

Due to the termination of the statewide COVID-19 State of Emergency by the Governor of California, effective March 1, 2023, all meetings of the Oakland Police & Fire Retirement System Board and its Committees will be conducted in person.

Meetings are held in wheelchair accessible facilities.

The Board may take action on items not on the agenda only if findings pursuant to the Sunshine Ordinance and Brown Act are made that the matter is urgent or an emergency.

For additional information, contact the Retirement Unit by calling (510) 238-7295. or send an email to mvisaya@oaklandca.gov



AGENDA

AUDIT COMMITTEE MEMBERS

John C. Speakman
Chairperson

R. Steven Wilkinson
Member

Martin J. Melia
Member

**In the event a quorum of the Board participates in the Committee meeting, the meeting is noticed as a Special Meeting of the Board; however, no final Board action can be taken. In the event that the Audit Committee does not reach quorum, this meeting is noticed as an informational meeting between staff and the Chair of the Audit Committee.*

MEETING of the AUDIT & OPERATIONS COMMITTEE of the OAKLAND POLICE AND FIRE RETIREMENT SYSTEM (“PFRS”)

WEDNESDAY, SEPTEMBER 25, 2024

10:00 AM

ONE FRANK H. OGAWA PLAZA, HEARING ROOM 2
OAKLAND, CA 94612

OBSERVE

- To observe the meeting by video conference, please click on this link: <https://us02web.zoom.us/j/82880493983> at the noticed meeting time.
 - To listen to the meeting by phone, please call the numbers below at the noticed meeting time: Dial (for higher quality, dial a number based on your current location):
 - iPhone one-tap: US: +16699006833, 82880493983# or +13462487799, 82880493983#
 - US: +1 669 900 6833 or +1 346 248 7799 or +1 253 215 8782 or +1 301 715 8592 or +1 312 626 6799 or +1 929 205 6099
 - International numbers available: <https://us02web.zoom.us/j/82880493983>
 - Webinar ID: 828 8049 3983.
- If asked for a participant ID or code, press #.

PUBLIC COMMENTS

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- Speaker Card: All persons wishing to address the Board must complete a speaker’s card, stating their name and the agenda item they wish to address, including “Open Forum”.
- eComment: To send your comment directly to staff BEFORE the meeting starts, please email to mvisaya@oaklandca.gov with “PFRS Board Meeting Public Comment” in the subject line for the corresponding meeting. Please note that eComment submission **closes two (2) hours before posted meeting time**.

If you have any questions, please email Maxine Visaya, Administrative Assistant II at mvisaya@oaklandca.gov

ORDER OF BUSINESS

1. **Subject:** OAKLAND POLICE AND FIRE RETIREMENT SYSTEM (“PFRS”) AUDIT & OPERATIONS COMMITTEE MEETING MINUTES
From: Staff of the PFRS Board

Recommendation: **APPROVE** the July 31, 2024 Audit & Operations Committee Meeting Minutes

2. **Subject:** ADMINISTRATIVE EXPENSES REPORT
From: Staff of the PFRS Board

Recommendation: **ACCEPT** informational report regarding PFRS administrative expenses as of June 30, 2024

3. **Subject:** ADMINISTRATIVE EXPENSES REPORT
From: Staff of the PFRS Board

Recommendation: **ACCEPT** informational report regarding PFRS administrative expenses as of July 31, 2024

4. REVIEW OF PENDING AUDIT COMMITTEE MEETING AGENDA ITEMS
5. OPEN FORUM
6. FUTURE SCHEDULING
7. ADJOURNMENT

A MEETING OF THE AUDIT & OPERATIONS COMMITTEE of the Oakland Police and Fire Retirement System (“PFRS”) was held Wednesday, July 31, 2024, at One Frank Ogawa Plaza, Hearing Room 2, Oakland, California.

- | | | |
|-----------------------|-----------------------|--------------------------------------|
| Committee Members: | ▪ John C. Speakman | Chairperson |
| | ▪ Martin J. Melia | Member |
| | ▪ R. Steven Wilkinson | Member (EXCUSED) |
| Additional Attendees: | ▪ David Jones | PFRS Plan Administrator & Secretary |
| | ▪ Téir Jenkins | PFRS Investment & Operations Manager |
| | ▪ Maxine Visaya | PFRS Staff Member |
| | ▪ Selia Warren | PFRS Legal Counsel |
| | ▪ Craig Harner | Macias Gini & O’Connell, LLP |
| | ▪ Yia Yang | Macias Gini & O’Connell, LLP |

The meeting was called to order at 10:00 a.m. Pacific

1. PFRS AUDIT & OPERATIONS COMMITTEE MEETING MINUTES

Member Melia made a motion to approve the June 26, 2024, Audit & Operations Committee Meeting minutes, second by Chairperson Speakman. Motion passed.

[SPEAKMAN – Y / MELIA – Y / WILKINSON – EXCUSED]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

2. SCOPE OF SERVICES AND INITIATION OF THE FINANCIAL AUDIT OF THE PFRS FUND FOR FISCAL YEAR ENDED JUNE 30, 2024

Craig Harner & Yia Yang of Macias Gini & O’Connell, LLP (MGO) presented the scope of services for the annual financial audit of the PFRS Fund for fiscal year ended June 30, 2024. MGO noted one significant change to the scope of services wherein they will be engaging the services of an actuarial specialists to serve as part of the engagement team to maximize quality control and conform with industry standards.

MOTION: Member Speakman made a motion to recommend Board approval of the proposed scope of services and initiate the annual audit of the PFRS Fund, second by member Melia. Motion passed.

[SPEAKMAN – Y / MELIA – Y / WILKINSON – EXCUSED]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

3. ADMINISTRATIVE EXPENSES REPORT

PFRS Investment & Operations Manager Jenkins presented an informational report regarding PFRS’ administrative expenditures as of May 31, 2024. PFRS has an approved annual budget of approximately \$3.8 million and expensed approximately \$2.4 million to date for fiscal year 2023/2024. Membership consisted of 628 retired members and beneficiaries of which there are 410 retirees and 218 beneficiaries. A slight overage was noted for Actuary Services as well as Board Hospitality this fiscal year due to additional work associated with the 2026 Actuarial Funding Date, the Asset Liability Study, and increased food costs. Staff has adjusted the budgets for next fiscal year to cover increasing costs.

MOTION: Member Melia made a motion to accept the administrative expenses report as of May 31, 2024, and forward to the Board, second by member Speakman. Motion passed.

[SPEAKMAN – Y / MELIA – Y / WILKINSON – EXCUSED]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

4. REVIEW OF PENDING AUDIT COMMITTEE MEETING AGENDA ITEMS

PFRS Plan Administrator Jones reported on the two (2) items on the Audit and Operations Committee Agenda pending list. Item 1) Status Report of the Ad Hoc Committee regarding the Actuarial Funding Date of July 1, 2026: The Ad Hoc Committee was not able to meet as scheduled on July 29, 2024, and will attempt to reconvene in advance of the August Board Meeting. Item 2) Monitor & Update PFRS Board of Upcoming City Council Agendas Regarding Discussion of the 2026 Actuarial Funding Date: Legal Counsel Warren advised there is no update at this time.

5. OPEN FORUM – No Report

6. FUTURE SCHEDULING

The next PFRS Audit & Operations Committee Meeting will be held in-person and is tentatively scheduled to occur August 28, 2024, at One Frank Ogawa Plaza, Hearing Room 2, Oakland, CA.

7. ADJOURNMENT – Member Melia made a motion to adjourn, second by Member Speakman. Motion passed.

[SPEAKMAN – Y / MELIA – Y / WILKINSON – EXCUSED]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

The meeting adjourned at 10:12 a.m. Pacific

JOHN C. SPEAKMAN
COMMITTEE CHAIRPERSON

DATE

Table 1

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Administrative Budget Spent to Date (Preliminary)

As of June 30, 2024

	Approved Budget		June 2024		FYTD		Remaining		Percent Remaining	
Internal Administrative Costs										
PFRS Staff Salaries	\$	1,459,000	\$	93,910	\$	1,254,796	\$	204,204		14.0%
Board Travel Expenditures		52,500		2,327		12,720		39,780		75.8%
Staff Training		20,000		-		650		19,350		96.8%
Staff Training - Tuition Reimbursement		7,500		-		-		7,500		100.0%
Board Hospitality		3,600		1,218		5,090		(1,490)		-41.4%
Payroll Processing Fees		40,000		40,000		40,000		-		0.0%
Miscellaneous Expenditures		45,000		2,655		30,819		14,181		31.5%
Internal Service Fees (ISF)		88,000		-		65,019		22,981		26.1%
Contract Services Contingency		50,000		750		1,875		48,125		96.3%
Internal Administrative Costs Subtotal :	\$	1,765,600	\$	140,860	\$	1,410,969	\$	354,631		20.1%
Actuary and Accounting Services										
Audit	\$	52,800	\$	-	\$	18,941	\$	33,859		64.1%
Actuary		49,400		2,115		56,516		(7,116)		-14.4%
Actuary and Accounting Subtotal:	\$	102,200	\$	2,115	\$	75,458	\$	26,742		26.2%
Legal Services										
City Attorney Salaries	\$	212,100	\$	210,428	\$	210,428	\$	1,672		0.8%
Legal Contingency		150,000		-		-		150,000		100.0%
Legal Services Subtotal:	\$	362,100	\$	210,428	\$	210,428	\$	151,672		41.9%
Investment Services										
Money Manager Fees	\$	1,313,000	\$	325,452	\$	1,189,076	\$	123,924		9.4%
Custodial Fee		124,500		31,125		124,500		-		0.0%
Investment Consultant		100,000		25,000		100,000		-		0.0%
Asset Liability Study		40,000		-		40,000		-		0.0%
Investment Subtotal:	\$	1,577,500	\$	381,577	\$	1,453,576	\$	123,924		7.9%
Total Operating Budget	\$	3,807,400	\$	734,980	\$	3,150,431	\$	656,969		17.26%

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Cash in Treasury (Fund 7100) - Preliminary

As of June 30, 2024

	June 2024
Beginning Cash as of 6/1/2024	\$ 10,471,226
Additions:	
City Pension Contribution - June	3,396,917
Investment Draw	1,000,000
Misc. Receipts	1,708
Total Additions:	\$ 4,398,625
Deductions:	
Pension Payment (May Pension Paid on 6/3/2024)	(4,090,969)
Expenditures Paid	(214,284)
Total Deductions	\$ (4,305,253)
 Ending Cash Balance as of 6/30/2024*	 \$ 10,564,598

* On 7/1/2024, June pension payment of appx \$4,079,000 will be made leaving a cash balance of \$6,486,000.

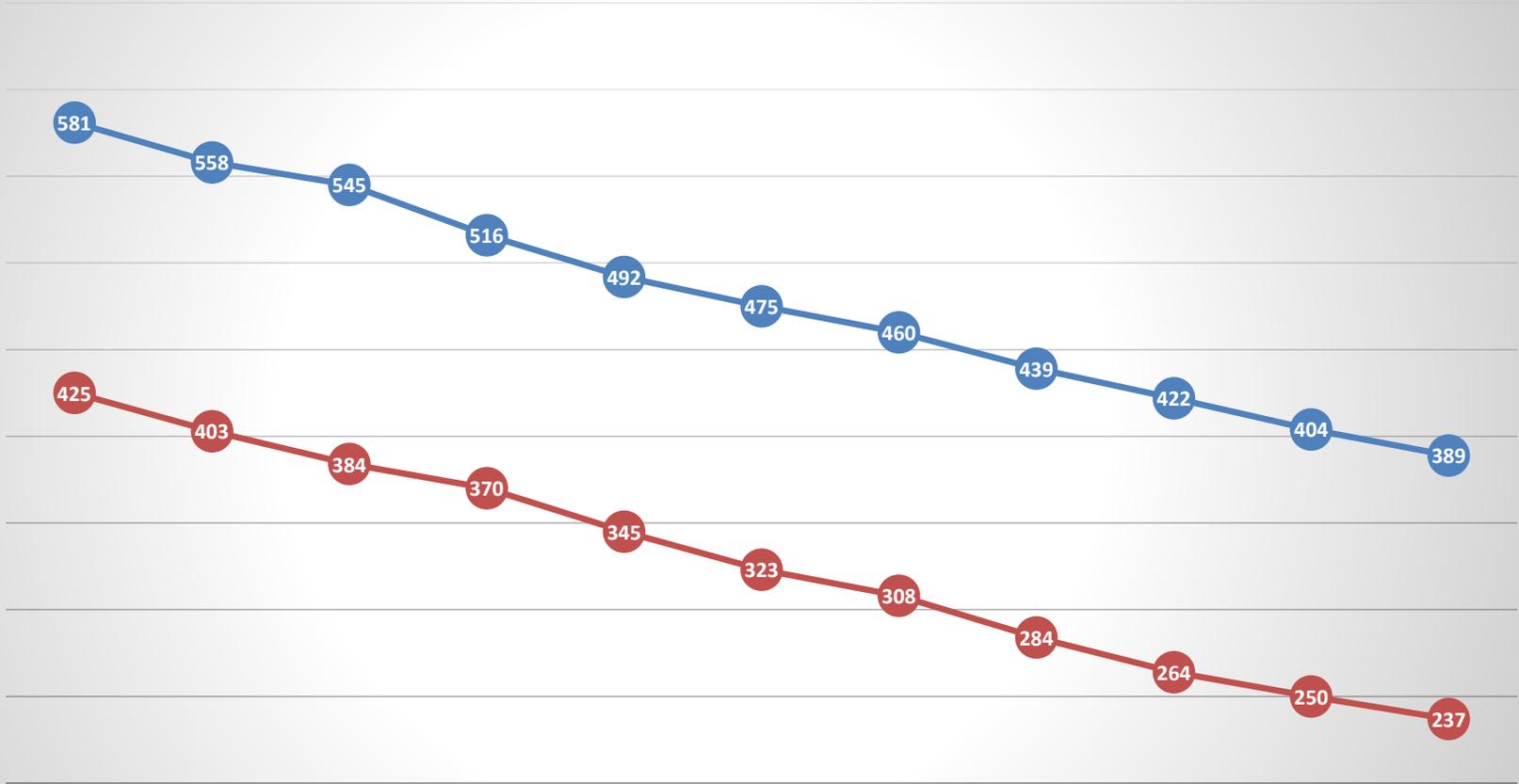
Table 3
CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Census
As of June 30, 2024

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Retiree	263	147	410
Beneficiary	126	90	216
<i>Total Retired Members</i>	389	237	626
<i>Total Membership:</i>	389	237	626

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Service Retirement	261	110	371
Disability Retirement	120	116	236
Death Allowance	8	11	19
<i>Total Retired Members:</i>	389	237	626
<i>Total Membership as of June 30, 2024:</i>	389	237	626
<i>Total Membership as of June 30, 2023:</i>	404	250	654
<i>Annual Difference:</i>	-15	-13	-28

Oakland Police and Fire Retirement System Pension Plan Membership Count As of June 30, 2024 (FY 2014 - FY 2024)

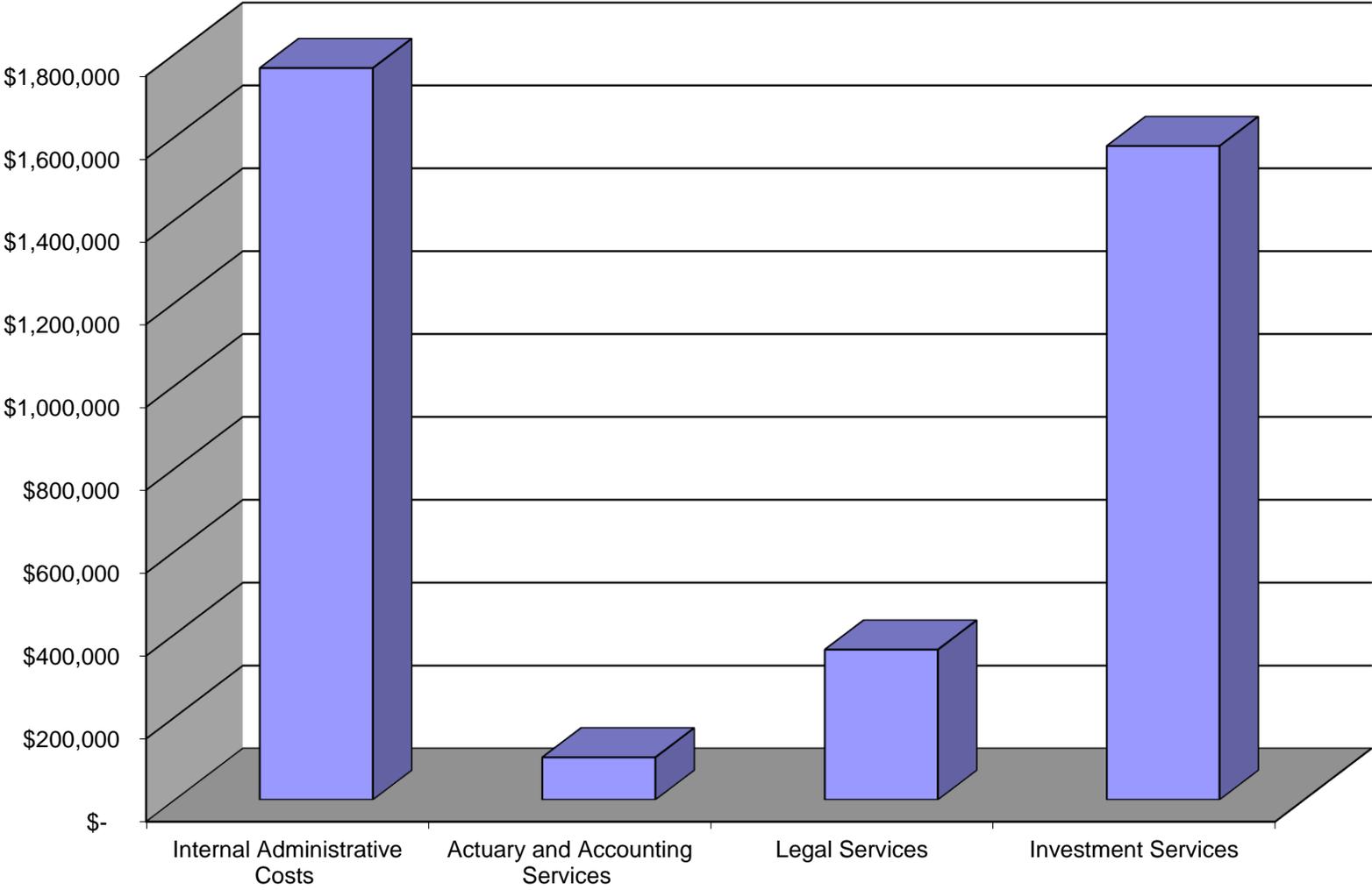


	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024 FYTD
Police	581	558	545	516	492	475	460	439	422	404	389
Fire	425	403	384	370	345	323	308	284	264	250	237
Total	1006	961	929	886	837	798	768	723	686	654	626

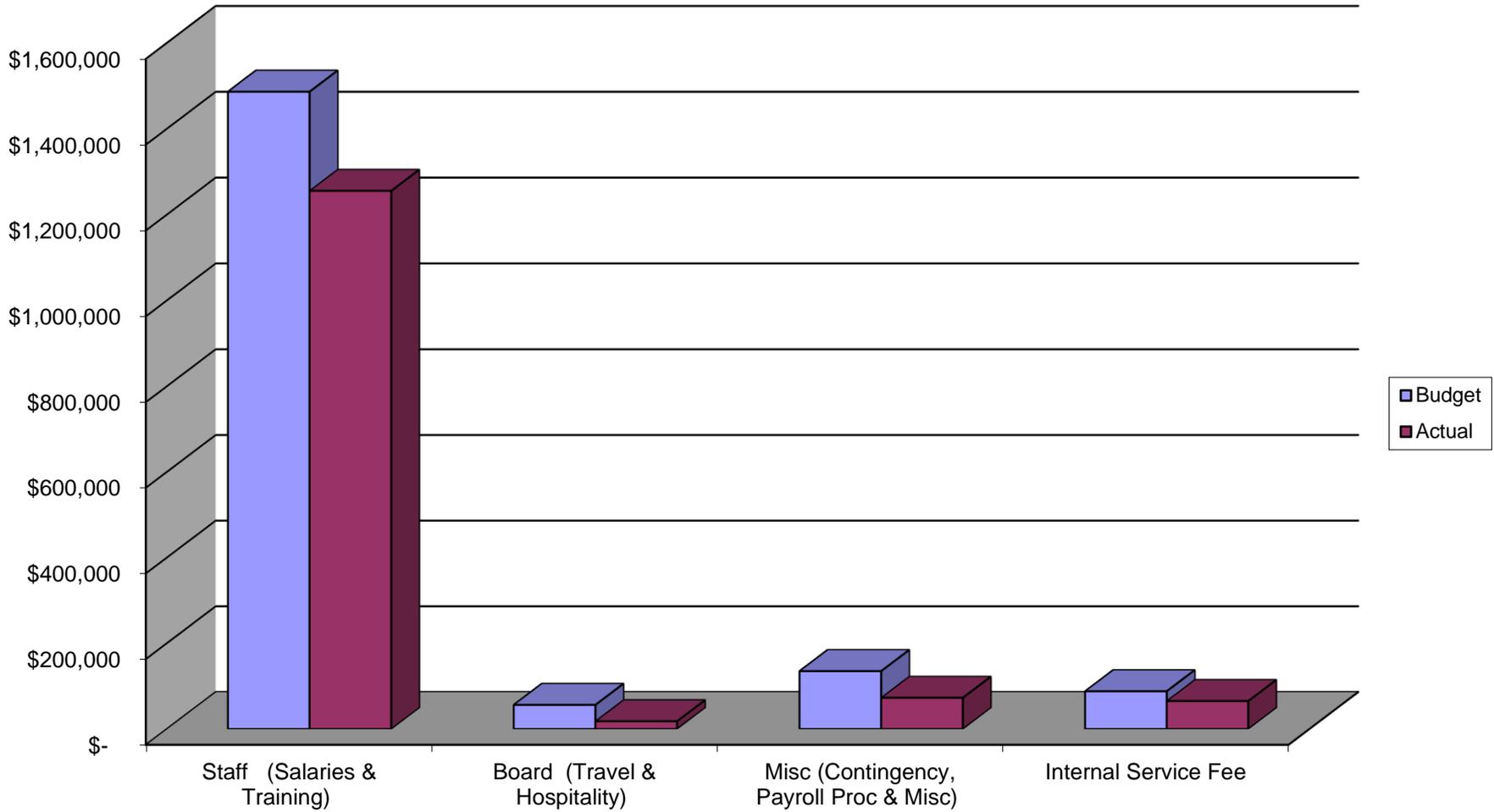
OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Approved Budget

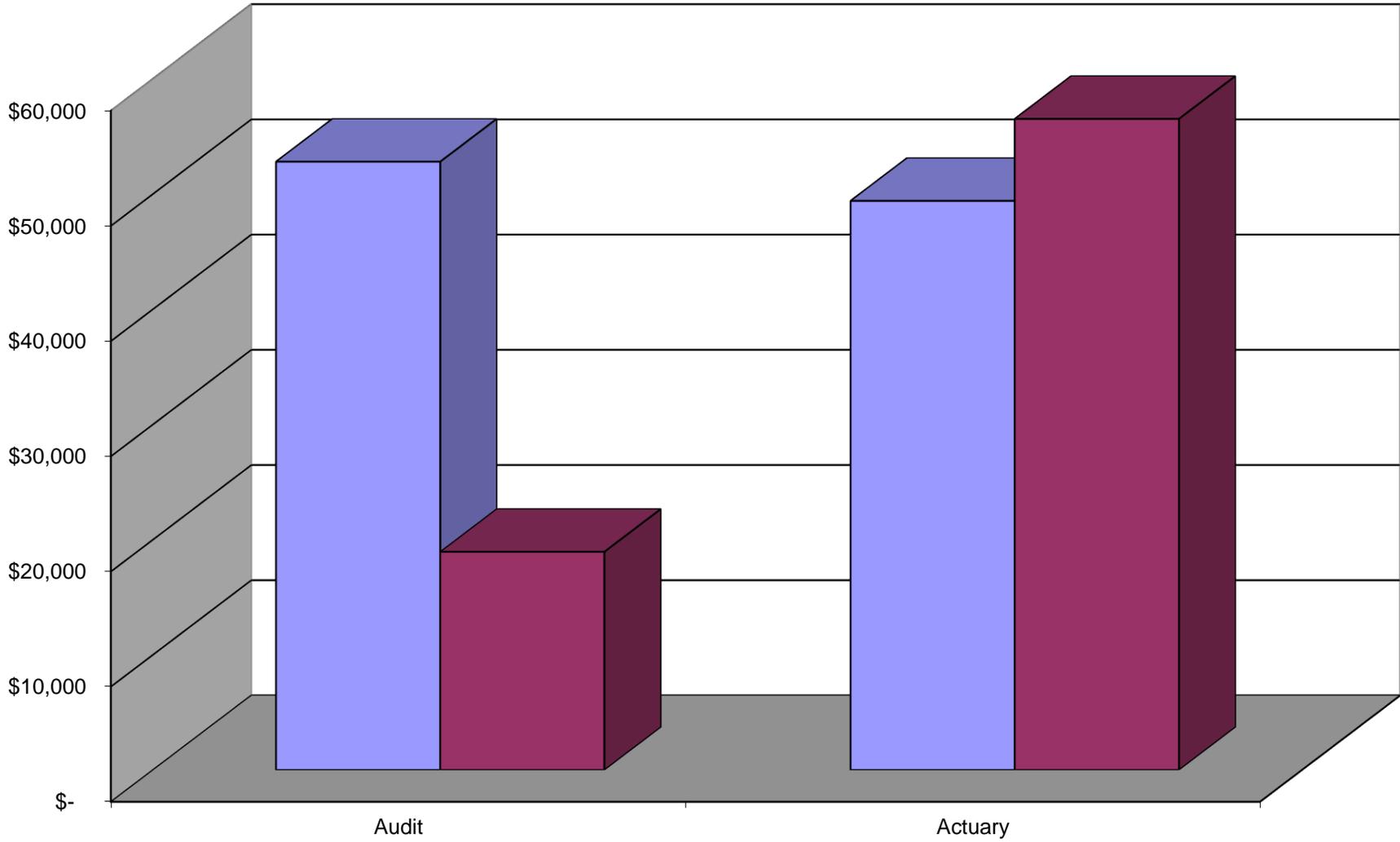
FY 2023-2024



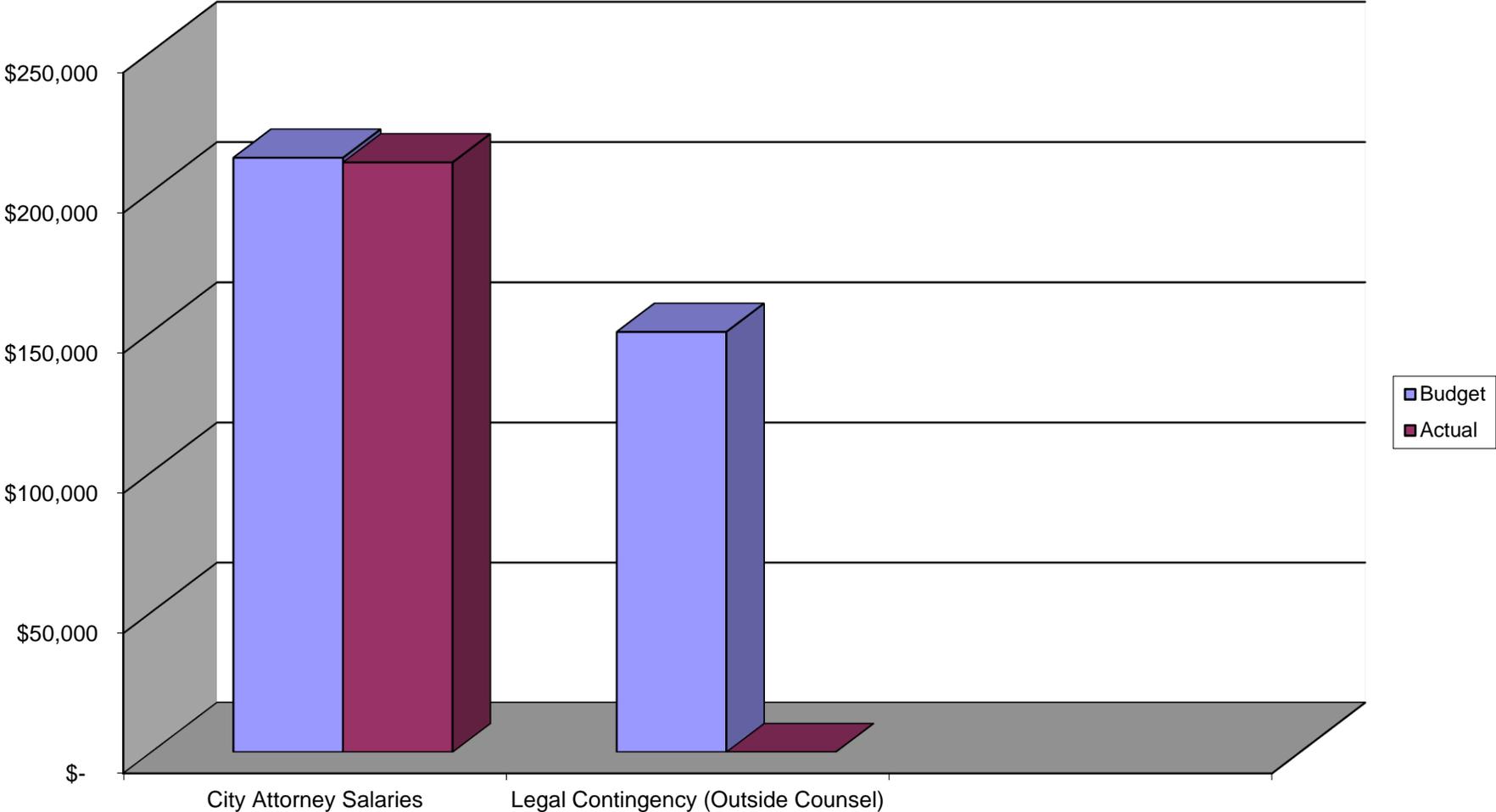
OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Budget vs Actual as of June 30, 2024
Internal Administrative Costs



OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Budget vs. Actual as of June 30, 2024
Actuary and Accounting Services



OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Budget vs. Actual as of June 30, 2024
Legal Services



OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Budget vs. Actual as of June 30, 2024
Investment Services

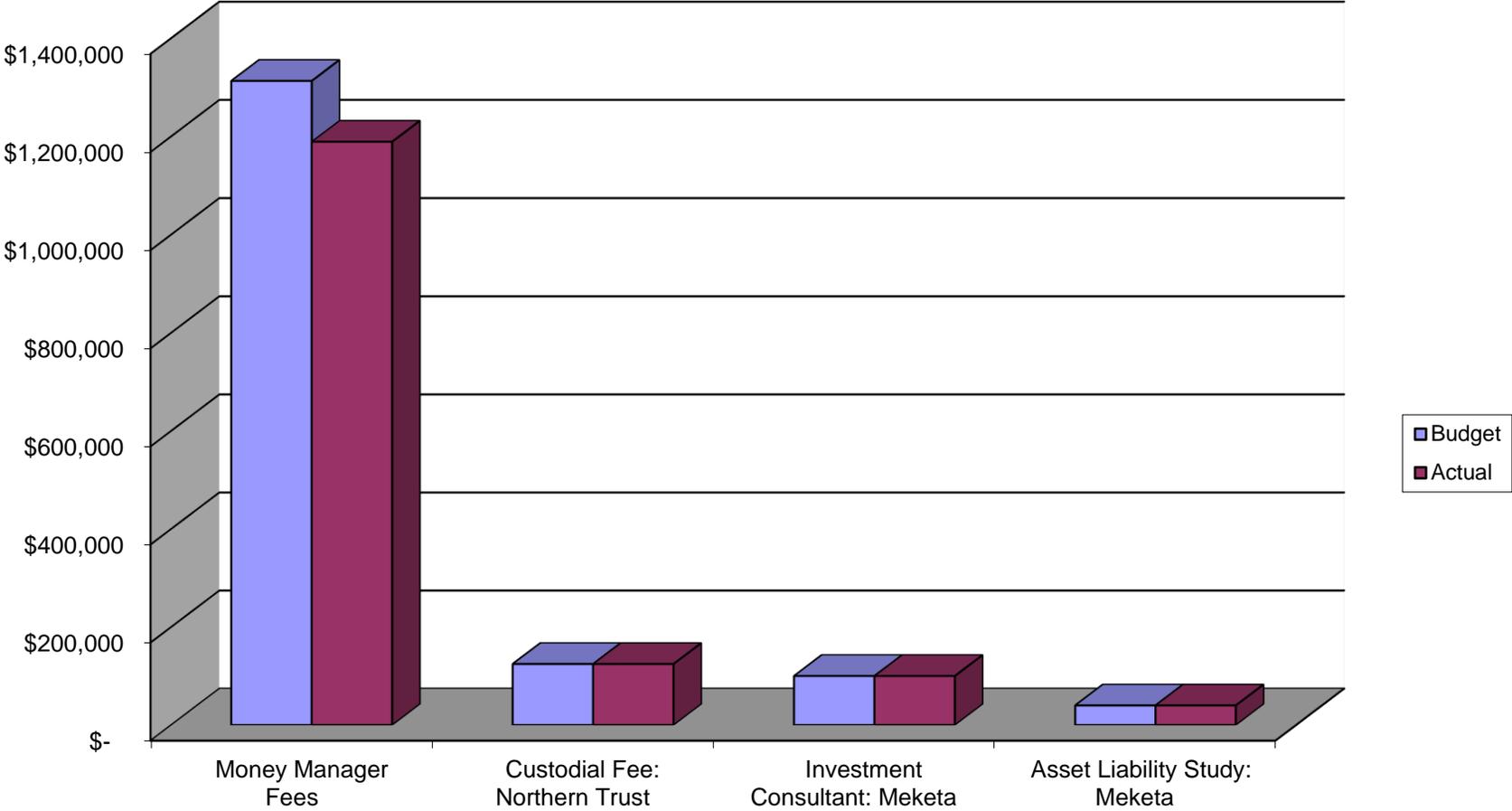


Table 1

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Administrative Budget Spent to Date (Preliminary)

As of July 31, 2024

	Approved Budget		July 2024		FYTD		Remaining		Percent Remaining	
Internal Administrative Costs										
PFRS Staff Salaries	\$	1,745,000	\$	131,764	\$	131,764	\$	1,613,236		92.4%
Board Travel Expenditures		52,500		-		-		52,500		100.0%
Staff Training		20,000		-		-		20,000		100.0%
Staff Training - Tuition Reimbursement		7,500		-		-		7,500		100.0%
Board Hospitality		7,200		-		-		7,200		100.0%
Payroll Processing Fees		40,000		-		-		40,000		100.0%
Miscellaneous Expenditures		45,000		60		60		44,940		99.9%
Internal Service Fees (ISF)		88,000		-		-		88,000		100.0%
Contract Services Contingency		50,000		-		-		50,000		100.0%
Internal Administrative Costs Subtotal :	\$	2,055,200	\$	131,824	\$	131,824	\$	1,923,376		93.6%
Actuary and Accounting Services										
Audit	\$	54,400	\$	-	\$	-	\$	54,400		100.0%
Actuary		50,900		-		-		50,900		100.0%
Actuary and Accounting Subtotal:	\$	105,300	\$	-	\$	-	\$	105,300		100.0%
Legal Services										
City Attorney Salaries	\$	220,700	\$	11,126	\$	11,126	\$	209,574		95.0%
Legal Contingency		150,000		-		-		150,000		100.0%
Legal Services Subtotal:	\$	370,700	\$	11,126	\$	11,126	\$	359,574		97.0%
Investment Services										
Money Manager Fees	\$	1,353,000	\$	-	\$	-	\$	1,353,000		100.0%
Custodial Fee		124,500		-		-		124,500		100.0%
Investment Consultant		100,000		-		-		100,000		100.0%
Investment Subtotal:	\$	1,577,500	\$	-	\$	-	\$	1,577,500		100.0%
Total Operating Budget	\$	4,108,700	\$	142,950	\$	142,950	\$	3,965,750		96.52%

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
 Cash in Treasury (Fund 7100) - Preliminary
 As of July 31, 2024

	July 2024	
Beginning Cash as of 7/1/2024	\$	10,564,598
Additions:		
City Pension Contribution - July		2,903,750
Investment Draw		1,000,000
Misc. Receipts		800
Total Additions:	\$	3,904,550
Deductions:		
Pension Payment (June Pension Paid on 7/1/2024)		(4,079,138)
Expenditures Paid		(229,969)
Total Deductions	\$	(4,309,107)
 Ending Cash Balance as of 7/31/2024*	 \$	 10,160,041

* On 8/1/2024, July pension payment of appx \$4,177,000 will be made leaving a cash balance of \$5,983,000.

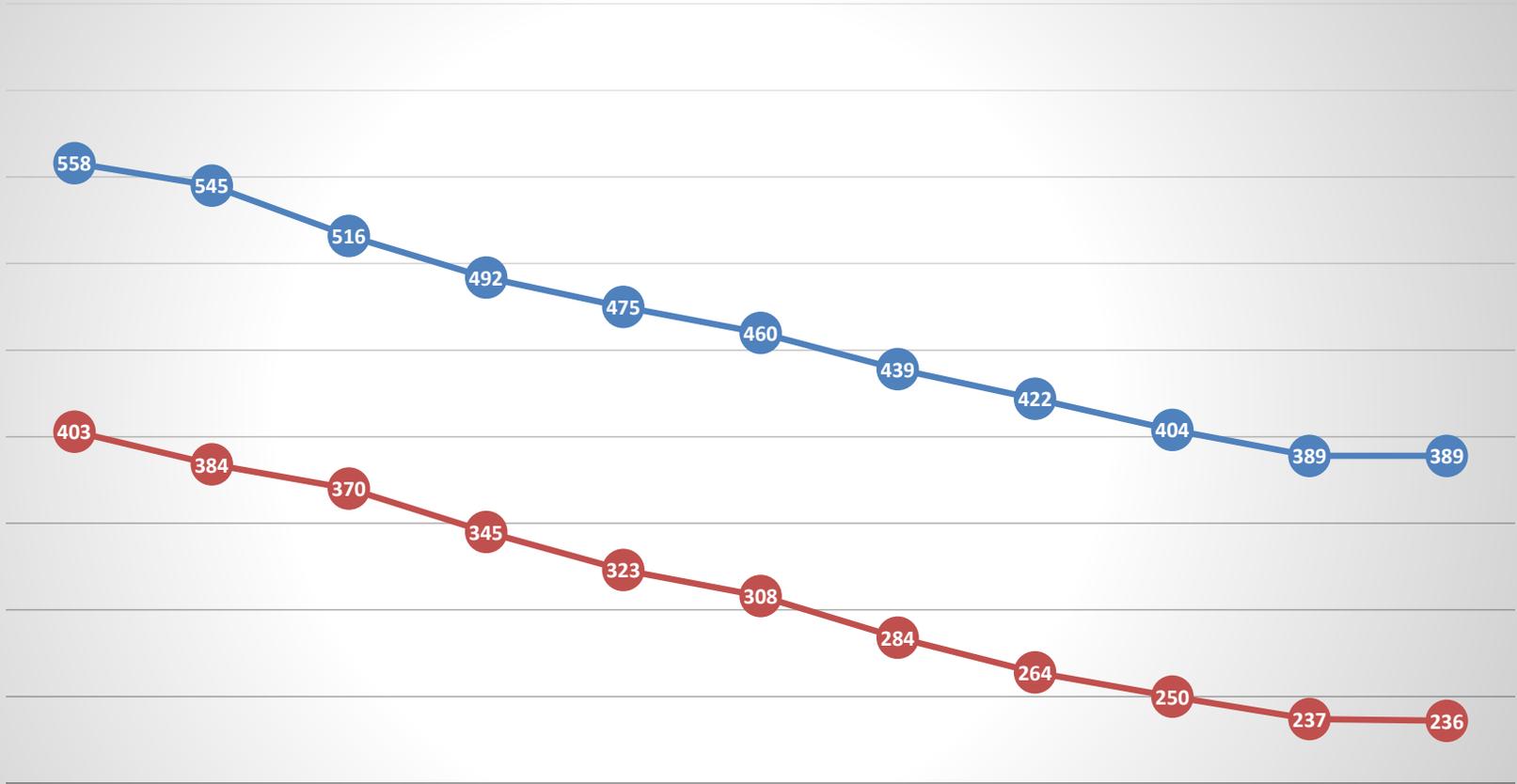
Table 3
CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Census
As of July 31, 2024

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Retiree	263	147	410
Beneficiary	126	89	215
<i>Total Retired Members</i>	389	236	625
<i>Total Membership:</i>	389	236	625

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Service Retirement	261	109	370
Disability Retirement	120	116	236
Death Allowance	8	11	19
<i>Total Retired Members:</i>	389	236	625
<i>Total Membership as of July 31, 2024:</i>	389	236	625
<i>Total Membership as of June 30, 2024:</i>	389	237	626
<i>Annual Difference:</i>	0	-1	-1

Oakland Police and Fire Retirement System Pension Plan Membership Count As of July 31, 2024 (FY 2015 - FY 2025)



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 FYTD
Police	558	545	516	492	475	460	439	422	404	389	389
Fire	403	384	370	345	323	308	284	264	250	237	236
Total	961	929	886	837	798	768	723	686	654	626	625



AGENDA REPORT

TO: Oakland Police and Fire Retirement System (PFRS) Audit & Operations Committee
FROM: David F. Jones
PFRS Plan Administrator & Secretary
SUBJECT: Audit & Operations Committee Agenda Pending List
DATE: September 25, 2024

	SUBJECT	MEETING DATE	MEETING STATUS
1	Status Report of the Ad Hoc Committee regarding Actuarial Funding date of July 1, 2026	08/26/2024	Ongoing
2	Monitor & Update PFRS Board of Upcoming City Council Agendas Regarding Discussion of the July 1, 2026 Actuarial Funding Date	Ongoing	Ongoing

Respectfully submitted,

David F. Jones
Plan Administrator & Secretary
Oakland Police & Fire Retirement Systems

REVISED



**CITY OF
OAKLAND**

**Retirement Unit
150 Frank H. Ogawa Plaza
Oakland, California 94612**

AGENDA

INVESTMENT COMMITTEE MEMBERS

Jaime T. Godfrey
Chairperson

R. Steven Wilkinson
Member

Robert W. Nichelini
Member

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**MEETING of the INVESTMENT AND FINANCIAL MATTERS COMMITTEE
of the OAKLAND POLICE AND FIRE RETIREMENT SYSTEM (“PFRS”)**

WEDNESDAY, SEPTEMBER 25, 2024

10:30 AM

**ONE FRANK H. OGAWA PLAZA, HEARING ROOM 2
OAKLAND, CA 94612**

OBSERVE

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- iPhone one-tap: US: +16699006833, 82880493983# or +13462487799, 82880493983#
- US: +1 669 900 6833 or +1 346 248 7799 or +1 253 215 8782 or +1 301 715 8592 or +1 312 626 6799 or +1 929 205 6099
- International numbers available: <https://us02web.zoom.us/j/82880493983>
- Webinar ID: 828 8049 3983.
- If asked for a participant ID or code, press #.

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ORDER OF BUSINESS

1. **Subject:** POLICE AND FIRE RETIREMENT SYSTEM (“PFRS”) INVESTMENT AND FINANCIAL MATTERS COMMITTEE MEETING MINUTES

From: Staff of the PFRS Board

Recommendation: **APPROVE** the July 31, 2024 Investment and Financial Matters Committee Meeting Minutes

2. **Subject:** ECONOMIC AND INVESTMENT MARKET OVERVIEW AS OF AUGUST 31, 2024

From: Meketa Investment Group

Recommendation: **ACCEPT** informational report regarding the Global Investment Markets as of August 31, 2024

3. **Subject:** PRELIMINARY INVESTMENT FUND PERFORMANCE UPDATE AS OF AUGUST 31, 2024

From: Meketa Investment Group

Recommendation: **ACCEPT** informational report regarding the Preliminary PFRS Investment Fund Performance Update as of August 31, 2024

4. **Subject:** \$13.2 MILLION DRAWDOWN FOR PFRS MEMBER RETIREMENT ALLOWANCES FROM OCTOBER 1, 2024 THROUGH DECEMBER 31, 2024

From: Meketa Investment Group

Recommendation: **ACCEPT** informational report and **RECOMMEND BOARD APPROVAL** of Meketa Investment Group’s proposed drawdown of \$13.2 million, which includes a \$8.7 Million contribution from the City of Oakland and a \$4.5 Million contribution from the PFRS Investment Fund, to be used to pay PFRS Member Retirement Allowances from October 1, 2024 through December 31, 2024 for Fiscal Year 2024/2025

5. **Subject:** PFRS INVESTMENT FUND QUARTERLY PERFORMANCE UPDATE AS OF JUNE 30, 2024

From: Meketa Investment Group

Recommendation: **ACCEPT** PFRS Investment Fund Quarterly Performance Update as of June 30, 2024

6. **Subject:** INVESTMENT POLICY UPDATE: TARGET ASSET ALLOCATION TRANSITION

From: Meketa Investment Group

Recommendation: **ACCEPT** informational report regarding the investment policy and a proposal to adjust the transition timeline and process to achieve the target asset allocation. **DISCUSS & RECOMMEND BOARD APPROVAL** for Meketa to adjust the transition timeline and process to achieve the new target asset allocation the PFRS’ Investment Portfolio

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
INVESTMENT & FINANCIAL MATTERS COMMITTEE MEETING
SEPTEMBER 25, 2024**

**7. Subject: ASSET CLASS REVIEW:
CRISIS RISK OFFSET**
From: Meketa Investment Group

Recommendation: **ACCEPT** informational report regarding an asset class review of PFRS' Crisis Risk Offset allocation. **DISCUSS & RECOMMEND BOARD APPROVAL** of Meketa's recommended changes to the Crisis Risk Offset asset class allocations of the PFRS' Investment Portfolio

**8. Subject: RESOLUTION 8113
RESOLUTION AUTHORIZING A FOURTH AMENDMENT TO THE
PROFESSIONAL SERVICES AGREEMENT WITH RAMIREZ ASSET
MANAGEMENT, INC. FOR THE PROVISION OF CORE FIXED INCOME
INVESTMENT STRATEGY MANAGER SERVICES FOR THE OAKLAND
POLICE AND FIRE RETIREMENT SYSTEM (PFRS) (1) TO PROVIDE PFRS
WITH AN UNLIMITED OPTION TO EXTEND THE AGREEMENT IN ONE-
YEAR TERMS UNDER SECTION IV(B) AND (2) TO RENEW THE
AGREEMENT FOR AN ADDITIONAL ONE-YEAR TERM**

From: Staff of the PFRS Board

Recommendation: **RECOMMEND BOARD APPROVAL** of Resolution No. 8113 authorizing a fourth amendment to the professional services agreement with Ramirez Asset Management, Inc. for the provision of core fixed income investment strategy manager services for the Oakland Police and Fire Retirement System (PFRS) (1) to provide PFRS with an unlimited option to extend the agreement in one-year terms under section IV(B) and (2) to renew the agreement for an additional one-year term

**9. Subject: RESOLUTION 8114
RESOLUTION AUTHORIZING THE FIRST AMENDMENT TO THE
PROFESSIONAL SERVICES AGREEMENT WITH STRATEGIC GLOBAL
ADVISORS FOR THE PROVISION OF ACTIVE INTERNATIONAL EQUITY
INVESTMENT STRATEGY MANAGER SERVICES FOR THE OAKLAND
POLICE AND FIRE RETIREMENT SYSTEM TO RENEW THE AGREEMENT
FOR AN ADDITIONAL ONE-YEAR TERM**

From: Staff of the PFRS Board

Recommendation: **RECOMMEND BOARD APPROVAL** of Resolution No. 8114 authorizing the first amendment to the professional services agreement with Strategic Global Advisors for the provision of active international equity investment strategy manager services for the Oakland Police and Fire Retirement System to renew the agreement for an additional one-year term

- 10. SCHEDULE OF PENDING INVESTMENT COMMITTEE MEETING AGENDA ITEMS**
- 11. NEW BUSINESS**
- 12. OPEN FORUM**
- 13. FUTURE SCHEDULING**
- 14. ADJOURNMENT**

A MEETING OF THE INVESTMENT AND FINANCIAL MATTERS COMMITTEE of the Oakland Police and Fire Retirement System (“PFRS”) was held Wednesday, July 31, 2024, at One Frank Ogawa Plaza, Hearing Room 2, Oakland, California.

Committee Members	▪ Jaime T. Godfrey	Chairperson (EXCUSED)
	▪ Robert W. Nichelini	Member
	▪ R. Steven Wilkinson	Member & Acting Chairperson
Additional Attendees	▪ David F. Jones	PFRS Plan Administrator & Secretary
	▪ Téir Jenkins	PFRS Investment & Operations Manager
	▪ Maxine Visaya	PFRS Staff Member
	▪ Selia Warren	PFRS Legal Counsel
	▪ David Sancewich	Meketa Investment Group

The meeting was called to order at 10:32 a.m. Pacific

1. APPROVAL OF INVESTMENT & FINANCIAL MATTERS COMMITTEE MEETING MINUTES

Member Nichelini made a motion to approve the June 26, 2024, Investment & Financial Matters Committee Meeting Minutes as submitted, second by Acting Chairperson Wilkinson. Motion Passed.

[GODFREY – EXCUSED / NICHELINI – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

2. ECONOMIC AND INVESTMENT MARKET OVERVIEW AS OF JUNE 30, 2024

David Sancewich of Meketa Investment Group (Meketa) presented an informational report regarding the economic and investment market overview as of June 30, 2024, and highlighted Index Returns; Domestic Equity Returns; Russell 3000 Sector Returns; Foreign Equity Returns; Fixed Income Returns; and the U.S. Consumer Under Stress.

MOTION: Member Nichelini made a motion to accept Meketa’s informational report and forward to the Board, second by Acting Chairperson Wilkinson. Motion passed.

[GODFREY – EXCUSED / NICHELINI – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

3. PRELIMINARY INVESTMENT FUND PERFORMANCE UPDATE AS OF JUNE 30, 2024

David Sancewich of Meketa presented an informational report regarding a preliminary investment performance update of the PFRS Fund as of June 30, 2024, and noted the Fixed Income investment strategy is not within the Investment Policy Statement (IPS) range as we transition to the new asset allocation and highlighted the PFRS Total Plan Performance and Cash Flow Summary.

MOTION: Member Nichelini made a motion to accept Meketa’s informational report and forward to the Board, second by Acting Chairperson Wilkinson. Motion passed.

[GODFREY – EXCUSED / NICHELINI – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

4. REQUEST FOR INFORMATION:**INTERNATIONAL EQUITY INVESTMENT STRATEGY MANAGER SERVICES FOR THE CITY OF OAKLAND POLICE & FIRE RETIREMENT SYSTEM**

David Sancewich of Meketa presented the scope and process of the request for information (RFI) for International Equity Investment Strategy Manager Services for the City of Oakland Police & Fire Retirement System and noted Meketa intends to publicly post the RFI on the internet in the next two weeks.

MOTION: Member Nichelini made a motion to recommend Board approval for Meketa to initiate the RFI process for International Equity Investment Strategy Manager Services, second by Acting Chairperson Wilkinson. Motion passed.

[GODFREY – EXCUSED / NICHELINI – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

5. REQUEST FOR INFORMATION:**FIXED INCOME INVESTMENT STRATEGY MANAGER SERVICES FOR THE CITY OF OAKLAND POLICE & FIRE RETIREMENT SYSTEM**

David Sancewich of Meketa presented the scope and process of the request for information (RFI) for Fixed Income Investment Strategy Manager Services for the City of Oakland Police & Fire Retirement System and noted Meketa intends to publicly post the RFI on the internet in the coming weeks.

MOTION: Member Nichelini made a motion to recommend Board approval for Meketa to initiate the RFI process for Fixed Income Investment Strategy Manager Services, second by Acting Chairperson Wilkinson. Motion passed.

[GODFREY – EXCUSED / NICHELINI – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

6. SCHEDULE OF PENDING INVESTMENT COMMITTEE MEETING AGENDA ITEMS

David Sancewich of Meketa presented the Strategic Planning Agenda for the remainder of the calendar year and noted the Credit Risk Offset Asset Class Review is scheduled for next month.

7. NEW BUSINESS – None**8. OPEN FORUM – None****9. FUTURE SCHEDULING**

The next PFRS Investment Committee Meeting will be held in-person and is tentatively scheduled to occur August 28, 2024, at One Frank Ogawa Plaza, Hearing Room 2, Oakland, CA.

10. ADJOURNMENT

Member Nichelini made a motion to adjourn, second by Acting Chairperson Wilkinson. Motion passed.

[GODFREY – EXCUSED / NICHELINI – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1)

The meeting adjourned at 11:02 a.m. Pacific

Economic and Market Update

August 2024 Report

Commentary

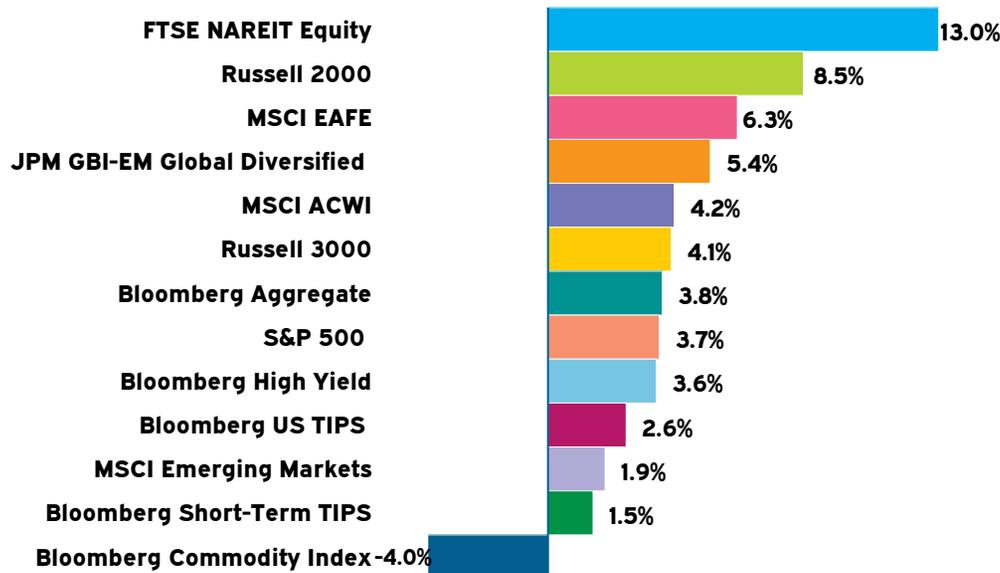
→ After a very volatile start to the month, most asset classes posted gains in August.

- Weak US jobs data caused speculation that the Fed might have waited too long to cut interest rates increasing the risk of a “hard landing” for the US economy. This and pressure from the Bank of Japan raising rates on the yen carry trade drove the equity market volatility at the start of the month.
- Subsequent data was more reassuring though, including an above expectations retail sales report, and the equity market was able to recover for the month. The Bank of Japan also calmed markets with dovish comments to stabilize the unwinding of the yen carry trade.
- From Jackson Hole, Chair Powell indicated that improvements in inflation and a balancing labor market provided justification for rate cuts soon. At their subsequent September meeting they reduced rates by 0.50%.
- In August, the broad market (Russell 3000) returned +2.8%. Large cap stocks (+2.4%) outperformed small cap (-1.5%). For the month healthcare, utilities, and consumer staples took over leadership from technology.
- Non-US developed equity markets outperformed the broad US market in August (+3.3%). A weakening US dollar was a key driver of results.
- Emerging market equities (+1.6%) lagged developed markets with China gaining +1.0%.
- Fixed income markets posted positive returns on expectations for policy rate cuts this fall as inflation pressures recede, and the economy slows.

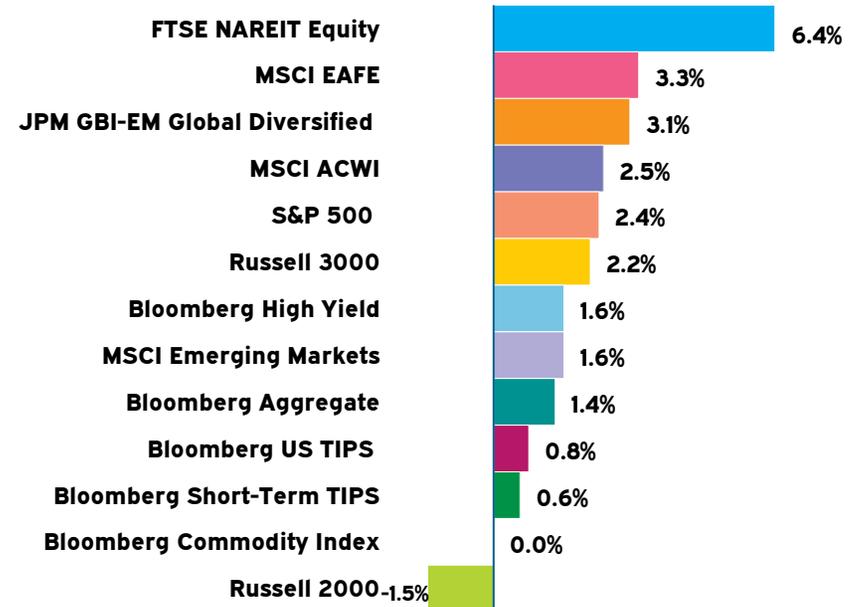
→ Looking ahead, the paths of inflation, labor markets, and monetary policy, China’s economic disorder and slowing economic growth, the yen-carry trade, and the looming US election will be key factors.

Index Returns¹

QTD



August



→ August was positive for most asset classes, but the month started off very volatile given concerns over weak economic data and an unwinding of the yen carry trade due to a rate increase by the Bank of Japan. Eventually things settled down though as additional economic data was released, and corporate earnings remained strong.

→ As we approach the end of the third quarter, US stocks have significantly outperformed other asset classes.

¹ Source: Bloomberg. Data is as of August 31, 2024.

Domestic Equity Returns¹

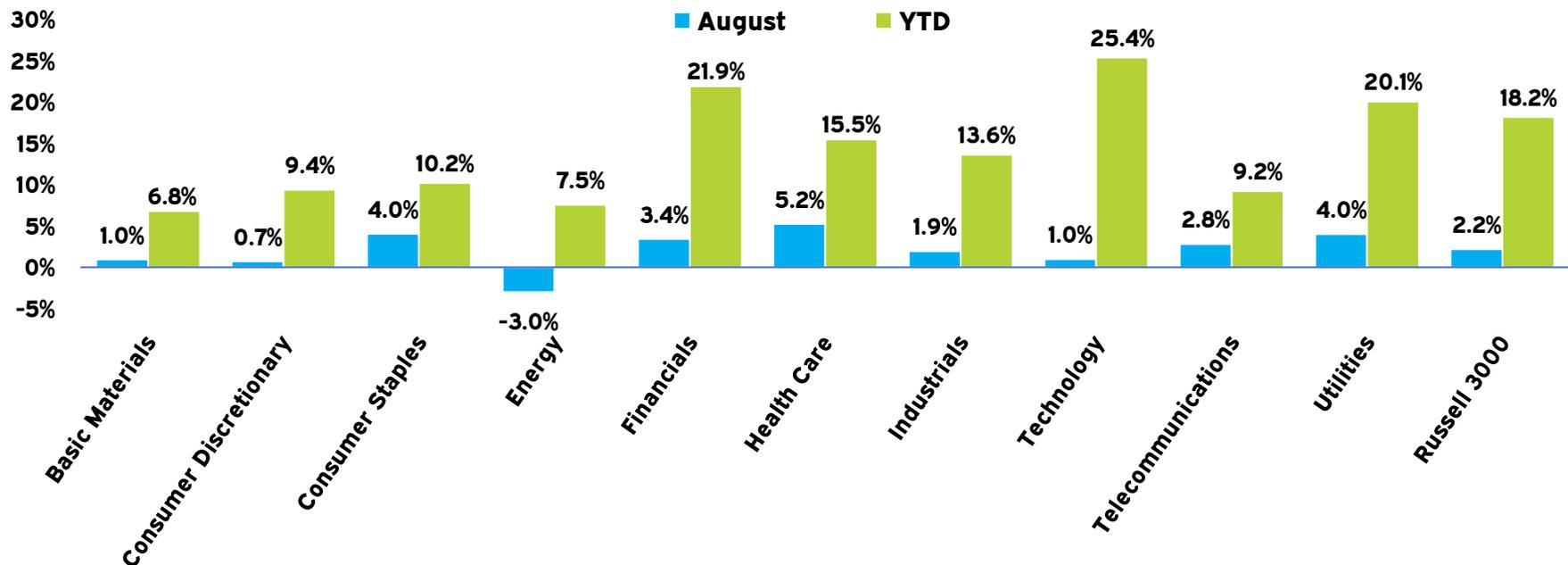
Domestic Equity	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	2.4	3.7	19.5	27.1	9.4	15.9	13.0
Russell 3000	2.2	4.1	18.2	26.1	7.9	15.2	12.3
Russell 1000	2.4	3.9	18.6	26.6	8.3	15.5	12.6
Russell 1000 Growth	2.1	0.3	21.1	30.8	8.9	19.1	16.0
Russell 1000 Value	2.7	7.9	15.1	21.1	7.3	11.2	8.8
Russell MidCap	2.0	6.8	12.1	20.2	3.5	11.2	9.6
Russell MidCap Growth	2.5	3.1	9.3	19.1	-0.5	10.5	10.6
Russell MidCap Value	1.9	8.0	13.0	20.2	5.4	10.8	8.3
Russell 2000	-1.5	8.5	10.4	18.5	0.6	9.7	8.0
Russell 2000 Growth	-1.1	7.0	11.7	17.7	-2.1	8.3	8.2
Russell 2000 Value	-1.9	10.1	9.1	19.2	3.1	10.4	7.5

US Equities: The Russell 3000 rose +2.2% in August, bringing the year-to-date results to +18.2%.

- US stocks experienced a sharp drawdown in early August, driven by the unwinding of the yen carry trade and a disappointing July jobs report. However, subsequent encouraging data on jobless claims and retail sales caused investors to be less concerned as the month wore on.
- Apple, Nvidia, and Microsoft now constitute 18% of the Russell 1000 Index (large cap). Taken together they drove the outperformance of the large cap index (+2.4%) over the small cap Russell 2000 index (-1.5%) for the month. The decline in energy prices also contributed to the underperformance as small cap energy companies were more impacted than their large cap peers.

¹ Source: Bloomberg. Data is as of August 31, 2024.

Russell 3000 Sector Returns¹



- In August, economically sensitive energy stood out with negative returns, while other sectors posted positive results.
- Health care (+5.2%) led the way for the month driven by strong results from Eli Lilly related to its weight loss drug. Consumer staples (+4.0%) and utilities (+4.0%) also posted strong gains for the month.
- All sectors have positive returns for the year-to-date period. Technology stocks (+25.4%) continue to lead the broader market, followed by financials (+21.9%), and utilities (+20.1%).

¹ Source: Bloomberg. Data is as of August 31, 2024.

Foreign Equity Returns¹

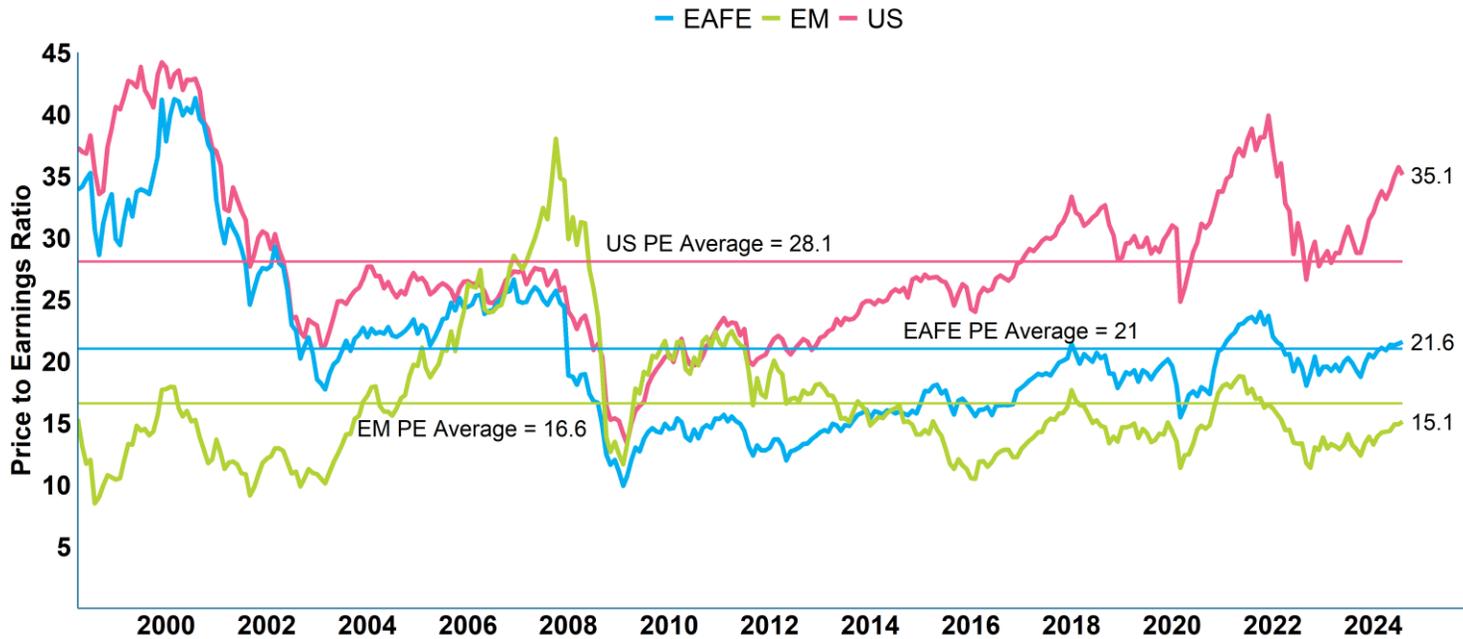
Foreign Equity	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	2.8	5.2	11.2	18.2	2.1	7.6	4.4
MSCI EAFE	3.3	6.3	12.0	19.4	4.1	8.6	5.2
MSCI EAFE (Local Currency)	0.4	1.2	12.4	16.7	7.6	9.6	7.4
MSCI EAFE Small Cap	2.0	7.8	8.3	15.1	-2.4	6.4	5.3
MSCI Emerging Markets	1.6	1.9	9.5	15.1	-3.1	4.8	2.6
MSCI Emerging Markets (Local Currency)	0.4	1.0	12.1	16.3	0.1	6.6	5.4
MSCI EM ex. China	1.8	2.7	11.3	22.6	1.8	8.7	3.9
MSCI China	1.0	-0.3	4.4	-2.8	-13.6	-3.4	0.6

Foreign Equity: Developed international equities (MSCI EAFE) rose +3.3% in August, while emerging market equities (MSCI Emerging Markets) gained just +1.6%.

- After a sell-off early in the month, developed market equities saw solid returns in August outpacing US equities. The weakening dollar was a major contributor to results with local currency returns much lower (+0.4% versus +3.3%). Europe led global returns for the month following promising inflation news and bolstered by spending around the Paris Olympics. UK returns were positive but comments that tax hikes and spending cuts were on the horizon weighed on relative returns. After initial significant volatility related to the strengthening yen, the Japanese TOPIX ended the month down -2.9%.
- Emerging market equities saw positive returns but lagged its developed peers. Smaller Asian markets saw the greatest returns, due to currency appreciation against the US dollar. China and India saw slight gains but lagged the broad index, while Korea saw losses as tech stocks experienced a correction.

¹ Source: Bloomberg. Data is as of August 31, 2024.

Equity Cyclically Adjusted P/E Ratios¹



→ In August, the US price to earnings ratio fell slightly to 35.1 it still remains well above its 21st century average (28.1).

→ Non-US developed market valuations have increased to slightly above their long-term average while emerging market stocks remain well below their long-term average price-to-earnings ratio.

¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of August 2024. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

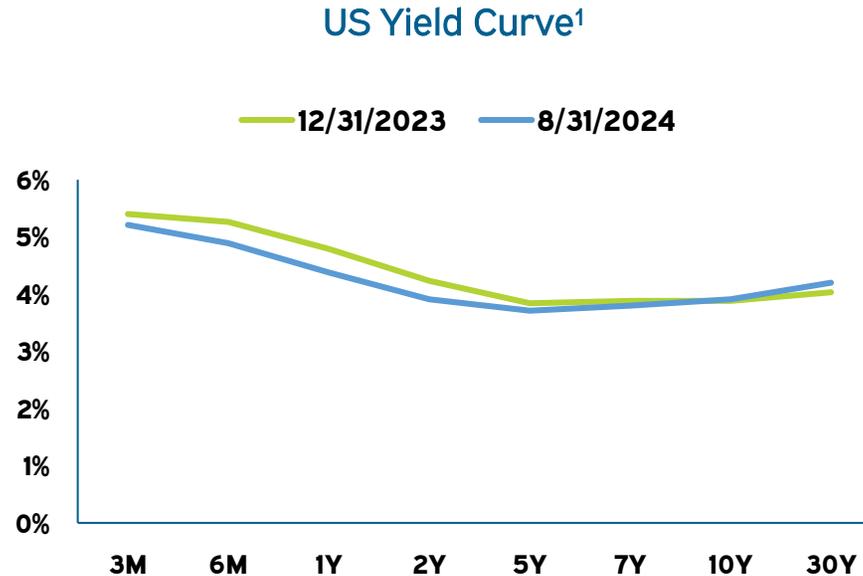
Fixed Income Returns¹

Fixed Income	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	1.5	3.8	3.5	7.9	-1.8	0.3	1.9	4.7	6.0
Bloomberg Aggregate	1.4	3.8	3.1	7.3	-2.1	0.0	1.6	4.4	6.2
Bloomberg US TIPS	0.8	2.6	3.3	6.2	-1.3	2.0	2.1	4.0	6.9
Bloomberg Short-term TIPS	0.6	1.5	3.8	6.3	2.2	3.3	2.2	4.1	2.5
Bloomberg High Yield	1.6	3.6	6.3	12.6	2.5	4.5	4.6	7.3	3.5
JPM GBI-EM Global Diversified (USD)	3.1	5.4	1.5	6.0	-1.7	0.1	-0.3	--	--

Fixed Income: The Bloomberg Universal index rose +1.5% in August, bringing the year-to-date return to +3.5%.

- Fixed income indexes rose in August, driven by market participants' expectations for a shift towards more accommodative monetary policy in the coming months largely due to continued easing of inflationary pressures and heightened concerns regarding a weakening labor market.
- The broad US bond market (Bloomberg Aggregate) rose +1.4% over the month, with the broad TIPS market gaining +0.8%. The less interest rate sensitive short-term TIPS index increased +0.6%.
- Riskier bonds led the way during the month, as risk appetite remains strong with emerging market and high yield bonds gaining +3.1% and +1.6%, respectively.

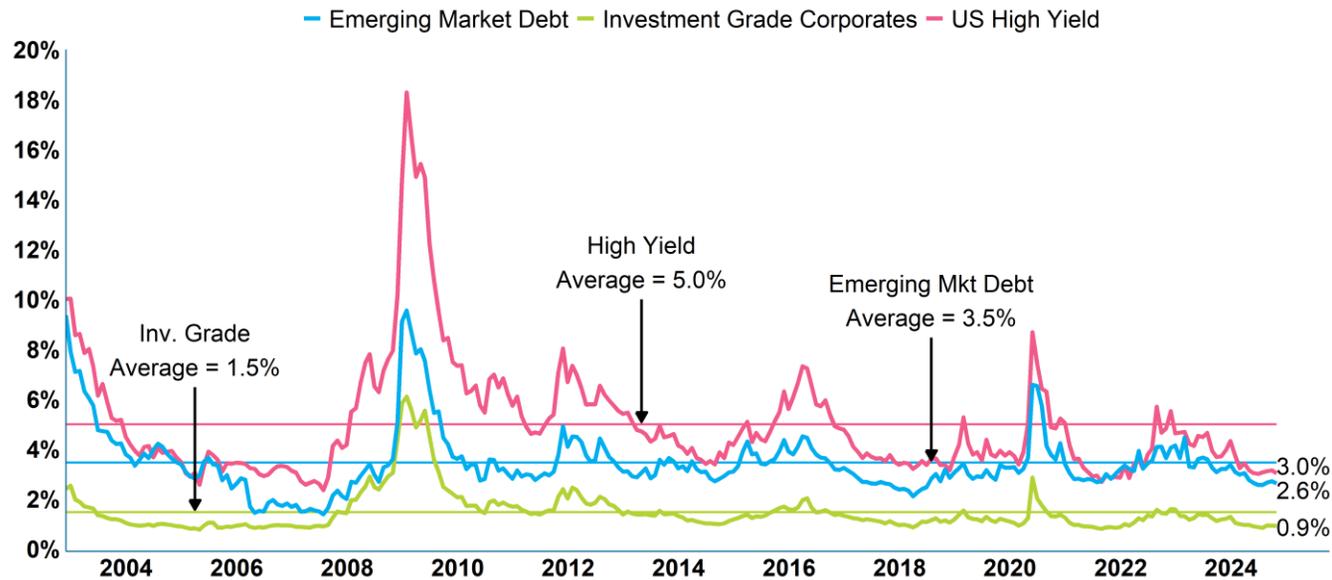
¹ Source: Bloomberg. Data is as of August 31, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration, respectively. JPM GBI-EM data is from J.P. Morgan. Current yield and duration data is not available.



- Weaker economic data and comments from Chair Powell in August that rate cuts were likely coming in September supported a bond rally for the month.
- Interest rates finished the month lower but largely off the levels reached during the start of the month volatility. The more policy sensitive 2-year Treasury yield declined from 4.26% at the end of July to 3.92% in August. The 10-year Treasury yield fell less in August declining from 4.03% to 3.90%.
- The yield curve was relatively flat at month-end after a long period of inversion, as shorter-dated yields declined the most over the month.

¹ Source: Bloomberg. Data is as of August 31, 2024.

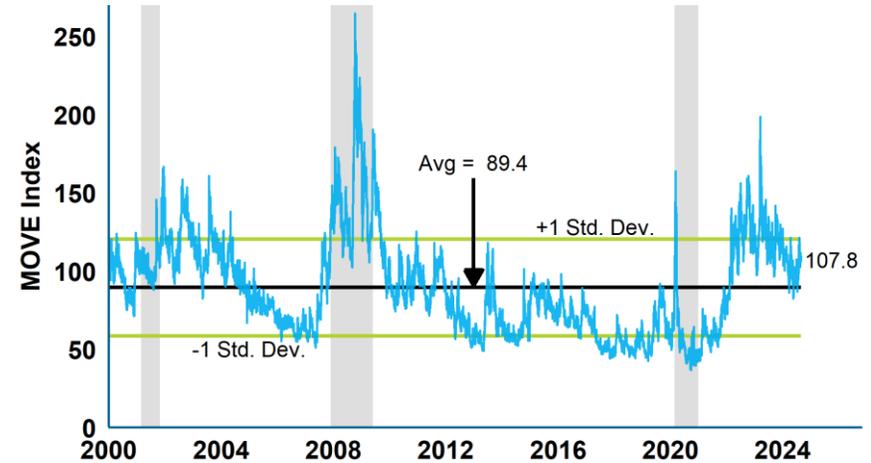
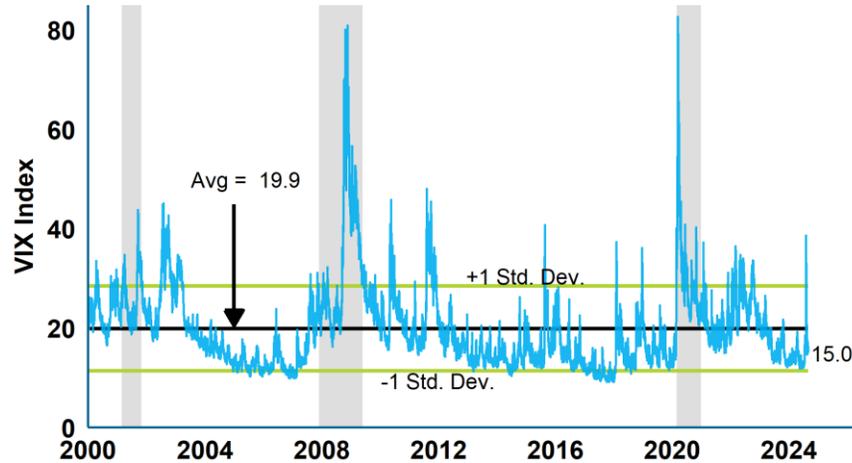
Credit Spreads vs. US Treasury Bonds¹



- Corporate bonds, particularly high yield, generally outperformed government bonds for the month given the prospective for materially lower interest rates.
- Spreads (the yield above a comparable maturity Treasury) widened significantly at the start of the month in the volatile environment but declined after.
- Overall spreads finished largely where they started the month despite the volatility. All spreads remained below their respective long-run averages, particularly high yield.
- Although spreads are relatively tight, yields remain at above-average levels compared to the last two decades, particularly for short-term issues.

¹ Source: Bloomberg. Data is as of August 31, 2024. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

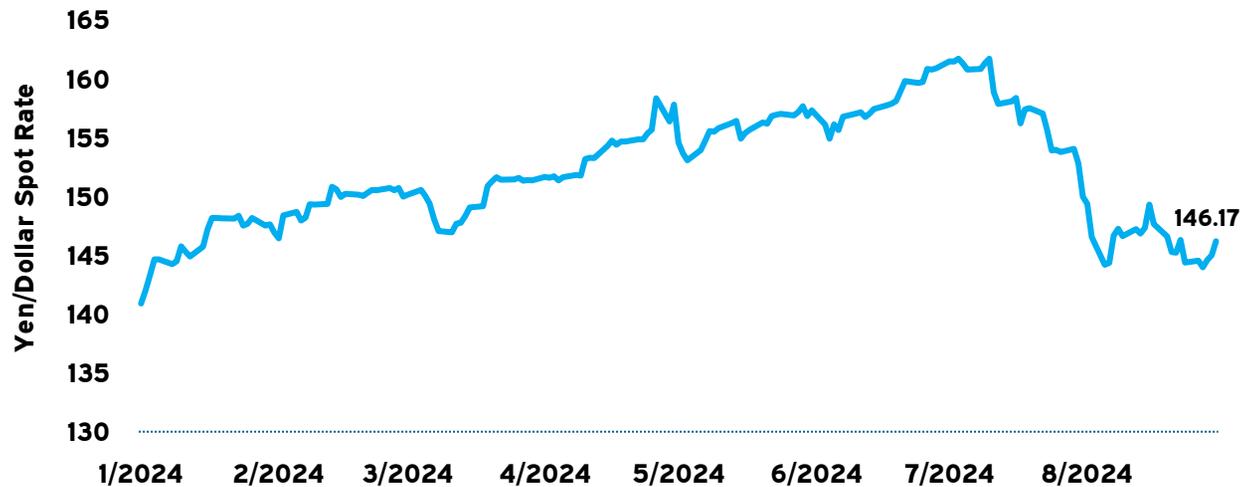
Equity and Fixed Income Volatility¹



- Equity market volatility fell slightly overall in August but this masks the significant volatility in the first part of the month related to the weaker than expected labor report in the US and pressures on the yen carry trade.
- Volatility levels (MOVE) in the bond market also fluctuated through the month finishing off their peak but at a level higher than where they started. Uncertainty in bond markets remain above the long-run average as markets continue to reprice interest rate cuts for the rest of 2024.

¹ Equity Volatility – Source: FRED. Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of August 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and August 2024.

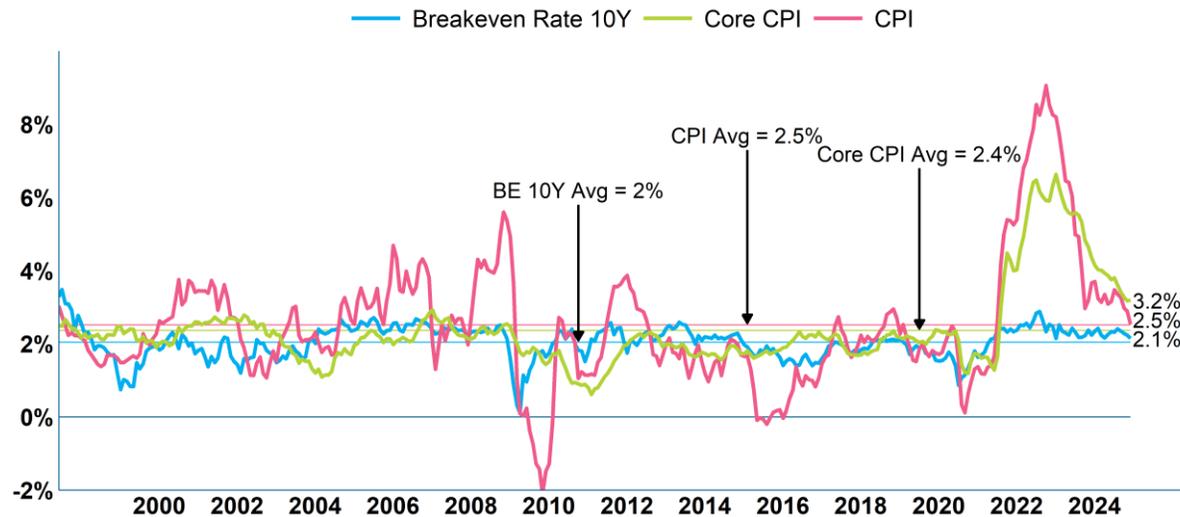
Recent Market Volatility: US Dollar versus Japanese Yen¹



- Given relatively lower interest rates in Japan many have entered the so-called “yen carry trade” borrowing cheaply in Japan and investing in other areas with perceived higher returns.
- This has traditionally involved taking the borrowed proceeds and investing them in Treasuries, but recently has expanded to investing in the US stock market particularly the technology sector.
- When the Bank of Japan signaled, it would continue to increase interest rates with expectations growing for the Fed to cut rates, many unwound this trade contributing to the significant market volatility (in addition to the unemployment miss) at the start of the month.
- With expectations for significant rate cuts ahead in the US the yen has further strengthened after month-end.

¹ Source: Bloomberg. Data as of August 31, 2024.

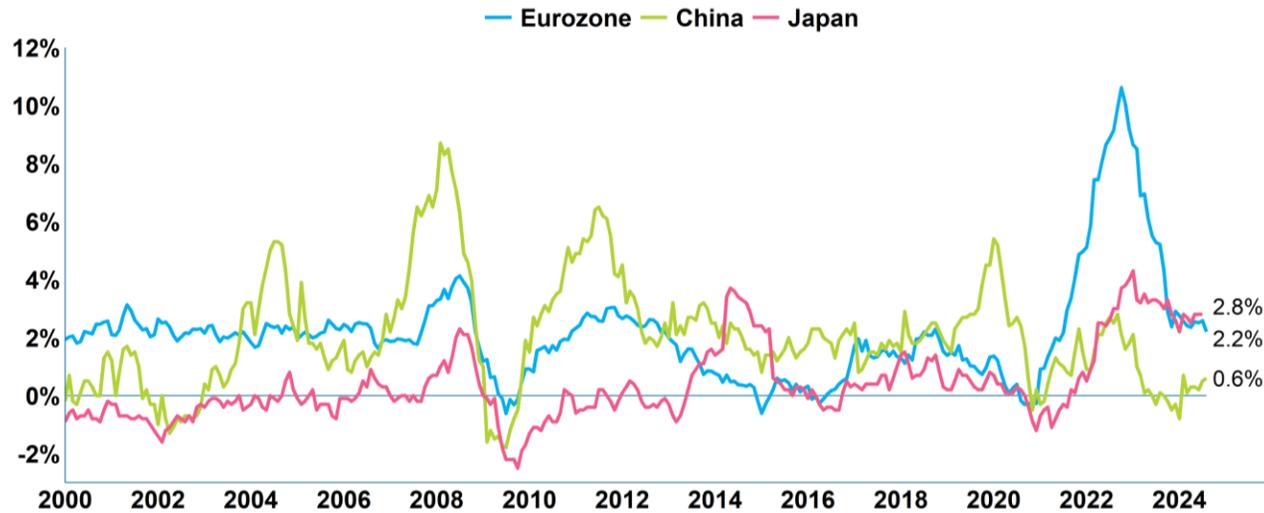
US Ten-Year Breakeven Inflation and CPI¹



- Year-over-year headline inflation continued to fall in August (2.9% to 2.5%), coming in at expectations.
- Month-over-month inflation increased 0.2% in August the same as in July. Shelter and transportation costs posted the largest gains rising 0.5% and 0.9%, respectively. Energy prices (-0.8%) fell for the month while food prices increased (0.1%).
- Core inflation (excluding food and energy) rose 0.3% (slightly above expectations) in August and 3.2% (at expectations) from a year prior.
- Inflation expectations (breakevens) have been relatively stable over the last several years. They remain below current inflation levels.

¹ Source: FRED. Data is as August 2024. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

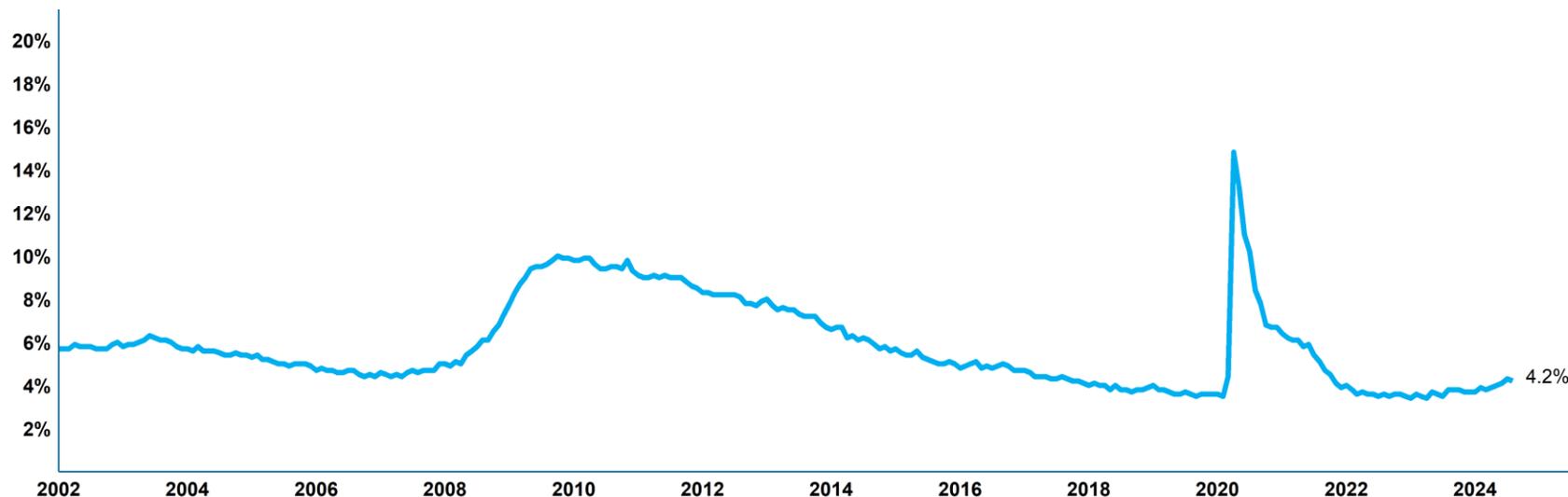
Global Inflation (CPI Trailing Twelve Months)¹



- In the eurozone, inflation fell from 2.5% to 2.2% in August, potentially clearing the way for further rate cuts from the ECB.
- Inflation in Japan remained steady at 2.8% in August for the third straight month. The Bank of Japan made some dovish comments in early August to calm markets, but in early September they signaled a willingness to raise interest rates in the future given inflation levels.
- In China, inflation was slightly up compared to last month representing the seventh straight month of positive price increases after declines late last year. Recent extreme weather has caused supply issues and contributed to higher prices. Inflation in China remains much lower than other countries though due to weak consumer spending and as issues in the real estate sector continue to weigh on sentiment.

