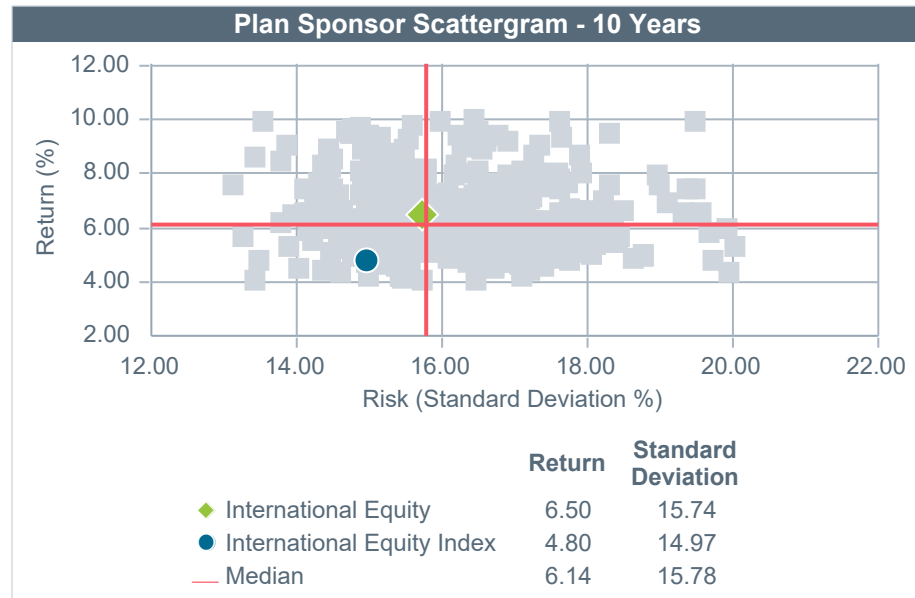


	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022
◆ International Equity	-7.14 (46)	-7.14 (46)	6.36 (43)	6.36 (43)	1.31 (51)	5.24 (50)	4.27 (60)	6.50 (40)	20.07 (31)	-18.57 (64)
● International Equity Index	-7.60 (56)	-7.60 (56)	5.53 (50)	5.53 (50)	0.82 (57)	4.10 (75)	3.53 (76)	4.80 (89)	15.62 (68)	-16.00 (48)
5th Percentile	-1.13	-1.13	16.93	16.93	8.24	10.37	9.19	10.02	26.24	-4.21
1st Quartile	-5.52	-5.52	8.99	8.99	4.00	6.93	5.79	7.38	20.69	-11.29
Median	-7.33	-7.33	5.45	5.45	1.36	5.16	4.60	6.14	17.72	-16.32
3rd Quartile	-8.47	-8.47	2.39	2.39	-1.96	4.02	3.57	5.42	14.75	-21.45
95th Percentile	-10.71	-10.71	-2.64	-2.64	-7.37	0.60	1.34	4.04	5.42	-31.83
Population	696	696	696	696	682	651	618	555	761	803

Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year for the COJ ends 09/30.



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



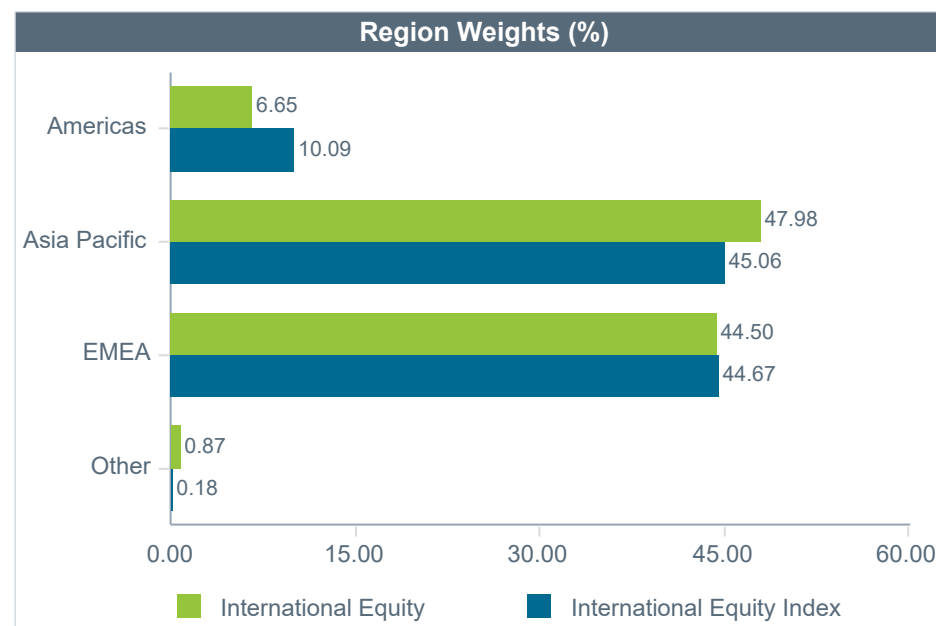
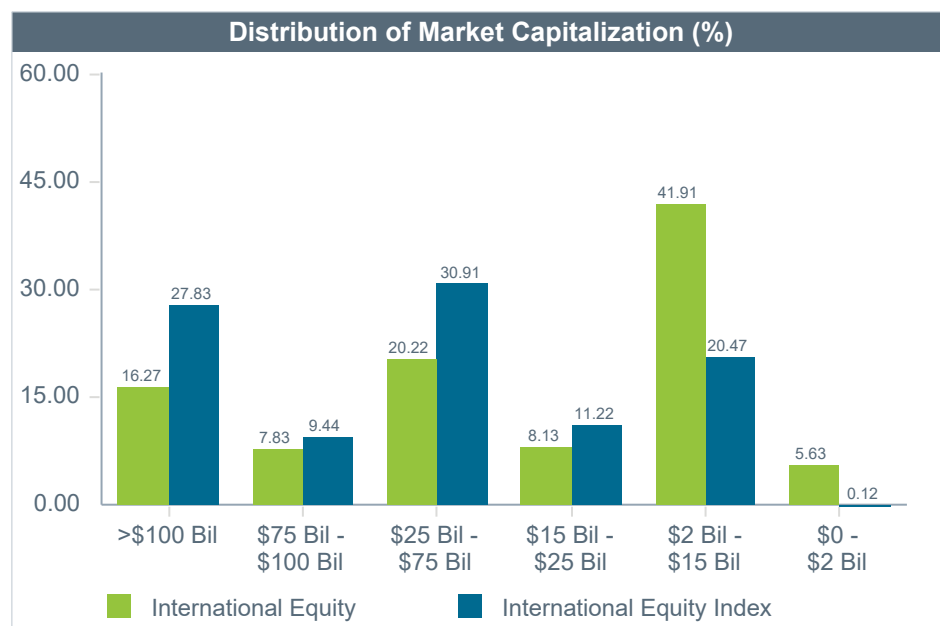
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

City of Jacksonville Employees' Retirement System  
International Equity vs. International Equity Index  
Portfolio Characteristics

As of December 31, 2024

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Taiwan Semiconductor Mfg	4.52	3.12	1.40	8.84
Spotify Technology SA	2.13	0.27	1.86	21.40
MercadoLibre Inc	1.40	0.00	1.40	-17.13
Adyen N.V	1.40	0.13	1.27	-4.94
Meituan	1.36	0.37	0.99	-11.81
Ferrari NV	1.35	0.21	1.14	-8.83
ASML Holding NV	1.34	1.09	0.25	-15.75
BMW Aktiengesellschaft	1.26	0.09	1.17	-7.45
Tencent Holdings LTD	1.23	1.35	-0.12	-6.21
GSK plc	1.19	0.27	0.92	-16.18
% of Portfolio	17.18	6.90	10.28	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	87,415	107,606
Median Mkt. Cap (\$M)	2,057	9,818
Price/Earnings Ratio	14.45	15.83
Price/Book Ratio	2.77	2.53
5 Yr. EPS Growth Rate (%)	11.27	12.03
Current Yield (%)	3.25	2.98
Beta (5 Years, Monthly)	1.01	1.00
Number of Securities	837	2,058
Active Share	82.34	N/A



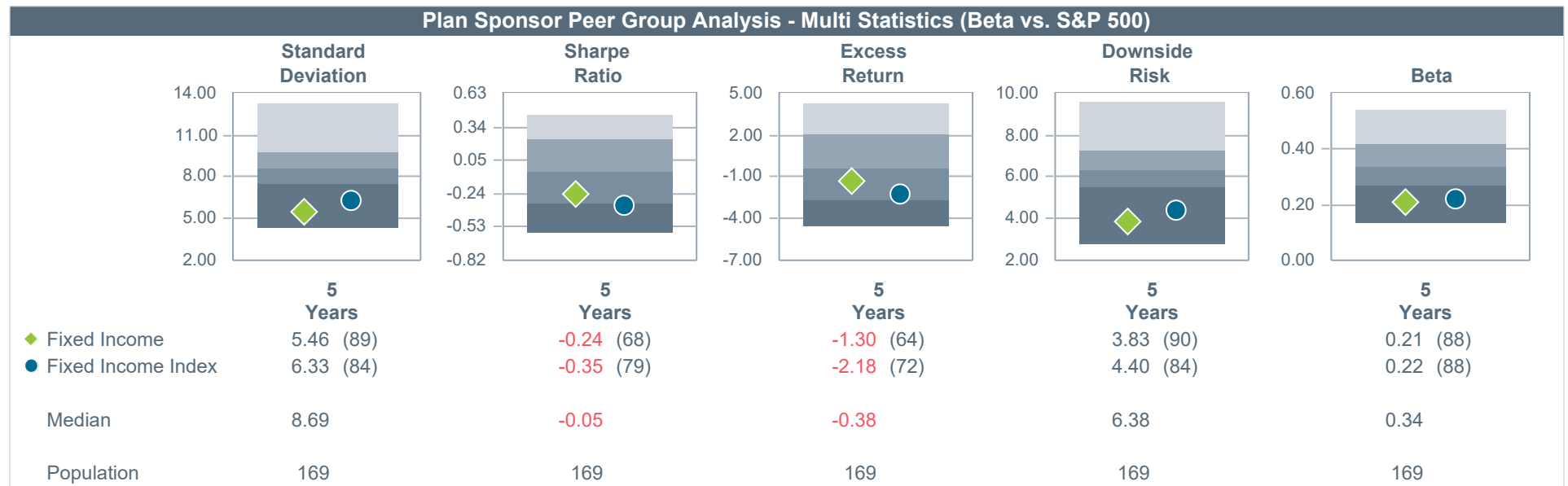
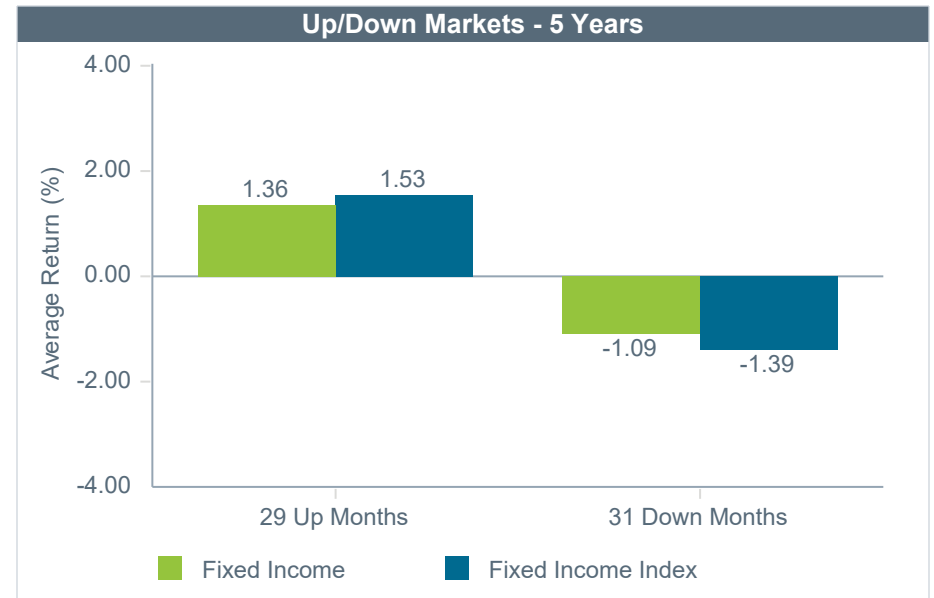
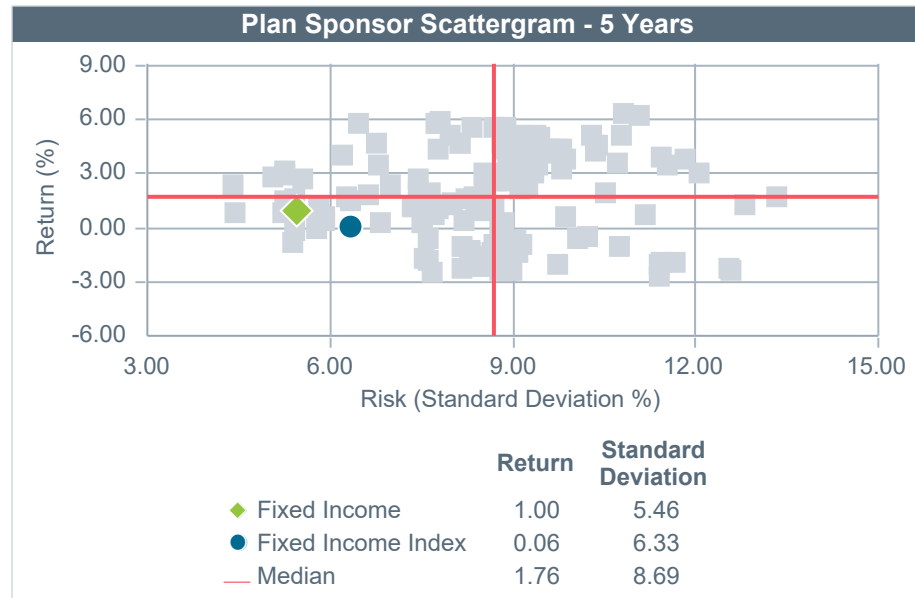
The Top Ten International Equity Holdings included Sanofi (1.19%) and Bayer AG (1.16%) Q3 2024 which was replaced by Tencent Holdings LTD (1.23%) and GSK plc (1.19%) in Q4 2024.

City of Jacksonville Employees' Retirement System  
 Fixed Income vs. IM Global Fixed Income (SA+CF)  
 Peer Group Analysis

As of December 31, 2024

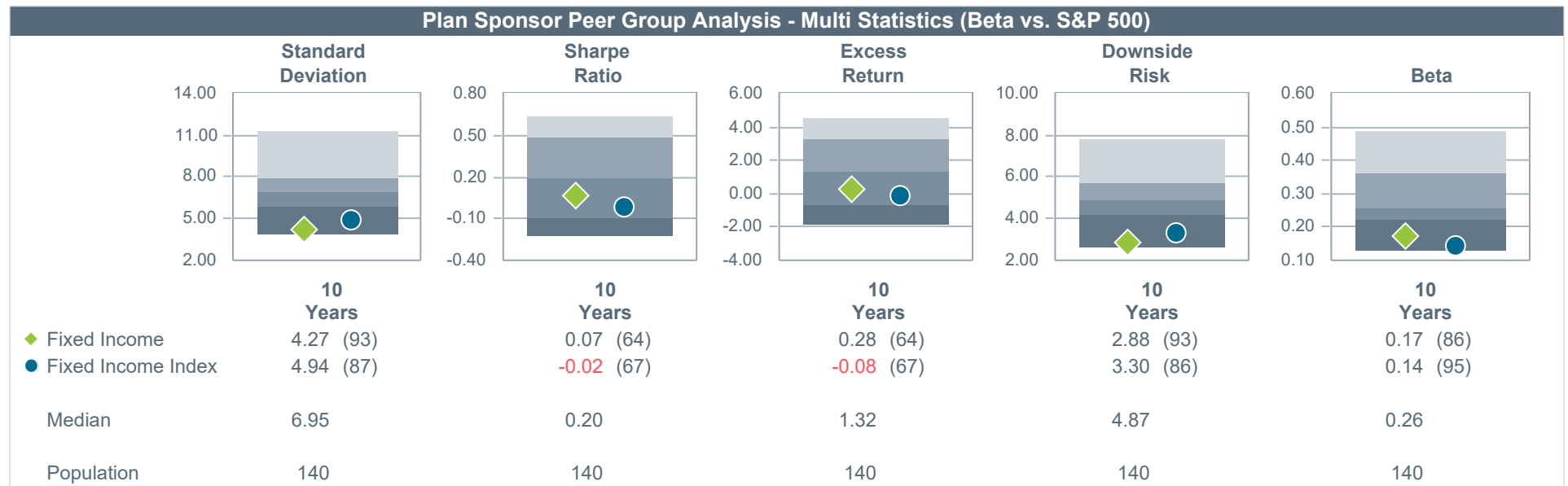
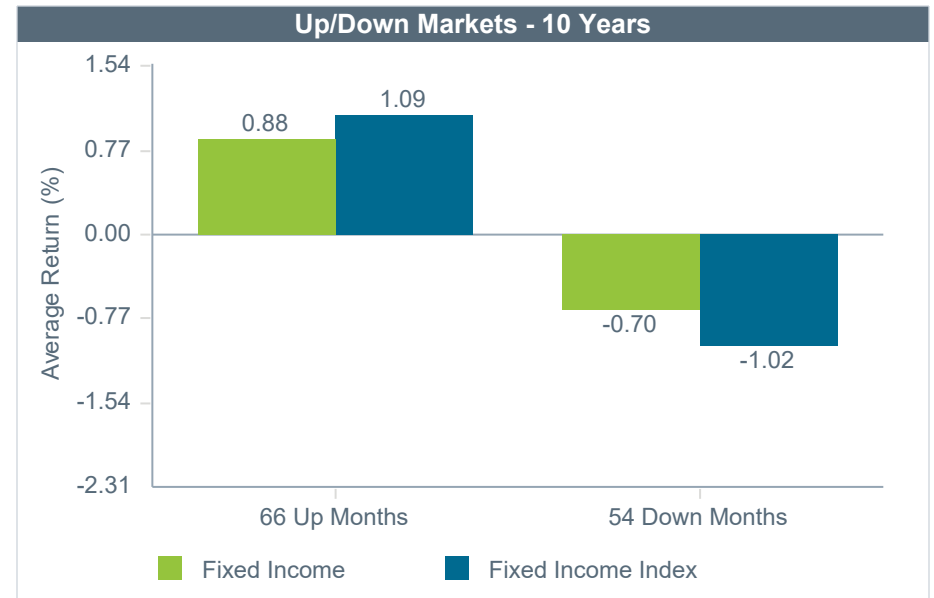
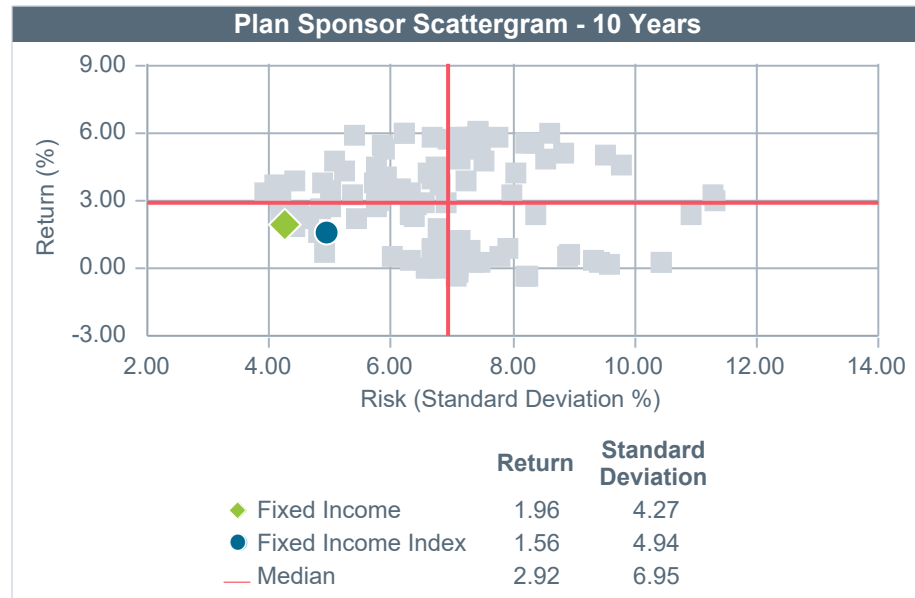


Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year for the COJ ends 09/30.



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



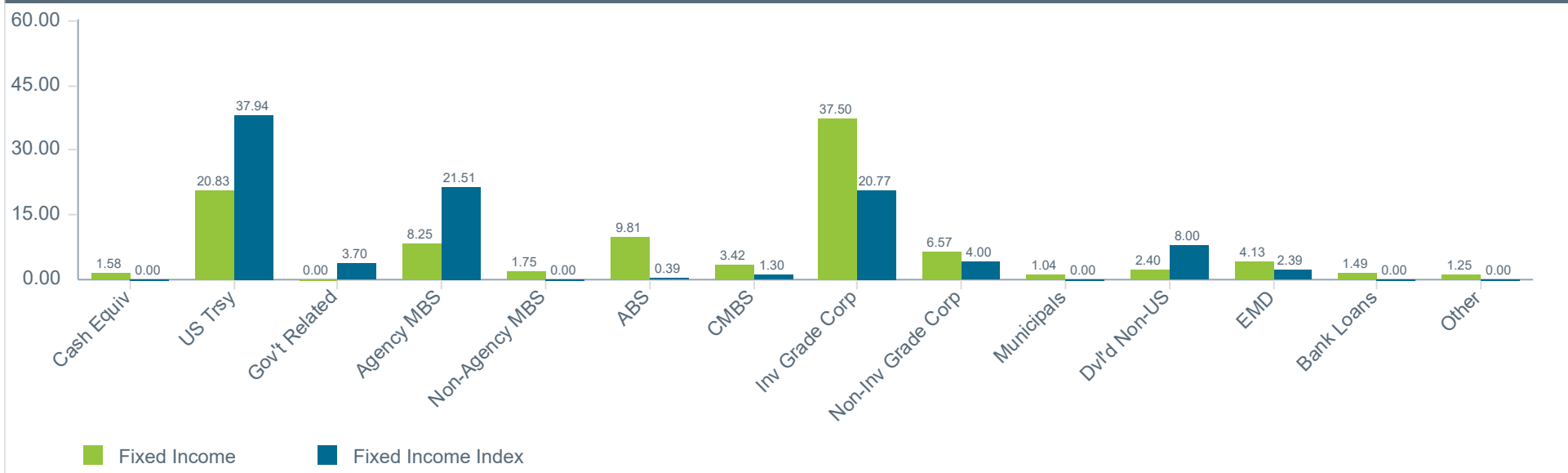


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	5.20	5.84
Avg. Maturity	6.61	8.14
Avg. Quality	A3	N/A
Yield To Maturity (%)	N/A	5.14
Coupon Rate (%)	4.51	3.66
Current Yield (%)	N/A	N/A

Sector Distribution (%)

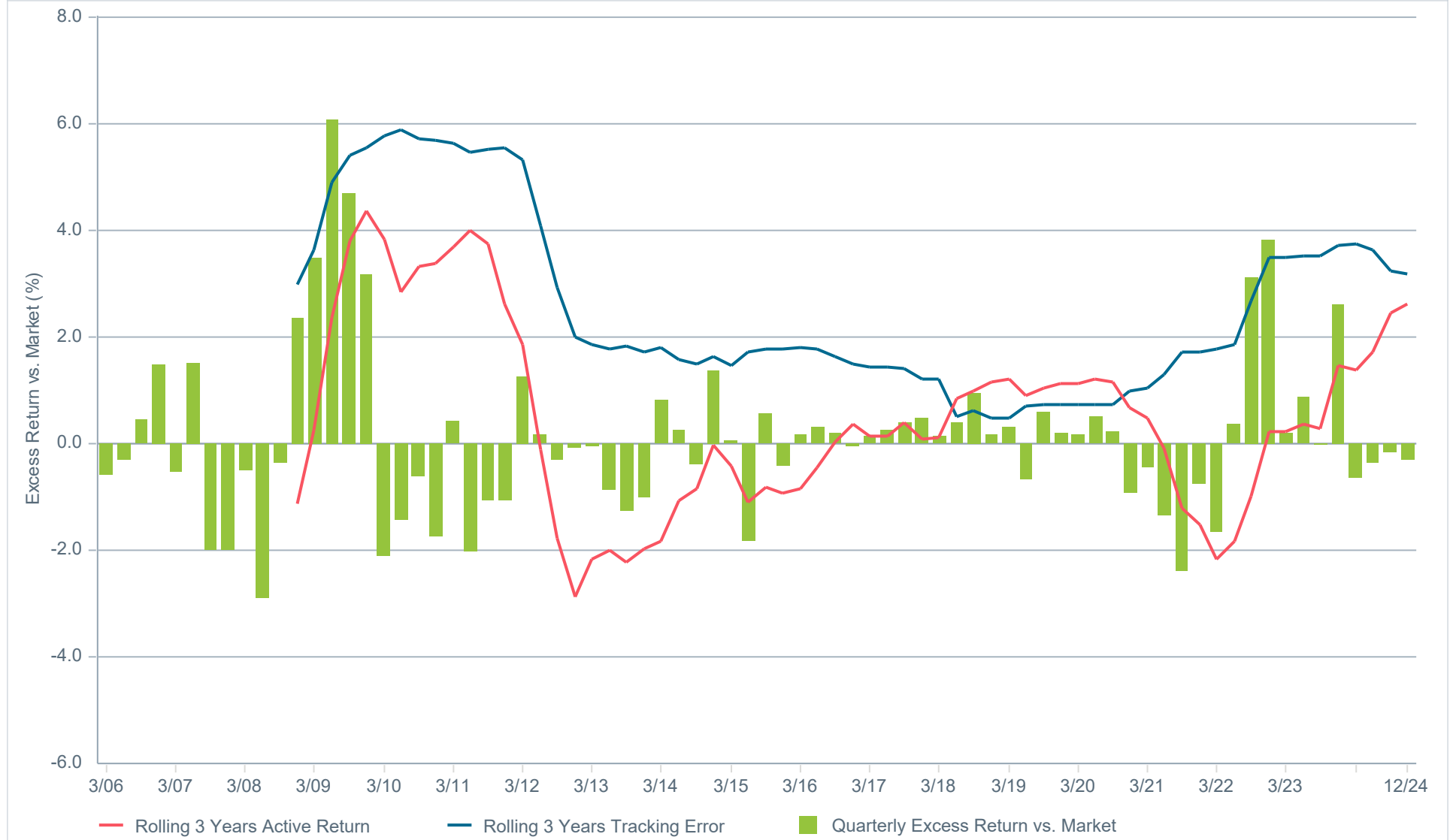


Cash equivalents are defined as any security with duration under one year. Allocation to "Other" consists of preferred equity and convertibles.

City of Jacksonville Employees' Retirement System  
 Real Estate vs. Real Estate Index  
 Comparative Performance & Rolling Return

As of December 31, 2024

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	Since Incep.	Inception Date
Real Estate	0.70	0.70	-3.55	-3.55	-0.39	2.73	3.92	5.57	-9.29	12.96	15.43	5.44	12/01/2005
Real Estate Index	1.02	1.02	-2.09	-2.09	-3.04	2.05	3.13	4.98	-12.65	6.57	21.02	5.06	
Difference	-0.32	-0.32	-1.46	-1.46	2.65	0.68	0.80	0.59	3.36	6.39	-5.58	0.38	

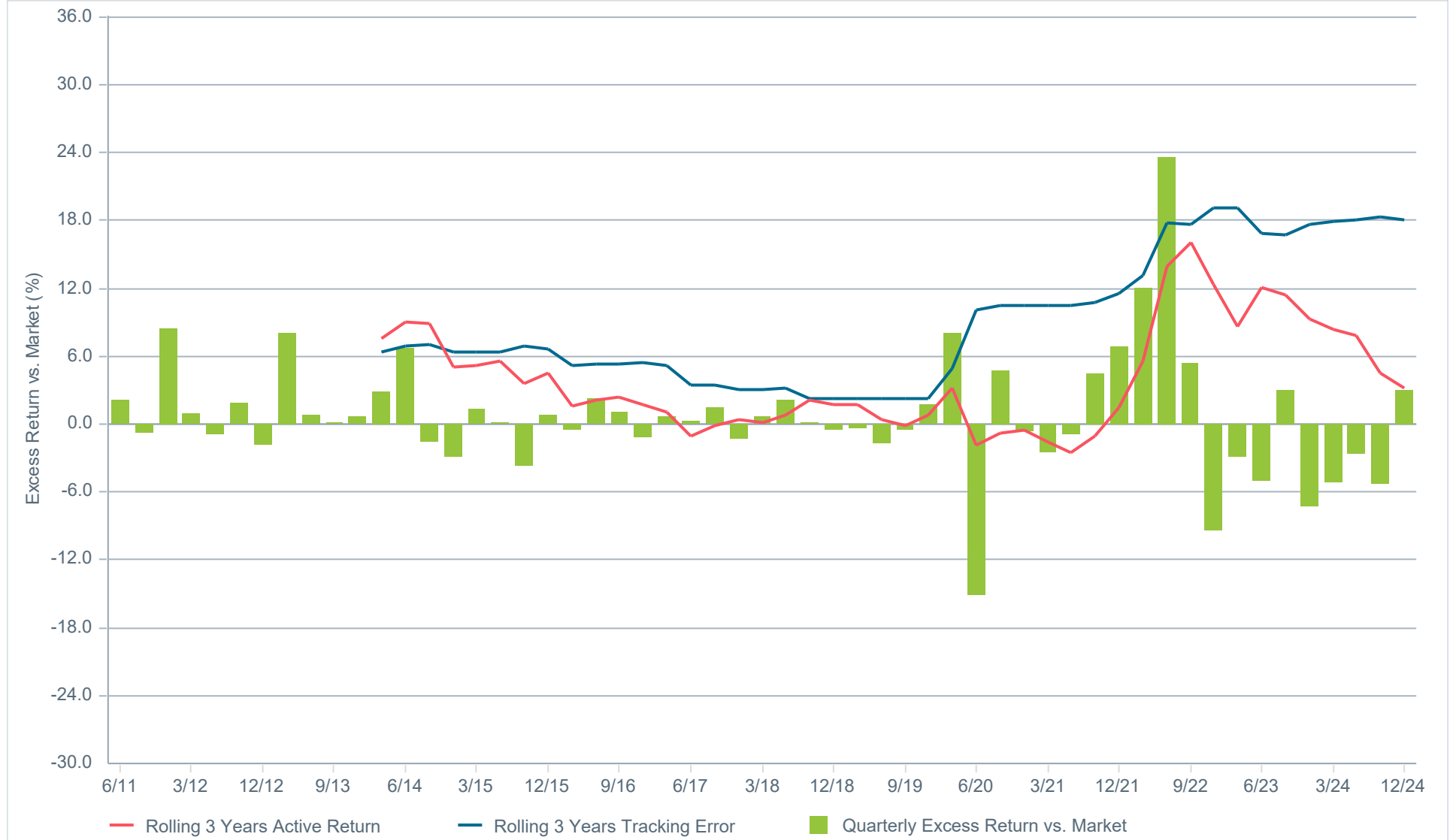


Performance shown is gross of fees. Calculation is based on quarterly periodicity.

City of Jacksonville Employees' Retirement System  
 Diversifying Assets vs. Diversifying Assets Index  
 Comparative Performance & Rolling Return

As of December 31, 2024

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	Since Incep.	Inception Date
Diversifying Assets	4.33	4.33	8.46	8.46	13.84	13.25	9.53	5.87	10.68	22.88	47.46	8.82	03/01/2011
Diversifying Assets Index	1.32	1.32	19.54	19.54	9.86	8.09	5.77	3.27	23.97	-10.53	36.38	5.19	
Difference	3.01	3.01	-11.07	-11.07	3.98	5.16	3.76	2.59	-13.28	33.41	11.08	3.62	



Performance shown is gross of fees. Calculation is based on quarterly periodicity.

City of Jacksonville Employees' Retirement System  
Alternative Investment Real Estate Fund Performance Listing

As of September 30, 2024

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
H.I.G. Realty Partners IV (Onshore) LP	2021	Real Estate - Opportunistic	25,000,000	25,519,505	4,555,842	26,305,599	15.68	2nd	-6.50	1.21
Abacus Multi-Family Partners VI LP	2022	Real Estate - Value Added	20,000,000	9,451,479	0	7,087,689	-36.37	N/A	-5.98	0.75
Bell Value-Add VIII LP	2022	Real Estate - Value Added	20,000,000	4,601,670	83,281	4,091,823	-15.20	N/A	-3.96	0.91
Hammes Partners IV LP	2022	Real Estate - Value Added	15,000,000	2,185,353	149,666	1,682,214	-64.50	N/A	-6.29	0.84
IPI Partners III-A LP	2023	Real Estate - Value Added	15,000,000	5,293,112	0	6,784,729	N/M	N/A	N/M	1.28
			<b>95,000,000</b>	<b>47,051,119</b>	<b>4,788,789</b>	<b>45,952,054</b>	<b>8.09</b>		<b>-5.85</b>	<b>1.08</b>

Certain valuations (marked with a \*\*) are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the NCREIF ODCE Index (AWA) (Net) (Monthly)+2% assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Preqin. These accounts all fall under Non-Core Real Estate.



City of Jacksonville Employees' Retirement System  
 Alternative Investment Private Equity Fund Performance Listing

As of September 30, 2024

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
ASP COJ PE Fund LP	2020	Private Equity - Fund of Funds	105,000,000	62,937,607	5,564,720	82,423,036	17.17	N/A	20.88	1.40
ASP COJ PE LP Tranche 2	2023	Private Equity - Fund of Funds	100,000,000	5,274,452	0	6,426,358	29.24	N/A	34.14	1.22
			<b>205,000,000</b>	<b>68,212,059</b>	<b>5,564,720</b>	<b>88,849,394</b>	<b>17.45</b>		<b>21.17</b>	<b>1.38</b>

Certain valuations (marked with a \*\*) are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the S&P 500 Index (CW)+3% assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Preqin.



City of Jacksonville Employees' Retirement System  
 Alternative Investment Private Credit Fund Performance Listing

As of September 30, 2024

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Hamilton Lane Private Credit (SA)	2021	Private Credit - Direct Investment	250,000,000	92,659,364	20,403,316	87,946,019	12.83	2nd	11.08	1.17
			<b>250,000,000</b>	<b>92,659,364</b>	<b>20,403,316</b>	<b>87,946,019</b>	<b>12.83</b>		<b>11.08</b>	<b>1.17</b>

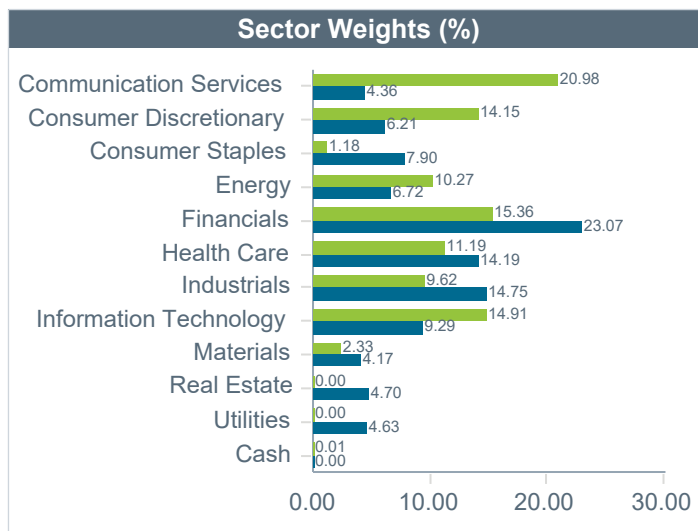
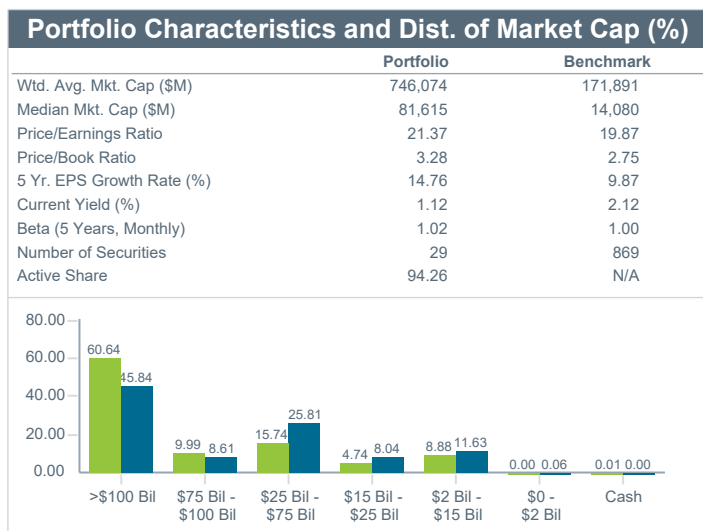
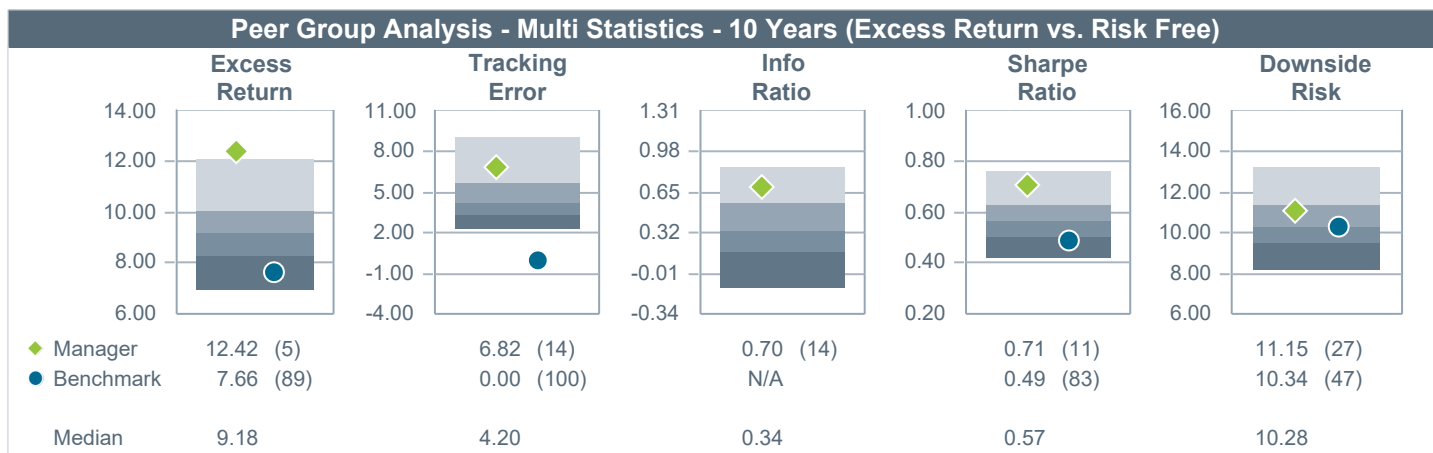
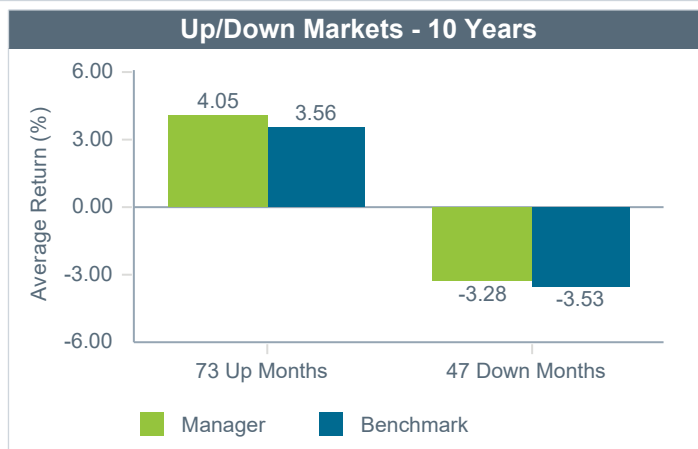
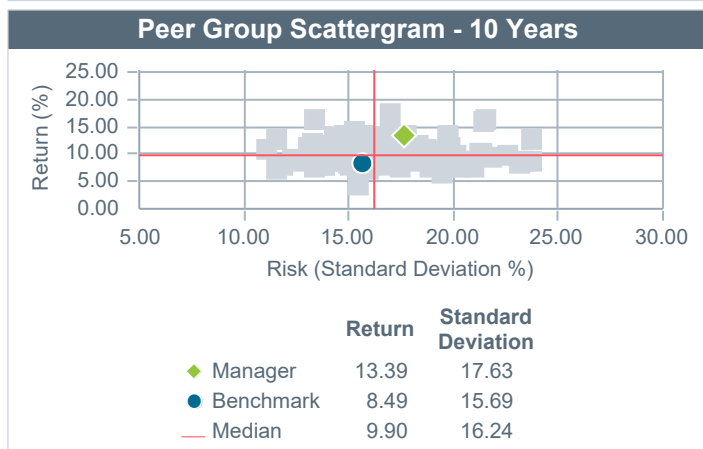
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# Investment Manager Profiles

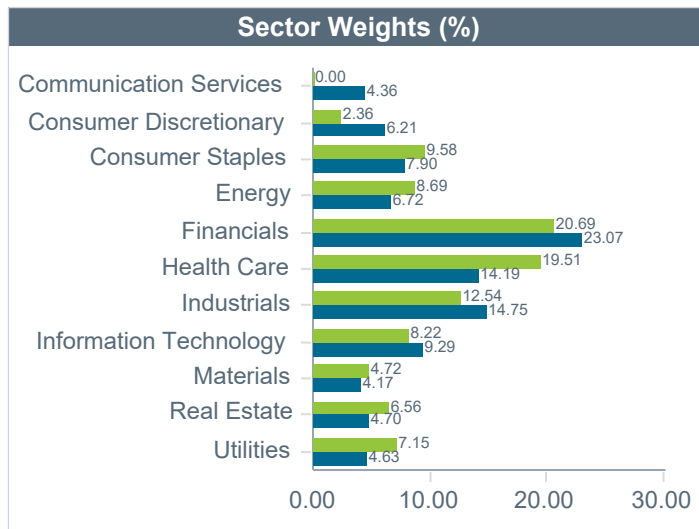
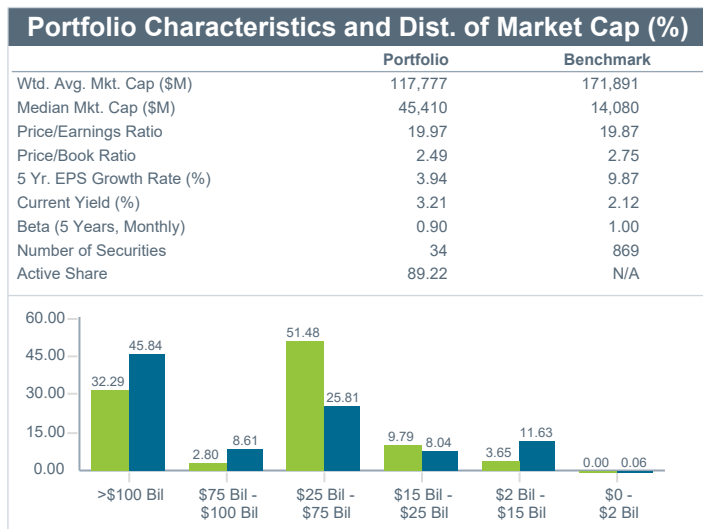
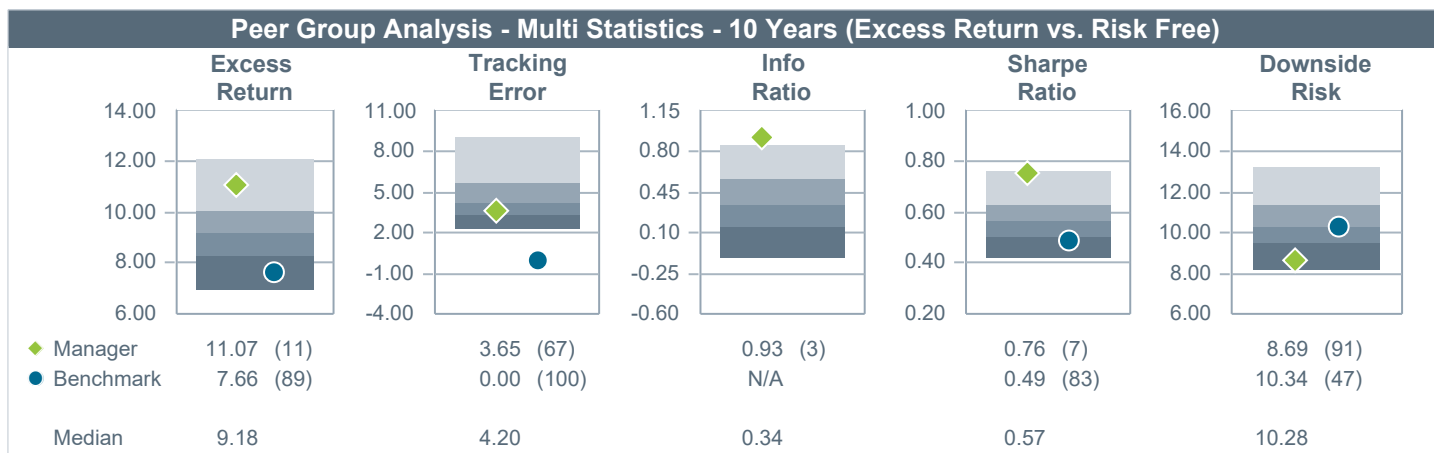
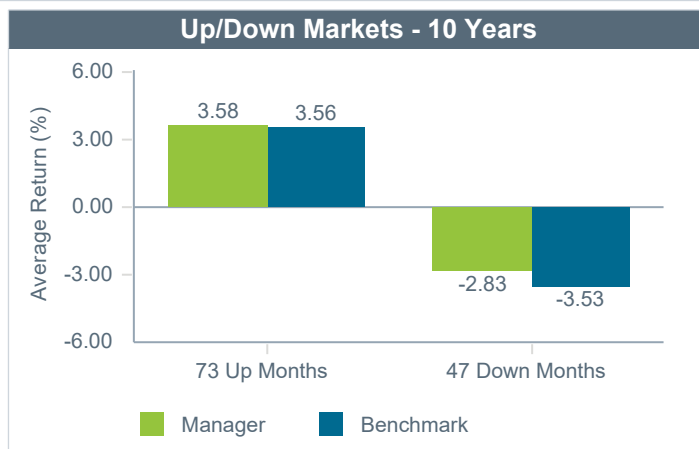
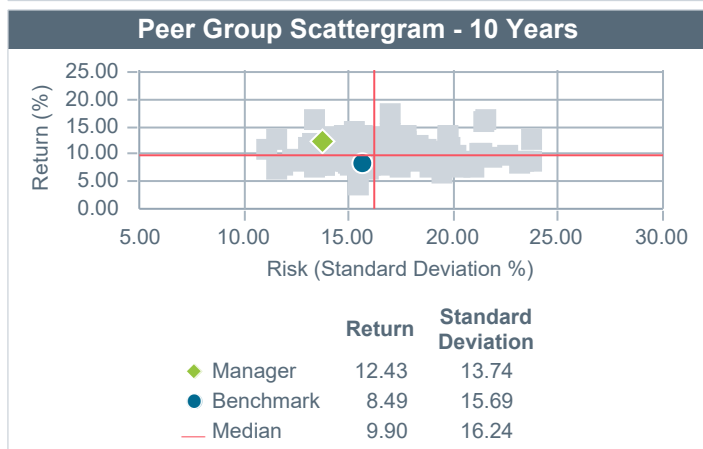


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	2.15	24.52	9.79	14.37	13.86	13.39	39.69	-23.92	28.01	15.54	31.94
Benchmark	-1.98	14.37	5.63	8.68	8.41	8.49	11.46	-7.54	25.16	2.80	26.54
Difference	4.14	10.15	4.15	5.69	5.45	4.91	28.22	-16.38	2.85	12.74	5.40
Peer Group Median	-1.27	15.66	7.52	10.87	10.14	9.90	13.99	-5.41	28.06	4.58	27.52
Rank	7	5	21	10	6	4	2	98	51	12	15
Population	225	225	224	217	209	198	251	259	273	289	312



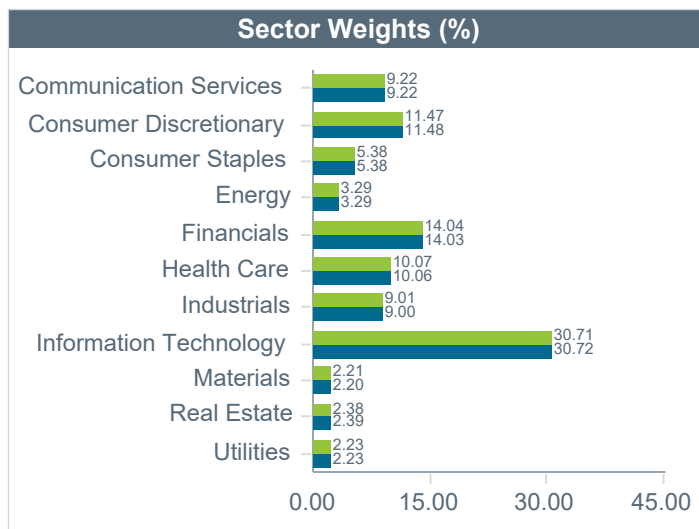
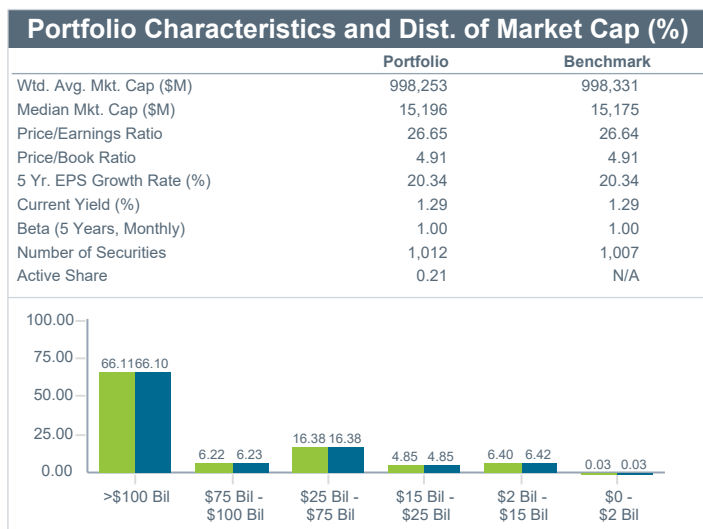
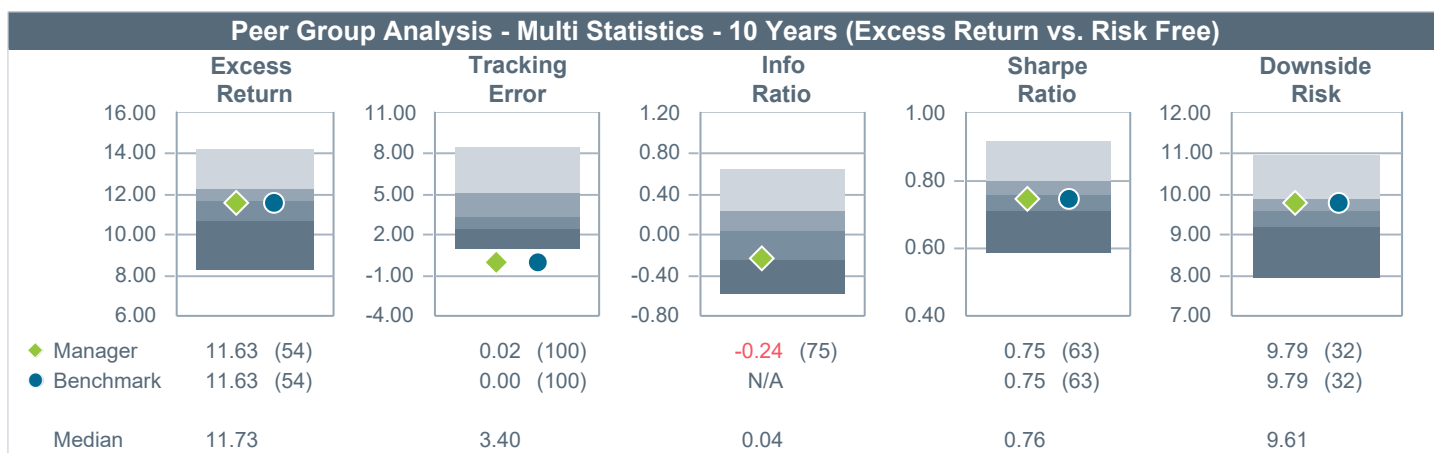
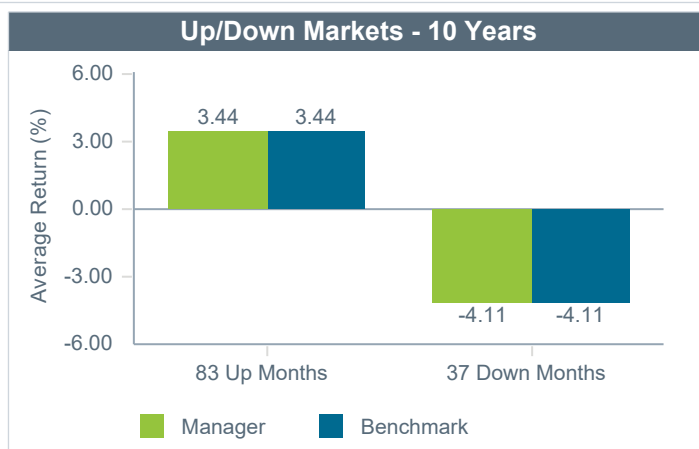
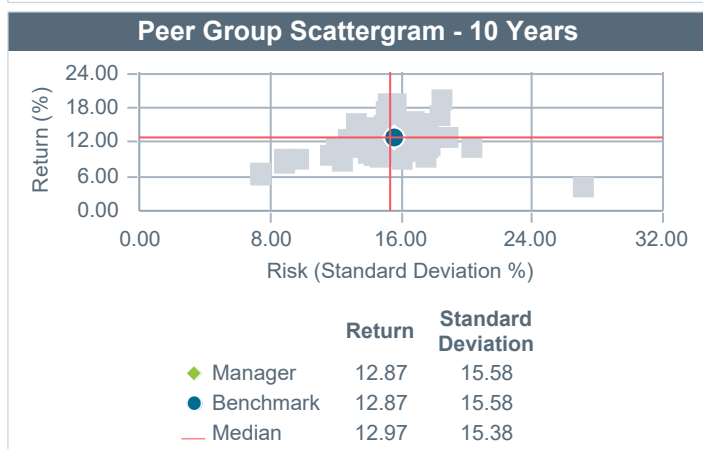
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	-1.09	14.17	9.03	13.25	12.54	12.43	8.99	4.15	30.58	10.07	31.19
Benchmark	-1.98	14.37	5.63	8.68	8.41	8.49	11.46	-7.54	25.16	2.80	26.54
Difference	0.89	-0.20	3.39	4.56	4.13	3.94	-2.48	11.69	5.42	7.27	4.65
Peer Group Median	-1.27	15.66	7.52	10.87	10.14	9.90	13.99	-5.41	28.06	4.58	27.52
Rank	45	59	30	20	11	10	85	6	25	28	18
Population	225	225	224	217	209	198	251	259	273	289	312



