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, CA 94612

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, JULY 26, 2023 10:00 AM ONE FRANK H. OGAWA PLAZA, HEARING ROOM 1 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/u/kctrX35uax
- 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".
- <u>eComment:</u> To send your comment directly to staff BEFORE the meeting starts, please email to <u>mvisaya@oaklandca.gov</u> 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 June 28, 2023 Audit & Operations Committee Meeting Minutes
2.	Subject: From:	ADMINISTRATIVE EXPENSES REPORT Staff of the PFRS Board
	Recommendation:	ACCEPT informational report regarding PFRS administrative expenses as of May 31, 2023
3.	Subject:	Reappointment of Walter L. Johnson, Sr. to the PFRS Board as Community Representative
3.	Subject: From:	• •
3.	•	Community Representative
3 . 4 .	From:	Community Representative Staff of the PFRS Board ACCEPT an informational report regarding the reappointment of Walter L. Johnson, Sr. to continue to serve the PFRS Board as Community Representative for a 5-year term commencing

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

June 23, 2023 and ending June 22, 2028

Jamie T. Godfrey. to continue to serve the PFRS Board as Banking Representative for a 5-year term commencing

A MEETING OF THE AUDIT & OPERATIONS COMMITTEE of the Oakland Police and Fire Retirement System ("PFRS") was held Wednesday, June 28, 2023, at One Frank Ogawa Plaza, Hearing Room 1, Oakland, California.

Committee Members • John C. Speakman Chairperson

Martin J. Melia MemberR. Steven Wilkinson Member

Additional Attendees • David Jones PFRS Secretary & Plan Administrator (Excused)

Téir Jenkins
 PFRS Investment & Operations Manager

Maxine VisayaSelia WarrenPFRS Staff MemberPFRS Legal Counsel

The meeting was called to order at 10:11 a.m. Pacific

 PFRS AUDIT & OPERATIONS COMMITTEE MEETING MINUTES – Member Melia made a motion to approve the May 31, 2023, Audit & Operations Committee Meeting minutes, second by Member Wilkinson. Motion passed.

[SPEAKMAN - Y / MELIA - Y / WILKINSON - Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 0)

2. SCOPE OF SERVICES AND INITIATION OF THE FINANCIAL AUDIT OF THE PFRS FUND FOR FISCAL YEAR ENDING JUNE 30, 2023 – Craig Harder of Macias Gini & O'Connell, LLP presented the scope of services and timeline of the Financial Audit of the PFRS Fund for fiscal year ending June 30, 2023. PFRS Investment & Operations Manager Jenkins noted Craig Harder provided the Board with an updated memo today which the information remained unchanged except the addition of proposed timelines.

MOTION: Member Wilkinson made a motion to recommend Board approval of the scope of services and initiation of the Financial Audit of the PFRS Fund for fiscal year ending June 30, 2023, second by Member Melia. Motion passed.

[SPEAKMAN - Y / MELIA - Y / WILKINSON - Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 0)

3. ADMINISTRATIVE EXPENSES REPORT – PFRS Investment & Operations Manager Jenkins presented an informational report regarding PFRS' administrative expenditures as of April 30, 2023. PFRS has an approved annual budget of approximately \$3.6 million and have expensed approximately \$1.8 million to date for fiscal year 2022/2023. Membership consisted of 662 retired members and beneficiaries, which included 409 Police Members and 253 Fire Members.

MOTION: Chairperson Speakman made a motion to accept the administrative expenses report as of April 30, 2023, and forward to the Board, second by Member Melia. Motion passed.

PFRS AUDIT & OPERATION COMMITTEE
MEETING MINUTES
JUNE 28, 2023
PAGE 2 OF 2

4. RESOLUTION NO. 8081 – Resolution approving request of Oakland Police and Fire Retirement System Board Member R. Steven Wilkinson to travel and attend the National Association of Securities Professionals (NASP) 34th Annual Financial Services Conference from July 24, 2023, through July 26, 2023, in Philadelphia, Pennsylvania and authorizing reimbursement of registration fees and travel-related expenses in an amount not to exceed three thousand dollars (\$3,000.00)

MOTION: Chairperson Speakman made a motion to recommend Board approval of Resolution 8081, second by Member Melia. Motion passed.

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

- 5. REVIEW OF PENDING AUDIT COMMITTEE MEETING AGENDA ITEMS PFRS Investment & Operations Manager Téir Jenkins 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 Committee was scheduled to meet June 26, 2023; however, the meeting will be rescheduled to occur next week. Item 2) Monitor & Update PFRS Board of Upcoming City Council Agendas Regarding Discussion of the 2026 Actuarial Funding Date: T. Jenkins advised Cheiron presented the Actuary Report and & Meketa presented the PFRS Quarterly Performance Report to the City Finance & Management Committee on June 27, 2023 and noted nothing substantial came out of that meeting. Legal Counsel Warren advised there are no updates at this time.
- 6. OPEN FORUM No Report.
- 7. **FUTURE SCHEDULING** The next Audit & Operations Committee Meeting will be held in-person and is tentatively scheduled to occur July 26, 2023.
- **8. ADJOURNMENT** Chairperson Speakman made a motion to adjourn, second by Member Wilkinson. Motion passed.

[SPEAKMAN - Y / MELIA - Y / WILKINSON - Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0/ ABSENT: 0 / EXCUSED: 0)

The meeting adjourned at 10:20 a.m. Pacific	
JOHN C. SPEAKMAN	DATE
COMMITTEE CHAIRPERSON	

Table 1

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Administrative Budget Spent to Date (Preliminary)
As of May 31, 2023

	Approved				
	Budget	May 2023	FYTD	Remaining	Percent Remaining
Internal Administrative Costs					
PFRS Staff Salaries	\$ 1,330,000	\$ 113,859	\$ 1,077,434	\$ 252,566	19.0%
Board Travel Expenditures	52,500	362	4,518	47,982	91.4%
Staff Training	20,000	-	-	20,000	100.0%
Staff Training - Tuition Reimbursement	7,500	-	-	7,500	100.0%
Board Hospitality	3,600	-	240	3,360	93.3%
Payroll Processing Fees	40,000	-	-	40,000	100.0%
Miscellaneous Expenditures	45,000	605	30,044	14,956	33.2%
Internal Service Fees (ISF)	88,000	-	47,884	40,116	45.6%
Contract Services Contingency	50,000	-	1,500	48,500	97.0%
Internal Administrative Costs Subtotal:	\$ 1,636,600	\$ 114,826	\$ 1,161,620	\$ 474,980	29.0%
Actuary and Accounting Services					
Audit	\$ 50,500	\$ -	\$ 33,883	\$ 16,617	32.9%
Actuary	47,900	-	24,409	23,491	49.0%
Actuary and Accounting Subtotal:	\$ 98,400	\$ -	\$ 58,292	\$ 40,108	40.8%
Legal Services					
City Attorney Salaries	\$ 194,000	\$ -	\$ 28	\$ 193,972	100.0%
Legal Contingency	150,000	-	-	150,000	100.0%
Legal Services Subtotal:	\$ 344,000	\$ -	\$ 28	\$ 343,972	100.0%
Investment Services					
Money Manager Fees	\$ 1,353,000	\$ 191,866	\$ 836,784	\$ 516,216	38.2%
Custodial Fee	124,000	_	60,250	63,750	51.4%
Investment Consultant	100,000	-	75,000	25,000	25.0%
Investment Subtotal:	\$ 1,577,000	\$ 191,866	\$ 972,034	\$ 604,966	38.4%
Total Operating Budget	\$ 3,656,000	\$ 306,692	\$ 2,191,974	\$ 1,464,026	40.04%

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Cash in Treasury (Fund 7100) - Preliminary As of May 31, 2023

	I	May 2023
Beginning Cash as of 5/1/2023	\$	9,147,066
Additions:		
City Pension Contribution - May	\$	2,726,000
Investment Draw	\$	2,000,000
Misc. Receipts		968
Total Additions:	\$	4,726,968
Deductions:		
Pension Payment (April Pension Paid on 5/1/2023)		(4,188,735)
Expenditures Paid		(372,220)
Total Deductions	\$	(4,560,956)
Ending Cash Balance as of 5/31/2023*	\$	9,313,078

^{*} On 6/1/2023, May pension payment of appx \$4,154,000 will be made leaving a cash balance of \$5,159,000.

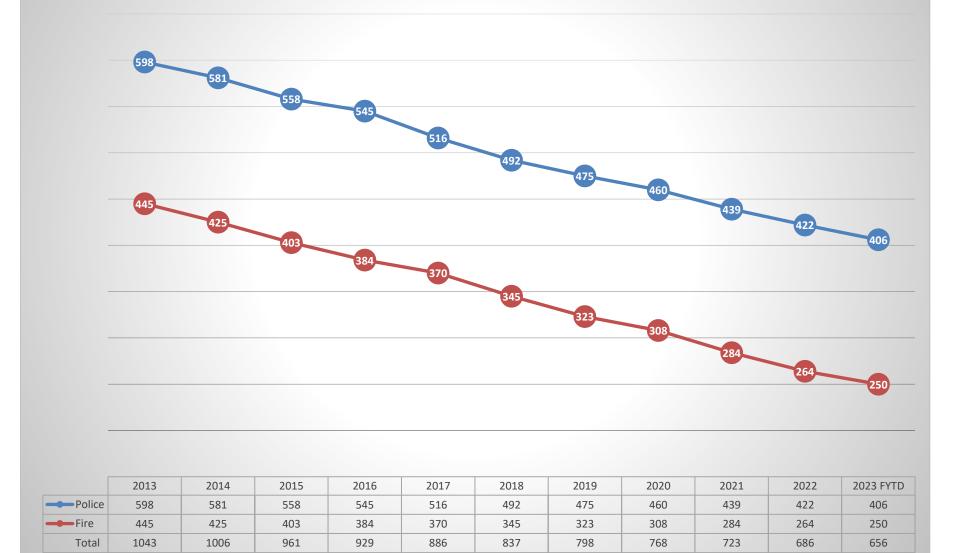
Table 3
CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Census As of May 31, 2023

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Retiree	284	164	448
Beneficiary	122	86	208
Total Retired Members	406	250	656
Total Membership:	406	250	656

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Service Retirement	271	122	393
Disability Retirement	125	117	242
Death Allowance	10	11	21
Total Retired Members:	406	250	656
Total Membership as of May 31, 2023:	406	250	656
Total Membership as of June 30, 2022:	422	264	686
Annual Difference:	-16	-14	-30

Oakland Police and Fire Retirement System Pension Plan Membership Count As of May 31, 2023 (FY 2013 - FY 2023)





A GENDA REPORT

TO: Oakland Police and Fire

Retirement System Board (PFRS)

FROM: Téir Jenkins

Investment & Operations Manager

SUBJECT: Mayoral Re-appointment of Board

Member Walter L. Johnson, Sr. as

Community Representative

DATE: July 26, 2023

SUMMARY

Walter L. Johnson, Sr. expressed a desire to continue to serve as the Community Representative of the PFRS Board of Administration and sought to be re-appointed for a fourth 5-year term. On July 18, 2023, pursuant to City Charter Section 601, Mayor Thao reappointed Member Johnson, Sr. to serve a term commencing May 2, 2023, and ending May 1, 2028, and submitted to City Council for confirmation. On July 18, 2023, The Council confirmed the Mayor's appointment. Mr. Johnson, Sr. will continue to serve as Community Representative of the PFRS Board of Administration for a fourth term 5-year term.

BACKGROUND

Walter L. Johnson was first appointed to serve as Community Representative by Mayor Dellums in 2008 assuming the Board seat vacated by Kenneth L. Brooks. Member Johnson, Sr. continued to serve the PFRS Board having been re-appointed by Mayor Schaaf for a third 5-year term commencing May 2, 2018 and ending May 1, 2023.

Respectfully submitted,

Téir Jenkin

Investment & Operations Manager Oakland

Police & Fire Retirement Systems

For questions please contact Maxine Visaya, Administrative Assistant II, at mvisaya@oaklandca.gov

Attachments:

- (1) Draft Resolution
- (2) Letter of Appointment
- (3) Letter Seeking Re-appointment

Agenda Item <u>B2</u> PFRS Board Meeting July 26, 2023

CITY ATTORNEY'S OFFICE

OAKLAND CITY COUNCIL

RESOLUTION NO. _____ C.M.S.

INTRODUCED BY MAYOR SHENG THAO

RESOLUTION CONFIRMING THE MAYOR'S REAPPOINTMENTS OF JAIME GODFREY AND WALTER JOHNSON SR. AS MEMBERS OF THE POLICE AND FIRE RETIREMENT BOARD

WHEREAS, Section 601 of the City Charter provides that members of City boards and commissions shall be appointed by the Mayor subject to confirmation by the affirmative vote of five members of the City Council; and

WHEREAS, Oakland City Charter, Article XXVI establishes the Police and Fire Retirement Board to manage and administer the Police and Fire Retirement System, which provides retirement benefits for certain sworn police and fire personnel; and

WHEREAS, Section 2601 of the City Charter provides that the Police and Fire Retirement Board consists of seven members including, among others, a life insurance executive of a local office, a senior officer of a local bank, and a community representative; and

WHEREAS, the Honorable Mayor Sheng Thao has reappointed Jaime Godfrey to serve a five-year term on the Police and Fire Retirement Board in the seat designated for a bank representative pursuant to Section 2601 of the City Charter, subject to confirmation by the City Council; and

WHEREAS, the Honorable Mayor Sheng Thao has reappointed Walter Johnson, Sr. to serve a five-year term on the Police and Fire Retirement Board in the seat designated for a community representative pursuant to Section 2601 of the City Charter, subject to confirmation by the City Council; now therefore be it

RESOLVED, that pursuant to City Charter sections 601 and 2601, the City Council hereby confirms the Mayor's reappointment of:

Jaime Godfrey to the Police and Fire Retirement Board in the seat designated for a bank representative to serve a five-year term that began June 23, 2023 and ends June 22, 2028, filling a seat previously held by himself.

Walter Johnson, **Sr.** to the Police and Fire Retirement Board in the seat designated for a Community Representative to serve a five-year term that began May 2, 2023 and ends May 1, 2028, filling a seat previously held by himself.

IN COUNCIL, OAKLAND, CALIFORNIA,

PASSED BY THE FOLLOWING VOTE:

AYES - FIFE, GALLO, JENKINS, KALB, KAPLAN, RAMACHANDRAN, REID, AND PRESIDENT FORTUNATO BAS

NOES – ABSENT – ABSTENTION –

ATTEST:

ASHA REED City Clerk and Clerk of the Council of the City of Oakland, California

3285034v1 / SW



THE HONORABLE SHENG THAO • MAYOR OF OAKLAND

CITY HALL • 1 FRANK H. OGAWA PLAZA • OAKLAND, CALIFORNIA 94612 • (510) 238-3141 • SThao@OaklandCA.Gov

Letter of Reappointment

July 18, 2023

Dear President Bas and members of the City Council:

Pursuant to City Charter Section 601, the Mayor has reappointed the following persons as members of the following board or commission, subject to City Council confirmation:

Police and Fire Retirement Board

Jaime Godfrey to the Police and Fire Retirement Board in the seat designated for a Bank Representative to serve a five-year term that began June 23, 2023 and ends June 22, 2028, filling a seat vacated by himself.

Walter Johnson, Sr. to the Police and Fire Retirement Board in the seat designated for a Community Representative to serve a five-year term that began May 2, 2023 and ends May 1, 2028, filling a seat vacated by himself.

Thank you for your assistance in this matter.

Sincerely,

Mayor Sheng Thao

CITY OF OAKLAND



150 FRANK H. OGAWA PLAZA, 3RD FLOOR • OAKLAND, CALIFORNIA 94612-2021
Finance Department
Treasury Bureau
Retirement Unit

CA RELAY 711

April 11, 2023

Mayor Sheng Thao City of Oakland One Frank H. Ogawa Plaza Oakland CA 94612

Dear Mayor Thao,

The Oakland Police and Fire Retirement System Board (PFRS) requests that you consider reappointment of Walter L. Johnson, Sr. to the PFRS Board of Administration for the term from May 2, 2023 through May 1, 2028. Mr. Johnson, Sr. has served as the Community Representative to the PFRS Board since 2008.

Mr. Johnson, Sr. has expressed a desire to continue to serve as the Community Representative and is anxious to have his appointment confirmed so he can continue to contribute his expertise. Mr. Johnson, Sr. is knowledgeable of the issues facing the PFRS Board and the Retirement System. His continued participation would allow the Board to continue to function efficiently and effectively.

We look forward to your response. If you have any questions, please contact me at 510.238.6508. Thank you.

Sincerely,

David F. Jones

Plan Administrator

Oakland Police and Fire Retirement System

cc: Steven Falk, Interim City Administrator



A GENDA REPORT

TO: Oakland Police and Fire

Retirement System Board (PFRS)

FROM: Téir Jenkins

Investment & Operations Manager

SUBJECT: Mayoral Re-appointment of Board

Member Jaime T. Godfrey as Bank

Representative

DATE: July 26, 2023

SUMMARY

Jaime T. Godfrey expressed a desire to continue to serve as Bank Representative of the PFRS Board of Administration and sought to be re-appointed for a sixth 5-year term. On July 18, 2023, pursuant to City Charter Section 601, Mayor Thao reappointed Member Godfrey to serve a term commencing June 23, 2023 and ending June 24, 2028, and submitted to City Council for confirmation. On July 18, 2023, The Council confirmed the Mayor's appointment. Mr. Godfrey will continue to serve as Bank Representative of the PFRS Board of Administration for a sixth 5-year term.

BACKGROUND

Jaime t. Godfrey was first appointed to serve as Bank Representative by Mayor Harris in 1998. Vice President Godfrey continued to serve the PFRS Board having been re-appointed by Mayor Schaaf for a fifth 5-year term commencing June 23, 2018 and ending June 24, 2023.

Respectfully submitted,

Téir Jenkins

Investment & Operations Manager Oakland

Police & Fire Retirement Systems

For questions please contact Maxine Visaya, Administrative Assistant II, at mvisaya@oaklandca.gov

- (1) Draft Resolution
- (2) Letter of Appointment
- (3) Letter Seeking Re-appointment

CITY ATTORNEY'S OFFICE

OAKLAND CITY COUNCIL

RESOLUTION NO. _____ C.M.S.

INTRODUCED BY MAYOR SHENG THAO

RESOLUTION CONFIRMING THE MAYOR'S REAPPOINTMENTS OF JAIME GODFREY AND WALTER JOHNSON SR. AS MEMBERS OF THE POLICE AND FIRE RETIREMENT BOARD

WHEREAS, Section 601 of the City Charter provides that members of City boards and commissions shall be appointed by the Mayor subject to confirmation by the affirmative vote of five members of the City Council; and

WHEREAS, Oakland City Charter, Article XXVI establishes the Police and Fire Retirement Board to manage and administer the Police and Fire Retirement System, which provides retirement benefits for certain sworn police and fire personnel; and

WHEREAS, Section 2601 of the City Charter provides that the Police and Fire Retirement Board consists of seven members including, among others, a life insurance executive of a local office, a senior officer of a local bank, and a community representative; and

WHEREAS, the Honorable Mayor Sheng Thao has reappointed Jaime Godfrey to serve a five-year term on the Police and Fire Retirement Board in the seat designated for a bank representative pursuant to Section 2601 of the City Charter, subject to confirmation by the City Council; and

WHEREAS, the Honorable Mayor Sheng Thao has reappointed Walter Johnson, Sr. to serve a five-year term on the Police and Fire Retirement Board in the seat designated for a community representative pursuant to Section 2601 of the City Charter, subject to confirmation by the City Council; now therefore be it

RESOLVED, that pursuant to City Charter sections 601 and 2601, the City Council hereby confirms the Mayor's reappointment of:

Jaime Godfrey to the Police and Fire Retirement Board in the seat designated for a bank representative to serve a five-year term that began June 23, 2023 and ends June 22, 2028, filling a seat previously held by himself.

Walter Johnson, **Sr.** to the Police and Fire Retirement Board in the seat designated for a Community Representative to serve a five-year term that began May 2, 2023 and ends May 1, 2028, filling a seat previously held by himself.

IN COUNCIL, OAKLAND, CALIFORNIA,

PASSED BY THE FOLLOWING VOTE:

AYES - FIFE, GALLO, JENKINS, KALB, KAPLAN, RAMACHANDRAN, REID, AND PRESIDENT FORTUNATO BAS

NOES – ABSENT – ABSTENTION –

ATTEST:

ASHA REED City Clerk and Clerk of the Council of the City of Oakland, California

3285034v1 / SW



THE HONORABLE SHENG THAO • MAYOR OF OAKLAND

CITY HALL • 1 FRANK H. OGAWA PLAZA • OAKLAND, CALIFORNIA 94612 • (510) 238-3141 • SThao@OaklandCA.Gov

Letter of Reappointment

July 18, 2023

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Pursuant to City Charter Section 601, the Mayor has reappointed the following persons as members of the following board or commission, subject to City Council confirmation:

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Jaime Godfrey to the Police and Fire Retirement Board in the seat designated for a Bank Representative to serve a five-year term that began June 23, 2023 and ends June 22, 2028, filling a seat vacated by himself.

Walter Johnson, Sr. to the Police and Fire Retirement Board in the seat designated for a Community Representative to serve a five-year term that began May 2, 2023 and ends May 1, 2028, filling a seat vacated by himself.

Thank you for your assistance in this matter.

Sincerely,

Mayor Sheng Thao

CITY OF OAKLAND



150 FRANK H. OGAWA PLAZA, 3RD FLOOR • OAKLAND, CALIFORNIA 94612-2021 Finance Department

Treasury Bureau

Retirement Unit

CA RELAY 711

April 11, 2023

Mayor Sheng Thao City of Oakland One Frank H. Ogawa Plaza Oakland CA 94612

Dear Mayor Thao,

The Oakland Police and Fire Retirement System Board (PFRS) requests that you consider reappointment of Jaime T. Godfrey to the PFRS Board of Administration for the term from June 23, 2023 through June 22, 2028. Mr. Godfrey is a member of the banking industry, as required by the Charter of the City of Oakland and has served the PFRS Board since 1998.

Mr. Godfrey has expressed a desire to continue to serve as the Banking Representative and is anxious to have his appointment confirmed so he can continue to contribute his expertise. Mr. Godfrey is knowledgeable of the issues facing the PFRS Board and the Retirement System. His continued participation would allow the Board to continue to function efficiently and effectively.

We look forward to your response. If you have any questions, please contact me at 510.238.6508. Thank you.

Sincerely,

David F. Jones
Plan Administrator

Oakland Police and Fire Retirement System

cc: Steven Falk, Interim City Administrator



A GENDA REPORT

TO: Oakland Police and Fire

Retirement System Audit &

Operation Committee

SUBJECT: Audit Committee Agenda

Pending List

FROM: Téir Jenkins

Investment & Operations Manager

DATE: July 26, 2023

	SUBJECT	TENTATIVE SCHEDULED MTG DATE	STATUS
1	Status Report of the Ad Hoc Committee regarding Actuarial Funding date of July 1, 2026	TBD	Meeting set for 07/19/2023 to be rescheduled to early August
2	Monitor & Update PFRS Board of Upcoming City Council Agendas Regarding Discussion of the July 1, 2026 Actuarial Funding Date	Ongoing	Ongoing

Respectfully submitted,

Téir Jenkins

Investment & Operations Manager Oakland

Police & Fire Retirement Systems

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

INVESTMENT COMMITTEE MEMBERS

Jaime T. Godfrey Chairperson

R. Steven Wilkinson Member

Robert W. Nichelini 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 Investment Committee does not reach quorum, this meeting is noticed as an informational meeting between staff and the Chair of the Investment Committee.