¹ Source: Bloomberg. Data is as of August 31, 2024, except Japan which is as of July 31, 2024.

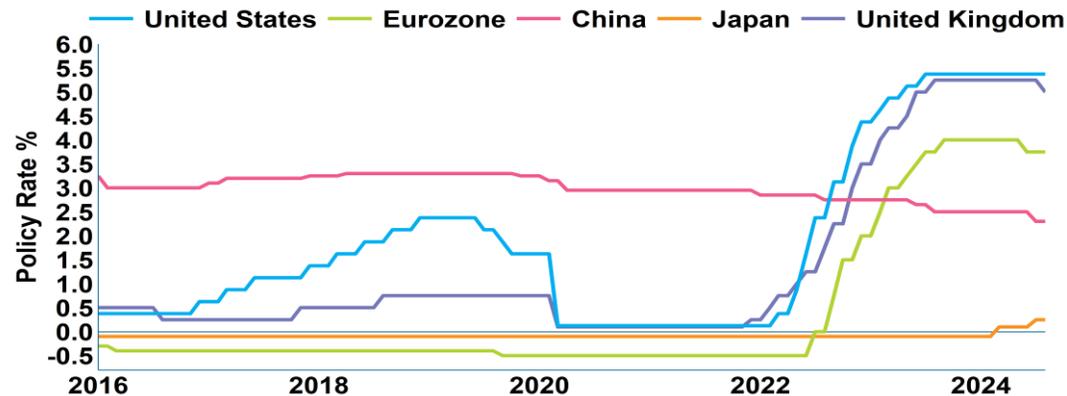
US Unemployment¹



- The unemployment rate fell slightly from 4.3% to 4.2% as the number of people on temporary layoff declined. Compared to a year ago the rate increased by 0.4% (3.8% to 4.2%).
- Construction (+34K), healthcare (+31K), and social services (+13K) sectors added jobs in August while manufacturing reduced jobs (-24k). The total number of jobs created was 142,000 compared to estimates of 165,000.
- The US labor market continues to show signs of slowing with the number of job openings falling to 7.7 million (the peak was over 12 million) and the rate of people quitting jobs is falling.
- The change in average hourly earnings from a year prior remains strong though (around 3.8%), and initial jobless claims are subdued.

¹ Source: FRED. Data is as August 31, 2024.

Policy Rates¹



- In the US, the Fed reduced interest rates by 0.5% after holding them at a 5.25%-5.50% level for over a year. Chair Powell cautioned though against assuming that the 0.5% initial cut would be the pace that policymakers would continue at. In their statement they highlighted that they would make additional interest rate cut decisions based on incoming data. Market participants are pricing in two to three additional cuts in 2024.
- The Bank of England (BoE) and European Central Bank (ECB) by contrast have both already started cutting rates. The BoE made a 25 basis points interest rate cut in July while the ECB made two similar cuts in June and September.
- Inflation in Japan remains elevated, prompting Bank of Japan officials to raise the policy rate 0.15% to 0.25% after decades at near-zero rates.
- China's central bank continues to pursue an easing policy given slowing economic growth and low inflation.

¹ Source: Bloomberg. Data is as of August 31, 2024. United States rate is the mid-point of the Federal Funds Target Rate range. Eurozone rate is the ECB Deposit Facility Announcement Rate. Japan rate is the Bank of Japan Unsecured Overnight Call Rate Expected. China rate is the China Central Bank 1-Year Medium Term Interest Rate. UK rate is the UK Bank of England Official Bank Rate.

US Dollar vs. Broad Currencies¹



- The US dollar weakened by over 2% in August on weak economic data and the prospect of rate cuts from the Fed later this year.
- Looking ahead, the track of policy rates across major central banks will be key for the path of the US dollar from here. If the US economy slows more than expected and the Fed relatedly lowers rates at a faster pace, we could see the dollar weaken.

¹ Source: Bloomberg. Data as of August 31, 2024.

Summary

Key Trends:

- According to the International Monetary Fund's (IMF) July report, global growth this year is expected to match the 2023 estimate at around 3.2% with most major economies predicted to avoid a recession.
- Key economic data in the US has largely weakened and come in below expectations, causing markets to expect an additional two to three rate cuts this year after the Fed's initial 0.5% reduction. Uncertainty remains though regarding the timing and pace of interest rate cuts in the coming year.
- We have started to see divergences in monetary policy. Some central banks, such as the European Central Bank and the Bank of England have started to cut interest rates and others, like the Bank of Japan, have increased interest rates, while the Fed appears on the verge of starting rate cuts. This disparity will likely influence capital flows and currencies.
- US consumers could feel pressure as certain components of inflation (e.g., shelter) remain high, borrowing costs are elevated, and the job market may weaken further.
- A focus for US equities going forward will be whether earnings can remain resilient if growth slows. Also, the future paths of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including China's economic uncertainty and ongoing weakness in the real estate sector. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

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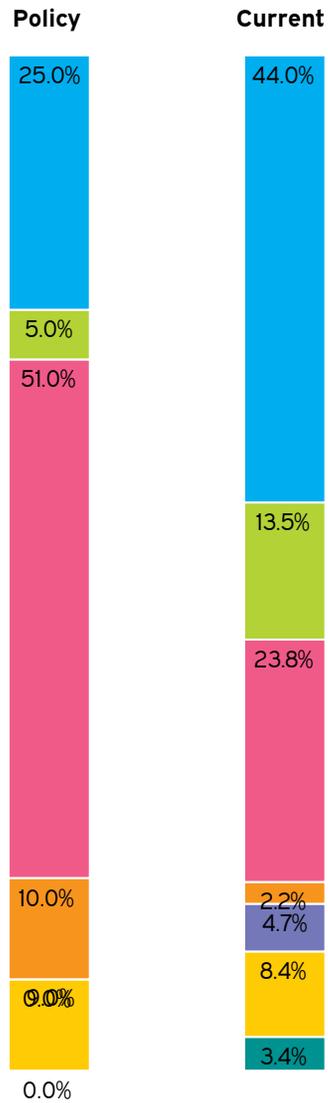
PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Oakland Police and Fire Retirement System

September 25, 2024

August Flash Report

As of August 31, 2024



Allocation vs. Targets and Policy							
	Current Balance (\$)	Current (%)	Long-Term Policy (%)	Difference (%)	Interim Policy (%)	Policy Range (%)	Within IPS Range?
Domestic Equity	207,044,063	44.0	25.0	19.0	34.0	15.0 - 35.0	No
International Equity	63,402,494	13.5	5.0	8.5	12.0	2.0 - 22.0	Yes
Fixed Income	111,921,012	23.8	51.0	-27.2	44.0	31.0 - 71.0	No
Credit	10,256,761	2.2	10.0	-7.8	0.0	0.0 - 16.0	Yes
Covered Calls	22,205,518	4.7	0.0	4.7	0.0	0.0 - 5.0	Yes
Crisis Risk Offset	39,257,439	8.4	9.0	-0.6	10.0	4.0 - 14.0	Yes
Cash	15,954,871	3.4	0.0	3.4	0.0	0.0 - 5.0	Yes
Total	470,042,158	100.0	100.0	0.0	100.0		

The new asset allocation policy established after the completion of the 2023 Asset-Liability Study became effective in July 2024. Most asset classes are currently out of policy ranges due to pending transitions.

Asset Class Performance Summary | As of August 31, 2024

Asset Class Performance Summary											
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
OPFRS Total Plan	470,042,158	100.0	1.6	4.3	9.7	15.2	2.9	7.0	6.9	6.8	Dec-88
<i>OPFRS Policy Benchmark</i>			1.6	3.6	10.6	16.4	3.7	7.6	7.1	8.1	
Excess Return			0.0	0.7	-0.9	-1.2	-0.8	-0.6	-0.2	-1.3	
Domestic Equity	207,044,063	44.0	2.1	6.1	15.3	23.1	6.4	13.3	11.3	9.3	Jun-97
<i>Russell 3000 (Blend)</i>			2.2	4.1	18.2	26.1	7.9	15.2	12.4	9.7	
Excess Return			-0.1	2.0	-2.9	-3.0	-1.5	-1.9	-1.1	-0.4	
International Equity	63,402,494	13.5	3.0	5.6	12.5	20.2	4.0	8.4	5.9	5.7	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			2.8	5.2	11.2	18.2	2.1	7.6	4.4	5.4	
Excess Return			0.2	0.4	1.3	2.0	1.9	0.8	1.5	0.3	
Fixed Income	111,921,012	23.8	1.4	3.8	3.5	7.6	-1.8	0.4	2.1	4.5	Jan-94
<i>Bloomberg Universal (Blend)</i>			1.5	3.8	3.5	7.9	-1.8	0.3	1.9	4.6	
Excess Return			-0.1	0.0	0.0	-0.3	0.0	0.1	0.2	-0.1	
Credit	10,256,761	2.2	0.5	1.7	5.8	9.8	3.4	5.5	--	5.2	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			1.6	3.6	6.3	12.6	2.5	4.5	4.7	5.1	
Excess Return			-1.1	-1.9	-0.5	-2.8	0.9	1.0	--	0.1	
Covered Calls	22,205,518	4.7	1.7	2.6	12.9	17.1	7.8	12.0	9.5	9.7	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			2.9	4.1	12.0	13.6	5.3	6.4	5.9	6.2	
Excess Return			-1.2	-1.5	0.9	3.5	2.5	5.6	3.6	3.5	
Crisis Risk Offset	39,257,439	8.4	-1.7	-1.5	0.2	0.8	-4.9	-9.0	--	-6.8	Aug-18
<i>Crisis Risk Offset Benchmark</i>			-1.0	-0.4	3.5	5.2	3.7	0.3	--	0.6	
Excess Return			-0.7	-1.1	-3.3	-4.4	-8.6	-9.3	--	-7.4	

Performance shown is net of fees, except for Total Plan, Domestic Equity, and International Equity composites which have a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investment's initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Asset Class & Manager Performance | As of August 31, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
OPFRS Total Plan	470,042,158	100.0	1.6	4.3	9.7	15.2	2.9	7.0	6.9	6.8	Dec-88
<i>OPFRS Policy Benchmark</i>			1.6	3.6	10.6	16.4	3.7	7.6	7.1	8.1	
Excess Return			0.0	0.7	-0.9	-1.2	-0.8	-0.6	-0.2	-1.3	
Domestic Equity	207,044,063	44.0	2.1	6.1	15.3	23.1	6.4	13.3	11.3	9.3	Jun-97
<i>Russell 3000 (Blend)</i>			2.2	4.1	18.2	26.1	7.9	15.2	12.4	9.7	
Excess Return			-0.1	2.0	-2.9	-3.0	-1.5	-1.9	-1.1	-0.4	
Northern Trust Russell 1000	104,675,018	22.3	2.4	3.8	18.6	26.6	8.2	15.4	12.6	14.1	Jun-10
<i>Russell 1000 Index</i>			2.4	3.9	18.6	26.6	8.3	15.6	12.7	14.2	
Excess Return			0.0	-0.1	0.0	0.0	-0.1	-0.2	-0.1	-0.1	
EARNEST Partners	42,321,968	9.0	1.6	7.3	9.7	17.5	4.6	12.1	11.2	9.6	Apr-06
<i>Russell Midcap Index</i>			2.0	6.8	12.1	20.2	3.5	11.2	9.6	9.1	
Excess Return			-0.4	0.5	-2.4	-2.7	1.1	0.9	1.6	0.5	
Wellington Select Quality Equity	27,847,851	5.9	4.0	8.9	13.9	20.6	--	--	--	10.6	May-22
<i>Russell 1000 Index</i>			2.4	3.9	18.6	26.6	8.3	15.6	12.7	15.6	
Excess Return			1.6	5.0	-4.7	-6.0	--	--	--	-5.0	
Brown Fundamental Small Cap Value	14,572,578	3.1	-2.1	9.8	13.5	23.7	9.4	--	--	9.3	Apr-21
<i>Russell 2000 Value Index</i>			-1.9	10.1	9.1	19.2	3.1	10.4	7.5	3.7	
Excess Return			-0.2	-0.3	4.4	4.5	6.3	--	--	5.6	
Rice Hall James	17,626,648	3.8	2.7	10.4	14.3	21.7	0.3	8.9	--	8.0	Aug-17
<i>Russell 2000 Growth Index</i>			-1.1	7.0	11.7	17.7	-2.1	8.4	8.2	8.1	
Excess Return			3.8	3.4	2.6	4.0	2.4	0.5	--	-0.1	

Performance shown is net of fees, except for Total Plan and Domestic Equity which have a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see the Benchmark History for custom benchmark compositions.

Asset Class & Manager Performance | As of August 31, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
International Equity	63,402,494	13.5	3.0	5.6	12.5	20.2	4.0	8.4	5.9	5.7	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			2.8	5.2	11.2	18.2	2.1	7.6	4.4	5.4	
Excess Return			0.2	0.4	1.3	2.0	1.9	0.8	1.5	0.3	
Vanguard Developed Markets ETF	17,543,577	3.7	2.9	6.0	11.0	18.6	3.2	8.7	5.4	8.7	Sep-19
<i>FTSE Developed All Cap ex-U.S. Index</i>			2.9	6.3	11.1	18.9	3.5	9.0	5.5	9.0	
Excess Return			0.0	-0.3	-0.1	-0.3	-0.3	-0.3	-0.1	-0.3	
SGA ACWI ex-U.S. Equity	45,858,917	9.8	3.1	5.5	13.1	20.8	4.5	--	--	6.5	Dec-19
<i>MSCI AC World ex USA (Net)</i>			2.8	5.2	11.2	18.2	2.1	7.6	4.4	6.4	
Excess Return			0.3	0.3	1.9	2.6	2.4	--	--	0.1	
Fixed Income	111,921,012	23.8	1.4	3.8	3.5	7.6	-1.8	0.4	2.1	4.5	Jan-94
<i>Bloomberg Universal (Blend)</i>			1.5	3.8	3.5	7.9	-1.8	0.3	1.9	4.6	
Excess Return			-0.1	0.0	0.0	-0.3	0.0	0.1	0.2	-0.1	
Ramirez	75,868,780	16.1	1.4	3.9	3.4	7.5	-2.0	0.1	--	2.0	Jan-17
<i>Blmbg. U.S. Aggregate Index</i>			1.4	3.8	3.1	7.3	-2.1	0.0	1.6	1.6	
Excess Return			0.0	0.1	0.3	0.2	0.1	0.1	--	0.4	
Wellington Core Bond	7,273,702	1.5	1.3	3.8	4.0	8.8	-1.9	--	--	-0.9	Apr-21
<i>Blmbg. U.S. Aggregate Index</i>			1.4	3.8	3.1	7.3	-2.1	0.0	1.6	-1.1	
Excess Return			-0.1	0.0	0.9	1.5	0.2	--	--	0.2	
Reams	28,778,530	6.1	1.4	3.8	3.6	7.6	-1.2	2.6	3.1	4.9	Feb-98
<i>Bloomberg Universal (Blend)</i>			1.5	3.8	3.5	7.9	-1.8	0.3	1.9	4.2	
Excess Return			-0.1	0.0	0.1	-0.3	0.6	2.3	1.2	0.7	

Performance shown is net of fees, except for International Equity composite which has a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see the Benchmark History for custom benchmark compositions.

Asset Class & Manager Performance | As of August 31, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
Credit	10,256,761	2.2	0.5	1.7	5.8	9.8	3.4	5.5	--	5.2	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			1.6	3.6	6.3	12.6	2.5	4.5	4.7	5.1	
Excess Return			-1.1	-1.9	-0.5	-2.8	0.9	1.0	--	0.1	
Polen Capital	10,256,761	2.2	0.5	1.7	5.8	9.8	3.4	5.5	--	5.2	Feb-15
<i>ICE BofA U.S. High Yield Index</i>			1.6	3.6	6.3	12.5	2.5	4.3	4.6	5.0	
Excess Return			-1.1	-1.9	-0.5	-2.7	0.9	1.2	--	0.2	
Covered Calls	22,205,518	4.7	1.7	2.6	12.9	17.1	7.8	12.0	9.5	9.7	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			2.9	4.1	12.0	13.6	5.3	6.4	5.9	6.2	
Excess Return			-1.2	-1.5	0.9	3.5	2.5	5.6	3.6	3.5	
Parametric BXM	10,620,426	2.3	1.0	2.0	10.8	13.8	6.4	9.1	7.4	7.7	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			2.9	4.1	12.0	13.6	5.3	6.4	5.9	6.2	
Excess Return			-1.9	-2.1	-1.2	0.2	1.1	2.7	1.5	1.5	
Parametric DeltaShift	11,585,092	2.5	2.4	3.2	14.9	20.3	9.0	14.7	11.6	11.8	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			2.9	4.1	12.0	13.6	5.3	6.4	5.9	6.2	
Excess Return			-0.5	-0.9	2.9	6.7	3.7	8.3	5.7	5.6	

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see the Benchmark History for custom benchmark compositions.

Asset Class & Manager Performance | As of August 31, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
Crisis Risk Offset	39,257,439	8.4	-1.7	-1.5	0.2	0.8	-4.9	-9.0	--	-6.8	Aug-18
<i>Crisis Risk Offset Benchmark</i>			<i>-1.0</i>	<i>-0.4</i>	<i>3.5</i>	<i>5.2</i>	<i>3.7</i>	<i>0.3</i>	<i>--</i>	<i>0.6</i>	
Excess Return			<i>-0.7</i>	<i>-1.1</i>	<i>-3.3</i>	<i>-4.4</i>	<i>-8.6</i>	<i>-9.3</i>	<i>--</i>	<i>-7.4</i>	
Kepos Alternative Risk Premia	12,074,598	2.6	-0.7	-0.4	10.9	12.3	--	--	--	7.6	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>			<i>-0.5</i>	<i>0.2</i>	<i>8.2</i>	<i>9.4</i>	<i>6.6</i>	<i>2.0</i>	<i>--</i>	<i>7.2</i>	
Excess Return			<i>-0.2</i>	<i>-0.6</i>	<i>2.7</i>	<i>2.9</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.4</i>	
Versor Trend Following	13,725,402	2.9	-6.0	-8.5	-7.9	-10.4	--	--	--	-3.6	Apr-22
<i>SG Trend Index</i>			<i>-4.5</i>	<i>-6.8</i>	<i>1.3</i>	<i>-0.6</i>	<i>7.5</i>	<i>5.5</i>	<i>4.8</i>	<i>2.1</i>	
Excess Return			<i>-1.5</i>	<i>-1.7</i>	<i>-9.2</i>	<i>-9.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-5.7</i>	
Vanguard Long-Term Treasury ETF	13,457,439	2.9	2.0	5.6	0.6	4.7	-9.9	-5.2	0.6	-3.1	Jul-19
<i>Blmbg. U.S. Gov Long Index</i>			<i>2.0</i>	<i>5.7</i>	<i>0.4</i>	<i>4.9</i>	<i>-9.8</i>	<i>-5.1</i>	<i>0.7</i>	<i>-3.1</i>	
Excess Return			<i>0.0</i>	<i>-0.1</i>	<i>0.2</i>	<i>-0.2</i>	<i>-0.1</i>	<i>-0.1</i>	<i>-0.1</i>	<i>0.0</i>	
Cash	15,954,871	3.4	0.1	0.1	0.4	0.4	0.1	0.4	0.8	0.6	Mar-11

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see the Benchmark History for custom benchmark compositions. Versor Trend Following is estimated using manager provided returns for 8/31/2024 due to statement availability.

**Cash Flow Summary
Month to Date**

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Northern Trust Russell 1000	102,261,697	-	2,413,321	104,675,018
EARNEST Partners	41,649,889	-	672,080	42,321,968
Wellington Select Quality Equity	26,771,306	-	1,076,544	27,847,851
Brown Fundamental Small Cap Value	14,879,531	-	-306,953	14,572,578
Rice Hall James	17,145,665	-	480,983	17,626,648
Vanguard Developed Markets ETF	17,047,977	-	495,600	17,543,577
SGA ACWI ex-U.S. Equity	44,457,705	-	1,401,212	45,858,917
Ramirez	74,806,183	-	1,062,598	75,868,780
Wellington Core Bond	7,177,747	-	95,955	7,273,702
Reams	28,376,279	-	402,251	28,778,530
Polen Capital	10,208,988	-	47,773	10,256,761
Parametric BXM	11,261,178	-750,000	109,248	10,620,426
Parametric DeltaShift	12,063,662	-750,000	271,431	11,585,092
Kepos Alternative Risk Premia	12,157,894	-	-83,296	12,074,598
Versor Trend Following	14,596,833	-	-871,431	13,725,402
Vanguard Long-Term Treasury ETF	13,237,226	-44,799	265,011	13,457,439
Cash - Money Market	5,910,691	20,350	8,830	5,939,871
Cash - Treasury	10,193,000	-178,000	-	10,015,000
Securities Lending Northern Trust	-	-10,097	10,097	-
OPFRS Total Plan	464,203,451	-1,712,546	7,551,253	470,042,158

Benchmark History

From Date	To Date	Benchmark
OPFRS Total Plan		
07/01/2024	Present	34.0% Russell 3000 Index, 12.0% MSCI AC World ex USA (Net), 44.0% Blmbg. U.S. Universal Index, 10.0% Crisis Risk Offset Benchmark
06/01/2022	07/01/2024	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA (Net), 31.0% Blmbg. U.S. Universal Index, 2.0% Blmbg. U.S. Corp: High Yield Index, 5.0% Cboe S&P 500 Buy Write Index, 10.0% Crisis Risk Offset Benchmark
01/01/2019	06/01/2022	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 31.0% Blmbg. U.S. Universal Index, 5.0% Cboe S&P 500 Buy Write Index, 2.0% Blmbg. U.S. Treasury: Long, 10.0% Crisis Risk Offset Benchmark
05/01/2016	01/01/2019	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 20.0% CBOE BXM
10/01/2015	05/01/2016	43.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 15.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
01/01/2014	10/01/2015	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 10.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
03/01/2013	01/01/2014	40.0% Russell 3000 Index, 10.0% MSCI AC World ex USA index, 17.0% Blmbg. U.S. Universal Index, 33.0% ICE BofA 3 Month U.S. T-Bill
08/01/2012	03/01/2013	20.0% Russell 3000 Index, 7.0% MSCI AC World ex USA index, 18.0% Blmbg. U.S. Universal Index, 55.0% ICE BofA 3 Month U.S. T-Bill
10/01/2007	08/01/2012	53.0% Russell 3000 Index, 17.0% MSCI AC World ex USA index, 30.0% Blmbg. U.S. Universal Index
04/01/2006	10/01/2007	35.0% Russell 3000 Index, 15.0% MSCI AC World ex USA index, 50.0% Blmbg. U.S. Universal Index
01/01/2005	04/01/2006	35.0% Russell 3000 Index, 50.0% Blmbg. U.S. Aggregate Index, 15.0% MSCI AC World ex USA index
04/01/1998	01/01/2005	20.0% Russell 1000 Value Index, 10.0% Russell 1000 Index, 5.0% Russell Midcap Index, 50.0% Blmbg. U.S. Aggregate Index, 15.0% MSCI EAFE (Net)
01/01/1978	04/01/1998	40.0% S&P 500 Index, 55.0% Blmbg. U.S. Aggregate Index, 5.0% FTSE 3 Month T-Bill

Benchmark History

From Date	To Date	Benchmark
Domestic Equity		
01/01/2005	Present	100.0% Russell 3000 Index
04/01/1998	01/01/2005	57.1% Russell 1000 Value Index, 28.6% Russell 1000 Index, 14.3% Russell Midcap Index
09/01/1988	04/01/1998	100.0% S&P 500 Index
International Equity		
01/01/2005	Present	100.0% MSCI AC World ex USA (Net)
01/01/1998	01/01/2005	100.0% MSCI EAFE Index
Fixed Income		
04/01/2006	Present	100.0% Blmbg. U.S. Universal Index
01/01/1976	04/01/2006	100.0% Blmbg. U.S. Aggregate Index
Covered Calls		
04/01/2014	Present	Cboe S&P 500 Buy Write Index
Crisis Risk Offset		
01/01/2023	Present	33.3% SG Trend Index, 33.3% SG Multi Alternative Risk Premia Index, 33.3% Blmbg. U.S. Government: Long Term Bond Index
08/01/2018	01/01/2023	100.0% SG Multi Alternative Risk Premia Index
Cash		
03/01/2011	Present	FTSE 3 Month T-Bill

Additional Information

Performance Return Types: Performance shown is net of fees, except for OPFRS Total Plan, Domestic Equity, and International Equity Composites, which have a mix of gross and net of fees performance. Performance shown for OPFRS Total Plan and International Equity composite is gross of fees prior to January 2016. Performance shown for Domestic Equity composite is gross of fees prior to January 2017.

Inception Date: Since inception date and performance begin in the month following an investments initial funding.

Fiscal Year: Fiscal year begins on July 1.

Fair Value Pricing Methodology: Though Vanguard Developed Markets ETF is a passive strategy, short-term performance may appear to diverge from the index it tracks more than would be expected. This is due to Fair Value Pricing (FVP) adjustments that address the pricing discrepancies that may arise from time-zone differences among global securities markets. The resulting temporary divergence is expected to correct itself when the foreign markets reopen.

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Oakland Police and Fire Retirement System

September 25, 2024

Recommendation for
2024 Q4 Cash Flows

Asset Class / Manager Liquidity

Asset Class	Fund	Liquidity Tier
US Equity	Northern Trust Russell 1000	1
US Equity	EARNEST Partners	3
US Equity	Wellington Select Quality Equity	3
US Equity	Rice Hall James	3
US Equity	Brown Small Cap Value	3
International Equity	SGA MSCI ACWI ex US	3
International Equity	Vanguard Developed Market	1
Fixed Income	Ramirez	2
Fixed Income	Reams	2
Fixed Income	Wellington Core Bond	3
Credit	Polen Capital High Yield	2
Covered Calls	Parametric	2
Crisis Risk Offset	Vanguard Long Treasury	1
Crisis Risk Offset	Versor Trend Following	3
Crisis Risk Offset	Kepos Alternative Risk Premia	3
Cash	Cash	1

Description of Liquidity Tiers

Tier	Description	Market Value (\$M)	In Months ¹
1	Public, Scheduled Withdrawal Allowances	151.6	25.3
2	Public, Accommodating of Withdrawals	137.1	22.9
3	Public, Must Plan Withdrawals	181.3	30.2
4	Closely Held	0.0	-
Total		470.0	

¹ Illustrates Liquidity in Months assuming a net outflow of \$6 million per month; that is, the illustrated figure demonstrates the number of months it would take to withdraw \$6 million per month from each liquidity tier.

Oakland PFRS Asset Allocation as of August 31, 2024¹

	Current Market Value		Long-Term Target	Interim Target ²	Variance from Interim Target		Actual Cash Flows for Current Quarter		Suggested CF for Next Quarter	
	(\$M)	(%)	(%)	(%)	(\$M)	(%)	Inflow (\$M)	Outflow (\$M)	Inflow (\$M)	Outflow (\$M)
Northern Trust Russell 1000	97.6	21.6%	15.0%	21%	6.4	1%	--	--	--	(6.0)
EARNEST Partners	39.7	8.8%	5.0%	6%	12.7	3%	--	--	--	(12.5)
Wellington Select Quality Equity	25.6	5.7%	0.0%	0%	27.8	6%	--	--	--	(27.8)
Rice Hall James	16.0	3.6%	2.5%	3%	1.6	0%	--	--	--	--
Brown Small Cap Value	13.5	3.0%	2.5%	3%	(1.4)	(0%)	--	--	--	--
US Equity	192.3	42.7%	25.0%	34%	47.2	10%	--	--	--	(46.3)
SGA MSCI ACWI ex US	43.6	9.7%	TBD	8%	6.4	1%	--	--	--	--
Vanguard Developed Markets	17.0	3.8%	TBD	4%	0.6	0%	--	--	--	--
International Equity	60.6	13.4%	5.0%	12%	7.0	1%	--	--	--	--
Total Equity (US & International)	252.9	56.1%	30.0%	46%	54.2	12%	--	--	--	(46.3)
Parametric	24.6	5.5%	0.0%	0%	22.2	5%	--	(4.5)	--	--
Covered Calls	24.6	5.5%	0.0%	0%	22.2	5%	--	(4.5)	--	--
Vanguard Long Treasury	12.7	2.8%	3.0%	3%	(2.2)	(0%)	--	--	--	--
Versor Trend Following	15.3	3.4%	3.0%	3%	(1.9)	(0%)	--	--	--	--
Kepos Alternative Risk Premia	12.4	2.7%	3.0%	3%	(3.6)	(1%)	--	--	--	--
Crisis Risk Offset	40.4	9.0%	9.0%	10%	(7.7)	(2%)	--	--	--	--
Ramirez	72.3	16.0%	16.0%	17%	(4.0)	(1%)	--	--	--	--
Wellington Core Bond	6.9	1.5%	15.0%	10%	(39.7)	(8%)	--	--	27.8	--
Reams	27.4	6.1%	10.0%	12%	(27.6)	(6%)	--	--	18.5	--
<i>Core Plus Mandate Addition to Existing Manager (TBD)</i>	0.0	0.0%	5.0%	5%	(23.5)	(5%)	--	--	--	--
<i>New Core Plus Manager (TBD)</i>	0.0	0.0%	15.0%	0%	0.0	0%	--	--	--	--
Polen Capital High Yield	10.0	2.2%	0.0%	0%	10.3	2%	--	--	--	(4.5)
Fixed Income (IG & Credit)	116.6	25.9%	61.0%	44%	(84.6)	(18%)	--	--	46.3	(4.5)
Cash	16.2	3.6%	0.0%	0%	16.0	3%	8.7	(8.7)	8.7	(8.7)
Fixed Income & Cash	132.9	29.5%	61.0%	44%	(68.7)	(15%)	8.7	(8.7)	55.0	(13.2)
Total Portfolio	450.8	100.0%	100.0%	100.0%	--	--	10.2	(13.2)	55.0	(59.5)

¹ Throughout this report, benefit payments and expenses are estimated at \$13.2 million quarterly for FYE2024 and FYE2025 per OPFRS. The report reflects estimated quarterly contributions from the City of \$10.2 million for FYE2024 and \$8.7 million for FYE2025, estimated based on prior fiscal year's actuarial valuations. Benefits are payable on first of each month.

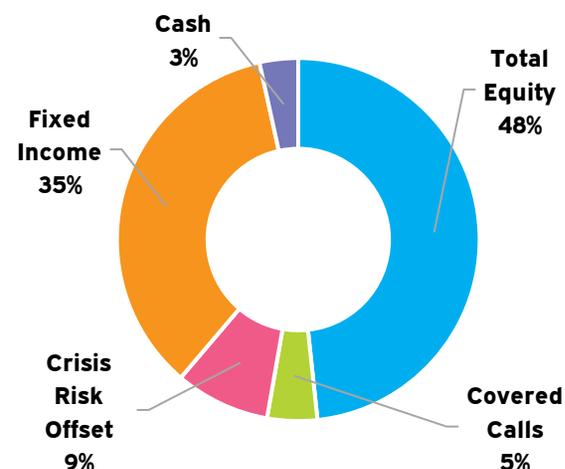
² The interim targets are the revised implementation targets for the 2nd half of 2024, pending Board's approval at 09/2024 meeting. Some manager/product targets and variances are omitted due to ongoing asset class reviews and transition planning.

Recommendation for 2024 Q4 Cash Flows

Market Value by Portfolio Segment Before Cash Flows

Portfolio Segment	Market Value (\$M)	Market Value (%)
US Equity	207.0	44.0
International Equity	63.4	13.5
Covered Calls	22.2	4.7
Crisis Risk Offset	39.3	8.4
Fixed Income (IG & Credit)	122.2	26.0
Cash	16.0	3.4
Total Portfolio	470.0	100.0

Projected Allocations After Cash Flows



Suggested Cash Flows for the Next Quarter

Portfolio Segment	Inflows (\$M)	Outflows (\$M)	Net Flows (\$M)	Purpose
Treasury Cash	8.7	-8.7	0.0	Benefit Payments
Polen High Yield	0.0	-4.5	-4.5	Benefit Payments
Northern Trust Russell 1000	0.0	-6.0	-6.0	Transition to New Asset Allocation Policy
EARNEST Partners	0.0	-12.5	-12.5	Transition to New Asset Allocation Policy
Wellington Select Quality Equity	0.0	-27.8	-27.8	Transition to New Asset Allocation Policy
Wellington Core Bond	27.8	0.0	27.8	Transition to New Asset Allocation Policy
Reams	18.5	0.0	18.5	Transition to New Asset Allocation Policy
Total	55.0	-59.5	-4.5	

Projected OPFRS Asset Allocation as of December 31, 2024¹

	Estimated Market Value		Interim Targets	Projected Variance from Interim Targets	
	(\$M)	(%)	(%)	(\$M)	(%)
Northern Trust Russell 1000	98.7	21.3%	21%	1.7	<1%
EARNEST Partners	29.8	6.4%	6%	0.6	<1%
Wellington Select Quality Equity	0.0	0.0%	0%	0.0	<1%
Rice Hall James	17.6	3.8%	3%	1.8	<1%
Brown Small Cap Value	14.6	3.1%	3%	(1.2)	<1%
US Equity	160.7	34.6%	34%	3.0	1%
SGA MSCI ACWI ex US	45.9	9.9%	8%	6.9	1%
Vanguard Developed Markets	17.5	3.8%	4%	0.8	0%
International Equity	63.4	13.7%	12%	7.7	2%
Total Equity (US & International)	224.1	48.3%	46%	10.7	2%
Parametric	20.7	4.5%	0%	20.7	5%
Covered Calls	20.7	4.5%	0%	20.7	5%
Vanguard Long Treasury	13.5	2.9%	3.3%	(2.0)	<(1%)
Versor Trend Following	13.7	3.0%	3.3%	(1.7)	<(1%)
Kepos Alternative Risk Premia	12.1	2.6%	3.3%	(3.4)	<(1%)
Crisis Risk Offset	39.3	8.5%	10%	(7.1)	(2%)
Ramirez	75.9	16.3%	17%	(3.0)	<(1%)
Wellington Core Bond	35.1	7.6%	10%	(11.3)	(2%)
Reams	47.3	10.2%	12%	(8.4)	(2%)
<i>Core Plus Mandate to Existing Mgr (TBD)</i>	<i>0.0</i>	<i>0.0%</i>	<i>5%</i>	<i>(23.2)</i>	<i>(5%)</i>
Polen Capital High Yield	5.8	1.2%	0%	5.8	1%
Fixed Income (IG & Credit)	164.0	35.3%	0%	(40.2)	(9%)
Cash	16.0	3.4%	44%	16.0	3%
Fixed Income & Cash	179.9	38.8%	0%	(24.2)	(5%)
Total Portfolio	464.0	100.0%	100%	--	--

¹ Estimated ending market value accounts for the remaining one-month of benefit payments for the current quarter and expected cash flows for the following quarter. The interim targets reflect the targets for the 2nd half of 2024 transitioning towards upon the long-term targets adopted in 2024 Q1. Some manager/product targets and variances are omitted due to ongoing asset class reviews and transition planning.

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Oakland Police and Fire Retirement System

September 25, 2024

Quarterly Performance Report
as of June 30, 2024

Agenda

1. Executive Summary
2. Economic and Market Update as of June 30, 2024
3. Quarterly Performance as of June 30, 2024
4. Manager Monitoring / Probation Status
5. Appendix
6. Disclaimer, Glossary, and Notes

Executive Summary

Total Portfolio Review

The Oakland Police and Fire Retirement System (OPFRS) finished the quarter with \$453.2 million in assets after net cash flows including monthly benefit payments. All asset classes were within their acceptable target allocation ranges¹ except for Fixed Income, which was slightly outside of its lower target limit at the end of the quarter.

Cash Flow Summary (\$ Millions)	Quarter	1 Year
Beginning Market Value	454.5	420.2
Net Cash Flows (including Benefit Payments)	-2.7	-11.6
Net Investment Change (Gain/Loss)	1.4	44.7
Ending Market Value	453.2	453.2

Investment Performance²

	QTD	YTD	1 Year	3 Year	5 Year
Total Plan (Gross)	0.3	5.3	10.9	2.7	6.5
Total Plan (Net)	0.3	5.1	10.6	2.4	6.2
<i>Policy Benchmark</i>	<i>1.4</i>	<i>6.8</i>	<i>12.6</i>	<i>3.3</i>	<i>6.9</i>
Excess Return	-1.1	-1.7	-2.0	-0.9	-0.7
<i>Public DB (\$250M-\$1B) Median Fund</i>	<i>0.9</i>	<i>5.6</i>	<i>10.5</i>	<i>2.7</i>	<i>7.2</i>
Total Plan (Net) vs. Peer Median Fund	-0.7	-0.4	0.1	-0.3	-0.9
<i>Peer Group Percentile Rank</i>	<i>82</i>	<i>66</i>	<i>50</i>	<i>57</i>	<i>77</i>

¹ The allocation targets are those adopted by the board in 2017 Q4. A new asset-liability study was completed, and new long-term and interim targets and ranges were adopted in 2024 Q1; these are expected to commence starting July 2024.

² Fiscal year begins on July 1. Peer group is Investment Metrics Public Defined Benefit plans with \$250 million to \$1 billion in assets. The number of peers is about 80-90 portfolios in each time period. Please see the Benchmark History section for the Policy Benchmark's current and historical compositions.

Asset Class and Manager Highlights¹

- **Total Plan** underperformed its Policy Benchmark across all time periods on a net of fee basis.
 - The underperformance during the quarter, year-to-date, and over the trailing 1-year period was driven primarily by the Domestic Equity segment as most managers performance lagged the broad market Russell 3000 Index. International Equity and Fixed Income were positive contributors to the Total Plan's relative performance for year-to-date and over the trailing 1-year period, partially offsetting Domestic Equity's underperformance.
- **Domestic Equity** underperformed the Russell 3000 Index over all trailing periods. Active Domestic Equity managers across different styles, with the exception of Brown Small Cap Value, trailed the broad market Russell 3000 Index over the 1-year period as a select group of companies ("Magnificent Seven") drove returns in 2023. For the quarter, Brown Small Cap Value and Rice Hall James outperformed their respective benchmarks while all other active managers underperformed their respective benchmarks.
- **International Equity** and its only active manager, SGA, outperformed MSCI ACWI ex US (Net) for all periods except over the quarter.
- **Fixed Income** slightly outperformed or matched its custom benchmark over the quarter and 1-year trailing period. The underweight allocation to Fixed Income has contributed to the Total Plan's relative performance over the past 1-year trailing period. The underlying managers outperformed their respective benchmarks for most time periods.
- The **Credit** segment, with Polen Capital as its sole manager, outperformed its underlying benchmark, the Bloomberg US Corporate High Yield Index, for all time periods except for the quarter and 1-year trailing period.
- **Covered Calls**, as well as both the passive BXM and the active DeltaShift strategies, outperformed the CBOE S&P 500 Buy Write Index across almost all periods measured.
- The **Crisis Risk Offset** segment underperformed its custom benchmark over all time periods measured. Year-to-date Kepos Alternative Risk Premia and Vanguard Long-term Treasury ETF have outperformed their respective benchmarks while Versor Trend Following lagged its benchmark, despite its outperformance over the quarter.

¹ Fiscal year begins on July 1. Please see the Benchmark History section for the custom benchmarks' current and historical compositions.

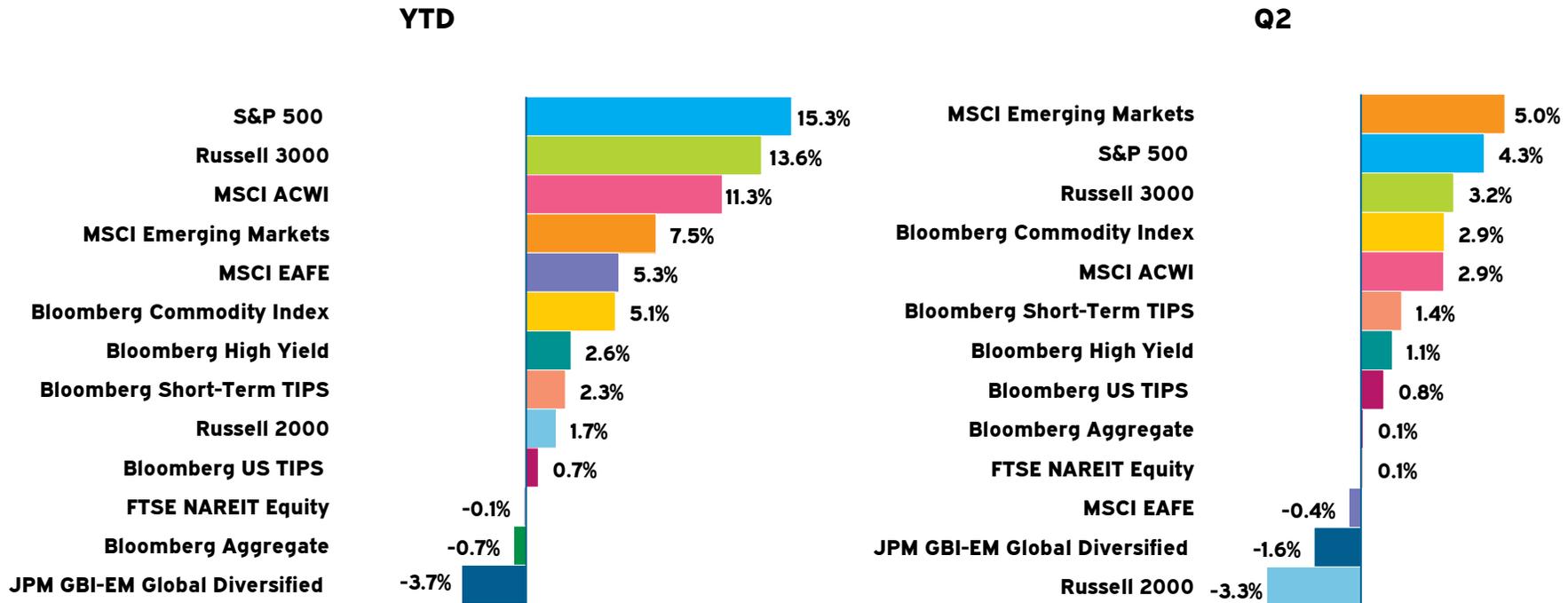
Economic and Market Update

As of June 30, 2024

Commentary

- Softening economic data, increased hopes of interest rate cuts, and ongoing AI optimism drove most asset classes higher in the second quarter.
- While the Fed remains data dependent, improvements in inflation and a cooling labor market may clear the way for several rate cuts this year.
 - Inflation pressures have eased in most countries from their pandemic peaks, but some uncertainty remains and levels are still above most central bank targets. In the second quarter, headline and core inflation measures in the US both fell, with most readings coming in below expectations.
 - The US equity markets (Russell 3000 index) added to its gains in the second quarter, rising 3.2%. Technology continued to drive results in the quarter due to AI demand and investment.
 - Non-US developed equity markets fell in the second quarter (-0.4%) on continued strength in the US dollar and political uncertainty in Europe.
 - Emerging market equities rallied (5.0%), for the quarter. Chinese stocks were up 7.1% as coordinated buying of Chinese exchange traded funds (ETFs) by state-backed financial services companies helped boost stock prices.
 - US interest rates rose over the quarter but finished off their highs. Income offset capital losses though, leading to the broad US bond market rising 0.1% in the second quarter.
- Looking to the rest of this year, the paths of inflation and monetary policy, China's economic disorder and slowing economic growth, and the many looming elections will be key factors.

Index Returns¹



→ Declining inflation, resilient growth, and strong corporate earnings supported most asset classes in the second quarter.

→ Mid-way through 2024, US stocks have significantly outperformed other asset classes on a year-to-date basis.

¹ Source: Bloomberg. Data is as of June 30, 2024.

Domestic Equity Returns¹

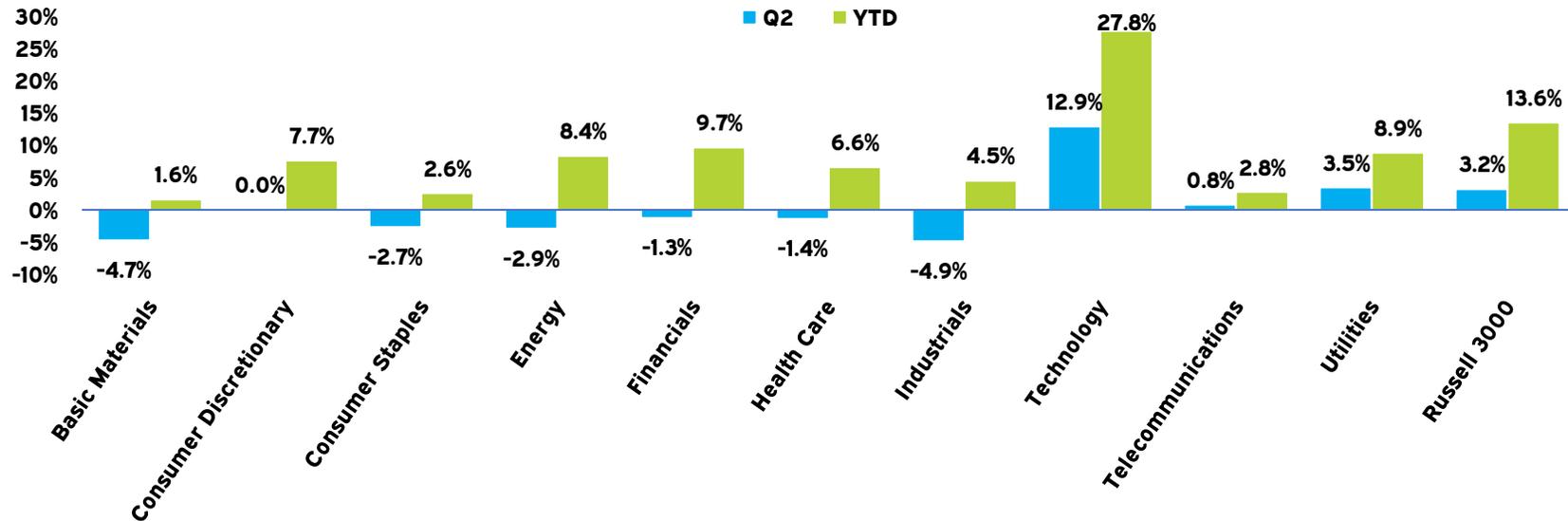
Domestic Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.6	4.3	15.3	24.6	10.0	15.1	12.9
Russell 3000	3.1	3.2	13.6	23.1	8.1	14.2	12.1
Russell 1000	3.3	3.6	14.2	23.9	8.8	14.6	12.5
Russell 1000 Growth	6.7	8.3	20.7	33.5	11.3	19.4	16.3
Russell 1000 Value	-0.9	-2.2	6.6	13.1	5.5	9.0	8.2
Russell MidCap	-0.7	-3.3	5.0	12.9	2.4	9.5	9.0
Russell MidCap Growth	1.7	-3.2	6.0	15.1	-0.1	9.9	10.5
Russell MidCap Value	-1.6	-3.4	4.5	12.0	3.7	8.5	7.6
Russell 2000	-0.9	-3.3	1.7	10.1	-2.6	6.9	7.0
Russell 2000 Growth	-0.2	-2.9	4.4	9.1	-4.9	6.2	7.4
Russell 2000 Value	-1.7	-3.6	-0.8	10.9	-0.5	7.1	6.2

US Equities: The Russell 3000 rose 3.2% in the second quarter, bringing the year-to-date results to 13.6%.

- US stocks continued their rise in June driven by on-going AI optimism. Nearly all the quarterly market gains in the S&P 500 were driven by large cap technology stocks, with the S&P 500 equal weighted index down 3.1% for the quarter.
- US large cap stocks continue to outperform small cap stocks. This dynamic is driven by the large technology stocks like NVIDIA, Apple, and Alphabet and the underperformance of small cap biopharma companies and banks.
- Growth outperformed value for the quarter, with the most pronounced outperformance in the large cap space (8.3% versus -2.2%).

¹ Source: Bloomberg. Data is as of June 30, 2024.

Russell 3000 Sector Returns¹



- Unlike first quarter performance, where all sectors gained, the second quarter saw mixed results across the major sectors.
- Technology (+12.9%) continued to drive results fueled by on-going AI optimism. Utilities were a distant second increasing 3.5%, on expectations of increased demand from AI-related companies.
- Many other sectors fell, including financials (-1.3%), health care (-1.4%), consumer staples (-2.7%), energy (-2.9%), materials (-4.7%), and industrials (-4.9%).
- All sectors have positive returns for the year-to-date period. Technology stocks (+27.8%) continue to lead the broader market, followed by financials (9.7%).

¹ Source: Bloomberg. Data is as of June 30, 2024.

Foreign Equity Returns¹

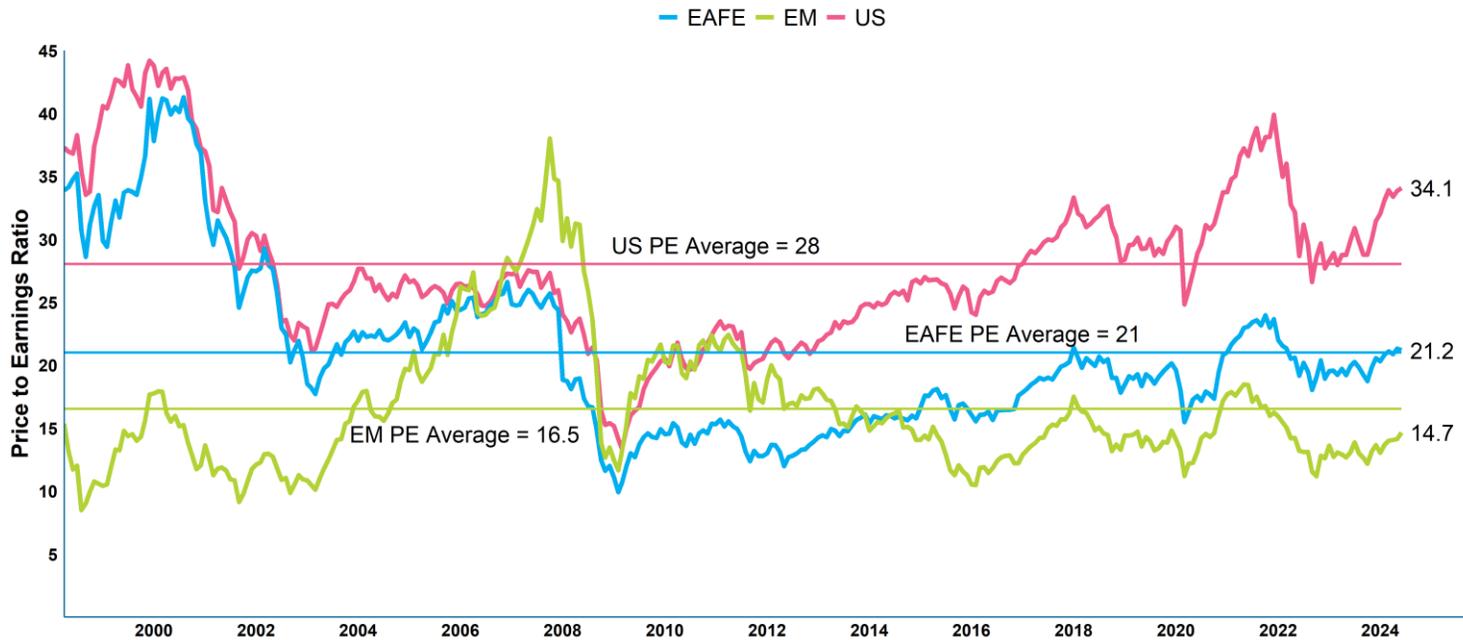
Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-0.1	1.0	5.7	11.6	0.5	5.6	3.8
MSCI EAFE	-1.6	-0.4	5.3	11.5	2.9	6.5	4.3
MSCI EAFE (Local Currency)	-0.6	1.0	11.1	15.1	8.1	9.0	7.4
MSCI EAFE Small Cap	-3.0	-1.8	0.5	7.8	-3.4	4.2	4.3
MSCI Emerging Markets	3.9	5.0	7.5	12.5	-5.1	3.1	2.8
MSCI Emerging Markets (Local Currency)	4.3	6.2	11.0	15.5	-1.6	5.6	5.8
MSCI EM ex. China	6.1	4.2	8.4	18.5	1.4	6.7	3.9
MSCI China	-1.9	7.1	4.7	-1.6	-17.7	-4.3	1.4

Foreign Equity: Developed international equities (MSCI EAFE) fell 0.4% in the second quarter, while emerging market equities (MSCI Emerging Markets) gained 5.0%.

- For the second quarter, developed market equities declined driven by continued strength in the US dollar and regional political risks particularly in France. UK and Japanese equities made new all-time highs during the quarter, but this was not enough to offset losses in Europe.
- Emerging market equities outpaced developed market equities during the quarter given strong results in China (7.1%). China equities moved into positive territory for the year (4.7%) due to government purchases of shares, improving economic data, and returning foreign investors.

¹ Source: Bloomberg. Data is as of June 30, 2024.

Equity Cyclically Adjusted P/E Ratios¹



- At the end of the second quarter, the US equity price-to-earnings ratio remained elevated and above its 21st century average.
- International equity market valuations remain well below the US. International developed market valuations have increased to slightly above their long-term average, while emerging market equities remain below their long-term average despite recent gains.

¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of June 2024. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

Fixed Income Returns¹

Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	0.9	0.2	-0.3	3.5	-2.7	0.1	1.6	5.3	6.0
Bloomberg Aggregate	0.9	0.1	-0.7	2.6	-3.0	-0.2	1.3	5.0	6.2
Bloomberg US TIPS	0.8	0.8	0.7	2.7	-1.3	2.1	1.9	4.8	6.6
Bloomberg Short-term TIPS	0.6	1.4	2.3	5.4	2.2	3.2	2.0	5.1	2.4
Bloomberg High Yield	0.9	1.1	2.6	10.4	1.6	3.9	4.3	7.9	3.7
JPM GBI-EM Global Diversified (USD)	-1.1	-1.6	-3.7	0.7	-3.3	-1.3	-0.9	--	--

Fixed Income: The Bloomberg Universal index rose 0.2% in the second quarter, reducing the year-to-date decline to -0.3%.

- Bonds finished the quarter slightly up as May and June gains offset the April declines.
- The broad US bond market (Bloomberg Aggregate) rose 0.1% in the second quarter, with the broad TIPS market gaining 0.8%. The less interest rate sensitive short-term TIPS index increased 1.4% for the quarter, leading to the best results.
- High yield bonds (1.1%) also rose, as risk appetite remains strong.

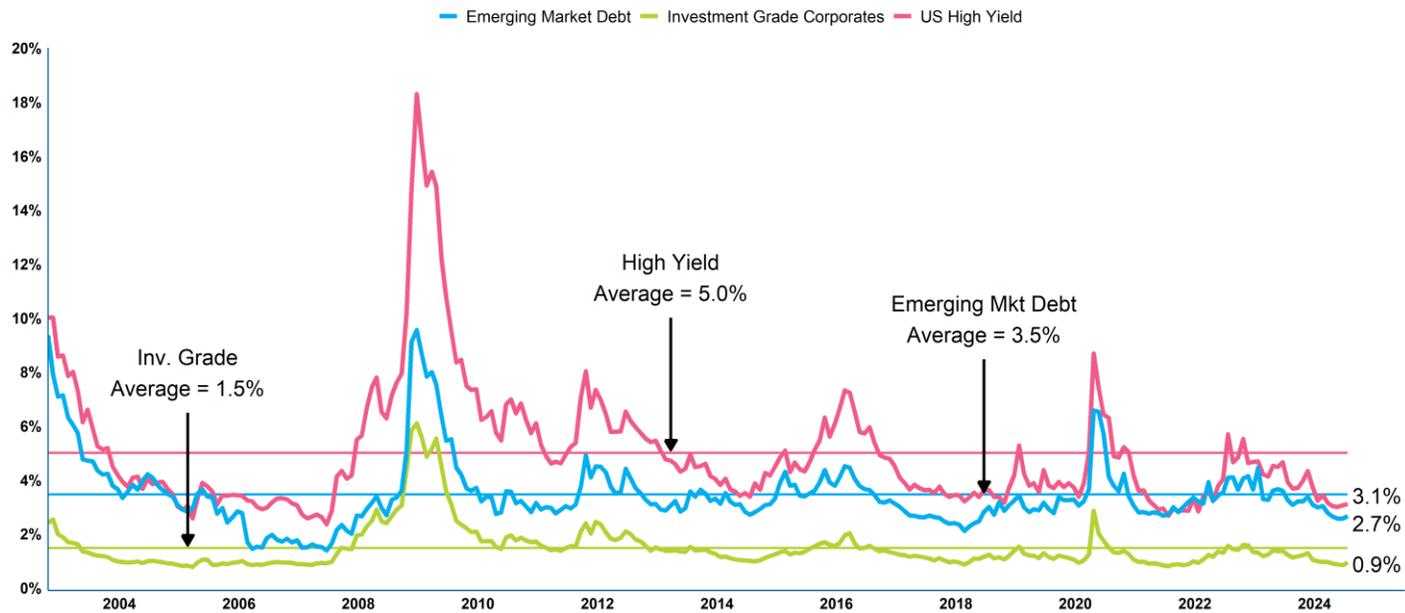
¹ Source: Bloomberg. Data is as of June 30, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively. JPM GBI-EM data is from J.P. Morgan. Current yield and duration data is not available.



- After rates significantly increased in April on strong inflation data, they then declined in May and June. Chair Powell confirming that the FOMC would not raise rates again this year as economic data appears to be returning to long-run trends led to rates declining from the April highs.
- The more policy sensitive 2-year Treasury yield finished the quarter roughly 0.2% higher at 4.76% but well off its peak of over 5.0%. The 10-year Treasury rose by a similar amount during the quarter finishing at 4.39%; also, off its April peak of 4.68%.
- The yield curve remained inverted at month-end, with the spread between the 2-year and 10-year Treasury at roughly -35 basis points.

¹ Source: Bloomberg. Data is as of June 30, 2024.

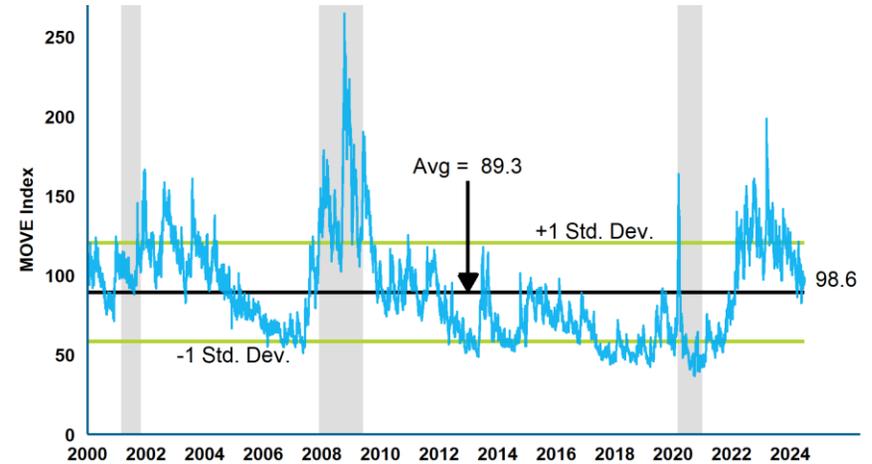
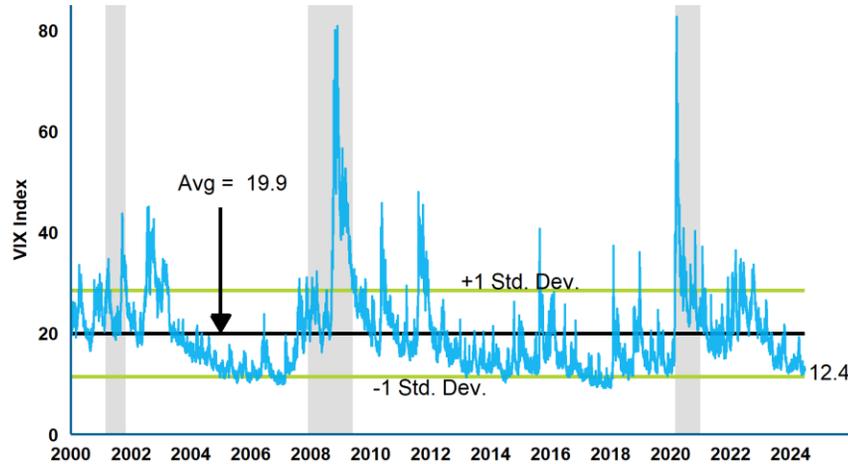
Credit Spreads vs. US Treasury Bonds¹



- Despite rising rates, investor demand for risk exposure in credit markets remained strong in Q2 given measured weakness in the economic outlook and expectations of lower interest rates by year-end.
- Spreads (the yield above a comparable maturity Treasury) stayed relatively steady over the quarter, near post-pandemic lows. All spreads remained below their respective long-run averages, particularly high yield.
- Although spreads are relatively tight, yields remain at above-average levels compared to the last two decades, particularly for short-term issues.

¹ Source: Bloomberg. Data is as of June 30, 2024. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

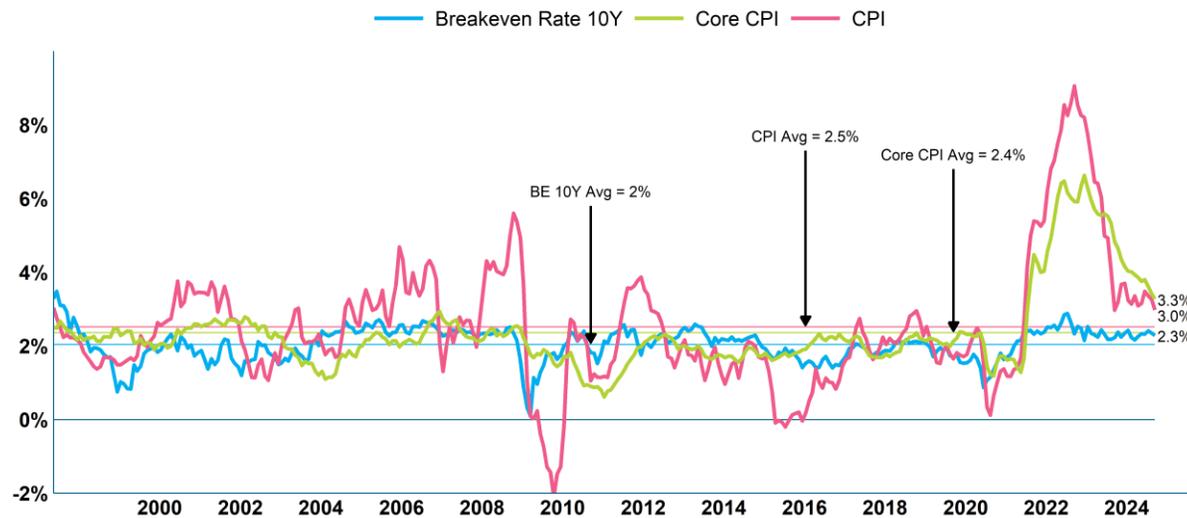
Equity and Fixed Income Volatility¹



- Volatility in equities was around one standard deviation below its long-term average at the end of the quarter as continued strength in technology stocks and weakening economic data has moderated fear in the markets.
- Volatility in bonds (MOVE) ended June higher than where it started the quarter (98.6 versus 86.4) and above its long-run average.

¹ Equity Volatility – Source: FRED. Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of June 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2024.

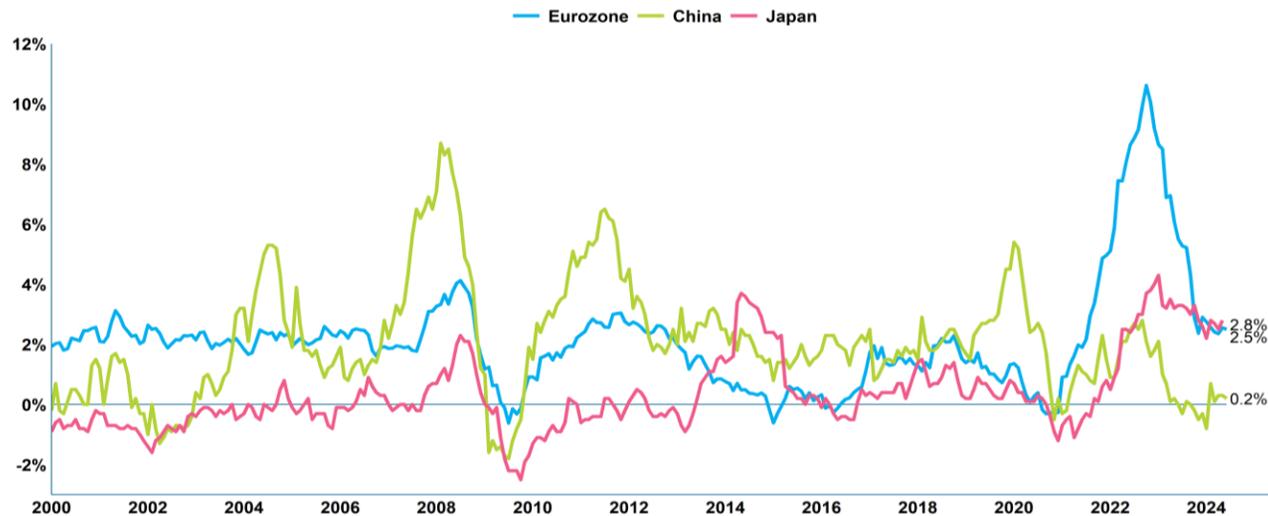
US Ten-Year Breakeven Inflation and CPI¹



- Year-over-year headline inflation continued to fall in June (3.3% to 3.0%) and again came in below expectations. Over the quarter, inflation fell by a total of 0.5%.
- Month-over-month inflation was negative for the first time since March 2020, largely because of price declines in energy and core goods.
- Core inflation (excluding food and energy) also declined in June (3.4% to 3.3%) and came in below expectations. A drop in used car prices, transportation services, and a slowing of the pace of shelter price increases all contributed to the decline.
- Inflation expectations (breakevens) have been volatile, but they finished the quarter largely where they started.

¹ Source: FRED. Data is as June 2024. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

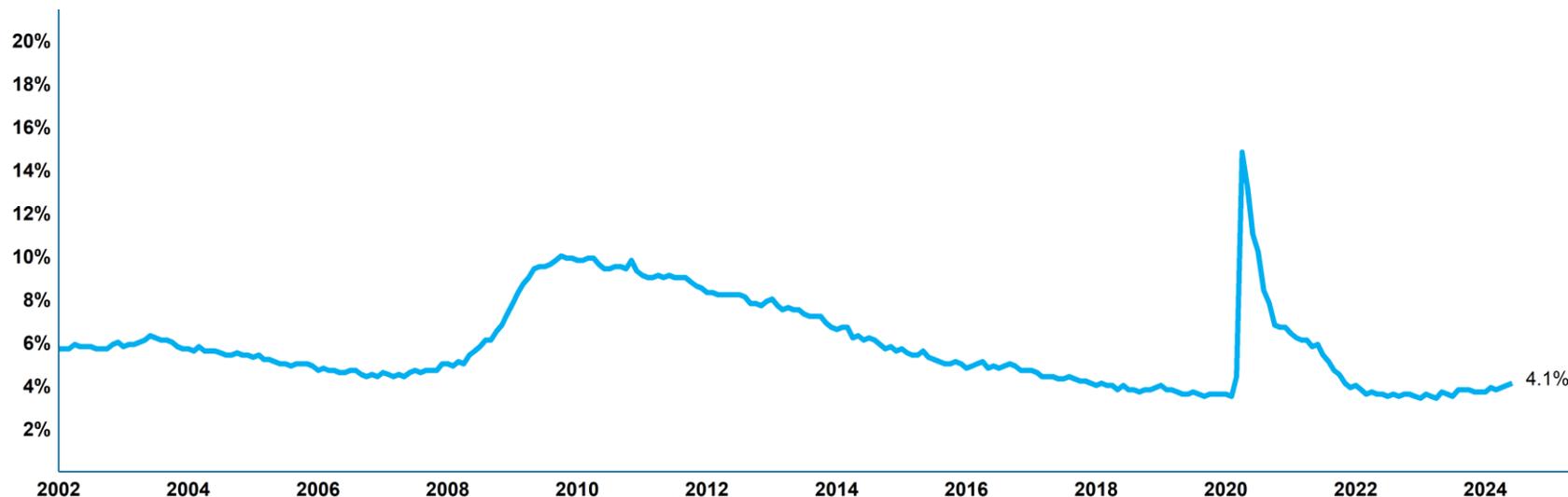
Global Inflation (CPI Trailing Twelve Months)¹



- Outside the US, inflation is also easing from the recent peaks.
- In the eurozone, inflation experienced a dramatic decline last year but remains above the central bank's 2% target. In June, inflation fell slightly from 2.6% to 2.5% year-over-year.
- Inflation in Japan has slowly dropped from the early 2023 peak of 4.3%, but it remains near levels not seen in a decade. In the most recent reading (May), inflation rose modestly from 2.5% to 2.8% as fuel and utility prices increased.
- China appears to have emerged from deflationary pressures, but inflation levels remain well below other major economies due to slowing economic growth. Annual inflation levels have been positive for the last five readings signaling improvement in domestic demand. The June year-over-year number came in at 0.2%, slightly lower than the prior reading of 0.3%.

¹ Source: Bloomberg. Data is June 30, 2024, except Japan which is as of May 31, 2024.

US Unemployment¹

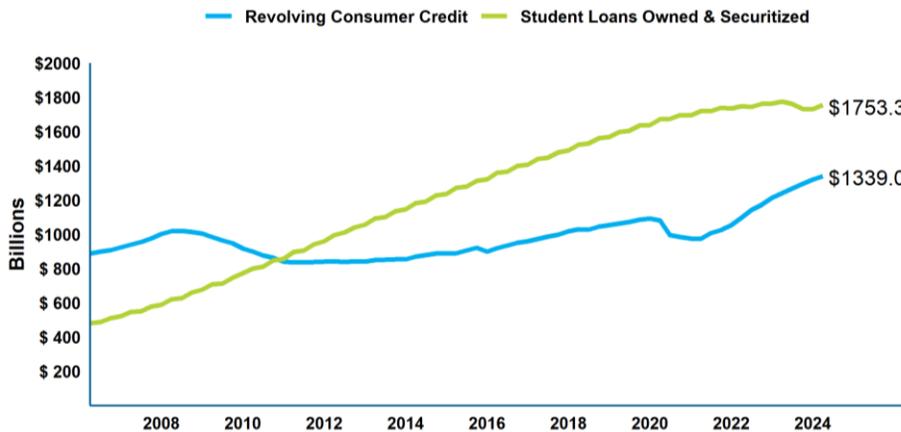


- Overall, the US labor market remains healthy, but there have been some recent signs of softening.
- The unemployment rate came in above expectations in June reaching 4.1%, a level not seen since early 2022. Over the second quarter unemployment increased 0.3%.
- Wage growth remains strong though (around 3.9% annually), and initial claims for unemployment are still subdued.
- Despite significant downward revisions to job gains in April and May, in June the economy added 206,000 jobs (above expectations). The government added the most jobs (70,000), followed by the healthcare sector (49,000).

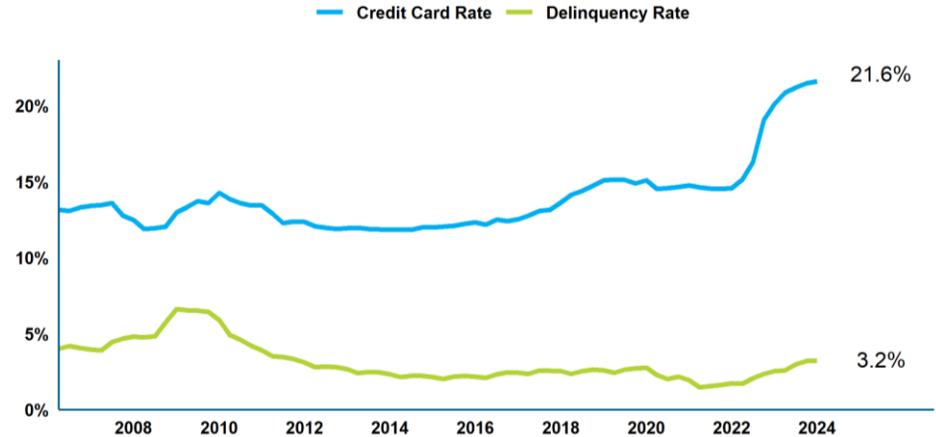
¹ Source: FRED. Data is as June 30, 2024.

US Consumer Under Stress?¹

Revolving Consumer Credit & Student Loans (\$B)



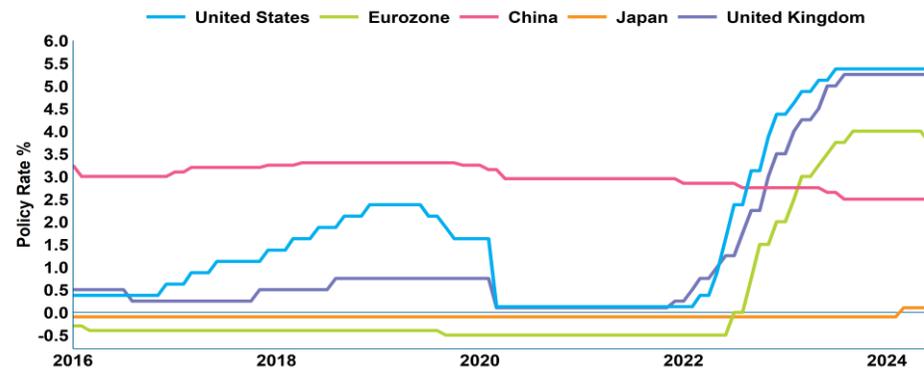
Consumer Credit Card Interest Rates (%)



- Despite the strong labor market and higher wages, pressures are building on the US consumer. This is an important consideration as consumer spending has been a key driver of economic growth.
- Revolving consumer credit surged to new highs in 2023 even as credit card interest rates hit levels not seen before (the prior peak was around 19% in the 1980s). Recently, we have also seen payment delinquencies on credit cards and auto loans start to increase, particularly for younger people.
- The return of student loan repayments after a three-year pandemic-related reprieve could add to pressures on consumers' budgets. This might be partially mitigated by recently initiated repayment and forgiveness programs.
- It is worth noting though that many people locked in low-rate fixed mortgages before rates increased and many corporations issued debt at extremely low levels, reducing the sensitivity to higher rates.

¹ Source: FRED. Data is as of March 31, 2024. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.

Policy Rates¹



- In the US interest rates have remained at current levels (5.25%-5.50%) for a year now. The most recent “dot plot” (the Fed’s expectation on the path of rates) showed a median expectation of roughly one rate cut this year. Markets are now pricing in two to three rate cuts in 2024 given the improving inflation data with the probability of a cut around 100% in September and slightly over 90% for December.
- The European Central Bank (ECB) cut its policy rate by 25 basis points at the beginning of June, as expected. Like the US, cuts are also anticipated at the September and December meetings.
- After ending the last negative interest rate policy given higher inflation levels, the Bank of Japan (BOJ) has since kept rates at slightly above 0%. Policy is expected to tighten going forward with the BOJ announcing at their recent meeting they would also start reducing their bond purchases. Interest rate futures markets are pricing in roughly two rate hikes (of 10 basis points) through the end of the year.
- The central bank in China has maintained interest rates at record low levels and continues to inject liquidity into the banking system, to support economic growth.

¹ Source: Bloomberg. Data is as of June 30, 2024. United States rate is the mid-point of the Federal Funds Target Rate range. Eurozone rate is the ECB Deposit Facility Announcement Rate. Japan rate is the Bank of Japan Unsecured Overnight Call Rate Expected. China rate is the China Central Bank 1-Year Medium Term Interest Rate. UK rate is the UK Bank of England Official Bank Rate.

US Dollar vs. Broad Currencies¹



- Overall, the dollar rose in the second quarter (104.5 to 105.9) versus a basket of currencies of major trading partners.
- China and the ECB cutting policy rates, stronger relative growth, and the weakening of the Japanese yen, have all collectively helped strengthen the dollar.

¹ Source: Bloomberg. Data as of June 30, 2024.

Summary

Key Trends:

- According to the International Monetary Fund's (IMF) April report, global growth this year is expected to match the 2023 estimate at around 3.2% with most major economies predicted to avoid a recession. Continued strong economic growth does run the risk of inflation and interest rates staying higher for longer.
- Key economic data in the US has largely weakened and come in below expectations, causing markets to expect between two and three rate cuts this year. Uncertainty remains though regarding the timing and pace of interest rate cuts in the coming year.
- We have started to see some divergences in monetary policy with other central banks, such as the European Central Bank (ECB), starting to cut interest rates while the Fed remains on hold. This disparity will likely influence investment flows and currencies.
- US consumers could feel pressure as certain components of inflation (e.g., shelter) remain high, borrowing costs are elevated, and the job market may weaken.
- A focus for US equities going forward will be whether earnings can remain resilient if growth slows. Also, the future paths of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including China's economic uncertainty and ongoing weakness in the real estate sector. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

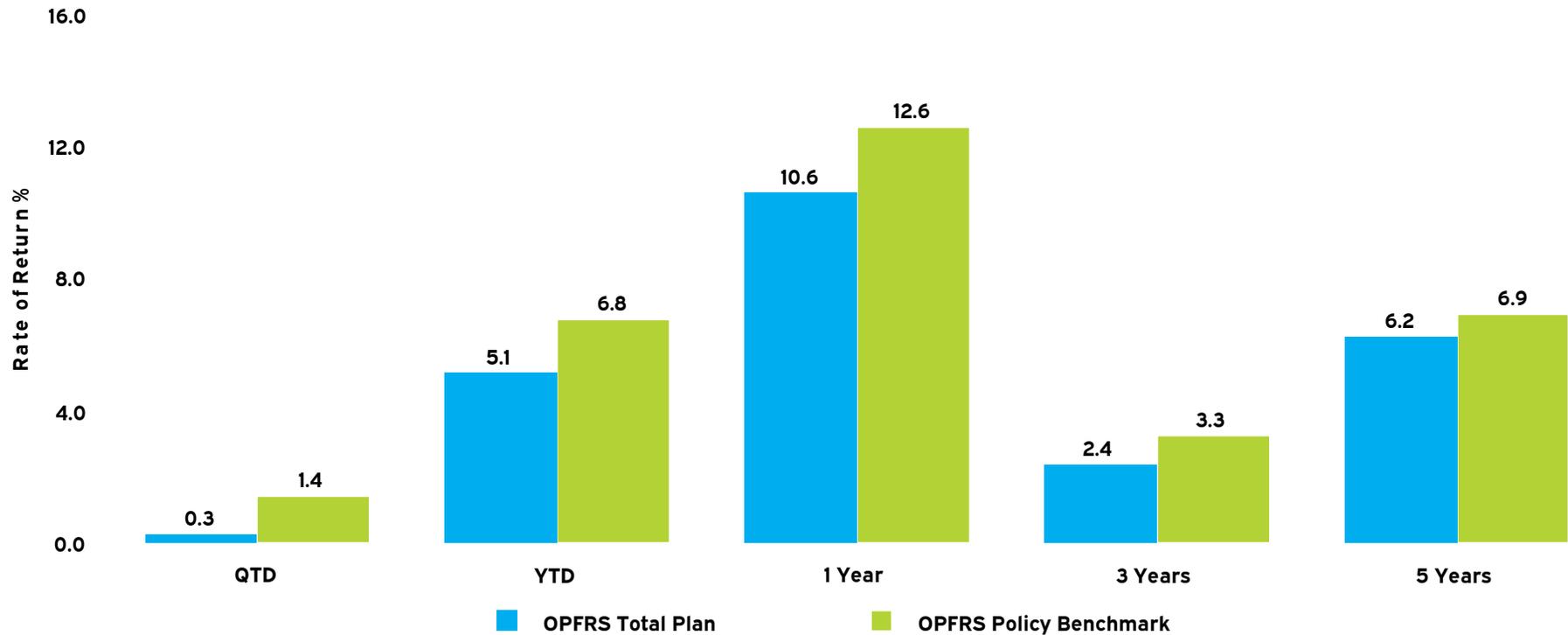
Quarterly Performance

as of June 30, 2024

Summary of Cash Flows

	QTD (\$)	1 Year (\$)
OPFRS Total Plan		
Beginning Market Value	454,455,689	420,170,089
Net Cash Flow	-2,663,182	-11,615,491
Net Investment Change	1,439,135	44,677,044
Ending Market Value	453,231,642	453,231,642

Return Summary Ending June 30, 2024

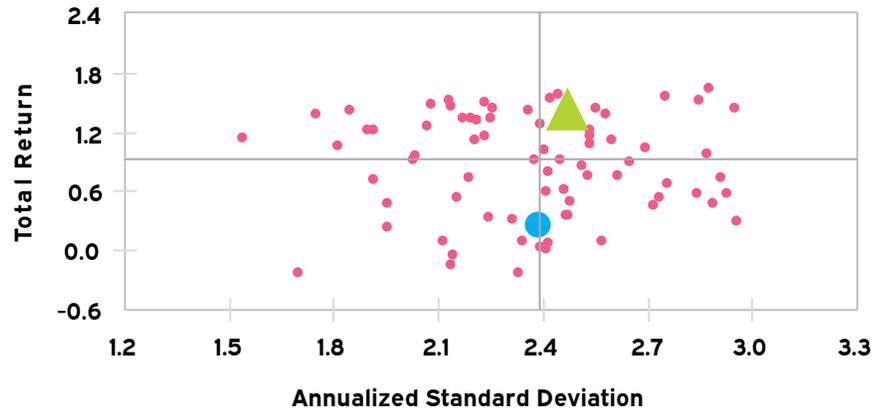


Total Plan performance shown is net of fees.

Oakland Police and Fire Retirement System

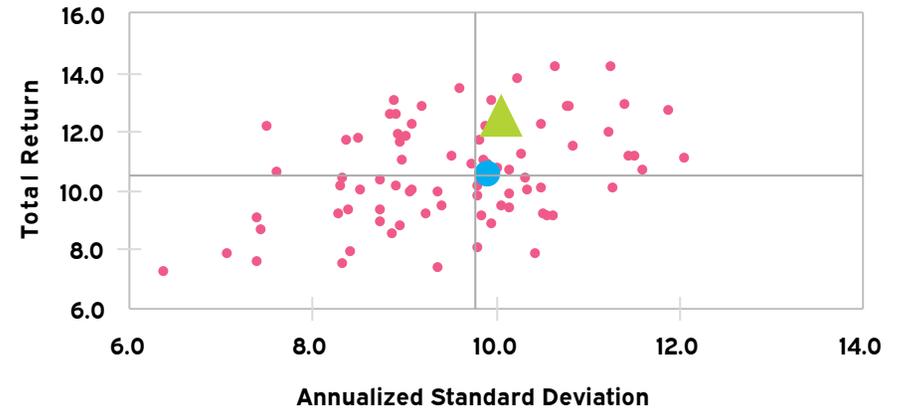
Total Plan Risk/Return Summary | As of June 30, 2024

Risk-Return Summary QTD Ending June 30, 2024



- IM Public DB \$250M-\$1B
- OPFRS Total Plan
- ▲ OPFRS Policy Benchmark

Risk-Return Summary 1 Yr Ending June 30, 2024



- IM Public DB \$250M-\$1B
- OPFRS Total Plan
- ▲ OPFRS Policy Benchmark

	Return	Standard Deviation
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OPFRS Total Plan	0.3	2.4
OPFRS Policy Benchmark	1.4	2.5
Median	0.9	2.4

	Return	Standard Deviation
--	--------	--------------------

OPFRS Total Plan	10.6	9.9
OPFRS Policy Benchmark	12.6	10.1
Median	10.5	9.8

Performance shown is net of fees. Calculation is based on monthly periodicity. Fiscal year begins on July 1. Plan Sponsor Peer Group shown is net of fees.