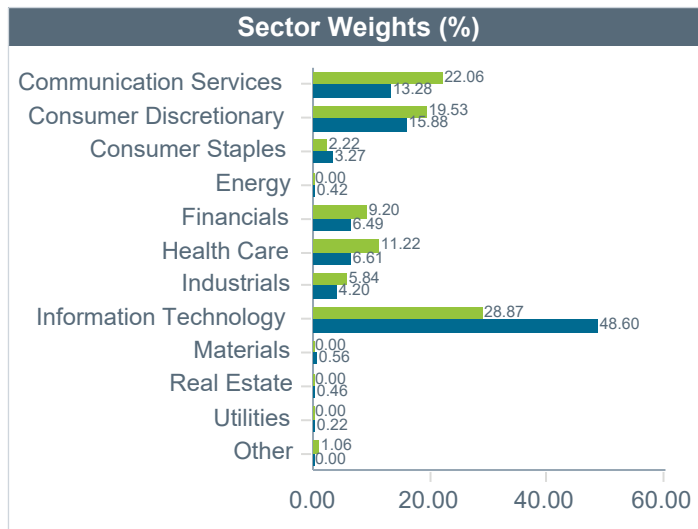
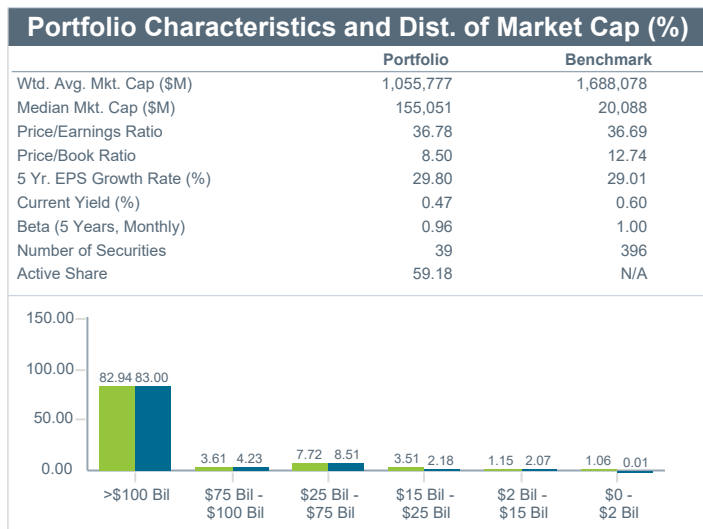
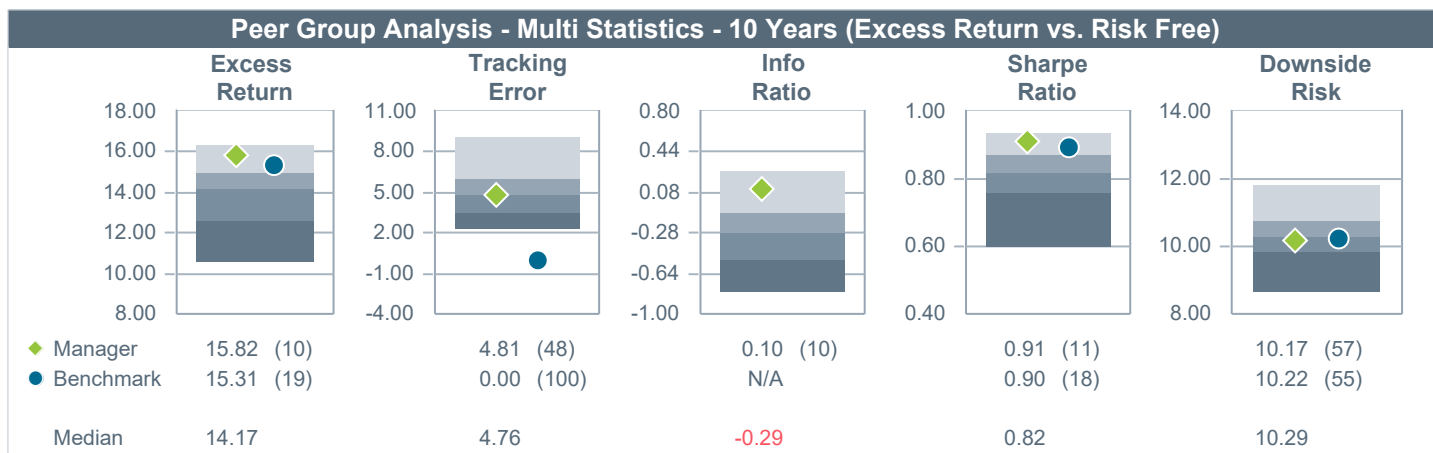
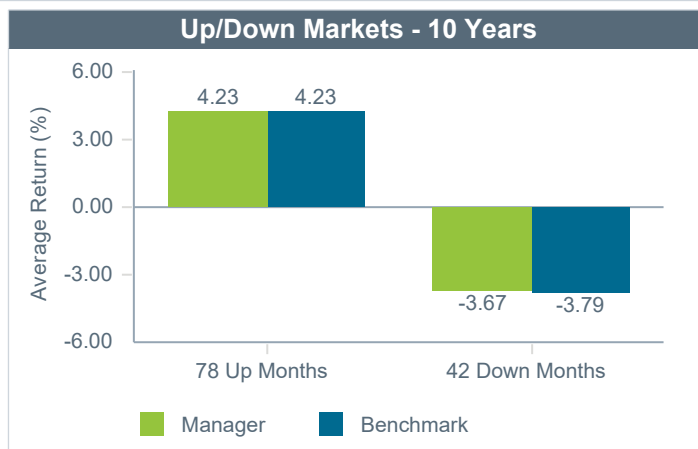
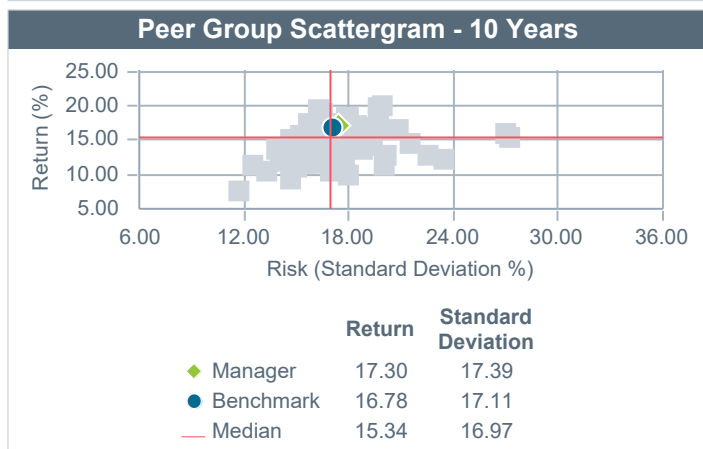
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	2.75	24.50	8.41	14.27	13.58	12.87	26.56	-19.14	26.46	20.91	31.42
Benchmark	2.75	24.51	8.41	14.28	13.58	12.87	26.53	-19.13	26.45	20.96	31.43
Difference	0.00	-0.01	0.00	-0.01	0.00	0.00	0.04	-0.01	0.00	-0.05	-0.01
Peer Group Median	2.31	24.42	8.88	14.34	13.57	12.97	24.70	-16.48	27.77	17.72	30.13
Rank	33	49	57	53	50	55	35	76	60	30	36
Population	191	191	188	181	170	160	217	228	230	243	267



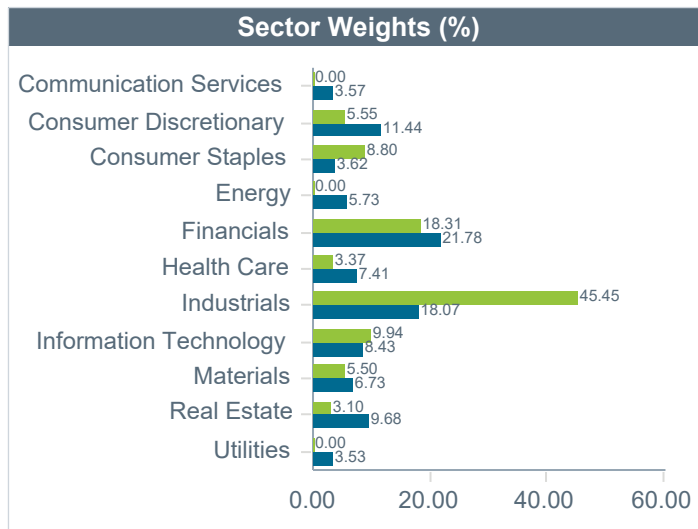
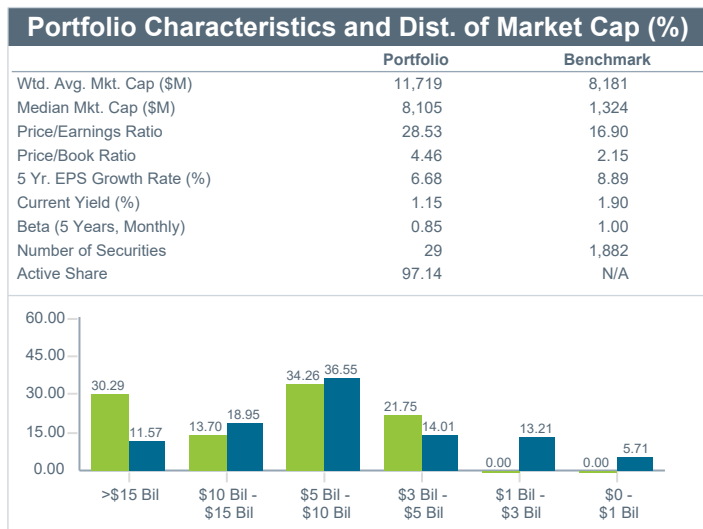
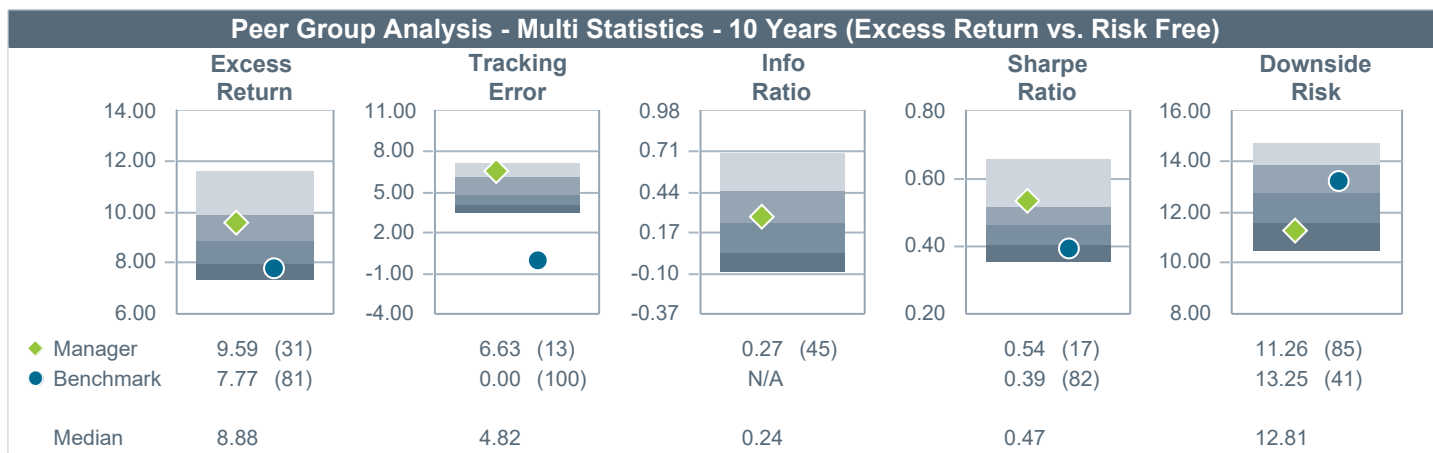
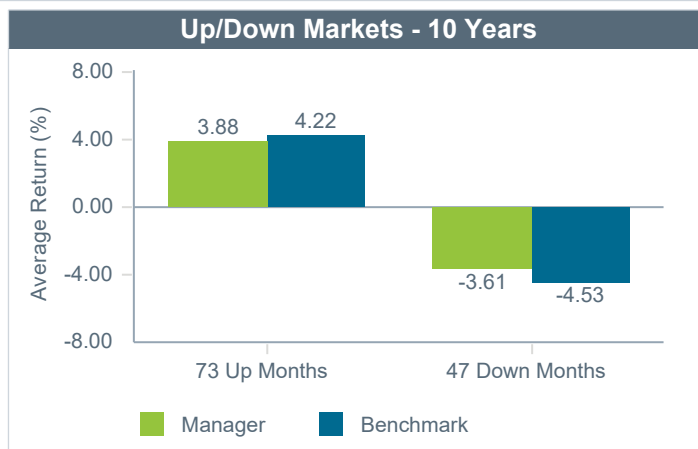
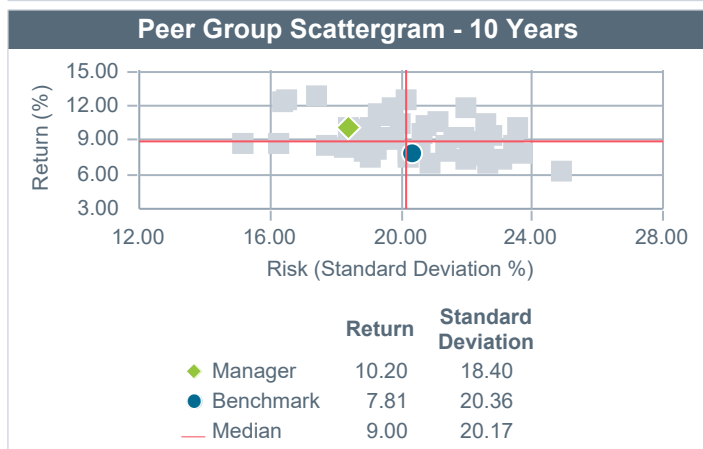
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
<b>Manager</b>	<b>9.51</b>	<b>35.21</b>	<b>14.53</b>	<b>19.00</b>	<b>17.61</b>	<b>17.30</b>	<b>52.53</b>	<b>-27.15</b>	<b>19.45</b>	<b>32.95</b>	<b>32.71</b>
Benchmark	7.07	33.36	10.47	18.96	18.08	16.78	42.68	-29.14	27.60	38.49	36.39
Difference	2.44	1.85	4.06	0.03	-0.47	0.53	9.85	1.98	-8.15	-5.55	-3.68
Peer Group Median	5.05	29.24	8.36	16.36	16.41	15.34	39.65	-29.03	24.98	35.35	34.05
Rank	6	20	2	17	23	9	7	40	81	63	64
Population	181	179	177	174	172	161	208	214	218	228	242



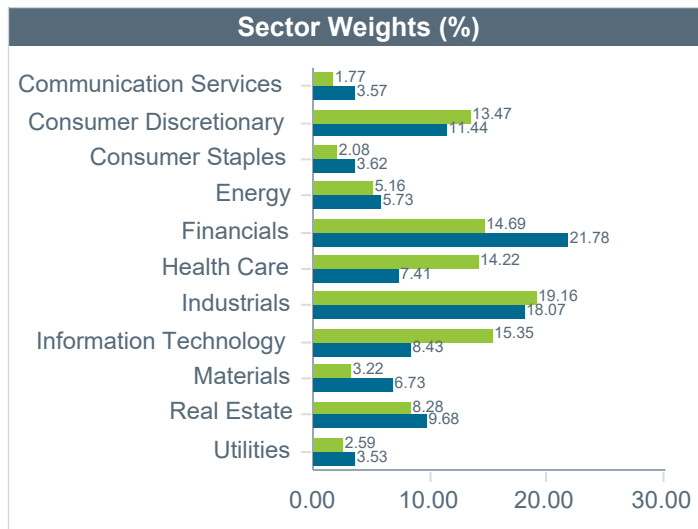
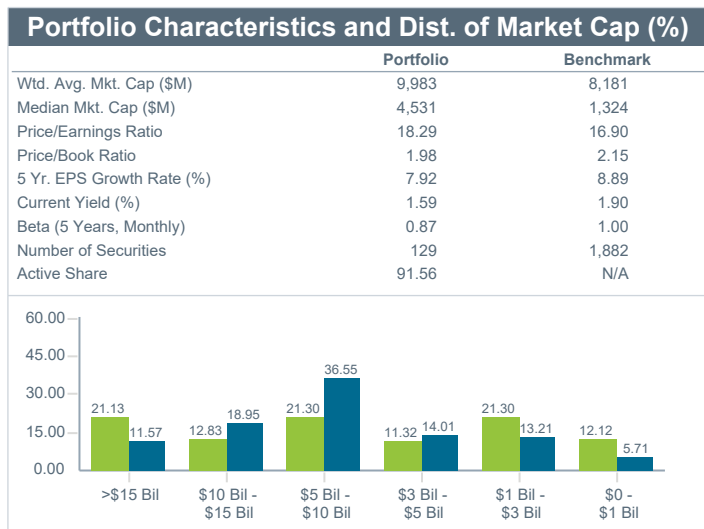
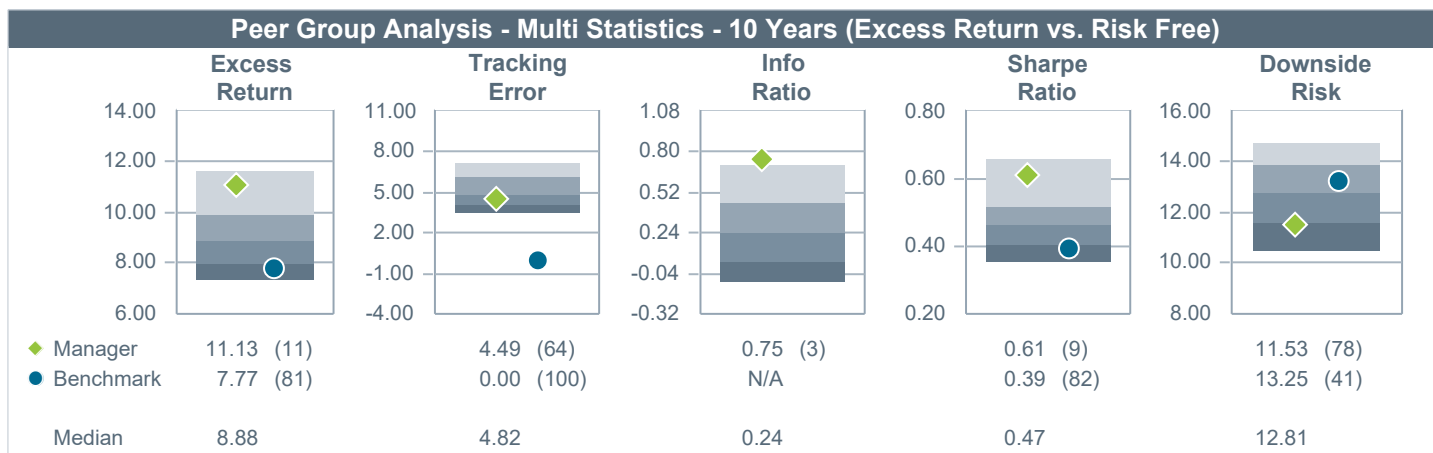
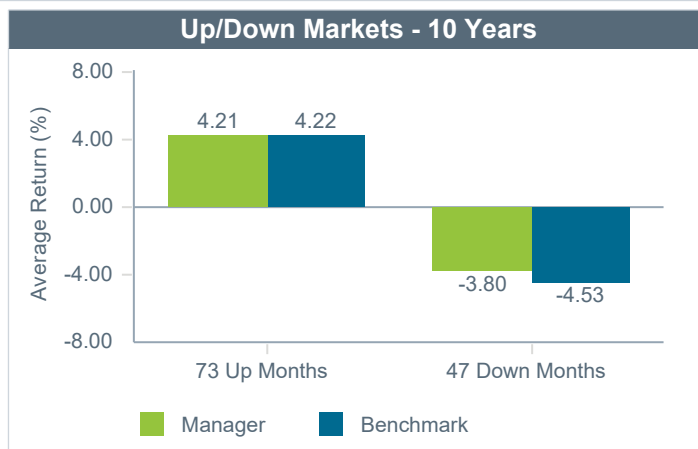
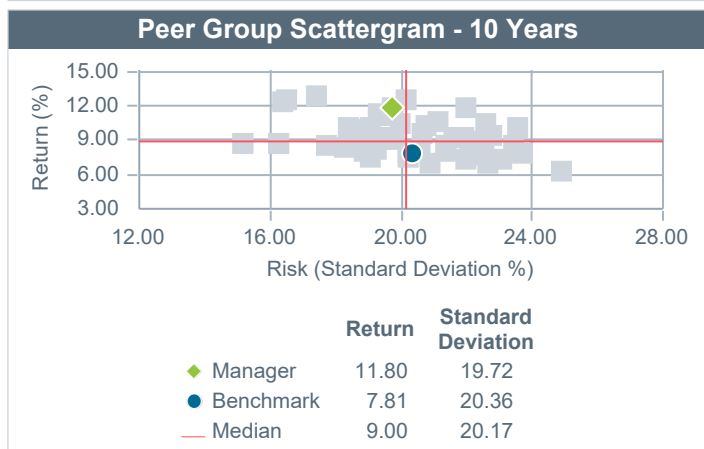
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	-0.61	11.30	1.62	9.84	9.39	10.20	17.87	-20.00	22.18	24.69	33.20
Benchmark	-0.26	10.98	3.81	8.44	7.17	7.81	15.98	-13.08	27.78	4.88	23.56
Difference	-0.35	0.32	-2.19	1.40	2.22	2.40	1.89	-6.92	-5.60	19.82	9.63
Peer Group Median	-0.77	11.39	4.90	9.70	8.72	9.00	16.04	-10.29	28.03	7.07	27.19
Rank	43	52	92	47	41	25	36	91	93	5	7
Population	57	57	57	57	53	50	69	75	77	84	84



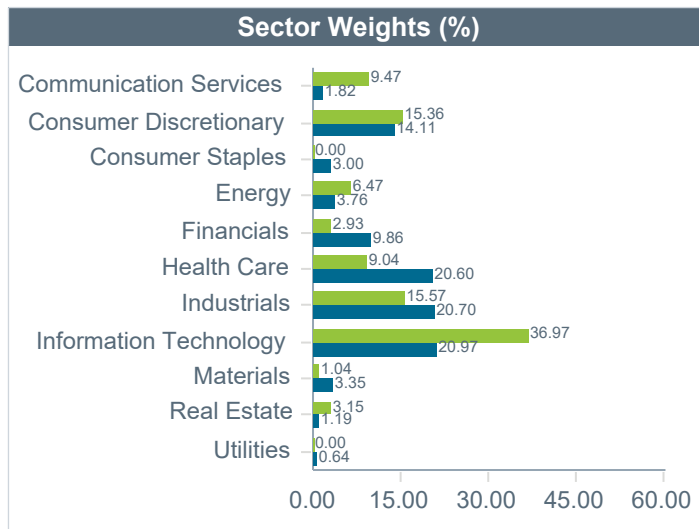
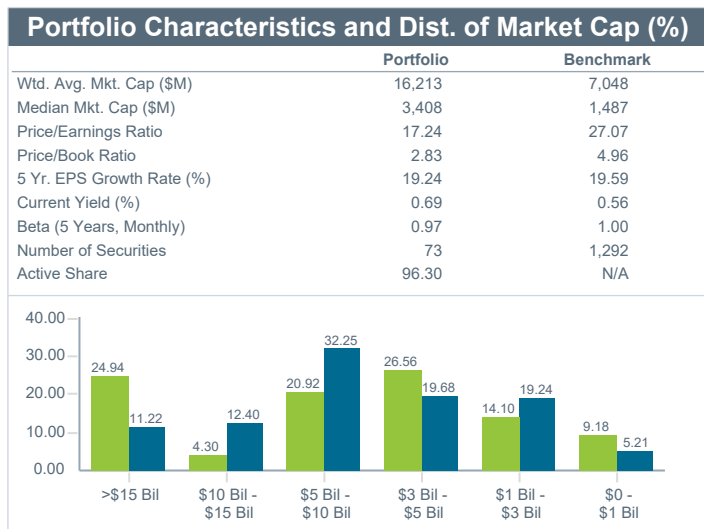
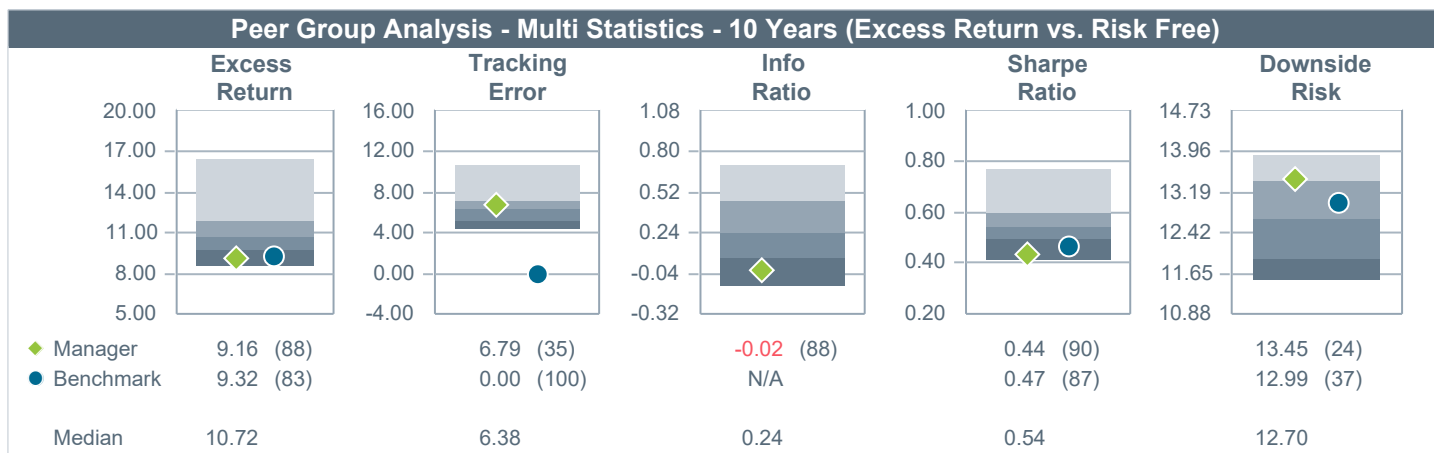
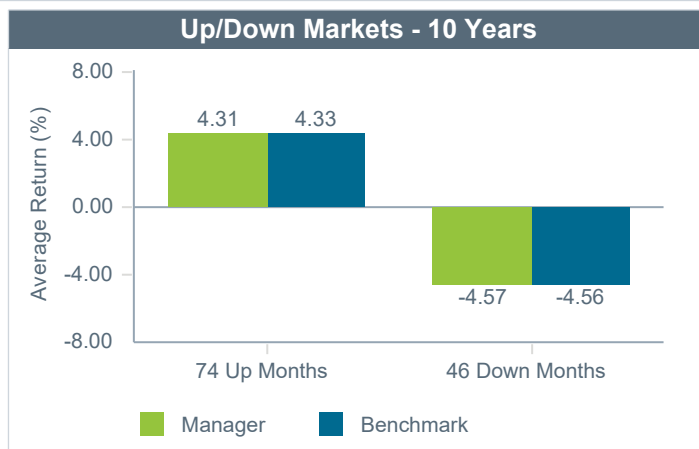
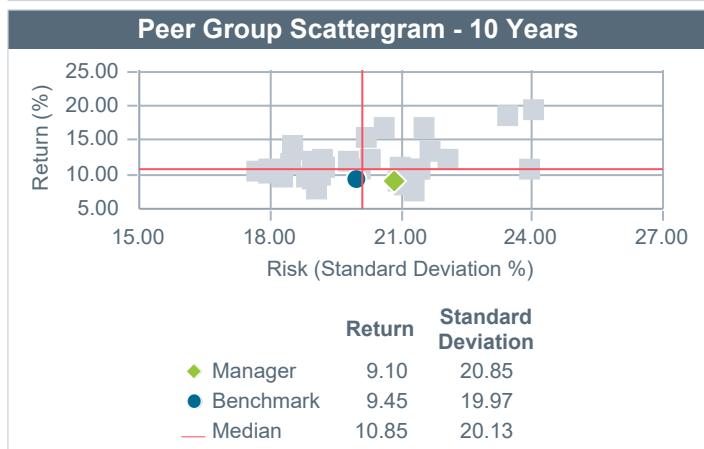
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	0.11	14.27	7.43	11.89	9.80	11.80	19.31	-9.07	31.53	7.55	27.80
Benchmark	-0.26	10.98	3.81	8.44	7.17	7.81	15.98	-13.08	27.78	4.88	23.56
Difference	0.37	3.29	3.61	3.45	2.63	4.00	3.33	4.01	3.75	2.68	4.24
Peer Group Median	-0.77	11.39	4.90	9.70	8.72	9.00	16.04	-10.29	28.03	7.07	27.19
Rank	35	37	15	20	31	11	24	41	27	47	43
Population	57	57	57	57	53	50	69	75	77	84	84



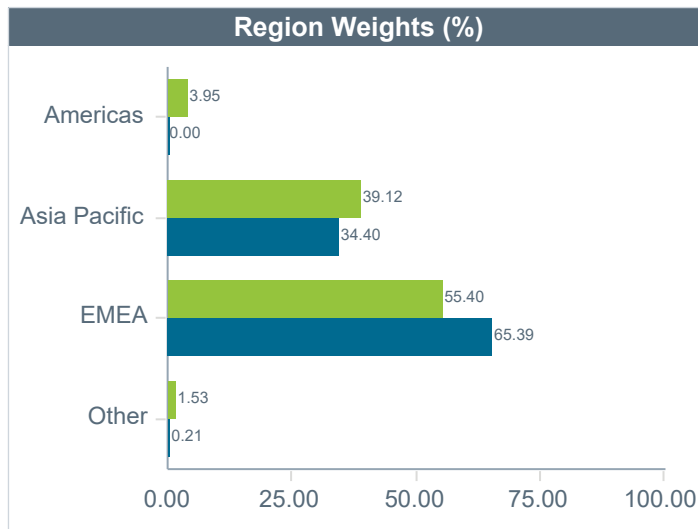
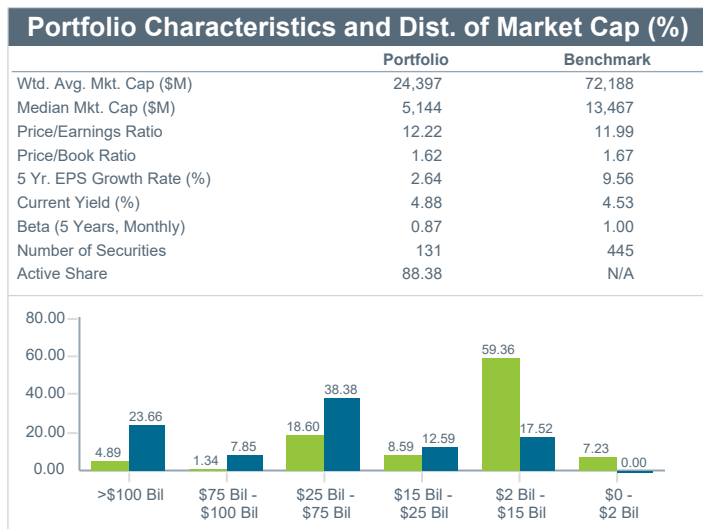
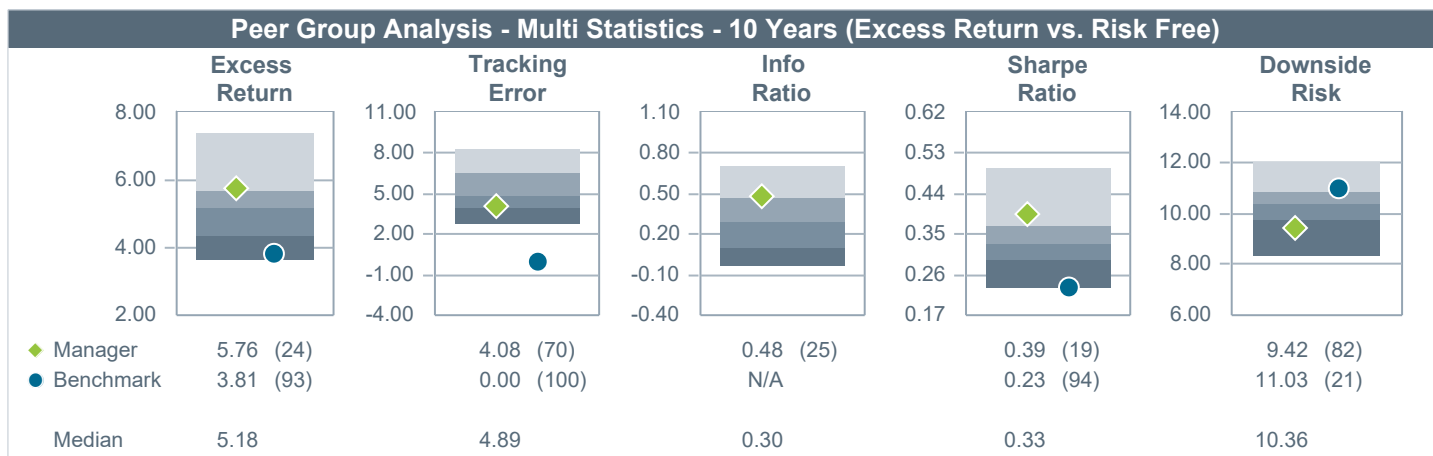
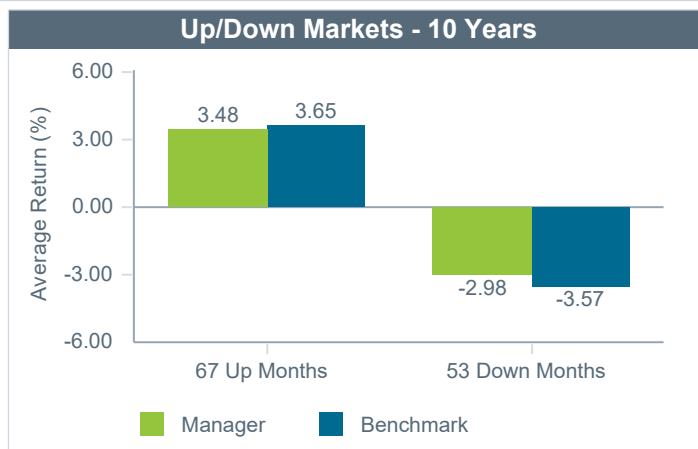
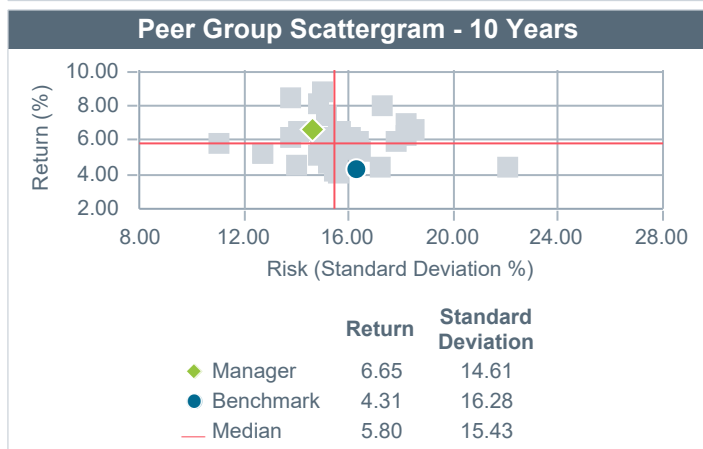
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	1.85	6.72	-2.08	7.12	8.67	9.10	15.67	-23.95	12.71	33.32	41.57
Benchmark	2.43	13.90	-0.02	8.08	8.85	9.45	18.93	-26.21	5.04	40.47	32.65
Difference	-0.58	-7.18	-2.07	-0.96	-0.18	-0.36	-3.26	2.26	7.66	-7.15	8.91
Peer Group Median	2.14	13.51	0.04	10.84	11.09	10.85	18.84	-27.64	13.31	46.85	32.24
Rank	55	85	67	90	91	91	71	32	56	79	5
Population	60	60	60	55	49	38	63	63	65	64	59



Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

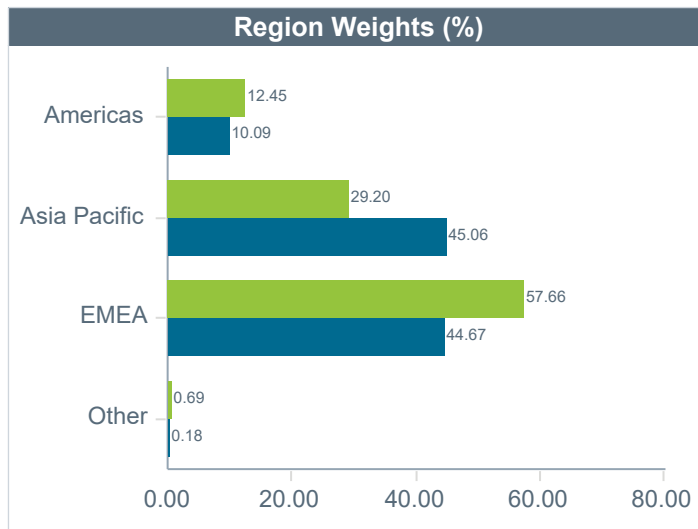
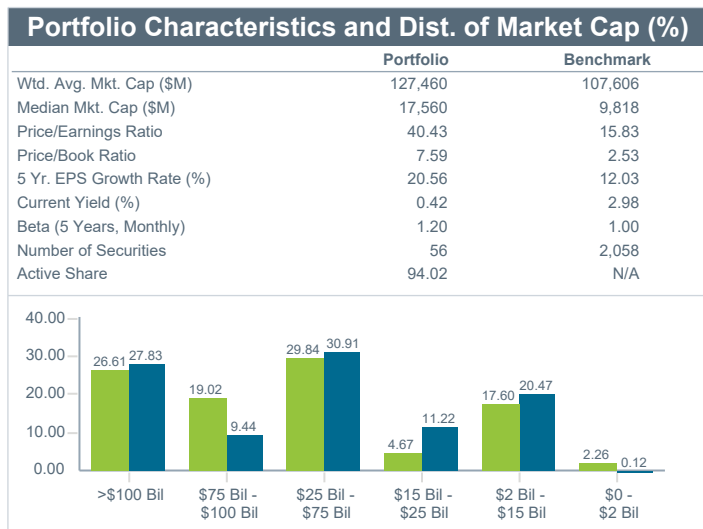
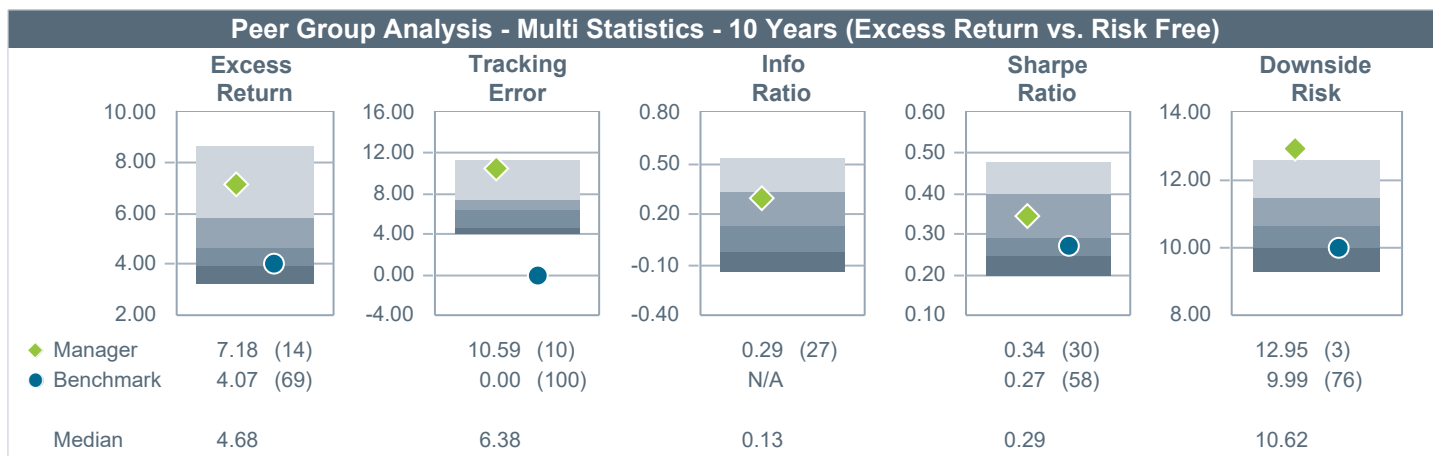
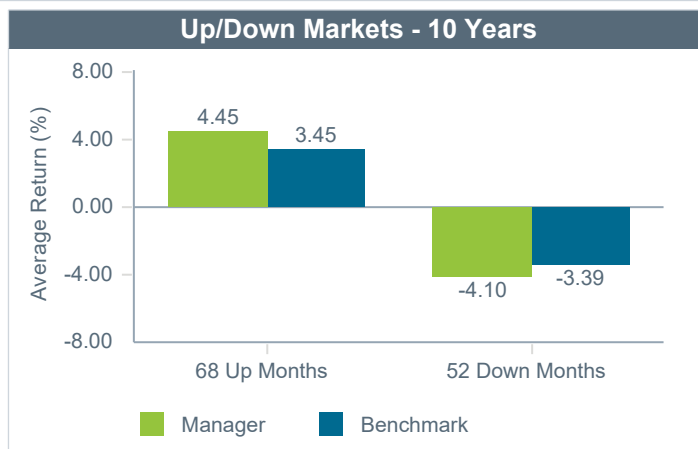
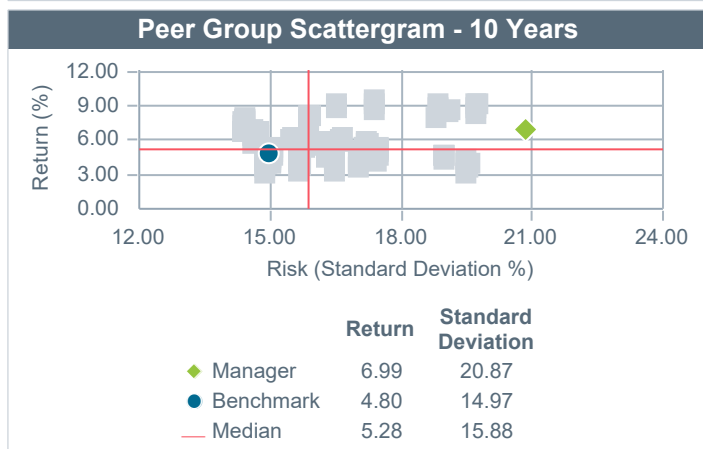
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	-8.79	1.20	5.31	5.66	4.28	6.65	21.78	-5.23	12.52	0.17	18.05
Benchmark	-7.12	5.68	5.88	5.09	3.45	4.31	18.95	-5.58	10.89	-2.63	16.09
Difference	-1.67	-4.48	-0.56	0.57	0.83	2.33	2.83	0.36	1.63	2.80	1.96
Peer Group Median	-7.20	6.02	3.81	5.54	4.67	5.80	18.64	-9.94	11.65	4.55	21.17
Rank	88	91	34	50	58	18	8	10	42	81	90
Population	36	36	36	36	35	35	40	45	46	51	57



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

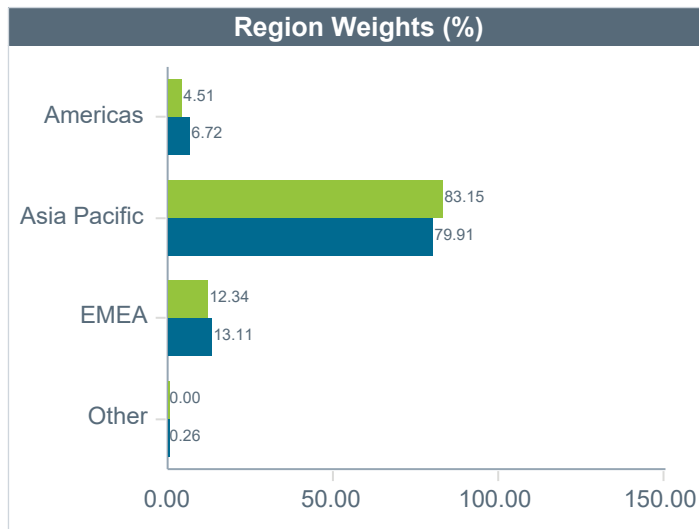
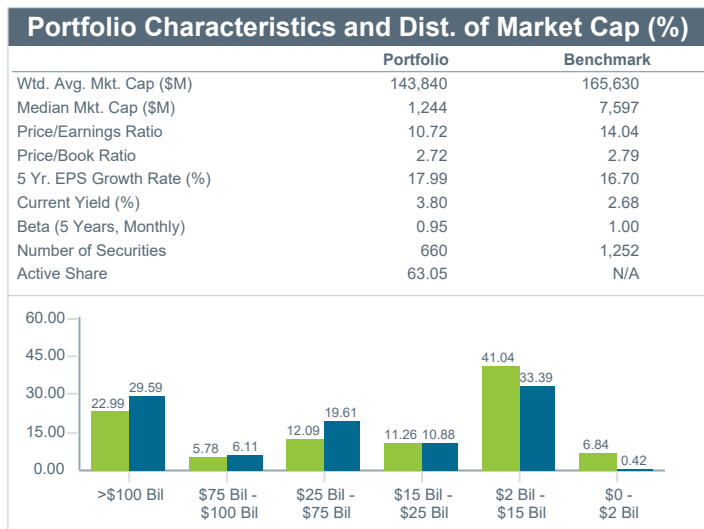
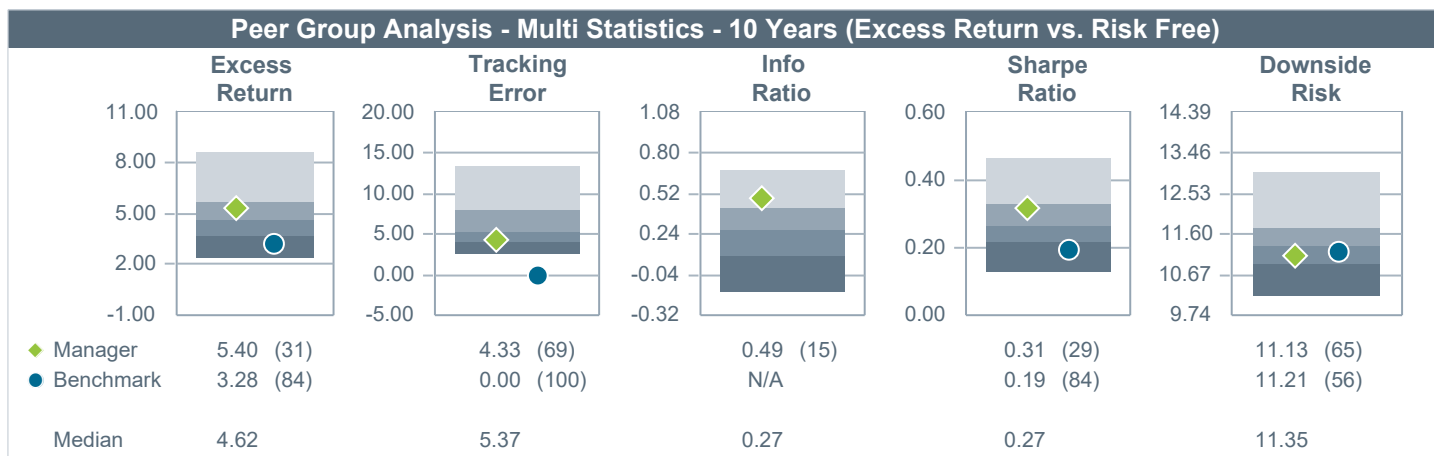
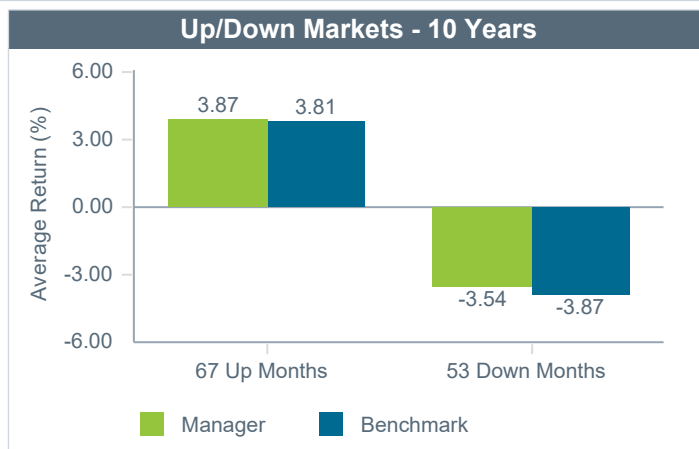
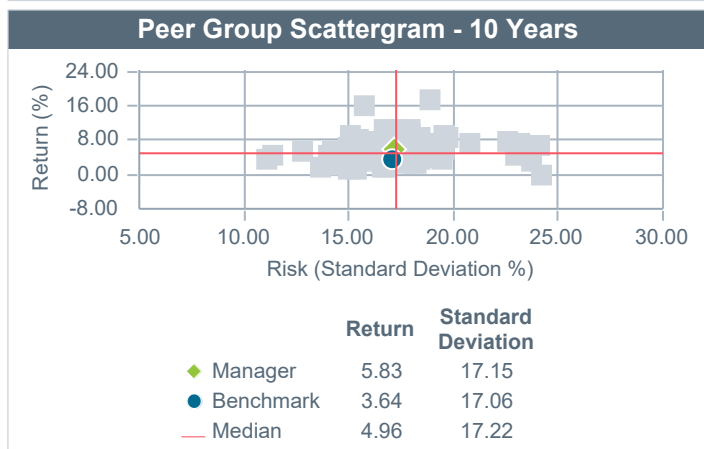


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
<b>Manager</b>	<b>-5.78</b>	<b>7.97</b>	<b>-6.75</b>	<b>3.71</b>	<b>4.54</b>	<b>6.99</b>	<b>14.42</b>	<b>-34.36</b>	<b>-9.32</b>	<b>63.13</b>	<b>37.48</b>
Benchmark	-7.60	5.53	0.82	4.10	3.53	4.80	15.62	-16.00	7.82	10.65	21.51
Difference	1.82	2.44	-7.57	-0.40	1.01	2.19	-1.19	-18.36	-17.14	52.48	15.96
Peer Group Median	-7.34	4.72	-3.26	3.53	3.80	5.28	15.36	-26.63	7.93	22.75	27.84
Rank	25	24	86	40	34	21	65	90	98	1	2
Population	153	153	153	153	153	117	162	170	170	170	172



Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
<b>Manager</b>	<b>-5.21</b>	<b>15.61</b>	<b>4.47</b>	<b>6.89</b>	<b>4.33</b>	<b>5.83</b>	<b>22.81</b>	<b>-19.69</b>	<b>8.75</b>	<b>12.55</b>	<b>18.00</b>
Benchmark	-8.01	7.50	-1.92	1.70	1.38	3.64	9.83	-20.09	-2.54	18.31	18.42
Difference	2.80	8.11	6.39	5.20	2.95	2.19	12.98	0.40	11.30	-5.75	-0.42
Peer Group Median	-6.81	8.13	-0.24	3.62	2.88	4.96	12.91	-19.54	1.13	18.42	20.14
Rank	27	15	20	27	31	31	19	51	26	75	66
Population	281	281	271	251	225	195	314	321	328	353	372



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

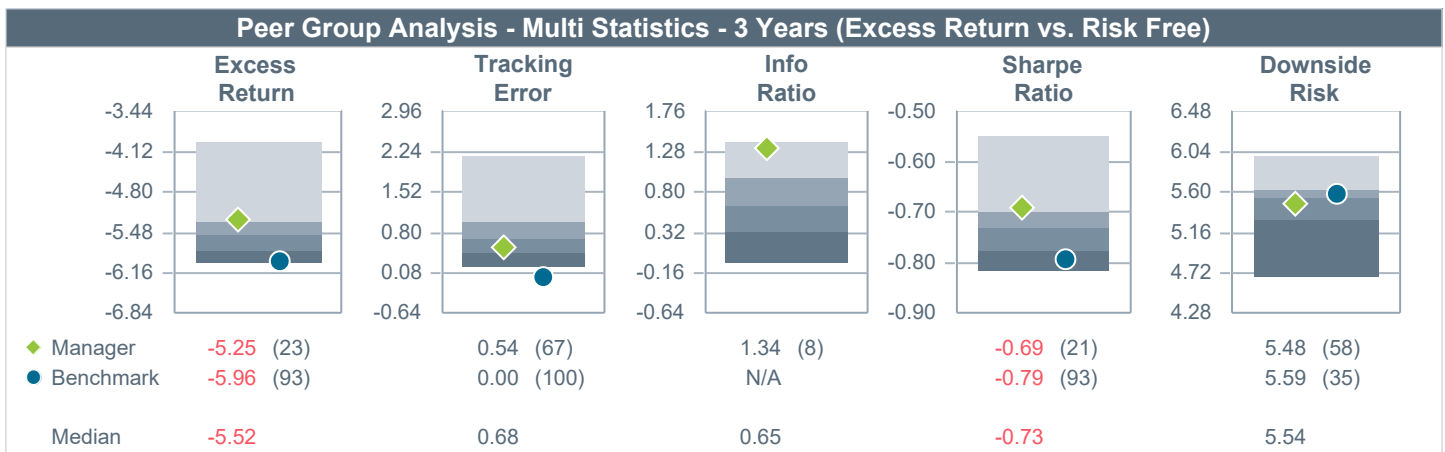
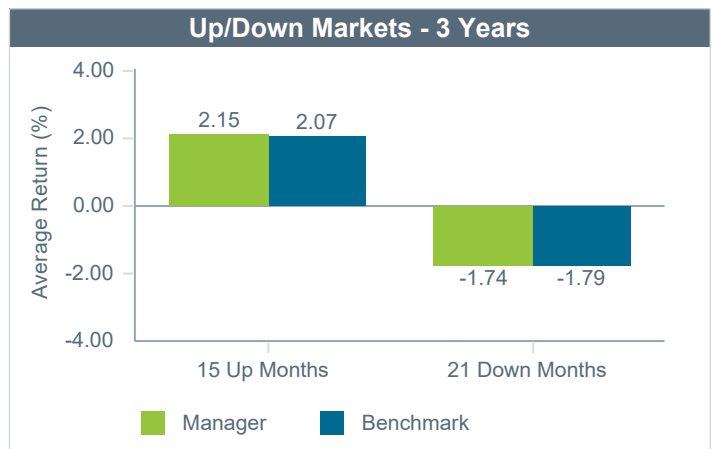
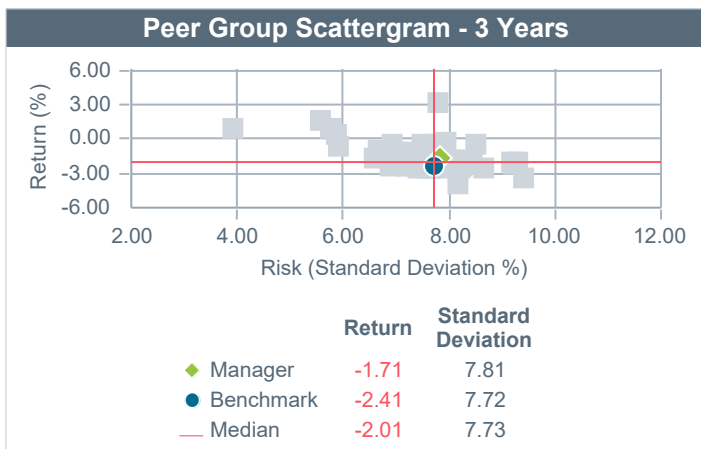
**Manager: Baird Core Fixed Income (SA)**

**As of December 31, 2024**

**Benchmark: Bloomberg US Agg Bond Index**

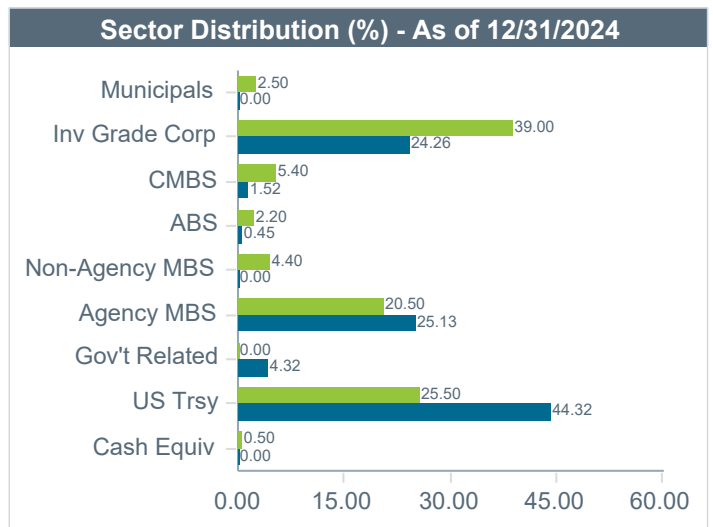
**Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)**

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	-2.81	2.57	-1.71	N/A	N/A	N/A	6.68	-13.23	N/A	N/A	N/A
Benchmark	-3.06	1.25	-2.41	-0.33	0.97	1.35	5.53	-13.01	-1.55	7.51	8.72
Difference	0.26	1.32	0.70	N/A	N/A	N/A	1.15	-0.22	N/A	N/A	N/A
Peer Group Median	-2.99	1.91	-2.01	0.24	1.47	1.85	5.98	-12.95	-1.24	8.34	9.17
Rank	25	21	23	N/A	N/A	N/A	19	74	N/A	N/A	N/A
Population	124	124	122	122	119	116	138	146	152	160	162