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

WEDNESDAY, JULY 26, 2023 10:30 AM ONE FRANK H. OGAWA PLAZA, HEARING ROOM 1 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/u/kctrX35uax
- 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".
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If you have any questions, please email Maxine Visaya, Administrative Assistant II at mvisaya@oaklandca.gov

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM INVESTMENT COMMITTEE MEETING JULY 26, 2023

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 June 28, 2023 Investment and Financial Matters

Committee Meeting Minutes

2. Subject: INVESTMENT MANAGER PERFORMANCE UPDATE:

KEPOS CAPTIAL, LP

From: Kepos Capital, LP

Recommendation: ACCEPT informational report regarding a firm overview and managerial

assessment; diversity and inclusion policy and practices; and investment strategy and portfolio performance of PFRS' Alternative Risk Premia

Investment Strategy Manager Kepos Capital, LP

3. Subject: INVESTMENT MANAGER PERFORMANCE REVIEW:

KEPOS CAPITAL, LP

From: Meketa Investment Group

Recommendation: ACCEPT Meketa Investment Group's review and evaluation regarding

a firm overview and managerial assessment; peer ranking; and investment portfolio performance of PFRS' Alternative Risk Premia

Investment Strategy Manager Kepos Capital, LP

4. Subject: ECONOMIC AND INVESTMENT MARKET OVERVIEW

AS OF JUNE 30, 2023

From: Meketa Investment Group

Recommendation: ACCEPT informational report regarding the Global Investment Markets

as of June 30, 2023

5. Subject: PRELIMINARY INVESTMENT FUND PERFORMANCE UPDATE

AS OF JUNE 30, 2023

From: Meketa Investment Group

Recommendation: ACCEPT informational report regarding the Preliminary Investment

Fund Performance Update as of June 30, 2023

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM INVESTMENT COMMITTEE MEETING JULY 26, 2023

- 6. SCHEDULE OF PENDING INVESTMENT COMMITTEE MEETING AGENDA ITEMS
- 7. OPEN FORUM
- 8. FUTURE SCHEDULING
- 9. ADJOURNMENT

PFRS INVESTMENT & FINANCIAL MATTERS COMMITTEE MEETING MINUTES JUNE 28, 2023 PAGE 1 OF 3

A MEETING OF THE INVESTMENT AND FINANCIAL MATTERS COMMITTEE of the Oakland Police and Fire Retirement System ("PFRS") was held Wednesday, June 28, 2023, at One Frank H. Ogawa Plaza, Hearing Room 1, Oakland, CA.

Committee Members

Jaime T. Godfrey Chairperson (Excused)

Robert W. Nichelini Member

R. Steven Wilkinson Member & Acting Chairperson

Additional Attendees • David F. Jones PFRS Secretary & Plan Administrator (Excused)

Téir Jenkins
 PFRS Investment & Operations Manager

Maxine Visaya
 Selia Warren
 David Sancewich
 Paola Nealon
 Kosta Stathopoulos
 PFRS Staff Member
 PFRS Legal Counsel
 Meketa Investment Group
 Brown Advisory, LLC

David Schuster Brown Advisory, LLC

The meeting was called to order at 10:42 a.m. Pacific

1. APPROVAL OF INVESTMENT & FINANCIAL MATTERS COMMITTEE MEETING MINUTES – Member Nichelini made a motion to approve the May 31, 2023, Investment & Financial Matters Committee Meeting Minutes, as written, second by Acting Chairperson Wilkinson. Motion Passed.

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

2. INVESTMENT MANAGER PERFORMANCE UPDATE: BROWN ADVISORY, LLC – Kosta Stathopoulos and David Schuster of Brown Advisory presented an informational report regarding a firm overview and managerial assessment; diversity and inclusion policy and practices; local brokerage usage; and investment strategy and portfolio performance of PFRS' Active Domestic Equity Small-Cap Fundamental Value Investment Strategy.

Acting Chairperson Wilkinson and Investment and Operations Manager Jenkins made inquiries to further the discussion regarding the following topics: organizational structure; firm culture; fluctuations of the client base; and investment strategy.

MOTION: Member Nichelini made a motion to accept the informational report from Brown Advisory, LLC 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)

PFRS INVESTMENT & FINANCIAL MATTERS COMMITTEE MEETING MINUTES JUNE 28, 2023 PAGE 2 OF 3

3. INVESTMENT MANAGER PERFORMANCE REVIEW: BROWN ADVISORY, LLC – Paola Nealon of Meketa Investment Group ("Meketa") presented an overview memo regarding a firm overview and managerial assessment; peer ranking; and investment portfolio performance of Brown Advisory, LLC, a PFRS Active Domestic Equity Small-Cap Fundamental Value Investment Strategy Manager. P. Nealon advised Meketa has no concerns from an organizational standpoint or regarding performance with Brown Advisory, LLC, and continue to consider the firm to be a high conviction manager.

MOTION: Member Nichelini made a motion to accept Meketa's evaluation of Brown Advisory, LLC and forward to the Board for approval, second by Acting Chairperson Wilkinson. Motion passed.

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

4. ECONOMIC AND INVESTMENT MARKET OVERVIEW AS OF MAY 31, 2023 – Paola Nealon of Meketa presented an informational report regarding the Economic and Investment Market Overview as of May 31, 2023, and highlighted Index Returns, Domestic Equity Returns, Foreign Equity Returns, and Ten-Year Breakeven Inflation and CPI and current factors impacting outcomes.

MOTION: Member Nichelini made a motion to accept the informational report presented by Meketa regarding the Economic and Investment Market Overview as of May 31, 2023, 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)

5. PRELIMINARY INVESTMENT PERFORMANCE UPDATE AS OF MAY 31, 2023 — David Sancewich of Meketa presented an informational report regarding the Preliminary Investment Performance Update as of May 31, 2023. D. Sancewich highlighted Allocation vs. Targets and Policy and the Asset Class Performance Summary and current factors impacting outcomes.

MOTION: Acting Chairperson Wilkinson made a motion to accept the informational report presented by Meketa regarding the Preliminary Investment Performance Update as of May 31, 2023, and forward to the Board, second by Member Nichelini. Motion passed.

[GODFREY - EXCUSED / NICHELINI - Y / WILKINSON - Y] (AYES: 2 / NOES: 0 / ABSTAIN: 0 / ABSENT: 0 / EXCUSED: 1) PFRS INVESTMENT & FINANCIAL MATTERS COMMITTEE

MEETING MINUTES

JUNE 28, 2023

PAGE 3 OF 3

6. \$13.2 MILLION DRAWDOWN FOR MEMBER RETIREMENT ALLOWANCES (FISCAL YEAR 2023/2024; QUARTER ENDING SEPTEMBER 30, 2023) — David Sancewich of Meketa presented an informational report and recommendation for a \$13.2 million drawdown, which included a \$10.2 Million contribution from the City of Oakland and a \$3.0 Million contribution from the PFRS Investment Fund, to be used to pay Member Retirement Allowances from July 1, 2023, through September 30, 2023 and for funds to be drawn from the SGA Portfolio. T. Jenkins noted the quarterly drawdown amount is intentionally being lowered to reduce internal cash balances because overall benefit payment amounts have decreased which effectively increased internal cash balances.

MOTION: Member Nichelini made a motion to accept the informational report and recommend Board approval of Meketa's recommendation regarding the \$13.2 million drawdown to pay for pay Member Retirement Allowances from July 1, 2023, through September 30, 2023, second by Acting Chairperson Wilkinson. Motion passed.

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

- 7. SCHEDULE OF PENDING INVESTMENT COMMITTEE MEETING AGENDA ITEMS David Sancewich of Meketa presented the 2023 Strategic Investment Agenda Plan for discussion and noted Meketa plans to add an education item in the coming months. No changes or additions were proposed.
- 8. **OPEN FORUM** No Report
- **9. FUTURE SCHEDULING** The next Investment Committee Meeting will be held in-person and is tentatively scheduled to occur July 26, 2023.
- **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 11:29 a.m. Pacific

R. STEVEN WILKINSON ACTING COMMITTEE CHAIRPERSON	DATE





Police and Fire Retirement System

Kepos Alternative Risk Premia
July 26, 2023

This summary description of Kepos Capital LP and any investment vehicle that it may organize and manage is intended only for discussion purposes and does not constitute an offer or solicitation of an offer with respect to the purchase or sale of any security; it should not be relied upon by you in evaluating the merits of investing in any securities. These materials are confidential and are not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution or use is contrary to local law or regulation. © Kepos Capital LP, 2023. All rights reserved.

Disclosures

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This Presentation is provided for discussion purposes only, is only a summary of certain information, is not complete, does not contain certain material information about the Fund, including important conflicts disclosures and risk factors, and is subject to change without notice.

The information contained in this Presentation is not investment, tax, accounting or legal advice and does not take into consideration the investment objectives, financial situation or particular needs of the recipient. Investing entails certain risks, including the possible loss of the entire principal amount invested. The recipient of this Presentation should seek its own financial, tax, accounting and legal advice in connection with any proposed investment in the Fund.

Risk of Loss. An investment in the Fund is not suitable for all investors. Investors must meet certain eligibility requirements and have the financial ability, sophistication, experience and willingness to bear the risks of an investment in the Fund for an extended period of time. An investment in the Fund would be speculative and entails a high degree of risk; no assurance can be given that the Fund's investment objective will be achieved or that investors will receive a return of their capital. Investment losses may occur. Nothing herein is intended to imply that a Fund's investment methodology may be considered "conservative," "safe," "risk free" or "risk averse." The Fund employs leverage and other investment techniques that may increase the volatility of the Fund's performance and increase the Fund's risk of loss. An investment in the Fund will be illiquid as there are significant restrictions on an investor's ability to withdraw, redeem, or transfer interests or shares in the Fund. The Fund involves a complex tax structure, which should be reviewed carefully. INVESTORS AND PROSPECTIVE INVESTORS MUST REVIEW THE RISK FACTORS FOUND IN THE FUND'S CONFIDENTIAL PRIVATE PLACEMENT MEMORANDUM.

Certain of the information contained in this Presentation represents or is based upon forward-looking statements, which can be identified by the use of forward-looking terminology such as "may", "will", "should", "expect", "anticipate", "target", "project", "estimate", "intend", "continue" or "believe" or the negatives thereof or other variations thereon or comparable terminology. Due to various risks and uncertainties, actual events or results or the actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements. The information contained herein represents management's current expectation of how the Fund will continue to be operated in the near term; however, management's plans and policies in this respect may change in the future. In particular, (i) policies and approaches to portfolio monitoring, risk management, and asset allocation may change in the future without notice and (ii) economic, market and other conditions could cause the Fund to deviate from stated investment objectives and guidelines.

This Presentation is confidential, is intended only for the person to whom it has been provided and under no circumstance may a copy be shown, copied, transmitted, or otherwise given to any person other than the authorized recipient without the prior written consent of Kepos. Notwithstanding anything to the contrary herein, each recipient of this summary may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of: (i) the Fund and (ii) any of its transactions, and all materials of any kind (including opinions or other tax analyses) relating to such tax treatment and tax structure. The distribution of the information contained herein in certain jurisdictions may be restricted, and, accordingly, it is the responsibility of any prospective investor to satisfy itself as to compliance with relevant laws and regulations.

PAST PERFORMANCE IS NOT AN INDICATOR OR GUARANTEE OF FUTURE RESULTS. THERE IS NO GUARANTEE THAT THE FUND WILL ACHIEVE COMPARABLE RESULTS TO THOSE SET FORTH IN THIS DOCUMENT OR THAT IT WILL ACHIEVE ITS INVESTMENT OBJECTIVES IN THE FUTURE.



Organization & Team

- Founded in January 2010 by Mark Carhart, Giorgio De Santis and Bob Litterman
- Over 45 employees; long history working together; most with profit participation
- ~\$2.1 billion AUM in alpha and alternative risk premia strategies¹

Long History in Asset Allocation & Alternative Risk Premia Research

- Black-Litterman model, 1992²
- Carhart four-factor model, 1997³
- Modern Investment Management: An Equilibrium Approach, 2003⁴
- "Beyond Active Alpha." Pioneering article on concept of exotic betas, 2008
- "Exotic Beta Revisited." Won the Graham Dodd Excellence Award, 2014

Features of a Partnership with Kepos Capital

Personalized commitment and focus

- We only build liquid alternative strategies and portfolios
- Thought partnership and transparency
 - Close collaboration and response to client-specific questions
 - Access to senior investment staff
- Dedicated management and alignment
 - US-based, wholly owned by founders and employees

¹ AUM is as of June 30, 2023. ² Black, Fisher; Litterman, Robert. "Global Portfolio Optimization". *Financial Analysts Journal*. Vol. 48, Issue 5. September/October 1992. ³ Carhart, Mark M. "On Persistence in Mutual Fund Performance". *Journal of Finance*. Volume 52, Issue 1, pp. 57-82. March 1997. ⁴ Litterman, B. & Quantitative Resources Group. (2003). *Modern Investment Management: An Equilibrium Approach* (1st ed.). Hoboken, NJ: John Wiley & Sons, Inc. ⁵ CFA Institute. Vol. 25. No. 1. March 2008. ⁶ *Financial Analysts Journal*. Vol. 70, Issue 5. November 2014.

Diversity Representation Survey for Oakland Police and Fire

DATA AS OF 06/30/2023

Firm Name	Kepos Capital LP
Product Name	Kepos Alternative Risk Premia Fund LP
Total Number of Employees	48

	Percentage (%) of Board of Directors / Managing Members	Percentage(%) of Firm (Entire Staff)	Percentage (%) of Firm (Investment Professionals)
Race and Ethnicity*			
African American/Black	0%	2%	0%
Asian/Hawaiian/Pacific Islander	18%	17%	6%
Latino/Hispanic	0%	6%	4%
White	73%	71%	38%
American Indian/Alaska Native	0%	0%	0%
Other	9%	4%	4%
Gender			
Male	100%	85%	52%
Female	0%	15%	0%
Non-Identified/Other	0%	0%	0%

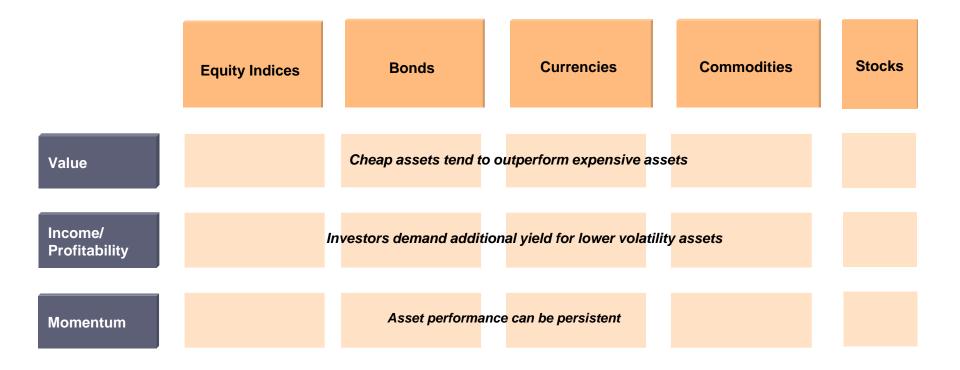


^{*} Racial/ethnic categories appear as defined by EEOC guidance.

Kepos Alternative Risk Premia Strategy

\$192 Million AUM¹

- Dynamically managed portfolio of both macro and equity premia
- Excludes macro insurance and directional momentum factors
- Targets 10% annualized volatility and 0.5 Sharpe ratio (net)
- Transparency, attractive liquidity and low cost





KARP YTD 2023 Net Performance Attribution¹

	Single Name Equities	Equity Indices	Bonds	Currencies	Com- modities	TOTAL
Value	-2.56%	-0.82%	1.04%	-2.41%	3.36%	-1.39%
Momentum	0.45%	1.24%	0.09%	1.77%	1.22%	4.77%
Income	0.40%	0.41%	-0.48%	3.36%	-0.75%	2.94%
Quality	0.17%					0.17%
TOTAL	-1.54%	0.83%	0.65%	2.72%	3.83%	6.49%
			KARP Net R	eturns ²		1 2023: 4.43% 2 2023: 1.98%
						I ACWI: 0.19 rg Agg: -0.09 VIX: -0.40
			Soc Gen Multi-Alternative Risk Premia Index Return ⁴		YTE	2023: 3.51%

Founder Share Class: Class F

Fees: 0.70% management fee per year **Liquidity:** Monthly with 30 days' notice

¹ Performance shown for Kepos Alternative Risk Premia Fund LP and is through June 30, 2023. The performance attribution figures stated herein are net of management fees, any incentive fee/allocation and other expenses. Fees and expenses were allocated to the strategies proportionately based on the absolute return generated by such strategy for the period shown. The performance figures set forth herein are unaudited and have been computed by Kepos Capital LP based on unaudited figures and data. Please note that the classifications used are those of Kepos Capital LP and may evolve. ² Net performance for KARP imputes the management fee associated with "new-issue" eligible class F shares/interests (i.e., a base 0.70% annual management fee). The above estimate assumes an investment in the applicable fund since inception. Performance includes reinvestment of interest and dividends, if any. ³ Correlations are based on realized monthly net returns since KARP inception (October 1, 2018) through June 30, 2023. ⁴ Computed using daily returns from NEIXMARP Index on Bloomberg as of June 30, 2023. Please see additional disclosures at the end of this presentation for definitions of the indices used above. PAST PERFORMANCE IS NOT AN INDICATOR OR GUARANTEE OF FUTURE RESULTS. THERE IS NO GUARANTEE THAT THE FUND WILL ACHIEVE COMPARABLE RESULTS TO THOSE SET FORTH IN THIS DOCUMENT OR THAT IT WILL ACHIEVE ITS INVESTMENT OBJECTIVES IN THE FUTURE.

The Goal

 Factors that perform well in the future (not ones that just perform well in backtests)

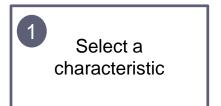
Where Do Factors Live?

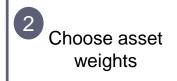
- Where there are <u>risk transfer opportunities</u> or persistent <u>behavioral biases</u>
- Theory does not identify the individual factors

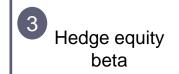
Framework for Factor Selection

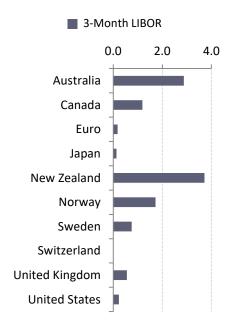
- 1. Economically intuitive (necessary, but not sufficient)
- 2. Demonstrated historical premium in excess of global equity beta
- 3. Institutional liquidity and capacity
- 4. Empirically robust
 - Testable on other markets, asset classes, time periods
 - Holds up when specific time periods and markets are excluded (jackknifing)
 - Insensitive to factor definition

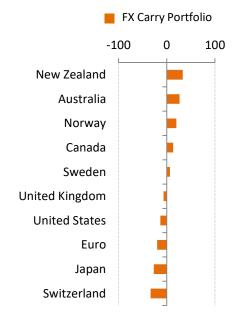


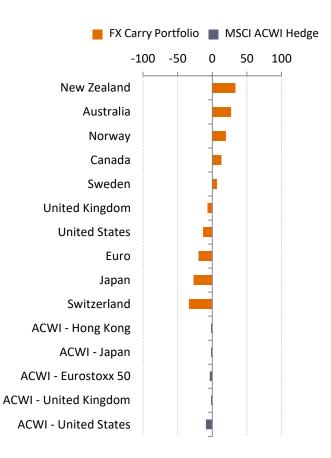






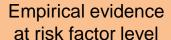






Prior views at risk factor level

Views implied by an equal risk allocation

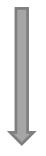


- Average returns
- Volatility
- Expected out-of-sample decay



Dynamic views at risk factor level

- Value
- Momentum
- Market environment



Risk model and other penalties

- Transaction costs
- Leverage
- Tail risk



Strategic risk factor forecasts



Overall risk factor forecasts





Optimal allocation across risk factors



- Our team has researched and invested in risk factors for over 25 years
- Our strategy overweights macro factors that are less crowded and more lowly correlated
- Our firm ethos is built on transparency, alignment, fairness and partnership



MARK CARHART | CHIEF INVESTMENT OFFICER

Mark Carhart is the Chief Investment Officer and a founding partner of Kepos Capital. Prior to founding Kepos in 2010, Mark was a Partner and the Co-Chief Investment Officer of the Quantitative Investment Strategies Group at Goldman Sachs Asset Management, and prior to GSAM he was an Assistant Professor at the Marshall School of Business at USC and a Senior Fellow at The Financial Institutions Center at The Wharton School. Mark's publications include articles in *The Journal of Finance*, *The Review of Financial Studies* and the *Financial Analysts Journal*, and he received the *FAJ's* Graham and Dodd Award in 2014. He is also a coauthor of Modern Investment Management: An Equilibrium Approach. Mark earned a B.A. from Yale University in 1988, became a CFA Charterholder in 1991 and received his Ph.D. from the University of Chicago Booth School of Business in 1995. He serves on the non-profit board of InTandem Cycling and the investment committees for the Convent of the Sacred Heart New York and the Aldrich Museum.

GIORGIO DE SANTIS | DIRECTOR OF RESEARCH

Giorgio De Santis is the Director of Research and a founding partner of Kepos Capital. Prior to Kepos, Giorgio was a Partner and the co-head of the research team in the Quantitative Investment Strategies Group at Goldman Sachs Asset Management. Prior to Goldman Sachs, he was an Assistant Professor of Finance and Business Economics at the Marshall School of Business at USC. He has published articles in *The Journal of Finance*, the *Journal of Financial Economics*, the *Journal of International Money and Finance*, the *Financial Analysts Journal* and other academic and practitioner journals in finance and economics, and received the *FAJ's* Graham and Dodd Award in 2014. He has also contributed chapters to several books on investment management and is a co-author of Modern Investment Management: An Equilibrium Approach. Giorgio earned a B.A. from the Libera Universita' Internazionale degli Studi Sociali in Rome in 1984, a M.A. in Economics from the University of Chicago in 1989 and a Ph.D. in Economics from the University of Chicago in 1993.

BOB LITTERMAN | CHAIRMAN, RISK COMMITTEE

Bob Litterman is the Chairman of the Risk Committee and founding partner of Kepos Capital LP. Prior to joining Kepos Capital in 2010, Bob enjoyed a 23-year career at Goldman, Sachs & Co., where he served in research, risk management, investments and thought leadership roles. He oversaw the Quantitative Investment Strategies Group in the Asset Management division. While at Goldman, Bob also spent six years as one of three external advisors to Singapore's Government Investment Corporation (GIC). Bob was named a partner of Goldman Sachs in 1994 and became head of the firm-wide risk function; prior to that role, he was co-head of the Fixed Income Research and Model Development Group with Fischer Black. During his tenure at Goldman, Bob researched and published a number of groundbreaking papers in asset allocation and risk management. He is the co-developer of the Black-Litterman Global Asset Allocation Model, a key tool in investment management, and has co-authored books including The Practice of Risk Management and Modern Investment Management: An Equilibrium Approach (Wiley & Co.). Bob earned a Ph.D. in Economics from the University of Minnesota and a B.S. in Human Biology from Stanford University. He was inducted into Risk magazine's Risk Management Hall of Fame and named the 2013 Risk Manager of the Year by the Global Association of Risk Professionals. In 2012, he was the inaugural recipient of the S. Donald Sussman Fellowship at MIT's Sloan School of Management. In 2008, Bob received the Nicholas Molodovsky Award from the CFA Institute Board as well as the International Association of Financial Engineers/SunGard Financial Engineer of the Year Award. Bob has served on a number of boards, including Commonfund, where he was elected Chair in 2014, Options Clearing Corporation (OCC), Resources for the Future RFF) and the Sloan Foundation. He also chaired the CFTC Climate-Related Market Risk Subcommittee, which published its report, "Managing Climate Risk in the U.S. Financial System," in September 2020. Bob is currently on the board of the Niskanen Center; Robert Wood Johnson Foundation; Ceres; World Wildlife Fund; Woodwell Climate Research Center; the Climate Leadership Council (CLC), where he serves as co-chair of the Board; PCAST (President's Council of Advisors on Science and Technology); UCAR (University Corporation for Atmospheric Research); and the Climate-related Financial Risk Advisory Committee (CFRAC) of the Financial Stability Oversight Council.