Asset Class Performance: Gross of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
OPFRS Total Plan (Gross)	453,231,642	100.0	0.3	5.3	10.9	2.7	6.5	6.8	6.7	Dec-88
<i>OPFRS Policy Benchmark</i>			<i>1.4</i>	<i>6.8</i>	<i>12.6</i>	<i>3.3</i>	<i>6.9</i>	<i>6.9</i>	<i>8.0</i>	
Excess Return			-1.1	-1.5	-1.7	-0.6	-0.4	-0.1	-1.3	
Domestic Equity (Gross)	194,973,749	43.0	0.4	8.8	17.3	6.0	12.0	11.1	9.2	Jun-97
<i>Russell 3000 (Blend)</i>			<i>3.2</i>	<i>13.6</i>	<i>23.1</i>	<i>8.1</i>	<i>14.1</i>	<i>12.1</i>	<i>9.6</i>	
Excess Return			-2.8	-4.8	-5.8	-2.1	-2.1	-1.0	-0.4	
International Equity (Gross)	59,974,536	13.2	0.2	6.9	14.6	3.4	7.1	5.7	5.7	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			<i>1.0</i>	<i>5.7</i>	<i>11.6</i>	<i>0.5</i>	<i>5.5</i>	<i>3.8</i>	<i>5.3</i>	
Excess Return			-0.8	1.2	3.0	2.9	1.6	1.9	0.4	
Fixed Income (Gross)	107,748,738	23.8	0.2	-0.2	3.2	-2.5	0.4	2.0	4.7	Jan-94
<i>Bloomberg Universal (Blend)</i>			<i>0.2</i>	<i>-0.3</i>	<i>3.5</i>	<i>-2.7</i>	<i>0.1</i>	<i>1.6</i>	<i>4.5</i>	
Excess Return			0.0	0.1	-0.3	0.2	0.3	0.4	0.2	
Credit (Gross)	10,084,780	2.2	1.1	4.3	10.2	3.8	5.4	--	5.8	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			<i>1.1</i>	<i>2.6</i>	<i>10.4</i>	<i>1.6</i>	<i>3.9</i>	<i>4.3</i>	<i>4.8</i>	
Excess Return			0.0	1.7	-0.2	2.2	1.5	--	1.0	
Covered Calls (Gross)	24,121,617	5.3	3.6	10.1	16.2	8.4	11.7	9.8	9.9	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>1.5</i>	<i>7.6</i>	<i>8.9</i>	<i>5.0</i>	<i>5.6</i>	<i>5.8</i>	<i>5.9</i>	
Excess Return			2.1	2.5	7.3	3.4	6.1	4.0	4.0	
Crisis Risk Offset (Gross)	39,948,914	8.8	-1.5	1.9	0.9	-3.2	-7.1	--	-6.5	Aug-18
<i>Crisis Risk Offset Benchmark</i>			<i>-1.4</i>	<i>3.9</i>	<i>3.6</i>	<i>4.3</i>	<i>0.7</i>	<i>--</i>	<i>0.7</i>	
Excess Return			-0.1	-2.0	-2.7	-7.5	-7.8	--	-7.2	
Cash (Gross)	16,379,309	3.6	0.3	0.3	0.3	0.1	0.5	0.8	0.5	Mar-11

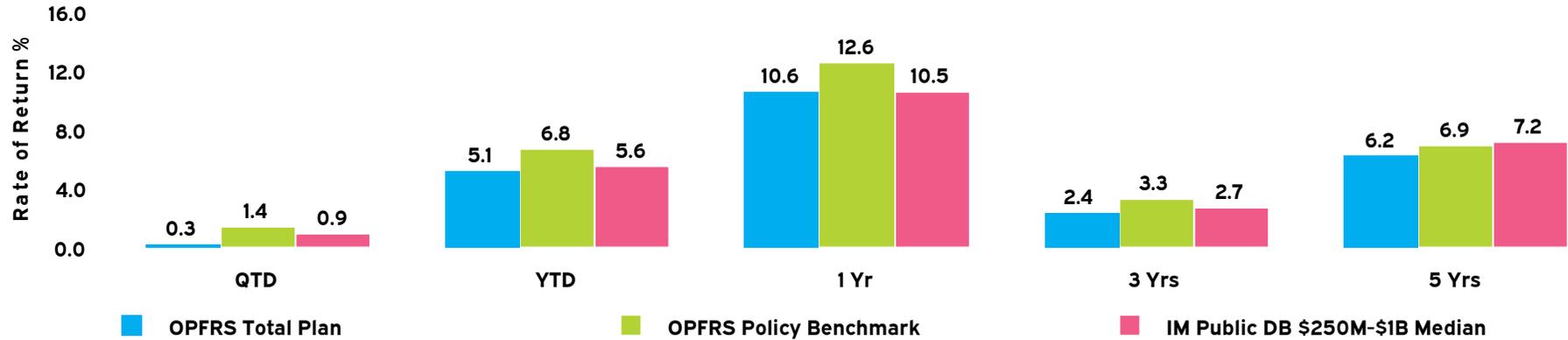
Performance shown is gross of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Asset Class Performance: Net of Fees | As of June 30, 2024

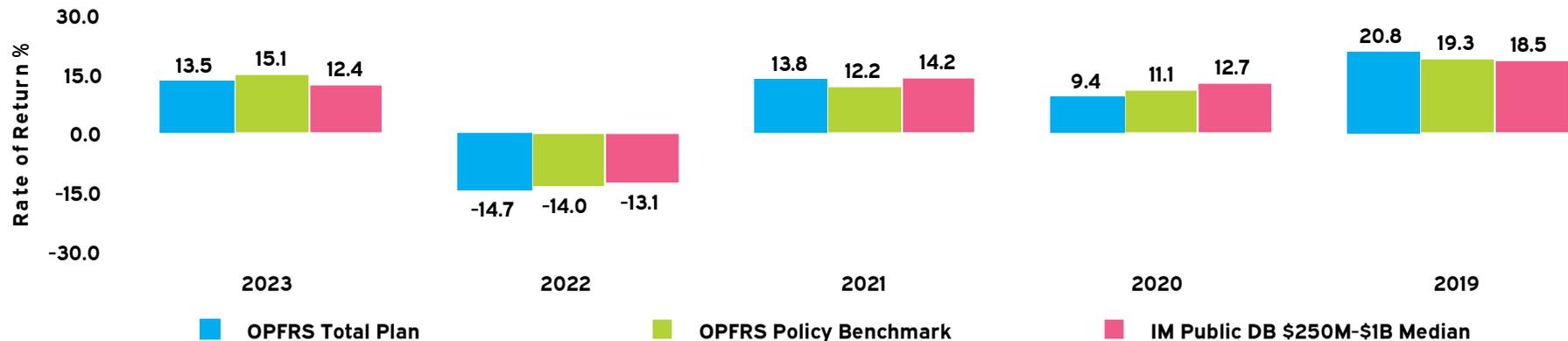
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
OPFRS Total Plan (Net)	453,231,642	100.0	0.3	5.1	10.6	2.4	6.2	6.5	6.7	Dec-88
<i>OPFRS Policy Benchmark</i>			1.4	6.8	12.6	3.3	6.9	6.9	8.0	
Excess Return			-1.1	-1.7	-2.0	-0.9	-0.7	-0.4	-1.3	
<i>IM Public DB \$250M-\$1B Median (Net)</i>			0.9	5.6	10.5	2.7	7.2	6.5	8.0	
Peer Group Rank			82	66	50	57	77	47	100	
Domestic Equity (Net)	194,973,749	43.0	0.3	8.6	16.9	5.7	11.7	10.8	9.1	Jun-97
<i>Russell 3000 (Blend)</i>			3.2	13.6	23.1	8.1	14.1	12.1	9.6	
Excess Return			-2.9	-5.0	-6.2	-2.4	-2.4	-1.3	-0.5	
International Equity (Net)	59,974,536	13.2	0.1	6.6	13.9	2.7	6.5	5.2	5.5	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			1.0	5.7	11.6	0.5	5.5	3.8	5.3	
Excess Return			-0.9	0.9	2.3	2.2	1.0	1.4	0.2	
Fixed Income (Net)	107,748,738	23.8	0.1	-0.3	3.0	-2.7	0.2	1.8	4.4	Jan-94
<i>Bloomberg Universal (Blend)</i>			0.2	-0.3	3.5	-2.7	0.1	1.6	4.5	
Excess Return			-0.1	0.0	-0.5	0.0	0.1	0.2	-0.1	
Credit (Net)	10,084,780	2.2	1.0	4.0	9.6	3.2	4.8	--	5.1	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			1.1	2.6	10.4	1.6	3.9	4.3	4.8	
Excess Return			-0.1	1.4	-0.8	1.6	0.9	--	0.3	
Covered Calls (Net)	24,121,617	5.3	3.6	10.0	15.9	8.2	11.5	9.5	9.6	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			1.5	7.6	8.9	5.0	5.6	5.8	5.9	
Excess Return			2.1	2.4	7.0	3.2	5.9	3.7	3.7	
Crisis Risk Offset (Net)	39,948,914	8.8	-1.6	1.8	0.7	-3.3	-7.3	--	-6.7	Aug-18
<i>Crisis Risk Offset Benchmark</i>			-1.4	3.9	3.6	4.3	0.7	--	0.7	
Excess Return			-0.2	-2.1	-2.9	-7.6	-8.0	--	-7.4	
Cash (Net)	16,379,309	3.6	0.3	0.3	0.3	0.1	0.5	0.8	0.5	Mar-11

Performance shown is net of fees, except for Total Plan, Domestic Equity, and International Equity composites which have a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Trailing Period Performance Ending June 30, 2024



Calendar Year Performance Ending December 31, 2023



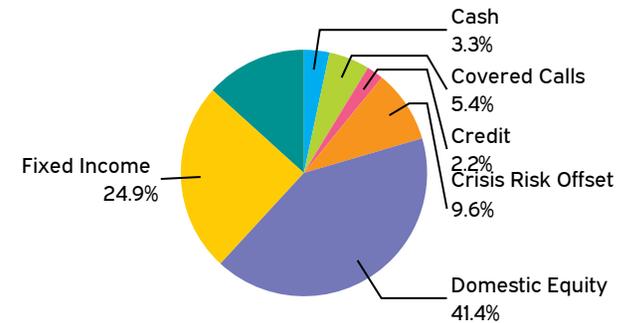
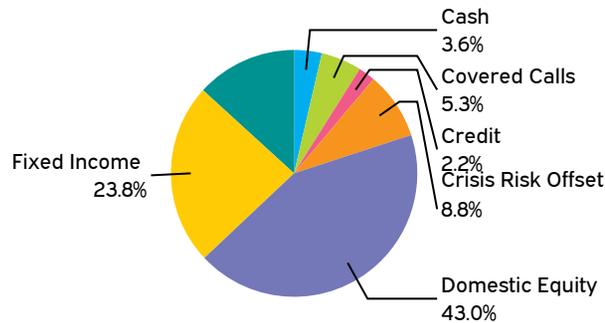
Total Plan performance is a mix of gross and net of fees; performance is gross of fees prior to January 2016 and thereafter. Fiscal year begins on July 1.

Asset Allocation | As of June 30, 2024

	Current Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Policy Range (%)	Within IPS Range?
Domestic Equity	194,973,749	43.0	40.0	3.0	30.0 - 50.0	Yes
International Equity	59,974,536	13.2	12.0	1.2	8.0 - 14.0	Yes
Fixed Income	107,748,738	23.8	31.0	-7.2	25.0 - 40.0	No
Credit	10,084,780	2.2	2.0	0.2	1.0 - 3.0	Yes
Covered Calls	24,121,617	5.3	5.0	0.3	5.0 - 10.0	Yes
Crisis Risk Offset	39,948,914	8.8	10.0	-1.2	5.0 - 15.0	Yes
Cash	16,379,309	3.6	0.0	3.6	0.0 - 5.0	Yes
Total	453,231,642	100.0	100.0	0.0		

June 30, 2024: \$453,231,642.0

June 30, 2023: \$406,308,110.42



Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers. Target weights reflect the Plan's evolving asset allocation (effective 05/31/2017).

Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Domestic Equity	194,973,749	100.0	0.3	8.6	16.9	5.7	11.7	10.8	9.1	Jun-97
<i>Russell 3000 (Blend)</i>			3.2	13.6	23.1	8.1	14.1	12.1	9.6	
Excess Return			-2.9	-5.0	-6.2	-2.4	-2.4	-1.3	-0.5	
Northern Trust Russell 1000	100,798,118	51.7	3.6	14.2	23.9	8.6	14.5	12.4	14.0	Jun-10
<i>Russell 1000 Index</i>			3.6	14.2	23.9	8.7	14.6	12.5	14.1	
Excess Return			0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	
EARNEST Partners	39,396,764	20.2	-5.3	2.2	10.0	3.3	10.3	10.6	9.3	Apr-06
<i>Russell Midcap Index</i>			-3.3	5.0	12.9	2.4	9.5	9.0	8.8	
Excess Return			-2.0	-2.8	-2.9	0.9	0.8	1.6	0.5	
eV US Mid Cap Core Equity Rank			74	77	71	68	49	21	37	
Wellington Select Quality Equity	25,563,443	13.1	-0.5	4.5	9.4	--	--	--	7.1	May-22
<i>Russell 1000 Index</i>			3.6	14.2	23.9	8.7	14.6	12.5	14.9	
Excess Return			-4.1	-9.7	-14.5	--	--	--	-7.8	
eV US Large Cap Core Equity Rank			85	97	97	--	--	--	94	
Brown Fundamental Small Cap Value	13,276,304	6.8	-1.5	3.4	17.7	6.2	--	--	6.7	Apr-21
<i>Russell 2000 Value Index</i>			-3.6	-0.8	10.9	-0.5	7.1	6.2	0.9	
Excess Return			2.1	4.2	6.8	6.7	--	--	5.8	
eV US Small Cap Value Equity Rank			20	27	11	16	--	--	19	
Rice Hall James	15,939,120	8.2	-1.8	3.5	7.6	-3.2	5.7	--	6.7	Aug-17
<i>Russell 2000 Growth Index</i>			-2.9	4.4	9.1	-4.9	6.2	7.4	7.2	
Excess Return			1.1	-0.9	-1.5	1.7	-0.5	--	-0.5	
eV US Small Cap Growth Equity Rank			39	63	60	46	78	--	92	

Performance shown is net of fees, except for the Domestic Equity composite which has a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
International Equity	59,974,536	100.0	0.1	6.6	13.9	2.7	6.5	5.2	5.5	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			<i>1.0</i>	<i>5.7</i>	<i>11.6</i>	<i>0.5</i>	<i>5.5</i>	<i>3.8</i>	<i>5.3</i>	
Excess Return			-0.9	0.9	2.3	2.2	1.0	1.4	0.2	
Vanguard Developed Markets ETF	16,549,028	27.6	-0.6	4.7	10.8	1.8	6.6	4.5	7.7	Sep-19
<i>FTSE Developed All Cap ex-U.S. Index</i>			<i>-0.6</i>	<i>4.5</i>	<i>11.4</i>	<i>2.1</i>	<i>6.8</i>	<i>4.7</i>	<i>7.9</i>	
Excess Return			0.0	0.2	-0.6	-0.3	-0.2	-0.2	-0.2	
SGA ACWI ex-U.S. Equity	43,425,507	72.4	0.3	7.3	15.1	3.3	--	--	5.6	Dec-19
<i>MSCI AC World ex USA (Net)</i>			<i>1.0</i>	<i>5.7</i>	<i>11.6</i>	<i>0.5</i>	<i>5.5</i>	<i>3.8</i>	<i>5.5</i>	
Excess Return			-0.7	1.6	3.5	2.8	--	--	0.1	
eV ACWI ex-US All Cap Core Eq Rank			55	26	14	13	--	--	60	

Performance shown is net of fees, except for the International Equity composite which has a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Fixed Income	107,748,738	100.0	0.1	-0.3	3.0	-2.7	0.2	1.8	4.4	Jan-94
<i>Bloomberg Universal (Blend)</i>			0.2	-0.3	3.5	-2.7	0.1	1.6	4.5	
Excess Return			-0.1	0.0	-0.5	0.0	0.1	0.2	-0.1	
Ramirez	73,029,640	67.8	0.1	-0.4	2.8	-2.9	0.0	--	1.5	Jan-17
<i>Blmbg. U.S. Aggregate Index</i>			0.1	-0.7	2.6	-3.0	-0.2	1.3	1.1	
Excess Return			0.0	0.3	0.2	0.1	0.2	--	0.4	
eV US Core Fixed Inc Rank			83	59	74	57	71	--	34	
Wellington Core Bond	7,006,703	6.5	0.4	0.2	4.2	-2.8	--	--	-2.1	Apr-21
<i>Blmbg. U.S. Aggregate Index</i>			0.1	-0.7	2.6	-3.0	-0.2	1.3	-2.2	
Excess Return			0.3	0.9	1.6	0.2	--	--	0.1	
eV US Core Fixed Inc Rank			15	17	15	52	--	--	58	
Reams	27,712,396	25.7	0.3	-0.2	3.0	-2.2	2.4	2.8	4.8	Feb-98
<i>Bloomberg Universal (Blend)</i>			0.2	-0.3	3.5	-2.7	0.1	1.6	4.1	
Excess Return			0.1	0.1	-0.5	0.5	2.3	1.2	0.7	
eV US Core Plus Fixed Inc Rank			69	73	82	30	3	10	26	

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Credit	10,084,780	100.0	1.0	4.0	9.6	3.2	4.8	--	5.1	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			<i>1.1</i>	<i>2.6</i>	<i>10.4</i>	<i>1.6</i>	<i>3.9</i>	<i>4.3</i>	<i>4.8</i>	
Excess Return			-0.1	1.4	-0.8	1.6	0.9	--	0.3	
Polen Capital	10,084,780	100.0	1.0	4.0	9.6	3.2	4.8	--	5.1	Feb-15
<i>ICE BofA U.S. High Yield Index</i>			<i>1.1</i>	<i>2.6</i>	<i>10.4</i>	<i>1.6</i>	<i>3.7</i>	<i>4.2</i>	<i>4.7</i>	
Excess Return			-0.1	1.4	-0.8	1.6	1.1	--	0.4	
eV US High Yield Fixed Inc Rank			75	11	65	16	16	--	19	

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Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Covered Calls	24,121,617	100.0	3.6	10.0	15.9	8.2	11.5	9.5	9.6	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>1.5</i>	<i>7.6</i>	<i>8.9</i>	<i>5.0</i>	<i>5.6</i>	<i>5.8</i>	<i>5.9</i>	
Excess Return			2.1	2.4	7.0	3.2	5.9	3.7	3.7	
Parametric BXM	11,654,056	48.3	2.7	8.7	13.0	6.8	8.7	7.5	7.6	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>1.5</i>	<i>7.6</i>	<i>8.9</i>	<i>5.0</i>	<i>5.6</i>	<i>5.8</i>	<i>5.9</i>	
Excess Return			1.2	1.1	4.1	1.8	3.1	1.7	1.7	
Parametric DeltaShift	12,467,561	51.7	4.4	11.4	18.9	9.5	14.0	11.5	11.7	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>1.5</i>	<i>7.6</i>	<i>8.9</i>	<i>5.0</i>	<i>5.6</i>	<i>5.8</i>	<i>5.9</i>	
Excess Return			2.9	3.8	10.0	4.5	8.4	5.7	5.8	

Performance shown is net of fees. Since inception date and performance begin in the month following an investment's initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of June 30, 2024

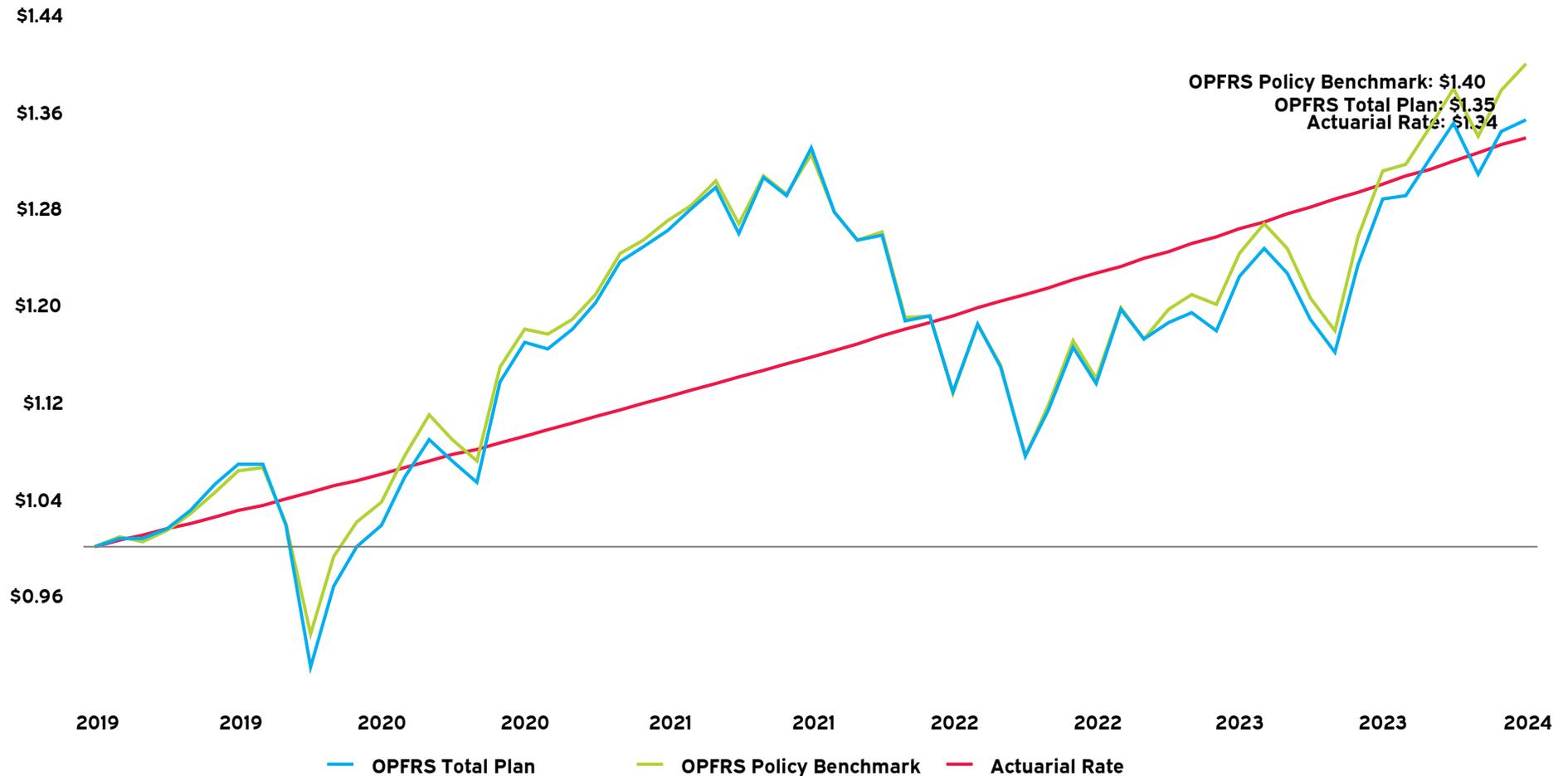
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Crisis Risk Offset	39,948,914	100.0	-1.6	1.8	0.7	-3.3	-7.3	--	-6.7	Aug-18
<i>Crisis Risk Offset Benchmark</i>			<i>-1.4</i>	<i>3.9</i>	<i>3.6</i>	<i>4.3</i>	<i>0.7</i>	<i>--</i>	<i>0.7</i>	
Over/Under			<i>-0.2</i>	<i>-2.1</i>	<i>-2.9</i>	<i>-7.6</i>	<i>-8.0</i>	<i>--</i>	<i>-7.4</i>	
Kepos Alternative Risk Premia	12,120,231	30.3	0.3	11.4	15.7	--	--	--	8.3	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>			<i>0.5</i>	<i>8.0</i>	<i>11.0</i>	<i>7.0</i>	<i>2.2</i>	<i>--</i>	<i>7.6</i>	
Over/Under			<i>-0.2</i>	<i>3.4</i>	<i>4.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.7</i>	
Versor Trend Following	14,998,517	37.5	-3.0	0.7	-3.6	--	--	--	0.0	Apr-22
<i>SG Trend Index</i>			<i>-3.2</i>	<i>8.7</i>	<i>4.0</i>	<i>10.5</i>	<i>9.4</i>	<i>6.0</i>	<i>5.5</i>	
Over/Under			<i>0.2</i>	<i>-8.0</i>	<i>-7.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-5.5</i>	
Vanguard Long-Term Treasury ETF	12,830,166	32.1	-1.6	-4.7	-5.7	-10.5	-4.3	0.6	-4.3	Jul-19
<i>Blmbg. U.S. Government: Long Term Bond Index</i>			<i>-1.8</i>	<i>-5.0</i>	<i>-5.6</i>	<i>-10.4</i>	<i>-4.2</i>	<i>0.6</i>	<i>-4.2</i>	
Over/Under			<i>0.2</i>	<i>0.3</i>	<i>-0.1</i>	<i>-0.1</i>	<i>-0.1</i>	<i>0.0</i>	<i>-0.1</i>	

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

**Cash Flow Summary
Quarter To Date**

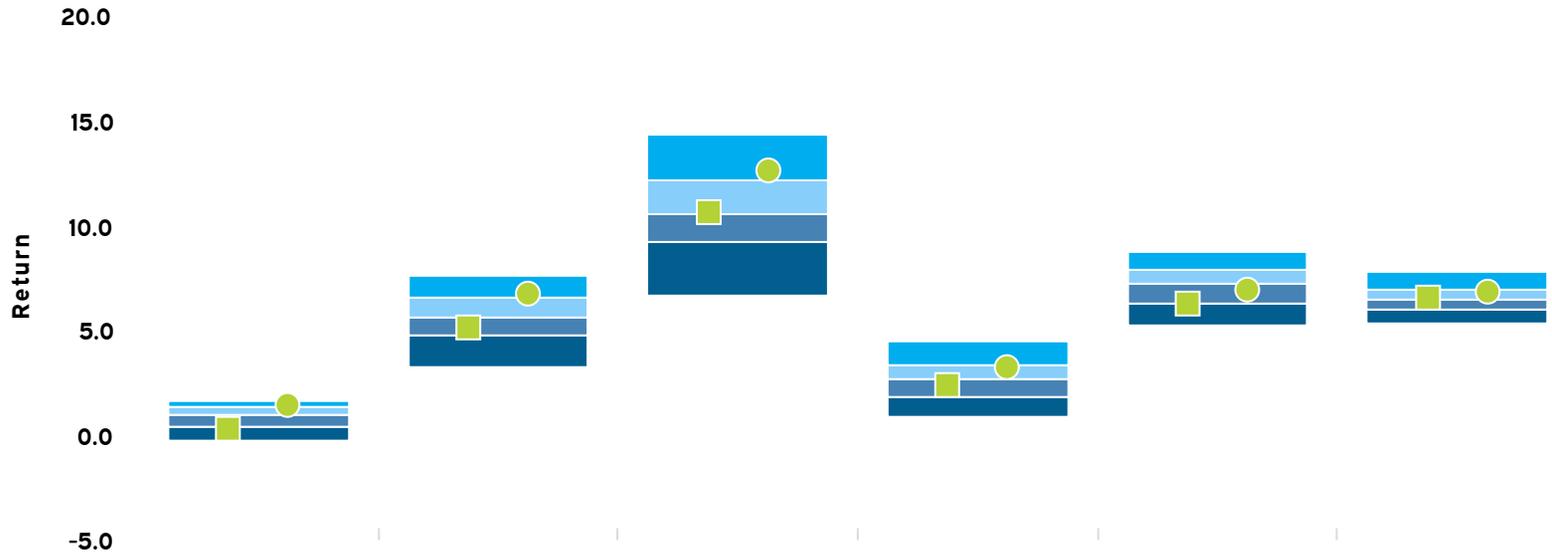
	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Northern Trust Russell 1000	97,326,458	-	3,471,660	100,798,118
EARNEST Partners	42,502,989	-1,000,000	-2,106,224	39,396,764
Wellington Select Quality Equity	25,703,596	-	-140,153	25,563,443
Brown Fundamental Small Cap Value	13,481,386	-	-205,083	13,276,304
Rice Hall James	16,194,267	-	-255,147	15,939,120
Vanguard Developed Markets ETF	16,800,177	-154,272	-96,876	16,549,028
SGA ACWI ex-U.S. Equity	43,184,334	-	241,173	43,425,507
Ramirez	72,950,679	-	78,961	73,029,640
Wellington Core Bond	6,980,801	-	25,902	7,006,703
Reams	27,629,437	-	82,959	27,712,396
Polen Capital	9,984,458	-	100,322	10,084,780
Parametric BXM	12,339,462	-1,000,000	314,594	11,654,056
Parametric DeltaShift	12,936,202	-1,000,000	531,359	12,467,561
Kepos Alternative Risk Premia	12,080,647	-	39,583	12,120,231
Versor Trend Following	15,458,363	-	-459,846	14,998,517
Vanguard Long-Term Treasury ETF	13,177,168	-80,390	-266,612	12,830,166
Cash - Money Market	5,402,267	417,364	46,679	5,866,309
Cash - Treasury	10,323,000	190,000	-	10,513,000
Securities Lending Northern Trust	-	-35,884	35,884	-
OPFRS Total Plan	454,455,689	-2,663,182	1,439,135	453,231,642

Growth of a Dollar 5 Years ending June 30, 2024



The actuarial expected rate of return was 8% through 6/30/2009, 7.5% through 6/30/2010, 7% through 6/30/2011, 6.75% through 6/30/2014, 6.5% through 2/31/2017 and 6.0% currently.

Plan Sponsor Peer Group Performance Comparison vs. InvMetrics Public DB \$250M-\$1B Net

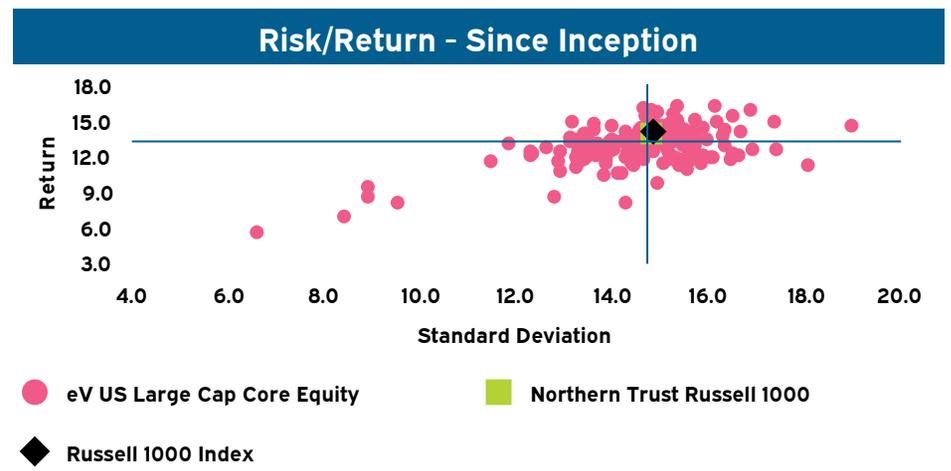
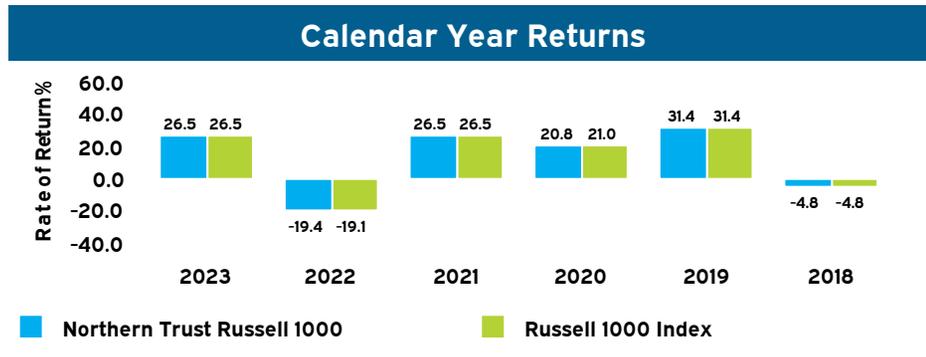
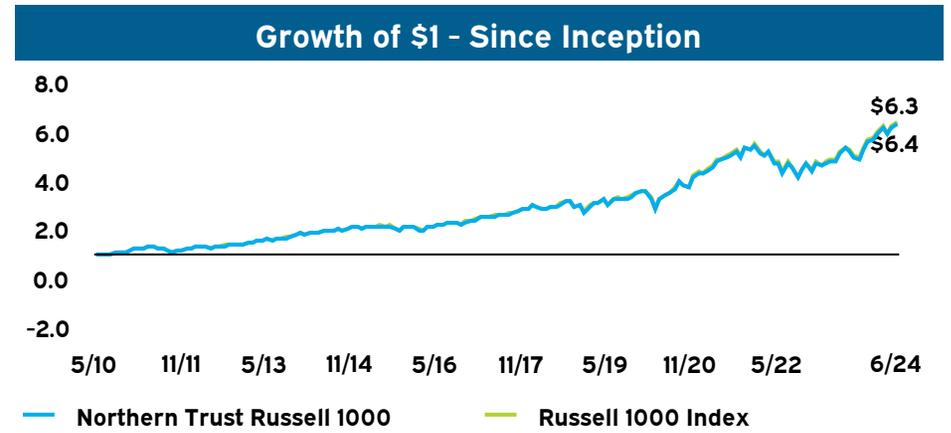
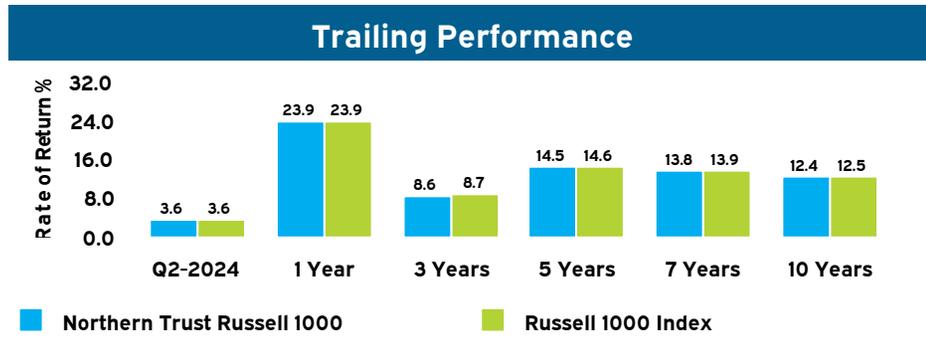


	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
■ OPFRS Total Plan	0.3 (82)	5.1 (66)	10.6 (50)	2.4 (57)	6.2 (77)	6.5 (47)
● OPFRS Policy Benchmark	1.4 (20)	6.8 (18)	12.6 (21)	3.3 (26)	6.9 (58)	6.9 (29)
5th Percentile	1.7	7.6	14.3	4.5	8.7	7.8
1st Quartile	1.4	6.5	12.1	3.3	7.9	7.0
Median	0.9	5.6	10.5	2.7	7.2	6.5
3rd Quartile	0.4	4.8	9.2	1.8	6.3	5.9
95th Percentile	-0.2	3.2	6.7	0.8	5.2	5.3
Population	94	94	94	94	93	83

Total Plan performance is a mix of gross and net of fees; performance is gross of fees prior to January 2016 and net of fees thereafter. Parentheses contain percentile rankings. Calculation based on monthly periodicity. Fiscal year begins on July 1.

Portfolio Characteristics & Manager Profiles

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Northern Trust Russell 1000	0.00	1.00	-0.63	0.21	0.01	1.00	99.82	99.90
Russell 1000 Index	0.00	1.00	-	0.21	0.00	1.00	100.00	100.00



	QTD Return	QTD Risk
Northern Trust Russell 1000	3.56	3.93
Russell 1000 Index	3.57	3.94

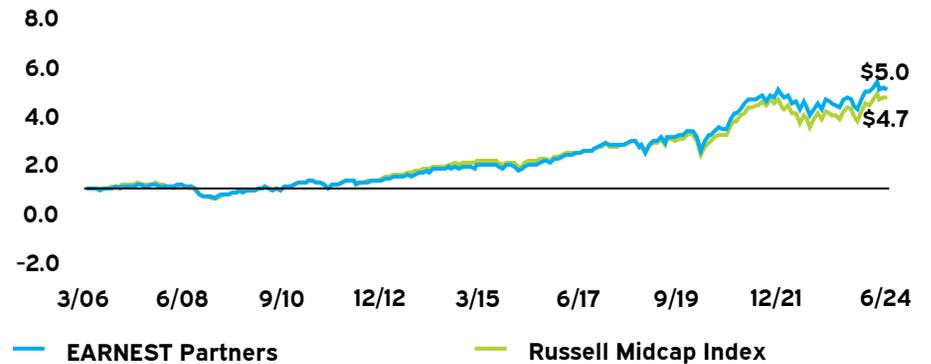
Performance shown is net of fees. Risk is measured as Standard Deviation.

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
EARNEST Partners	-0.75	0.92	-1.23	-0.69	0.54	0.98	52.57	110.49
Russell Midcap Index	0.00	1.00	-	-0.45	0.00	1.00	100.00	100.00

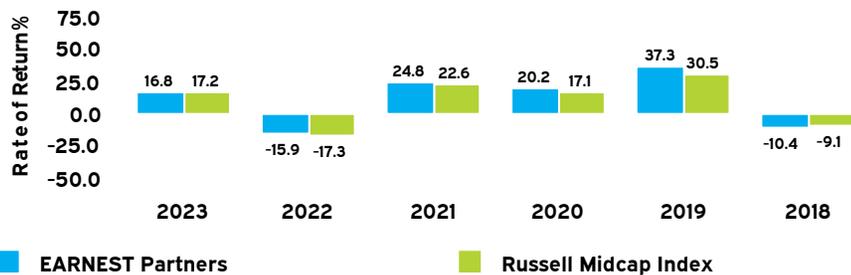
Trailing Performance



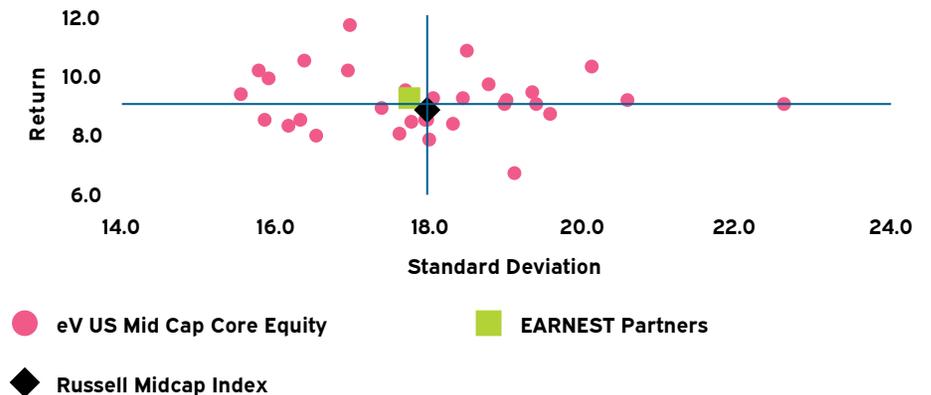
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
EARNEST Partners	-5.26	3.15
Russell Midcap Index	-3.35	3.38

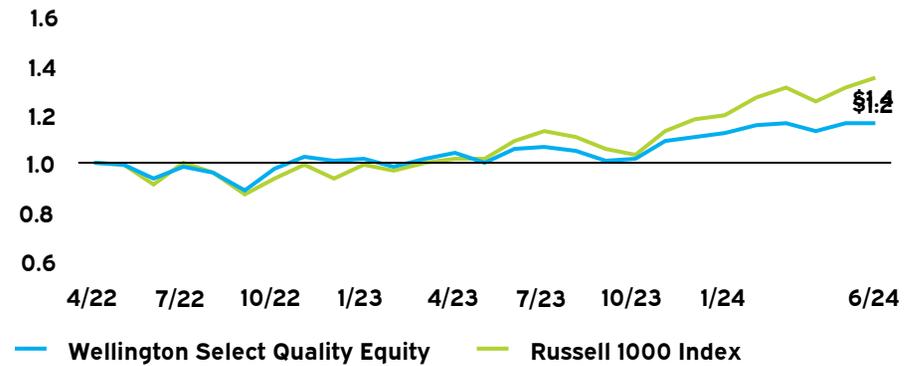
Performance shown is net of fees. Risk is measured as Standard Deviation.

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Wellington Select Quality Equity	-0.92	0.62	-0.81	-0.23	1.73	0.89	36.43	79.16
Russell 1000 Index	0.00	1.00	-	0.21	0.00	1.00	100.00	100.00

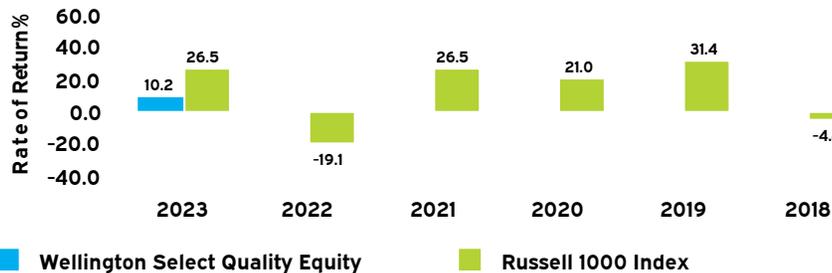
Trailing Performance



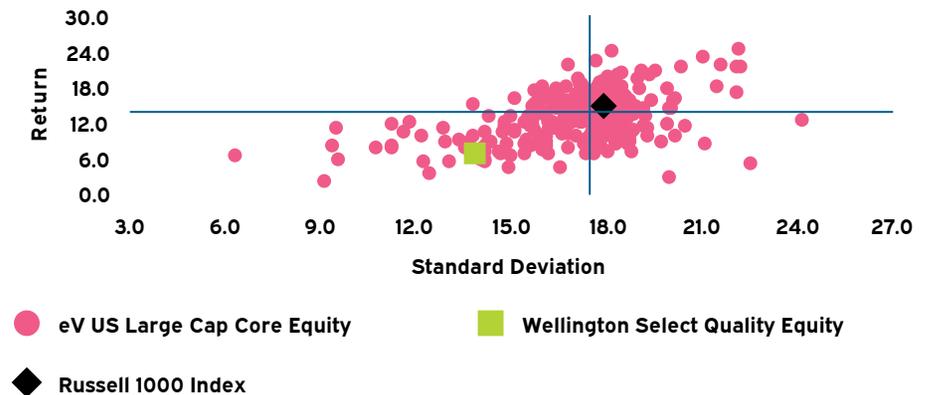
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
Wellington Select Quality Equity	-0.55	2.57
Russell 1000 Index	3.57	3.94

Performance shown is net of fees. Risk is measured as Standard Deviation.

Brown Fundamental Small Cap Value | As of June 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Brown Fundamental Small Cap Value	0.54	0.86	0.85	-0.22	0.82	0.98	104.53	76.78
Russell 2000 Value Index	0.00	1.00	-	-0.35	0.00	1.00	100.00	100.00

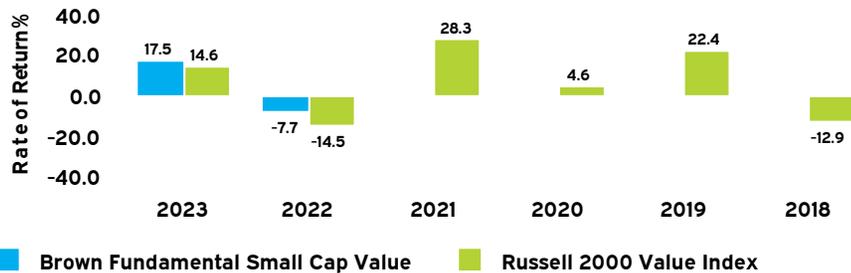
Trailing Performance



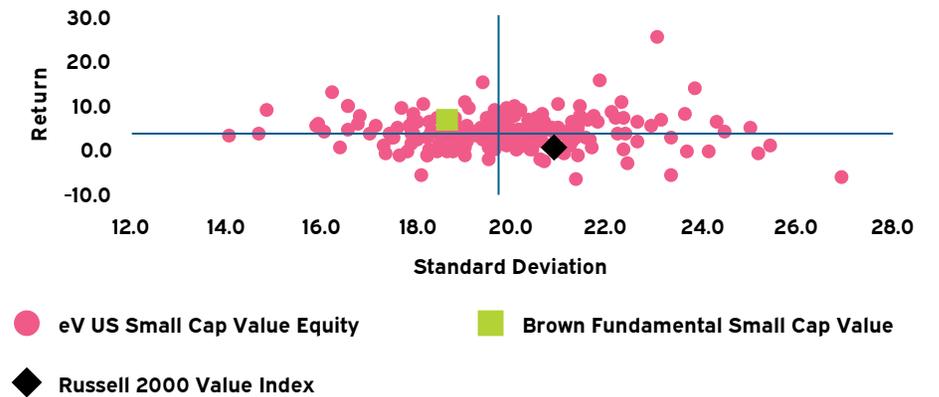
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
Brown Fundamental Small Cap Value	-1.52	3.94
Russell 2000 Value Index	-3.64	4.53

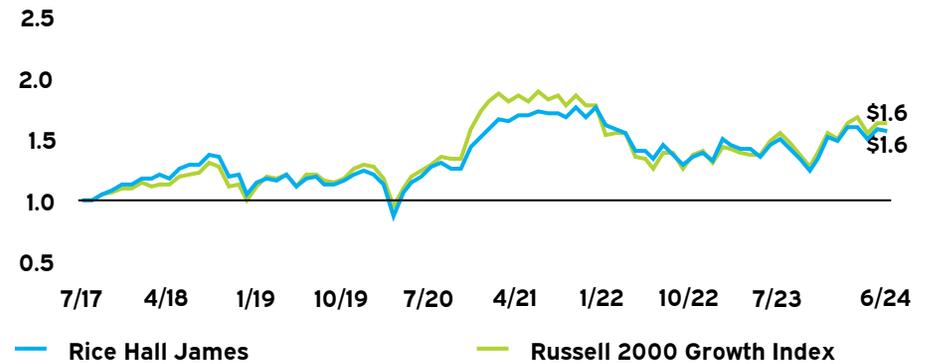
Performance shown is net of fees. Risk is measured as Standard Deviation.

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Rice Hall James	0.17	0.82	0.30	-0.22	1.07	0.99	91.83	82.11
Russell 2000 Growth Index	0.00	1.00	-	-0.24	0.00	1.00	100.00	100.00

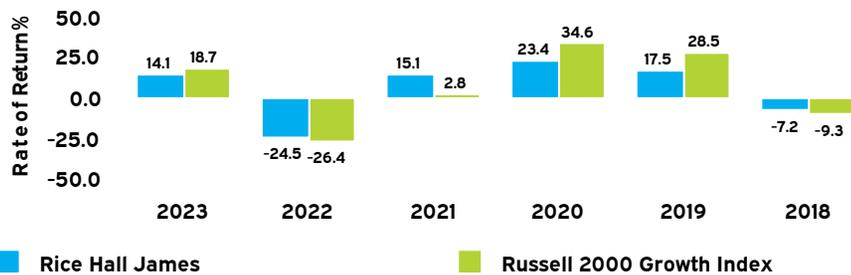
Trailing Performance



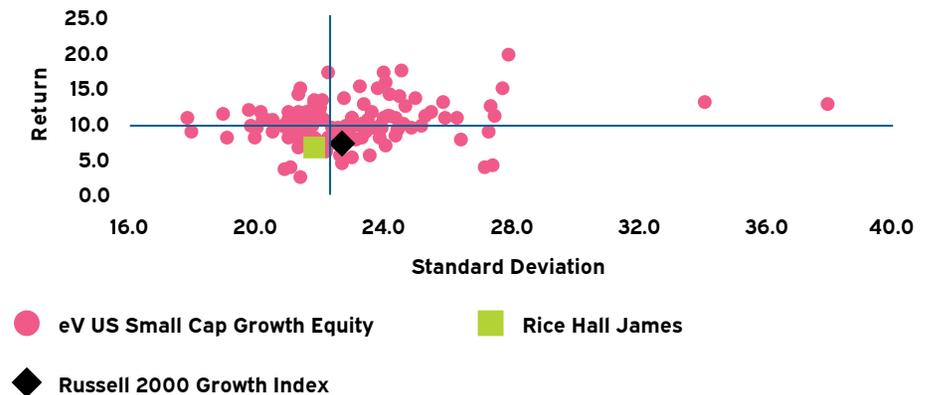
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



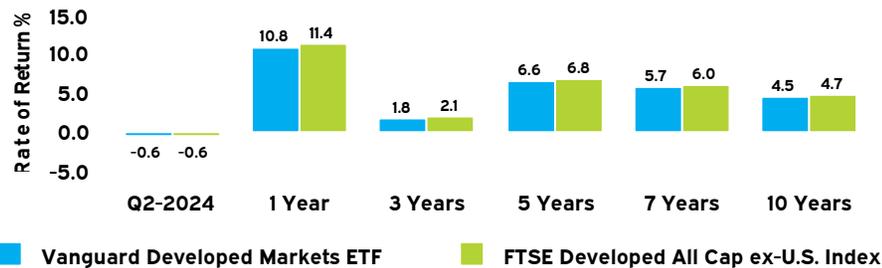
	QTD Return	QTD Risk
Rice Hall James	-1.82	4.40
Russell 2000 Growth Index	-2.92	5.35

Performance shown is net of fees. Risk is measured as Standard Deviation.

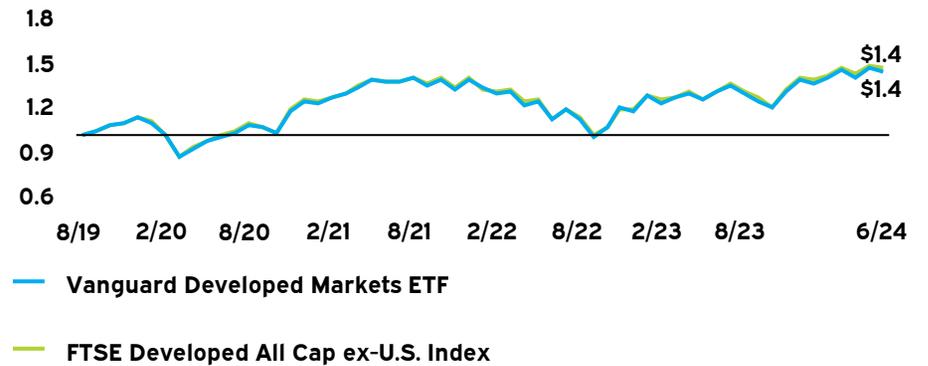
Vanguard Developed Markets ETF | As of June 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Vanguard Developed Markets ETF	0.08	1.27	0.05	-0.17	0.73	1.00	128.43	122.44
FTSE Developed All Cap ex-U.S. Index	0.00	1.00	-	-0.22	0.00	1.00	100.00	100.00

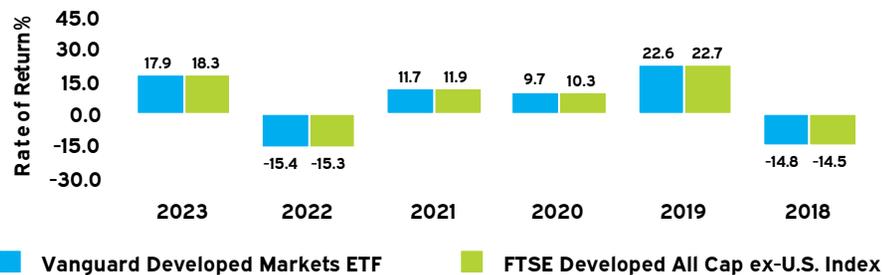
Trailing Performance



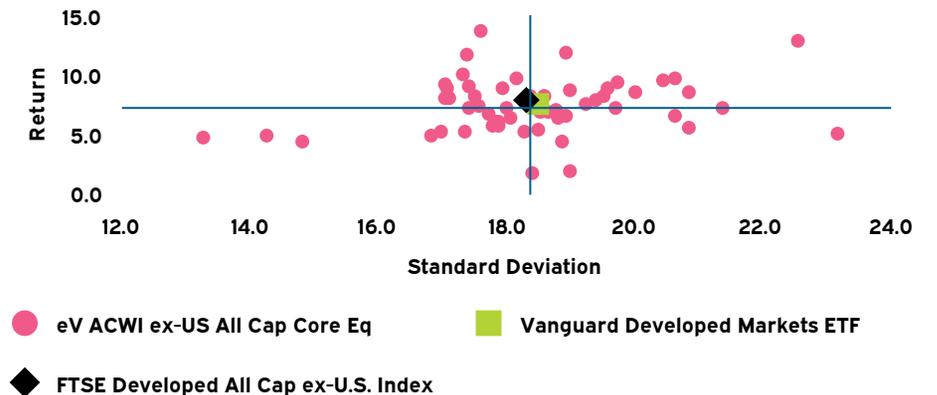
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
Vanguard Developed Markets ETF	-0.57	3.47
FTSE Developed All Cap ex-U.S. Index	-0.61	2.74

Performance shown is net of fees. Risk is measured as Standard Deviation.

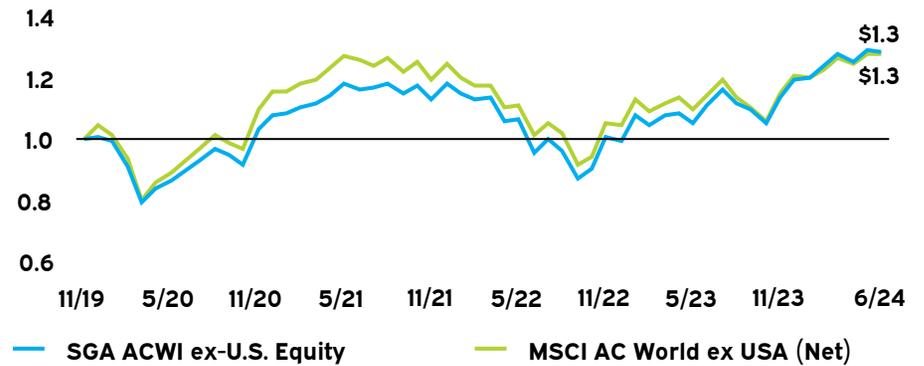
SGA ACWI ex-U.S. Equity | As of June 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
SGA ACWI ex-U.S. Equity	-0.20	1.00	-1.54	-0.16	0.13	1.00	95.43	125.27
MSCI AC World ex USA (Net)	0.00	1.00	-	-0.05	0.00	1.00	100.00	100.00

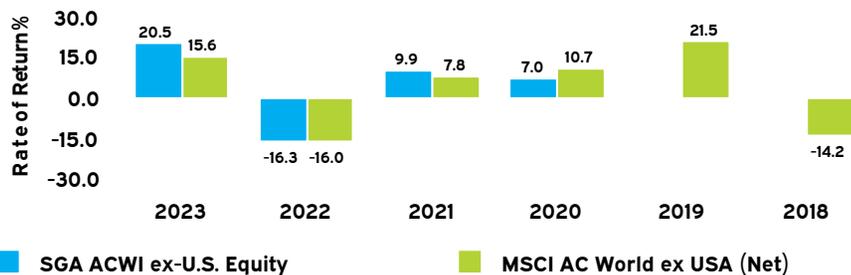
Trailing Performance



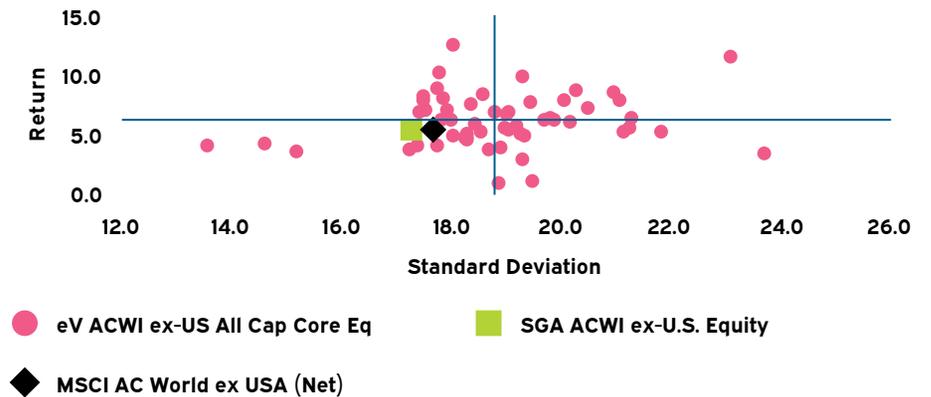
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
SGA ACWI ex-U.S. Equity	0.35	1.95
MSCI AC World ex USA (Net)	0.96	1.94

Performance shown is net of fees. Risk is measured as Standard Deviation.

Account Information

Account Name	Ramirez
Account Structure	Separate Account
Inception Date	01/30/2017
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	eV US Core Fixed Inc

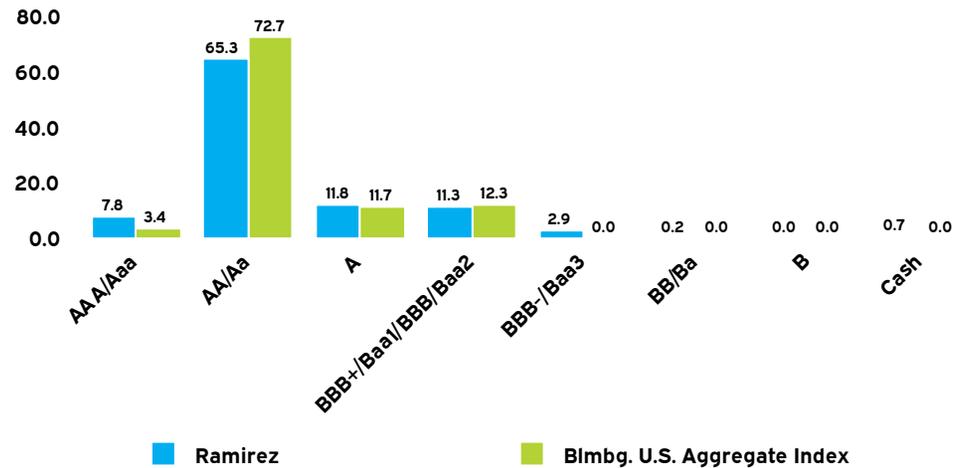
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Ramirez	0.1	-0.4	2.8	-2.9	0.0
Blmbg. U.S. Aggregate Index	0.1	-0.7	2.6	-3.0	-0.2

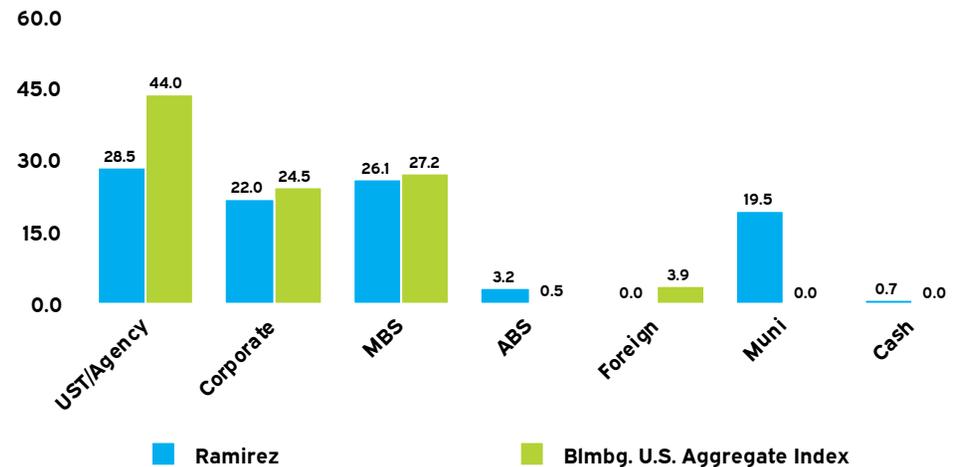
Portfolio Fixed Income Characteristics

	Q2-24 Portfolio	Q1-24 Portfolio
Yield To Maturity	5.2	5.0
Average Duration	6.1	6.1
Average Quality	AA	AA
Weighted Average Maturity	9.1	8.9

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

Account Information

Account Name	Wellington Core Bond
Account Structure	Commingled Fund
Inception Date	04/01/2021
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	eV US Core Fixed Inc

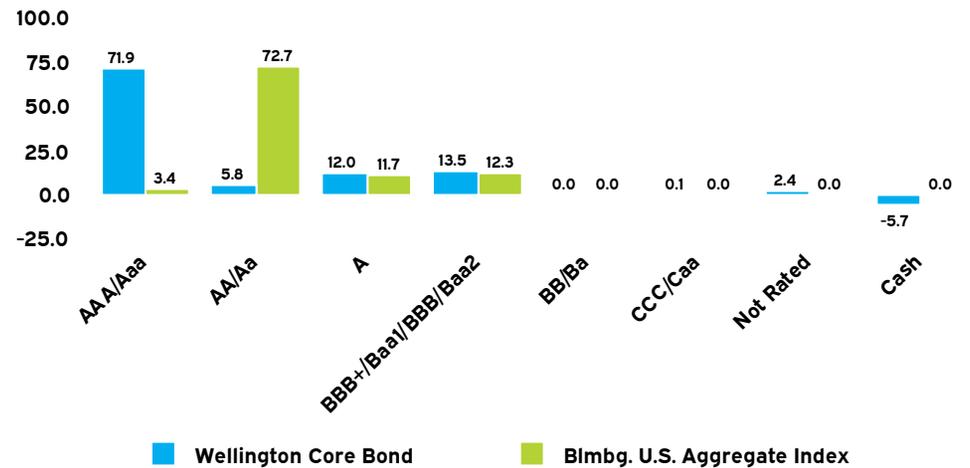
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Wellington Core Bond	0.4	0.2	4.2	-2.8	-
Blmbg. U.S. Aggregate Index	0.1	-0.7	2.6	-3.0	-0.2

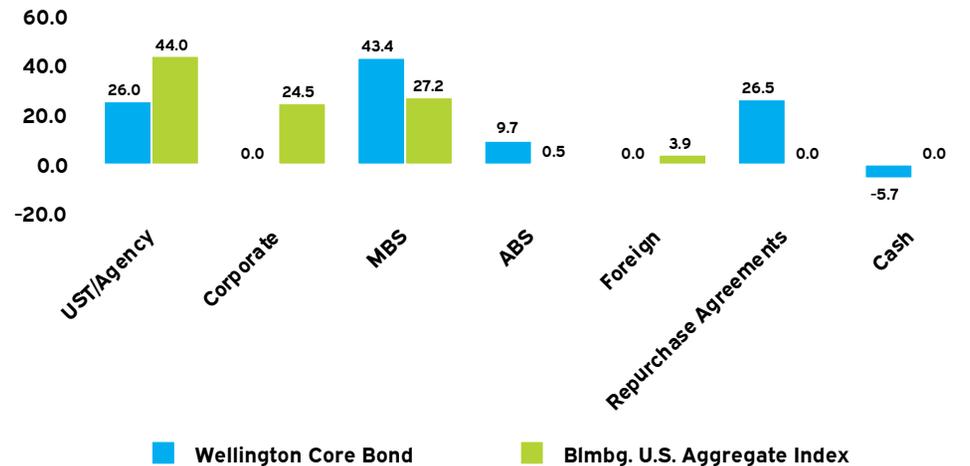
Portfolio Fixed Income Characteristics

	Q2-24 Portfolio	Q1-24 Portfolio
Yield To Maturity	5.3	5.3
Average Duration	6.7	6.5
Average Quality	AA	AA
Weighted Average Maturity	-	-

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

Account Information

Account Name	Reams
Account Structure	Separate Account
Inception Date	01/01/1998
Asset Class	US Fixed Income
Benchmark	Bloomberg Universal (Blend)
Peer Group	eV US Core Plus Fixed Inc

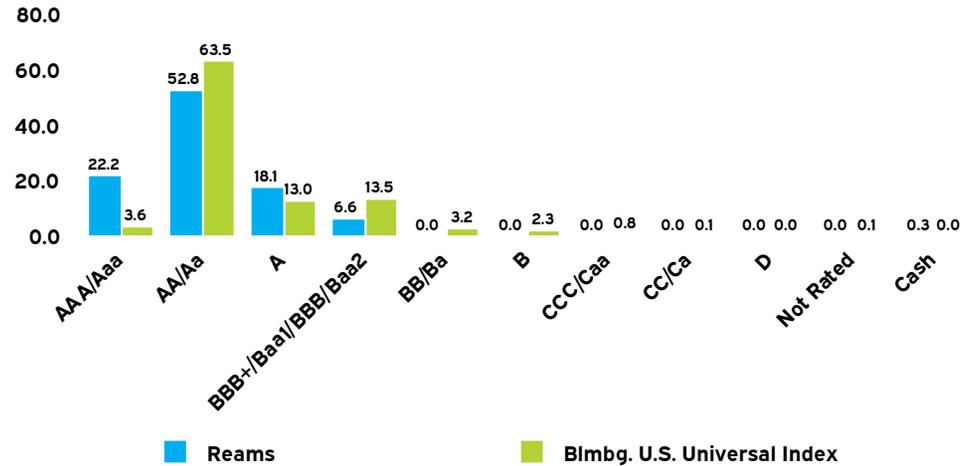
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Reams	0.3	-0.2	3.0	-2.2	2.4
Bimbg. U.S. Universal Index	0.2	-0.3	3.5	-2.7	0.1

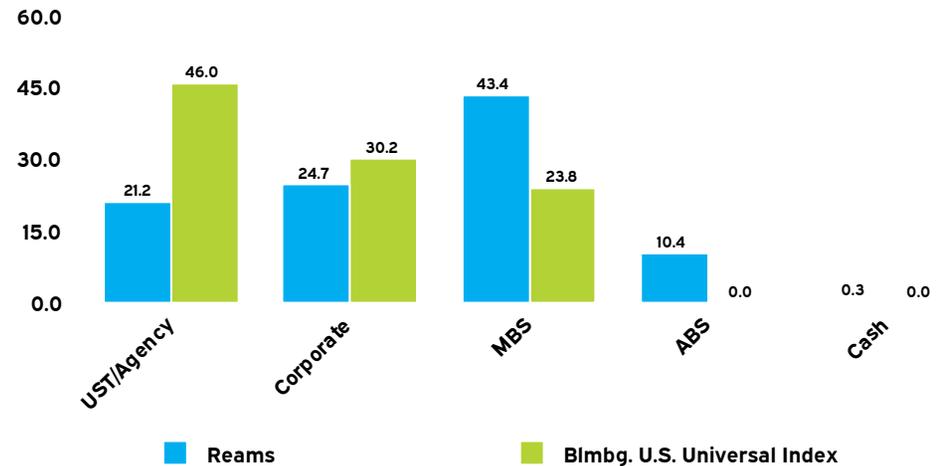
Portfolio Fixed Income Characteristics

	Q2-24 Portfolio	Q1-24 Portfolio
Yield To Maturity	5.3	5.1
Average Duration	6.4	6.5
Average Quality	AA	AA
Weighted Average Maturity	9.4	7.5

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

Account Information

Account Name	Polen Capital
Account Structure	Commingled Fund
Inception Date	02/01/2015
Asset Class	US Fixed Income
Benchmark	ICE BofA U.S. High Yield Index
Peer Group	eV US High Yield Fixed Inc

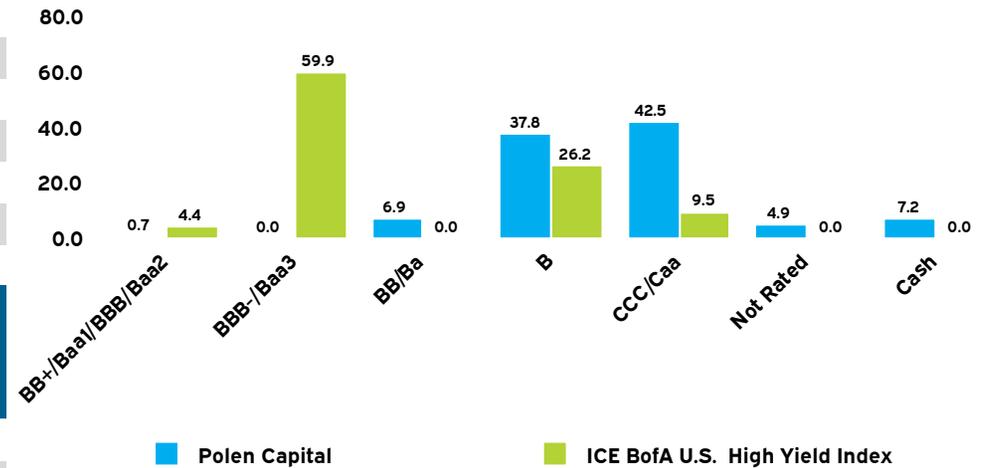
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Polen Capital	1.0	4.0	9.6	3.2	4.8
ICE BofA U.S. High Yield Index	1.1	2.6	10.4	1.6	3.7

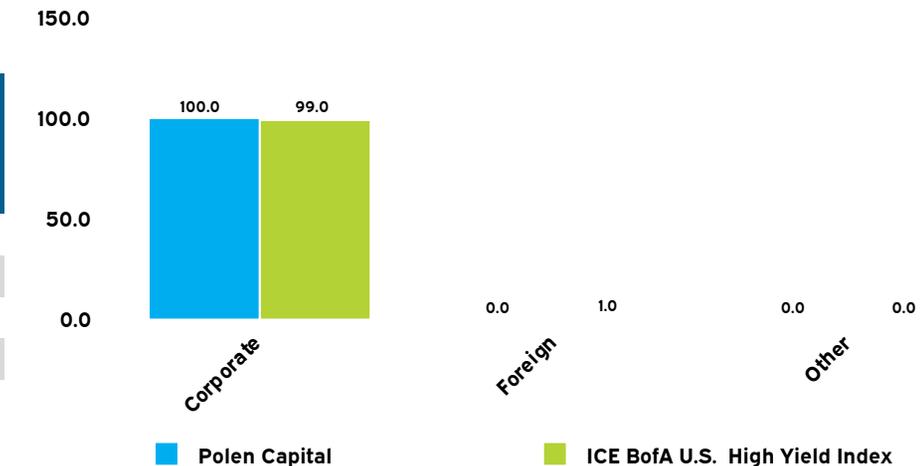
Portfolio Fixed Income Characteristics

	Q2-24 Portfolio	Q1-24 Portfolio
Yield To Maturity	9.7	9.2
Average Duration	2.1	2.2
Average Quality	B	B
Weighted Average Maturity	4.9	4.7

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

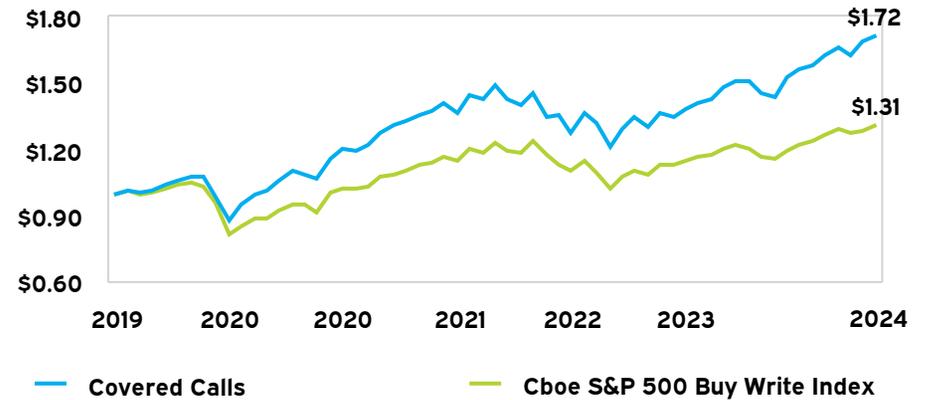
Covered Calls | As of June 30, 2024

	Return	Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Capture	Down Capture	Inception Date
Covered Calls	9.6	11.4	3.3	1.0	0.9	4.0	125.3	105.4	04/01/2014
Cboe S&P 500 Buy Write Index	5.9	10.2	0.0	1.0	-	0.0	100.0	100.0	
Parametric BXM	7.6	9.3	2.4	0.9	0.5	3.1	100.6	85.9	04/01/2014
Cboe S&P 500 Buy Write Index	5.9	10.2	0.0	1.0	-	0.0	100.0	100.0	
Parametric DeltaShift	11.7	13.7	4.5	1.2	0.9	6.2	149.1	122.3	04/01/2014
Cboe S&P 500 Buy Write Index	5.9	10.2	0.0	1.0	-	0.0	100.0	100.0	

Trailing Period Performance



Growth of a Dollar



Calendar Year Performance



Performance shown is net of fees.

Crisis Risk Offset | As of June 30, 2024

	Return	Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Capture	Down Capture	Inception Date
Crisis Risk Offset	-6.7	10.7	-6.8	0.8	-0.7	9.9	31.2	127.4	08/01/2018
Crisis Risk Offset Benchmark	0.7	5.4	0.0	1.0	-	0.0	100.0	100.0	
Kepos Alternative Risk Premia	8.3	6.7	1.7	0.9	0.1	5.0	97.9	77.7	02/01/2022
SG Multi Alternative Risk Premia Index	7.6	5.2	0.0	1.0	-	0.0	100.0	100.0	
Versor Trend Following	0.0	14.5	-5.1	1.0	-0.7	6.8	83.4	111.5	04/01/2022
SG Trend Index	5.5	12.6	0.0	1.0	-	0.0	100.0	100.0	
Vanguard Long-Term Treasury ETF	-4.3	15.1	0.0	1.0	0.0	1.1	101.0	100.9	07/01/2019
Blmbg. U.S. Government: Long Term Bond Index	-4.2	15.0	0.0	1.0	-	0.0	100.0	100.0	

Correlation Matrix

3 Months Ending June 30, 2024

	Crisis Risk Offset	MSCI AC World Index Value	S&P 500 Index	Blmbg. Global Aggregate Index
Crisis Risk Offset	1.00			
MSCI AC World Index Value	-0.01	1.00		
S&P 500 Index	-0.46	0.89	1.00	
Blmbg. Global Aggregate Index	-0.31	0.95	0.99	1.00

Trailing Period Performance



Performance shown is net of fees.

Benchmark History		
From Date	To Date	Benchmark
OPFRS Total Plan		
06/01/2022	Present	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA (Net), 31.0% Blmbg. US Universal Index, 2.0% Blmbg. US Corp: High Yield Index, 5.0% Cboe S&P 500 Buy Write Index, 10.0% Crisis Risk Offset Benchmark
01/01/2019	06/01/2022	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 31.0% Blmbg. US Universal Index, 5.0% Cboe S&P 500 Buy Write Index, 2.0% Blmbg. US Treasury: Long, 10.0% Crisis Risk Offset Benchmark
05/01/2016	01/01/2019	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. US Universal Index, 20.0% CBOE BXM
10/01/2015	05/01/2016	43.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. US Universal Index, 15.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
01/01/2014	10/01/2015	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. US Universal Index, 10.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
03/01/2013	01/01/2014	40.0% Russell 3000 Index, 10.0% MSCI AC World ex USA index, 17.0% Blmbg. US Universal Index, 33.0% ICE BofA 3 Month US T-Bill
08/01/2012	03/01/2013	20.0% Russell 3000 Index, 7.0% MSCI AC World ex USA index, 18.0% Blmbg. US Universal Index, 55.0% ICE BofA 3 Month US T-Bill
10/01/2007	08/01/2012	53.0% Russell 3000 Index, 17.0% MSCI AC World ex USA index, 30.0% Blmbg. US Universal Index
04/01/2006	10/01/2007	35.0% Russell 3000 Index, 15.0% MSCI AC World ex USA index, 50.0% Blmbg. US Universal Index
01/01/2005	04/01/2006	35.0% Russell 3000 Index, 50.0% Blmbg. US Aggregate Index, 15.0% MSCI AC World ex USA index
04/01/1998	01/01/2005	20.0% Russell 1000 Value Index, 10.0% Russell 1000 Index, 5.0% Russell Midcap Index, 50.0% Blmbg. US Aggregate Index, 15.0% MSCI EAFE (Net)
09/01/1988	04/01/1998	40.0% S&P 500 Index, 55.0% Blmbg. US Aggregate Index, 5.0% FTSE 3 Month T-Bill

Benchmark History

From Date	To Date	Benchmark
Domestic Equity		
01/01/2005	Present	100.0% Russell 3000 Index
04/01/1998	01/01/2005	57.1% Russell 1000 Value Index, 28.6% Russell 1000 Index, 14.3% Russell Midcap Index
09/01/1988	04/01/1998	100.0% S&P 500 Index
International Equity		
01/01/2005	Present	100.0% MSCI AC World ex USA (Net)
01/01/1998	01/01/2005	100.0% MSCI EAFE Index
Fixed Income		
04/01/2006	Present	100.0% Blmbg. US Universal Index
01/01/1976	04/01/2006	100.0% Blmbg. US Aggregate Index
Covered Calls		
04/01/2014	Present	Cboe S&P 500 Buy Write Index
Crisis Risk Offset		
01/01/2023	Present	33.3% SG Trend Index, 33.3% SG Multi Alternative Risk Premia Index, 33.3% Blmbg. US Government: Long Term Bond Index
08/01/2018	01/01/2023	100.0% SG Multi Alternative Risk Premia Index
Cash		
03/01/2011	Present	FTSE 3 Month T-Bill

Manager Monitoring / Probation Status

Managers on Watch / Probation Status

Manager & Strategy	Concern Triggering Watch Status	Date of Corrective Action ¹	Months Since Placement	Performance ² Since Placement	Peer Group Rank Since Placement
Versor Trend Following	Organization / Performance	9/27/2023	9	-7.2	N/A
<i>Benchmark: SG Trend Index</i>	--	--	--	3.2	--

Investment Manager Monitoring Criteria³

Investment managers are evaluated on ongoing and periodic basis using both quantitative performance criteria and qualitative aspects of the managers. The quantitative criteria for different asset classes are as follows:

Asset Class	Short-term (Rolling 12 months)	Medium-term (Rolling 36 months)	Long-term (60 + months)
Active Domestic Equity	Fund return < benchmark return by 3.5%	Annualized Fund return < benchmark return by 1.75% for 6 consecutive months	VRR ⁴ < 0.97 for 6 consecutive months
Active International Equity	Fund return < benchmark return by 4.5%	Annualized Fund return < benchmark return by 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Passive International Equity	Tracking Error > 0.50%	Tracking Error > 0.45% for 6 consecutive months	Annualized Fund return < benchmark return by 0.4% for 6 consecutive months
Fixed Income	Fund return < benchmark return by 1.5%	Annualized Fund return < benchmark return by 1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months

¹ Date when the Board voted to either monitor a manager at a heightened level or place it on probation.

² Performance Since Placement starts at the beginning of the full month following the date of corrective action. Performance shown is net of fees and annualized after one year mark.

³ Per Investment Policy Statement and Manager Guidelines ("IPS"), Revised 5/31/2023, section H. Currently, only Domestic Equity, International Equity, and Fixed Income have stated quantitative monitoring criteria in the IPS.

⁴ VRR (Value Relative Ratio) is calculated as manager cumulative return/ benchmark cumulative return.

Appendix

Additional Information

Performance Return Types: Performance shown is net of fees, except for OPFRS Total Plan, Domestic Equity, and International Equity Composites, which have a mix of gross and net of fees performance. Performance shown for OPFRS Total Plan and International Equity composite is gross of fees prior to January 2016. Performance shown for Domestic Equity composite is gross of fees prior to January 2017.

Inception Date: Since inception date and performance begin in the month following an investments initial funding.

Fiscal Year: Fiscal year begins on July 1.

Fair Value Pricing Methodology: Though Vanguard Developed Markets ETF is a passive strategy, short-term performance may appear to diverge from the index it tracks more than would be expected. This is due to Fair Value Pricing (FVP) adjustments that address the pricing discrepancies that may arise from time-zone differences among global securities markets. The resulting temporary divergence is expected to correct itself when the foreign markets reopen.

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.

The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.

MEMORANDUM

TO: Oakland Police and Fire Retirement System (“OPFRS”)
FROM: Meketa Investment Group (“Meketa”)
DATE: September 25, 2024
RE: Revised Implementation Plan

Background

At the March 2024 meeting, OPFRS received a tentative and evolving implementation plan to transition to the newly adopted long-term strategic allocation policy. It laid out a gradual transition of the assets over the following 18 to 24 months so as to not disrupt the portfolio’s risk-return and diversification profile in the near term. This memorandum provides an updated implementation plan as we progress through reviewing asset class structures and investment manager line-up since March 2024.

Recommendation

Meketa recommends the Board approve the revised implementation plan as presented below.

Revised Implementation Plan¹

Asset Classes	Previous Target	Actual (2024-Q2)	2024 H2	2025 H1	Long-term Target
Growth / Equities					
US Equity	40	44.6	34	26	25
International (Non-US) Equity	12	13.7	12	9	5
Covered Calls	5	5.5	0	0	--
Fixed Income & Credit					
Investment Grade Bonds	31	24.7	39	46	51
High Yield Bonds	--	0.0	5	10	10
Credit	2	2.3	0	0	--
Crisis Risk Offset					
Alternative Risk Premia (ARP)	3.3	2.8	3.3	3	3
Systematic Trend Following	3.3	3.4	3.3	3	3
Long-Term Government Bonds	3.3	2.9	3.3	3	3

Parts of the implementation process are dependent on other processes such as investment manager search RFI (request for information) and contract/manager agreement review. We will continue to provide the OPFRS Board with regular updates on the implementation process.

DS/PN/JLC/mn

¹ Actual allocations are as of June 30, 2024, and excludes the cash account. H1 and H2 represent first and second halves of the calendar year.

Oakland Police and Fire Retirement System

September 25, 2024

Crisis Risk Offset (CRO)
Asset Class Review

Agenda

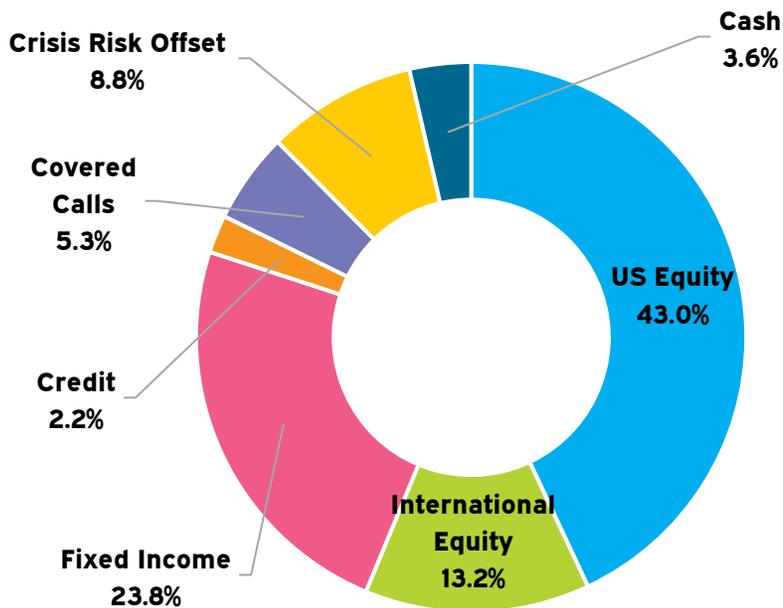
1. Background
2. Role & Components of Crisis Risk Offset (CRO)
3. Current Composition in OPFRS Portfolio
4. Recommendations

Background

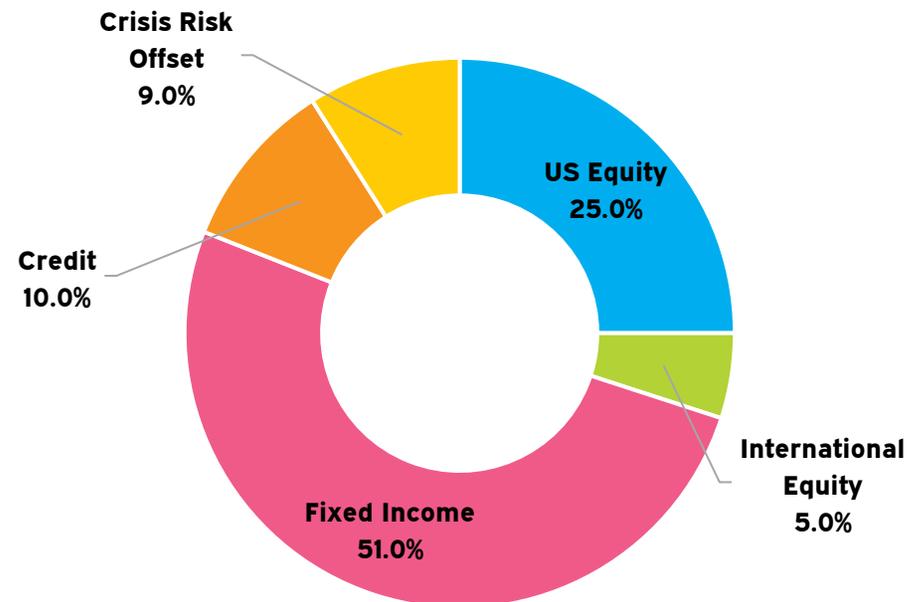
During 2024 Q1, the Board adopted a new long-term asset allocation policy as the result of the latest asset liability study.

- Crisis Risk Offset (CRO) currently represents 8.8% of OPFRS allocation as of June 30, 2024. The new target allocation for this asset class is 9%, marginally decreased from previous target of 10%.
- The objective of this class is to diversify both the equity risk and nominal interest rate risk of the total portfolio

Actual Allocation as of June 30, 2024



Long-Term Target Allocation



Role & Components of Crisis Risk Offset (CRO)

Expected Benefits and Key Metrics*

-  Protection
-  Positive Returns
-  Liquidity
-  Customization
-  Portfolio Efficiency

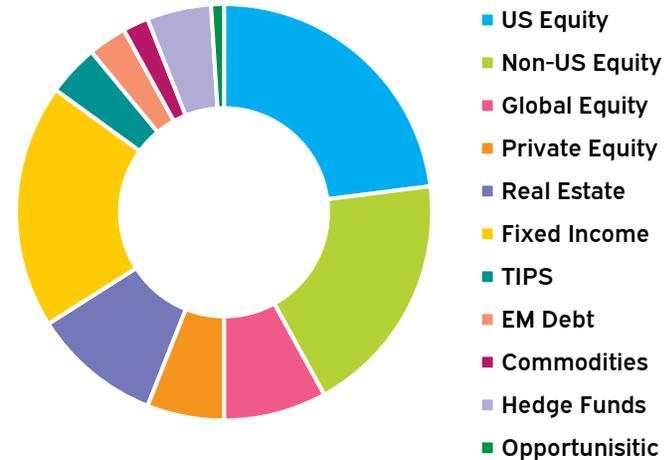
Jan. '05 – Dec. '23	RMS Benchmark	HFRI
Correlation to S&P 500	-0.12	0.82
Average Return During S&P 500 Drawdowns of at Least 10%	5.4%	-9.3%
Max Drawdown	-11.1%	-21.4%
Annualized Jensen's Alpha vs. S&P 500	2.9%	0.7%
Annualized Return	4.0%	4.9%

* Source: eVestment. HFRI FWC = HFRI Fund Weighted Composite Index. Please see "RMS Benchmark Composition" methodology in the Appendix. January 2005 through December 2023. The Jensen's Alpha calculation is the excess return of a portfolio relative to a benchmark after accounting for the portfolio's risk (i.e., a portfolio's beta relative to a benchmark such as the S&P 500)

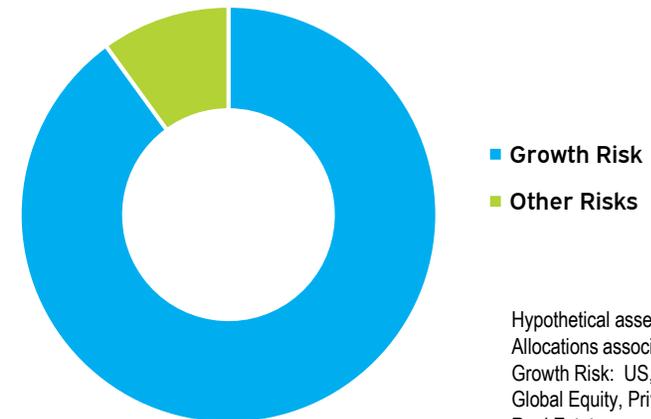
Examining Portfolio Risk Factors

- Investors construct portfolios through a strategic asset allocation process.
- The goal of the process is to achieve a certain level of return given a level of accepted risk.
- Most investment portfolios appear highly diversified by strategy name.
- However, assets oriented to economic growth (e.g., equities) are the overwhelming risk exposure. This is in part due to both the higher volatility and direct link of many of these assets to the global economy.

