

Pursuant to California +Government Code section 54953(e), the Oakland Police & Fire Retirement System Board and Committee Members, as well as City staff, will participate via phone/video conference, and no physical teleconference locations are required.

Please see the agenda to participate in the meeting. For additional information, contact the Retirement Unit by calling (510) 238-7295.



AUDIT COMMITTEE MEMBERS

**John C. Speakman**  
Chairperson

**R. Steven Wilkinson**  
Member

**Kevin Traylor**  
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.*

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

**WEDNESDAY, MAY 25, 2022**

**10:00 AM**

**TELE-CONFERENCE BOARD MEETING  
VIA ZOOM WEBINAR**

**OBSERVE**

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

**PUBLIC COMMENTS**

There are three ways to submit public comments.

- eComment. To send your comment directly to staff BEFORE the meeting starts, please email to [mvisaya@oaklandca.gov](mailto:mvisaya@oaklandca.gov) with “PFRS Board Meeting” in the subject line for the corresponding meeting. Please note that eComment submission **closes two (2) hours before posted meeting time.**

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM  
REGULAR AUDIT COMMITTEE MEETING  
MAY 25, 2022**

- To comment by Zoom video conference, click the “Raise Your Hand” button to request to speak when Public Comment is being taken on an eligible agenda item at the beginning of the meeting. You will be permitted to speak during your turn, allowed to comment, and after the allotted time, re-muted. Instructions on how to “Raise Your Hand” is available at: [https://support.zoom.us/hc/en-us/articles/205566129 - Raise-Hand-In-Webinar](https://support.zoom.us/hc/en-us/articles/205566129-Raise-Hand-In-Webinar).
- To comment by phone, please call on one of the above listed phone numbers. You will be prompted to “Raise Your Hand” by pressing “\*9” to speak when Public Comment is taken. You will be permitted to speak during your turn, allowed to comment, and after the allotted time, re-muted. Please unmute yourself by pressing “\*6.”

If you have any questions, please email Maxine Visaya, Administrative Assistant II at [mvisaya@oaklandca.gov](mailto:mvisaya@oaklandca.gov)

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## ORDER OF BUSINESS

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- 1. Subject: Oakland Police and Fire Retirement System (“PFRS”) Audit Committee Meeting Minutes**  
**From:** Staff of the PFRS Board

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**Recommendation:** **APPROVE** the April 27, 2022 Audit Committee Meeting Minutes
- 2. Subject: Administrative Expenses Report**  
**From:** Staff of the PFRS Board

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**Recommendation:** **ACCEPT** informational report regarding PFRS administrative expenses as of March 31, 2022
- 3. Subject: Election of a New 3-Year Alternating Retired Police/Fire Representative Board Position**  
**From:** Staff of the PFRS Board

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**Recommendation:** **ACCEPT** informational report regarding the Election of a new 3-Year Alternating Retired Police/Fire Representative Board Position to fill Board seat currently held by Retired Police Representative Kevin R. Traylor

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM  
REGULAR AUDIT COMMITTEE MEETING  
MAY 25, 2022**

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

**AN AUDIT/OPERATIONS COMMITTEE REGULAR MEETING** of the Oakland Police and Fire Retirement System (“PFRS”) was held on Wednesday, April 27, 2022 via Zoom Webinar.

- |                      |                       |                                     |
|----------------------|-----------------------|-------------------------------------|
| Committee Members    | ▪ John C. Speakman    | Chairperson (Excused)               |
|                      | ▪ Kevin R. Traylor    | Member                              |
|                      | ▪ R. Steven Wilkinson | Member & Acting Chairperson         |
| Additional Attendees | ▪ David Jones         | PFRS Secretary & Plan Administrator |
|                      | ▪ Téir Jenkins        | PFRS Staff Member                   |
|                      | ▪ Maxine Visaya       | PFRS Staff Member                   |
|                      | ▪ Mitesh Bhakta       | PFRS Legal Counsel                  |

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

**1. PFRS Audit Committee Meeting Minutes** – Member Traylor made a motion to approve the March 30, 2022 Audit Committee Meeting minutes, second by Acting Chairperson Wilkinson. Motion passed.

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

**2. Administrative Expenses Report** – Staff Member Jenkins presented an informational report on PFRS’ administrative expenditures as of February 28, 2022. PFRS has an approved annual budget of approximately \$3.5 million and have expensed approximately \$1.7 million fiscal year-to-date. Membership consisted of 697 retired members, which included 428 Police Members and 269 Fire Members.

Member Wilkinson inquired about the effect of inflation on the administrative budget and Staff Member Jenkins and Plan Administrator Jones provided that costs are fixed based on current contracts, however when renewals come due there is a possibility of rate increases.

**MOTION:** Member Traylor made a motion to accept the administrative expenses report as of February 28, 2022 and forward to the Board, second by Acting Chairperson Wilkinson. Motion passed.

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

**3. PFRS FY2021-2023 Administrative Expenses Budget Mid-Cycle Adjustment** – Staff Member Jenkins presented an informational report on the PFRS’ FY2021-2023 Administrative Expenses Budget Mid-Cycle Adjustment. Member Traylor requested details regarding a breakdown of items included under Miscellaneous Expenditures. Staff Member Jenkins will follow-up and provide an update.

**MOTION:** Member Traylor made a motion to recommend Board approval of the PFRS’ FY2021-2023 Administrative Expenses Budget Mid-Cycle Adjustment, second by Acting Chairperson Wilkinson. Motion passed.

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

4. **Resolution No. 8047** – Resolution to approve a two-year extension of the professional service agreement for the provision of Actuarial Services between the City of Oakland Police and Fire Retirement System Board and Cheiron, Inc. through June 30, 2024 with annual retainer fees not to exceed \$47,900 for FY2022-2023 and \$49,400 for FY2023-2024.

Acting Chairperson Wilkinson and Plan Administrator Jones expressed confidence in the current working relationship with Cheiron and noted they are a local firm, very professional, detailed in their work, and highly respected in the field.

**MOTION:** Member Traylor made a motion to recommend Board approval of Resolution No. 8047, second by Acting Chairperson Wilkinson. Motion passed.

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

5. **Resolution No. 8048** – Resolution approving request of Oakland Police and Fire Retirement System Trustee R. Steven Wilkinson to attend The State Association of County Retirement Systems (SACRS) Spring Conference from May 10, 2022 through May 13, 2022, in Rancho Mirage, California and reimbursement of travel-related expenses in an amount not to exceed \$2,500.00 Two Thousand Five Hundred Dollars (\$2,500.00)

Acting Chairperson Wilkinson moved this item to the Full Board because he is required to abstain from action regarding approval for his own travel request.

**MOTION:** This item was moved to the Full Board and no action was taken.

6. **Review of Pending Audit Committee Meeting Agenda Items** – Plan Administrator Jones reported on the two (2) pending items on the Audit Committee Agenda. Item 1) the 2006 Management Audit: Staff is working to determine how to move the work forward with staff on-site two days a week. Member Traylor requested details regarding how staff will transition to a pro-active basis and move the work forward; Plan Administrator Jones will gather information regarding the action plan and provide an update at the May 2022 Committee Meeting; Item 2) Monitoring & Updates regarding upcoming City Council Agendas with scheduled discussions of the 2026 Actuarial Funding Date is ongoing to provide for the 2026 Ad-Hoc Committee to take any necessary action.

7. **Open Forum** – Acting Chairperson Wilkinson confirmed members received the contact information for Bob Crawford providing for opportunity to reach out to wish him well.

8. **Future Scheduling** – The next regular Audit Committee meeting is tentatively scheduled to occur May 25, 2022.

9. **Adjournment** – Member Traylor made a motion to adjourn, second by Acting Chairperson Wilkinson. Motion passed.

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

The meeting adjourned at 10:16 a.m. PST

\_\_\_\_\_  
R. STEVEN WILKINSON  
ACTING COMMITTEE CHAIRPERSON

\_\_\_\_\_  
DATE

DRAFT

**Table 1**

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM**

**Administrative Budget Spent to Date (Preliminary)**

As of March 31, 2022

	Approved Budget		March 2022		FYTD		Remaining		Percent Remaining	
<b>Internal Administrative Costs</b>										
PFRS Staff Salaries	\$	1,212,000	\$	105,745	\$	813,833	\$	398,167		32.9%
Board Travel Expenditures		52,500		-		1,711		50,789		96.7%
Staff Training		20,000		-		-		20,000		100.0%
Staff Training - Tuition Reimbursement		7,500		-		-		7,500		100.0%
Board Hospitality		3,600		-		-		3,600		100.0%
Payroll Processing Fees		40,000		-		-		40,000		100.0%
Miscellaneous Expenditures		40,000		1,179		8,756		31,244		78.1%
Internal Service Fees (ISF)		88,000		-		53,814		34,186		38.8%
Contract Services Contingency		50,000		1,200		1,200		48,800		97.6%
<b>Internal Administrative Costs Subtotal :</b>	<b>\$</b>	<b>1,513,600</b>	<b>\$</b>	<b>108,124</b>	<b>\$</b>	<b>879,315</b>	<b>\$</b>	<b>634,285</b>		<b>41.9%</b>
<b>Actuary and Accounting Services</b>										
Audit	\$	49,000	\$	-	\$	48,300	\$	700		1.4%
Actuary		46,500		-		23,896		22,604		48.6%
<b>Actuary and Accounting Subtotal:</b>	<b>\$</b>	<b>95,500</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>72,196</b>	<b>\$</b>	<b>23,304</b>		<b>24.4%</b>
<b>Legal Services</b>										
City Attorney Salaries	\$	188,000	\$	20,137	\$	115,863	\$	72,137		38.4%
Legal Contingency		150,000		-		-		150,000		100.0%
<b>Legal Services Subtotal:</b>	<b>\$</b>	<b>338,000</b>	<b>\$</b>	<b>20,137</b>	<b>\$</b>	<b>115,863</b>	<b>\$</b>	<b>222,137</b>		<b>65.7%</b>
<b>Investment Services</b>										
Money Manager Fees	\$	1,353,000	\$	12,380	\$	670,072	\$	682,928		50.5%
Custodial Fee		124,000		-		58,250		65,750		53.0%
Investment Consultant		100,000		25,000		75,000		25,000		25.0%
<b>Investment Subtotal:</b>	<b>\$</b>	<b>1,577,000</b>	<b>\$</b>	<b>37,380</b>	<b>\$</b>	<b>803,322</b>	<b>\$</b>	<b>773,678</b>		<b>49.1%</b>
<b>Total Operating Budget</b>	<b>\$</b>	<b>3,524,100</b>	<b>\$</b>	<b>165,640</b>	<b>\$</b>	<b>1,870,695</b>	<b>\$</b>	<b>1,653,405</b>		<b>46.92%</b>

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Cash in Treasury (Fund 7100) - Preliminary

As of March 31, 2022

	March 2022
<b>Beginning Cash as of 2/28/2022</b>	\$ 6,771,097
<b>Additions:</b>	
City Pension Contribution - March	\$ 3,651,667
Investment Draw	\$ 1,000,000
Misc. Receipts	2,059
<b>Total Additions:</b>	\$ 4,653,725
<b>Deductions:</b>	
Pension Payment (February Pension Paid on 3/1/2022)	(4,260,428)
Expenditures Paid	(232,899)
<b>Total Deductions</b>	\$ (4,493,327)
 <b>Ending Cash Balance as of 3/31/2022*</b>	 \$ 6,931,495

\* On 4/1/2022, March pension payment of appx \$4,241,200 will be made leaving a cash balance of \$2,690,000.

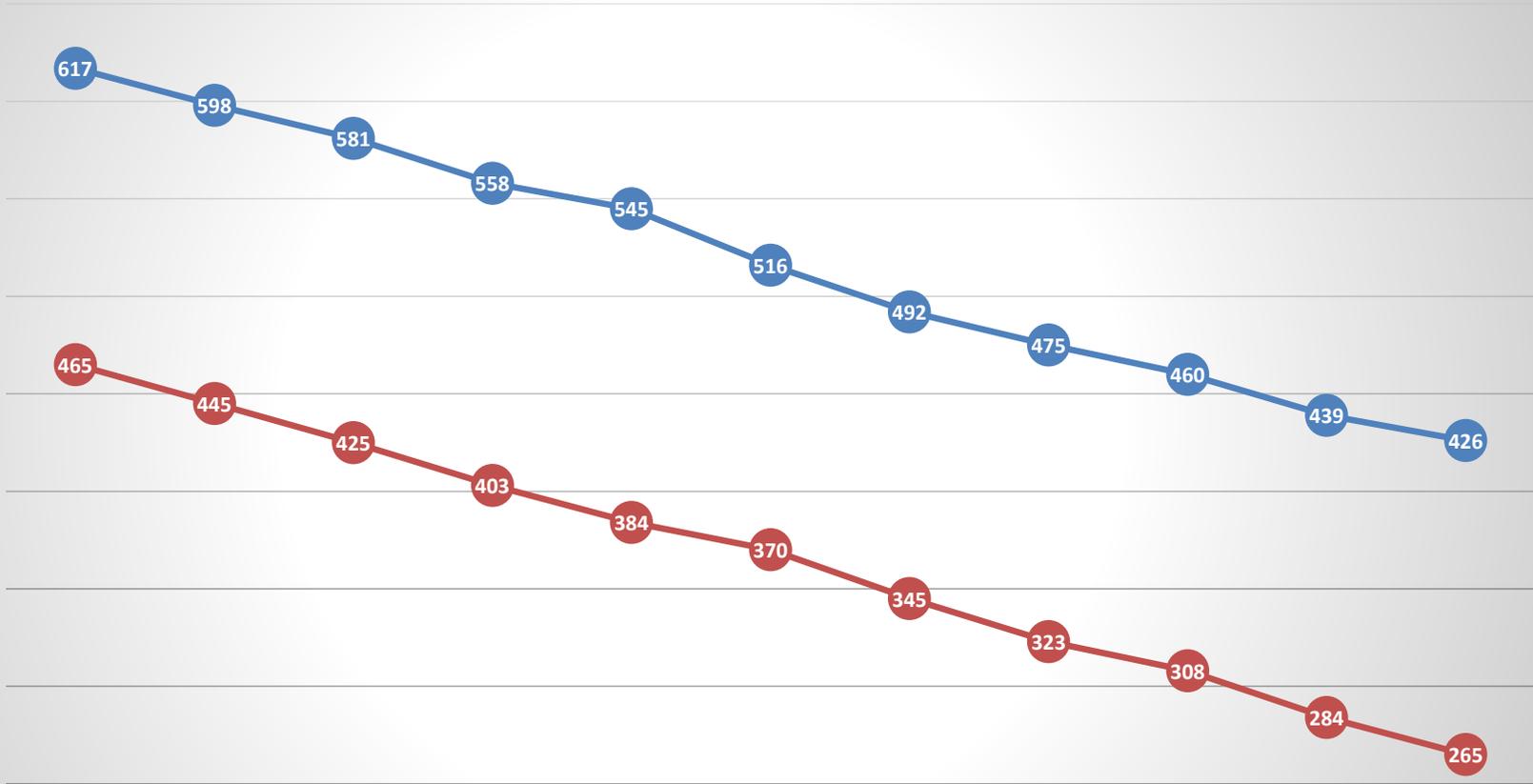
**Table 3**  
**CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM**

Census  
As of March 31, 2022

COMPOSITION	POLICE	FIRE	TOTAL
<b>Retired Member:</b>			
Retiree	303	172	475
Beneficiary	123	93	216
<b><i>Total Retired Members</i></b>	<b>426</b>	<b>265</b>	<b>691</b>
<b><i>Total Membership:</i></b>	<b>426</b>	<b>265</b>	<b>691</b>

COMPOSITION	POLICE	FIRE	TOTAL
<b>Retired Member:</b>			
Service Retirement	287	134	421
Disability Retirement	130	119	249
Death Allowance	9	12	21
<b><i>Total Retired Members:</i></b>	<b>426</b>	<b>265</b>	<b>691</b>
<b><i>Total Membership as of March 31, 2022:</i></b>	<b>426</b>	<b>265</b>	<b>691</b>
<b><i>Total Membership as of June 30, 2021:</i></b>	<b>439</b>	<b>284</b>	<b>723</b>
<b><i>Annual Difference:</i></b>	<b>-13</b>	<b>-19</b>	<b>-32</b>

## Oakland Police and Fire Retirement System Pension Plan Membership Count As of March 31, 2022 (FY 2012 - FY 2022)



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 FYTD
Police	617	598	581	558	545	516	492	475	460	439	426
Fire	465	445	425	403	384	370	345	323	308	284	265
Total	1082	1043	1006	961	929	886	837	798	768	723	691



# AGENDA REPORT

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**TO:** Oakland Police and Fire Retirement System Board (PFRS)      **FROM:** David F. Jones  
Plan Administrator

**SUBJECT:** Election of 3-Year Alternating Police/Fire Department Representative Board Position      **DATE:** May 25, 2022

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## SUMMARY

The 3-year alternating police/fire member board seat currently held by Kevin R. Traylor is due to expire August 31, 2022. Pursuant to the PFRS election guidelines outlined in Article 11 of the PFRS Rules and Regulations, an election for this board seat will be conducted by the Staff of the PFRS board with the assistance of the City Clerk's office.

## BACKGROUND

Kevin R. Traylor, a retired PFRS Police Member, was elected to the 3-year elected term as the 3-year Alternating Police/Fire Retired Member Representative effective February 26, 2020. Member Traylor's election to the Board seat completed Member Robert W. Nichelini's term as 3-year alternating police/fire member following his early resignation from the 3-year alternating police/fire board position to complete Member Muzar's position as the 5-year elected police representative. Member Traylor's board seat is set to expire August 31, 2022 and a new 3-year alternating police/fire member will need to be elected to this seat from the retired **Fire** membership.

Following the PFRS Rules & Regulations Article 11, Section 11.2, the PFRS staff will inform the International Association of Fire Fighters, Local 55 (IAFF Local 55) of the board vacancy and deliver to them the election schedules and nomination forms.

Should no more than one ( 1 ) nomination form be received by the nomination form submission deadline of 5 pm, July 20, 2022, then the single nominee will be automatically elected to the nominated position; an election would otherwise follow on August 24, 2022. The elected board member will begin the new term immediately following certification of results from the City Clerk's Office.

**Attachment (1):** *Rules & Regulations - Excerpt of Election: Article 11*

**Attachment (2):** *Nomination Form - Fire Department Representative for 3-Year Alternating Police/Fire Board Position*

The following timeline shows the due dates for nominees and PFRS staff during this election cycle:

- Last day for furnishing the International Association of Fire Fighters, Local 55 (IAFF Local 55) a notice stating that nominating papers may be obtained from the Retirement Systems office..... June 1, 2022
- Last day for filing nominees to submit nominating papers to the City Clerk's Office..... July 20, 2022
- Last day for City Clerk to certify to Office of the PFRS Board the names of members nominated..... July 20, 2022
- Last day for mailing of ballots to members..... August 9, 2022
- Last day for delivering to City Clerk the Roster of PFRS Retired Fire Department Members..... August 9, 2022
- Ballots due to City Clerk no later than 10 am..... August 24, 2022
- Day for counting of ballots by City Clerk..... August 24, 2022

Respectfully submitted,



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

**Attachment (1):** Rules & Regulations - Excerpt of Election: Article 11

**Attachment (2):** Nomination Form - Fire Department Representative for 3-Year Alternating Police/Fire Board Position

# **ATTACHMENT 1**

*Rules & Regulations  
Excerpt of Election  
Article 11*

# OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## RULES AND REGULATIONS

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### **Article 11: ELECTION OF MEMBERS OF THE BOARD REPRESENTING RETIRED MEMBERS OF THE RETIREMENT SYSTEM**

#### Section 11.1: Day for Counting of Ballots

The fourth Wednesday in August of the year in which such election is required to be held is hereby the day for counting of ballots.

In the event of a vacancy of one or more of the elected PFRS Retirement Board seats before the completion of the full term, the day for counting ballots for the election to fill the vacant PFRS Retirement Board seat shall be the fourth Wednesday of the month that follows 90 days after the date of being informed of the vacancy.

#### Section 11.2: Notice of Nomination

On or before the first business day in June of each year in which an election is required, the office of the Police and Fire Retirement Board shall send a notice stating that nomination papers may be obtained at the office of said Police and Fire Retirement Board, the place where nomination papers shall be filed and the final date of filing thereof, the date when ballots will be counted and such other information as may be appropriate to the following organizations:

- Retired Oakland Police Officers' Association (ROPOA)
- International Association of Fire Fighters, Local 55 (IAFF Local 55)

In the event of a vacancy of one of the elected PFRS Retirement Board seats before the completion of the full term, the office of the Police and Fire Retirement Board shall send notice as stated above no later than ten (10) calendar days after the date of being informed of the vacancy.

#### Section 11.3: Nomination for Membership

Nomination for membership on the Police and Fire Retirement Board from the retired membership of the Police and Fire Department shall be in writing on forms supplied by the office of said Police and Fire Retirement Board upon request. Nomination papers shall be substantially in the form shown in Appendix A. Nomination papers shall be signed by at least ten retired members of the Police or Fire Department, as the case may be, who are members of the POLICE AND FIRE RETIREMENT SYSTEM, other than the person nominated. Each signatory of a nominating paper shall write the date of his/her signature at the end of the line opposite his/her signature. Beneficiaries of deceased members are not eligible to vote in elections.

# OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## RULES AND REGULATIONS

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### Section 11.4: Date of Filing Nomination Papers

Nominating papers shall be filed in the Office of the Oakland City Clerk, Room 306 of the Oakland City Hall, not less than thirty-five days before the day of counting ballots. If said date falls on a non-business day for the City of Oakland, it shall be filed on the next business day.

### Section 11.5: Determination of Sufficiency of Nominating Papers

The City Clerk of the City of Oakland will determine when a member is nominated and for this purpose shall have access to the records of the Police and Fire Retirement Board the names of those retired members of the respective departments determined by him to have been nominated.

### Section 11.6: Winner by Default

In the event that only one person is nominated in accordance with this Article 11 as a member of the Board, that person shall be declared a winner.

### Section 11.7: Mailing of Ballots

Not less than fifteen days before the day for the counting of the ballots that shall be prepared by and mailed for the office of the Police and Fire Retirement Board to each retired member of the Police Department of Fire Department who is a member of the Police and Fire Retirement System a ballot addressed to his or her address as shown by the records of the Police and Fire Retirement Board. The Ballots shall contain the names in alphabetical order of the candidates certified by the City Clerk as nominated. Such ballot, sealed in a blank envelope provided for this purpose, which shall be enclosed in another envelope, also provided for such purpose, upon which the voter shall place his or her name, may be returned to the City Clerk not later than 10:00 a.m. of the day for the counting of ballots.

### Section 11.8: Roster of Eligible Voters

There shall be prepared in the office of the Police and Fire Retirement Board a roster of eligible voters which shall contain the names of the retired members of the Police or Fire Department who are members of the Police and Fire Retirement System, excluding beneficiaries of deceased members. Such roster of eligible voters shall be delivered to the City Clerk not less than fifteen days before the day for the counting of ballots and shall be in such form as to permit appropriate asking thereon by the City Clerk to indicate that an eligible member has voted.

### Section 11.9: Counting of Ballots

On the day for the counting of ballots at the hour of 10:00 A.M. thereof, the ballot box shall be opened and no ballot received after said hour shall be counted. The ballots will be counted under the

# OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## RULES AND REGULATIONS

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supervision and control of the City Clerk in such manner that the identity of the individual casting any ballot will not be disclosed. No ballot shall be counted unless it is enclosed in an envelope bearing the name of the voter. No ballot shall be counted which contains a vote for a person not nominated in accordance with Article 12. Upon the conclusion of the counting of the ballots, the City Clerk will certify the count and the candidate elected and notify each candidate thereof by mail.

### Section 11.10: Vote Necessary for Election

The candidate receiving the highest number of eligible votes shall be declared elected.

### Section 11.11: Disposition of Ballots after Counting

Upon conclusion of the counting of the ballots they shall be kept by the City Clerk in the manner and for the period the ballots of municipal elections are kept.

### Section 11.12: Procedure to Fill Vacancy of Elected Members

In the event a vacancy occurs before the end of a full term in any of the three (3) elected offices of the Board which are filled by retired members of the Retirement System, a successor shall be elected for the unexpired portion of the term vacated. The successor shall be elected from the same department of the member who is vacating the seat for the remainder of said unexpired three (3) year, or five (5) year, term. The election shall be governed by Article 11.

# **ATTACHMENT 2**

## ***Nomination Form***

***Fire Department Representative***

***for***

***3-Year Alternating  
Police/Fire Department  
Board Position***





# AGENDA REPORT

**TO:** Oakland Police and Fire Retirement System Board (PFRS)      **FROM:** David F. Jones  
Plan Administrator & Secretary

**SUBJECT:** Audit Committee Agenda Pending List      **DATE:** May 25, 2022

	SUBJECT	TENTATIVE SCHEDULED MTG DATE	STATUS
1	Staff Review of the 2006 Management Audit	TBD	Pending
2	Monitor & Update PFRS Board of Upcoming City Council Agendas Regarding Discussion of the 2026 Actuarial Funding Date	Ongoing	Ongoing

Respectfully submitted,

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

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

INVESTMENT COMMITTEE MEMBERS

**Jaime T. Godfrey**  
Chairperson

**R. Steven Wilkinson**  
Member

**Robert W. Nichelini**  
Member

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

**WEDNESDAY, MAY 25, 2022**  
**10:30 AM**  
**TELE-CONFERENCE BOARD MEETING**  
**VIA ZOOM WEBINAR**

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REGULAR INVESTMENT COMMITTEE MEETING  
MAY 25, 2022**

- To comment by Zoom video conference, click the “Raise Your Hand” button to request to speak when Public Comment is being taken on an eligible agenda item at the beginning of the meeting. You will be permitted to speak during your turn, allowed to comment, and after the allotted time, re-muted. Instructions on how to “Raise Your Hand” is available at: [https://support.zoom.us/hc/en-us/articles/205566129 - Raise-Hand-In-Webinar](https://support.zoom.us/hc/en-us/articles/205566129-Raise-Hand-In-Webinar).
- To comment by phone, please call on one of the above listed phone numbers. You will be prompted to “Raise Your Hand” by pressing “\*9” to speak when Public Comment is taken. You will be permitted to speak during your turn, allowed to comment, and after the allotted time, re-muted. Please unmute yourself by pressing \*6.