### Portfolio Characteristics (%) - As of 12/31/2024

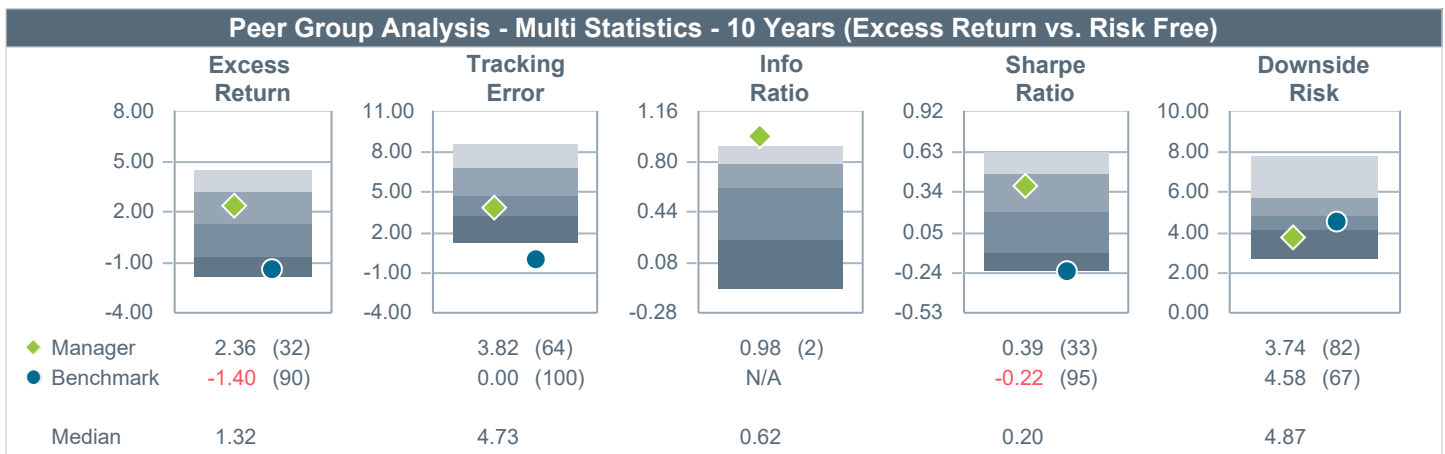
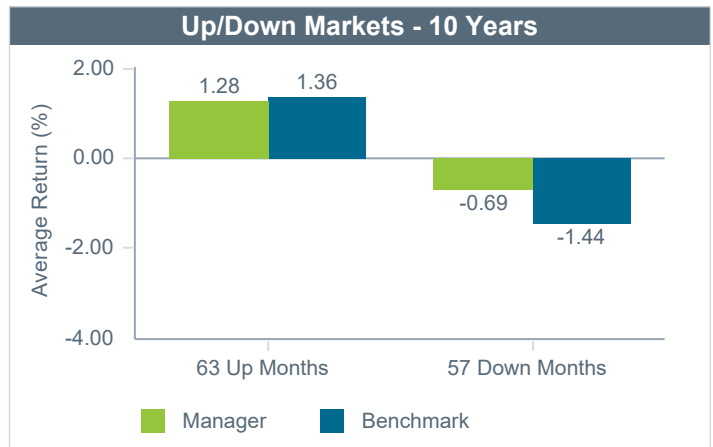
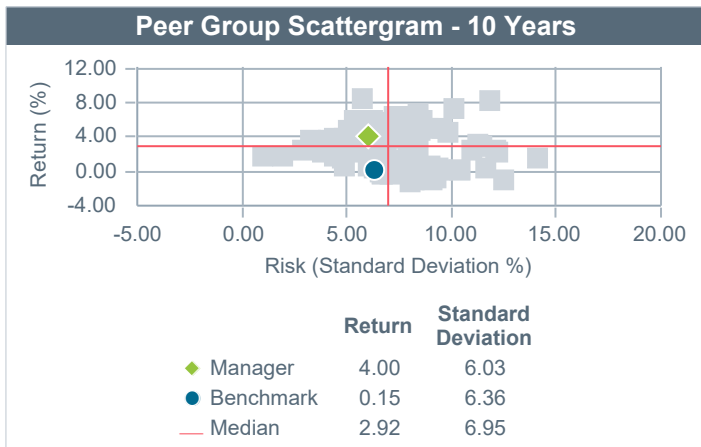
	Portfolio	Benchmark
Effective Duration	6.08	6.08
Spread Duration	3.59	N/A
Avg. Maturity	8.18	8.35
Avg. Quality	Aa3	Aa2/Aa3
Yield To Maturity (%)	N/A	4.91
Coupon Rate (%)	3.58	3.42
Current Yield (%)	N/A	N/A
Holdings Count	208	13,630



Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

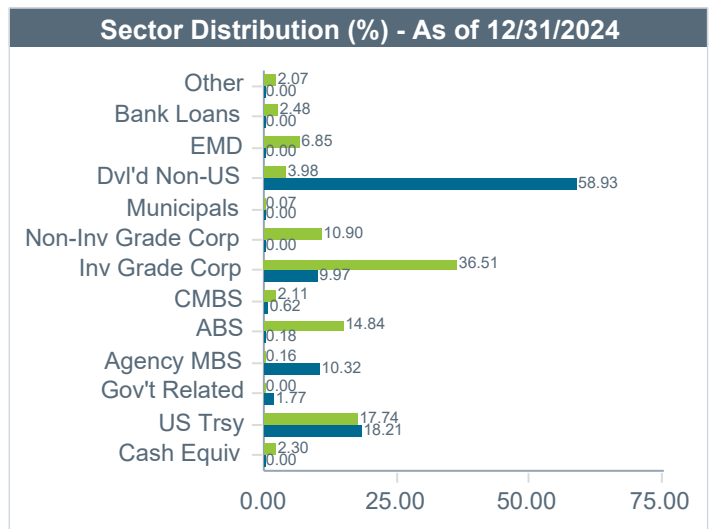


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	-0.99	5.92	0.36	3.18	3.65	4.00	8.56	-12.09	0.55	15.08	9.79
Benchmark	-5.10	-1.69	-4.52	-1.96	-0.64	0.15	5.72	-16.25	-4.71	9.20	6.84
Difference	4.11	7.60	4.88	5.14	4.29	3.85	2.85	4.16	5.25	5.88	2.95
Peer Group Median	-1.29	4.24	0.25	1.76	2.53	2.92	9.16	-12.06	0.52	8.39	9.72
Rank	43	37	48	36	33	32	54	51	49	7	49
Population	176	176	172	169	155	140	217	228	239	255	262



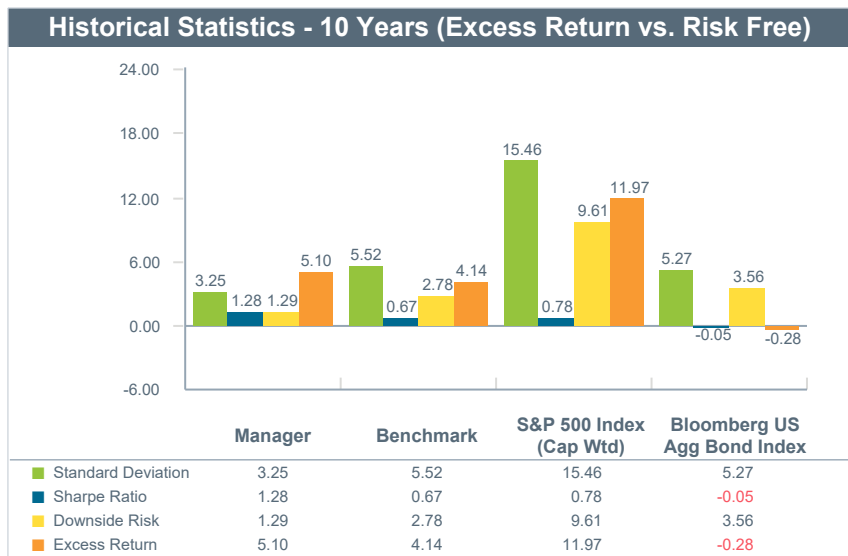
### Portfolio Characteristics (%) - As of 12/31/2024

	Portfolio	Benchmark
Effective Duration	4.61	6.55
Spread Duration	3.76	N/A
Avg. Maturity	5.58	8.43
Avg. Quality	Baa2	N/A
Yield To Maturity (%)	5.75	3.68
Coupon Rate (%)	5.12	2.86
Current Yield (%)	5.29	N/A
Holdings Count	858	30,422



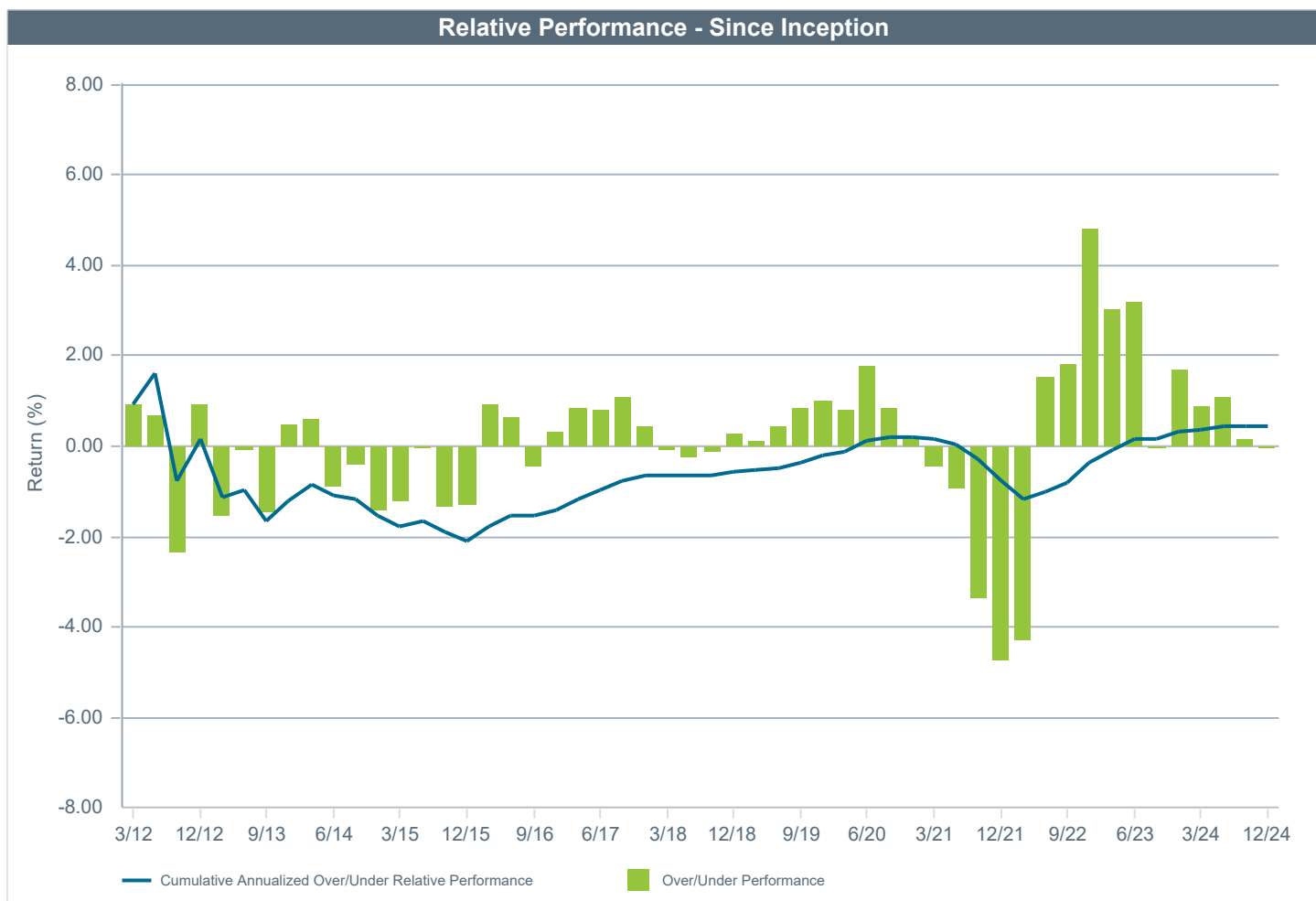
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	1.11	0.63	2.16	4.41	5.43	6.98	-4.91	11.43	10.94	4.91	7.87
Benchmark	1.16	-1.43	-2.32	2.87	3.99	5.88	-12.02	7.47	22.17	1.19	5.34
Difference	-0.05	2.06	4.48	1.54	1.44	1.10	7.11	3.96	-11.23	3.72	2.53



### Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.80
S&P 500 Index (Cap Wtd)	-0.41
Russell 2000 Index	-0.32
MSCI EAFE Index (USD) (Net)	-0.39
MSCI Emg Mkts Index (USD) (Net)	-0.27
Bloomberg US Agg Bond Index	-0.36
Bloomberg US Trsy US TIPS Index	-0.34
Wilshire US REIT Index	-0.31
HFRI FOF Comp Index	-0.36
Bloomberg Cmdty Index (TR)	0.04
ICE BofAML 3 Mo US T-Bill Index	-0.73
Cons Price Index (Unadjusted)	0.31
NCREIF ODCE Index (AWA) (Gross)	0.80



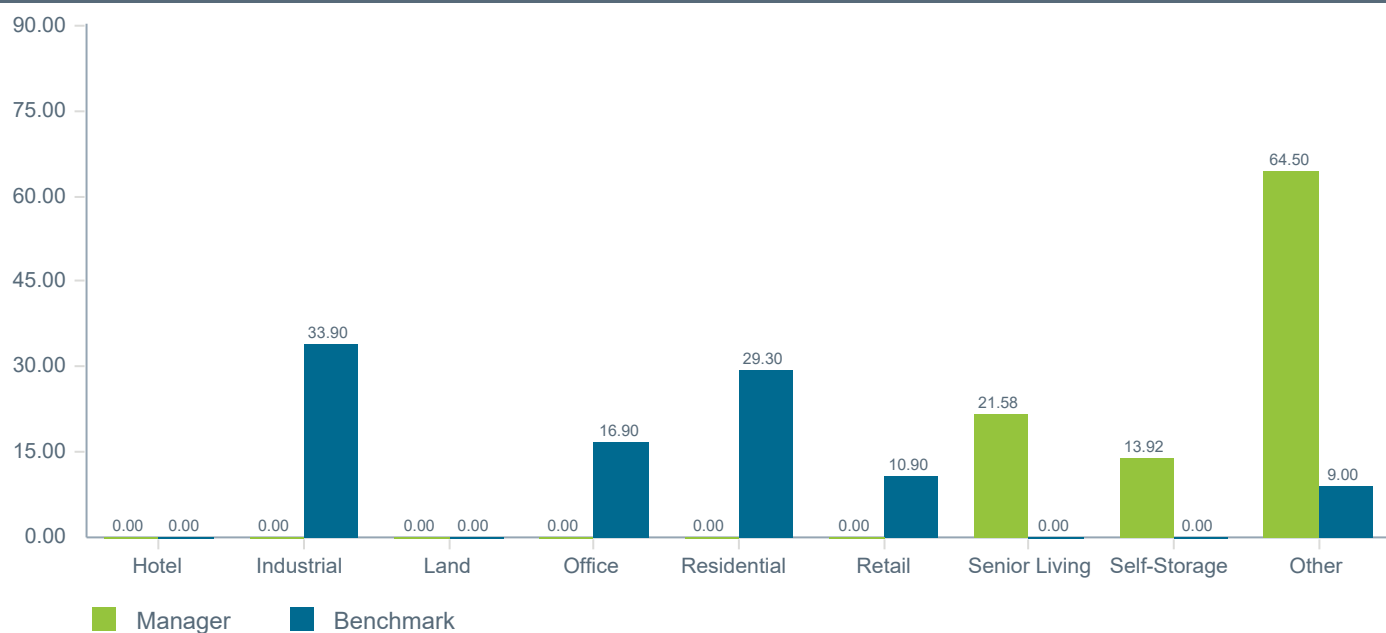
**Investment Strategy**

The Fund's strategy is on primarily stabilized income-producing investments in niche sectors; Education, Health, and Storage. Within these sectors the fund invests in student housing, seniors housing, medical office buildings, life science buildings, and self-storage. The majority of the return from the Fund is expected to be realized from current income, with a modest portion of the return to be derived from asset appreciation. Harrison Street believes that the primary property types it targets will provide better risk/return profiles than properties in traditional core portfolios across all economic cycles.

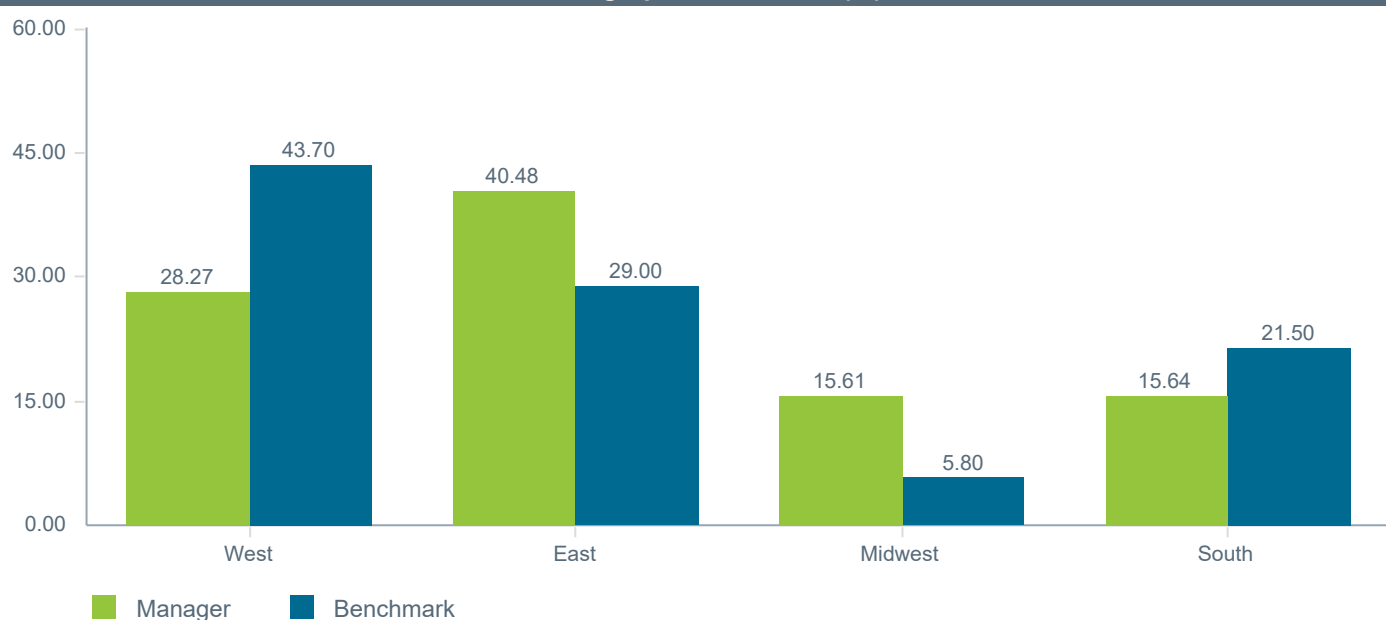
**Investment Profile**

Fund Inception	2011
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	13,058
Fund Leverage %	26.65
Portfolio Occupancy %	90.80
Cash Reserve %	0.34
Number of Investments	388
Number of Limited Partners	266

**Property Type Allocation (%)**

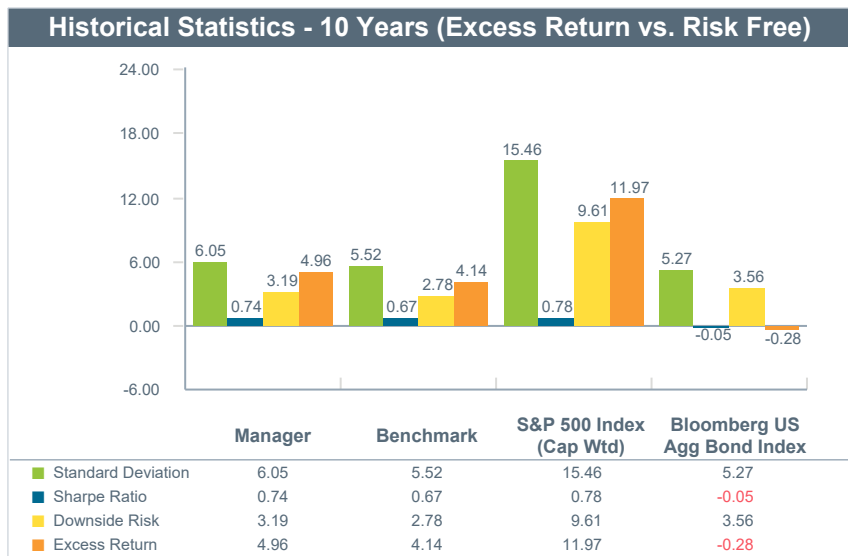


**Geographic Allocation (%)**



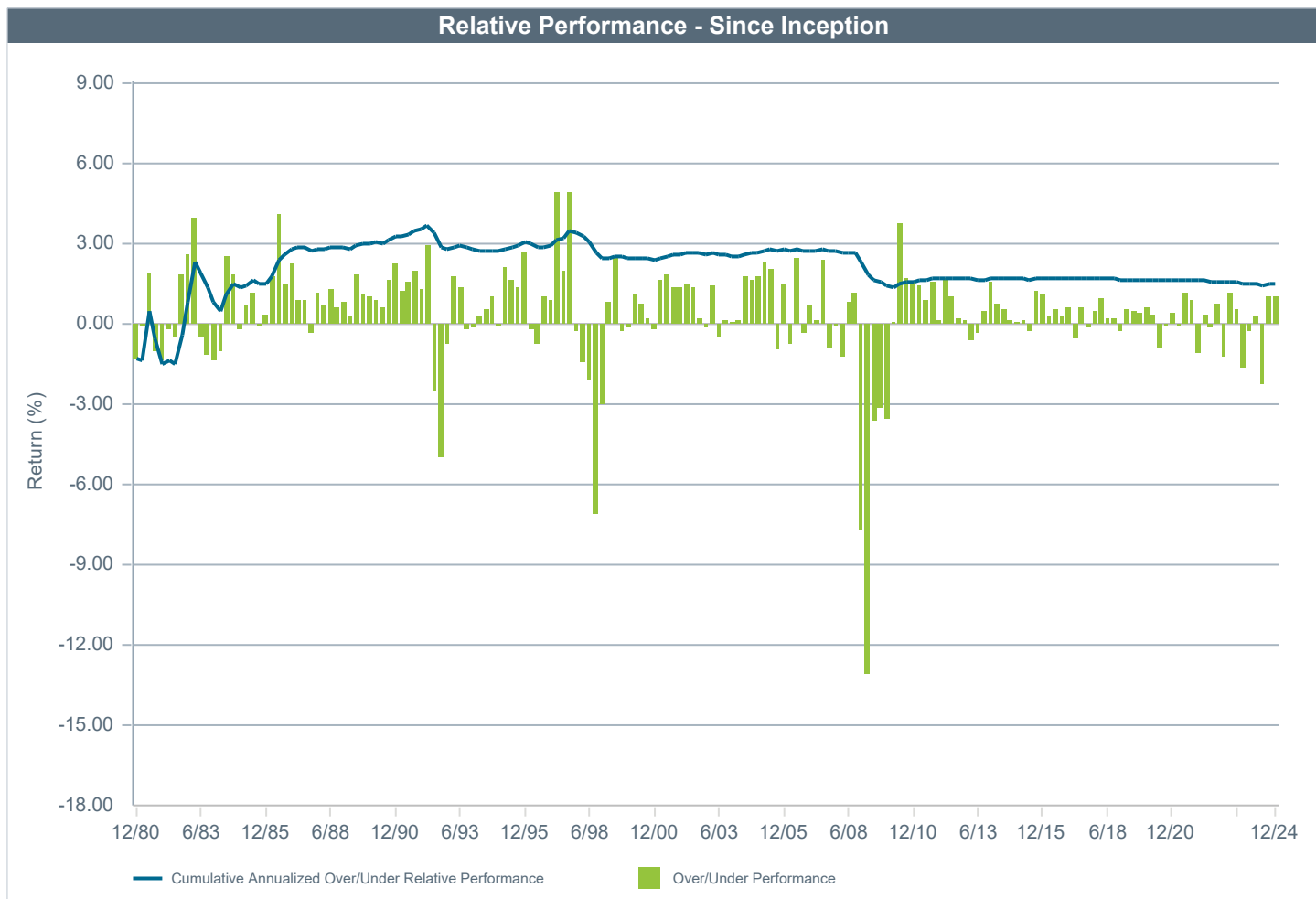
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Allocation to "Other" consists of entertainment, parking, data center, and operating land.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	2.18	-1.37	-2.46	2.94	4.50	6.70	-12.17	7.13	23.30	1.03	7.52
Benchmark	1.16	-1.43	-2.32	2.87	3.99	5.88	-12.02	7.47	22.17	1.19	5.34
Difference	1.02	0.06	-0.14	0.07	0.51	0.83	-0.16	-0.34	1.13	-0.16	2.18



### Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.97
S&P 500 Index (Cap Wtd)	-0.30
Russell 2000 Index	-0.25
MSCI EAFE Index (USD) (Net)	-0.36
MSCI Emg Mkts Index (USD) (Net)	-0.36
Bloomberg US Agg Bond Index	-0.33
Bloomberg US Trsy US TIPS Index	-0.24
Wilshire US REIT Index	-0.07
HFRI FOF Comp Index	-0.29
Bloomberg Cmnty Index (TR)	0.14
ICE BofAML 3 Mo US T-Bill Index	-0.70
Cons Price Index (Unadjusted)	0.32



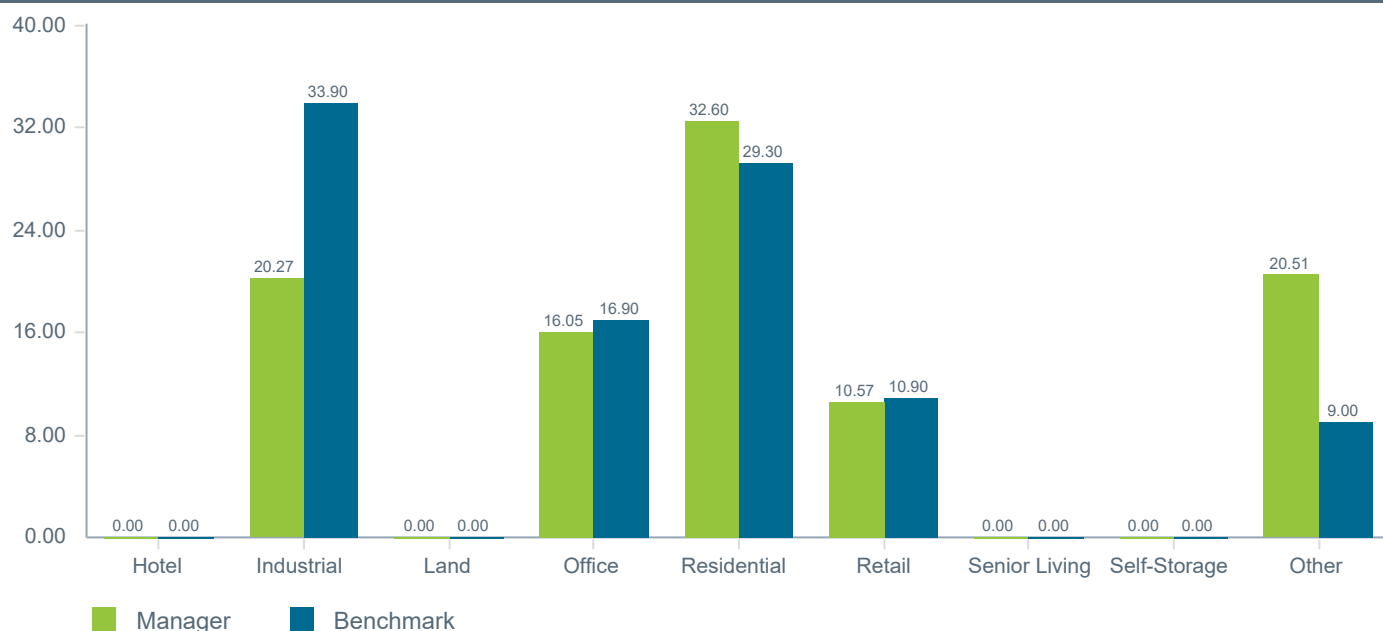
**Investment Strategy**

The Fund pursues a diversified core-plus real estate strategy that seeks to generate a total return before fees of 9.0% to 12.0% annually by structuring investments to enhance risk-adjusted returns. Investments may be made through direct property ownership or indirectly through such vehicles as joint ventures, general or limited partnerships, limited liability companies, mortgage loans and other loan types, including mezzanine debt, and debt secured by an interest in the borrowing entity or interests in companies or entities that directly or indirectly hold real estate or real estate interests. It operates with a leverage limit of 40% and may invest up to 35% of its gross assets in higher-risk, non-core real estate investment opportunities.

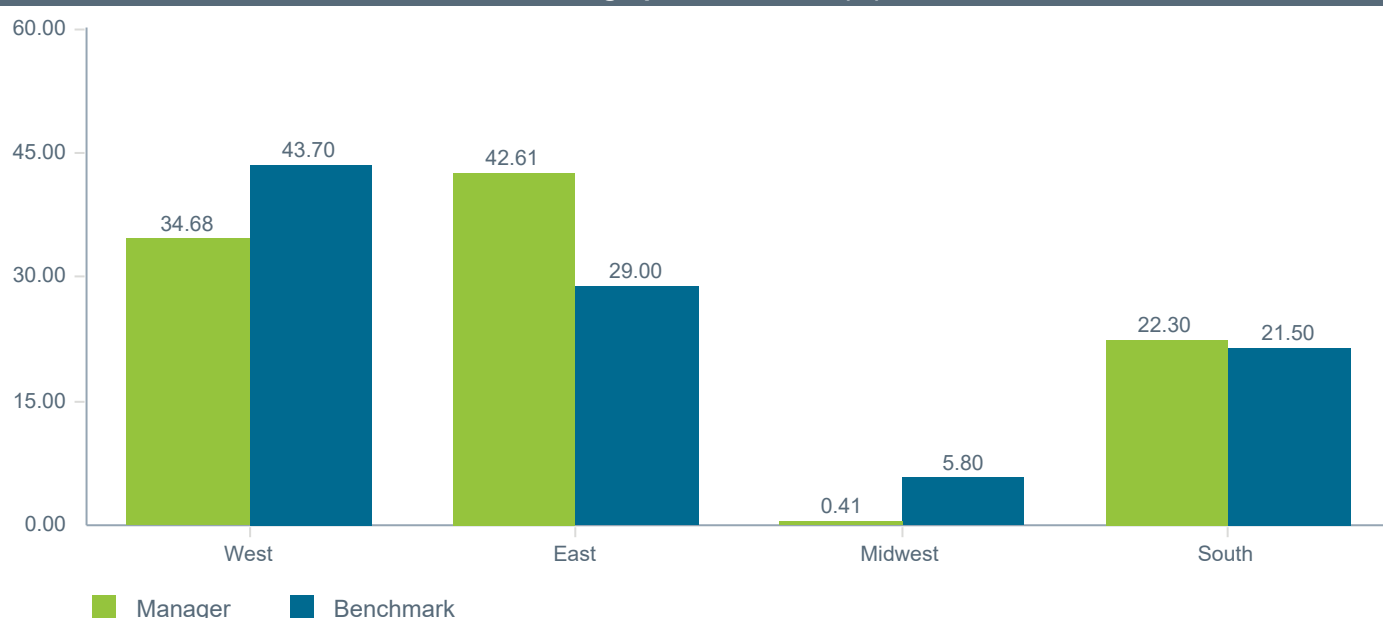
**Investment Profile**

Fund Inception	1980
Legal Structure	REIT
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	15,439
Fund Leverage %	41.55
Portfolio Occupancy %	87.62
Cash Reserve %	1.93
Number of Investments	129
Number of Limited Partners	117

**Property Type Allocation (%)**



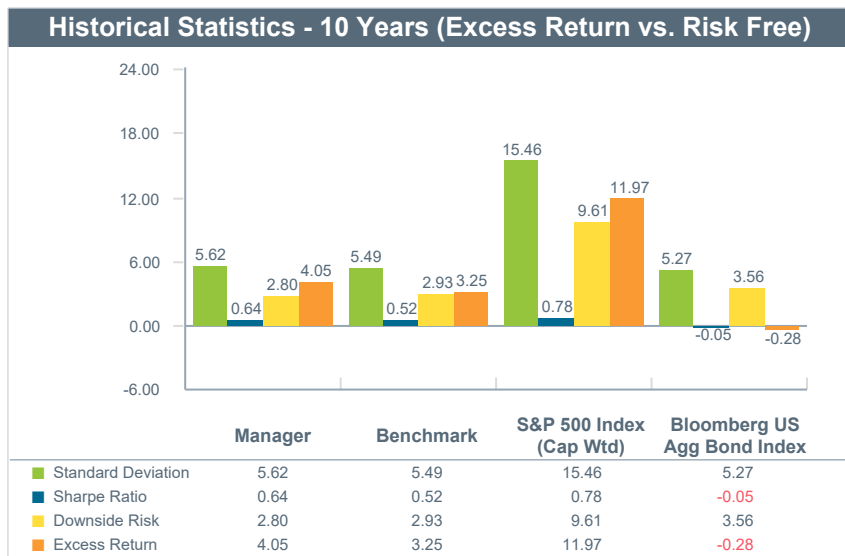
**Geographic Allocation (%)**



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Allocation to "Other" consists of entertainment, parking, data center, and operating land.

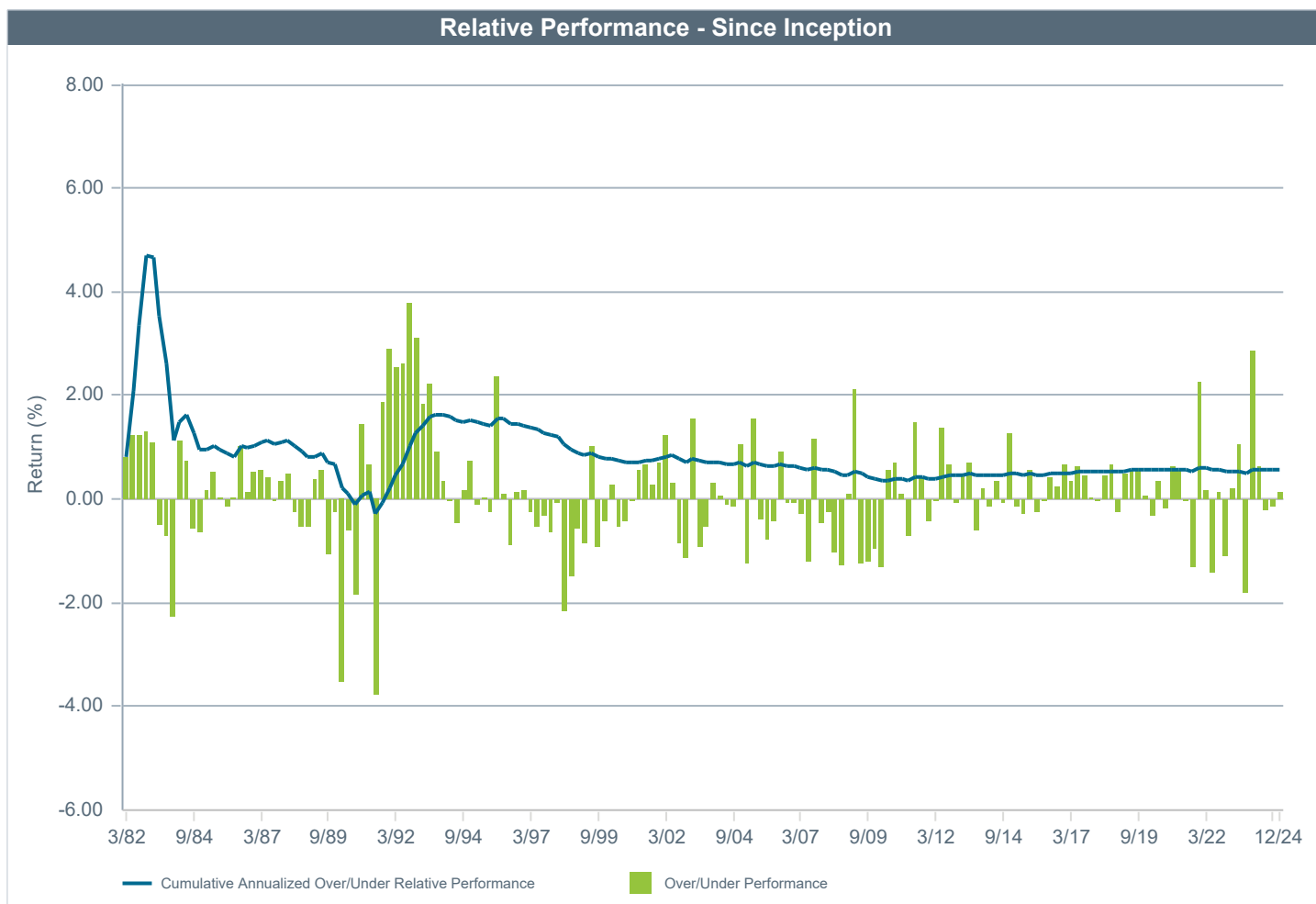


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	1.11	-1.85	-2.95	2.51	3.84	5.77	-10.69	4.27	22.83	0.81	6.22
Benchmark	0.96	-2.27	-3.14	1.99	3.08	4.94	-12.73	6.55	21.02	0.34	4.39
Difference	0.15	0.42	0.19	0.52	0.76	0.83	2.04	-2.28	1.81	0.46	1.83



### Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Net)	0.96
S&P 500 Index (Cap Wtd)	-0.17
Russell 2000 Index	-0.16
MSCI EAFE Index (USD) (Net)	-0.28
MSCI Emg Mkts Index (USD) (Net)	-0.27
Bloomberg US Agg Bond Index	-0.28
Bloomberg US Trsy US TIPS Index	-0.16
Wilshire US REIT Index	0.07
HFRI FOF Comp Index	-0.22
Bloomberg Cmdty Index (TR)	0.16
ICE BofAML 3 Mo US T-Bill Index	-0.69
Cons Price Index (Unadjusted)	0.31
NCREIF ODCE Index (AWA) (Gross)	0.96



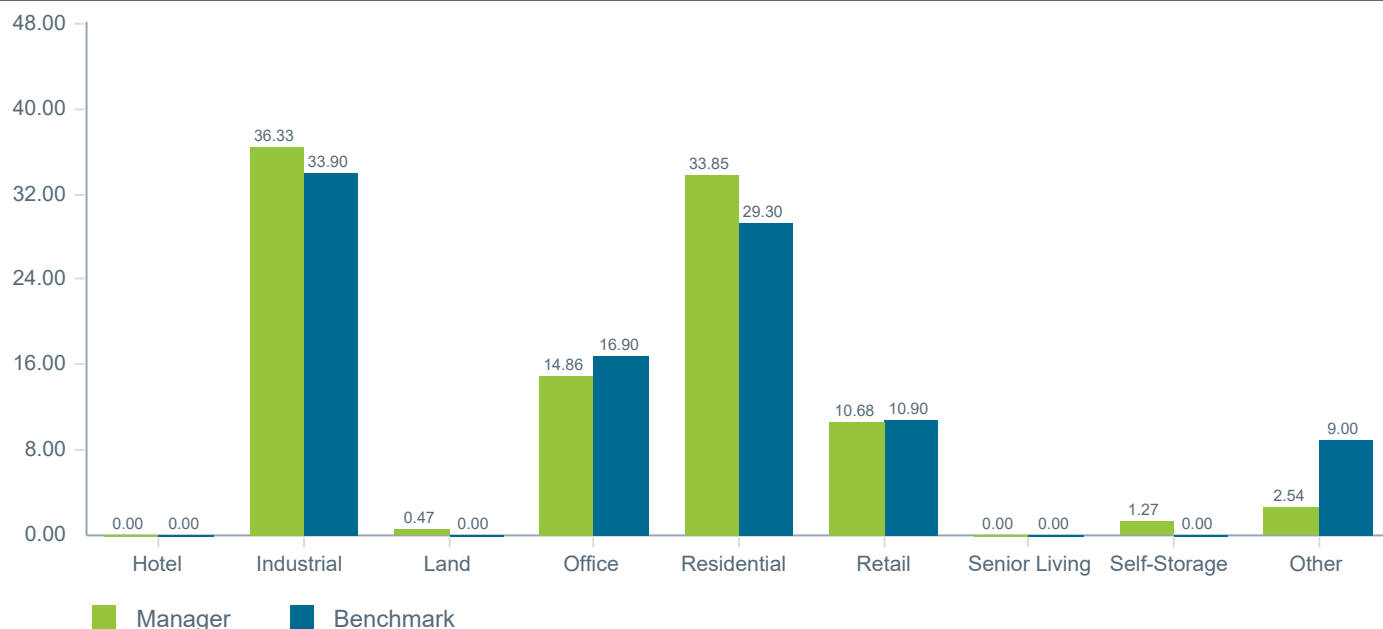
**Investment Strategy**

The Principal U.S. Property Account is a core real estate account designed to have a low to moderate risk profile consistent with other open-end real estate funds comprising the NFI-ODCE. This risk profile has two components: 1) a low to moderate real estate property risk profile; and 2) a low to moderate risk portfolio level operating profile. Low to moderate real estate property risk is accomplished by investing primarily in well-leased properties on an unleveraged basis. Long-term investment objectives include investing in a well-diversified portfolio and meeting or exceeding the NFI-ODCE over a full market cycle. Low to moderate portfolio level risk is accomplished by operating with limited portfolio level obligations and a well-diversified portfolio. The Account invests in the traditional real estate property types; multifamily, office, industrial, and retail.

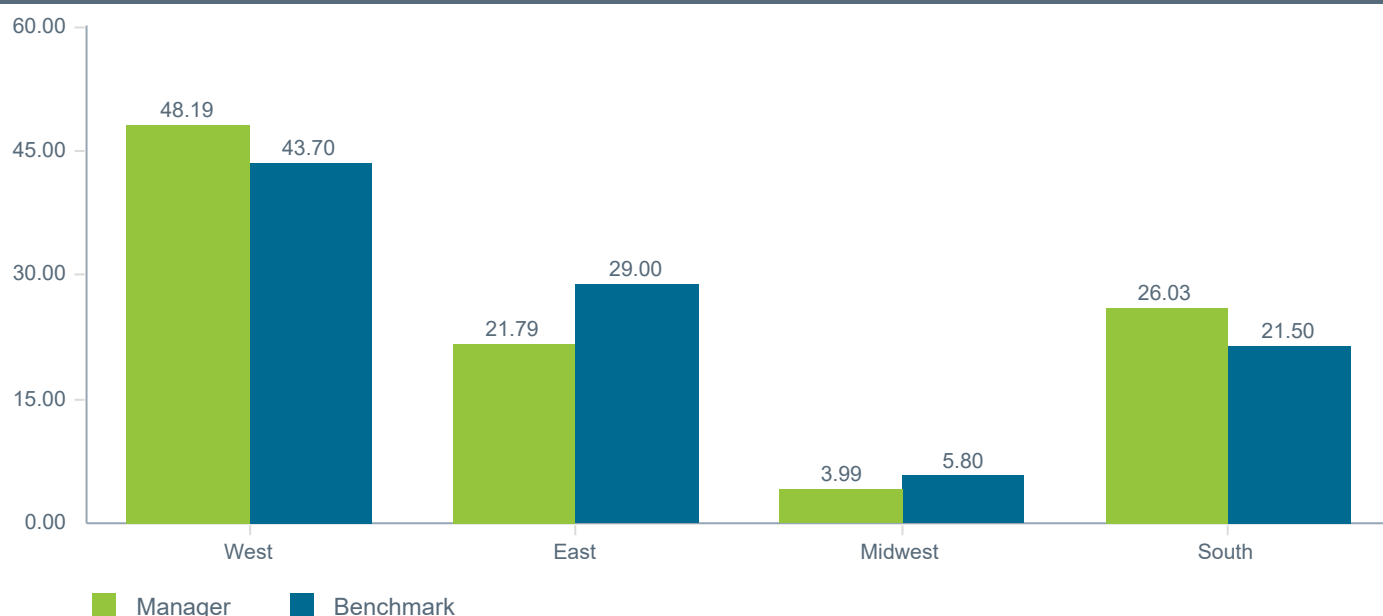
**Investment Profile**

Fund Inception	1982
Legal Structure	Insurance SA
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	11,523
Fund Leverage %	25.86
Portfolio Occupancy %	86.55
Cash Reserve %	5.27
Number of Investments	140
Number of Limited Partners	4,447

**Property Type Allocation (%)**

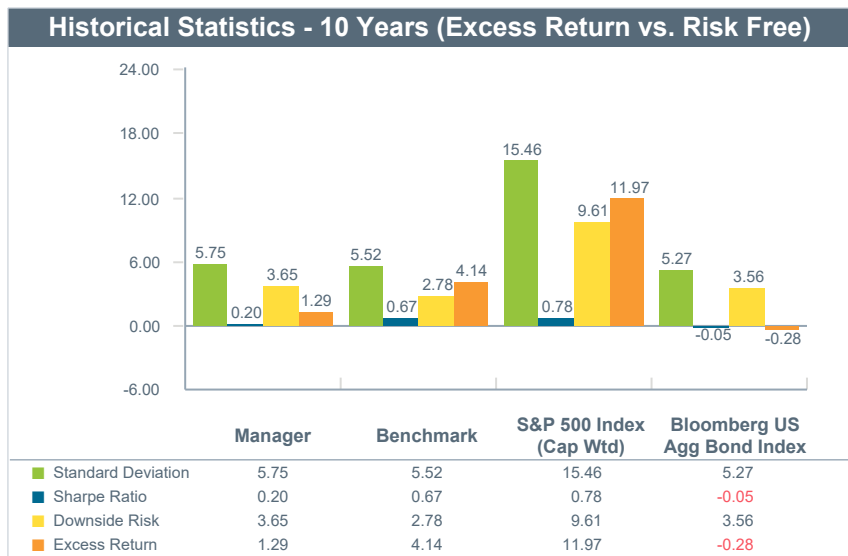


**Geographic Allocation (%)**



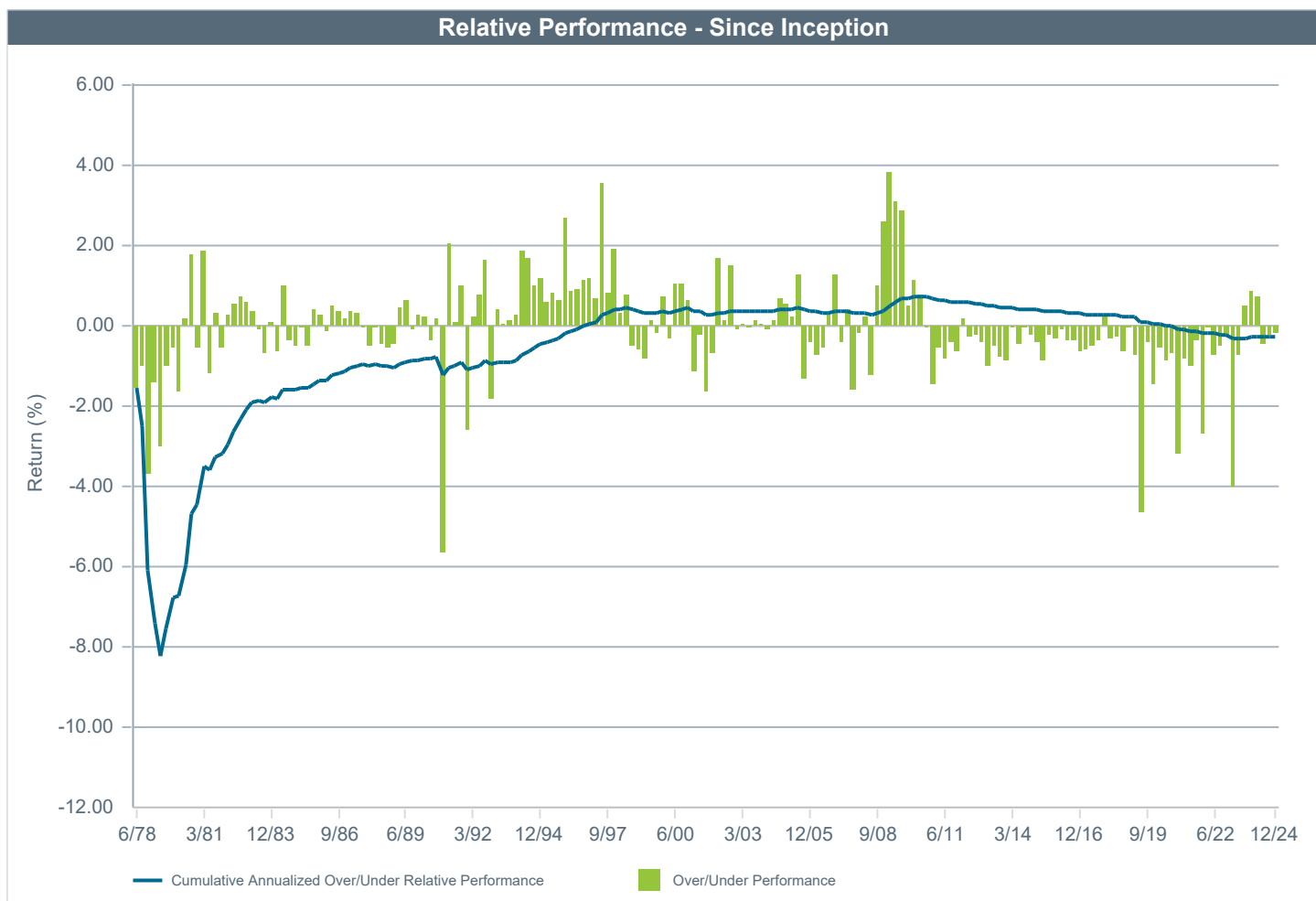
Performance shown is net of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Allocation to "Other" consists of entertainment, parking, data center, and operating land.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	0.98	-1.58	-3.95	-0.23	0.49	2.91	-15.00	5.91	16.24	-4.04	-2.10
Benchmark	1.16	-1.43	-2.32	2.87	3.99	5.88	-12.02	7.47	22.17	1.19	5.34
Difference	-0.18	-0.15	-1.63	-3.11	-3.49	-2.97	-2.98	-1.56	-5.92	-5.22	-7.44



### Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.92
S&P 500 Index (Cap Wtd)	-0.38
Russell 2000 Index	-0.35
MSCI EAFE Index (USD) (Net)	-0.44
MSCI Emg Mkts Index (USD) (Net)	-0.39
Bloomberg US Agg Bond Index	-0.41
Bloomberg US Trsy US TIPS Index	-0.33
Wilshire US REIT Index	-0.14
HFRI FOF Comp Index	-0.36
Bloomberg Cmnty Index (TR)	0.17
ICE BofAML 3 Mo US T-Bill Index	-0.63
Cons Price Index (Unadjusted)	0.28



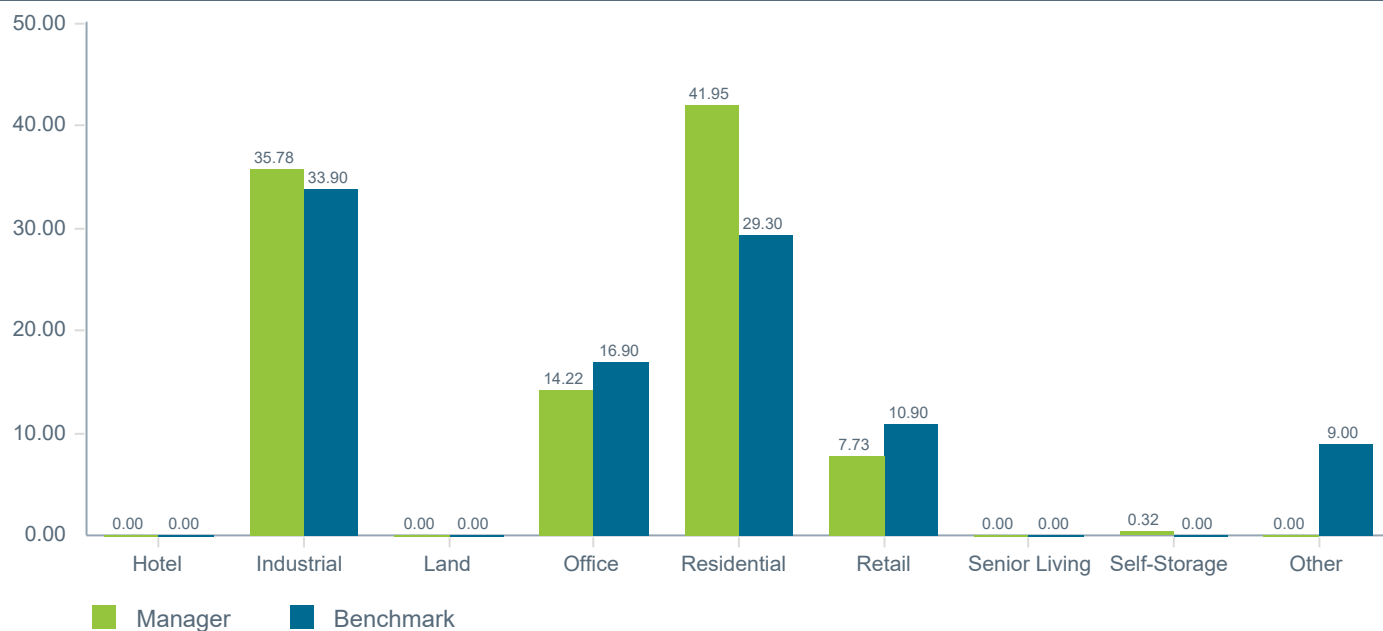
**Investment Strategy**

The Fund pursues a diversified core real estate strategy that seeks to produce attractive risk-adjusted returns by focusing on selective acquisitions, diversification, active portfolio management, and asset management. The Fund invests in well-leased, stabilized assets in major US metropolitan markets and receives the majority of its return from the income component. Diversification for the Fund is consistently pursued on many levels, including geographic region, property type, and economic sector. The Fund has historically maintained a leverage ratio significantly lower than the NCREIF ODCE Index and invests 5-15% of its gross assets in value-added type real estate investment opportunities.