Example Asset Allocation



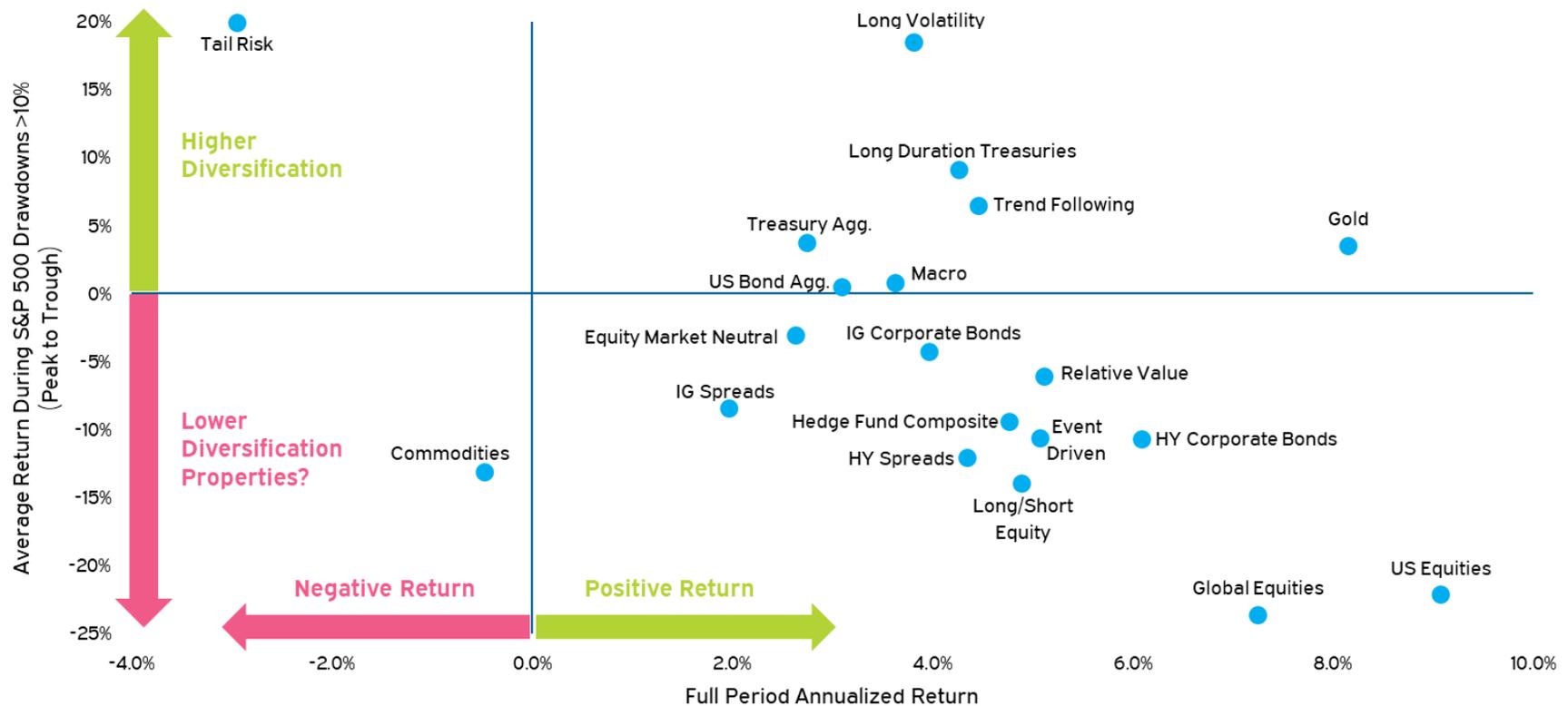
Resulting Risk Allocation



Hypothetical asset allocation. Allocations associated with Growth Risk: US, International, Global Equity, Private Equity, Real Estate

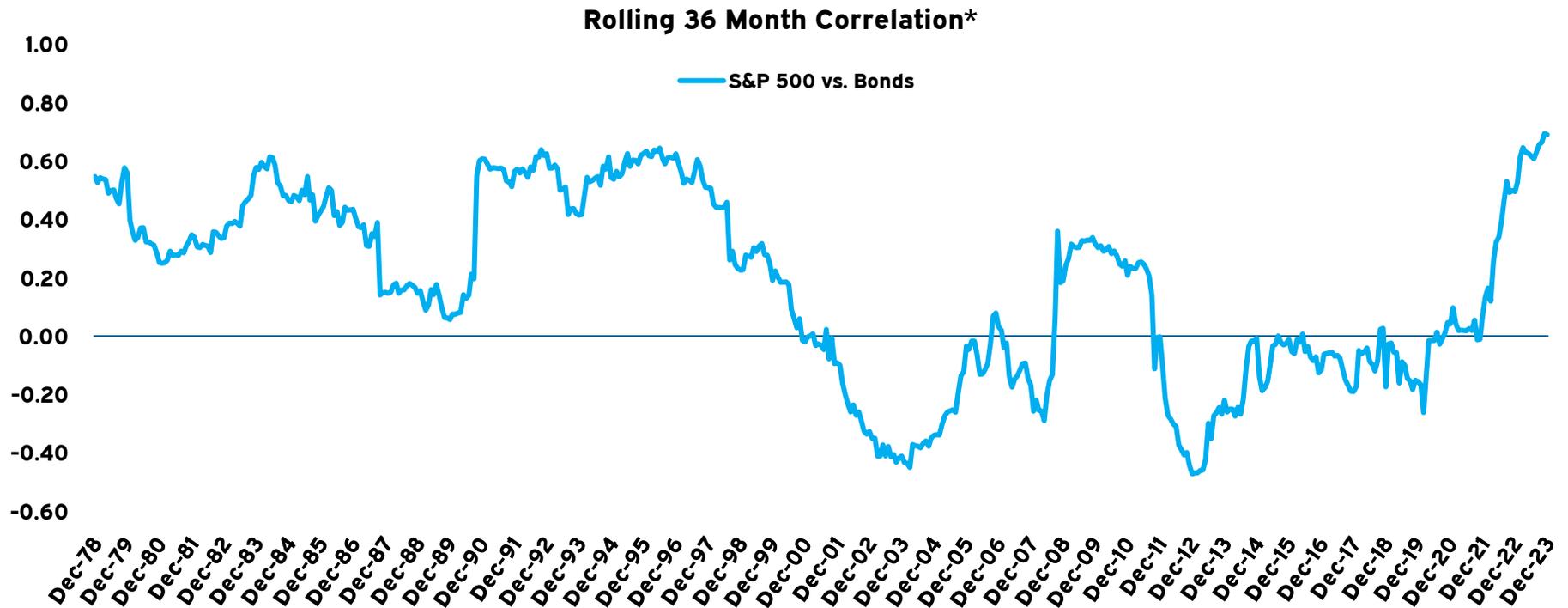
Sources of Diversification (Jan. '05 – Dec. '23)*

- Label diversification does not necessarily lead to risk diversification.
- Future outcomes may depend on factors such as central bank policy, fiscal policy, growth, inflation, geopolitics and industry/company fundamentals.
- Various strategies may provide a higher probability of hedging different types of equity drawdowns.



* Monthly data points from January 2005 through December 2023 (except Tail Risk, which has a dataset that began January 2008). Indices used are as follows: Trend Following = SG Trend; Long Volatility = CBOE Eurekahedge Long Vol.; Long Duration Treasuries = Bloomberg 20Y+ UST; Treasury Agg. = Bloomberg Treasury Agg.; US Bond Agg. = Bloomberg US Agg.; Macro = HFRI Macro; Equity Market Neutral = HFRI Equity Market Neutral; IG Corporate Bonds = Bloomberg US Investment Grade Corporate Bonds; Relative Value = HFRI Relative Value; Hedge Funds = HFRI Fund Weighted Composite; Event Driven = HFRI Event Driven; High Yield Corporate Bonds = Bloomberg US High Yield Corporate Bonds; Global Equities = MSCI ACWI; US Equities = S&P 500; Gold = "GLD" ETF; Commodities = Bloomberg Commodities; Tail Risk = CBOE Eurekahedge Tail Risk; Long/Short Equity = HFRI Equity Hedge; IG Spreads and HY Spreads = "LQDH" and "HYGH" ETFs with data prior to their first full month inception (June 2014) being a broad IG and HY corporate bond index less duration, plus 3M T-Bills, in order to approximate the credit spread return

Evaluating the Utilization of Bonds as a Source of Diversification

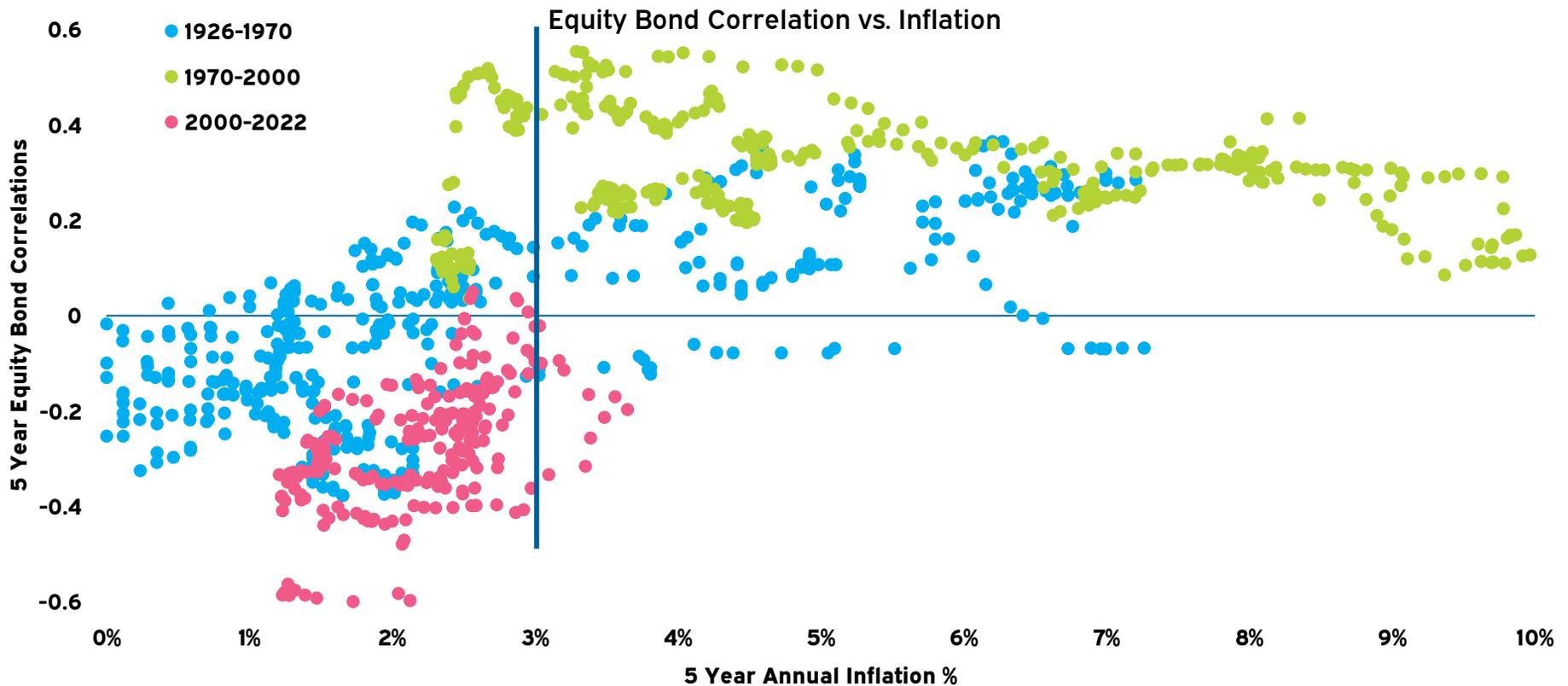


→ The correlation between equities and bonds is not structurally negative.

→ Going from a negative correlation to a less negative correlation still poses a risk to the efficacy of using bonds to hedge equity risk.

* Source: eVestment. Bonds = Bloomberg US Aggregate. As of December 2023

Evaluating the Utilization of Bonds as a Source of Diversification



→ From 1926 to May 2022, equity and bond returns were positively correlated 90% of the time when inflation was greater than 3%.

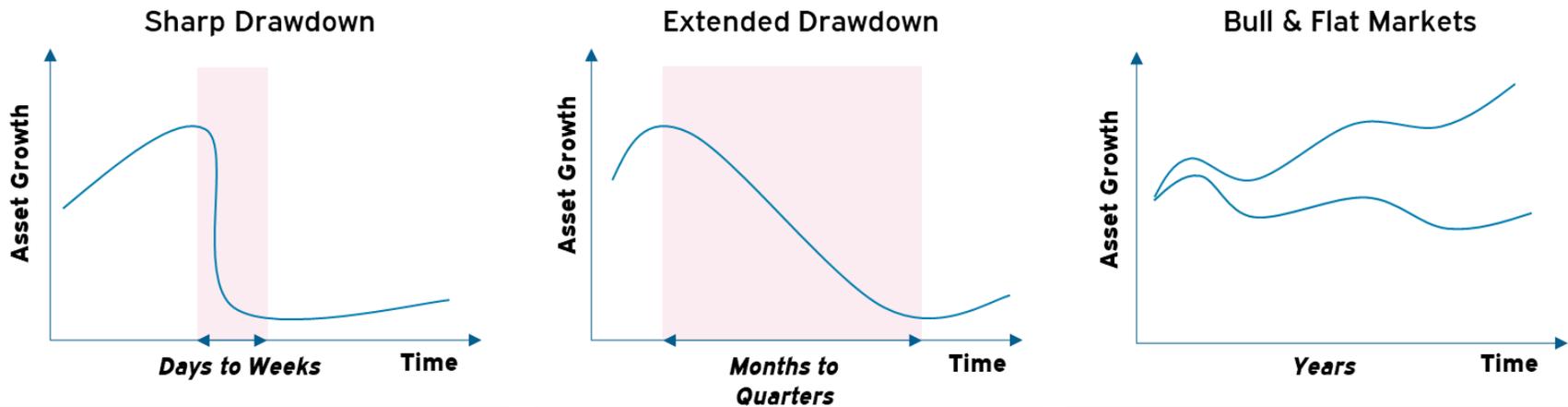
→ Since the year 2000, equity losses have been dampened by bond returns; however, a shifting macro environment may cause equity/bond correlations to behave differently in the future.

* Source: Source: Robert Shiller data and FRED 1926 – 2022 as of March 2022

Program Building Blocks

CRO / RMS programs are designed to:

- Provide diversification properties that are difficult to achieve in traditional asset classes.
- Have a positive long-term expected return, particularly during equity drawdowns.
- Be scalable and capital efficient to have a material impact to asset allocation.
- Provide liquidity for rebalancing and improve probabilities of meeting spending/liability requirements.
- Provide customization to meet the specific needs of investors.



First Responders

Primary Role: First line of protection in an equity drawdown

Strategy Examples: Long Volatility, Long Duration US Treasuries, Tail Risk Strategies

Second Responders

Primary Role: Second line of protection in an equity drawdown

Strategy Examples: Trend Following, CTAs, Managed Futures

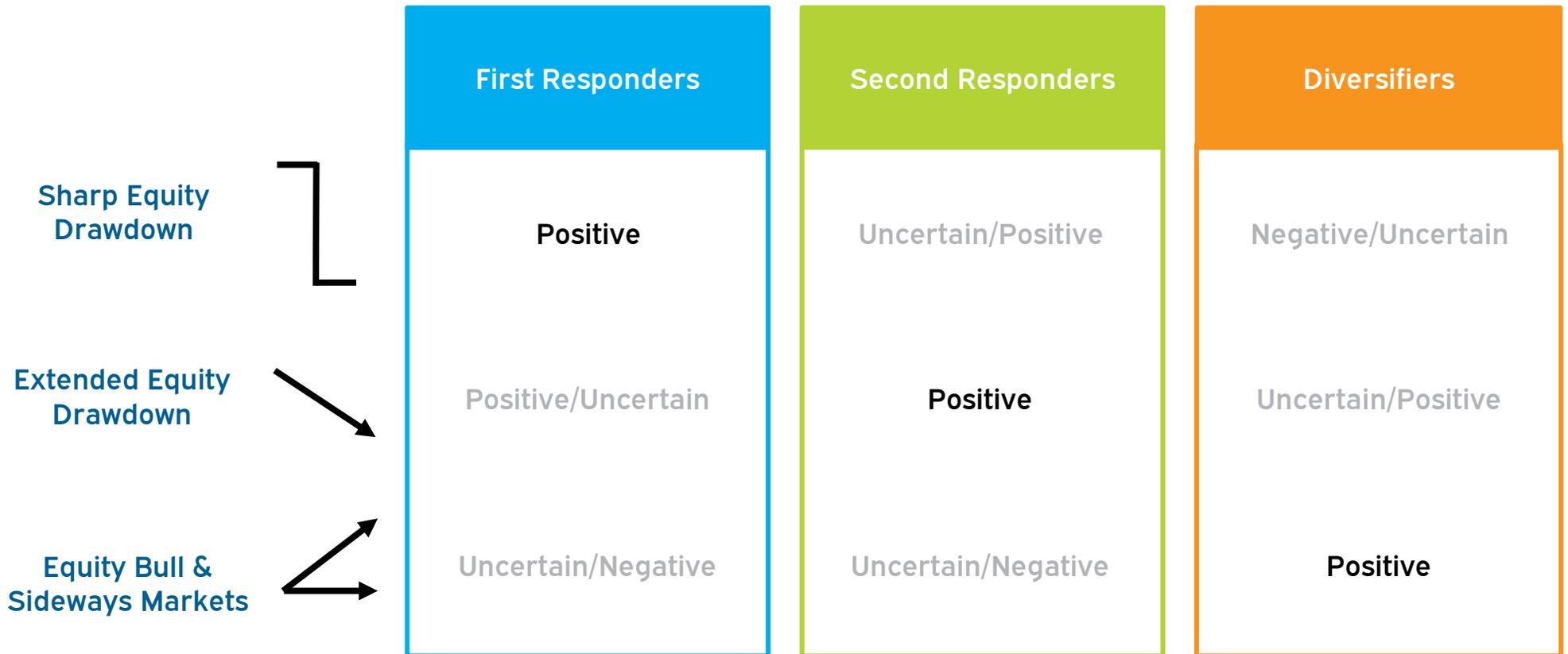
Diversifiers

Primary Role: Provide uncorrelated returns to stabilize 1st and 2nd responders

Strategy Examples: Global Macro, Multi-Strategy, Equity Market Neutral, Relative Value, Event-Driven, Insurance Linked, Alternative Risk Premia, etc.

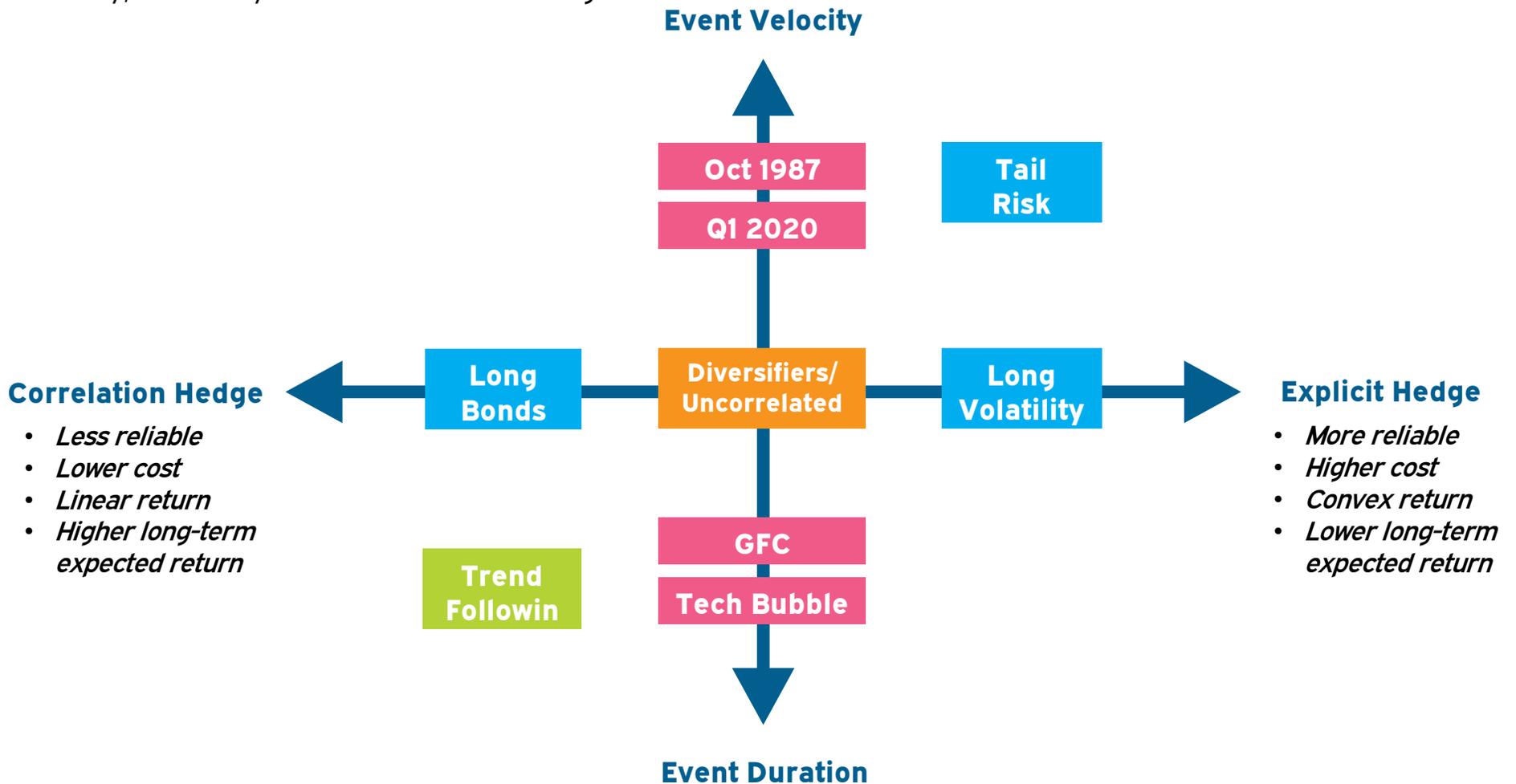
Components and Expected Outcomes

With varied expectations by strategy, allocating across multiple components increases the probability of achieving a desired result.



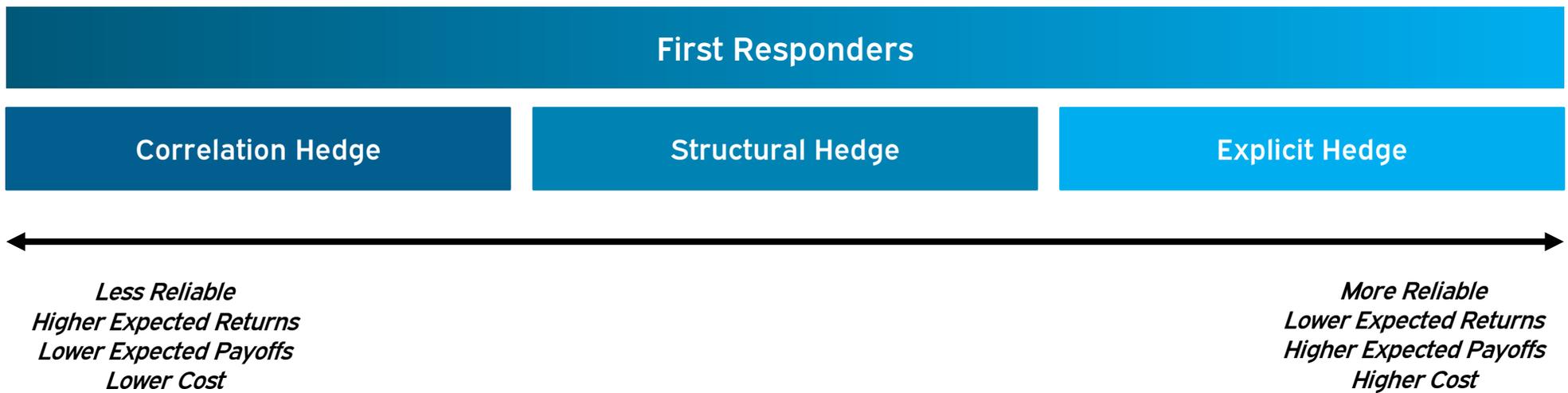
Program Designs Considerations

There are key tradeoffs to consider when building an RMS / CRO program, which revolve around cost, capital efficiency, convexity and asset class coverage.



First Responders

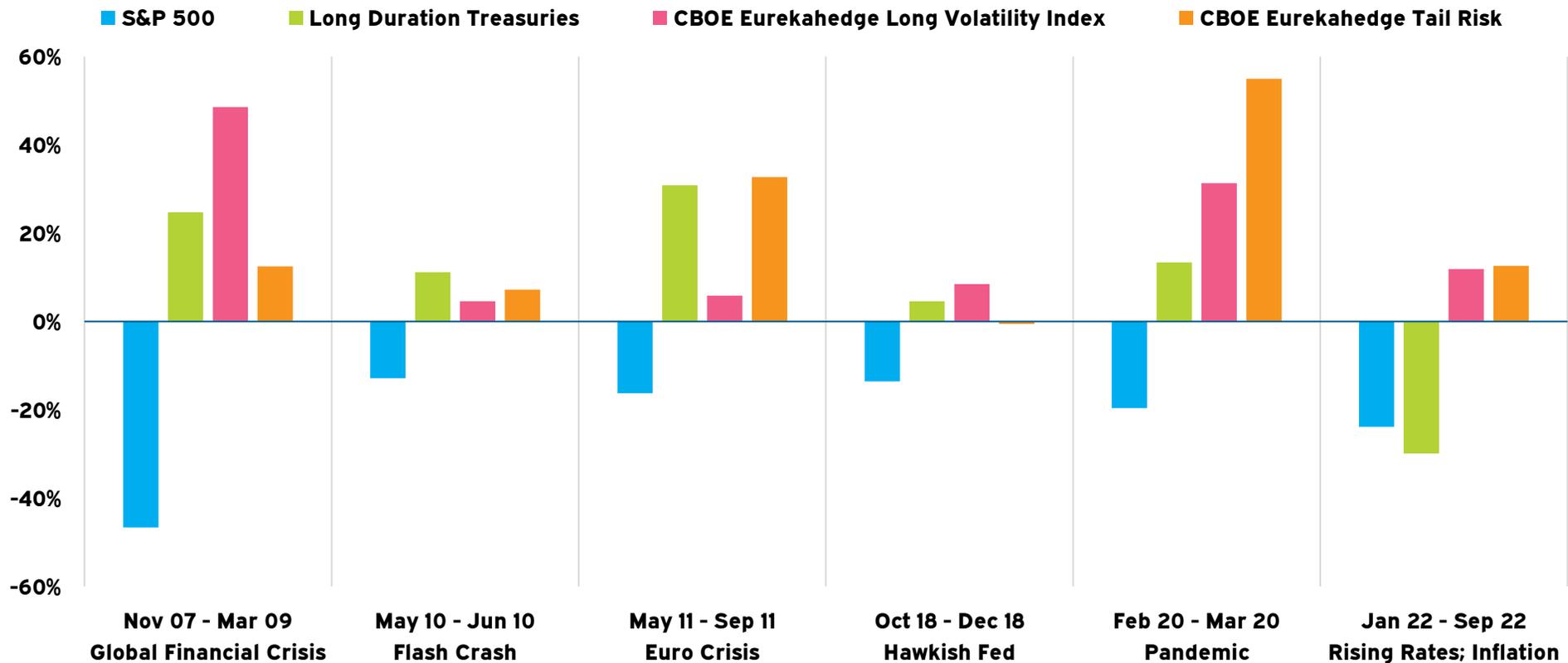
- First responders are meant to be the first line of defense in an equity event.
- Strategies should produce meaningful gains in the initial stages of a market shock.
- There are three main types of hedging all of which can be found within the First Responders component of RMS:
 - Correlation hedge: a bet that one asset will produce good returns when another produces bad returns.
 - Structural hedge: an investment in a security that has a close inverse relationship with another.
 - Explicit hedge: analogous to an insurance contract (e.g., an ongoing payment in exchange for a payoff if an event X occurs).
- Strategies vary primarily by certainty, payoff magnitude, expected return, and cost.



First Responders

Correlation Hedge	Structural Hedge	Explicit Hedge
<p>Strategies: → Long US Treasuries</p> <p>Performance Drivers: → Investors often seek high quality assets when markets decline</p> <p>Most Effective When...  → Flight-to-safety</p> <p>Least Effective When...  → Rising rates</p> <p>Implementation Example → Buying 20+ year US Treasuries</p> <p>Strategy Benefits → Well known → Low cost → Historically reliable</p> <p>Things to consider... → Relies on the behavior of others → Negative real yields → Changing correlations?</p>	<p>Strategies: → Long Volatility</p> <p>Performance Drivers: → Volatility increases as equity price changes accelerate</p> <p>Most Effective When...  → Increasing volatility</p> <p>Least Effective When...  → Stable / low volatility</p> <p>Implementation Example → Buying CBOE VIX options</p> <p>Strategy Benefits: → High certainty → High event payoffs → Flexible implementation</p> <p>Things to consider... → Low expected returns → Complexity → Ability to hold</p>	<p>Strategies: → Tail risk hedging</p> <p>Performance Drivers: → Continual insurance payment for a guaranteed payoff</p> <p>Most Effective When...  → Sharp drawdowns</p> <p>Least Effective When...  → Stable, bull markets</p> <p>Implementation Example → Buying equity put options</p> <p>Strategy Benefits: → Guaranteed payoff → Targets specific levels → Highest payoff</p> <p>Things to consider... → Explicit ongoing cost → Most difficult to hold → Counterparty risk</p>

First Responders Returns During S&P 500 Drawdowns of at Least 10%*



→ RMS is designed to protect against short and long-term market shocks.

→ Gains from RMS during market dislocations can potentially be used to rebalance, fund spending/liabilities, fund capital calls from private investments, etc.

→ Factors such as liquidity, RMS program design, and overall client objectives need to be considered.

* Source: eVestment. Jan. '05 through Dec. '22 using monthly data. CBOE Eurekahedge Tail Risk Index began January 2008.

Second Responders

Strategies:

- Trend Following

Performance Drivers:

- Markets often exhibit persistent trends driven by behavioral, economic, or institution reasons

Most Effective When...

- Trending markets



Least Effective When...

- Sharp reversals, sideways markets



Dynamic Positioning:

- Long Bonds in March of 2020, benefiting from flight-to-quality
- Short Bonds in 2022 hedging against inflationary

Strategy Benefits:

- Positive expected returns
- Negative conditional correlations

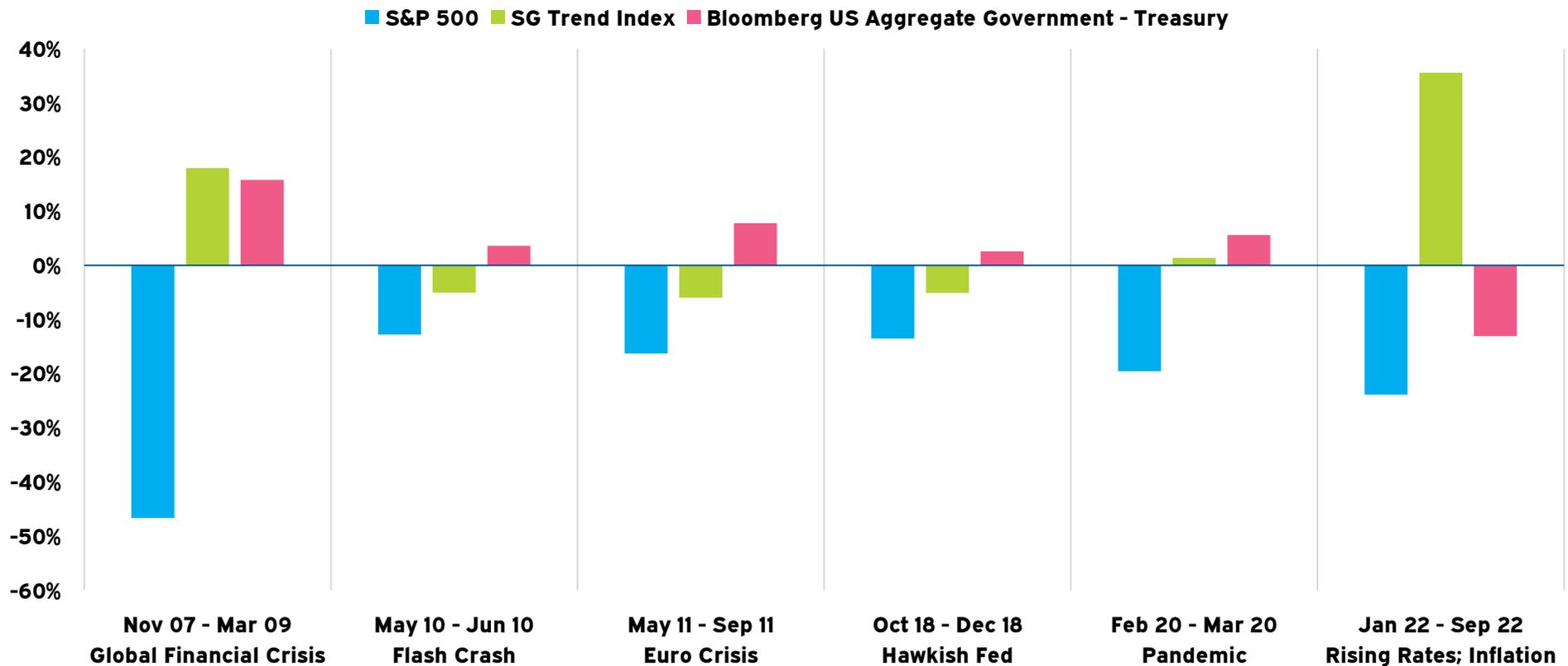
Things to consider...

- Basis risk
- Divergent profile (many small losses with large positive outliers)

Second Responders Description

- Strategies that follow pre-defined rules (i.e., systematic implementations) for trading (long and short) liquid futures and forwards contracts.
- Trade futures/forwards across global equity indices, interest rates/bonds, currencies, and commodities.
- Example instruments may include; S&P 500 futures, US 10-year treasury futures, Oil futures, and USD/EUR forwards.
- Simplistic explanation: strategies that buy an asset when it has a positive return over recent history and sell an asset when it has a negative return over recent history.
- Trend following strategies have been used for decades with live manager track records dating back to the 1970s.
- With no structural long or short bias, trend following exhibits low-to-no correlation on average to major market risks.
- Trend following has exhibited a negative conditional correlation to equity markets during drawdown periods resulting in a convex return profile.
- The best returns for trend following strategies have typically occurred during the best and worst periods for equities.
- Trend following typically underperforms in sideways markets or at fulcrum points when markets reverse up (or down) after a sustained trend, creating a drawdown profile that is complementary to equities.

Second Responders Returns During S&P 500 Drawdowns of at Least 10%*



→ RMS is designed to protect against short and long-term market shocks.

→ Gains from RMS during market dislocations can potentially be used to rebalance, fund spending/liabilities, fund capital calls from private investments, etc.

→ Factors such as liquidity, RMS program design, and overall client objectives need to be considered.

* Source: eVestment. Jan. '05 through Dec. '22 using monthly data.

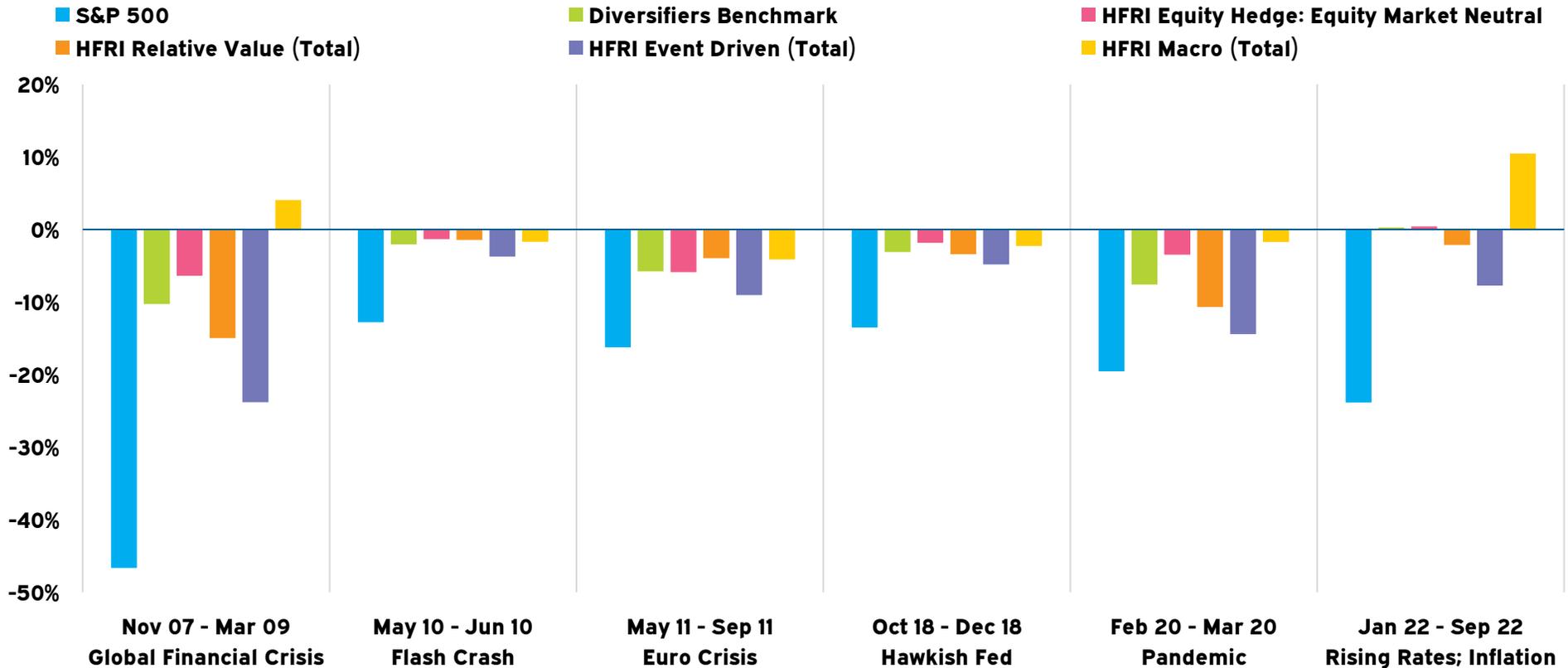
Diversifiers Description

In aggregate or isolation, Diversifiers seek to meet several key criteria:

- Higher expected risk-adjusted returns than First and Second Responders.
- Uncorrelated to First and Second Responders.
- Uncorrelated to traditional risk factors (e.g., equities, credit spreads, rates) on average.

Diversifiers	Global Macro	Alternative Risk Premia	Insurance Linked Strategies
	<p>Summary</p> <ul style="list-style-type: none"> → Attempts to profit by predicting market moves or finding inefficiencies through systematic and / or discretionary analysis <p>Common Implementation:</p> <ul style="list-style-type: none"> → Liquid global futures / forwards contracts across equities, bonds, currencies, and commodities 	<p>Summary</p> <ul style="list-style-type: none"> → Harvests non-traditional risk premiums in a market neutral fashion (Value, Carry, Momentum) <p>Common Implementation:</p> <ul style="list-style-type: none"> → Liquid global futures / forwards contracts across equities, bonds, currencies, and commodities → Single name equities 	<p>Summary</p> <ul style="list-style-type: none"> → Harvests a risk premium linked to property damage insurance contracts related to natural catastrophes <p>Common Implementation:</p> <ul style="list-style-type: none"> → Modestly illiquid reinsurance contracts
	Relative Value / Event Driven	Equity Market Neutral	Multi-Strategy
	<p>Summary</p> <ul style="list-style-type: none"> → Attempts to profit from market inefficiencies related to idiosyncratic events or relative value opportunities <p>Common Implementation:</p> <ul style="list-style-type: none"> → Liquid global futures / forwards contracts across equities, bonds, currencies, and commodities → Single name equities 	<p>Summary</p> <ul style="list-style-type: none"> → Uses a systematic approach to profit from pricing anomalies related to mean reversion or technical analysis <p>Common Implementation:</p> <ul style="list-style-type: none"> → Single name equities 	<p>Summary</p> <ul style="list-style-type: none"> → A diversified portfolio of multiple investment strategies or portfolio managers <p>Common Implementation:</p> <ul style="list-style-type: none"> → Liquid global futures / forwards contracts across equities, bonds, currencies, and commodities → Single name equities

Diversifiers' Returns During S&P 500 Drawdowns of at Least 10%*



→ RMS is designed to protect against short and long-term market shocks.

→ Gains from RMS during market dislocations can potentially be used to rebalance, fund spending/liabilities, fund capital calls from private investments, etc.

→ Factors such as liquidity, RMS program design, and overall client objectives need to be considered.

* Source: eVestment. Jan. '05 through Dec. '22 using monthly data. "Diversifiers Benchmark" is an equally weighted, annually rebalanced composite of the following HFRI indices: Macro, Event Driven, Equity Market Neutral, Relative Value.

Implementations

→ Standalone allocation to complement an existing asset class while seeking to increase diversification

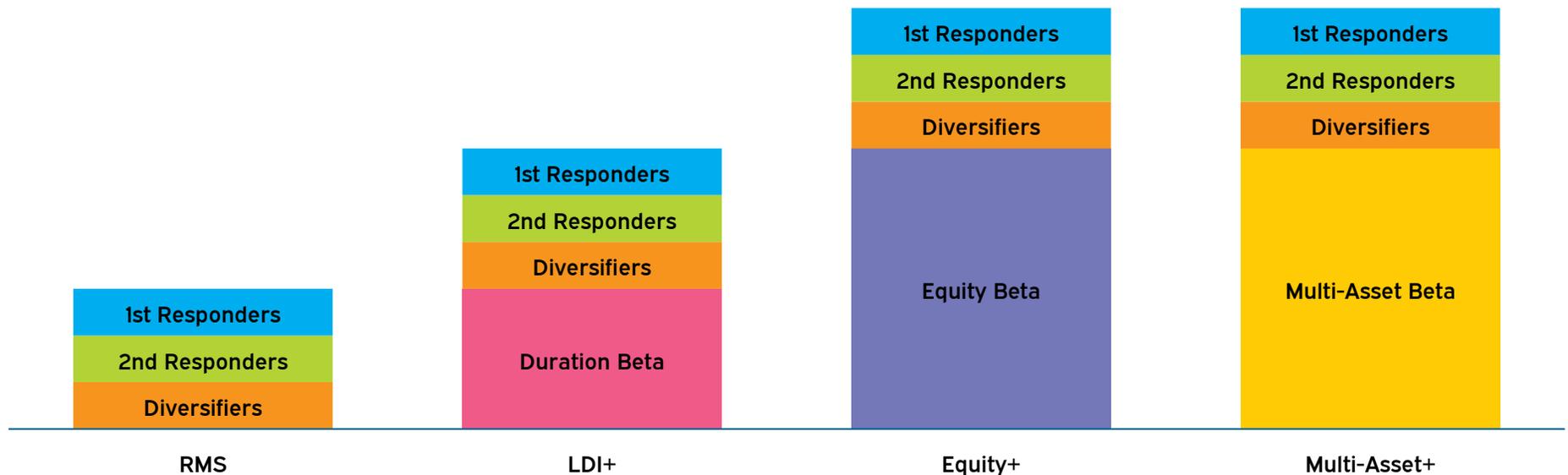
Example: potential asymmetric risks of equity and fixed income allocations

→ Combine with duration beta to complement traditional LDI strategies

Example: replace credit spread risk of investment grade corporate bonds

→ Combine with equity beta to complement traditional active long-only equity allocations

Example: potential lack of meaningful persistent alpha in active US Large Cap strategies

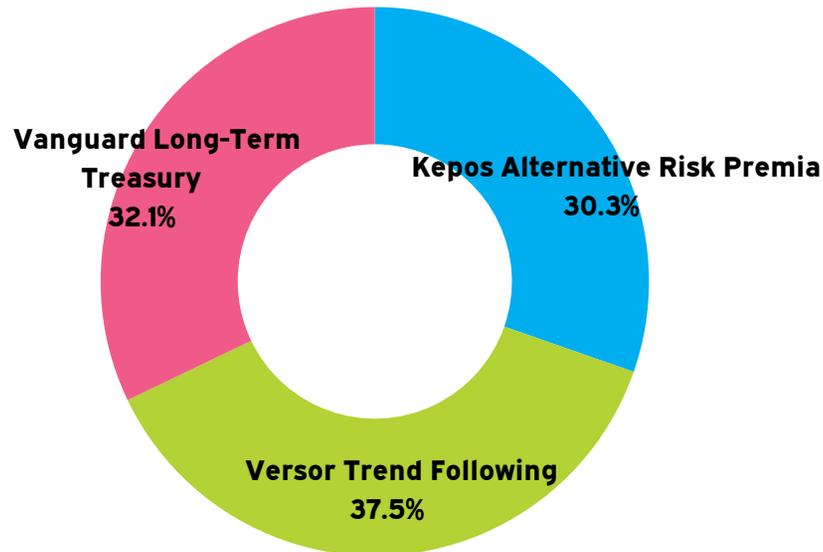


Current Composition in OPFRS Portfolio

Crisis Risk Offset Composition

- OPFRS's Crisis Risk Offset portfolio is composed of three components: Alternative Risk Premia, Systematic Trend Following, and Long Duration Treasuries with equally weighted targets (~33.3% each).
- The following chart illustrates the actual allocations as of June 30, 2024.

Actual Allocation as of June 30, 2024



The sector and credit quality allocation and characteristics data is as of March 31, 2024.

Correlations between CRO & Other Asset Classes

- The objective of CRO component is to diversify both the equity risk and nominal interest rate risk of the total portfolio; and is designed for it to exhibit returns and characteristics with little to no correlation to other components of the portfolio.
- The following table illustrates the trailing correlations between CRO and the Plan's other asset classes.
 - Since inception in August 2018, CRO segment has exhibited less than ± 0.50 correlations to most other asset classes.

CRO Correlation to:	YTD	1-Yr	3-Yr	5-Yr	Since Inception
US Equity	-0.33	0.44	0.63	0.14	0.34
International Equity	0.17	0.64	0.76	0.08	0.31
Fixed Income	-0.10	0.43	0.30	0.46	0.38
Credit	0.54	0.70	0.13	0.53	0.51
Covered Calls	0.20	0.51	0.06	0.33	0.39

Correlation $< \pm 0.50$ is highlighted with green in this table with the deepest shade for those under ± 0.20 .

Correlations may range from -1.0 (inversely correlated) to 1.0 (directly correlated). Lower value, regardless of positive or negative sign would be preferable for the purposes of diversification.

Correlation data is as of June 30, 2024. Inception date for Crisis Risk Offset component is August 2018.

Annualized Performance – Net of Fees (as of June 30, 2024)

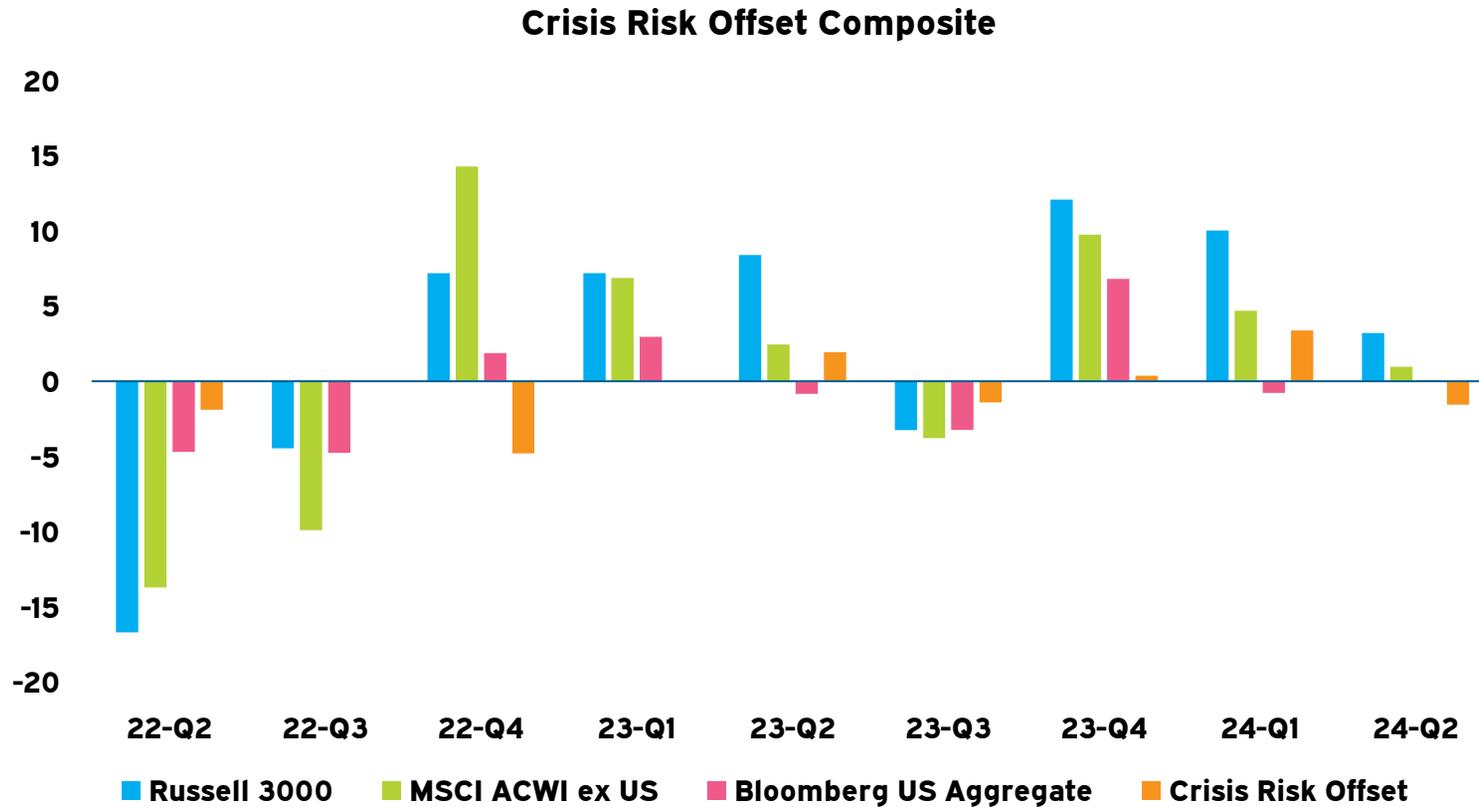
	1-Yr	3-Yr	5-Yr	Since Inception	Inception Date
Crisis Risk Offset	0.7	-3.3	-7.3	-6.7	Aug-18
<i>Crisis Risk Offset Benchmark</i>	3.6	4.3	0.7	0.7	
Excess Return	-2.9	-7.6	-8.0	-7.4	
Kepos Alternative Risk Premia	15.7	--	--	8.3	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>	11.0	--	--	7.6	
Excess Return	4.7	--	--	0.7	
Versor Trend Following	-3.6	--	--	-0.0	Apr-22
<i>SG Trend Index</i>	4.0	--	--	5.5	
Excess Return	-7.6	--	--	-5.5	
Vanguard Long-Term Treasury ETF	-5.7	-10.5	-4.3	-4.3	Jul-19
<i>Blmbg. U.S. Government: Long Term Bond Index</i>	-5.6	-10.4	-4.2	-4.2	
Excess Return	-0.1	-0.1	-0.1	-0.1	

→ As Kepos and Versor were incepted in early 2022, they have not gone through a complete business cycle and does not have trailing returns longer than 1 year.

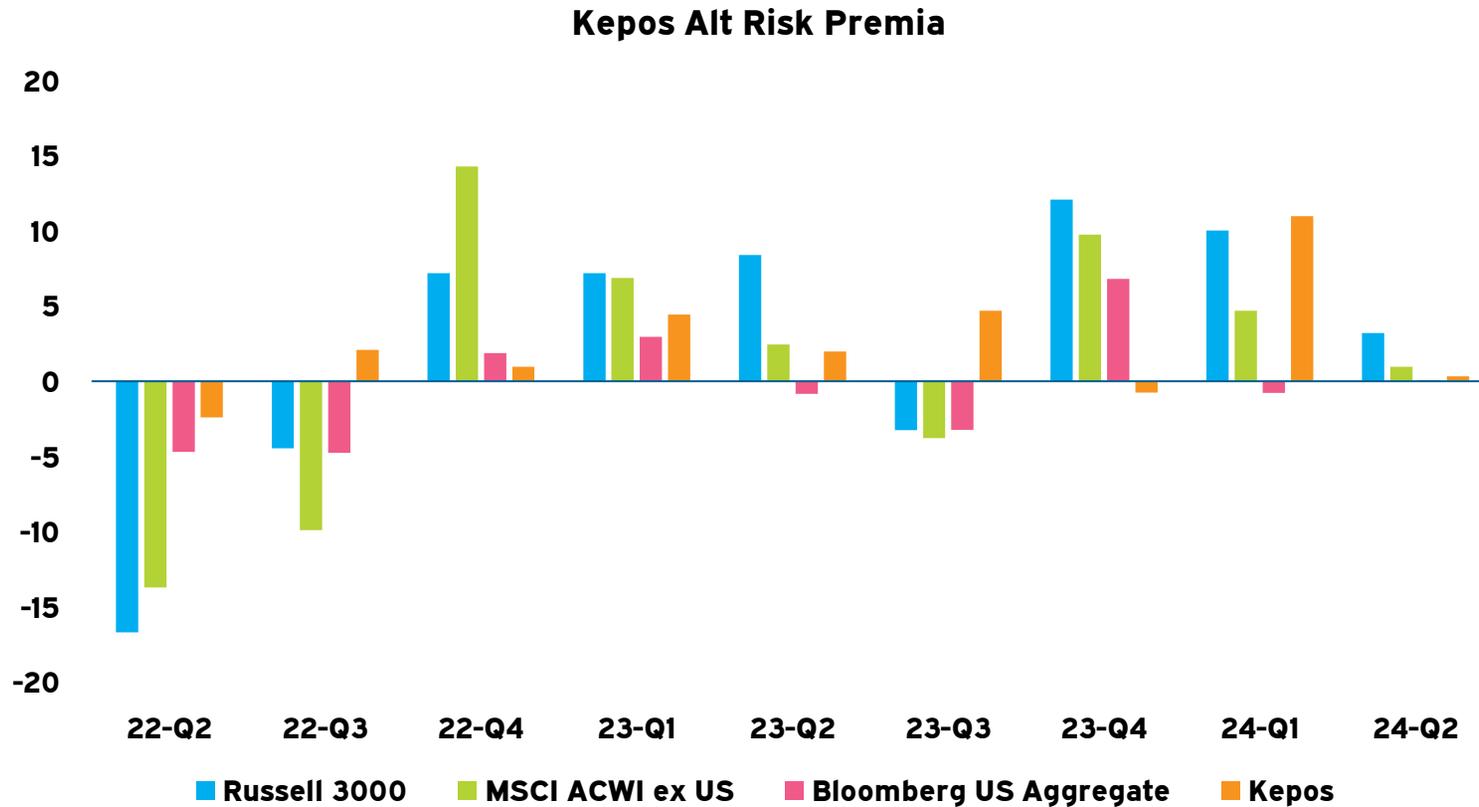
→ The following pages illustrate CRO and the three underlying funds' quarterly returns since 2022 Q2 (when all current managers are invested) in comparison with the broad market indices.

Crisis Risk Offset Benchmark is 100.0% SG Multi Alternative Risk Premia Index since inception through 12/02022; 33.3% SG Trend Index, 33.3% SG Multi Alternative Risk Premia Index, 33.3% Blmbg. U.S. Government: Long Term Bond Index thereafter.

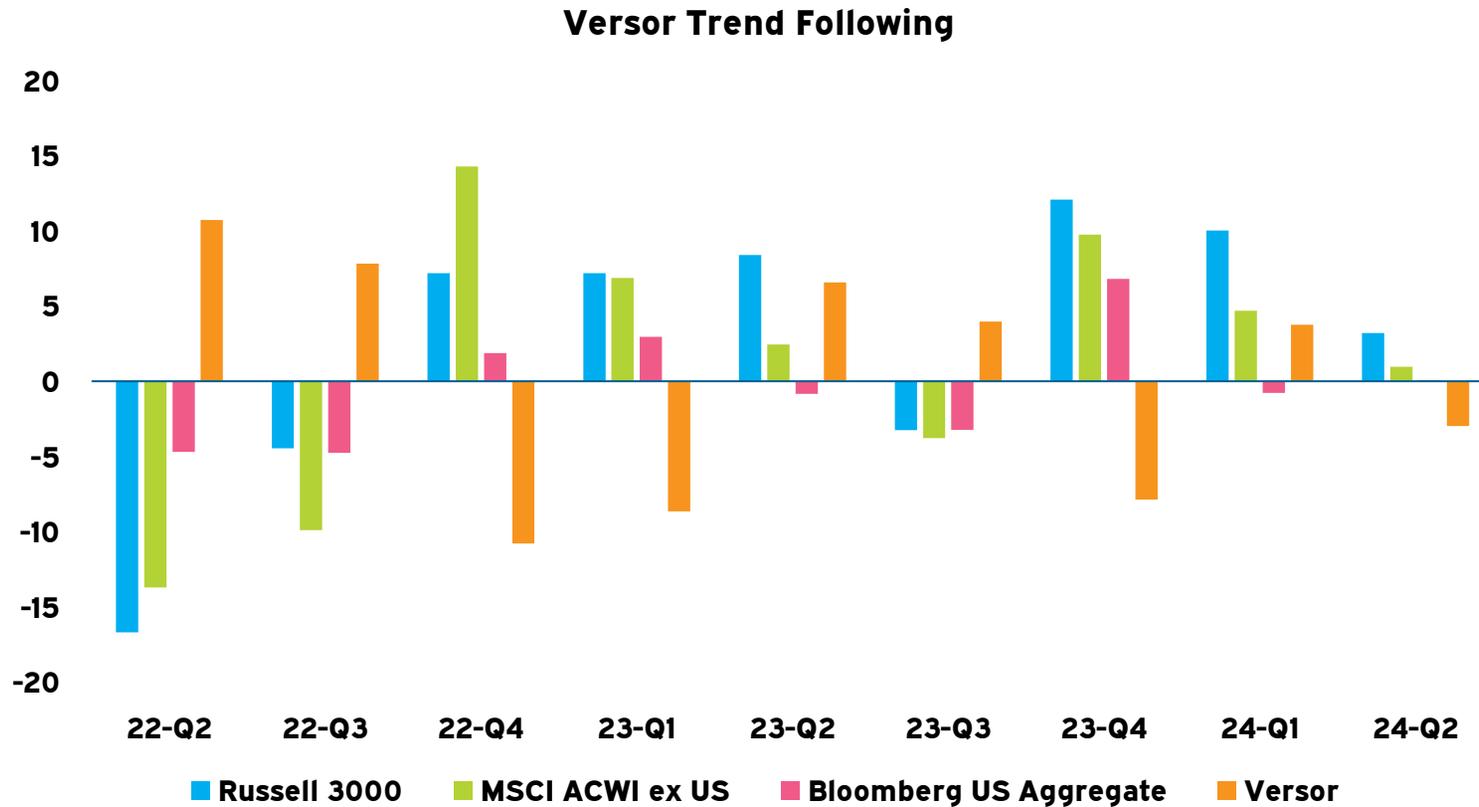
Quarterly Performance Since 2022 Q2



Quarterly Performance Since 2022 Q2

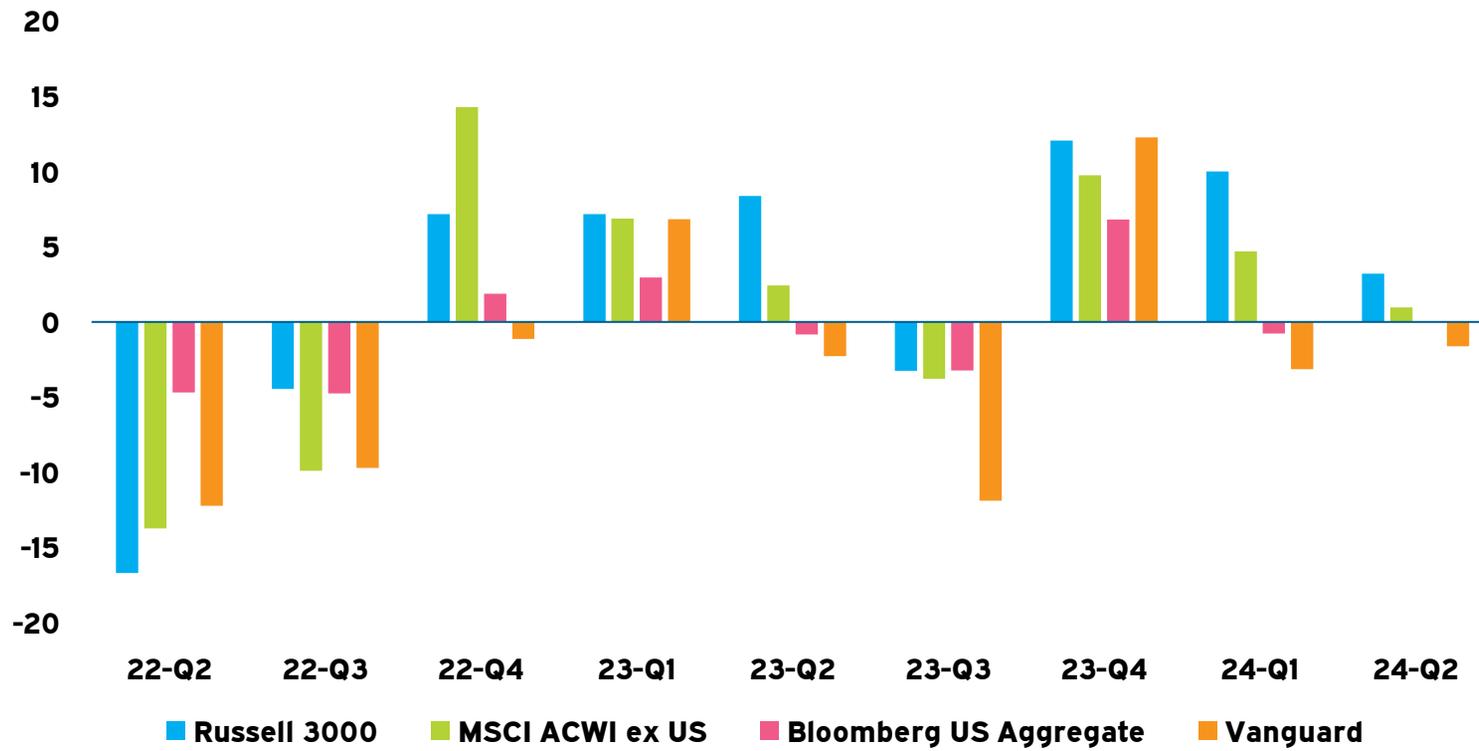


Quarterly Performance Since 2022 Q2



Quarterly Performance Since 2022 Q2

Vanguard Long-Term Treasury



Recommendations

Recommendations

OPFRS's CRO component and the underlying managers has performed and exhibited characteristics expected.

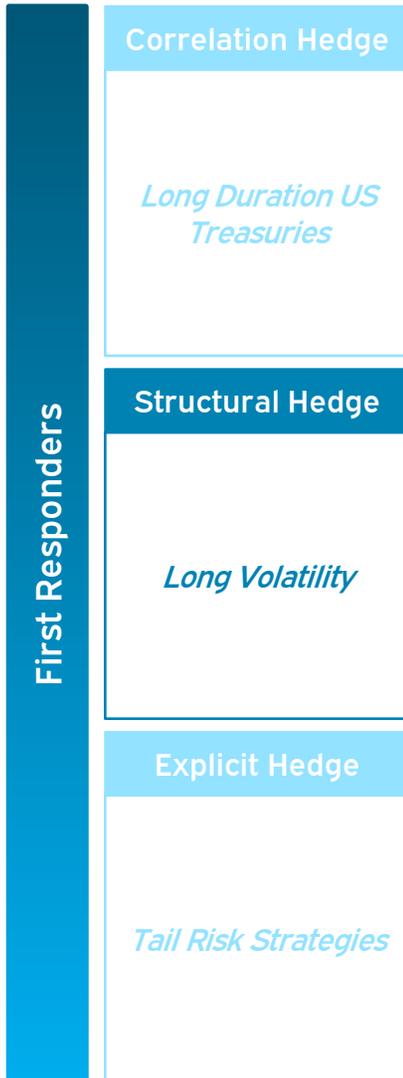
→ **Meketa recommends maintaining the current structure and manager composition of the Crisis Risk Offset segment.**

Appendix

First Responders: Correlation Hedge Description

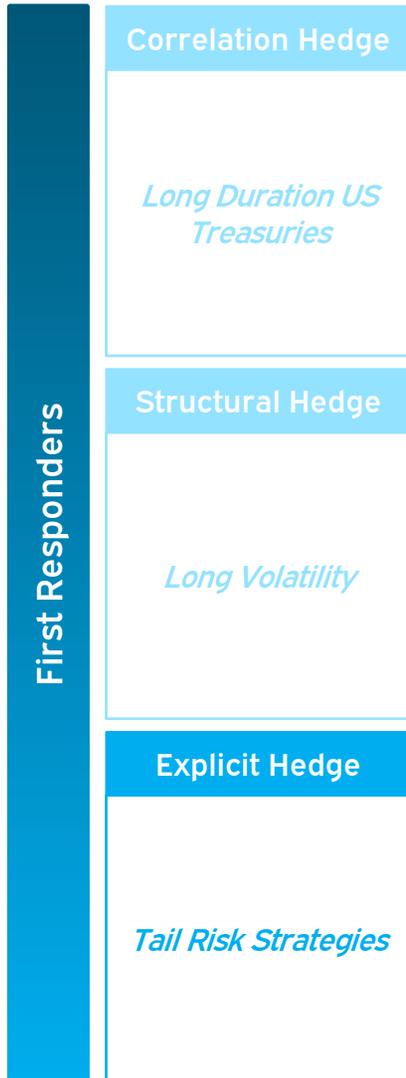
First Responders	Correlation Hedge
	<i>Long Duration US Treasuries</i>
	Structural Hedge
	<i>Long Volatility</i>
	Explicit Hedge
	<i>Tail Risk Strategies</i>

- Long Duration US Treasuries are a correlation hedge against an equity drawdown.
- This strategy makes investments in long-term (20+ year) US Treasury Bonds.
- They are perhaps the most used defensive asset used historically by institutions.
- Given the perceived risk-free characteristics of all US government-issued debt, treasuries have historically behaved as a “safe haven” asset during times of crisis.
- As equity market declines have generally coincided with declines in interest rates, holding longer duration bonds magnifies their defensive impact.
- As a correlation hedge however, their behavior during an equity drawdown is reliant on the actions of other investors in market separate from equities.
- While void of equity risk, these bonds have a material amount of interest rate risk.
- If a rising rate environment triggers an equity drawdown or period of crisis, the treasuries could face material losses or reduced effectiveness as a hedge to equities.
- This strategy offers the highest expected return vs. other first responders. Although this gap has shrunk meaningfully as rates have fallen and inflation has risen.
- In addition, this is the least complex, lowest fee, and most liquid strategy that can be implemented as a part of an RMS portfolio.



First Responders: Structural Hedge Description

- Long Volatility strategies are a **structural hedge** against an equity drawdown.
- This is the second most direct form of equity drawdown insurance, benefiting from structural attributes.
- Long volatility strategies purchase derivative securities which are linked to the volatility of equity, fixed income, currency, and / or commodity volatility.
- The strategy profits as market volatility rises or is higher than anticipated.
- Equity market corrections or drawdowns tend to be accompanied by sharp increases in volatility so strategies that are long equity volatility will profit.
- Long volatility strategies have a higher expected return than tail risk but still likely to lose -1% to -5% per annum during benign periods.
- During major market drawdowns they should generate a return of 0.5x to 1.5x of the corresponding equity drawdown.
- Long volatility strategies can suffer from basis risk in their expected defensive performance to equity drawdowns if they have small or no allocation to equities.
- These strategies are often found in traditional hedge fund structures of 2/20% with extended (quarterly+ liquidity) but an increasing number of institutional solutions are coming to market with flat fees and monthly or better liquidity.



First Responders: Explicit Hedge Description

- Tail risk strategies are an **explicit hedge** against an equity drawdown.
- Implementation utilizes derivatives which allows for substantial payoffs during market crisis situations due their inherent leverage.
- Most basic implementation consists of buying equity put options. This involves paying a premium to have the option to sell equities at a pre-specified price in the future.
- Strategies can target a specific equity drawdown level and a specific amount of the portfolio to protect.
- For example, a strategy could be implemented which would preserve 100% of an investor's equity portfolio in the event of a 20% equity drawdown.
- The strategy can effectively set a maximum loss level for a portfolio.
- The key drawback is that, ignoring interim profit harvesting, 100% of the premium spent will be lost if an equity drawdown of that magnitude does not occur.
- Due the to the on-going cost of holding an option, this type of strategy has a negative expected return.
- However, tail risk strategies are the most reliable way to hedge a portfolio. Aside from counterparty risk considerations, they are guaranteed to payoff.
- These strategies are implemented in an overlay or separate account format.

RMS Benchmark Composition

RMS Benchmark is equally weighted, rebalanced each calendar year

- 1/3rd First Responders Benchmark
- 1/3rd Second Responders Benchmark
- 1/3rd Diversifiers Benchmark

First Responders Benchmark*:

- 1/3rd equally weight, rebalanced each calendar year: CBOE Eureka hedge Long Volatility Index, CBOE Eureka hedge Tail Risk Index (incepted Jan-2008), Bloomberg US Treasury 20+ Years

Second Responders Benchmark:

- SG Trend Index

Diversifiers Benchmark: equally weighted; rebalanced each calendar year

- 25% HFRI Relative Value
- 25% HFRI Equity Market Neutral
- 25% HFRI Macro
- 25% HFRI Event Driven

* Since the CBOE Eureka hedge Tail Risk Index started in January 2008 the First Responders Benchmark uses an equal weighting of the other two benchmarks prior to January 2008

THIS REPORT (THE "REPORT") HAS BEEN PREPARED FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

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AGENDA REPORT

TO: Oakland Police and Fire Retirement System (PFRS) Board of Administration

FROM: David F. Jones
Plan Administrator & Secretary

SUBJECT: Expiration Notice of PFRS Investment Manager Service Agreement and Action to Extend Service Agreement

DATE: September 25, 2024

SUMMARY

The Service Contract for the following Investment Manager for the Oakland Police & Fire Retirement Systems (PFRS) is set to expire December 31, 2024. The PFRS Board is asked to consider acting to extend the agreement for this manager for one additional year pursuant to the professional service agreement.

BACKGROUND

The Professional Service Agreement for the following Investment Manager who provides services for the PFRS Board will expire shortly. The following table describes the investment manager contract:

Investment Manager	Investment Strategy	Inception Date	Contract Extension Expiration Date
Ramirez Asset Management	Core Fixed Income	January 1, 2017	December 31, 2024

RECOMMENDATION

Staff recommends that the PFRS Board approve the implementation of the relevant service agreement provision for the manager to extend the professional service agreement between the above mentioned PFRS Investment Manager and PFRS.

Respectfully submitted,

David F. Jones
Plan Administrator & Secretary
Oakland Police and Fire Retirement System

MEMORANDUM

TO: Oakland Police and Fire Retirement System (“OPFRS”)
FROM: Meketa Investment Group (“Meketa”)
DATE: September 25, 2024
RE: Ramirez Core Fixed Income—Contract Extension

Manager: Ramirez Asset Management

Inception Date:	February 2017	OPFRS AUM (8/31/2024):	\$ 75.9 million
Strategy:	Core Fixed Income	Strategy AUM (6/30/2024):	\$ 2.7 billion
Benchmark:	Bloomberg US Aggregate Bond Index	Firm-wide AUM (6/30/2024):	\$ 11.4 billion

Summary & Recommendation

Ramirez has managed a portion of OPFRS’s Core Fixed Income portfolio since January 2017. As of 8/31/2024, the portfolio is approximately \$75.9 million or about 16.1% of OPFRS’s Total Fund. The strategy has performed within expectations and guidelines for the portfolio for all time periods measured, and has experienced no major organizational changes in the portfolio management team since last review in December 2023. **Therefore, Meketa does not have any major concerns with Ramirez and recommends that the Board retains Ramirez as a Core Fixed Income manager with a one-year contract extension.**

Investment Performance Review Summary

As of 8/31/2024, Ramirez Core Fixed Income portfolio has outperformed the benchmark over all time periods measured on both gross- and net-of-fees bases. In comparison with its peers in the eVestment US Core Fixed Income (Net) universe, it has ranked above average year-to-date and since inception..

OPFRS Portfolio Returns (as of 8/31/2024)¹

Portfolio	Balance (\$000)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	S.I. (%)	Inception Date
Ramirez Core (Gross)	75,868.8	3.9	3.6	7.7	-1.8	0.3	2.2	1/2017
<i>Bloomberg US Aggregate</i>	---	<i>3.8</i>	<i>3.1</i>	<i>7.3</i>	<i>-2.1</i>	<i>0.0</i>	<i>1.6</i>	---
Excess Return	---	0.1	0.5	0.4	0.3	0.3	0.6	---
Ramirez Core (Net)	75,868.8	3.9	3.4	7.5	-2.0	0.1	2.0	1/2017
<i>Bloomberg US Aggregate</i>	---	<i>3.8</i>	<i>3.1</i>	<i>7.3</i>	<i>-2.1</i>	<i>0.0</i>	<i>1.6</i>	---
Excess Return	---	0.1	0.3	0.2	0.1	0.1	0.4	---
Peer Group Rank (Net) ²		28	45	66	58	75	28	---

¹ Performance is annualized for periods longer than one year. “S.I.” signifies Since Inception.

² Peer group is eVestment US Core Fixed Income (Net) as of 8/31/2024.



Product and Organization Review Summary

Ramirez Asset Management	Areas of Potential Impact				
	Level of Concern	Investment Process	Investment Team	Performance Track Record	Team/Firm Culture
Product					
Key people changes	None				
Changes to team structure or individuals' roles	None				
Product client gain/losses	None				
Changes to investment process	None				
Personnel turnover	None				
Organization					
Ownership changes	None				
Key people changes	None				
Firm wide client gain/losses	None				
Recommended Action	None - X	Watch Status		Termination	

A review of Ramirez Asset Management and the Core Fixed Income strategy revealed no concerning organizational issues or changes since the last review in December 2023.

Investment Summary per Manager

Ramirez is seeking active relative value credit opportunities to add incremental yield and total return. The firm allows experienced portfolio managers to make meaningful allocations to relative value anomalies that they identify. Ramirez is disciplined in adhering to overall benchmark duration, term, and credit quality risk framework. However, it is not risk constrained by credit segmentation within the benchmark. Ramirez believes utilizing credit expertise in sector rotation and security selection, in a risk-controlled framework will produce consistent risk-adjusted returns over time.

This philosophy is the foundation of each of Ramirez's investment strategies and has remained unchanged since the firm's inception. The firm's investment approach seeks to add value by:

- Taking a longer-term view on investing; less dependent on a few top-down decisions;
- Closely regulating relative duration and term structure positioning;
- Combining quantitative and qualitative factors into a bottom-up/ top-down process;
- Emphasizing active relative value allocation across domestic high grade credit sectors and securities held in the index.

Ramirez's overriding objective is to achieve consistent excess returns above the benchmark through successive market cycles. Ramirez views that a strategy which attempts to anticipate interest rates will exhibit higher levels of volatility relative to a benchmark and will result in inconsistent relative performance. A critical component of the risk management process is the maintenance of overall duration and term structure positioning, relative to the benchmark, within fairly narrow ranges utilizing key rate durations ("KRD") as the preferred measure. While Ramirez will express a bias for the directionality of interest rates, overall portfolio effective duration and KRD are kept within narrow bands relative to the benchmark, typically $\pm 10\%$ with average variances ranging between $\pm 5\%$.

Ramirez's portfolios, including the Core strategy, are actively managed with a blend of top-down macroeconomic analysis and bottom-up issuer level research. When forming the firm's macro- and microeconomic opinions, the Investment Committee, assesses both qualitative and quantitative factors. This ensures that the appropriate quantitative market indicators and metrics as well as the extensive experience of the firm's investment professionals is utilized when determining the optimal sectors positioning and security selection. This portfolio construction process has been in place and remained unchanged since the firm's founding.

DS/PN/JLC/mn



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OAKLAND POLICE AND FIRE RETIREMENT BOARD
CITY OF OAKLAND, CALIFORNIA
RESOLUTION No. 8113

Approved to Form
and Legality



ON MOTION OF MEMBER _____ SECONDED BY MEMBER _____

RESOLUTION AUTHORIZING A FOURTH AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH RAMIREZ ASSET MANAGEMENT, INC. FOR THE PROVISION OF CORE FIXED INCOME INVESTMENT STRATEGY MANAGER SERVICES FOR THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM (PFRS) (1) TO PROVIDE PFRS WITH AN UNLIMITED OPTION TO EXTEND THE AGREEMENT IN ONE-YEAR TERMS UNDER SECTION IV(B) AND (2) TO RENEW THE AGREEMENT FOR AN ADDITIONAL ONE-YEAR TERM COMMENCING JANUARY 1, 2025 AND ENDING DECEMBER 31, 2025

WHEREAS, Article XVI §17 of the California Constitution, commonly referred to as the Pension Protection Act or Proposition 162, and Article XXVI of the Oakland City Charter (“Charter”) vest the Oakland Police and Fire Retirement System Board (“PFRS Board”) with exclusive control of the administration and investment of the assets of the Police and Fire Retirement Fund (the “Fund”); and

WHEREAS, the PFRS Board manages and administers the Police and Fire Retirement System (“PFRS”), pursuant to the requirements of Article XXVI of the Charter; and

WHEREAS, Charter section 2601(e) gives the Board power to make all necessary rules and regulations for its guidance and exclusive control of the administration and investment of the funds established for the maintenance and operation of the system; and

WHEREAS, Article XXVI of the Charter expressly authorizes the PFRS Board to secure competent investment counsel to provide advice and counsel regarding the investment of the Fund and further provides that discretionary powers granted to such investment counsel will be at the option of the Board; and

WHEREAS, on December 21, 2016, the PFRS Board adopted Resolution No. 6941, which awarded a professional service agreement to Ramirez Asset Management Inc. to serve as the Core Fixed Income Investment Strategy Manager for PFRS at a rate of .24 percent of the portfolio’s annual asset value for a five-year term with three one-year options to renew the Agreement at the same rate; and

WHEREAS, pursuant to Resolution No. 6941, PFRS entered into an agreement with Ramirez Asset Management Inc., to serve as the Core Fixed Income Investment Strategy Manager for a five-year term commencing January 1,

OAKLAND POLICE AND FIRE RETIREMENT BOARD

CITY OF OAKLAND, CALIFORNIA

RESOLUTION NO. 8113

2017, and ending December 31, 2021, subject to the fees and terms set forth above; and

WHEREAS, Section IV(B) of the Agreement gave the PFRS Board the option to extend the initial term of the Agreement for three addition one-year terms by giving Investment Counsel written notice of its intent to exercise its option not less than sixty days prior to the expiration of the term or extended term of the agreement; and

WHEREAS, on October 27, 2021, the PFRS Board exercised their first option to renew the agreement and adopted Resolution No. 8030, which authorized a one-year extension of the agreement with Ramirez Asset Management Inc. commencing January 1, 2022, and ending December 31, 2022; and

WHEREAS, on September 28, 2022, the PFRS Board exercised their second option to renew the agreement and adopted Resolution No. 8063, which authorized a one-year extension of the agreement with Ramirez Asset Management Inc. commencing January 1, 2023, and ending December 31, 2023; and

WHEREAS, on December 26, 2023, the PFRS Board exercised their third option to renew the agreement and adopted Resolution No. 8086, which authorized a one-year extension of the agreement with Ramirez Asset Management Inc. commencing January 1, 2024, and ending December 31, 2024; and

WHEREAS, Section XX of the Agreement allows for modification of the Agreement by written agreement of all parties; and

WHEREAS, the PFRS Board wishes to have unlimited one-year extension options to extend said Agreement, and Investment Counsel agrees with the PFRS Board; and

WHEREAS, the PFRS Board and Investment Counsel agree and wish the Agreement be amended to modify Section IV(B) to provide for unlimited one-year extension options; and

WHEREAS, the PFRS Board now wishes to renew the agreement with Ramirez Asset Management Inc. for an additional one-year term, at an annual fee rate not to exceed 0.24 percent of the Fund assets under management (presently valued at approximately Seventy Four Million Dollars (\$74,000,000.00), commencing January 1, 2025; now, therefore, be it

OAKLAND POLICE AND FIRE RETIREMENT BOARD

CITY OF OAKLAND, CALIFORNIA

RESOLUTION NO. 8113

RESOLVED: That the PFRS Board authorizes an amendment to the Agreement provision in Section IV(B) in order to provide for unlimited one-year extension options; and be it

FURTHER RESOLVED: That all other terms of the Agreement, which are not modified herein, shall remain in full force and effect; and be it

FURTHER RESOLVED: That PFRS staff is authorized to amend the agreement with Ramirez Asset Management Inc. for the provision of Core Fixed Income Investment Strategy Manager Services for PFRS at the annual rate not to exceed 0.24 percent of the Fund assets under management to amend section IV.B of the agreement to provide for unlimited one-year options to extend and to extend the term for an additional one-year commencing January 1, 2025, and ending December 31, 2025; and be it

FURTHER RESOLVED: That the President of the PFRS Board is hereby authorized to execute, on behalf of PFRS, the fourth amended agreement with Ramirez Asset Management Inc.

IN BOARD MEETING, CITY HALL, OAKLAND, CA SEPTEMBER 25, 2024

PASSED BY THE FOLLOWING VOTE:

AYES: GODFREY, MELIA, NICHELINI, ROSEMAN, SPEAKMAN, WILKINSON, & PRESIDENT JOHNSON

NOES:

ABSTAIN:

ABSENT:

ATTEST: _____
PRESIDENT

ATTEST: _____
SECRETARY



AGENDA REPORT

TO: Oakland Police and Fire Retirement System (PFRS) Board of Administration

FROM: David F. Jones
Plan Administrator & Secretary

SUBJECT: Expiration Notice of PFRS Investment Manager Service Agreement and Action to Extend Service Agreement

DATE: September 25, 2024

SUMMARY

The Service Contract for the following Investment Manager for the Oakland Police & Fire Retirement Systems (PFRS) is set to expire September 30, 2024. The PFRS Board is asked to consider acting to extend the agreement for this manager for one additional year pursuant to the professional service agreement.

BACKGROUND

The Professional Service Agreement for the following Investment Manager who provides services for the PFRS Board will expire shortly. The following table describes the investment manager contract:

Investment Manager	Investment Strategy	Inception Date	Contract Expiration Date
SGA	Active International Equity	October 1, 2019	September 30, 2024

RECOMMENDATION

Staff recommends that the PFRS Board approve the implementation of the relevant service agreement provision for the manager to extend the professional service agreement between the above mentioned PFRS Investment Manager and PFRS.

Respectfully submitted,

David F. Jones
Plan Administrator & Secretary
Oakland Police and Fire Retirement System

MEMORANDUM

TO: Oakland Police and Fire Retirement System (“OPFRS”)
FROM: Meketa Investment Group (“Meketa”)
DATE: September 25, 2024
RE: Strategic Global Advisors—Contract Extension

Manager: Strategic Global Advisors (“SGA”)

Inception Date:	December 2019	OPFRS AUM (8/31/2024):	\$ 45.9 million
Strategy:	International Equity	Strategy AUM (6/30/2024):	\$ 369.6 million
Benchmark:	MSCI ACWI ex USA	Firm-wide AUM (6/30/2024):	\$ 2.4 billion

Summary & Recommendation

SGA has managed a portion of OPFRS’s international equity portfolio since December 2019. As of 8/31/2024, the portfolio is approximately \$45.9 million or about 9.8% of OPFRS’s Total Fund. The strategy has performed within expectations and guidelines for the portfolio for all time periods measured, and has experienced no major organizational changes in the portfolio management team since the last review in December 2022. **Therefore, Meketa does not have any major concerns with SGA and recommends that the Board retains SGA as an international equity manager with a one-year contract extension.**

Investment Performance Review Summary

As of 8/31/2024, SGA ACWI ex US portfolio has outperformed the benchmark over all time periods measured on both gross- and net-of-fees bases. In comparison with its peers in the eVestment ACWI ex US All Cap Core Equity (Net) universe, it has ranked above average across all periods except for the since inception period.

OPFRS Portfolio Returns (as of 8/31/2024)¹

Portfolio	Balance (\$000)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	S.I. (%)	Inception Date
SGA (Gross)	45,858.9	5.6	13.8	21.8	5.4	---	7.3	12/2019
<i>MSCI ACWI ex US (Net)</i>	---	<i>5.2</i>	<i>11.2</i>	<i>18.2</i>	<i>2.1</i>	---	<i>6.4</i>	---
Excess Return	---	0.4	2.6	3.6	3.3	---	0.9	---
SGA (Net)	45,858.9	5.5	13.1	20.8	4.5	---	6.5	12/2019
<i>MSCI ACWI ex US (Net)</i>	---	<i>5.2</i>	<i>11.2</i>	<i>18.2</i>	<i>2.1</i>	---	<i>6.4</i>	---
Excess Return	---	0.3	1.9	2.6	2.4	---	0.1	---
Peer Group Rank (Net) ²		33	27	19	25	---	61	---

¹ Performance is annualized for periods longer than one year. “S.I.” signifies Since Inception.

² Peer group is eVestment All Country World ex US All Cap Core Equity (Net) as of 8/31/2024.

Product and Organization Review Summary

Strategic Global Advisors	Areas of Potential Impact				
	Level of Concern	Investment Process	Investment Team	Performance Track Record	Team/Firm Culture
Product					
Key people changes	None				
Changes to team structure or individuals' roles	None				
Product client gain/losses	None				
Changes to investment process	None				
Personnel turnover	None				
Organization					
Ownership changes	None				
Key people changes	None				
Firm wide client gain/losses	None				
Recommended Action	None - X	Watch Status	Termination		

A review of Strategic Global Advisors and the ACWI ex US strategy revealed no concerning organizational issues or changes since the last review in December 2022.

Strategic Global Advisors remains a majority employee- and woman-owned asset management firm. Cynthia Tusan (SGA's Founder, CEO, and Senior Portfolio Manager) and Gary Baierl share the majority employee-ownership. A non-voting, minority ownership stake is held by Nile Capital Group.

Investment Summary per Manager

The Strategic Global Advisors International ACWI ex-US strategy seeks to outperform the MSCI ACWI ex US index by 2-3.5% on an annualized basis over a full market cycle of three to five years. The securities held are generally mid to large cap equities, on a market relative basis, of companies headquartered outside the U.S. The strategy is diversified across industries, sectors, countries, and style exposures. This core approach is intended to promote consistent outperformance.

SGA's preferred approach to investing is to integrate quantitative tools with fundamental analysis subject to an active risk management process. This blends the disciplined, unemotional, and repeatable breadth of a systematic approach with the experience and qualitative judgment of the senior investment professionals involved in fundamental analysis. There have been no changes to this philosophy since the firm was founded.

SGA's process combines both quantitative and fundamental approaches to investment. SGA generates stock ideas utilizing a bottom-up stock selection process by estimating expected alphas based on global industry peer rankings and optimizing the results against the preferred benchmark. SGA's fundamental analysis team conducts ongoing research on new stock ideas identified by the quantitative process.

Applying this approach daily ensures a continuous flow of "best ideas" that must then pass SGA's fundamental review to become eligible for inclusion in the portfolio. With each rebalance, an optimal portfolio is determined with new eligible candidates, accounting for benchmark relative constraints and client objectives. During the portfolio construction process, country and sector allocations are held close to neutral, relative to benchmark weights, in order to focus active management on stock selection. All securities are subject to review by a team of portfolio managers who may make adjustments based on their experience, judgement and market conditions.

The quantitative models do not represent a simplistic "screen" which eliminates candidates, rather, SGA uses multiple models to blend a combination of growth, value, sentiment, and quality alpha factors along with their risk characteristics while assessing whether each constituent contributes positively to the current portfolio. In practice, there are infinite paths a stock might take for inclusion in the portfolio and its appropriate weighting. Once an optimized portfolio has been put forth, fundamental analysis is used to vet and approve or disapprove the ideas suggested.

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OAKLAND POLICE AND FIRE RETIREMENT BOARD
CITY OF OAKLAND, CALIFORNIA
RESOLUTION No. 8114

Approved to Form
and Legality



ON MOTION OF MEMBER _____ SECONDED BY MEMBER _____

RESOLUTION AUTHORIZING THE FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH STRATEGIC GLOBAL ADVISORS FOR THE PROVISION OF ACTIVE INTERNATIONAL EQUITY INVESTMENT STRATEGY MANAGER SERVICES FOR THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM TO RENEW THE AGREEMENT FOR AN ADDITIONAL ONE-YEAR TERM COMMENCING OCTOBER 1, 2024 AND ENDING SEPTEMBER 30, 2025

WHEREAS, Article XVI §17 of the California Constitution, commonly referred to as the Pension Protection Act or Proposition 162, and Article XXVI of the Oakland City Charter (“Charter”) vest the Oakland Police and Fire Retirement System Board (“PFRS Board”) with exclusive control of the administration and investment of the assets of the Police and Fire Retirement Fund (the “Fund”); and

WHEREAS, the PFRS Board manages and administers the Police and Fire Retirement System (“PFRS”), pursuant to the requirements of Article XXVI of the Charter; and

WHEREAS, Charter section 2601(e) gives the Board power to make all necessary rules and regulations for its guidance and exclusive control of the administration and investment of the funds established for the maintenance and operation of the system; and

WHEREAS, Article XXVI of the Charter expressly authorizes the PFRS Board to secure competent investment counsel to provide advice and counsel regarding the investment of the Fund and further provides that discretionary powers granted to such investment counsel will be at the option of the Board; and

WHEREAS, on September 25, 2019, the PFRS Board adopted Resolution No. 7071, which awarded a professional service agreement to Strategic Global Advisors (“SGA”) to serve as the Active International Equity Investment Strategy Manager for PFRS at a fee rate not to exceed 70 basis points (70bp or 0.70 percent) of the portfolio’s annual asset value; and

WHEREAS, pursuant to Resolution No. 7071, PFRS entered into an agreement with SGA, to serve as the Active International Equity Investment Strategy Manager for a five-year term commencing October 1, 2019, and ending September 30, 2024 providing the PFRS Board the option to extend the term for three additional one-year terms, subject to the fees and terms set forth above; and

OAKLAND POLICE AND FIRE RETIREMENT BOARD

CITY OF OAKLAND, CALIFORNIA

RESOLUTION NO. 8114

WHEREAS, the PFRS Board now wishes to exercise its first option to renew the agreement with SGA for an additional one-year term, at the fee rate not to exceed 0.65 percent of the Fund assets under management (presently valued at approximately Forty Five Million Dollars (\$45,000,000.00), commencing October 1, 2024; now, therefore, be it

RESOLVED: That PFRS staff is authorized to amend the agreement with SGA for the provision of Active International Equity Investment Strategy Manager Services for PFRS at the annual rate not to exceed 0.65 percent of the Fund assets under management to extend the term for an additional one-year commencing October 1, 2024, and ending September 30, 2025; and be it

FURTHER RESOLVED: That the President of the PFRS Board is hereby authorized to execute, on behalf of PFRS, the fourth amended agreement with Strategic Global Advisors.