If you have any questions, please email Maxine Visaya, Administrative Assistant II at [mvisaya@oaklandca.gov](mailto:mvisaya@oaklandca.gov)

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## ORDER OF BUSINESS

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- 1. Subject:** Police and Fire Retirement System (“PFRS”) Investment Committee Meeting Minutes

**From:** Staff of the PFRS Board

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**Recommendation:** **APPROVE** April 27, 2022 Investment Committee Meeting Minutes
  
- 2. Subject:** Investment Manager Performance Update – Northern Trust Investments, Inc.

**From:** Northern Trust Investments, Inc.

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**Recommendation:** **ACCEPT** informational report regarding a recent management leadership change, managerial assessment, diversity and inclusion policy and practices, and investment portfolio performance of Northern Trust Investments Inc., a PFRS Domestic Equity Large Cap Core Investment Manager
  
- 3. Subject:** Investment Manager Performance Review – Northern Trust Investments, Inc.

**From:** Northern Trust Investments, Inc.

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**Recommendation:** **ACCEPT** Meketa Investment Group’s review and evaluation of Northern Trust Investments, Inc., a PFRS Domestic Equity Large Cap Core Investment Manager, regarding a recent management leadership change, managerial assessment, diversity and inclusion policy and practices, and investment portfolio performance

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM  
REGULAR INVESTMENT COMMITTEE MEETING  
MAY 25, 2022**

**4. Subject: Investment Market Overview as of April 30, 2022**  
**From: Meketa Investment Group**  

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**Recommendation: ACCEPT** informational report regarding the Global Investment Markets as of April 30, 2022

**5. Subject: Preliminary Investment Fund Performance Update as of April 30, 2022**  
**From: Meketa Investment Group**  

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**Recommendation: ACCEPT** informational report regarding the Preliminary Investment Fund Performance Update as of April 30, 2022

**6. Subject: Investment Fund Quarterly Performance Update as of March 31, 2022**  
**From: Meketa Investment Group**  

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**Recommendation: ACCEPT** the Investment Fund Quarterly Performance Update as of March 31, 2022

**7. Schedule of Pending Investment Committee Meeting Agenda Items**

**8. Open Forum**

**9. Future Scheduling**

**10. Adjournment**

**A REGULAR MEETING OF THE INVESTMENT AND FINANCIAL MATTERS COMMITTEE** of the Oakland Police and Fire Retirement System (“PFRS”) was held Wednesday, April 27, 2022 via Zoom Webinar.

Committee Members	<ul style="list-style-type: none"> <li>▪ Jaime T. Godfrey</li> <li>▪ Robert W. Nichelini</li> <li>▪ R. Steven Wilkinson</li> </ul>	<ul style="list-style-type: none"> <li>Chairperson</li> <li>Member</li> <li>Member</li> </ul>
Additional Attendees	<ul style="list-style-type: none"> <li>▪ David F. Jones</li> <li>▪ Mitesh Bhakta</li> <li>▪ Téir Jenkins</li> <li>▪ Maxine Visaya</li> <li>▪ David Sancewich</li> <li>▪ Paola Nealon</li> <li>▪ Jason Leong Campbell</li> <li>▪ Chris Gibson</li> <li>▪ David Schuster</li> <li>▪ Mike Poggi</li> </ul>	<ul style="list-style-type: none"> <li>PFRS Secretary &amp; Plan Administrator</li> <li>PFRS Legal Counsel</li> <li>PFRS Staff Member</li> <li>PFRS Staff Member</li> <li>Meketa Investment Group</li> <li>Meketa Investment Group</li> <li>Meketa Investment Group</li> <li>Brown Advisory, LLC</li> <li>Brown Advisory, LLC</li> <li>Brown Advisory, LLC</li> </ul>

The meeting was called to order at 10:31 a.m. PST

1. **Approval of Investment Committee Meeting Minutes** – Member Nichelini made a motion to approve the March 30, 2022 Investment Committee Meeting Minutes, as written, second by Member Wilkinson. Motion Passed.

[GODFREY – Y / NICHELINI – Y / WILKINSON – Y]  
 (AYES: 3 / NOES: 0 / ABSTAIN: 0 / EXCUSED: 0)

2. **Investment Manager Performance Update – Brown Advisory, LLC** – Chris Gibson, David Schuster, and Mike Poggi of Brown Advisory, LLC, a PFRS Active Small-Cap Value Investment Manager, presented an informational report regarding a firm overview; managerial assessment; investment philosophy and strategies; PFRS’ investment portfolio performance; and the firm’s Diversity & Inclusion practices.

Chairperson Godfrey and Plan Administrator Jones made inquiries to further the discussion regarding investment strategies. Staff Member Jenkins requested a brief overview of the firm’s use of local brokerages and their Diversity & Inclusion practices and noted he is encouraged by their actions and working relationship.

**MOTION:** Member Nichelini made a motion to accept the informational report presented by Brown Advisory, LLC and forward to the Board, second by Member Wilkinson. Motion passed.

[GODFREY – Y / NICHELINI – Y / WILKINSON – Y]  
 (AYES: 3 / NOES: 0 / ABSTAIN: 0 / EXCUSED: 0)

3. **Investment Manager Performance Review – Brown Advisory, LLC** – David Sancewich of Meketa Investment Group (“Meketa”) provided an overview memo regarding Brown Advisory, LLC, a PFRS Active Small-Cap Value Investment Manager. Meketa continues to have confidence in Brown Advisory, LLC and does not recommend any action be taken at this time and D. Sancewich noted Brown Advisory, LLC has outperformed both their benchmark and the median fund since inception one year ago.

**MOTION:** Member Nichelini made a motion accept the overview memo and forward to the Board, second by Member Wilkinson. Motion passed.

[GODFREY – Y / NICHELINI – Y / WILKINSON – Y]  
(AYES: 3 / NOES: 0 / ABSTAIN: 0 / EXCUSED: 0)

4. **Investment Market Overview as of March 30, 2022** – David Sancewich of Meketa presented an informational report regarding the Investment Market Overview as of March 30, 2022 and highlighted Domestic Equity Returns and current factors impacting outcomes. Member Nichelini made inquiries to discuss if there is a possibility of the current actuary assumptions becoming so far off track as a result of market volatility and creating a fund balance shortage approaching the 2026 funding date.

**MOTION:** Chairperson Godfrey made a motion to accept the informational report presented by Meketa regarding the Investment Market Overview as of March 30, 2022 and forward to the Board, second by Member Nichelini. Motion passed.

[GODFREY – Y / NICHELINI – Y / WILKINSON – Y]  
(AYES: 3 / NOES: 0 / ABSTAIN: 0 / EXCUSED: 0)

5. **Preliminary Investment Performance Update as of March 30, 2022** – David Sancewich of Meketa presented an informational report regarding the Preliminary Investment Fund Performance Update as of March 30, 2022 and highlighted Allocation vs. Target and Policy and Asset Class Performance Summary.

**MOTION:** Chairperson Godfrey made a motion to accept the informational report presented by Meketa regarding the Preliminary Investment Fund Performance Update as of March 30, 2022 and forward to the Board, second by Member Nichelini. Motion passed.

[GODFREY – Y / NICHELINI – Y / WILKINSON – Y]  
(AYES: 3 / NOES: 0 / ABSTAIN: 0 / EXCUSED: 0)

6. **Informational Overview Regarding Stagflation** – David Sancewich of Meketa Investment Group presented an informational overview regarding Stagflation and noted this is for informational purposes only and not a recommendation for action.

**MOTION:** Chairperson Godfrey made a motion to accept the informational overview regarding Stagflation presented by Meketa and forward to the Board, second by Member Nichelini. Motion passed.

[GODFREY – Y / NICHELINI – Y / WILKINSON – Y]  
(AYES: 3 / NOES: 0 / ABSTAIN: 0 / EXCUSED: 0)

7. **Schedule of Pending Investment Committee Meeting Agenda Items** – David Sancewich presented the 2022 Ongoing Strategic Investment Agenda for discussion and no there were no additions or changes to the current strategy.
8. **Open Forum** – No Report
9. **Future Scheduling** – The next regular Investment Committee meeting is tentatively scheduled to occur Wednesday, May 25, 2022.
10. **Adjournment** – Member Nichelini made a motion to adjourn, second by Member Wilkinson. Motion passed.

[GODFREY – Y / NICHELINI – Y / WILKINSON – Y]  
(AYES: 3 / NOES: 0 / ABSTAIN: 0 / EXCUSED: 0)

The meeting adjourned at 11:30 a.m. PST

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JAIME T. GODFREY  
COMMITTEE CHAIRPERSON

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DATE

ASSET MANAGEMENT

# Oakland Police and Fire Retirement System (PFRS)

## Annual Portfolio Review



CITY OF OAKLAND

*Prepared by: Northern Trust Asset Management*

*Wednesday, May 25, 2022, 10:00 am Pacific*

*Via Zoom*

For One-on-One Use with Institutional Investors Only. Not For Retail Use. This information is intended for one-on-one use with current or prospective clients. This information is confidential and may not be duplicated in any form or disseminated without prior consent.



**NORTHERN TRUST**

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- Northern Trust Asset Management Overview
- Equity Index Management
- Portfolio Review
- Appendix

# ABOUT THE PRESENTERS

## **Shivani Shah**

Shivani is a Portfolio Manager responsible for managing a variety of equity index portfolios for a broad range of clients. She joined Northern Trust in 2021. Prior to joining Northern Trust, Shivani was a Portfolio Manager and Trader at Vanguard Group managing ETFs and Equity Index investments. She has held various investment management roles where she optimized the performance of domestic and international mutual funds, ETFs, and equity index investments.

Prior firms include: Davis Selected Advisors, The Vanguard Group, and most recently an Independent Consultant via Gerson Lehrman Group, Inc.

Shivani received a Bachelor of Arts degree in Finance and Entrepreneurship from the University of Arizona. Additionally, she earned an Executive Education Certificate in Sustainable Finance and ESG Investing from NYU Stern Business School. She is specialized in Monetizing the Value of Sustainability (ROSI).

## **Tamara Doi Beck**

Tamara Doi Beck is Director of Public Funds & Taft-Hartley Plans for the Institutional Group at Northern Trust Asset Management. In her role, Tamara delivers investment solutions, including equity, fixed income, and alternative asset classes, for these institutional segments on the West Coast. Tamara has covered this region since 2003 and has 22 years of financial industry experience, all of it developing business and managing client relationships with institutional investment programs.

Tamara joined from Janus Henderson Investors, where she was Managing Director, responsible for new business development with public, corporate, endowment and foundation plans. Previously, she was Director of Business Development for LMCG Investments and Senior Vice President for Neuberger Berman. Tamara also held several roles at Morgan Stanley Investment Management for over six years, most recently as Vice President of Institutional Sales on the Public Funds Team.

Tamara earned a BA from Tufts University and graduated summa cum laude with highest thesis honors. She holds Series 3, 7, 30 and 63 licenses.

# Northern Trust Asset Management Overview

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# PRINCIPLES THAT ENDURE



# NORTHERN TRUST

## Service

Relentless drive to provide exceptional service.

## Expertise

Resolving complex challenges with multi-asset class capabilities.

## Integrity

Acting with the highest ethics, utmost honesty and unfailing reliability.

Northern Trust's core principles of service, expertise, and integrity have remained constant for over 125 years, guiding Northern Trust's evolution to a multi-faceted global financial services provider.

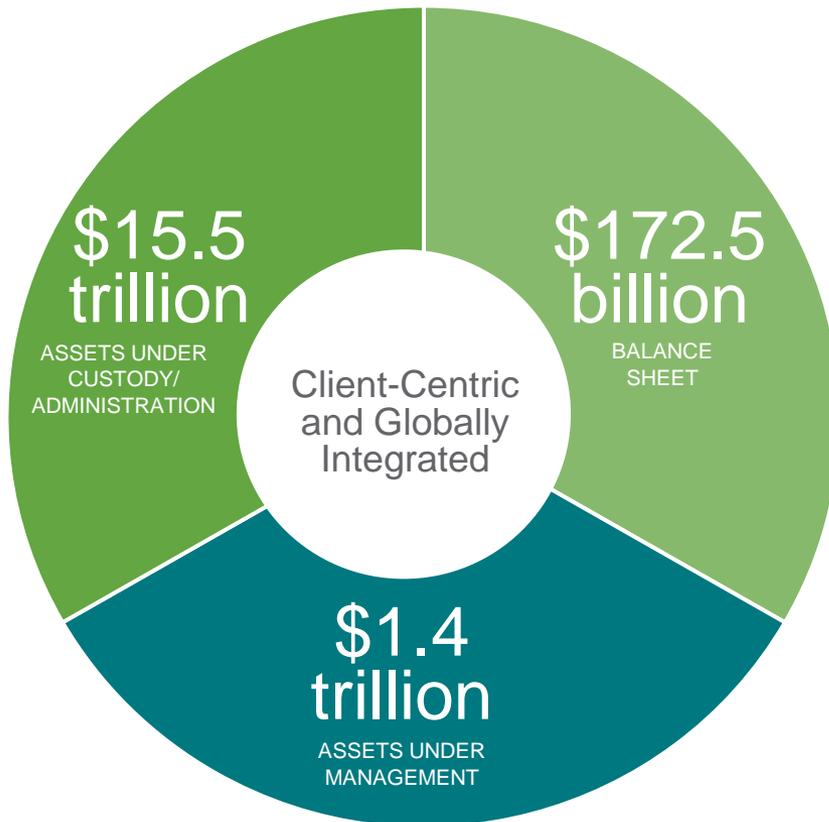
Throughout our history and changing market environments, we have led the financial services industry by aligning our efforts with these guiding principles.

Today, we remain committed to these founding principles which continue to unite and drive our partners around the globe — delivering our clients unparalleled service and expertise, with integrity.

# Northern Trust Corporation

Serving the world's most-sophisticated clients – from sovereign entities and the wealthiest individuals, to the largest global corporations and hedge funds.

## GLOBAL PLATFORM



As of March 31, 2022

<sup>1</sup>Standard and Poor's, senior debt as of June 30, 2021

<sup>2</sup>Source: Fortune, Korn Ferry. In 2022, 635 survey participants with \$10B+ in revenues, from 29 countries and 52 industries, were asked to rate companies in their own industry on nine criteria. A company's score must rank in the top half of its industry survey to be listed among the World's Most Admired Companies. Visit <http://fortune.com/worlds-most-admired-companies> for additional details and survey results. Past performance is not indicative of future results

## AT A GLANCE

- Founded in 1889
- Headquartered in Chicago, IL
- Locations in 26 countries
- 25,000+ global employees
- Diversified revenue streams
- A+ debt rating; well-capitalized<sup>1</sup>



World's most admired companies<sup>®</sup>

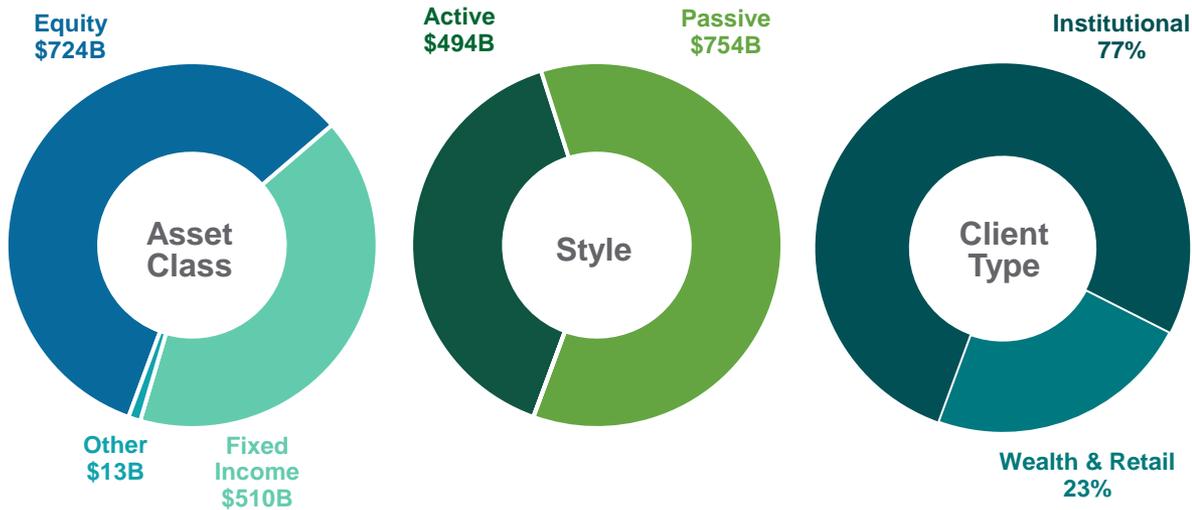
Fortune Magazine<sup>2</sup>  
15<sup>th</sup> consecutive year



# Northern Trust Asset Management

A leading global investment manager with a client-centric culture rooted in a fiduciary heritage.

## TOTAL ASSETS UNDER MANAGEMENT



## A TRUSTED PARTNER

**Leveraging** the strength of Northern Trust

**Global** network of investment professionals with deep expertise

**Demonstrated** ability to thrive in various market environments

**Progressive** thought leadership and differentiated insights

**Solving** complex global challenges with innovative solutions

**Focused** on placing the needs of our clients above all else

**\$1.2 trillion**  
TOTAL AUM\*

World's **17th largest** asset manager<sup>1</sup>

\*Assets under management as of March 31, 2022. For the Northern Trust Asset Management entities included in AUM total, please see disclosure at end of this document.

<sup>1</sup>The above rankings are not indicative of future performance. Unless otherwise noted, rankings are based on total worldwide assets under management of \$1.1 trillion as of December 31, 2020, by Pensions & Investments magazine's 2021 Special Report on the Largest Money Managers. Please see important information in the Appendix for more information about rankings and awards. Past performance is not indicative of future results.

# Investment Management Expertise

*Investment solutions and asset allocation informed by deep capital markets analysis. Comprehensive asset class capabilities from passive and factor-based, to fundamental active and multi-manager.*

## Capital Markets Expertise

### Equity

Factor-Based  
Active  
Passive  
Tax Advantaged  
Multi-Manager

### Fixed Income

Active  
Passive  
Cash Management  
Multi-Manager

### Alternatives

Hedge Funds  
Private Equity  
Private Credit  
Real Assets  
Infrastructure  
Real Estate

### Solutions

Sustainable/ESG  
Retirement  
Target Date  
Multi-Manager  
Investment Advisory  
Investment Institute

### Asset Allocation

Strategic  
Tactical

..... Forward-looking, historically aware investment approach .....

## GLOBAL PRODUCT VEHICLES

Collective Funds | Common Contractual Funds (CCF) | Common Funds | Exchange Traded Funds (ETFs) | Fonds voor Gemene Rekening (FGR)

Investment Company Variable Capital (ICVC) | Managed Accounts | Mutual Funds | Separate Accounts

# A Foundation Rooted in Sustainability

*We believe that the long-term financial success of our clients and shareholders is dependent upon a healthy global environment, a stable society and well-functioning, well-governed companies.*

## Organizational Commitment

Corporate social responsibility and philanthropy are essential elements of our mission and culture.

- **Reduced carbon emissions by 62%** since 2015 vs. 25% goal (2020)
- **3rd consecutive year** in the Bloomberg Gender-Equality Index (2020)
- **58%** of NTAM's Executive Group and **58%** of Northern Trust's Board of Directors **are gender-, racial- and ethnically diverse**

## Industry Leadership

Proudly participating, supporting and contributing to dozens of leading industry groups and initiatives around the globe.

- **Founding signatory** of Climate Action 100+
- **A+ Rated for Strategy and Governance\*** *Principles for Responsible Investment; member since 2009*
- **TCFD Supporter** *Task Force on Climate-Related Financial Disclosures*
- **SASB Investors Advisory Group Member** *Sustainability Accounting Standards Board*



## Stewardship

Representing investors' ownership interests by following and applying a thoughtful, disciplined process.

- **A thematic approach** guides our \$1 trillion global asset base to drive meaningful change through company engagement
- **Best performing U.S. asset manager** — supported 68% of climate resolutions (2021)<sup>1</sup>
- **3,000+** total engagements globally (2020)

## Expertise

Our history and proven expertise managing sustainable portfolios reflects a longstanding commitment to responsibly serving the needs of our clients.

- **\$158 billion<sup>2</sup>** in sustainable strategies AUM
- **30+ years** of expertise and innovation
- **Investment strategies and bespoke solutions** across asset classes and global investment vehicles
- **The Northern Trust ESG Vector Score™** an industry first approach that captures both the magnitude and direction of a company's potential ESG related business risks.

Source: Northern Trust, ShareAction. All data is as of December 31, 2020, unless otherwise stated.

<sup>1</sup>ShareAction 2021 report "Voting Matters" — Northern Trust Asset Management ranked 34th overall globally and 1st among U.S. asset managers. <sup>2</sup>Data as of March 31, 2022.

\*In our most recent 2020 UN PRI report we received an A+ rating for strategy and governance. For the full Northern Trust PRI Transparency Report, visit [www.unpri.org](http://www.unpri.org). Assessment methodology can be found at <https://www.unpri.org/reporting-and-assessment/how-investors-are-assessed-on-their-reporting/3066.article>. Please see important information in the Appendix for more information about rankings and awards. Past performance is not indicative of future results.

# A Firm Commitment to Diversity, Equity & Inclusion

*We're committed to fostering a diverse and inclusive culture. That means we lead — and live — by example, creating greater value for our employees, clients, shareholders and communities.*

## Diverse Talent and Leaders

Recruiting, developing and deploying diverse talent and leadership globally enables us to capitalize on the strength that lies in our differences.

**Diverse Leadership — 58%** gender-, racial- and ethnically diverse Executive Group.

**11 employee-led councils** providing professional development opportunities and amplifying diverse perspectives.

**Creating and maintaining a diverse workforce** has been **recognized** by many groups, including: *Working Mother* and *Black Enterprise*, as well as the Corporate Equality Index.

**100% score in the Disability Equality Index** and Disability:IN list of Best Places to Work for Disability Inclusion.<sup>1</sup>

**Women's Leadership Development Forum** — More than 1,700 high-potential women have participated since 2008.

## Investment Programs

Putting our values into action — driving change by developing innovative investment programs and investing in our communities.

**Established Minority Brokerage Program (2007):**

- Participating firms are majority owned by minorities, women and disabled veterans.
- 15% target for trading commissions executed through minority brokers on equity securities in CITs.<sup>2</sup>

**Multi-Manager Program**, engaging with diverse managers since 1979.

**Developed holistic, 360° framework** to assess diversity within public and private investments.

**\$3.4 billion** in community development investments.

**\$100 million** in low-cost funding committed to communities hard hit by the COVID-19 pandemic.<sup>3</sup>

## Leadership

Advancing diversity, equity and inclusion through industry and civic leadership and notable dialogue engagements.

**Leading organizational sample membership:**

- Signatory of Women in Finance Charter
- The Diversity Project
- LGBT Great
- Hiring Our Heroes
- Hispanic Alliance for Career Enhancement (HACE)
- Women in Super
- Financial Services Pipeline Initiative

**Encouraging transparent dialogue —** Through President's open letters and media engagements.

**Savoy Magazine** named **NTAM president Shundrawn Thomas** as one of the "Most Influential Black Executives in Corporate America."<sup>4</sup>

**Diversity Champion**, *Investment News*.<sup>5</sup>

All data from Northern Trust as of 12/31/2020, unless otherwise noted. <sup>1</sup> American Association of People with Disabilities. <sup>2</sup> Collective investment trusts with trading activity. <sup>3</sup> As of May 2020, Northern Trust announced it had committed to provide US\$100 million in low-cost funding to assist Community Development Financial Institutions (CDFIs), which provide loans, investments, financial services and technical assistance to underserved populations and communities. <sup>4</sup> *Savoy Magazine*, March 2020. <sup>5</sup> Excellence in Diversity & Inclusion Awards, *Investment News*, 2018, 2020, 2021, 2022. Please see important information in the Appendix for more information about rankings and awards. Past performance is not indicative of future results.

# DIVERSITY REPRESENTATION SURVEY FOR OAKLAND POLICE AND FIRE

DATA AS OF 12/31/2021

<b>Firm Name</b>	Northern Trust Investments, Inc.
<b>Product Name</b>	NT Collective Russell 1000 Index Fund - Lending
<b>Total Number of Employees</b>	As of 12/31/21 there were 509 employees for NTI

	Percentage (%) of Board of Directors / Managing Members	Percentage(%) of Firm (Entire Staff)	Percentage (%) of Firm (Investment Professionals)
<b>Race and Ethnicity*</b>			
African American/Black	29%	9%	9%
Asian/Hawaiian/Pacific Islander	14%	9%	9%
Latino/Hispanic	0%	7%	6%
White	57%	73%	74%
American Indian/Alaska Native	0%	0%	0%
Other	0%	2%	2%
<b>Gender</b>			
Male	71%	61%	69%
Female	29%	39%	31%
Non-Identified/Other	0%	0%	0%

*Please note that information above is reflective as of 12/31/21.*

\*Racial/ethnic categories appear as defined by EEOC guidance.  
We provide HR stats and data as of 12/31 and 6/30.



Stability  
+ Strength

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Opportunity

We're referred to as the stable institution that people trust—but trust and stability doesn't mean tired and stationary.

Quite the contrary; trust and stability mean we operate from a position of strength.