MATT DESCHAMPS | CHIEF OPERATING OFFICER

Matt DesChamps is the Chief Operating Officer and a founding partner of Kepos Capital. Prior to Kepos, Matt was a founding Principal of Satellite Asset Management, L.P. and Chair of its Operating Committee. Formerly, Matt worked at Morgan Stanley, where he was an account relationship manager in the equity division, and at Coopers & Lybrand, LLC, where he was a Senior Associate. Matt earned a B.A. from Franklin & Marshall College and an M.B.A. in Finance from the Stern School of Business at New York University in 1999. He is a Certified Public Accountant and a member of The American Institute of Certified Public Accountants. He is a trustee of Franklin & Marshall College, Enveritas and other not-for-profit organizations.

SIMON RAYKHER I GENERAL COUNSEL AND CHIEF COMPLIANCE OFFICER

Simon Raykher is the General Counsel and Chief Compliance Officer of Kepos Capital. Prior to Kepos, Simon served as General Counsel and Chief Compliance Officer at Lombard Odier Asset Management (USA) Corp, the US asset management subsidiary of one of the oldest and largest private banks in Switzerland. For the previous seven years, he was General Counsel, Chief Compliance Officer and Principal of Satellite Asset Management, L.P. Prior to Satellite, Simon was an attorney with the law firm of Schulte Roth & Zabel LLP. Earlier in his career, he was a prosecutor with the Investigation Division of the New York County District Attorney's office, where he conducted tax fraud and money laundering investigations. Simon started his career as an auditor with Coopers & Lybrand, LLC. Simon earned a B.B.A. and an M.B.A. in Accounting from Pace University and a J.D. from Fordham University School of Law. Simon is an Adjunct Professor of Law at Fordham University School of Law.

ANDREW MILLER | HEAD OF BUSINESS DEVELOPMENT

Prior to joining Kepos, Andrew was Senior Institutional Investor Relations Manager for Värde Partners. He has spent his entire career in client-facing roles, beginning in 1997 with Invesco Asset Management in Paris. After seven years with Invesco in Europe, he returned to the US where he worked with the firm's Global Structured Products Group and Global Fixed Income team before joining WL Ross & Co in 2006. In 2008, Andrew joined Satellite Asset Management and subsequently was responsible for Business Development for Trafalgar Asset Managers. Andrew is a CFA Charterholder and earned a B.A. from Lawrence University in 1996.

RODOLFO MARTELL | QUANTITATIVE STRATEGIST

Rodolfo Martell is the Quantitative Strategist of Kepos Capital. Prior to Kepos, Rodolfo was Head of Portfolio Strategy at Pluribus Labs, Global Co-head of Investment Strategy at AQR Capital Management, and an investment strategist, portfolio manager and researcher at Barclays Global Investors (BGI, now part of BlackRock). Prior to BGI, Rodolfo was an Assistant Professor of Finance at the Krannert School of Management at Purdue University, where he won the John and Mary Willis Young Faculty award. He has published articles in the *American Economic Review, Review of Finance* and *Emerging Markets Review*, and has been a lecturer at the Haas School of Business (Berkeley), The Ohio State University's Fisher College of Business and ITAM. Rodolfo earned a B.A in Economics from Universidad de las Americas – Puebla, and a Ph.D. in Finance from The Ohio State University.

KRISTIN SCHERER | DIRECTOR OF BUSINESS DEVELOPMENT

Prior to joining Kepos, Kristin was a Director on the Capital Services team at Credit Suisse, where she was responsible for relationships with institutional investors, family offices and hedge fund managers on the West Coast. From 2015 to 2019, she was a Director at Societe Generale in their Capital Introductions group, also handling relationships with West Coast-based investors and asset managers. In 2018, Kristin was named by the *Hedge Fund Journal* as one of the 50 Leading Women in Hedge Funds. Before joining Societe Generale, Kristin was a Managing Director and the Head of Global Business Development at V2 Capital. Prior to that, she served as a Managing Director at Marketfield Asset Management, where she led US institutional business development. From 2005 to 2012 she held various positions at AllianceBernstein. Kristin is a CAIA Charterholder. She graduated from Colgate University, where she played lacrosse, with a degree in Philosophy & Religion.



Disclosures and Additional Notes

In connection with any consideration of an investment in the Fund, prospective investors should be aware of a number of additional general and specific risks (many of which are described in the Fund's private placement memorandum and Kepos Capital's Form ADV), including the following:

Conflicts of Interest. The investment manager will be subject to a number of conflicts of interest from time to time, some of which are described in the Fund's private placement memorandum.

<u>Financing Arrangements.</u> The use of leverage is integral to many of the Fund's strategies, and the Fund depends on the availability of credit in order to finance its portfolio. The purchase of options, futures, forward contracts, repurchase agreements, reverse repurchase agreements and equity swaps generally involves little or no margin deposit and, therefore, provides substantial leverage. Accordingly, relatively small price movements in these financial instruments may result in immediate and substantial losses to the Fund.

Model and Data Risk. Given the complexity of the investments and strategies we manage, we must rely heavily on quantitative models (both proprietary models developed by our personnel, and those supplied by third parties) and information and data supplied by third parties. When these models and data prove to be incorrect, misleading or incomplete, any decisions made in reliance on them expose investors to potential risks. Also, the research and modeling process we engage in is extremely complex and involves financial, economic, econometric and statistical theories, research and modeling; the results of that process must then be translated into computer code. Although we seek to hire individuals skilled in each of these functions and endeavor to provide appropriate levels of oversight, this complexity raises the chances that the finished model may contain one or more errors that could adversely affect performance.

Obsolescence Risk. We are unlikely to be successful in managing client accounts unless the assumptions underlying our models are realistic and either remain realistic and relevant in the future or are adjusted to account for changes in the overall market environment. If such assumptions are inaccurate or become inaccurate and are not promptly adjusted, it is likely that profitable trading signals will not be generated.

<u>Crowding/Convergence.</u> There is significant competition among quantitatively-focused managers, and our ability to deliver returns for investors that have a low correlation with global aggregate equity markets and other hedge funds is dependent on our ability to employ models that are simultaneously profitable and differentiated from those employed by other managers. To the extent that we are not able to develop sufficiently differentiated models, investors' investment objectives may not be met, irrespective of whether the models are profitable in an absolute sense.

Market Indices Used in Presentation:

MSCI ACWI is an index designed to measure the broad equity market performance of developed and emerging markets.

Bloomberg Global Aggregate provides a broad-based measure of the global investment grade fixed-rate debt markets (with the currency exposure hedged).

VIX is a measure of market expectations of near-term volatility as conveved by S&P 500 stock index options.

Hedge Fund Indices Used in Presentation:

HFRI Global Fund Weighted Composite Index is an equal-weighted index of over 2,000 single-manager funds with at least \$50 million under management or a 12-month track record.

HFRI Equity Hedge (Total) Index is comprised of managers who maintain positions both long and short in primarily equity and equity derivate securities.

HFRI Relative Value Index is an index designed to measure managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities across asset classes.

<u>HFRI Event Driven</u> is a broad measure of managers who maintain positions in companies involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments.

HFRI Macro Index is a measure of managers whose investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

SocGen Multi Alternative Risk Premia Index represents risk premia managers who employ investment programs diversified across multiple asset classes while utilizing multiple risk premia factors. These managers trade multiple asset classes such as equities, fixed income, currencies, and in many cases commodities, and aim to capture a diversity of discrete risk premia, including most prevalently value, carry, and momentum. These multi-asset, multi-risk premia strategies are typically systematic. Single asset class and risk premia programs are excluded. The SG Multi Alternative Risk Premia Index is an equally weighed, non-investable index of funds.

References to indices, benchmarks or other measures of relative market performance over a specified period of time are provided for your information only and do not imply that the actual Fund portfolio will achieve similar results. The index composition does not reflect the manner in which a portfolio is constructed; unlike these indices and benchmarks, the Fund's portfolio may contain options (including covered and uncovered puts and calls) and other derivative securities, futures and other commodity interests and currencies, and may include short sales of securities, margin trading, securities of smaller capitalization companies and types of securities that are different than those reflected in these indices and benchmarks, and is not as diversified as these indices and benchmarks. While an adviser seeks to design a portfolio which reflects appropriate risk and return features, portfolio characteristics may deviate from those of the benchmark. Indices are unmanaged and investors cannot invest directly in most indices. The figures for the indices may reflect the reinvestment of dividends but do not reflect the deduction of any fees or expenses which would reduce returns.



MEMORANDUM

TO: Oakland Police and Fire Retirement System (OPFRS)

FROM: Meketa Investment Group (Meketa)

DATE: July 26, 2023

RE: Kepos Capital—Manager Update

Manager: Kepos Capital										
Inception Date:	February 2022	OPFRS AUM (6/30/2023):	\$10.5 million							
Strategy:	Alternative Risk Premia	Strategy AUM (6/30/2023):	\$192 million							
Benchmark:	SG Multi-Alternative Risk Premia	Firm-wide AUM (6/30/2023):	\$2.1 billion							

Summary & Recommendation

Kepos Capital has managed the alternative risk premia sleeve within the Plan's Crisis Risk Offset component since February 2022. As of 6/30/2023, the portfolio is approximately \$10.5 million or about 2.5% of OPFRS's total plan. The strategy has performed within expectations and guidelines for the portfolio. No major organizational changes or personnel turnover in the portfolio management team have been observed since OPFRS's initial funding in early 2022. *Therefore, Meketa does not have any major concerns with Kepos Capital and Alternative Risk Premia strategy.*

Investment Performance Review Summary

As of 6/30/2023, Kepos Alternative Risk Premia strategy has outperformed the benchmark Société Générale (SG) Multi-Alternative Risk Premia Index year-to-date and over the 1-year trailing period on both gross- and net-of-fees bases. Since inception in February 2022, the strategy has generated an annualized net-of-fees investment return of -2.0%.

OPFRS Portfolio Returns (as of 6/30/2023)¹

Portfolio	Market Value (\$000)	YTD	1 YR	3 YR	5 YR	Since Inception	Inception Date
Kepos Alt Risk Premia (Gross)	10,477	6.9	10.5			4.1	2/2022
SG Multi-Alt Risk Premia Index		3.5	6.0			5.3	
Excess Return (Gross)		3.4	4.5			-1.2	
Kepos Alt Risk Premia (Net)		6.5	9.8			3.3	
SG Multi-Alt Risk Premia Index		3.5	6.0			5.3	
Excess Return (Net)		3.0	3.8			-1.9	

¹ Performance is annualized for periods longer than one year.



Investment Characteristics Review

The Crisis Risk Offset (CRO) component, which Kepos Alternative Risk Premia is a part of, is expected to exhibit lower correlations to the traditional equity and fixed income markets.

Since account inception in February 2022, Kepos Alternative Risk Premia has exhibited near zero correlation to equities (as measured by MSCI All Country World Index) and fixed income (as measured by Bloomberg Global Aggregate Index).

In comparison with these two indices, Kepos has also exhibited lower volatility (measured as Standard Deviation) year-to-date, over 1-year trailing period, and since account inception in February 2022.

	Kepos Alt Risk Premia	MSCI ACWI	Bloomberg Global Agg								
Correlation to Board Market Indices											
Since Account Inception		0.02	0.02								
	Volatility (Standard Dev	iation) Comparison									
YTD	1.4	3.5	2.4								
1-Yr	5.2	18.6	10.3								
Since Account Inception	6.0	19.1	10.1								

Product and Organization Review Summary

Kepos Capital			Areas of Potent	ial Impact	
	Level of Concern	Investment Process	Investment Team	Performance Track Record	Team/ Firm Culture
Product					
Key people changes	None				
Changes to team structure/individuals' roles	None				
Product client gain/losses	None				
Changes to the 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	Termina	ition

A review of Kepos Capital and the Alternative Risk Premia strategy revealed no concerning organizational issues or changes since February 2022.



Investment Summary per Manager

The Kepos Alternative Risk Premia strategy is designed to harvest diversified and time-varying exposure to equity and macro risk premia while remaining uncorrelated to global equities over a market cycle. The strategy's risk process is calibrated to deliver approximately 10% annualized volatility over the same period, although the risk target of the strategy will vary depending on the models' assessment of the level of risk of the premia factors at any given point in time.

The strategy invests in risk premia that are transparent, intuitive, relatively well-known and, in most cases, very liquid. The opportunities captured by the risk premia are not generated by short-term inefficiencies or unexpected events. Conceptually, they exist in the presence of risk transfers or behavioral effects. Kepos believes that alternative risk premia are found in all asset classes and can be grouped into the following themes: value, income, and momentum.

The Kepos team applies a systematic research and investment process. The team performs proprietary research, combining economic theory and statistical methods to identify potentially durable risk premia. Ideas are generally developed and evaluated by combining traditional and behavioral economic ideas, support from empirical evidence, market conditions (such as the liquidity of tradable instruments) and leverage requirements. Once a factor has been developed and evaluated, it is translated into a portfolio of securities and investments based on a number of criteria, which would include expected returns over the relevant time horizon; various risk measures such as Value at Risk and Conditional Value at Risk; transaction costs; leverage requirements; position size relative to market liquidity; and exposure to various factors and market indices.

DS/PN/JLC/mn



Disclosure

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



Economic and Market Update

June 2023 Report

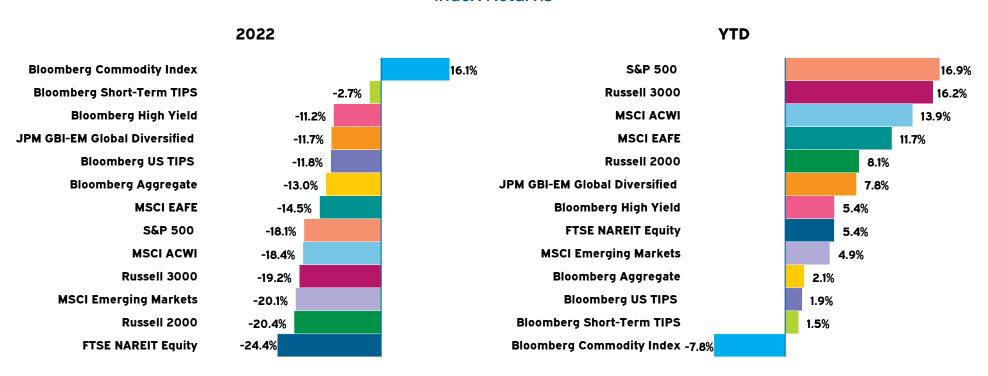


Commentary

- → Asset returns were positive in June with US and Non-US equities posting gains, while most fixed income sectors sold-off on expectations for further interest rate hikes later this year. Except for commodities, most public market asset classes remain up for the year.
 - Although the Fed skipped a rate-hike in June, Fed comments signaled further rate hikes in the 2H 2023; the US economy appears to be resilient supporting domestic demand and low unemployment.
 - US equity markets (Russell 3000) rose in June (+6.8%) adding to YTD gains (+16.2%). Some of the largest technology names drove positive results. Growth stocks continued to outpace value stocks, particularly in the large cap space.
 - Non-US developed equity markets rose in June (MSCI EAFE 4.6%) falling behind US equities in 2023 (+16.2% versus +11.7%). A strengthening US dollar weighed on returns.
 - Emerging market equities rose in June (+3.8%) supported by positive returns in China (+4.0%). They significantly trail developed market equities YTD returning +4.9%, due partly to higher US-China tensions.
 - Rates generally rose in June leading to bond markets declining, with the broad US bond market (Bloomberg Aggregate) falling 0.4% for the month. It remains positive (+2.1%) year-to-date, though, on declining inflation and expectations for the Fed to end their rate hikes soon.
- → This year, the paths of inflation and monetary policy, slowing global growth and the war in Ukraine will all be key.



Index Returns¹



- → After a particularly difficult 2022, most public market assets are up thus far in 2023, building on gains from the fourth quarter of last year.
- → Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall, and growth has slowed.

¹ Source: Bloomberg and FactSet. Data is as of June 30, 2023.



Domestic Equity Returns¹

Domestic Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	6.6	8.7	16.9	19.6	14.6	12.3	12.8
Russell 3000	6.8	8.4	16.2	19.0	13.9	11.4	12.3
Russell 1000	6.8	8.6	16.7	19.4	14.1	11.9	12.6
Russell 1000 Growth	6.8	12.8	29.0	27.1	13.7	15.1	15.7
Russell 1000 Value	6.6	4.1	5.1	11.5	14.3	8.1	9.2
Russell MidCap	8.3	4.8	9.0	14.9	12.5	8.4	10.3
Russell MidCap Growth	7.7	6.2	15.9	23.1	7.6	9.7	11.5
Russell MidCap Value	8.7	3.9	5.2	10.5	15.0	6.8	9.0
Russell 2000	8.1	5.2	8.1	12.3	10.8	4.2	8.2
Russell 2000 Growth	8.3	7.1	13.6	18.5	6.1	4.2	8.8
Russell 2000 Value	7.9	3.2	2.5	6.0	15.4	3.5	7.3

US Equities: Russell 3000 Index rose 8.4% in the second guarter and 16.2% YTD.

- → US stocks rose sharply in the second quarter of 2023. Most of the gains came in the month of June when the Fed kept its target rate unchanged for the first time since early 2022. Investors are expressing optimism that the Fed can tame inflation without widespread disruptions to the equity markets.
- → With the exception of energy and utilities, each sector of the Russell 3000 index appreciated during the second quarter. Technology led all sectors and was driven by enthusiasm for growth stocks, particularly those with exposure to artificial intelligence (e.g., NVIDIA).
- → Large cap stocks continue to outperform small cap stocks, driven by technology and the underperformance of small cap biotechnology stocks. Growth stocks continue to broadly outperform value stocks.

¹ Source: Bloomberg. Data is as of June 30, 2023.



Foreign Equity Returns¹

Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	4.5	2.4	9.5	12.7	7.2	3.5	4.7
MSCI EAFE	4.6	3.0	11.7	18.8	8.9	4.4	5.4
MSCI EAFE (Local Currency)	3.6	4.3	12.1	17.5	11.7	6.4	7.7
MSCI EAFE Small Cap	2.9	0.6	5.5	10.2	5.7	1.3	6.2
MSCI Emerging Markets	3.8	0.9	4.9	1.8	2.3	0.9	2.9
MSCI Emerging Markets (Local Currency)	3.4	1.7	5.6	3.3	3.9	3.0	5.7
MSCI China	4.0	-9.7	-5.5	-16.8	-10.3	-5.3	3.0

Foreign Equity: Developed international equities (MSCI EAFE) rose 3.0% in the second quarter bringing the YTD results to +11.7%. Emerging market equities (MSCI EM) rose 0.9% in the quarter, rising 4.9% YTD.

- → Eurozone and Japan markets continued their strength in June, wrapping up a strong second quarter. In Europe, financials and IT led returns whereas energy and communication services lagged. Enthusiasm for AI helped company fundamentals and prices for semiconductor stocks. Headline inflation was down in June, although core inflation was up slightly month over month. Energy and materials were the main drivers for falling UK equities, along with Bank of England rate hikes. Optimism continues to build for Japanese investors, while the Yen remains weak, and Bank of Japan remains dovish.
- → Emerging markets were laggards as China equities struggled from weak export demands and rising negative sentiments. Brazil, India, and Taiwan are bright spots in EM, the former due to good earnings and macro, the latter from AI and IT strength.

¹ Source: Bloomberg. Data is as of June 30, 2023.



Fixed Income Returns¹

Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-0.2	-0.6	2.3	0.0	-3.4	1.0	1.8	5.2	6.3
Bloomberg Aggregate	-0.4	-0.8	2.1	-0.9	-4.0	0.8	1.5	4.8	6.5
Bloomberg US TIPS	-0.3	-1.4	1.9	-1.4	-0.1	2.5	2.1	4.6	6.8
Bloomberg Short-term TIPS	-0.2	-0.7	1.5	0.1	2.3	2.7	1.7	5.3	2.5
Bloomberg High Yield	1.7	1.7	5.4	9.1	3.1	3.4	4.4	8.5	4.1
JPM GBI-EM Global Diversified (USD)	3.3	2.5	7.8	11.4	-1.4	0.3	-0.6	6.6	5.0

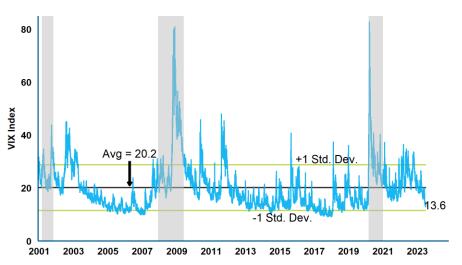
Fixed Income: The Bloomberg Universal declined 0.6% in the second quarter as global sovereign debt yields generally rose. Bonds retained a positive start to the year (+2.3% YTD) though as inflation continues to decline.

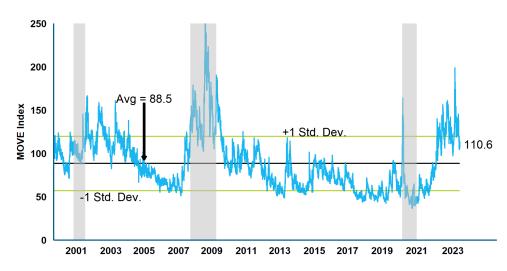
- → US Treasury yields generally rose over the month, with 1-year to 10-year maturity sector rising the most due to higher policy expectations.
- → The TIPS index and the short-term TIPS index posted negative returns for the month as inflation concerns continued to ease.
- → Continued risk appetite drove high yield bond performance (1.7%) and outperformance versus the broad US bond market (Bloomberg Aggregate). Emerging market bonds (3.3%) also performed well on investor risk sentiment.

¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of June 30, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.



Equity and Fixed Income Volatility¹



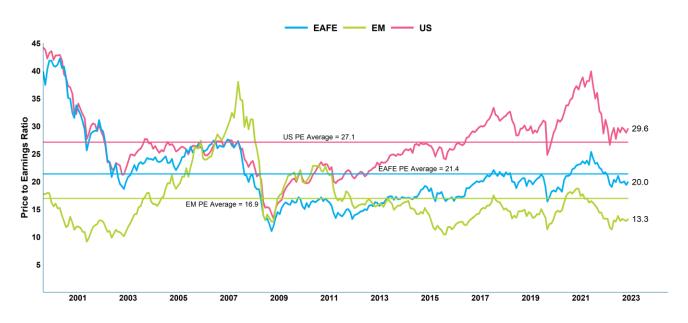


- → Volatility in equities (VIX) declined in June and remains low as investors continue to anticipate the end of the Fed's policy tightening.
- → In comparison, the bond market remains on edge after last year's historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above (110.6) its long-run average (88.4), but off its recent peak during the heart of the banking crisis.

¹ Equity and 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 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2023.



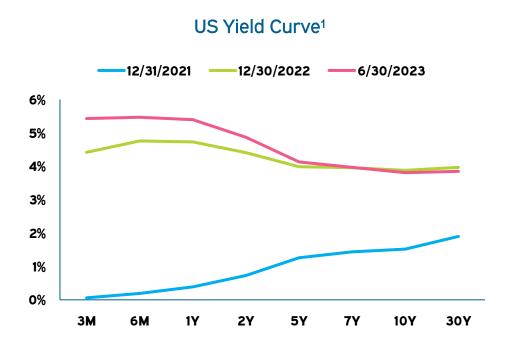
Equity Cyclically Adjusted P/E Ratios¹



- → After its dramatic decline last year the US equity price-to-earnings ratio remains above its long-run (21st century) average.
- → International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

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: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of June 2023. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



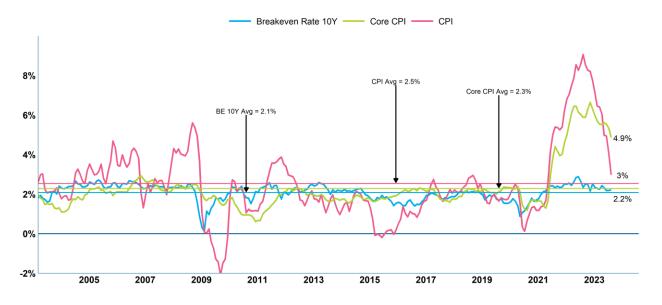


- → Interest rates have started rising again across the curve given policy maker guidance that policy rates are likely to rise further and potentially stay longer at the terminal rate than market participants expect. The rise in rates was particularly acute at the very front-end (< 1 year). Maturities from two years out also drifted higher as market participants considered the possibility of additional policy rate increases as economic data (mainly inflation and labor markets) remains strong.
- → The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -1.06%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.62%. Inversions in the yield curve have often preceded recessions.