IN BOARD MEETING, CITY HALL, OAKLAND, CA SEPTEMBER 25, 2024

PASSED BY THE FOLLOWING VOTE:

AYES: GODFREY, MELIA, NICHELINI, ROSEMAN, SPEAKMAN, WILKINSON, & PRESIDENT JOHNSON

NOES:

ABSTAIN:

ABSENT:

ATTEST: _____
PRESIDENT

ATTEST: _____
SECRETARY

MEMORANDUM

TO: Oakland Police and Fire Retirement System (OPFRS)
FROM: Meketa Investment Group (Meketa)
DATE: September 25, 2024
RE: 2024 Ongoing Strategic Investment Agenda

On an ongoing (monthly) basis, Meketa develops a list of projects that we expect to work closely with OPFRS to complete over the calendar year (see table below). In an attempt to coordinate the scheduling of these tasks, this memo details a Preliminary Investment Project Agenda by calendaring and prioritizing the expected tasks and deliverables that would be required to fulfill the Agenda. The proposed timeline is subject to revisions and change based upon OPFRS's emerging needs. Meketa welcomes any suggestions or modifications to the proposed timeline.

2024 Preliminary Investment Project Agenda

Month	Task
October 2024	Flash Performance (2024 Sep) Thermal Coal List Update: 2024 Progress Update: Asset Allocation Implementation
November 2024	Flash Performance (2024 Oct) Progress Update: Asset Allocation Implementation
December 2024	Flash Performance (2024 Nov) Quarterly Performance Report (2024 Q3) Cash Flow Report (2025 Q1) Progress Update: Asset Allocation Implementation

This agenda includes only major strategic items. Meketa also expects to work with the Staff and Board to complete more routine tasks and projects, as expected.

DS/PN/JLC/mn

REVISED

Due to the termination of the statewide COVID-19 State of Emergency by the Governor of California, effective March 1, 2023, all meetings of the Oakland Police & Fire Retirement System Board and its Committees will be conducted in person.

Meetings are held in wheelchair accessible facilities.

The Board may take action on items not on the agenda only if findings pursuant to the Sunshine Ordinance and Brown Act are made that the matter is urgent or an emergency.

For additional information, contact the Retirement Unit by calling (510) 238-7295. or send an email to mvisaya@oaklandca.gov



Retirement Unit
150 Frank H. Ogawa Plaza
Oakland, California 94612

AGENDA

RETIREMENT BOARD MEMBERS

Walter L. Johnson, Sr.
President

Jaime T. Godfrey
Vice President

Martin J. Melia
Member

Robert W. Nichelini
Member

John C. Speakman
Member

R. Steven Wilkinson
Member

Erin Roseman
Member

MEETING of the BOARD OF ADMINISTRATION of the OAKLAND POLICE AND FIRE RETIREMENT SYSTEM (“PFRS”)

WEDNESDAY, SEPTEMBER 25, 2024

11:30 AM

ONE FRANK H. OGAWA PLAZA, HEARING ROOM 2
OAKLAND, CA 94612

OBSERVE

- To observe the meeting by video conference, please click on this link: <https://us02web.zoom.us/j/82880493983> at the noticed meeting time.
- To listen to the meeting by phone, please call the numbers below at the noticed meeting time: Dial (for higher quality, dial a number based on your current location):
- iPhone one-tap: US: +16699006833, 82880493983# or +13462487799, 82880493983#
- US: +1 669 900 6833 or +1 346 248 7799 or +1 253 215 8782 or +1 301 715 8592 or +1 312 626 6799 or +1 929 205 6099
- International numbers available: <https://us02web.zoom.us/j/82880493983>
- Webinar ID: 828 8049 3983.
- If asked for a participant ID or code, press #.

PUBLIC COMMENTS

There are two ways to submit public comments.

- Speaker Card: All persons wishing to address the Board must complete a speaker’s card, stating their name and the agenda item they wish to address, including “Open Forum”.
- eComment: To send your comment directly to staff BEFORE the meeting starts, please email to mvisaya@oaklandca.gov with “PFRS Board Meeting Public Comment” in the subject line for the corresponding meeting. Please note that eComment submission **closes two (2) hours before posted meeting time**.

If you have any questions, please email Maxine Visaya, Administrative Assistant II at mvisaya@oaklandca.gov

ORDER OF BUSINESS

- A. **Subject:** ELECTION OF PFRS BOARD PRESIDENT & VICE PRESIDENT
From: Staff of the PFRS Board
-
- Recommendation:** **CONDUCT** PFRS Board Elections for Board President and Vice President pursuant to PFRS Rules and Regulations Section 7.1
- B. **Subject:** POLICE AND FIRE RETIREMENT SYSTEM (“PFRS”) BOARD OF ADMINISTRATION MEETING MINUTES
From: Staff of the PFRS Board
-
- Recommendation:** **APPROVE** the July 31, 2024 PFRS Board of Administration Meeting Minutes
- C. **AUDIT & OPERATIONS COMMITTEE AGENDA – SEPTEMBER 25, 2024**
- C1. **Subject:** ADMINISTRATIVE EXPENSES REPORT
From: Staff of the PFRS Board
-
- Recommendation:** **ACCEPT** informational report regarding PFRS administrative expenses as of June 30, 2024
- C2. **Subject:** ADMINISTRATIVE EXPENSES REPORT
From: Staff of the PFRS Board
-
- Recommendation:** **ACCEPT** informational report regarding PFRS administrative expenses as of July 31, 2024
- D. **INVESTMENT & FINANCIAL MATTERS COMMITTEE AGENDA – SEPTEMBER 25, 2024**
- D1. **Subject:** ECONOMIC AND INVESTMENT MARKET OVERVIEW
AS OF AUGUST 31, 2024
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** informational report regarding the Global Investment Markets as of August 31, 2024
- D2. **Subject:** PRELIMINARY INVESTMENT FUND PERFORMANCE UPDATE
AS OF AUGUST 31, 2024
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** informational report regarding the Preliminary PFRS Investment Fund Performance Update as of August 31, 2024
- D3. **Subject:** \$13.2 MILLION DRAWDOWN FOR PFRS MEMBER RETIREMENT ALLOWANCES FROM OCTOBER 1, 2024 THROUGH DECEMBER 31, 2024
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** informational report and **RECOMMEND BOARD APPROVAL** of Meketa Investment Group’s proposed drawdown of \$13.2 million, which includes a \$8.7 Million contribution from the City of Oakland and a \$4.5 Million contribution from the PFRS Investment Fund, to be used to pay PFRS Member Retirement Allowances from October 1, 2024 through December 31, 2024 for Fiscal Year 2024/2025

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
BOARD OF ADMINISTRATION MEETING AGENDA
SEPTEMBER 25, 2024

- D4. **Subject:** PFRS INVESTMENT FUND QUARTERLY PERFORMANCE UPDATE
AS OF JUNE 30, 2024
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** PFRS Investment Fund Quarterly Performance Update as of June 30, 2024
- D5. **Subject:** INVESTMENT POLICY UPDATE:
TARGET ASSET ALLOCATION TRANSITION
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** informational report regarding the investment policy and a proposal to adjust the transition timeline and process to achieve the target asset allocation. **DISCUSS & APPROVE** Meketa to adjust the transition timeline and process to achieve the new target asset allocation the PFRS' Investment Portfolio
- D6. **Subject:** ASSET CLASS REVIEW:
CRISIS RISK OFFSET
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** informational report regarding an asset class review of PFRS' Crisis Risk Offset allocation. **DISCUSS & RECOMMEND BOARD APPROVAL** of Meketa's recommended changes to the Crisis Risk Offset asset class allocations of the PFRS' Investment Portfolio
- D7. **Subject:** RESOLUTION 8113
RESOLUTION AUTHORIZING A FOURTH AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH RAMIREZ ASSET MANAGEMENT, INC. FOR THE PROVISION OF CORE FIXED INCOME INVESTMENT STRATEGY MANAGER SERVICES FOR THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM (PFRS) (1) TO PROVIDE PFRS WITH AN UNLIMITED OPTION TO EXTEND THE AGREEMENT IN ONE-YEAR TERMS UNDER SECTION IV(B) AND (2) TO RENEW THE AGREEMENT FOR AN ADDITIONAL ONE-YEAR TERM
From: Staff of the PFRS Board
-
- Recommendation:** **RECOMMEND BOARD APPROVAL** of Resolution No. 8113 authorizing a fourth amendment to the professional services agreement with Ramirez Asset Management, Inc. for the provision of core fixed income investment strategy manager services for the Oakland Police and Fire Retirement System (PFRS) (1) to provide PFRS with an unlimited option to extend the agreement in one-year terms under section IV(B) and (2) to renew the agreement for an additional one-year term

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
BOARD OF ADMINISTRATION MEETING AGENDA
SEPTEMBER 25, 2024

D8. **Subject:** RESOLUTION 8114
RESOLUTION AUTHORIZING THE FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH STRATEGIC GLOBAL ADVISORS FOR THE PROVISION OF ACTIVE INTERNATIONAL EQUITY INVESTMENT STRATEGY MANAGER SERVICES FOR THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM TO RENEW THE AGREEMENT FOR AN ADDITIONAL ONE-YEAR TERM

From: Staff of the PFRS Board

Recommendation: **RECOMMEND BOARD APPROVAL** of Resolution No. 8114 authorizing the first amendment to the professional services agreement with Strategic Global Advisors for the provision of active international equity investment strategy manager services for the Oakland Police and Fire Retirement System to renew the agreement for an additional one-year term

- E. PENDING ITEMS
- F. NEW BUSINESS
- G. OPEN FORUM
- H. FUTURE SCHEDULING
- I. ADJOURNMENT

A MEETING OF THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM (“PFRS”) BOARD OF ADMINISTRATION was held Wednesday, July 31, 2024, at One Frank Ogawa Plaza, Hearing Room 2, Oakland, California.

- Board Members:
- Walter L. Johnson President
 - Jaime T. Godfrey Vice President (EXCUSED)
 - Martin J. Melia Member
 - Robert W. Nichelini Member
 - Erin Roseman Member (EXCUSED)
 - John C. Speakman Member
 - R. Steven Wilkinson Member

- Additional Attendees:
- David F. Jones PFRS Plan Administrator & Secretary
 - Téir Jenkins PFRS Investment & Operations Manager
 - Maxine Visaya PFRS Staff Member
 - Selia Warren PFRS Legal Counsel
 - David Sancewich Meketa Investment Group

The meeting was called to order at 11:30 a.m. Pacific

A. APPROVAL OF THE PFRS BOARD OF ADMINISTRATION MEETING MINUTES

Member Speakman made a motion to approve the June 26, 2024, PFRS Board of Administration Meeting Minutes, second by Member Nichelini. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

B. AUDIT AND OPERATIONS COMMITTEE AGENDA – JULY 31, 2024

B1. SCOPE OF SERVICES AND INITIATION OF THE FINANCIAL AUDIT OF THE PFRS FUND FOR FISCAL YEAR ENDED JUNE 30, 2024

Member Speakman provided an overview of the presentation of Craig Harner & Yia Yang of Macias Gini & O’Connell, LLP (MGO) regarding the scope of services of the annual financial audit of the PFRS Fund for fiscal year ended June 30, 2024. PFRS Investment & Operations Manager Jenkins noted MGO will engage the services of an actuarial specialist to serve as part of the engagement team to maximize quality control and conform with industry standards at no additional cost.

MOTION: Member Speakman made a motion to approve the scope of services and initiate the annual financial audit of the PFRS Fund, second by Member Nichelini. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

B2. ADMINISTRATIVE EXPENSES REPORT

PFRS Investment & Operations Manager Jenkins presented an informational report regarding PFRS' administrative expenditures as of May 31, 2024. PFRS has an approved annual budget of approximately \$3.8 million and expensed approximately \$2.4 million to date for fiscal year 2023/2024 and noted a slight overage for Actuary Services as well as Board Hospitality due to additional work associated with the 2026 Actuarial Funding Date, the Asset Liability Study, and increased food costs. Membership consisted of 628 retired members and beneficiaries, which included 390 Police Members and 238 Fire Members.

MOTION: Member Nichelini made a motion to accept the informational report regarding PFRS' Administrative Expenses Report, second by Member Speakman. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

C. INVESTMENT & FINANCIAL MATTERS COMMITTEE AGENDA – JULY 31, 2024**c1. ECONOMIC AND INVESTMENT MARKET OVERVIEW AS OF JUNE 30, 2024**

David Sancewich of Meketa Investment Group (Meketa) presented an informational report regarding the economic and investment market overview as of June 30, 2024, and highlighted Equity Cyclically Adjusted Price to Earnings (P/E) Ratios.

MOTION: Member Nichelini made a motion to accept the informational report provided by Meketa regarding the Economic and Investment Market Overview as of June 30, 2024, second by Member Melia. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

c2. PRELIMINARY INVESTMENT FUND PERFORMANCE UPDATE AS OF JUNE 30, 2024

David Sancewich of Meketa presented an informational report regarding a preliminary investment performance update of the PFRS Fund as of June 30, 2024, and highlighted PFRS Total Plan Performance.

MOTION: Member Nichelini made a motion to accept the informational report provided by Meketa regarding the Preliminary Investment Fund Performance Update as of June 30, 2024, second by Member Speakman. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

C3. REQUEST FOR INFORMATION:**INTERNATIONAL EQUITY INVESTMENT STRATEGY MANAGER SERVICES FOR THE CITY OF OAKLAND POLICE & FIRE RETIREMENT SYSTEM**

David Sancewich of Meketa presented the scope and process of the request for information (RFI) for International Equity Investment Strategy Manager Services for the City of Oakland Police & Fire Retirement System and advised the RFI will be publicly posted on the internet via Meketa's website, Pension & Investments (P & I), and a few other media services in the next couple weeks. D. Sancewich further advised this is a PFRS specific closed search for investment manager service providers and we will enter a "quiet period" and directed the Board to refrain from engaging directly with International Equity Investment Strategy Managers until the search has concluded.

MOTION: Member Nichelini made a motion to approve Meketa initiate the RFI process for International Equity Investment Strategy Manager Services, second by Member Speakman. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

C4. REQUEST FOR INFORMATION:**FIXED INCOME INVESTMENT STRATEGY MANAGER SERVICES FOR THE CITY OF OAKLAND POLICE & FIRE RETIREMENT SYSTEM**

David Sancewich of Meketa presented the scope and process of the request for information (RFI) for Fixed Income Investment Strategy Manager Services for the City of Oakland Police & Fire Retirement System and advised the RFI will be publicly posted on the internet via Meketa's website, P & I, and a few other media services in the next couple weeks. D. Sancewich further advised this is a PFRS specific closed search for investment manager service providers and we will enter a "quiet period" and directed the Board to refrain from engaging directly with Fixed Income Investment Strategy Managers until the search has concluded.

MOTION: Member Nichelini made a motion to approve Meketa initiate the RFI process for Fixed Income Investment Strategy Manager Services, second by Member Speakman. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

D. MEMBER RESOLUTIONS NOS. 8111 - 8112**D1. RESOLUTION NO. 8111**

Resolution amending Resolution 8107 approving the death benefit payment and directing a warrant thereunder in the amount of \$1,000.00 payable to the beneficiary of deceased City of Oakland Police and Fire Retirement System member Ronald D. Flashberger to correct the named beneficiary.

MOTION: Member Speakman made a motion to approve Resolution No. 8111, second by Member Nichelini. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

D2. RESOLUTION NO. 8112

Resolution approving the death benefit payment and directing a warrant thereunder in the total sum of \$1,000.00 payable to the beneficiary of the following deceased member of the Oakland Police and Fire Retirement System:

- James A. Duffy

MOTION: Member Speakman made a motion to approve Resolution No. 8112, second by Member Nichelini. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

- E. PENDING ITEMS** – PFRS Plan Administrator Jones advised the Ad Hoc Committee was unable to meet on July 29, 2024, as scheduled, and is optimistic the group can meet prior to the August Board meeting. Member Nichelini inquired if the City Attorney’s Office has issued an opinion regarding the Property Tax Override (PTO) and PFRS Legal Counsel Warren advised no formal opinion has been issued to date.
- F. NEW BUSINESS** – None
- G. OPEN FORUM** – D. Sancewich reported out on the most recent fund performance report provided to the Finance & Management Committee of the City Council and PFRS Investment & Operations Manager Jenkins noted Council thanked us for bringing good news.
- H. FUTURE SCHEDULING** – The next Regular Board Meeting will be held in-person and is tentatively scheduled to occur August 28, 2024, at One Frank Ogawa Plaza, Hearing Room 2, Oakland, CA. Member Speakman expressed the Board has an interest in establishing a new regular meeting time as 10:00 a.m. Pacific; for the Committee and Board meetings to be scheduled and noticed concurrently and held in succession; and requested the matter be treated expeditiously.
- I. ADJOURNMENT** – Member Nichelini made a motion to adjourn, second by Member Speakman. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: EXCUSED / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 2)

The meeting adjourned at 11:44 a.m.

DAVID F. JONES
PLAN ADMINISTRATOR & SECRETARY

DATE

Table 1

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Administrative Budget Spent to Date (Preliminary)

As of June 30, 2024

	Approved Budget		June 2024		FYTD		Remaining		Percent Remaining	
Internal Administrative Costs										
PFRS Staff Salaries	\$	1,459,000	\$	93,910	\$	1,254,796	\$	204,204		14.0%
Board Travel Expenditures		52,500		2,327		12,720		39,780		75.8%
Staff Training		20,000		-		650		19,350		96.8%
Staff Training - Tuition Reimbursement		7,500		-		-		7,500		100.0%
Board Hospitality		3,600		1,218		5,090		(1,490)		-41.4%
Payroll Processing Fees		40,000		40,000		40,000		-		0.0%
Miscellaneous Expenditures		45,000		2,655		30,819		14,181		31.5%
Internal Service Fees (ISF)		88,000		-		65,019		22,981		26.1%
Contract Services Contingency		50,000		750		1,875		48,125		96.3%
Internal Administrative Costs Subtotal :	\$	1,765,600	\$	140,860	\$	1,410,969	\$	354,631		20.1%
Actuary and Accounting Services										
Audit	\$	52,800	\$	-	\$	18,941	\$	33,859		64.1%
Actuary		49,400		2,115		56,516		(7,116)		-14.4%
Actuary and Accounting Subtotal:	\$	102,200	\$	2,115	\$	75,458	\$	26,742		26.2%
Legal Services										
City Attorney Salaries	\$	212,100	\$	210,428	\$	210,428	\$	1,672		0.8%
Legal Contingency		150,000		-		-		150,000		100.0%
Legal Services Subtotal:	\$	362,100	\$	210,428	\$	210,428	\$	151,672		41.9%
Investment Services										
Money Manager Fees	\$	1,313,000	\$	325,452	\$	1,189,076	\$	123,924		9.4%
Custodial Fee		124,500		31,125		124,500		-		0.0%
Investment Consultant		100,000		25,000		100,000		-		0.0%
Asset Liability Study		40,000		-		40,000		-		0.0%
Investment Subtotal:	\$	1,577,500	\$	381,577	\$	1,453,576	\$	123,924		7.9%
Total Operating Budget	\$	3,807,400	\$	734,980	\$	3,150,431	\$	656,969		17.26%

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Cash in Treasury (Fund 7100) - Preliminary
As of June 30, 2024

		June 2024
Beginning Cash as of 6/1/2024	\$	10,471,226
Additions:		
City Pension Contribution - June		3,396,917
Investment Draw		1,000,000
Misc. Receipts		1,708
Total Additions:	\$	4,398,625
Deductions:		
Pension Payment (May Pension Paid on 6/3/2024)		(4,090,969)
Expenditures Paid		(214,284)
Total Deductions	\$	(4,305,253)
 Ending Cash Balance as of 6/30/2024*	 \$	 10,564,598

* On 7/1/2024, June pension payment of appx \$4,079,000 will be made leaving a cash balance of \$6,486,000.

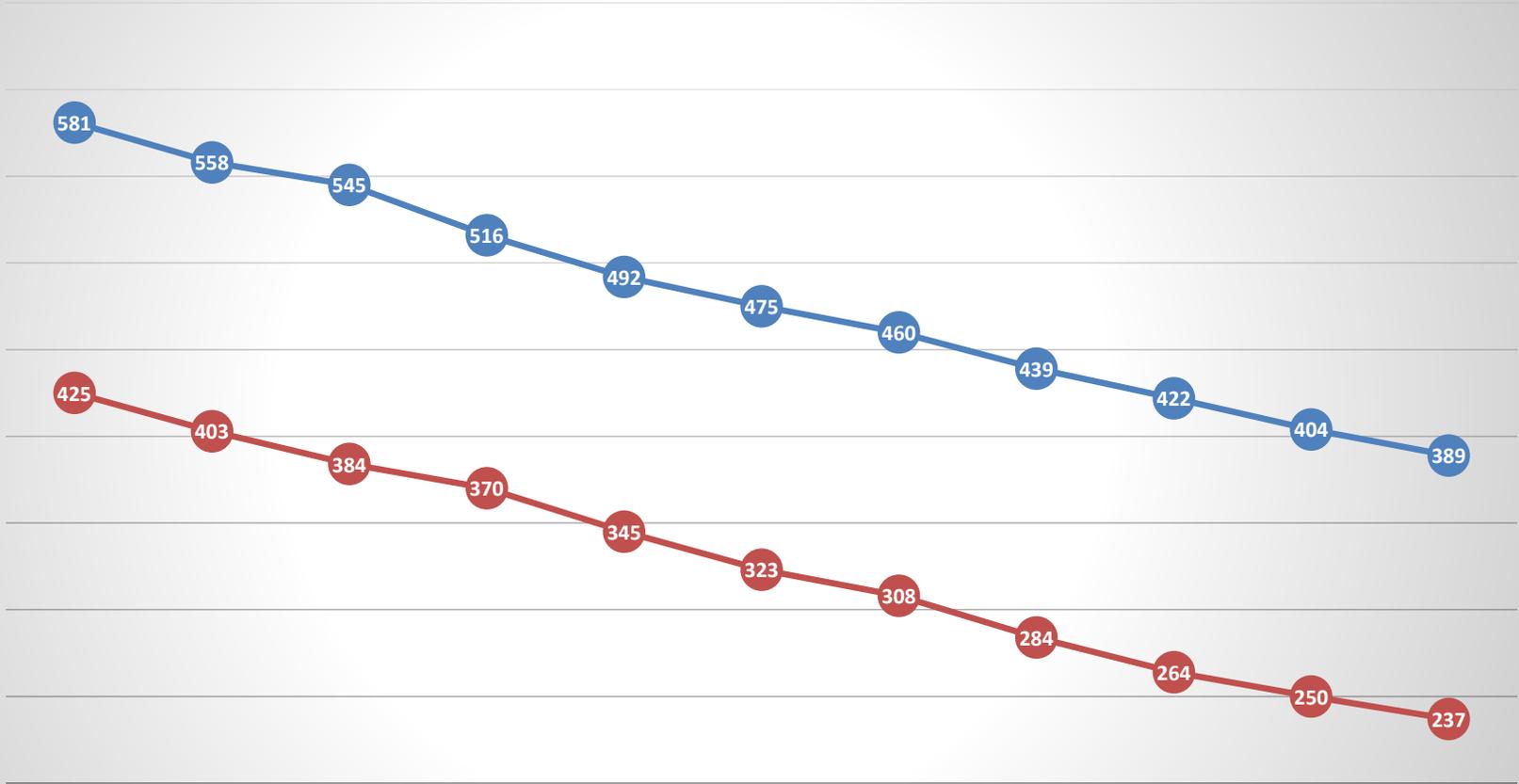
Table 3
CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Census
As of June 30, 2024

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Retiree	263	147	410
Beneficiary	126	90	216
<i>Total Retired Members</i>	389	237	626
<i>Total Membership:</i>	389	237	626

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Service Retirement	261	110	371
Disability Retirement	120	116	236
Death Allowance	8	11	19
<i>Total Retired Members:</i>	389	237	626
<i>Total Membership as of June 30, 2024:</i>	389	237	626
<i>Total Membership as of June 30, 2023:</i>	404	250	654
<i>Annual Difference:</i>	-15	-13	-28

Oakland Police and Fire Retirement System Pension Plan Membership Count As of June 30, 2024 (FY 2014 - FY 2024)

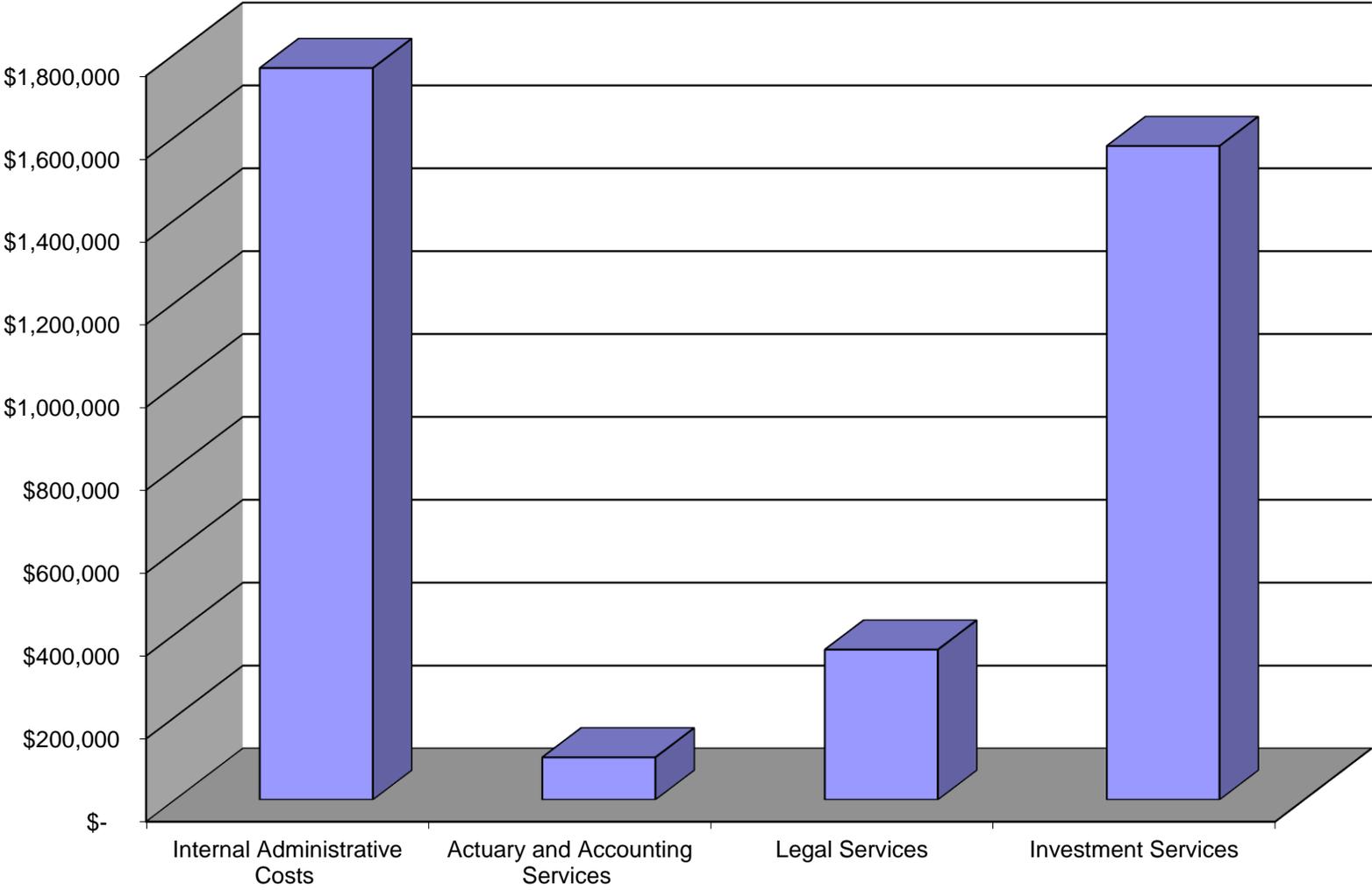


	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024 FYTD
Police	581	558	545	516	492	475	460	439	422	404	389
Fire	425	403	384	370	345	323	308	284	264	250	237
Total	1006	961	929	886	837	798	768	723	686	654	626

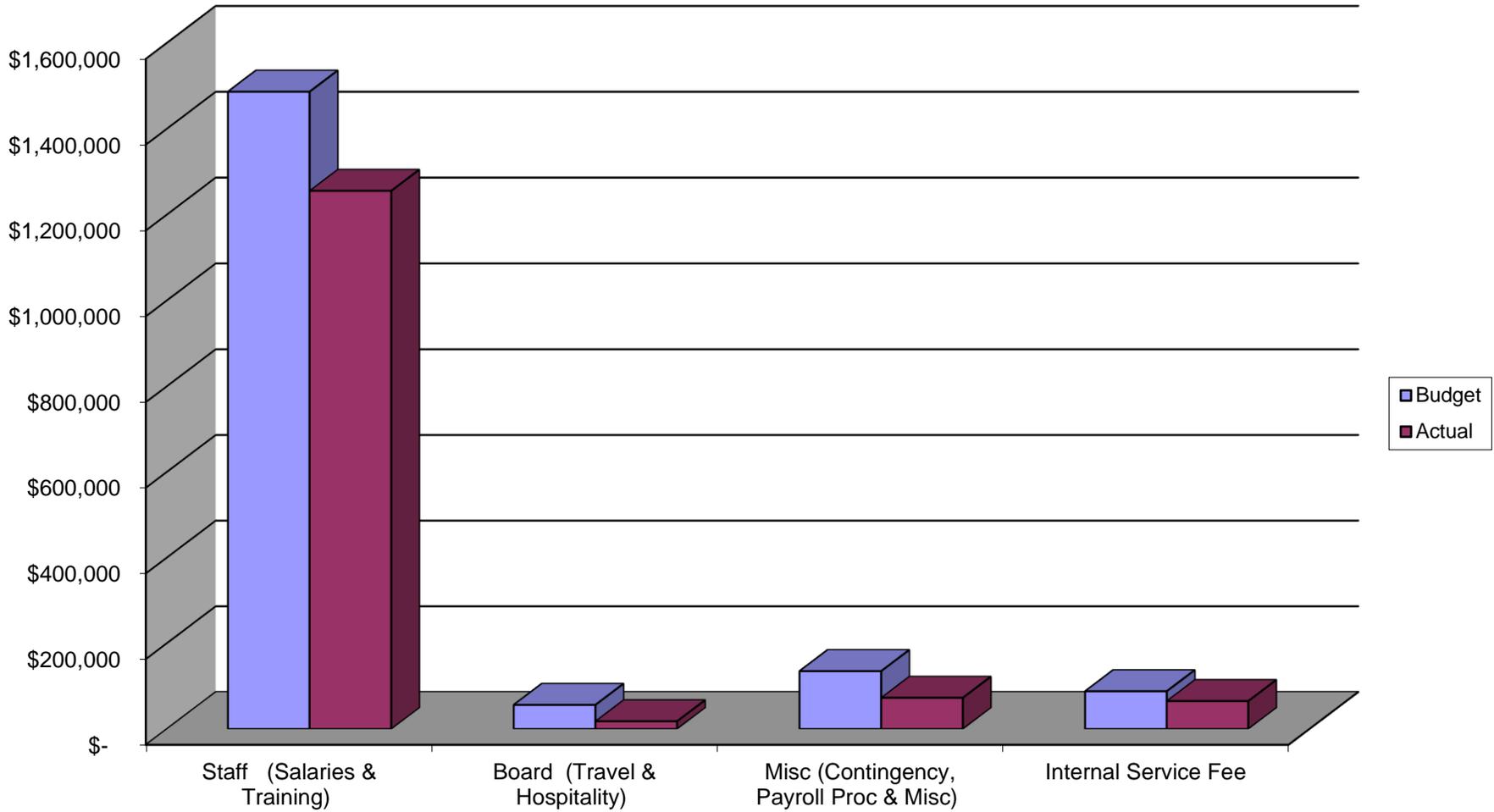
OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Approved Budget

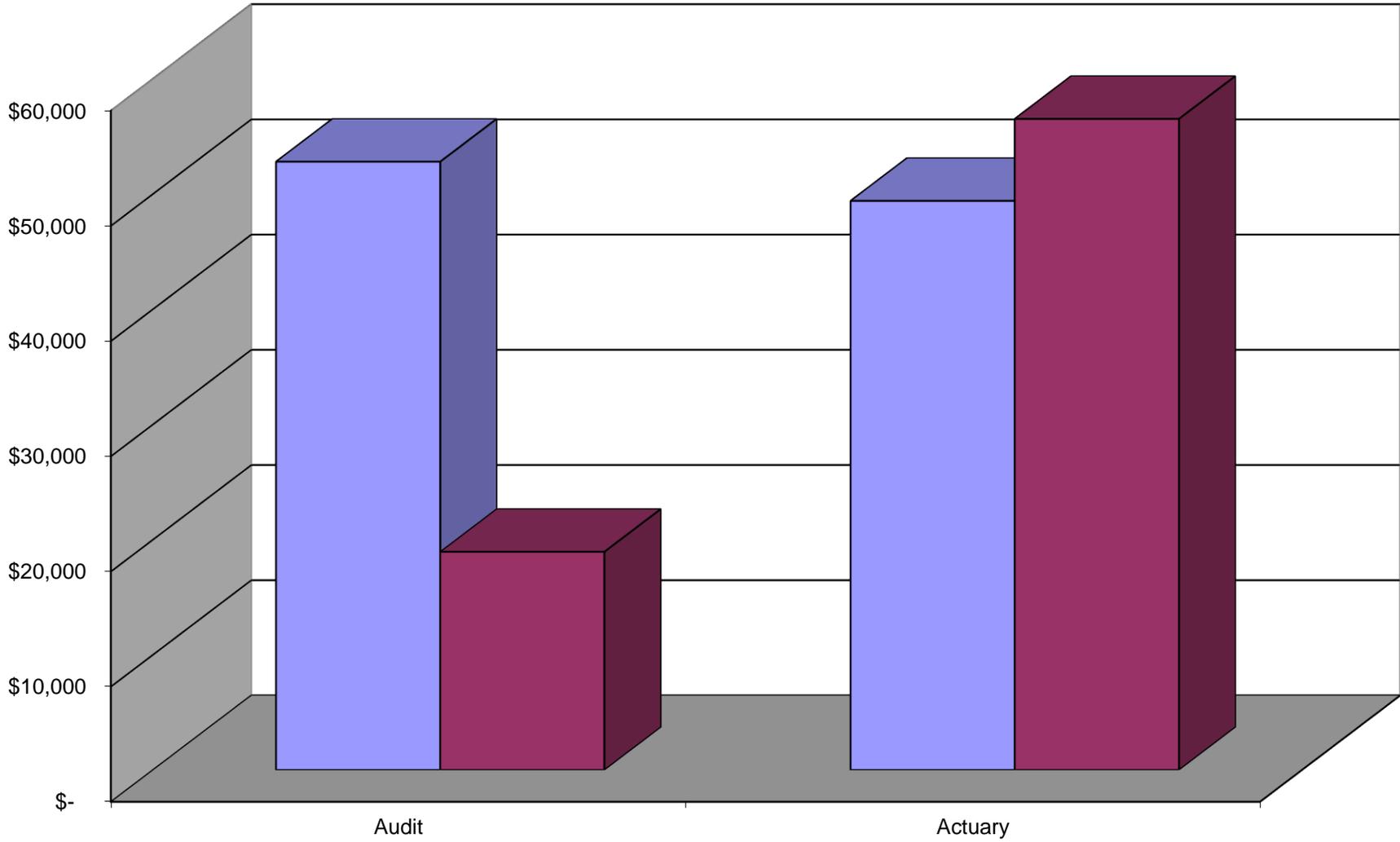
FY 2023-2024



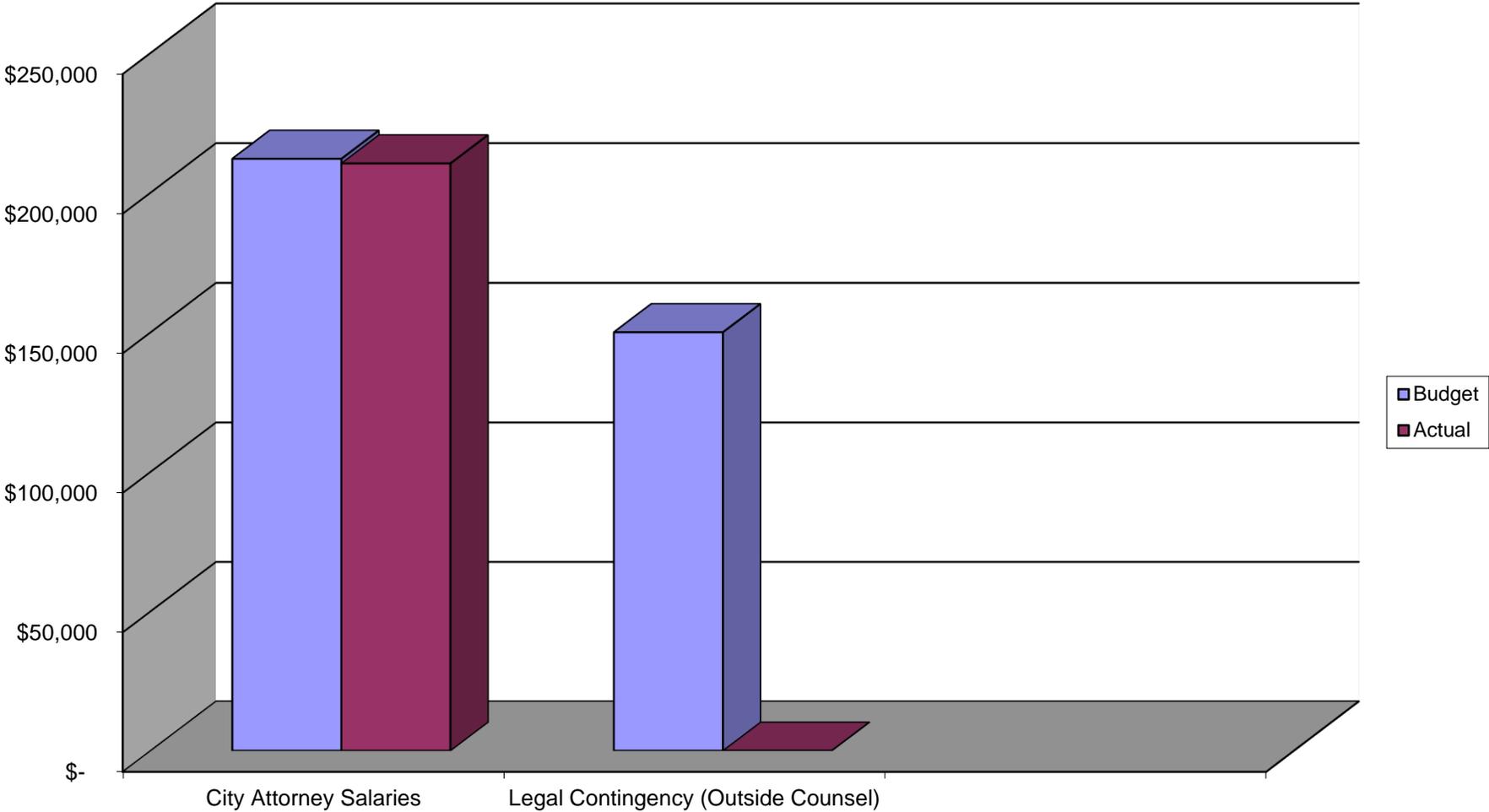
OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Budget vs Actual as of June 30, 2024
Internal Administrative Costs



OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Budget vs. Actual as of June 30, 2024
Actuary and Accounting Services



OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Budget vs. Actual as of June 30, 2024
Legal Services



OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
Budget vs. Actual as of June 30, 2024
Investment Services

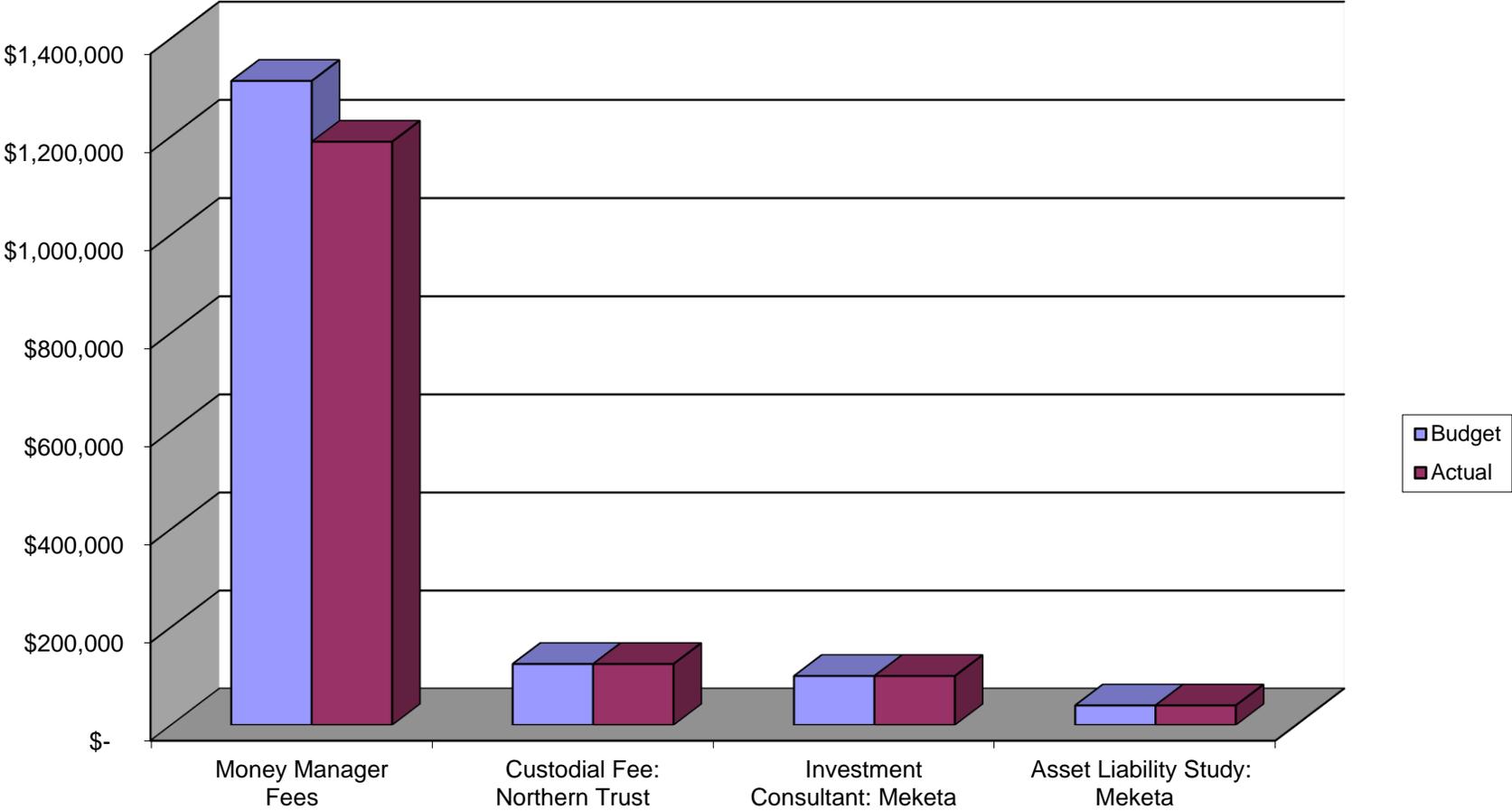


Table 1

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Administrative Budget Spent to Date (Preliminary)

As of July 31, 2024

	Approved Budget		July 2024		FYTD		Remaining		Percent Remaining	
Internal Administrative Costs										
PFRS Staff Salaries	\$	1,745,000	\$	131,764	\$	131,764	\$	1,613,236		92.4%
Board Travel Expenditures		52,500		-		-		52,500		100.0%
Staff Training		20,000		-		-		20,000		100.0%
Staff Training - Tuition Reimbursement		7,500		-		-		7,500		100.0%
Board Hospitality		7,200		-		-		7,200		100.0%
Payroll Processing Fees		40,000		-		-		40,000		100.0%
Miscellaneous Expenditures		45,000		60		60		44,940		99.9%
Internal Service Fees (ISF)		88,000		-		-		88,000		100.0%
Contract Services Contingency		50,000		-		-		50,000		100.0%
Internal Administrative Costs Subtotal :	\$	2,055,200	\$	131,824	\$	131,824	\$	1,923,376		93.6%
Actuary and Accounting Services										
Audit	\$	54,400	\$	-	\$	-	\$	54,400		100.0%
Actuary		50,900		-		-		50,900		100.0%
Actuary and Accounting Subtotal:	\$	105,300	\$	-	\$	-	\$	105,300		100.0%
Legal Services										
City Attorney Salaries	\$	220,700	\$	11,126	\$	11,126	\$	209,574		95.0%
Legal Contingency		150,000		-		-		150,000		100.0%
Legal Services Subtotal:	\$	370,700	\$	11,126	\$	11,126	\$	359,574		97.0%
Investment Services										
Money Manager Fees	\$	1,353,000	\$	-	\$	-	\$	1,353,000		100.0%
Custodial Fee		124,500		-		-		124,500		100.0%
Investment Consultant		100,000		-		-		100,000		100.0%
Investment Subtotal:	\$	1,577,500	\$	-	\$	-	\$	1,577,500		100.0%
Total Operating Budget	\$	4,108,700	\$	142,950	\$	142,950	\$	3,965,750		96.52%

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
 Cash in Treasury (Fund 7100) - Preliminary
 As of July 31, 2024

	July 2024	
Beginning Cash as of 7/1/2024	\$	10,564,598
Additions:		
City Pension Contribution - July		2,903,750
Investment Draw		1,000,000
Misc. Receipts		800
Total Additions:	\$	3,904,550
Deductions:		
Pension Payment (June Pension Paid on 7/1/2024)		(4,079,138)
Expenditures Paid		(229,969)
Total Deductions	\$	(4,309,107)
 Ending Cash Balance as of 7/31/2024*	 \$	 10,160,041

* On 8/1/2024, July pension payment of appx \$4,177,000 will be made leaving a cash balance of \$5,983,000.

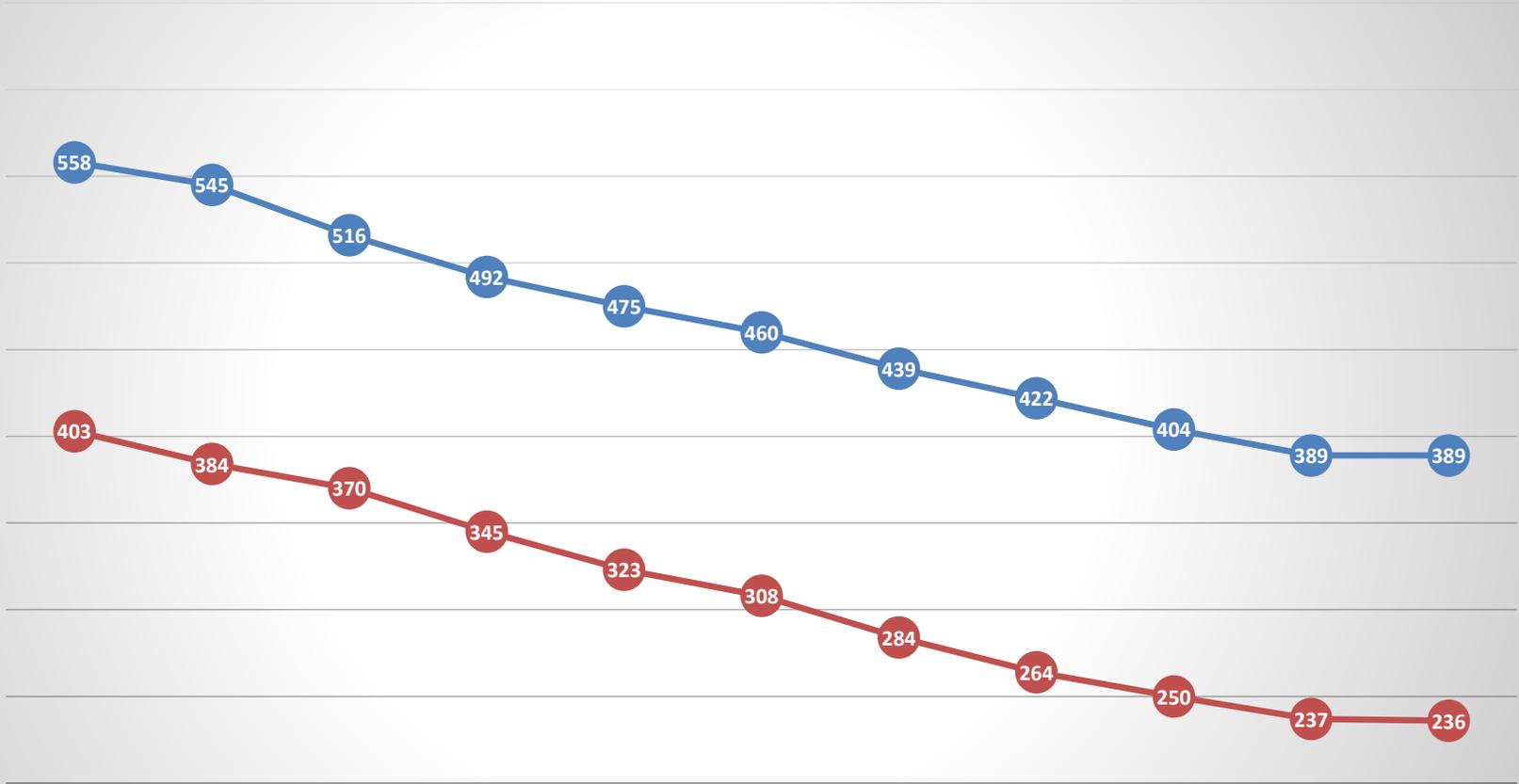
Table 3
CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Census
As of July 31, 2024

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Retiree	263	147	410
Beneficiary	126	89	215
<i>Total Retired Members</i>	389	236	625
<i>Total Membership:</i>	389	236	625

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Service Retirement	261	109	370
Disability Retirement	120	116	236
Death Allowance	8	11	19
<i>Total Retired Members:</i>	389	236	625
<i>Total Membership as of July 31, 2024:</i>	389	236	625
<i>Total Membership as of June 30, 2024:</i>	389	237	626
<i>Annual Difference:</i>	0	-1	-1

Oakland Police and Fire Retirement System Pension Plan Membership Count As of July 31, 2024 (FY 2015 - FY 2025)



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 FYTD
Police	558	545	516	492	475	460	439	422	404	389	389
Fire	403	384	370	345	323	308	284	264	250	237	236
Total	961	929	886	837	798	768	723	686	654	626	625

Economic and Market Update

August 2024 Report

Commentary

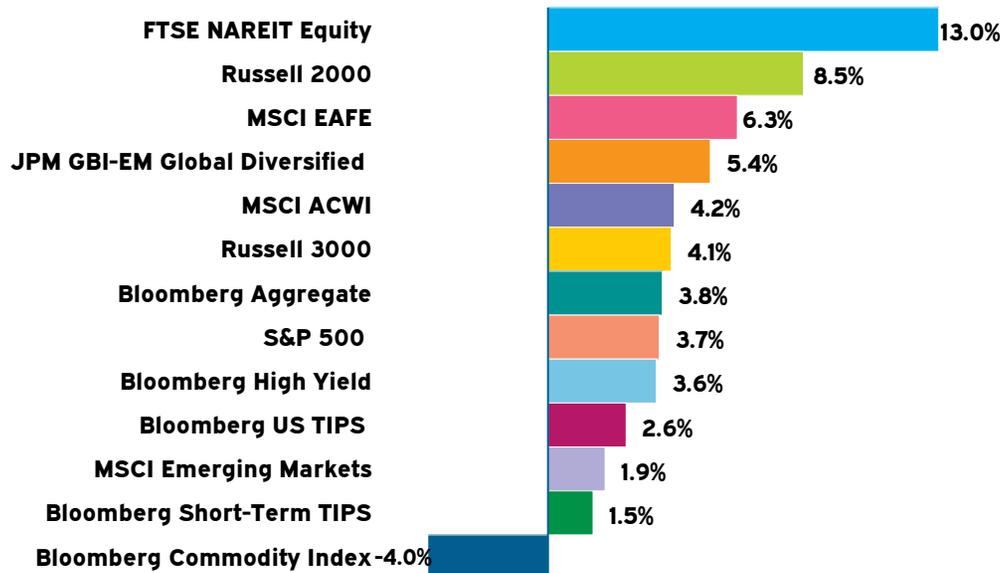
→ After a very volatile start to the month, most asset classes posted gains in August.

- Weak US jobs data caused speculation that the Fed might have waited too long to cut interest rates increasing the risk of a “hard landing” for the US economy. This and pressure from the Bank of Japan raising rates on the yen carry trade drove the equity market volatility at the start of the month.
- Subsequent data was more reassuring though, including an above expectations retail sales report, and the equity market was able to recover for the month. The Bank of Japan also calmed markets with dovish comments to stabilize the unwinding of the yen carry trade.
- From Jackson Hole, Chair Powell indicated that improvements in inflation and a balancing labor market provided justification for rate cuts soon. At their subsequent September meeting they reduced rates by 0.50%.
- In August, the broad market (Russell 3000) returned +2.8%. Large cap stocks (+2.4%) outperformed small cap (-1.5%). For the month healthcare, utilities, and consumer staples took over leadership from technology.
- Non-US developed equity markets outperformed the broad US market in August (+3.3%). A weakening US dollar was a key driver of results.
- Emerging market equities (+1.6%) lagged developed markets with China gaining +1.0%.
- Fixed income markets posted positive returns on expectations for policy rate cuts this fall as inflation pressures recede, and the economy slows.

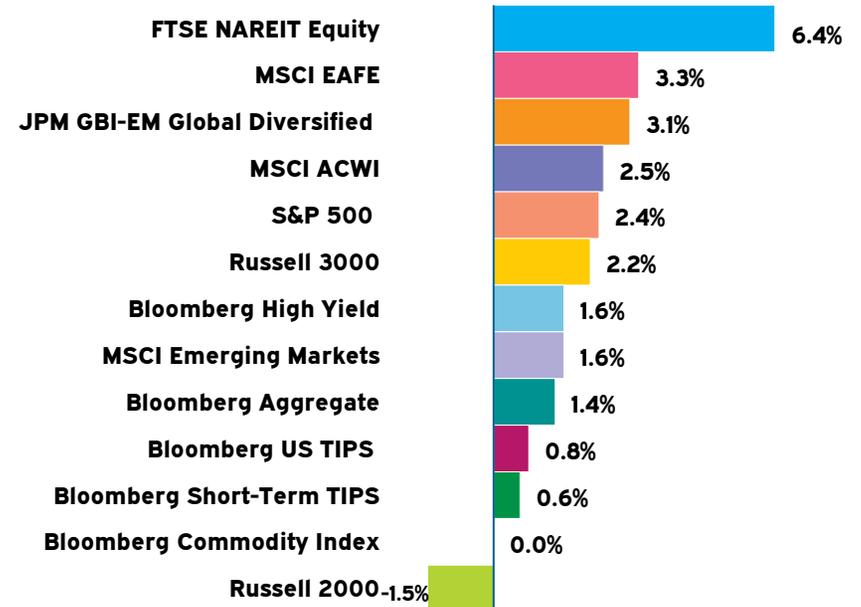
→ Looking ahead, the paths of inflation, labor markets, and monetary policy, China’s economic disorder and slowing economic growth, the yen-carry trade, and the looming US election will be key factors.

Index Returns¹

QTD



August



→ August was positive for most asset classes, but the month started off very volatile given concerns over weak economic data and an unwinding of the yen carry trade due to a rate increase by the Bank of Japan. Eventually things settled down though as additional economic data was released, and corporate earnings remained strong.

→ As we approach the end of the third quarter, US stocks have significantly outperformed other asset classes.

¹ Source: Bloomberg. Data is as of August 31, 2024.

Domestic Equity Returns¹

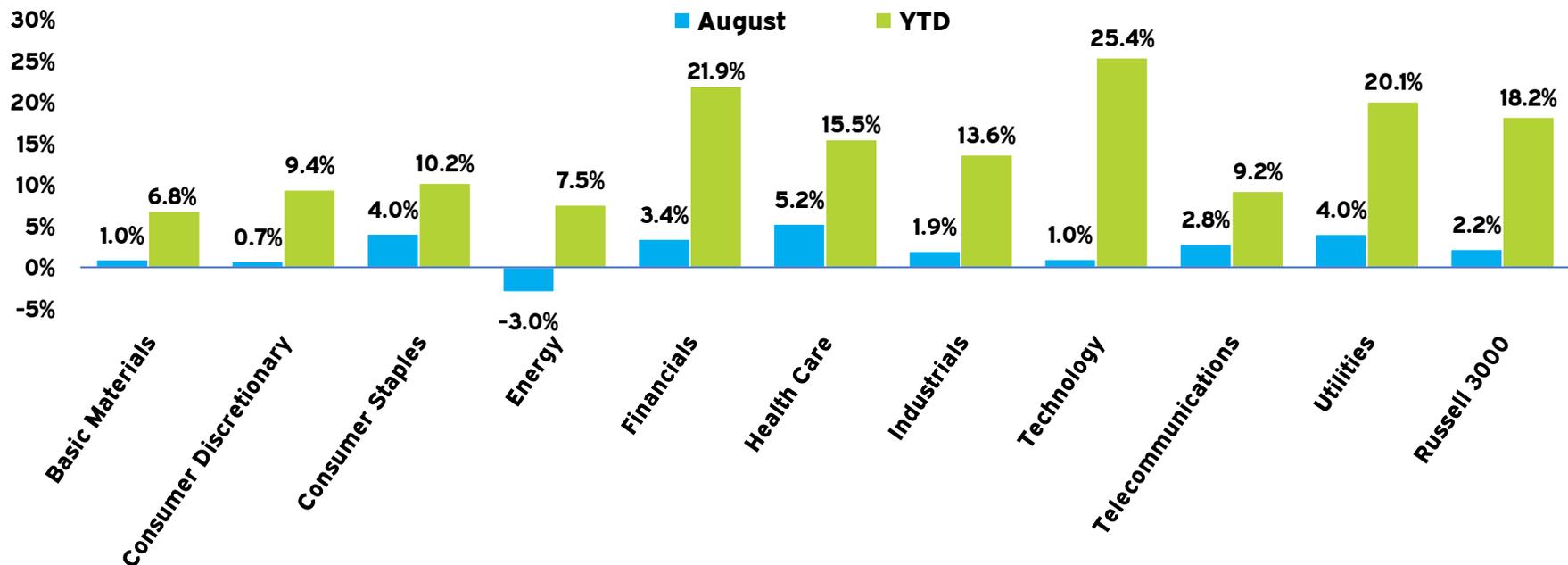
Domestic Equity	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	2.4	3.7	19.5	27.1	9.4	15.9	13.0
Russell 3000	2.2	4.1	18.2	26.1	7.9	15.2	12.3
Russell 1000	2.4	3.9	18.6	26.6	8.3	15.5	12.6
Russell 1000 Growth	2.1	0.3	21.1	30.8	8.9	19.1	16.0
Russell 1000 Value	2.7	7.9	15.1	21.1	7.3	11.2	8.8
Russell MidCap	2.0	6.8	12.1	20.2	3.5	11.2	9.6
Russell MidCap Growth	2.5	3.1	9.3	19.1	-0.5	10.5	10.6
Russell MidCap Value	1.9	8.0	13.0	20.2	5.4	10.8	8.3
Russell 2000	-1.5	8.5	10.4	18.5	0.6	9.7	8.0
Russell 2000 Growth	-1.1	7.0	11.7	17.7	-2.1	8.3	8.2
Russell 2000 Value	-1.9	10.1	9.1	19.2	3.1	10.4	7.5

US Equities: The Russell 3000 rose +2.2% in August, bringing the year-to-date results to +18.2%.

- US stocks experienced a sharp drawdown in early August, driven by the unwinding of the yen carry trade and a disappointing July jobs report. However, subsequent encouraging data on jobless claims and retail sales caused investors to be less concerned as the month wore on.
- Apple, Nvidia, and Microsoft now constitute 18% of the Russell 1000 Index (large cap). Taken together they drove the outperformance of the large cap index (+2.4%) over the small cap Russell 2000 index (-1.5%) for the month. The decline in energy prices also contributed to the underperformance as small cap energy companies were more impacted than their large cap peers.

¹ Source: Bloomberg. Data is as of August 31, 2024.

Russell 3000 Sector Returns¹



- In August, economically sensitive energy stood out with negative returns, while other sectors posted positive results.
- Health care (+5.2%) led the way for the month driven by strong results from Eli Lilly related to its weight loss drug. Consumer staples (+4.0%) and utilities (+4.0%) also posted strong gains for the month.
- All sectors have positive returns for the year-to-date period. Technology stocks (+25.4%) continue to lead the broader market, followed by financials (+21.9%), and utilities (+20.1%).

¹ Source: Bloomberg. Data is as of August 31, 2024.

Foreign Equity Returns¹

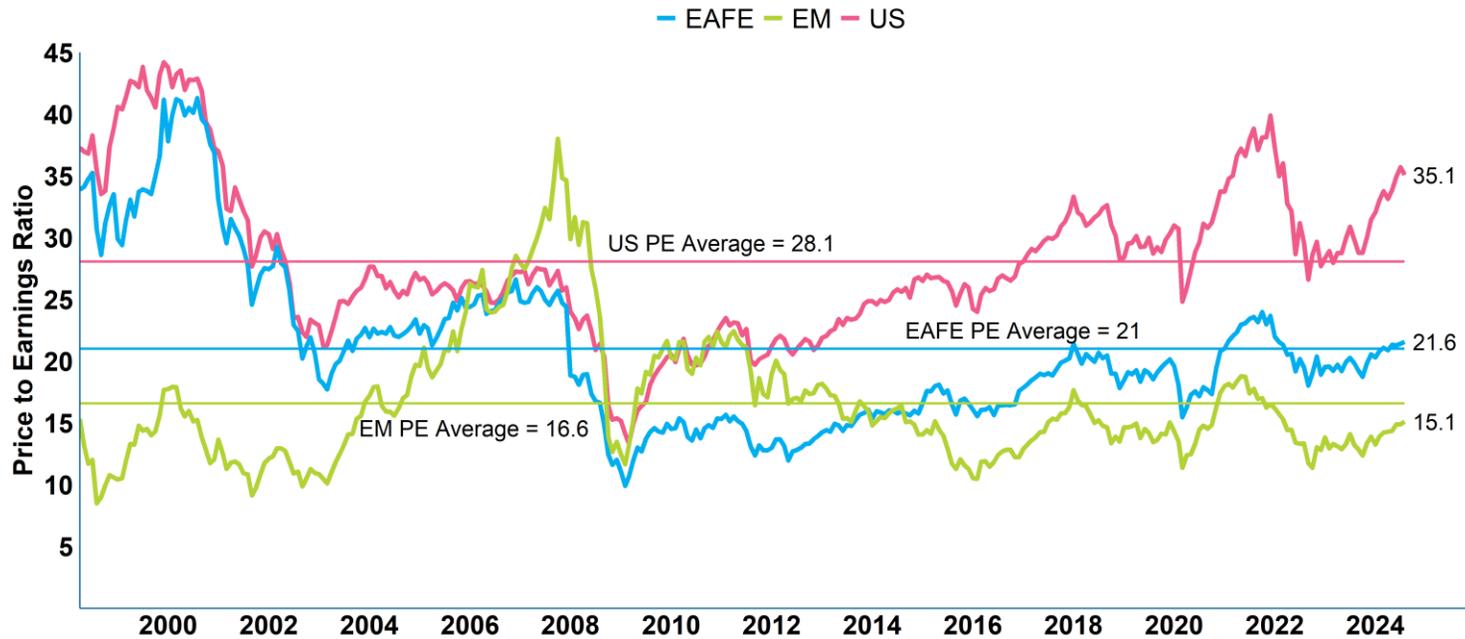
Foreign Equity	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	2.8	5.2	11.2	18.2	2.1	7.6	4.4
MSCI EAFE	3.3	6.3	12.0	19.4	4.1	8.6	5.2
MSCI EAFE (Local Currency)	0.4	1.2	12.4	16.7	7.6	9.6	7.4
MSCI EAFE Small Cap	2.0	7.8	8.3	15.1	-2.4	6.4	5.3
MSCI Emerging Markets	1.6	1.9	9.5	15.1	-3.1	4.8	2.6
MSCI Emerging Markets (Local Currency)	0.4	1.0	12.1	16.3	0.1	6.6	5.4
MSCI EM ex. China	1.8	2.7	11.3	22.6	1.8	8.7	3.9
MSCI China	1.0	-0.3	4.4	-2.8	-13.6	-3.4	0.6

Foreign Equity: Developed international equities (MSCI EAFE) rose +3.3% in August, while emerging market equities (MSCI Emerging Markets) gained just +1.6%.

- After a sell-off early in the month, developed market equities saw solid returns in August outpacing US equities. The weakening dollar was a major contributor to results with local currency returns much lower (+0.4% versus +3.3%). Europe led global returns for the month following promising inflation news and bolstered by spending around the Paris Olympics. UK returns were positive but comments that tax hikes and spending cuts were on the horizon weighed on relative returns. After initial significant volatility related to the strengthening yen, the Japanese TOPIX ended the month down -2.9%.
- Emerging market equities saw positive returns but lagged its developed peers. Smaller Asian markets saw the greatest returns, due to currency appreciation against the US dollar. China and India saw slight gains but lagged the broad index, while Korea saw losses as tech stocks experienced a correction.

¹ Source: Bloomberg. Data is as of August 31, 2024.

Equity Cyclically Adjusted P/E Ratios¹



→ In August, the US price to earnings ratio fell slightly to 35.1 it still remains well above its 21st century average (28.1).

→ Non-US developed market valuations have increased to slightly above their long-term average while emerging market stocks remain well below their long-term average price-to-earnings ratio.

¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of August 2024. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

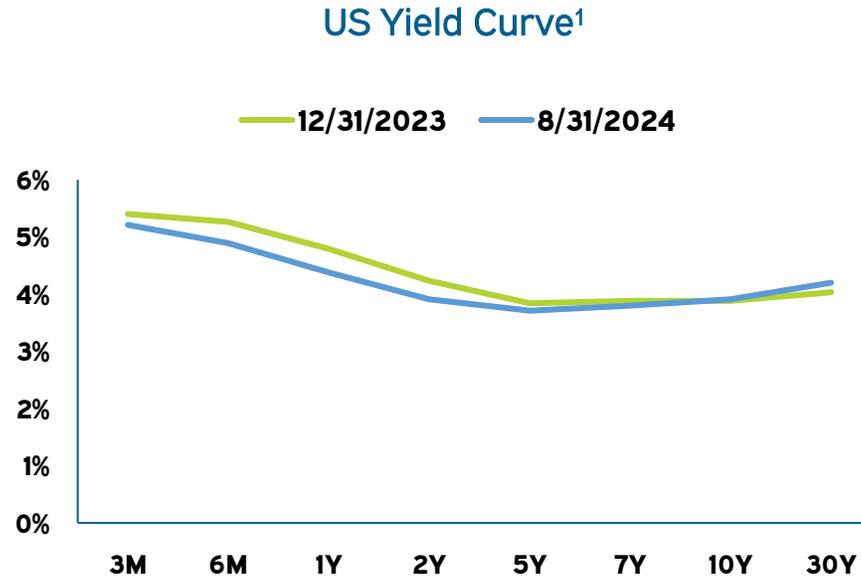
Fixed Income Returns¹

Fixed Income	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	1.5	3.8	3.5	7.9	-1.8	0.3	1.9	4.7	6.0
Bloomberg Aggregate	1.4	3.8	3.1	7.3	-2.1	0.0	1.6	4.4	6.2
Bloomberg US TIPS	0.8	2.6	3.3	6.2	-1.3	2.0	2.1	4.0	6.9
Bloomberg Short-term TIPS	0.6	1.5	3.8	6.3	2.2	3.3	2.2	4.1	2.5
Bloomberg High Yield	1.6	3.6	6.3	12.6	2.5	4.5	4.6	7.3	3.5
JPM GBI-EM Global Diversified (USD)	3.1	5.4	1.5	6.0	-1.7	0.1	-0.3	--	--

Fixed Income: The Bloomberg Universal index rose +1.5% in August, bringing the year-to-date return to +3.5%.

- Fixed income indexes rose in August, driven by market participants' expectations for a shift towards more accommodative monetary policy in the coming months largely due to continued easing of inflationary pressures and heightened concerns regarding a weakening labor market.
- The broad US bond market (Bloomberg Aggregate) rose +1.4% over the month, with the broad TIPS market gaining +0.8%. The less interest rate sensitive short-term TIPS index increased +0.6%.
- Riskier bonds led the way during the month, as risk appetite remains strong with emerging market and high yield bonds gaining +3.1% and +1.6%, respectively.

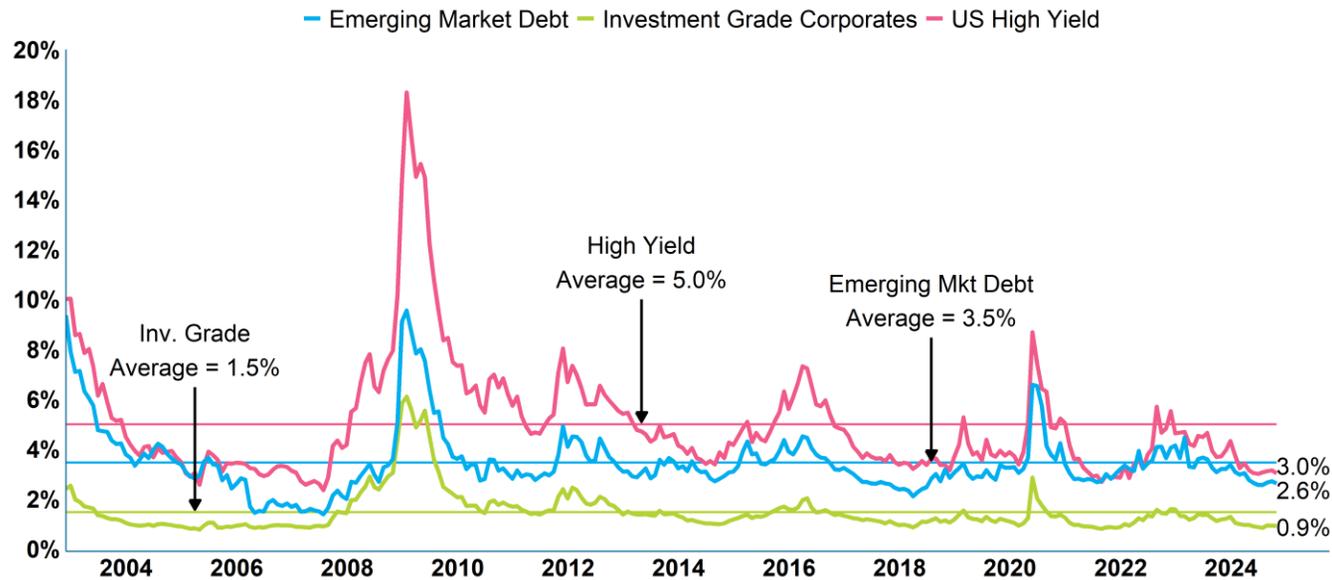
¹ Source: Bloomberg. Data is as of August 31, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration, respectively. JPM GBI-EM data is from J.P. Morgan. Current yield and duration data is not available.



- Weaker economic data and comments from Chair Powell in August that rate cuts were likely coming in September supported a bond rally for the month.
- Interest rates finished the month lower but largely off the levels reached during the start of the month volatility. The more policy sensitive 2-year Treasury yield declined from 4.26% at the end of July to 3.92% in August. The 10-year Treasury yield fell less in August declining from 4.03% to 3.90%.
- The yield curve was relatively flat at month-end after a long period of inversion, as shorter-dated yields declined the most over the month.

¹ Source: Bloomberg. Data is as of August 31, 2024.

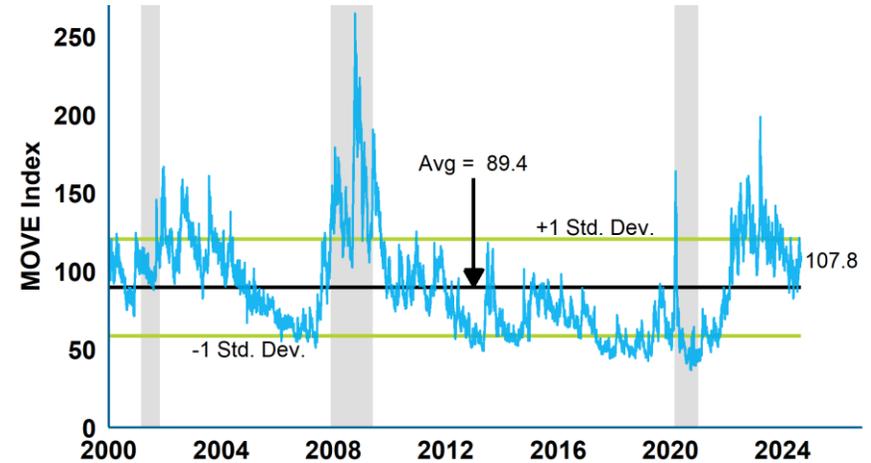
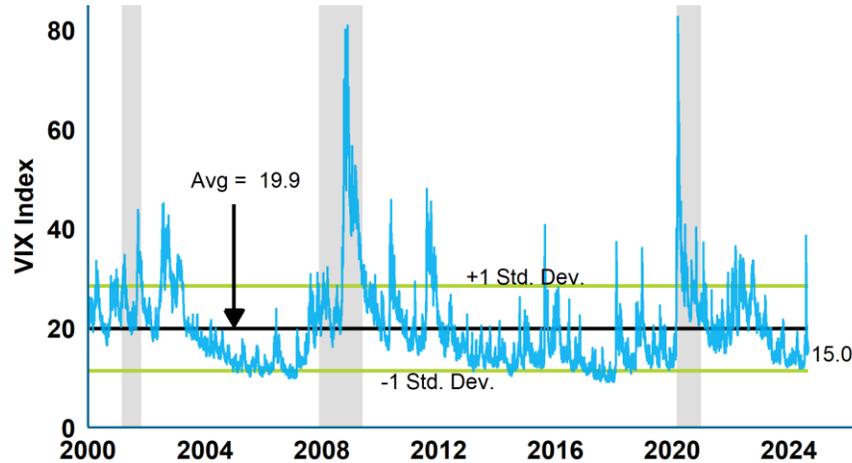
Credit Spreads vs. US Treasury Bonds¹



- Corporate bonds, particularly high yield, generally outperformed government bonds for the month given the prospective for materially lower interest rates.
- Spreads (the yield above a comparable maturity Treasury) widened significantly at the start of the month in the volatile environment but declined after.
- Overall spreads finished largely where they started the month despite the volatility. All spreads remained below their respective long-run averages, particularly high yield.
- Although spreads are relatively tight, yields remain at above-average levels compared to the last two decades, particularly for short-term issues.

¹ Source: Bloomberg. Data is as of August 31, 2024. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

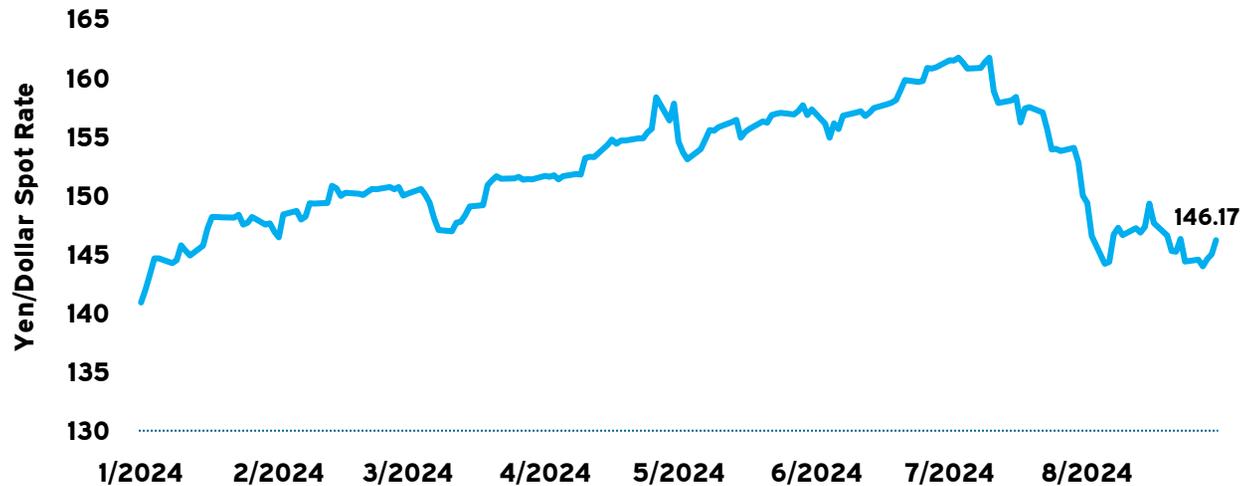
Equity and Fixed Income Volatility¹



- Equity market volatility fell slightly overall in August but this masks the significant volatility in the first part of the month related to the weaker than expected labor report in the US and pressures on the yen carry trade.
- Volatility levels (MOVE) in the bond market also fluctuated through the month finishing off their peak but at a level higher than where they started. Uncertainty in bond markets remain above the long-run average as markets continue to reprice interest rate cuts for the rest of 2024.

¹ Equity Volatility – Source: FRED. Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of August 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and August 2024.

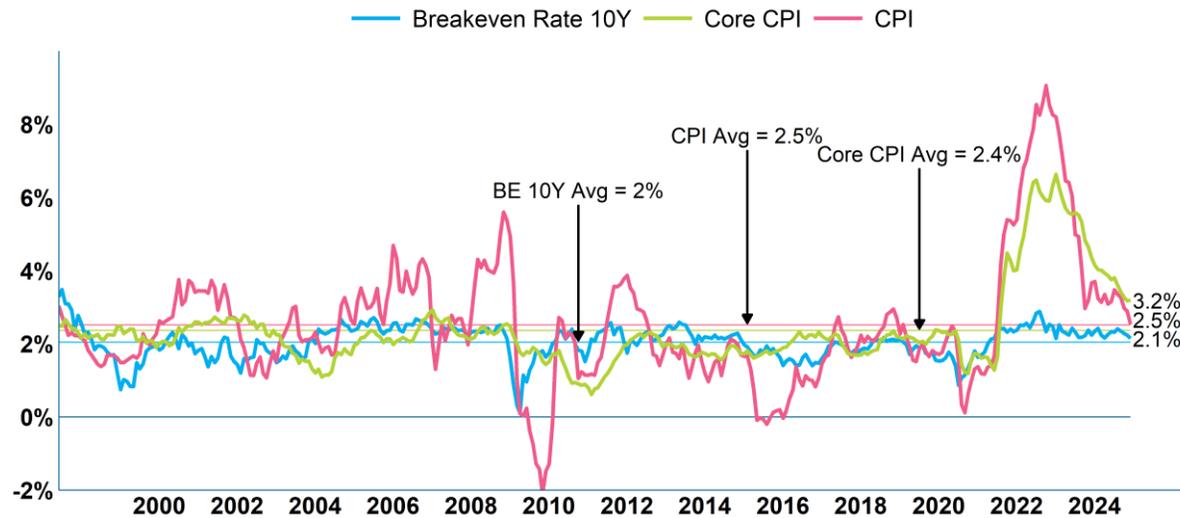
Recent Market Volatility: US Dollar versus Japanese Yen¹



- Given relatively lower interest rates in Japan many have entered the so-called “yen carry trade” borrowing cheaply in Japan and investing in other areas with perceived higher returns.
- This has traditionally involved taking the borrowed proceeds and investing them in Treasuries, but recently has expanded to investing in the US stock market particularly the technology sector.
- When the Bank of Japan signaled, it would continue to increase interest rates with expectations growing for the Fed to cut rates, many unwound this trade contributing to the significant market volatility (in addition to the unemployment miss) at the start of the month.
- With expectations for significant rate cuts ahead in the US the yen has further strengthened after month-end.

¹ Source: Bloomberg. Data as of August 31, 2024.

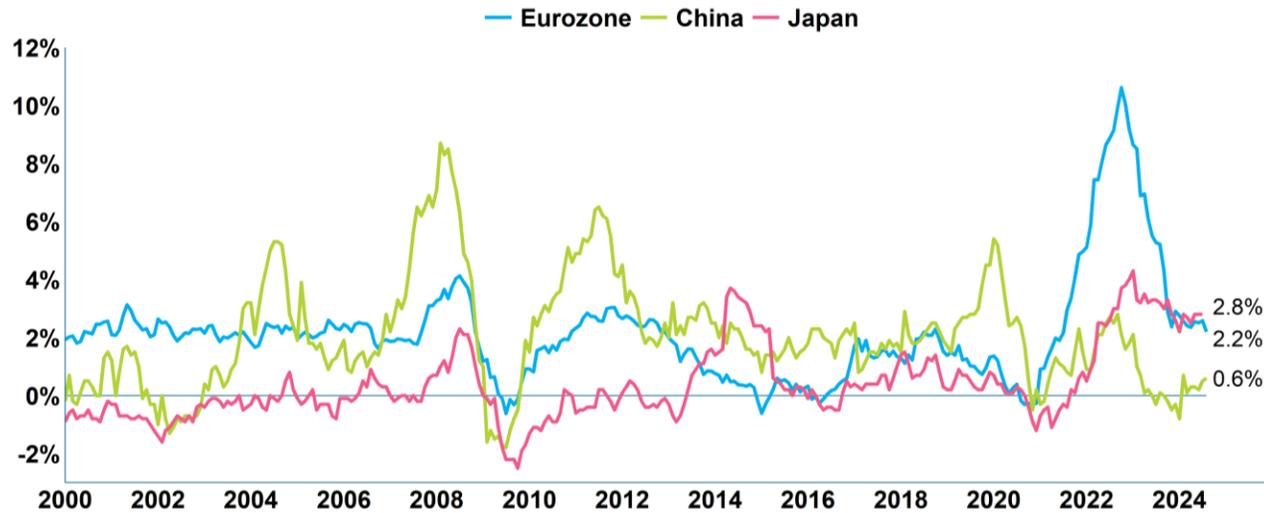
US Ten-Year Breakeven Inflation and CPI¹



- Year-over-year headline inflation continued to fall in August (2.9% to 2.5%), coming in at expectations.
- Month-over-month inflation increased 0.2% in August the same as in July. Shelter and transportation costs posted the largest gains rising 0.5% and 0.9%, respectively. Energy prices (-0.8%) fell for the month while food prices increased (0.1%).
- Core inflation (excluding food and energy) rose 0.3% (slightly above expectations) in August and 3.2% (at expectations) from a year prior.
- Inflation expectations (breakevens) have been relatively stable over the last several years. They remain below current inflation levels.

¹ Source: FRED. Data is as August 2024. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

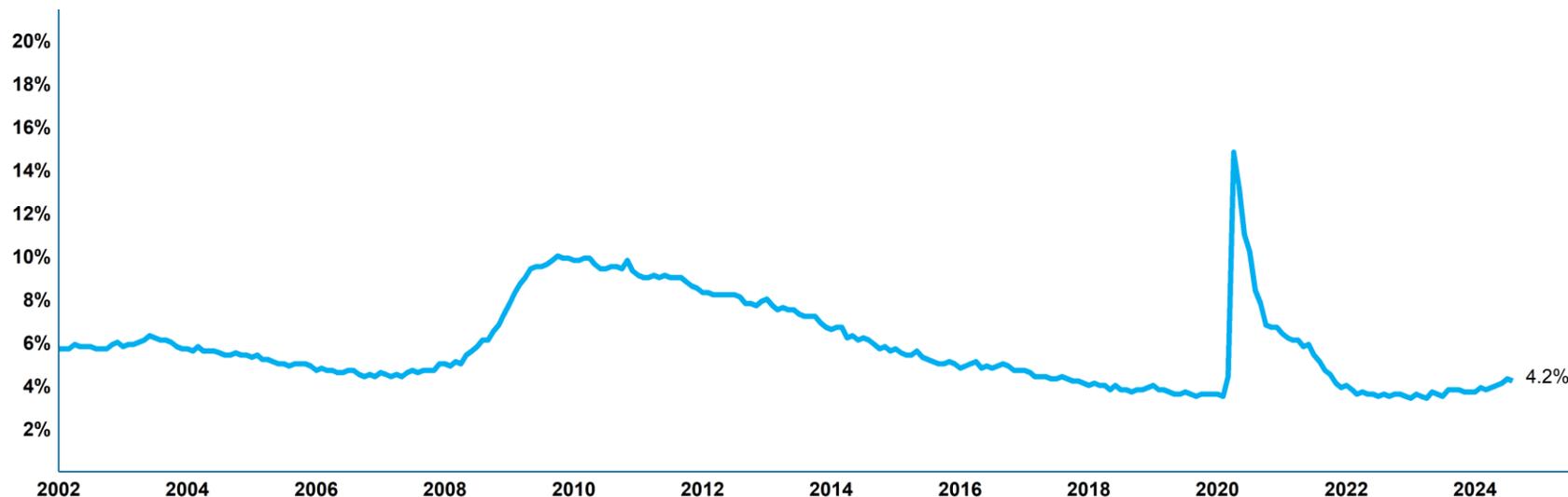
Global Inflation (CPI Trailing Twelve Months)¹



- In the eurozone, inflation fell from 2.5% to 2.2% in August, potentially clearing the way for further rate cuts from the ECB.
- Inflation in Japan remained steady at 2.8% in August for the third straight month. The Bank of Japan made some dovish comments in early August to calm markets, but in early September they signaled a willingness to raise interest rates in the future given inflation levels.
- In China, inflation was slightly up compared to last month representing the seventh straight month of positive price increases after declines late last year. Recent extreme weather has caused supply issues and contributed to higher prices. Inflation in China remains much lower than other countries though due to weak consumer spending and as issues in the real estate sector continue to weigh on sentiment.

¹ Source: Bloomberg. Data is as of August 31, 2024, except Japan which is as of July 31, 2024.