And with strength comes the ability to identify, create and seize opportunities for our clients.

# Equity Index Management

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# Index Management Capabilities and Team

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# Global Index Management Platform

*Our transparent index management process considers risk, liquidity and costs at every stage while integrating pointed proxy voting policies and principles targeted at upholding stewardship practices.*

## FAST FACTS

**\$754.6B AUM\***

**5th Largest Index Manager<sup>1</sup>**

**200+** Index Equity and Fixed Income Strategies

## DECADES OF EXPERIENCE

**40+ Years** Index Management

**30+ Years** ESG & Sustainability

**20+ Years** Quantitative Active

## OUR CAPABILITIES

### Equity

Developed Markets

Emerging Markets

ESG & Sustainability Considerations

Market-Cap Weighted

Alternatively Weighted

### Fixed Income

Global Broad Fixed Income

Government Sectors

Securitized and Credit Sectors

ESG and Sustainability Considerations

Alternatively Weighted

### Real Assets

Real Estate

Infrastructure

Natural Resources

## Sustainable Investing

<sup>1</sup> Total worldwide assets under management. The above rankings are not indicative of future performance. Unless otherwise noted, rankings are based on total worldwide assets under management of \$1.1 trillion as of December 31, 2020, by Pensions & Investments magazine's 2021 Special Report on the Largest Money Managers. Please see important information on page 11 for more information about rankings and awards. Past performance is not indicative of future results.

\*Index Management AUM includes \$3.3B of Multi-Manager Solutions Assets.

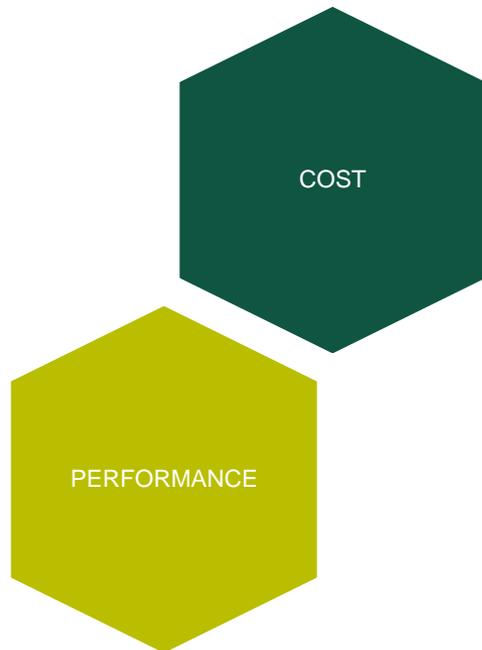
Assets under management as of 03/31/22.

# Solutions For Emerging Trends In Index Management

*The seemingly simple world of index investing continues to grow in breadth and complexity.*

## Indexing in the Past

Narrow solutions



## Indexing Now and into the Future

Innovative and customized solutions as needs evolve



# A Global Index Equity Team

**Angelo Manioudakis**  
Chief Investment Officer

## INDEX EQUITY

**Michael R. Hunstad, Ph.D.**  
Head of Quantitative Strategies

**Jake Weaver, CFA, CPA**  
Head of Equity Index

## PORTFOLIO MANAGEMENT & RESEARCH

### Chicago

**Brent D. Reeder**  
Head of Index, US

**Robert Anstine**  
Senior Portfolio Manager

**Keith Carroll**  
Senior Portfolio Manager

**Michael Gleeman, CFA**  
Senior Portfolio Manager

**Chris Jaeger**  
Senior Portfolio Manager

**Lucy Johnston**  
Senior Portfolio Manager

**Steve Santiccioli**  
Senior Portfolio Manager

**Brendan Sullivan, CFA**  
Senior Portfolio Manager

**Alan Aung, CFA**  
Senior Portfolio Manager

**Volter Bagriy, CFA**  
Senior Portfolio Manager

**Yair Walny, CFA**  
Senior Portfolio Manager

**Shivani Shah**  
Portfolio Manager

**Errol Mitchell**  
Associate Portfolio Manager

### London

**Nicholas Dymond, CFA**  
Head of International Index  
Equity, EMEA

**James Amatt**  
Senior Portfolio Manager

**Josh Fiennes, CFA**  
Senior Portfolio Manager

**Nigel Tyler**  
Senior Portfolio Manager

### Hong Kong

**Gregory Pasieka, CFA**  
Head of Index, APAC

**Manfred Wong, CFA**  
Senior Portfolio Manager

**David Crowe**  
Portfolio Manager

**Hamung Patel**  
Portfolio Manager

**Simona Muresan**  
Associate Portfolio Manager

**Open Position**  
Portfolio Manager

**Celia Chau, CFA, FRM**  
Portfolio Manager

**Sophie Piempreecha**  
Portfolio Manager

## EQUITY TRADING

**Curt Nass**  
Global Head of Equity Trading

### Chicago

**Peter Driscoll**  
Senior Equity Trader

**Christopher Ebel, CFA**  
Equity Trader

**Sean Finegan, CFA**  
Senior Equity Trader

**Walid Karim**  
Senior Equity Trader

**Ashish Mehta**  
Senior Equity Trader

**Paul Howaniec**  
Junior Equity Trader

**Jeffrey J Logan**  
Equity Trader

**Open Position**  
Equity Trader

### London

**Peter Hughes**  
Equity Trader

**Kerem Onder**  
Equity Trader

**Lindsay Anderson**  
Equity Trader

### Hong Kong

**Wilson Har**  
Equity Trader

**Michael Tan**  
Equity Trader

## INVESTMENT STRATEGY

**Jim McDonald**  
Chief Investment Strategist

**Wouter Sturkenboom, CFA**  
Chief Investment Strategist – EMEA

**Daniel Phillips, CFA**  
Senior Investment Strategist

## INDEX SERVICES

**Michael Deverall**  
Head of Index Services

## EQUITY SPECIALISTS

**Christopher Fronk, CFA, CPA**  
Senior Equity Specialist

**Emily Lawrence**  
Senior Equity Specialist – Sustainable Investing

**Austin Guy, CFA**  
Equity Specialist

## BUSINESS MANAGEMENT

**Ali Bleecker**  
Chief Administrative Officer

## RISK MANAGEMENT LEADERSHIP

**Michelle L Pfeiffer**  
Head of Investment Risk Management

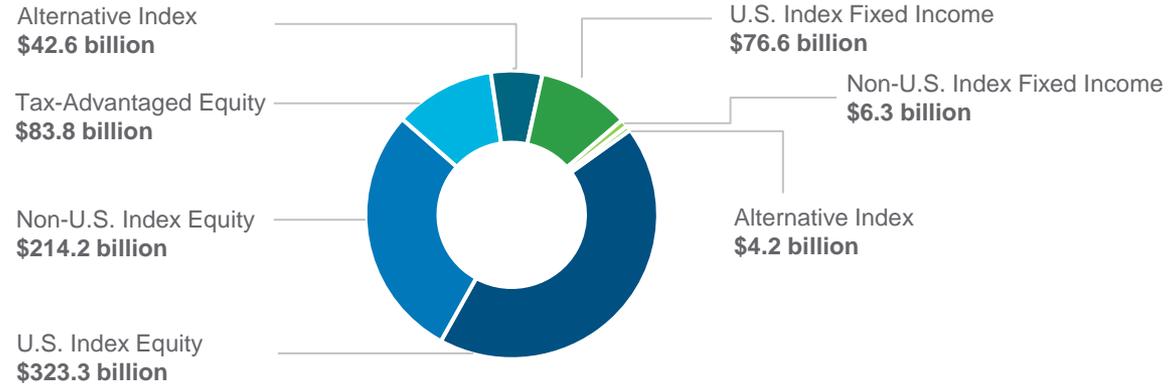
# Index Management

*Traditional market-cap weighted, alternatively-weighted and custom strategies for all asset classes*

Total index management assets under management:  
**\$754.6 billion\***  
 as of March 31, 2022

**Equity:**  
**\$664.0 billion**

**Fixed Income:**  
**\$87.2 billion**



As of March 31, 2022 (updated quarterly). Source: NTAM Finance.

\*Index Management AUM does not include \$3.3B of Multi-Manager Solutions Assets.

Northern Trust Asset Management is composed of Northern Trust Investments, Inc., Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K., NT Global Advisors, Inc., 50 South Capital Advisors, LLC, Belvedere Advisors LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company to offer investment products and services to personal and institutional markets.

For purpose of compliance with the Global Investment Performance Standards (GIPS®) the firm is defined as Northern Trust Asset Management Services, a subset of Northern Trust Asset Management, and includes those investment products managed by NTI, NTGIL, NTGIJ and TNTC that are distributed through global channels.

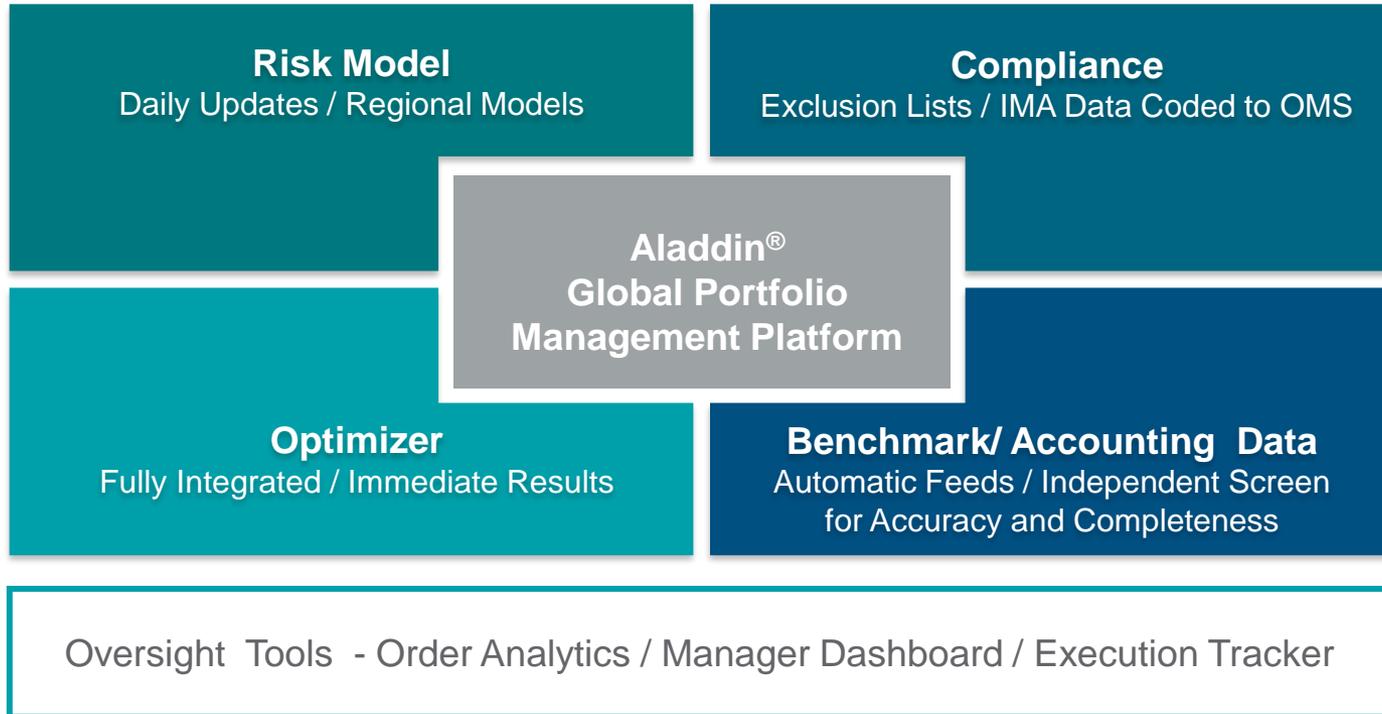
As of 03/31/2022 Northern Trust Asset Management had assets under management totaling \$1.24 trillion of which \$1.17 trillion is part of the GIPS firm

# Investment Process

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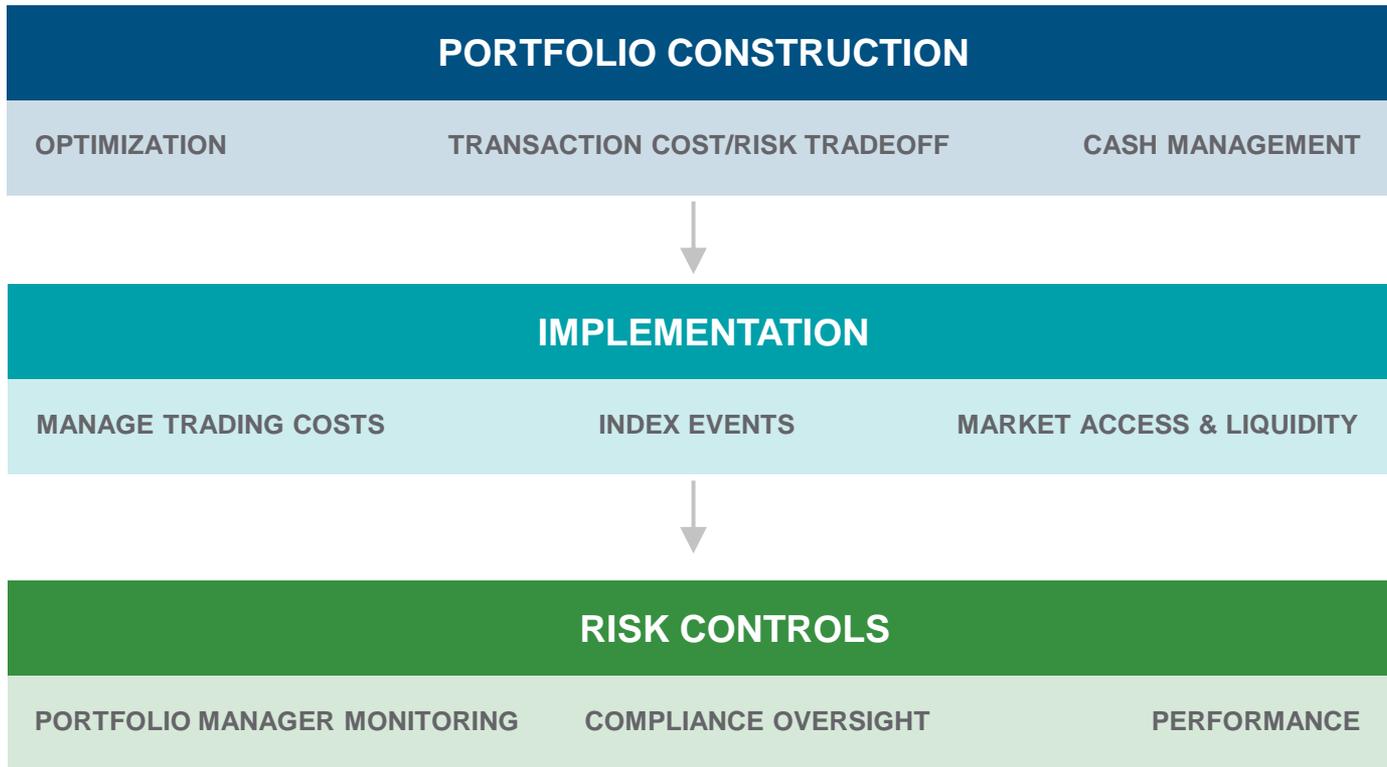
# Integrated Global Technology Platform

*Integrated industry-leading global platform backed by significant scale and infrastructure*



# Liquidity Driven Approach to Portfolio Construction

*Our investment philosophy is grounded in the belief that to efficiently replicate benchmark characteristics, it is vital to consider liquidity, transaction costs, and risk throughout the investment process.*



Please note that this information reflects current processes and that all steps of the analysis may not be taken for each investment.

# Multi-Dimensional Risk Oversight

*Continuous process examining portfolio risk, performance attribution and compliance.*

## Daily Reviews

### Portfolio Management Team

- Observe projected tracking error
- Evaluate positioning, risks and costs
- Monitor changes in index constituents and characteristics
- System validation of holdings versus guidelines, in real time
- Conduct pre-trade compliance

### Compliance Team

- OMS Systems examine holdings vs. guidelines
- Conduct post-trade compliance

## Ongoing Reviews

### Investment Governance Committee (Quarterly)

- Consists of senior investment and risk professionals across firm
- Review performance results and peer group
- Review investment strategy decisions and governance

### Asset Management Risk Committee (Monthly)

- Oversight and monitoring of investment, operational and regulatory risks
- Key members include Chief Risk Officer, Chief Compliance Officer and Chief Investment Officer

There is no guarantee that tracking error targets can be achieved. Tracking error measures the difference between the investment performance of the strategy or fund and that of the Index.

# Global, 24/6 Equity Trading Platform

*Leading market participant with global reach in Equities, Currencies, and Futures across Developed, Emerging, and Frontier markets.*



## Structure

- Global trading team with 24/6 pass the book infrastructure between dedicated dealing teams in Chicago, London, and Hong Kong
- Straight through electronic order processing from portfolio management origination to trade allocation and settlement



## Trading Strengths

- Northern Trust is a sophisticated market participant able to efficiently navigate all markets
- Competitive explicit trading costs in all markets.
- Executes with understanding and optimal blend of opportunity cost and market impact

# Portfolio Review

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Performance as of March 31, 2022

# CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## GROSS AND NET GROSS PERFORMANCE – AS OF APRIL 30, 2022

Northern Trust Asset Management

### CITY OF OAKLAND POLICE AND FIRE RETIREMENT BOARD



PERFORMANCE as of April 30, 2022

						ANNUALIZED			
		One Month	Quarter	YTD	1-Year	3-Year	5-Year	10-Year	Since Inception
		7/1/2013							
<b>City of Oakland Police &amp; Fire Retirement System</b>	<b>Gross of Fees</b>	<b>-8.91</b>	<b>-8.42</b>	<b>-13.58</b>	<b>-2.09</b>	<b>13.56</b>	<b>13.45</b>		<b>13.33</b>
2698026	Net of Fees	-8.91	-8.42	-13.59	-2.11	13.54	13.43		13.30
	Russell 1000	-8.91	-8.42	-13.59	-2.10	13.57	13.44		13.29

Returns for periods greater than one year are annualized. Gross performance returns shown do not reflect the deduction of investment management/advisory fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs and other expenses. Performance results will be reduced by the fees incurred in the management of the account. Net performance returns are reduced by investment management fees and other expenses relating to the management of the account. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Past performance is not indicative of future results. Investment management/advisory fees are described in Northern Trust Investments, Inc. Form ADV Part 2A.

# CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## PERFORMANCE & MARKET VALUE SUMMARY OF HOLDING – AS OF APRIL 30, 2022

	Inception Date	As of 04/30/22 Market Value	PORTFOLIO PERFORMANCE THROUGH 04/30/22 (%)							
			1 Month	3 Month	Year to Date	1 Year	3 Year	5 Year	10 Year	Since Inception
<b>CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM-(2698026)</b>										
Northern Trust Collective Russell 1000 Index Fund - Lending	07/01/13	USD \$83,008,915.20								
Total Fund Gross of Fees			-8.91	-8.42	-13.58	-2.09	13.56	13.45	NA	13.33
Russell 1000 Index			-8.91	-8.42	-13.59	-2.10	13.57	13.44	NA	13.29
Total Market Value of Legal Agreement		USD \$83,008,915.20								
Total Market Value of Assets		USD \$83,008,915.20								

Annualized gross returns for periods greater than one year. Client's return will be reduced by the advisory fees. Gross performance returns shown do not reflect the deduction of investment management/advisory fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs and other expenses. Performance results will be reduced by the fees incurred in the management of the account. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Past performance is not indicative of future results.

To illustrate the effect of the compounding fees, assuming an annual gross return of 8% and an annual investment management fee of 0.80%, a \$10,000,000 account would grow in value over five years to \$14,693,281 before fees and \$14,157,088 after deduction of fees. The fee illustration represents the deduction of the highest applicable management fee. Investment management/advisory fees are described in Northern Trust Investments, Inc. Form ADV Part 2A. For one-on-one use only.

# RUSSELL 1000 INDEX - CHARACTERISTICS AS OF APRIL 30, 2022

## CHARACTERISTICS

	Fund	Benchmark
Average Weighted Market Cap (\$M)	\$497,909.67	\$497,471.39
Trailing P/E Ratio	20.13	20.12
Forward 12-Month P/E Ratio	18.08	18.07
P/B Ratio	4.04	4.04

	Fund	Benchmark
Dividend Yield	1.44%	1.44%
Return on Equity	25.92%	25.91%
Number of Equity Holdings	1025	1023
5-Year Beta	NA	1.00

## TOP TEN HOLDINGS BY ACCOUNT (%)

	Fund
Apple Inc.	6.33
Microsoft Corporation	5.44
Amazon.com, Inc.	2.81
Tesla Inc	1.89
Alphabet Inc. Class A	1.79
Alphabet Inc. Class C	1.66
Berkshire Hathaway Inc. Class B	1.54
UnitedHealth Group Incorporated	1.24
Johnson & Johnson	1.24
Meta Platforms Inc. Class A	1.20

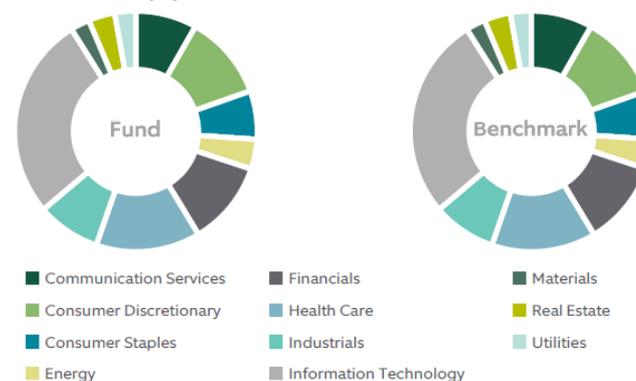
## TOP TEN HOLDINGS BY BENCHMARK (%)

	Benchmark
Apple Inc.	6.32
Microsoft Corporation	5.44
Amazon.com, Inc.	2.80
Tesla Inc	1.88
Alphabet Inc. Class A	1.78
Alphabet Inc. Class C	1.65
Berkshire Hathaway Inc. Class B	1.54
UnitedHealth Group Incorporated	1.24
Johnson & Johnson	1.24
Meta Platforms Inc. Class A	1.20

## SECTOR EXPOSURE (%)

	Fund	Benchmark	Overweight/ Underweight
Information Technology	27.33	27.31	0.02
Consumer Discretionary	11.41	11.40	0.01
Communication Services	8.17	8.17	0.00
Consumer Staples	6.50	6.50	0.00
Industrials	8.47	8.48	-0.01
Utilities	2.81	2.82	-0.01
Materials	2.59	2.60	-0.01
Energy	4.03	4.03	0.00
Real Estate	3.50	3.50	0.00
Health Care	13.89	13.90	-0.01
Financials	11.30	11.31	-0.01

## SECTOR EXPOSURE (%)



\*\*Please note Beta is calculated using the prior month's portfolio and benchmark returns.

Information is provided to illustrate typical sectors and securities in which the portfolio may invest and to reflect representative portfolio characteristics. It should not be considered investment advice or a recommendation to buy or sell any security. There is no guarantee that securities remain in the portfolio or that securities sold have not been repurchased. It should not be assumed that any investments were profitable or will prove to be profitable. Past performance does not guarantee future results.

# Appendix

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# IMPORTANT INFORMATION

## ***2021 One of the World's Most Admired Companies***

Fortune's survey partners at Korn Ferry Group start with approximately 1,500 companies comprised of the Fortune 1,000 (the 1,000 largest U.S. companies ranked by revenue) and non-U.S. companies in Fortune's Global 500 database with revenues of \$10 billion or more. Korn Ferry then selects the companies with the highest-revenues in 52 industries, surveying a total of 670 companies from 30 countries in 2021. To create the 52 industry lists, Korn Ferry polled executives, directors and analysts to rate companies in their own industry on nine criteria, from investment value to social responsibility. A company's score must rank in the top half of its industry survey to be listed. <http://fortune.com/worlds-most-admired-companies>

## ***Barron's 100 Most Sustainable Companies***

Additional information regarding the ranking methodology can be found at: <https://www.barrons.com/articles/barrons-100-most-sustainable-companies-for-2021-51613172493?refsec=top-sustainable-companies>

*(click on 'See our methodology and credits')*

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Investing involves risk – no investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

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All securities investing and trading activities risk the loss of capital. Each portfolio is subject to substantial risks including market risks, strategy risks, adviser risk and risks with respect to its investment in other structures. There can be no assurance that any portfolio investment objectives will be achieved, or that any investment will achieve profits or avoid incurring substantial losses. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Risk controls and models do not promise any level of performance or guarantee against loss of principal. Any discussion of risk management is intended to describe Northern Trust's efforts to monitor and manage risk but does not imply low risk.

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If presented, hypothetical portfolio information provided does not represent results of an actual investment portfolio but reflects representative historical performance of the strategies, funds or accounts listed herein, which were selected with the benefit of hindsight. Hypothetical performance results do not reflect actual trading. No representation is being made that any portfolio will achieve a performance record similar to that shown. A hypothetical investment does not necessarily take into account the fees, risks, economic or market factors/conditions an investor might experience in actual trading. Hypothetical results may have under- or over- compensation for the impact, if any, of certain market factors such as lack of liquidity, economic or market factors/conditions. The investment returns of other clients may differ materially from the portfolio portrayed. There are numerous other factors related to the markets in general or to the implementation of any specific program that cannot be fully accounted for in the preparation of hypothetical performance results. The information is confidential and may not be duplicated in any form or disseminated without the prior consent of Northern Trust.

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Northern Trust Asset Management is composed of Northern Trust Investments, Inc., Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K., NT Global Advisors, Inc., 50 South Capital Advisors, LLC, Belvedere Advisors LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company.