¹ Source: Bloomberg. Data is as of June 30, 2023.



Ten-Year Breakeven Inflation and CPI¹

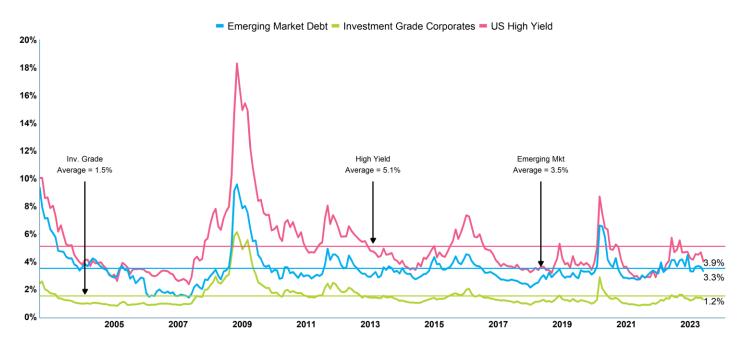


- → Headline inflation continued to decline in June, with the year-over-year reading falling from 4.0% to 3.0% and coming in slightly below estimates. The month-over-month rate of price increases rose slightly (0.2% versus 0.1%), with food prices ticking up slightly (0.1%) and energy prices rose (0.6%).
- → Core inflation excluding food and energy fell (5.3% to 4.9%), coming in slightly above forecasts. It remains stubbornly high driven by shelter costs.
- → Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed's 2% average target.

¹ Source: Bloomberg. Data is as June 30, 2023. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.



Credit Spreads vs. US Treasury Bonds¹

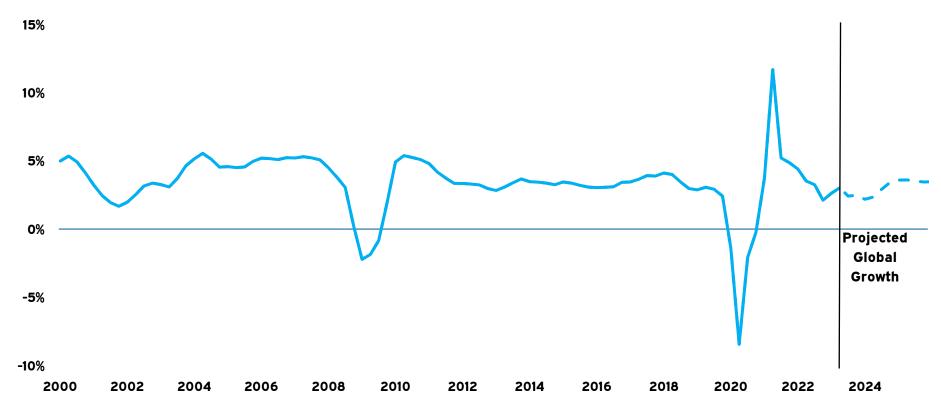


- → Spreads (the added yield above a comparable maturity Treasury) declined in June as risk appetite remained robust for respective credit exposures.
- → High yield spreads remain below their long-term average. Investment grade spreads and emerging market spreads are narrower than high yield spreads and close to their respective long-term averages.

¹ Sources: Bloomberg. Data is as of June 30, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end, respectively.





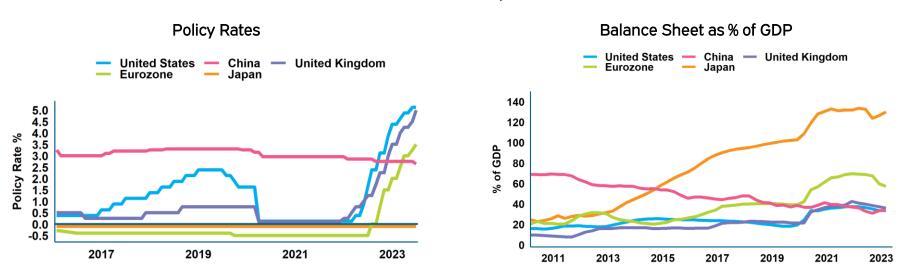


- → Global economies are expected to slow this year compared to 2022, with risks of recession as the impacts of policymakers' aggressive tightening to fight inflation flow through economies.
- → The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated June 2023.



Central Bank Response¹

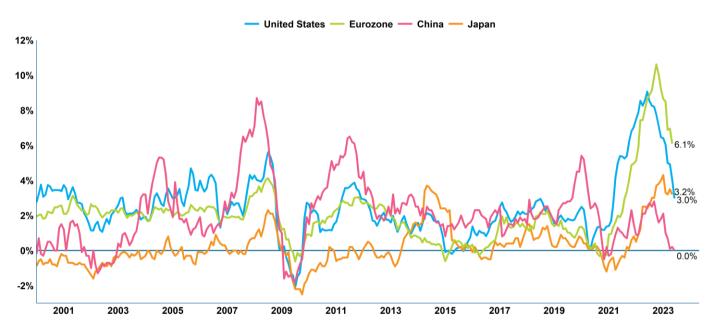


- → In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and growth have led to expectations for reductions in policy tightening going forward.
- → In May the Fed raised rates another 25 basis points to a range of 5.0% to 5.25%. After month-end, the FOMC paused its tightening campaign but hinted that one or two additional rate hikes could come later this year.
- → In China, the central bank has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- → Looking ahead, risks remain for a policy error as central banks attempt to balance multiple goals, bringing down inflation, maintaining financial stability, and supporting growth.

¹ Source: Bloomberg. Policy rate data is as of June 30, 2023. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of March 31, 2023.



Inflation (CPI Trailing Twelve Months)1

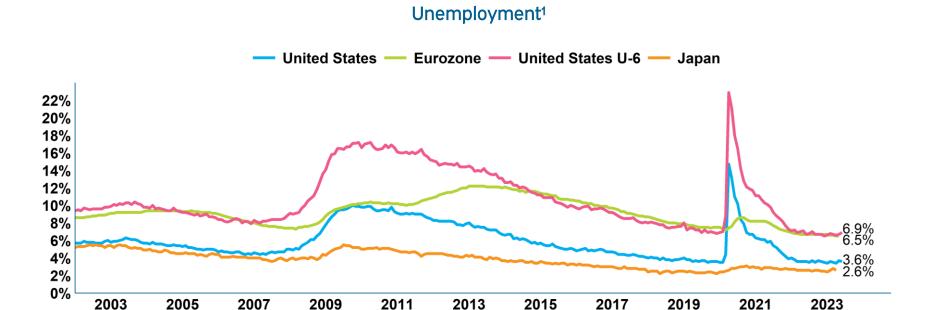


- → Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.
- → In the US, inflation fell to 3.0% at month-end, while eurozone inflation also fell (6.1% from 7.0%) a level well off its peak. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- → Inflation remains lower in China and Japan. In China, inflation levels were only slightly above 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

¹ Source: Bloomberg. Data is as June 30, 2023. The most recent Japanese inflation data is as of May 2023.

2023





→ Despite slowing growth and high inflation, the US labor market still shows signs of resiliency. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.9% but also declined dramatically from their peak.

2013

2017

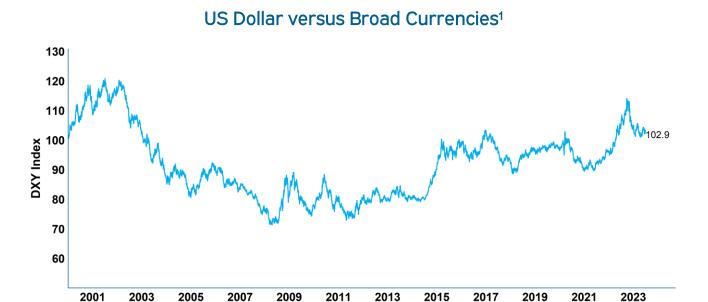
2019

2011

- → The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, leading to higher unemployment.
- → Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

¹ Source: Bloomberg. Data is as June 30, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of May 2023.





- → The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- → Late last year and into this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. In June, we did see a slight decline in the dollar though.
- → This year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

¹ Source: Bloomberg. Data as of June 30, 2023.



Summary

Key Trends:

- → The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.
- → Recent issues related to the banking sector seem to have subsided for now but are a reminder that there is a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.
- → Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- → Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.
- → In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing cost are elevated, and the job market may weaken.
- → The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.
- → Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector.

MEKETA

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INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

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



June Flash Report

As of June 30, 2023

Policy	(Current
40.0%		41.4%
12.0%		13.3%
31.0%		24.9%
		2.2% 5.4%
2.0% 5.0%		
10.0%		9.6%
		3.3%
0.0%		

	Allocation vs. Targets and Policy												
	Current Balance (\$)	Current (%)	Policy (%)	Difference (%)	Policy Range (%)	Within IPS Range?							
Domestic Equity	\$173,924,779	41	40	1	30 - 50	Yes							
International Equity	\$55,841,087	13	12	1	8 - 14	Yes							
Fixed Income	\$104,462,270	25	31	-6	25 - 40	No							
Credit	\$9,200,988	2	2	0	0 - 100	Yes							
Covered Calls	\$22,548,100	5	5	0	5 - 10	Yes							
Crisis Risk Offset	\$40,159,887	10	10	0	5 - 15	Yes							
Cash	\$14,032,977	3	0	3	0 - 5	Yes							
Total	\$420,170,089	100	100	0									

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As of June 30, 2023

										,		5 30, LUL
		Asset Cla	ass Pe	forma	nce Su	mmary						
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
OPFRS Total Plan	420,170,089	100.0	3.8	3.4	8.0	8.8	8.8	6.6	5.6	7.3	6.6	Dec-88
OPFRS Policy Benchmark			3.5	4.0	9.1	10.4	10.4	6.2	<i>5.5</i>	7.1	7.9	
Excess Return			0.3	-0.6	-1.1	-1.6	-1.6	0.4	0.1	0.2	-1.3	
Domestic Equity	173,924,779	41.4	7.0	6.0	11.5	14.9	14.9	13.1	10.0	11.8	8.9	Jun-97
Russell 3000 (Blend)			6.8	8.4	16.2	19.0	19.0	13.9	11.4	12.3	9.1	
Excess Return			0.2	-2.4	-4.7	-4.1	-4.1	-0.8	-1.4	-0.5	-0.2	
International Equity	55,841,087	13.3	5.2	3.1	12.1	16.7	16.7	8.5	4.8	6.2	5.4	Jan-98
MSCI ACWI ex US (Blend)			4.5	2.4	9.5	12.7	12.7	7.2	3.5	4.7	5.0	
Excess Return			0.7	0.7	2.6	4.0	4.0	1.3	1.3	1.5	0.4	
Fixed Income	104,462,270	24.9	-0.2	-0.5	2.9	0.2	0.2	-2.7	1.3	2.1	4.7	Jan-94
Bloomberg Universal (Blend)			-0.2	-0.6	2.3	0.0	0.0	-3.4	1.0	1.8	4.5	
Excess Return			0.0	0.1	0.6	0.2	0.2	0.7	0.3	0.3	0.2	
Credit	9,200,988	2.2	2.0	3.4	7.2	8.8	8.8	7.9	4.0		5.2	Feb-15
Blmbg. U.S. Corp: High Yield Index			1.7	1.7	5.4	9.1	9.1	3.1	3.4	4.4	4.2	
Excess Return			0.3	1.7	1.8	-0.3	-0.3	4.8	0.6		1.0	
Covered Calls	22,548,100	5.4	4.1	7.4	14.0	16.6	16.6	13.7	9.9		9.2	Apr-14
CBOE S&P 500 Buy Write Index			2.1	4.3	10.5	9.0	9.0	10.6	4.6	6.3	<i>5.7</i>	
Excess Return			2.0	3.1	3.5	7.6	7.6	3.1	5.3		3.5	
Crisis Risk Offset	40,159,887	9.6	1.3	2.0	2.0	-2.8	-2.8	-7.3			-8.0	Aug-18
Crisis Risk Offset Benchmark			1.6	2.7	<i>2.</i> 7	5.2	<i>5.2</i>	4.1			0.1	
Excess Return			-0.3	-0.7	-0.7	-8.0	-8.0	-11.4			-8.1	

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

MEKETA INVESTMENT GROUP Page 3 of 11

As of June 30, 2023

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
OPFRS Total Plan	420,170,089	100.0	3.8	3.4	8.0	8.8	8.8	6.6	5.6	7.3	6.6	Dec-88
OPFRS Policy Benchmark			3.5	4.0	9.1	10.4	10.4	6.2	5.5	7.1	7.9	
Excess Return			0.3	-0.6	-1.1	-1.6	-1.6	0.4	0.1	0.2	-1.3	
Domestic Equity	173,924,779	41.4	7.0	6.0	11.5	14.9	14.9	13.1	10.0	11.8	8.9	Jun-97
Russell 3000 (Blend)			6.8	8.4	16.2	19.0	19.0	13.9	11.4	12.3	9.1	
Excess Return			0.2	-2.4	-4.7	-4.1	-4.1	-0.8	-1.4	-0.5	-0.2	
Northern Trust Russell 1000	81,367,541	19.4	6.7	8.6	16.7	19.3	19.3	14.0	11.8	12.6	13.4	Jun-10
Russell 1000 Index			6.8	8.6	16.7	19.4	19.4	14.1	11.9	12.6	13.4	
Excess Return			-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.0	0.0	
EARNEST Partners	43,238,606	10.3	7.6	4.0	8.9	10.8	10.8	14.1	11.4	13.1	10.2	Apr-06
Russell Midcap Index			8.3	4.8	9.0	14.9	14.9	12.5	<i>8.5</i>	10.3	8.6	
Excess Return			-0.7	-0.8	-0.1	-4.1	-4.1	1.6	2.9	2.8	1.6	
Wellington Select Quality Equity	23,373,498	5.6	5.9	4.5	5.3	12.7	12.7				5.3	May-22
Russell 1000 Index			6.8	8.6	16.7	19.4	19.4	14.1	11.9	12.6	7.8	
Excess Return			-0.9	-4.1	-11.4	-6.7	-6.7				-2.5	
Brown Fundamental Small Cap Value	11,278,982	2.7	8.7	4.0	3.7	14.7	14.7				3.0	Apr-21
Russell 2000 Value Index			7.9	3.2	2.5	6.0	6.0	15.4	3.5	7.3	-3.3	
Excess Return			0.8	0.8	1.2	8.7	8.7				6.3	
Rice Hall James	14,666,153	3.5	7.0	3.0	10.3	9.1	9.1	7.7	3.5		7.6	Aug-17
Russell 2000 Growth Index			8.3	7.1	13.6	18.5	18.5	6.1	4.2	8.8	6.9	
Excess Return			-1.3	-4.1	-3.3	-9.4	-9.4	1.6	-0.7		0.7	

MEKETA INVESTMENT GROUP Page 4 of 11

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

As of June 30, 2023

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
International Equity	55,841,087	13.3	5.2	3.1	12.1	16.7	16.7	8.5	4.8	6.2	5.4	Jan-98
MSCI ACWI ex US (Blend)			4.5	2.4	9.5	12.7	12.7	7.2	3.5	4.7	5.0	
Excess Return			0.7	0.7	2.6	4.0	4.0	1.3	1.3	1.5	0.4	
Vanguard Developed Markets ETF ²	15,464,066	3.7	3.5	2.2	10.4	15.3	15.3	8.8			6.7	Sep-19
FTSE Developed All Cap ex-U.S. Index			4.4	3.1	11.1	16.9	16.9	9.3	4.6	5.9	7.1	
Excess Return			-0.9	-0.9	-0.7	-1.6	-1.6	-0.5			-0.4	
SGA ACWI ex-U.S. Equity	40,377,022	9.6	5.9	3.5	12.8	17.3	17.3	8.4			3.8	Dec-19
MSCI AC World ex USA (Net)			4.5	2.4	9.5	12.7	12.7	7.2	3.5	4.7	3.8	
Excess Return			1.4	1.1	3.3	4.6	4.6	1.2			0.0	
Fixed Income	104,462,270	24.9	-0.2	-0.5	2.9	0.2	0.2	-2.7	1.3	2.1	4.7	Jan-94
Bloomberg Universal (Blend)			-0.2	-0.6	2.3	0.0	0.0	-3.4	1.0	1.8	4.5	
Excess Return			0.0	0.1	0.6	0.2	0.2	0.7	0.3	0.3	0.2	
Ramirez	70,891,932	16.9	-0.2	-0.6	2.7	-0.2	-0.2	-2.7	1.2		1.4	Feb-17
Blmbg. U.S. Aggregate Index			-0.4	-0.8	2.1	-0.9	-0.9	-4.0	0.8	1.5	0.9	
Excess Return			0.2	0.2	0.6	0.7	0.7	1.3	0.4		0.5	
Wellington Core Bond	6,726,320	1.6	-0.2	-0.5	3.1	-0.1	-0.1				-4.6	Apr-21
Blmbg. U.S. Aggregate Index			-0.4	-0.8	2.1	-0.9	-0.9	-4.0	0.8	1.5	-4.3	
Excess Return			0.2	0.3	1.0	8.0	0.8				-0.3	
Reams	26,844,017	6.4	-0.2	-0.4	3.2	1.3	1.3	-2.4	3.6	3.0	5.1	Feb-98
Bloomberg Universal (Blend)			-0.2	-0.6	2.3	0.0	0.0	-3.4	1.0	1.8	4.1	
Excess Return			0.0	0.2	0.9	1.3	1.3	1.0	2.6	1.2	1.0	

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

²Through Vanguard Developed Markets ETF is a passive strategy, short-term performance may appear to diverge from the index it tracks more than what 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.

As of June 30, 2023

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
Credit	9,200,988	2.2	2.0	3.4	7.2	8.8	8.8	7.9	4.0		5.2	Feb-15
Blmbg. U.S. Corp: High Yield Index			1.7	1.7	5.4	9.1	9.1	<i>3.1</i>	3.4	4.4	4.2	
Excess Return			0.3	1.7	1.8	-0.3	-0.3	4.8	0.6		1.0	
Polen Capital	9,200,988	2.2	2.0	3.4	7.2	8.8	8.8	7.9	4.0		5.2	Feb-15
ICE BofA High Yield Master II			1.6	1.6	5.4	8.9	8.9	3.2	3.2	4.3	4.1	
Excess Return			0.4	1.8	1.8	-0.1	-0.1	4.7	0.8		1.1	
Covered Calls	22,548,100	5.4	4.1	7.4	14.0	16.6	16.6	13.7	9.9		9.2	Apr-14
CBOE S&P 500 Buy Write Index			2.1	4.3	10.5	9.0	9.0	10.6	4.6	6.3	<i>5.7</i>	
Excess Return			2.0	3.1	3.5	7.6	7.6	3.1	5.3		3.5	
Parametric BXM	11,207,891	2.7	2.6	6.0	11.5	12.8	12.8	11.3	7.3		7.3	Apr-14
CBOE S&P 500 Buy Write Index			2.1	4.3	10.5	9.0	9.0	10.6	4.6	6.3	5.7	
Excess Return			0.5	1.7	1.0	3.8	3.8	0.7	2.7		1.6	
Parametric DeltaShift	11,340,209	2.7	5.6	8.8	16.6	20.5	20.5	15.6	12.2		11.3	Apr-14
CBOE S&P 500 Buy Write Index			2.1	4.3	10.5	9.0	9.0	10.6	4.6	6.3	<i>5.7</i>	
Excess Return			3.5	4.5	6.1	11.5	11.5	5.0	7.6		5.6	

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

As of June 30, 2023

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
Crisis Risk Offset	40,159,887	9.6	1.3	2.0	2.0	-2.8	-2.8	-7.3	-		-8.0	Aug-18
Crisis Risk Offset Benchmark			1.6	2.7	2.7	<i>5.2</i>	5.2	4.1			0.1	
Excess Return			-0.3	-0.7	-0.7	-8.0	-8.0	-11.4			-8.1	
Kepos Alternative Risk Premia	10,476,679	2.5	2.2	2.2	6.9	10.5	10.5				4.1	Feb-22
SG Multi Alternative Risk Premia Index			2.8	2.4	<i>3.5</i>	6.0	6.0	4.4			<i>5.3</i>	
Excess Return			-0.6	-0.2	3.4	4.5	4.5				-1.2	
Versor Trend Following	15,551,785	3.7	2.2	6.6	-2.6	-6.4	-6.4				2.9	Apr-22
SG Trend Index			2.0	8.0	0.1	-1.1	-1.1	14.3	9.4	<i>5.7</i>	6.6	
Excess Return			0.2	-1.4	-2.7	-5.3	-5.3				-3.7	
Vanguard Long-Term Treasury ETF	14,131,423	3.4	-0.2	-2.8	3.9	-7.3	-7.3	-12.2			-4.1	Jul-19
Blmbg. U.S. Government: Long Term Bond Index			0.0	-2.3	<i>3.7</i>	-6.8	-6.8	-12.0	-0.9	1.8	-3.9	
Excess Return			-0.2	-0.5	0.2	-0.5	-0.5	-0.2			-0.2	
Cash	14,032,977	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.6	Mar-11
Cash - Money Market	4,357,977	1.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1	0.8	0.6	Mar-11
Cash - Treasury	9,675,000	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	Oct-16

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

1 Month Ending June 30, 2023

Cash Flow Summary								
	Beginning Net Cash Flow Market Value		Net Investment Change	Ending Market Value				
Northern Trust Russell 1000	\$76,227,926	-	\$5,139,615	\$81,367,541				
EARNEST Partners	\$42,189,954	-\$2,000,000	\$3,048,652	\$43,238,606				
Wellington Select Quality Equity	\$22,080,589	-	\$1,292,909	\$23,373,498				
Brown Fundamental Small Cap Value	\$10,386,361	-	\$892,621	\$11,278,982				
Rice Hall James	\$13,712,159	-	\$953,993	\$14,666,153				
anguard Developed Markets ETF	\$14,945,025	-	\$519,041	\$15,464,066				
GA ACWI ex-U.S. Equity	\$38,125,089	-	\$2,251,933	\$40,377,022				
amirez	\$71,049,712	-	-\$157,779	\$70,891,932				
Vellington Core Bond	\$6,739,209	-	-\$12,889	\$6,726,320				
leams	\$26,895,636	-	-\$51,619	\$26,844,017				
olen Capital	\$9,029,007	-	\$171,981	\$9,200,988				
arametric BXM	\$10,923,681	-	\$284,210	\$11,207,891				
arametric DeltaShift	\$10,733,861	-	\$606,348	\$11,340,209				
epos Alternative Risk Premia	\$10,259,414	-	\$217,265	\$10,476,679				
ersor Trend Following	\$15,217,823	-	\$333,962	\$15,551,785				
anguard Long-Term Treasury ETF	\$14,167,013	-	-\$35,590	\$14,131,423				
ash - Money Market	\$4,121,881	\$236,096	-	\$4,357,977				
ash - Treasury	\$9,246,000	\$429,000	-	\$9,675,000				
ecurities Lending Northern Trust	-	-\$11,723	\$11,723	-				
PFRS Total Plan	\$406,050,340	-\$1,346,627	\$15,466,376	\$420,170,089				

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Benchmark History | As of June 30, 2023

	Benchmark History							
From Date	To Date	Benchmark						
OPFRS Total F	Plan							
06/01/2022	Present	40.0% Russell 3000 Index, 2.0% Blmbg. U.S. Corp: High Yield Index, 31.0% Blmbg. U.S. Universal Index, 12.0% MSCI AC World ex USA (Net), 5.0% CBOE BXM, 10.0% Crisis Risk Offset Benchmark						
01/01/2019	06/01/2022	40.0% Russell 3000 Index, 2.0% Blmbg. U.S. Treasury: Long, 12.0% MSCI AC World ex USA index, 31.0% Blmbg. U.S. Universal Index, 5.0% CBOE BXM, 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-Bi						
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)						
09/01/1988	04/01/1998	40.0% S&P 500 Index, 55.0% Blmbg. U.S. Aggregate Index, 5.0% FTSE 3 Month T-Bill						

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As of June 30, 2023

	Benchmark History							
From Date	To Date	Benchmark						
Domestic Equ	ity							
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	;							
03/01/2014	Present	CBOE S&P 500 Buy Write Index						
Crisis Risk Off	set							
01/01/2023	Present	33.3% SG Trend, 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						

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Disclaimer



WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM", "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

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

MEKETA INVESTMENT GROUP
Page 11 of 11



MEMORANDUM

TO: Oakland Police and Fire Retirement System (OPFRS)

FROM: Meketa Investment Group (Meketa)

DATE: July 26, 2023

RE: 2023 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 throughout 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. Meketa welcomes any suggestions and/or modifications to the proposed timeline.