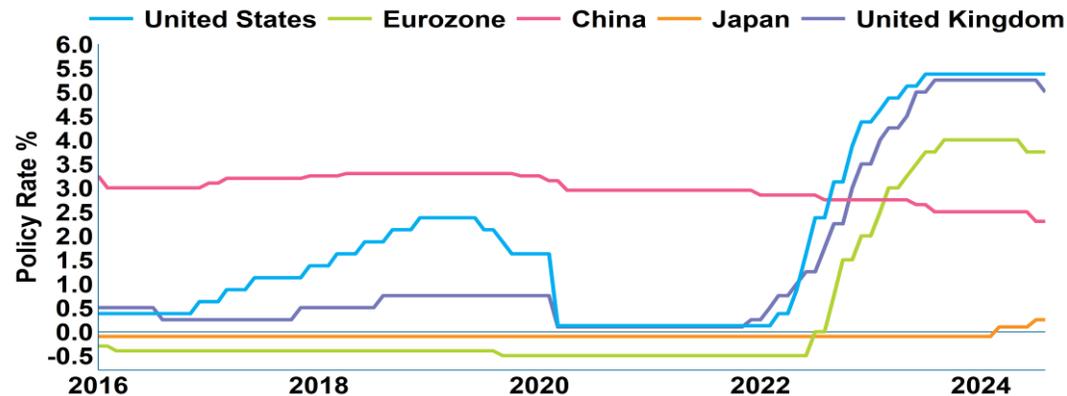
US Unemployment¹



- The unemployment rate fell slightly from 4.3% to 4.2% as the number of people on temporary layoff declined. Compared to a year ago the rate increased by 0.4% (3.8% to 4.2%).
- Construction (+34K), healthcare (+31K), and social services (+13K) sectors added jobs in August while manufacturing reduced jobs (-24k). The total number of jobs created was 142,000 compared to estimates of 165,000.
- The US labor market continues to show signs of slowing with the number of job openings falling to 7.7 million (the peak was over 12 million) and the rate of people quitting jobs is falling.
- The change in average hourly earnings from a year prior remains strong though (around 3.8%), and initial jobless claims are subdued.

¹ Source: FRED. Data is as August 31, 2024.

Policy Rates¹



- In the US, the Fed reduced interest rates by 0.5% after holding them at a 5.25%-5.50% level for over a year. Chair Powell cautioned though against assuming that the 0.5% initial cut would be the pace that policymakers would continue at. In their statement they highlighted that they would make additional interest rate cut decisions based on incoming data. Market participants are pricing in two to three additional cuts in 2024.
- The Bank of England (BoE) and European Central Bank (ECB) by contrast have both already started cutting rates. The BoE made a 25 basis points interest rate cut in July while the ECB made two similar cuts in June and September.
- Inflation in Japan remains elevated, prompting Bank of Japan officials to raise the policy rate 0.15% to 0.25% after decades at near-zero rates.
- China's central bank continues to pursue an easing policy given slowing economic growth and low inflation.

¹ Source: Bloomberg. Data is as of August 31, 2024. United States rate is the mid-point of the Federal Funds Target Rate range. Eurozone rate is the ECB Deposit Facility Announcement Rate. Japan rate is the Bank of Japan Unsecured Overnight Call Rate Expected. China rate is the China Central Bank 1-Year Medium Term Interest Rate. UK rate is the UK Bank of England Official Bank Rate.

US Dollar vs. Broad Currencies¹



- The US dollar weakened by over 2% in August on weak economic data and the prospect of rate cuts from the Fed later this year.
- Looking ahead, the track of policy rates across major central banks will be key for the path of the US dollar from here. If the US economy slows more than expected and the Fed relatedly lowers rates at a faster pace, we could see the dollar weaken.

¹ Source: Bloomberg. Data as of August 31, 2024.

Summary

Key Trends:

- According to the International Monetary Fund's (IMF) July report, global growth this year is expected to match the 2023 estimate at around 3.2% with most major economies predicted to avoid a recession.
- Key economic data in the US has largely weakened and come in below expectations, causing markets to expect an additional two to three rate cuts this year after the Fed's initial 0.5% reduction. Uncertainty remains though regarding the timing and pace of interest rate cuts in the coming year.
- We have started to see divergences in monetary policy. Some central banks, such as the European Central Bank and the Bank of England have started to cut interest rates and others, like the Bank of Japan, have increased interest rates, while the Fed appears on the verge of starting rate cuts. This disparity will likely influence capital flows and currencies.
- US consumers could feel pressure as certain components of inflation (e.g., shelter) remain high, borrowing costs are elevated, and the job market may weaken further.
- A focus for US equities going forward will be whether earnings can remain resilient if growth slows. Also, the future paths of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including China's economic uncertainty and ongoing weakness in the real estate sector. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

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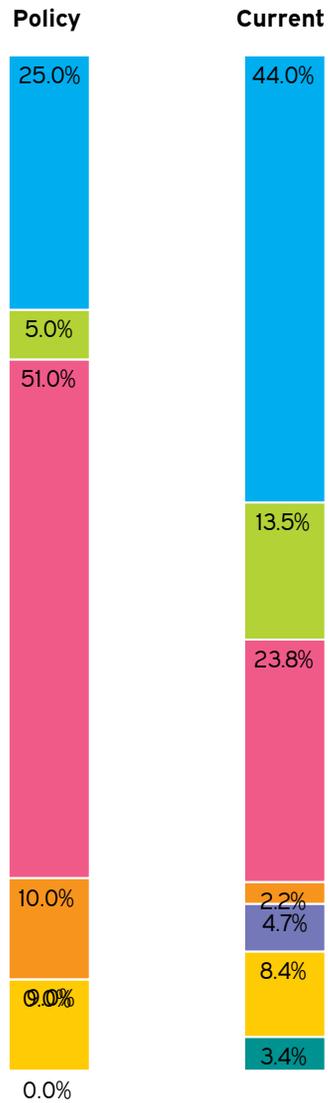
PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Oakland Police and Fire Retirement System

September 25, 2024

August Flash Report

As of August 31, 2024



Allocation vs. Targets and Policy							
	Current Balance (\$)	Current (%)	Long-Term Policy (%)	Difference (%)	Interim Policy (%)	Policy Range (%)	Within IPS Range?
Domestic Equity	207,044,063	44.0	25.0	19.0	34.0	15.0 - 35.0	No
International Equity	63,402,494	13.5	5.0	8.5	12.0	2.0 - 22.0	Yes
Fixed Income	111,921,012	23.8	51.0	-27.2	44.0	31.0 - 71.0	No
Credit	10,256,761	2.2	10.0	-7.8	0.0	0.0 - 16.0	Yes
Covered Calls	22,205,518	4.7	0.0	4.7	0.0	0.0 - 5.0	Yes
Crisis Risk Offset	39,257,439	8.4	9.0	-0.6	10.0	4.0 - 14.0	Yes
Cash	15,954,871	3.4	0.0	3.4	0.0	0.0 - 5.0	Yes
Total	470,042,158	100.0	100.0	0.0	100.0		

The new asset allocation policy established after the completion of the 2023 Asset-Liability Study became effective in July 2024. Most asset classes are currently out of policy ranges due to pending transitions.

Asset Class Performance Summary | As of August 31, 2024

Asset Class Performance Summary											
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
OPFRS Total Plan	470,042,158	100.0	1.6	4.3	9.7	15.2	2.9	7.0	6.9	6.8	Dec-88
<i>OPFRS Policy Benchmark</i>			1.6	3.6	10.6	16.4	3.7	7.6	7.1	8.1	
Excess Return			0.0	0.7	-0.9	-1.2	-0.8	-0.6	-0.2	-1.3	
Domestic Equity	207,044,063	44.0	2.1	6.1	15.3	23.1	6.4	13.3	11.3	9.3	Jun-97
<i>Russell 3000 (Blend)</i>			2.2	4.1	18.2	26.1	7.9	15.2	12.4	9.7	
Excess Return			-0.1	2.0	-2.9	-3.0	-1.5	-1.9	-1.1	-0.4	
International Equity	63,402,494	13.5	3.0	5.6	12.5	20.2	4.0	8.4	5.9	5.7	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			2.8	5.2	11.2	18.2	2.1	7.6	4.4	5.4	
Excess Return			0.2	0.4	1.3	2.0	1.9	0.8	1.5	0.3	
Fixed Income	111,921,012	23.8	1.4	3.8	3.5	7.6	-1.8	0.4	2.1	4.5	Jan-94
<i>Bloomberg Universal (Blend)</i>			1.5	3.8	3.5	7.9	-1.8	0.3	1.9	4.6	
Excess Return			-0.1	0.0	0.0	-0.3	0.0	0.1	0.2	-0.1	
Credit	10,256,761	2.2	0.5	1.7	5.8	9.8	3.4	5.5	--	5.2	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			1.6	3.6	6.3	12.6	2.5	4.5	4.7	5.1	
Excess Return			-1.1	-1.9	-0.5	-2.8	0.9	1.0	--	0.1	
Covered Calls	22,205,518	4.7	1.7	2.6	12.9	17.1	7.8	12.0	9.5	9.7	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			2.9	4.1	12.0	13.6	5.3	6.4	5.9	6.2	
Excess Return			-1.2	-1.5	0.9	3.5	2.5	5.6	3.6	3.5	
Crisis Risk Offset	39,257,439	8.4	-1.7	-1.5	0.2	0.8	-4.9	-9.0	--	-6.8	Aug-18
<i>Crisis Risk Offset Benchmark</i>			-1.0	-0.4	3.5	5.2	3.7	0.3	--	0.6	
Excess Return			-0.7	-1.1	-3.3	-4.4	-8.6	-9.3	--	-7.4	

Performance shown is net of fees, except for Total Plan, Domestic Equity, and International Equity composites which have a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investment's initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Asset Class & Manager Performance | As of August 31, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
OPFRS Total Plan	470,042,158	100.0	1.6	4.3	9.7	15.2	2.9	7.0	6.9	6.8	Dec-88
<i>OPFRS Policy Benchmark</i>			1.6	3.6	10.6	16.4	3.7	7.6	7.1	8.1	
Excess Return			0.0	0.7	-0.9	-1.2	-0.8	-0.6	-0.2	-1.3	
Domestic Equity	207,044,063	44.0	2.1	6.1	15.3	23.1	6.4	13.3	11.3	9.3	Jun-97
<i>Russell 3000 (Blend)</i>			2.2	4.1	18.2	26.1	7.9	15.2	12.4	9.7	
Excess Return			-0.1	2.0	-2.9	-3.0	-1.5	-1.9	-1.1	-0.4	
Northern Trust Russell 1000	104,675,018	22.3	2.4	3.8	18.6	26.6	8.2	15.4	12.6	14.1	Jun-10
<i>Russell 1000 Index</i>			2.4	3.9	18.6	26.6	8.3	15.6	12.7	14.2	
Excess Return			0.0	-0.1	0.0	0.0	-0.1	-0.2	-0.1	-0.1	
EARNEST Partners	42,321,968	9.0	1.6	7.3	9.7	17.5	4.6	12.1	11.2	9.6	Apr-06
<i>Russell Midcap Index</i>			2.0	6.8	12.1	20.2	3.5	11.2	9.6	9.1	
Excess Return			-0.4	0.5	-2.4	-2.7	1.1	0.9	1.6	0.5	
Wellington Select Quality Equity	27,847,851	5.9	4.0	8.9	13.9	20.6	--	--	--	10.6	May-22
<i>Russell 1000 Index</i>			2.4	3.9	18.6	26.6	8.3	15.6	12.7	15.6	
Excess Return			1.6	5.0	-4.7	-6.0	--	--	--	-5.0	
Brown Fundamental Small Cap Value	14,572,578	3.1	-2.1	9.8	13.5	23.7	9.4	--	--	9.3	Apr-21
<i>Russell 2000 Value Index</i>			-1.9	10.1	9.1	19.2	3.1	10.4	7.5	3.7	
Excess Return			-0.2	-0.3	4.4	4.5	6.3	--	--	5.6	
Rice Hall James	17,626,648	3.8	2.7	10.4	14.3	21.7	0.3	8.9	--	8.0	Aug-17
<i>Russell 2000 Growth Index</i>			-1.1	7.0	11.7	17.7	-2.1	8.4	8.2	8.1	
Excess Return			3.8	3.4	2.6	4.0	2.4	0.5	--	-0.1	

Performance shown is net of fees, except for Total Plan and Domestic Equity which have a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see the Benchmark History for custom benchmark compositions.

Asset Class & Manager Performance | As of August 31, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
International Equity	63,402,494	13.5	3.0	5.6	12.5	20.2	4.0	8.4	5.9	5.7	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			2.8	5.2	11.2	18.2	2.1	7.6	4.4	5.4	
Excess Return			0.2	0.4	1.3	2.0	1.9	0.8	1.5	0.3	
Vanguard Developed Markets ETF	17,543,577	3.7	2.9	6.0	11.0	18.6	3.2	8.7	5.4	8.7	Sep-19
<i>FTSE Developed All Cap ex-U.S. Index</i>			2.9	6.3	11.1	18.9	3.5	9.0	5.5	9.0	
Excess Return			0.0	-0.3	-0.1	-0.3	-0.3	-0.3	-0.1	-0.3	
SGA ACWI ex-U.S. Equity	45,858,917	9.8	3.1	5.5	13.1	20.8	4.5	--	--	6.5	Dec-19
<i>MSCI AC World ex USA (Net)</i>			2.8	5.2	11.2	18.2	2.1	7.6	4.4	6.4	
Excess Return			0.3	0.3	1.9	2.6	2.4	--	--	0.1	
Fixed Income	111,921,012	23.8	1.4	3.8	3.5	7.6	-1.8	0.4	2.1	4.5	Jan-94
<i>Bloomberg Universal (Blend)</i>			1.5	3.8	3.5	7.9	-1.8	0.3	1.9	4.6	
Excess Return			-0.1	0.0	0.0	-0.3	0.0	0.1	0.2	-0.1	
Ramirez	75,868,780	16.1	1.4	3.9	3.4	7.5	-2.0	0.1	--	2.0	Jan-17
<i>Blmbg. U.S. Aggregate Index</i>			1.4	3.8	3.1	7.3	-2.1	0.0	1.6	1.6	
Excess Return			0.0	0.1	0.3	0.2	0.1	0.1	--	0.4	
Wellington Core Bond	7,273,702	1.5	1.3	3.8	4.0	8.8	-1.9	--	--	-0.9	Apr-21
<i>Blmbg. U.S. Aggregate Index</i>			1.4	3.8	3.1	7.3	-2.1	0.0	1.6	-1.1	
Excess Return			-0.1	0.0	0.9	1.5	0.2	--	--	0.2	
Reams	28,778,530	6.1	1.4	3.8	3.6	7.6	-1.2	2.6	3.1	4.9	Feb-98
<i>Bloomberg Universal (Blend)</i>			1.5	3.8	3.5	7.9	-1.8	0.3	1.9	4.2	
Excess Return			-0.1	0.0	0.1	-0.3	0.6	2.3	1.2	0.7	

Performance shown is net of fees, except for International Equity composite which has a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see the Benchmark History for custom benchmark compositions.

Asset Class & Manager Performance | As of August 31, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
Credit	10,256,761	2.2	0.5	1.7	5.8	9.8	3.4	5.5	--	5.2	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			1.6	3.6	6.3	12.6	2.5	4.5	4.7	5.1	
Excess Return			-1.1	-1.9	-0.5	-2.8	0.9	1.0	--	0.1	
Polen Capital	10,256,761	2.2	0.5	1.7	5.8	9.8	3.4	5.5	--	5.2	Feb-15
<i>ICE BofA U.S. High Yield Index</i>			1.6	3.6	6.3	12.5	2.5	4.3	4.6	5.0	
Excess Return			-1.1	-1.9	-0.5	-2.7	0.9	1.2	--	0.2	
Covered Calls	22,205,518	4.7	1.7	2.6	12.9	17.1	7.8	12.0	9.5	9.7	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			2.9	4.1	12.0	13.6	5.3	6.4	5.9	6.2	
Excess Return			-1.2	-1.5	0.9	3.5	2.5	5.6	3.6	3.5	
Parametric BXM	10,620,426	2.3	1.0	2.0	10.8	13.8	6.4	9.1	7.4	7.7	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			2.9	4.1	12.0	13.6	5.3	6.4	5.9	6.2	
Excess Return			-1.9	-2.1	-1.2	0.2	1.1	2.7	1.5	1.5	
Parametric DeltaShift	11,585,092	2.5	2.4	3.2	14.9	20.3	9.0	14.7	11.6	11.8	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			2.9	4.1	12.0	13.6	5.3	6.4	5.9	6.2	
Excess Return			-0.5	-0.9	2.9	6.7	3.7	8.3	5.7	5.6	

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see the Benchmark History for custom benchmark compositions.

Asset Class & Manager Performance | As of August 31, 2024

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
Crisis Risk Offset	39,257,439	8.4	-1.7	-1.5	0.2	0.8	-4.9	-9.0	--	-6.8	Aug-18
<i>Crisis Risk Offset Benchmark</i>			<i>-1.0</i>	<i>-0.4</i>	<i>3.5</i>	<i>5.2</i>	<i>3.7</i>	<i>0.3</i>	<i>--</i>	<i>0.6</i>	
Excess Return			<i>-0.7</i>	<i>-1.1</i>	<i>-3.3</i>	<i>-4.4</i>	<i>-8.6</i>	<i>-9.3</i>	<i>--</i>	<i>-7.4</i>	
Kepos Alternative Risk Premia	12,074,598	2.6	-0.7	-0.4	10.9	12.3	--	--	--	7.6	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>			<i>-0.5</i>	<i>0.2</i>	<i>8.2</i>	<i>9.4</i>	<i>6.6</i>	<i>2.0</i>	<i>--</i>	<i>7.2</i>	
Excess Return			<i>-0.2</i>	<i>-0.6</i>	<i>2.7</i>	<i>2.9</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.4</i>	
Versor Trend Following	13,725,402	2.9	-6.0	-8.5	-7.9	-10.4	--	--	--	-3.6	Apr-22
<i>SG Trend Index</i>			<i>-4.5</i>	<i>-6.8</i>	<i>1.3</i>	<i>-0.6</i>	<i>7.5</i>	<i>5.5</i>	<i>4.8</i>	<i>2.1</i>	
Excess Return			<i>-1.5</i>	<i>-1.7</i>	<i>-9.2</i>	<i>-9.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-5.7</i>	
Vanguard Long-Term Treasury ETF	13,457,439	2.9	2.0	5.6	0.6	4.7	-9.9	-5.2	0.6	-3.1	Jul-19
<i>Blmbg. U.S. Gov Long Index</i>			<i>2.0</i>	<i>5.7</i>	<i>0.4</i>	<i>4.9</i>	<i>-9.8</i>	<i>-5.1</i>	<i>0.7</i>	<i>-3.1</i>	
Excess Return			<i>0.0</i>	<i>-0.1</i>	<i>0.2</i>	<i>-0.2</i>	<i>-0.1</i>	<i>-0.1</i>	<i>-0.1</i>	<i>0.0</i>	
Cash	15,954,871	3.4	0.1	0.1	0.4	0.4	0.1	0.4	0.8	0.6	Mar-11

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see the Benchmark History for custom benchmark compositions. Versor Trend Following is estimated using manager provided returns for 8/31/2024 due to statement availability.

**Cash Flow Summary
Month to Date**

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Northern Trust Russell 1000	102,261,697	-	2,413,321	104,675,018
EARNEST Partners	41,649,889	-	672,080	42,321,968
Wellington Select Quality Equity	26,771,306	-	1,076,544	27,847,851
Brown Fundamental Small Cap Value	14,879,531	-	-306,953	14,572,578
Rice Hall James	17,145,665	-	480,983	17,626,648
Vanguard Developed Markets ETF	17,047,977	-	495,600	17,543,577
SGA ACWI ex-U.S. Equity	44,457,705	-	1,401,212	45,858,917
Ramirez	74,806,183	-	1,062,598	75,868,780
Wellington Core Bond	7,177,747	-	95,955	7,273,702
Reams	28,376,279	-	402,251	28,778,530
Polen Capital	10,208,988	-	47,773	10,256,761
Parametric BXM	11,261,178	-750,000	109,248	10,620,426
Parametric DeltaShift	12,063,662	-750,000	271,431	11,585,092
Kepos Alternative Risk Premia	12,157,894	-	-83,296	12,074,598
Versor Trend Following	14,596,833	-	-871,431	13,725,402
Vanguard Long-Term Treasury ETF	13,237,226	-44,799	265,011	13,457,439
Cash - Money Market	5,910,691	20,350	8,830	5,939,871
Cash - Treasury	10,193,000	-178,000	-	10,015,000
Securities Lending Northern Trust	-	-10,097	10,097	-
OPFRS Total Plan	464,203,451	-1,712,546	7,551,253	470,042,158

Benchmark History

From Date	To Date	Benchmark
OPFRS Total Plan		
07/01/2024	Present	34.0% Russell 3000 Index, 12.0% MSCI AC World ex USA (Net), 44.0% Blmbg. U.S. Universal Index, 10.0% Crisis Risk Offset Benchmark
06/01/2022	07/01/2024	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA (Net), 31.0% Blmbg. U.S. Universal Index, 2.0% Blmbg. U.S. Corp: High Yield Index, 5.0% Cboe S&P 500 Buy Write Index, 10.0% Crisis Risk Offset Benchmark
01/01/2019	06/01/2022	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 31.0% Blmbg. U.S. Universal Index, 5.0% Cboe S&P 500 Buy Write Index, 2.0% Blmbg. U.S. Treasury: Long, 10.0% Crisis Risk Offset Benchmark
05/01/2016	01/01/2019	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 20.0% CBOE BXM
10/01/2015	05/01/2016	43.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 15.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
01/01/2014	10/01/2015	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 10.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
03/01/2013	01/01/2014	40.0% Russell 3000 Index, 10.0% MSCI AC World ex USA index, 17.0% Blmbg. U.S. Universal Index, 33.0% ICE BofA 3 Month U.S. T-Bill
08/01/2012	03/01/2013	20.0% Russell 3000 Index, 7.0% MSCI AC World ex USA index, 18.0% Blmbg. U.S. Universal Index, 55.0% ICE BofA 3 Month U.S. T-Bill
10/01/2007	08/01/2012	53.0% Russell 3000 Index, 17.0% MSCI AC World ex USA index, 30.0% Blmbg. U.S. Universal Index
04/01/2006	10/01/2007	35.0% Russell 3000 Index, 15.0% MSCI AC World ex USA index, 50.0% Blmbg. U.S. Universal Index
01/01/2005	04/01/2006	35.0% Russell 3000 Index, 50.0% Blmbg. U.S. Aggregate Index, 15.0% MSCI AC World ex USA index
04/01/1998	01/01/2005	20.0% Russell 1000 Value Index, 10.0% Russell 1000 Index, 5.0% Russell Midcap Index, 50.0% Blmbg. U.S. Aggregate Index, 15.0% MSCI EAFE (Net)
01/01/1978	04/01/1998	40.0% S&P 500 Index, 55.0% Blmbg. U.S. Aggregate Index, 5.0% FTSE 3 Month T-Bill

Benchmark History

From Date	To Date	Benchmark
Domestic Equity		
01/01/2005	Present	100.0% Russell 3000 Index
04/01/1998	01/01/2005	57.1% Russell 1000 Value Index, 28.6% Russell 1000 Index, 14.3% Russell Midcap Index
09/01/1988	04/01/1998	100.0% S&P 500 Index
International Equity		
01/01/2005	Present	100.0% MSCI AC World ex USA (Net)
01/01/1998	01/01/2005	100.0% MSCI EAFE Index
Fixed Income		
04/01/2006	Present	100.0% Blmbg. U.S. Universal Index
01/01/1976	04/01/2006	100.0% Blmbg. U.S. Aggregate Index
Covered Calls		
04/01/2014	Present	Cboe S&P 500 Buy Write Index
Crisis Risk Offset		
01/01/2023	Present	33.3% SG Trend Index, 33.3% SG Multi Alternative Risk Premia Index, 33.3% Blmbg. U.S. Government: Long Term Bond Index
08/01/2018	01/01/2023	100.0% SG Multi Alternative Risk Premia Index
Cash		
03/01/2011	Present	FTSE 3 Month T-Bill

Additional Information

Performance Return Types: Performance shown is net of fees, except for OPFRS Total Plan, Domestic Equity, and International Equity Composites, which have a mix of gross and net of fees performance. Performance shown for OPFRS Total Plan and International Equity composite is gross of fees prior to January 2016. Performance shown for Domestic Equity composite is gross of fees prior to January 2017.

Inception Date: Since inception date and performance begin in the month following an investments initial funding.

Fiscal Year: Fiscal year begins on July 1.

Fair Value Pricing Methodology: Though Vanguard Developed Markets ETF is a passive strategy, short-term performance may appear to diverge from the index it tracks more than would be expected. This is due to Fair Value Pricing (FVP) adjustments that address the pricing discrepancies that may arise from time-zone differences among global securities markets. The resulting temporary divergence is expected to correct itself when the foreign markets reopen.

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Oakland Police and Fire Retirement System

September 25, 2024

Recommendation for
2024 Q4 Cash Flows

Asset Class / Manager Liquidity

Asset Class	Fund	Liquidity Tier
US Equity	Northern Trust Russell 1000	1
US Equity	EARNEST Partners	3
US Equity	Wellington Select Quality Equity	3
US Equity	Rice Hall James	3
US Equity	Brown Small Cap Value	3
International Equity	SGA MSCI ACWI ex US	3
International Equity	Vanguard Developed Market	1
Fixed Income	Ramirez	2
Fixed Income	Reams	2
Fixed Income	Wellington Core Bond	3
Credit	Polen Capital High Yield	2
Covered Calls	Parametric	2
Crisis Risk Offset	Vanguard Long Treasury	1
Crisis Risk Offset	Versor Trend Following	3
Crisis Risk Offset	Kepos Alternative Risk Premia	3
Cash	Cash	1

Description of Liquidity Tiers

Tier	Description	Market Value (\$M)	In Months ¹
1	Public, Scheduled Withdrawal Allowances	151.6	25.3
2	Public, Accommodating of Withdrawals	137.1	22.9
3	Public, Must Plan Withdrawals	181.3	30.2
4	Closely Held	0.0	-
Total		470.0	

¹ Illustrates Liquidity in Months assuming a net outflow of \$6 million per month; that is, the illustrated figure demonstrates the number of months it would take to withdraw \$6 million per month from each liquidity tier.

Oakland PFRS Asset Allocation as of August 31, 2024¹

	Current Market Value		Long-Term Target	Interim Target ²	Variance from Interim Target		Actual Cash Flows for Current Quarter		Suggested CF for Next Quarter	
	(\$M)	(%)	(%)	(%)	(\$M)	(%)	Inflow (\$M)	Outflow (\$M)	Inflow (\$M)	Outflow (\$M)
Northern Trust Russell 1000	97.6	21.6%	15.0%	21%	6.4	1%	--	--	--	(6.0)
EARNEST Partners	39.7	8.8%	5.0%	6%	12.7	3%	--	--	--	(12.5)
Wellington Select Quality Equity	25.6	5.7%	0.0%	0%	27.8	6%	--	--	--	(27.8)
Rice Hall James	16.0	3.6%	2.5%	3%	1.6	0%	--	--	--	--
Brown Small Cap Value	13.5	3.0%	2.5%	3%	(1.4)	(0%)	--	--	--	--
US Equity	192.3	42.7%	25.0%	34%	47.2	10%	--	--	--	(46.3)
SGA MSCI ACWI ex US	43.6	9.7%	TBD	8%	6.4	1%	--	--	--	--
Vanguard Developed Markets	17.0	3.8%	TBD	4%	0.6	0%	--	--	--	--
International Equity	60.6	13.4%	5.0%	12%	7.0	1%	--	--	--	--
Total Equity (US & International)	252.9	56.1%	30.0%	46%	54.2	12%	--	--	--	(46.3)
Parametric	24.6	5.5%	0.0%	0%	22.2	5%	--	(4.5)	--	--
Covered Calls	24.6	5.5%	0.0%	0%	22.2	5%	--	(4.5)	--	--
Vanguard Long Treasury	12.7	2.8%	3.0%	3%	(2.2)	(0%)	--	--	--	--
Versor Trend Following	15.3	3.4%	3.0%	3%	(1.9)	(0%)	--	--	--	--
Kepos Alternative Risk Premia	12.4	2.7%	3.0%	3%	(3.6)	(1%)	--	--	--	--
Crisis Risk Offset	40.4	9.0%	9.0%	10%	(7.7)	(2%)	--	--	--	--
Ramirez	72.3	16.0%	16.0%	17%	(4.0)	(1%)	--	--	--	--
Wellington Core Bond	6.9	1.5%	15.0%	10%	(39.7)	(8%)	--	--	27.8	--
Reams	27.4	6.1%	10.0%	12%	(27.6)	(6%)	--	--	18.5	--
<i>Core Plus Mandate Addition to Existing Manager (TBD)</i>	0.0	0.0%	5.0%	5%	(23.5)	(5%)	--	--	--	--
<i>New Core Plus Manager (TBD)</i>	0.0	0.0%	15.0%	0%	0.0	0%	--	--	--	--
Polen Capital High Yield	10.0	2.2%	0.0%	0%	10.3	2%	--	--	--	(4.5)
Fixed Income (IG & Credit)	116.6	25.9%	61.0%	44%	(84.6)	(18%)	--	--	46.3	(4.5)
Cash	16.2	3.6%	0.0%	0%	16.0	3%	8.7	(8.7)	8.7	(8.7)
Fixed Income & Cash	132.9	29.5%	61.0%	44%	(68.7)	(15%)	8.7	(8.7)	55.0	(13.2)
Total Portfolio	450.8	100.0%	100.0%	100.0%	--	--	10.2	(13.2)	55.0	(59.5)

¹ Throughout this report, benefit payments and expenses are estimated at \$13.2 million quarterly for FYE2024 and FYE2025 per OPFRS. The report reflects estimated quarterly contributions from the City of \$10.2 million for FYE2024 and \$8.7 million for FYE2025, estimated based on prior fiscal year's actuarial valuations. Benefits are payable on first of each month.

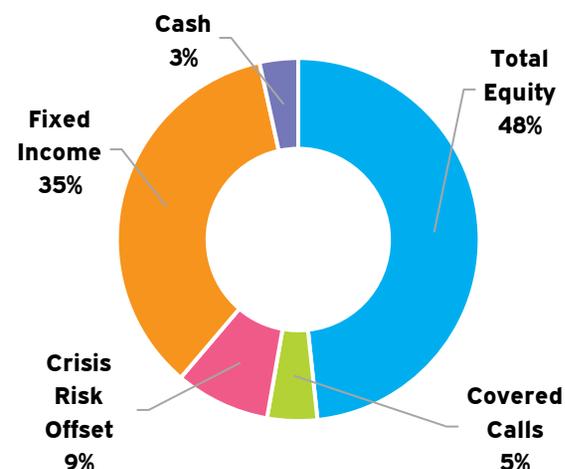
² The interim targets are the revised implementation targets for the 2nd half of 2024, pending Board's approval at 09/2024 meeting. Some manager/product targets and variances are omitted due to ongoing asset class reviews and transition planning.

Recommendation for 2024 Q4 Cash Flows

Market Value by Portfolio Segment Before Cash Flows

Portfolio Segment	Market Value (\$M)	Market Value (%)
US Equity	207.0	44.0
International Equity	63.4	13.5
Covered Calls	22.2	4.7
Crisis Risk Offset	39.3	8.4
Fixed Income (IG & Credit)	122.2	26.0
Cash	16.0	3.4
Total Portfolio	470.0	100.0

Projected Allocations After Cash Flows



Suggested Cash Flows for the Next Quarter

Portfolio Segment	Inflows (\$M)	Outflows (\$M)	Net Flows (\$M)	Purpose
Treasury Cash	8.7	-8.7	0.0	Benefit Payments
Polen High Yield	0.0	-4.5	-4.5	Benefit Payments
Northern Trust Russell 1000	0.0	-6.0	-6.0	Transition to New Asset Allocation Policy
EARNEST Partners	0.0	-12.5	-12.5	Transition to New Asset Allocation Policy
Wellington Select Quality Equity	0.0	-27.8	-27.8	Transition to New Asset Allocation Policy
Wellington Core Bond	27.8	0.0	27.8	Transition to New Asset Allocation Policy
Reams	18.5	0.0	18.5	Transition to New Asset Allocation Policy
Total	55.0	-59.5	-4.5	

Projected OPFRS Asset Allocation as of December 31, 2024¹

	Estimated Market Value		Interim Targets	Projected Variance from Interim Targets	
	(\$M)	(%)	(%)	(\$M)	(%)
Northern Trust Russell 1000	98.7	21.3%	21%	1.7	<1%
EARNEST Partners	29.8	6.4%	6%	0.6	<1%
Wellington Select Quality Equity	0.0	0.0%	0%	0.0	<1%
Rice Hall James	17.6	3.8%	3%	1.8	<1%
Brown Small Cap Value	14.6	3.1%	3%	(1.2)	<1%
US Equity	160.7	34.6%	34%	3.0	1%
SGA MSCI ACWI ex US	45.9	9.9%	8%	6.9	1%
Vanguard Developed Markets	17.5	3.8%	4%	0.8	0%
International Equity	63.4	13.7%	12%	7.7	2%
Total Equity (US & International)	224.1	48.3%	46%	10.7	2%
Parametric	20.7	4.5%	0%	20.7	5%
Covered Calls	20.7	4.5%	0%	20.7	5%
Vanguard Long Treasury	13.5	2.9%	3.3%	(2.0)	<(1%)
Versor Trend Following	13.7	3.0%	3.3%	(1.7)	<(1%)
Kepos Alternative Risk Premia	12.1	2.6%	3.3%	(3.4)	<(1%)
Crisis Risk Offset	39.3	8.5%	10%	(7.1)	(2%)
Ramirez	75.9	16.3%	17%	(3.0)	<(1%)
Wellington Core Bond	35.1	7.6%	10%	(11.3)	(2%)
Reams	47.3	10.2%	12%	(8.4)	(2%)
<i>Core Plus Mandate to Existing Mgr (TBD)</i>	<i>0.0</i>	<i>0.0%</i>	<i>5%</i>	<i>(23.2)</i>	<i>(5%)</i>
Polen Capital High Yield	5.8	1.2%	0%	5.8	1%
Fixed Income (IG & Credit)	164.0	35.3%	0%	(40.2)	(9%)
Cash	16.0	3.4%	44%	16.0	3%
Fixed Income & Cash	179.9	38.8%	0%	(24.2)	(5%)
Total Portfolio	464.0	100.0%	100%	--	--

¹ Estimated ending market value accounts for the remaining one-month of benefit payments for the current quarter and expected cash flows for the following quarter. The interim targets reflect the targets for the 2nd half of 2024 transitioning towards upon the long-term targets adopted in 2024 Q1. Some manager/product targets and variances are omitted due to ongoing asset class reviews and transition planning.

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Oakland Police and Fire Retirement System

September 25, 2024

Quarterly Performance Report
as of June 30, 2024

Agenda

1. Executive Summary
2. Economic and Market Update as of June 30, 2024
3. Quarterly Performance as of June 30, 2024
4. Manager Monitoring / Probation Status
5. Appendix
6. Disclaimer, Glossary, and Notes

Executive Summary

Total Portfolio Review

The Oakland Police and Fire Retirement System (OPFRS) finished the quarter with \$453.2 million in assets after net cash flows including monthly benefit payments. All asset classes were within their acceptable target allocation ranges¹ except for Fixed Income, which was slightly outside of its lower target limit at the end of the quarter.

Cash Flow Summary (\$ Millions)	Quarter	1 Year
Beginning Market Value	454.5	420.2
Net Cash Flows (including Benefit Payments)	-2.7	-11.6
Net Investment Change (Gain/Loss)	1.4	44.7
Ending Market Value	453.2	453.2

Investment Performance²

	QTD	YTD	1 Year	3 Year	5 Year
Total Plan (Gross)	0.3	5.3	10.9	2.7	6.5
Total Plan (Net)	0.3	5.1	10.6	2.4	6.2
<i>Policy Benchmark</i>	<i>1.4</i>	<i>6.8</i>	<i>12.6</i>	<i>3.3</i>	<i>6.9</i>
Excess Return	-1.1	-1.7	-2.0	-0.9	-0.7
<i>Public DB (\$250M-\$1B) Median Fund</i>	<i>0.9</i>	<i>5.6</i>	<i>10.5</i>	<i>2.7</i>	<i>7.2</i>
Total Plan (Net) vs. Peer Median Fund	-0.7	-0.4	0.1	-0.3	-0.9
<i>Peer Group Percentile Rank</i>	<i>82</i>	<i>66</i>	<i>50</i>	<i>57</i>	<i>77</i>

¹ The allocation targets are those adopted by the board in 2017 Q4. A new asset-liability study was completed, and new long-term and interim targets and ranges were adopted in 2024 Q1; these are expected to commence starting July 2024.

² Fiscal year begins on July 1. Peer group is Investment Metrics Public Defined Benefit plans with \$250 million to \$1 billion in assets. The number of peers is about 80-90 portfolios in each time period. Please see the Benchmark History section for the Policy Benchmark's current and historical compositions.

Asset Class and Manager Highlights¹

- **Total Plan** underperformed its Policy Benchmark across all time periods on a net of fee basis.
 - The underperformance during the quarter, year-to-date, and over the trailing 1-year period was driven primarily by the Domestic Equity segment as most managers performance lagged the broad market Russell 3000 Index. International Equity and Fixed Income were positive contributors to the Total Plan's relative performance for year-to-date and over the trailing 1-year period, partially offsetting Domestic Equity's underperformance.
- **Domestic Equity** underperformed the Russell 3000 Index over all trailing periods. Active Domestic Equity managers across different styles, with the exception of Brown Small Cap Value, trailed the broad market Russell 3000 Index over the 1-year period as a select group of companies ("Magnificent Seven") drove returns in 2023. For the quarter, Brown Small Cap Value and Rice Hall James outperformed their respective benchmarks while all other active managers underperformed their respective benchmarks.
- **International Equity** and its only active manager, SGA, outperformed MSCI ACWI ex US (Net) for all periods except over the quarter.
- **Fixed Income** slightly outperformed or matched its custom benchmark over the quarter and 1-year trailing period. The underweight allocation to Fixed Income has contributed to the Total Plan's relative performance over the past 1-year trailing period. The underlying managers outperformed their respective benchmarks for most time periods.
- The **Credit** segment, with Polen Capital as its sole manager, outperformed its underlying benchmark, the Bloomberg US Corporate High Yield Index, for all time periods except for the quarter and 1-year trailing period.
- **Covered Calls**, as well as both the passive BXM and the active DeltaShift strategies, outperformed the CBOE S&P 500 Buy Write Index across almost all periods measured.
- The **Crisis Risk Offset** segment underperformed its custom benchmark over all time periods measured. Year-to-date Kepos Alternative Risk Premia and Vanguard Long-term Treasury ETF have outperformed their respective benchmarks while Versor Trend Following lagged its benchmark, despite its outperformance over the quarter.

¹ Fiscal year begins on July 1. Please see the Benchmark History section for the custom benchmarks' current and historical compositions.

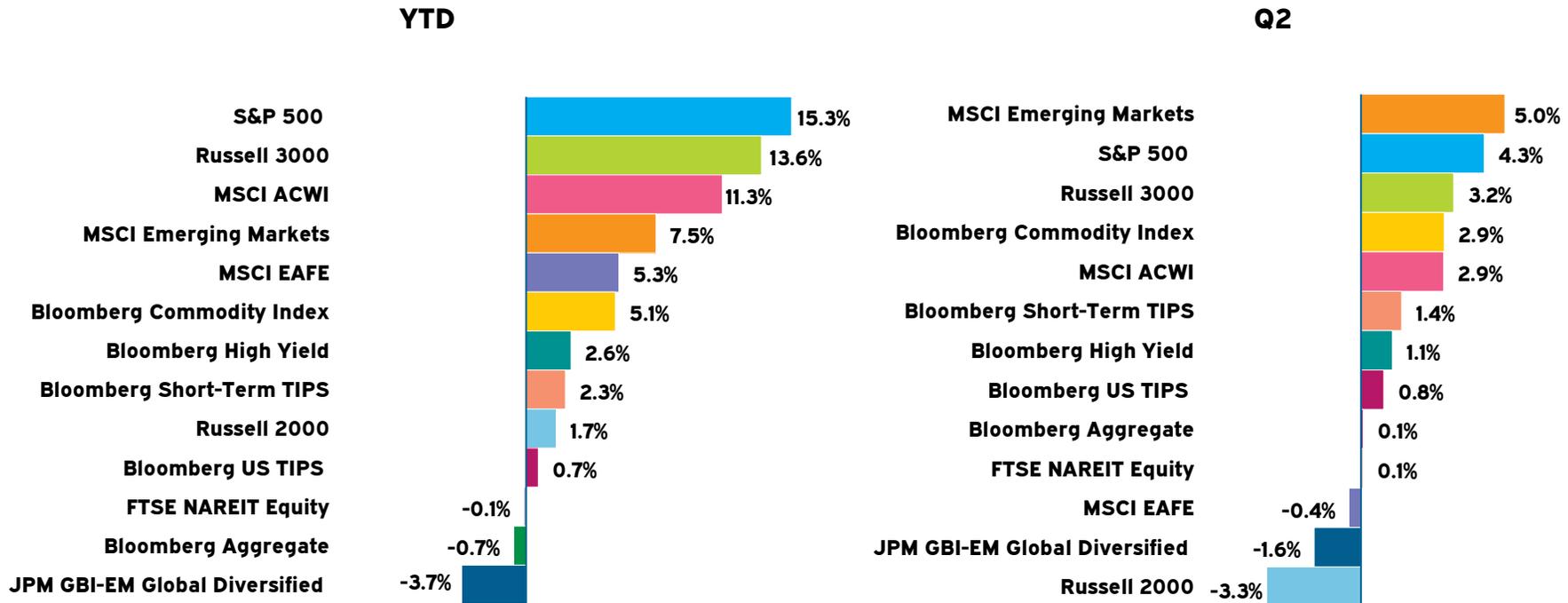
Economic and Market Update

As of June 30, 2024

Commentary

- Softening economic data, increased hopes of interest rate cuts, and ongoing AI optimism drove most asset classes higher in the second quarter.
- While the Fed remains data dependent, improvements in inflation and a cooling labor market may clear the way for several rate cuts this year.
 - Inflation pressures have eased in most countries from their pandemic peaks, but some uncertainty remains and levels are still above most central bank targets. In the second quarter, headline and core inflation measures in the US both fell, with most readings coming in below expectations.
 - The US equity markets (Russell 3000 index) added to its gains in the second quarter, rising 3.2%. Technology continued to drive results in the quarter due to AI demand and investment.
 - Non-US developed equity markets fell in the second quarter (-0.4%) on continued strength in the US dollar and political uncertainty in Europe.
 - Emerging market equities rallied (5.0%), for the quarter. Chinese stocks were up 7.1% as coordinated buying of Chinese exchange traded funds (ETFs) by state-backed financial services companies helped boost stock prices.
 - US interest rates rose over the quarter but finished off their highs. Income offset capital losses though, leading to the broad US bond market rising 0.1% in the second quarter.
- Looking to the rest of this year, the paths of inflation and monetary policy, China's economic disorder and slowing economic growth, and the many looming elections will be key factors.

Index Returns¹



→ Declining inflation, resilient growth, and strong corporate earnings supported most asset classes in the second quarter.

→ Mid-way through 2024, US stocks have significantly outperformed other asset classes on a year-to-date basis.

¹ Source: Bloomberg. Data is as of June 30, 2024.

Domestic Equity Returns¹

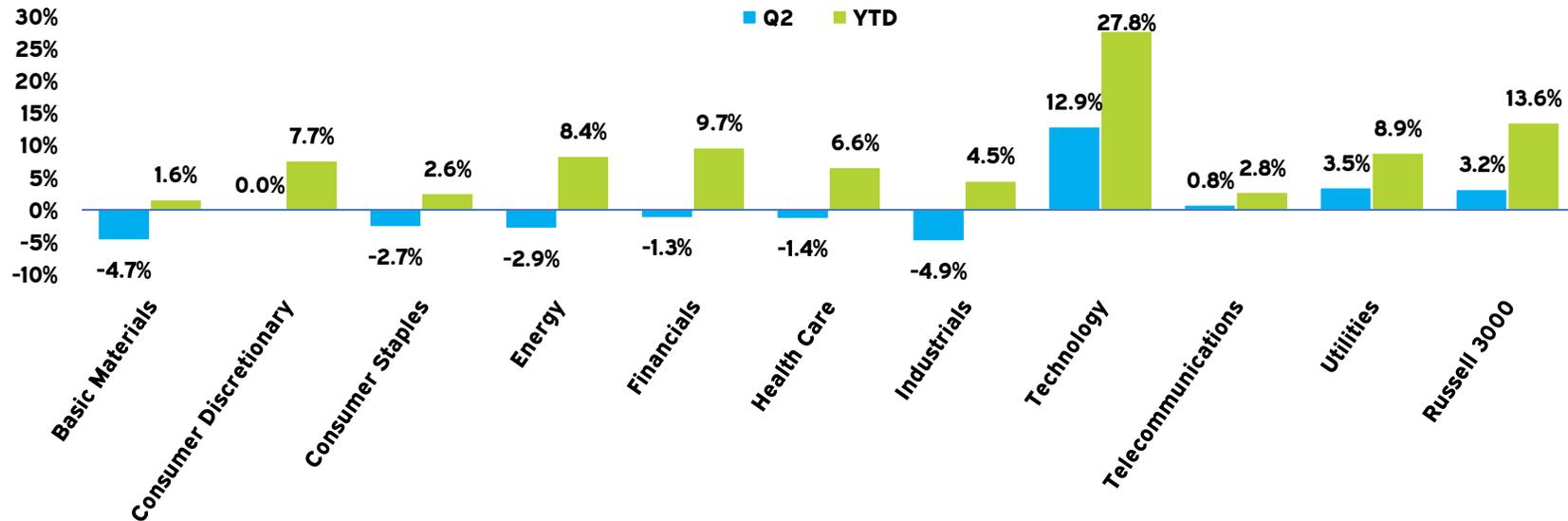
Domestic Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.6	4.3	15.3	24.6	10.0	15.1	12.9
Russell 3000	3.1	3.2	13.6	23.1	8.1	14.2	12.1
Russell 1000	3.3	3.6	14.2	23.9	8.8	14.6	12.5
Russell 1000 Growth	6.7	8.3	20.7	33.5	11.3	19.4	16.3
Russell 1000 Value	-0.9	-2.2	6.6	13.1	5.5	9.0	8.2
Russell MidCap	-0.7	-3.3	5.0	12.9	2.4	9.5	9.0
Russell MidCap Growth	1.7	-3.2	6.0	15.1	-0.1	9.9	10.5
Russell MidCap Value	-1.6	-3.4	4.5	12.0	3.7	8.5	7.6
Russell 2000	-0.9	-3.3	1.7	10.1	-2.6	6.9	7.0
Russell 2000 Growth	-0.2	-2.9	4.4	9.1	-4.9	6.2	7.4
Russell 2000 Value	-1.7	-3.6	-0.8	10.9	-0.5	7.1	6.2

US Equities: The Russell 3000 rose 3.2% in the second quarter, bringing the year-to-date results to 13.6%.

- US stocks continued their rise in June driven by on-going AI optimism. Nearly all the quarterly market gains in the S&P 500 were driven by large cap technology stocks, with the S&P 500 equal weighted index down 3.1% for the quarter.
- US large cap stocks continue to outperform small cap stocks. This dynamic is driven by the large technology stocks like NVIDIA, Apple, and Alphabet and the underperformance of small cap biopharma companies and banks.
- Growth outperformed value for the quarter, with the most pronounced outperformance in the large cap space (8.3% versus -2.2%).

¹ Source: Bloomberg. Data is as of June 30, 2024.

Russell 3000 Sector Returns¹



- Unlike first quarter performance, where all sectors gained, the second quarter saw mixed results across the major sectors.
- Technology (+12.9%) continued to drive results fueled by on-going AI optimism. Utilities were a distant second increasing 3.5%, on expectations of increased demand from AI-related companies.
- Many other sectors fell, including financials (-1.3%), health care (-1.4%), consumer staples (-2.7%), energy (-2.9%), materials (-4.7%), and industrials (-4.9%).
- All sectors have positive returns for the year-to-date period. Technology stocks (+27.8%) continue to lead the broader market, followed by financials (9.7%).

¹ Source: Bloomberg. Data is as of June 30, 2024.

Foreign Equity Returns¹

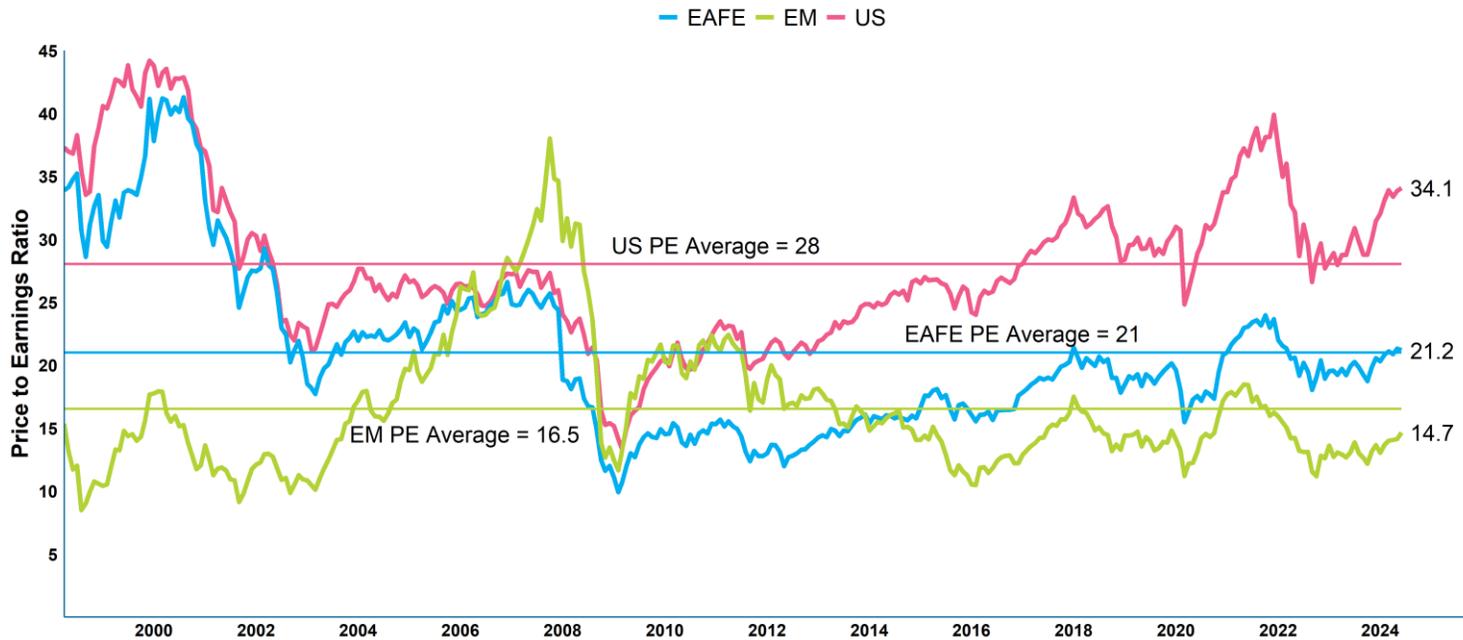
Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-0.1	1.0	5.7	11.6	0.5	5.6	3.8
MSCI EAFE	-1.6	-0.4	5.3	11.5	2.9	6.5	4.3
MSCI EAFE (Local Currency)	-0.6	1.0	11.1	15.1	8.1	9.0	7.4
MSCI EAFE Small Cap	-3.0	-1.8	0.5	7.8	-3.4	4.2	4.3
MSCI Emerging Markets	3.9	5.0	7.5	12.5	-5.1	3.1	2.8
MSCI Emerging Markets (Local Currency)	4.3	6.2	11.0	15.5	-1.6	5.6	5.8
MSCI EM ex. China	6.1	4.2	8.4	18.5	1.4	6.7	3.9
MSCI China	-1.9	7.1	4.7	-1.6	-17.7	-4.3	1.4

Foreign Equity: Developed international equities (MSCI EAFE) fell 0.4% in the second quarter, while emerging market equities (MSCI Emerging Markets) gained 5.0%.

- For the second quarter, developed market equities declined driven by continued strength in the US dollar and regional political risks particularly in France. UK and Japanese equities made new all-time highs during the quarter, but this was not enough to offset losses in Europe.
- Emerging market equities outpaced developed market equities during the quarter given strong results in China (7.1%). China equities moved into positive territory for the year (4.7%) due to government purchases of shares, improving economic data, and returning foreign investors.

¹ Source: Bloomberg. Data is as of June 30, 2024.

Equity Cyclically Adjusted P/E Ratios¹



- At the end of the second quarter, the US equity price-to-earnings ratio remained elevated and above its 21st century average.
- International equity market valuations remain well below the US. International developed market valuations have increased to slightly above their long-term average, while emerging market equities remain below their long-term average despite recent gains.

¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of June 2024. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

Fixed Income Returns¹

Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	0.9	0.2	-0.3	3.5	-2.7	0.1	1.6	5.3	6.0
Bloomberg Aggregate	0.9	0.1	-0.7	2.6	-3.0	-0.2	1.3	5.0	6.2
Bloomberg US TIPS	0.8	0.8	0.7	2.7	-1.3	2.1	1.9	4.8	6.6
Bloomberg Short-term TIPS	0.6	1.4	2.3	5.4	2.2	3.2	2.0	5.1	2.4
Bloomberg High Yield	0.9	1.1	2.6	10.4	1.6	3.9	4.3	7.9	3.7
JPM GBI-EM Global Diversified (USD)	-1.1	-1.6	-3.7	0.7	-3.3	-1.3	-0.9	--	--

Fixed Income: The Bloomberg Universal index rose 0.2% in the second quarter, reducing the year-to-date decline to -0.3%.

- Bonds finished the quarter slightly up as May and June gains offset the April declines.
- The broad US bond market (Bloomberg Aggregate) rose 0.1% in the second quarter, with the broad TIPS market gaining 0.8%. The less interest rate sensitive short-term TIPS index increased 1.4% for the quarter, leading to the best results.
- High yield bonds (1.1%) also rose, as risk appetite remains strong.

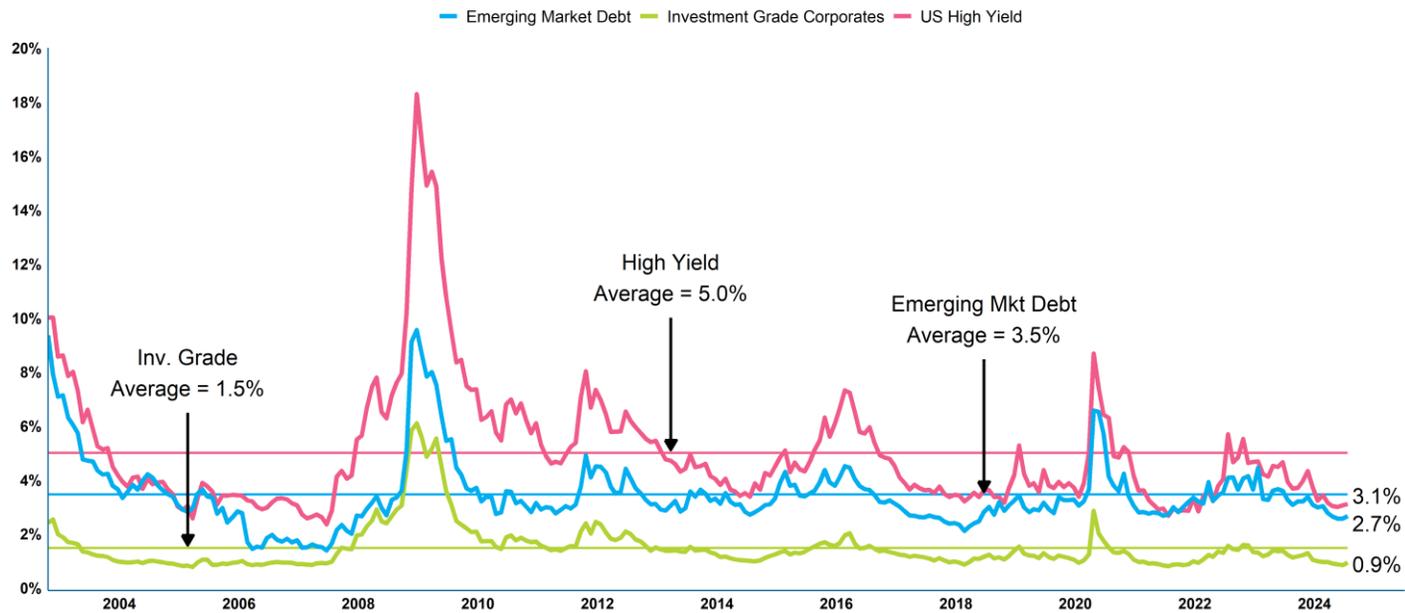
¹ Source: Bloomberg. Data is as of June 30, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively. JPM GBI-EM data is from J.P. Morgan. Current yield and duration data is not available.



- After rates significantly increased in April on strong inflation data, they then declined in May and June. Chair Powell confirming that the FOMC would not raise rates again this year as economic data appears to be returning to long-run trends led to rates declining from the April highs.
- The more policy sensitive 2-year Treasury yield finished the quarter roughly 0.2% higher at 4.76% but well off its peak of over 5.0%. The 10-year Treasury rose by a similar amount during the quarter finishing at 4.39%; also, off its April peak of 4.68%.
- The yield curve remained inverted at month-end, with the spread between the 2-year and 10-year Treasury at roughly -35 basis points.

¹ Source: Bloomberg. Data is as of June 30, 2024.

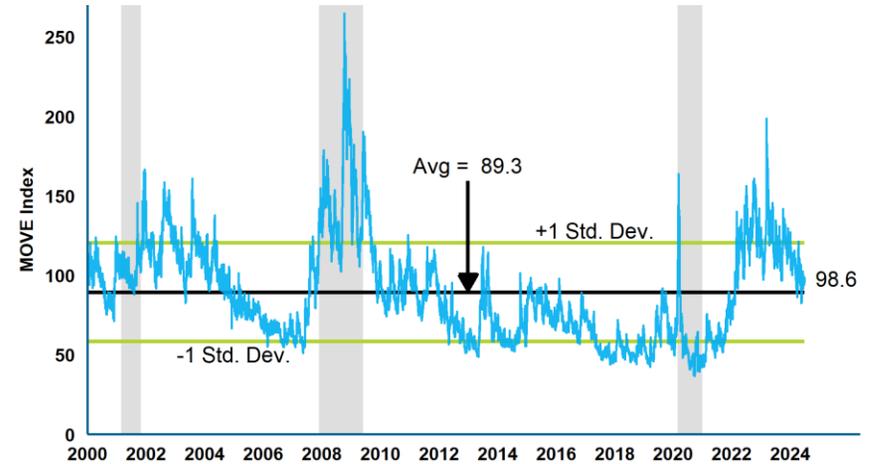
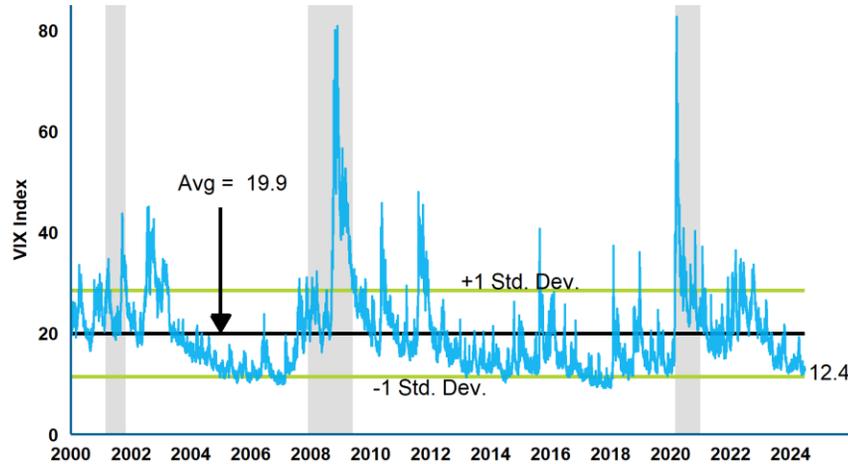
Credit Spreads vs. US Treasury Bonds¹



- Despite rising rates, investor demand for risk exposure in credit markets remained strong in Q2 given measured weakness in the economic outlook and expectations of lower interest rates by year-end.
- Spreads (the yield above a comparable maturity Treasury) stayed relatively steady over the quarter, near post-pandemic lows. All spreads remained below their respective long-run averages, particularly high yield.
- Although spreads are relatively tight, yields remain at above-average levels compared to the last two decades, particularly for short-term issues.

¹ Source: Bloomberg. Data is as of June 30, 2024. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

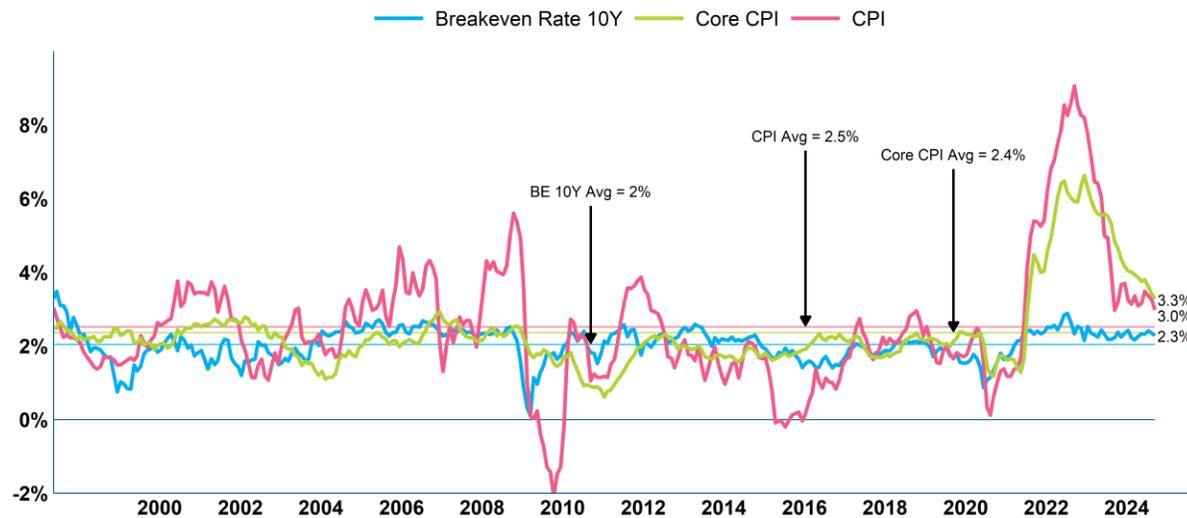
Equity and Fixed Income Volatility¹



- Volatility in equities was around one standard deviation below its long-term average at the end of the quarter as continued strength in technology stocks and weakening economic data has moderated fear in the markets.
- Volatility in bonds (MOVE) ended June higher than where it started the quarter (98.6 versus 86.4) and above its long-run average.

¹ Equity Volatility – Source: FRED. Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of June 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2024.

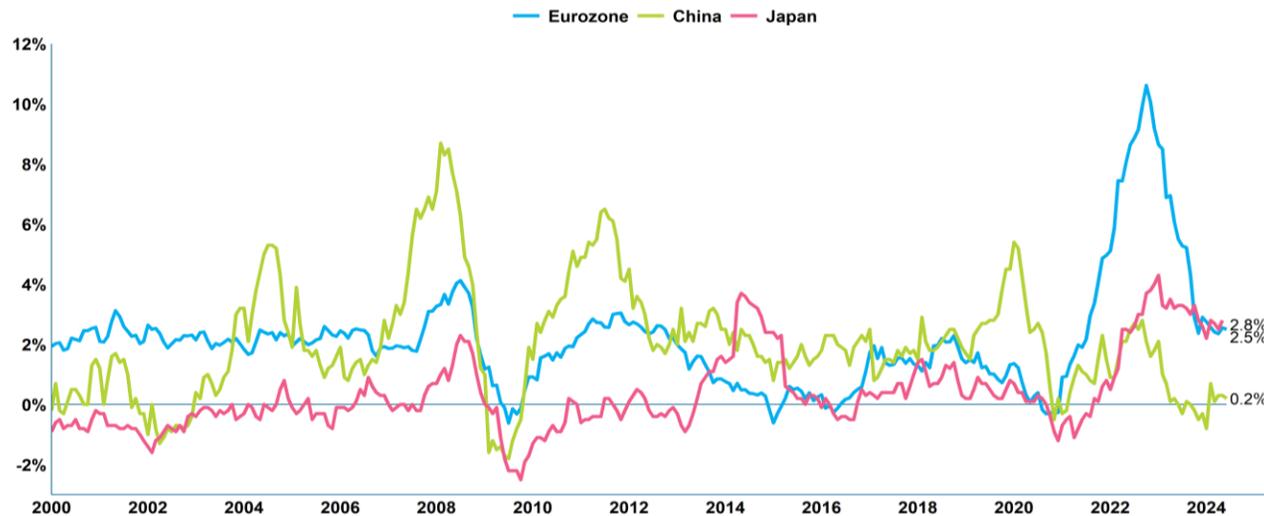
US Ten-Year Breakeven Inflation and CPI¹



- Year-over-year headline inflation continued to fall in June (3.3% to 3.0%) and again came in below expectations. Over the quarter, inflation fell by a total of 0.5%.
- Month-over-month inflation was negative for the first time since March 2020, largely because of price declines in energy and core goods.
- Core inflation (excluding food and energy) also declined in June (3.4% to 3.3%) and came in below expectations. A drop in used car prices, transportation services, and a slowing of the pace of shelter price increases all contributed to the decline.
- Inflation expectations (breakevens) have been volatile, but they finished the quarter largely where they started.

¹ Source: FRED. Data is as June 2024. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

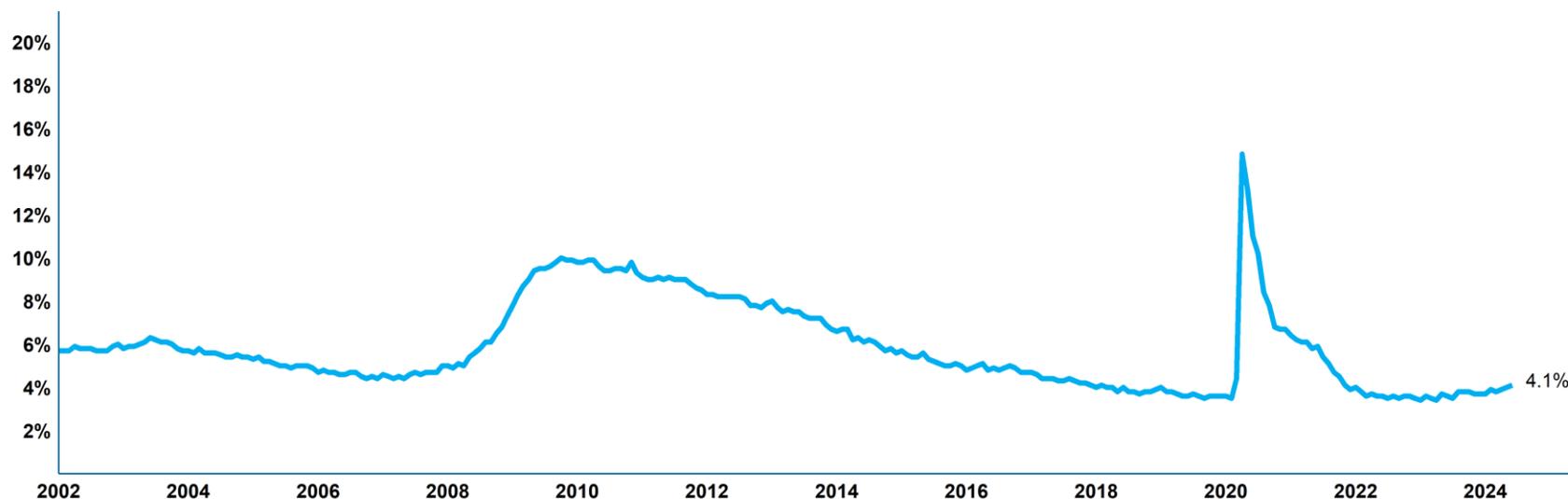
Global Inflation (CPI Trailing Twelve Months)¹



- Outside the US, inflation is also easing from the recent peaks.
- In the eurozone, inflation experienced a dramatic decline last year but remains above the central bank's 2% target. In June, inflation fell slightly from 2.6% to 2.5% year-over-year.
- Inflation in Japan has slowly dropped from the early 2023 peak of 4.3%, but it remains near levels not seen in a decade. In the most recent reading (May), inflation rose modestly from 2.5% to 2.8% as fuel and utility prices increased.
- China appears to have emerged from deflationary pressures, but inflation levels remain well below other major economies due to slowing economic growth. Annual inflation levels have been positive for the last five readings signaling improvement in domestic demand. The June year-over-year number came in at 0.2%, slightly lower than the prior reading of 0.3%.

¹ Source: Bloomberg. Data is June 30, 2024, except Japan which is as of May 31, 2024.

US Unemployment¹

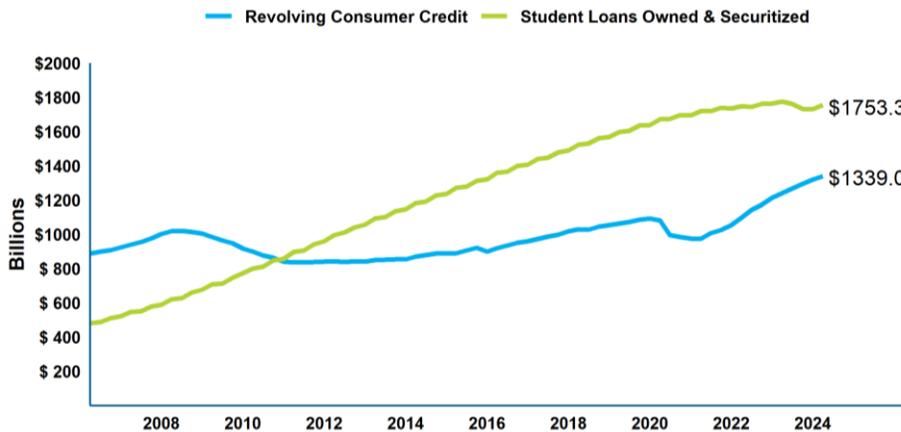


- Overall, the US labor market remains healthy, but there have been some recent signs of softening.
- The unemployment rate came in above expectations in June reaching 4.1%, a level not seen since early 2022. Over the second quarter unemployment increased 0.3%.
- Wage growth remains strong though (around 3.9% annually), and initial claims for unemployment are still subdued.
- Despite significant downward revisions to job gains in April and May, in June the economy added 206,000 jobs (above expectations). The government added the most jobs (70,000), followed by the healthcare sector (49,000).

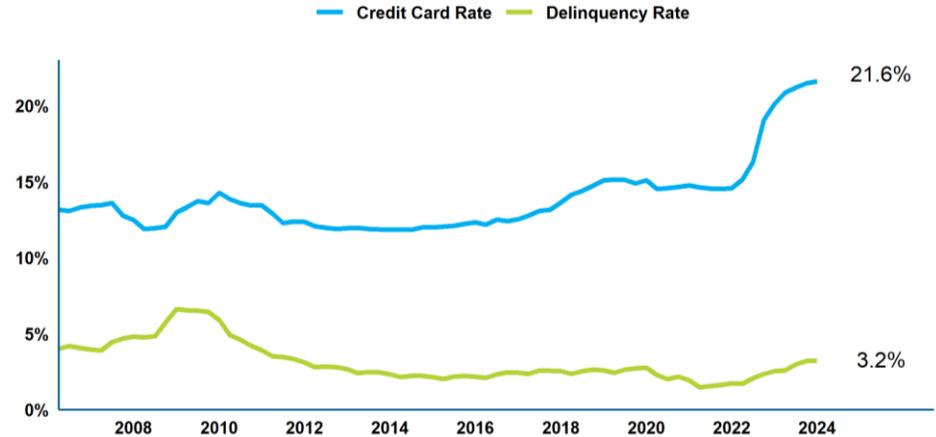
¹ Source: FRED. Data is as June 30, 2024.

US Consumer Under Stress?¹

Revolving Consumer Credit & Student Loans (\$B)



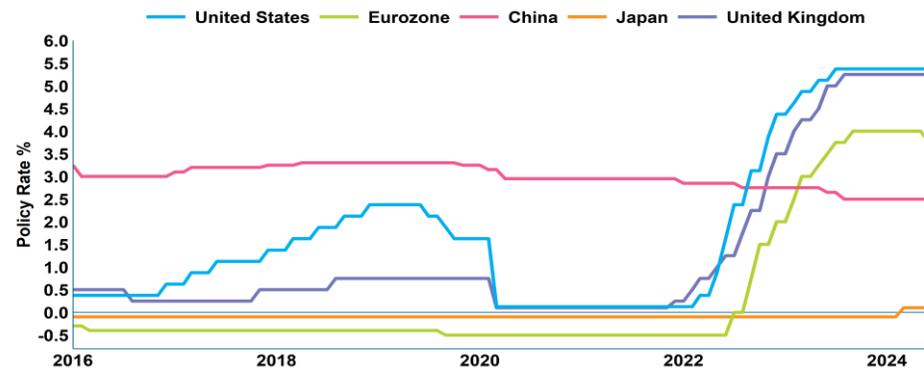
Consumer Credit Card Interest Rates (%)



- Despite the strong labor market and higher wages, pressures are building on the US consumer. This is an important consideration as consumer spending has been a key driver of economic growth.
- Revolving consumer credit surged to new highs in 2023 even as credit card interest rates hit levels not seen before (the prior peak was around 19% in the 1980s). Recently, we have also seen payment delinquencies on credit cards and auto loans start to increase, particularly for younger people.
- The return of student loan repayments after a three-year pandemic-related reprieve could add to pressures on consumers' budgets. This might be partially mitigated by recently initiated repayment and forgiveness programs.
- It is worth noting though that many people locked in low-rate fixed mortgages before rates increased and many corporations issued debt at extremely low levels, reducing the sensitivity to higher rates.

¹ Source: FRED. Data is as of March 31, 2024. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.

Policy Rates¹



- In the US interest rates have remained at current levels (5.25%-5.50%) for a year now. The most recent “dot plot” (the Fed’s expectation on the path of rates) showed a median expectation of roughly one rate cut this year. Markets are now pricing in two to three rate cuts in 2024 given the improving inflation data with the probability of a cut around 100% in September and slightly over 90% for December.
- The European Central Bank (ECB) cut its policy rate by 25 basis points at the beginning of June, as expected. Like the US, cuts are also anticipated at the September and December meetings.
- After ending the last negative interest rate policy given higher inflation levels, the Bank of Japan (BOJ) has since kept rates at slightly above 0%. Policy is expected to tighten going forward with the BOJ announcing at their recent meeting they would also start reducing their bond purchases. Interest rate futures markets are pricing in roughly two rate hikes (of 10 basis points) through the end of the year.
- The central bank in China has maintained interest rates at record low levels and continues to inject liquidity into the banking system, to support economic growth.

¹ Source: Bloomberg. Data is as of June 30, 2024. United States rate is the mid-point of the Federal Funds Target Rate range. Eurozone rate is the ECB Deposit Facility Announcement Rate. Japan rate is the Bank of Japan Unsecured Overnight Call Rate Expected. China rate is the China Central Bank 1-Year Medium Term Interest Rate. UK rate is the UK Bank of England Official Bank Rate.

US Dollar vs. Broad Currencies¹



- Overall, the dollar rose in the second quarter (104.5 to 105.9) versus a basket of currencies of major trading partners.
- China and the ECB cutting policy rates, stronger relative growth, and the weakening of the Japanese yen, have all collectively helped strengthen the dollar.

¹ Source: Bloomberg. Data as of June 30, 2024.

Summary

Key Trends:

- According to the International Monetary Fund's (IMF) April report, global growth this year is expected to match the 2023 estimate at around 3.2% with most major economies predicted to avoid a recession. Continued strong economic growth does run the risk of inflation and interest rates staying higher for longer.
- Key economic data in the US has largely weakened and come in below expectations, causing markets to expect between two and three rate cuts this year. Uncertainty remains though regarding the timing and pace of interest rate cuts in the coming year.
- We have started to see some divergences in monetary policy with other central banks, such as the European Central Bank (ECB), starting to cut interest rates while the Fed remains on hold. This disparity will likely influence investment flows and currencies.
- US consumers could feel pressure as certain components of inflation (e.g., shelter) remain high, borrowing costs are elevated, and the job market may weaken.
- A focus for US equities going forward will be whether earnings can remain resilient if growth slows. Also, the future paths of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including China's economic uncertainty and ongoing weakness in the real estate sector. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

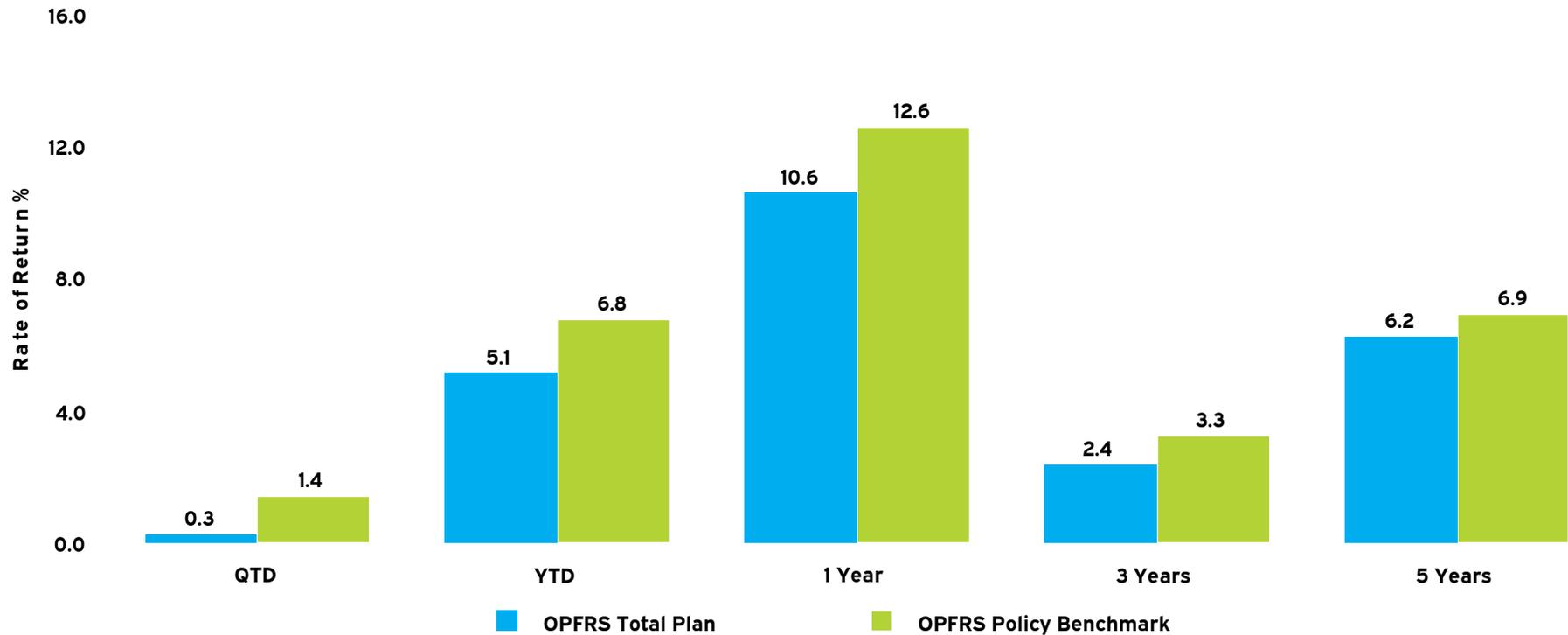
Quarterly Performance

as of June 30, 2024

Summary of Cash Flows

	QTD (\$)	1 Year (\$)
OPFRS Total Plan		
Beginning Market Value	454,455,689	420,170,089
Net Cash Flow	-2,663,182	-11,615,491
Net Investment Change	1,439,135	44,677,044
Ending Market Value	453,231,642	453,231,642

Return Summary Ending June 30, 2024

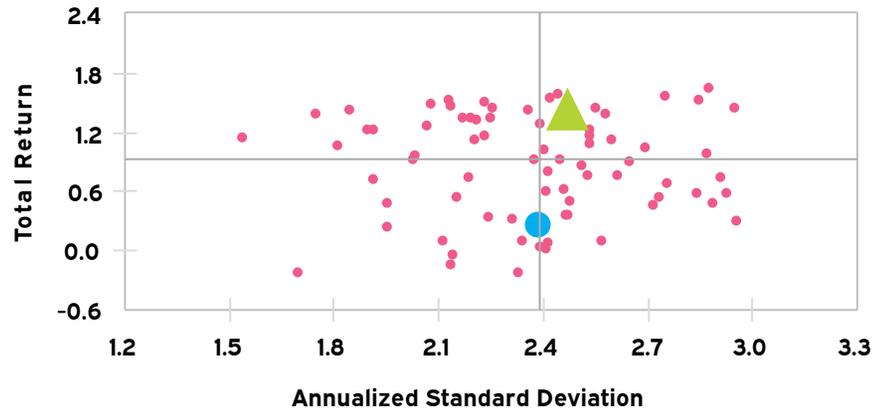


Total Plan performance shown is net of fees.

Oakland Police and Fire Retirement System

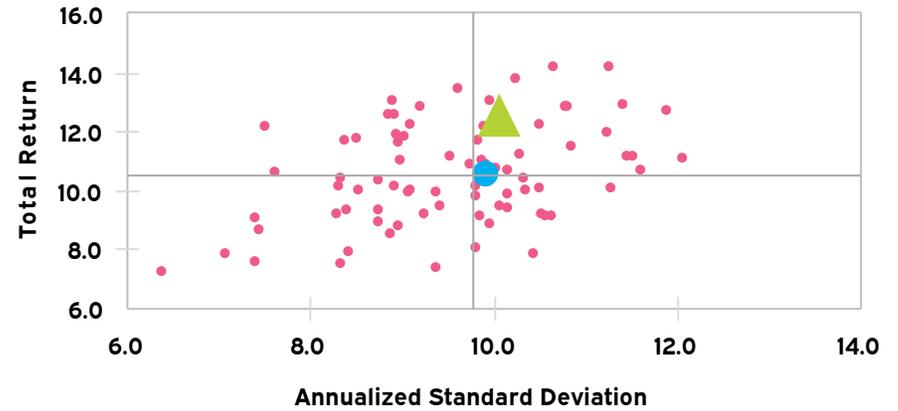
Total Plan Risk/Return Summary | As of June 30, 2024

Risk-Return Summary QTD Ending June 30, 2024



- IM Public DB \$250M-\$1B
- OPFRS Total Plan
- ▲ OPFRS Policy Benchmark

Risk-Return Summary 1 Yr Ending June 30, 2024



- IM Public DB \$250M-\$1B
- OPFRS Total Plan
- ▲ OPFRS Policy Benchmark

	Return	Standard Deviation
--	--------	--------------------

OPFRS Total Plan	0.3	2.4
OPFRS Policy Benchmark	1.4	2.5
Median	0.9	2.4

	Return	Standard Deviation
--	--------	--------------------

OPFRS Total Plan	10.6	9.9
OPFRS Policy Benchmark	12.6	10.1
Median	10.5	9.8

Performance shown is net of fees. Calculation is based on monthly periodicity. Fiscal year begins on July 1. Plan Sponsor Peer Group shown is net of fees.