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NORTHERN  
TRUST



## News Release

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Doug\_Holt@ntrs.com

<http://www.northerntrust.com>

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# Northern Trust Announces Asset Management Leadership Change

**CHICAGO, May 3, 2022** — Northern Trust (Nasdaq: NTRS) announced today that Shundrawn Thomas, President of Northern Trust Asset Management, will be leaving the company on June 1, 2022, in order to pursue an outside entrepreneurial opportunity.

“On behalf of Northern Trust, I would like to thank Shundrawn for his exceptional contributions throughout his 18 years,” Northern Trust Corporation Chairman and Chief Executive Officer Michael O’Grady said. “Shundrawn led with clarity, empathy and purpose and served as an example to us all. He not only embodied our enduring principles of service, expertise and integrity; he also courageously challenged and guided us to evolve how we live our principles in more inclusive and equitable ways.”

Thomas joined Northern Trust in 2004 and served in several executive roles over his tenure, including as a member of the Asset Management executive team since 2008 and as a member of the Management Group since 2017.

Thomas said he made the decision to leave Northern Trust in order to co-found a new, diverse-owned and led business that will provide debt and equity solutions to privately held U.S. companies. A key focus will be identifying untapped market opportunities and partnering with women and ethnically diverse business operators.

“Shundrawn has been a tireless champion for diversity, equity, and inclusion – both at Northern Trust and in the asset management industry – and is a recognized leader in sustainable investing,” O’Grady said. “We support Shundrawn’s commitment to driving social impact, and we wish him nothing but continued success.”

### About Northern Trust

Northern Trust Corporation (Nasdaq: NTRS) is a leading provider of wealth management, asset servicing, asset management and banking to corporations, institutions, affluent families and individuals. Founded in Chicago in 1889, Northern Trust has a global presence with offices in 23 U.S. states and Washington, D.C., and across 23 locations in Canada, Europe, the Middle East and the Asia-Pacific region. As of March 31, 2022, Northern Trust had assets under custody/administration of US\$15.5 trillion, and assets under management of US\$1.5 trillion. For more than 130 years, Northern Trust has earned distinction as an industry leader for exceptional service, financial expertise, integrity and innovation. Visit us on [northerntrust.com](http://northerntrust.com). Follow us on [@NorthernTrust](https://twitter.com/NorthernTrust) or Northern Trust Corporation on [LinkedIn](https://www.linkedin.com/company/northern-trust).



Northern Trust Corporation, Head Office: 50 South La Salle Street, Chicago, Illinois 60603 U.S.A., incorporated with limited liability in the U.S. Global legal and regulatory information can be found at <https://www.northerntrust.com/terms-and-conditions>.

## MEMORANDUM

**TO:** Oakland Police and Fire Retirement System (OPFRS)  
**FROM:** Meketa Investment Group  
**DATE:** May 25, 2022  
**RE:** Northern Trust – Manager Update

### Manager: Brown Advisory

<b>Inception Date:</b>	June 2010	<b>OPFRS AUM (4/30/2022):</b>	\$84.1 million
<b>Strategy:</b>	Large Cap Core Equity Index	<b>Firm-wide AUM (3/31/2022):</b>	\$1.2 trillion
<b>Benchmark:</b>	Russell 1000 Index	<b>Strategy AUM (3/31/2022):</b>	\$47.6 billion

### Summary & Recommendation

Northern Trust began managing OPFRS's large cap core portfolio in June 2010, which is now approximately \$84.1 million or about 20% of OPFRS's total allocation. Over this period, Northern Trust has performed within expectations for a passive manager and has experienced no major organizational changes. *Due to Northern Trust's consistent performance and stable organizational operations, Meketa does not have any major concerns with Northern Trust and does not recommend any action be taken at this time.*

### Discussion

Since inception in 2010, Northern Trust has performed within guidelines expected for a passive manager. It has replicated the risk-return profile of the Russell 1000 Index; over 3- and 5-year trailing periods, the strategy ranks in the upper half in the universe of large cap core equity managers.

### OPFRS Portfolio Annualized Returns (as of 4/30/2022)

Manager	Mkt Value (\$000)	Asset Class	YTD	1 YR	3 YR	5 YR	Since Inception	Inception Date
Northern Trust Russell 1000 (Gross)	84,108	Large Cap Core	-13.6	-2.1	13.5	13.4	14.0	6/2010
<i>Russell 1000</i>	---	---	-13.6	-2.1	13.6	13.4	14.0	---
Excess Return	---	---	0	0	-0.1	0	0	---
<i>Rank (as of 3/31/2022)*</i>	---	---	55	58	35	40	43	---
Northern Trust Russell 1000 (Net)	84,108	Large Cap Core	-13.6	-2.1	13.5	13.4	13.9	6/2010
<i>Russell 1000</i>	---	---	-13.6	-2.1	13.6	13.4	14.0	---

\* Peer group ranking is not yet available for 4/30/2022..

### Product and Organization Review Summary

Brown Advisory	Areas of Potential Impact				
	Level of Concern	Investment process (Client Portfolio)	Investment Team	Performance Track Record	Team/ Firm Culture
<b>Product</b>					
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				
<b>Organization</b>					
Ownership changes	None				
Key people changes	None				
Firm wide client gain/losses	None				
Recommended Action	None - X		Watch Status	Termination	

A review of Northern Trust and the Russell 1000 Equity Index strategy revealed no significant organizational issues or changes. Brent Reeder, who is considered the primary manager for the Russell 1000 core product, has been with the fund since 1998.

### Investment Philosophy & Process, per manager

The Northern Trust Russell 1000 Index fund seeks investment results, before expenses, approximating the aggregate price and dividend performance of the securities included in the Russell 1000 Index. The fund invests at least 80% of its net assets in equity securities in the index and uses proprietary quantitative techniques to minimize trading costs.

Northern Trust's investment philosophy is grounded in the belief that to efficiently replicate benchmark characteristics, it is vital to consider liquidity, transaction costs, and risk throughout the investment process.

Portfolio managers replicate the underlying benchmark's risk and return characteristics while maximizing value for investors through a thoughtful approach to portfolio construction and implementation around index events and client flows, as well as a multi-dimensional risk management framework that incorporates constraints at the security, sector, country and risk factor level.



## Disclosure

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

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

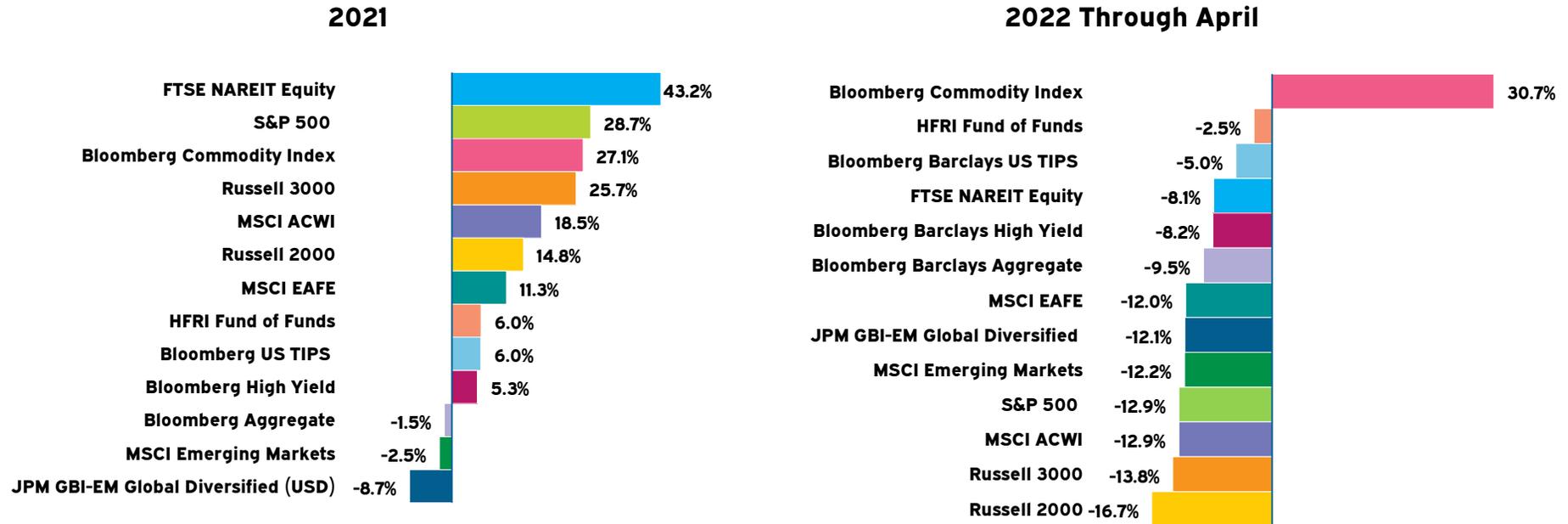
# Economic and Market Update

April 2022 Report

### Commentary

- Market volatility rose sharply in April due to continued inflation pressures, driven by supply chain issues, global stimulus, and the war in Ukraine.
- Except for commodities, all asset classes declined in April.
  - Equities fell across the board with the US experiencing the steepest declines.
  - Value-oriented equities outpaced growth in the US, influenced by higher interest rates and notable weakness in some high-profile technology companies.
  - The global bond selloff continued, as rates rose further on inflation fears and policy expectations.
  - Rates rose across the US yield curve, with the curve steepening after a brief early month inversion.
  - Inflation remains high globally given lingering supply issues from the pandemic and the conflict in Ukraine.
  - The pace of policy tightening will likely increase due to persistent inflation.
- The conflict in Ukraine, lingering COVID-19 issues, persistent inflation, and strict lockdowns in China will all have considerable economic and financial consequences for the global economy going forward.

### Index Returns<sup>1</sup>



→ Outside of emerging markets and the broad US investment grade bond market (Bloomberg Aggregate), most asset classes rose in 2021.

→ In April, most major asset classes extended their losses from the first quarter, with US stocks and bonds having one of their worst starts to a year on record. Commodities continue to be the one exception to the trend, adding 4.1% in April and bringing the year-to-date return to over 30%.

<sup>1</sup> Source: Bloomberg and FactSet. Data is as of April 30, 2022.

### Domestic Equity Returns<sup>1</sup>

Domestic Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-8.7	-4.6	-12.9	-0.5	13.8	13.7	13.6
Russell 3000	-9.0	-5.3	-13.8	-3.9	13.1	13.0	13.2
Russell 1000	-8.9	-5.1	-13.6	-2.8	13.6	13.4	13.5
Russell 1000 Growth	-12.1	-9.0	-20.0	-6.0	16.7	17.3	15.5
Russell 1000 Value	-5.6	-0.7	-6.3	0.5	9.6	9.1	11.1
Russell MidCap	-7.7	-5.7	-12.9	-7.1	10.5	10.7	11.9
Russell MidCap Growth	-11.3	-12.6	-22.4	-17.7	8.7	12.1	12.1
Russell MidCap Value	-5.9	-1.8	-7.7	-0.9	10.2	8.6	11.3
Russell 2000	-9.9	-7.5	-16.7	-17.9	6.7	7.2	9.9
Russell 2000 Growth	-12.3	-12.6	-23.3	-27.4	4.1	7.1	9.8
Russell 2000 Value	-7.8	-2.4	-10.0	-7.7	8.4	6.7	9.7

#### US Equities: Russell 3000 Index declined 9%, and value indices outperformed growth in April.

- The steep declines in US stocks were driven by an overall weakening of economic data and persistent inflation, leading to expectations for the Federal Reserve to increase rates much faster than previously expected.
- Value stocks declined far less than growth stocks for the month, maintaining the recent trend as rising rates and inflation continued to weigh on growth companies.
- Large company stocks outpaced small company stocks for the month, extending year-to-date relative outperformance.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022.

### Foreign Equity Returns<sup>1</sup>

Foreign Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-6.3	-5.4	-11.4	-11.3	4.3	4.9	5.0
MSCI EAFE	-6.5	-5.9	-12.0	-9.1	4.4	4.8	5.7
MSCI EAFE (Local Currency)	-1.4	-3.7	-5.1	2.9	6.5	6.0	8.7
MSCI EAFE Small Cap	-6.9	-8.5	-14.8	-14.4	4.9	5.0	7.6
MSCI Emerging Markets	-5.6	-7.0	-12.2	-19.3	2.2	4.3	3.0
MSCI Emerging Markets (Local Currency)	-3.5	-6.1	-9.4	-15.3	4.1	6.2	6.0
MSCI China	-4.1	-14.2	-17.7	-37.1	-5.0	2.1	3.9

#### International Developed Market Equities: MSCI EAFE -6.5% in April.

- Non-US stocks fell less than US stocks in April, leading to their smaller year-to-date declines.
- The war in Ukraine, high inflation, continued strength in the US dollar, and slowing growth all weighed on stocks in Europe. A particularly weak currency and diverging monetary policy impacted Japan's results.
- Like the US, value stocks outperformed growth stocks by a wide margin across developed markets, but not in emerging markets where value and growth declined equally in the month of April.

#### Emerging Markets: MSCI EM -5.6% in April.

- Emerging market stocks suffered negative returns in April but outperformed developed market stocks.
- China's strict COVID-19 policies, increased hawkishness from the US Fed, the war in Ukraine, and US dollar strength all contributed to declines.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022.

### Fixed Income Returns<sup>1</sup>

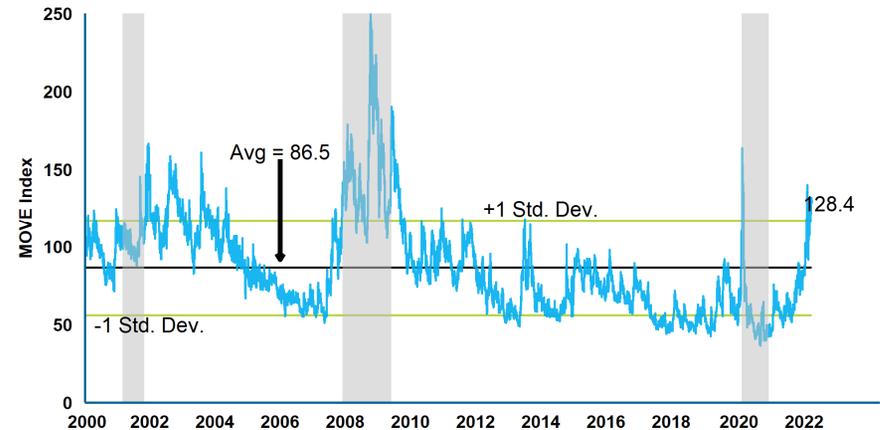
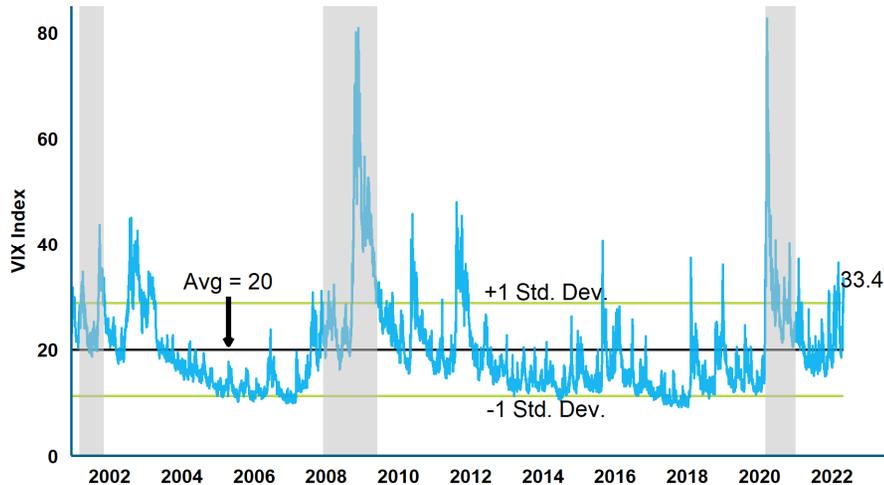
Fixed Income	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-3.7	-6.1	-9.6	-8.5	0.6	1.4	2.1	3.9	6.5
Bloomberg Aggregate	-3.8	-5.9	-9.5	-8.4	0.4	1.2	1.7	3.5	6.7
Bloomberg US TIPS	-2.0	-3.0	-5.0	0.7	5.4	3.9	2.3	3.1	7.5
Bloomberg High Yield	-3.6	-4.8	-8.2	-5.2	2.8	3.7	5.3	7.0	4.8
JPM GBI-EM Global Diversified (USD)	-6.0	-6.5	-12.1	-15.9	-3.1	-1.3	-1.4	6.9	4.9

#### Fixed Income: Bloomberg Universal -3.7% in April.

- Continued concerns about policy tightening and inflation led to rates rising further in April resulting in the broad US investment grade bond market (Bloomberg Aggregate) having its worst start to a year on record. The nominal 10-year Treasury yield approached 3% by month-end and real yields moved toward becoming positive (this eventually happened after month-end).
- US credit spreads continued to widen, particularly in high yield, as risk assets fell.
- Emerging market debt experienced the worst declines for the month and year-to date periods with the conflict in Ukraine, rising rates in the US, and strict lockdowns in China all contributing.

<sup>1</sup> Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of April 30, 2022.

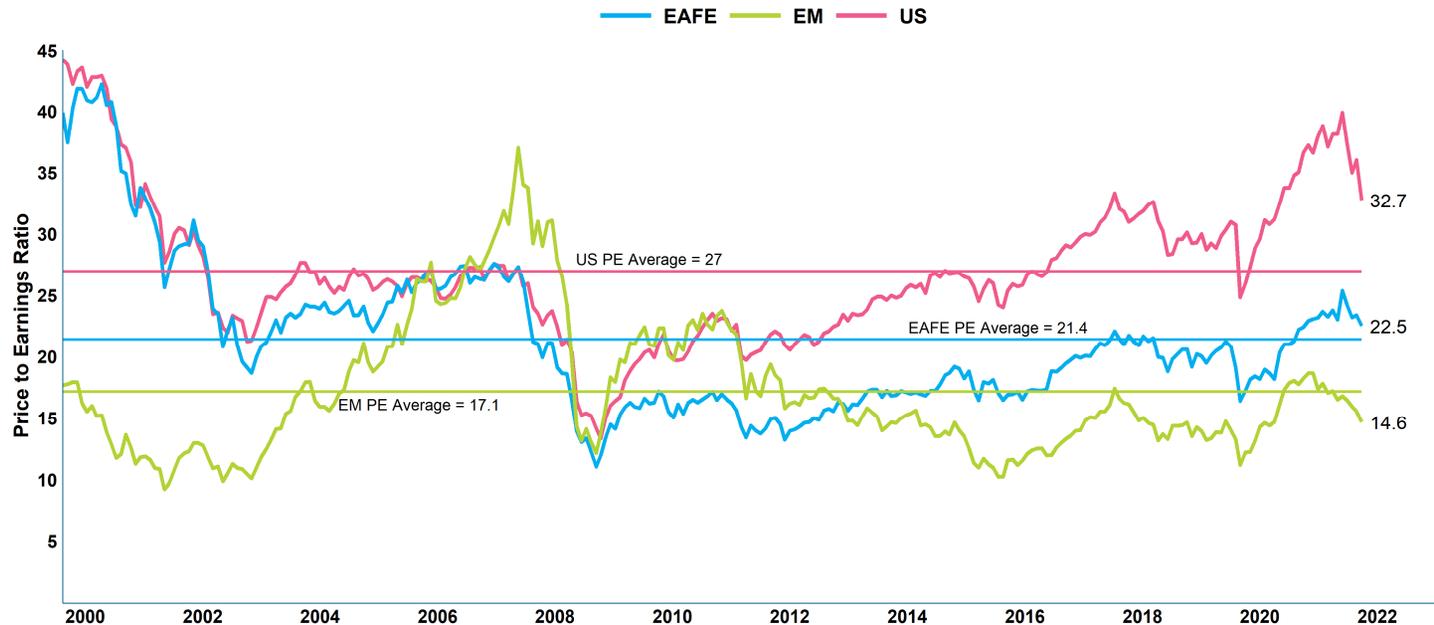
### Equity and Fixed Income Volatility<sup>1</sup>



- Volatility in both equities (VIX) and fixed income (MOVE) surged in April remaining well above long run averages.
- Concerns over high inflation and the related faster pace of expected policy tightening has led to volatility across markets remaining elevated.

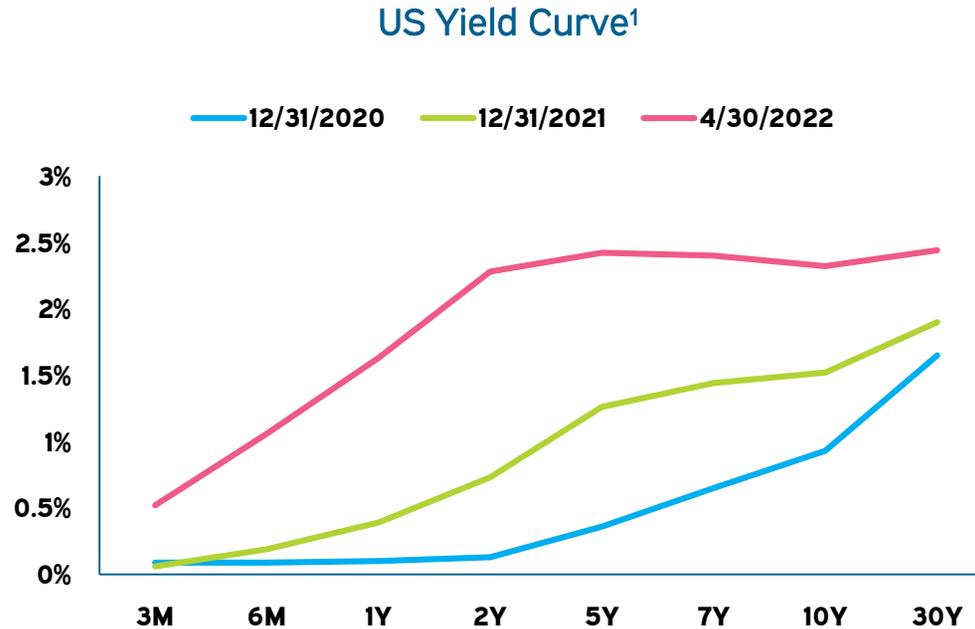
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of April 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the present month-end respectively.

**Equity Cyclically Adjusted P/E Ratios<sup>1</sup>**



- After a pause in March, US stocks resumed their sell-off in April. Despite the recent sell-off, valuations remain well above long-term averages (near +2 standard deviations).
- International developed market valuations remain below the US, with those for emerging markets under the long-term average.

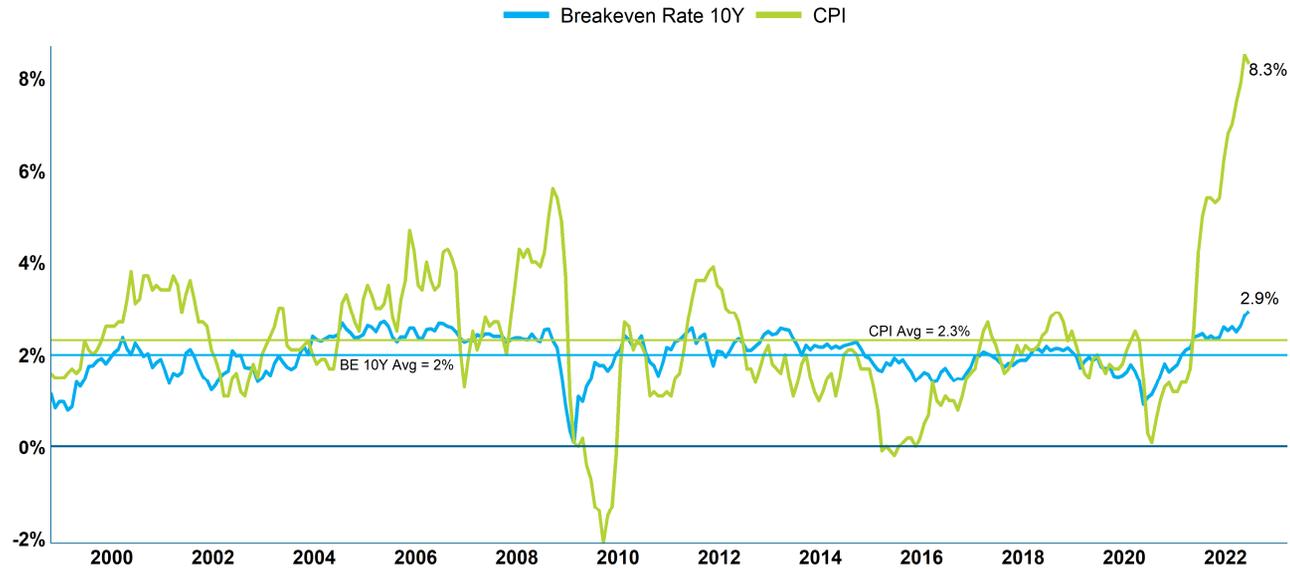
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of April 30, 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to month-end respectively.



- In April, the trend of higher rates across maturities persisted as markets continue to reprice inflation, rate expectations, and an accelerated pace of the Federal Reserve reducing its balance sheet.
- After a brief inversion at the start of the month, which historically has often signaled building recessionary pressures, the curve steepened, with the spread between two-year and ten-year Treasuries finishing April at 22.7 basis points.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022.