2023 Preliminary Investment Project Agenda

Expected Completion Date	Task
August 2023	Flash Performance Report (2023 Jul) Quarterly Performance Report (2Q 2023) Manager Update: Wellington Select Equity Asset Liability Study Proposal
September 2023	Flash Performance Report (2023 Aug) Cash Flow Report (4Q 2023) Asset Class Review: Credit Thermal Coal List Update: 2023
October 2023	Flash Performance Report (2023 Sep) Manager Update: Versor Contract Renewal: Parametric
November 2023	Flash Performance Report (2023 Oct) Quarterly Performance Report (3Q 2023) Manager Update: Strategic Global Advisors
December 2023	Flash Performance Report (2023 Nov) Cash Flow Report (1Q 2024) Manager Update: Ramirez

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



Disclosure

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

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

REGULAR MEETING of the BOARD OF ADMINISTRATION of the OAKLAND POLICE AND FIRE RETIREMENT SYSTEM ("PFRS")

WEDNESDAY, JULY 26, 2023 11:30 AM ONE FRANK H. OGAWA PLAZA, HEARING ROOM 1 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/u/kctrX35uax
- 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".
- <u>eComment:</u> To send your comment directly to staff BEFORE the meeting starts, please email to <u>mvisaya@oaklandca.gov</u> 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

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A. Subject: POLICE AND FIRE RETIREMENT SYSTEM ("PFRS") BOARD OF

ADMINISTRATION MEETING MINUTES

From: Staff of the PFRS Board

Recommendation: APPROVE the June 28, 2023 PFRS Board of Administration Meeting

Minutes

B. AUDIT & OPERATIONS COMMITTEE AGENDA – JULY 26, 2023

B1. Subject: ADMINISTRATIVE EXPENSES REPORT

From: Staff of the PFRS Board

Recommendation: ACCEPT informational report regarding PFRS administrative expenses

as of May 31, 2023

B2. Subject: Reappointment of Walter L. Johnson, Sr. to the PFRS Board as

Community Representative

From: Staff of the PFRS Board

Recommendation: ACCEPT an informational report regarding the reappointment of

Walter L. Johnson, Sr. to continue to serve the PFRS Board as Community Representative for a 5-year term commencing May 2, 2023

and ending May 1, 2028

B3. Subject: Reappointment of Jamie T. Godfrey. to the PFRS Board as

Banking Representative

From: Staff of the PFRS Board

Recommendation: ACCEPT an informational report regarding the reappointment of

Jamie T. Godfrey. to continue to serve the PFRS Board as Banking Representative for a 5-year term commencing June 23, 2023

and ending June 22, 2028

C. INVESTMENT & FINANCIAL MATTERS COMMITTEE AGENDA – JULY 26, 2023

C1. Subject: INVESTMENT MANAGER PERFORMANCE UPDATE:

KEPOS CAPTIAL, LP

From: Kepos Capital, LP

Recommendation: ACCEPT informational report regarding a firm overview and managerial

assessment; diversity and inclusion policy and practices; and investment strategy and portfolio performance of PFRS' Alternative

Risk Premia Investment Strategy Manager Kepos Capital, LP

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM REGULAR BOARD MEETING JULY 26, 2023

C2. Subject: INVESTMENT MANAGER PERFORMANCE REVIEW:

KEPOS CAPITAL, LP

From: Meketa Investment Group

Recommendation: ACCEPT Meketa Investment Group's review and evaluation regarding

a firm overview and managerial assessment; peer ranking; and investment portfolio performance of PFRS' Alternative Risk Premia

Investment Strategy Manager Kepos Capital, LP

C3. Subject: ECONOMIC AND INVESTMENT MARKET OVERVIEW

AS OF JUNE 30, 2023

From: Meketa Investment Group

Recommendation: ACCEPT informational report regarding the Global Investment Markets

as of June 30, 2023

C4. Subject: PRELIMINARY INVESTMENT FUND PERFORMANCE UPDATE

AS OF JUNE 30, 2023

From: Meketa Investment Group

Recommendation: ACCEPT informational report regarding the Preliminary Investment

Fund Performance Update as of June 30, 2023

E. PENDING ITEMS: NONE

F. NEW BUSINESS

G. OPEN FORUM

H. FUTURE SCHEDULING

I. ADJOURNMENT

PFRS BOARD OF ADMINISTRATION REGULAR MEETING MINUTES JUNE 28, 2023 PAGE 1 OF 5

A MEETING OF THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM ("PFRS") BOARD OF ADMINISTRATION was held on Wednesday, June 28, 2023, at One Frank H. Ogawa Plaza, Hearing Room 1, Oakland, CA.

Board Members: • Walter L. Johnson President

Jaime T. Godfrey Vice President (Excused)

Martin J. Melia Member
Robert W. Nichelini Member
Erin Roseman Member
John C. Speakman Member
R. Steven Wilkinson Member

Additional Attendees: • David F. Jones PFRS Secretary & Plan Administrator (Excused)

Téir Jenkins PFRS Investment & Operations Manager

Maxine Visaya
 Selia Warren
 David Sancewich
 Paola Nealon
 PFRS Staff Member
 PFRS Legal Counsel
 Meketa Investment Group
 Meketa Investment Group

The meeting was called to order at 11:37 a.m. Pacific

A. PFRS BOARD MEETING MINUTES – Member Speakman made a motion to approve the May 31, 2023, Board of Administration Meeting Minutes, second by Member Nichelini. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y]

(AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED:1)

- B. AUDIT AND OPERATIONS COMMITTEE AGENDA JUNE 28, 2023
- B1. SCOPE OF SERVICES AND INITIATION OF THE FINANCIAL AUDIT OF THE PFRS FUND FOR FISCAL YEAR ENDING JUNE 30, 2023 Investment & Operations Manager Jenkins provided an overview of the presentation by Macias Gini & O'Connell, LLP regarding the scope of services and initiation of the financial audit of the PFRS Fund for fiscal year ending June 30, 2023 and noted the estimated completion date is October 31. 2023.

MOTION: Member Melia made a motion to approve the scope of services and initiate the audit of the PFRS Fund for fiscal year ending June 30, 2023, second by Member Nichelini. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y] (AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

PFRS BOARD OF ADMINISTRATION REGULAR MEETING MINUTES JUNE 28, 2023 PAGE 2 OF 5

B2. ADMINISTRATIVE EXPENSES REPORT – Investment & Operations Manager Jenkins presented an informational report on PFRS' administrative expenditures as of April 30, 2023. PFRS has an approved annual budget of approximately \$3.6 million and have expensed approximately \$1.8 million to date for fiscal year 2022/2023. Membership consisted of 662 retired members and beneficiaries, which included 409 Police Members and 253 Fire Members.

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

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y] (AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

B3. **RESOLUTION NO.8081**– Resolution approving request of Oakland Police and Fire Retirement System Board Member R. Steven Wilkinson to travel and attend the National Association of Securities Professionals (NASP) 34th Annual Financial Services Conference from July 24, 2023, through July 26, 2023, in Philadelphia, Pennsylvania and authorizing reimbursement of registration fees and travel-related expenses in an amount not to exceed three-thousand dollars (\$3,000.00).

MOTION: Member Melia made a motion to approve Resolution No. 8081, second by Member Nichelini. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: ABSTAIN] (AYES: 5 / NOES: 0 / ABSENT: 0 / ABSTAIN: 1 / EXCUSED: 1)

- C. INVESTMENT & FINANCIAL MATTERS COMMITTEE AGENDA JUNE 28, 2023
- C1. INVESTMENT MANAGER PERFORMANCE UPDATE: BROWN ADVISORY, LLC
 Member Wilkinson presented a brief overview of the presentation provided by Brown Advisory,
 LLC regarding a firm overview and managerial assessment; diversity and inclusion policy and
 practices; local brokerage use; and investment strategy and portfolio performance of PFRS'
 Active Domestic Equity Small-Cap Fundamental Value Investment Strategy.

MOTION: Member Wilkinson made a motion to accept the informational report provided by Brown Advisory, LLC, second by Member Nichelini. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: EXCUSED / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: ABSTAIN] (AYES: 7 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 0)

PFRS BOARD OF ADMINISTRATION REGULAR MEETING MINUTES JUNE 28, 2023 PAGE 3 OF 5

c2. INVESTMENT MANAGER PERFORMANCE REVIEW: BROWN ADVISORY, LLC

Paola Nealon of Meketa Investment Group ("Meketa") presented an overview memo regarding a firm overview and managerial assessment; peer ranking; and investment portfolio performance of Brown Advisory, LLC, a PFRS' Active Domestic Equity Small-Cap Fundamental Value Investment Strategy Manager. P. Nealon Meketa has no concerns from an organizational standpoint or regarding performance with Brown Advisory, LLC, and continue to consider the firm to be a high conviction manager.

MOTION: Member Wilkinson made a motion to accept Meketa's evaluation of Brown Advisory, LLC, second by Member Nichelini. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y] (AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

c3. **ECONOMIC AND INVESTMENT MARKET OVERVIEW AS OF MAY 31, 2023** – Paola Nealon of Meketa presented an informational report regarding the Economic and Investment Market Overview as of May 31, 2023, and highlighted Index Returns and current factors impacting outcomes. Member Melia made inquiries to further the discussion regarding what de-risking the portfolio entails.

MOTION: Member Nichelini made a motion to accept the informational report provided by Meketa regarding the Economic and Investment Market Overview as of May 31, 2023, second by Member Wilkinson. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

C4. PRELIMINARY INVESTMENT FUND PERFORMANCE UPDATE AS OF MAY 31, 2023 – David Sancewich of Meketa presented the Preliminary Investment Fund Performance Update as of May 31, 2023, and highlighted the Asset Class Performance Summary.

MOTION: Member Wilkinson made a motion to accept the informational report provided by Meketa regarding the Preliminary Investment Fund Performance Update as of May 31, 2023, second by Member Speakman. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y] (AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

PFRS BOARD OF ADMINISTRATION REGULAR MEETING MINUTES JUNE 28, 2023 PAGE 4 OF 5

c5. \$13.2 MILLION DRAWDOWN FOR MEMBER RETIREMENT ALLOWANCES (FISCAL YEAR 2023/2024; QUARTER ENDING SEPTEMBER 30, 2023) — David Sancewich of Meketa presented an informational report and recommendation for a \$13.2 million drawdown, which included a \$10.2 Million contribution from the City of Oakland and a \$3.0 Million contribution from the PFRS Investment Fund, to be used to pay Member Retirement Allowances from July 1, 2023, through September 30, 2023 and for funds to be drawn from the SGA Portfolio. T. Jenkins noted the quarterly drawdown amount is intentionally being lowered to reduce internal cash balances because overall benefit payment amounts have decreased which effectively increased internal cash balances and advised staff will continue to monitor this and adjust accordingly.

MOTION: Member Nichelini made a motion to approve the recommendation by Meketa regarding the \$13.2 million drawdown to be used to pay Member Retirement Allowances from July 1, 2023, through September 30, 2023, second by Member Wilkinson. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

- D. MEMBER RESOLUTIONS NOS. 8079 8080
- **D1. RESOLUTION NO. 8079** Resolution fixing the monthly allowance of surviving spouse of the following retired member of the Oakland Police and Fire Retirement System in the amount indicated:

<u>Deceased Member</u> <u>Surviving Spouse</u> <u>Monthly Allowance</u>

David A. Catano Donna Allen \$4,572.17

MOTION: Member Nichelini made a motion to approve Resolution No. 8079, second by Member Speakman. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y]

(AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

- **RESOLUTION NO. 8080** Resolution approving death benefit payments and directing warrants 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:
 - Dale W. Criswell
 - James R. Kimzey

MOTION: Member Nichelini made a motion to approve Resolution No. 8080, second by Member Speakman. Motion Passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y]

(AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

PFRS BOARD OF ADMINISTRATION REGULAR MEETING MINUTES JUNE 28, 2023 PAGE 5 OF 5

- E. **PENDING ITEMS** None
- F. **NEW BUSINESS** None
- G. OPEN FORUM (1) President Johnson requested an update from PFRS Legal Counsel Warren regarding outside counsel's legal opinion on the matter of the June 30, 2024 Settlement Agreement and the June 30, 2026 MOU between the City of Oakland, the Oakland Police Officers Association ("OPOA"), and the Oakland Police Management Association ("OPMA") as it relates to the holiday pay settlement agreement between the City, PFRS, and the ROPOA. PFRS Legal Counsel Warren advised outside counsel is working on the matter and a meeting is scheduled to occur the following week. (2) Member Nichelini advised the Board he turned in his nomination form to the City Clerk's office today for the 5-year Retired Police Representative to the Board. (3) Member Nichelini requested staff provide Board Member notice of upcoming educational/training opportunities. Investment & Operations Manager Jenkins advised staff will email members as information becomes available.
- H. FUTURE SCHEDULING The next Regular Board Meeting will be held in-person and is tentatively scheduled to occur July 26, 2023.
- I. ADJOURNMENT –Member Speakman made a motion to adjourn today's meeting in honor of retired Battalion Chief Ray Dossa who recently passed away at the age of 93 and noted he served the City of Oakland Fire Department for 53 years, second by Member Nichelini. Motion passed.

[JOHNSON: Y / GODFREY: EXCUSED / MELIA: Y / NICHELINI: Y / ROSEMAN: Y / SPEAKMAN: Y / WILKINSON: Y]
(AYES: 6 / NOES: 0 / ABSENT: 0 / ABSTAIN: 0 / EXCUSED: 1)

The meeting adjourned at 11:58 p.m.	
TÉIR JENKINS	DATE

Table 1

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Administrative Budget Spent to Date (Preliminary)
As of May 31, 2023

	Approved				
	Budget	May 2023	FYTD	Remaining	Percent Remaining
Internal Administrative Costs					
PFRS Staff Salaries	\$ 1,330,000	\$ 113,859	\$ 1,077,434	\$ 252,566	19.0%
Board Travel Expenditures	52,500	362	4,518	47,982	91.4%
Staff Training	20,000	-	-	20,000	100.0%
Staff Training - Tuition Reimbursement	7,500	-	-	7,500	100.0%
Board Hospitality	3,600	-	240	3,360	93.3%
Payroll Processing Fees	40,000	-	-	40,000	100.0%
Miscellaneous Expenditures	45,000	605	30,044	14,956	33.2%
Internal Service Fees (ISF)	88,000	-	47,884	40,116	45.6%
Contract Services Contingency	50,000	-	1,500	48,500	97.0%
Internal Administrative Costs Subtotal:	\$ 1,636,600	\$ 114,826	\$ 1,161,620	\$ 474,980	29.0%
Actuary and Accounting Services					
Audit	\$ 50,500	\$ -	\$ 33,883	\$ 16,617	32.9%
Actuary	47,900	-	24,409	23,491	49.0%
Actuary and Accounting Subtotal:	\$ 98,400	\$ -	\$ 58,292	\$ 40,108	40.8%
Legal Services					
City Attorney Salaries	\$ 194,000	\$ -	\$ 28	\$ 193,972	100.0%
Legal Contingency	150,000	-	-	150,000	100.0%
Legal Services Subtotal:	\$ 344,000	\$ -	\$ 28	\$ 343,972	100.0%
Investment Services					
Money Manager Fees	\$ 1,353,000	\$ 191,866	\$ 836,784	\$ 516,216	38.2%
Custodial Fee	124,000	_	60,250	63,750	51.4%
Investment Consultant	100,000	-	75,000	25,000	25.0%
Investment Subtotal:	\$ 1,577,000	\$ 191,866	\$ 972,034	\$ 604,966	38.4%
Total Operating Budget	\$ 3,656,000	\$ 306,692	\$ 2,191,974	\$ 1,464,026	40.04%

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Cash in Treasury (Fund 7100) - Preliminary As of May 31, 2023

	May 2023		
Beginning Cash as of 5/1/2023	\$	9,147,066	
Additions:			
City Pension Contribution - May	\$	2,726,000	
Investment Draw	\$	2,000,000	
Misc. Receipts		968	
Total Additions:	\$	4,726,968	
Deductions:			
Pension Payment (April Pension Paid on 5/1/2023)		(4,188,735)	
Expenditures Paid		(372,220)	
Total Deductions	\$	(4,560,956)	
Ending Cash Balance as of 5/31/2023*	\$	9,313,078	

^{*} On 6/1/2023, May pension payment of appx \$4,154,000 will be made leaving a cash balance of \$5,159,000.

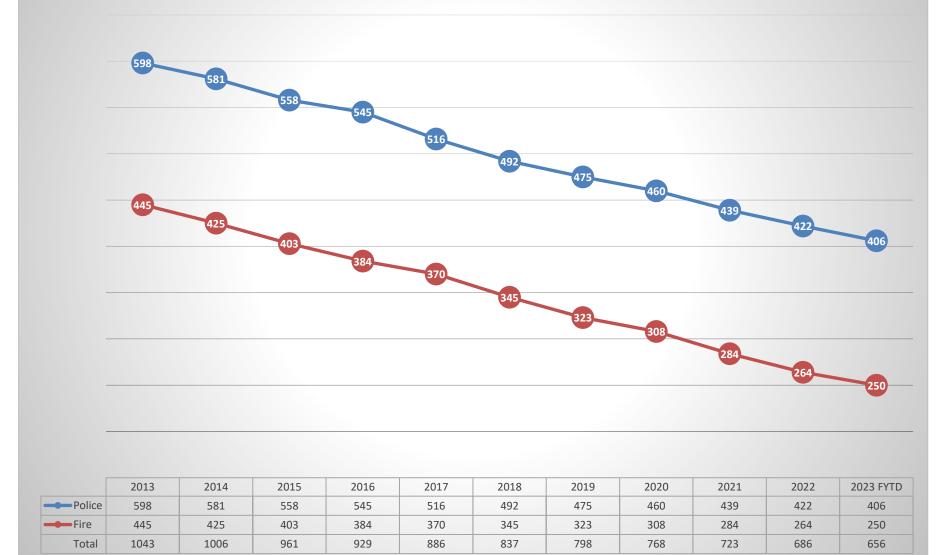
Table 3
CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Census As of May 31, 2023

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Retiree	284	164	448
Beneficiary	122	86	208
Total Retired Members	406	250	656
Total Membership:	406	250	656

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Service Retirement	271	122	393
Disability Retirement	125	117	242
Death Allowance	10	11	21
Total Retired Members:	406	250	656
Total Membership as of May 31, 2023:	406	250	656
Total Membership as of June 30, 2022:	422	264	686
Annual Difference:	-16	-14	-30

Oakland Police and Fire Retirement System Pension Plan Membership Count As of May 31, 2023 (FY 2013 - FY 2023)





A GENDA REPORT

TO: Oakland Police and Fire

Retirement System Board (PFRS)

FROM: Téir Jenkins

Investment & Operations Manager

SUBJECT: Mayoral Re-appointment of Board

Member Walter L. Johnson, Sr. as

Community Representative

DATE: July 26, 2023

SUMMARY

Walter L. Johnson, Sr. expressed a desire to continue to serve as the Community Representative of the PFRS Board of Administration and sought to be re-appointed for a fourth 5-year term. On July 18, 2023, pursuant to City Charter Section 601, Mayor Thao reappointed Member Johnson, Sr. to serve a term commencing May 2, 2023, and ending May 1, 2028, and submitted to City Council for confirmation. On July 18, 2023, The Council confirmed the Mayor's appointment. Mr. Johnson, Sr. will continue to serve as Community Representative of the PFRS Board of Administration for a fourth term 5-year term.

BACKGROUND

Walter L. Johnson was first appointed to serve as Community Representative by Mayor Dellums in 2008 assuming the Board seat vacated by Kenneth L. Brooks. Member Johnson, Sr. continued to serve the PFRS Board having been re-appointed by Mayor Schaaf for a third 5-year term commencing May 2, 2018 and ending May 1, 2023.

Respectfully submitted,

Téir Jenkin

Investment & Operations Manager Oakland

Police & Fire Retirement Systems

For questions please contact Maxine Visaya, Administrative Assistant II, at mvisaya@oaklandca.gov

Attachments:

- (1) Draft Resolution
- (2) Letter of Appointment
- (3) Letter Seeking Re-appointment

Agenda Item <u>B2</u> PFRS Board Meeting July 26, 2023

CITY ATTORNEY'S OFFICE

OAKLAND CITY COUNCIL

RESOLUTION NO. _____ C.M.S.

INTRODUCED BY MAYOR SHENG THAO

RESOLUTION CONFIRMING THE MAYOR'S REAPPOINTMENTS OF JAIME GODFREY AND WALTER JOHNSON SR. AS MEMBERS OF THE POLICE AND FIRE RETIREMENT BOARD

WHEREAS, Section 601 of the City Charter provides that members of City boards and commissions shall be appointed by the Mayor subject to confirmation by the affirmative vote of five members of the City Council; and

WHEREAS, Oakland City Charter, Article XXVI establishes the Police and Fire Retirement Board to manage and administer the Police and Fire Retirement System, which provides retirement benefits for certain sworn police and fire personnel; and

WHEREAS, Section 2601 of the City Charter provides that the Police and Fire Retirement Board consists of seven members including, among others, a life insurance executive of a local office, a senior officer of a local bank, and a community representative; and

WHEREAS, the Honorable Mayor Sheng Thao has reappointed Jaime Godfrey to serve a five-year term on the Police and Fire Retirement Board in the seat designated for a bank representative pursuant to Section 2601 of the City Charter, subject to confirmation by the City Council; and

WHEREAS, the Honorable Mayor Sheng Thao has reappointed Walter Johnson, Sr. to serve a five-year term on the Police and Fire Retirement Board in the seat designated for a community representative pursuant to Section 2601 of the City Charter, subject to confirmation by the City Council; now therefore be it

RESOLVED, that pursuant to City Charter sections 601 and 2601, the City Council hereby confirms the Mayor's reappointment of:

Jaime Godfrey to the Police and Fire Retirement Board in the seat designated for a bank representative to serve a five-year term that began June 23, 2023 and ends June 22, 2028, filling a seat previously held by himself.

Walter Johnson, **Sr.** to the Police and Fire Retirement Board in the seat designated for a Community Representative to serve a five-year term that began May 2, 2023 and ends May 1, 2028, filling a seat previously held by himself.

IN COUNCIL, OAKLAND, CALIFORNIA,

PASSED BY THE FOLLOWING VOTE:

AYES - FIFE, GALLO, JENKINS, KALB, KAPLAN, RAMACHANDRAN, REID, AND PRESIDENT FORTUNATO BAS

NOES – ABSENT – ABSTENTION –

ATTEST:

ASHA REED City Clerk and Clerk of the Council of the City of Oakland, California

3285034v1 / SW



THE HONORABLE SHENG THAO • MAYOR OF OAKLAND

CITY HALL • 1 FRANK H. OGAWA PLAZA • OAKLAND, CALIFORNIA 94612 • (510) 238-3141 • SThao@OaklandCA.Gov

Letter of Reappointment

July 18, 2023

Dear President Bas and members of the City Council:

Pursuant to City Charter Section 601, the Mayor has reappointed the following persons as members of the following board or commission, subject to City Council confirmation:

Police and Fire Retirement Board

Jaime Godfrey to the Police and Fire Retirement Board in the seat designated for a Bank Representative to serve a five-year term that began June 23, 2023 and ends June 22, 2028, filling a seat vacated by himself.

Walter Johnson, Sr. to the Police and Fire Retirement Board in the seat designated for a Community Representative to serve a five-year term that began May 2, 2023 and ends May 1, 2028, filling a seat vacated by himself.

Thank you for your assistance in this matter.