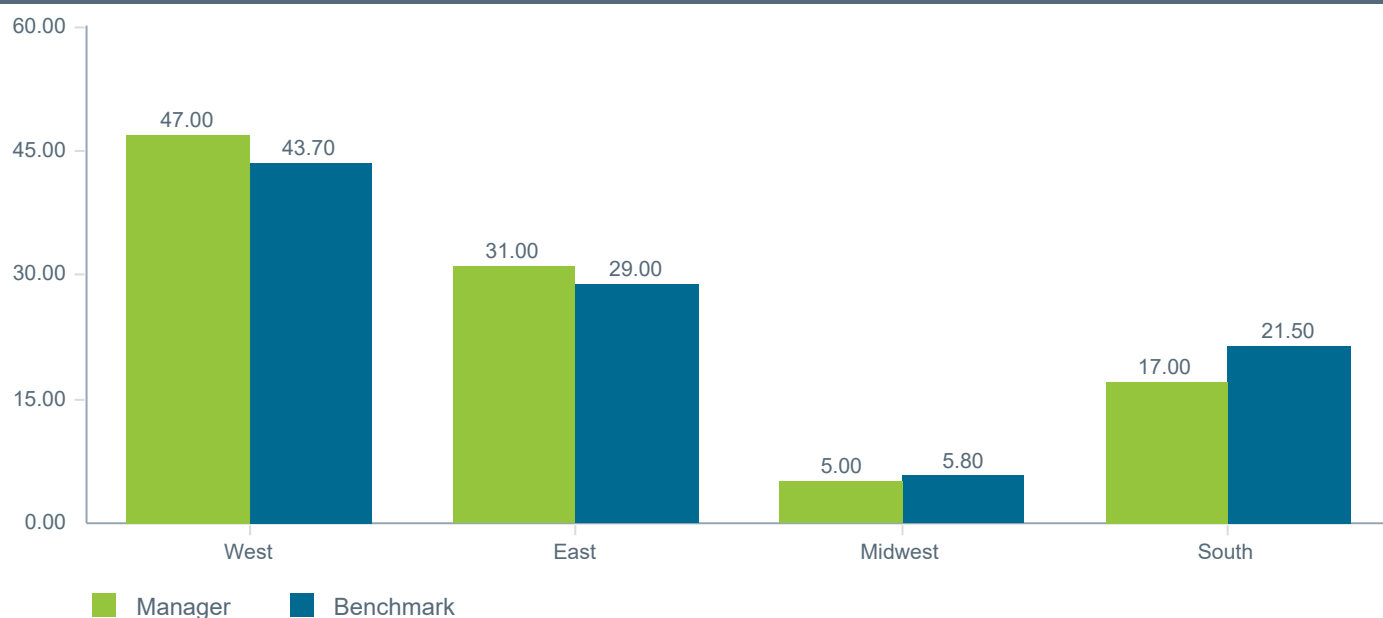
**Investment Profile**

Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	13,223
Fund Leverage %	23.17
Portfolio Occupancy %	92.10
Cash Reserve %	4.13
Number of Investments	115
Number of Limited Partners	429

**Property Type Allocation (%)**

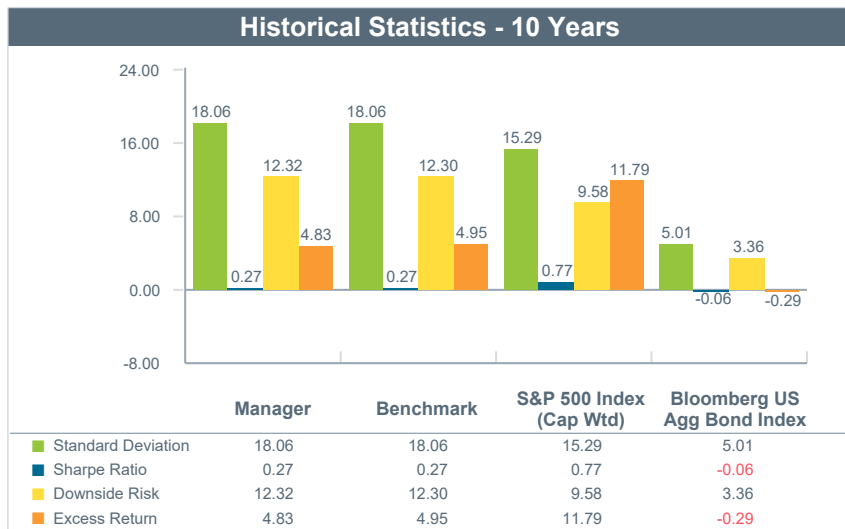
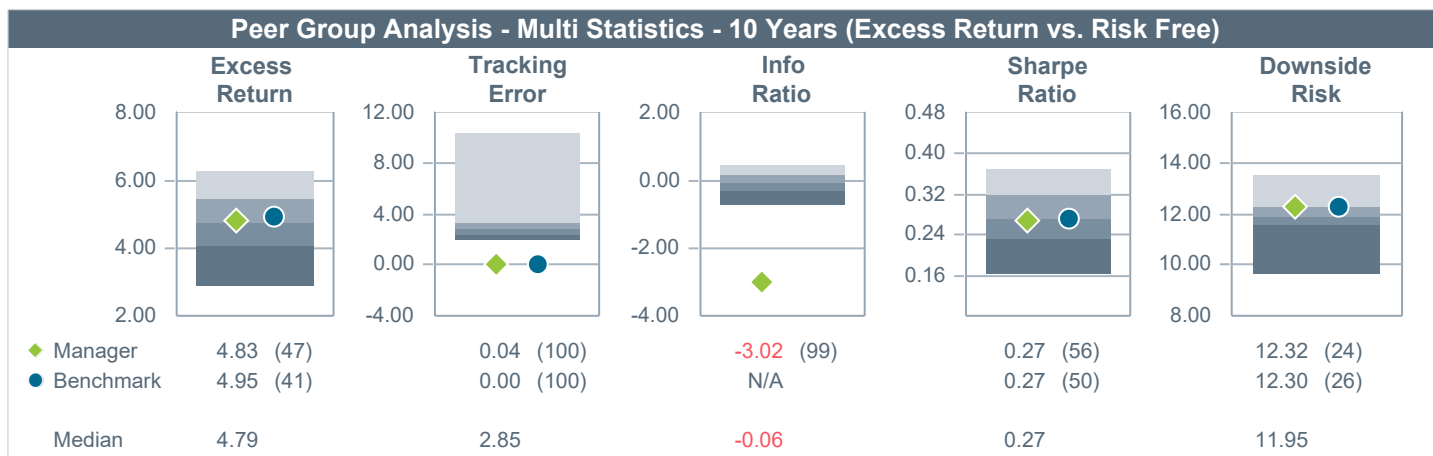
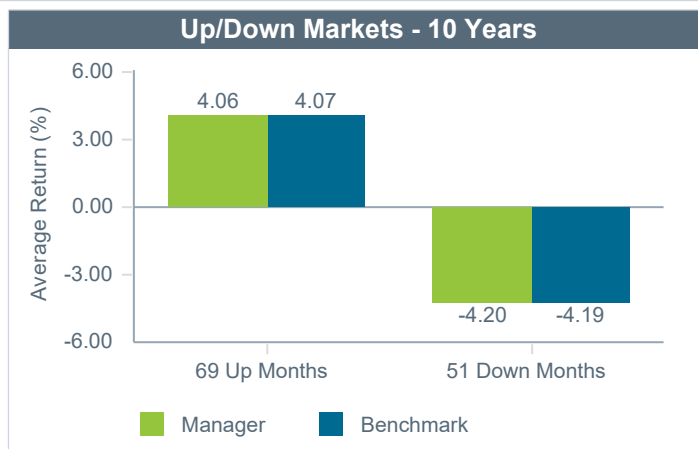
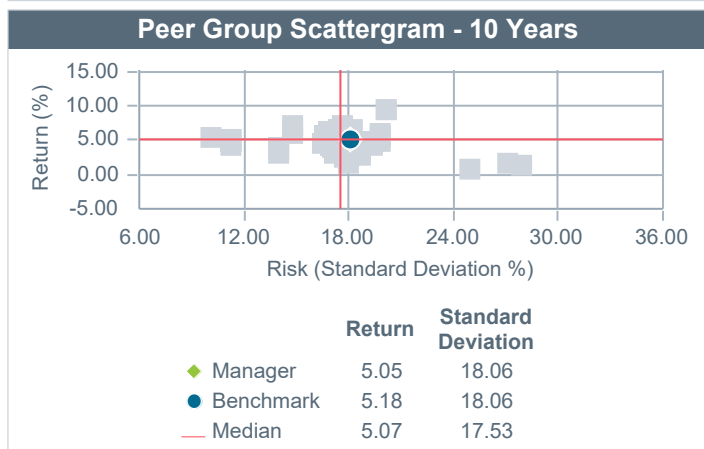


**Geographic Allocation (%)**



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Allocation to "Other" consists of entertainment, parking, data center, and operating land.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
<b>Manager</b>	<b>-7.64</b>	<b>4.92</b>	<b>-4.71</b>	<b>2.97</b>	<b>4.96</b>	<b>5.05</b>	<b>11.75</b>	<b>-26.20</b>	<b>40.38</b>	<b>-4.72</b>	<b>28.91</b>
Benchmark	-7.61	5.05	-4.57	3.12	5.09	5.18	11.96	-26.12	40.56	-4.55	29.03
Difference	-0.02	-0.13	-0.13	-0.15	-0.13	-0.13	-0.21	-0.08	-0.18	-0.17	-0.12
Peer Group Median	-6.90	6.05	-4.08	3.40	5.20	5.07	11.91	-26.17	41.32	-4.31	27.32
Rank	69	75	63	70	60	52	56	51	63	55	35
Population	219	216	208	196	180	148	244	247	251	248	256



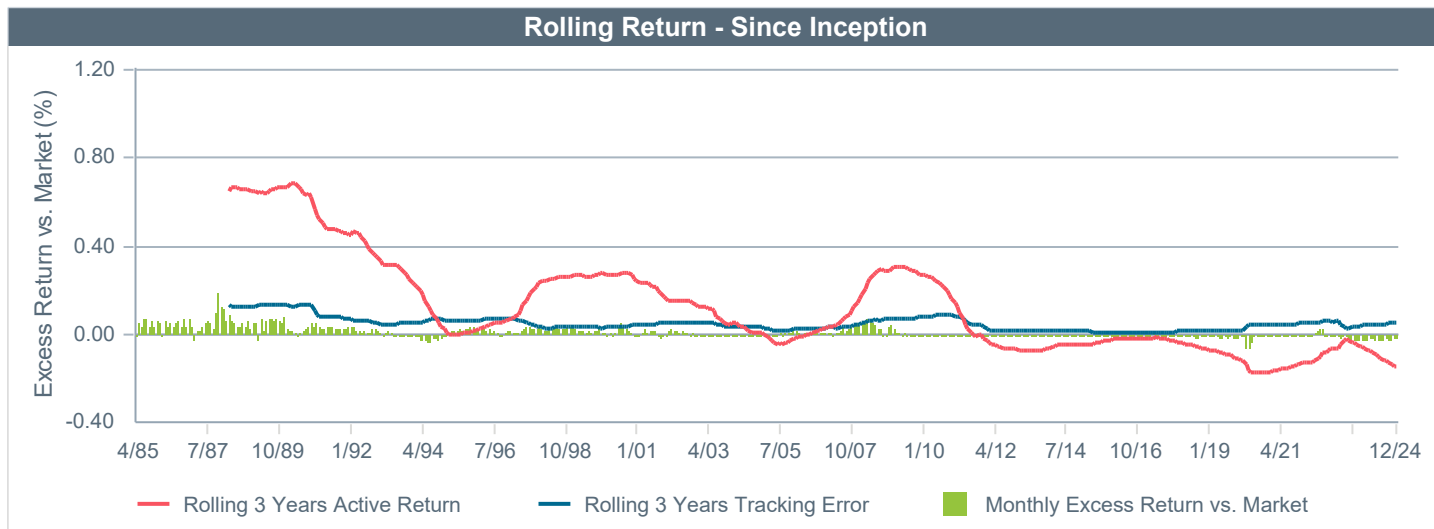
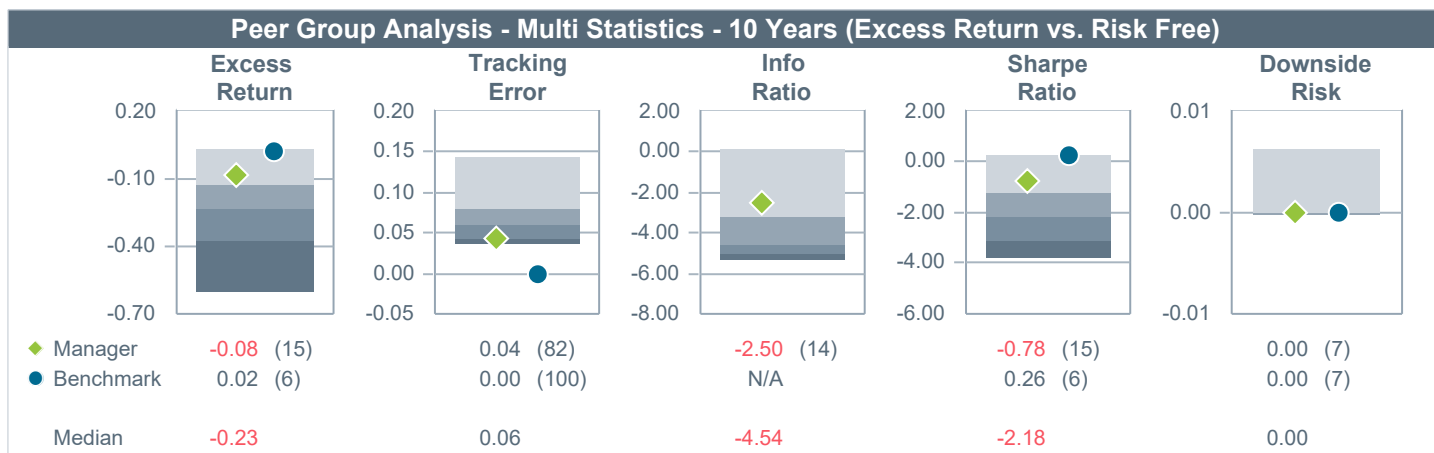
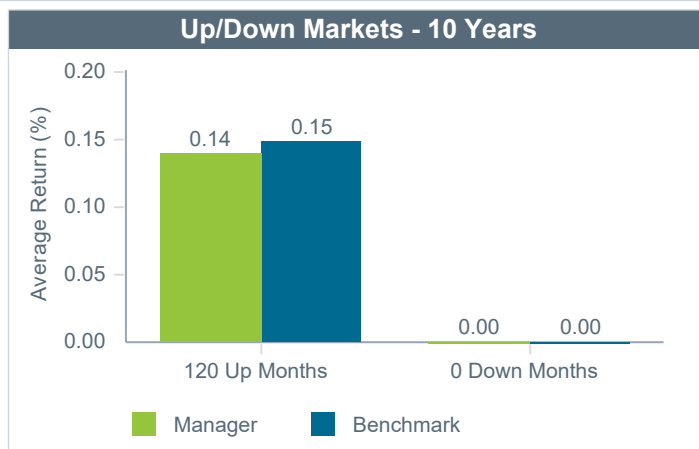
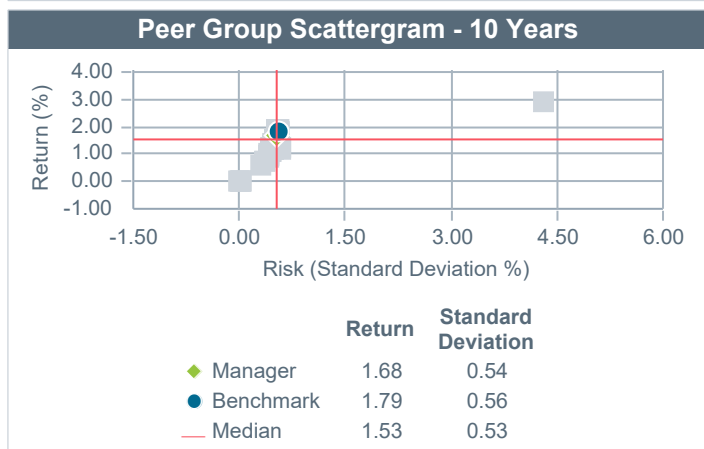
### Actual Correlation - 10 Years

Index	Actual Correlation
Vanguard Spl Real Estate Index	1.00
S&P 500 Index (Cap Wtd)	0.76
Russell 2000 Index	0.72
MSCI EAFE Index (USD) (Net)	0.69
MSCI Emg Mkts Index (USD) (Net)	0.54
Bloomberg US Agg Bond Index	0.58
Bloomberg US Trsy US TIPS Index	0.64
Wilshire US REIT Index	0.99
HFRI FOF Comp Index	0.63
Bloomberg Cmnty Index (TR)	0.27
ICE BofAML 3 Mo US T-Bill Index	-0.04
Cons Price Index (Unadjusted)	-0.06

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Performance shown is calculated using Net Asset Values (NAV). Parentheses contain percentile ranks. Benchmark consists of MSCI US REIT Index (USD) (Gross) adjusted to include a 2% cash position (Lipper Money Market Average) through 04/30/09; MSCI US REIT Index (USD) (Gross) through 02/01/18; MSCI US IM Real Estate 25/50 Transition Index through 07/24/18; and MSCI US IM Real Estate 25/50 Index (Gross) thereafter.



Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	1.16	5.16	3.90	2.40	2.26	1.68	5.03	1.55	0.03	0.37	2.09
Benchmark	1.23	5.45	4.05	2.54	2.40	1.79	5.26	1.50	0.05	0.58	2.25
Difference	-0.07	-0.29	-0.15	-0.14	-0.14	-0.11	-0.23	0.04	-0.02	-0.21	-0.16
Peer Group Median	1.13	5.01	3.73	2.28	2.12	1.53	4.88	1.39	0.01	0.30	1.90
Rank	24	24	18	17	16	15	21	20	12	31	20
Population	748	723	680	630	593	472	769	786	774	794	799



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

# Addendum & Glossary

## City of Jacksonville Employees' Retirement System Addendum

### Performance Related Comments:

- Performance is annualized for periods greater than one year.
- The inception date shown indicates the first full month of performance following initial funding.
- The market value shown for the Transition Account includes residual assets from terminated managers.
- RVK began monitoring the assets of the City of Jacksonville Retirement System on 01/01/2019. Prior historical data was provided by the custodian and previous consultant.

### Custom Composite Benchmark Comments:

- **Current Total Fund Policy Index:** The passive Total Fund Policy Index is calculated monthly and currently consists of 30% Russell 3000 Index, 23% MSCI ACW Ex US Index (USD) (Net), 20% Fixed Income Index, 15% Real Estate Index, and 12% Diversifying Assets Index.
- **Actual Allocation Index:** The Actual Allocation Index is calculated monthly using beginning of month weights of each investment applied to its corresponding primary benchmark return. The inception date is 01/2019 and prior performance is listed as "N/A".
- **Actual Allocation Index (Net of Alts):** The Actual Allocation Index (Net of Alts) is calculated monthly, using beginning of month weights of each investment applied to its corresponding primary benchmark return, with the exception of funds in Real Estate and Diversifying Assets composites, which are represented by actual monthly composite returns. The Actual Allocation Index's Inception date is 01/2019 and prior performance is listed as "N/A".
- **US Equity Index:** The passive US Equity Index consists of 100% DJ US TSM Index through 06/2009 and 100% Russell 3000 Index thereafter.
- **International Equity Index:** The passive International Equity Index consists of 100% MSCI EAFE Index (USD) (Gross) through 01/2011 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- **Fixed Income Index:** The passive Fixed Income Index consists of 100% Bloomberg US Agg Bond Index through 10/2017 and 100% Bloomberg US Universal Bond Index thereafter.
- **Real Estate Index:** The active Real Estate Index is calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return.
- **Diversifying Assets Index:** The Diversifying Assets Index is calculated monthly and consists of 50% S&P MLP Index (TR)/50% NCREIF Timberland Index through 10/2017, 67% S&P MLP Index (TR)/33% NCREIF Timberland Index through 09/2020, and calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return thereafter.

### Custom Manager Benchmark Comments:

- **Baillie Gifford Index:** The passive Baillie Gifford Index consists of 100% MSCI EAFE Grth Index (USD) (Net) through 10/2017 and 100% MSCI ACW Ex US Grth Index (USD) (Net) thereafter.
- **Baillie Gifford Spliced Index:** The passive Baillie Gifford Spliced Index consists of 100% MSCI EAFE Index (USD) (Net) through 11/2019 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- **Custom REITs Index:** The passive Custom REITs Index consists of 100% MSCI US REIT Index (USD) (Gross) through 01/2019 and 100% Vanguard Spl Real Estate Index thereafter.
- **Vanguard Spliced Real Estate Index:** The Vanguard Spl Real Estate Index consists of MSCI US REIT Index (USD) (Gross) adjusted to include a 2% cash position (Lipper Money Market Average) through 04/30/2009, MSCI US REIT Index (USD) (Gross) through 01/31/2018, MSCI US IM Real Estate 25/50 Transition Index through 07/24/2018, and MSCI US IM Real Estate 25/50 Index (Gross) thereafter.



## Glossary

**Active Return** - The difference between the investment manager/composite performance relative to the performance of an appropriate market benchmark.

**Active Share** - Measures the degree to which the holdings of a fund differ from the holdings of the benchmark. Active share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the fund versus the weight of each holding in the benchmark and dividing by two.

**Alpha** - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

**Alpha Ratio** - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

**Average Quality** - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. *Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager.* There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers), such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters, such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>	<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>
<b>Higher Credit Quality – Investment Grade</b>			<b>Lower Credit Quality – Below Investment Grade</b>		
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality
AA+	Aa1	High credit quality	BB	Ba2	
AA	Aa2		BB-	Ba3	
AA-	Aa3		B+	B1	Highly speculative
A+	A1	Upper-medium credit quality	B	B2	
A	A2		B-	B3	
A-	A3		CCC+	Caa1	Substantial credit/default risk
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative
BBB	Baa2		CCC-	Caa3	
BBB-	Baa3		CC	Ca	Vulnerable to default
			C	Ca	
			D	C	In default

**Benchmark Effect** - The difference between the blended return of each respective managers' benchmark within a composite and the composite's benchmark return.

**Beta** - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

**Box Plots** - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1<sup>st</sup> quartile, 2<sup>nd</sup> quartile, 3<sup>rd</sup> quartile, and 4<sup>th</sup> quartile). The median observation is where the 2<sup>nd</sup> quartile and 3<sup>rd</sup> quartile meet.

**Buy and Hold Attribution** - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

**Sector** - Attribution is calculated using the Global Industry Classification Standard (GICS), which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector as defined by S&P Capital IQ data. Attribution to "Other" is the result of securities based in industries that do not fit into any GICS classification.

**Country/Region** - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data, and thus may differ from the classification of the investment manager and/or index provider. Attribution to "EMEA" represents securities based in Europe, the Middle East, and Africa. Attribution to "Other" is the result of securities based in countries/regions that do not fit into any MSCI classification.

**Style** - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, and names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category. Stocks are unclassified when there is not enough data to determine a size and style metric.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.

## Glossary

### Capital Markets Review -

**Breakeven Inflation** - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.

**Consumer Confidence** - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

**Consumer Price Index (CPI)** - Measures the change in the price level of consumer goods and services.

**Federal Funds Rate** - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.

**Option-Adjusted Spread** - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.

**Purchasing Managers Index (PMI)** - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.

**Real Gross Domestic Product (Real GDP)** - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.

**Unemployment Rate** - The percentage of the total labor force that is unemployed but actively seeking employment.

**US Dollar Total Weighted Index** - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.

**VIX** - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."

**Cash Flow Effect** - The composite's active return minus the sum of each managers' active return minus the benchmark effect.

**Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

**Convexity** - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.

**Correlation** - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.

**Coupon Rate** - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.

**Current Yield** - The annual income of a security divided by the security's current price.

**Down Market Capture** - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.

**Downside Risk** - A measure similar to standard deviation that focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative returns for the selected periodicity. The higher the factor, the riskier the product.

**Earnings Per Share** - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.

**Effective Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield.

**Excess Return vs. Market** - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.

**Excess Return vs. Risk Free** - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.

**Excess Risk** - A measure of the standard deviation of a portfolio's performance relative to the risk-free return.

**Expense Ratios** - Morningstar is the source for mutual fund expense ratios.

**Gain/Loss** - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.

**Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used, or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability, and/or completeness.

**Information Ratio** - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.

## Glossary

**Liability Driven Investing (LDI)** - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.

**Estimated Funded Status** - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.

**Estimated PV of Liabilities** - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.

**Duration of Liabilities** - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.

**Duration of Assets** - The dollar-weighted average duration of all the individual Plan assets.

**Estimated Plan Hedge Ratio** - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

**Modified Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

**Mutual Fund Performance** - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

**Net Cash Flow** - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

### Peer Groups -

**Plan Sponsor Peer Groups** - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client performance compiled from consultant and custodian data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans.

**Investment Manager Peer Groups** - RVK utilizes Investment Metrics' Peer Groups for investment manager peer comparison and ranking. The Investment Metrics Peer Group database includes performance and other quantitative data for over 840 investment management firms and 29,000 investments products, across more than 160 standard peer groups. Mutual Fund Peer Groups are net of fees.

**Percentile Rankings** - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value                      100 - Lowest Statistical Value

*Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4<sup>th</sup> percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.*

**Performance Methodology** - RVK calculates performance for investment managers and composites using different methodologies.

**Investment Managers** - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of  $\geq 10\%$  of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

**Composites** - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

**Portfolio Characteristics & Distribution (%)** - Due to disclosure guidelines set by each investment manager, portfolio characteristics and distribution percentages shown are as of the most recent date available.

**Price to Earnings Ratio** - The ratio valuing a company's current share price relative to its trailing 12-month per-share earnings (EPS).

**Private Equity Quartile Ranks** - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

**R-Squared** - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

**Return** - Compounded rate of return for the period.

**% Return** - The time-weighted rate of return of a portfolio for a given period.

**Risk Free Benchmark** - ICE BofAML 3 Mo US T-Bill Index unless specified otherwise.

## Glossary

**RVK Liquidity Rating** - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

<u>Asset Class</u>	<u>RVK Liquidity Rating</u>	<u>Asset Class</u>	<u>RVK Liquidity Rating</u>
<b><u>Liquid Investments</u></b>		<b><u>Less Liquid Investments</u></b>	
T-Bills and Treasuries	100	Fixed Income Plus Sector	50
Cash Equivalents	98	Stable Value (Plan Sponsor Directed)	50
TIPS	95	Hedge Funds of Funds	35
US Large Cap Equity	95		
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Global Equity	90	<b><u>Not Liquid Investments</u></b>	
Non-US Large Cap Equity	90	Core Real Estate	25
Global Tactical Asset Allocation	88	Core Plus Real Estate	15
MLPs	85	Non-Core Real Estate	5
US Mid Cap Equity	85	Private Equity	5
US SMid Cap Equity	85	Private Credit	5
US Small Cap Equity	85		
REITs	85		
Non-US Small Cap Equity	85		
Emerging Markets Equity	85		
Core Fixed Income	85		
Core Plus Fixed Income	80		

**Sector Allocation** - Negative fixed income sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps. An allocation to "Other" is the result of securities that do not fit into RVK's standardized classification, such as Catastrophe, CLOs, Common Stock, Convertibles, CRTs, Derivatives, Direct Loans, Emerging Markets Local Corporates, ETFs, FX Forwards, Infrastructure Debt, Reverse Repo, Swaps, Trade Finance, Unsecured Bonds, and Other Assets.

**Sharpe Ratio** - Represents the excess rate of return over the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

**Simple Alpha** - The difference between the manager's return and the benchmark's return.

**Spread Duration** - The approximate percentage change in a bond's price for a 100 basis point change in its spread over a Treasury of the same maturity.

**Standard Deviation** - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

**Thematic Classification** - Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

<u>Alpha</u>	<u>Capital Appreciation</u>	<u>Capital Preservation</u>	<u>Inflation</u>
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Bank Loans
	Preferred Securities	Asset Backed Fixed Income	Core Real Estate
	High Yield	Domestic Core Plus Fixed Income	Real Return
	Convertible Fixed Income	Mortgage Backed Fixed Income	Inflation Hedges
	TALF Funds	International Developed Fixed Income	REITs
	Distressed Debt	Cash Equivalents	Commodities
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	Opportunistic Real Estate		

**Time Period Abbreviations** - QTD - Quarter-to-Date. CYTD - Calendar Year-to-Date. FYTD - Fiscal Year-to-Date. YOY - Year Over Year.

**Total Fund Attribution** - The Investment Decision Process (IDP) model provides an approach to evaluating investment performance that applies to all asset classes and investment styles. The IDP model is based on a top-down hierarchy framework of investment decisions, with each decision contributing to the overall profit or loss. The IDP approach starts from the strategic asset allocation and follows the flow of the investments down to the manager's skill.

**Strategic Asset Allocation (SAA)** - The percentage return gained or lost from the long-term strategic asset allocation decision, the most significant determinant of long-term performance. SAA is the product of the target asset allocation multiplied by the corresponding benchmark returns.

**Tactical Asset Allocation (TAA)** - The percentage return gained or lost from not having been precisely allocated at the target asset allocation mix, whether by deviations that are tactical in nature or a by-product of moving towards the target mix. TAA is the product of the actual asset allocation multiplied by the broad asset class benchmarks, less the SAA.

**Style Selection (SS)** - The percentage return gained or lost from intentional style biases within each asset class (e.g. value rather than core or overweight to emerging markets relative to benchmark). SS is the product of the actual manager allocation within each asset class multiplied by their specific benchmark, less TAA.

**Manager's Skill (MS)** - The percentage return gained or lost from manager value added relative to their specific benchmark. MS is the product of the actual manager allocation multiplied by their achieved excess return.

## Glossary

**Total Fund Beta** - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.

**Tracking Error** - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

**Treynor Ratio** - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

**Unit Value** - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

**Up Market Capture** - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolio's return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

**Yield to Maturity** - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

**Yield to Worst** - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.

# RVK

**Disclaimer of Warranties and Limitation of Liability** - This document was prepared by RVK, Inc. (RVK) and may include information and data from some or all of the following sources: client staff; custodian banks; investment managers; specialty investment consultants; actuaries; plan administrators/record-keepers; index providers; as well as other third-party sources as directed by the client or as we believe necessary or appropriate. RVK has taken reasonable care to ensure the accuracy of the information or data, but makes no warranties and disclaims responsibility for the accuracy or completeness of information or data provided or methodologies employed by any external source. This document is provided for the client's internal use only. It should not be construed as legal or tax advice. It does not constitute a recommendation by RVK or an offer of, or a solicitation for, any particular security and it is not intended to convey any guarantees as to the future performance of the investment products, asset classes, or capital markets. This document should not be construed as investment advice: it does not reflect all potential risks with regard to the client's investments and should not be used to make investment decisions without additional considerations or discussions about the risks and limitations involved. Any decision, investment or otherwise, made on the basis of this document is the sole responsibility of the client or intended recipient.



# City of Jacksonville Employees' Retirement System

## INVESTMENT ACTIVITY REPORT: February 2025

### Events

#### Board Due Diligence Meetings

**1<sup>st</sup> Thursday Each Month**

*Presentation: 12:30-2 PM*

*City Hall Conference Room 3C*

**March 6, 2025**

*Wellington- Large Cap Value*

**April 3, 2025**

*Eagle Capital- Large Cap Core*

**May 1, 2025**

*Kayne Anderson- SMID Core*

**June 5, 2025**

*Systematic- SMID Value*

**July 3, 2025**

*Happy 4<sup>th</sup> of July*

*No meeting*

**August 7, 2025**

*Adams Street- PE*

**September 4, 2025**

*TBD*

**October 2, 2025**

*Loomis Sayles- LCG*

**November 6, 2025**

*Payden & Rygel – Jeffrey*

*Cleveland- Economist*

**December 4, 2025**

*TBD*

### Staff Update

#### Contract Status Update

N/A

#### Other

##### \*Real Estate:

Harrison Street: \$30 million

PGIM PRISA II: \$20 million

Principal: \$40 million

UBS Trumbull: Full Liquidation

~\$60 million

**Total: \$150 million**

\*redemption limitations

#### Current Manager Meetings

*Harrison Street- Real Estate*

*Pinnacle- SMID Growth*

#### Potential Manager Meetings

*DF Capital Management – RE*

*InLight - RE*

*Janus Henderson- Fixed Income*

*Neuberger Berman–Fixed Income*

*State Street*

*T. Rowe Price*

*Voya*

### Cash Flows

#### Hamilton Lane-Private Credit

Balance Point VI: \$0.1 M

Everberg Cap II: \$0.7 M

ICG Europe Fund VIII: €0.9 M

Hamilton Lane Strat Op VI: \$0.7 M

Plexus Fund VI: \$1.0 M

**Total Called: ~\$3.5 million**

#### Adams Street- Private Equity

Tranche I: \$0 M

**Total Called: ~\$73 million**

Tranche II: \$0 M

**Total Called: ~\$6 million**

#### Real Estate

Ares US RE IV: \$0.5 M

Bell Fund VIII: \$0.8M

#### Provider Disbursements

Hamilton Lane: \$62,500

Kayne Anderson: \$110,000

Pinnacle: \$110,000

Mellon LCC: \$7,500

Total Fees: ~\$0.3 million

#### Provider Income + Redemptions

Harrison Street: \$6.2 M

Principal Property: \$10 M

PRISA II: \$2.5 M

UBS Trumbull: \$2.2 M

**Total: \$21 million**

# RVK

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## 2025 Capital Market Assumptions



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## RVK, Inc. (“RVK”) Capital Market Assumptions

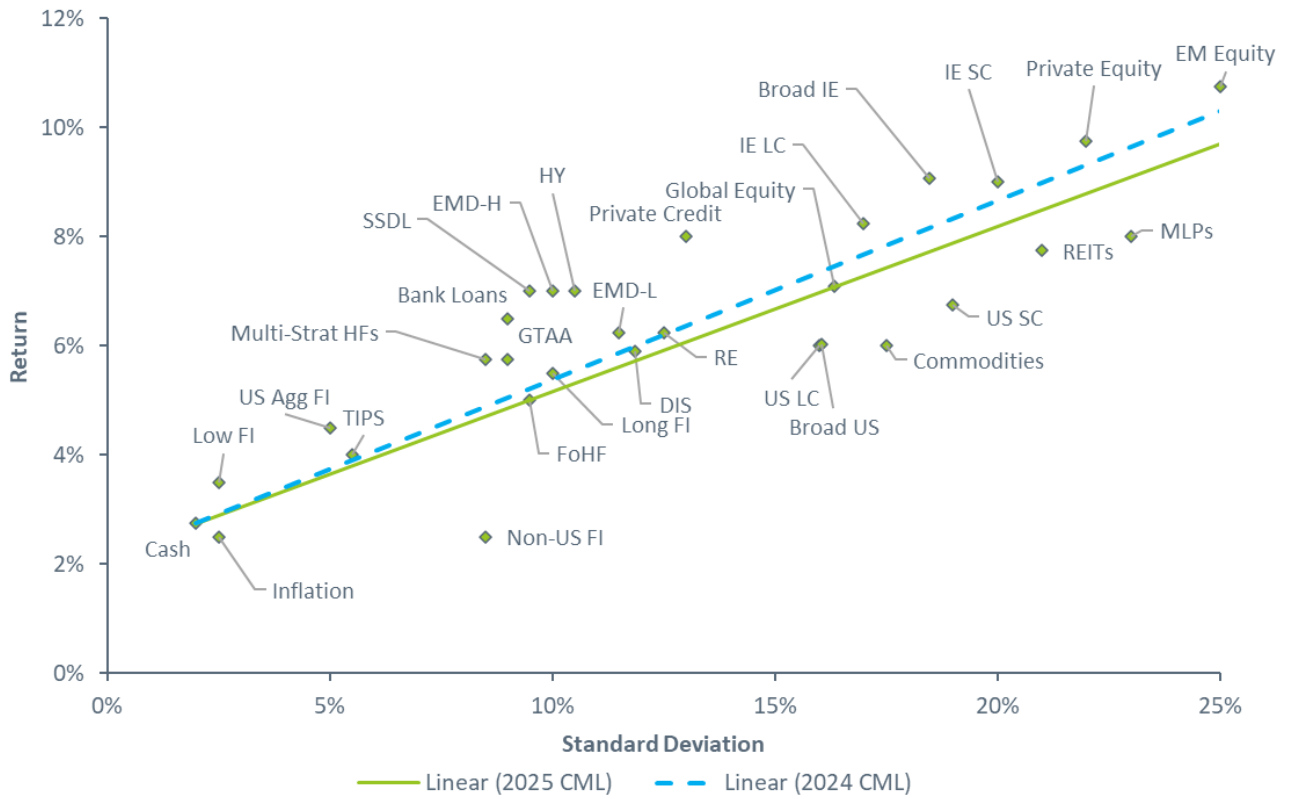
This white paper serves as a guide to help our clients understand the methodology used by RVK to develop our 2025 capital market assumptions. Asset allocation is the most important investment decision made by our clients, and asset allocation modeling outcomes are highly dependent upon the capital market assumptions (CMAs) used as inputs. Therefore, RVK created the following long-term (20 years) forward-looking expected asset class assumptions through a rigorous multi-step process, which involves detailed research and employs firmwide resources.

This white paper first walks through our expectations for inflation and is followed by detailed analysis of the major asset classes utilized by our clients. Our forward-looking, long-term return and risk assumptions as of December 31, 2024, are listed below in **Figure 1** and are followed by our capital market line on the next page in **Figure 2**. Our correlation assumptions are show in Appendix B.

**Figure 1: 2025 Asset Class Return and Risk Assumptions**

Asset Class	Return (Nominal Arithmetic)	Risk (Standard Deviation)
<b>Cash and Inflation</b>		
US Inflation	2.50%	2.50%
Cash Equivalents	2.75%	2.00%
<b>Fixed Income</b>		
US Aggregate Fixed Income	4.50%	5.00%
Non-US Developed Sovereign FI (UH)	2.50%	8.50%
TIPS	4.00%	5.50%
Low Duration Fixed Income	3.50%	2.50%
Long Duration Fixed Income	5.50%	10.00%
High Yield	7.00%	10.50%
Bank Loans	6.50%	9.00%
Emerging Markets Debt (Hard)	7.00%	10.00%
Emerging Markets Debt (Local)	6.25%	11.50%
<b>US Equity</b>		
Large/Mid Cap US Equity	6.00%	16.00%
Small Cap US Equity	6.75%	19.00%
Broad US Equity	6.04%	16.10%
<b>International Equity (Non-US)</b>		
Dev'd Large/Mid Cap Int'l Equity	8.25%	17.00%
Dev'd Small Cap Int'l Equity	9.00%	20.00%
Emerging Markets Equity	10.75%	25.00%
Broad International Equity	9.07%	18.85%
Global Equity	7.09%	16.60%
<b>Real Estate</b>		
Core Real Estate	6.25%	12.50%
Global REITs	7.75%	21.00%
Master Limited Partnerships (“MLPs”)	8.00%	23.00%
<b>Alternative Strategies</b>		
Funds of Hedge Funds	5.00%	9.50%
Multi-Strategy Hedge Funds	5.75%	8.50%
GTAA	5.75%	9.00%
Private Credit	8.00%	13.00%
Senior Secured Direct Lending	7.00%	9.50%
Private Equity	9.75%	22.00%
Commodities	6.00%	17.50%
Diversified Inflation Strategies	6.00%	11.85%

Figure 2: 2025 RVK Capital Market Line



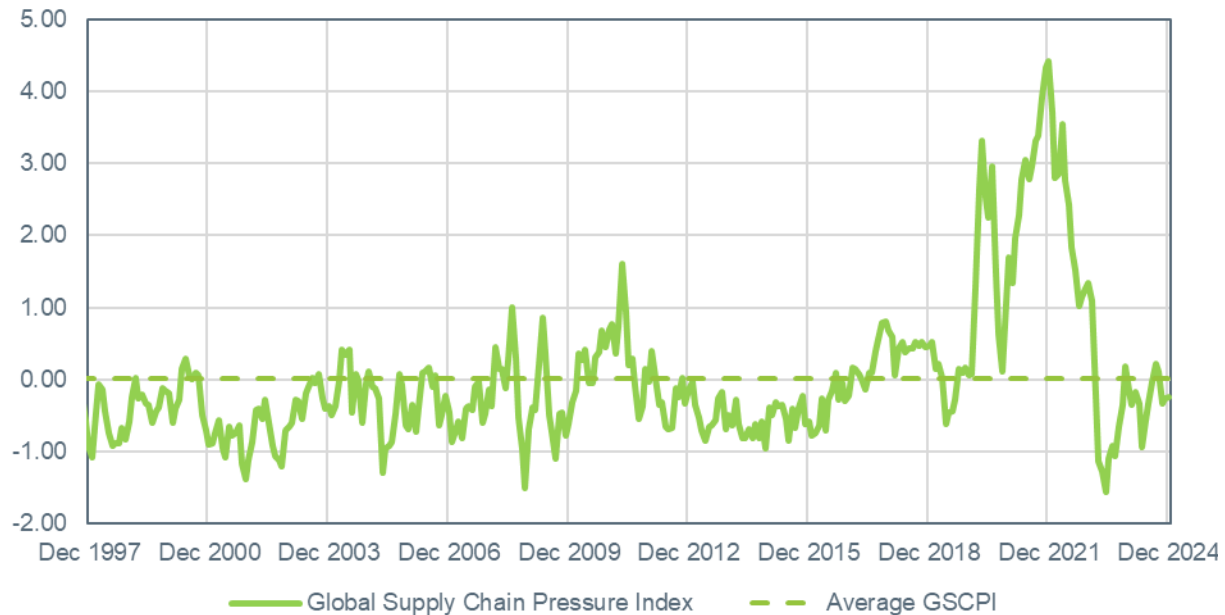
## US Inflation and Cash Equivalents

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Standard Deviation	Nominal Return (Geo.)	Nominal Return (Arith.)	Standard Deviation	Nominal Return (Geo.)	Nominal Return (Arith.)	Standard Deviation	Nominal Return (Geo.)
US Inflation	2.50%	2.50%	2.47%	2.50%	2.50%	2.47%	0.00%	0.00%	0.00%
Cash Equivalents	2.75%	2.00%	2.73%	2.75%	2.00%	2.73%	0.00%	0.00%	0.00%

### US Inflation

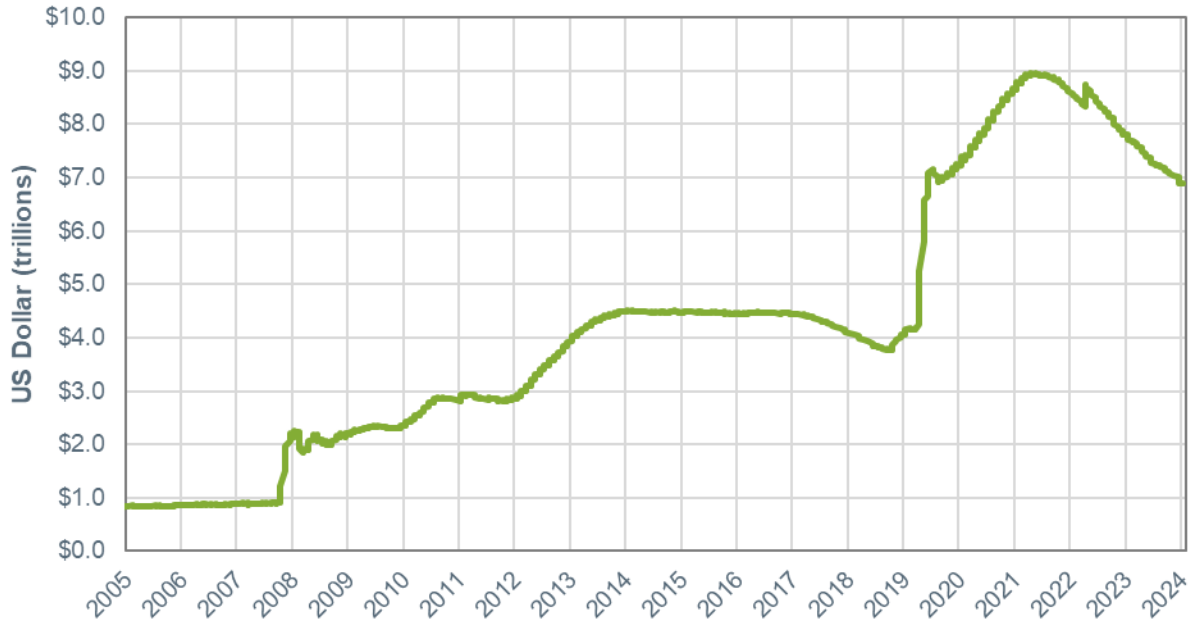
RVK maintained its long-term inflation assumption at 2.50%. While we still believe the economic impacts from issues such as debt, demographics, deficits, automation, artificial intelligence and globalization will continue to exert downward pressure on inflation over the long-term, we are also keenly aware of the near-term inflationary concerns that remain. While the Fed's aggressive rate hikes have greatly mitigated the level of inflation, elevated inflation remains ongoing and above the desired 2% target – with some unexpected upward movement in inflation at times during the past year. As the near-term trajectory of inflation remain uncertain, we believe it is too early to make adjustments to our long-term inflation assumption. **Figure 3** below outlines the volatility in the global supply chain including rising pressure of late, while **Figure 4** outlines the magnitude of the monetary response – not to mention fiscal – that provoked the increased volatility.

**Figure 3: Global Supply Chain Pressure Index**



Source: FactSet. (2025)

Figure 4: Federal Reserve Balance Sheet



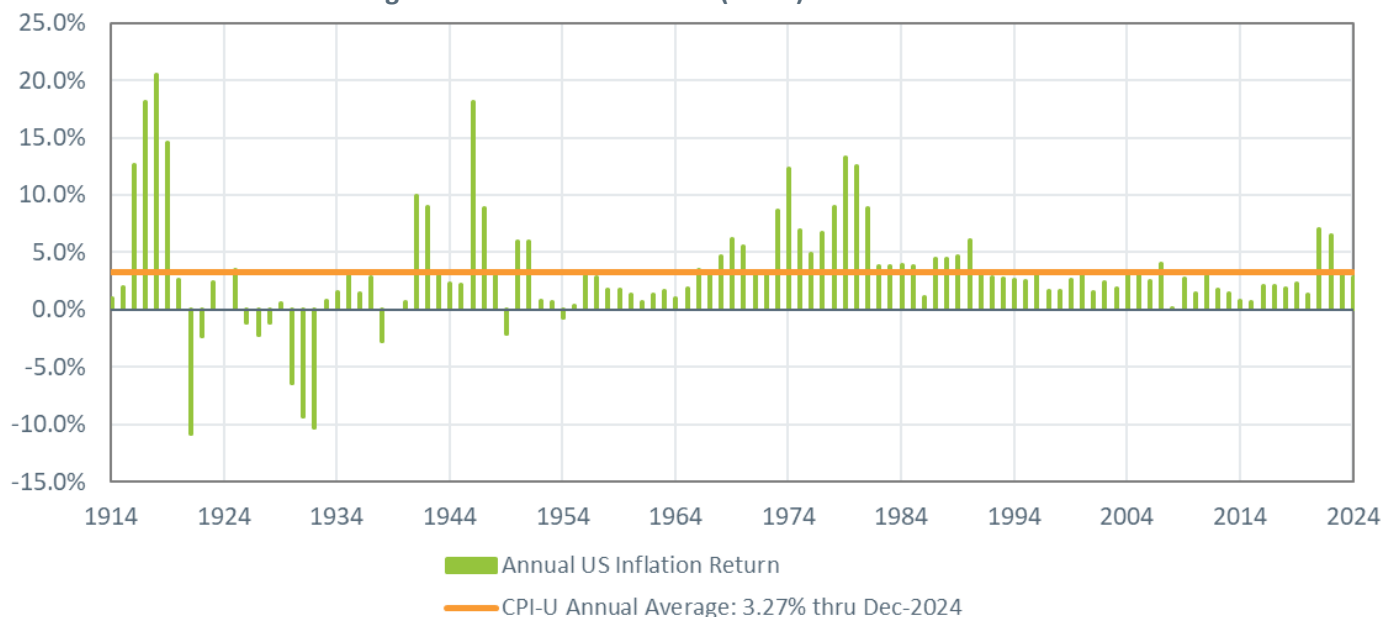
Source: Board of Governors of the Federal Reserve System (US). (2025)

Below we discuss the current state of inflation – in particular, the consumer price index – as well as approaches to measuring inflation; including realized and expected inflation, and the various factors that influence inflation outcomes.

### Current State of Inflation

While we have been on a downward trend from the post-COVID inflation spike, we have seen inflation remain above the low inflation that persisted post-GFC in the US. We use the Consumer Price Index for All Urban Consumers (“CPI-U”), not seasonally adjusted, as a measure of inflation in our analysis below. The historical average and annual outcome data are shown below in [Figure 5](#).

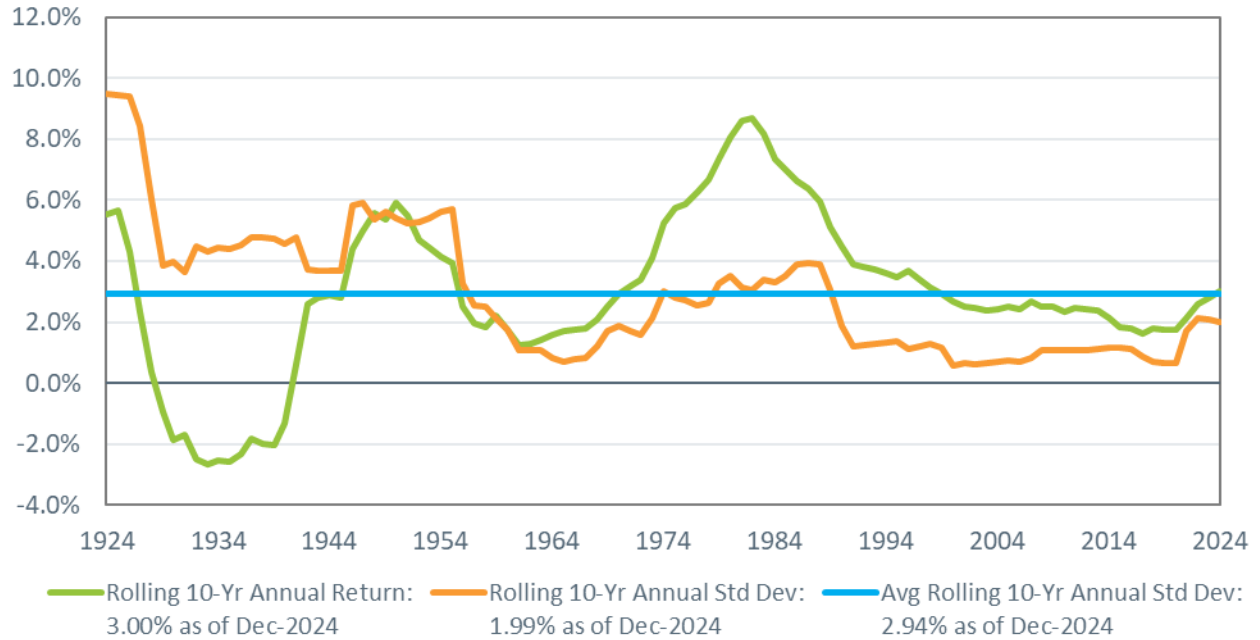
Figure 5: Annual US Inflation (CPI-U) Return



Source: FactSet. (2025)

Additionally, a review of rolling inflation volatility, as illustrated below in **Figure 6**, reveals that near-term inflation volatility has plateaued after rising significantly post-COVID for the first time in decades.

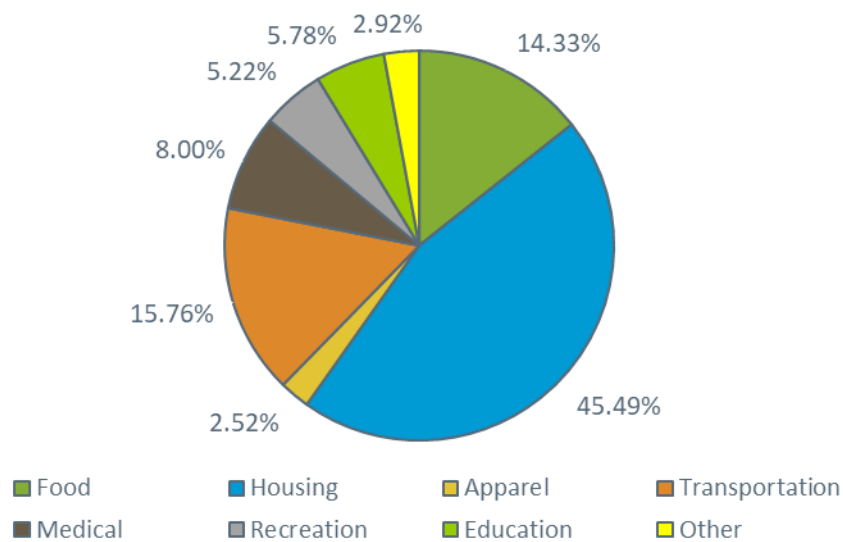
**Figure 6: Rolling 10-Year Annualized US Inflation (CPI-U) and Standard Deviation**



Source: FactSet. (2025)

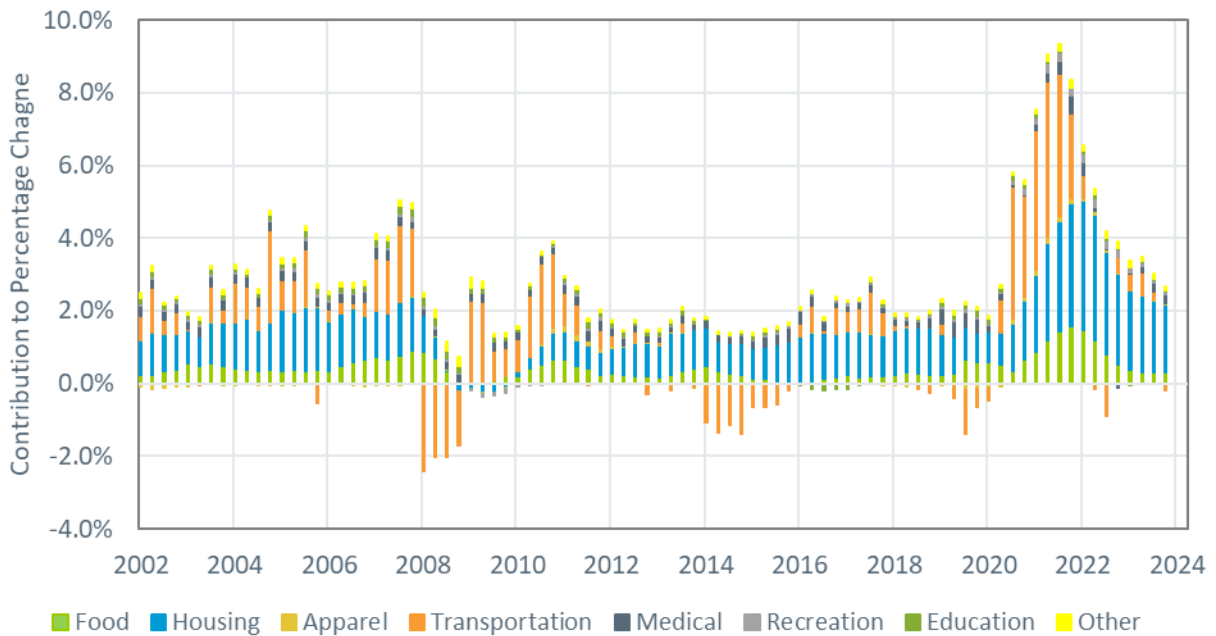
**Figure 7** and **Figure 8** provide insight into the components and drivers of movements of inflation as measured by the CPI-U. A number of different categories contribute to headline inflation with housing being the largest component and transportation – which is highly correlated with energy costs – the most volatile.

**Figure 7: CPI Current Composition**



Source: FactSet. (2025)

**Figure 8: Contribution to CPI YoY Change (Not Seasonally Adjusted) in CPI**



Source: FactSet. (2025)

### Measures of Inflation

The two most readily followed measures of inflation seek to capture the price changes occurring in the US economy across goods and services. These consist of the Personal Consumption Expenditure (“PCE”) measure, which reflects goods and services targeted and consumed by individuals, and the CPI-U, which captures the changes in the price of goods and services purchased by urban consumers. Policy makers and market participants utilize these economic indicators to guide their expectations for inflation risks and potential policy actions by the Federal Reserve. These measures highlight current inflation pressures, particularly within the transportation component of the index – but also within food and housing.

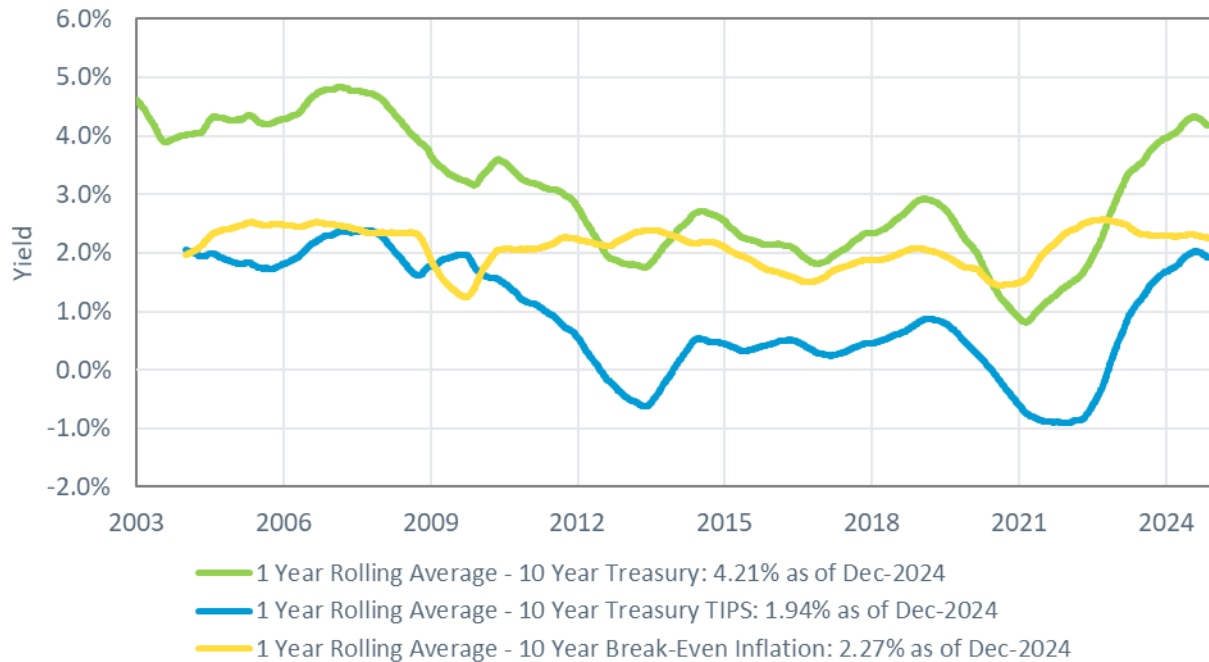
### Inflation Expectations

It is important that market participants have a reliable way to set inflation expectations, as it will limit the likelihood of reacting to short-term price volatility and help guide their long-term wage and benefit policies. While there are tradeable assets that market participants can use to gauge inflation expectations over the next 5-to-10-year period, such as inflation swaps, the primary measure referenced by many market participants when discussing the inflation outlook is the “break-even inflation rate.”

### Break-Even Rates

The “break-even inflation rate” approximates the expected inflation compensation using the difference between the yield-to-maturity of nominal and inflation-linked Treasury securities of equivalent maturities. As of December 31, 2024, the one year rolling average of implied expected inflation for the 10 year Treasury was 2.27% as shown below in [Figure 9](#).

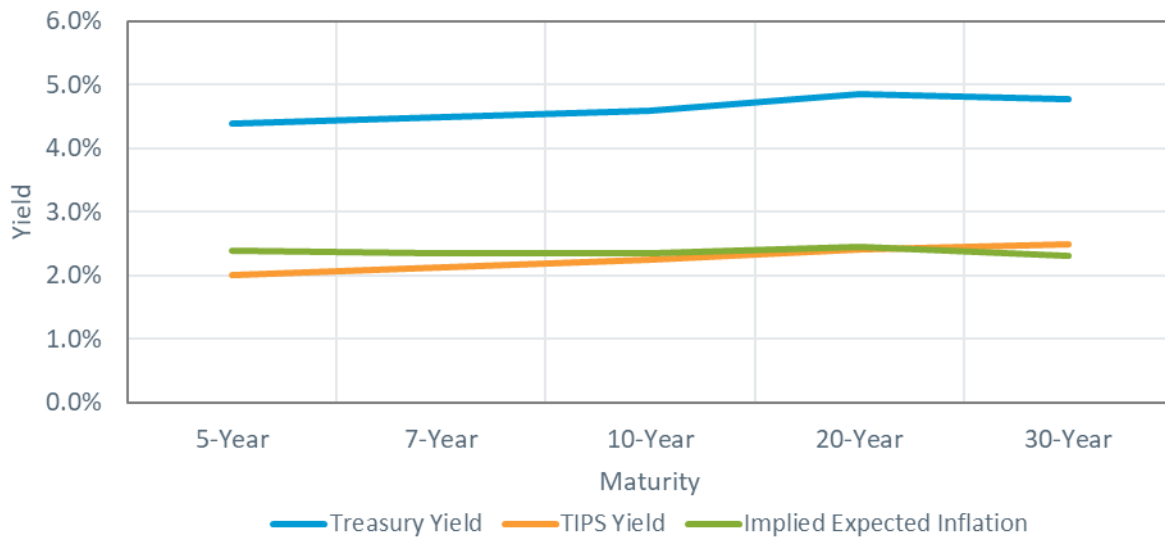
**Figure 9: Rolling 252 Business Day Average of Market Inflation Expectations**



Implied Expected Inflation is the difference between the nominal 10-Year Treasury Yield and the 10-Year TIPS Yield.  
 Source: FactSet. (2025)

**Figure 10** shows the results for implied expected inflation using point-in-time data as of December 31, 2024, across various maturities. The data resembles a nominal rate yield curve and reflects the differences in inflation expectations depending on the time horizon being examined. As can be seen by the green line, the implied expected inflation curve is relatively flat – suggesting expectations for lower and more stable inflation over time.

**Figure 10: Market Expectations for Inflation**



As of December 31, 2023	5-Year	7-Year	10-Year	20-Year	30-Year
<b>Treasury Yield</b>	4.38%	4.48%	4.58%	4.86%	4.78%
<b>TIPS Yield</b>	2.00%	2.13%	2.24%	2.41%	2.48%
<b>Implied Expected Inflation</b>	2.38%	2.35%	2.34%	2.45%	2.30%

Implied Expected Inflation is the difference between the nominal Treasury Yield and the TIPS Yield.  
 Source: FactSet. (2025)



However, investors should note that ex-ante market expectations for inflation can be markedly different than realized inflation. Implied expected inflation is simply market participants' best guess for average inflation over a specific time period. If an investor believes that realized inflation will be higher than implied inflation, then they would prefer holding Treasury Inflation Protected Securities ("TIPS") versus nominal Treasuries. If they believe that realized inflation will be lower than implied inflation, then holding nominal Treasuries would be preferred. If the expectation is for realized inflation to match implied inflation, they should be indifferent between TIPS and nominal Treasuries with the same duration.