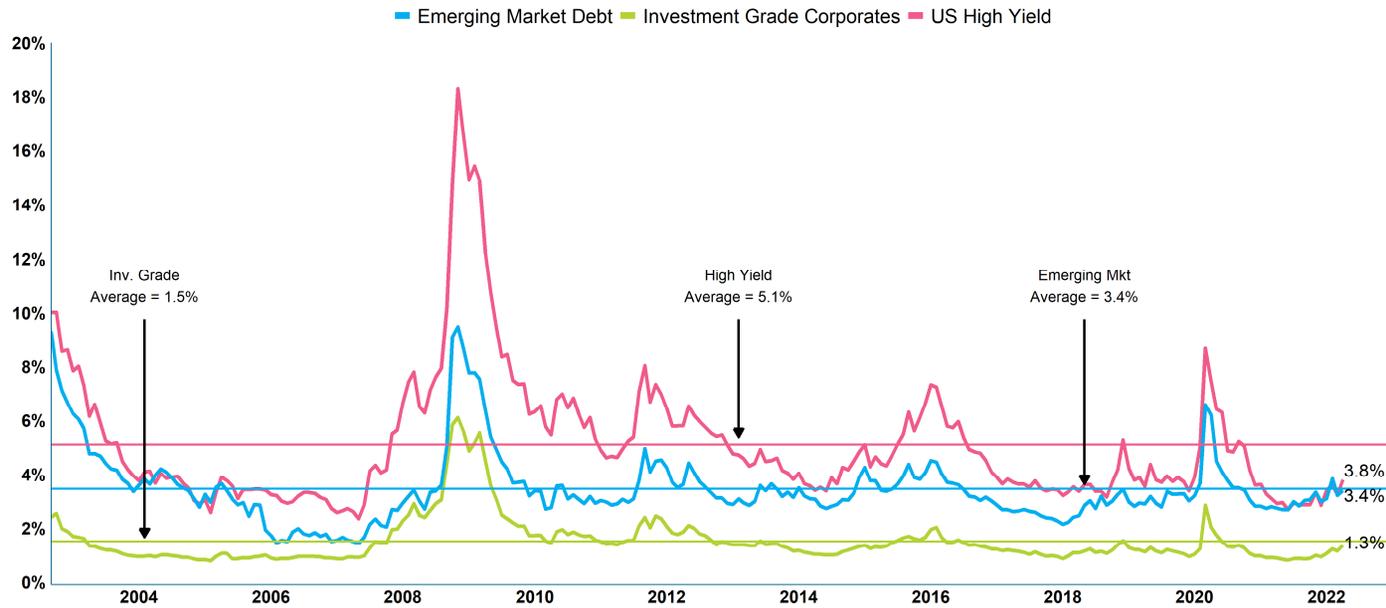
**Ten-Year Breakeven Inflation and CPI<sup>1</sup>**



- Inflation expectations (breakevens) increased slightly in April making a new peak above 3% during the month. It is worth noting that breakevens declined significantly after month-end, on expectations inflation could be peaking.
- Trailing twelve-month CPI declined slightly in April (8.3% versus 8.5%) remaining well above the long-term average of 2.3%.
- Rising prices for energy and food, and for new and used cars, remained key drivers of higher inflation.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022. 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 Bonds<sup>1</sup>**



- Credit spreads (the spread above a comparable maturity Treasury) increased further in April in the risk-off environment extending losses for the year, particularly for riskier bonds.
- In the US, spreads for high yield increased more than investment grade. Emerging market spreads also increased during the month but finished lower than US high yield.
- Despite the recent increase, US high yield spreads remain well below the long-term average (3.8% versus 5.1%).

<sup>1</sup> Sources: Bloomberg. Data is as of April 30, 2022. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the present month-end respectively.

### Global Economic Outlook

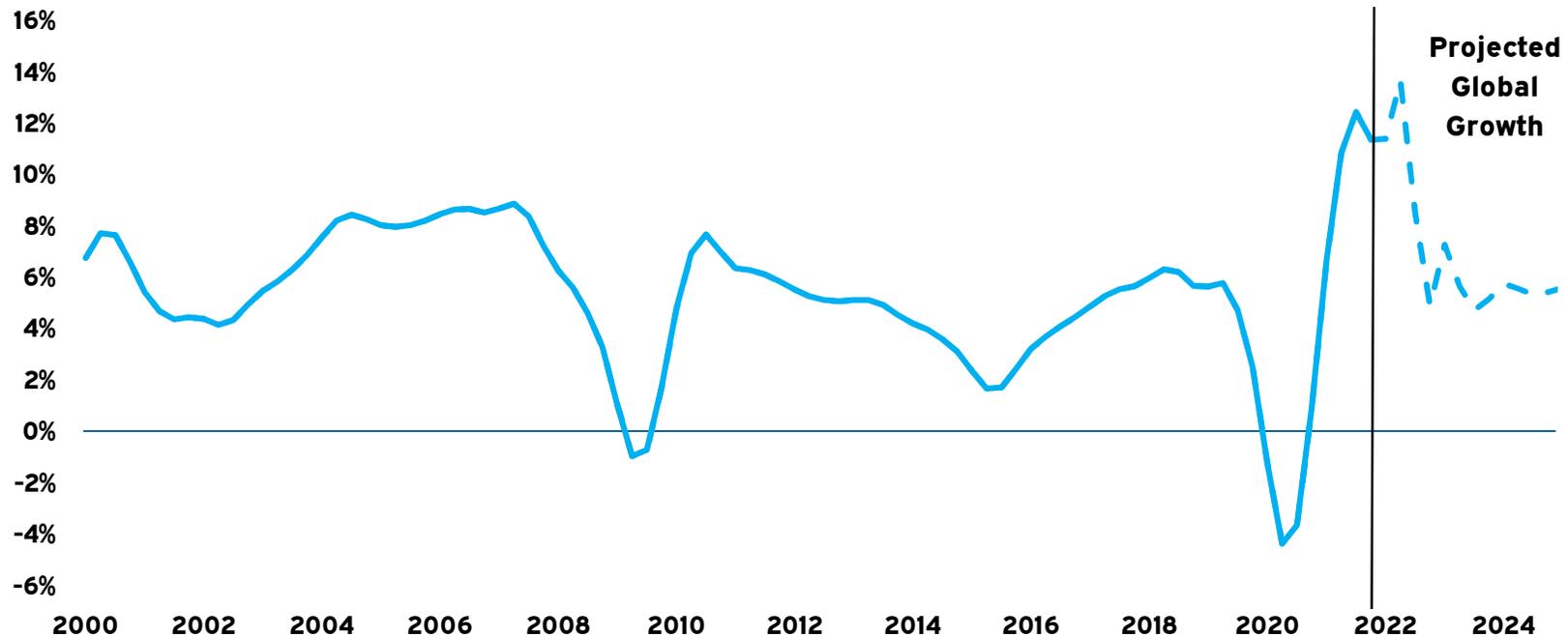
The IMF significantly lowered global growth forecasts in their latest projections, driven by the economic impacts of the war in Ukraine.

- The IMF forecasts final global GDP to come in at 6.1% in 2021 and 3.6% in 2022 (0.8% below the prior 2022 estimate), both still above the past ten-year average of 3.0%.
- In advanced economies, GDP is projected to increase 3.3% in 2022 and 2.4% in 2023. The US has limited economic ties with Russia but saw another downgrade in the 2022 growth forecast (3.7% versus 4.0%) largely due to policy tightening happening faster than previously expected. The euro area saw a significant downgrade in expected growth (2.8% versus 3.9%) in 2022 as rising energy prices particularly weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 2.4% this year.
- Growth projections for emerging markets are higher than developed markets, at 3.8% in 2022 and 4.4% in 2023. China's growth was downgraded (4.4% versus 4.8%) for 2022 given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (7.4% versus 3.8%) due to the war in Ukraine.

	Real GDP (%) <sup>1</sup>			Inflation (%) <sup>1</sup>		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.6	3.6	3.0	7.4	4.8	3.5
Advanced Economies	3.3	2.4	1.6	5.7	2.5	1.5
US	3.7	2.3	2.1	7.7	2.9	1.9
Euro Area	2.8	2.3	0.9	5.3	2.3	1.2
Japan	2.4	2.3	0.5	1.0	0.8	0.5
Emerging Economies	3.8	4.4	4.2	8.7	6.5	5.1
China	4.4	5.1	6.7	2.1	1.8	2.1

<sup>1</sup> Source: IMF World Economic Outlook. Real GDP forecasts from April WEO Update. Inflation forecasts are as of the April 2022 Update. "Actual 10 Year Average" represents data from 2012 to 2021.

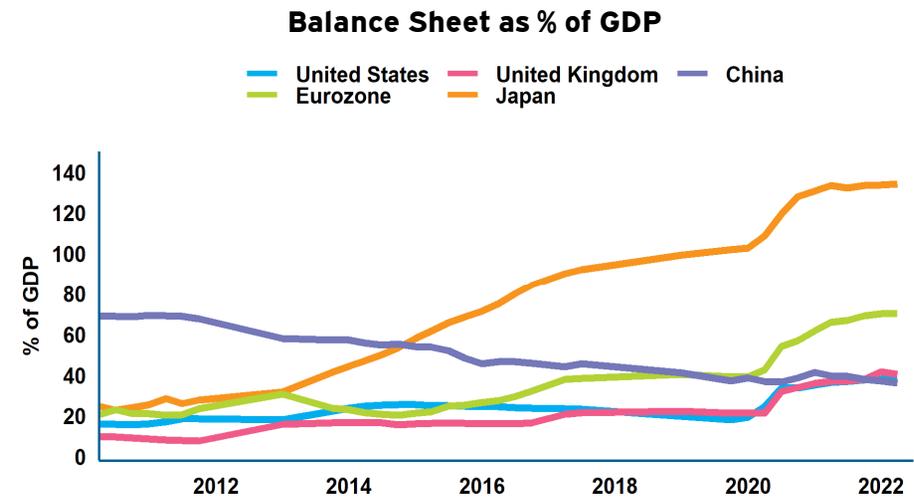
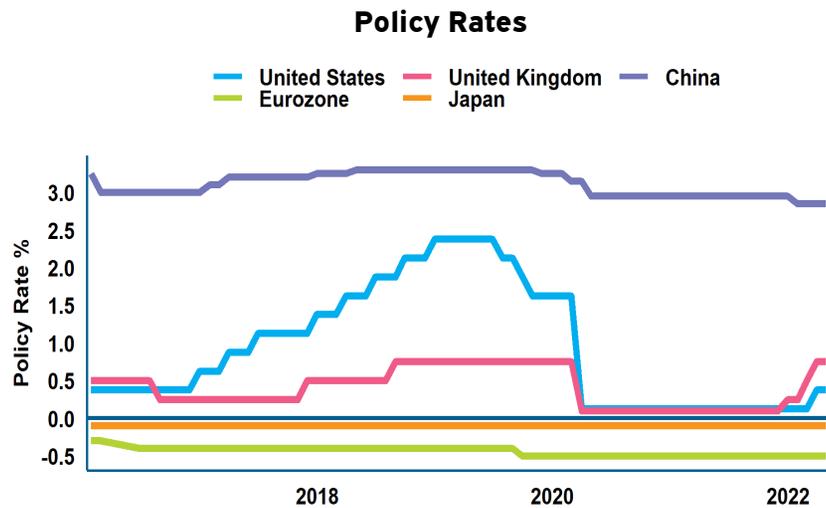
### Global Nominal Gross Domestic Product (GDP) Growth<sup>1</sup>



- Global economies are expected to slow in 2022 compared to 2021 but are forecasted to have another year of largely above-trend growth as economies continue to emerge from the pandemic.
- Looking forward, the track of the conflict between Russia and Ukraine, continued supply chain issues, ongoing inflationary pressures, tighter monetary policy, and lingering pandemic problems all remain key with the risk for continued downgrades in growth forecasts.

<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated April 2022.

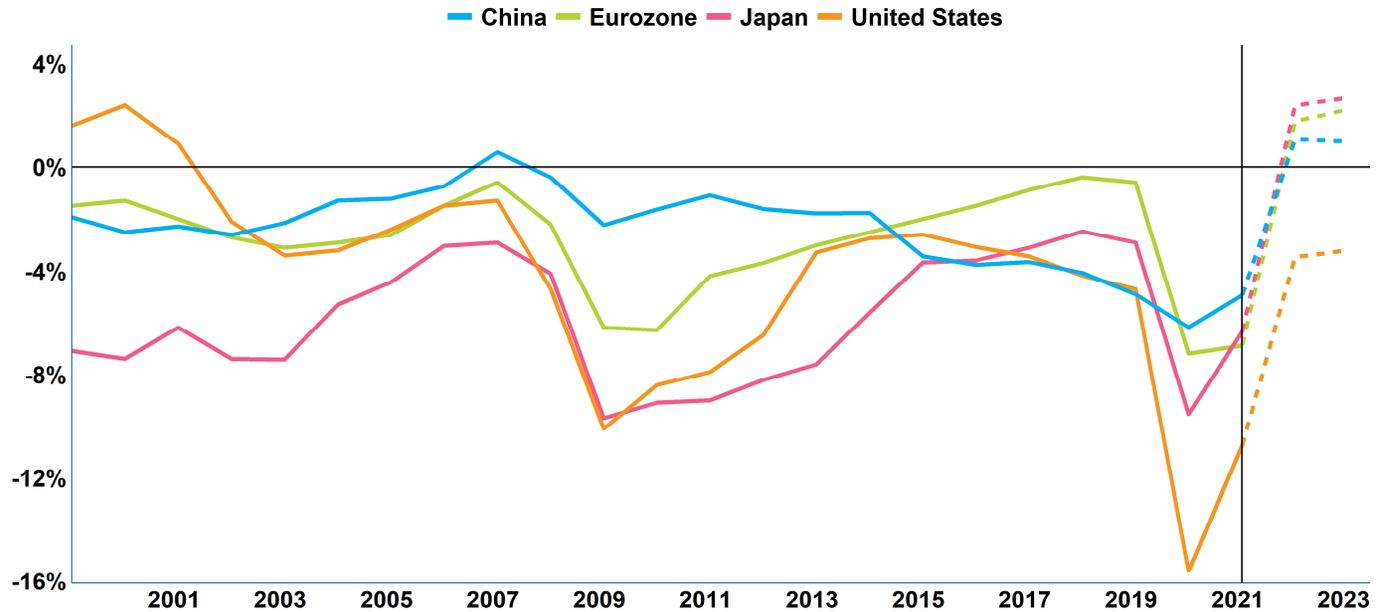
### Central Bank Response<sup>1</sup>



- After global central banks took extraordinary action to support economies during the pandemic including policy rate cuts and emergency stimulus through quantitative easing (QE), many are considering reducing support in the face of high inflation.
- The pace of withdrawing support will likely vary across central banks with the US expected to take a more aggressive approach. The risk remains for a policy error, particularly overtightening, as the war in Ukraine and a tough COVID-19 policy in China could suppress global growth.
- The one notable outlier is China, where the central bank recently lowered rates and reserve requirements in response to slowing growth.

<sup>1</sup> Source: Bloomberg. Policy rate data is as of April 30, 2022. 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, 2022.

**Budget Surplus / Deficit as a Percentage of GDP<sup>1</sup>**

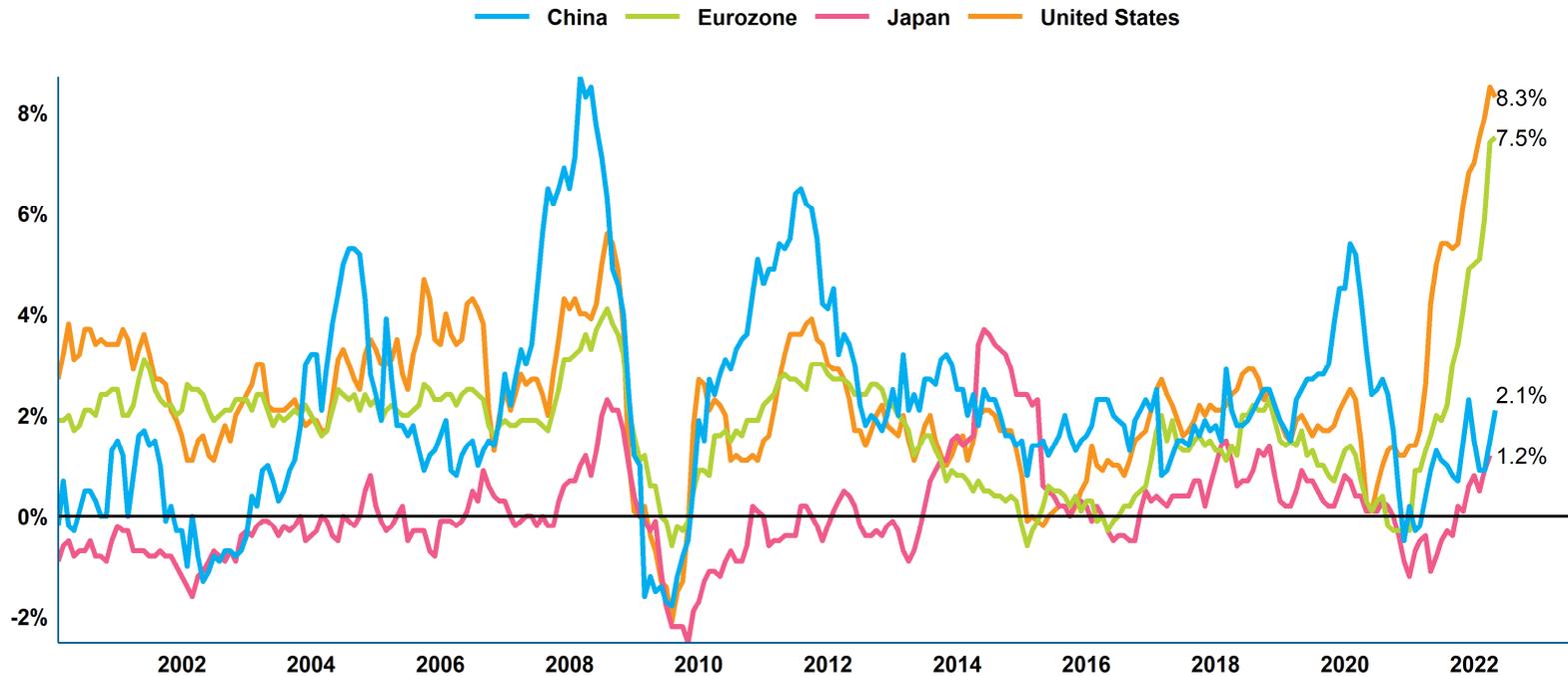


→ Budget deficits as a percentage of GDP drastically increased for major world economies, particularly the US, due to massive fiscal support and the severe economic contraction's effect on tax revenue in 2020 and 2021.

→ As fiscal stimulus programs end, and economic recoveries continue, deficits should improve in the coming years.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022. Projections via IMF Forecasts from April 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

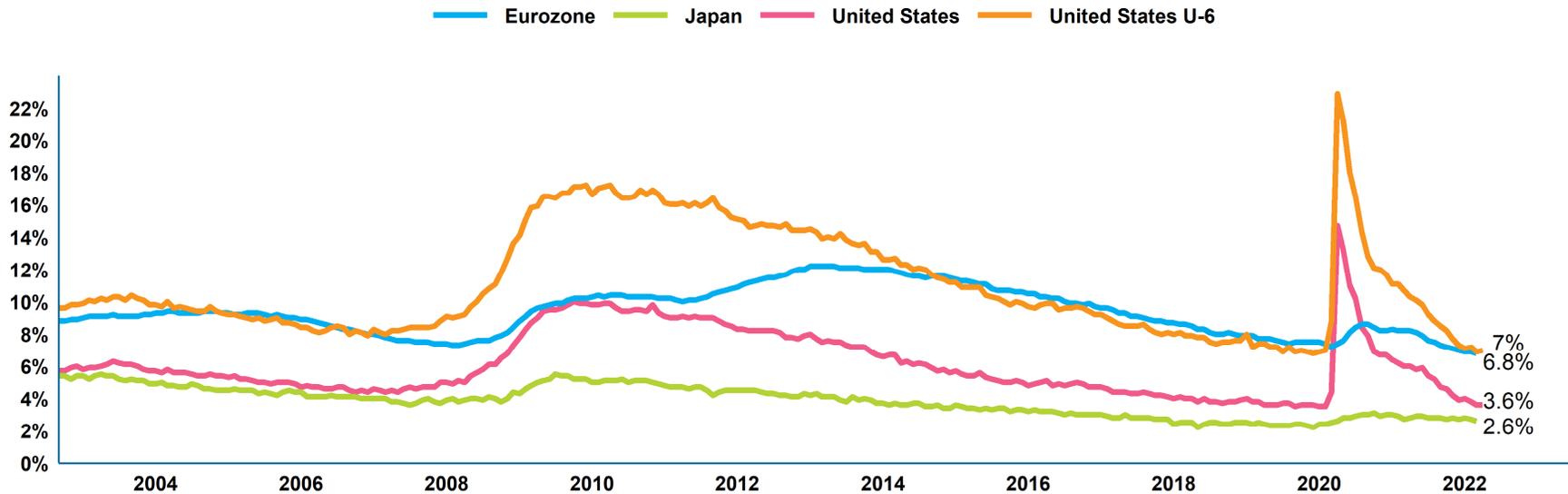
**Inflation (CPI Trailing Twelve Months)<sup>1</sup>**



- Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it remains at levels not seen in decades.
- Supply issues related to the pandemic and higher prices in many commodities driven by the Russia and Ukraine conflict have been key drivers of inflation globally.

<sup>1</sup> Source: Bloomberg. Data is as of April 2022, except for Japan, where the most recent data available is as of March 31, 2022.

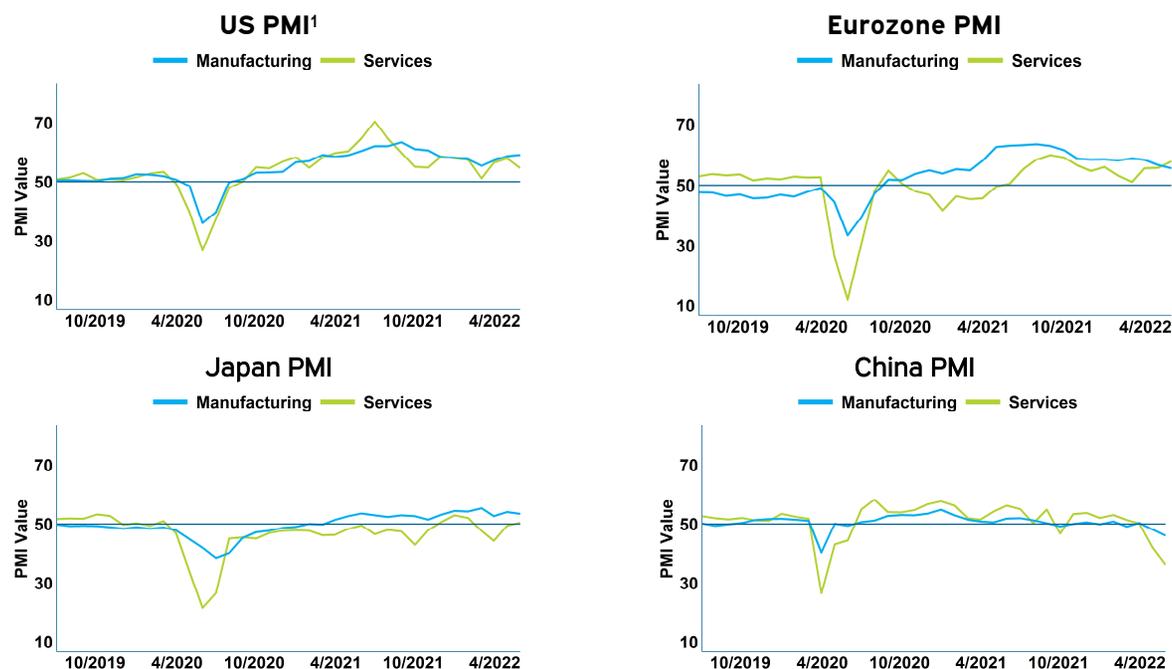
### Unemployment<sup>1</sup>



- As economies have largely reopened, helped by vaccines for the virus, improvements have been seen in the labor market.
- US unemployment, which experienced the steepest rise from the pandemic, has declined back to pre-pandemic levels. The broader measure (U-6) that includes discouraged and underemployed workers declined but is much higher at 7.0%.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of March 31, 2022.

### Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have experienced some pressures recently.
- Service sector PMIs have seen some improvements in the US and Europe lately as the effects of the Omicron variant wane, while Japan and China remain weaker due to a rise in COVID-19 cases, with China still in contraction due to their strict policies.
- In most countries, manufacturing PMIs are in expansion territory as pandemic-related production issues ease and orders increase. China is the one exception, though, with the manufacturing PMI falling below 50 due to increased COVID-19 restrictions.

<sup>1</sup> Source: Bloomberg. US Markit Services and Manufacturing PMI, Caixin Services and Manufacturing PMI, Eurozone Markit Services and Manufacturing PMI, Jibun Bank Services and Manufacturing PMI. Data is as of April 2022. Readings below 50 represent economic contractions.

US Dollar versus Broad Currencies<sup>1</sup>



- The US dollar continued its trend of strengthening against a broad basket of peers in April of 2022 with further increases after month-end.
- Safe-haven flows, relatively stronger growth, and higher rates have all been key drivers of the dollar’s on-going strength.
- The euro, yen, and yuan have all experienced significant declines versus the dollar, adding to inflation and slowing growth concerns.

<sup>1</sup> Source: Bloomberg. Data as of April 30, 2022.

## Summary

### Key Trends in 2022:

- The war in Ukraine has created significant uncertainty, with a wide range of potential outcomes. Volatility will likely remain high.
- Expect growth to slow globally in 2022 but remain above the long-term trend for the year. The pandemic's impact on economic activity and the war will be key.
- Inflationary pressures could linger, particularly if the Russian invasion of Ukraine intensifies or expands.
- The end of many fiscal programs is expected to put the burden of continued growth on consumers. Higher energy and food prices will depress consumer ability to spend in other areas.
- Monetary policy will likely tighten globally but will remain relatively accommodative. The risk of overtightening policy impacting growth remains.
- Valuations remain high in the US, but relatively low interest rates and strong margins could be supportive of equity markets.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but risks remain, including continued strength in the US dollar, higher inflation particularly weighing on Europe, and China maintaining its restrictive COVID-19 policies.