Sincerely,

Mayor Sheng Thao

CITY OF OAKLAND



150 FRANK H. OGAWA PLAZA, 3RD FLOOR • OAKLAND, CALIFORNIA 94612-2021
Finance Department
Treasury Bureau
Retirement Unit

CA RELAY 711

April 11, 2023

Mayor Sheng Thao City of Oakland One Frank H. Ogawa Plaza Oakland CA 94612

Dear Mayor Thao,

The Oakland Police and Fire Retirement System Board (PFRS) requests that you consider reappointment of Walter L. Johnson, Sr. to the PFRS Board of Administration for the term from May 2, 2023 through May 1, 2028. Mr. Johnson, Sr. has served as the Community Representative to the PFRS Board since 2008.

Mr. Johnson, Sr. has expressed a desire to continue to serve as the Community Representative and is anxious to have his appointment confirmed so he can continue to contribute his expertise. Mr. Johnson, Sr. is knowledgeable of the issues facing the PFRS Board and the Retirement System. His continued participation would allow the Board to continue to function efficiently and effectively.

We look forward to your response. If you have any questions, please contact me at 510.238.6508. Thank you.

Sincerely,

David F. Jones

Plan Administrator

Oakland Police and Fire Retirement System

cc: Steven Falk, Interim City Administrator



A GENDA REPORT

TO: Oakland Police and Fire

Retirement System Board (PFRS)

FROM: Téir Jenkins

Investment & Operations Manager

SUBJECT: Mayoral Re-appointment of Board

Member Jaime T. Godfrey as Bank

Representative

DATE: July 26, 2023

SUMMARY

Jaime T. Godfrey expressed a desire to continue to serve as Bank Representative of the PFRS Board of Administration and sought to be re-appointed for a sixth 5-year term. On July 18, 2023, pursuant to City Charter Section 601, Mayor Thao reappointed Member Godfrey to serve a term commencing June 23, 2023 and ending June 24, 2028, and submitted to City Council for confirmation. On July 18, 2023, The Council confirmed the Mayor's appointment. Mr. Godfrey will continue to serve as Bank Representative of the PFRS Board of Administration for a sixth 5-year term.

BACKGROUND

Jaime t. Godfrey was first appointed to serve as Bank Representative by Mayor Harris in 1998. Vice President Godfrey continued to serve the PFRS Board having been re-appointed by Mayor Schaaf for a fifth 5-year term commencing June 23, 2018 and ending June 24, 2023.

Respectfully submitted,

Téir Jenkins

Investment & Operations Manager Oakland

Police & Fire Retirement Systems

For questions please contact Maxine Visaya, Administrative Assistant II, at mvisaya@oaklandca.gov

- (1) Draft Resolution
- (2) Letter of Appointment
- (3) Letter Seeking Re-appointment

CITY ATTORNEY'S OFFICE

OAKLAND CITY COUNCIL

RESOLUTION NO. _____ C.M.S.

INTRODUCED BY MAYOR SHENG THAO

RESOLUTION CONFIRMING THE MAYOR'S REAPPOINTMENTS OF JAIME GODFREY AND WALTER JOHNSON SR. AS MEMBERS OF THE POLICE AND FIRE RETIREMENT BOARD

WHEREAS, Section 601 of the City Charter provides that members of City boards and commissions shall be appointed by the Mayor subject to confirmation by the affirmative vote of five members of the City Council; and

WHEREAS, Oakland City Charter, Article XXVI establishes the Police and Fire Retirement Board to manage and administer the Police and Fire Retirement System, which provides retirement benefits for certain sworn police and fire personnel; and

WHEREAS, Section 2601 of the City Charter provides that the Police and Fire Retirement Board consists of seven members including, among others, a life insurance executive of a local office, a senior officer of a local bank, and a community representative; and

WHEREAS, the Honorable Mayor Sheng Thao has reappointed Jaime Godfrey to serve a five-year term on the Police and Fire Retirement Board in the seat designated for a bank representative pursuant to Section 2601 of the City Charter, subject to confirmation by the City Council; and

WHEREAS, the Honorable Mayor Sheng Thao has reappointed Walter Johnson, Sr. to serve a five-year term on the Police and Fire Retirement Board in the seat designated for a community representative pursuant to Section 2601 of the City Charter, subject to confirmation by the City Council; now therefore be it

RESOLVED, that pursuant to City Charter sections 601 and 2601, the City Council hereby confirms the Mayor's reappointment of:

Jaime Godfrey to the Police and Fire Retirement Board in the seat designated for a bank representative to serve a five-year term that began June 23, 2023 and ends June 22, 2028, filling a seat previously held by himself.

Walter Johnson, **Sr.** to the Police and Fire Retirement Board in the seat designated for a Community Representative to serve a five-year term that began May 2, 2023 and ends May 1, 2028, filling a seat previously held by himself.

IN COUNCIL, OAKLAND, CALIFORNIA,

PASSED BY THE FOLLOWING VOTE:

AYES - FIFE, GALLO, JENKINS, KALB, KAPLAN, RAMACHANDRAN, REID, AND PRESIDENT FORTUNATO BAS

NOES – ABSENT – ABSTENTION –

ATTEST:

ASHA REED City Clerk and Clerk of the Council of the City of Oakland, California

3285034v1 / SW



THE HONORABLE SHENG THAO • MAYOR OF OAKLAND

CITY HALL • 1 FRANK H. OGAWA PLAZA • OAKLAND, CALIFORNIA 94612 • (510) 238-3141 • SThao@OaklandCA.Gov

Letter of Reappointment

July 18, 2023

Dear President Bas and members of the City Council:

Pursuant to City Charter Section 601, the Mayor has reappointed the following persons as members of the following board or commission, subject to City Council confirmation:

Police and Fire Retirement Board

Jaime Godfrey to the Police and Fire Retirement Board in the seat designated for a Bank Representative to serve a five-year term that began June 23, 2023 and ends June 22, 2028, filling a seat vacated by himself.

Walter Johnson, Sr. to the Police and Fire Retirement Board in the seat designated for a Community Representative to serve a five-year term that began May 2, 2023 and ends May 1, 2028, filling a seat vacated by himself.

Thank you for your assistance in this matter.

Sincerely,

Mayor Sheng Thao

CITY OF OAKLAND



150 FRANK H. OGAWA PLAZA, 3RD FLOOR • OAKLAND, CALIFORNIA 94612-2021 Finance Department

Treasury Bureau

Retirement Unit

CA RELAY 711

April 11, 2023

Mayor Sheng Thao City of Oakland One Frank H. Ogawa Plaza Oakland CA 94612

Dear Mayor Thao,

The Oakland Police and Fire Retirement System Board (PFRS) requests that you consider reappointment of Jaime T. Godfrey to the PFRS Board of Administration for the term from June 23, 2023 through June 22, 2028. Mr. Godfrey is a member of the banking industry, as required by the Charter of the City of Oakland and has served the PFRS Board since 1998.

Mr. Godfrey has expressed a desire to continue to serve as the Banking Representative and is anxious to have his appointment confirmed so he can continue to contribute his expertise. Mr. Godfrey is knowledgeable of the issues facing the PFRS Board and the Retirement System. His continued participation would allow the Board to continue to function efficiently and effectively.

We look forward to your response. If you have any questions, please contact me at 510.238.6508. Thank you.

Sincerely,

David F. Jones
Plan Administrator

Oakland Police and Fire Retirement System

cc: Steven Falk, Interim City Administrator





Police and Fire Retirement System

Kepos Alternative Risk Premia
July 26, 2023

This summary description of Kepos Capital LP and any investment vehicle that it may organize and manage is intended only for discussion purposes and does not constitute an offer or solicitation of an offer with respect to the purchase or sale of any security; it should not be relied upon by you in evaluating the merits of investing in any securities. These materials are confidential and are not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution or use is contrary to local law or regulation. © Kepos Capital LP, 2023. All rights reserved.

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This Presentation is provided for discussion purposes only, is only a summary of certain information, is not complete, does not contain certain material information about the Fund, including important conflicts disclosures and risk factors, and is subject to change without notice.

The information contained in this Presentation is not investment, tax, accounting or legal advice and does not take into consideration the investment objectives, financial situation or particular needs of the recipient. Investing entails certain risks, including the possible loss of the entire principal amount invested. The recipient of this Presentation should seek its own financial, tax, accounting and legal advice in connection with any proposed investment in the Fund.

Risk of Loss. An investment in the Fund is not suitable for all investors. Investors must meet certain eligibility requirements and have the financial ability, sophistication, experience and willingness to bear the risks of an investment in the Fund for an extended period of time. An investment in the Fund would be speculative and entails a high degree of risk; no assurance can be given that the Fund's investment objective will be achieved or that investors will receive a return of their capital. Investment losses may occur. Nothing herein is intended to imply that a Fund's investment methodology may be considered "conservative," "safe," "risk free" or "risk averse." The Fund employs leverage and other investment techniques that may increase the volatility of the Fund's performance and increase the Fund's risk of loss. An investment in the Fund will be illiquid as there are significant restrictions on an investor's ability to withdraw, redeem, or transfer interests or shares in the Fund. The Fund involves a complex tax structure, which should be reviewed carefully. INVESTORS AND PROSPECTIVE INVESTORS MUST REVIEW THE RISK FACTORS FOUND IN THE FUND'S CONFIDENTIAL PRIVATE PLACEMENT MEMORANDUM.

Certain of the information contained in this Presentation represents or is based upon forward-looking statements, which can be identified by the use of forward-looking terminology such as "may", "will", "should", "expect", "anticipate", "target", "project", "estimate", "intend", "continue" or "believe" or the negatives thereof or other variations thereon or comparable terminology. Due to various risks and uncertainties, actual events or results or the actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements. The information contained herein represents management's current expectation of how the Fund will continue to be operated in the near term; however, management's plans and policies in this respect may change in the future. In particular, (i) policies and approaches to portfolio monitoring, risk management, and asset allocation may change in the future without notice and (ii) economic, market and other conditions could cause the Fund to deviate from stated investment objectives and guidelines.

This Presentation is confidential, is intended only for the person to whom it has been provided and under no circumstance may a copy be shown, copied, transmitted, or otherwise given to any person other than the authorized recipient without the prior written consent of Kepos. Notwithstanding anything to the contrary herein, each recipient of this summary may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of: (i) the Fund and (ii) any of its transactions, and all materials of any kind (including opinions or other tax analyses) relating to such tax treatment and tax structure. The distribution of the information contained herein in certain jurisdictions may be restricted, and, accordingly, it is the responsibility of any prospective investor to satisfy itself as to compliance with relevant laws and regulations.

PAST PERFORMANCE IS NOT AN INDICATOR OR GUARANTEE OF FUTURE RESULTS. THERE IS NO GUARANTEE THAT THE FUND WILL ACHIEVE COMPARABLE RESULTS TO THOSE SET FORTH IN THIS DOCUMENT OR THAT IT WILL ACHIEVE ITS INVESTMENT OBJECTIVES IN THE FUTURE.



Organization & Team

- Founded in January 2010 by Mark Carhart, Giorgio De Santis and Bob Litterman
- Over 45 employees; long history working together; most with profit participation
- ~\$2.1 billion AUM in alpha and alternative risk premia strategies¹

Long History in Asset Allocation & Alternative Risk Premia Research

- Black-Litterman model, 1992²
- Carhart four-factor model, 1997³
- Modern Investment Management: An Equilibrium Approach, 2003⁴
- "Beyond Active Alpha." Pioneering article on concept of exotic betas, 2008
- "Exotic Beta Revisited." Won the Graham Dodd Excellence Award, 2014

Features of a Partnership with Kepos Capital

Personalized commitment and focus

- We only build liquid alternative strategies and portfolios
- Thought partnership and transparency
 - Close collaboration and response to client-specific questions
 - Access to senior investment staff
- Dedicated management and alignment
 - US-based, wholly owned by founders and employees

¹ AUM is as of June 30, 2023. ² Black, Fisher; Litterman, Robert. "Global Portfolio Optimization". *Financial Analysts Journal*. Vol. 48, Issue 5. September/October 1992. ³ Carhart, Mark M. "On Persistence in Mutual Fund Performance". *Journal of Finance*. Volume 52, Issue 1, pp. 57-82. March 1997. ⁴ Litterman, B. & Quantitative Resources Group. (2003). *Modern Investment Management: An Equilibrium Approach* (1st ed.). Hoboken, NJ: John Wiley & Sons, Inc. ⁵ CFA Institute. Vol. 25. No. 1. March 2008. ⁶ *Financial Analysts Journal*. Vol. 70, Issue 5. November 2014.

Diversity Representation Survey for Oakland Police and Fire

DATA AS OF 06/30/2023

Firm Name	Kepos Capital LP
Product Name	Kepos Alternative Risk Premia Fund LP
Total Number of Employees	48

	Percentage (%) of Board of Directors / Managing Members	Percentage(%) of Firm (Entire Staff)	Percentage (%) of Firm (Investment Professionals)	
Race and Ethnicity*				
African American/Black	0%	2%	0%	
Asian/Hawaiian/Pacific Islander	18%	17%	6%	
Latino/Hispanic	0%	6%	4%	
White	73%	71%	38%	
American Indian/Alaska Native	0%	0%	0%	
Other	9%	4%	4%	
Gender				
Male	100%	85%	52%	
Female	0%	15%	0%	
Non-Identified/Other	0%	0%	0%	

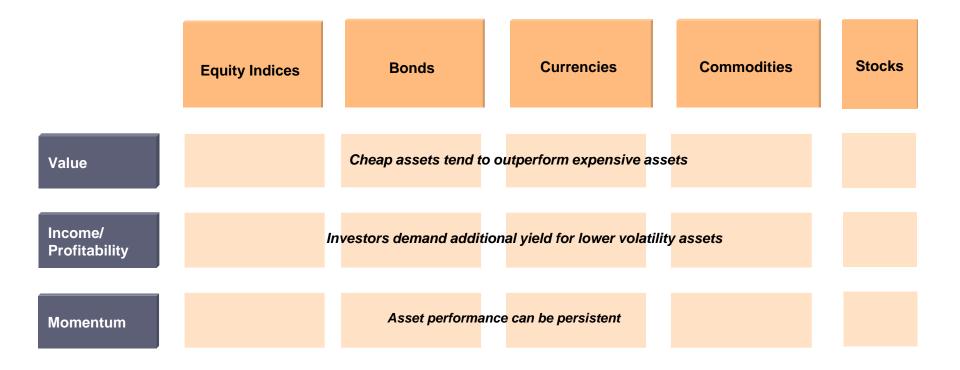


^{*} Racial/ethnic categories appear as defined by EEOC guidance.

Kepos Alternative Risk Premia Strategy

\$192 Million AUM¹

- Dynamically managed portfolio of both macro and equity premia
- Excludes macro insurance and directional momentum factors
- Targets 10% annualized volatility and 0.5 Sharpe ratio (net)
- Transparency, attractive liquidity and low cost





KARP YTD 2023 Net Performance Attribution¹

	Single Name Equities	Equity Indices	Bonds	Currencies	Com- modities	TOTAL
Value	-2.56%	-0.82%	1.04%	-2.41%	3.36%	-1.39%
Momentum	0.45%	1.24%	0.09%	1.77%	1.22%	4.77%
Income	0.40%	0.41%	-0.48%	3.36%	-0.75%	2.94%
Quality	0.17%					0.17%
TOTAL	-1.54%	0.83%	0.65%	2.72%	3.83%	6.49%
		KARP Net Returns ² Q1 2023: 4.439 Q2 2023: 1.989				
			Realized Co			I ACWI: 0.19 rg Agg: -0.09 VIX: -0.40
			Soc Gen Multi-Alternative Risk Premia Index Return ⁴ YTD 2023: 3.			2023: 3.51%

Founder Share Class: Class F

Fees: 0.70% management fee per year **Liquidity:** Monthly with 30 days' notice

¹ Performance shown for Kepos Alternative Risk Premia Fund LP and is through June 30, 2023. The performance attribution figures stated herein are net of management fees, any incentive fee/allocation and other expenses. Fees and expenses were allocated to the strategies proportionately based on the absolute return generated by such strategy for the period shown. The performance figures set forth herein are unaudited and have been computed by Kepos Capital LP based on unaudited figures and data. Please note that the classifications used are those of Kepos Capital LP and may evolve. ² Net performance for KARP imputes the management fee associated with "new-issue" eligible class F shares/interests (i.e., a base 0.70% annual management fee). The above estimate assumes an investment in the applicable fund since inception. Performance includes reinvestment of interest and dividends, if any. ³ Correlations are based on realized monthly net returns since KARP inception (October 1, 2018) through June 30, 2023. ⁴ Computed using daily returns from NEIXMARP Index on Bloomberg as of June 30, 2023. Please see additional disclosures at the end of this presentation for definitions of the indices used above. PAST PERFORMANCE IS NOT AN INDICATOR OR GUARANTEE OF FUTURE RESULTS. THERE IS NO GUARANTEE THAT THE FUND WILL ACHIEVE COMPARABLE RESULTS TO THOSE SET FORTH IN THIS DOCUMENT OR THAT IT WILL ACHIEVE ITS INVESTMENT OBJECTIVES IN THE FUTURE.

The Goal

 Factors that perform well in the future (not ones that just perform well in backtests)

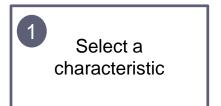
Where Do Factors Live?

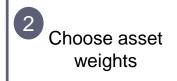
- Where there are <u>risk transfer opportunities</u> or persistent <u>behavioral biases</u>
- Theory does not identify the individual factors

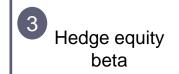
Framework for Factor Selection

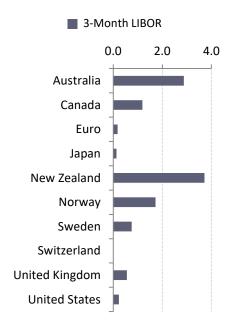
- 1. Economically intuitive (necessary, but not sufficient)
- 2. Demonstrated historical premium in excess of global equity beta
- 3. Institutional liquidity and capacity
- 4. Empirically robust
 - Testable on other markets, asset classes, time periods
 - Holds up when specific time periods and markets are excluded (jackknifing)
 - Insensitive to factor definition

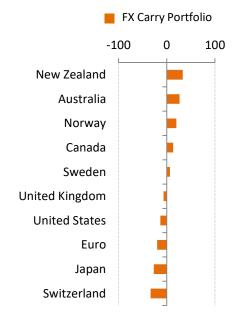


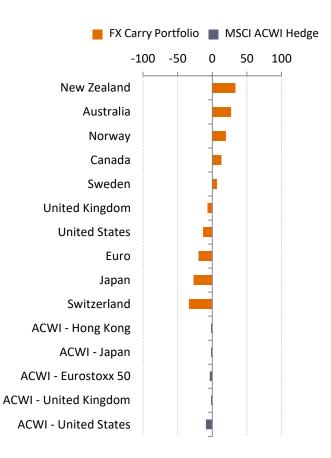






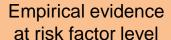






Prior views at risk factor level

Views implied by an equal risk allocation

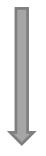


- Average returns
- Volatility
- Expected out-of-sample decay



Dynamic views at risk factor level

- Value
- Momentum
- Market environment



Risk model and other penalties

- Transaction costs
- Leverage
- Tail risk



Strategic risk factor forecasts



Overall risk factor forecasts





Optimal allocation across risk factors



- Our team has researched and invested in risk factors for over 25 years
- Our strategy overweights macro factors that are less crowded and more lowly correlated
- Our firm ethos is built on transparency, alignment, fairness and partnership



MARK CARHART | CHIEF INVESTMENT OFFICER

Mark Carhart is the Chief Investment Officer and a founding partner of Kepos Capital. Prior to founding Kepos in 2010, Mark was a Partner and the Co-Chief Investment Officer of the Quantitative Investment Strategies Group at Goldman Sachs Asset Management, and prior to GSAM he was an Assistant Professor at the Marshall School of Business at USC and a Senior Fellow at The Financial Institutions Center at The Wharton School. Mark's publications include articles in *The Journal of Finance*, *The Review of Financial Studies* and the *Financial Analysts Journal*, and he received the *FAJ's* Graham and Dodd Award in 2014. He is also a coauthor of Modern Investment Management: An Equilibrium Approach. Mark earned a B.A. from Yale University in 1988, became a CFA Charterholder in 1991 and received his Ph.D. from the University of Chicago Booth School of Business in 1995. He serves on the non-profit board of InTandem Cycling and the investment committees for the Convent of the Sacred Heart New York and the Aldrich Museum.

GIORGIO DE SANTIS | DIRECTOR OF RESEARCH

Giorgio De Santis is the Director of Research and a founding partner of Kepos Capital. Prior to Kepos, Giorgio was a Partner and the co-head of the research team in the Quantitative Investment Strategies Group at Goldman Sachs Asset Management. Prior to Goldman Sachs, he was an Assistant Professor of Finance and Business Economics at the Marshall School of Business at USC. He has published articles in *The Journal of Finance*, the *Journal of Financial Economics*, the *Journal of International Money and Finance*, the *Financial Analysts Journal* and other academic and practitioner journals in finance and economics, and received the *FAJ's* Graham and Dodd Award in 2014. He has also contributed chapters to several books on investment management and is a co-author of Modern Investment Management: An Equilibrium Approach. Giorgio earned a B.A. from the Libera Universita' Internazionale degli Studi Sociali in Rome in 1984, a M.A. in Economics from the University of Chicago in 1989 and a Ph.D. in Economics from the University of Chicago in 1993.

BOB LITTERMAN | CHAIRMAN, RISK COMMITTEE

Bob Litterman is the Chairman of the Risk Committee and founding partner of Kepos Capital LP. Prior to joining Kepos Capital in 2010, Bob enjoyed a 23-year career at Goldman, Sachs & Co., where he served in research, risk management, investments and thought leadership roles. He oversaw the Quantitative Investment Strategies Group in the Asset Management division. While at Goldman, Bob also spent six years as one of three external advisors to Singapore's Government Investment Corporation (GIC). Bob was named a partner of Goldman Sachs in 1994 and became head of the firm-wide risk function; prior to that role, he was co-head of the Fixed Income Research and Model Development Group with Fischer Black. During his tenure at Goldman, Bob researched and published a number of groundbreaking papers in asset allocation and risk management. He is the co-developer of the Black-Litterman Global Asset Allocation Model, a key tool in investment management, and has co-authored books including The Practice of Risk Management and Modern Investment Management: An Equilibrium Approach (Wiley & Co.). Bob earned a Ph.D. in Economics from the University of Minnesota and a B.S. in Human Biology from Stanford University. He was inducted into Risk magazine's Risk Management Hall of Fame and named the 2013 Risk Manager of the Year by the Global Association of Risk Professionals. In 2012, he was the inaugural recipient of the S. Donald Sussman Fellowship at MIT's Sloan School of Management. In 2008, Bob received the Nicholas Molodovsky Award from the CFA Institute Board as well as the International Association of Financial Engineers/SunGard Financial Engineer of the Year Award. Bob has served on a number of boards, including Commonfund, where he was elected Chair in 2014, Options Clearing Corporation (OCC), Resources for the Future RFF) and the Sloan Foundation. He also chaired the CFTC Climate-Related Market Risk Subcommittee, which published its report, "Managing Climate Risk in the U.S. Financial System," in September 2020. Bob is currently on the board of the Niskanen Center; Robert Wood Johnson Foundation; Ceres; World Wildlife Fund; Woodwell Climate Research Center; the Climate Leadership Council (CLC), where he serves as co-chair of the Board; PCAST (President's Council of Advisors on Science and Technology); UCAR (University Corporation for Atmospheric Research); and the Climate-related Financial Risk Advisory Committee (CFRAC) of the Financial Stability Oversight Council.



MATT DESCHAMPS | CHIEF OPERATING OFFICER

Matt DesChamps is the Chief Operating Officer and a founding partner of Kepos Capital. Prior to Kepos, Matt was a founding Principal of Satellite Asset Management, L.P. and Chair of its Operating Committee. Formerly, Matt worked at Morgan Stanley, where he was an account relationship manager in the equity division, and at Coopers & Lybrand, LLC, where he was a Senior Associate. Matt earned a B.A. from Franklin & Marshall College and an M.B.A. in Finance from the Stern School of Business at New York University in 1999. He is a Certified Public Accountant and a member of The American Institute of Certified Public Accountants. He is a trustee of Franklin & Marshall College, Enveritas and other not-for-profit organizations.