### **What Factors Drive or Influence Inflation**

A combination of factors likely influenced inflation dynamics over the last several decades. These factors include demographic and structural changes of the workforce, a general aging of the relative population of workers, the overseas changes in labor markets promoting slower wage growth, and certain market segments being heavily influenced by increases in technological efficiencies. A different set of factors drove more recent inflation with supply constraints related to global lockdowns resulting from varying responses to COVID. The degree to which any or all of these factors are influencing inflation dynamics more so than any other factor is open for considerable debate, however, market participants generally consider these as the primary factors to examine. Debt levels are increasingly becoming an important factor as well.

Still, it is difficult to singularly describe the cause of inflation, as a number of underlying variables can influence price levels. Further, the relationship between variables is dynamic, and subject to influences that vary over time. In attempting to formalize a base of understanding to support the broader inflation discussion, market participants typically classify the factors into three main categories:

- Demand-pull factors
- Supply-cost factors
- Money supply factors

Swift increases in aggregate demand (e.g., abnormal fiscal expansion), supply shocks (e.g., oil supply constraints) and monetary expansion (e.g., low interest rate policies) have all influenced inflationary regimes in the past. Therefore, to project the future path of inflation, it is critical to examine the current economic backdrop as it will dictate whether deflationary or inflationary pressures ultimately persist.

### **Demand-Pull Factors**

Demand-pull inflation occurs when there is an increase in aggregate demand that is faster than the corresponding increase in aggregate supply. Various factors can fuel aggregate demand including, but not limited to, tax cuts, depreciation of local exchange rates, increased government fiscal spending, growing consumer confidence, and increased consumer spending. So, in general, a rapidly expanding economy can create inflationary pressures. Therefore, in our forecasts of inflation, we look to current and forward-looking economic indicators that may indicate a change in aggregate demand.

The 2008 recession was deep, and the ensuing recovery was characterized as slow with episodes of deflationary pressures. The coronavirus led recession of 2020 was also significant, but conversely its recovery outcomes have been quick and led to inflationary pressures.

As seen in [Figure 11](#), the overall economy is operating at mixed capacity, with utilization levels across some sectors above, and others below, their long-term averages. With utilization levels largely unchanged from last year in the face of significant rate hikes, it will be important to monitor how these rates change in the near future.

**Figure 11: Spare Economic Capacity**

As of 12/31/2024	Current Level	Long-Term Average	Standard Deviation
<b>Goods Sector</b>			
Manufacturing capacity utilization	76.3%	79.8%	5.1%
Mining capacity utilization	89.9%	86.5%	4.8%
<b>Services Sector</b>			
Utilities capacity utilization	70.5%	85.3%	6.2%
<b>Housing/Real Estate Sector</b>			
Rental Vacancy Rate	6.9%	7.3%	1.5%
Owner-Occupied Vacancy Rate	1.1%	1.5%	0.5%
<b>Labor Market</b>			
US Unemployment Rate (U-3)	4.2%	5.7%	1.7%
US Labor Force Non-Participation Rate	37.5%	37.1%	2.9%
US Employment to Population Rate	59.9%	59.3%	2.7%
Eurozone Unemployment Rate	6.2%*	9.0%	1.7%
<b>Oil Sector</b>			
Weekly US Field Production of Crude Oil	13,573	7,736	2,294
US Stock Crude Oil (Million Barrels)	416	346	66

Source: FactSet. (2025). \*As of 9/30/2024

### Supply-Cost Factors

Supply-cost (often referred to as cost-push) inflation is caused by an increase in prices of inputs like labor, raw material, or capital. Some well-known factors that fuel cost-push inflation include energy price shocks and wage increases. While it is hard to predict this type of inflation, as it often occurs due to sudden events, we can build a reasonable expectation by noting the general trends.

**Figure 12** shows meaningful decreases in the Median Wage Growth after both the Tech Bubble recession as well as the Housing Bubble recession. However, growth had been increasing leading into the COVID recession and while growth rates have fallen from their recent peak in 2022, they remain elevated compared to the long-term average.

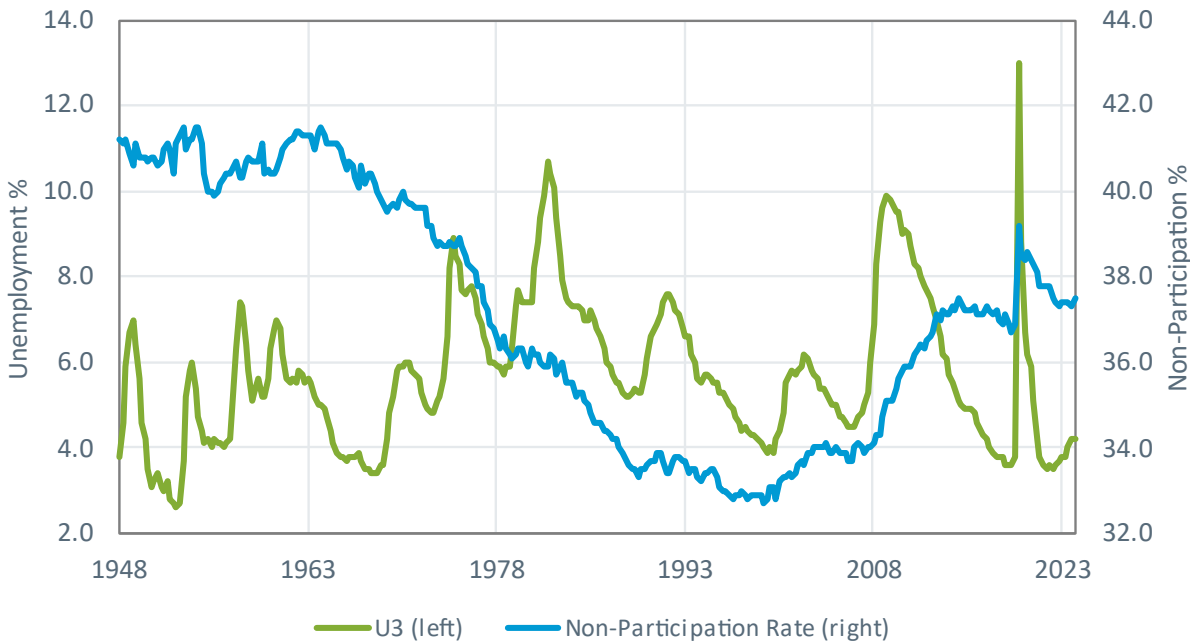
Figure 12: Median Wage Growth



Source: FactSet. (2025)

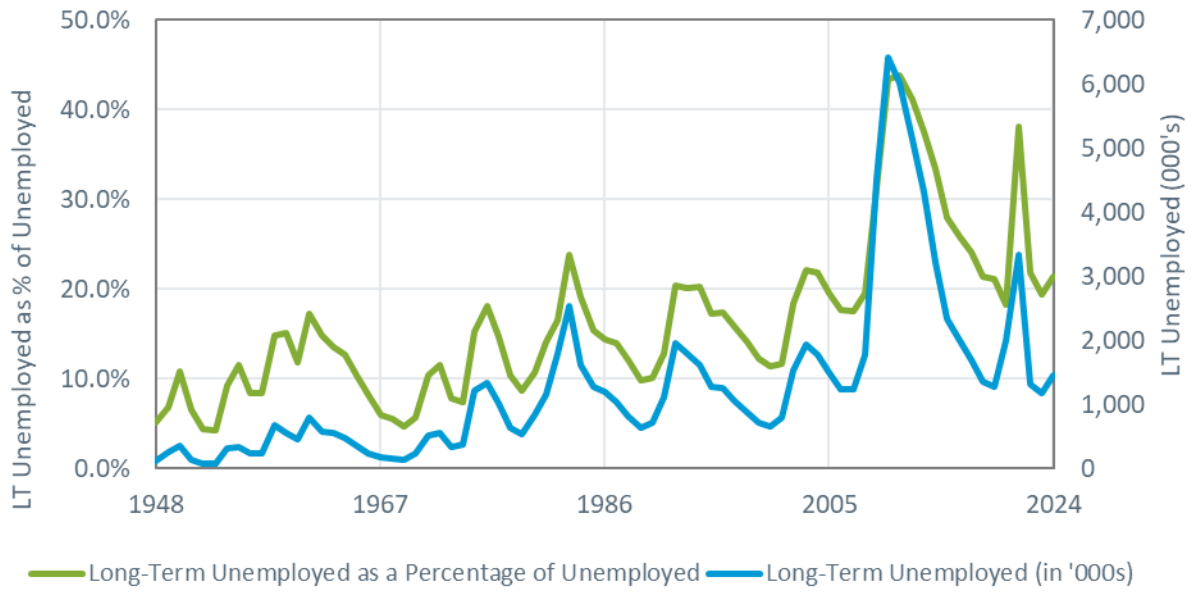
Figure 13, Figure 14, and Figure 15 also illustrate material movements in other labor market measures. The general path of data leading into the global pandemic suggested tightening labor supply – with the non-participation rate and the unemployment rate decreasing at the same time, while hourly earnings were increasing. However, volatility of these labor market measures post-pandemic would suggest we still need some time before we can observe whether long-term trends are maintaining or developing.

Figure 13: US Unemployment Rate and Labor Force Participation Rate



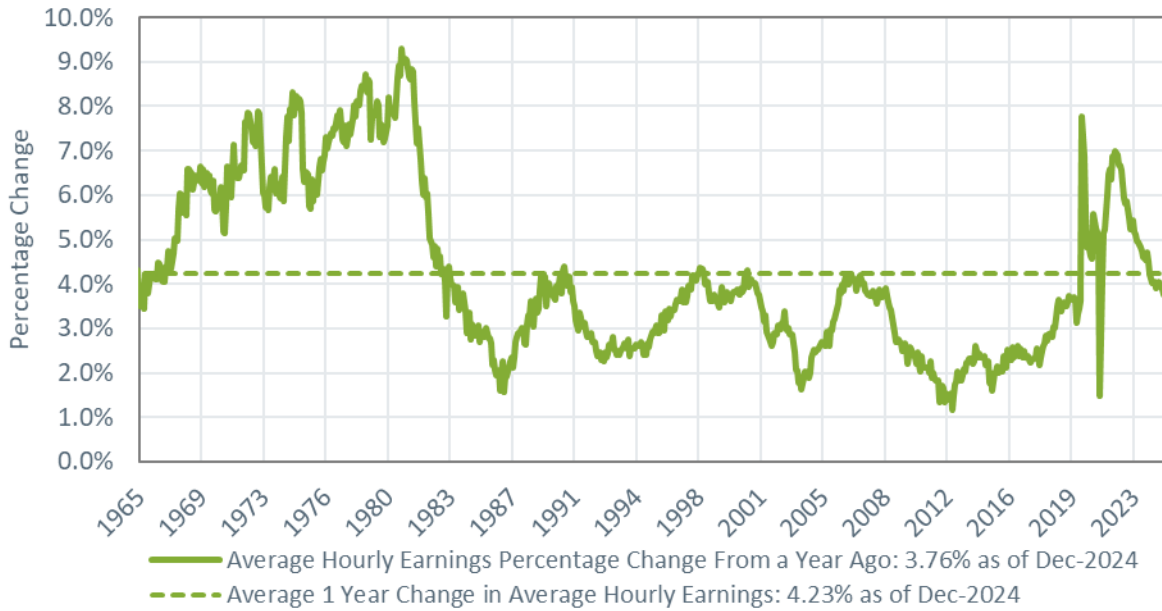
Source: FactSet. (2025)

**Figure 14: Trends in Long-Term Unemployment**



Source: FactSet. (2025)

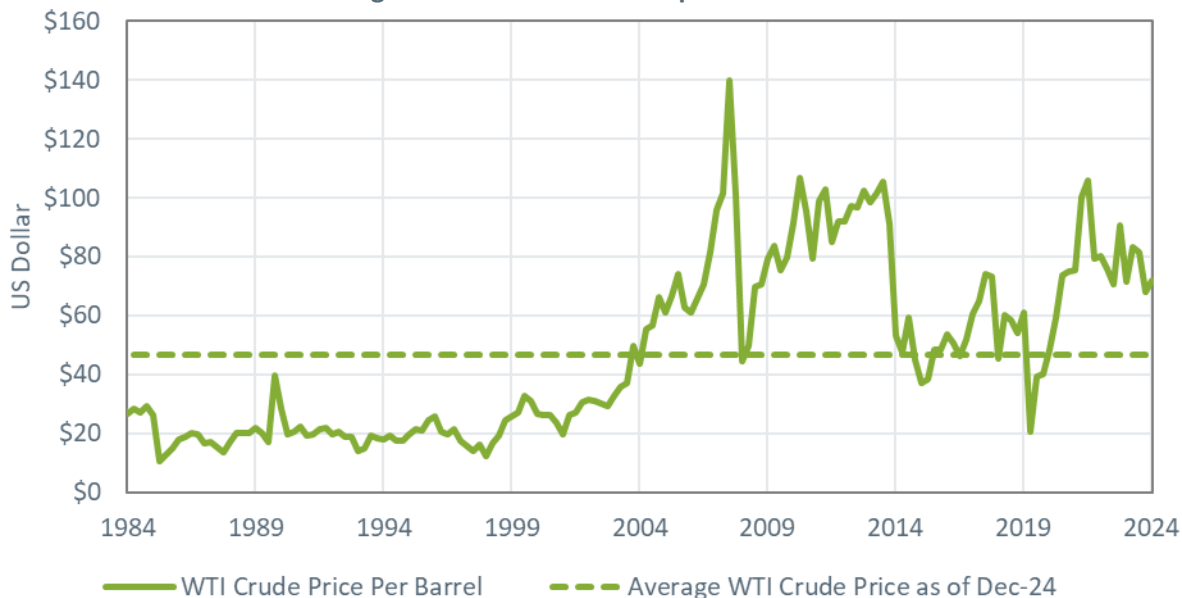
**Figure 15: Trends in Average Hourly Earnings of Production/Nonsupervisory Employees**



Source: FactSet. (2025)

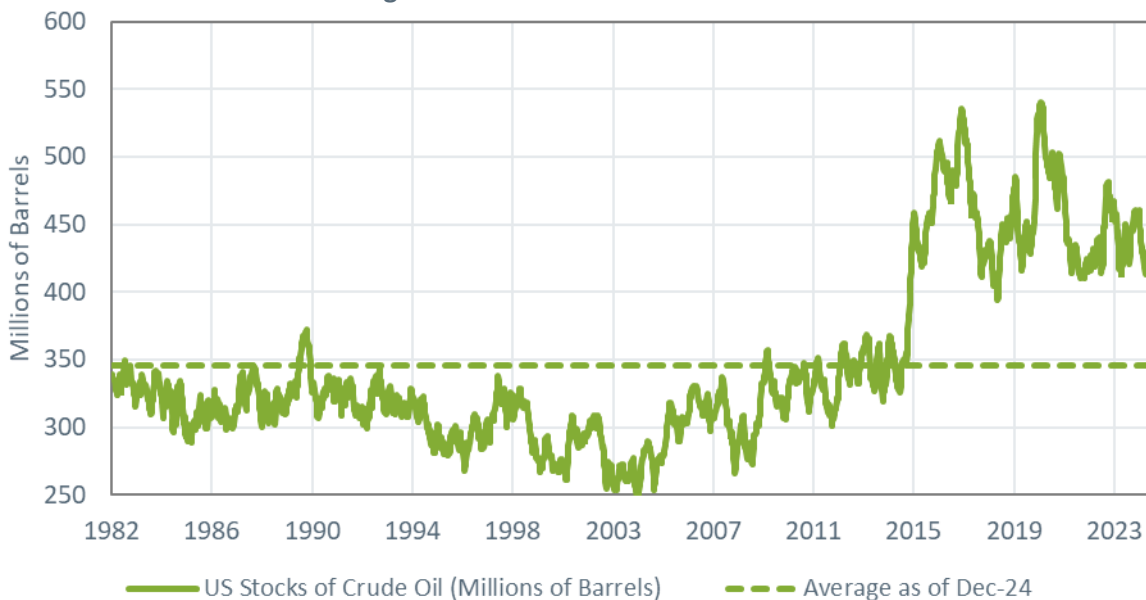
Figure 16 highlights the elevated cost of oil, as increased demand was not offset by increased supply – as shown in Figure 17.

Figure 16: WTI Crude Price per Barrel



Source: FactSet. (2025)

Figure 17: US Crude Oil Inventories



Source: FactSet. (2025)

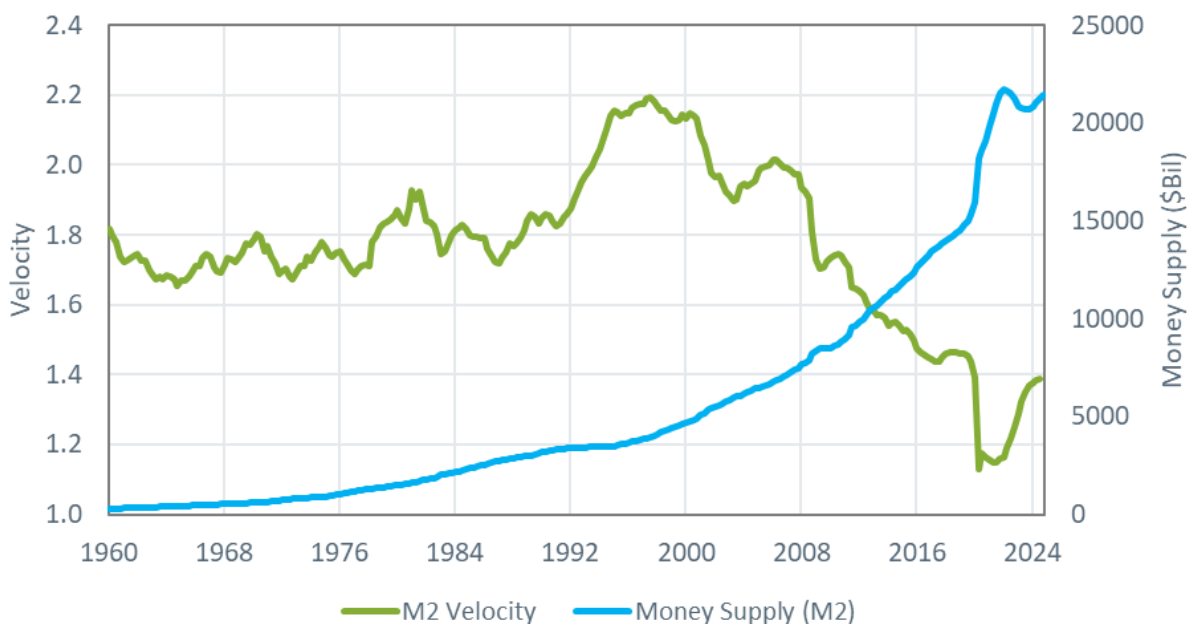
### Money-Supply Factors

Money supply factors, typically driven by monetary policy action from the Federal Reserve, have received a significant amount of media attention and concern given recent levels of inflation. However, inflationary concerns related to monetary policies may become less of a focus over time. This is largely driven by the inflation dynamics following the 2008 financial crisis, and the lack of realized inflation (excluding financial assets) from the significant growth in money supply as a byproduct of the Fed’s crisis related programs. We believe these same considerations apply, over the long run, to the monetary policy actions associated with the 2020 financial crisis and beyond.

Indeed, in the heart of the 2008 financial crisis when the Federal Reserve abandoned its interest rate point target in favor of a “floor” system, many market participants and policy makers highlighted the potential inflation risk of such a large monetary base. Many suggested that the excess reserves in the financial system would be aggressively lent out and ultimately spent on inflationary causing endeavors. As the crisis subsided, economic growth returned, and inflationary pressures failed to build, many market participants took an opportunity to review the commonly held theory that excess reserves were in fact inflationary. Specifically, many economists are now reviewing the actual structure of the reserve system and believe that reserves in themselves are not inflationary insomuch as they cannot be lent in the traditional sense. Instead, the reserves are essentially “locked” in a closed system until the Fed decides to remove them through temporary or permanent open market operations. This is not to suggest that Federal Reserve policies have no impact on inflation dynamics. In fact, they do, but it is largely from the impact of keeping real policy rates above or below the US economy’s long-run potential growth rate, and not from institutions holding excess reserves. However, when significant monetary stimulus is then combined with significant fiscal stimulus – and focused directly to consumers – clearly it has had a significant impact on recent inflation.

In reviewing other measures of money-supply related metrics, the frequency of currency exchange, also known as the velocity of money, continues to remain below long-term averages, just off record low levels. As **Figure 18** highlights, the velocity of M2<sup>1</sup> stock has been on a steady decline since peaking in the late 1990s until recently – while money supply had been increasing for decades until recently as well. We believe these offsetting money supply and velocity effects may continue, as diminishing marginal returns to increasing levels of debt result in less productive debt that could lower potential future economic growth. However, these are important changes to note and monitor. It should also be noted that this government spending reduces net savings – and thus investment – which can also reduce potential future growth. Therefore, while we find the recent increases in velocity worthy of inflation considerations, we believe that there are offsetting factors to consider as well.

**Figure 18: Velocity of M2 and Money Supply (M2)**

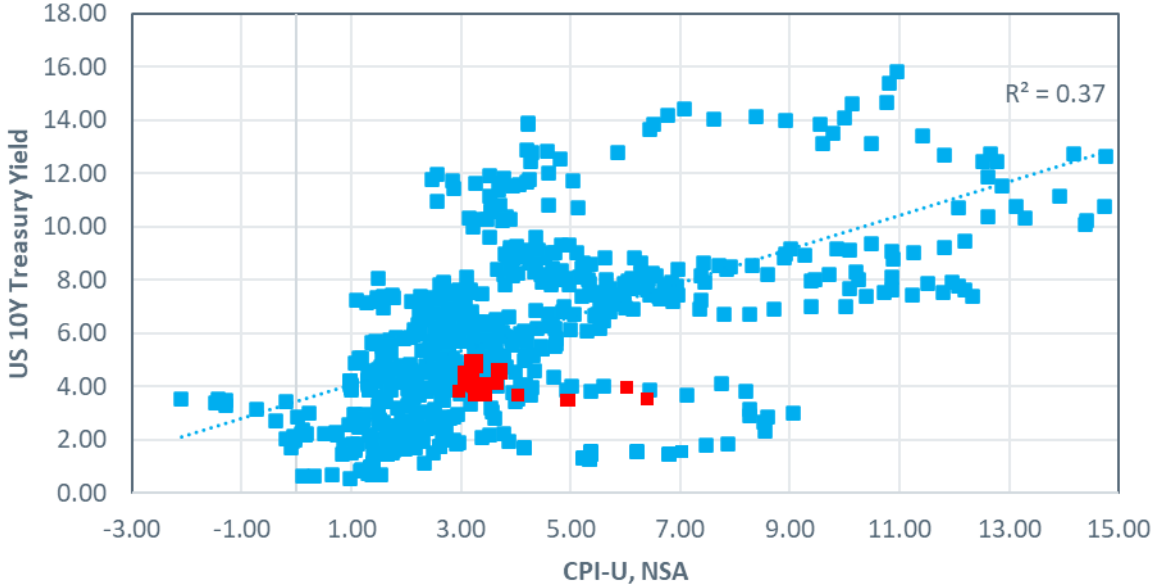


Source: FactSet. (2025)

<sup>1</sup> M2 is a measure of the money supply that includes cash and checking deposits plus savings deposits, money market securities, mutual funds and other time deposits.

Lastly, **Figure 19** illustrates the historically strong relationship, between inflation (CPI) and interest rates (10-yr). The red dots indicate the last 12 months with the more recent months larger in size. After a period of divergence, the Fed responded with significant rate hikes resulting in a slowing of inflation and a convergence towards long-term trends.

**Figure 19: Historical Relationship between Inflation and Interest Rates**  
CPI-U, NSA vs. US 10Y Treasury Yield



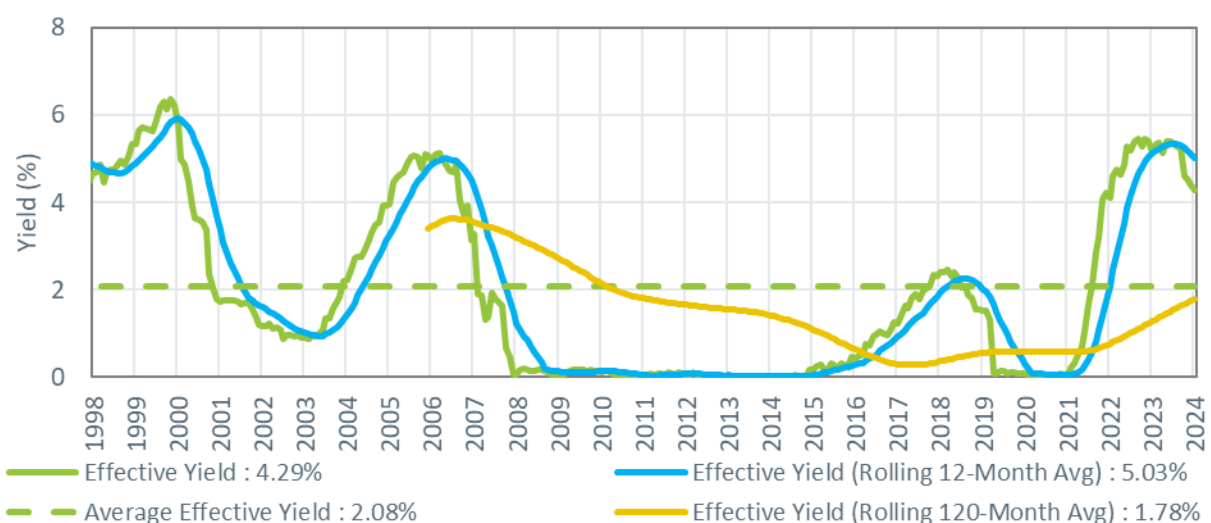
Source: FactSet. (2025)

## Cash Equivalents (BofA ML US 3-Month Treasury Bill Index)

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Standard Deviation	Nominal Return (Geo.)	Nominal Return (Arith.)	Standard Deviation	Nominal Return (Geo.)	Nominal Return (Arith.)	Standard Deviation	Nominal Return (Geo.)
Cash Equivalents	2.75%	2.00%	2.73%	2.75%	2.00%	2.73%	0.00%	0.00%	0.00%

The historical performance of short-term instruments, as measured by the Bank of America (“BofA”) ML US 3-Month Treasury Bill Index as of December 31, 2024, indicates that cash equivalents have provided an annualized return of 4.58% with an annual standard deviation of 3.90% since inception (January 1, 1978). The effective yield as of December 31, 2024 was 4.29% with an average yield of 2.08% since effective yield data became available (December 31, 1998).

**Figure 20: BofA ML US 3-Month Treasury Bill Index Effective Yield**



Source: FactSet. (2025)

	ICE BofA ML US 3-Month Treasury Bill (since 1/1/1978)	US 30 Day T-Bill (since 1/1/1926)
<b>Annualized Return</b>	4.58%	3.28%
<b>Annualized Real Return</b>	1.02%	0.31%
<b>Annual Standard Deviation</b>	3.90%	3.04%

Source: FactSet, Morningstar. (2025)

Given maintained effective yields above long-term averages, paired with expectations of higher rates for longer, we left our long-term return expectation for cash equivalents unchanged at 2.75%.



## FIXED INCOME

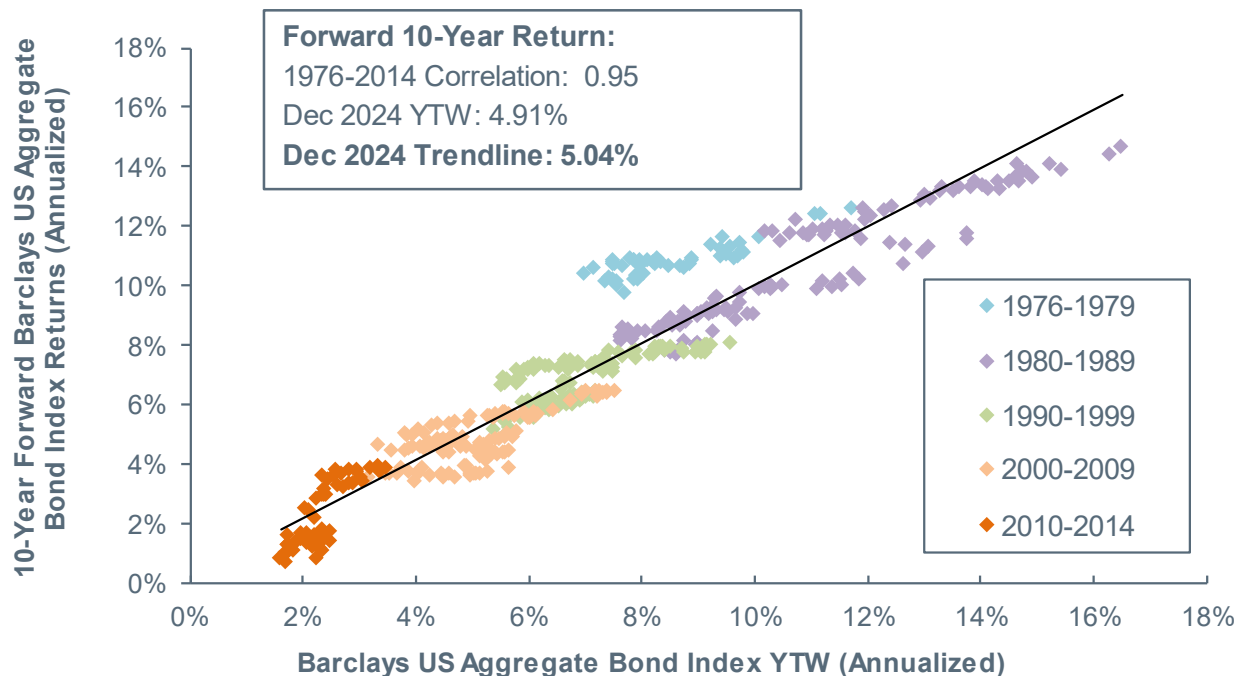
Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
US Aggregate Fixed Income	4.00%	5.00%	3.88%	4.50%	5.00%	4.38%	0.50%	0.00%	0.50%
Non-US Dev'd Sovereign Fixed Income UH TIPS	2.50%	8.50%	2.15%	2.50%	8.50%	2.15%	0.00%	0.00%	0.00%
Low Duration Fixed Income	3.25%	2.50%	3.22%	3.50%	2.50%	3.47%	0.25%	0.00%	0.25%
Long Duration Fixed Income	5.00%	10.00%	4.53%	5.50%	10.00%	5.03%	0.50%	0.00%	0.50%
High Yield	7.00%	10.50%	6.49%	7.00%	10.50%	6.49%	0.00%	0.00%	0.00%
Bank Loans	6.50%	9.00%	6.12%	6.50%	9.00%	6.12%	0.00%	0.00%	0.00%
Emerging Markets Debt (Hard)	7.00%	10.00%	6.54%	7.00%	10.00%	6.54%	0.00%	0.00%	0.00%
Emerging Markets Debt (Local)	6.00%	11.50%	5.38%	6.25%	11.50%	5.63%	0.25%	0.00%	0.25%

The factors we utilize for estimating fixed income returns include, but are not limited to, yield and the yield curve, changes in interest rates and spreads, as well as duration. We discuss these in more depth below.

### Yield

The yield (to worst) of a fixed income security is the anticipated return to an investor based on interest payments (and other factors including call options). Therefore, as [Figure 21](#) illustrates, initial period yields (as represented by the Bloomberg US Aggregate Bond Index) have historically been a reasonable starting point when forecasting future fixed income total returns. Starting low bond yields typically indicate low total returns for the future, and vice versa.

**Figure 21: Relationship between YTW and Forward 10 Year Returns**



Source: FactSet. (2025)

## Interest Rates

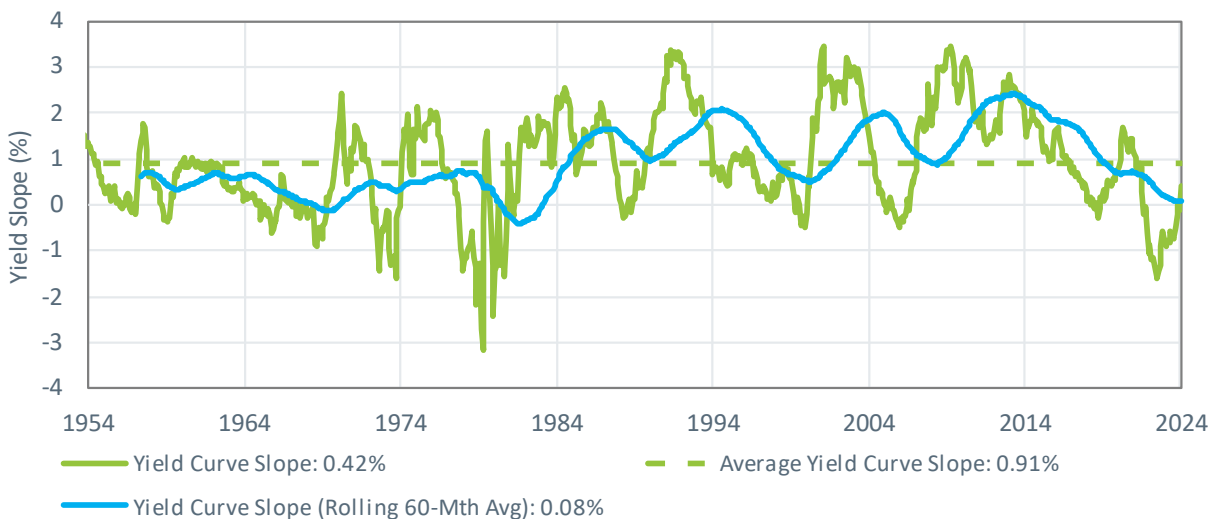
We consider interest rate expectations when setting fixed income expected returns. Interest rate changes affect fixed income investments in multiple ways. In the short-term, if interest rates rise, fixed rate bonds will incur price losses; and if rates fall, the opposite will occur. However, in the long-term, rising interest rates result in higher yields/incomes for re-investment. We consider this trade-off between short- and long-term effects of interest rate changes, and the timing of such changes, on future fixed income returns when deriving our assumptions.

The prices of longer-maturity bonds are more sensitive to changing interest rates because the income on a fixed income security is fixed. For example, consider a 10-year bond with a 2% yield and a scenario where the interest rate increases in two years by 2%, resulting in a similar newly issued bond paying 4% interest. This means that your old bond is less valuable now if sold because for the remaining eight years of the bond's life it will pay 2% interest versus the newly issued bond paying 4% interest. However, if your initial bond matured in three years instead of 10, then the impact is less severe as your old bond only has one year of inferior payments.

## Yield Curve

In addition to the yield level at a particular duration we also examine the shape of the yield curve when evaluating future return outcomes for fixed income investments. [Figure 22](#) below shows the slope of the Treasury yield curve throughout time. RVK generally assumes an average shape/slope for the yield curve over the long-term, which must be considered against the starting shape/slope of the current yield curve to understand the potential impacts of changes in the yield curve over time on the various fixed income assumptions over the investment horizon.

**Figure 22: Market Cycle: Yield Curve Slope US 10-Year Treasury vs. US 1-Year Treasury**



The yield curve slope shown is the difference between the US 10-Year Treasury Yield and US 1-Year Treasury Yield.

Source: FactSet. (2025)

## Duration

The example in the above "Interest Rates" section shows the significance of the duration of a fixed income investment in relation to its future returns. Duration is a measure of how long (in years) it takes for the price of a bond to be repaid by its cash flow, as well as an indicator of interest rate sensitivity. Therefore, duration is a relevant consideration that impacts both the return and risk assumptions.

While the assumption timeframe is long-term, the horizon period is still finite (20 years). Rising rates have the potential to increase long-term fixed income returns through additional future income, but they can also cause (be offset by) short-term market impairment of prices. Therefore, the closer the asset class duration is to the investment horizon (the longer the duration), the closer the return assumption (generally) is to the starting market yield – all else equal.

### **Spread**

We also consider credit conditions and the spread (option adjusted) of yields over US Treasuries when forecasting return assumptions. We compare the current level of spread for a particular asset class to its long-term average to estimate the impact of potential spread level movements on future returns.

### **Other Considerations**

It is also important to note that while the above stated factors generally inform the direction and magnitude of our decisions, we also consider qualitative and triangulation issues, as well as additional factors as needed (i.e., currency impact on international bonds), when arriving at final assumption values.

### **2025 Forecast**

While increasing interest rates result in short-run price losses for fixed income securities, in the long-run they provide higher income for re-investment. 2024 saw material movement in rates throughout the year, however yields at year end were generally higher than the previous year, thus, prospects for fixed income returns generally improved compared to last year.

## US Aggregate Fixed Income (Bloomberg US Aggregate Bond Index)

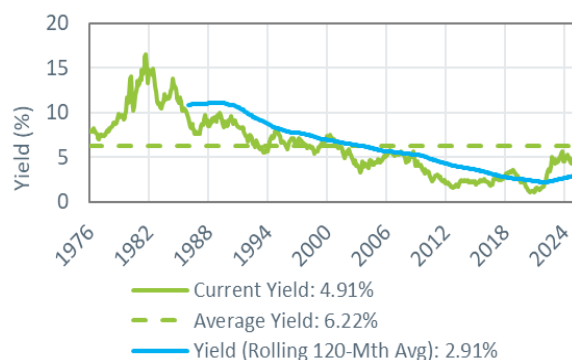
Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
US Aggregate Fixed Income	4.00%	5.00%	3.88%	4.50%	5.00%	4.38%	0.50%	0.00%	0.50%

We increased our long-term return forecast for US aggregate fixed income to 4.50%, reflecting increased yields and an expected higher interest rate environment. Spreads are below historical averages though not significantly for this index, and duration is largely unchanged. While this return forecast is still below historical averages, it is significantly improved related to most assumptions created post-GFC. The below charts provide further yield, spread, and duration details.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
<b>YTW</b>	4.91%	4.53%	2.91%	6.22%
<b>Modified Duration</b>	6.1 years	6.2 years	6.0 years	5.1 years
<b>OAS</b>	0.34%	0.42%	0.46%	0.53%

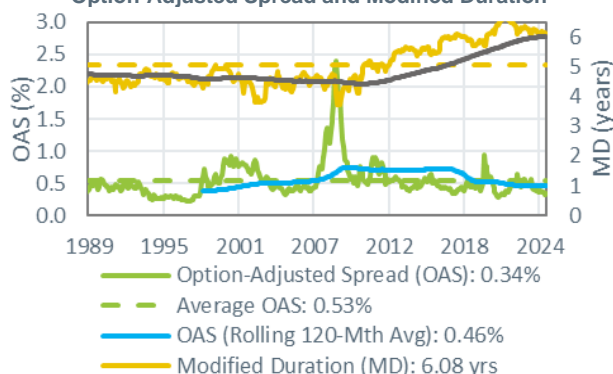
**Note:** Since inception averages are calculated starting from the following dates – yield to worst starting from January 1976, modified duration from January 1989, and option-adjusted spread from August 1988.

**Figure 23: Bloomberg US Aggregate Bond Index Yield to Worst**



Source: FactSet. (2025)

**Figure 24: Bloomberg US Aggregate Bond Index Option-Adjusted Spread and Modified Duration**



## Non-US Fixed Income (FTSE Non-US World Government Bond Index USD Unhedged)

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Non-US Dev'd Sovereign Fixed Income UH	2.50%	8.50%	2.15%	2.50%	8.50%	2.15%	0.00%	0.00%	0.00%

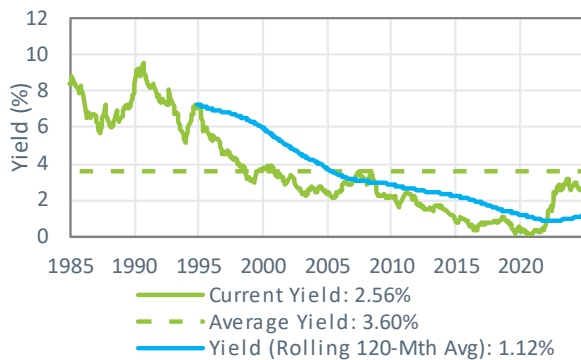
We utilize an unhedged index, which includes currency movements, and thus eliminates any impact from active currency hedging decisions. We believe that while currency does not structurally add value over the long-term as a strategic allocation, it could be a source of alpha for an active non-US fixed income mandate.

We continue to expect lower returns for non-US government bonds due to lower present yields, lower inflation expectations internationally, and longer durations that complicate the future return potential. Given the stability in yields and general outlook of future yield expectations globally, we have maintained our long-term return forecast for non-US developed sovereign fixed income at 2.50%. The below charts provide further yield, spread, and duration details.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
<b>YTW</b>	2.56%	2.53%	1.12%	3.60%
<b>Modified Duration</b>	7.8 years	8.2 years	8.8 years	6.4 years
<b>OAS</b>	0.11%	0.18%	0.20%	0.17%
<b>Credit Quality</b>	Aa3	Aa3	-	-

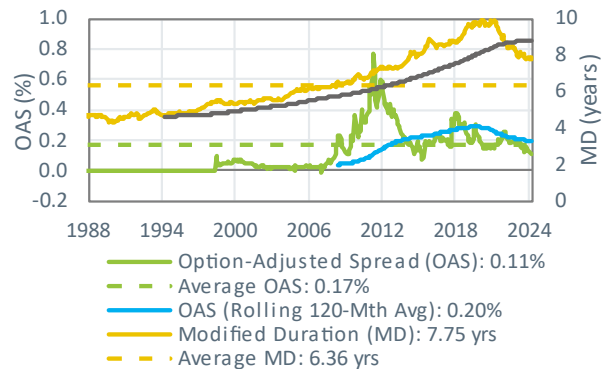
**Note:** since inception averages are calculated starting from the following dates –YTW starting from January 1999, and modified duration from January 1985.

**Figure 25: FTSE Non-US WGB Index Yield to Worst**



Source: The Yield Book, Inc. (2025)

**Figure 26: FTSE Non-US WGB Index Option-Adjusted Spread and Modified Duration**



## Treasury Inflation Protected Securities (“TIPS”) (Bloomberg US TIPS Index)

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
TIPS	4.00%	5.50%	3.85%	4.00%	5.50%	3.85%	0.00%	0.00%	0.00%

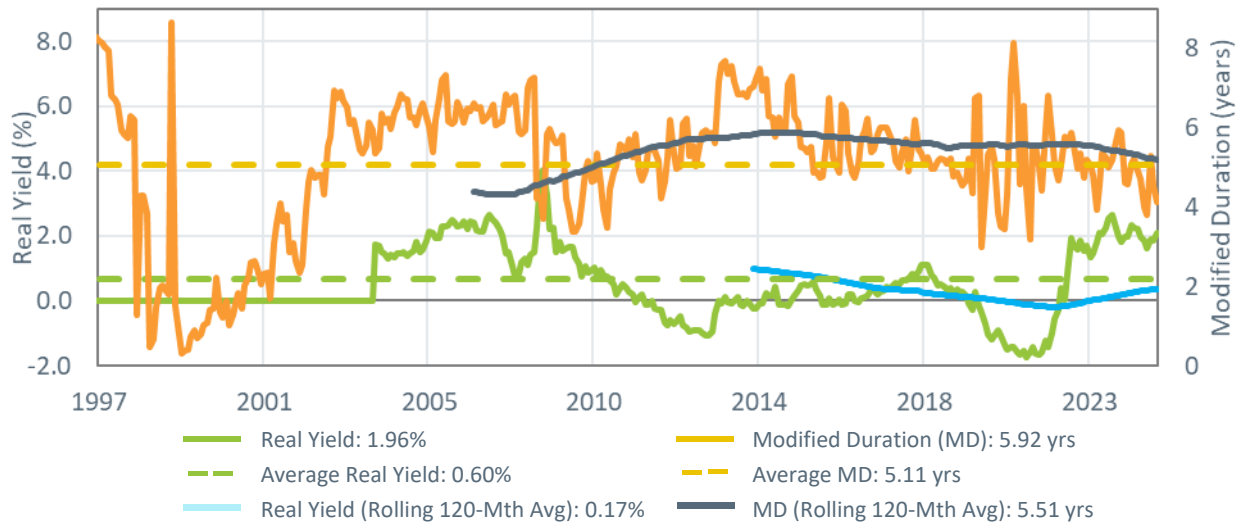
TIPS are a relatively immature asset class in the United States, and hence the performance history of the selected index, the Bloomberg US TIPS Index, is limited – beginning in 1997. TIPS are inflation-linked securities whereby the principal is adjusted relative to the index ratio CPI-U. The coupon is fixed relative to principal with semi-annual interest payments. We review real yield, plus inflation, as a starting point for return considerations.

We maintained our TIPS return assumption at 4.00% as real yields remained relatively stable and duration decreased. The charts below provide further yield and duration details.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
<b>Real Yield</b>	2.08%	1.96%	0.37%	0.66%
<b>Modified Duration</b>	4.1 years	5.9 years	5.2 years	5.1 years

**Note:** since inception averages are calculated starting from the following dates – real yield starting from June 2004, modified duration from March 1997.

**Figure 27: Bloomberg US Treasury US TIPS Index  
Real Yield and Modified Duration**



Source: FactSet. (2025)

## US Low Duration Fixed Income (Bloomberg US 1-3 Year Government/Credit Index)

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Low Duration Fixed Income	3.25%	2.50%	3.22%	3.50%	2.50%	3.47%	0.25%	0.00%	0.25%

We increased our long-term return expectation for low duration fixed income strategies by 25 bps to 3.50%, given the outlook of higher rates for longer, in spite of a modest decrease in yield and minimal changes to duration, and spreads. The charts below provide further yield, spread, and duration details.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
Effective Yield	4.40%	4.52%	2.22%	5.20%
Modified Duration	1.8 years	1.8 years	1.9 years	1.8 years
OAS	0.14%	0.18%	0.18%	0.30%

Note: Since inception averages are calculated starting from the following dates – effective yield to starting from January 1976, modified duration from December 1985, and option-adjusted spread from August 2000.

Figure 28: Bloomberg US 1-3 Year Gov't/Credit Index Yield to Worst

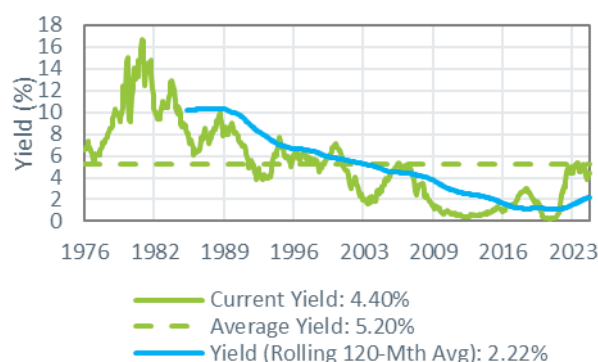
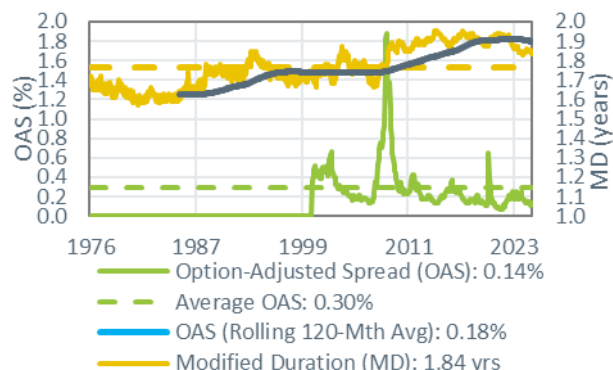


Figure 29: Bloomberg US 1-3 Year Gov't/Credit Index Option-Adjusted Spread and Modified Duration



Source: FactSet. (2025)

## US Long Duration Fixed Income (Bloomberg US Long Government/Credit Index)

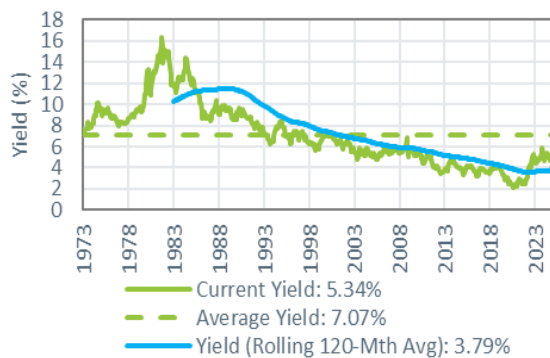
Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Long Duration Fixed Income	5.00%	10.00%	4.53%	5.50%	10.00%	5.03%	0.50%	0.00%	0.50%

Given a material increase in yields and a duration nearing the investment horizon, we increased our long-term return expectation for long duration fixed income strategies by 50 bps to 5.50%. The charts below provide further yield, spread, and duration details.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
YTW	5.34%	4.71%	3.79%	7.21%
Modified Duration	13.6 years	14.3 years	15.2 years	11.2 years
OAS	0.50%	0.62%	0.95%	0.76%

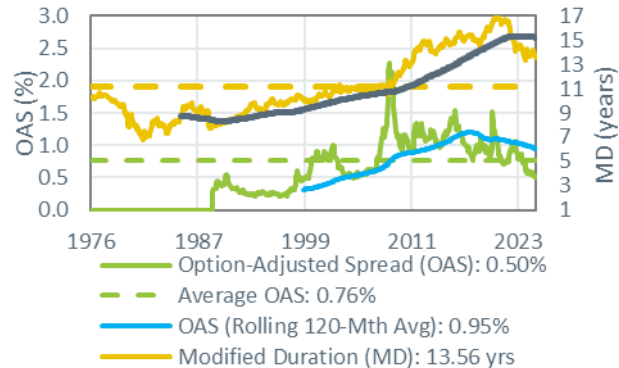
**Note:** Since inception averages are calculated starting from the following dates – yield to worst starting from January 1973, modified duration from January 1989, and option-adjusted spread from June 1989.

Figure 30: Bloomberg US Long Government/Credit Index Yield to Worst



Source: FactSet. (2025)

Figure 31: Bloomberg US Long Government/Credit Index Option-Adjusted Spread and Modified Duration





## US High Yield Fixed Income (Bloomberg US Corporate High Yield Index)

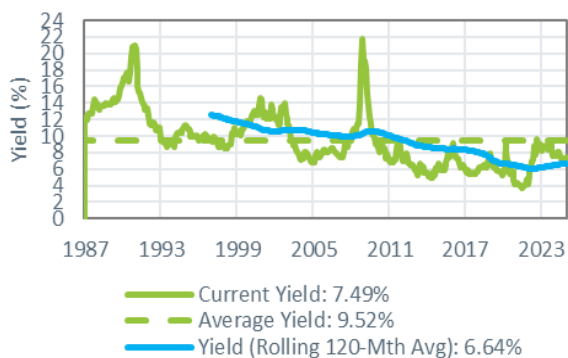
Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
High Yield	7.00%	10.50%	6.49%	7.00%	10.50%	6.49%	0.00%	0.00%	0.00%

Given modest overall changes to yields and duration, we have maintained our long-term forecast for high yield returns at 7.00%. While lower than average spreads would generally indicate headwinds for fixed income assets, as normalization occurs the limited duration of high yield provides more years at higher yields in the investment horizon allowing losses to be recouped. The charts below provide further yield, spread, and duration details.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
YTW	7.49%	7.59%	6.64%	9.52%
Modified Duration	3.1 years	3.2 years	3.8 years	4.2 years
OAS	2.87%	3.23%	4.18%	4.86%

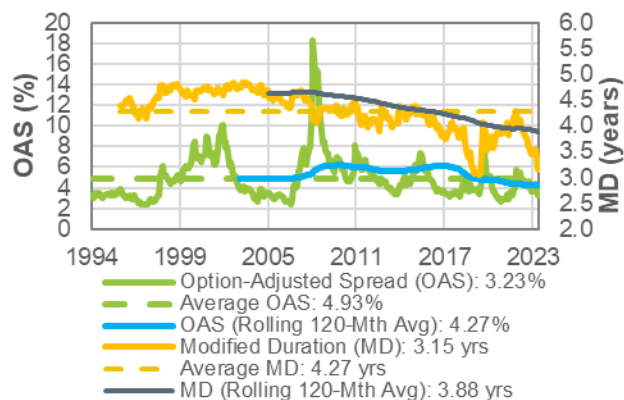
**Note:** Since inception averages are calculated starting from the following dates – yield to worst starting from January 1987, modified duration from January 1995, and option-adjusted spread from January 1994.

**Figure 32: Bloomberg US Corporate High Yield Index Yield to Worst**



Source: FactSet. (2025)

**Figure 33: Bloomberg US Corporate High Yield Index Option-Adjusted Spread and Modified Duration**



## US Bank Loans (Credit Suisse Leveraged Loan Index)

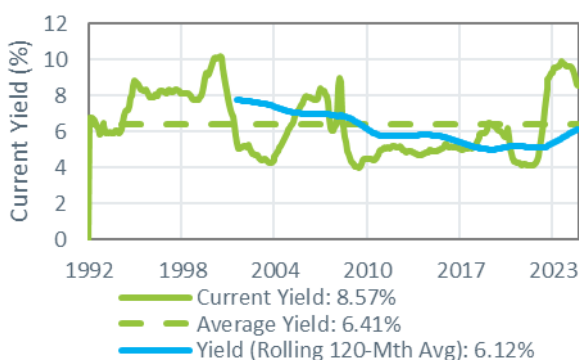
Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Bank Loans	6.50%	9.00%	6.12%	6.50%	9.00%	6.12%	0.00%	0.00%	0.00%

We maintained our long-term return forecast return at 6.50% as above average yield levels were offset by expected rate changes. Additionally, discount margins were fairly average and relatively unchanged, while the duration of bank loans is minimal. The charts below provide further details related to yield and discount margin.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
<b>Current Yield</b>	8.57%	9.79%	6.12%	6.41%
<b>3-Year Discount Margin</b>	4.75%	5.28%	5.14%	4.73%

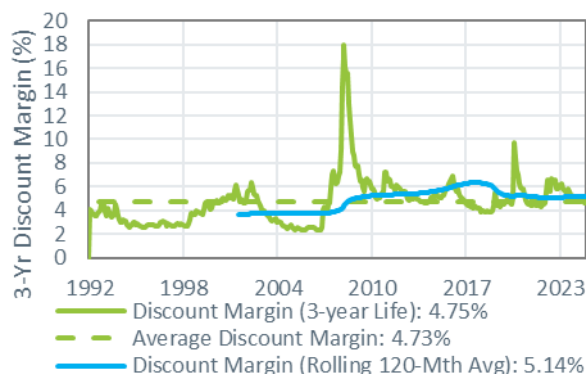
**Note:** Since inception averages are calculated starting from January 1992.

**Figure 34: Credit Suisse Leveraged Loan Index Yield to Worst**



Source: Credit Suisse. (2025)

**Figure 35: Credit Suisse Leveraged Loan Index Three-Year Discount Margin**



## Emerging Markets Debt (Hard Currency) (JP Morgan Emerging Market Bond Global Diversified Total Return Index)

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Emerging Markets Debt (Hard)	7.00%	10.00%	6.54%	7.00%	10.00%	6.54%	0.00%	0.00%	0.00%

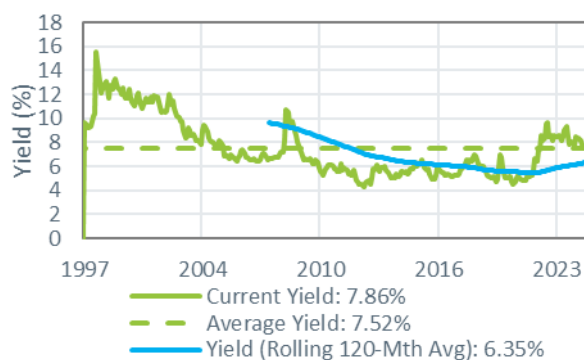
The JP Morgan Emerging Market Bond Global Diversified Total Return Index (“JPM EMBI Global Diversified TR Index”) measures the performance of international government bonds issued by emerging market countries that are considered sovereign (issued in something other than local currency). The JPM EMBI Global Diversified TR Index consisted of 19% quasi-sovereign securities and 81% sovereign securities as of December 31, 2024. This is a relatively immature asset class, hence the performance history for the benchmark only goes back to 1994.

We maintained our long-term forecast for return at 7.00% due to relatively unchanged fundamentals. The charts below provide further yield, spread, quality, and duration details.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
<b>YTM</b>	7.86%	7.84%	6.35%	7.52%
<b>Effective Duration</b>	6.5 years	6.8 years	7.0 years	6.4 years
<b>Strip Spread</b>	3.25%	3.84%	3.83%	4.32%
<b>Credit Quality</b>	Ba1	Ba1	-	-

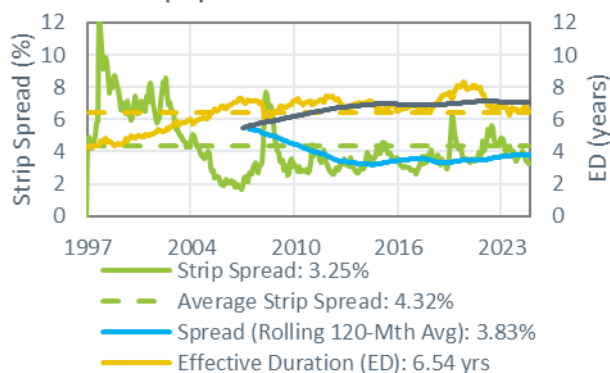
**Note:** Since inception averages have been calculated starting from January 2001.