Asset Class Performance: Gross of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
OPFRS Total Plan (Gross)	453,231,642	100.0	0.3	5.3	10.9	2.7	6.5	6.8	6.7	Dec-88
<i>OPFRS Policy Benchmark</i>			<i>1.4</i>	<i>6.8</i>	<i>12.6</i>	<i>3.3</i>	<i>6.9</i>	<i>6.9</i>	<i>8.0</i>	
Excess Return			-1.1	-1.5	-1.7	-0.6	-0.4	-0.1	-1.3	
Domestic Equity (Gross)	194,973,749	43.0	0.4	8.8	17.3	6.0	12.0	11.1	9.2	Jun-97
<i>Russell 3000 (Blend)</i>			<i>3.2</i>	<i>13.6</i>	<i>23.1</i>	<i>8.1</i>	<i>14.1</i>	<i>12.1</i>	<i>9.6</i>	
Excess Return			-2.8	-4.8	-5.8	-2.1	-2.1	-1.0	-0.4	
International Equity (Gross)	59,974,536	13.2	0.2	6.9	14.6	3.4	7.1	5.7	5.7	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			<i>1.0</i>	<i>5.7</i>	<i>11.6</i>	<i>0.5</i>	<i>5.5</i>	<i>3.8</i>	<i>5.3</i>	
Excess Return			-0.8	1.2	3.0	2.9	1.6	1.9	0.4	
Fixed Income (Gross)	107,748,738	23.8	0.2	-0.2	3.2	-2.5	0.4	2.0	4.7	Jan-94
<i>Bloomberg Universal (Blend)</i>			<i>0.2</i>	<i>-0.3</i>	<i>3.5</i>	<i>-2.7</i>	<i>0.1</i>	<i>1.6</i>	<i>4.5</i>	
Excess Return			0.0	0.1	-0.3	0.2	0.3	0.4	0.2	
Credit (Gross)	10,084,780	2.2	1.1	4.3	10.2	3.8	5.4	--	5.8	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			<i>1.1</i>	<i>2.6</i>	<i>10.4</i>	<i>1.6</i>	<i>3.9</i>	<i>4.3</i>	<i>4.8</i>	
Excess Return			0.0	1.7	-0.2	2.2	1.5	--	1.0	
Covered Calls (Gross)	24,121,617	5.3	3.6	10.1	16.2	8.4	11.7	9.8	9.9	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>1.5</i>	<i>7.6</i>	<i>8.9</i>	<i>5.0</i>	<i>5.6</i>	<i>5.8</i>	<i>5.9</i>	
Excess Return			2.1	2.5	7.3	3.4	6.1	4.0	4.0	
Crisis Risk Offset (Gross)	39,948,914	8.8	-1.5	1.9	0.9	-3.2	-7.1	--	-6.5	Aug-18
<i>Crisis Risk Offset Benchmark</i>			<i>-1.4</i>	<i>3.9</i>	<i>3.6</i>	<i>4.3</i>	<i>0.7</i>	<i>--</i>	<i>0.7</i>	
Excess Return			-0.1	-2.0	-2.7	-7.5	-7.8	--	-7.2	
Cash (Gross)	16,379,309	3.6	0.3	0.3	0.3	0.1	0.5	0.8	0.5	Mar-11

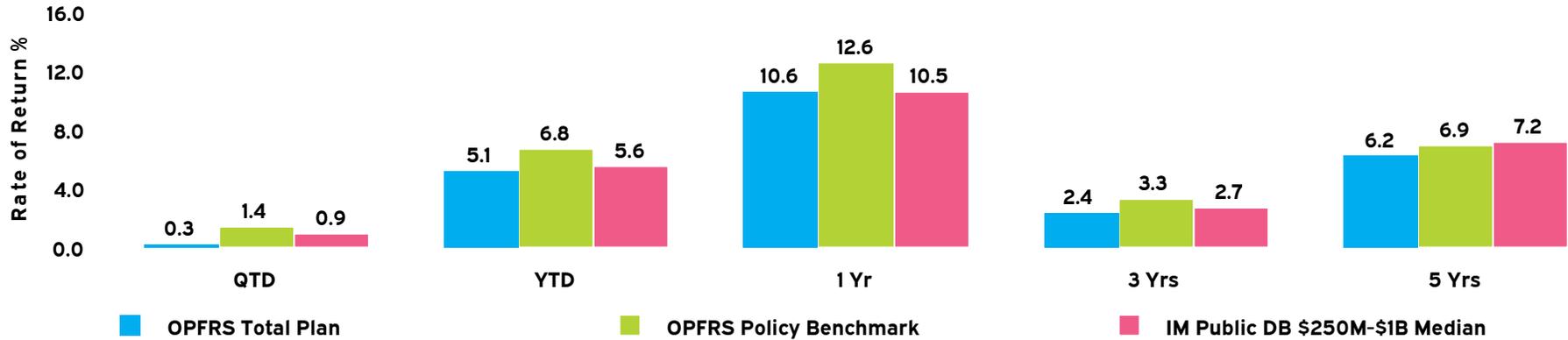
Performance shown is gross of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Asset Class Performance: Net of Fees | As of June 30, 2024

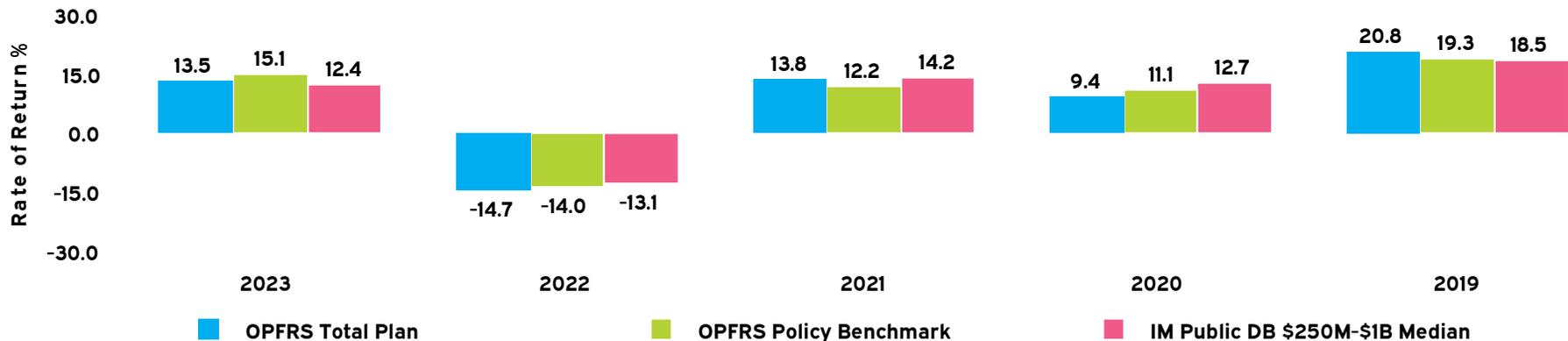
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
OPFRS Total Plan (Net)	453,231,642	100.0	0.3	5.1	10.6	2.4	6.2	6.5	6.7	Dec-88
<i>OPFRS Policy Benchmark</i>			1.4	6.8	12.6	3.3	6.9	6.9	8.0	
Excess Return			-1.1	-1.7	-2.0	-0.9	-0.7	-0.4	-1.3	
<i>IM Public DB \$250M-\$1B Median (Net)</i>			0.9	5.6	10.5	2.7	7.2	6.5	8.0	
Peer Group Rank			82	66	50	57	77	47	100	
Domestic Equity (Net)	194,973,749	43.0	0.3	8.6	16.9	5.7	11.7	10.8	9.1	Jun-97
<i>Russell 3000 (Blend)</i>			3.2	13.6	23.1	8.1	14.1	12.1	9.6	
Excess Return			-2.9	-5.0	-6.2	-2.4	-2.4	-1.3	-0.5	
International Equity (Net)	59,974,536	13.2	0.1	6.6	13.9	2.7	6.5	5.2	5.5	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			1.0	5.7	11.6	0.5	5.5	3.8	5.3	
Excess Return			-0.9	0.9	2.3	2.2	1.0	1.4	0.2	
Fixed Income (Net)	107,748,738	23.8	0.1	-0.3	3.0	-2.7	0.2	1.8	4.4	Jan-94
<i>Bloomberg Universal (Blend)</i>			0.2	-0.3	3.5	-2.7	0.1	1.6	4.5	
Excess Return			-0.1	0.0	-0.5	0.0	0.1	0.2	-0.1	
Credit (Net)	10,084,780	2.2	1.0	4.0	9.6	3.2	4.8	--	5.1	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			1.1	2.6	10.4	1.6	3.9	4.3	4.8	
Excess Return			-0.1	1.4	-0.8	1.6	0.9	--	0.3	
Covered Calls (Net)	24,121,617	5.3	3.6	10.0	15.9	8.2	11.5	9.5	9.6	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			1.5	7.6	8.9	5.0	5.6	5.8	5.9	
Excess Return			2.1	2.4	7.0	3.2	5.9	3.7	3.7	
Crisis Risk Offset (Net)	39,948,914	8.8	-1.6	1.8	0.7	-3.3	-7.3	--	-6.7	Aug-18
<i>Crisis Risk Offset Benchmark</i>			-1.4	3.9	3.6	4.3	0.7	--	0.7	
Excess Return			-0.2	-2.1	-2.9	-7.6	-8.0	--	-7.4	
Cash (Net)	16,379,309	3.6	0.3	0.3	0.3	0.1	0.5	0.8	0.5	Mar-11

Performance shown is net of fees, except for Total Plan, Domestic Equity, and International Equity composites which have a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Trailing Period Performance Ending June 30, 2024



Calendar Year Performance Ending December 31, 2023



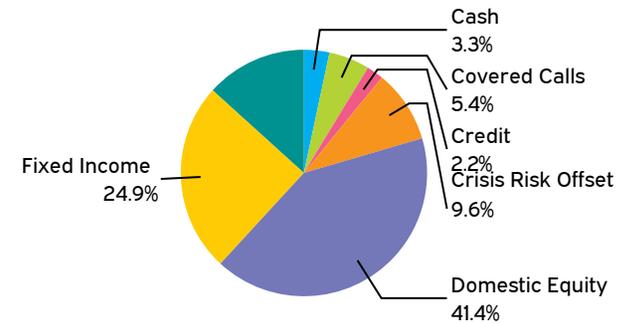
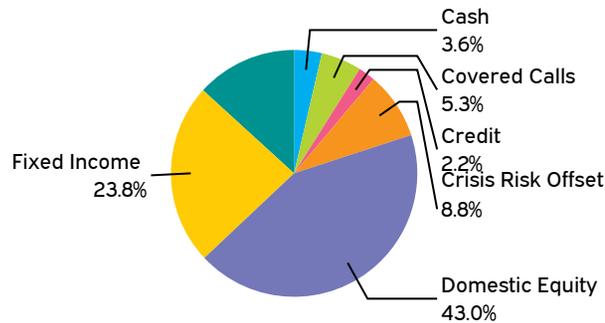
Total Plan performance is a mix of gross and net of fees; performance is gross of fees prior to January 2016 and thereafter. Fiscal year begins on July 1.

Asset Allocation | As of June 30, 2024

	Current Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Policy Range (%)	Within IPS Range?
Domestic Equity	194,973,749	43.0	40.0	3.0	30.0 - 50.0	Yes
International Equity	59,974,536	13.2	12.0	1.2	8.0 - 14.0	Yes
Fixed Income	107,748,738	23.8	31.0	-7.2	25.0 - 40.0	No
Credit	10,084,780	2.2	2.0	0.2	1.0 - 3.0	Yes
Covered Calls	24,121,617	5.3	5.0	0.3	5.0 - 10.0	Yes
Crisis Risk Offset	39,948,914	8.8	10.0	-1.2	5.0 - 15.0	Yes
Cash	16,379,309	3.6	0.0	3.6	0.0 - 5.0	Yes
Total	453,231,642	100.0	100.0	0.0		

June 30, 2024: \$453,231,642.0

June 30, 2023: \$406,308,110.42



Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers. Target weights reflect the Plan's evolving asset allocation (effective 05/31/2017).

Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Domestic Equity	194,973,749	100.0	0.3	8.6	16.9	5.7	11.7	10.8	9.1	Jun-97
<i>Russell 3000 (Blend)</i>			3.2	13.6	23.1	8.1	14.1	12.1	9.6	
Excess Return			-2.9	-5.0	-6.2	-2.4	-2.4	-1.3	-0.5	
Northern Trust Russell 1000	100,798,118	51.7	3.6	14.2	23.9	8.6	14.5	12.4	14.0	Jun-10
<i>Russell 1000 Index</i>			3.6	14.2	23.9	8.7	14.6	12.5	14.1	
Excess Return			0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	
EARNEST Partners	39,396,764	20.2	-5.3	2.2	10.0	3.3	10.3	10.6	9.3	Apr-06
<i>Russell Midcap Index</i>			-3.3	5.0	12.9	2.4	9.5	9.0	8.8	
Excess Return			-2.0	-2.8	-2.9	0.9	0.8	1.6	0.5	
eV US Mid Cap Core Equity Rank			74	77	71	68	49	21	37	
Wellington Select Quality Equity	25,563,443	13.1	-0.5	4.5	9.4	--	--	--	7.1	May-22
<i>Russell 1000 Index</i>			3.6	14.2	23.9	8.7	14.6	12.5	14.9	
Excess Return			-4.1	-9.7	-14.5	--	--	--	-7.8	
eV US Large Cap Core Equity Rank			85	97	97	--	--	--	94	
Brown Fundamental Small Cap Value	13,276,304	6.8	-1.5	3.4	17.7	6.2	--	--	6.7	Apr-21
<i>Russell 2000 Value Index</i>			-3.6	-0.8	10.9	-0.5	7.1	6.2	0.9	
Excess Return			2.1	4.2	6.8	6.7	--	--	5.8	
eV US Small Cap Value Equity Rank			20	27	11	16	--	--	19	
Rice Hall James	15,939,120	8.2	-1.8	3.5	7.6	-3.2	5.7	--	6.7	Aug-17
<i>Russell 2000 Growth Index</i>			-2.9	4.4	9.1	-4.9	6.2	7.4	7.2	
Excess Return			1.1	-0.9	-1.5	1.7	-0.5	--	-0.5	
eV US Small Cap Growth Equity Rank			39	63	60	46	78	--	92	

Performance shown is net of fees, except for the Domestic Equity composite which has a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
International Equity	59,974,536	100.0	0.1	6.6	13.9	2.7	6.5	5.2	5.5	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			<i>1.0</i>	<i>5.7</i>	<i>11.6</i>	<i>0.5</i>	<i>5.5</i>	<i>3.8</i>	<i>5.3</i>	
Excess Return			-0.9	0.9	2.3	2.2	1.0	1.4	0.2	
Vanguard Developed Markets ETF	16,549,028	27.6	-0.6	4.7	10.8	1.8	6.6	4.5	7.7	Sep-19
<i>FTSE Developed All Cap ex-U.S. Index</i>			<i>-0.6</i>	<i>4.5</i>	<i>11.4</i>	<i>2.1</i>	<i>6.8</i>	<i>4.7</i>	<i>7.9</i>	
Excess Return			0.0	0.2	-0.6	-0.3	-0.2	-0.2	-0.2	
SGA ACWI ex-U.S. Equity	43,425,507	72.4	0.3	7.3	15.1	3.3	--	--	5.6	Dec-19
<i>MSCI AC World ex USA (Net)</i>			<i>1.0</i>	<i>5.7</i>	<i>11.6</i>	<i>0.5</i>	<i>5.5</i>	<i>3.8</i>	<i>5.5</i>	
Excess Return			-0.7	1.6	3.5	2.8	--	--	0.1	
eV ACWI ex-US All Cap Core Eq Rank			55	26	14	13	--	--	60	

Performance shown is net of fees, except for the International Equity composite which has a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Fixed Income	107,748,738	100.0	0.1	-0.3	3.0	-2.7	0.2	1.8	4.4	Jan-94
<i>Bloomberg Universal (Blend)</i>			0.2	-0.3	3.5	-2.7	0.1	1.6	4.5	
Excess Return			-0.1	0.0	-0.5	0.0	0.1	0.2	-0.1	
Ramirez	73,029,640	67.8	0.1	-0.4	2.8	-2.9	0.0	--	1.5	Jan-17
<i>Blmbg. U.S. Aggregate Index</i>			0.1	-0.7	2.6	-3.0	-0.2	1.3	1.1	
Excess Return			0.0	0.3	0.2	0.1	0.2	--	0.4	
eV US Core Fixed Inc Rank			83	59	74	57	71	--	34	
Wellington Core Bond	7,006,703	6.5	0.4	0.2	4.2	-2.8	--	--	-2.1	Apr-21
<i>Blmbg. U.S. Aggregate Index</i>			0.1	-0.7	2.6	-3.0	-0.2	1.3	-2.2	
Excess Return			0.3	0.9	1.6	0.2	--	--	0.1	
eV US Core Fixed Inc Rank			15	17	15	52	--	--	58	
Reams	27,712,396	25.7	0.3	-0.2	3.0	-2.2	2.4	2.8	4.8	Feb-98
<i>Bloomberg Universal (Blend)</i>			0.2	-0.3	3.5	-2.7	0.1	1.6	4.1	
Excess Return			0.1	0.1	-0.5	0.5	2.3	1.2	0.7	
eV US Core Plus Fixed Inc Rank			69	73	82	30	3	10	26	

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Credit	10,084,780	100.0	1.0	4.0	9.6	3.2	4.8	--	5.1	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			<i>1.1</i>	<i>2.6</i>	<i>10.4</i>	<i>1.6</i>	<i>3.9</i>	<i>4.3</i>	<i>4.8</i>	
Excess Return			<i>-0.1</i>	<i>1.4</i>	<i>-0.8</i>	<i>1.6</i>	<i>0.9</i>	<i>--</i>	<i>0.3</i>	
Polen Capital	10,084,780	100.0	1.0	4.0	9.6	3.2	4.8	--	5.1	Feb-15
<i>ICE BofA U.S. High Yield Index</i>			<i>1.1</i>	<i>2.6</i>	<i>10.4</i>	<i>1.6</i>	<i>3.7</i>	<i>4.2</i>	<i>4.7</i>	
Excess Return			<i>-0.1</i>	<i>1.4</i>	<i>-0.8</i>	<i>1.6</i>	<i>1.1</i>	<i>--</i>	<i>0.4</i>	
eV US High Yield Fixed Inc Rank			75	11	65	16	16	--	19	

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Manager Performance - Net of Fees | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Covered Calls	24,121,617	100.0	3.6	10.0	15.9	8.2	11.5	9.5	9.6	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>1.5</i>	<i>7.6</i>	<i>8.9</i>	<i>5.0</i>	<i>5.6</i>	<i>5.8</i>	<i>5.9</i>	
Excess Return			2.1	2.4	7.0	3.2	5.9	3.7	3.7	
Parametric BXM	11,654,056	48.3	2.7	8.7	13.0	6.8	8.7	7.5	7.6	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>1.5</i>	<i>7.6</i>	<i>8.9</i>	<i>5.0</i>	<i>5.6</i>	<i>5.8</i>	<i>5.9</i>	
Excess Return			1.2	1.1	4.1	1.8	3.1	1.7	1.7	
Parametric DeltaShift	12,467,561	51.7	4.4	11.4	18.9	9.5	14.0	11.5	11.7	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>1.5</i>	<i>7.6</i>	<i>8.9</i>	<i>5.0</i>	<i>5.6</i>	<i>5.8</i>	<i>5.9</i>	
Excess Return			2.9	3.8	10.0	4.5	8.4	5.7	5.8	

Performance shown is net of fees. Since inception date and performance begin in the month following an investment's initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of June 30, 2024

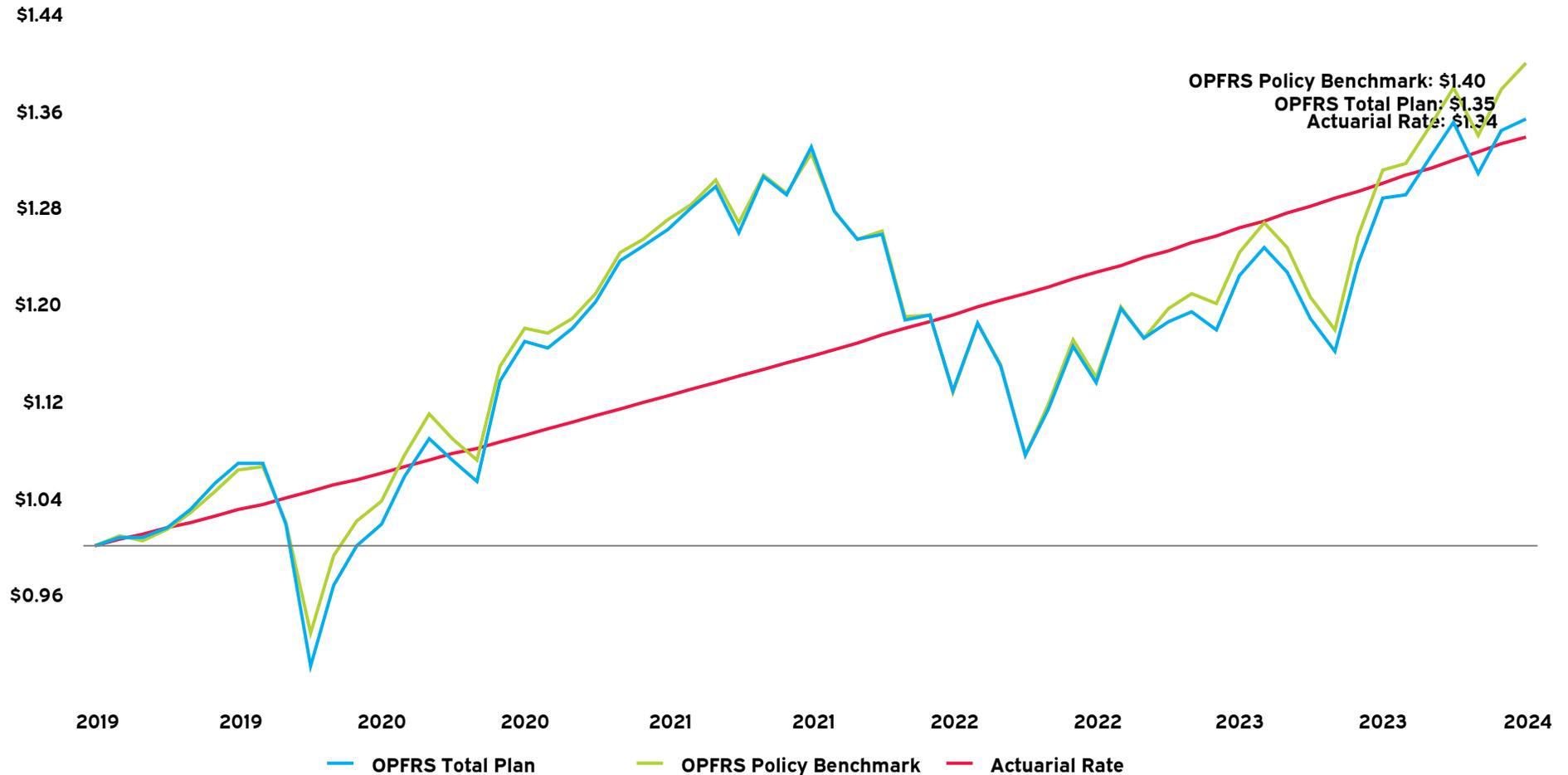
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Crisis Risk Offset	39,948,914	100.0	-1.6	1.8	0.7	-3.3	-7.3	--	-6.7	Aug-18
<i>Crisis Risk Offset Benchmark</i>			<i>-1.4</i>	<i>3.9</i>	<i>3.6</i>	<i>4.3</i>	<i>0.7</i>	<i>--</i>	<i>0.7</i>	
Over/Under			<i>-0.2</i>	<i>-2.1</i>	<i>-2.9</i>	<i>-7.6</i>	<i>-8.0</i>	<i>--</i>	<i>-7.4</i>	
Kepos Alternative Risk Premia	12,120,231	30.3	0.3	11.4	15.7	--	--	--	8.3	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>			<i>0.5</i>	<i>8.0</i>	<i>11.0</i>	<i>7.0</i>	<i>2.2</i>	<i>--</i>	<i>7.6</i>	
Over/Under			<i>-0.2</i>	<i>3.4</i>	<i>4.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.7</i>	
Versor Trend Following	14,998,517	37.5	-3.0	0.7	-3.6	--	--	--	0.0	Apr-22
<i>SG Trend Index</i>			<i>-3.2</i>	<i>8.7</i>	<i>4.0</i>	<i>10.5</i>	<i>9.4</i>	<i>6.0</i>	<i>5.5</i>	
Over/Under			<i>0.2</i>	<i>-8.0</i>	<i>-7.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-5.5</i>	
Vanguard Long-Term Treasury ETF	12,830,166	32.1	-1.6	-4.7	-5.7	-10.5	-4.3	0.6	-4.3	Jul-19
<i>Blmbg. U.S. Government: Long Term Bond Index</i>			<i>-1.8</i>	<i>-5.0</i>	<i>-5.6</i>	<i>-10.4</i>	<i>-4.2</i>	<i>0.6</i>	<i>-4.2</i>	
Over/Under			<i>0.2</i>	<i>0.3</i>	<i>-0.1</i>	<i>-0.1</i>	<i>-0.1</i>	<i>0.0</i>	<i>-0.1</i>	

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

**Cash Flow Summary
Quarter To Date**

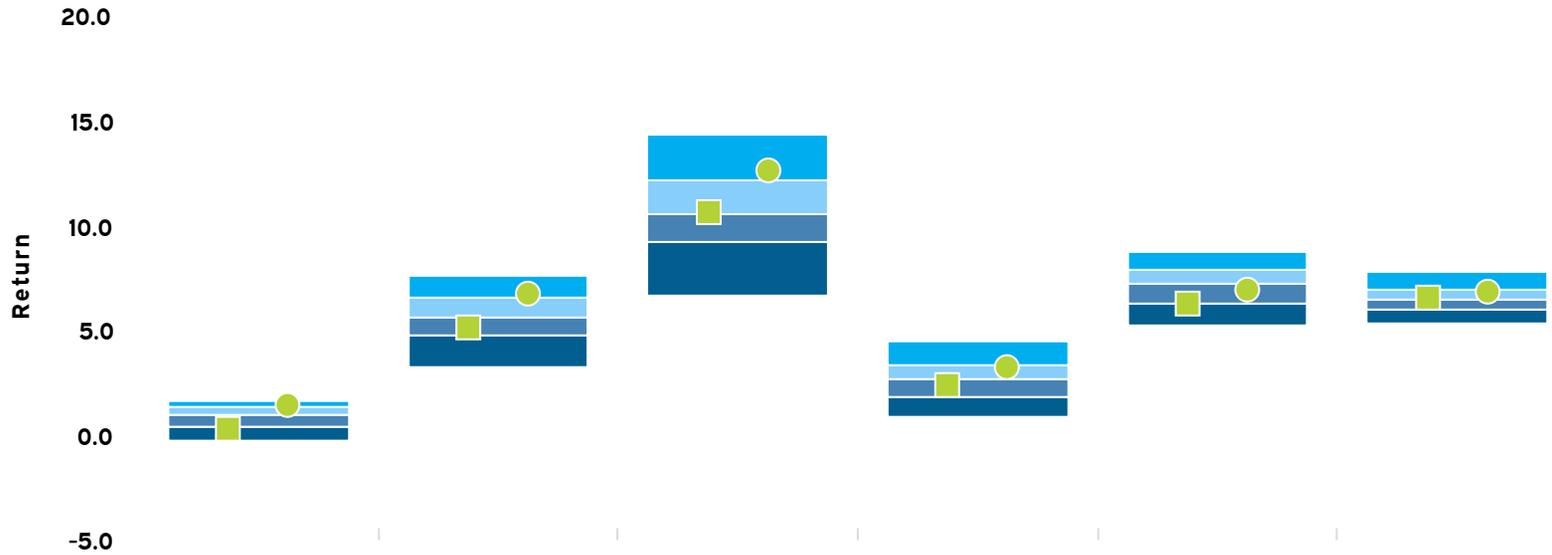
	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Northern Trust Russell 1000	97,326,458	-	3,471,660	100,798,118
EARNEST Partners	42,502,989	-1,000,000	-2,106,224	39,396,764
Wellington Select Quality Equity	25,703,596	-	-140,153	25,563,443
Brown Fundamental Small Cap Value	13,481,386	-	-205,083	13,276,304
Rice Hall James	16,194,267	-	-255,147	15,939,120
Vanguard Developed Markets ETF	16,800,177	-154,272	-96,876	16,549,028
SGA ACWI ex-U.S. Equity	43,184,334	-	241,173	43,425,507
Ramirez	72,950,679	-	78,961	73,029,640
Wellington Core Bond	6,980,801	-	25,902	7,006,703
Reams	27,629,437	-	82,959	27,712,396
Polen Capital	9,984,458	-	100,322	10,084,780
Parametric BXM	12,339,462	-1,000,000	314,594	11,654,056
Parametric DeltaShift	12,936,202	-1,000,000	531,359	12,467,561
Kepos Alternative Risk Premia	12,080,647	-	39,583	12,120,231
Versor Trend Following	15,458,363	-	-459,846	14,998,517
Vanguard Long-Term Treasury ETF	13,177,168	-80,390	-266,612	12,830,166
Cash - Money Market	5,402,267	417,364	46,679	5,866,309
Cash - Treasury	10,323,000	190,000	-	10,513,000
Securities Lending Northern Trust	-	-35,884	35,884	-
OPFRS Total Plan	454,455,689	-2,663,182	1,439,135	453,231,642

Growth of a Dollar 5 Years ending June 30, 2024



The actuarial expected rate of return was 8% through 6/30/2009, 7.5% through 6/30/2010, 7% through 6/30/2011, 6.75% through 6/30/2014, 6.5% through 2/31/2017 and 6.0% currently.

Plan Sponsor Peer Group Performance Comparison vs. InvMetrics Public DB \$250M-\$1B Net



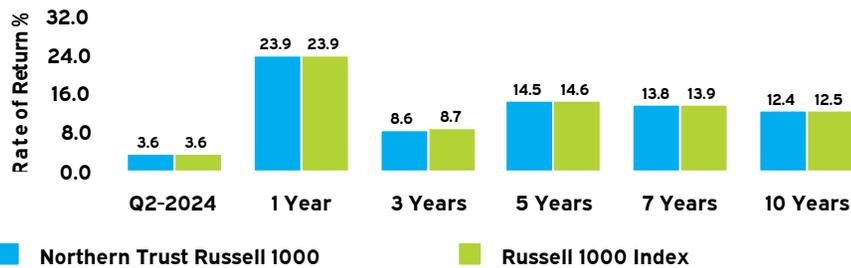
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
■ OPFRS Total Plan	0.3 (82)	5.1 (66)	10.6 (50)	2.4 (57)	6.2 (77)	6.5 (47)
● OPFRS Policy Benchmark	1.4 (20)	6.8 (18)	12.6 (21)	3.3 (26)	6.9 (58)	6.9 (29)
5th Percentile	1.7	7.6	14.3	4.5	8.7	7.8
1st Quartile	1.4	6.5	12.1	3.3	7.9	7.0
Median	0.9	5.6	10.5	2.7	7.2	6.5
3rd Quartile	0.4	4.8	9.2	1.8	6.3	5.9
95th Percentile	-0.2	3.2	6.7	0.8	5.2	5.3
Population	94	94	94	94	93	83

Total Plan performance is a mix of gross and net of fees; performance is gross of fees prior to January 2016 and net of fees thereafter. Parentheses contain percentile rankings. Calculation based on monthly periodicity. Fiscal year begins on July 1.

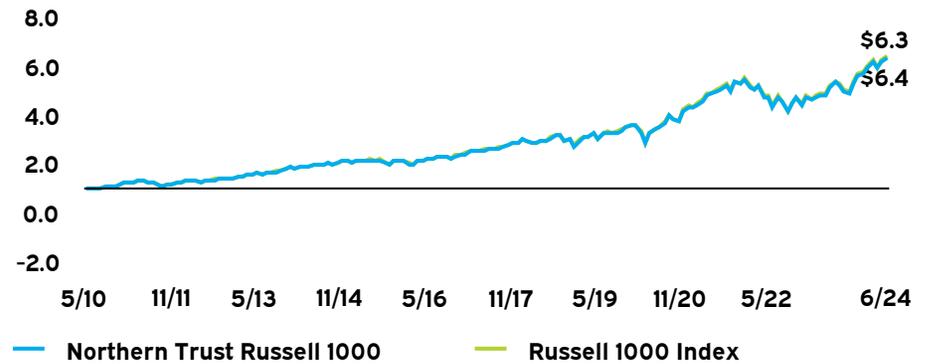
Portfolio Characteristics & Manager Profiles

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Northern Trust Russell 1000	0.00	1.00	-0.63	0.21	0.01	1.00	99.82	99.90
Russell 1000 Index	0.00	1.00	-	0.21	0.00	1.00	100.00	100.00

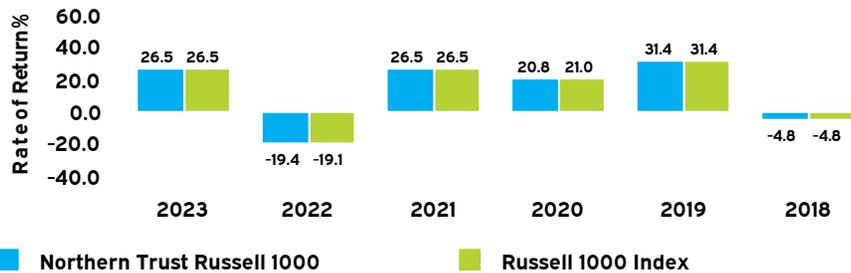
Trailing Performance



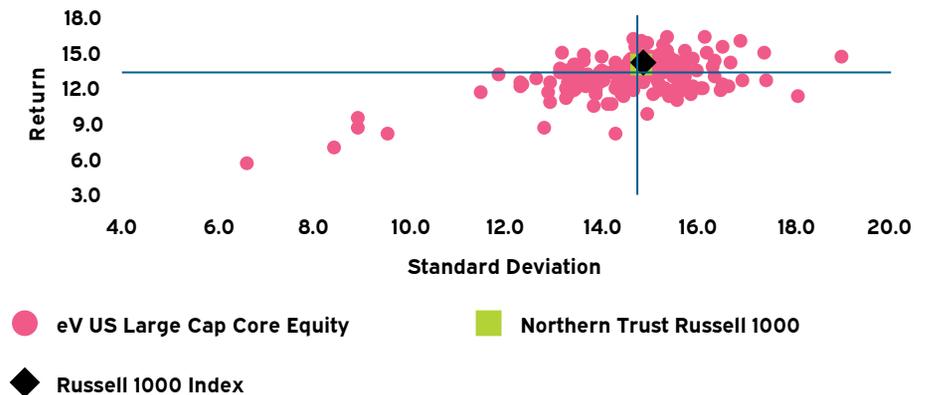
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
Northern Trust Russell 1000	3.56	3.93
Russell 1000 Index	3.57	3.94

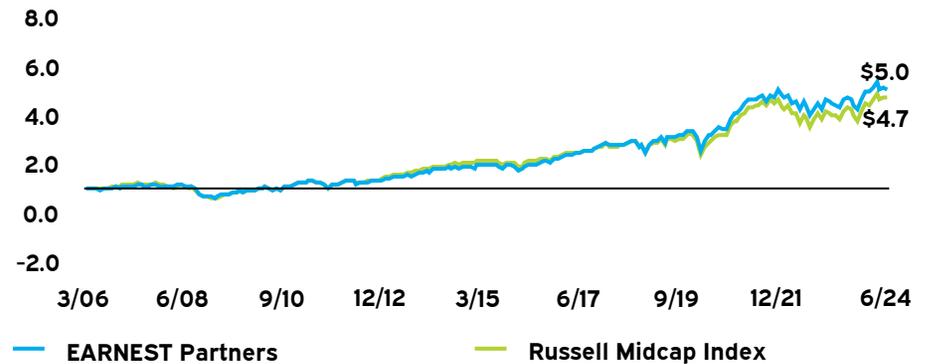
Performance shown is net of fees. Risk is measured as Standard Deviation.

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
EARNEST Partners	-0.75	0.92	-1.23	-0.69	0.54	0.98	52.57	110.49
Russell Midcap Index	0.00	1.00	-	-0.45	0.00	1.00	100.00	100.00

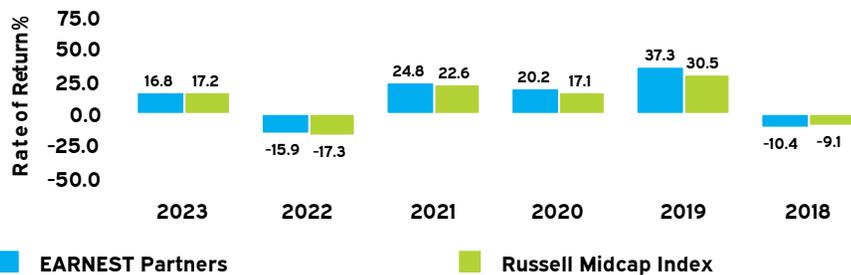
Trailing Performance



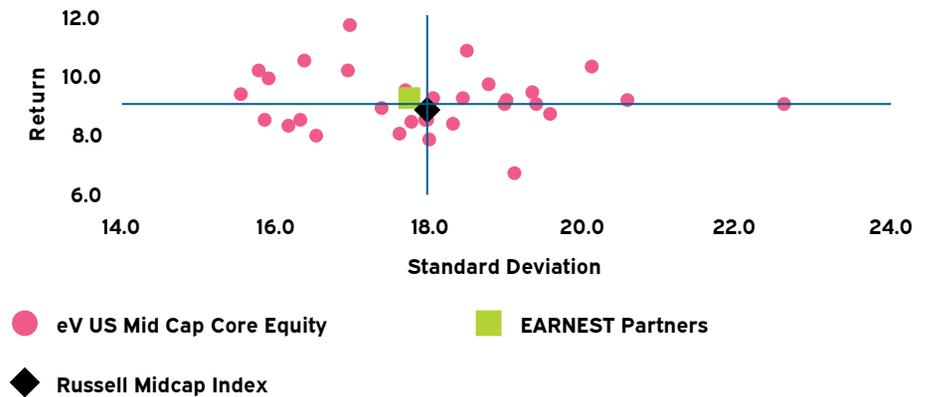
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
EARNEST Partners	-5.26	3.15
Russell Midcap Index	-3.35	3.38

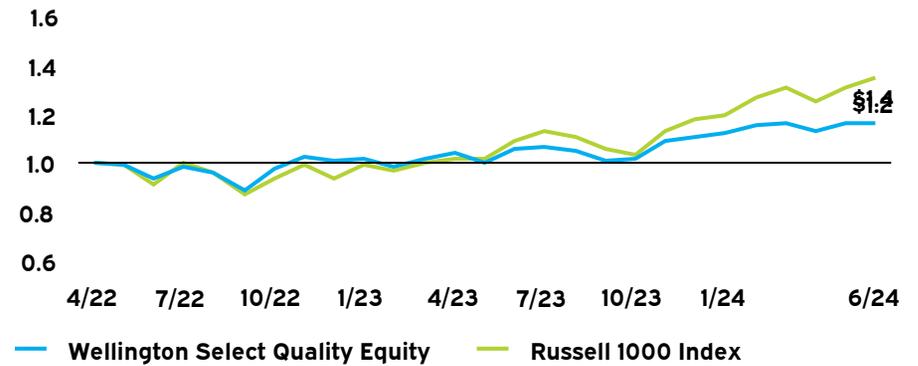
Performance shown is net of fees. Risk is measured as Standard Deviation.

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Wellington Select Quality Equity	-0.92	0.62	-0.81	-0.23	1.73	0.89	36.43	79.16
Russell 1000 Index	0.00	1.00	-	0.21	0.00	1.00	100.00	100.00

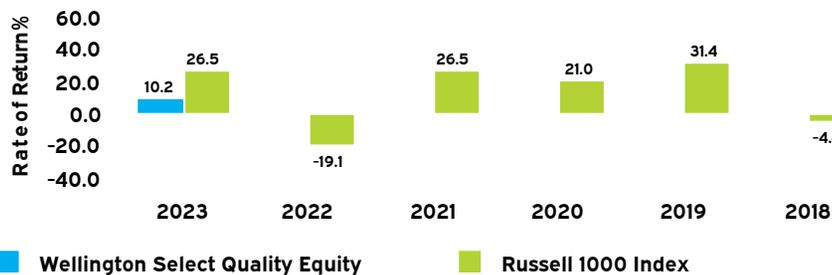
Trailing Performance



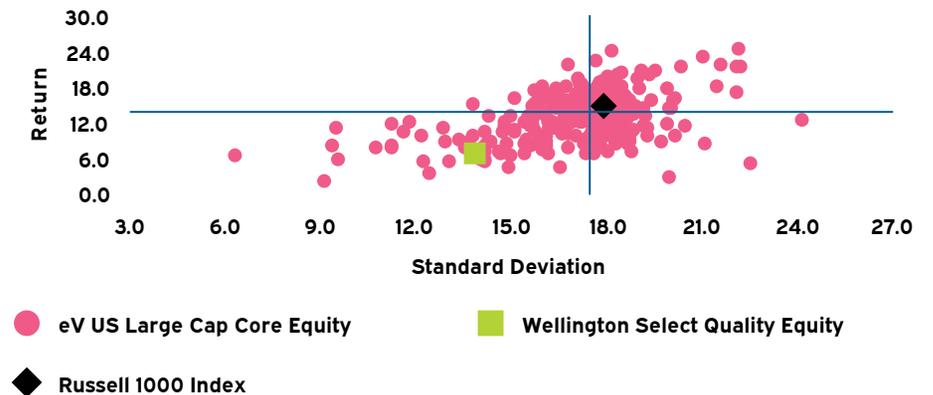
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
Wellington Select Quality Equity	-0.55	2.57
Russell 1000 Index	3.57	3.94

Performance shown is net of fees. Risk is measured as Standard Deviation.

Brown Fundamental Small Cap Value | As of June 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Brown Fundamental Small Cap Value	0.54	0.86	0.85	-0.22	0.82	0.98	104.53	76.78
Russell 2000 Value Index	0.00	1.00	-	-0.35	0.00	1.00	100.00	100.00

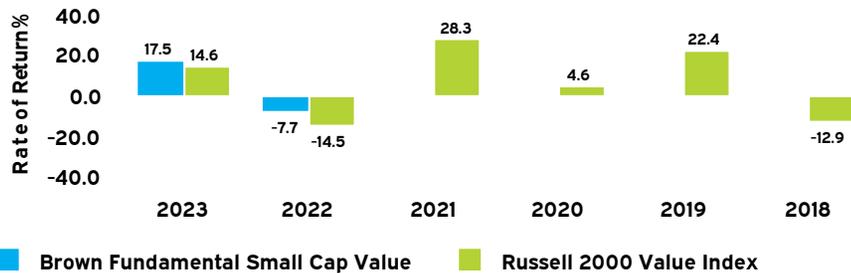
Trailing Performance



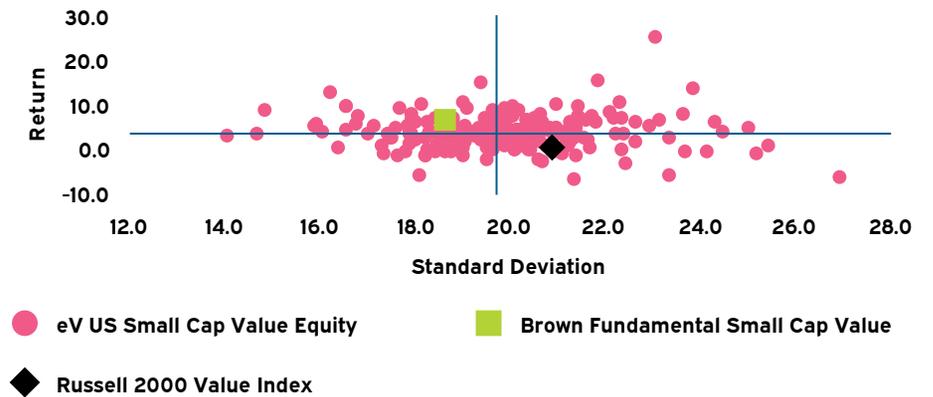
Growth of \$1 - Since Inception



Calendar Year Returns



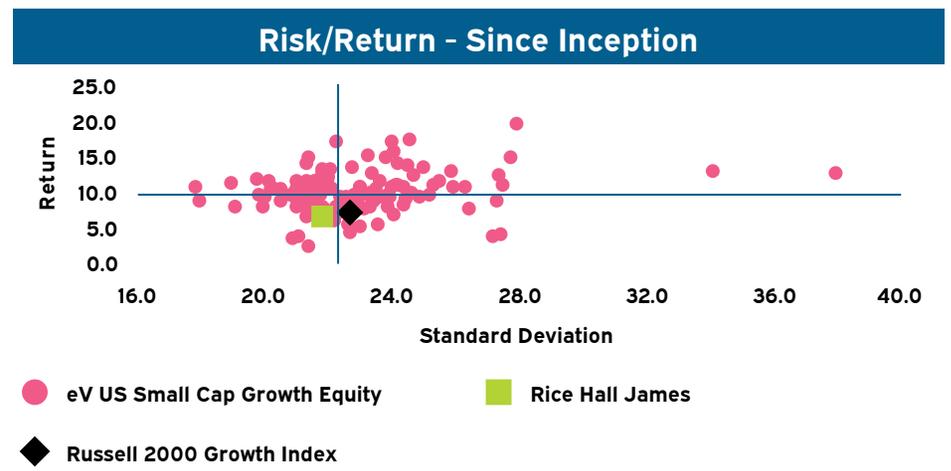
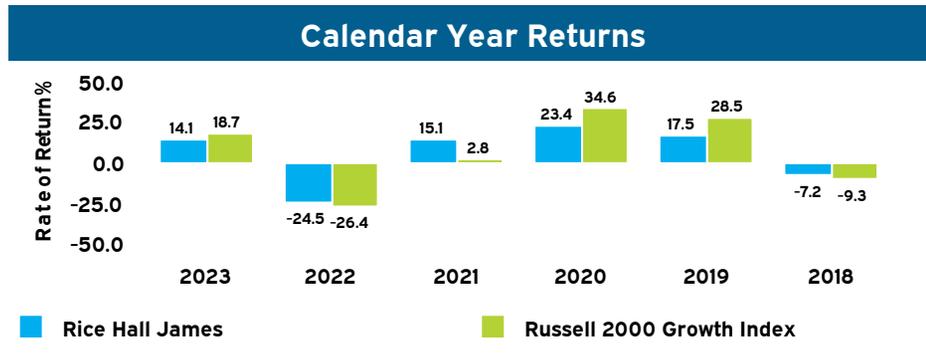
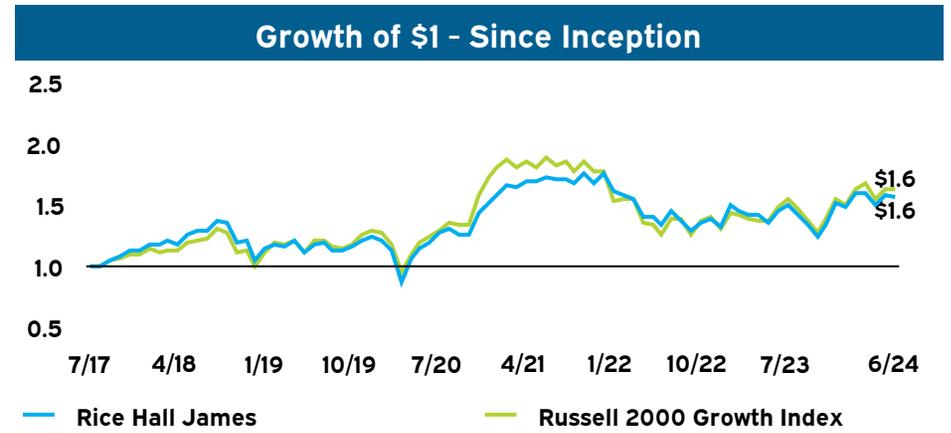
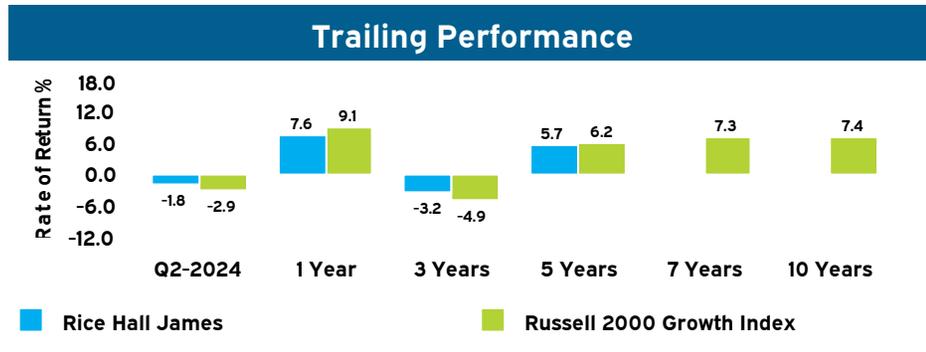
Risk/Return - Since Inception



	QTD Return	QTD Risk
Brown Fundamental Small Cap Value	-1.52	3.94
Russell 2000 Value Index	-3.64	4.53

Performance shown is net of fees. Risk is measured as Standard Deviation.

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Rice Hall James	0.17	0.82	0.30	-0.22	1.07	0.99	91.83	82.11
Russell 2000 Growth Index	0.00	1.00	-	-0.24	0.00	1.00	100.00	100.00



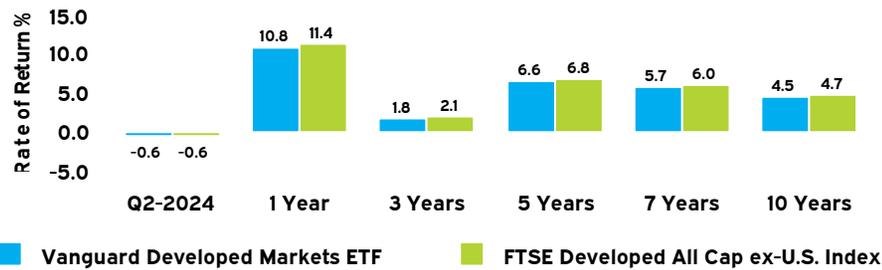
	QTD Return	QTD Risk
Rice Hall James	-1.82	4.40
Russell 2000 Growth Index	-2.92	5.35

Performance shown is net of fees. Risk is measured as Standard Deviation.

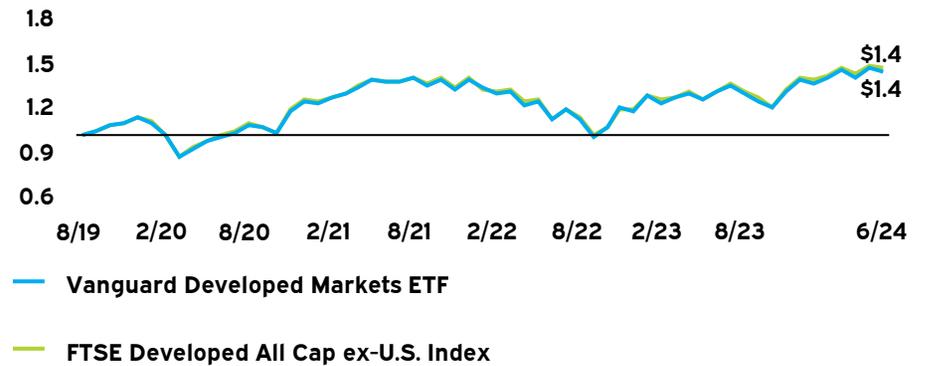
Vanguard Developed Markets ETF | As of June 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Vanguard Developed Markets ETF	0.08	1.27	0.05	-0.17	0.73	1.00	128.43	122.44
FTSE Developed All Cap ex-U.S. Index	0.00	1.00	-	-0.22	0.00	1.00	100.00	100.00

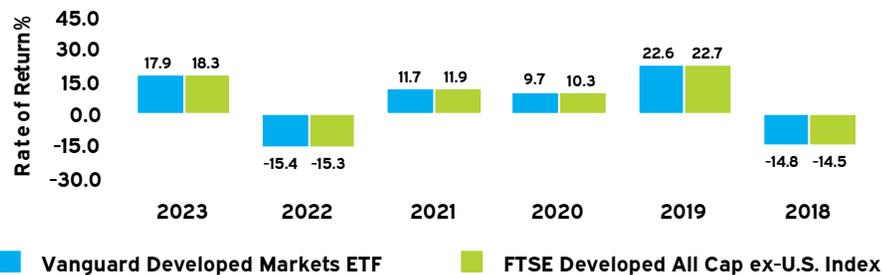
Trailing Performance



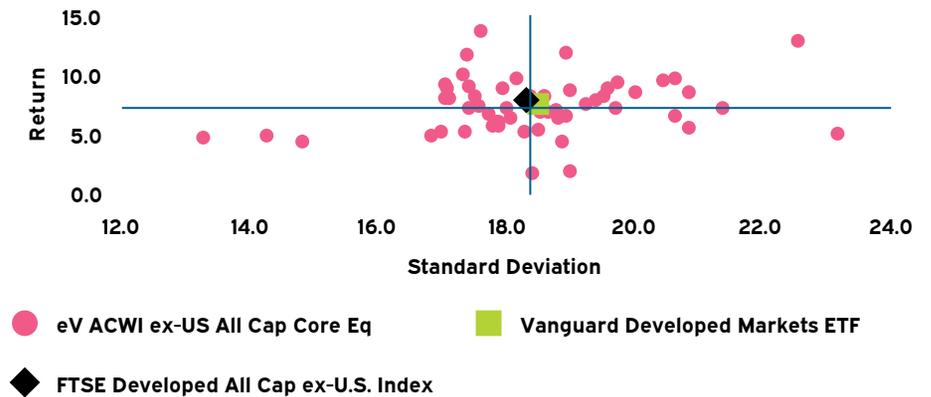
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
Vanguard Developed Markets ETF	-0.57	3.47
FTSE Developed All Cap ex-U.S. Index	-0.61	2.74

Performance shown is net of fees. Risk is measured as Standard Deviation.

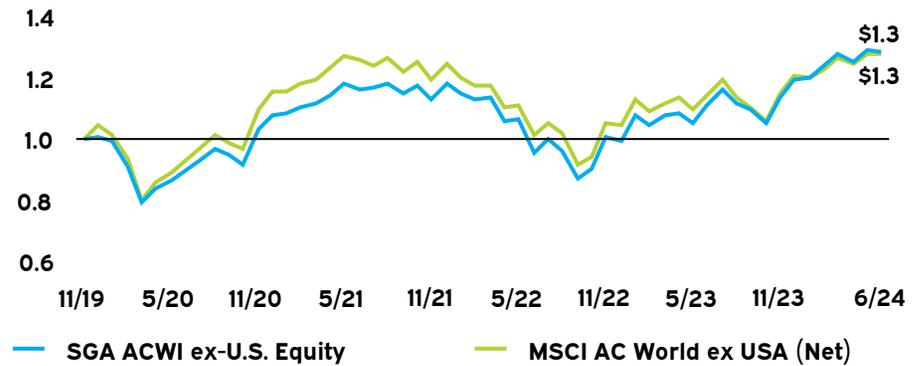
SGA ACWI ex-U.S. Equity | As of June 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
SGA ACWI ex-U.S. Equity	-0.20	1.00	-1.54	-0.16	0.13	1.00	95.43	125.27
MSCI AC World ex USA (Net)	0.00	1.00	-	-0.05	0.00	1.00	100.00	100.00

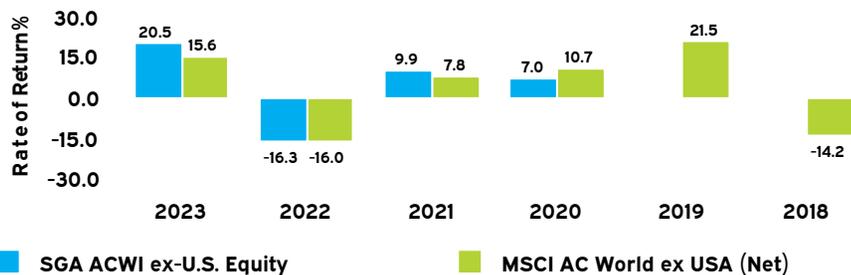
Trailing Performance



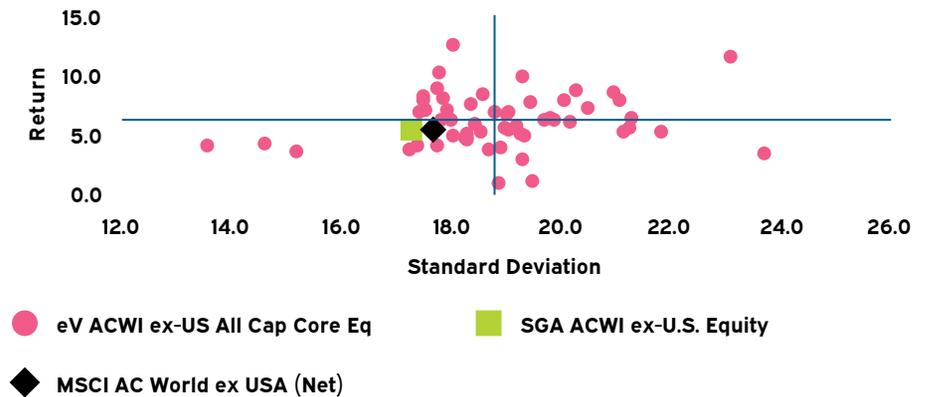
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
SGA ACWI ex-U.S. Equity	0.35	1.95
MSCI AC World ex USA (Net)	0.96	1.94

Performance shown is net of fees. Risk is measured as Standard Deviation.

Account Information

Account Name	Ramirez
Account Structure	Separate Account
Inception Date	01/30/2017
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	eV US Core Fixed Inc

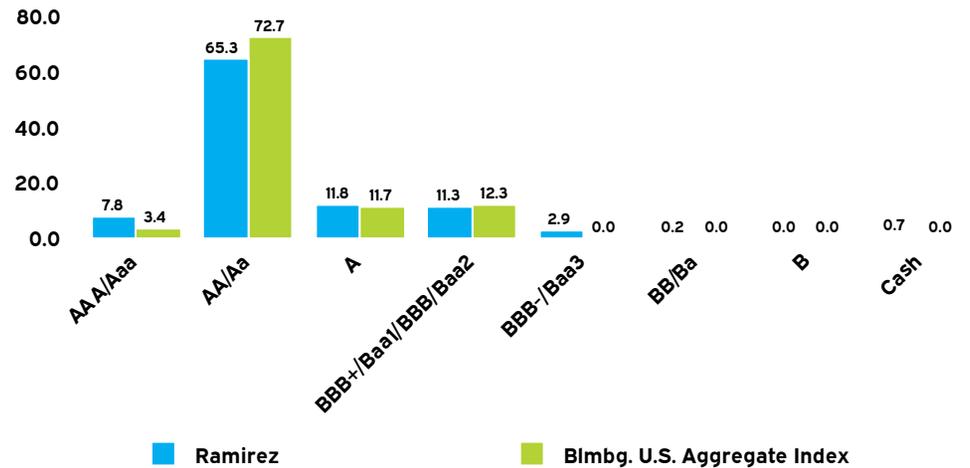
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Ramirez	0.1	-0.4	2.8	-2.9	0.0
Blmbg. U.S. Aggregate Index	0.1	-0.7	2.6	-3.0	-0.2

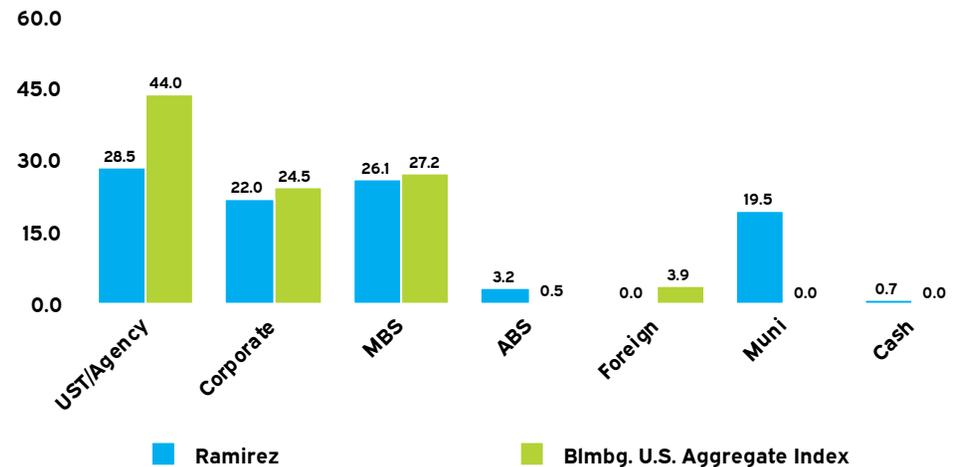
Portfolio Fixed Income Characteristics

	Q2-24 Portfolio	Q1-24 Portfolio
Yield To Maturity	5.2	5.0
Average Duration	6.1	6.1
Average Quality	AA	AA
Weighted Average Maturity	9.1	8.9

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

Wellington Core Bond | As of June 30, 2024

Account Information

Account Name	Wellington Core Bond
Account Structure	Commingled Fund
Inception Date	04/01/2021
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	eV US Core Fixed Inc

Portfolio Performance Summary

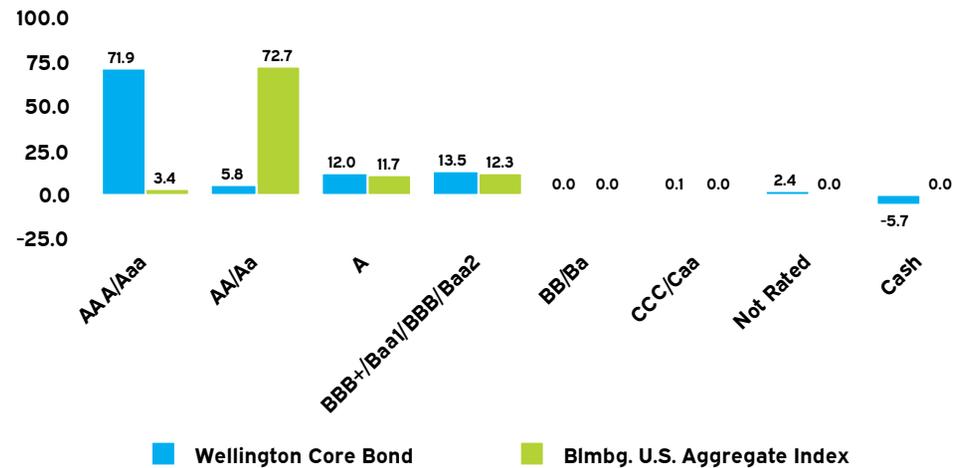
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Wellington Core Bond	0.4	0.2	4.2	-2.8	-
Blmbg. U.S. Aggregate Index	0.1	-0.7	2.6	-3.0	-0.2

Portfolio Fixed Income Characteristics

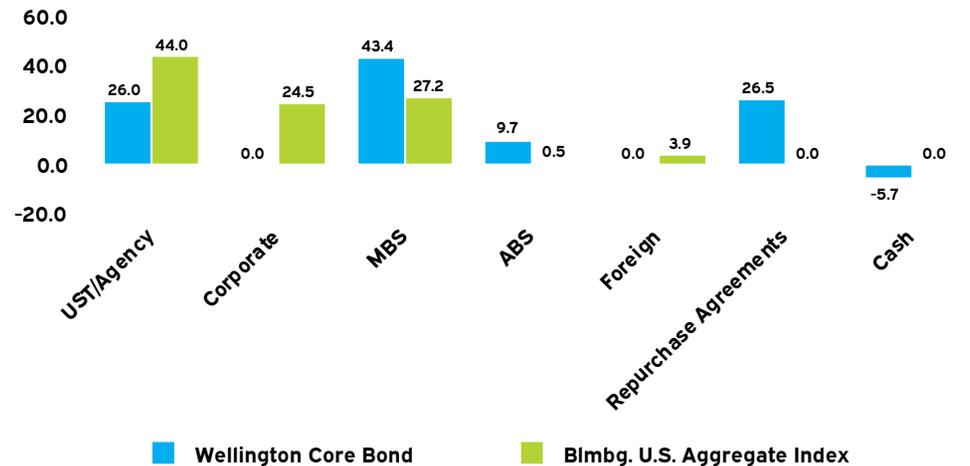
	Q2-24 Portfolio	Q1-24 Portfolio
Yield To Maturity	5.3	5.3
Average Duration	6.7	6.5
Average Quality	AA	AA
Weighted Average Maturity	-	-

Performance shown is net of fees.

Credit Quality Allocation



Sector Allocation



Account Information

Account Name	Reams
Account Structure	Separate Account
Inception Date	01/01/1998
Asset Class	US Fixed Income
Benchmark	Bloomberg Universal (Blend)
Peer Group	eV US Core Plus Fixed Inc

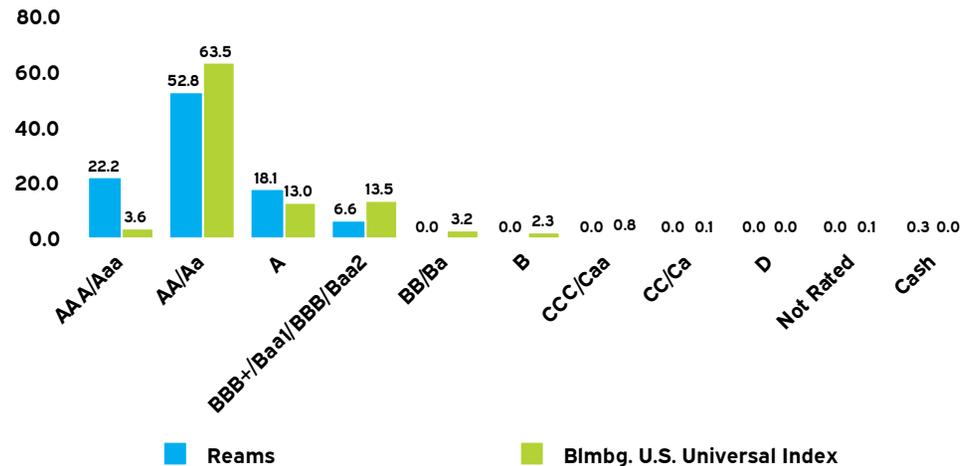
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Reams	0.3	-0.2	3.0	-2.2	2.4
Bimbg. U.S. Universal Index	0.2	-0.3	3.5	-2.7	0.1

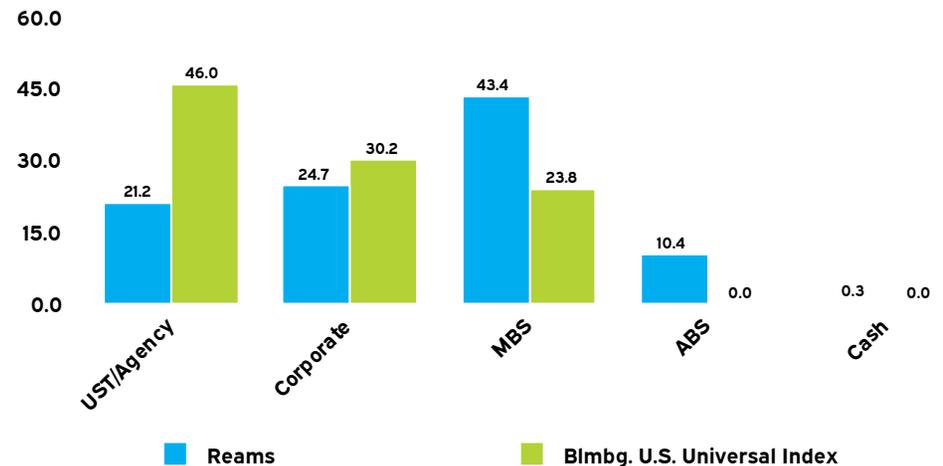
Portfolio Fixed Income Characteristics

	Q2-24 Portfolio	Q1-24 Portfolio
Yield To Maturity	5.3	5.1
Average Duration	6.4	6.5
Average Quality	AA	AA
Weighted Average Maturity	9.4	7.5

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

Account Information

Account Name	Polen Capital
Account Structure	Commingled Fund
Inception Date	02/01/2015
Asset Class	US Fixed Income
Benchmark	ICE BofA U.S. High Yield Index
Peer Group	eV US High Yield Fixed Inc

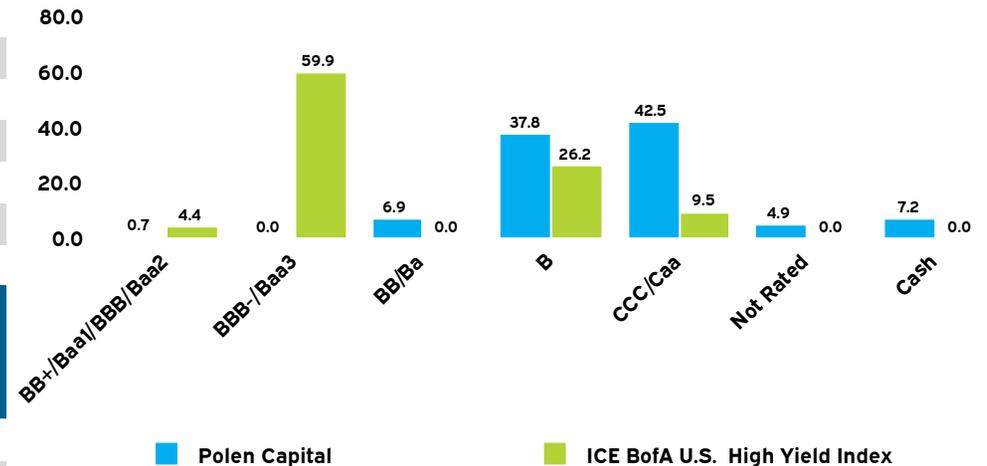
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Polen Capital	1.0	4.0	9.6	3.2	4.8
ICE BofA U.S. High Yield Index	1.1	2.6	10.4	1.6	3.7

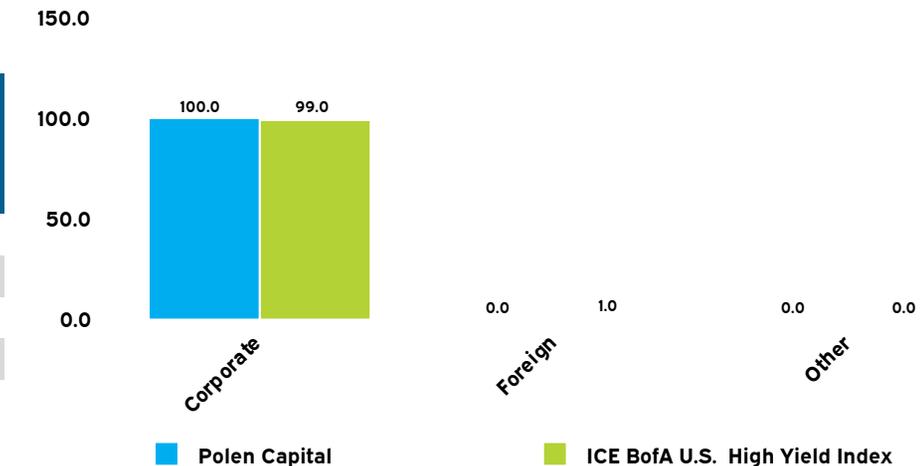
Portfolio Fixed Income Characteristics

	Q2-24 Portfolio	Q1-24 Portfolio
Yield To Maturity	9.7	9.2
Average Duration	2.1	2.2
Average Quality	B	B
Weighted Average Maturity	4.9	4.7

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

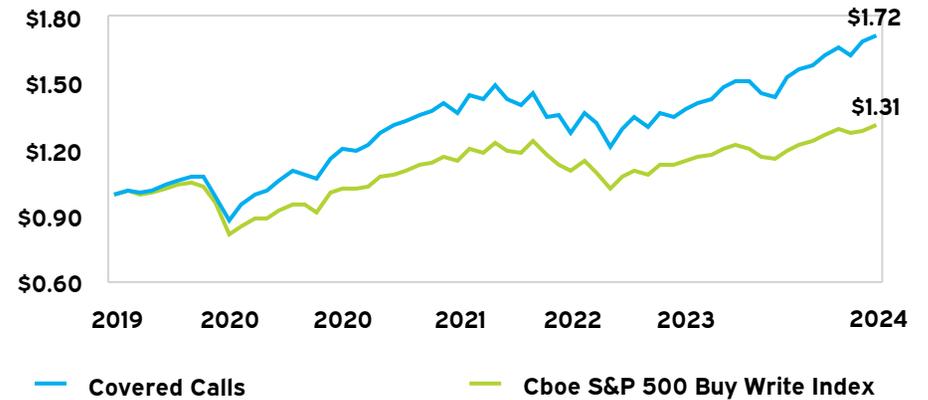
Covered Calls | As of June 30, 2024

	Return	Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Capture	Down Capture	Inception Date
Covered Calls	9.6	11.4	3.3	1.0	0.9	4.0	125.3	105.4	04/01/2014
Cboe S&P 500 Buy Write Index	5.9	10.2	0.0	1.0	-	0.0	100.0	100.0	
Parametric BXM	7.6	9.3	2.4	0.9	0.5	3.1	100.6	85.9	04/01/2014
Cboe S&P 500 Buy Write Index	5.9	10.2	0.0	1.0	-	0.0	100.0	100.0	
Parametric DeltaShift	11.7	13.7	4.5	1.2	0.9	6.2	149.1	122.3	04/01/2014
Cboe S&P 500 Buy Write Index	5.9	10.2	0.0	1.0	-	0.0	100.0	100.0	

Trailing Period Performance



Growth of a Dollar



Calendar Year Performance



Performance shown is net of fees.

Crisis Risk Offset | As of June 30, 2024

	Return	Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Capture	Down Capture	Inception Date
Crisis Risk Offset	-6.7	10.7	-6.8	0.8	-0.7	9.9	31.2	127.4	08/01/2018
Crisis Risk Offset Benchmark	0.7	5.4	0.0	1.0	-	0.0	100.0	100.0	
Kepos Alternative Risk Premia	8.3	6.7	1.7	0.9	0.1	5.0	97.9	77.7	02/01/2022
SG Multi Alternative Risk Premia Index	7.6	5.2	0.0	1.0	-	0.0	100.0	100.0	
Versor Trend Following	0.0	14.5	-5.1	1.0	-0.7	6.8	83.4	111.5	04/01/2022
SG Trend Index	5.5	12.6	0.0	1.0	-	0.0	100.0	100.0	
Vanguard Long-Term Treasury ETF	-4.3	15.1	0.0	1.0	0.0	1.1	101.0	100.9	07/01/2019
Blmbg. U.S. Government: Long Term Bond Index	-4.2	15.0	0.0	1.0	-	0.0	100.0	100.0	

Correlation Matrix

3 Months Ending June 30, 2024

	Crisis Risk Offset	MSCI AC World Index Value	S&P 500 Index	Blmbg. Global Aggregate Index
Crisis Risk Offset	1.00			
MSCI AC World Index Value	-0.01	1.00		
S&P 500 Index	-0.46	0.89	1.00	
Blmbg. Global Aggregate Index	-0.31	0.95	0.99	1.00

Trailing Period Performance



Performance shown is net of fees.

Benchmark History		
From Date	To Date	Benchmark
OPFRS Total Plan		
06/01/2022	Present	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA (Net), 31.0% Blmbg. US Universal Index, 2.0% Blmbg. US Corp: High Yield Index, 5.0% Cboe S&P 500 Buy Write Index, 10.0% Crisis Risk Offset Benchmark
01/01/2019	06/01/2022	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 31.0% Blmbg. US Universal Index, 5.0% Cboe S&P 500 Buy Write Index, 2.0% Blmbg. US Treasury: Long, 10.0% Crisis Risk Offset Benchmark
05/01/2016	01/01/2019	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. US Universal Index, 20.0% CBOE BXM
10/01/2015	05/01/2016	43.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. US Universal Index, 15.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
01/01/2014	10/01/2015	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. US Universal Index, 10.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
03/01/2013	01/01/2014	40.0% Russell 3000 Index, 10.0% MSCI AC World ex USA index, 17.0% Blmbg. US Universal Index, 33.0% ICE BofA 3 Month US T-Bill
08/01/2012	03/01/2013	20.0% Russell 3000 Index, 7.0% MSCI AC World ex USA index, 18.0% Blmbg. US Universal Index, 55.0% ICE BofA 3 Month US T-Bill
10/01/2007	08/01/2012	53.0% Russell 3000 Index, 17.0% MSCI AC World ex USA index, 30.0% Blmbg. US Universal Index
04/01/2006	10/01/2007	35.0% Russell 3000 Index, 15.0% MSCI AC World ex USA index, 50.0% Blmbg. US Universal Index
01/01/2005	04/01/2006	35.0% Russell 3000 Index, 50.0% Blmbg. US Aggregate Index, 15.0% MSCI AC World ex USA index
04/01/1998	01/01/2005	20.0% Russell 1000 Value Index, 10.0% Russell 1000 Index, 5.0% Russell Midcap Index, 50.0% Blmbg. US Aggregate Index, 15.0% MSCI EAFE (Net)
09/01/1988	04/01/1998	40.0% S&P 500 Index, 55.0% Blmbg. US Aggregate Index, 5.0% FTSE 3 Month T-Bill

Benchmark History

From Date	To Date	Benchmark
Domestic Equity		
01/01/2005	Present	100.0% Russell 3000 Index
04/01/1998	01/01/2005	57.1% Russell 1000 Value Index, 28.6% Russell 1000 Index, 14.3% Russell Midcap Index
09/01/1988	04/01/1998	100.0% S&P 500 Index
International Equity		
01/01/2005	Present	100.0% MSCI AC World ex USA (Net)
01/01/1998	01/01/2005	100.0% MSCI EAFE Index
Fixed Income		
04/01/2006	Present	100.0% Blmbg. US Universal Index
01/01/1976	04/01/2006	100.0% Blmbg. US Aggregate Index
Covered Calls		
04/01/2014	Present	Cboe S&P 500 Buy Write Index
Crisis Risk Offset		
01/01/2023	Present	33.3% SG Trend Index, 33.3% SG Multi Alternative Risk Premia Index, 33.3% Blmbg. US Government: Long Term Bond Index
08/01/2018	01/01/2023	100.0% SG Multi Alternative Risk Premia Index
Cash		
03/01/2011	Present	FTSE 3 Month T-Bill

Manager Monitoring / Probation Status

Managers on Watch / Probation Status

Manager & Strategy	Concern Triggering Watch Status	Date of Corrective Action ¹	Months Since Placement	Performance ² Since Placement	Peer Group Rank Since Placement
Versor Trend Following	Organization / Performance	9/27/2023	9	-7.2	N/A
<i>Benchmark: SG Trend Index</i>	--	--	--	3.2	--

Investment Manager Monitoring Criteria³

Investment managers are evaluated on ongoing and periodic basis using both quantitative performance criteria and qualitative aspects of the managers. The quantitative criteria for different asset classes are as follows:

Asset Class	Short-term (Rolling 12 months)	Medium-term (Rolling 36 months)	Long-term (60 + months)
Active Domestic Equity	Fund return < benchmark return by 3.5%	Annualized Fund return < benchmark return by 1.75% for 6 consecutive months	VRR ⁴ < 0.97 for 6 consecutive months
Active International Equity	Fund return < benchmark return by 4.5%	Annualized Fund return < benchmark return by 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Passive International Equity	Tracking Error > 0.50%	Tracking Error > 0.45% for 6 consecutive months	Annualized Fund return < benchmark return by 0.4% for 6 consecutive months
Fixed Income	Fund return < benchmark return by 1.5%	Annualized Fund return < benchmark return by 1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months

¹ Date when the Board voted to either monitor a manager at a heightened level or place it on probation.

² Performance Since Placement starts at the beginning of the full month following the date of corrective action. Performance shown is net of fees and annualized after one year mark.

³ Per Investment Policy Statement and Manager Guidelines ("IPS"), Revised 5/31/2023, section H. Currently, only Domestic Equity, International Equity, and Fixed Income have stated quantitative monitoring criteria in the IPS.

⁴ VRR (Value Relative Ratio) is calculated as manager cumulative return/ benchmark cumulative return.

Appendix

Additional Information

Performance Return Types: Performance shown is net of fees, except for OPFRS Total Plan, Domestic Equity, and International Equity Composites, which have a mix of gross and net of fees performance. Performance shown for OPFRS Total Plan and International Equity composite is gross of fees prior to January 2016. Performance shown for Domestic Equity composite is gross of fees prior to January 2017.

Inception Date: Since inception date and performance begin in the month following an investments initial funding.

Fiscal Year: Fiscal year begins on July 1.

Fair Value Pricing Methodology: Though Vanguard Developed Markets ETF is a passive strategy, short-term performance may appear to diverge from the index it tracks more than would be expected. This is due to Fair Value Pricing (FVP) adjustments that address the pricing discrepancies that may arise from time-zone differences among global securities markets. The resulting temporary divergence is expected to correct itself when the foreign markets reopen.

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.

The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.

MEMORANDUM

TO: Oakland Police and Fire Retirement System (“OPFRS”)
FROM: Meketa Investment Group (“Meketa”)
DATE: September 25, 2024
RE: Revised Implementation Plan

Background

At the March 2024 meeting, OPFRS received a tentative and evolving implementation plan to transition to the newly adopted long-term strategic allocation policy. It laid out a gradual transition of the assets over the following 18 to 24 months so as to not disrupt the portfolio’s risk-return and diversification profile in the near term. This memorandum provides an updated implementation plan as we progress through reviewing asset class structures and investment manager line-up since March 2024.

Recommendation

Meketa recommends the Board approve the revised implementation plan as presented below.

Revised Implementation Plan¹

Asset Classes	Previous Target	Actual (2024-Q2)	2024 H2	2025 H1	Long-term Target
Growth / Equities					
US Equity	40	44.6	34	26	25
International (Non-US) Equity	12	13.7	12	9	5
Covered Calls	5	5.5	0	0	--
Fixed Income & Credit					
Investment Grade Bonds	31	24.7	39	46	51
High Yield Bonds	--	0.0	5	10	10
Credit	2	2.3	0	0	--
Crisis Risk Offset					
Alternative Risk Premia (ARP)	3.3	2.8	3.3	3	3
Systematic Trend Following	3.3	3.4	3.3	3	3
Long-Term Government Bonds	3.3	2.9	3.3	3	3

Parts of the implementation process are dependent on other processes such as investment manager search RFI (request for information) and contract/manager agreement review. We will continue to provide the OPFRS Board with regular updates on the implementation process.

DS/PN/JLC/mn

¹ Actual allocations are as of June 30, 2024, and excludes the cash account. H1 and H2 represent first and second halves of the calendar year.

Oakland Police and Fire Retirement System

September 25, 2024

Crisis Risk Offset (CRO)
Asset Class Review

Agenda

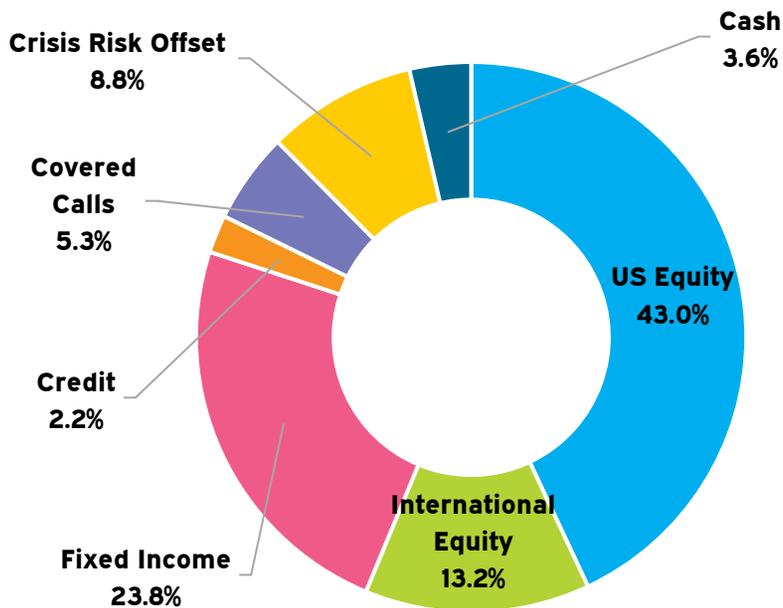
1. Background
2. Role & Components of Crisis Risk Offset (CRO)
3. Current Composition in OPFRS Portfolio
4. Recommendations

Background

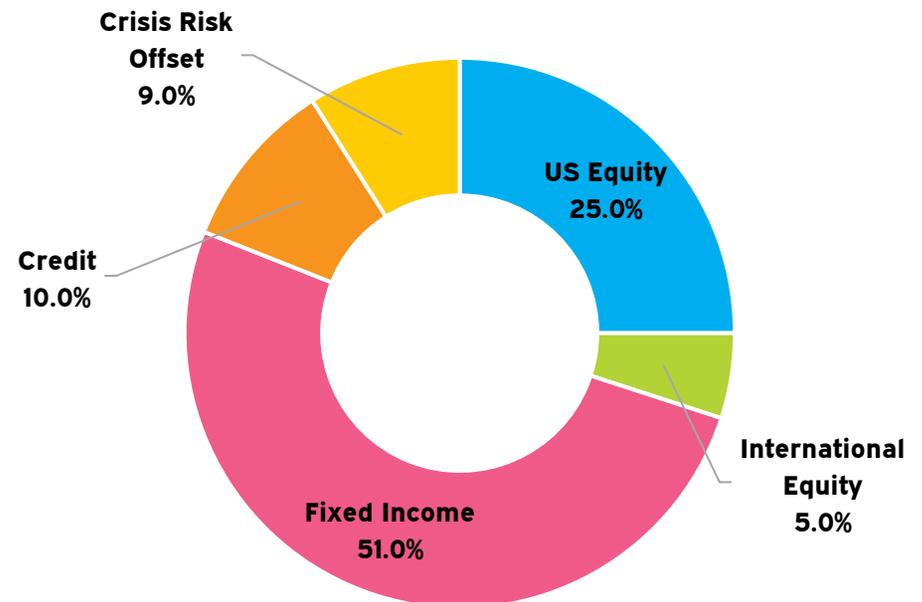
During 2024 Q1, the Board adopted a new long-term asset allocation policy as the result of the latest asset liability study.

- Crisis Risk Offset (CRO) currently represents 8.8% of OPFRS allocation as of June 30, 2024. The new target allocation for this asset class is 9%, marginally decreased from previous target of 10%.
- The objective of this class is to diversify both the equity risk and nominal interest rate risk of the total portfolio

Actual Allocation as of June 30, 2024



Long-Term Target Allocation



Role & Components of Crisis Risk Offset (CRO)

Expected Benefits and Key Metrics*

- 
Protection
- 
Positive Returns
- 
Liquidity
- 
Customization
- 
Portfolio Efficiency

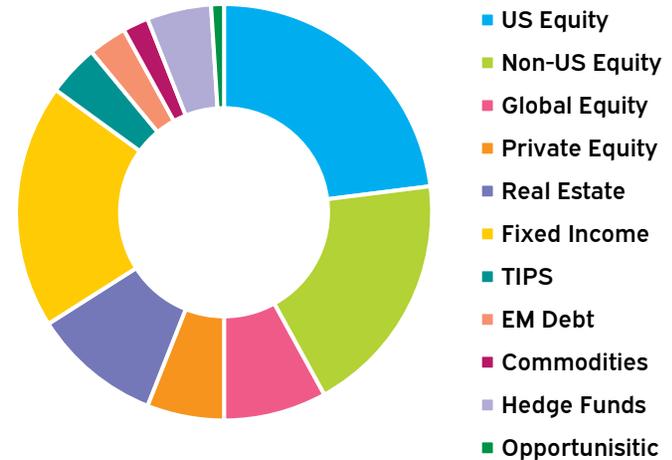
Jan. '05 – Dec. '23	RMS Benchmark	HFRI
Correlation to S&P 500	-0.12	0.82
Average Return During S&P 500 Drawdowns of at Least 10%	5.4%	-9.3%
Max Drawdown	-11.1%	-21.4%
Annualized Jensen's Alpha vs. S&P 500	2.9%	0.7%
Annualized Return	4.0%	4.9%

* Source: eVestment. HFRI FWC = HFRI Fund Weighted Composite Index. Please see "RMS Benchmark Composition" methodology in the Appendix. January 2005 through December 2023. The Jensen's Alpha calculation is the excess return of a portfolio relative to a benchmark after accounting for the portfolio's risk (i.e., a portfolio's beta relative to a benchmark such as the S&P 500)

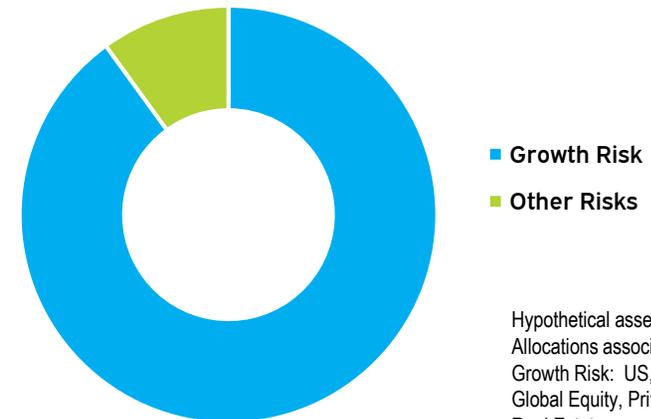
Examining Portfolio Risk Factors

- Investors construct portfolios through a strategic asset allocation process.
- The goal of the process is to achieve a certain level of return given a level of accepted risk.
- Most investment portfolios appear highly diversified by strategy name.
- However, assets oriented to economic growth (e.g., equities) are the overwhelming risk exposure. This is in part due to both the higher volatility and direct link of many of these assets to the global economy.