SIMON RAYKHER | GENERAL COUNSEL AND CHIEF COMPLIANCE OFFICER

Simon Raykher is the General Counsel and Chief Compliance Officer of Kepos Capital. Prior to Kepos, Simon served as General Counsel and Chief Compliance Officer at Lombard Odier Asset Management (USA) Corp, the US asset management subsidiary of one of the oldest and largest private banks in Switzerland. For the previous seven years, he was General Counsel, Chief Compliance Officer and Principal of Satellite Asset Management, L.P. Prior to Satellite, Simon was an attorney with the law firm of Schulte Roth & Zabel LLP. Earlier in his career, he was a prosecutor with the Investigation Division of the New York County District Attorney's office, where he conducted tax fraud and money laundering investigations. Simon started his career as an auditor with Coopers & Lybrand, LLC. Simon earned a B.B.A. and an M.B.A. in Accounting from Pace University and a J.D. from Fordham University School of Law. Simon is an Adjunct Professor of Law at Fordham University School of Law.

ANDREW MILLER | HEAD OF BUSINESS DEVELOPMENT

Prior to joining Kepos, Andrew was Senior Institutional Investor Relations Manager for Värde Partners. He has spent his entire career in client-facing roles, beginning in 1997 with Invesco Asset Management in Paris. After seven years with Invesco in Europe, he returned to the US where he worked with the firm's Global Structured Products Group and Global Fixed Income team before joining WL Ross & Co in 2006. In 2008, Andrew joined Satellite Asset Management and subsequently was responsible for Business Development for Trafalgar Asset Managers. Andrew is a CFA Charterholder and earned a B.A. from Lawrence University in 1996.

RODOLFO MARTELL | QUANTITATIVE STRATEGIST

Rodolfo Martell is the Quantitative Strategist of Kepos Capital. Prior to Kepos, Rodolfo was Head of Portfolio Strategy at Pluribus Labs, Global Co-head of Investment Strategy at AQR Capital Management, and an investment strategist, portfolio manager and researcher at Barclays Global Investors (BGI, now part of BlackRock). Prior to BGI, Rodolfo was an Assistant Professor of Finance at the Krannert School of Management at Purdue University, where he won the John and Mary Willis Young Faculty award. He has published articles in the *American Economic Review, Review of Finance* and *Emerging Markets Review*, and has been a lecturer at the Haas School of Business (Berkeley), The Ohio State University's Fisher College of Business and ITAM. Rodolfo earned a B.A in Economics from Universidad de las Americas – Puebla, and a Ph.D. in Finance from The Ohio State University.

KRISTIN SCHERER | DIRECTOR OF BUSINESS DEVELOPMENT

Prior to joining Kepos, Kristin was a Director on the Capital Services team at Credit Suisse, where she was responsible for relationships with institutional investors, family offices and hedge fund managers on the West Coast. From 2015 to 2019, she was a Director at Societe Generale in their Capital Introductions group, also handling relationships with West Coast-based investors and asset managers. In 2018, Kristin was named by the *Hedge Fund Journal* as one of the 50 Leading Women in Hedge Funds. Before joining Societe Generale, Kristin was a Managing Director and the Head of Global Business Development at V2 Capital. Prior to that, she served as a Managing Director at Marketfield Asset Management, where she led US institutional business development. From 2005 to 2012 she held various positions at AllianceBernstein. Kristin is a CAIA Charterholder. She graduated from Colgate University, where she played lacrosse, with a degree in Philosophy & Religion.



Disclosures and Additional Notes

In connection with any consideration of an investment in the Fund, prospective investors should be aware of a number of additional general and specific risks (many of which are described in the Fund's private placement memorandum and Kepos Capital's Form ADV), including the following:

Conflicts of Interest. The investment manager will be subject to a number of conflicts of interest from time to time, some of which are described in the Fund's private placement memorandum.

<u>Financing Arrangements.</u> The use of leverage is integral to many of the Fund's strategies, and the Fund depends on the availability of credit in order to finance its portfolio. The purchase of options, futures, forward contracts, repurchase agreements, reverse repurchase agreements and equity swaps generally involves little or no margin deposit and, therefore, provides substantial leverage. Accordingly, relatively small price movements in these financial instruments may result in immediate and substantial losses to the Fund.

Model and Data Risk. Given the complexity of the investments and strategies we manage, we must rely heavily on quantitative models (both proprietary models developed by our personnel, and those supplied by third parties) and information and data supplied by third parties. When these models and data prove to be incorrect, misleading or incomplete, any decisions made in reliance on them expose investors to potential risks. Also, the research and modeling process we engage in is extremely complex and involves financial, economic, econometric and statistical theories, research and modeling; the results of that process must then be translated into computer code. Although we seek to hire individuals skilled in each of these functions and endeavor to provide appropriate levels of oversight, this complexity raises the chances that the finished model may contain one or more errors that could adversely affect performance.

Obsolescence Risk. We are unlikely to be successful in managing client accounts unless the assumptions underlying our models are realistic and either remain realistic and relevant in the future or are adjusted to account for changes in the overall market environment. If such assumptions are inaccurate or become inaccurate and are not promptly adjusted, it is likely that profitable trading signals will not be generated.

<u>Crowding/Convergence.</u> There is significant competition among quantitatively-focused managers, and our ability to deliver returns for investors that have a low correlation with global aggregate equity markets and other hedge funds is dependent on our ability to employ models that are simultaneously profitable and differentiated from those employed by other managers. To the extent that we are not able to develop sufficiently differentiated models, investors' investment objectives may not be met, irrespective of whether the models are profitable in an absolute sense.

Market Indices Used in Presentation:

MSCI ACWI is an index designed to measure the broad equity market performance of developed and emerging markets.

Bloomberg Global Aggregate provides a broad-based measure of the global investment grade fixed-rate debt markets (with the currency exposure hedged).

VIX is a measure of market expectations of near-term volatility as conveved by S&P 500 stock index options.

Hedge Fund Indices Used in Presentation:

HFRI Global Fund Weighted Composite Index is an equal-weighted index of over 2,000 single-manager funds with at least \$50 million under management or a 12-month track record.

HFRI Equity Hedge (Total) Index is comprised of managers who maintain positions both long and short in primarily equity and equity derivate securities.

HFRI Relative Value Index is an index designed to measure managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities across asset classes.

<u>HFRI Event Driven</u> is a broad measure of managers who maintain positions in companies involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments.

HFRI Macro Index is a measure of managers whose investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

SocGen Multi Alternative Risk Premia Index represents risk premia managers who employ investment programs diversified across multiple asset classes while utilizing multiple risk premia factors. These managers trade multiple asset classes such as equities, fixed income, currencies, and in many cases commodities, and aim to capture a diversity of discrete risk premia, including most prevalently value, carry, and momentum. These multi-asset, multi-risk premia strategies are typically systematic. Single asset class and risk premia programs are excluded. The SG Multi Alternative Risk Premia Index is an equally weighed, non-investable index of funds.

References to indices, benchmarks or other measures of relative market performance over a specified period of time are provided for your information only and do not imply that the actual Fund portfolio will achieve similar results. The index composition does not reflect the manner in which a portfolio is constructed; unlike these indices and benchmarks, the Fund's portfolio may contain options (including covered and uncovered puts and calls) and other derivative securities, futures and other commodity interests and currencies, and may include short sales of securities, margin trading, securities of smaller capitalization companies and types of securities that are different than those reflected in these indices and benchmarks, and is not as diversified as these indices and benchmarks. While an adviser seeks to design a portfolio which reflects appropriate risk and return features, portfolio characteristics may deviate from those of the benchmark. Indices are unmanaged and investors cannot invest directly in most indices. The figures for the indices may reflect the reinvestment of dividends but do not reflect the deduction of any fees or expenses which would reduce returns.



MEMORANDUM

TO: Oakland Police and Fire Retirement System (OPFRS)

FROM: Meketa Investment Group (Meketa)

DATE: July 26, 2023

RE: Kepos Capital—Manager Update

Manager: Kepos Capital										
Inception Date:	February 2022	OPFRS AUM (6/30/2023):	\$10.5 million							
Strategy:	Alternative Risk Premia	Strategy AUM (6/30/2023):	\$192 million							
Benchmark:	SG Multi-Alternative Risk Premia	Firm-wide AUM (6/30/2023):	\$2.1 billion							

Summary & Recommendation

Kepos Capital has managed the alternative risk premia sleeve within the Plan's Crisis Risk Offset component since February 2022. As of 6/30/2023, the portfolio is approximately \$10.5 million or about 2.5% of OPFRS's total plan. The strategy has performed within expectations and guidelines for the portfolio. No major organizational changes or personnel turnover in the portfolio management team have been observed since OPFRS's initial funding in early 2022. *Therefore, Meketa does not have any major concerns with Kepos Capital and Alternative Risk Premia strategy.*

Investment Performance Review Summary

As of 6/30/2023, Kepos Alternative Risk Premia strategy has outperformed the benchmark Société Générale (SG) Multi-Alternative Risk Premia Index year-to-date and over the 1-year trailing period on both gross- and net-of-fees bases. Since inception in February 2022, the strategy has generated an annualized net-of-fees investment return of -2.0%.

OPFRS Portfolio Returns (as of 6/30/2023)¹

Portfolio	Market Value (\$000)	YTD	1 YR	3 YR	5 YR	Since Inception	Inception Date
Kepos Alt Risk Premia (Gross)	10,477	6.9	10.5			4.1	2/2022
SG Multi-Alt Risk Premia Index		3.5	6.0			5.3	
Excess Return (Gross)		3.4	4.5			-1.2	
Kepos Alt Risk Premia (Net)		6.5	9.8			3.3	
SG Multi-Alt Risk Premia Index		3.5	6.0			5.3	
Excess Return (Net)		3.0	3.8			-1.9	

¹ Performance is annualized for periods longer than one year.



Investment Characteristics Review

The Crisis Risk Offset (CRO) component, which Kepos Alternative Risk Premia is a part of, is expected to exhibit lower correlations to the traditional equity and fixed income markets.

Since account inception in February 2022, Kepos Alternative Risk Premia has exhibited near zero correlation to equities (as measured by MSCI All Country World Index) and fixed income (as measured by Bloomberg Global Aggregate Index).

In comparison with these two indices, Kepos has also exhibited lower volatility (measured as Standard Deviation) year-to-date, over 1-year trailing period, and since account inception in February 2022.

	Kepos Alt Risk Premia	MSCI ACWI	Bloomberg Global Agg								
Correlation to Board Market Indices											
Since Account Inception		0.02	0.02								
	Volatility (Standard Dev	iation) Comparison									
YTD	1.4	3.5	2.4								
1-Yr	5.2	18.6	10.3								
Since Account Inception	6.0	19.1	10.1								

Product and Organization Review Summary

Kepos Capital			Areas of Potent	ial Impact	
	Level of Concern	Investment Process	Investment Team	Performance Track Record	Team/ Firm Culture
Product					
Key people changes	None				
Changes to team structure/individuals' roles	None				
Product client gain/losses	None				
Changes to the 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	Termina	ition

A review of Kepos Capital and the Alternative Risk Premia strategy revealed no concerning organizational issues or changes since February 2022.



Investment Summary per Manager

The Kepos Alternative Risk Premia strategy is designed to harvest diversified and time-varying exposure to equity and macro risk premia while remaining uncorrelated to global equities over a market cycle. The strategy's risk process is calibrated to deliver approximately 10% annualized volatility over the same period, although the risk target of the strategy will vary depending on the models' assessment of the level of risk of the premia factors at any given point in time.

The strategy invests in risk premia that are transparent, intuitive, relatively well-known and, in most cases, very liquid. The opportunities captured by the risk premia are not generated by short-term inefficiencies or unexpected events. Conceptually, they exist in the presence of risk transfers or behavioral effects. Kepos believes that alternative risk premia are found in all asset classes and can be grouped into the following themes: value, income, and momentum.

The Kepos team applies a systematic research and investment process. The team performs proprietary research, combining economic theory and statistical methods to identify potentially durable risk premia. Ideas are generally developed and evaluated by combining traditional and behavioral economic ideas, support from empirical evidence, market conditions (such as the liquidity of tradable instruments) and leverage requirements. Once a factor has been developed and evaluated, it is translated into a portfolio of securities and investments based on a number of criteria, which would include expected returns over the relevant time horizon; various risk measures such as Value at Risk and Conditional Value at Risk; transaction costs; leverage requirements; position size relative to market liquidity; and exposure to various factors and market indices.

DS/PN/JLC/mn



Disclosure

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM", "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

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



Economic and Market Update

June 2023 Report

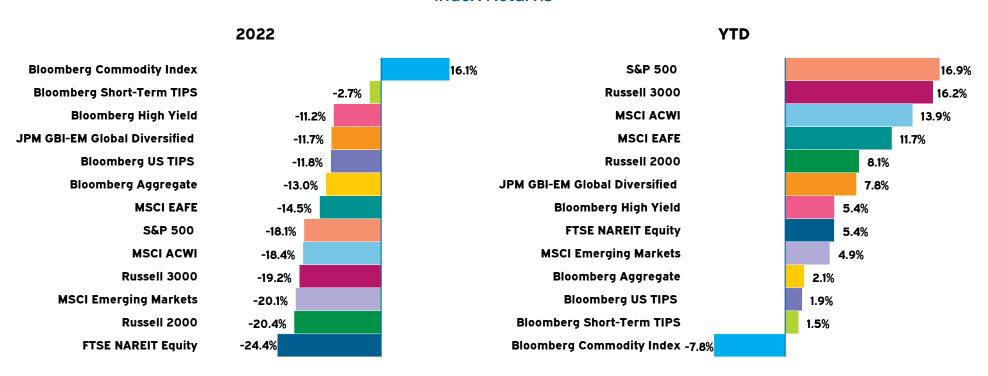


Commentary

- → Asset returns were positive in June with US and Non-US equities posting gains, while most fixed income sectors sold-off on expectations for further interest rate hikes later this year. Except for commodities, most public market asset classes remain up for the year.
 - Although the Fed skipped a rate-hike in June, Fed comments signaled further rate hikes in the 2H 2023; the US economy appears to be resilient supporting domestic demand and low unemployment.
 - US equity markets (Russell 3000) rose in June (+6.8%) adding to YTD gains (+16.2%). Some of the largest technology names drove positive results. Growth stocks continued to outpace value stocks, particularly in the large cap space.
 - Non-US developed equity markets rose in June (MSCI EAFE 4.6%) falling behind US equities in 2023 (+16.2% versus +11.7%). A strengthening US dollar weighed on returns.
 - Emerging market equities rose in June (+3.8%) supported by positive returns in China (+4.0%). They significantly trail developed market equities YTD returning +4.9%, due partly to higher US-China tensions.
 - Rates generally rose in June leading to bond markets declining, with the broad US bond market (Bloomberg Aggregate) falling 0.4% for the month. It remains positive (+2.1%) year-to-date, though, on declining inflation and expectations for the Fed to end their rate hikes soon.
- → This year, the paths of inflation and monetary policy, slowing global growth and the war in Ukraine will all be key.



Index Returns¹



- → After a particularly difficult 2022, most public market assets are up thus far in 2023, building on gains from the fourth quarter of last year.
- → Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall, and growth has slowed.

¹ Source: Bloomberg and FactSet. Data is as of June 30, 2023.



Domestic Equity Returns¹

Domestic Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	6.6	8.7	16.9	19.6	14.6	12.3	12.8
Russell 3000	6.8	8.4	16.2	19.0	13.9	11.4	12.3
Russell 1000	6.8	8.6	16.7	19.4	14.1	11.9	12.6
Russell 1000 Growth	6.8	12.8	29.0	27.1	13.7	15.1	15.7
Russell 1000 Value	6.6	4.1	5.1	11.5	14.3	8.1	9.2
Russell MidCap	8.3	4.8	9.0	14.9	12.5	8.4	10.3
Russell MidCap Growth	7.7	6.2	15.9	23.1	7.6	9.7	11.5
Russell MidCap Value	8.7	3.9	5.2	10.5	15.0	6.8	9.0
Russell 2000	8.1	5.2	8.1	12.3	10.8	4.2	8.2
Russell 2000 Growth	8.3	7.1	13.6	18.5	6.1	4.2	8.8
Russell 2000 Value	7.9	3.2	2.5	6.0	15.4	3.5	7.3

US Equities: Russell 3000 Index rose 8.4% in the second guarter and 16.2% YTD.

- → US stocks rose sharply in the second quarter of 2023. Most of the gains came in the month of June when the Fed kept its target rate unchanged for the first time since early 2022. Investors are expressing optimism that the Fed can tame inflation without widespread disruptions to the equity markets.
- → With the exception of energy and utilities, each sector of the Russell 3000 index appreciated during the second quarter. Technology led all sectors and was driven by enthusiasm for growth stocks, particularly those with exposure to artificial intelligence (e.g., NVIDIA).
- → Large cap stocks continue to outperform small cap stocks, driven by technology and the underperformance of small cap biotechnology stocks. Growth stocks continue to broadly outperform value stocks.

¹ Source: Bloomberg. Data is as of June 30, 2023.



Foreign Equity Returns¹

Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	4.5	2.4	9.5	12.7	7.2	3.5	4.7
MSCI EAFE	4.6	3.0	11.7	18.8	8.9	4.4	5.4
MSCI EAFE (Local Currency)	3.6	4.3	12.1	17.5	11.7	6.4	7.7
MSCI EAFE Small Cap	2.9	0.6	5.5	10.2	5.7	1.3	6.2
MSCI Emerging Markets	3.8	0.9	4.9	1.8	2.3	0.9	2.9
MSCI Emerging Markets (Local Currency)	3.4	1.7	5.6	3.3	3.9	3.0	5.7
MSCI China	4.0	-9.7	-5.5	-16.8	-10.3	-5.3	3.0

Foreign Equity: Developed international equities (MSCI EAFE) rose 3.0% in the second quarter bringing the YTD results to +11.7%. Emerging market equities (MSCI EM) rose 0.9% in the quarter, rising 4.9% YTD.

- → Eurozone and Japan markets continued their strength in June, wrapping up a strong second quarter. In Europe, financials and IT led returns whereas energy and communication services lagged. Enthusiasm for AI helped company fundamentals and prices for semiconductor stocks. Headline inflation was down in June, although core inflation was up slightly month over month. Energy and materials were the main drivers for falling UK equities, along with Bank of England rate hikes. Optimism continues to build for Japanese investors, while the Yen remains weak, and Bank of Japan remains dovish.
- → Emerging markets were laggards as China equities struggled from weak export demands and rising negative sentiments. Brazil, India, and Taiwan are bright spots in EM, the former due to good earnings and macro, the latter from AI and IT strength.

¹ Source: Bloomberg. Data is as of June 30, 2023.



Fixed Income Returns¹

Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-0.2	-0.6	2.3	0.0	-3.4	1.0	1.8	5.2	6.3
Bloomberg Aggregate	-0.4	-0.8	2.1	-0.9	-4.0	0.8	1.5	4.8	6.5
Bloomberg US TIPS	-0.3	-1.4	1.9	-1.4	-0.1	2.5	2.1	4.6	6.8
Bloomberg Short-term TIPS	-0.2	-0.7	1.5	0.1	2.3	2.7	1.7	5.3	2.5
Bloomberg High Yield	1.7	1.7	5.4	9.1	3.1	3.4	4.4	8.5	4.1
JPM GBI-EM Global Diversified (USD)	3.3	2.5	7.8	11.4	-1.4	0.3	-0.6	6.6	5.0

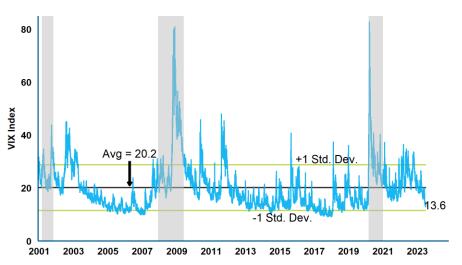
Fixed Income: The Bloomberg Universal declined 0.6% in the second quarter as global sovereign debt yields generally rose. Bonds retained a positive start to the year (+2.3% YTD) though as inflation continues to decline.

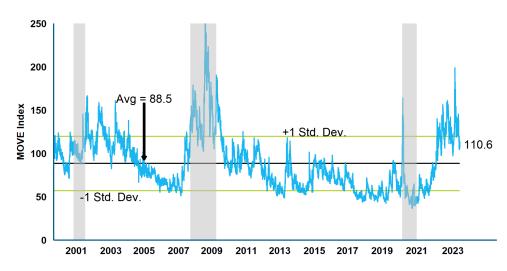
- → US Treasury yields generally rose over the month, with 1-year to 10-year maturity sector rising the most due to higher policy expectations.
- → The TIPS index and the short-term TIPS index posted negative returns for the month as inflation concerns continued to ease.
- → Continued risk appetite drove high yield bond performance (1.7%) and outperformance versus the broad US bond market (Bloomberg Aggregate). Emerging market bonds (3.3%) also performed well on investor risk sentiment.

¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of June 30, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.



Equity and Fixed Income Volatility¹



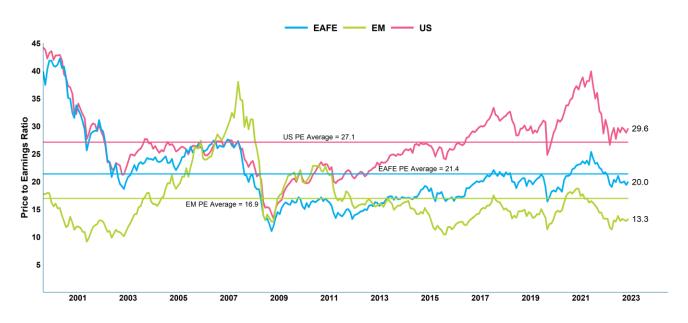


- → Volatility in equities (VIX) declined in June and remains low as investors continue to anticipate the end of the Fed's policy tightening.
- → In comparison, the bond market remains on edge after last year's historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above (110.6) its long-run average (88.4), but off its recent peak during the heart of the banking crisis.

¹ Equity and 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 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2023.



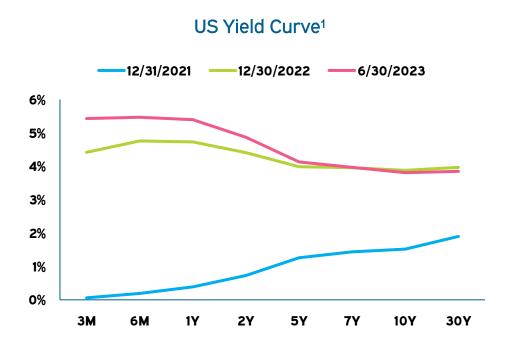
Equity Cyclically Adjusted P/E Ratios¹



- → After its dramatic decline last year the US equity price-to-earnings ratio remains above its long-run (21st century) average.
- → International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

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: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of June 2023. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



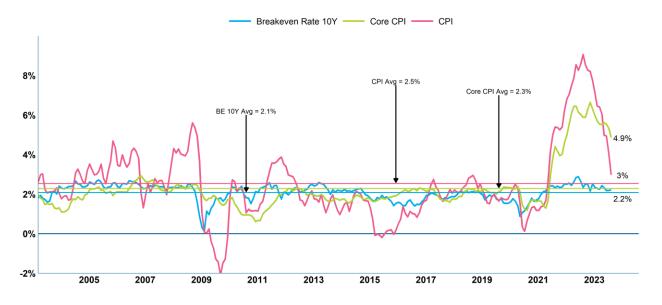


- → Interest rates have started rising again across the curve given policy maker guidance that policy rates are likely to rise further and potentially stay longer at the terminal rate than market participants expect. The rise in rates was particularly acute at the very front-end (< 1 year). Maturities from two years out also drifted higher as market participants considered the possibility of additional policy rate increases as economic data (mainly inflation and labor markets) remains strong.
- → The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -1.06%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.62%. Inversions in the yield curve have often preceded recessions.