**Figure 36: JPM EMBI Global Diversified TR Index Yield to Worst**



Source: JPM Markets. (2025)

**Figure 37: JPM EMBI Global Diversified TR Index Strip Spread and Effective Duration**



## Emerging Markets Debt (Local Currency) (JP Morgan Government Bond Index Emerging Markets Global Diversified Total Return (USD))

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Emerging Markets Debt (Local)	6.00%	11.50%	5.38%	6.25%	11.50%	5.63%	0.25%	0.00%	0.25%

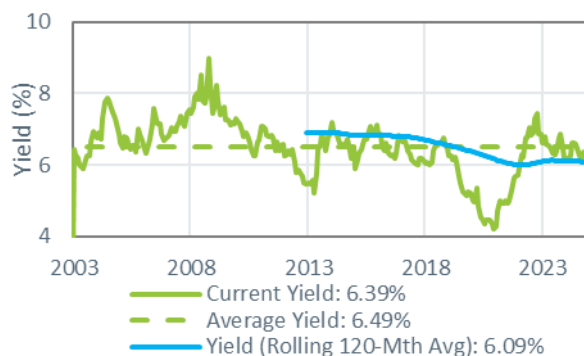
The JP Morgan Government Bond Index Emerging Markets Global Diversified Total Return (USD) is an investable benchmark that measures the performance of government bonds issued by emerging market countries in local currencies and consists 100% of sovereign securities. This is a relatively immature asset class, hence the performance history for the benchmark only goes back to 2003.

We increased our long-term forecast for return by 25 bps to 6.25% due to increased yields and expected tailwinds from currency impacts. The charts below provide further yield, spread, and duration details.

	12/31/2024	12/31/2023	10 Year Average	Since Inception
<b>YTM</b>	6.39%	6.19%	6.09%	6.09%
<b>Modified Duration</b>	5.3 years	5.0 years	5.1 years	4.7 years
<b>3-7 Y Treasury Spread</b>	2.00%	2.30%	3.88%	4.11%

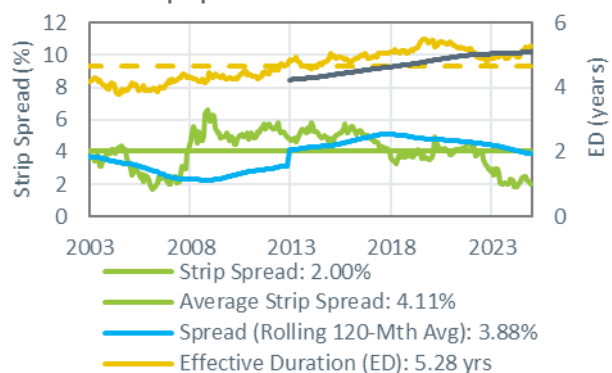
**Note:** Since inception averages are calculated starting from January 2003. Spreads are calculated relative to the Bloomberg Barclays 3-7 Year Treasury Index.

**Figure 38: JPM GBI-EM Global Diversified TR Index Yield to Worst**



Source: JPM Markets. (2025)

**Figure 39: JPM GBI-EM Global Diversified TR Index Strip Spread and Effective Duration**



## EQUITY

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Large/Mid Cap US Equity	6.50%	16.00%	5.32%	6.00%	16.00%	4.81%	-0.50%	0.00%	-0.51%
Small Cap US Equity	7.00%	19.00%	5.35%	6.75%	19.00%	5.10%	-0.25%	0.00%	-0.25%
Broad US Equity	6.50%	16.10%	5.30%	6.04%	16.04%	4.84%	-0.46%	-0.06%	-0.46%
Dev'd Large/Mid Cap Int'l Equity	8.25%	17.00%	6.94%	8.25%	17.00%	6.94%	0.00%	0.00%	0.00%
Dev'd Small Cap Int'l Equity	9.00%	20.00%	7.21%	9.00%	20.00%	7.21%	0.00%	0.00%	0.00%
Emerging Markets Equity	11.25%	25.00%	8.54%	10.75%	25.00%	8.03%	-0.50%	0.00%	-0.51%
Broad International Equity	9.15%	18.85%	7.56%	9.07%	18.47%	7.54%	-0.08%	-0.38%	-0.02%
Global Equity	7.55%	16.60%	6.29%	7.09%	16.34%	5.86%	-0.46%	-0.26%	-0.43%

The fundamental methodology we utilize for forecasting public equity returns is a bottom-up decomposition model, whereby RVK analyzes long-term data regarding key equity return drivers, including dividend yield, projected real earnings growth, and projected changes in valuations. Consistent with previous years, we build decomposition models for each equity sub-asset class. Despite the fact that the data history is more limited for sub-asset classes outside of US large/mid cap equity, we believe that performing distinct decompositions for each sub-asset class still improves the overall accuracy of our assumptions.

Our return decomposition methodology is similar to the Grinold & Kroner model, which is a methodology included in the CFA Institute's Candidate Body of Knowledge ("CBOK"). The method decomposes equity return expectations into the following drivers: dividend yield, share repurchase yield, earnings growth, inflation, and change in price/earnings ratio. However, RVK excludes share repurchase yield from the model as we believe there is evidence suggesting it is not additive to long-term returns<sup>2</sup>. It is also difficult to find long-term data to analyze for this factor, especially for smaller capitalizations and international markets.

Factors included in the RVK model are presented in **Figure 40**. Please note that inflation is broadly addressed in our preceding analysis and therefore added as a separate item within each asset class section below. It is also important to note that while the above stated factors generally inform the direction and magnitude of our decisions, we also consider qualitative and triangulation issues, as well as additional factors as needed, when arriving at final assumption values.

**Figure 40: RVK Return Decomposition**

$$\hat{R}_i = \frac{D}{P} + g + \Delta\left(\frac{P}{E}\right)$$

$\hat{R}_i$  = Expected Return  
 $\frac{D}{P}$  = Dividend Yield  
 $g$  = Projected Earnings Growth  
 $\Delta\left(\frac{P}{E}\right)$  = Expected Change in Price/Earnings Ratio

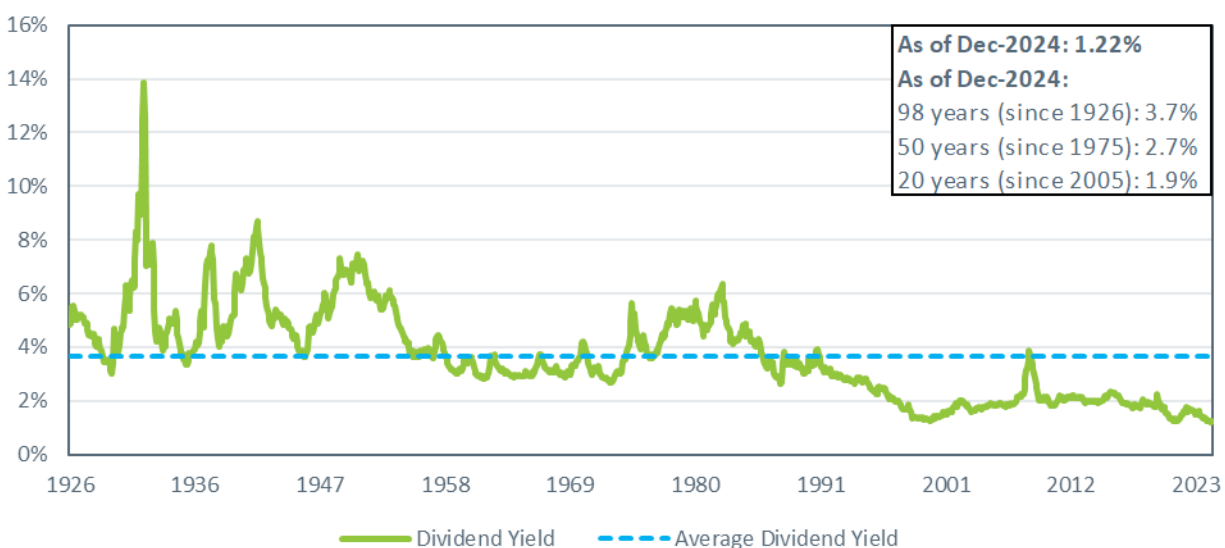
Source: CFA Institute Candidate Body of Knowledge. (2012)

<sup>2</sup> Bernstein, William J. and Arnott, Robert D., *Earnings Growth: The Two Percent Dilution*. Financial Analysts Journal, Vol. 59, No. 5, pp. 47-55, September/October 2003. Available at SSRN: <http://ssrn.com/abstract=489602>.

## Dividend Yield

Dividend yield represents the income that investors earn on their equity investment. As shown in [Figure 41](#), the average dividend yield for the S&P 500 Index has been roughly 4% since 1926. However, in the last 20 years the dividend yield has fallen to an average of only 2% or so, which may suggest lower income returns in the future. We use the current dividend yield in the return decomposition model to better reflect the current economic environment and lower trend.

**Figure 41: S&P 500 Index  
Dividend Yield**



Source: RVK calculation, based on data from the Robert Shiller Database. (2025)

## Earnings Growth

Generally, as the economy expands, corporations benefit from higher sales/earnings. Therefore, we assume that corporate sales (and earnings) grow at roughly the same pace as the economies from which their sales (and earnings) are derived – adjusted for market based regional revenue exposures within each asset class. We utilize multiple forecasts of future real GDP growth worldwide to arrive at an estimated future real earnings growth rate for each equity asset class. Again, please note that inflation is broadly addressed in our preceding analysis and, therefore, added as a separate item within each asset class section below to arrive at nominal growth.

## Valuation (Change in Cyclically Adjusted Price/Earnings Ratio)

The last driver of future equity returns in our decomposition model is valuations. There exist numerous ratios that can provide a valuation measure for equities – Shiller Cyclical Adjusted Price-to-Earnings (“CAPE”), Siegel National Income and Product Account (“NIPA”), trailing or forward-looking Price-to-Earnings (“P/E”), the price-to-dividend ratio, and total public equity value to GDP, to name a few. We have analyzed the most common valuation measures, focusing on their predictive power for future equity returns as well as the quality and availability of data for performing calculations. The summary of our analysis is presented in [Appendix A](#).

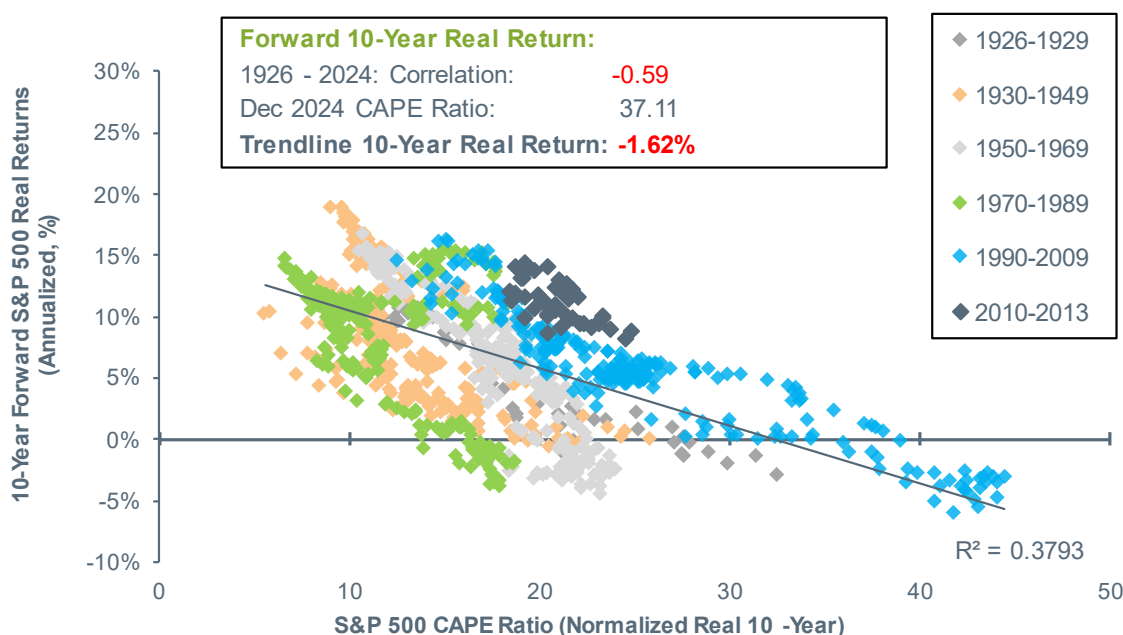
For the purposes of our Capital Market Assumptions, we have decided to utilize the CAPE ratio as the primary valuation measure in our decomposition model. We chose the CAPE ratio because it encompasses a long history, multiple market cycles, is easily understood, is commonly used in the industry, employs a simple calculation methodology, and has historically shown some predictive power for future equity

returns. Even though we utilize this single ratio in our model, we also compare the CAPE ratio to other measures presented in the [Appendix A](#) to make sure it is consistent with other valuation metric signals.

The CAPE ratio is negatively correlated with long-term equity returns. Yale professor Robert Shiller argued that one-year earnings are highly volatile, affected by short-run considerations, and likely mean-reverting over longer periods<sup>3</sup>. He proposed using the cyclically adjusted P/E ratio (i.e., CAPE or Shiller P/E), which averages the prior 10 years of real earnings. [Figure](#) below demonstrates the negative correlation between CAPE and the subsequent 10-year equity returns as measured by S&P 500.

Therefore, in our forecast of a valuation impact on future equity returns, we assume that current CAPE ratios will mean revert over the long run to the historical average for the given index. Valuation tends to be the most volatile decomposition input, given its underlying components, and thus often has the largest influence on year-to-year changes in return assumptions.

**Figure 42: S&P 500 CAPE Ratio vs. 10-Year Forward S&P 500 Return**



December 2024 CAPE ratio uses the S&P 500 earnings estimate for the fourth quarter of 2024.

Source: RVK, based on data from FactSet. (2025)

### Currency and Regional Inflation

We also include currency valuations and regional inflation in our decomposition model for international equities. To determine the developed non-US and emerging market currency valuations relative to the US Dollar we calculate a market weighted mean reversion to the long-term average of the spot rate of the USD pairing of each underlying country's currency included in the MSCI EAFE Index and the MSCI Emerging Markets Index.

We believe both international developed and emerging markets currencies to be undervalued relative to the US Dollar. Regional inflation estimates are mixed – with developed non-US countries forecast to experience lower inflation and emerging countries forecast to experience higher inflation than in the US.

### Index Selection

<sup>3</sup> Campbell, John Y., and Robert Shiller, 1998. *Valuation Ratios and the Long-Run Stock Market Outlook*. The Journal of Portfolio Management 24(2).

We utilize the benchmarks shown in [Figure 43](#) for the equity asset classes.

**Figure 43: RVK Equity Proxy Indices**

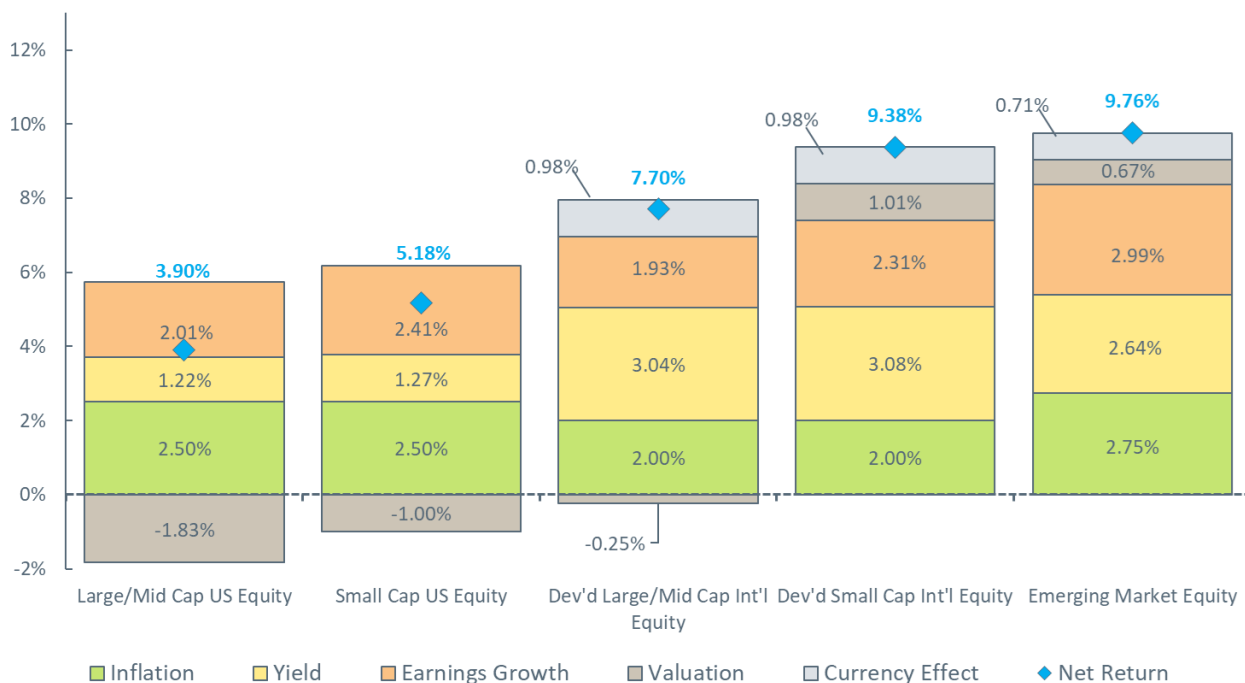
Asset Class	Proxy Index
US Large/Mid Cap Equity	S&P 500
US Small Cap Equity	Russell 2000
Broad US Equity	Russell 3000
Large/Mid Cap Developed International Equity	MSCI EAFE Index
Small Cap Developed International Equity	MSCI Small Cap EAFE
Emerging Markets Equity	MSCI Emerging Markets
Broad International Equity	MSCI All Country World ex-US IMI
Global Equity	MSCI All Country World IMI

### 2025 Equity Return Assumptions

[Figure 44](#) shows the decomposition of the building blocks for each of the public equity asset classes that we model. [Figure 45](#) shows a comparison to the 2024 data points. Several themes are consistent across many or all public equity asset classes.

Inflation expectations increased across developed international asset classes, with a modest decrease in emerging markets, while currency valuations were additive across most international asset classes. Additionally yields decreased across all US and emerging public equity asset classes, with modest increases in developed international equity markets – though yields still remain well below their long-term averages. And given the very strong returns in 2024, valuations also increased across most public equity asset classes. Earnings growth expectations improved slightly for Large Cap US equity, but deteriorated in all other public equity markets.

**Figure 44: RVK Equity Decomposition**



**Figure 45: Year over Year RVK Equity Decomposition Changes**



	US Large/Mid Cap Equity	US Small Cap Equity	Large/Mid Cap Developed International Equity	Small Cap Developed International Equity	Emerging Markets Equity
Inflation	--	--	0.42%	0.42%	-0.05%
Yield	-0.21%	-0.08%	0.26%	0.35%	-0.27%
Earnings Growth	0.05%	-0.03%	-0.07%	-0.18%	-0.15%
Valuation	-0.80%	-0.27%	-0.02%	0.11%	-0.45%
Currency	--	--	0.32%	0.32%	0.12%
<b>Total</b>	<b>-0.95%</b>	<b>-0.38%</b>	<b>0.91%</b>	<b>1.02%</b>	<b>-0.81%</b>

For broad US equity, broad international equity, and global equity we utilize a weighted average of our underlying assumptions to calculate “rolled-up” numbers. These weights are based on their respective proxy indices and are shown in [Figure 46](#). The risk calculations include the impact of correlations as a simple weighted average cannot be used.

**Figure 46: Rolled-Up Equity Assumptions**

	Broad US Equity	Broad International Equity	Global Equity
Russell 1000	95.3%	-	-
Russell 2000	4.7%	-	-
Russell 3000	-	-	65.3%
MSCI EAFE	-	60.5%	-
MSCI Small Cap EAFE	-	9.7%	-
MSCI Emerging Markets IMI	-	29.8%	-
MSCI All Country World ex-US IMI	-	-	34.7%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Weighed Return Assumption</b>	<b>6.04%</b>	<b>9.07%</b>	<b>7.09%</b>
<b>Weighed Risk Assumption</b>	<b>16.04%</b>	<b>18.47%</b>	<b>16.34%</b>

Source: FactSet. (2025)

## REAL ESTATE

Our 2025 real estate return assumptions are shown below. Additionally, we can provide non-core (i.e., value added and opportunistic) assumptions as needed, but we do not publish assumptions for these asset classes here as the return and risk profile can vary substantially depending on the implementation approach.

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Core Real Estate	5.75%	12.50%	5.02%	6.25%	12.50%	5.52%	0.50%	0.00%	0.50%
Global REITs	7.75%	21.00%	5.76%	7.75%	21.00%	5.76%	0.00%	0.00%	0.00%
MLPs	8.25%	23.00%	5.89%	8.00%	23.00%	5.63%	-0.25%	0.00%	-0.26%

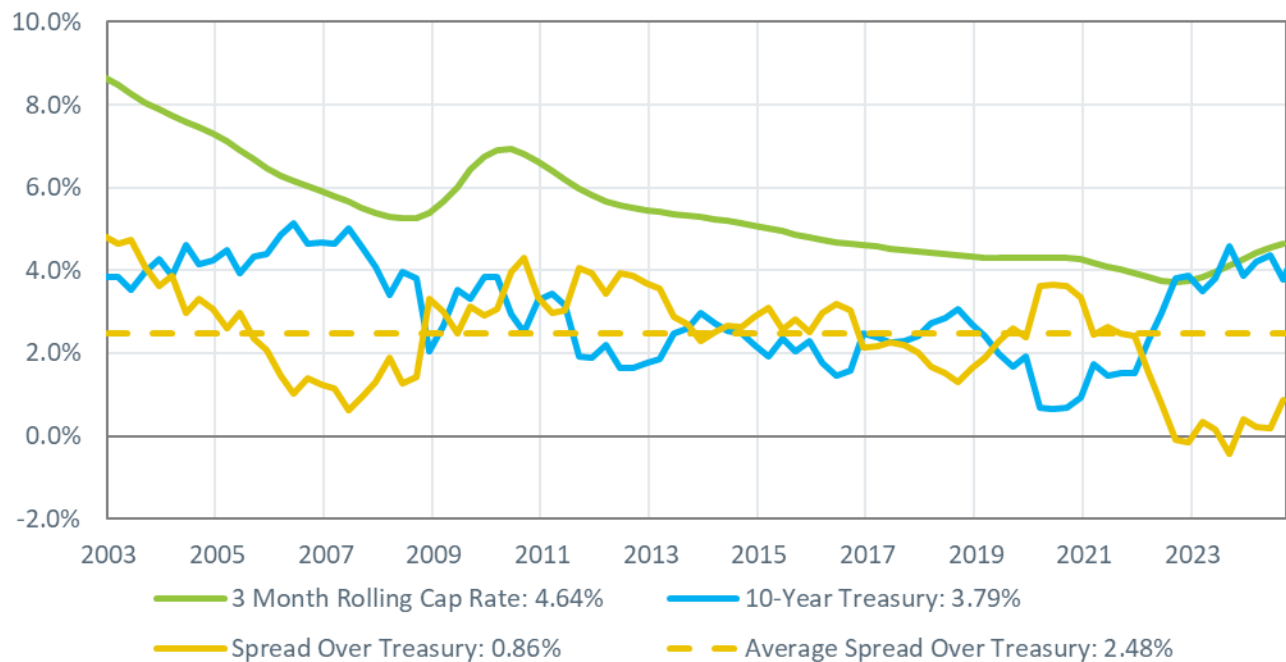
### Core Real Estate (NCREIF ODCE Quarterly Returns (Net))

We examine core real estate assumptions by first reviewing our basic return decomposition model, but also by considering qualitative factors as well. We use both as inputs when determining our final assumptions for this asset class.

#### Cap Rates and Interest Rates

Capitalization rates (“cap rates”) represent the estimated return on a real estate investment property and are calculated by dividing a property’s net income by the total value of the property. As shown in [Figure 47](#) below, core cap rates continue to be lower than historical averages, and are currently near historic lows. Over the last year we have seen a modest improvement in cap rates, providing a return to positive spreads over 10-year Treasury yields.

Figure 47: Cap Rates and Spread to Treasuries



Source: NCREIF, FactSet. (2025)

Low interest rates and falling cap rates had a positive impact on real estate returns before 2022, but with rates up significantly over the last few years real estate has experienced negative returns beginning in the latter half of 2023 and continuing through the first half of 2024, given that core real estate pricing is largely influenced by interest rates available from competing income producing securities (and financing costs). Thus far, the recent rate increases in interest rates have continued to modestly drive cap rates up for core real estate assets from their previous lows at the end of 2022, leading to a modest change in valuations.

Uncertainty surrounding future real estate utilization for various property types as a direct result of structural economic changes accelerated by the coronavirus cause us to remain cautious as we evaluate current real estate valuations. While many sectors may undergo meaningful repricing, other sectors continue to thrive. As a whole, we have not made significant changes to our real estate model, and we kept our return estimate roughly aligned with the decomposition model discussed below.

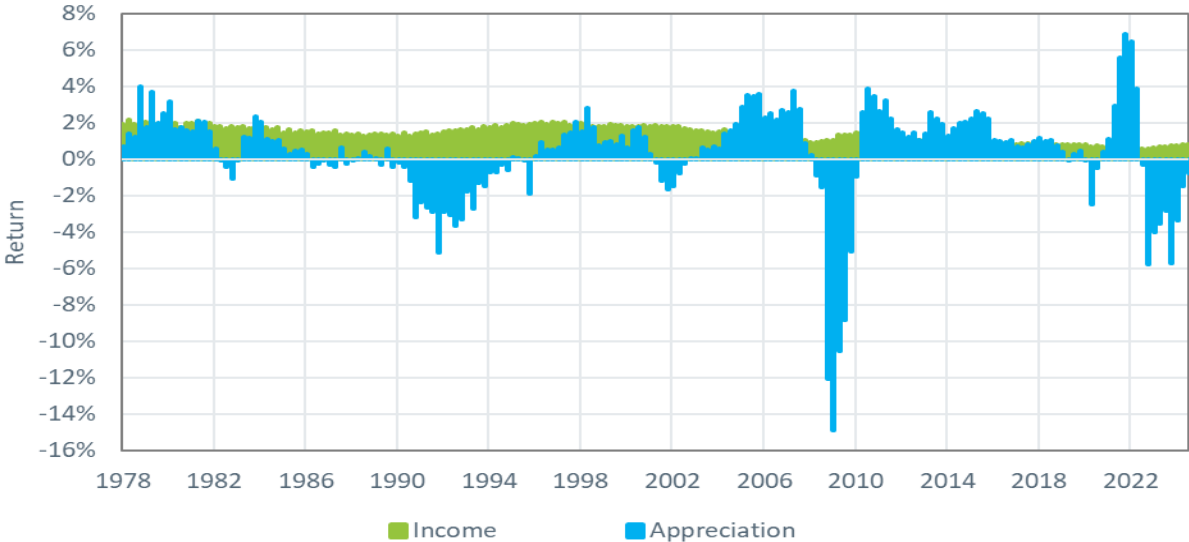
### Entry/Exit Queues

Open-ended core fund exit queues began to form as a result of the market volatility experienced during 2022. We continue to monitor these queues as the economic environment continues to develop, especially given that a recession has not arrived yet despite ongoing market turmoil and an inverted yield curve.

### Yields

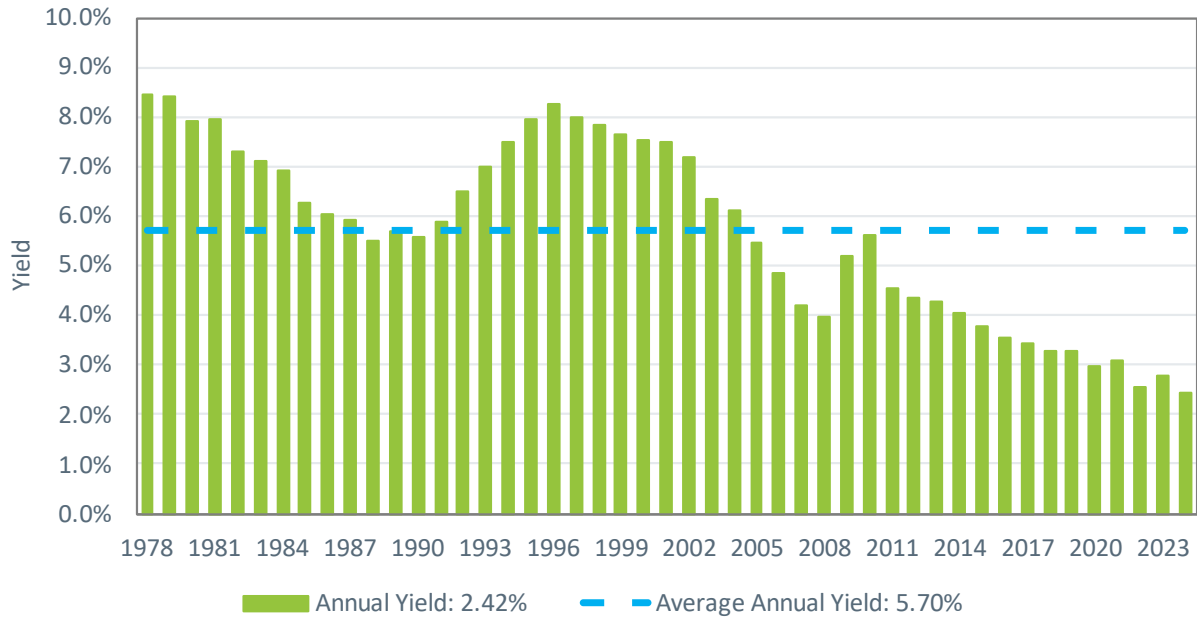
Core real estate is a yield-driven investment asset class. From 1978 to 2002, the vast majority of returns in core real estate have come from income, not capital appreciation. During multiple periods after the Dotcom bubble bursting, this fundamental principle of core real estate flipped, and capital appreciation provided the majority of returns. We anticipate the historical, pre-2002 trend to reassert itself in the future with moderate capital appreciation over the long-term compared to income. **Figure 48** shows quarterly returns of the NCREIF Open-Ended Core Equity Index (“NCREIF ODCE Index”) since inception and illustrates the large variations in the returns stemming from appreciation and income in core real estate.

**Figure 48: NCREIF ODCE Quarterly Returns (Net)**



Source: NCREIF. (2025)

Figure 49: NCREIF ODCE Annual Yields (Net)



Source: NCREIF. (2025)

### Return Decomposition Model

We believe a reasonable expectation for future core real estate returns can be ascertained by using a basic fundamental decomposition model. Future returns should reflect expected inflation plus net yield, with additional consideration given to valuations.

Figure 49 above shows historical yields of the NCREIF ODCE Index. The annual yield (net) as of December 31, 2024, was 3.18%, while the average annual yield since inception (1978) has been 5.71%. Adding the current annual yield to our assumed annual inflation of 2.50% we approximate an expected return of 5.68%. While valuation measures improved relative to last year, they remain challenged relative to historical averages.

We also assume that the average core real estate fund has a 10-20% allocation to non-core properties and that on average managers add 1.00% (on a geometric basis) of value on these properties (based on historical data).

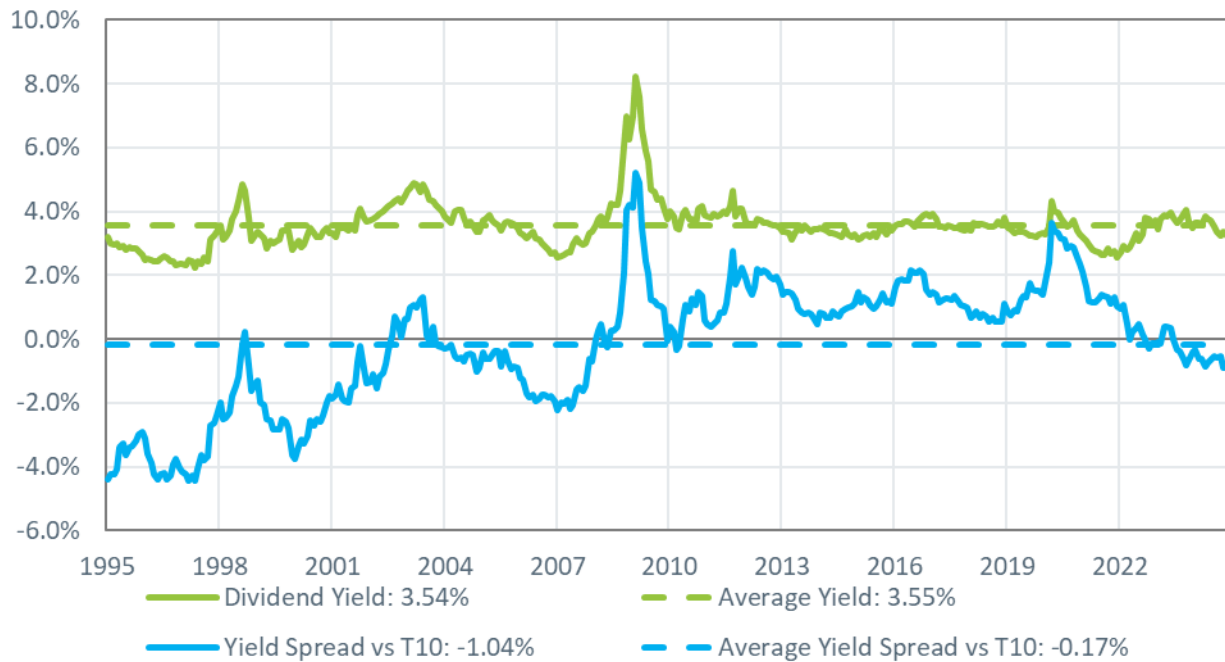
Given improved yields and valuations, we increased our long-term core real estate return assumption by 50 bps to 6.25%.

## Global Real Estate Investment Trusts (“REITs”) (MSCI World Real Estate Index (Gross))

The MSCI World Real Estate Index (Gross) consists of exposures across developed markets. Similar to core real estate, we utilize a basic fundamental decomposition model, whereby RVK gathers long-term data regarding the key return drivers of global REITs. The methodology we utilize decomposes global REITs return expectations into the following drivers: yield, inflation, and valuations.

Dividend yield represents the income that investors earn on their equity investment. The average dividend yield for the MSCI World Real Estate Index has been 3.55% since 1995. We use current dividend yield in the return decomposition model to estimate future yields to better reflect the current economic environment and recent trends.

**Figure 50: MSCI World Real Estate Index Dividend Yield and Yield Spread**



Source: MSCI. (2025)

Adding RVK’s expected inflation rate of 2.50% to the 3.54% dividend yield as of December 31, 2024, our decomposition model suggests a nominal return for global REITs of 6.04%. This represents a 0.06% increase in yield compared to December 31, 2023. Yield spread is modestly below historical averages, which suggests a slight overvaluation on a relative basis. Given the immaterial change in yields, our return assumption for global REITs remains unchanged at 7.75%.

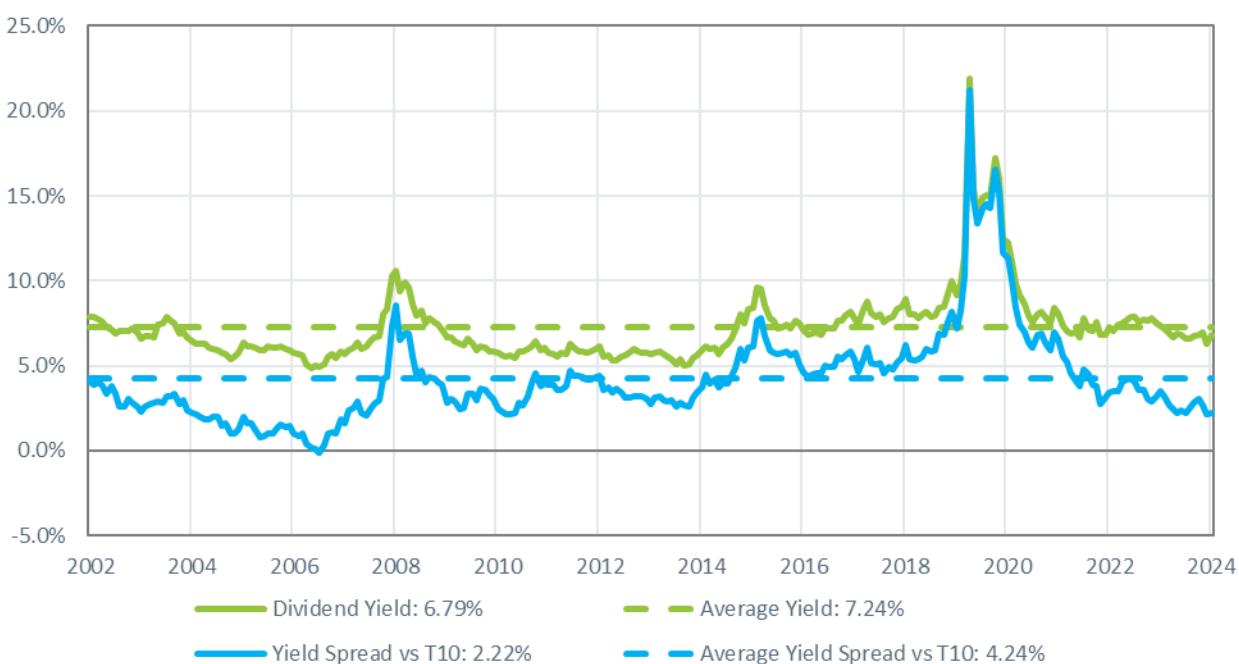
## Master Limited Partnerships (“MLPs”) (Alerian MLP Index)

Master Limited Partnerships (“MLPs”) are typically companies that own energy infrastructure (i.e., pipelines, storage tanks, etc.), and are generally structured to be publicly traded on an exchange. MLPs usually pay out most of their profit (~90%) to investors via dividends (distributions).

The Alerian MLP Index, which was inceptioned in June 2006, is a float-adjusted, capitalization-weighted index and includes 50 energy MLPs. It is worth noting that MLPs are a relatively immature asset class, and hence the performance history is limited.

Since MLPs are publicly traded securities, we use a basic fundamental decomposition model similar to REITs, whereby RVK gathers long-term data regarding the key return drivers of MLPs. The methodology we utilize decomposes MLP return expectations into the following drivers: yield (net), growth/inflation, and valuations.

Figure 51: Alerian MLP Index Dividend Yield



Source: Alerian. (2025)

Adding RVK’s expected inflation rate of 2.50% (dividends have historically grown by more, but we believe inflation is a reasonable long-term assumption for future growth), to the current dividend yield of 6.79% (see [Figure 51](#)), and then conservatively netting out fees of 1.50% (associated with tax and related investment management), our decomposition model suggests a return for MLPs of 7.79%. Yields decreased by 0.58% during 2024.

Yield spreads decreased materially during the year to 0.72% versus the 10-year Treasury and remain below the historical average yield spread of 2.71%. Given the decrease in yield we have reduced our return assumption to 8.00%.

## ALTERNATIVE ASSET CLASSES

### Hedge Funds

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Funds of Hedge Funds	5.00%	9.50%	4.57%	5.00%	9.50%	4.57%	0.00%	0.00%	0.00%
Multi-Strategy Hedge Funds	5.75%	8.50%	5.41%	5.75%	8.50%	5.41%	0.00%	0.00%	0.00%

RVK's assumption for hedge funds is designed to be representative of the opportunity set available to institutional investors allocating capital within the hedge fund space. The assumption is built to be reflective of how sophisticated allocators invest in practice. It is not designed to reflect how the industry in aggregate might perform.

Data provided by the Hedge Fund Research Global ("HFR") as of 2023, indicate that 47.4% of the 8,000 plus hedge funds in existence today are classified as "Equity Hedge," otherwise known as Long/Short Equity strategies. In practice, institutional allocators do not rely so heavily on a single strategy within their hedge fund allocations. Rather, investors strive to build objective oriented portfolios diversified across numerous hedge fund strategies and trading styles. Such strategies may include Long/Short Equity, Long/Short Credit, Fixed Income Arbitrage, and Systematic Macro, among others. Investment styles vary by strategy but are typically captured by either Relative Value ("RV") or Event Driven ("ED") trading styles. RVK's diversified hedge fund assumption is therefore built using peer index data provided by HFR that is reflective of these differentiated trading styles and investment strategies.

Hedge fund assumptions are built using a building block method similar to how RVK produces long-term capital market assumptions for traditional markets. The return for any given hedge fund strategy can be broken down into three components: a risk-free return; a beta return; and a return from alpha. These coefficients can each be derived from the Capital Asset Pricing Model ("CAPM"), where "alpha" is commonly referred to as Jensen's Alpha or "specific risk," and is obtained through regression analysis. In the context of CAPM, "alpha" is represented as the intercept coefficient in the below equation.

$$E(R_i) = \alpha + \{r + \beta_i [E(R_m) - r]\}$$

Deriving alpha requires knowledge of several inputs, where  $r$  is the risk-free rate, defined as the long-term expected return on cash;  $R_m$  is the expected return of the market, obtained through RVK's capital market assumptions process and deemed to be an appropriate marketable index with which to compare a hedge fund strategy's return, and  $R_i$  is the realized return of the hedge fund strategy's peer index. We briefly describe how each return component is calculated below:

**Risk-Free Rate:** RVK's long-term assumption for the risk-free rate (US T-Bills, cash assumption) remained unchanged at 2.75%.

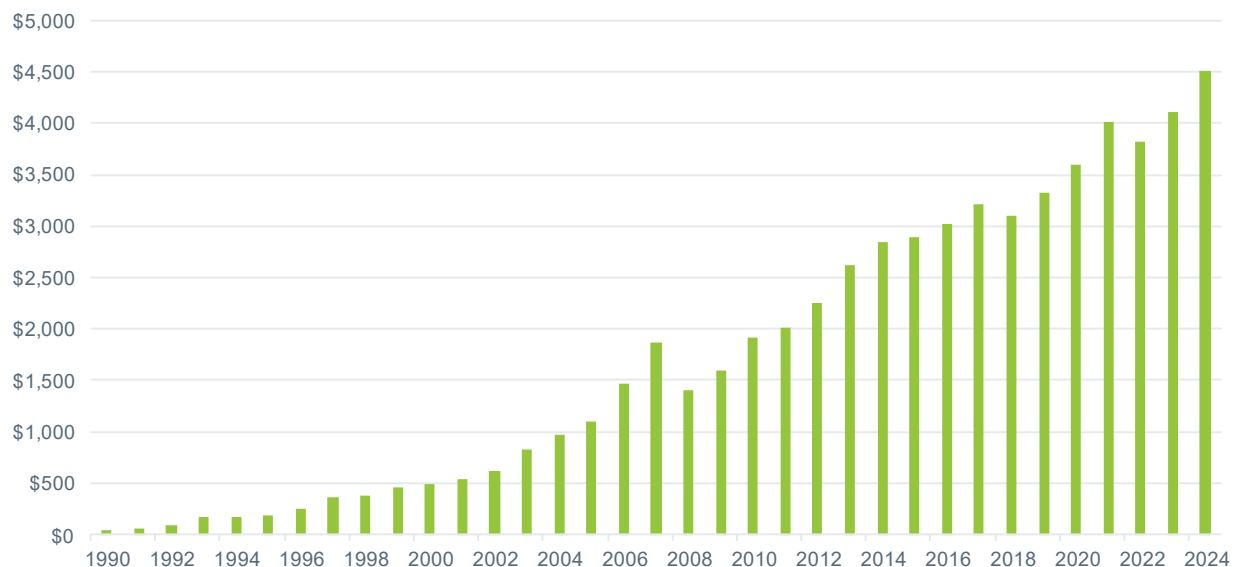
**Beta Return:** The beta coefficient is obtained by regressing excess returns of the hedge fund peer index against its proxy marketable securities benchmark. The proxy benchmark is a traditional market or blend of markets for which RVK has already developed a long-term capital markets assumption. With the expected excess return of the proxy benchmark and the beta coefficient known, these can be multiplied to obtain a forward-looking estimate of a hedge fund strategy's return resulting from market beta.

**Alpha Return:** Alpha is the residual risk and is obtained simply by subtracting the known beta and risk-free returns from the realized returns of the hedge fund peer index.

While the risk-free rate is known and betas between hedge fund strategies and their proxy benchmarks can be calculated ex-post, developing a reasonable ex-ante forecast for hedge fund alpha still requires some subjectivity. Past returns are used as a guide, but RVK adjusts based on long-term trends and potential regime changes that might affect forward-looking return expectations. We also consider a variety of hedge fund peer index returns and benchmarks in building our assumption for diversified hedge fund returns.

With respect to trends in the hedge fund industry, a notable change facing investors today relative to prior decades is the increasing level of Assets Under Management (“AUM”) industry wide. **Figure 52** illustrates hedge fund industry AUM growth according to data provided by HFR Global.

**Figure 52: Hedge Fund Industry AUM Growth (in billions)**



Source: Hedge Fund Research Global (2025) \*2024 AUM is preliminary.

RVK notes that absolute returns have declined for many hedge fund strategies as industry AUM has grown, perhaps as greater amounts of capital compete for the same investment opportunities. These return declines have been particularly acute post-Global Financial Crisis (post-GFC).

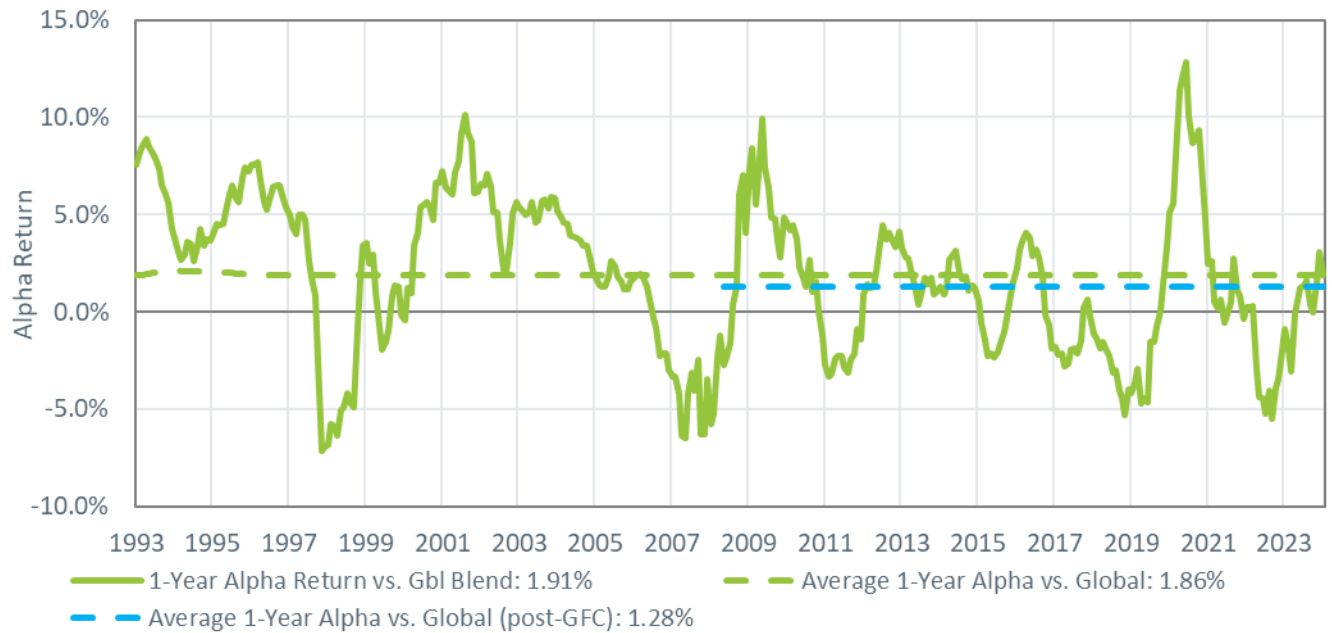
However, RVK also recognizes the post-GFC environment has been a difficult period for active management broadly. We are sensitive to arguments that monetary policy during this period has lowered the cost of capital for borrowers, allowing perhaps fundamentally unsound companies to prosper, and narrowing the range of outcomes for various corporate entities. The resulting lower stock dispersion has meant a more difficult alpha generating environment for active managers in both the traditional and hedge fund space. On net, RVK expects that alpha generation will mean revert to some extent from its currently low levels, but that it may never recover to the highs observed in the 1990s and early 2000s.

**Figure 53** provides an example of RVK’s process in more detail. We use a blend of the HFRI Event Driven and Relative Value Multi-Strategy peer indices to proxy the investment styles available to institutional allocators. For the proxy market benchmark we use a blended portfolio called Global Blend which is a 50/50 blend of the MSCI All Country World Index and Bloomberg Global High Yield Index. Alphas and betas are then calculated over two different regimes, one that includes industry peer group data dating back to inception in January 1990. The other focuses on the relationship of the blended HFR indices to the market proxy post-GFC.



The analysis demonstrates potential cyclical in hedge fund alpha production, but also provides evidence that alpha generation has been lower in recent years.

**Figure 53: HFRI Multi-Strategy Blend 1-Year Rolling Alpha**



Source: Hedge Fund Research Global, MSCI, Bloomberg (2025)

The chart depicts historical 1-year average rolling alpha for the multi-strategy blend of 1.86% since 1993. It is worth noting that alpha has tended to decline and fall into negative territory prior to market peaks, but that dislocations tend to be predictive of strong alpha generation. For example, alpha in the periods immediately following both the Dotcom era bubble and the Global Financial crisis each peaked near 10% annually, though post-GFC annual alpha has averaged 1.28%.

Figure 54 below shows the result of this modelling and the implied returns available from the risk-free rate, beta, and alpha, which can be aggregated to produce an implied return for diversified hedge funds. The global market assumption of 7.05% is a blend of RVK’s return assumption for global equities and high yield bonds. These numbers do not directly translate into RVK’s return assumption, but rather are used as a guide to understand trends in the various components of hedge fund returns.

**Figure 54: Multi-Strategy Hedge Fund Model Implied Returns**

	HF vs. Global Beta	Global Market Assumption	Risk-Free	Beta Return	Alpha Return
Historical Model	0.31	7.05%	2.75%	1.35%	1.86%
Post-GFC Model	0.37	7.05%	2.75%	1.57%	0.96%

Historical Model Implied Return	5.95%
Post-GFC Model Implied Return	5.28%

Our final assumption for multi-strategy hedge funds of 5.75% reflects an unchanged collateral yield from cash without material changes from beta or alpha inputs.

Our assumption for Funds of Hedge Funds (“FoHFs”) is 75 bps below our assumption for the blended multi-strategy peer group. This reflects empirical evidence suggesting that direct multi-strategy hedge funds consistently outperform FoHF peers over rolling periods as a result of the second layer of fees charged by FoHF providers.

Historically, the annualized monthly volatility of the blended multi-strategy peer indices has been low (below 5%), but the volatility using annual data has been much higher (above 8.5%), and the distribution of returns has been wider than a normal distribution would imply. Moreover, volatility levels realized during the financial crisis would have required a one in three million event to be consistent with the annualized monthly standard deviation measure. These issues would suggest that the historical annualized monthly standard deviation calculation is too low. As such, we rely on an average annual standard deviation calculation, which makes the performance of 2008 a statistical possibility.

Recognizing the challenges (survivorship bias, etc.) of benchmarking this “asset class,” we also analyzed the subset of multi-strategy managers (34 managers with return data starting from 1988) most commonly utilized by RVK’s clients, as well as the broader available universe of managers monitored by RVK. This exercise is necessary to validate the consistency between the datasets. The return and volatility results from this comparison are shown in [Figure 55](#). However, as outlined in [Figure 56](#) the actual distribution of rolling 1-year manager returns from this exercise exhibits a fat left tail (downside risk), which does not represent a normal distribution.

**Figure 55: Multi-Strategy Hedge Fund Historical Returns**

	Date Range	Arithmetic Average Return	Annual Standard Deviation
HFRI RV/ED Multi-Strategy Hybrid Index	1990-2024	7.24%	8.06%
RVK Subset of 34 Managers (Average)	1988-2024	11.71%	7.58%

HFRI RV/ED Multi-Strategy Hybrid Index is a hybrid index consisting of 50% HFRI Relative Value Index and 50% HFRI Event Driven Index. Arithmetic average return is calculated using annualized returns based on monthly periodicity and annual standard deviation is based on annual periodicity. **Source:** Hedge Fund Research, Inc. (2025) and RVK calculations.

**Figure 56: Manager Rolling 1-Year Average Performance  
(34 Managers: 1988-2024)**



Source: Hedge Fund Research, Inc. (2025) and RVK calculations. Data is based on monthly periodicity.

## Global Tactical Asset Allocation (“GTAA”) (Representative Portfolio Benchmark)

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
GTAA	5.75%	9.00%	5.37%	5.75%	9.00%	5.37%	0.00%	0.00%	0.00%

Global Tactical Asset Allocation (“GTAA”) strategies seek to exploit inefficiencies in equilibrium values among different asset classes. GTAA strategies vary widely, ranging from more traditional strategies that deviate from a blended 60/40 portfolio to those with an absolute return orientation. Sources of return in GTAA products typically include market (or “beta”) exposure across a variety of asset classes, top-down tactical asset allocation decisions, as well as the potential for outperformance (or “alpha”) from active bottom-up management of the underlying exposures.

Recognizing the challenges of benchmarking this “asset class,” we applied a triangulation approach to derive our long-term assumptions utilizing four comparisons: (1) a simple blended index of 60% MSCI AC World IMI/40% Bloomberg US Aggregate Bond Index; (2) a more complex “representative portfolio” approach across a variety of asset classes; (3) a universe of potential managers, and; (4) manager return objectives. The results of these analyses are provided in [Figure 57](#).

**Figure 57: Historical and Forward-Looking Return and Risk for GTAA Asset Class**

	Historical Results (2006 – 2024) <sup>1</sup>		Forward-Looking Results <sup>2</sup>	
	Annualized Return	Standard Deviation	Arithmetic Return	Standard Deviation
(1) Simple Blend (60/40)	5.89%	12.32%	6.05%	10.57%
(2) Representative Portfolio <sup>3</sup>	4.62%	9.12%	5.70%	8.83%
(3) Manager Universe <sup>4</sup>	5.01%	10.15%	-	-
(4) Manager Objectives	-	-	CPI + 5% = 7.50%	

<sup>1</sup> The timeframe is set to 18 years to align with the available historical manager returns. Annualized returns are based on monthly periodicity and annual standard deviation is based on annual periodicity.

<sup>2</sup> Based on 2025 RVK Capital Market Assumptions.

<sup>3</sup> More information on the representative portfolio is provided in the write-up below.

<sup>4</sup> Universe average return (net) and risk for the 18 year time period.

- (1) Although there is no perfect benchmark for GTAA, a simple comparison (or reasonable benchmark to expect them to outperform) is a continuously rebalanced portfolio consisting of 60% stocks (MSCI All Country World IMI) and 40% bonds (Bloomberg US Aggregate Bond Index). Since GTAA managers have more flexibility than traditional balanced managers, we would expect long-run outperformance of this blended index.
- (2) Given that GTAA managers utilize a wide array of asset classes, we believe it is prudent to also consider a broader, more complex asset mix as another comparison point. This broader asset mix does not align with any particular manager, as allocation variations are wide, but rather attempts to encompass common asset class allocations utilized by those GTAA managers that are most frequently used by our clients. Due to divergent allocations, our representative portfolio (outlined in [Figure 58](#)) is merely an attempt to show the differences that arise from a moderate diversification away from “traditional” stocks and bonds and into other asset classes.

**Figure 58: Representative GTAA Asset Portfolio Allocations**

Asset Class	Benchmark	Allocation
Global Equities	MSCI All Country World IMI	30%
US Aggregate Fixed Income	Bloomberg US Aggregate Bond Index	25%
Int'l Developed Fixed Income	Citi Non-US World Government Bond Index	5%
Emerging Markets Debt Local	JP Morgan EMBI Global Diversified Index	10%
TIPS	Bloomberg US TIPS Index	10%
High Yield Fixed Income	Bloomberg US Corporate High Yield Index	10%
Commodities	Bloomberg Commodities Index	10%

GTAA managers are typically hired to produce excess return (“alpha”) by making dynamic top-down and bottom-up decisions. Conservatively, we would expect GTAA managers to produce at least 50 bps of net alpha over all static, passive portfolios (such as the simple blend (1) and the representative portfolio (2)).

- (3) We analyzed a 18-year period (the longest available common timeframe for the managers used) of returns for a sub-group of GTAA products utilized by RVK clients. These products and managers have successfully passed our due diligence screens, have proven track records, and historically produced alpha via dynamic movements in their portfolios. The GTAA products in the sub-group utilize a broad array of asset classes, the most common of which are listed in [Figure 58](#). In addition, the managers can, and historically have, tactically utilized contrarian or lower risk assets to defensively position their portfolios.
- (4) We also considered the performance objectives of the managers. A typical long-term performance objective is CPI + 5%.

Given our forward-looking expectations for underlying asset classes, we maintained our return assumption at 5.75% given the offsetting changes to the underlying asset class assumptions. This return assumption builds in a modest premium over approach (2) to account for tactical and dynamic management of these strategies. However, it is more conservative than approaches (1) and (4).

## Private Markets

Private market investments are long-term investments for which market participants expect a return premium over tradable equity or credit investments to account for illiquidity and other risks.

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Private Credit	8.00%	13.00%	7.23%	8.00%	13.00%	7.23%	0.00%	0.00%	0.00%
Senior Secured Direct Lending	7.00%	9.50%	6.58%	7.00%	9.50%	6.58%	0.00%	0.00%	0.00%
Private Equity	9.75%	22.00%	7.61%	9.75%	22.00%	7.61%	0.00%	0.00%	0.00%

### Private Credit and Senior Secured Direct Lending

Investments in private credit include direct lending, specialty finance, asset-backed private debt, distressed and mezzanine debt, private debt fund of funds, and venture debt. We provide a separate set of assumptions for senior secured direct lending, as we believe the risk/return profile for this asset class can significantly differ from broad-spectrum private credit in many market environments.