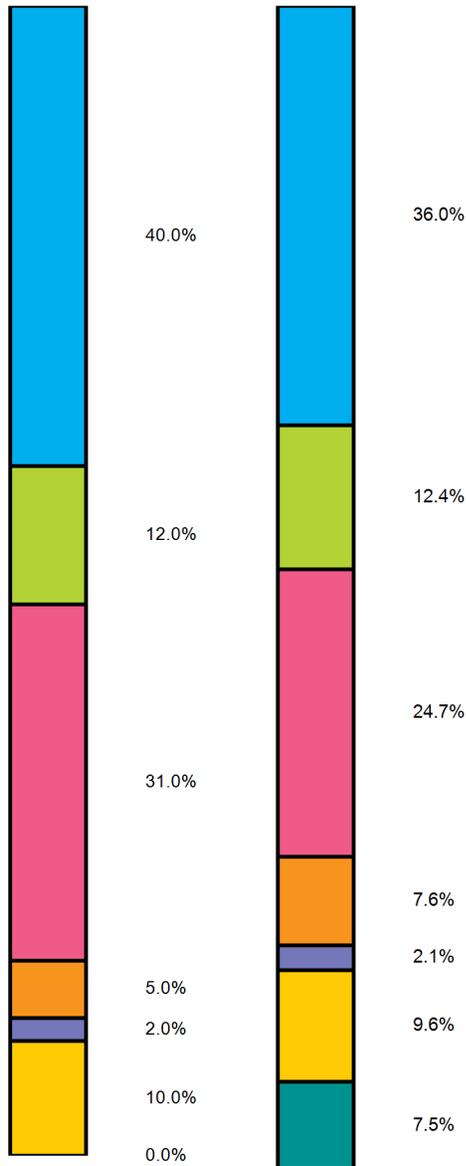
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# Oakland Police and Fire Retirement System

May 25, 2022

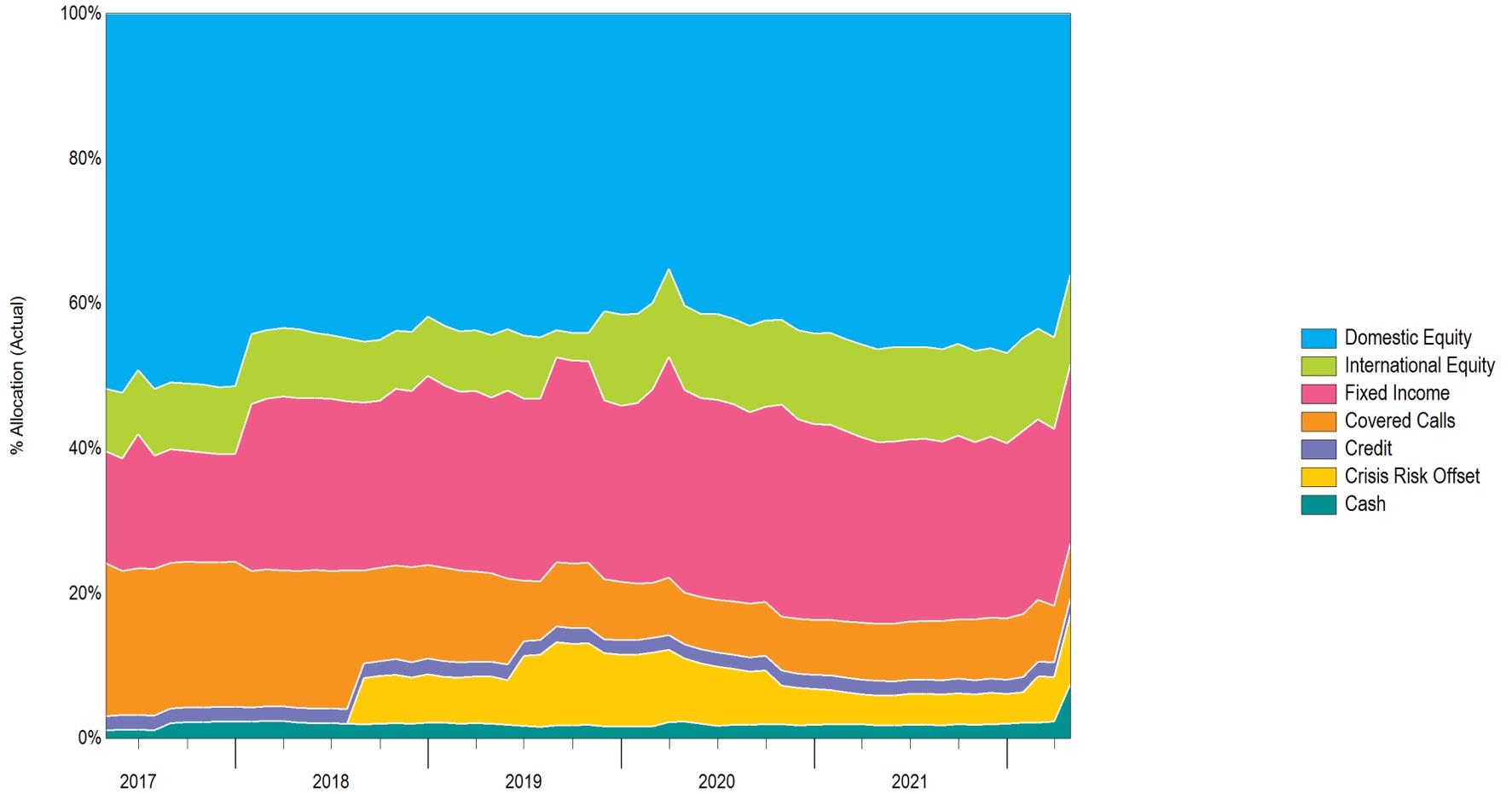
April Flash Report

As of April 30, 2022



Allocation vs. Targets and Policy						
	Current Balance	Current Allocation	Policy	Difference	Within IPS Range?	
Domestic Equity	\$153,955,373	36.0%	40.0%	-4.0%	Yes	
International Equity	\$52,923,051	12.4%	12.0%	0.4%	Yes	
Fixed Income	\$105,696,629	24.7%	31.0%	-6.3%	No	
Covered Calls	\$32,602,534	7.6%	5.0%	2.6%	Yes	
Credit	\$9,070,808	2.1%	2.0%	0.1%	Yes	
Crisis Risk Offset	\$41,159,587	9.6%	10.0%	-0.4%	Yes	
Cash	\$32,017,665	7.5%	0.0%	7.5%	No	
<b>Total</b>	<b>\$427,425,646</b>	<b>100.0%</b>	<b>100.0%</b>			

Asset Allocation History  
5 Years Ending April 30, 2022



As of April 30, 2022

Asset Class Performance Summary											
	Market Value (\$)	% of Portfolio	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
<b>OPFRS Total Plan</b>	<b>427,425,646</b>	<b>100.0</b>	<b>-5.9</b>	<b>-6.0</b>	<b>-10.9</b>	<b>-4.0</b>	<b>6.2</b>	<b>7.4</b>	<b>7.6</b>	<b>6.7</b>	<b>Dec-88</b>
<i>OPFRS Policy Benchmark</i>			<i>-5.9</i>	<i>-6.9</i>	<i>-10.7</i>	<i>-4.8</i>	<i>6.5</i>	<i>7.0</i>	<i>7.2</i>	<i>8.0</i>	<i>Dec-88</i>
<b>Domestic Equity</b>	<b>153,955,373</b>	<b>36.0</b>	<b>-7.9</b>	<b>-5.0</b>	<b>-13.1</b>	<b>-3.1</b>	<b>12.0</b>	<b>12.3</b>	<b>12.9</b>	<b>9.0</b>	<b>Jun-97</b>
<i>Russell 3000 (Blend)</i>			<i>-9.0</i>	<i>-5.9</i>	<i>-13.8</i>	<i>-3.1</i>	<i>13.1</i>	<i>13.0</i>	<i>13.3</i>	<i>9.2</i>	<i>Jun-97</i>
<b>International Equity</b>	<b>52,923,051</b>	<b>12.4</b>	<b>-6.9</b>	<b>-9.5</b>	<b>-11.2</b>	<b>-7.6</b>	<b>5.2</b>	<b>6.0</b>	<b>6.2</b>	<b>5.3</b>	<b>Jan-98</b>
<i>MSCI ACWI ex US (Blend)</i>			<i>-6.2</i>	<i>-12.2</i>	<i>-11.2</i>	<i>-9.9</i>	<i>4.8</i>	<i>5.4</i>	<i>5.5</i>	<i>5.4</i>	<i>Jan-98</i>
<b>Fixed Income</b>	<b>105,696,629</b>	<b>24.7</b>	<b>-3.6</b>	<b>-9.1</b>	<b>-9.3</b>	<b>-7.3</b>	<b>0.9</b>	<b>1.9</b>	<b>2.4</b>	<b>5.0</b>	<b>Dec-93</b>
<i>Bloomberg Universal (Blend)</i>			<i>-3.7</i>	<i>-9.6</i>	<i>-9.6</i>	<i>-8.6</i>	<i>0.5</i>	<i>1.4</i>	<i>2.1</i>	<i>4.8</i>	<i>Dec-93</i>
<b>Credit</b>	<b>9,070,808</b>	<b>2.1</b>	<b>-1.9</b>	<b>-0.6</b>	<b>-3.0</b>	<b>1.4</b>	<b>4.4</b>	<b>5.1</b>	<b>--</b>	<b>5.8</b>	<b>Feb-15</b>
<i>Bloomberg US High Yield TR</i>			<i>-3.6</i>	<i>-6.8</i>	<i>-8.2</i>	<i>-5.2</i>	<i>2.8</i>	<i>3.7</i>	<i>5.3</i>	<i>4.6</i>	<i>Feb-15</i>
<b>Covered Calls</b>	<b>32,602,534</b>	<b>7.6</b>	<b>-6.9</b>	<b>-0.2</b>	<b>-9.3</b>	<b>3.4</b>	<b>11.2</b>	<b>10.0</b>	<b>--</b>	<b>9.3</b>	<b>Apr-14</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>-4.7</i>	<i>4.2</i>	<i>-3.9</i>	<i>8.6</i>	<i>6.6</i>	<i>6.1</i>	<i>6.6</i>	<i>6.3</i>	<i>Apr-14</i>
<b>Crisis Risk Offset</b>	<b>41,159,587</b>	<b>9.6</b>	<b>-3.5</b>	<b>-10.0</b>	<b>-11.8</b>	<b>-6.7</b>	<b>-13.2</b>	<b>--</b>	<b>--</b>	<b>-10.4</b>	<b>Aug-18</b>
<i>SG Multi Alternative Risk Premia Index</i>			<i>3.0</i>	<i>4.2</i>	<i>2.5</i>	<i>5.7</i>	<i>-2.0</i>	<i>--</i>	<i>--</i>	<i>-1.2</i>	<i>Aug-18</i>

Fiscal year begins on July 1.

Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers.

As of April 30, 2022

Trailing Net Performance												
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
<b>OPFRS Total Plan</b>	<b>427,425,646</b>	<b>100.0</b>	<b>--</b>	<b>-5.9</b>	<b>-6.0</b>	<b>-10.9</b>	<b>-4.0</b>	<b>6.2</b>	<b>7.4</b>	<b>7.6</b>	<b>6.7</b>	<b>Dec-88</b>
<i>OPFRS Policy Benchmark</i>				<i>-5.9</i>	<i>-6.9</i>	<i>-10.7</i>	<i>-4.8</i>	<i>6.5</i>	<i>7.0</i>	<i>7.2</i>	<i>8.0</i>	<i>Dec-88</i>
<b>Domestic Equity</b>	<b>153,955,373</b>	<b>36.0</b>	<b>36.0</b>	<b>-7.9</b>	<b>-5.0</b>	<b>-13.1</b>	<b>-3.1</b>	<b>12.0</b>	<b>12.3</b>	<b>12.9</b>	<b>9.0</b>	<b>Jun-97</b>
<i>Russell 3000 (Blend)</i>				<i>-9.0</i>	<i>-5.9</i>	<i>-13.8</i>	<i>-3.1</i>	<i>13.1</i>	<i>13.0</i>	<i>13.3</i>	<i>9.2</i>	<i>Jun-97</i>
Northern Trust Russell 1000	84,107,653	19.7	54.6	-8.9	-4.9	-13.6	-2.1	13.5	13.4	13.5	14.0	Jun-10
<i>Russell 1000</i>				<i>-8.9</i>	<i>-4.9</i>	<i>-13.6</i>	<i>-2.1</i>	<i>13.6</i>	<i>13.4</i>	<i>13.5</i>	<i>14.0</i>	<i>Jun-10</i>
EARNEST Partners	45,339,132	10.6	29.4	-6.7	-3.0	-12.0	-3.3	14.1	14.2	14.2	10.7	Apr-06
<i>Russell MidCap</i>				<i>-7.7</i>	<i>-8.2</i>	<i>-12.9</i>	<i>-6.1</i>	<i>10.5</i>	<i>10.7</i>	<i>12.0</i>	<i>9.0</i>	<i>Apr-06</i>
Rice Hall James	14,060,617	3.3	9.1	-8.9	-17.7	-19.4	-15.8	6.5	--	--	8.2	Jul-17
<i>Russell 2000 Growth</i>				<i>-12.3</i>	<i>-27.7</i>	<i>-23.3</i>	<i>-26.4</i>	<i>4.1</i>	<i>7.1</i>	<i>9.9</i>	<i>6.8</i>	<i>Jul-17</i>
Brown Fundamental Small Cap Value	10,447,971	2.4	6.8	-6.8	-5.1	-11.5	-4.9	--	--	--	-1.8	Apr-21
<i>Russell 2000 Value</i>				<i>-7.8</i>	<i>-8.9</i>	<i>-10.0</i>	<i>-6.6</i>	<i>8.4</i>	<i>6.7</i>	<i>9.8</i>	<i>-4.3</i>	<i>Apr-21</i>
iShares Edge MSCI Min Vol ETF	0	0.0	0.0	-5.3	0.8	-8.9	3.4	--	--	--	17.7	Apr-20
<i>MSCI USA Minimum Volatility GR USD</i>				<i>-5.3</i>	<i>0.9</i>	<i>-8.8</i>	<i>3.6</i>	<i>9.0</i>	<i>10.9</i>	<i>12.3</i>	<i>17.9</i>	<i>Apr-20</i>
<b>International Equity</b>	<b>52,923,051</b>	<b>12.4</b>	<b>12.4</b>	<b>-6.9</b>	<b>-9.5</b>	<b>-11.2</b>	<b>-7.6</b>	<b>5.2</b>	<b>6.0</b>	<b>6.2</b>	<b>5.3</b>	<b>Jan-98</b>
<i>MSCI ACWI ex US (Blend)</i>				<i>-6.2</i>	<i>-12.2</i>	<i>-11.2</i>	<i>-9.9</i>	<i>4.8</i>	<i>5.4</i>	<i>5.5</i>	<i>5.4</i>	<i>Jan-98</i>
SGA ACWI ex-U.S. Equity	37,931,145	8.9	71.7	-7.0	-8.6	-10.5	-6.8	--	--	--	3.0	Dec-19
<i>MSCI ACWI ex USA Gross</i>				<i>-6.2</i>	<i>-12.2</i>	<i>-11.2</i>	<i>-9.9</i>	<i>4.8</i>	<i>5.4</i>	<i>5.5</i>	<i>4.6</i>	<i>Dec-19</i>
Vanguard Developed Markets ETF	14,991,906	3.5	28.3	-6.8	-11.2	-12.2	-8.9	--	--	--	7.2	Sep-19
<i>FTSE Developed All Cap Ex US TR USD</i>				<i>-6.5</i>	<i>-10.0</i>	<i>-11.3</i>	<i>-7.8</i>	<i>5.8</i>	<i>5.7</i>	<i>6.3</i>	<i>7.9</i>	<i>Sep-19</i>

Performance shown is net-of-fees and time-weighted using the Modified Dietz methodology. Fiscal year starts July 1. Since inception date and performance begin in the full calendar month following an investment's initial funding.

As of April 30, 2022

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
<b>Fixed Income</b>	<b>105,696,629</b>	<b>24.7</b>	<b>24.7</b>	<b>-3.6</b>	<b>-9.1</b>	<b>-9.3</b>	<b>-7.3</b>	<b>0.9</b>	<b>1.9</b>	<b>2.4</b>	<b>5.0</b>	<b>Dec-93</b>
<i>Bloomberg Universal (Blend)</i>				<i>-3.7</i>	<i>-9.6</i>	<i>-9.6</i>	<i>-8.6</i>	<i>0.5</i>	<i>1.4</i>	<i>2.1</i>	<i>4.8</i>	<i>Dec-93</i>
Ramirez	71,999,758	16.8	68.1	-3.4	-9.1	-9.3	-7.0	0.8	1.9	--	2.1	Jan-17
<i>Bloomberg US Aggregate TR</i>				<i>-3.8</i>	<i>-9.4</i>	<i>-9.5</i>	<i>-8.5</i>	<i>0.4</i>	<i>1.2</i>	<i>1.7</i>	<i>1.4</i>	<i>Jan-17</i>
Reams	26,835,789	6.3	25.4	-3.9	-8.8	-9.2	-7.5	4.3	3.8	3.3	5.4	Feb-98
<i>Bloomberg Universal (Blend)</i>				<i>-3.7</i>	<i>-9.6</i>	<i>-9.6</i>	<i>-8.6</i>	<i>0.5</i>	<i>1.4</i>	<i>2.1</i>	<i>4.4</i>	<i>Feb-98</i>
Wellington Core Bond	6,861,081	1.6	6.5	-4.0	-10.1	-10.1	-9.1	--	--	--	-7.8	Apr-21
<i>Bloomberg US Aggregate TR</i>				<i>-3.8</i>	<i>-9.4</i>	<i>-9.5</i>	<i>-8.5</i>	<i>0.4</i>	<i>1.2</i>	<i>1.7</i>	<i>-7.2</i>	<i>Apr-21</i>
<b>Credit</b>	<b>9,070,808</b>	<b>2.1</b>	<b>2.1</b>	<b>-1.9</b>	<b>-0.6</b>	<b>-3.0</b>	<b>1.4</b>	<b>4.4</b>	<b>5.1</b>	<b>--</b>	<b>5.8</b>	<b>Feb-15</b>
<i>Bloomberg US High Yield TR</i>				<i>-3.6</i>	<i>-6.8</i>	<i>-8.2</i>	<i>-5.2</i>	<i>2.8</i>	<i>3.7</i>	<i>5.3</i>	<i>4.6</i>	<i>Feb-15</i>
Polen Capital	9,070,808	2.1	100.0	-1.9	-0.6	-3.0	1.4	4.4	5.1	--	5.8	Feb-15
<i>ICE BofA High Yield Master TR</i>				<i>-3.7</i>	<i>-6.5</i>	<i>-8.0</i>	<i>-5.0</i>	<i>2.6</i>	<i>3.6</i>	<i>5.2</i>	<i>4.5</i>	<i>Feb-15</i>
<b>Covered Calls</b>	<b>32,602,534</b>	<b>7.6</b>	<b>7.6</b>	<b>-6.9</b>	<b>-0.2</b>	<b>-9.3</b>	<b>3.4</b>	<b>11.2</b>	<b>10.0</b>	<b>--</b>	<b>9.3</b>	<b>Apr-14</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>				<i>-4.7</i>	<i>4.2</i>	<i>-3.9</i>	<i>8.6</i>	<i>6.6</i>	<i>6.1</i>	<i>6.6</i>	<i>6.3</i>	<i>Apr-14</i>
Parametric BXM	16,357,603	3.8	50.2	-5.7	-0.2	-7.3	3.2	7.8	7.2	--	7.3	Apr-14
<i>CBOE S&amp;P 500 BuyWrite USD</i>				<i>-4.7</i>	<i>4.2</i>	<i>-3.9</i>	<i>8.6</i>	<i>6.6</i>	<i>6.1</i>	<i>6.6</i>	<i>6.3</i>	<i>Apr-14</i>
Parametric DeltaShift	16,244,931	3.8	49.8	-8.0	-0.4	-11.1	3.3	14.2	12.4	--	11.5	Apr-14
<i>CBOE S&amp;P 500 BuyWrite USD</i>				<i>-4.7</i>	<i>4.2</i>	<i>-3.9</i>	<i>8.6</i>	<i>6.6</i>	<i>6.1</i>	<i>6.6</i>	<i>6.3</i>	<i>Apr-14</i>

As of April 30, 2022

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
<b>Crisis Risk Offset</b>	<b>41,159,587</b>	<b>9.6</b>	<b>9.6</b>	<b>-3.5</b>	<b>-10.0</b>	<b>-11.8</b>	<b>-6.7</b>	<b>-13.2</b>	<b>--</b>	<b>--</b>	<b>-10.4</b>	<b>Aug-18</b>
<i>SG Multi Alternative Risk Premia Index</i>				<i>3.0</i>	<i>4.2</i>	<i>2.5</i>	<i>5.7</i>	<i>-2.0</i>	<i>--</i>	<i>--</i>	<i>-1.2</i>	<i>Aug-18</i>
Vanguard Long-Term Treasury ETF	16,211,209	3.8	39.4	-9.3	-16.9	-18.5	-13.8	--	--	--	-2.6	Jul-19
<i>Bloomberg US Govt Long TR</i>				<i>-8.9</i>	<i>-15.6</i>	<i>-18.5</i>	<i>-12.2</i>	<i>0.7</i>	<i>1.7</i>	<i>2.6</i>	<i>-1.9</i>	<i>Jul-19</i>
Versor Trend Following	15,000,000	3.5	36.4	0.0	--	--	--	--	--	--	0.0	Apr-22
<i>SG Multi Alternative Risk Premia Index</i>				<i>3.0</i>	<i>4.2</i>	<i>2.5</i>	<i>5.7</i>	<i>-2.0</i>	<i>--</i>	<i>--</i>	<i>3.0</i>	<i>Apr-22</i>
Kepos Alternative Risk Premia	9,948,378	2.3	24.2	1.8	--	--	--	--	--	--	-0.3	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>				<i>3.0</i>	<i>4.2</i>	<i>2.5</i>	<i>5.7</i>	<i>-2.0</i>	<i>--</i>	<i>--</i>	<i>1.7</i>	<i>Feb-22</i>
<b>Cash</b>	<b>32,017,665</b>	<b>7.5</b>	<b>7.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>1.3</b>	<b>0.7</b>	<b>0.6</b>	<b>Mar-11</b>
<i>FTSE T-Bill 3 Months TR</i>				<i>0.0</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.7</i>	<i>1.1</i>	<i>0.6</i>	<i>0.5</i>	<i>Mar-11</i>
Cash	25,152,665	5.9	78.6	0.0	0.0	0.0	0.0	1.1	1.4	0.8	0.7	Mar-11
<i>FTSE T-Bill 3 Months TR</i>				<i>0.0</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.7</i>	<i>1.1</i>	<i>0.6</i>	<i>0.5</i>	<i>Mar-11</i>
Cash - Treasury	6,865,000	1.6	21.4									

In April 2022 iShares Edge MSCI Min Vol. ETF was liquidated. Upon sale the market value was included in cash. It was subsequently used to fund Wellington Defensive Equity.

Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers.

As of April 30, 2022

Cash Flow Summary

Month to Date

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Brown Fundamental Small Cap Value	\$11,212,249	\$0	-\$764,278	\$10,447,971
Cash	\$3,688,533	\$21,464,133	\$0	\$25,152,665
Cash - Treasury	\$6,676,000	\$189,000	\$0	\$6,865,000
EARNEST Partners	\$48,590,675	\$0	-\$3,251,543	\$45,339,132
iShares Edge MSCI Min Vol ETF	\$22,076,344	-\$21,447,300	-\$629,045	\$0
Kepos Alternative Risk Premia	\$9,778,017	\$0	\$170,362	\$9,948,378
Northern Trust Russell 1000	\$103,327,856	-\$11,000,000	-\$8,220,203	\$84,107,653
Parametric BXM	\$17,353,030	\$0	-\$995,427	\$16,357,603
Parametric DeltaShift	\$17,664,992	\$0	-\$1,420,060	\$16,244,931
Polen Capital	\$9,250,051	\$0	-\$179,243	\$9,070,808
Ramirez	\$74,513,589	\$0	-\$2,513,831	\$71,999,758
Reams	\$27,928,505	\$0	-\$1,092,716	\$26,835,789
Rice Hall James	\$15,430,352	\$0	-\$1,369,736	\$14,060,617
Securities Lending Northern Trust	\$0	-\$10,738	\$10,738	\$0
SGA ACWI ex-U.S. Equity	\$40,766,479	\$0	-\$2,835,335	\$37,931,145
Vanguard Developed Markets ETF	\$16,083,566	\$0	-\$1,091,660	\$14,991,906
Vanguard Long-Term Treasury ETF	\$17,883,935	\$0	-\$1,672,726	\$16,211,209
Versor Trend Following	\$0	\$15,000,000	\$0	\$15,000,000
Wellington Core Bond	\$7,149,273	\$0	-\$288,192	\$6,861,081
<b>Total</b>	<b>\$449,373,445</b>	<b>\$4,195,095</b>	<b>-\$26,142,894</b>	<b>\$427,425,646</b>

**Benchmark History**  
As of April 30, 2022

Total Plan x Securities Lending x Reams LD Exception Comp

1/1/2019	Present	40% Russell 3000 / 12% MSCI ACWI ex USA Gross / 33% Bloomberg US Universal TR / 5% CBOE BXM / 6.7% SG Multi Alternative Risk Premia Index / 3.3% Bloomberg US Treasury Long TR
5/1/2016	12/31/2018	48% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 20% CBOE BXM
10/1/2015	4/30/2016	43% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 15% CBOE BXM / 10% CPI - All Urban Consumers (unadjusted) +3%
1/1/2014	9/30/2015	48% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 10% CBOE BXM / 10% CPI - All Urban Consumers (unadjusted) +3%
3/1/2013	12/31/2013	40% Russell 3000 / 10% MSCI ACWI ex USA Gross / 17% Bloomberg US Universal TR / 33% ICE BofA 3M US Treasury TR USD
8/1/2012	2/28/2013	20% Russell 3000 / 7% MSCI ACWI ex USA Gross / 18% Bloomberg US Universal TR / 55% ICE BofA 3M US Treasury TR USD
10/1/2007	7/31/2012	53% Russell 3000 / 17% MSCI ACWI ex USA Gross / 30% Bloomberg US Universal TR
4/1/2006	9/30/2007	35% Russell 3000 / 15% MSCI ACWI ex USA Gross / 50% Bloomberg US Universal TR
1/1/2005	3/31/2006	35% Russell 3000 / 15% MSCI ACWI ex USA Gross / 50% Bloomberg US Aggregate TR
4/1/1998	12/31/2004	50% Bloomberg US Aggregate TR / 10% Russell 1000 / 20% Russell 1000 Value / 5% Russell MidCap / 15% MSCI EAFE
9/1/1988	3/31/1998	40% S&P 500 / 55% Bloomberg US Aggregate TR / 5% FTSE T-Bill 3 Months TR

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

# Oakland Police and Fire Retirement System

## Q1 2022

Quarterly Report

## Agenda

1. Total Portfolio Summary
2. Economic and Market Update
3. Asset Class and Manager Commentary
4. 1Q 2022 Performance as of March 31, 2022
5. Disclaimer, Glossary, and Notes

## **Total Portfolio Summary**

### Total Portfolio Summary

As of March 31, 2022, the City of Oakland Police and Fire Retirement System (OPFRS) portfolio had an aggregate value of \$449.4M. This represents a \$26.1M depreciation in investment value after (\$7.7M) in benefit payments over the quarter. Over the one-year period, the OPFRS Total Portfolio value is higher by \$23.5M, after withdrawals totaling (\$17.4M) for benefit payments.