Example Asset Allocation



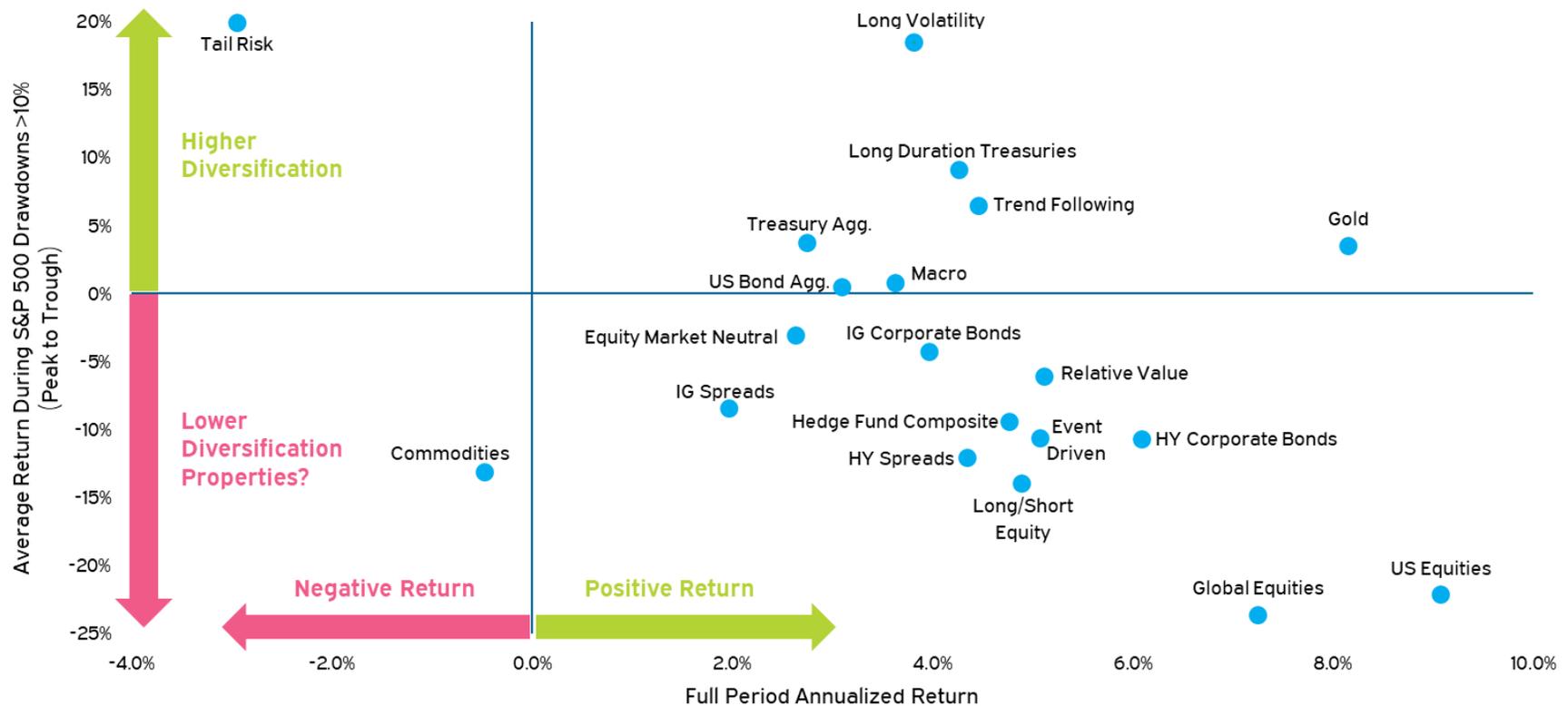
Resulting Risk Allocation



Hypothetical asset allocation. Allocations associated with Growth Risk: US, International, Global Equity, Private Equity, Real Estate

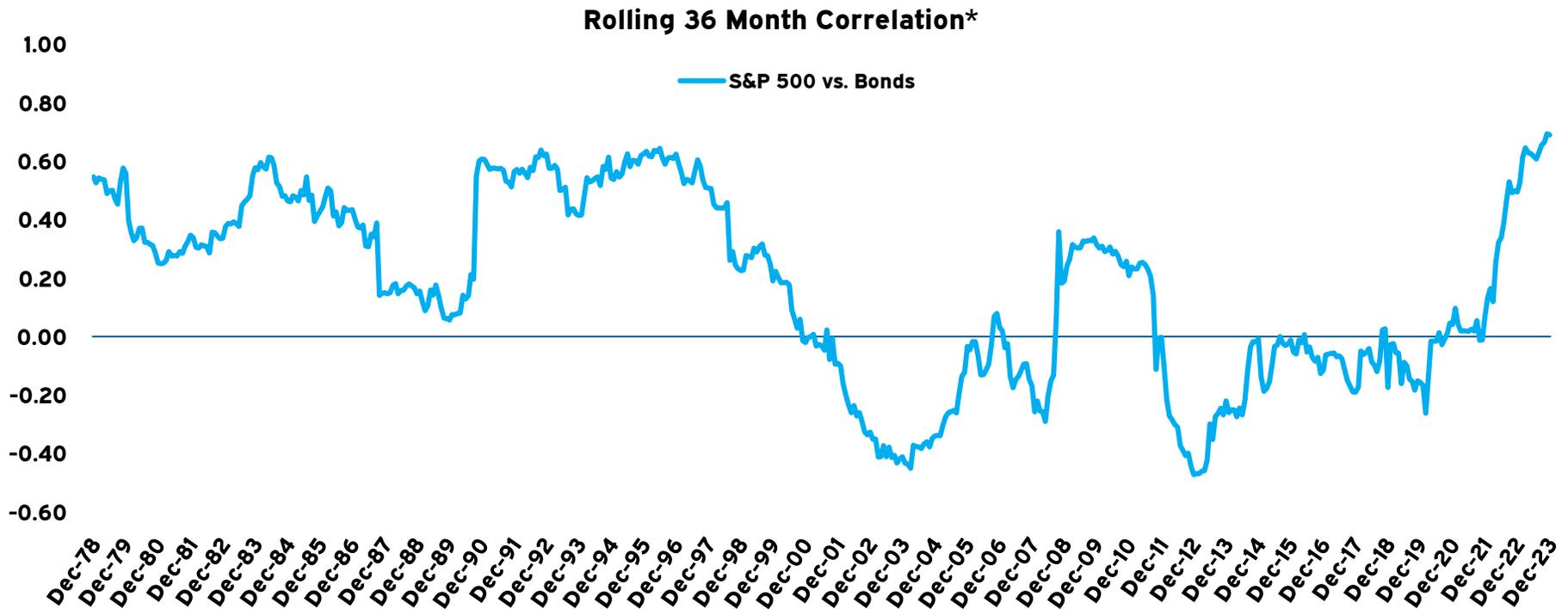
Sources of Diversification (Jan. '05 – Dec. '23)*

- Label diversification does not necessarily lead to risk diversification.
- Future outcomes may depend on factors such as central bank policy, fiscal policy, growth, inflation, geopolitics and industry/company fundamentals.
- Various strategies may provide a higher probability of hedging different types of equity drawdowns.



* Monthly data points from January 2005 through December 2023 (except Tail Risk, which has a dataset that began January 2008). Indices used are as follows: Trend Following = SG Trend; Long Volatility = CBOE Eurekahedge Long Vol.; Long Duration Treasuries = Bloomberg 20Y+ UST; Treasury Agg. = Bloomberg Treasury Agg.; US Bond Agg. = Bloomberg US Agg.; Macro = HFRI Macro; Equity Market Neutral = HFRI Equity Market Neutral; IG Corporate Bonds = Bloomberg US Investment Grade Corporate Bonds; Relative Value = HFRI Relative Value; Hedge Funds = HFRI Fund Weighted Composite; Event Driven = HFRI Event Driven; High Yield Corporate Bonds = Bloomberg US High Yield Corporate Bonds; Global Equities = MSCI ACWI; US Equities = S&P 500; Gold = "GLD" ETF; Commodities = Bloomberg Commodities; Tail Risk = CBOE Eurekahedge Tail Risk; Long/Short Equity = HFRI Equity Hedge; IG Spreads and HY Spreads = "LQDH" and "HYGH" ETFs with data prior to their first full month inception (June 2014) being a broad IG and HY corporate bond index less duration, plus 3M T-Bills, in order to approximate the credit spread return

Evaluating the Utilization of Bonds as a Source of Diversification

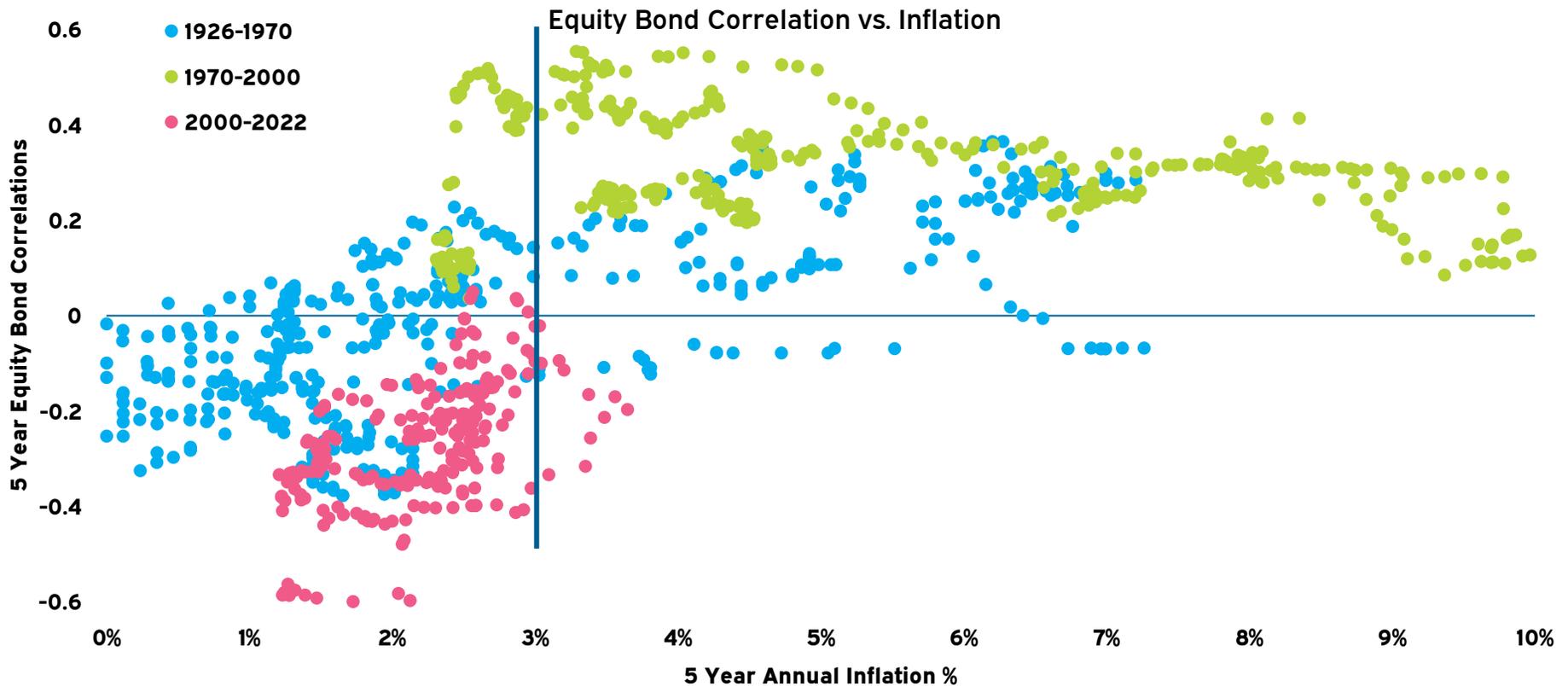


→ The correlation between equities and bonds is not structurally negative.

→ Going from a negative correlation to a less negative correlation still poses a risk to the efficacy of using bonds to hedge equity risk.

* Source: eVestment. Bonds = Bloomberg US Aggregate. As of December 2023

Evaluating the Utilization of Bonds as a Source of Diversification



→ From 1926 to May 2022, equity and bond returns were positively correlated 90% of the time when inflation was greater than 3%.

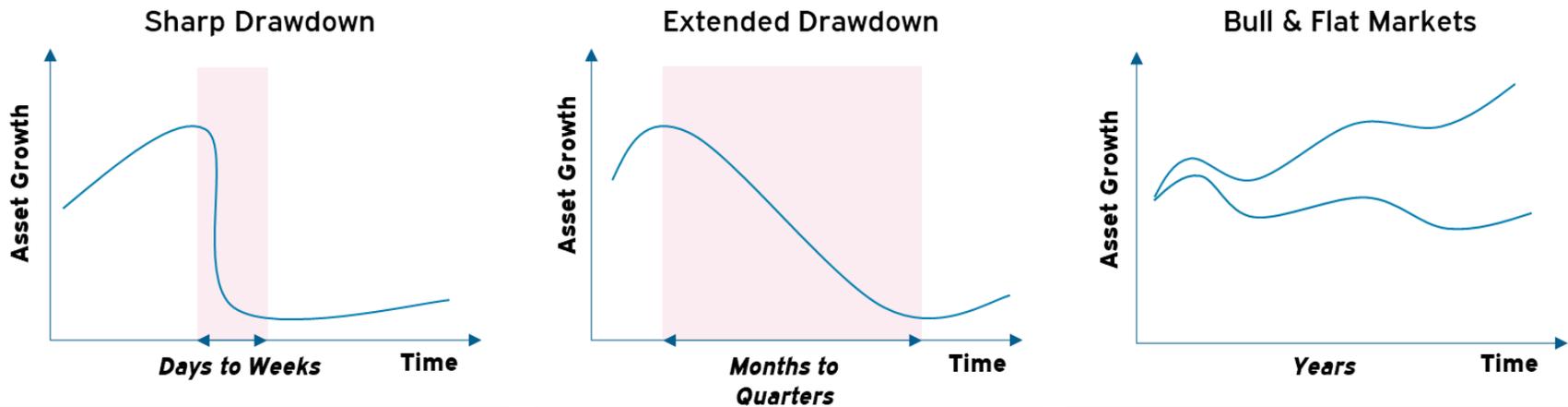
→ Since the year 2000, equity losses have been dampened by bond returns; however, a shifting macro environment may cause equity/bond correlations to behave differently in the future.

* Source: Source: Robert Shiller data and FRED 1926 – 2022 as of March 2022

Program Building Blocks

CRO / RMS programs are designed to:

- Provide diversification properties that are difficult to achieve in traditional asset classes.
- Have a positive long-term expected return, particularly during equity drawdowns.
- Be scalable and capital efficient to have a material impact to asset allocation.
- Provide liquidity for rebalancing and improve probabilities of meeting spending/liability requirements.
- Provide customization to meet the specific needs of investors.



First Responders

Primary Role: First line of protection in an equity drawdown

Strategy Examples: Long Volatility, Long Duration US Treasuries, Tail Risk Strategies

Second Responders

Primary Role: Second line of protection in an equity drawdown

Strategy Examples: Trend Following, CTAs, Managed Futures

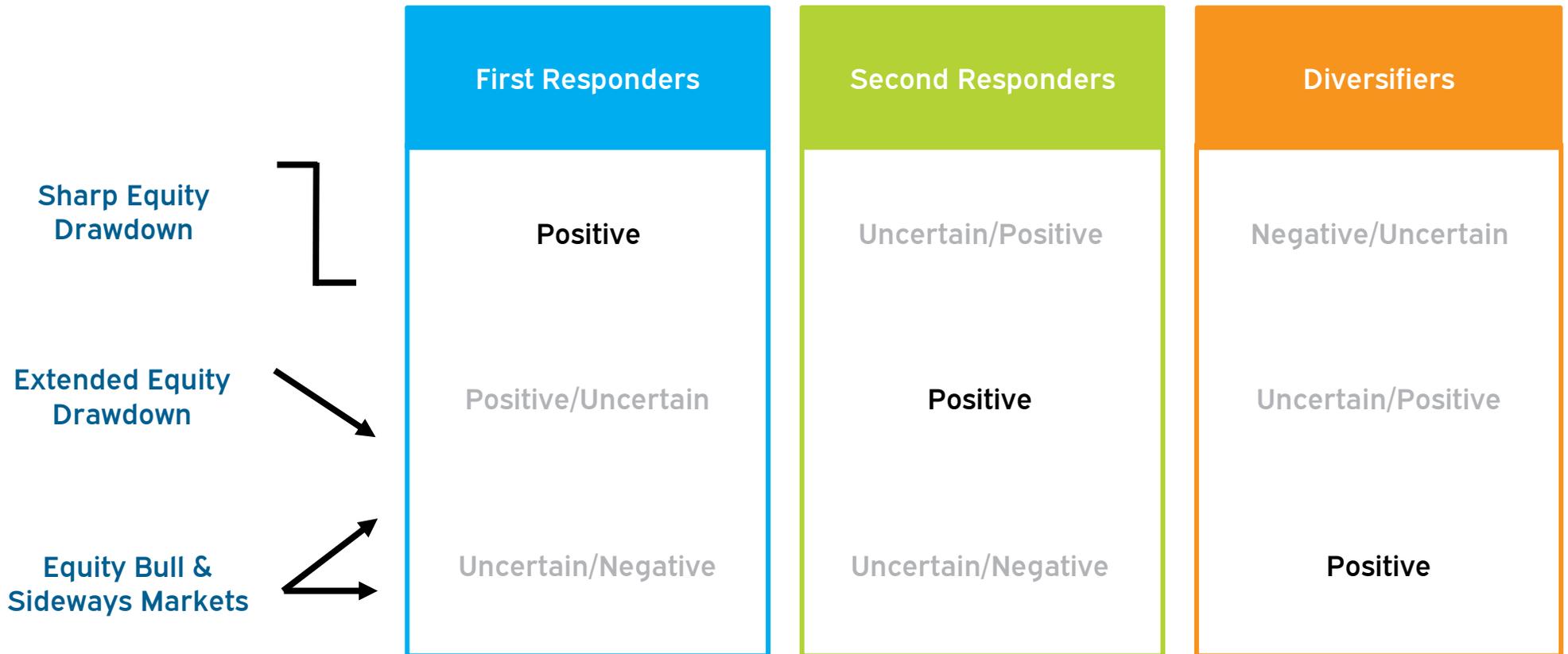
Diversifiers

Primary Role: Provide uncorrelated returns to stabilize 1st and 2nd responders

Strategy Examples: Global Macro, Multi-Strategy, Equity Market Neutral, Relative Value, Event-Driven, Insurance Linked, Alternative Risk Premia, etc.

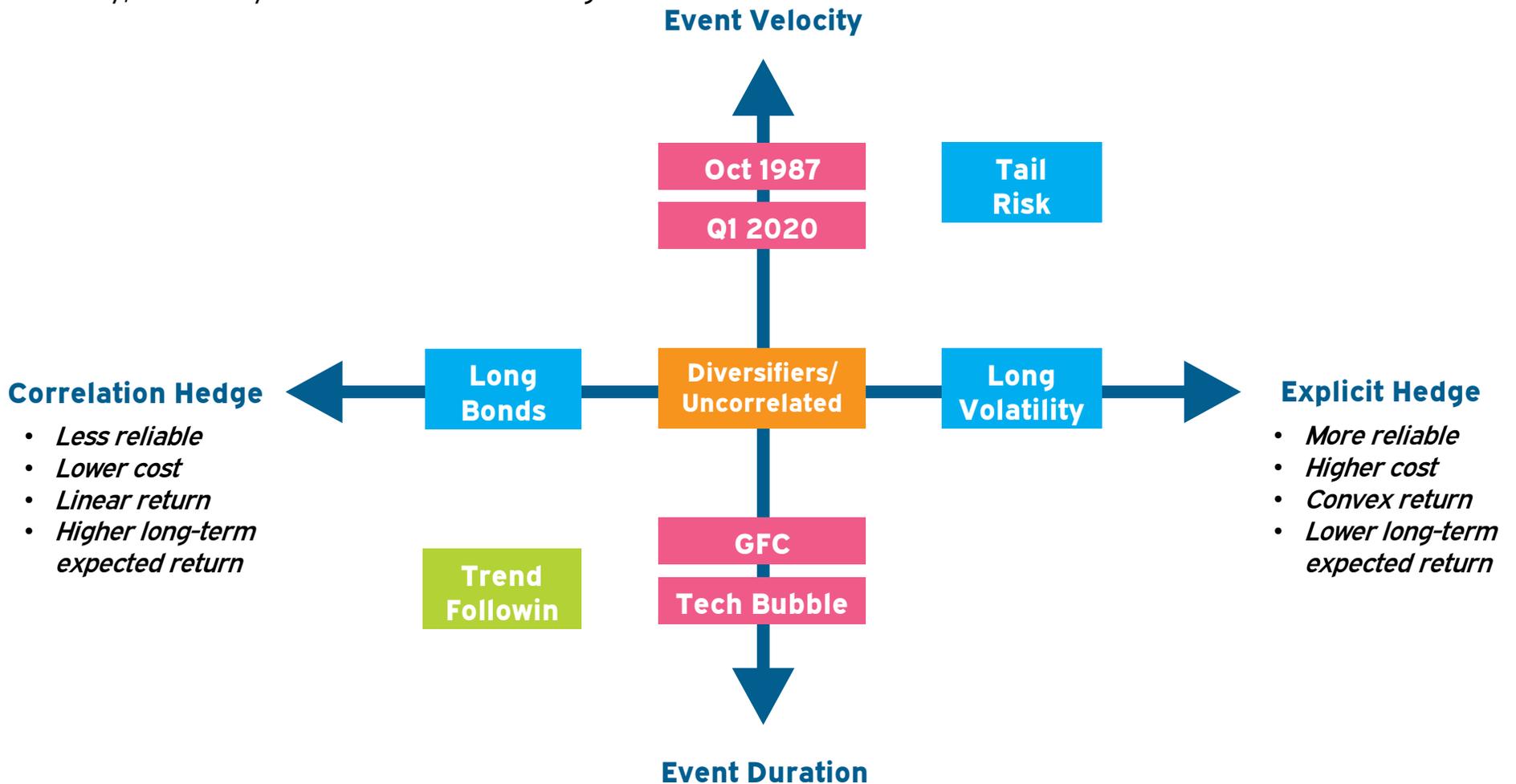
Components and Expected Outcomes

With varied expectations by strategy, allocating across multiple components increases the probability of achieving a desired result.



Program Designs Considerations

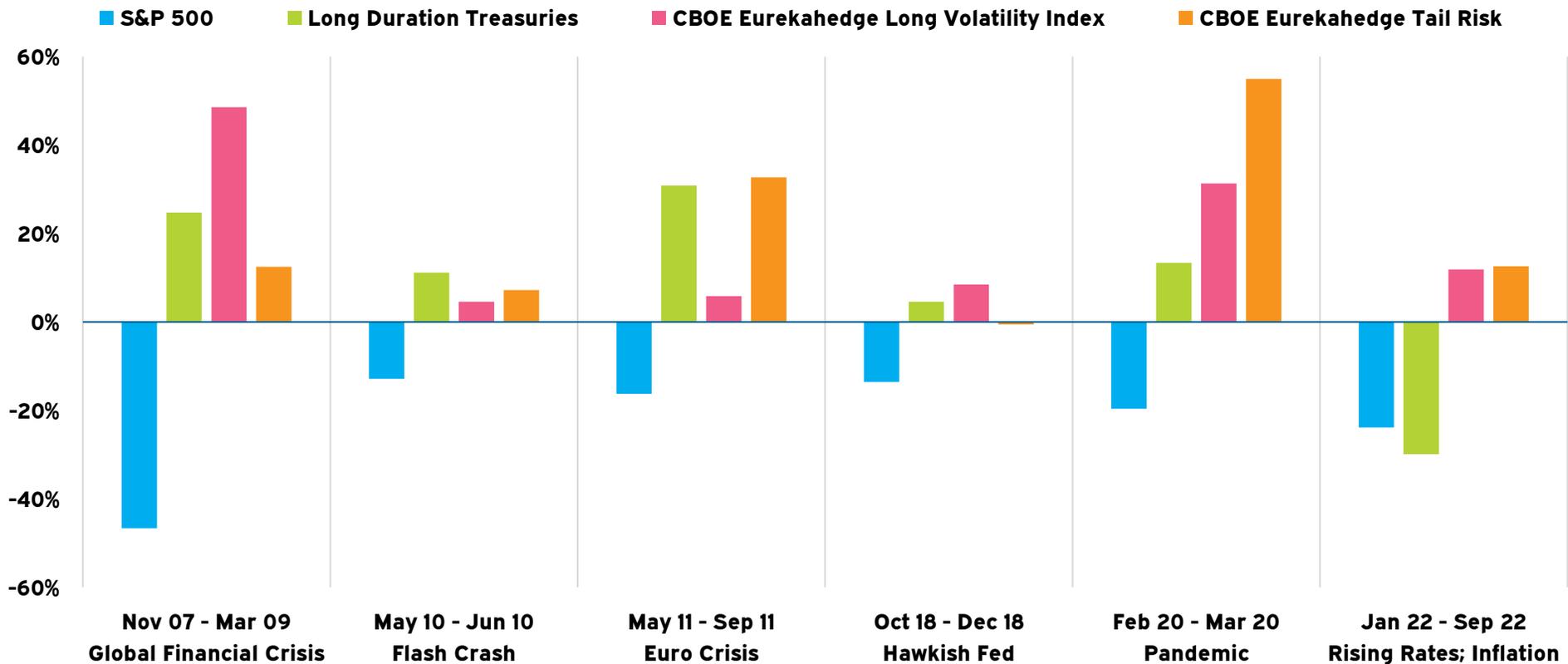
There are key tradeoffs to consider when building an RMS / CRO program, which revolve around cost, capital efficiency, convexity and asset class coverage.



First Responders

Correlation Hedge	Structural Hedge	Explicit Hedge
<p>Strategies: → Long US Treasuries</p>	<p>Strategies: → Long Volatility</p>	<p>Strategies: → Tail risk hedging</p>
<p>Performance Drivers: → Investors often seek high quality assets when markets decline</p>	<p>Performance Drivers: → Volatility increases as equity price changes accelerate</p>	<p>Performance Drivers: → Continual insurance payment for a guaranteed payoff</p>
<p>Most Effective When... → Flight-to-safety</p> 	<p>Most Effective When... → Increasing volatility</p> 	<p>Most Effective When... → Sharp drawdowns</p> 
<p>Least Effective When... → Rising rates</p> 	<p>Least Effective When... → Stable / low volatility</p> 	<p>Least Effective When... → Stable, bull markets</p> 
<p>Implementation Example → Buying 20+ year US Treasuries</p>	<p>Implementation Example → Buying CBOE VIX options</p>	<p>Implementation Example → Buying equity put options</p>
<p>Strategy Benefits → Well known → Low cost → Historically reliable</p>	<p>Strategy Benefits: → High certainty → High event payoffs → Flexible implementation</p>	<p>Strategy Benefits: → Guaranteed payoff → Targets specific levels → Highest payoff</p>
<p>Things to consider... → Relies on the behavior of others → Negative real yields → Changing correlations?</p>	<p>Things to consider... → Low expected returns → Complexity → Ability to hold</p>	<p>Things to consider... → Explicit ongoing cost → Most difficult to hold → Counterparty risk</p>

First Responders Returns During S&P 500 Drawdowns of at Least 10%*



→ RMS is designed to protect against short and long-term market shocks.

→ Gains from RMS during market dislocations can potentially be used to rebalance, fund spending/liabilities, fund capital calls from private investments, etc.

→ Factors such as liquidity, RMS program design, and overall client objectives need to be considered.

* Source: eVestment. Jan. '05 through Dec. '22 using monthly data. CBOE Eurekahedge Tail Risk Index began January 2008.

Second Responders

Strategies:

- Trend Following

Performance Drivers:

- Markets often exhibit persistent trends driven by behavioral, economic, or institution reasons

Most Effective When...

- Trending markets



Least Effective When...

- Sharp reversals, sideways markets



Dynamic Positioning:

- Long Bonds in March of 2020, benefiting from flight-to-quality
- Short Bonds in 2022 hedging against inflationary

Strategy Benefits:

- Positive expected returns
- Negative conditional correlations

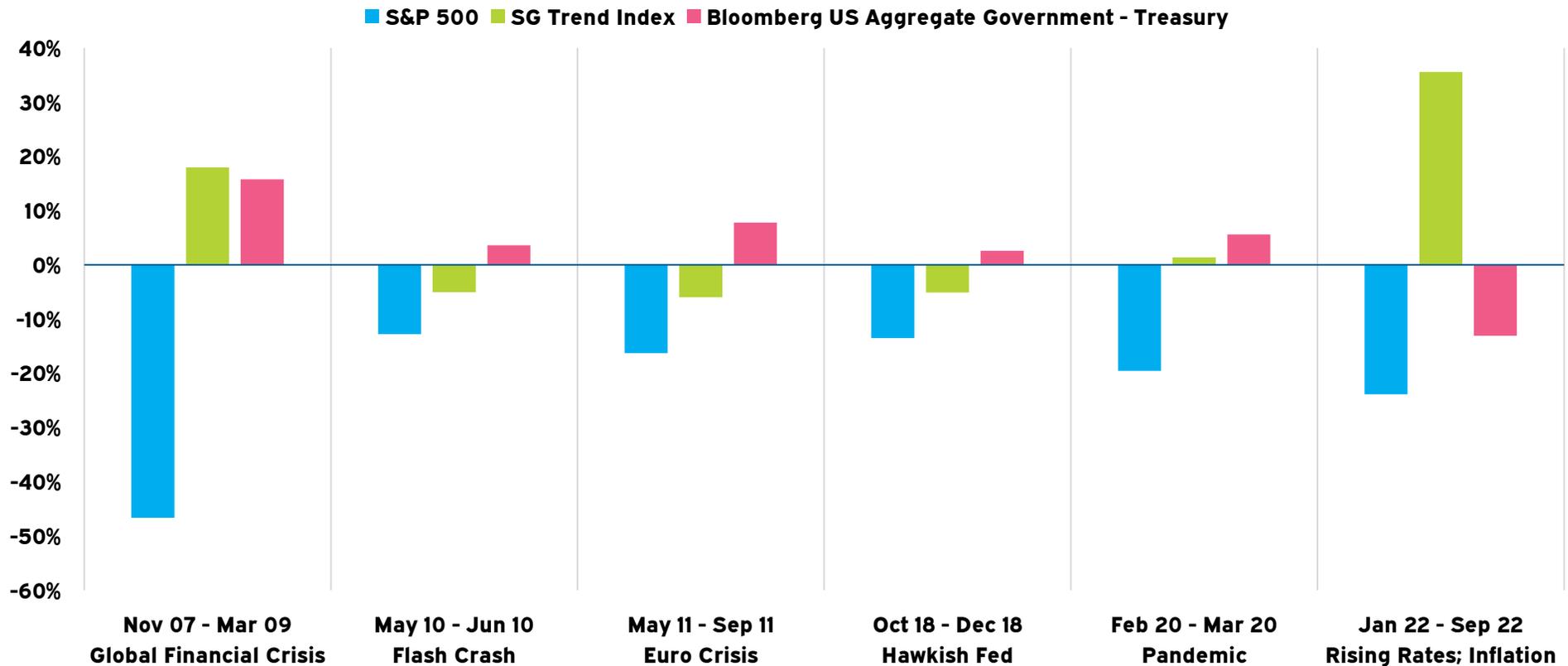
Things to consider...

- Basis risk
- Divergent profile (many small losses with large positive outliers)

Second Responders Description

- Strategies that follow pre-defined rules (i.e., systematic implementations) for trading (long and short) liquid futures and forwards contracts.
- Trade futures/forwards across global equity indices, interest rates/bonds, currencies, and commodities.
- Example instruments may include; S&P 500 futures, US 10-year treasury futures, Oil futures, and USD/EUR forwards.
- Simplistic explanation: strategies that buy an asset when it has a positive return over recent history and sell an asset when it has a negative return over recent history.
- Trend following strategies have been used for decades with live manager track records dating back to the 1970s.
- With no structural long or short bias, trend following exhibits low-to-no correlation on average to major market risks.
- Trend following has exhibited a negative conditional correlation to equity markets during drawdown periods resulting in a convex return profile.
- The best returns for trend following strategies have typically occurred during the best and worst periods for equities.
- Trend following typically underperforms in sideways markets or at fulcrum points when markets reverse up (or down) after a sustained trend, creating a drawdown profile that is complementary to equities.

Second Responders Returns During S&P 500 Drawdowns of at Least 10%*



→ RMS is designed to protect against short and long-term market shocks.

→ Gains from RMS during market dislocations can potentially be used to rebalance, fund spending/liabilities, fund capital calls from private investments, etc.

→ Factors such as liquidity, RMS program design, and overall client objectives need to be considered.

* Source: eVestment. Jan. '05 through Dec. '22 using monthly data.

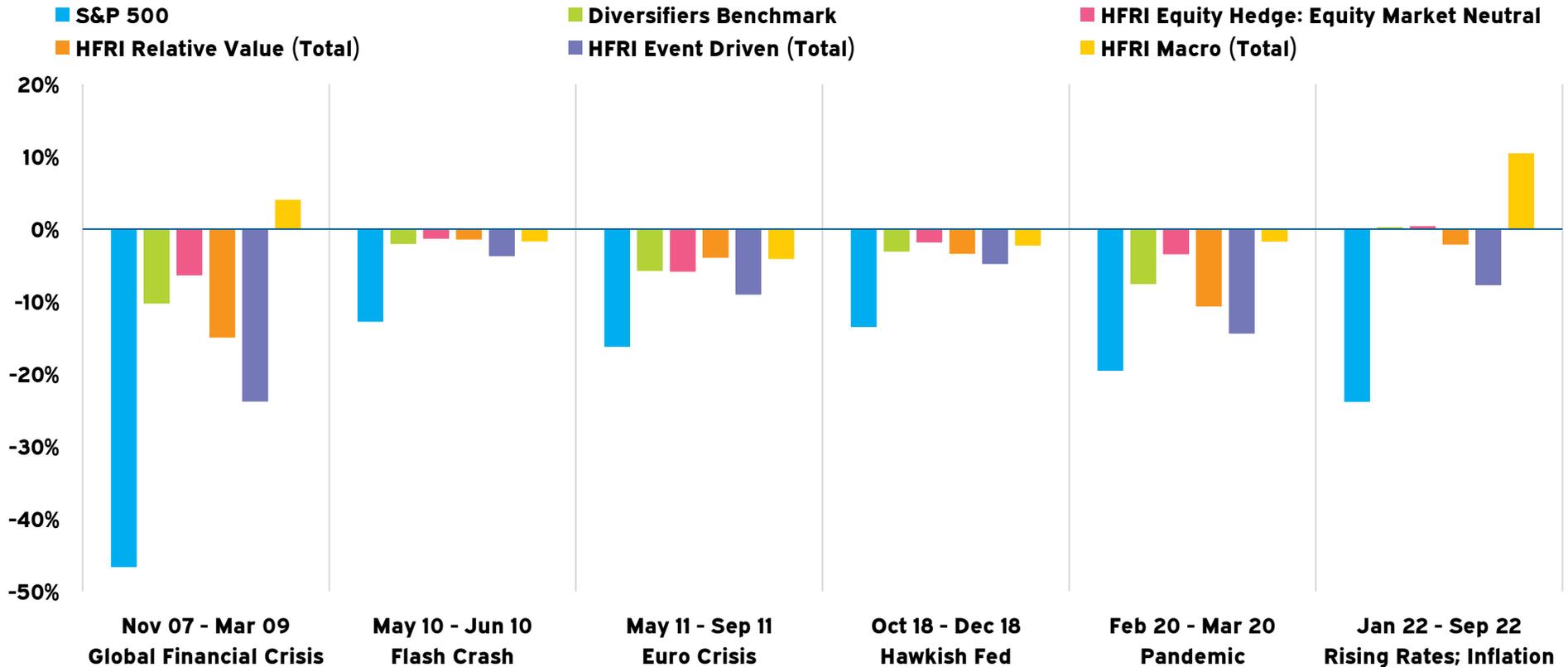
Diversifiers Description

In aggregate or isolation, Diversifiers seek to meet several key criteria:

- Higher expected risk-adjusted returns than First and Second Responders.
- Uncorrelated to First and Second Responders.
- Uncorrelated to traditional risk factors (e.g., equities, credit spreads, rates) on average.

Diversifiers	Global Macro	Alternative Risk Premia	Insurance Linked Strategies
	<p>Summary</p> <ul style="list-style-type: none"> → Attempts to profit by predicting market moves or finding inefficiencies through systematic and / or discretionary analysis <p>Common Implementation:</p> <ul style="list-style-type: none"> → Liquid global futures / forwards contracts across equities, bonds, currencies, and commodities 	<p>Summary</p> <ul style="list-style-type: none"> → Harvests non-traditional risk premiums in a market neutral fashion (Value, Carry, Momentum) <p>Common Implementation:</p> <ul style="list-style-type: none"> → Liquid global futures / forwards contracts across equities, bonds, currencies, and commodities → Single name equities 	<p>Summary</p> <ul style="list-style-type: none"> → Harvests a risk premium linked to property damage insurance contracts related to natural catastrophes <p>Common Implementation:</p> <ul style="list-style-type: none"> → Modestly illiquid reinsurance contracts
	Relative Value / Event Driven	Equity Market Neutral	Multi-Strategy
	<p>Summary</p> <ul style="list-style-type: none"> → Attempts to profit from market inefficiencies related to idiosyncratic events or relative value opportunities <p>Common Implementation:</p> <ul style="list-style-type: none"> → Liquid global futures / forwards contracts across equities, bonds, currencies, and commodities → Single name equities 	<p>Summary</p> <ul style="list-style-type: none"> → Uses a systematic approach to profit from pricing anomalies related to mean reversion or technical analysis <p>Common Implementation:</p> <ul style="list-style-type: none"> → Single name equities 	<p>Summary</p> <ul style="list-style-type: none"> → A diversified portfolio of multiple investment strategies or portfolio managers <p>Common Implementation:</p> <ul style="list-style-type: none"> → Liquid global futures / forwards contracts across equities, bonds, currencies, and commodities → Single name equities

Diversifiers' Returns During S&P 500 Drawdowns of at Least 10%*



- RMS is designed to protect against short and long-term market shocks.
- Gains from RMS during market dislocations can potentially be used to rebalance, fund spending/liabilities, fund capital calls from private investments, etc.
- Factors such as liquidity, RMS program design, and overall client objectives need to be considered.

* Source: eVestment. Jan. '05 through Dec. '22 using monthly data. "Diversifiers Benchmark" is an equally weighted, annually rebalanced composite of the following HFRI indices: Macro, Event Driven, Equity Market Neutral, Relative Value.

Implementations

→ Standalone allocation to complement an existing asset class while seeking to increase diversification

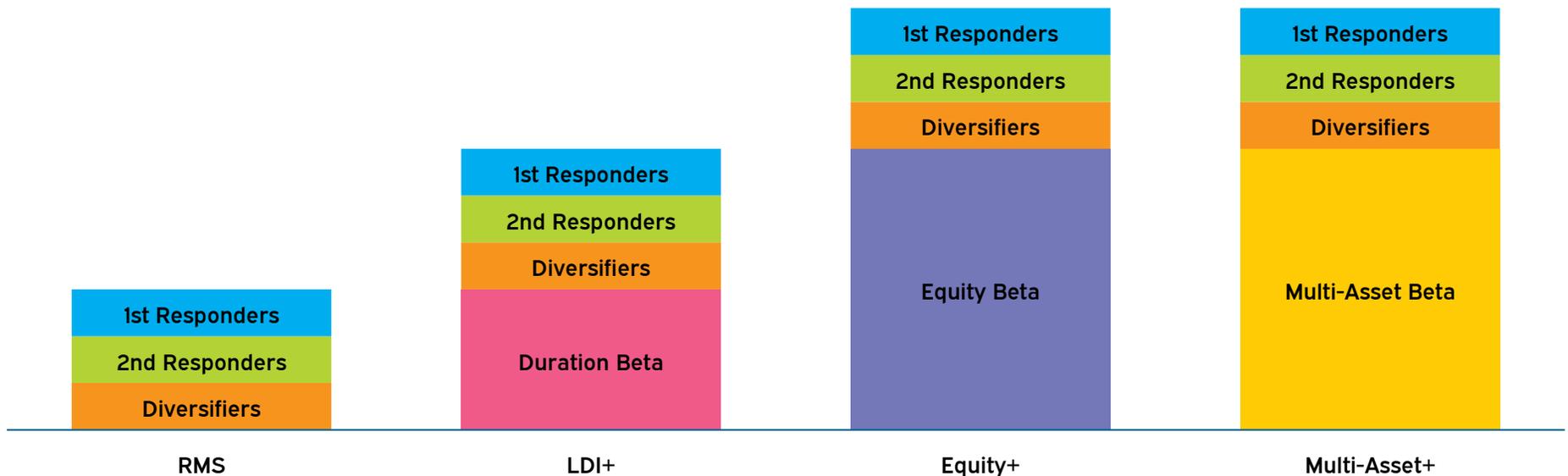
Example: potential asymmetric risks of equity and fixed income allocations

→ Combine with duration beta to complement traditional LDI strategies

Example: replace credit spread risk of investment grade corporate bonds

→ Combine with equity beta to complement traditional active long-only equity allocations

Example: potential lack of meaningful persistent alpha in active US Large Cap strategies

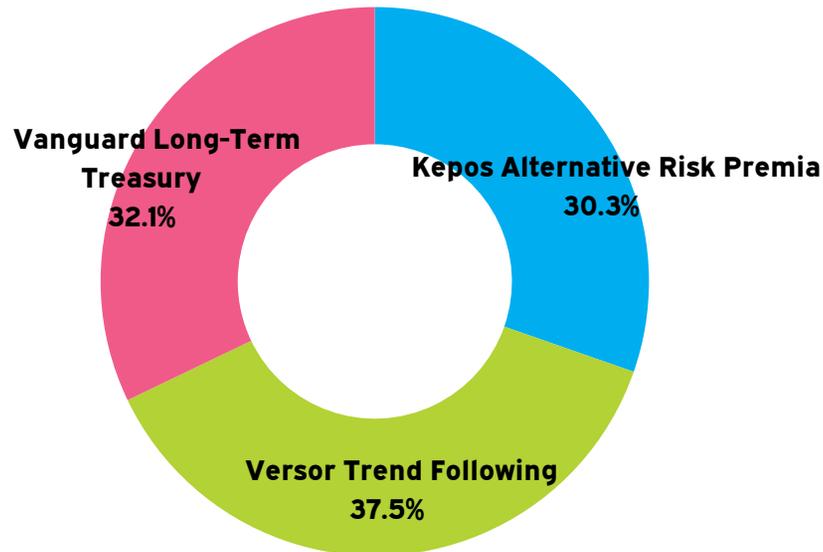


Current Composition in OPFRS Portfolio

Crisis Risk Offset Composition

- OPFRS's Crisis Risk Offset portfolio is composed of three components: Alternative Risk Premia, Systematic Trend Following, and Long Duration Treasuries with equally weighted targets (~33.3% each).
- The following chart illustrates the actual allocations as of June 30, 2024.

Actual Allocation as of June 30, 2024



The sector and credit quality allocation and characteristics data is as of March 31, 2024.

Correlations between CRO & Other Asset Classes

- The objective of CRO component is to diversify both the equity risk and nominal interest rate risk of the total portfolio; and is designed for it to exhibit returns and characteristics with little to no correlation to other components of the portfolio.
- The following table illustrates the trailing correlations between CRO and the Plan’s other asset classes.
 - Since inception in August 2018, CRO segment has exhibited less than ± 0.50 correlations to most other asset classes.

CRO Correlation to:	YTD	1-Yr	3-Yr	5-Yr	Since Inception
US Equity	-0.33	0.44	0.63	0.14	0.34
International Equity	0.17	0.64	0.76	0.08	0.31
Fixed Income	-0.10	0.43	0.30	0.46	0.38
Credit	0.54	0.70	0.13	0.53	0.51
Covered Calls	0.20	0.51	0.06	0.33	0.39

Correlation < ± 0.50 is highlighted with green in this table with the deepest shade for those under ± 0.20 .

Correlations may range from -1.0 (inversely correlated) to 1.0 (directly correlated). Lower value, regardless of positive or negative sign would be preferable for the purposes of diversification.

Correlation data is as of June 30, 2024. Inception date for Crisis Risk Offset component is August 2018.

Annualized Performance – Net of Fees (as of June 30, 2024)

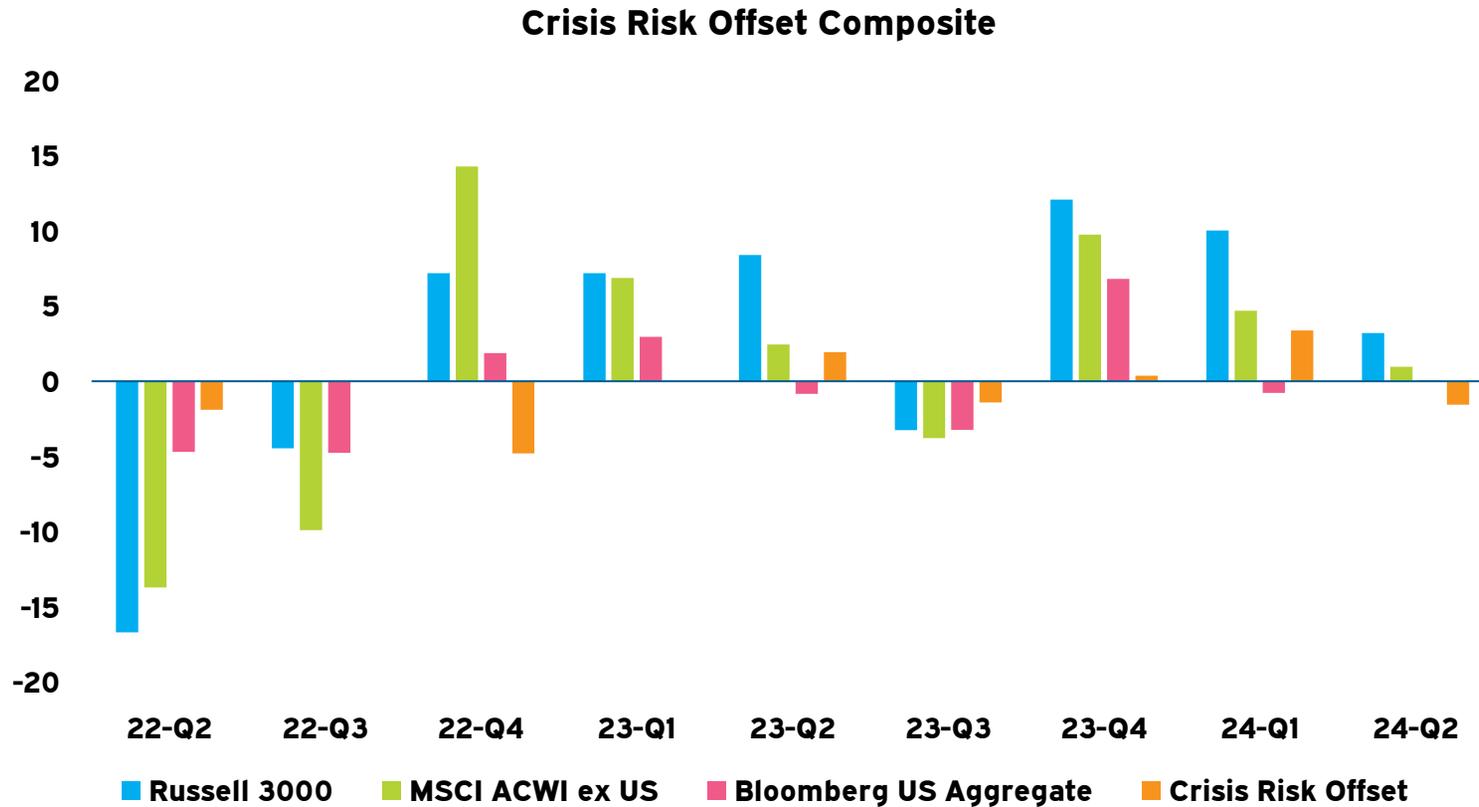
	1-Yr	3-Yr	5-Yr	Since Inception	Inception Date
Crisis Risk Offset	0.7	-3.3	-7.3	-6.7	Aug-18
<i>Crisis Risk Offset Benchmark</i>	3.6	4.3	0.7	0.7	
Excess Return	-2.9	-7.6	-8.0	-7.4	
Kepos Alternative Risk Premia	15.7	--	--	8.3	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>	11.0	--	--	7.6	
Excess Return	4.7	--	--	0.7	
Versor Trend Following	-3.6	--	--	-0.0	Apr-22
<i>SG Trend Index</i>	4.0	--	--	5.5	
Excess Return	-7.6	--	--	-5.5	
Vanguard Long-Term Treasury ETF	-5.7	-10.5	-4.3	-4.3	Jul-19
<i>Blmbg. U.S. Government: Long Term Bond Index</i>	-5.6	-10.4	-4.2	-4.2	
Excess Return	-0.1	-0.1	-0.1	-0.1	

→ As Kepos and Versor were incepted in early 2022, they have not gone through a complete business cycle and does not have trailing returns longer than 1 year.

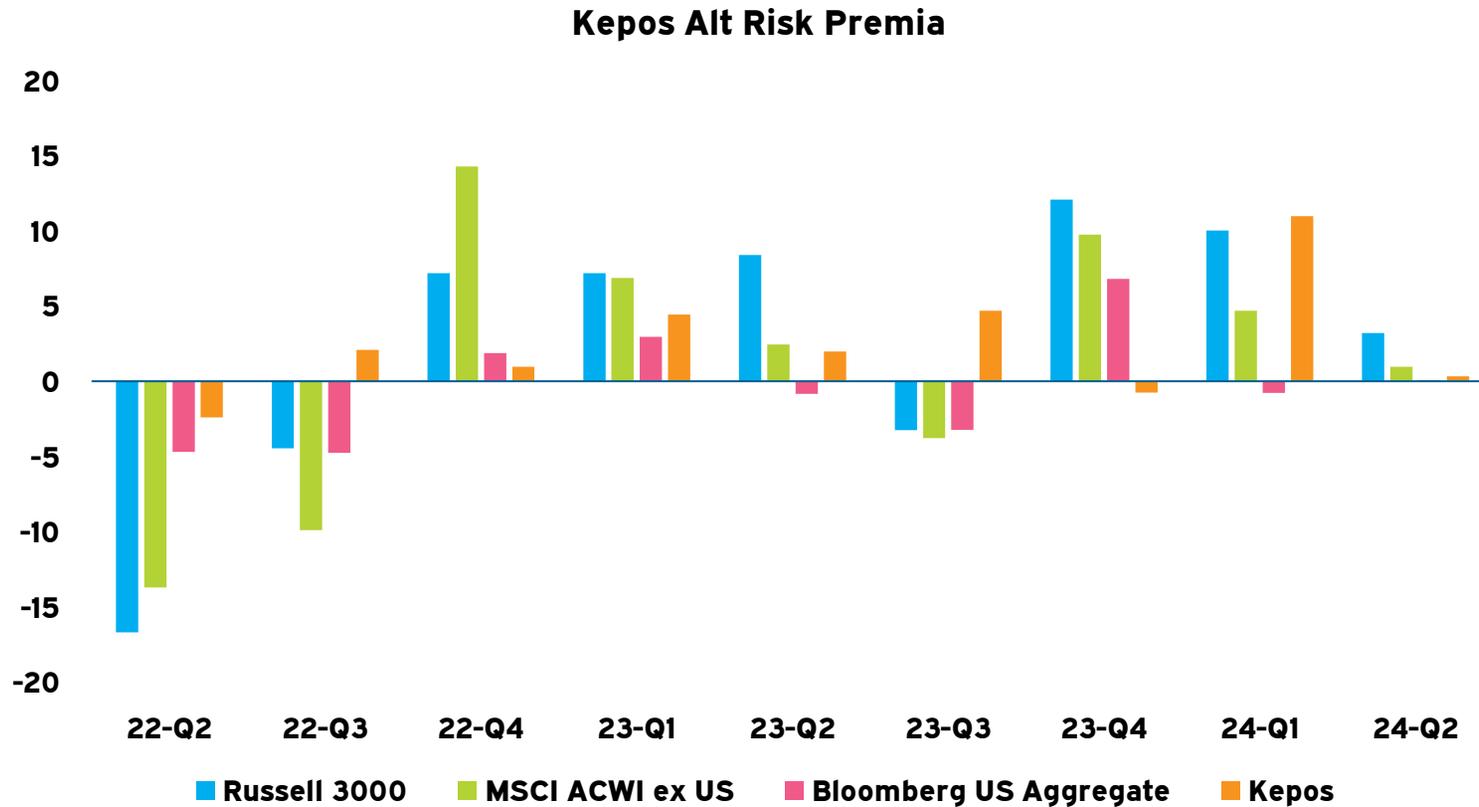
→ The following pages illustrate CRO and the three underlying funds' quarterly returns since 2022 Q2 (when all current managers are invested) in comparison with the broad market indices.

Crisis Risk Offset Benchmark is 100.0% SG Multi Alternative Risk Premia Index since inception through 12/02022; 33.3% SG Trend Index, 33.3% SG Multi Alternative Risk Premia Index, 33.3% Blmbg. U.S. Government: Long Term Bond Index thereafter.

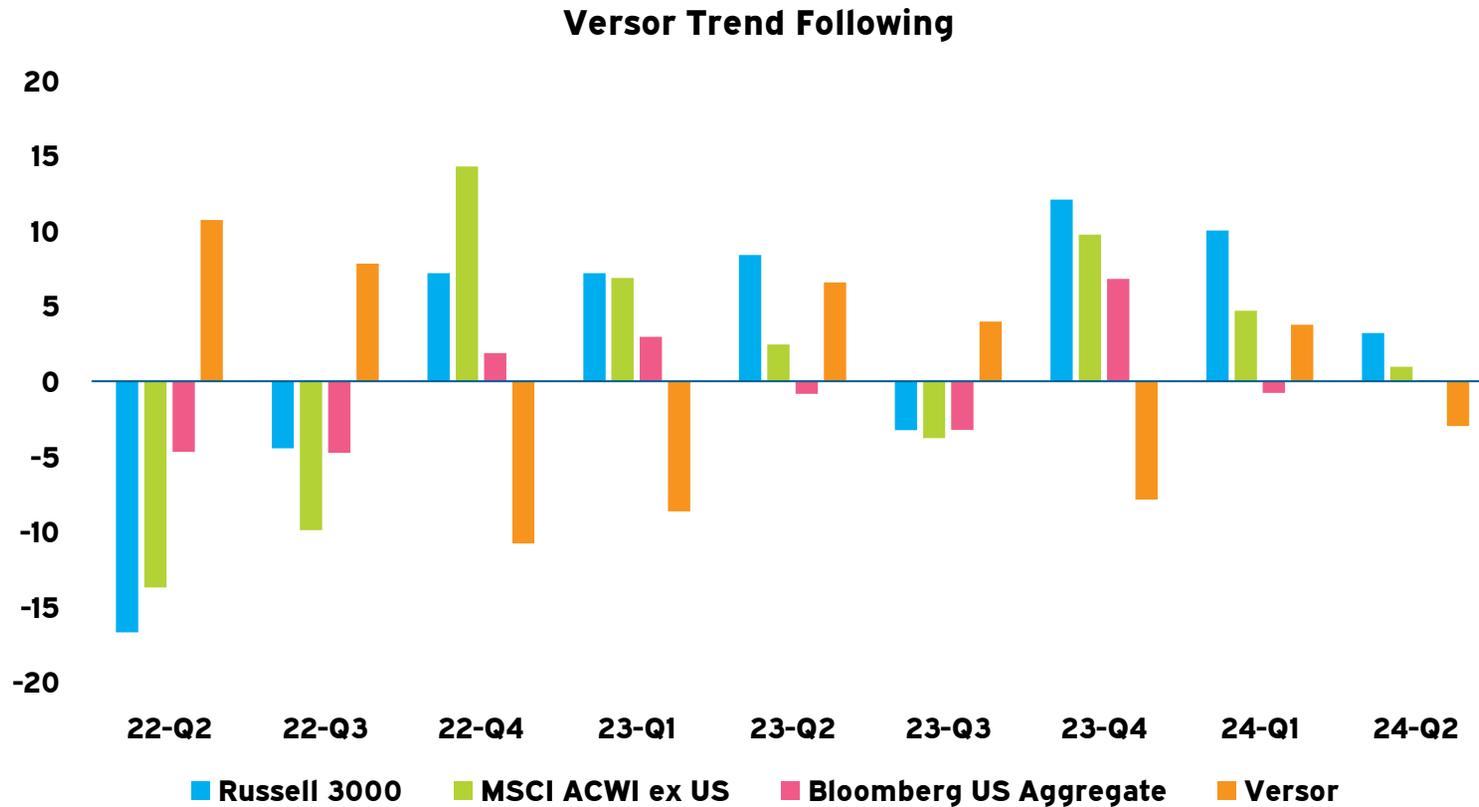
Quarterly Performance Since 2022 Q2



Quarterly Performance Since 2022 Q2

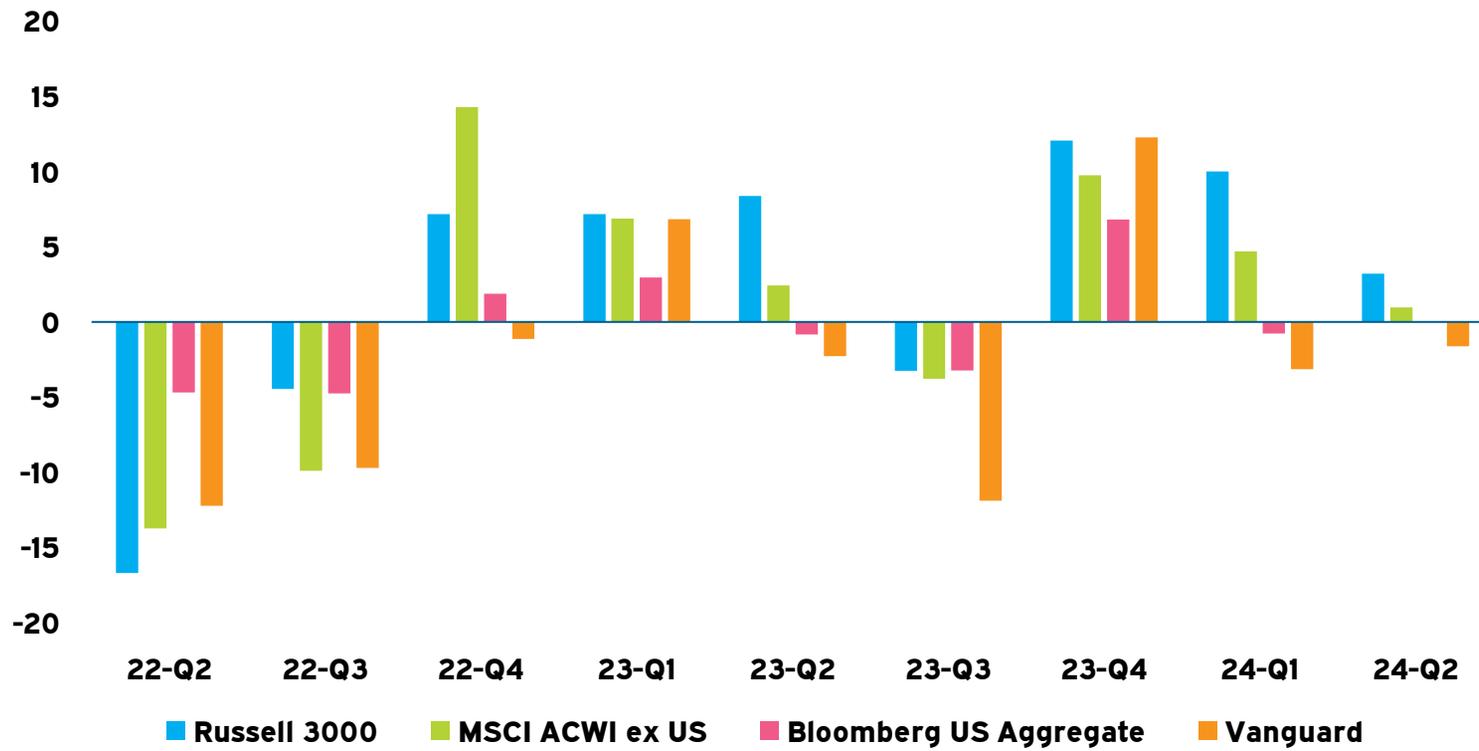


Quarterly Performance Since 2022 Q2



Quarterly Performance Since 2022 Q2

Vanguard Long-Term Treasury



Recommendations

Recommendations

OPFRS's CRO component and the underlying managers has performed and exhibited characteristics expected.

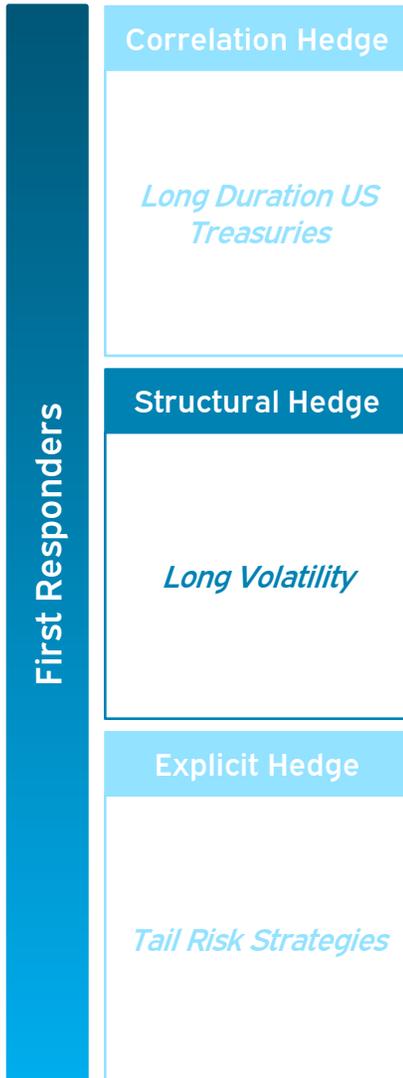
→ **Meketa recommends maintaining the current structure and manager composition of the Crisis Risk Offset segment.**

Appendix

First Responders: Correlation Hedge Description

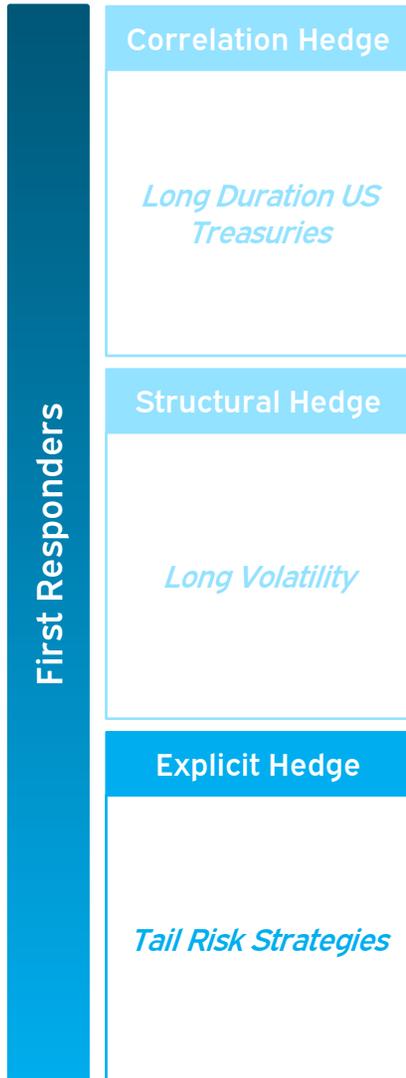
First Responders	Correlation Hedge
	<i>Long Duration US Treasuries</i>
	Structural Hedge
	<i>Long Volatility</i>
	Explicit Hedge
	<i>Tail Risk Strategies</i>

- Long Duration US Treasuries are a correlation hedge against an equity drawdown.
- This strategy makes investments in long-term (20+ year) US Treasury Bonds.
- They are perhaps the most used defensive asset used historically by institutions.
- Given the perceived risk-free characteristics of all US government-issued debt, treasuries have historically behaved as a “safe haven” asset during times of crisis.
- As equity market declines have generally coincided with declines in interest rates, holding longer duration bonds magnifies their defensive impact.
- As a correlation hedge however, their behavior during an equity drawdown is reliant on the actions of other investors in market separate from equities.
- While void of equity risk, these bonds have a material amount of interest rate risk.
- If a rising rate environment triggers an equity drawdown or period of crisis, the treasuries could face material losses or reduced effectiveness as a hedge to equities.
- This strategy offers the highest expected return vs. other first responders. Although this gap has shrunk meaningfully as rates have fallen and inflation has risen.
- In addition, this is the least complex, lowest fee, and most liquid strategy that can be implemented as a part of an RMS portfolio.



First Responders: Structural Hedge Description

- Long Volatility strategies are a **structural hedge** against an equity drawdown.
- This is the second most direct form of equity drawdown insurance, benefiting from structural attributes.
- Long volatility strategies purchase derivative securities which are linked to the volatility of equity, fixed income, currency, and / or commodity volatility.
- The strategy profits as market volatility rises or is higher than anticipated.
- Equity market corrections or drawdowns tend to be accompanied by sharp increases in volatility so strategies that are long equity volatility will profit.
- Long volatility strategies have a higher expected return than tail risk but still likely to lose -1% to -5% per annum during benign periods.
- During major market drawdowns they should generate a return of 0.5x to 1.5x of the corresponding equity drawdown.
- Long volatility strategies can suffer from basis risk in their expected defensive performance to equity drawdowns if they have small or no allocation to equities.
- These strategies are often found in traditional hedge fund structures of 2/20% with extended (quarterly+ liquidity) but an increasing number of institutional solutions are coming to market with flat fees and monthly or better liquidity.



First Responders: Explicit Hedge Description

- Tail risk strategies are an **explicit hedge** against an equity drawdown.
- Implementation utilizes derivatives which allows for substantial payoffs during market crisis situations due their inherent leverage.
- Most basic implementation consists of buying equity put options. This involves paying a premium to have the option to sell equities at a pre-specified price in the future.
- Strategies can target a specific equity drawdown level and a specific amount of the portfolio to protect.
- For example, a strategy could be implemented which would preserve 100% of an investor's equity portfolio in the event of a 20% equity drawdown.
- The strategy can effectively set a maximum loss level for a portfolio.
- The key drawback is that, ignoring interim profit harvesting, 100% of the premium spent will be lost if an equity drawdown of that magnitude does not occur.
- Due the to the on-going cost of holding an option, this type of strategy has a negative expected return.
- However, tail risk strategies are the most reliable way to hedge a portfolio. Aside from counterparty risk considerations, they are guaranteed to payoff.
- These strategies are implemented in an overlay or separate account format.

RMS Benchmark Composition

RMS Benchmark is equally weighted, rebalanced each calendar year

- 1/3rd First Responders Benchmark
- 1/3rd Second Responders Benchmark
- 1/3rd Diversifiers Benchmark

First Responders Benchmark*:

- 1/3rd equally weight, rebalanced each calendar year: CBOE Eureka hedge Long Volatility Index, CBOE Eureka hedge Tail Risk Index (incepted Jan-2008), Bloomberg US Treasury 20+ Years

Second Responders Benchmark:

- SG Trend Index

Diversifiers Benchmark: equally weighted; rebalanced each calendar year

- 25% HFRI Relative Value
- 25% HFRI Equity Market Neutral
- 25% HFRI Macro
- 25% HFRI Event Driven

* Since the CBOE Eureka hedge Tail Risk Index started in January 2008 the First Responders Benchmark uses an equal weighting of the other two benchmarks prior to January 2008

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AGENDA REPORT

TO: Oakland Police and Fire Retirement System (PFRS) Board of Administration

FROM: David F. Jones
Plan Administrator & Secretary

SUBJECT: Expiration Notice of PFRS Investment Manager Service Agreement and Action to Extend Service Agreement

DATE: September 25, 2024

SUMMARY

The Service Contract for the following Investment Manager for the Oakland Police & Fire Retirement Systems (PFRS) is set to expire December 31, 2024. The PFRS Board is asked to consider acting to extend the agreement for this manager for one additional year pursuant to the professional service agreement.

BACKGROUND

The Professional Service Agreement for the following Investment Manager who provides services for the PFRS Board will expire shortly. The following table describes the investment manager contract:

Investment Manager	Investment Strategy	Inception Date	Contract Extension Expiration Date
Ramirez Asset Management	Core Fixed Income	January 1, 2017	December 31, 2024

RECOMMENDATION

Staff recommends that the PFRS Board approve the implementation of the relevant service agreement provision for the manager to extend the professional service agreement between the above mentioned PFRS Investment Manager and PFRS.

Respectfully submitted,

David F. Jones
Plan Administrator & Secretary
Oakland Police and Fire Retirement System

MEMORANDUM

TO: Oakland Police and Fire Retirement System (“OPFRS”)
FROM: Meketa Investment Group (“Meketa”)
DATE: September 25, 2024
RE: Ramirez Core Fixed Income—Contract Extension

Manager: Ramirez Asset Management

Inception Date:	February 2017	OPFRS AUM (8/31/2024):	\$ 75.9 million
Strategy:	Core Fixed Income	Strategy AUM (6/30/2024):	\$ 2.7 billion
Benchmark:	Bloomberg US Aggregate Bond Index	Firm-wide AUM (6/30/2024):	\$ 11.4 billion

Summary & Recommendation

Ramirez has managed a portion of OPFRS’s Core Fixed Income portfolio since January 2017. As of 8/31/2024, the portfolio is approximately \$75.9 million or about 16.1% of OPFRS’s Total Fund. The strategy has performed within expectations and guidelines for the portfolio for all time periods measured, and has experienced no major organizational changes in the portfolio management team since last review in December 2023. **Therefore, Meketa does not have any major concerns with Ramirez and recommends that the Board retains Ramirez as a Core Fixed Income manager with a one-year contract extension.**

Investment Performance Review Summary

As of 8/31/2024, Ramirez Core Fixed Income portfolio has outperformed the benchmark over all time periods measured on both gross- and net-of-fees bases. In comparison with its peers in the eVestment US Core Fixed Income (Net) universe, it has ranked above average year-to-date and since inception..

OPFRS Portfolio Returns (as of 8/31/2024)¹

Portfolio	Balance (\$000)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	S.I. (%)	Inception Date
Ramirez Core (Gross)	75,868.8	3.9	3.6	7.7	-1.8	0.3	2.2	1/2017
<i>Bloomberg US Aggregate</i>	---	<i>3.8</i>	<i>3.1</i>	<i>7.3</i>	<i>-2.1</i>	<i>0.0</i>	<i>1.6</i>	---
Excess Return	---	0.1	0.5	0.4	0.3	0.3	0.6	---
Ramirez Core (Net)	75,868.8	3.9	3.4	7.5	-2.0	0.1	2.0	1/2017
<i>Bloomberg US Aggregate</i>	---	<i>3.8</i>	<i>3.1</i>	<i>7.3</i>	<i>-2.1</i>	<i>0.0</i>	<i>1.6</i>	---
Excess Return	---	0.1	0.3	0.2	0.1	0.1	0.4	---
Peer Group Rank (Net) ²		28	45	66	58	75	28	---

¹ Performance is annualized for periods longer than one year. “S.I.” signifies Since Inception.

² Peer group is eVestment US Core Fixed Income (Net) as of 8/31/2024.

Product and Organization Review Summary

Ramirez Asset Management	Areas of Potential Impact				
	Level of Concern	Investment Process	Investment Team	Performance Track Record	Team/Firm Culture
Product					
Key people changes	None				
Changes to team structure or individuals' roles	None				
Product client gain/losses	None				
Changes to investment process	None				
Personnel turnover	None				
Organization					
Ownership changes	None				
Key people changes	None				
Firm wide client gain/losses	None				
Recommended Action	None - X	Watch Status		Termination	

A review of Ramirez Asset Management and the Core Fixed Income strategy revealed no concerning organizational issues or changes since the last review in December 2023.

Investment Summary per Manager

Ramirez is seeking active relative value credit opportunities to add incremental yield and total return. The firm allows experienced portfolio managers to make meaningful allocations to relative value anomalies that they identify. Ramirez is disciplined in adhering to overall benchmark duration, term, and credit quality risk framework. However, it is not risk constrained by credit segmentation within the benchmark. Ramirez believes utilizing credit expertise in sector rotation and security selection, in a risk-controlled framework will produce consistent risk-adjusted returns over time.

This philosophy is the foundation of each of Ramirez's investment strategies and has remained unchanged since the firm's inception. The firm's investment approach seeks to add value by:

- Taking a longer-term view on investing; less dependent on a few top-down decisions;
- Closely regulating relative duration and term structure positioning;
- Combining quantitative and qualitative factors into a bottom-up/ top-down process;
- Emphasizing active relative value allocation across domestic high grade credit sectors and securities held in the index.

Ramirez's overriding objective is to achieve consistent excess returns above the benchmark through successive market cycles. Ramirez views that a strategy which attempts to anticipate interest rates will exhibit higher levels of volatility relative to a benchmark and will result in inconsistent relative performance. A critical component of the risk management process is the maintenance of overall duration and term structure positioning, relative to the benchmark, within fairly narrow ranges utilizing key rate durations ("KRD") as the preferred measure. While Ramirez will express a bias for the directionality of interest rates, overall portfolio effective duration and KRD are kept within narrow bands relative to the benchmark, typically $\pm 10\%$ with average variances ranging between $\pm 5\%$.

Ramirez's portfolios, including the Core strategy, are actively managed with a blend of top-down macroeconomic analysis and bottom-up issuer level research. When forming the firm's macro- and microeconomic opinions, the Investment Committee, assesses both qualitative and quantitative factors. This ensures that the appropriate quantitative market indicators and metrics as well as the extensive experience of the firm's investment professionals is utilized when determining the optimal sectors positioning and security selection. This portfolio construction process has been in place and remained unchanged since the firm's founding.

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OAKLAND POLICE AND FIRE RETIREMENT BOARD
CITY OF OAKLAND, CALIFORNIA
RESOLUTION No. 8113

Approved to Form
and Legality



ON MOTION OF MEMBER _____ SECONDED BY MEMBER _____

RESOLUTION AUTHORIZING A FOURTH AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH RAMIREZ ASSET MANAGEMENT, INC. FOR THE PROVISION OF CORE FIXED INCOME INVESTMENT STRATEGY MANAGER SERVICES FOR THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM (PFRS) (1) TO PROVIDE PFRS WITH AN UNLIMITED OPTION TO EXTEND THE AGREEMENT IN ONE-YEAR TERMS UNDER SECTION IV(B) AND (2) TO RENEW THE AGREEMENT FOR AN ADDITIONAL ONE-YEAR TERM COMMENCING JANUARY 1, 2025 AND ENDING DECEMBER 31, 2025

WHEREAS, Article XVI §17 of the California Constitution, commonly referred to as the Pension Protection Act or Proposition 162, and Article XXVI of the Oakland City Charter (“Charter”) vest the Oakland Police and Fire Retirement System Board (“PFRS Board”) with exclusive control of the administration and investment of the assets of the Police and Fire Retirement Fund (the “Fund”); and

WHEREAS, the PFRS Board manages and administers the Police and Fire Retirement System (“PFRS”), pursuant to the requirements of Article XXVI of the Charter; and

WHEREAS, Charter section 2601(e) gives the Board power to make all necessary rules and regulations for its guidance and exclusive control of the administration and investment of the funds established for the maintenance and operation of the system; and

WHEREAS, Article XXVI of the Charter expressly authorizes the PFRS Board to secure competent investment counsel to provide advice and counsel regarding the investment of the Fund and further provides that discretionary powers granted to such investment counsel will be at the option of the Board; and

WHEREAS, on December 21, 2016, the PFRS Board adopted Resolution No. 6941, which awarded a professional service agreement to Ramirez Asset Management Inc. to serve as the Core Fixed Income Investment Strategy Manager for PFRS at a rate of .24 percent of the portfolio’s annual asset value for a five-year term with three one-year options to renew the Agreement at the same rate; and

WHEREAS, pursuant to Resolution No. 6941, PFRS entered into an agreement with Ramirez Asset Management Inc., to serve as the Core Fixed Income Investment Strategy Manager for a five-year term commencing January 1,

OAKLAND POLICE AND FIRE RETIREMENT BOARD

CITY OF OAKLAND, CALIFORNIA

RESOLUTION NO. 8113

2017, and ending December 31, 2021, subject to the fees and terms set forth above; and

WHEREAS, Section IV(B) of the Agreement gave the PFRS Board the option to extend the initial term of the Agreement for three addition one-year terms by giving Investment Counsel written notice of its intent to exercise its option not less than sixty days prior to the expiration of the term or extended term of the agreement; and

WHEREAS, on October 27, 2021, the PFRS Board exercised their first option to renew the agreement and adopted Resolution No. 8030, which authorized a one-year extension of the agreement with Ramirez Asset Management Inc. commencing January 1, 2022, and ending December 31, 2022; and

WHEREAS, on September 28, 2022, the PFRS Board exercised their second option to renew the agreement and adopted Resolution No. 8063, which authorized a one-year extension of the agreement with Ramirez Asset Management Inc. commencing January 1, 2023, and ending December 31, 2023; and

WHEREAS, on December 26, 2023, the PFRS Board exercised their third option to renew the agreement and adopted Resolution No. 8086, which authorized a one-year extension of the agreement with Ramirez Asset Management Inc. commencing January 1, 2024, and ending December 31, 2024; and

WHEREAS, Section XX of the Agreement allows for modification of the Agreement by written agreement of all parties; and

WHEREAS, the PFRS Board wishes to have unlimited one-year extension options to extend said Agreement, and Investment Counsel agrees with the PFRS Board; and

WHEREAS, the PFRS Board and Investment Counsel agree and wish the Agreement be amended to modify Section IV(B) to provide for unlimited one-year extension options; and

WHEREAS, the PFRS Board now wishes to renew the agreement with Ramirez Asset Management Inc. for an additional one-year term, at an annual fee rate not to exceed 0.24 percent of the Fund assets under management (presently valued at approximately Seventy Four Million Dollars (\$74,000,000.00), commencing January 1, 2025; now, therefore, be it

OAKLAND POLICE AND FIRE RETIREMENT BOARD

CITY OF OAKLAND, CALIFORNIA

RESOLUTION NO. 8113

RESOLVED: That the PFRS Board authorizes an amendment to the Agreement provision in Section IV(B) in order to provide for unlimited one-year extension options; and be it

FURTHER RESOLVED: That all other terms of the Agreement, which are not modified herein, shall remain in full force and effect; and be it

FURTHER RESOLVED: That PFRS staff is authorized to amend the agreement with Ramirez Asset Management Inc. for the provision of Core Fixed Income Investment Strategy Manager Services for PFRS at the annual rate not to exceed 0.24 percent of the Fund assets under management to amend section IV.B of the agreement to provide for unlimited one-year options to extend and to extend the term for an additional one-year commencing January 1, 2025, and ending December 31, 2025; and be it

FURTHER RESOLVED: That the President of the PFRS Board is hereby authorized to execute, on behalf of PFRS, the fourth amended agreement with Ramirez Asset Management Inc.

IN BOARD MEETING, CITY HALL, OAKLAND, CA _____ **SEPTEMBER 25, 2024** _____

PASSED BY THE FOLLOWING VOTE:

AYES: GODFREY, MELIA, NICHELINI, ROSEMAN, SPEAKMAN, WILKINSON, & PRESIDENT JOHNSON

NOES:

ABSTAIN:

ABSENT:

ATTEST: _____
PRESIDENT

ATTEST: _____
SECRETARY



AGENDA REPORT

TO: Oakland Police and Fire Retirement System (PFRS) Board of Administration

FROM: David F. Jones
Plan Administrator & Secretary

SUBJECT: Expiration Notice of PFRS Investment Manager Service Agreement and Action to Extend Service Agreement

DATE: September 25, 2024

SUMMARY

The Service Contract for the following Investment Manager for the Oakland Police & Fire Retirement Systems (PFRS) is set to expire September 30, 2024. The PFRS Board is asked to consider acting to extend the agreement for this manager for one additional year pursuant to the professional service agreement.

BACKGROUND

The Professional Service Agreement for the following Investment Manager who provides services for the PFRS Board will expire shortly. The following table describes the investment manager contract:

Investment Manager	Investment Strategy	Inception Date	Contract Expiration Date
SGA	Active International Equity	October 1, 2019	September 30, 2024

RECOMMENDATION

Staff recommends that the PFRS Board approve the implementation of the relevant service agreement provision for the manager to extend the professional service agreement between the above mentioned PFRS Investment Manager and PFRS.

Respectfully submitted,

David F. Jones
Plan Administrator & Secretary
Oakland Police and Fire Retirement System

MEMORANDUM

TO: Oakland Police and Fire Retirement System (“OPFRS”)
FROM: Meketa Investment Group (“Meketa”)
DATE: September 25, 2024
RE: Strategic Global Advisors—Contract Extension

Manager: Strategic Global Advisors (“SGA”)

Inception Date:	December 2019	OPFRS AUM (8/31/2024):	\$ 45.9 million
Strategy:	International Equity	Strategy AUM (6/30/2024):	\$ 369.6 million
Benchmark:	MSCI ACWI ex USA	Firm-wide AUM (6/30/2024):	\$ 2.4 billion

Summary & Recommendation

SGA has managed a portion of OPFRS’s international equity portfolio since December 2019. As of 8/31/2024, the portfolio is approximately \$45.9 million or about 9.8% of OPFRS’s Total Fund. The strategy has performed within expectations and guidelines for the portfolio for all time periods measured, and has experienced no major organizational changes in the portfolio management team since the last review in December 2022. **Therefore, Meketa does not have any major concerns with SGA and recommends that the Board retains SGA as an international equity manager with a one-year contract extension.**

Investment Performance Review Summary

As of 8/31/2024, SGA ACWI ex US portfolio has outperformed the benchmark over all time periods measured on both gross- and net-of-fees bases. In comparison with its peers in the eVestment ACWI ex US All Cap Core Equity (Net) universe, it has ranked above average across all periods except for the since inception period.

OPFRS Portfolio Returns (as of 8/31/2024)¹

Portfolio	Balance (\$000)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	S.I. (%)	Inception Date
SGA (Gross)	45,858.9	5.6	13.8	21.8	5.4	---	7.3	12/2019
<i>MSCI ACWI ex US (Net)</i>	---	<i>5.2</i>	<i>11.2</i>	<i>18.2</i>	<i>2.1</i>	---	<i>6.4</i>	---
Excess Return	---	0.4	2.6	3.6	3.3	---	0.9	---
SGA (Net)	45,858.9	5.5	13.1	20.8	4.5	---	6.5	12/2019
<i>MSCI ACWI ex US (Net)</i>	---	<i>5.2</i>	<i>11.2</i>	<i>18.2</i>	<i>2.1</i>	---	<i>6.4</i>	---
Excess Return	---	0.3	1.9	2.6	2.4	---	0.1	---
Peer Group Rank (Net) ²		33	27	19	25	---	61	---

¹ Performance is annualized for periods longer than one year. “S.I.” signifies Since Inception.

² Peer group is eVestment All Country World ex US All Cap Core Equity (Net) as of 8/31/2024.

Product and Organization Review Summary

Strategic Global Advisors	Areas of Potential Impact				
	Level of Concern	Investment Process	Investment Team	Performance Track Record	Team/Firm Culture
Product					
Key people changes	None				
Changes to team structure or individuals' roles	None				
Product client gain/losses	None				
Changes to investment process	None				
Personnel turnover	None				
Organization					
Ownership changes	None				
Key people changes	None				
Firm wide client gain/losses	None				
Recommended Action	None - X	Watch Status	Termination		

A review of Strategic Global Advisors and the ACWI ex US strategy revealed no concerning organizational issues or changes since the last review in December 2022.

Strategic Global Advisors remains a majority employee- and woman-owned asset management firm. Cynthia Tusan (SGA's Founder, CEO, and Senior Portfolio Manager) and Gary Baierl share the majority employee-ownership. A non-voting, minority ownership stake is held by Nile Capital Group.

Investment Summary per Manager

The Strategic Global Advisors International ACWI ex-US strategy seeks to outperform the MSCI ACWI ex US index by 2-3.5% on an annualized basis over a full market cycle of three to five years. The securities held are generally mid to large cap equities, on a market relative basis, of companies headquartered outside the U.S. The strategy is diversified across industries, sectors, countries, and style exposures. This core approach is intended to promote consistent outperformance.

SGA's preferred approach to investing is to integrate quantitative tools with fundamental analysis subject to an active risk management process. This blends the disciplined, unemotional, and repeatable breadth of a systematic approach with the experience and qualitative judgment of the senior investment professionals involved in fundamental analysis. There have been no changes to this philosophy since the firm was founded.

SGA's process combines both quantitative and fundamental approaches to investment. SGA generates stock ideas utilizing a bottom-up stock selection process by estimating expected alphas based on global industry peer rankings and optimizing the results against the preferred benchmark. SGA's fundamental analysis team conducts ongoing research on new stock ideas identified by the quantitative process.

Applying this approach daily ensures a continuous flow of "best ideas" that must then pass SGA's fundamental review to become eligible for inclusion in the portfolio. With each rebalance, an optimal portfolio is determined with new eligible candidates, accounting for benchmark relative constraints and client objectives. During the portfolio construction process, country and sector allocations are held close to neutral, relative to benchmark weights, in order to focus active management on stock selection. All securities are subject to review by a team of portfolio managers who may make adjustments based on their experience, judgement and market conditions.

The quantitative models do not represent a simplistic "screen" which eliminates candidates, rather, SGA uses multiple models to blend a combination of growth, value, sentiment, and quality alpha factors along with their risk characteristics while assessing whether each constituent contributes positively to the current portfolio. In practice, there are infinite paths a stock might take for inclusion in the portfolio and its appropriate weighting. Once an optimized portfolio has been put forth, fundamental analysis is used to vet and approve or disapprove the ideas suggested.

DS/PN/JLC/mn



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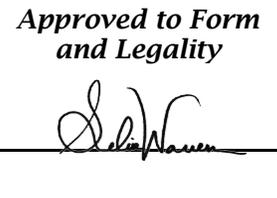
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OAKLAND POLICE AND FIRE RETIREMENT BOARD
CITY OF OAKLAND, CALIFORNIA
RESOLUTION No. 8114



ON MOTION OF MEMBER _____ SECONDED BY MEMBER _____

RESOLUTION AUTHORIZING THE FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH STRATEGIC GLOBAL ADVISORS FOR THE PROVISION OF ACTIVE INTERNATIONAL EQUITY INVESTMENT STRATEGY MANAGER SERVICES FOR THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM TO RENEW THE AGREEMENT FOR AN ADDITIONAL ONE-YEAR TERM COMMENCING OCTOBER 1, 2024 AND ENDING SEPTEMBER 30, 2025

WHEREAS, Article XVI §17 of the California Constitution, commonly referred to as the Pension Protection Act or Proposition 162, and Article XXVI of the Oakland City Charter (“Charter”) vest the Oakland Police and Fire Retirement System Board (“PFRS Board”) with exclusive control of the administration and investment of the assets of the Police and Fire Retirement Fund (the “Fund”); and

WHEREAS, the PFRS Board manages and administers the Police and Fire Retirement System (“PFRS”), pursuant to the requirements of Article XXVI of the Charter; and

WHEREAS, Charter section 2601(e) gives the Board power to make all necessary rules and regulations for its guidance and exclusive control of the administration and investment of the funds established for the maintenance and operation of the system; and

WHEREAS, Article XXVI of the Charter expressly authorizes the PFRS Board to secure competent investment counsel to provide advice and counsel regarding the investment of the Fund and further provides that discretionary powers granted to such investment counsel will be at the option of the Board; and

WHEREAS, on September 25, 2019, the PFRS Board adopted Resolution No. 7071, which awarded a professional service agreement to Strategic Global Advisors (“SGA”) to serve as the Active International Equity Investment Strategy Manager for PFRS at a fee rate not to exceed 70 basis points (70bp or 0.70 percent) of the portfolio’s annual asset value; and

WHEREAS, pursuant to Resolution No. 7071, PFRS entered into an agreement with SGA, to serve as the Active International Equity Investment Strategy Manager for a five-year term commencing October 1, 2019, and ending September 30, 2024 providing the PFRS Board the option to extend the term for three additional one-year terms, subject to the fees and terms set forth above; and

OAKLAND POLICE AND FIRE RETIREMENT BOARD

CITY OF OAKLAND, CALIFORNIA

RESOLUTION NO. 8114

WHEREAS, the PFRS Board now wishes to exercise its first option to renew the agreement with SGA for an additional one-year term, at the fee rate not to exceed 0.65 percent of the Fund assets under management (presently valued at approximately Forty Five Million Dollars (\$45,000,000.00), commencing October 1, 2024; now, therefore, be it

RESOLVED: That PFRS staff is authorized to amend the agreement with SGA for the provision of Active International Equity Investment Strategy Manager Services for PFRS at the annual rate not to exceed 0.65 percent of the Fund assets under management to extend the term for an additional one-year commencing October 1, 2024, and ending September 30, 2025; and be it

FURTHER RESOLVED: That the President of the PFRS Board is hereby authorized to execute, on behalf of PFRS, the fourth amended agreement with Strategic Global Advisors.

IN BOARD MEETING, CITY HALL, OAKLAND, CA **SEPTEMBER 25, 2024**

PASSED BY THE FOLLOWING VOTE:

AYES: GODFREY, MELIA, NICHELINI, ROSEMAN, SPEAKMAN, WILKINSON, & PRESIDENT JOHNSON

NOES:

ABSTAIN:

ABSENT:

ATTEST: _____
PRESIDENT

ATTEST: _____
SECRETARY



AGENDA REPORT

TO: Oakland Police and Fire Retirement System (PFRS) Board of Administration
FROM: David F. Jones
PFRS Plan Administrator & Secretary
SUBJECT: PFRS Board of Administration Agenda Pending List
DATE: September 25, 2024

	SUBJECT	MEETING DATE	STATUS
1	Status Report of the Ad Hoc Committee regarding Actuarial Funding date of July 1, 2026	08/26/2024	Ongoing

Respectfully submitted,

David F. Jones
Plan Administrator & Secretary
Oakland Police & Fire Retirement Systems