For broad-spectrum private credit, we generally assume a geometric return premium of 1.25% over bank loans due to the complexity and illiquidity which typically characterizes these strategies, as well as a higher standard deviation of 13.00%. For the more straightforward and competitive universe of senior secured direct lending, we generally assume a geometric return premium of 0.50% over bank loans and a slightly higher standard deviation of 9.50%. However, given current market conditions we decided to lower the historical premium to account for potential market risks.

Our 2025 long-term return estimates are 7.00% for senior secured direct lending and 8.00% for private credit (levered, net of fees). Both assumptions are built upon our bank loan assumption, which we believe roughly approximates private credit in terms of both borrower credit risk and interest rate sensitivity, plus an added illiquidity premium to reflect the drawdown structure and privately held nature of these asset classes. Our assumptions then take into account the fact that many private credit funds available to investors offer some form of fund-level leverage in order to boost their yields. That leverage incurs an inherent associated cost, which needs to be included. Lastly, we deduct asset and performance-based fees to arrive at our final estimated net return values.

It should broadly be noted that, as the rapid arrival of new private credit strategies increases the pricing efficiency of this space, the asset class has experienced an ongoing level of yield compression. Specifically, the more limited complexity and illiquidity premiums experienced to some extent by broad spectrum private credit and even more acutely by direct lending have reduced the long-term expected yields of these strategies. However, as noted above, a portion of the reduced expected returns we have witnessed across this asset class are also matched by reduced levels of fund leverage and credit risk, as the distressed component of the investable private credit landscape continues to shrink and the number of private credit strategies tailored to risk-averse institutional clients in fields such as the insurance industry continues to grow.

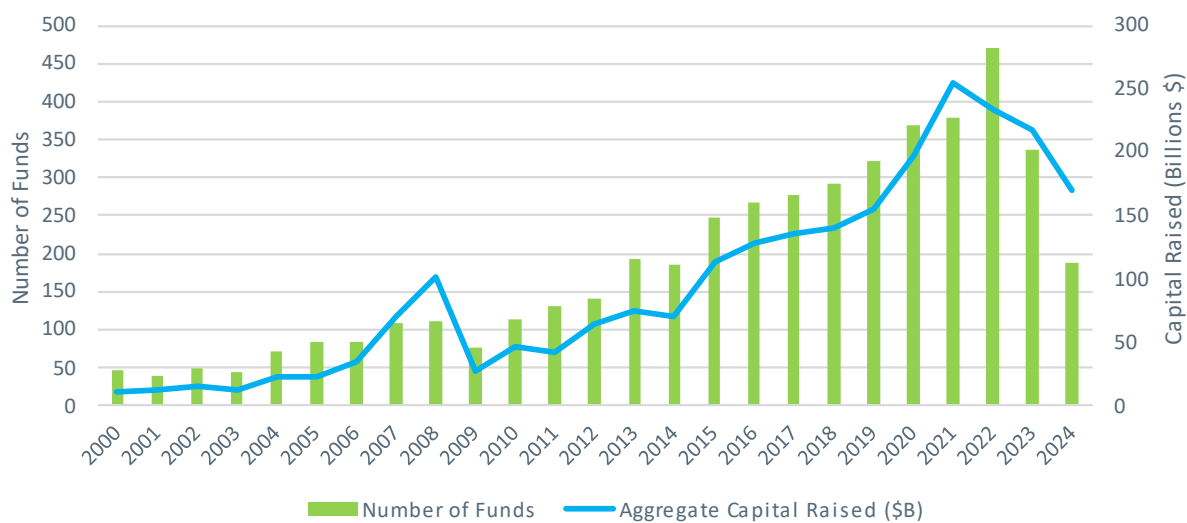
When addressing the current and expected investment environment for private credit, we focused on the following major themes in our analysis:

- An ongoing trend of increasing competition for deals;
- A continued evolution of underlying strategy types and profiles;
- A high volume of new capital raised and new strategies entering the space;
- Continued, strong private equity demand, sustaining the need for private debt;

- Rising multiples on equity deals, combined with demand-driven yield compression and weaker industry-wide debt covenants are forcing investors to become even more selective in order to preserve their desired levels of risk-adjusted return.

Private debt fundraising has continued to slow down through 2024 from its peak in 2021, as shown in **Figure 59**. Direct lending and distressed debt fundraising, traditionally the largest segments of the market, continued to see declines in relative capital raised compared to subsets of the asset class such as asset-backed lending and specialty finance. We believe the ongoing investor demand for the higher yield provided by private credit relative to the yields available to publicly traded fixed income may continue to drive large amounts of new capital into this asset class – an ongoing trend that has particularly impacted mainstream direct lending. This, in turn, may lead to the ongoing deterioration in underwriting standards and reduction in illiquidity premiums for direct lending that we witnessed previously though recent market volatility may direct otherwise.

**Figure 59: Historical Private Debt Fundraising by Year**



Source: Preqin (2025)

With regard to our volatility assumption, we continue to face the challenge that observed volatility for privately held assets not subject to market pricing does not necessarily reflect underlying risks, and therefore causes potential triangulation issues with more liquid asset classes. As such, some weight has been placed on expected cash flows and scenario testing in determining the expected long-term volatility of private credit compared to the methodology used for most longer-standing, liquid asset classes, which tend to be heavily influenced by fluctuations in historical risk-adjusted returns. Specifically, cash flow based scenario tests analyzing the volatility implied by historical default and loss rates during stressed market periods such as 2008-2009 have played a significant role in our volatility estimates.

## Private Equity

Private equity investments include leveraged buyouts, venture capital, and special situations funds. We generally assume a private equity geometric return premium of 2.50% over large/mid cap US equity, less than the historical average given elevated valuations, and a volatility rate consistent with private equity's position on the capital markets line. We have maintained the expected arithmetic return assumption at 9.75%, representing a 50 bps increase relative to the underlying asset class assumption (US Large Cap Equity), given the less extended valuations relative to public markets as well as the changing characteristics of the public market reference index.

Comparing 42 years of quarterly, time-weighted private equity returns with the returns of the S&P 500 Index for the same period shows that pooled private equity returns have experienced an average return premium over the S&P 500 of approximately 385 bps. We believe a return premium in private assets should consider more recent trends and triangulate well with the capital markets line, and thus our return assumption of 9.75% is well below the historically observed average arithmetic return of 14.68%. [Figures 60 and 61](#) below detail these observations.

**Figure 60: Return Comparison of Private Equity\* vs. the S&P 500 Index**

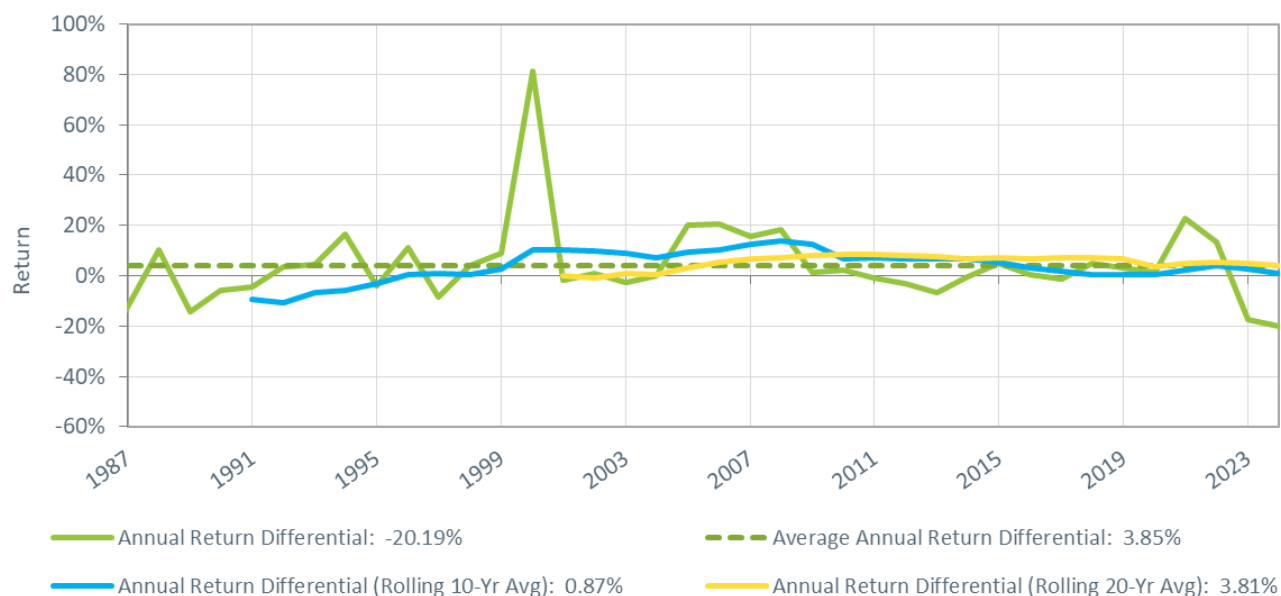
	All PE	S&P 500	Difference
Average Annual Geometric Return	14.68%	10.83%	3.85%
Annual Standard Deviation	19.68%	17.44%	2.24%

Statistics are calculated based on annual data from July 1, 1982 through June 30, 2024.

\*Represented by the Cambridge US PE & VC Index

Sources: Cambridge and S&P. (2025)

**Figure 61: Annual Return Differential  
Cambridge US Private Equity & Venture Capital Index vs. S&P 500 Index**



The annual return differential shown is the difference between the Cambridge PE & VC Index and S&P 500 Index. Average Annual Return Differential is for the time period July 1, 1982 through June 30, 2024. Averages are calculated based on annual frequency.

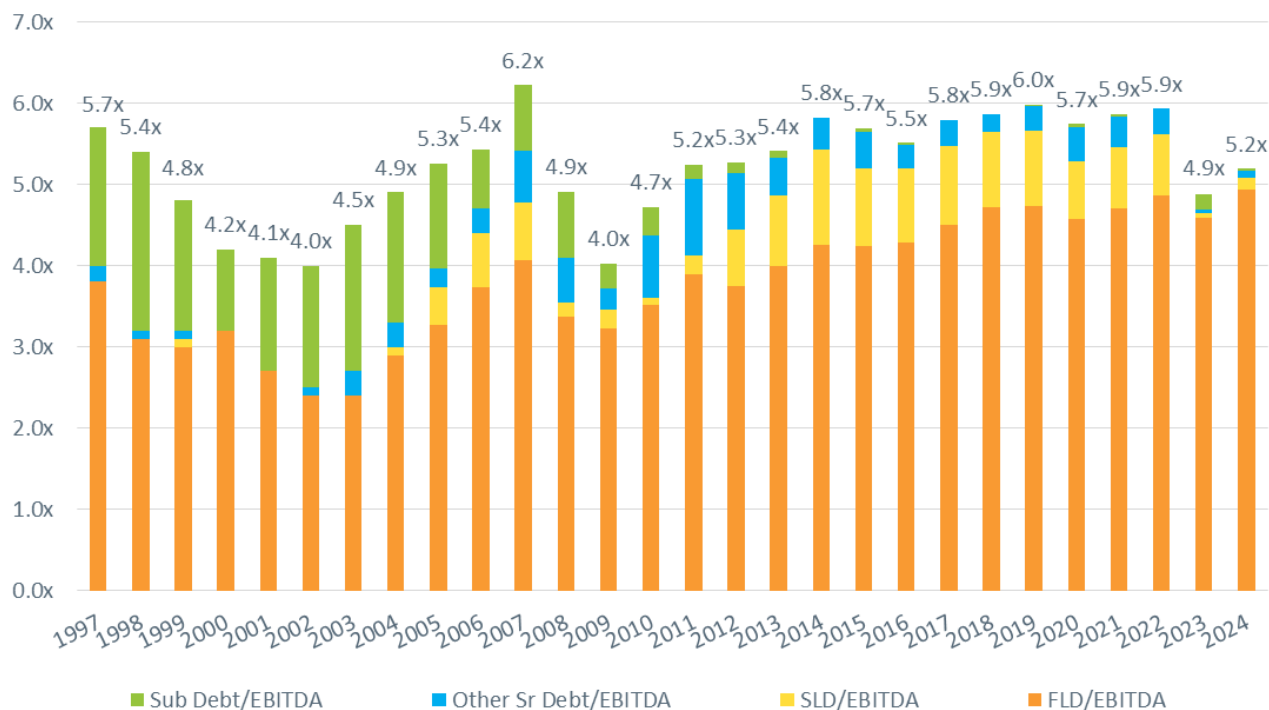
Source: Cambridge. (2025)

When addressing the current and expected investment environment for private equity, we focused on the following major themes in our analysis: current deal pricing relative to long-term averages, debt market conditions and credit availability, and fundraising and commitment pace.



Figure 62 and 63 below illustrate the historical and current debt and purchase price multiples for large leveraged buyout (“LBO”) transactions.

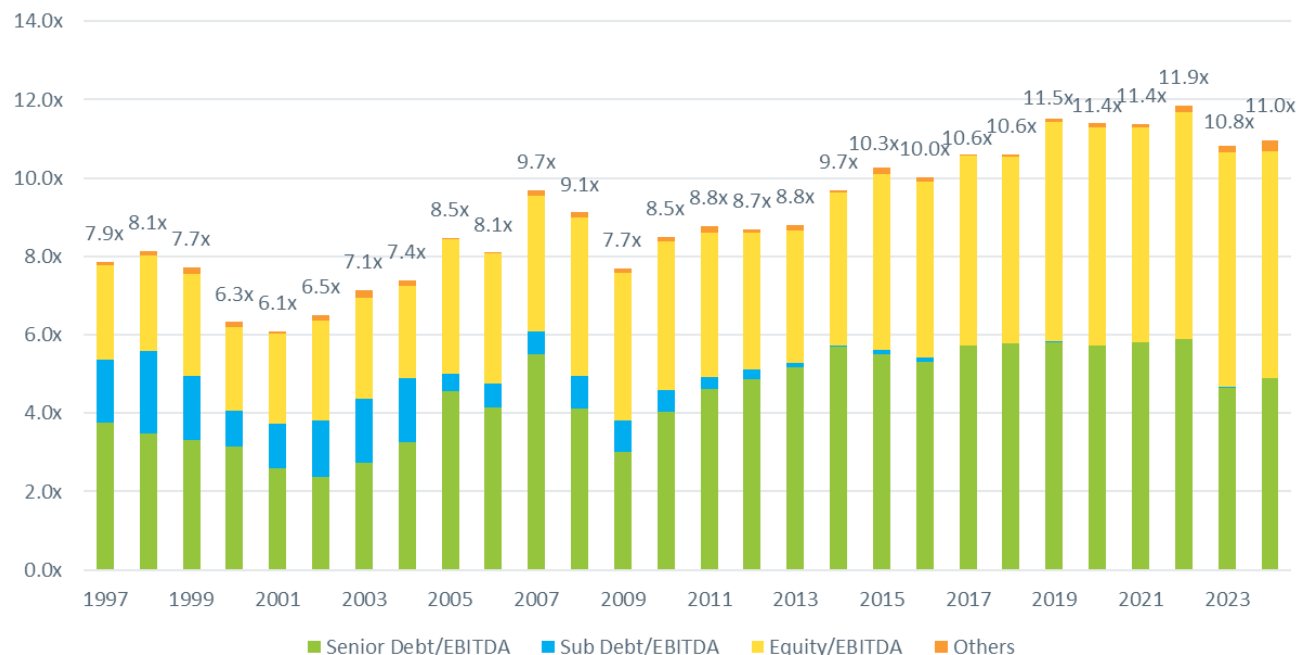
**Figure 62: Average Debt Multiples of Large\* Corporate LBO Loans EBITDA Adjusted for Prospective Cost Savings or Synergies**



\*Defined as Issuers with EBITDA of more than \$50M.

Source: S&P Capital IQ. (2025)

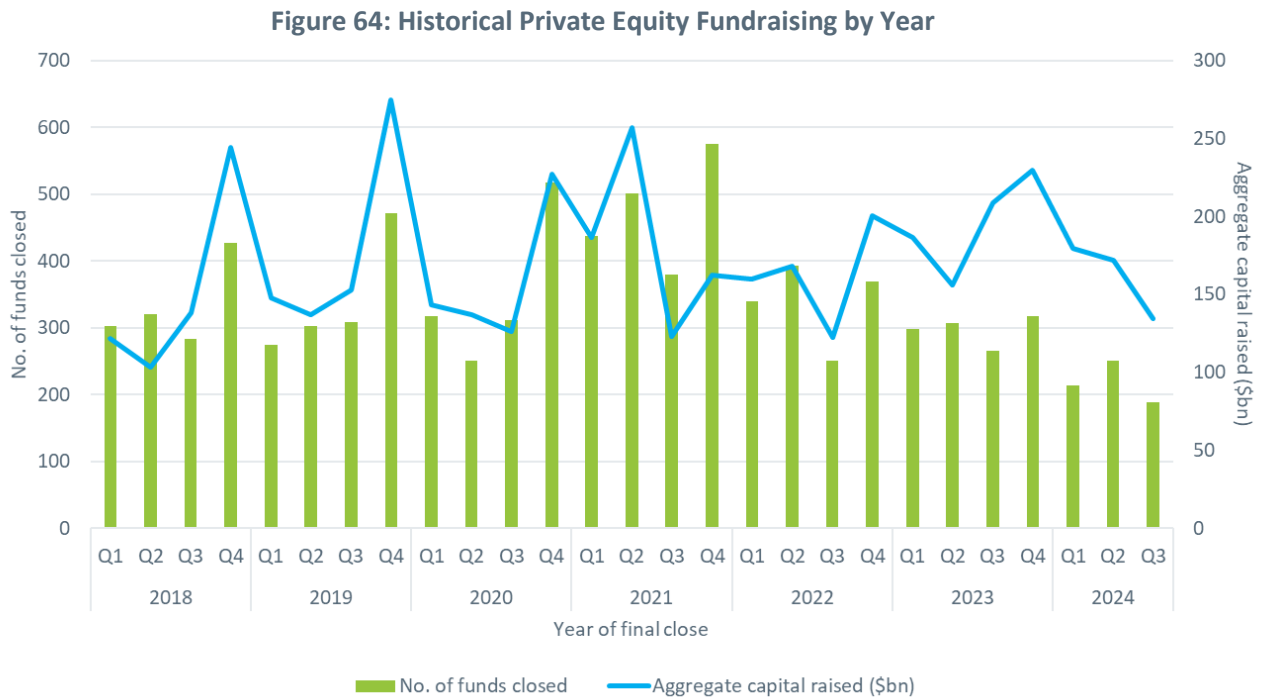
**Figure 63: Average Purchase Price and Equity Contribution by Sponsors of All LBO Loans – Purchase Price Breakdown**



Source: S&P Capital IQ. (2025)

These charts highlight that the use of credit in buyout transactions in 2024 are below the near-record high levels of the majority of the last decade, and the current levels are more in line with historical norms. We do not believe that the current credit climate will have a strong negative or positive effect on the investment environment or expected future returns. However, we do believe that elevated valuation levels will negatively impact expected future returns.

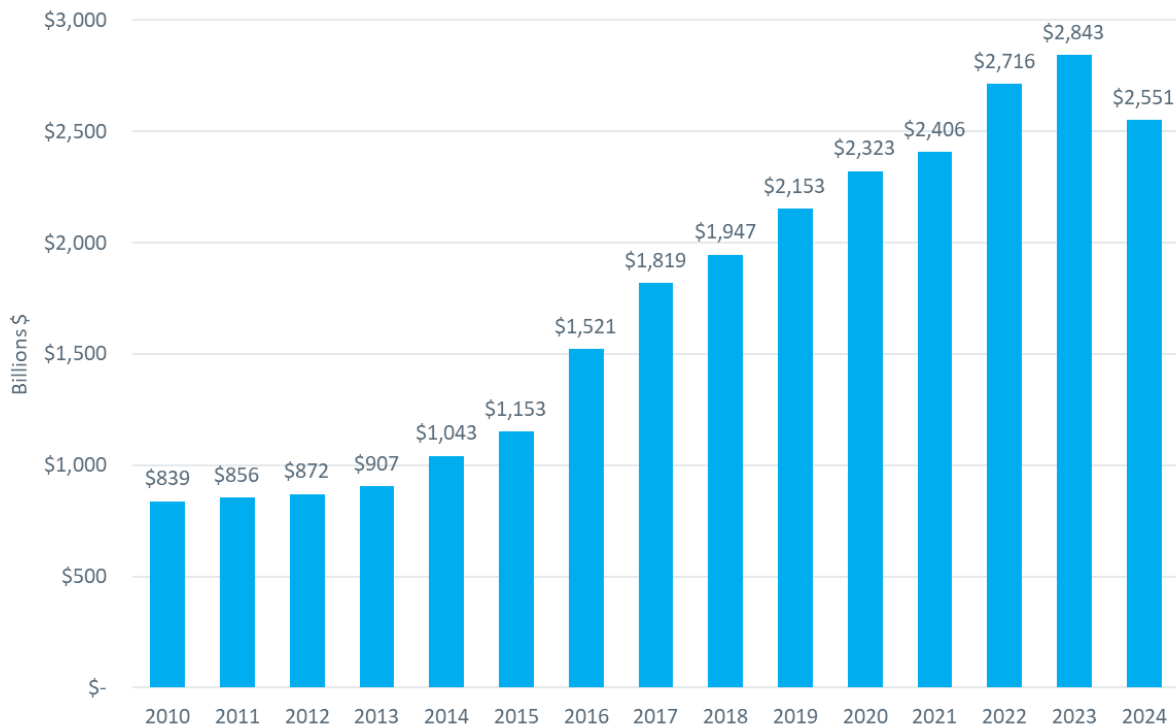
**Figure 64** shows historical fundraising versus the number of funds closed for all private equity funds over the last 5 years. The number of private equity funds closing in 2024 appears to be continuing a downward trend when compared to the past several years. Aggregate capital raised has reduced, which may help the overhang of capital outlined in **Figure 65**.



Source: Preqin. (2025)

We expect that increased deal valuation multiples and higher equity requirements will put some pressure on forward-looking returns. Traditional leverage-heavy deals will likely suffer in an environment of more equity and less leverage. We believe an arithmetic return assumption of 3.75% above our arithmetic large/mid cap US equity return assumption, is appropriate.

Figure 65: Private Equity Dry Power



Source: Preqin. (2025)

With regard to our volatility assumption, we continue to face the challenge that observed volatility likely does not reflect underlying risks and therefore causes potential triangulation issues with more liquid asset classes. Additionally, our model stress testing efforts suggest some output insensitivity to material increases in the volatility assumption given the healthy return level. Therefore, our conclusion is that the volatility assumption should place private equity in close proximity to the capital markets line.

Based on triangulation with other asset classes and the capital markets line, we assume an expected standard deviation of 22.00%.

## Commodities (Bloomberg Commodity Index)

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Commodities	6.25%	17.50%	4.84%	6.00%	17.50%	4.58%	-0.25%	0.00%	-0.25%

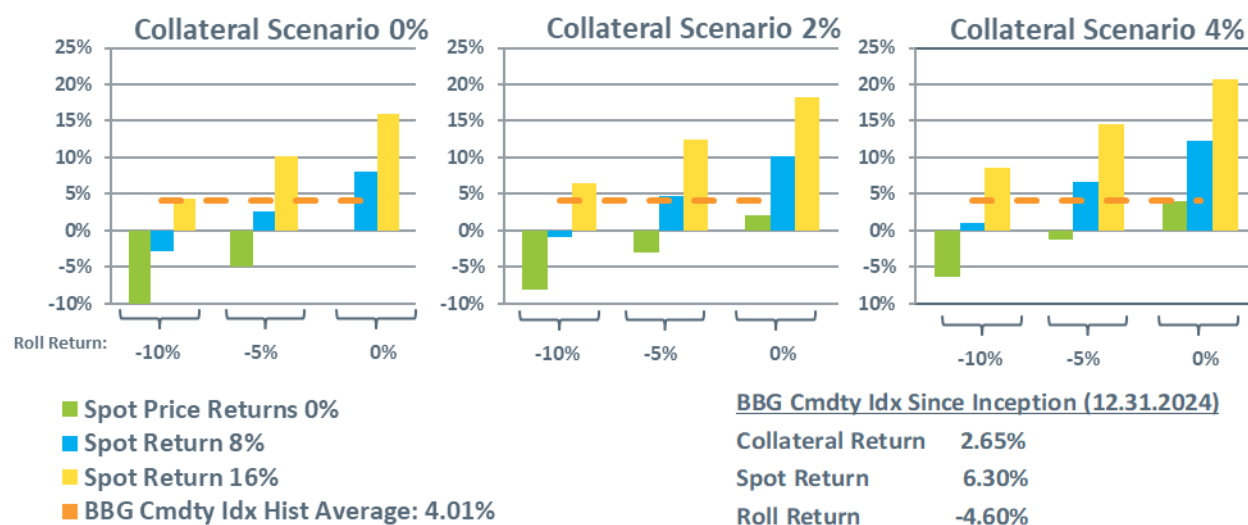
Exposure to commodities can be captured in three primary ways: (1) physical investment; (2) buying or building a portfolio of stocks that generate the majority of their operating cash flow from commodity extraction or production; or, (3) commodity futures which often require the hiring of a Commodity Trading Advisor (“CTA”) or buying an active or passive broad based commodity index.

Our process focuses on a broad-based index, the Bloomberg Commodity Index, as a basis for assumption building, which restricts the composition to no more than 33% in one sector (e.g., energy). We consider the constituent return components of the index in developing our long-term total return and risk assumptions. Spot price, roll yield, and collateral return are considered when developing our commodities assumption.

### Return Decomposition

Figure 66 illustrates the since inception average return of the underlying commodity components, as well as analyzes potential total return outcomes using multiple spot prices and roll returns under three different collateral return scenarios (0%, 2%, and 4%). The below building blocks scenario analysis provides a simple method for reviewing potential return outcomes.

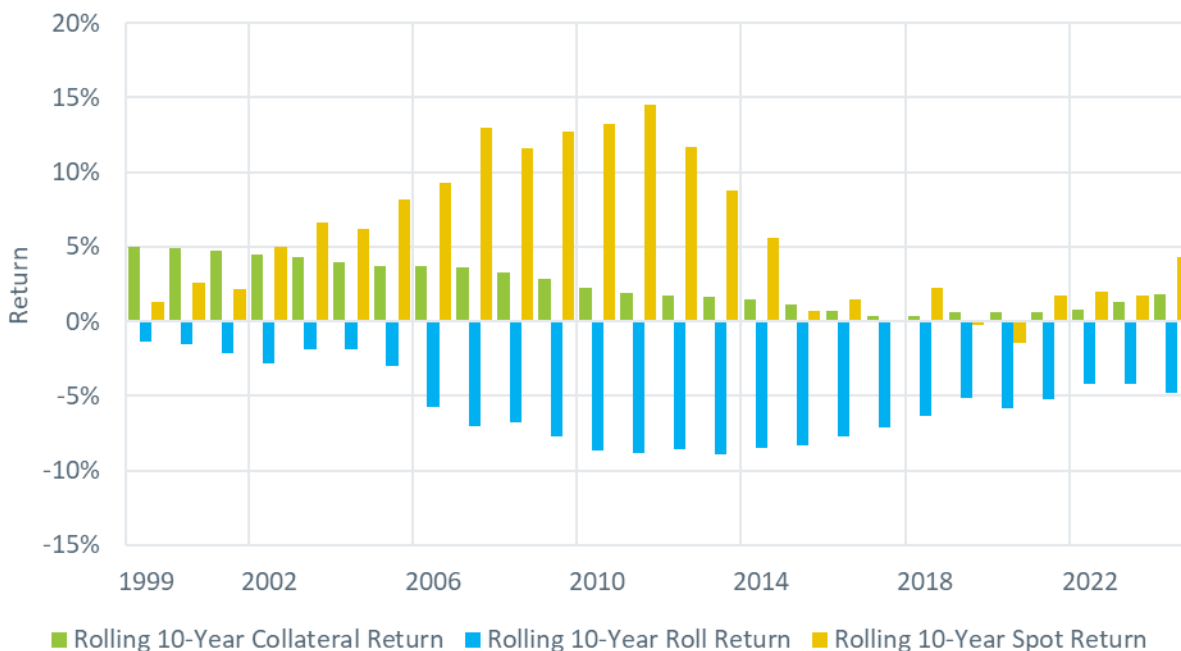
Figure 66: Bloomberg Commodity Index – Building Block Scenario Analysis



Source: FactSet. (2025). Calculations are based on annual periodicity.

Historically, spot return has been the largest driver of commodity total return (6.30% average annual return since inception). We see this trend continuing going forward as other return components (roll yield in particular) appear weak. Collateral return has increased as yields on most collateral accounts have risen with rates (please see the Inflation and Cash Equivalents sections for further related discussion). The roll return component has been a significant negative contributor to commodity returns over the last several years (though slightly less so of late), and we do not anticipate it becoming a positive contributor without seeing a significant reversal in the continued trend of large net inflows into this asset class. However, such inflow/outflow changes could also result in inverse outcomes for spot versus roll returns. Figure 67 highlights the dispersion of the individual return components over rolling 10-year periods.

**Figure 67: Commodity Return Components**



Source: FactSet. (2025)

## Other Commodity Dynamics

### Capital Flows

Historically strong capital inflows into commodity vehicles and corresponding derivatives issuance put negative pressure on roll yields (i.e., contango), which presents a significant challenge to the return potential of futures-based commodity investment strategies.

**Figure 68** shows the since inception cumulative roll yield moves from positive to negative, and thus detracts from the total return of a passive investment approach. The negative contribution from roll yield return has coincided with a significant increase in assets invested in passive strategies and the proliferation of exchange traded and index-based commodity products.

Figure 68: Bloomberg Commodity Index – Cumulative Roll Yield

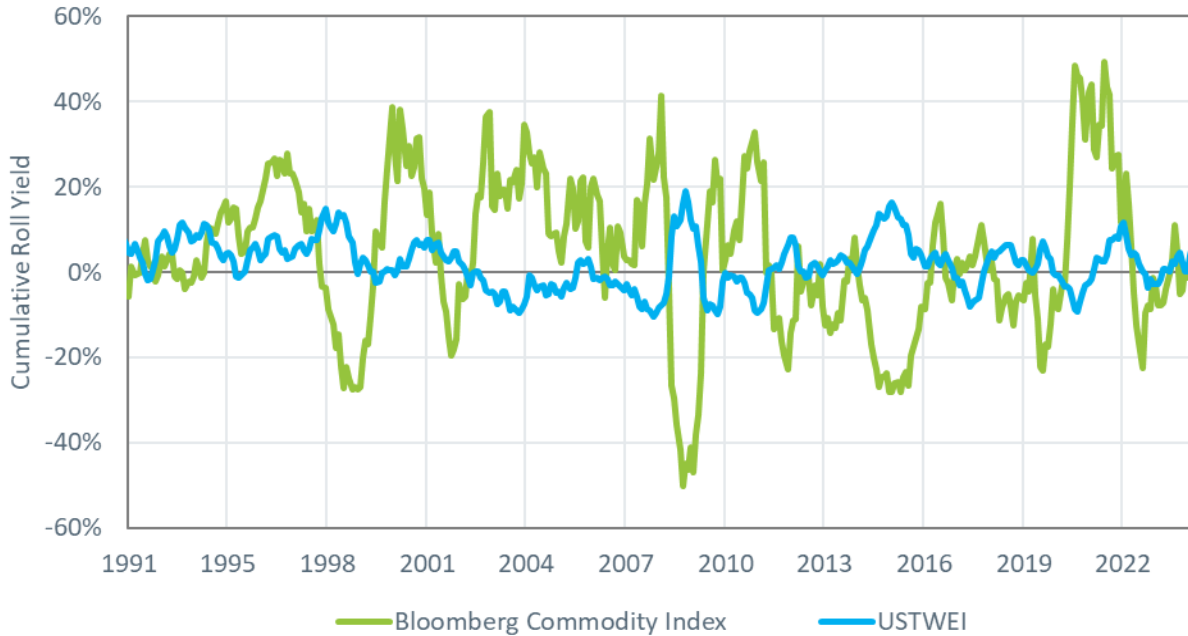


Source: FactSet. (2025)

### US Dollar Exchange Rates

Government debt levels and the trade deficit in the US may pose a long-term risk to US dollar strength, though the US is by no means the only country facing these issues. In fact, the dollar seems to be benefiting from relatively better economic conditions compared to other developed economies (i.e., Europe, Japan). The dollar's reserve currency status should also continue to serve as resistance to such weakening factors and the correspondingly higher commodity prices within a more volatile capital markets environment. Commodity prices are often quoted in US dollars and past periods of material dollar appreciation/depreciation have exhibited an inverse relationship with commodity pricing. In periods where the relative strength of the dollar index has materially fluctuated, commodities have experienced large performance swings, coinciding with shifts in relative currency strength. [Figure 69](#) highlights those periods where currency strength deviated, and commodities experienced a corresponding performance shift. The dollar strength indicator used in our analysis is the Federal Reserve created Trade Weighted US Dollar Index ("USTWEI").

**Figure 69: Bloomberg Commodity Index vs. Trade Weighted US Dollar Index**

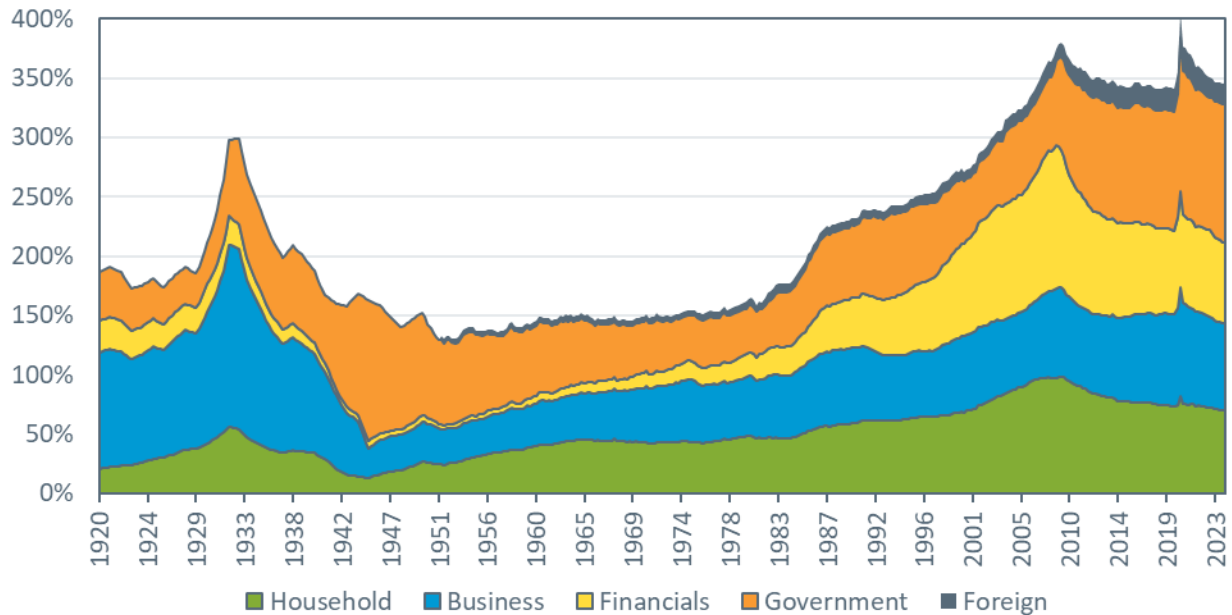


Source: FactSet. (2025)

Debt, Growth, and Supply Challenges

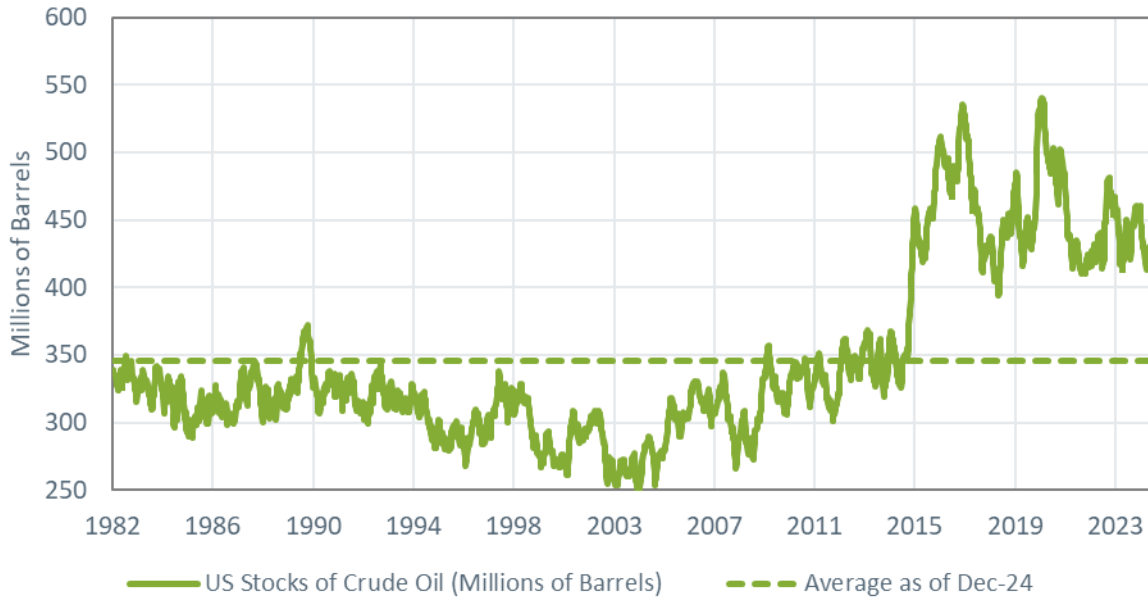
Further long-term headwinds to the future expected return on commodity prices can be seen in [Figure 70 and 71](#). Debt as a percentage of GDP remains elevated (global problem) and is generally a negative indicator of financial health. In addition to potential demand constraints, current supply levels are elevated with potential for additional supply from new (and old) projects. Combined, higher debt loads and excess supply levels generally do not suggest a long-term rise in the commodity spot price environment.

**Figure 70: US Credit Market Debt as % of GDP**



Data as of September 30, 2024.  
Source: FactSet. (2025)

Figure 71: US Stocks of Crude Oil (Excluding SPR)



Source: FactSet. (2025)

In summary, the potential for increasing commodity supply and higher debt levels suggest limited upward pressure on commodity spot prices in the long run. However, recent increases to collateral yields present a tailwind for returns, and geopolitical concerns could also put potential upward pressure on spot prices. If we assume spot prices grow with inflation (assumed above to be 2.50%), approximate collateral returns with the RVK cash assumption (2.75%) and assume roll yields will be modestly negative (0.25%), then we arrive at a suggested return assumption of 5.00%. Given the persistence of negative roll yields we have opted for a 25 bps reduction in our commodities return assumption to 6.00%.



## Diversified Inflation Strategies

Asset Class	2024			2025			Change (2025-2024)		
	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Diversified Inflation Strategies	6.00%	11.85%	5.34%	5.90%	11.85%	5.24%	-0.10%	0.00%	-0.10%

Diversified inflation strategies include investments expected to perform well in inflationary environments that typically target a return that exceeds inflation by a premium (e.g., CPI + X%). There are a number of diversified inflation implementation strategies. RVK's diversified inflation strategies assumption set is intended for those clients seeking implementation via a broadly diversified, pre-packaged approach (as opposed to implementation via direct investments in relevant sub-asset classes, which can typically be modeled separately).

When benchmarking diversified inflation strategies, it is important to note that, similar to GDP growth, inflation seldom changes dramatically from quarter to quarter, but instead follows secular cycles that result from structural changes in the economy and/or government policy. Because inflationary periods are expected to have a long duration, the price impact on inflation hedging assets should be expected to occur principally in response to changes in expected inflation. As a result, we believe diversified inflation strategies will provide a return premium above inflation when measured over a long time period; however, the quarter to quarter and sometimes year to year returns may deviate significantly from measured changes in CPI.

Our assumptions for diversified inflation strategies are based on a representative portfolio consisting of equal allocations to TIPS, broad commodities, and global REITs. Our methodology results in a long-term expected return for diversified inflation strategies of 5.90%. The return assumption decreased by 0.10%, as the return assumption for commodities decreased.

## VOLATILITY

The tradeoff between return and risk is critical for all investment decisions. Thus, it is essential for capital markets assumption setting to use an appropriate measure for volatility.

Asset class volatility measures the consistency with which asset class returns are generated. Standard deviation is the most commonly utilized measure of risk in the investment industry and is a statistical measurement used to calculate the volatility of returns. The standard deviation of returns reflects the variability of returns around the mean (or average) return as shown in the formula below:

$$SD = \sqrt{\frac{\sum(r_i - r_{avg})^2}{n - 1}}$$

Where,

$r_i$  – the return observed in one period

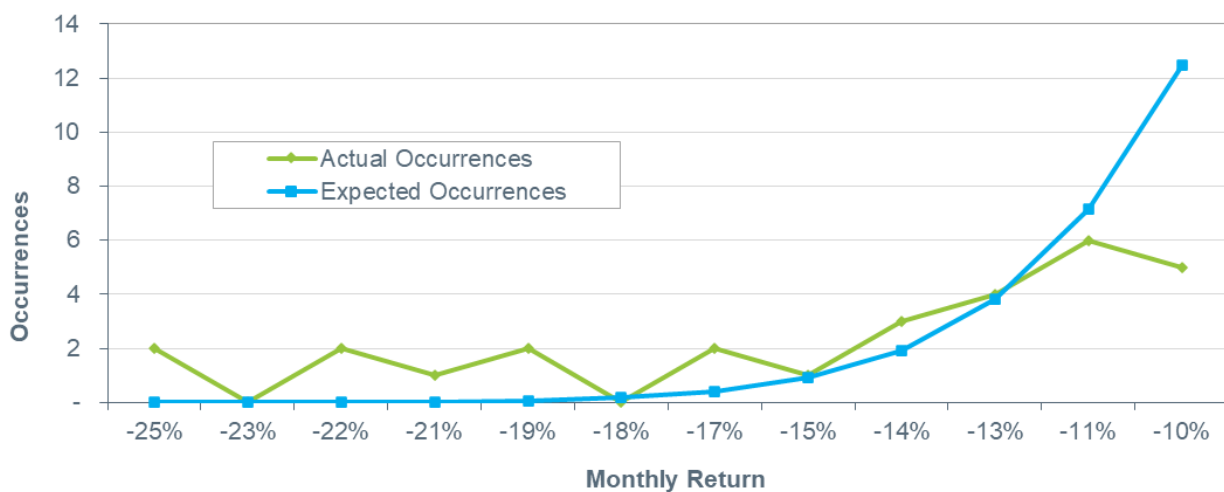
$r_{avg}$  – the arithmetic mean of the returns observed

$n$  – the number of observations in the dataset

In the framework of capital markets assumption setting, we care about understanding how asset class returns may vary over long holding periods, and thus are not as concerned with monthly variability in returns. Therefore, the RVK methodology for developing volatility assumptions has historically focused more intently on the annual standard deviation calculation. However, focusing too intently on annual standard deviations presents a variety of issues, particularly for asset classes with shorter time horizons.

Annualized standard deviation (a standard deviation of monthly data multiplied by  $\sqrt{12}$ ) is another commonly utilized measure of volatility in the industry. However, we believe it is often not an appropriate volatility measure for assuming risk levels in institutional investor portfolios for a variety of reasons. For example, the mathematical process of annualizing monthly returns assumes that monthly data is normally distributed. As history has proved many times, many asset class returns are not normally distributed, but instead tend to have a fat left tail, as shown below in [Figure 72](#).

**Figure 72: Fat Left Tail for S&P 500 Index (2/1/1926 – 12/31/2024)**



Source: Standard & Poor's. (2025). RVK calculations. Expected occurrences are based on a normal distribution curve.

Recognizing the shortfalls of both methodologies when used in isolation, RVK has chosen to enhance its historical distribution analysis and more directly focus on distribution information as it relates to reviewing both annual and monthly calculation methodology outcomes. This process involves additional quantitative analysis, but given the broader set of information, it also requires a qualitative determination to balance all the factors under consideration.

Furthermore, additional factors effect individual asset classes. For example, the continuing extension of fixed income durations was considered. Private asset classes also present unique challenges via their lack of market data and smoothed or lagged appraisal based valuation processes.

**Figure 73** below shows the differences between historical annual and annualized monthly standard deviations for major asset classes.

**Figure 73: Historical Standard Deviations**

Asset Class	30 Year Historical		RVK Assumption
	Monthly	Annual	2024
US Inflation	0.98%	1.48%	2.50%
Cash Equivalents	0.65%	2.12%	2.50%
US Aggregate Fixed Income	4.14%	4.79%	5.00%
Non-US Developed Sovereign FI (UH)	8.50%	9.25%	8.50%
TIPS*	5.71%	6.42%	5.50%
Low Duration Fixed Income	1.57%	3.72%	2.50%
Long Duration Fixed Income	9.79%	10.33%	10.00%
High Yield	8.53%	13.82%	10.50%
Bank Loans	5.46%	10.48%	9.00%
Emerging Markets Debt (Hard)	10.88%	11.53%	10.00%
Emerging Markets Debt (Local)	11.58%	11.77%	11.50%
Large/Mid Cap US Equity	15.20%	17.72%	16.00%
Small Cap US Equity	20.09%	17.67%	19.00%
Dev'd Large/Mid Cap Int'l Equity	16.16%	18.36%	17.00%
Dev'd Small Cap Int'l Equity	17.92%	22.06%	20.00%
Emerging Markets Equity	21.51%	29.08%	25.00%
Core Real Estate**	6.18%	11.07%	12.50%
Global REITs*	18.76%	20.98%	21.00%
Master Limited Partnerships*	24.81%	28.04%	23.00%
Funds of Hedge Funds	5.54%	8.58%	9.50%
Multi-Strategy Hedge Funds	4.07%	7.48%	8.50%
GTAA*	7.82%	9.10%	9.00%
Private Credit	7.78%	7.33%	13.00%
Senior Secured Direct Lending	12.55%	13.12%	9.50%
Private Equity**	13.18%	20.93%	22.00%
Commodities	15.22%	18.00%	17.50%

\* TIPS, Global REITs, MLPs, and GTAA are based on a 20 year timeframe.

\*\*Private Equity and Core Real Estate are based on quarterly returns and not monthly returns.

## CORRELATIONS

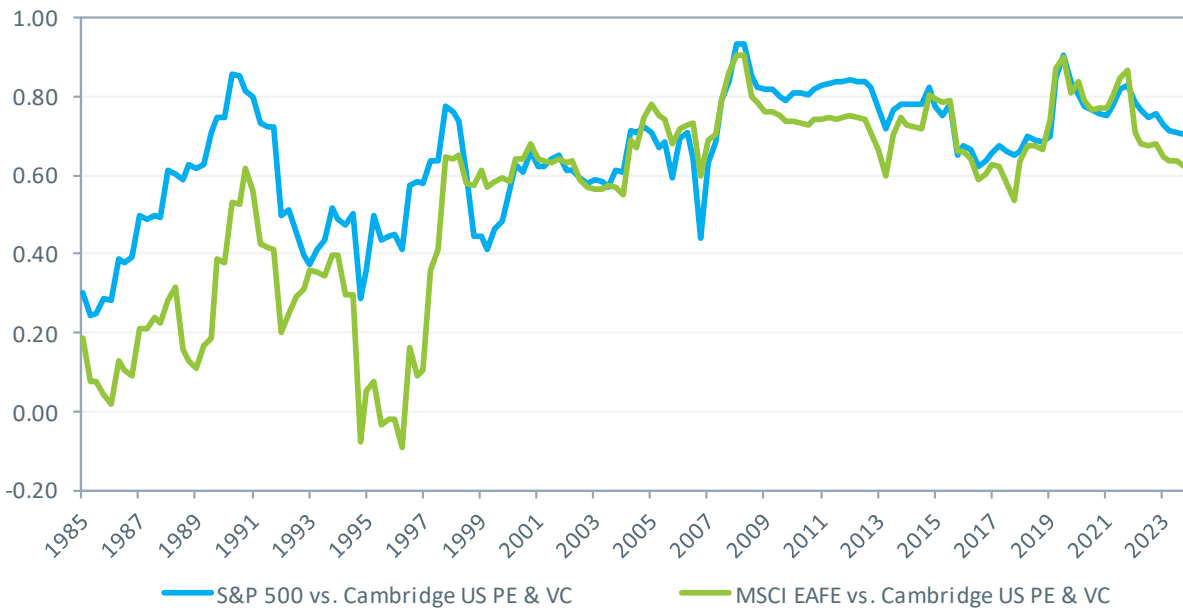
During the 2024 calendar year, RVK conducted analysis to review the correlation assumption process for potential enhancements. The analysis reviewed correlations of various historical time frames, and blends of time frames, to back test their predictive power in projecting forward 20-year correlations. The analysis strongly suggested that modifying the existing 90/10 split of since inception/5-year historical correlations for assets of monthly data availability, to instead utilize the 20-year historical correlation in place of since inception correlations materially improved the predictive power of the following 20-year correlations. The data further reinforced that maintaining the “blended assumption” was beneficial, where in general, long-term historical index values and interrelationships constitute the foundation, while more recent trends function as a forecasting tool. Specifically, a 90% weight is placed on the historical 20-year data and a 10% weight is applied to the last 5-year period. This methodology yields a manageable matrix of assumptions that incorporates both long-term and recent trends.

We employ a modified methodology for less liquid asset classes – such as private equity and real estate – attempting to account for the lags between periodic accounting reports and underlying true economic values, as well as to more accurately incorporate trends observed over the last decade that are reasonably likely to endure.

For private equity, we employ a 50/50 weighting to periodic correlations observed since inception and during the last ten-year period. We believe that this methodology more accurately reflects the current nature of the private equity markets (specifically its maturation as an asset class), while also incorporating its long-term history. As shown in [Figure 74](#), the correlations between private and public equities have increased over the last 10 to 15 years – with some slippage recently. Some of the following factors may be driving this trend:

- **Public Market Exits** – Private equity firms frequently exit investments and generate value for investors via Mergers and Acquisitions (“M&A”) and Initial Public Offerings (“IPOs”). Both the success and frequency of these transactions is closely correlated with conditions in public equity markets.
- **Increasing Supply of Capital** – As the private equity marketplace has matured significantly, more players have entered the private equity space resulting in more firms fighting for a limited pool of opportunities.
- **Diminished Role of Venture Capital** – The increasing average size of buyouts on a weighted basis and relatively smaller venture capital deal volume illustrate a diminished role of venture capital in the private equity universe. This represents a departure from the past in which venture capital constituted a larger percentage of overall deal volume.
- **Increasing Valuation Frequency Due to New Accounting Requirements** – Fair value accounting and compliance with revised auditing standards encourages a more frequent revaluation of portfolio companies (away from a generally cost- or exit-based approach). A more frequent valuation approach (especially one that emphasizes public market comparables) is likely to increase observed correlations.

Figure 74: 5-Year Rolling Correlations



Sources: Cambridge, S&P and MSCI. (2025)

For core real estate, we have updated the 90/10 methodology to the 20-year/5-year blend, but have retained the two-quarter lag to the return streams. We believe that a lagged methodology better reflects the long-term relationships and economic realities of the private real estate asset class given current appraisal smoothing/lag and partial portfolio revaluations. However, we note that recently appraisers have been more proactive in marking assets to market, and fund managers have adopted new policies to appraise underlying assets more frequently and with greater rigor. Consequently, we continue to revisit this methodology on an annual basis to ensure it does not need adjusting based on new developments in the asset class.

A copy of the RVK 2025 correlation matrix is provided in [Appendix B](#).

## APPENDIX A: EQUITY VALUATIONS REVIEW

As stated in the Equity section, there exist numerous metrics that can provide a valuation measure for US equities. We have carefully reviewed and tested some of the most commonly referenced metrics in the industry to determine a method that is both valid in measuring the value of the US stock market and is easily calculated on an ongoing basis. Below we present a brief review of each valuation indicator.

After careful review of all the prominent valuation metrics, we chose CAPE ratio as the primary valuation indicator we utilize in forecasting future long-term equity returns. This ratio has by far the longest history and spans multiple market cycles. The calculation methodology is straightforward, easily replicated and can be updated on a monthly basis. Most importantly, the CAPE ratio has not only exhibited >90% negative correlation with future long-term equity returns over the last 25 years, but has maintained a negative correlation of >59% with stock returns when looking at close to 100 years of data (as shown in [Figure 75](#)).

**Figure 75: US Equity Valuation Measures**

								Regression with 10-year forward S&P500 returns	
		Latest	As of	Percent	StDev	Average	Starting	Corr from the Starting Date	R-Square (starting date)
		Value	Date	Rank	from Mean	(longest available)	date		
Real	Real TTM CAPE	36.6	Dec-24	98.8%	2.5	17.4	Jan-26	-38%	14%
	Shiller CAPE 10-year	<b>38.6</b>	<b>Dec-24</b>	<b>97.8%</b>	<b>2.5</b>	<b>18.9</b>	<b>Jan-26</b>	<b>-59%</b>	<b>34%</b>
	Margin Adj Shiller CAPE10 <sup>*(1)</sup>	70.7	Dec-24	99.7%	2.5	24.9	Dec-39	-56%	31%
	Shiller CAPE 20-year	46.4	Dec-24	98.7%	2.7	20.8	Jan-26	-56%	32%
Nominal	S&P 500 Price / Dividend <sup>(2)</sup>	80.3	Dec-24	98.1%	2.6	34.4	Jan-26	-45%	21%
	S&P 500 Price / Book	5.0	Dec-24	99.0%	2.3	3.0	Jan-90	n/a	n/a
	S&P 500 Forward P/E (CY) <sup>(3)</sup>	24.6	Dec-24	94.7%	2.0	17.6	Jan-90	n/a	n/a
	S&P 500 Price / Sales	3.1	Dec-24	98.8%	2.6	1.6	Jan-90	n/a	n/a

\* Regression analysis is run against Real 10-year forward S&P500 annualized returns.

<sup>1</sup> Margin adjusted Shiller CAPE calculation is based on Dr. Hussman methodology as stated on <https://www.hussmanfunds.com/knowledge-center>.

<sup>2</sup> Based on Robert Shiller data.

<sup>3</sup> "CY" stands for "Current year EPS estimate" and "NY" stands for "Next year EPS estimate".

**Sources:** FactSet, The Board of Governors of the Federal Reserve System, Bureau of Economic Analysis, Dimensional Fund Advisors, Federal Reserve Economic Database, Standard & Poors, Robert Shiller. (2024)

### Price-to-Book Ratio

The Price-to-Book ("P/B") ratio is calculated by dividing the price by the book value. The P/B ratio provides a relatively stable valuation metric since book values are less volatile than profits and cash flows. The ratio is easy to calculate and does not require smoothing for business cycles. The shortfall of this ratio is its relatively short historical data starting from 1990.

### **Price-to-Dividend Ratio**

The Price-to-Dividend (“P/D”) ratio is calculated by dividing price by the reported dividend. The benefit of this ratio is that, unlike earnings, dividends cannot be influenced by “creative” accounting and are free from possible “write-offs.” However, over the last 20 years or so, many companies have shifted their focus from paying out dividends to exercising stock buybacks. Therefore, dividends alone might not be an accurate representation of total cash payouts to investors.

### **Price-to-Sales Ratio**

The Price-to-Sales (“P/S”) ratio is calculated by dividing price by total sales. Sales get restated and written down far less often than earnings, so they provide a stable value in the denominator of the price ratio. This ratio, however, fails to incorporate any of the basic elements used to value companies, such as profit margins, earnings, or dividends. As with the P/B ratio, historical data is relatively short starting from 1990.

### **Price-to-Earnings Ratio**

The Price-to-Earnings (“P/E”) ratio is calculated by dividing price by the trailing 12-month corporate earnings. The P/E ratio is the most widely used valuation multiple in the investment industry as earnings power is considered to be the primary driver of investment value. A large body of empirical research has proven that P/E multiple is related to long-run average stock returns.

However, short-term earnings tend to be volatile due to several factors – variations in profit margins during business cycles, potential short-term losses leading to negative earnings and manager’s discretion in determining (or “manipulating”) reported earnings. There also have been many changes to accounting regulations regarding reported earnings over the last decade prompting some professionals to challenge the use of reported earnings in the denominator of the P/E ratio. As a result, several academics and practitioners in the industry developed “adjusted” P/E ratios to reduce the issues embedded in reported earnings.

### **Shiller Cyclically Adjusted Price-to-Earnings (“CAPE”) Ratio**

Shiller Cyclically Adjusted Price-to-Earnings (“CAPE”) valuation ratio compares the current price of the S&P 500 Index to the 10-year average of inflation-adjusted earnings. Robert Shiller and John Campbell introduced the CAPE in 1988 with the historical data going back to January 1871. The goal of the CAPE ratio is to smooth the cyclical fluctuations in earnings by “normalizing” earnings over a 10-year period, assumed to be one full business cycle. Adjusted for an economic cycle, it measures whether the value of an equity market is high or low compared to its earnings level.

Shiller CAPE ratio is one of the most commonly used and referenced relative valuation measures due to its statistically-proven predictive power of future, long-term equity returns. Additionally, this ratio is easy to calculate due to publicly available data and, thanks to Shiller’s work, the ratio has more than 140 years of data encompassing many market cycles.

### **Siegel National Income and Product Account (“NIPA”) P/E**

In recent years, the Shiller CAPE ratio has come under criticism for its use of reported earnings. Due to changes in accounting rules over the last 20 years, particularly with respect to mark-to-market mandates, current reported earnings are no longer consistent with historical reported earnings which critics argue biases CAPE ratios upward.