¹ Source: Bloomberg. Data is as of June 30, 2023.



Ten-Year Breakeven Inflation and CPI¹

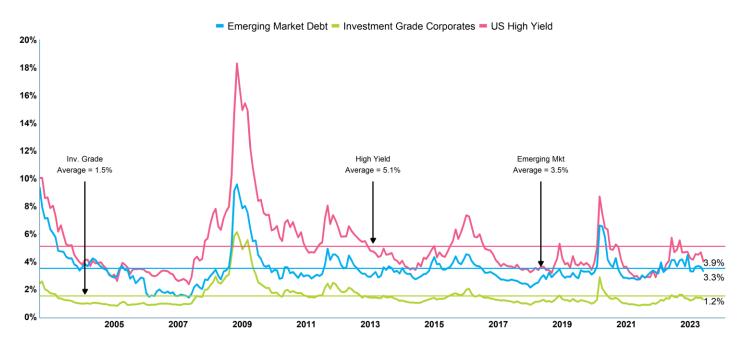


- → Headline inflation continued to decline in June, with the year-over-year reading falling from 4.0% to 3.0% and coming in slightly below estimates. The month-over-month rate of price increases rose slightly (0.2% versus 0.1%), with food prices ticking up slightly (0.1%) and energy prices rose (0.6%).
- → Core inflation excluding food and energy fell (5.3% to 4.9%), coming in slightly above forecasts. It remains stubbornly high driven by shelter costs.
- → Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed's 2% average target.

¹ Source: Bloomberg. Data is as June 30, 2023. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.



Credit Spreads vs. US Treasury Bonds¹

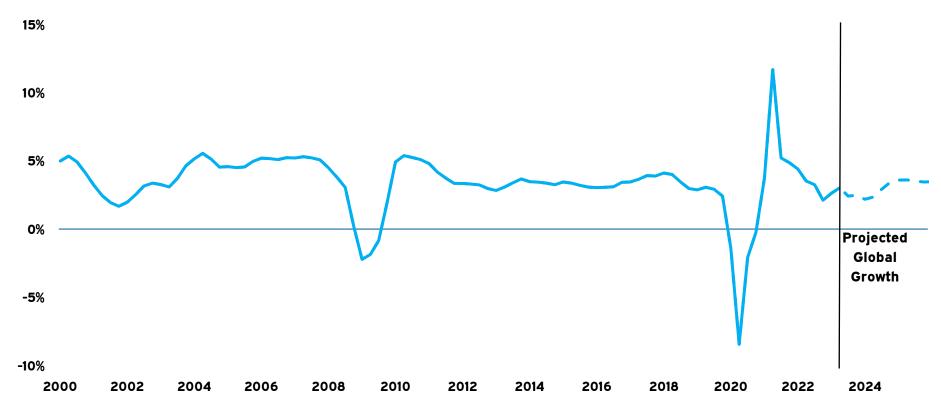


- → Spreads (the added yield above a comparable maturity Treasury) declined in June as risk appetite remained robust for respective credit exposures.
- → High yield spreads remain below their long-term average. Investment grade spreads and emerging market spreads are narrower than high yield spreads and close to their respective long-term averages.

¹ Sources: Bloomberg. Data is as of June 30, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end, respectively.





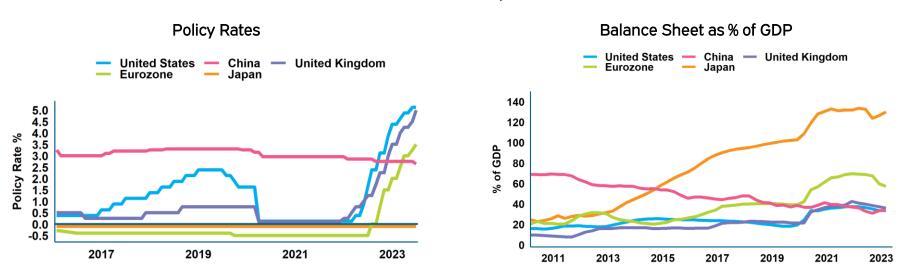


- → Global economies are expected to slow this year compared to 2022, with risks of recession as the impacts of policymakers' aggressive tightening to fight inflation flow through economies.
- → The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated June 2023.



Central Bank Response¹

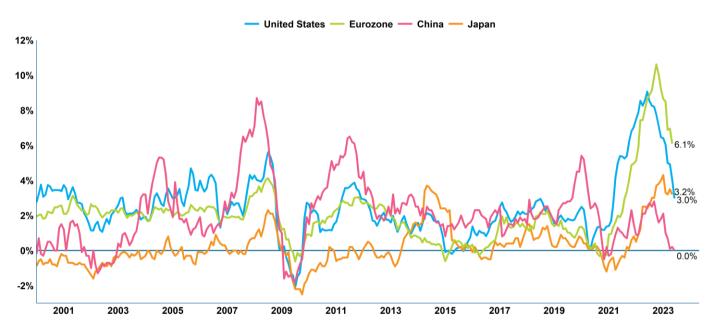


- → In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and growth have led to expectations for reductions in policy tightening going forward.
- → In May the Fed raised rates another 25 basis points to a range of 5.0% to 5.25%. After month-end, the FOMC paused its tightening campaign but hinted that one or two additional rate hikes could come later this year.
- → In China, the central bank has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- → Looking ahead, risks remain for a policy error as central banks attempt to balance multiple goals, bringing down inflation, maintaining financial stability, and supporting growth.

¹ Source: Bloomberg. Policy rate data is as of June 30, 2023. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of March 31, 2023.



Inflation (CPI Trailing Twelve Months)1

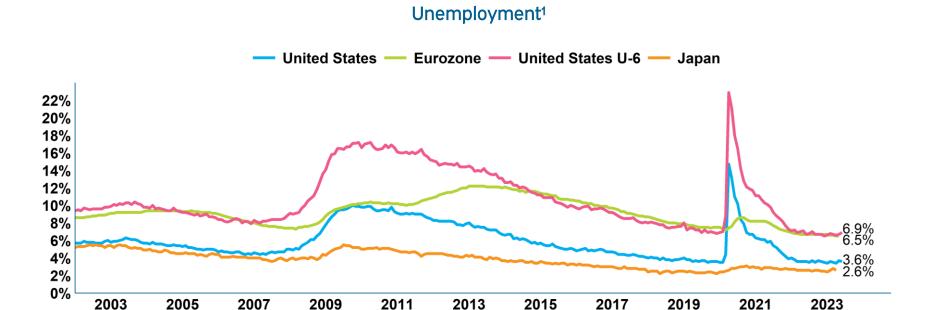


- → Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.
- → In the US, inflation fell to 3.0% at month-end, while eurozone inflation also fell (6.1% from 7.0%) a level well off its peak. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- → Inflation remains lower in China and Japan. In China, inflation levels were only slightly above 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

¹ Source: Bloomberg. Data is as June 30, 2023. The most recent Japanese inflation data is as of May 2023.

2023





→ Despite slowing growth and high inflation, the US labor market still shows signs of resiliency. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.9% but also declined dramatically from their peak.

2013

2017

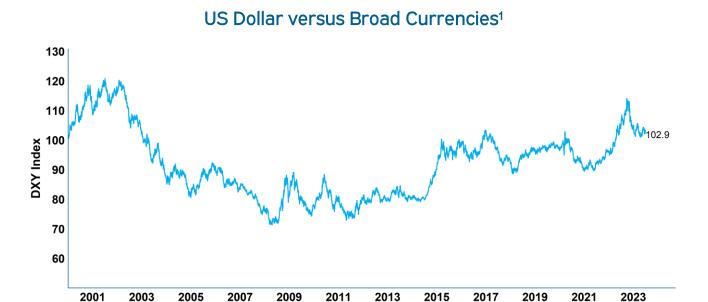
2019

2011

- → The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, leading to higher unemployment.
- → Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

¹ Source: Bloomberg. Data is as June 30, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of May 2023.





- → The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- → Late last year and into this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. In June, we did see a slight decline in the dollar though.
- → This year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

¹ Source: Bloomberg. Data as of June 30, 2023.



Summary

Key Trends:

- → The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.
- → Recent issues related to the banking sector seem to have subsided for now but are a reminder that there is a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.
- → Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- → Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.
- → In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing cost are elevated, and the job market may weaken.
- → The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.
- → Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector.

MEKETA

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

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



June Flash Report

As of June 30, 2023

Policy	(Current
40.0%		41.4%
12.0%		13.3%
31.0%		24.9%
		2.2% 5.4%
2.0% 5.0%		
10.0%		9.6%
		3.3%
0.0%		

	Allocation vs. Targets and Policy												
	Current Balance (\$)	Current (%)	Policy (%)	Difference (%)	Policy Range (%)	Within IPS Range?							
Domestic Equity	\$173,924,779	41	40	1	30 - 50	Yes							
International Equity	\$55,841,087	13	12	1	8 - 14	Yes							
Fixed Income	\$104,462,270	25	31	-6	25 - 40	No							
Credit	\$9,200,988	2	2	0	0 - 100	Yes							
Covered Calls	\$22,548,100	5	5	0	5 - 10	Yes							
Crisis Risk Offset	\$40,159,887	10	10	0	5 - 15	Yes							
Cash	\$14,032,977	3	0	3	0 - 5	Yes							
Total	\$420,170,089	100	100	0									

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As of June 30, 2023

										,		5 30, LUL
		Asset Cla	ass Pe	forma	nce Su	mmary						
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
OPFRS Total Plan	420,170,089	100.0	3.8	3.4	8.0	8.8	8.8	6.6	5.6	7.3	6.6	Dec-88
OPFRS Policy Benchmark			3.5	4.0	9.1	10.4	10.4	6.2	<i>5.5</i>	7.1	7.9	
Excess Return			0.3	-0.6	-1.1	-1.6	-1.6	0.4	0.1	0.2	-1.3	
Domestic Equity	173,924,779	41.4	7.0	6.0	11.5	14.9	14.9	13.1	10.0	11.8	8.9	Jun-97
Russell 3000 (Blend)			6.8	8.4	16.2	19.0	19.0	13.9	11.4	12.3	9.1	
Excess Return			0.2	-2.4	-4.7	-4.1	-4.1	-0.8	-1.4	-0.5	-0.2	
International Equity	55,841,087	13.3	5.2	3.1	12.1	16.7	16.7	8.5	4.8	6.2	5.4	Jan-98
MSCI ACWI ex US (Blend)			4.5	2.4	9.5	12.7	12.7	7.2	3.5	4.7	5.0	
Excess Return			0.7	0.7	2.6	4.0	4.0	1.3	1.3	1.5	0.4	
Fixed Income	104,462,270	24.9	-0.2	-0.5	2.9	0.2	0.2	-2.7	1.3	2.1	4.7	Jan-94
Bloomberg Universal (Blend)			-0.2	-0.6	2.3	0.0	0.0	-3.4	1.0	1.8	4.5	
Excess Return			0.0	0.1	0.6	0.2	0.2	0.7	0.3	0.3	0.2	
Credit	9,200,988	2.2	2.0	3.4	7.2	8.8	8.8	7.9	4.0		5.2	Feb-15
Blmbg. U.S. Corp: High Yield Index			1.7	1.7	5.4	9.1	9.1	3.1	3.4	4.4	4.2	
Excess Return			0.3	1.7	1.8	-0.3	-0.3	4.8	0.6		1.0	
Covered Calls	22,548,100	5.4	4.1	7.4	14.0	16.6	16.6	13.7	9.9		9.2	Apr-14
CBOE S&P 500 Buy Write Index			2.1	4.3	10.5	9.0	9.0	10.6	4.6	6.3	<i>5.7</i>	
Excess Return			2.0	3.1	3.5	7.6	7.6	3.1	5.3		3.5	
Crisis Risk Offset	40,159,887	9.6	1.3	2.0	2.0	-2.8	-2.8	-7.3			-8.0	Aug-18
Crisis Risk Offset Benchmark			1.6	2.7	<i>2.</i> 7	5.2	<i>5.2</i>	4.1			0.1	
Excess Return			-0.3	-0.7	-0.7	-8.0	-8.0	-11.4			-8.1	

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

MEKETA INVESTMENT GROUP Page 3 of 11

As of June 30, 2023

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
OPFRS Total Plan	420,170,089	100.0	3.8	3.4	8.0	8.8	8.8	6.6	5.6	7.3	6.6	Dec-88
OPFRS Policy Benchmark			3.5	4.0	9.1	10.4	10.4	6.2	5.5	7.1	7.9	
Excess Return			0.3	-0.6	-1.1	-1.6	-1.6	0.4	0.1	0.2	-1.3	
Domestic Equity	173,924,779	41.4	7.0	6.0	11.5	14.9	14.9	13.1	10.0	11.8	8.9	Jun-97
Russell 3000 (Blend)			6.8	8.4	16.2	19.0	19.0	13.9	11.4	12.3	9.1	
Excess Return			0.2	-2.4	-4.7	-4.1	-4.1	-0.8	-1.4	-0.5	-0.2	
Northern Trust Russell 1000	81,367,541	19.4	6.7	8.6	16.7	19.3	19.3	14.0	11.8	12.6	13.4	Jun-10
Russell 1000 Index			6.8	8.6	16.7	19.4	19.4	14.1	11.9	12.6	13.4	
Excess Return			-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.0	0.0	
EARNEST Partners	43,238,606	10.3	7.6	4.0	8.9	10.8	10.8	14.1	11.4	13.1	10.2	Apr-06
Russell Midcap Index			8.3	4.8	9.0	14.9	14.9	12.5	<i>8.5</i>	10.3	8.6	
Excess Return			-0.7	-0.8	-0.1	-4.1	-4.1	1.6	2.9	2.8	1.6	
Wellington Select Quality Equity	23,373,498	5.6	5.9	4.5	5.3	12.7	12.7				5.3	May-22
Russell 1000 Index			6.8	8.6	16.7	19.4	19.4	14.1	11.9	12.6	7.8	
Excess Return			-0.9	-4.1	-11.4	-6.7	-6.7				-2.5	
Brown Fundamental Small Cap Value	11,278,982	2.7	8.7	4.0	3.7	14.7	14.7				3.0	Apr-21
Russell 2000 Value Index			7.9	3.2	2.5	6.0	6.0	15.4	3.5	7.3	-3.3	
Excess Return			0.8	0.8	1.2	8.7	8.7				6.3	
Rice Hall James	14,666,153	3.5	7.0	3.0	10.3	9.1	9.1	7.7	3.5		7.6	Aug-17
Russell 2000 Growth Index			8.3	7.1	13.6	18.5	18.5	6.1	4.2	8.8	6.9	
Excess Return			-1.3	-4.1	-3.3	-9.4	-9.4	1.6	-0.7		0.7	

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

As of June 30, 2023

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
International Equity	55,841,087	13.3	5.2	3.1	12.1	16.7	16.7	8.5	4.8	6.2	5.4	Jan-98
MSCI ACWI ex US (Blend)			4.5	2.4	9.5	12.7	12.7	7.2	3.5	4.7	5.0	
Excess Return			0.7	0.7	2.6	4.0	4.0	1.3	1.3	1.5	0.4	
Vanguard Developed Markets ETF ²	15,464,066	3.7	3.5	2.2	10.4	15.3	15.3	8.8			6.7	Sep-19
FTSE Developed All Cap ex-U.S. Index			4.4	3.1	11.1	16.9	16.9	9.3	4.6	5.9	7.1	
Excess Return			-0.9	-0.9	-0.7	-1.6	-1.6	-0.5			-0.4	
SGA ACWI ex-U.S. Equity	40,377,022	9.6	5.9	3.5	12.8	17.3	17.3	8.4			3.8	Dec-19
MSCI AC World ex USA (Net)			4.5	2.4	9.5	12.7	12.7	7.2	3.5	4.7	3.8	
Excess Return			1.4	1.1	3.3	4.6	4.6	1.2			0.0	
Fixed Income	104,462,270	24.9	-0.2	-0.5	2.9	0.2	0.2	-2.7	1.3	2.1	4.7	Jan-94
Bloomberg Universal (Blend)			-0.2	-0.6	2.3	0.0	0.0	-3.4	1.0	1.8	4.5	
Excess Return			0.0	0.1	0.6	0.2	0.2	0.7	0.3	0.3	0.2	
Ramirez	70,891,932	16.9	-0.2	-0.6	2.7	-0.2	-0.2	-2.7	1.2		1.4	Feb-17
Blmbg. U.S. Aggregate Index			-0.4	-0.8	2.1	-0.9	-0.9	-4.0	0.8	1.5	0.9	
Excess Return			0.2	0.2	0.6	0.7	0.7	1.3	0.4		0.5	
Wellington Core Bond	6,726,320	1.6	-0.2	-0.5	3.1	-0.1	-0.1				-4.6	Apr-21
Blmbg. U.S. Aggregate Index			-0.4	-0.8	2.1	-0.9	-0.9	-4.0	0.8	1.5	-4.3	
Excess Return			0.2	0.3	1.0	8.0	0.8				-0.3	
Reams	26,844,017	6.4	-0.2	-0.4	3.2	1.3	1.3	-2.4	3.6	3.0	5.1	Feb-98
Bloomberg Universal (Blend)			-0.2	-0.6	2.3	0.0	0.0	-3.4	1.0	1.8	4.1	
Excess Return			0.0	0.2	0.9	1.3	1.3	1.0	2.6	1.2	1.0	

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

²Through Vanguard Developed Markets ETF is a passive strategy, short-term performance may appear to diverge from the index it tracks more than what 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.

As of June 30, 2023

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
Credit	9,200,988	2.2	2.0	3.4	7.2	8.8	8.8	7.9	4.0		5.2	Feb-15
Blmbg. U.S. Corp: High Yield Index			1.7	1.7	5.4	9.1	9.1	<i>3.1</i>	3.4	4.4	4.2	
Excess Return			0.3	1.7	1.8	-0.3	-0.3	4.8	0.6		1.0	
Polen Capital	9,200,988	2.2	2.0	3.4	7.2	8.8	8.8	7.9	4.0		5.2	Feb-15
ICE BofA High Yield Master II			1.6	1.6	5.4	8.9	8.9	3.2	3.2	4.3	4.1	
Excess Return			0.4	1.8	1.8	-0.1	-0.1	4.7	0.8		1.1	
Covered Calls	22,548,100	5.4	4.1	7.4	14.0	16.6	16.6	13.7	9.9		9.2	Apr-14
CBOE S&P 500 Buy Write Index			2.1	4.3	10.5	9.0	9.0	10.6	4.6	6.3	<i>5.7</i>	
Excess Return			2.0	3.1	3.5	7.6	7.6	3.1	5.3		3.5	
Parametric BXM	11,207,891	2.7	2.6	6.0	11.5	12.8	12.8	11.3	7.3		7.3	Apr-14
CBOE S&P 500 Buy Write Index			2.1	4.3	10.5	9.0	9.0	10.6	4.6	6.3	5.7	
Excess Return			0.5	1.7	1.0	3.8	3.8	0.7	2.7		1.6	
Parametric DeltaShift	11,340,209	2.7	5.6	8.8	16.6	20.5	20.5	15.6	12.2		11.3	Apr-14
CBOE S&P 500 Buy Write Index			2.1	4.3	10.5	9.0	9.0	10.6	4.6	6.3	<i>5.7</i>	
Excess Return			3.5	4.5	6.1	11.5	11.5	5.0	7.6		5.6	

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

As of June 30, 2023

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTR (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	Inception Date
Crisis Risk Offset	40,159,887	9.6	1.3	2.0	2.0	-2.8	-2.8	-7.3	-		-8.0	Aug-18
Crisis Risk Offset Benchmark			1.6	2.7	2.7	<i>5.2</i>	5.2	4.1			0.1	
Excess Return			-0.3	-0.7	-0.7	-8.0	-8.0	-11.4			-8.1	
Kepos Alternative Risk Premia	10,476,679	2.5	2.2	2.2	6.9	10.5	10.5				4.1	Feb-22
SG Multi Alternative Risk Premia Index			2.8	2.4	<i>3.5</i>	6.0	6.0	4.4			<i>5.3</i>	
Excess Return			-0.6	-0.2	3.4	4.5	4.5				-1.2	
Versor Trend Following	15,551,785	3.7	2.2	6.6	-2.6	-6.4	-6.4				2.9	Apr-22
SG Trend Index			2.0	8.0	0.1	-1.1	-1.1	14.3	9.4	<i>5.7</i>	6.6	
Excess Return			0.2	-1.4	-2.7	-5.3	-5.3				-3.7	
Vanguard Long-Term Treasury ETF	14,131,423	3.4	-0.2	-2.8	3.9	-7.3	-7.3	-12.2			-4.1	Jul-19
Blmbg. U.S. Government: Long Term Bond Index			0.0	-2.3	<i>3.7</i>	-6.8	-6.8	-12.0	-0.9	1.8	-3.9	
Excess Return			-0.2	-0.5	0.2	-0.5	-0.5	-0.2			-0.2	
Cash	14,032,977	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.6	Mar-11
Cash - Money Market	4,357,977	1.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1	0.8	0.6	Mar-11
Cash - Treasury	9,675,000	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	Oct-16

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

1 Month Ending June 30, 2023

Cash Flow Summary							
	Beginning Net Cash Flow Market Value		Net Investment Change	Ending Market Value			
Northern Trust Russell 1000	\$76,227,926	-	\$5,139,615	\$81,367,541			
EARNEST Partners	\$42,189,954	-\$2,000,000	\$3,048,652	\$43,238,606			
Wellington Select Quality Equity	\$22,080,589	-	\$1,292,909	\$23,373,498			
Brown Fundamental Small Cap Value	\$10,386,361	-	\$892,621	\$11,278,982			
Rice Hall James	\$13,712,159	-	\$953,993	\$14,666,153			
anguard Developed Markets ETF	\$14,945,025	-	\$519,041	\$15,464,066			
GA ACWI ex-U.S. Equity	\$38,125,089	-	\$2,251,933	\$40,377,022			
amirez	\$71,049,712	-	-\$157,779	\$70,891,932			
Vellington Core Bond	\$6,739,209	-	-\$12,889	\$6,726,320			
leams	\$26,895,636	-	-\$51,619	\$26,844,017			
olen Capital	\$9,029,007	-	\$171,981	\$9,200,988			
arametric BXM	\$10,923,681	-	\$284,210	\$11,207,891			
arametric DeltaShift	\$10,733,861	-	\$606,348	\$11,340,209			
epos Alternative Risk Premia	\$10,259,414	-	\$217,265	\$10,476,679			
ersor Trend Following	\$15,217,823	-	\$333,962	\$15,551,785			
anguard Long-Term Treasury ETF	\$14,167,013	-	-\$35,590	\$14,131,423			
ash - Money Market	\$4,121,881	\$236,096	-	\$4,357,977			
ash - Treasury	\$9,246,000	\$429,000	-	\$9,675,000			
ecurities Lending Northern Trust	-	-\$11,723	\$11,723	-			
PFRS Total Plan	\$406,050,340	-\$1,346,627	\$15,466,376	\$420,170,089			

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Benchmark History | As of June 30, 2023

	Benchmark History							
From Date	To Date	Benchmark						
OPFRS Total F	Plan							
06/01/2022	Present	40.0% Russell 3000 Index, 2.0% Blmbg. U.S. Corp: High Yield Index, 31.0% Blmbg. U.S. Universal Index, 12.0% MSCI AC World ex USA (Net), 5.0% CBOE BXM, 10.0% Crisis Risk Offset Benchmark						
01/01/2019	06/01/2022	40.0% Russell 3000 Index, 2.0% Blmbg. U.S. Treasury: Long, 12.0% MSCI AC World ex USA index, 31.0% Blmbg. U.S. Universal Index, 5.0% CBOE BXM, 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-Bi						
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)						
09/01/1988	04/01/1998	40.0% S&P 500 Index, 55.0% Blmbg. U.S. Aggregate Index, 5.0% FTSE 3 Month T-Bill						

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As of June 30, 2023

Benchmark History							
From Date	To Date	Benchmark					
Domestic Equ	ity						
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	;						
03/01/2014	Present	CBOE S&P 500 Buy Write Index					
Crisis Risk Off	set						
01/01/2023	Present	33.3% SG Trend, 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					

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