### Asset Allocation Trends

- The asset allocation targets throughout this report reflect those as of March 31, 2022. Target weightings reflect the interim phase (where Crisis Risk Offset component is set to 10%) of the Plan's previously approved asset allocation (effective 5/31/2017).
- Relative to policy targets, the portfolio ended the latest quarter overweight Equities, Covered Calls and Cash, while underweight Fixed Income and Crisis Risk Offset (CRO). The Fixed Income asset class was slightly below its acceptable ranges from the policy target.
  - In February 2022, Kepos was funded as a new Alternative Risk Premia manager to the CRO segment.

### Recent Investment Performance

- During the most recent quarter, the OPFRS portfolio generated an absolute return of (5.4%), gross of fees, trailing its policy benchmark by (0.3%). Over the trailing 1- and 5-year periods, however, the portfolio outperformed its benchmark by 0.9% and 0.5% respectively while keeping pace in the 3-year period.
- In comparison to its peers, the OPFRS portfolio lagged the Median fund's return over the quarter by (0.6%) while outperforming the Median fund by 0.5% over the 1-year period. Over the 3- and 5-year trailing periods, the OPFRS portfolio trailed the Median fund by (1.3%) and (0.2%) respectively.

	Quarter	CYTD	FYTD	1 Year	3 Year	5 Year
Total Portfolio <sup>1</sup>	-5.4%	-5.4%	-0.1%	5.0%	9.4%	9.0%
Policy Benchmark <sup>2</sup>	-5.1%	-5.1%	-1.1%	4.1%	9.4%	8.5%
<b>Excess Return</b>	<b>-0.3%</b>	<b>-0.3%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0.0%</b>	<b>0.5%</b>
Reference: Median Fund <sup>3</sup>	-4.8%	-4.8%	-0.7%	4.5%	10.7%	9.2%
Reference: Total Net of Fees <sup>4</sup>	-5.4%	-5.4%	-0.4%	4.7%	9.1%	8.7%

- Over the quarter, the portfolio reflected the broad market trends with all asset classes generating negative absolute returns. On relative basis, the Credit component was the primary contributor with an excess return of 3.7% in Q1.

<sup>1</sup> Gross of Fees. Performance since 2005 includes securities lending.

<sup>2</sup> Evolving Policy Benchmark consists of 40% Russell 3000, 12% MSCI ACWI ex U.S., 33% Bloomberg Universal, 5% CBOE BXM, 6.7% SG Multi Asset Risk Premia, 3.3% Bloomberg Long Treasury.

<sup>3</sup> Investment Metrics Public Define Benefit Plan with \$250 million to \$1 billion value Universe.

<sup>4</sup> Longer-term (>1 year) Net of fee returns include estimates based on OPFRS manager fee schedule (approximately 34 bps).

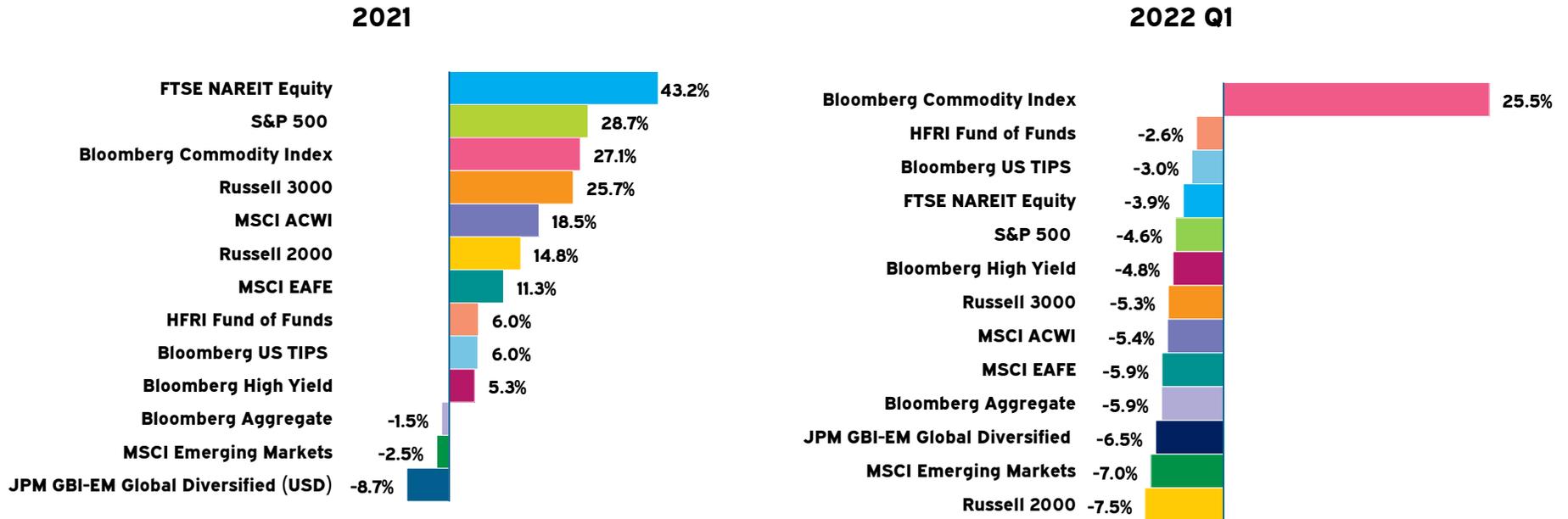
# **Economic and Market Update**

Data as of March 31, 2022

### Q1 Commentary

- The first quarter saw market volatility, driven by persistently high inflation, expectations for policy to tighten faster than previously expected, and Russia's invasion of Ukraine.
- Except for commodities, all asset classes declined during the quarter.
  - Equities declined across the board with double-digit losses in China particularly weighing on emerging markets.
  - Value oriented equities outpaced growth in the US influenced by higher interest rates.
  - Bonds in the US had one of their worst quarters on record, declining more than equities.
  - Rates rose across the US yield curve, with the curve inverting by some measures by month-end.
  - Inflation remains high globally given lingering supply issues from the pandemic and the conflict in Ukraine.
  - The pace of policy tightening will likely increase due to persistent inflation.
- The conflict in eastern Europe will have considerable economic and financial consequences for the global economy including the pacing of policy rate tightening, the risk of policy mistakes, and supply shocks pushing inflation even higher around the world.

### Index Returns<sup>1</sup>



→ Outside of emerging markets and the broad US investment grade bond market (Bloomberg Aggregate), most asset classes appreciated in 2021.

→ Most major asset classes suffered negative returns in the first quarter of 2022 with the notable exception of commodities. TIPS declined less than most other asset classes in the inflationary environment.

<sup>1</sup> Data Source: Bloomberg and FactSet. Data is as of March 31, 2022.

### Domestic Equity Returns<sup>1</sup>

Domestic Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.7	-4.6	15.6	18.9	16.0	14.6
Russell 3000	3.2	-5.3	11.9	18.2	15.4	14.3
Russell 1000	3.4	-5.1	13.3	18.7	15.8	14.5
Russell 1000 Growth	3.9	-9.0	15.0	23.5	20.9	17.0
Russell 1000 Value	2.8	-0.7	11.7	13.0	10.3	11.7
Russell MidCap	2.6	-5.7	6.9	14.9	12.6	12.8
Russell MidCap Growth	1.6	-12.6	-0.9	14.8	15.1	13.5
Russell MidCap Value	3.0	-1.8	11.5	13.6	10.0	12.0
Russell 2000	1.2	-7.5	-5.8	11.7	9.7	11.0
Russell 2000 Growth	0.5	-12.6	-14.3	9.9	10.3	11.2
Russell 2000 Value	2.0	-2.4	3.3	12.7	8.6	10.5

#### US Equities: Russell 3000 Index returned -5.3%, and value indices outperformed growth in Q1.

- Despite positive returns in March, US equities posted negative returns for the first quarter of 2022 across all market capitalizations and styles given persistently high inflation and geopolitical uncertainty.
- Value stocks declined far less than growth stocks in the rising rate environment. Strong returns in the energy sector and weakness in the technology sector contributed to the results.
- Large company stocks (Russell 1000) outperformed small company stocks (Russell 2000).

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022.

### Foreign Equity Returns<sup>1</sup>

Foreign Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	0.2	-5.4	-1.5	7.5	6.8	5.5
MSCI EAFE	0.6	-5.9	1.2	7.8	6.7	6.3
MSCI EAFE (Local Currency)	2.1	-3.7	6.2	8.2	6.5	8.6
MSCI EAFE Small Cap	0.0	-8.5	-3.6	8.5	7.4	8.3
MSCI Emerging Markets	-2.3	-7.0	-11.4	4.9	6.0	3.4
MSCI Emerging Markets (Local Currency)	-2.1	-6.1	-9.9	6.2	7.5	6.3
MSCI China	-8.0	-14.2	-32.5	-3.0	3.5	4.5

#### International Developed Market Equities: MSCI EAFE -5.9% in Q1.

- Returns in international developed markets were also negative for the first quarter of 2022.
- Declines were driven by a sharp fall in stocks in Europe hurt by a high reliance on Russian oil and gas.
- Continued strength in the US dollar also weighed on results.

#### Emerging Markets: MSCI EM -7.0% in Q1.

- Emerging market stocks declined more than developed market stocks for the quarter.
- China was a key driver of results as its zero COVID-19 policy led to renewed lockdowns in Shanghai. Concerns related to regulations on US-listed China stocks and overall slower growth also weighed on returns.
- Russian stocks and the ruble plunged with sanctions and trading halts.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022.

### Fixed Income Returns<sup>1</sup>

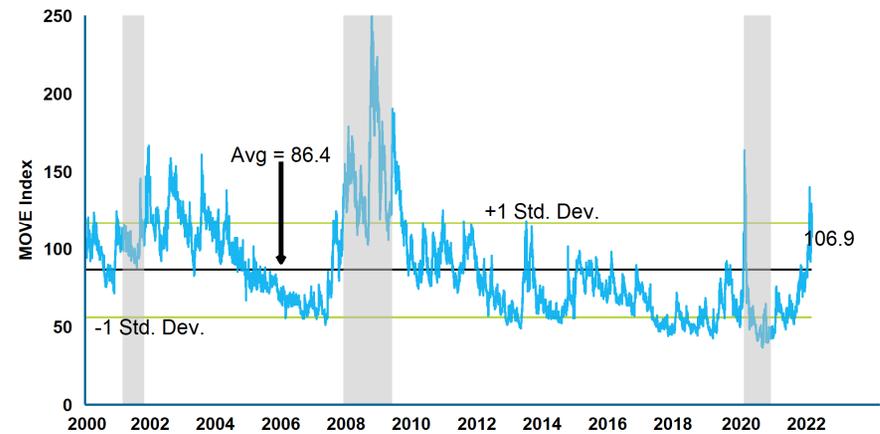
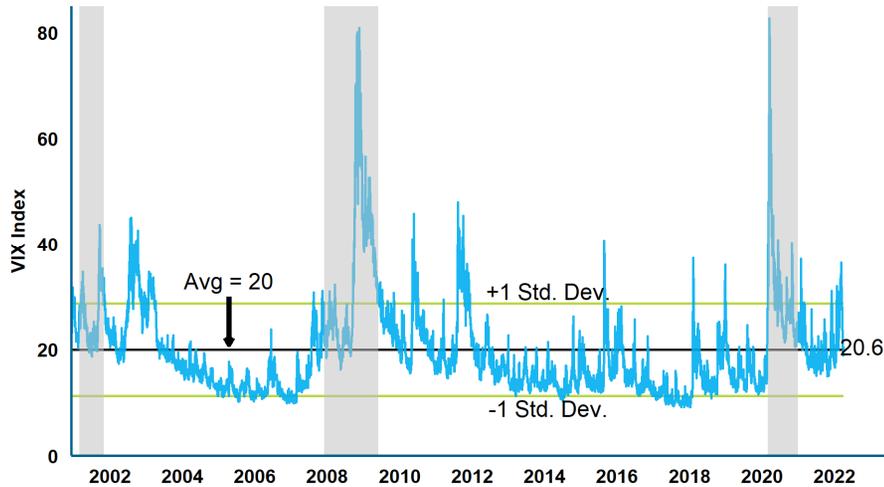
Fixed Income	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-2.7	-6.1	-4.2	1.8	2.3	2.6	3.3	6.6
Bloomberg Aggregate	-2.8	-5.9	-4.2	1.7	2.1	2.2	2.9	6.8
Bloomberg US TIPS	-1.9	-3.0	4.3	6.2	4.4	2.7	2.6	7.6
Bloomberg High Yield	-1.1	-4.8	-0.7	4.6	4.7	5.7	6.0	4.6
JPM GBI-EM Global Diversified (USD)	-1.5	-6.5	-8.5	-1.1	0.2	-0.7	6.4	5.1

#### Fixed Income: Bloomberg Universal -6.1% in Q1.

- The broad US investment grade bond market (Bloomberg Aggregate) experienced one of its worst quarters on record given continued concerns about policy tightening and inflation. The nominal 10-year Treasury yield finished the quarter at 2.3%, a level 0.8% above the end of 2021.
- TIPS also declined in the rising rate environment, but less than other bond sectors, helped by their inflation component.
- US credit spreads widened in the first quarter, particularly in high yield, as risk assets fell. Spreads remain at relatively low levels, though, given strong corporate health and high investor demand in the low-rate environment.
- Emerging market debt prices also declined in the quarter driven by the Russian invasion of Ukraine.

<sup>1</sup> Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of March 31, 2022.

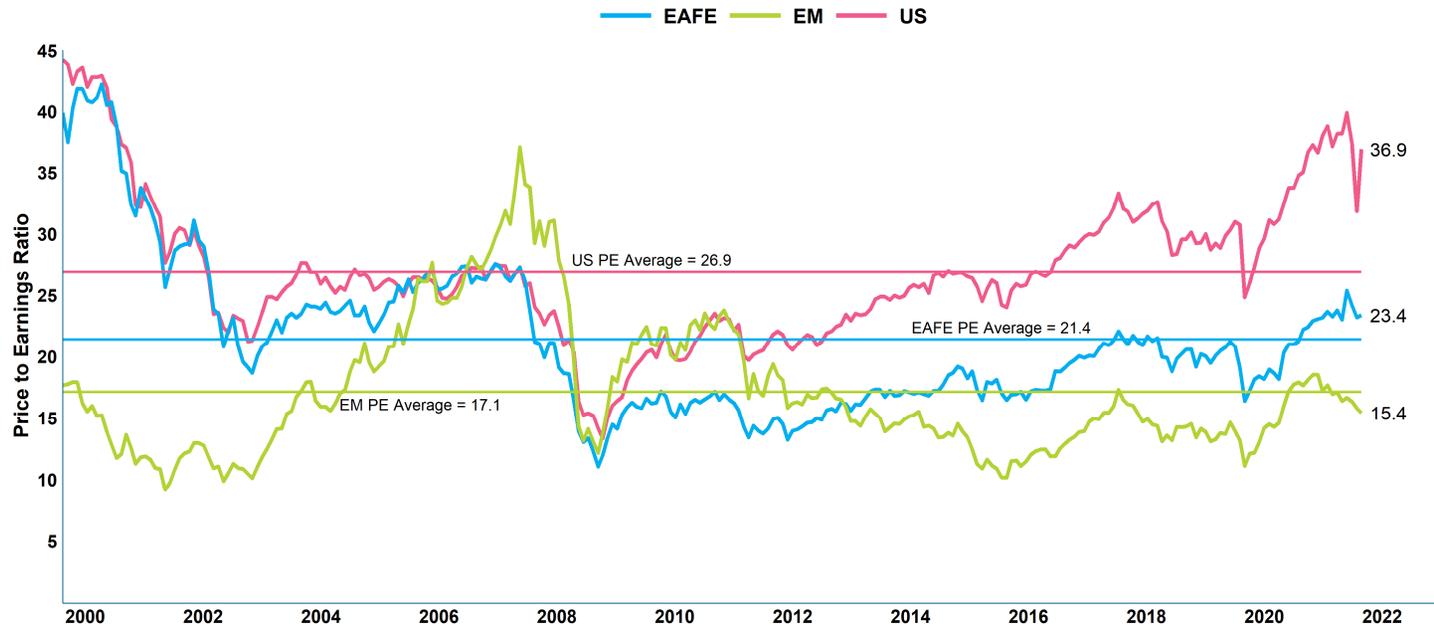
**Equity and Fixed Income Volatility<sup>1</sup>**



- Volatility in equities (VIX) increased for the first quarter but finished well below the March peak of 36.5.
- Fixed income volatility (MOVE) also increased and remains elevated driven largely by expectations that the Federal Reserve would tighten monetary policy faster than previously expected.

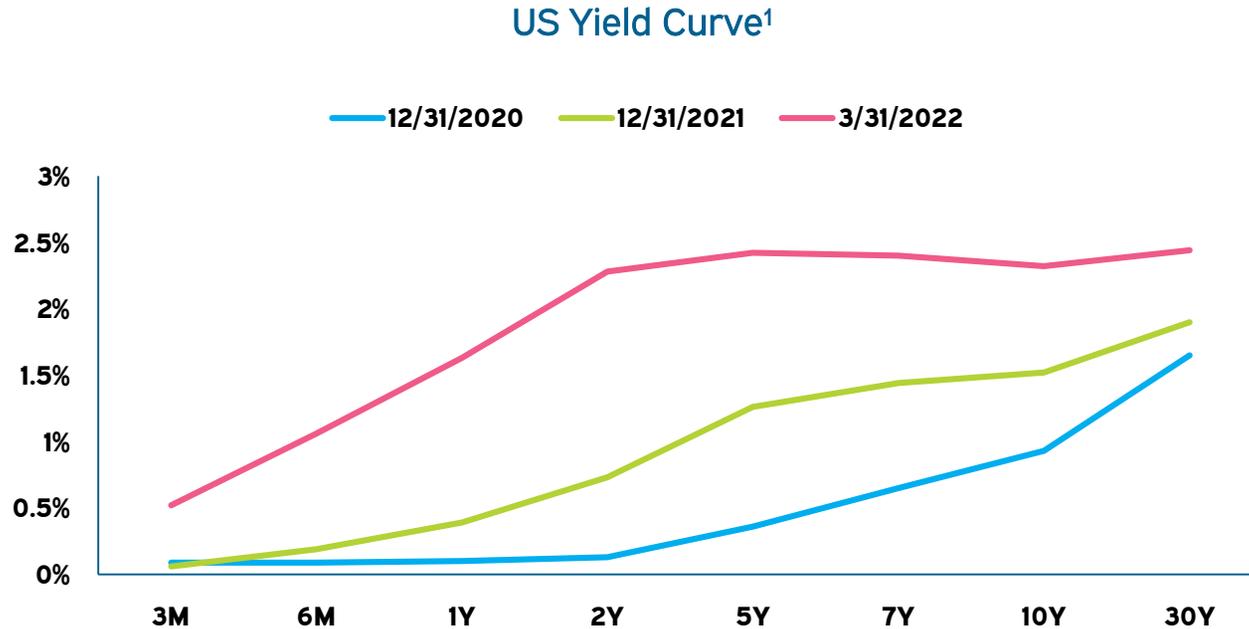
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of March 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the present month-end respectively.

**Equity Cyclically Adjusted P/E Ratios<sup>1</sup>**



- US equity valuations retreated in the first two months of 2022, and rebounded in March with the market recovery. They remain well above long-term averages (near +2 standard deviations).
- International developed market valuations remain below the US, with those for emerging markets under its long-term average.

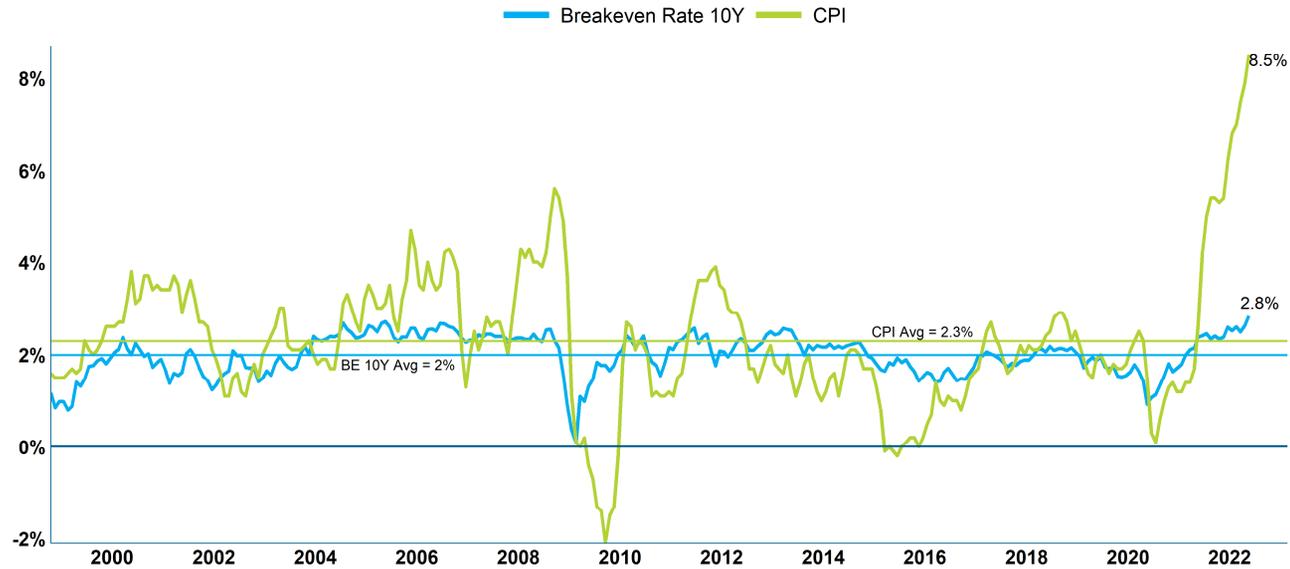
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of March 31, 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to month-end respectively.



- The trends of higher rates across maturities and curve flattening continued during the first quarter of 2022 as markets repriced inflation, rate expectations, and an accelerated pace of the Federal Reserve reducing its balance sheet.
- The spread between two-year and ten-year Treasuries declined significantly over the quarter and became negative after quarter-end which historically has often signaled a recession.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022.