To remedy the issues with the reported earnings, Jeremy Siegel proposed to use corporate profits reported in the National Income and Product Accounts (“NIPAs”)<sup>4</sup>. The BEA defines “corporate profits” as the income earned from the current production by US corporations—based on “adjusting, supplementing, and integrating financial-based and tax-based source data.” The biggest implementation shortfall of the NIPA data is that it covers 9,000 companies as compared to the 500 names within the S&P index. Although NIPA data can be easily downloaded from the BEA website, it is difficult to replicate Siegel’s calculation as he made a number of adjustments to make NIPA earnings comparable to the S&P 500 earnings. Potential methodology considerations with NIPA earnings are not including foreign earnings and not deducting for bad debt losses, as well as measuring earnings from nonpublic companies.

### **Hussmann Margin Adjusted CAPE**

John Hussman from Hussman Funds proposed to adjust Shiller CAPE for swings in profit margins. Hussman suggested that margin-adjustment “corrects for the tendency for valuation multiples to appear misleadingly low when corporate earnings are at cyclically-elevated levels, and to appear misleadingly high when corporate earnings are at cyclically-depressed levels<sup>5</sup>.” During economic growth periods corporate profit margins expand thus elevating corporate earnings, and vice versa. To calculate a margin-adjusted CAPE, Shiller CAPEs are multiplied by a cyclical adjustment factor for profit margins (10-year trailing profit margins divided by long-term profit margin).

### **Tobin’s Q Ratio**

James Tobin developed the Q ratio (known as Tobin’s Q) which defines the fair value of equities as the cost of replacement. For the purposes of market valuation, it is the total price of the market divided by the replacement cost of all its companies. The Federal Reserve provides the Q ratio data in the Z.1 Financial Accounts of the United States report, which is released quarterly. Stephen Wright calculated the Q ratio for the equities market for the period 1900-1952 published in the Review of Income and Wealth (2004). Q Ratio data is not very timely, as the Z.1 data is released only on a quarterly basis and is two months lagged at the time of a release.

### **Total Market Cap / Gross Domestic Product (Buffet Indicator)**

The Gross Domestic Product (“GDP”) is the sum of all goods and services produced within a nation’s geographic borders over a year. Thus, the ratio of Total Market Cap to GDP is like Price-to-Sales ratio for the entire country. The downside of this ratio is that it doesn’t consider the profitability of businesses, only their top line revenue figures.

There are two common ways to calculate Total Market Cap to GDP valuation indicator. The first calculation, used and proliferated by Warren Buffet, is a ratio of corporate equities; liability from the Federal Reserve’s Z.1 Balance Sheet to nominal GDP. The data for the corporate equities goes back to 1950s. A more transparent way uses the Wilshire 5000 Full Cap Index (includes reinvested dividends) in the numerator, but the data for the Wilshire Index begins only in 1971. For the purposes of setting long-term assumptions, we prefer to use longer timeframe datasets that encompass several economic cycles. Therefore, we analyzed the “Buffet” version of this indicator.

### **Full Cap Price Index/Gross National Product**

The Gross National Product (“GNP”) is the sum of all goods and services produced by all the citizens and corporations from a specific nation, regardless of where in the world the actual production takes place. Wilshire 5000 Full Cap Price Index, which does not include reinvested dividends, is used in the numerator for this valuation indicator. The data for the Wilshire Index begins in 1971.

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<sup>4</sup> Siegel, J. Jeremy, 2016. *The Shiller CAPE Ratio: A New Look*. Financial Analysts Journal. Volume 72, Number 3.

<sup>5</sup> Hussman Funds. (n.d). Knowledge Center / Recent Charts. Retrieved from <https://www.hussmanfunds.com/knowledge-center>



## APPENDIX B: 2025 CORRELATION MATRIX

Asset Class	Large/Mid Cap US Equity	Small/Mid Cap US Equity	Broad US Equity	Dev'd Large/Mid Int'l Equity	Dev'd Small Int'l Equity	Emerging Markets Equity	Broad International Equity	Global Equity	US Agg Fixed Income	Non-US Developed Sovereign Fixed Income UH	Emerging Markets Debt (Hard)	Emerging Markets Debt (Local)	TIPS	Low Duration Fixed Income	Long Duration Fixed Income	High Yield Fixed Income	Private Credit	Senior Secured Debt	Bank Loans	Real Estate	Global REITs	MLPs	Diversified Hedge Fund of Funds	Multi-Strategy Hedge Funds	GTAA	Private Equity	Commodities	Diversified Inflation Strategies	U.S. Inflation	Cash Equivalents
Large/Mid Cap US Equity	1.00	0.88	1.00	0.87	0.84	0.72	0.86	0.96	0.27	0.37	0.64	0.61	0.35	0.12	0.25	0.75	0.78	0.34	0.59	0.34	0.83	0.58	0.74	0.65	0.87	0.65	0.45	0.76	0.02	-0.05
Small/Mid Cap US Equity	0.88	1.00	0.92	0.78	0.79	0.67	0.79	0.88	0.20	0.27	0.57	0.55	0.26	0.05	0.18	0.73	0.77	0.35	0.59	0.26	0.77	0.57	0.72	0.64	0.79	0.66	0.40	0.69	-0.00	-0.08
Broad US Equity	1.00	0.92	1.00	0.87	0.85	0.73	0.87	0.97	0.27	0.36	0.65	0.61	0.35	0.11	0.25	0.77	0.79	0.34	0.61	0.33	0.83	0.59	0.76	0.67	0.88	0.67	0.46	0.77	0.01	-0.05
Dev'd Large/Mid Int'l Equity	0.87	0.78	0.87	1.00	0.96	0.84	0.99	0.96	0.31	0.49	0.71	0.76	0.37	0.20	0.27	0.77	0.83	0.37	0.59	0.31	0.85	0.53	0.78	0.71	0.91	0.67	0.55	0.83	0.02	-0.02
Dev'd Small Int'l Equity	0.84	0.79	0.85	0.96	1.00	0.83	0.96	0.94	0.32	0.49	0.71	0.73	0.39	0.20	0.28	0.79	0.82	0.40	0.64	0.33	0.83	0.53	0.82	0.75	0.90	0.72	0.55	0.82	0.01	-0.07
Emerging Markets Equity	0.72	0.67	0.73	0.84	0.83	1.00	0.92	0.85	0.28	0.46	0.71	0.81	0.36	0.20	0.26	0.72	0.82	0.35	0.57	0.28	0.75	0.46	0.75	0.70	0.84	0.63	0.58	0.78	0.01	0.00
Broad International Equity	0.86	0.79	0.87	0.99	0.96	0.92	1.00	0.97	0.31	0.50	0.74	0.80	0.39	0.20	0.28	0.80	0.85	0.38	0.63	0.31	0.85	0.54	0.81	0.75	0.93	0.70	0.59	0.85	0.03	-0.02
Global Equity	0.96	0.88	0.97	0.96	0.94	0.85	0.97	1.00	0.30	0.44	0.72	0.73	0.38	0.16	0.27	0.81	0.85	0.37	0.64	0.33	0.87	0.59	0.82	0.74	0.94	0.72	0.55	0.84	0.02	-0.04
US Agg Fixed Income	0.27	0.20	0.27	0.31	0.32	0.28	0.31	0.30	1.00	0.74	0.63	0.47	0.78	0.81	0.95	0.38	-0.06	0.08	0.07	0.10	0.44	0.06	0.15	0.15	0.48	0.02	-0.01	0.39	-0.26	0.08
Non-US Developed Sovereign Fixed Income UH	0.37	0.27	0.36	0.49	0.49	0.46	0.50	0.44	0.74	1.00	0.61	0.67	0.67	0.67	0.68	0.41	0.13	0.15	0.09	0.07	0.50	0.13	0.23	0.18	0.60	0.16	0.27	0.54	-0.14	0.08
Emerging Markets Debt (Hard)	0.64	0.57	0.65	0.71	0.71	0.71	0.74	0.72	0.63	0.61	1.00	0.82	0.64	0.44	0.61	0.79	0.60	0.38	0.60	0.19	0.74	0.42	0.61	0.66	0.84	0.48	0.39	0.74	-0.09	-0.00
Emerging Markets Debt (Local)	0.61	0.55	0.61	0.76	0.73	0.81	0.80	0.73	0.47	0.67	0.82	1.00	0.49	0.39	0.43	0.67	0.60	0.32	0.45	0.09	0.72	0.40	0.55	0.54	0.80	0.47	0.49	0.74	-0.03	0.06
TIPS	0.35	0.26	0.35	0.37	0.39	0.36	0.39	0.38	0.78	0.67	0.64	0.49	1.00	0.66	0.73	0.49	0.16	0.16	0.26	0.25	0.47	0.18	0.27	0.32	0.59	0.22	0.27	0.58	-0.04	0.00
Low Duration Fixed Income	0.12	0.05	0.11	0.20	0.20	0.20	0.20	0.16	0.81	0.67	0.44	0.39	0.66	1.00	0.65	0.25	-0.11	-0.01	-0.03	-0.06	0.24	0.02	0.06	0.05	0.35	-0.09	0.02	0.27	-0.27	0.35
Long Duration Fixed Income	0.25	0.18	0.25	0.27	0.28	0.26	0.28	0.27	0.95	0.68	0.61	0.43	0.73	0.65	1.00	0.34	-0.10	0.06	0.06	0.13	0.42	0.04	0.15	0.14	0.44	0.04	-0.04	0.35	-0.26	0.01
High Yield Fixed Income	0.75	0.73	0.77	0.77	0.79	0.72	0.80	0.81	0.38	0.41	0.79	0.67	0.49	0.25	0.34	1.00	0.86	0.44	0.82	0.23	0.79	0.59	0.70	0.80	0.86	0.51	0.48	0.78	0.04	-0.08
Private Credit	0.78	0.77	0.79	0.83	0.82	0.82	0.85	0.85	-0.06	0.13	0.60	0.60	0.16	-0.11	-0.10	0.86	1.00	0.48	0.88	0.41	0.80	0.61	0.80	0.89	0.82	0.74	0.64	0.84	0.29	-0.07
Senior Secured Debt	0.34	0.35	0.34	0.37	0.40	0.35	0.38	0.37	0.08	0.15	0.38	0.32	0.16	-0.01	0.06	0.44	0.48	1.00	0.47	0.07	0.32	0.27	0.36	0.43	0.40	0.46	0.25	0.34	0.05	-0.14
Bank Loans	0.59	0.59	0.61	0.59	0.64	0.57	0.63	0.64	0.07	0.09	0.60	0.45	0.26	-0.03	0.06	0.82	0.88	0.47	1.00	0.18	0.60	0.59	0.70	0.84	0.65	0.51	0.46	0.62	0.22	-0.08
Real Estate	0.34	0.26	0.33	0.31	0.33	0.28	0.31	0.33	0.10	0.07	0.19	0.09	0.25	-0.06	0.13	0.23	0.41	0.07	0.18	1.00	0.42	0.19	0.39	0.40	0.35	0.53	0.31	0.45	0.08	-0.22
Global REITs	0.83	0.77	0.83	0.85	0.83	0.75	0.85	0.87	0.44	0.50	0.74	0.72	0.47	0.24	0.42	0.79	0.80	0.32	0.60	0.42	1.00	0.48	0.66	0.66	0.87	0.56	0.44	0.88	0.01	-0.04
MLPs	0.58	0.57	0.59	0.53	0.53	0.46	0.54	0.59	0.06	0.13	0.42	0.40	0.18	0.02	0.04	0.59	0.61	0.27	0.59	0.19	0.48	1.00	0.58	0.59	0.57	0.39	0.44	0.53	0.07	-0.08
Diversified Hedge Fund of Funds	0.74	0.72	0.76	0.78	0.82	0.75	0.81	0.82	0.15	0.23	0.61	0.55	0.27	0.06	0.15	0.70	0.80	0.36	0.70	0.39	0.66	0.58	1.00	0.84	0.78	0.75	0.55	0.70	0.09	-0.00
Multi-Strategy Hedge Funds	0.65	0.64	0.67	0.71	0.75	0.70	0.75	0.74	0.15	0.18	0.66	0.54	0.32	0.05	0.14	0.80	0.89	0.43	0.84	0.40	0.66	0.59	0.84	1.00	0.75	0.61	0.57	0.72	0.16	-0.12
GTAA	0.87	0.79	0.88	0.91	0.90	0.84	0.93	0.94	0.48	0.60	0.84	0.80	0.59	0.35	0.44	0.86	0.82	0.40	0.65	0.35	0.87	0.57	0.78	0.75	1.00	0.68	0.64	0.92	0.01	-0.01
Private Equity	0.65	0.66	0.67	0.67	0.72	0.63	0.70	0.72	0.02	0.16	0.48	0.47	0.22	-0.09	0.04	0.51	0.74	0.46	0.51	0.53	0.56	0.39	0.75	0.61	0.68	1.00	0.42	0.62	-0.01	-0.21
Commodities	0.45	0.40	0.46	0.55	0.55	0.58	0.59	0.55	-0.01	0.27	0.39	0.49	0.27	0.02	-0.04	0.48	0.64	0.25	0.46	0.31	0.44	0.44	0.55	0.57	0.64	0.42	1.00	0.79	0.28	-0.04
Diversified Inflation Strategies	0.76	0.69	0.77	0.83	0.82	0.78	0.85	0.84	0.39	0.54	0.74	0.74	0.58	0.27	0.35	0.78	0.84	0.34	0.62	0.45	0.88	0.53	0.70	0.72	0.92	0.62	0.79	1.00	0.13	-0.04
U.S. Inflation	0.02	-0.00	0.01	0.02	0.01	0.01	0.03	0.02	-0.26	-0.14	-0.09	-0.03	-0.04	-0.27	-0.26	0.04	0.29	0.05	0.22	0.08	0.01	0.07	0.09	0.16	0.01	-0.01	0.28	0.13	1.00	-0.01
Cash Equivalents	-0.05	-0.08	-0.05	-0.02	-0.07	0.00	-0.02	-0.04	0.08	0.08	-0.00	0.06	0.00	0.35	0.01	-0.08	-0.07	-0.14	-0.08	-0.22	-0.04	-0.08	-0.00	-0.12	-0.01	-0.21	-0.04	-0.04	-0.01	1.00

Correlation Equal to 1.00

Correlation Greater Than 0.50

Correlation Between 0 and 0.50

Correlation Between -0.50 and 1

# RVK

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RVK

# Monthly Performance Report

City of Jacksonville Employees'  
Retirement System

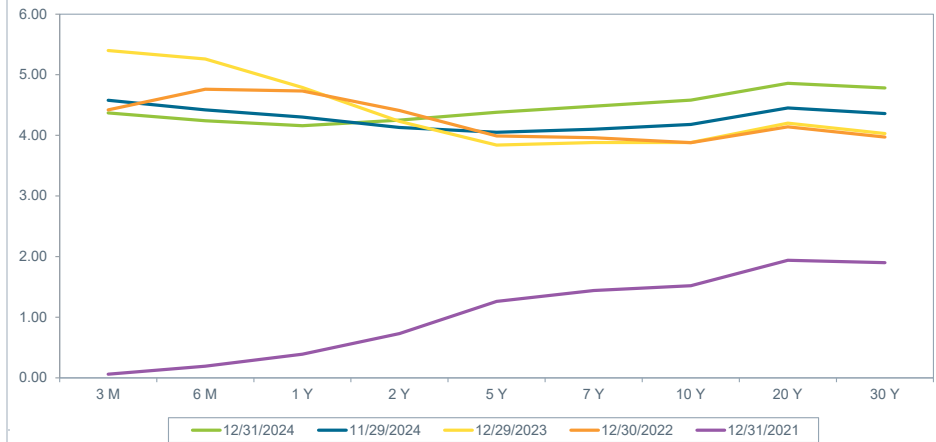
December 31, 2024

General Market Commentary

- During December, both domestic and international equity markets broadly traded lower for the month, posting low to mid-single digit losses. Large-cap stocks fared better than small-cap stocks, and growth stocks generally outperformed their value counterparts.
- The Federal Reserve cut interest rates by 25 basis points at their December 2024 meeting; however, stocks and bonds declined due to expectations that future rate cuts may occur more slowly than previously anticipated, which was driven by stubborn inflation. US inflation, as measured by CPI, slightly increased with a year-over-year change of 2.7% as of the end of November.
- Fixed income markets also experienced a drawdown during December, with yields increasing across the curve as investors evaluate a potential higher-for-longer interest rate environment due to persistent inflation.
- Equity markets posted negative returns in December as the S&P 500 (Cap Wtd) Index returned -2.38% and the MSCI EAFE (Net) Index returned -2.27%. Emerging markets returned -0.14%, as measured by the MSCI EM (Net) Index.
- The Bloomberg US Aggregate Bond Index returned -1.64% in December, underperforming the -0.57% return by the Bloomberg US Treasury Intermediate Term Index. International fixed income markets returned -2.86%, as measured by the FTSE Non-US World Gov't Bond Index.
- Public real estate returned -7.38% in December and 4.27% over the trailing five-year period, as measured by the FTSE NAREIT Eq REITs Index (TR).
- The Cambridge US Private Equity Index returned 9.18% for the trailing one-year period and 15.33% for the trailing five-year period ending September 2024.
- Absolute return strategies returned 0.23% for the month and 9.40% over the trailing one-year period, as measured by the HFRI FOF Comp Index.
- The price of crude oil increased by 5.25% during the month but has decreased by 0.11% YoY.

Economic Indicators	Dec-24	Nov-24	Dec-23	10 Yr	20 Yr
Federal Funds Rate (%)	4.33 ▼	4.58	5.33	1.77	1.68
Breakeven Inflation - 5 Year (%)	2.37 ▲	2.35	2.14	1.95	1.93
Breakeven Inflation - 10 Year (%)	2.33 ▲	2.27	2.17	1.99	2.09
Breakeven Inflation - 30 Year (%)	2.32 ▲	2.23	2.16	2.03	2.22
Bloomberg US Agg Bond Index - Yield (%)	4.91 ▲	4.64	4.53	2.91	3.28
Bloomberg US Agg Bond Index - OAS (%)	0.34 ▲	0.32	0.42	0.47	0.59
Bloomberg US Agg Credit Index - OAS (%)	0.77 ▲	0.74	0.93	1.15	1.38
Bloomberg US Corp: HY Index - OAS (%)	2.87 ▲	2.66	3.23	4.17	4.90
Capacity Utilization (%)	77.63 ▲	77.02	78.73	77.37	77.16
Unemployment Rate (%)	4.10 ▼	4.20	3.70	4.67	5.80
PMI - Manufacturing (%)	49.30 ▲	48.40	47.40	53.13	52.86
Baltic Dry Index - Shipping	997 ▼	1,354	2,094	1,432	2,225
Consumer Conf (Conf Board)	104.70 ▼	111.70	108.00	110.38	92.88
CPI YoY (Headline) (%)	2.90 ▲	2.70	3.40	2.92	2.61
CPI YoY (Core) (%)	3.20 ▼	3.30	3.90	2.99	2.46
PPI YoY (%)	3.30 ▲	3.00	1.10	2.74	N/A
M2 YoY (%)	N/A	N/A	3.70	-2.40	6.40
US Dollar Total Weighted Index	129.49 ▲	126.81	118.77	115.36	104.49
WTI Crude Oil per Barrel (\$)	72 ▲	68	72	62	72
Gold Spot per Oz (\$)	2,612 ▼	2,643	2,068	1,599	1,335

Treasury Yield Curve (%)



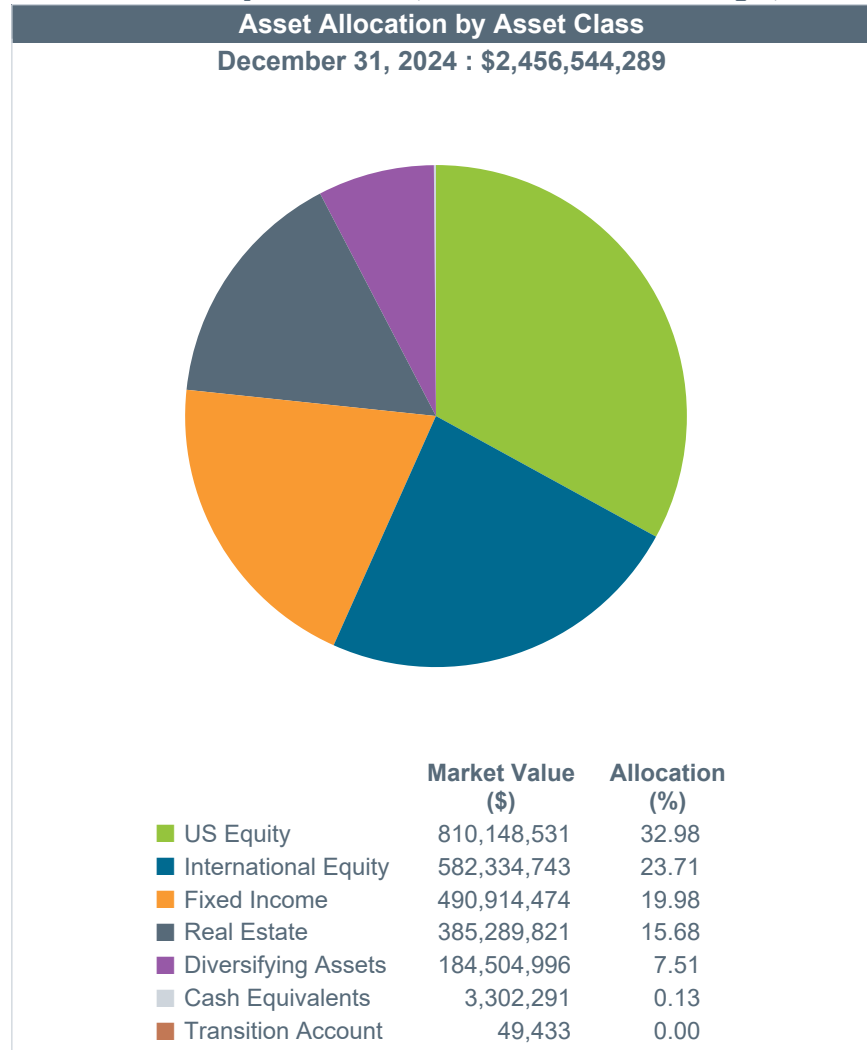
Treasury Yield Curve (%)	Dec-24	Nov-24	Dec-23	Dec-22	Dec-21			
3 Month	4.37	4.58	5.40	4.42	0.06			
6 Month	4.24	4.42	5.26	4.76	0.19			
1 Year	4.16	4.30	4.79	4.73	0.39			
2 Year	4.25	4.13	4.23	4.41	0.73			
5 Year	4.38	4.05	3.84	3.99	1.26			
7 Year	4.48	4.10	3.88	3.96	1.44			
10 Year	4.58	4.18	3.88	3.88	1.52			
20 Year	4.86	4.45	4.20	4.14	1.94			
30 Year	4.78	4.36	4.03	3.97	1.90			
Market Performance (%)	MTD	QTD	CYTD	1 Yr	3 Yr	5 Yr	7 Yr	10 Yr
S&P 500 (Cap Wtd)	-2.38	2.41	25.02	25.02	8.94	14.53	13.83	13.10
Russell 2000	-8.26	0.33	11.54	11.54	1.24	7.40	6.91	7.82
MSCI EAFE (Net)	-2.27	-8.11	3.82	3.82	1.65	4.73	4.10	5.20
MSCI EAFE SC (Net)	-2.30	-8.36	1.82	1.82	-3.25	2.30	2.01	5.52
MSCI EM (Net)	-0.14	-8.01	7.50	7.50	-1.92	1.70	1.38	3.64
Bloomberg US Agg Bond	-1.64	-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35
ICE BofAML 3 Mo US T-Bill	0.40	1.17	5.25	5.25	3.89	2.46	2.35	1.77
NCREIF ODCE (Gross)	1.16	1.16	-1.43	-1.43	-2.32	2.87	3.99	5.88
FTSE NAREIT Eq REITs Index (TR)	-7.38	-6.21	8.73	8.73	-2.20	4.27	5.77	5.73
HFRI FOF Comp Index	0.23	2.30	9.40	9.40	3.19	5.28	4.33	3.81
Bloomberg Cmtly Index (TR)	1.02	-0.45	5.38	5.38	4.05	6.77	4.11	1.28

NCREIF performance is reported quarterly; MTD and QTD returns are shown as "N/A" on interim-quarter months and until available. Data shown is as of most recent quarter-end. Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. The previous month's CPI YoY is used as a proxy for the current YoY return until it becomes available.



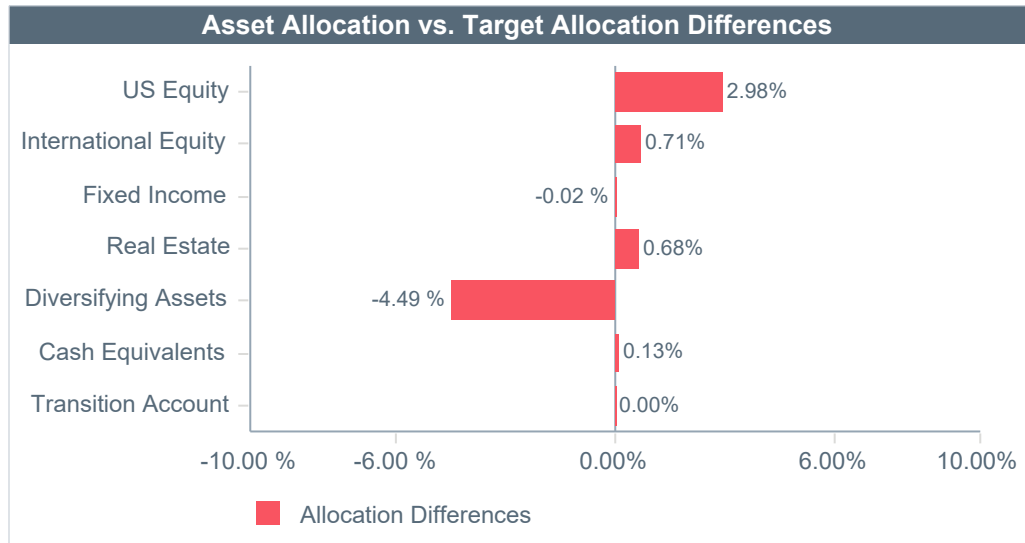
Total Fund

Asset Allocation by Asset Class, Asset Allocation vs. Target, and Schedule of Investable Assets



### Asset Allocation vs. Target Allocation

	Market Value (\$)	Allocation (%)	Min (%)	Target (%)	Max (%)
<b>Total Fund</b>	<b>2,456,544,289</b>	<b>100.00</b>	<b>-</b>	<b>100.00</b>	<b>-</b>
US Equity	810,148,531	32.98	20.00	30.00	40.00
International Equity	582,334,743	23.71	13.00	23.00	25.00
Fixed Income	490,914,474	19.98	10.00	20.00	30.00
Real Estate	385,289,821	15.68	0.00	15.00	20.00
Diversifying Assets	184,504,996	7.51	0.00	12.00	20.00
Cash Equivalents	3,302,291	0.13	0.00	0.00	10.00
Transition Account	49,433	0.00	0.00	0.00	0.00

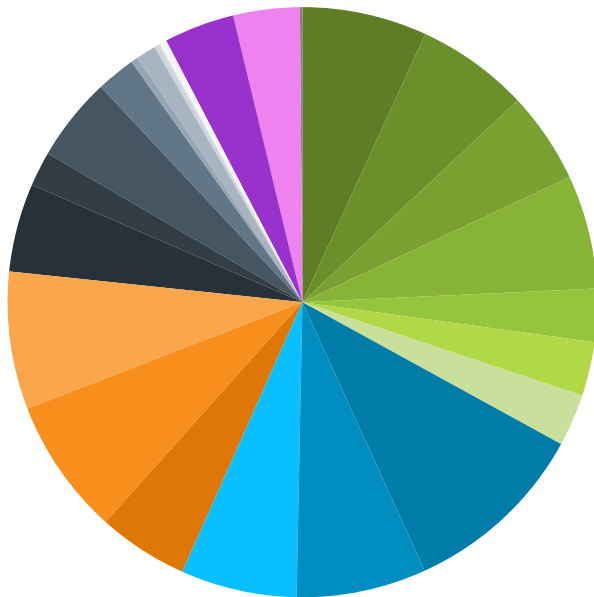


### Schedule of Investable Assets

Periods Ending	Beginning Market Value (\$)	Net Cash Flows (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
FYTD	2,475,947,332	622,619	-20,025,663	2,456,544,289	-0.81
CYTD	2,355,516,708	-104,817,513	205,845,094	2,456,544,289	8.67

Market values and performance shown are preliminary and subject to change. Performance shown is net of fees. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year for the COJ ends 09/30.

December 31, 2024 : \$2,456,544,289



	Market Value (\$)	Allocation (%)
Eagle Capital Large Cap Value (SA)	167,957,318	6.84
Wellington Select Equity Income Fund (SA)	151,777,702	6.18
BNYM DB Lg Cap Stock Idx NL (CF)	123,207,128	5.02
Loomis, Sayles & Co Lg Cap Grth (CF)	152,935,104	6.23
Kayne Anderson US SMID Value (SA)	71,383,037	2.91
Systematic Financial US SMID Value (SA)	72,744,236	2.96
Pinnacle Associates US SMID Cap Growth (SA)	70,144,005	2.86
Silchester Intl Val Equity (CF)	250,994,695	10.22
Bail Giff Intl Gro;4 (BGEFX)	174,858,768	7.12
Acadian Emg Mkts Eq II (CF)	156,481,280	6.37
Baird Core Fixed Income (SA)	121,497,613	4.95
Loomis Sayles Multisector Full Discretion (CF)	184,059,825	7.49
Schroder Flexible Secured Income LP (CF)	185,357,036	7.55
Harrison Street Core Property LP	119,006,554	4.84
PGIM Real Estate PRISA II LP	46,443,750	1.89
Principal US Property (CF)	113,309,854	4.61
UBS Trumbull Property (CF)	52,200,385	2.12
Vanguard RE Idx;ETF (VNQ)	1,330,724	0.05
Abacus Multi-Family Partners VI LP	8,389,059	0.34
H.I.G. Realty Partners IV (Onshore) LP	26,822,565	1.09
Bell Value-Add Fund VII (CF)	6,425,161	0.26
Hammes Partners IV LP	1,682,218	0.07
IPI Partners III-A LP	8,188,723	0.33
Ares US Real Estate Opportunity IV LP	1,490,828	0.06
Adams Street Private Equity (SA)	94,858,966	3.86
Hamilton Lane Private Credit (SA)	89,646,030	3.65
Dreyfus Gvt CM;Inst (DGCXX)	3,302,291	0.13
Transition Account	49,433	0.00

Market values shown are preliminary and subject to change. Allocations shown may not sum up to 100% exactly due to rounding.

**City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)**

**As of December 31, 2024**

	Allocation		Performance (%)										
	Market Value (\$)	%	MTD	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Total Fund</b>	<b>2,456,544,289</b>	<b>100.00</b>	<b>-1.62</b>	<b>-0.81</b>	<b>-0.81</b>	<b>8.67</b>	<b>8.67</b>	<b>2.47</b>	<b>6.06</b>	<b>5.91</b>	<b>6.45</b>	<b>6.31</b>	<b>07/01/1999</b>
Total Fund Policy Index			-1.67	-1.21	-1.21	10.56	10.56	3.15	6.78	6.52	6.71	6.08	
Difference			0.06	0.40	0.40	-1.89	-1.89	-0.68	-0.72	-0.61	-0.26	0.23	
Actual Allocation Index			-2.18	-1.76	-1.76	8.77	8.77	1.53	5.46	N/A	N/A	N/A	
Difference			0.57	0.96	0.96	-0.10	-0.10	0.94	0.60	N/A	N/A	N/A	
Actual Allocation Index (Net of Alts)			-2.05	-1.60	-1.60	7.82	7.82	1.89	5.64	N/A	N/A	N/A	
Difference			0.43	0.79	0.79	0.85	0.85	0.58	0.42	N/A	N/A	N/A	
<b>Total Equity</b>	<b>1,392,483,274</b>	<b>56.68</b>	<b>-2.91</b>	<b>-1.91</b>	<b>-1.91</b>	<b>13.61</b>	<b>13.61</b>	<b>4.46</b>	<b>9.36</b>	<b>8.71</b>	<b>9.30</b>	<b>6.93</b>	<b>07/01/1999</b>
<b>US Equity</b>	<b>810,148,531</b>	<b>32.98</b>	<b>-3.64</b>	<b>2.35</b>	<b>2.35</b>	<b>19.96</b>	<b>19.96</b>	<b>7.24</b>	<b>12.65</b>	<b>12.14</b>	<b>11.53</b>	<b>7.91</b>	<b>07/01/1999</b>
US Equity Index			-3.06	2.63	2.63	23.81	23.81	8.01	13.86	13.16	12.55	8.09	
Difference			-0.58	-0.29	-0.29	-3.84	-3.84	-0.77	-1.21	-1.03	-1.01	-0.18	
<b>International Equity</b>	<b>582,334,743</b>	<b>23.71</b>	<b>-1.87</b>	<b>-7.27</b>	<b>-7.27</b>	<b>5.80</b>	<b>5.80</b>	<b>0.77</b>	<b>4.67</b>	<b>3.70</b>	<b>5.91</b>	<b>5.78</b>	<b>07/01/1999</b>
International Equity Index			-1.94	-7.60	-7.60	5.53	5.53	0.82	4.10	3.53	4.80	4.12	
Difference			0.07	0.33	0.33	0.27	0.27	-0.05	0.56	0.17	1.11	1.66	
<b>Fixed Income</b>	<b>490,914,474</b>	<b>19.98</b>	<b>-0.68</b>	<b>-0.55</b>	<b>-0.55</b>	<b>5.55</b>	<b>5.55</b>	<b>-0.27</b>	<b>0.68</b>	<b>1.34</b>	<b>1.69</b>	<b>4.35</b>	<b>07/01/1999</b>
Fixed Income Index			-1.51	-2.73	-2.73	2.04	2.04	-1.95	0.06	1.28	1.56	3.97	
Difference			0.83	2.18	2.18	3.51	3.51	1.68	0.63	0.05	0.12	0.39	
<b>Real Estate</b>	<b>385,289,821</b>	<b>15.68</b>	<b>0.18</b>	<b>0.59</b>	<b>0.59</b>	<b>-4.00</b>	<b>-4.00</b>	<b>-0.89</b>	<b>2.17</b>	<b>3.27</b>	<b>4.88</b>	<b>4.80</b>	<b>12/01/2005</b>
Real Estate Index			0.98	1.02	1.02	-2.09	-2.09	-3.04	2.05	3.13	4.98	5.06	
Difference			-0.81	-0.43	-0.43	-1.91	-1.91	2.16	0.12	0.15	-0.09	-0.26	
<b>Core Real Estate</b>	<b>332,291,267</b>	<b>13.53</b>	<b>0.20</b>	<b>0.51</b>	<b>0.51</b>	<b>-4.63</b>	<b>-4.63</b>	<b>-1.40</b>	<b>1.86</b>	<b>3.05</b>	<b>4.72</b>	<b>4.71</b>	<b>12/01/2005</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	5.04	
Difference			-0.76	-0.45	-0.45	-2.36	-2.36	1.74	-0.13	-0.04	-0.22	-0.33	
<b>Non-Core Real Estate</b>	<b>52,998,554</b>	<b>2.16</b>	<b>0.00</b>	<b>1.17</b>	<b>1.17</b>	<b>2.55</b>	<b>2.55</b>	<b>22.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>22.00</b>	<b>01/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.13	1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-1.20	
Difference			-1.13	-0.29	-0.29	2.86	2.86	23.20	N/A	N/A	N/A	23.20	
<b>Diversifying Assets</b>	<b>184,504,996</b>	<b>7.51</b>	<b>2.23</b>	<b>4.26</b>	<b>4.26</b>	<b>8.26</b>	<b>8.26</b>	<b>13.54</b>	<b>12.80</b>	<b>9.07</b>	<b>5.39</b>	<b>8.32</b>	<b>03/01/2011</b>
Diversifying Assets Index			-1.29	1.32	1.32	19.54	19.54	9.86	8.09	5.77	3.27	5.19	
Difference			3.52	2.94	2.94	-11.28	-11.28	3.68	4.71	3.30	2.12	3.13	
<b>Cash Equivalents</b>	<b>3,302,291</b>	<b>0.13</b>	<b>0.37</b>	<b>1.15</b>	<b>1.15</b>	<b>5.26</b>	<b>5.26</b>	<b>4.08</b>	<b>1.70</b>	<b>N/A</b>	<b>N/A</b>	<b>1.78</b>	<b>09/01/2018</b>
FTSE 3 Mo T-Bill Index			0.39	1.23	1.23	5.45	5.45	4.05	2.54	2.40	1.79	2.48	
Difference			-0.02	-0.07	-0.07	-0.19	-0.19	0.03	-0.84	N/A	N/A	-0.70	

Market values and performance shown are preliminary and subject to change. Performance shown is net of fees and is annualized for periods greater than one year. Allocations may not sum up to 100% due to the exclusion of managers in liquidation. Please see the addendum for custom benchmark definitions. Fiscal year for the COJ ends 09/30. Schroder Flexible Secured Income Fund LP (CF), Harrison Street Core Property LP, PGIM Real Estate PRISA II LP, UBS Trumbull Property (CF), all non core Real Estate Managers, and Adams Street Private Equity (SA) valuations are available quarterly, adjusted for subsequent cash flows. Asset Valuations for Real Estate and Diversifying Assets are lagged/unlagged as reported by the System's book of record, BNY Mellon. Performance for NCREIF ODCE Index (AWA) (Net) is available on a quarterly basis. The Total Fund market value includes the Transition Account.

City of Jacksonville Employees' Retirement System  
Asset Allocation & Performance (Net of Fees)

As of December 31, 2024

	Allocation		Performance (%)										
	Market Value (\$)	%	MTD	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>US Equity</b>													
<b>Eagle Capital Large Cap Value (SA)</b>	<b>167,957,318</b>	<b>6.84</b>	<b>-3.44</b>	<b>1.96</b>	<b>1.96</b>	<b>23.62</b>	<b>23.62</b>	<b>8.95</b>	<b>13.52</b>	<b>13.01</b>	<b>12.55</b>	<b>11.51</b>	<b>03/01/2007</b>
Russell 1000 Val Index			-6.84	-1.98	-1.98	14.37	14.37	5.63	8.68	8.41	8.49	7.28	
Difference			3.40	3.94	3.94	9.25	9.25	3.31	4.84	4.59	4.06	4.23	
Russell 1000 Index			-2.79	2.75	2.75	24.51	24.51	8.41	14.28	13.58	12.87	10.44	
Difference			-0.65	-0.79	-0.79	-0.89	-0.89	0.54	-0.76	-0.58	-0.32	1.07	
<b>Wellington Select Equity Income Fund (SA)</b>	<b>151,777,702</b>	<b>6.18</b>	<b>-5.70</b>	<b>-1.19</b>	<b>-1.19</b>	<b>13.74</b>	<b>13.74</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>17.78</b>	<b>06/01/2023</b>
Russell 1000 Val Index			-6.84	-1.98	-1.98	14.37	14.37	5.63	8.68	8.41	8.49	17.63	
Difference			1.14	0.79	0.79	-0.63	-0.63	N/A	N/A	N/A	N/A	0.14	
<b>BNYM DB Lg Cap Stock Idx NL (CF)</b>	<b>123,207,128</b>	<b>5.02</b>	<b>-2.79</b>	<b>2.74</b>	<b>2.74</b>	<b>24.56</b>	<b>24.56</b>	<b>8.82</b>	<b>14.50</b>	<b>N/A</b>	<b>N/A</b>	<b>14.75</b>	<b>05/01/2019</b>
Russell 1000 Index			-2.79	2.75	2.75	24.51	24.51	8.41	14.28	13.58	12.87	14.55	
Difference			0.00	-0.01	-0.01	0.05	0.05	0.41	0.23	N/A	N/A	0.20	
<b>Loomis, Sayles &amp; Co Lg Cap Grth (CF)</b>	<b>152,935,104</b>	<b>6.23</b>	<b>0.76</b>	<b>9.53</b>	<b>9.53</b>	<b>33.96</b>	<b>33.96</b>	<b>13.79</b>	<b>18.33</b>	<b>16.96</b>	<b>N/A</b>	<b>17.56</b>	<b>08/01/2017</b>
Russell 1000 Grth Index			0.88	7.07	7.07	33.36	33.36	10.47	18.96	18.08	16.78	18.68	
Difference			-0.12	2.46	2.46	0.60	0.60	3.31	-0.63	-1.12	N/A	-1.12	
<b>Kayne Anderson US SMID Value (SA)</b>	<b>71,383,037</b>	<b>2.91</b>	<b>-7.17</b>	<b>-0.76</b>	<b>-0.76</b>	<b>10.67</b>	<b>10.67</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.54</b>	<b>03/01/2022</b>
Russell 2500 Val Index			-7.18	-0.26	-0.26	10.98	10.98	3.81	8.44	7.17	7.81	5.37	
Difference			0.01	-0.50	-0.50	-0.32	-0.32	N/A	N/A	N/A	N/A	0.17	
<b>Systematic Financial US SMID Value (SA)</b>	<b>72,744,236</b>	<b>2.96</b>	<b>-4.91</b>	<b>-0.05</b>	<b>-0.05</b>	<b>13.61</b>	<b>13.61</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.80</b>	<b>03/01/2022</b>
Russell 2500 Val Index			-7.18	-0.26	-0.26	10.98	10.98	3.81	8.44	7.17	7.81	5.37	
Difference			2.27	0.21	0.21	2.62	2.62	N/A	N/A	N/A	N/A	2.43	
<b>Pinnacle Associates US SMID Cap Growth (SA)</b>	<b>70,144,005</b>	<b>2.86</b>	<b>-5.13</b>	<b>1.70</b>	<b>1.70</b>	<b>6.08</b>	<b>6.08</b>	<b>-2.83</b>	<b>6.42</b>	<b>7.99</b>	<b>8.38</b>	<b>11.52</b>	<b>03/01/2010</b>
Russell 2500 Grth Index			-8.23	2.43	2.43	13.90	13.90	-0.02	8.08	8.85	9.45	12.08	
Difference			3.11	-0.73	-0.73	-7.82	-7.82	-2.82	-1.66	-0.86	-1.08	-0.56	

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<b>International Equity</b>													
<b>Silchester Intl Val Equity (CF)</b>	<b>250,994,695</b>	<b>10.22</b>	<b>-1.06</b>	<b>-8.92</b>	<b>-8.92</b>	<b>0.44</b>	<b>0.44</b>	<b>4.65</b>	<b>5.01</b>	<b>3.66</b>	<b>6.02</b>	<b>8.35</b>	<b>06/01/2009</b>
MSCI EAFE Val Index (USD) (Net)			-1.79	-7.12	-7.12	5.68	5.68	5.88	5.09	3.45	4.31	5.48	
Difference			0.72	-1.80	-1.80	-5.25	-5.25	-1.23	-0.07	0.21	1.70	2.87	
<b>Bail Giff Intl Gro;4 (BGEFX)</b>													
<b>Bail Giff Intl Gro;4 (BGEFX)</b>	<b>174,858,768</b>	<b>7.12</b>	<b>-4.36</b>	<b>-5.78</b>	<b>-5.78</b>	<b>7.97</b>	<b>7.97</b>	<b>-6.75</b>	<b>3.71</b>	<b>4.54</b>	<b>6.99</b>	<b>8.65</b>	<b>06/01/2009</b>
Baillie Gifford Index			-2.14	-7.88	-7.88	5.07	5.07	-2.67	3.44	3.71	5.35	6.74	
Difference			-2.22	2.11	2.11	2.90	2.90	-4.07	0.27	0.84	1.64	1.91	
Baillie Gifford Spliced Index			-1.94	-7.60	-7.60	5.53	5.53	0.82	4.10	3.82	4.99	6.22	
Difference			-2.42	1.82	1.82	2.44	2.44	-7.57	-0.40	0.73	2.00	2.43	
<b>Acadian Emg Mkts Eq II (CF)</b>													
<b>Acadian Emg Mkts Eq II (CF)</b>	<b>156,481,280</b>	<b>6.37</b>	<b>-0.27</b>	<b>-6.20</b>	<b>-6.20</b>	<b>13.87</b>	<b>13.87</b>	<b>3.45</b>	<b>5.98</b>	<b>3.48</b>	<b>4.99</b>	<b>3.93</b>	<b>02/01/2011</b>
MSCI Emg Mkts Index (USD) (Net)			-0.14	-8.01	-8.01	7.50	7.50	-1.92	1.70	1.38	3.64	2.18	
Difference			-0.13	1.81	1.81	6.36	6.36	5.37	4.28	2.10	1.36	1.76	
<b>Fixed Income</b>													
<b>Baird Core Fixed Income (SA)</b>													
<b>Baird Core Fixed Income (SA)</b>	<b>121,497,613</b>	<b>4.95</b>	<b>-1.62</b>	<b>-2.90</b>	<b>-2.90</b>	<b>2.31</b>	<b>2.31</b>	<b>-1.94</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-1.29</b>	<b>03/01/2021</b>
Bloomberg US Agg Bond Index			-1.64	-3.06	-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35	-1.73	
Difference			0.02	0.17	0.17	1.06	1.06	0.47	N/A	N/A	N/A	0.44	
<b>Loomis Sayles Multisector Full Discretion (CF)</b>													
<b>Loomis Sayles Multisector Full Discretion (CF)</b>	<b>184,059,825</b>	<b>7.49</b>	<b>-0.75</b>	<b>-1.07</b>	<b>-1.07</b>	<b>5.44</b>	<b>5.44</b>	<b>0.09</b>	<b>2.85</b>	<b>3.30</b>	<b>3.63</b>	<b>5.45</b>	<b>11/01/2007</b>
Bloomberg Gbl Agg Bond Index			-2.15	-5.10	-5.10	-1.69	-1.69	-4.52	-1.96	-0.64	0.15	1.62	
Difference			1.40	4.03	4.03	7.12	7.12	4.61	4.81	3.94	3.48	3.83	
<b>Schroder Flexible Secured Income LP (CF)</b>													
<b>Schroder Flexible Secured Income LP (CF)</b>	<b>185,357,036</b>	<b>7.55</b>	<b>0.00</b>	<b>1.58</b>	<b>1.58</b>	<b>8.48</b>	<b>8.48</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.36</b>	<b>10/01/2022</b>
SOFR+1.75%			0.52	1.61	1.61	7.12	7.12	5.82	4.26	N/A	N/A	6.87	
Difference			-0.52	-0.03	-0.03	1.36	1.36	N/A	N/A	N/A	N/A	1.49	
SOFR+5%			0.79	2.42	2.42	10.54	10.54	9.20	7.59	N/A	N/A	10.28	
Difference			-0.79	-0.83	-0.83	-2.06	-2.06	N/A	N/A	N/A	N/A	-1.93	

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<b>Core Real Estate</b>													
<b>Harrison Street Core Property LP</b>	<b>119,006,554</b>	<b>4.84</b>	<b>0.00</b>	<b>0.15</b>	<b>0.15</b>	<b>-3.92</b>	<b>-3.92</b>	<b>1.98</b>	<b>3.43</b>	<b>4.75</b>	<b>N/A</b>	<b>5.55</b>	<b>11/01/2015</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	4.26	
Difference			-0.96	-0.81	-0.81	-1.65	-1.65	5.12	1.44	1.67	N/A	1.29	
<b>PGIM Real Estate PRISA II LP</b>	<b>46,443,750</b>	<b>1.89</b>	<b>0.00</b>	<b>1.08</b>	<b>1.08</b>	<b>-9.68</b>	<b>-9.68</b>	<b>-2.35</b>	<b>1.24</b>	<b>3.24</b>	<b>5.12</b>	<b>5.12</b>	<b>01/01/2015</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	4.94	
Difference			-0.96	0.12	0.12	-7.41	-7.41	0.78	-0.75	0.16	0.18	0.18	
<b>Principal US Property (CF)</b>	<b>113,309,854</b>	<b>4.61</b>	<b>0.71</b>	<b>1.08</b>	<b>1.08</b>	<b>-1.90</b>	<b>-1.90</b>	<b>-3.00</b>	<b>2.45</b>	<b>3.78</b>	<b>5.71</b>	<b>6.35</b>	<b>01/01/2014</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	5.52	
Difference			-0.25	0.12	0.12	0.37	0.37	0.14	0.46	0.70	0.77	0.83	
<b>UBS Trumbull Property (CF)</b>	<b>52,200,385</b>	<b>2.12</b>	<b>0.00</b>	<b>-0.16</b>	<b>-0.16</b>	<b>-7.11</b>	<b>-7.11</b>	<b>-3.19</b>	<b>-0.97</b>	<b>-0.27</b>	<b>2.04</b>	<b>3.53</b>	<b>01/01/2006</b>
NCREIF ODCE Index (AWA) (Net)			0.96	0.96	0.96	-2.27	-2.27	-3.14	1.99	3.08	4.94	4.81	
Difference			-0.96	-1.12	-1.12	-4.85	-4.85	-0.05	-2.96	-3.35	-2.90	-1.27	
<b>Vanguard RE Idx;ETF (VNQ)</b>	<b>1,330,724</b>	<b>0.05</b>	<b>-8.37</b>	<b>-7.67</b>	<b>-7.67</b>	<b>4.80</b>	<b>4.80</b>	<b>-4.75</b>	<b>2.97</b>	<b>4.94</b>	<b>4.99</b>	<b>10.62</b>	<b>12/01/2008</b>
Custom REITs Index			-8.21	-7.61	-7.61	5.05	5.05	-4.57	3.12	5.30	5.32	11.28	
Difference			-0.16	-0.06	-0.06	-0.25	-0.25	-0.18	-0.15	-0.36	-0.33	-0.66	

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<b>Non-Core Real Estate</b>													
<b>Abacus Multi-Family Partners VI LP</b>	<b>8,389,059</b>	<b>0.34</b>	<b>0.00</b>	<b>1.22</b>	<b>1.22</b>	<b>-39.39</b>	<b>-39.39</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-42.97</b>	<b>10/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.13	1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-7.18	
Difference			-1.13	-0.24	-0.24	-39.08	-39.08	N/A	N/A	N/A	N/A	-35.79	
<b>H.I.G. Realty Partners IV (Onshore) LP</b>	<b>26,822,565</b>	<b>1.09</b>	<b>0.00</b>	<b>0.92</b>	<b>0.92</b>	<b>6.37</b>	<b>6.37</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>01/01/2022</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.13	1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-1.20	
Difference			-1.13	-0.54	-0.54	6.68	6.68	N/A	N/A	N/A	N/A	N/A	
<b>Bell Value-Add Fund VII (CF)</b>	<b>6,425,161</b>	<b>0.26</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-5.25</b>	<b>-5.25</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-13.39</b>	<b>04/01/2023</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.13	1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-5.02	
Difference			-1.13	-1.46	-1.46	-4.93	-4.93	N/A	N/A	N/A	N/A	-8.38	
<b>Hammes Partners IV LP</b>	<b>1,682,218</b>	<b>0.07</b>	<b>0.00</b>	<b>3.19</b>	<b>3.19</b>	<b>-50.81</b>	<b>-50.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-61.67</b>	<b>10/01/2023</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.13	1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	-3.88	
Difference			-1.13	1.73	1.73	-50.49	-50.49	N/A	N/A	N/A	N/A	-57.79	
<b>IPI Partners III-A LP</b>	<b>8,188,723</b>	<b>0.33</b>	<b>0.00</b>	<b>2.26</b>	<b>2.26</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>27.95</b>	<b>04/01/2024</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.13	1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	1.82	
Difference			-1.13	0.80	0.80	N/A	N/A	N/A	N/A	N/A	N/A	26.14	
<b>Ares US Real Estate Opportunity IV LP</b>	<b>1,490,828</b>	<b>0.06</b>	<b>0.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.00</b>	<b>11/01/2024</b>
NCREIF ODCE Index (AWA) (Net) +2%			1.13	1.46	1.46	-0.31	-0.31	-1.20	4.03	5.14	7.04	1.29	
Difference			-1.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.29	
<b>Diversifying Assets</b>													
<b>Adams Street Private Equity (SA)</b>	<b>94,858,966</b>	<b>3.86</b>	<b>4.59</b>	<b>4.59</b>	<b>4.59</b>	<b>5.41</b>	<b>5.41</b>	<b>13.28</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>19.34</b>	<b>11/01/2020</b>
S&P 500 Index+3%			-2.14	3.17	3.17	28.77	28.77	12.21	17.96	17.25	16.50	20.41	
Difference			6.73	1.42	1.42	-23.36	-23.36	1.07	N/A	N/A	N/A	-1.07	
<b>Hamilton Lane Private Credit (SA)</b>	<b>89,646,030</b>	<b>3.65</b>	<b>-0.10</b>	<b>3.92</b>	<b>3.92</b>	<b>11.54</b>	<b>11.54</b>	<b>8.49</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.22</b>	<b>04/01/2021</b>
ICE BofAML Gbl Hi Yld Index +2%			-0.46	-0.65	-0.65	9.63	9.63	3.92	5.04	5.58	6.52	3.93	
Difference			0.36	4.57	4.57	1.91	1.91	4.57	N/A	N/A	N/A	0.29	
<b>Cash Equivalents</b>													
<b>Dreyfus Gvt CM;Inst (DGCXX)</b>	<b>3,302,291</b>	<b>0.13</b>	<b>0.37</b>	<b>1.15</b>	<b>1.15</b>	<b>5.26</b>	<b>5.26</b>	<b>3.92</b>	<b>2.50</b>	<b>2.37</b>	<b>1.79</b>	<b>1.65</b>	<b>05/01/2001</b>
FTSE 3 Mo T-Bill Index			0.39	1.23	1.23	5.45	5.45	4.05	2.54	2.40	1.79	1.64	
Difference			-0.02	-0.07	-0.07	-0.19	-0.19	-0.14	-0.04	-0.03	0.00	0.01	

Private equity funds tend to underperform in the early stages of their maturity; returns tend to improve as funds mature.

Market values and performance shown are preliminary and subject to change. Performance shown is net of fees and is annualized for periods greater than one year. Allocations may not sum up to 100% due to the exclusion of managers in liquidation. Please see the addendum for custom benchmark definitions. Fiscal year for the COJ ends 09/30. Schroder Flexible Secured Income Fund LP (CF), Harrison Street Core Property LP, PGIM Real Estate PRISA II LP, UBS Trumbull Property (CF), all non core Real Estate Managers, and Adams Street Private Equity (SA) valuations are available quarterly, adjusted for subsequent cash flows. Asset Valuations for Real Estate and Diversifying Assets are lagged/unlagged as reported by the System's book of record, BNY Mellon. Performance for NCREIF ODCE Index (AWA) (Net) is available on a quarterly basis. The Total Fund market value includes the Transition Account.

**Performance Related Comments:**

- Performance is annualized for periods greater than one year.
- Performance and market values shown are preliminary and subject to change.
- The inception date shown indicates the first full month of performance following initial funding.
- The market value shown for the Transition Account includes JXP Transition, BNYM Transition, Loop Cap Transition, and residual assets from terminated managers.
- RVK began monitoring the assets of the City of Jacksonville Retirement System on 01/01/2019. Prior historical data was provided by the custodian and previous consultant.

**Custom Composite Benchmark Comments:**

- **Total Fund Policy Index:** The passive Total Fund Policy Index is calculated monthly and currently consists of 30% Russell 3000 Index, 23% MSCI ACW Ex US Index (USD) (Net), 20% Fixed Income Index, 15% Real Estate Index, and 12% Diversifying Assets Index.
- **Actual Allocation Index:** The Actual Allocation Index is calculated monthly, using beginning of month weights of each investment applied to its corresponding primary benchmark return. The Actual Allocation Index's Inception date is 01/2019 and prior performance is listed as "N/A".
- **Actual Allocation Index (Net of Alts):** The Actual Allocation Index (Net of Alts) is calculated monthly, using beginning of month weights of each investment applied to its corresponding primary benchmark return, with the exception of funds in the Core Real Estate, Non-Core Real Estate, and Diversifying Assets composites, which are represented by actual monthly composite returns. The Actual Allocation Index's Inception date is 01/2019 and prior performance is listed as "N/A".
- **US Equity Index:** The passive US Equity Index consists of 100% DJ US TSM Index through 06/2009 and 100% Russell 3000 Index thereafter.
- **International Equity Index:** The passive International Equity Index consists of 100% MSCI EAFE Index (USD) (Gross) through 01/2011 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- **Fixed Income Index:** The passive Fixed Income Index consists of 100% Bloomberg US Agg Bond Index through 10/2017 and 100% Bloomberg US Universal Bond Index thereafter.
- **Real Estate Index:** The active Real Estate Index is calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return.
- **Diversifying Assets Index:** The Diversifying Assets Index is calculated monthly and consists of 50% S&P MLP Index (TR)/50% NCREIF Timberland Index through 10/2017, 67% S&P MLP Index (TR)/33% NCREIF Timberland Index through 09/2020, and calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return thereafter.

**Custom Manager Benchmark Comments:**

- **Baillie Gifford Index:** The passive Baillie Gifford Index consists of 100% MSCI EAFE Grth Index (USD) (Net) through 10/2017 and 100% MSCI ACW Ex US Grth Index (USD) (Net) thereafter.
- **Baillie Gifford Spliced Index:** The passive Baillie Gifford Spliced Index consists of 100% MSCI EAFE Index (USD) (Net) through 11/2019 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- **Custom REITs Index:** The passive Custom REITs Index consists of 100% MSCI US REIT Index (USD) (Gross) through 01/2019 and 100% Vanguard Spl Real Estate Index thereafter.
- **Vanguard Spliced Real Estate Index:** The Vanguard Spl Real Estate Index consists of MSCI US REIT Index (USD) (Gross) adjusted to include a 2% cash position (Lipper Money Market Average) through 04/30/2009, MSCI US REIT Index (USD) (Gross) through 01/31/2018, MSCI US IM Real Estate 25/50 Transition Index through 07/24/2018, and MSCI US IM Real Estate 25/50 Index (Gross) thereafter.

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