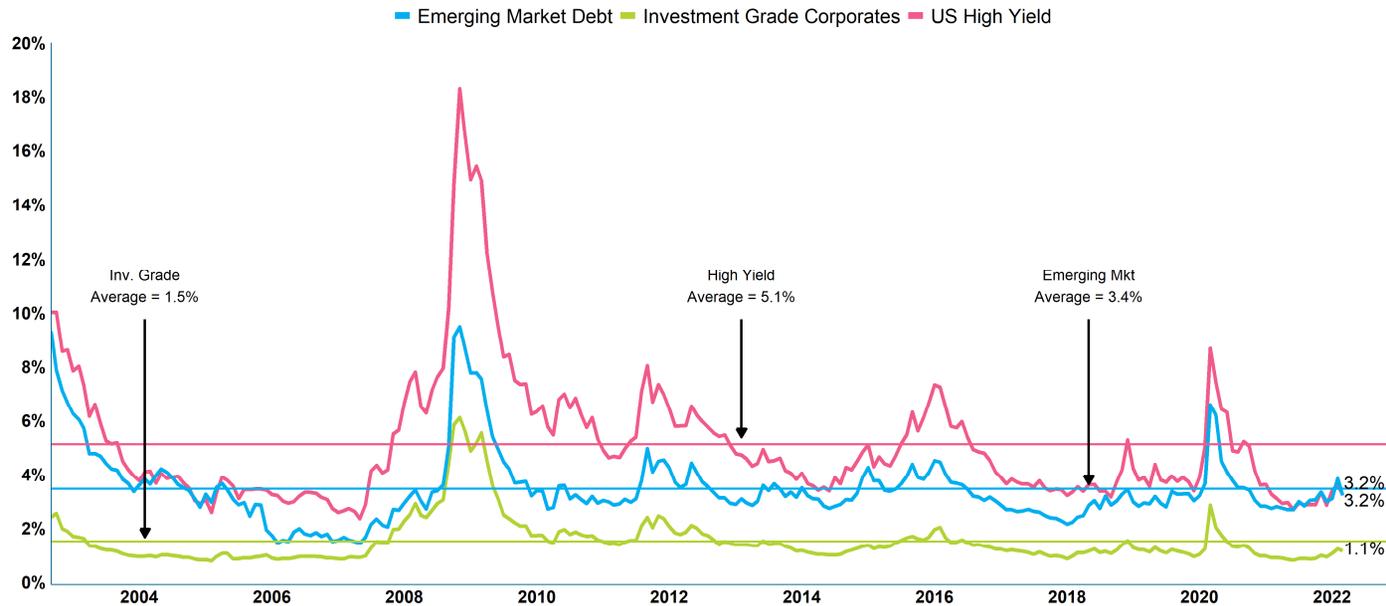
**Ten-Year Breakeven Inflation and CPI<sup>1</sup>**



- Inflation expectations (breakevens) increased during the quarter but are off their peak of close to 3.0%. They remain well above the long-term average.
- Trailing twelve-month CPI continued to rise in March, reaching 8.5%, a level not seen since the early 1980s and far above the long-term average of 2.3%.
- Rising prices for energy and food, and for new and used cars, remained key drivers of higher inflation.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022. 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 Bonds<sup>1</sup>**



- Credit spreads (the spread above a comparable maturity Treasury) increased over the quarter leading to negative returns.
- In the US, high yield spreads increased more than investment grade spreads, but declined less due to the higher relative income. Emerging market spreads finished the quarter at the same level as US high yield.
- The search for yield in a low-rate environment and continued strong corporate fundamentals with low default risk have been key drivers in the decline in credit spreads to below long-term averages in the US. High yield spreads remain well below the long-term average.

<sup>1</sup> Sources: Bloomberg. Data is as of March 31, 2022. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the present month-end respectively.

### Global Economic Outlook

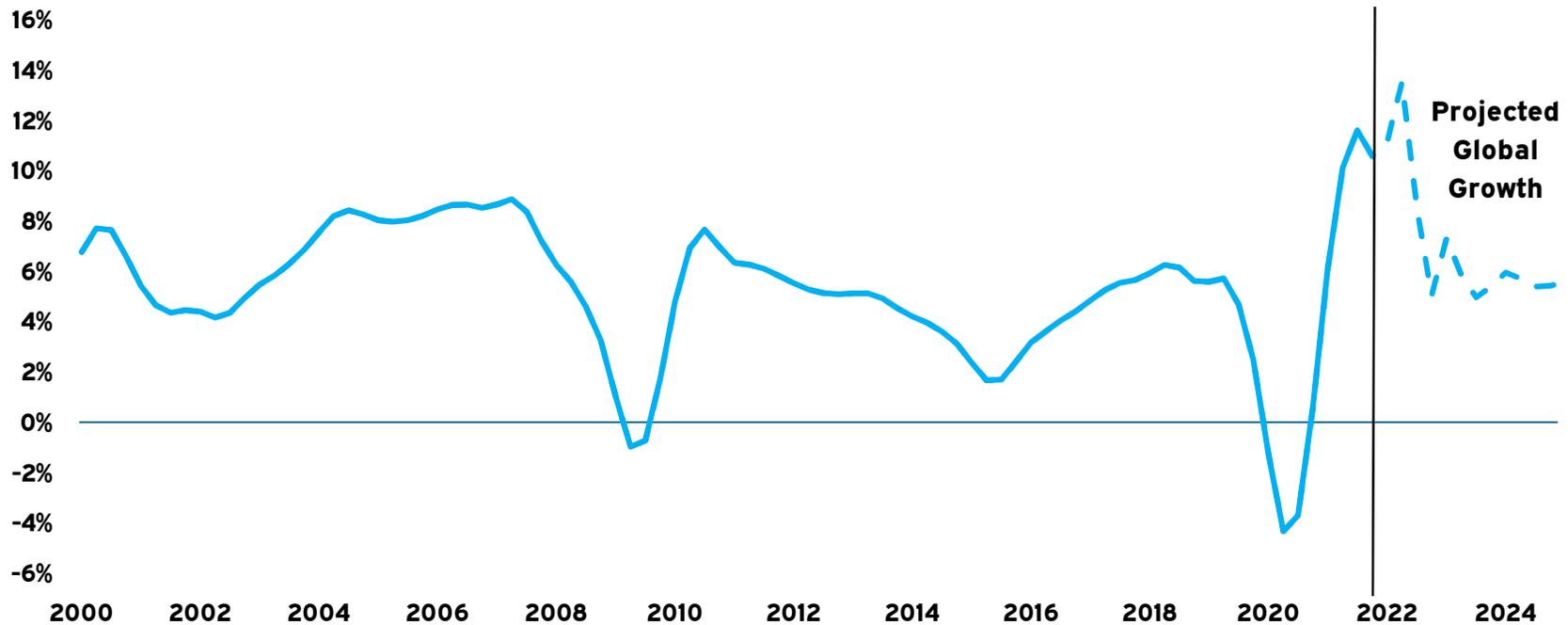
The IMF significantly lowered global growth forecasts in their latest projections, driven by the economic impacts of the war in Ukraine.

- The IMF forecasts final global GDP to come in at 6.1% in 2021 and 3.6% in 2022 (0.8% below the prior 2022 estimate), both still above the past ten-year average of 3.0%.
- In advanced economies, GDP is projected to increase 3.3% in 2022 and 2.4% in 2023. The US has limited economic ties with Russia but saw another downgrade in the 2022 growth forecast (3.7% versus 4.0%) largely due to policy reduction happening faster than previously expected. The euro area economy saw a significant downgrade in expected growth (2.8% versus 3.9%) in 2022 as rising energy prices particularly weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 2.4% this year.
- Growth projections for emerging markets are higher than developed markets, at 3.8% in 2022 and 4.4% in 2023. China's growth was downgraded (4.4% versus 4.8%) for 2022 given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (7.4% versus 3.8%) due to the war in Ukraine.

	Real GDP (%) <sup>1</sup>			Inflation (%) <sup>1</sup>		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.6	3.6	3.0	7.4	4.8	3.5
Advanced Economies	3.3	2.4	1.6	5.7	2.5	1.5
US	3.7	2.3	2.1	7.7	2.9	1.9
Euro Area	2.8	2.3	0.9	5.3	2.3	1.2
Japan	2.4	2.3	0.5	1.0	0.8	0.5
Emerging Economies	3.8	4.4	4.2	8.7	6.5	5.1
China	4.4	5.1	6.7	2.1	1.8	2.1

<sup>1</sup> Source: IMF World Economic Outlook. Real GDP forecasts from April WEO Update. Inflation forecasts are as of the April 2022 Update. "Actual 10 Year Average" represents data from 2012 to 2021.

### Global Nominal Gross Domestic Product (GDP) Growth<sup>1</sup>

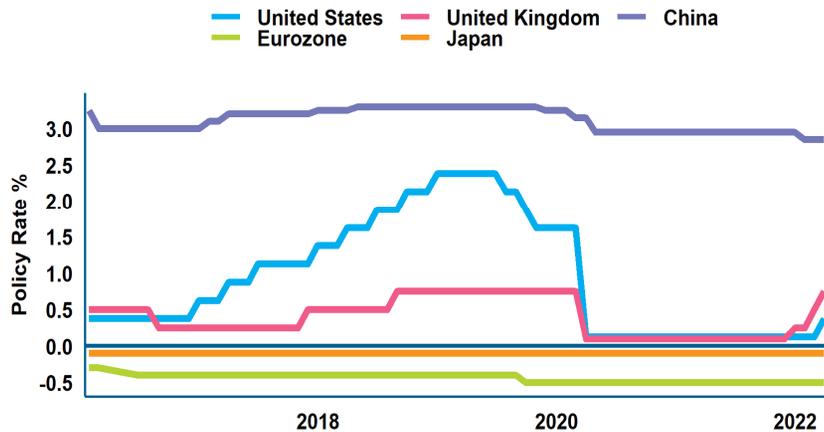


- Global economies are expected to slow in 2022 compared to 2021 but are forecasted to have another year of largely above-trend growth as economies continue to emerge from the pandemic.
- Looking forward, the track of the conflict between Russia and Ukraine, continued supply chain issues, ongoing inflationary pressures, tighter monetary policy, and lingering pandemic problems all remain key.

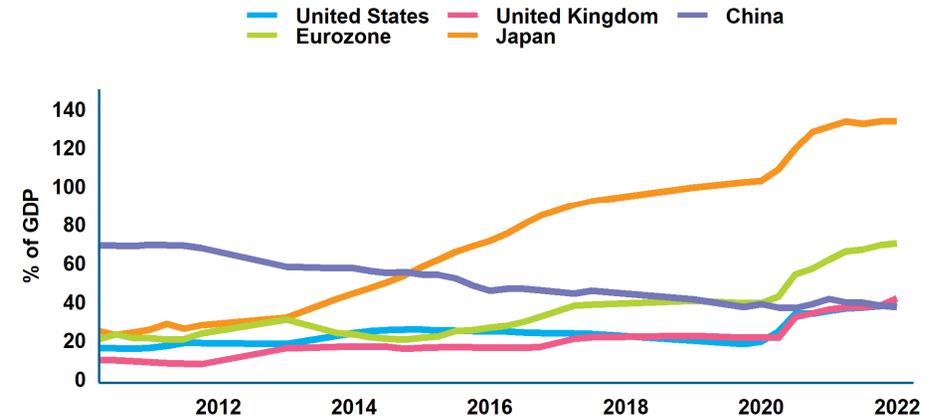
<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated March 2022.

### Central Bank Response<sup>1</sup>

#### Policy Rates



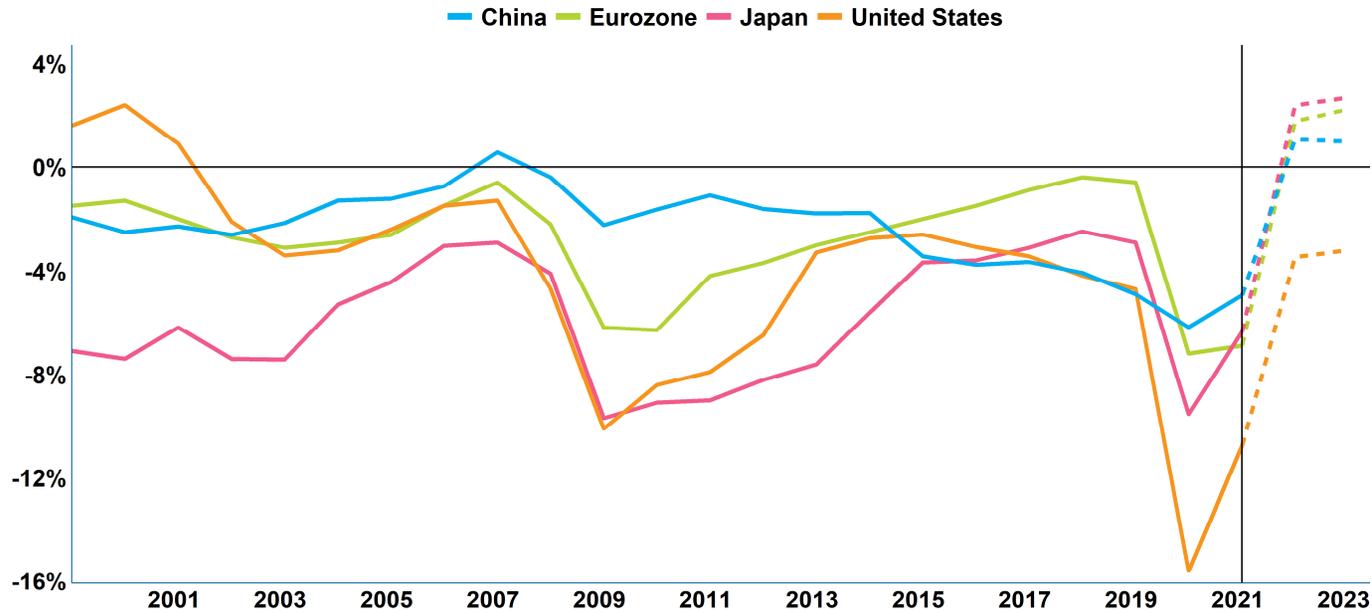
#### Balance Sheet as % of GDP



- After global central banks took extraordinary action to support the economy during the pandemic including policy rate cuts and emergency stimulus through quantitative easing (QE), many are considering reducing support in the face of high inflation.
- The pace of withdrawing support will likely vary across central banks with the US expected to take a more aggressive approach. The risk remains for a policy error, particularly overtightening, as the war in Ukraine could suppress global growth.
- The one notable outlier is China, where the central bank recently lowered rates and reserve requirements in response to slowing growth.

<sup>1</sup> Source: Bloomberg. Policy rate data is as of March 31, 2022. 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 December 31, 2021.

**Budget Surplus / Deficit as a Percentage of GDP<sup>1</sup>**

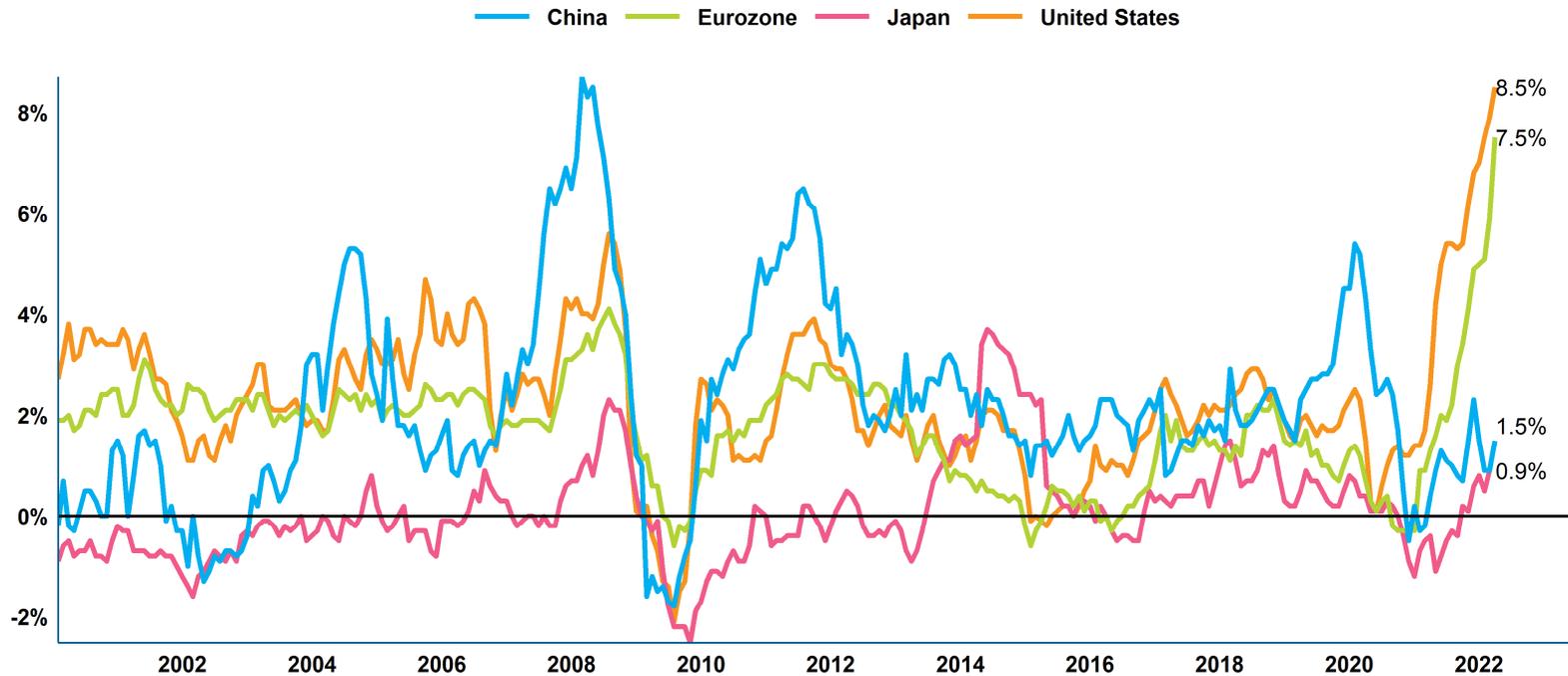


→ Budget deficits as a percentage of GDP drastically increased for major world economies, particularly the US, due to massive fiscal support and the severe economic contraction's effect on tax revenue in 2020 and 2021.

→ As fiscal stimulus programs end, and economic recoveries continue, deficits should improve in the coming years.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022. Projections via IMF Forecasts from April 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

**Inflation (CPI Trailing Twelve Months)<sup>1</sup>**

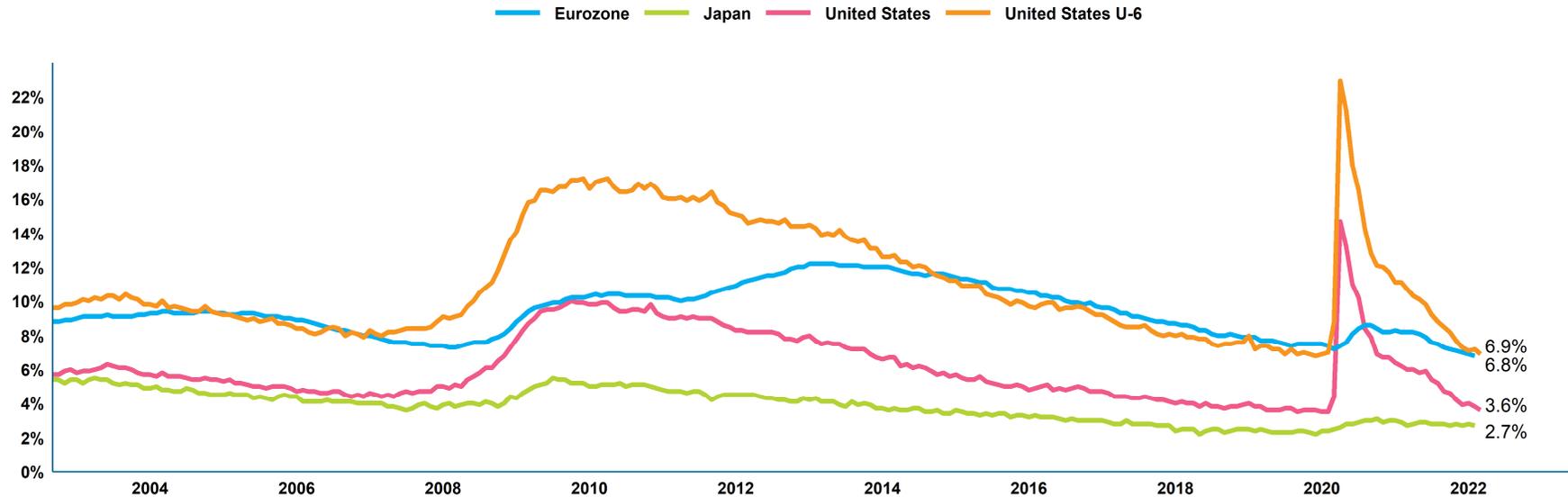


→ Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it continues to reach levels not seen in decades.

→ Supply issues related to the pandemic and higher prices in many key commodities driven by the Russia and Ukraine conflict have been key drivers of inflation globally.

<sup>1</sup> Source: Bloomberg. Data is as of March 2022, except for Japan, where the most recent data available is as of February 28, 2022.

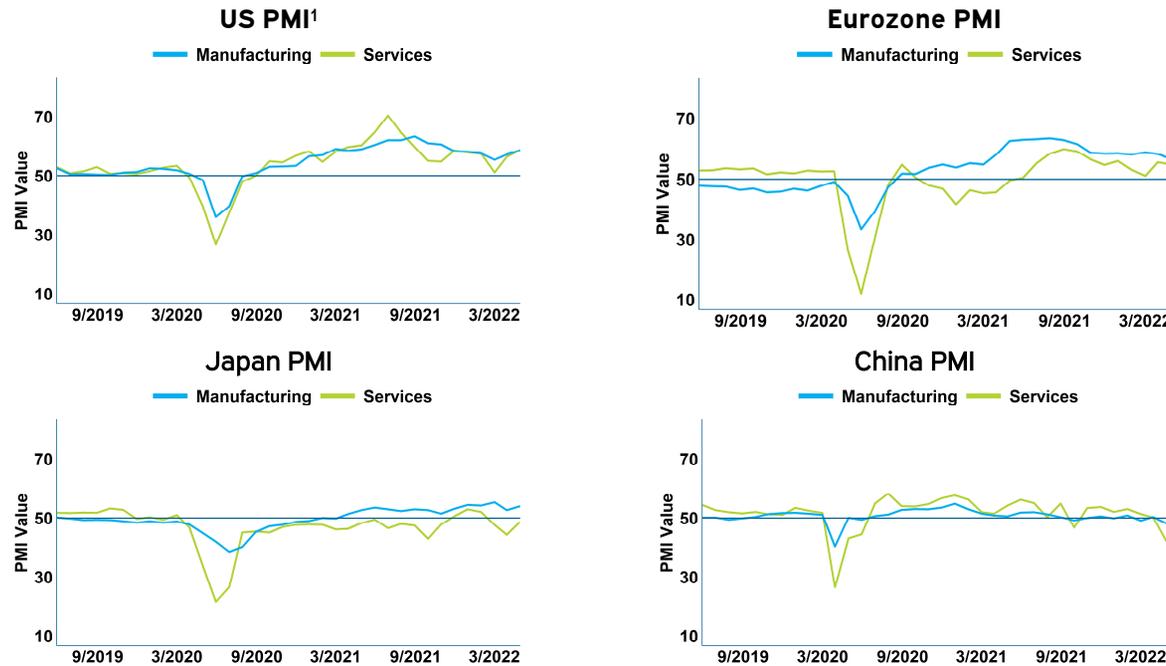
### Unemployment<sup>1</sup>



- As economies have largely reopened due to vaccines for the virus, improvements have been seen in the labor market.
- US unemployment, which experienced the steepest rise from the pandemic, has declined back to pre-pandemic levels. The broader measure (U-6) that includes discouraged and underemployed workers has declined but is much higher at 6.9%.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of February 28, 2022.

### Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have experienced pressures recently.
- Service sector PMIs have seen some improvements in the US and Europe lately as the effects of the Omicron variant wane, while Japan and China remain in contraction due to a rise in COVID-19 cases.
- In most countries, manufacturing PMIs are in expansion territory as pandemic-related production issues ease and orders increase. China is the one exception, though, with the manufacturing PMI falling below 50 in March due to increased COVID-19 restrictions.

<sup>1</sup> Source: Bloomberg. US Market Services and Manufacturing PMI, Caixin Services and Manufacturing PMI, Eurozone Market Services and Manufacturing PMI, Jibun Bank Services and Manufacturing PMI. Data is as of March 2022. Readings below 50 represent economic contractions.

US Dollar versus Broad Currencies<sup>1</sup>



- The US dollar continued its 2021 trend of strengthening against a broad basket of peers in the first quarter of 2022 with further increases after month-end.
- Safe-haven flows and higher rates have been key drivers of the dollar’s continued strength.
- A few commodity-sensitive currencies like the Brazilian real, South African rand, and Mexican peso have recently outpaced the dollar, given persistently high commodity prices.

<sup>1</sup> Source: Bloomberg. Data as of March 28, 2022.

## Summary

### Key Trends in 2022:

- The war in eastern Europe has created significant uncertainty going forward with a wide range of potential outcomes. Volatility will likely remain high.
- Expect growth to slow globally in 2022 but remain above trend. The track of the pandemic and war will be key.
- Inflationary pressures could linger, particularly if the Russian invasion of Ukraine intensifies or expands.
- The end of many fiscal programs will put the burden of continued growth on consumers. Higher energy and food prices will depress their ability to spend in other areas.
- Monetary policy will likely tighten globally but will remain relatively low. The risk of policy error remains.
- Valuations remain high in the US, but low rates and strong margins should be supportive.
- Outside the US, valuations remain lower in both emerging and developed markets, but risks remain.

## **Asset Class and Manager Commentary**

### Domestic Equity

→ Over the quarter ending March 31, 2022, domestic equity returned (5.6%), trailing the Russell 3000 benchmark by (0.3%). Reflecting the volatile market over the quarter, all of the managers generated negative absolute returns with mixed performance on relative basis.

- The passive strategies, namely **Northern Trust Russell 1000** and **iShares Edge MSCI Minimum Volatility**, performed in line with their respective benchmarks with acceptable tracking error. While it is not included in the current report, **iShares Edge MSCI Minimum Volatility** was replaced with **Wellington Defensive Equity** (hired in 2021) after the current reporting period.
- **Earnest Partners**, the Plan's active mid cap core manager, returned (5.7%), keeping pace with the Russell Midcap benchmark, placing its slight above the average in its peer group for the quarter. It has also outperformed its benchmark over all other time periods measured and maintained an above-average ranking since its inception in 2006.
- **Rice Hall James**, the Plan's active small cap growth manager, returned (11.5%) outperforming the Russell 2000 Growth benchmark by 1.1%, and placing in the 31<sup>st</sup> percentile for the quarter. The manager also outperformed its benchmark over the 1- and 3-year trailing periods by 9.2% and 1.5% respectively. While it has outperformed the benchmark over all time periods measured, due to its underperformance in 2018, Rice Hall James ranks below the Median fund over the 3-year trailing and since inception periods.
- **Brown Fundamental**, the Plan's active small cap value manager, returned (5.1%) over the quarter lagging its Russell 2000 Value benchmark by (2.7%) while outperforming the benchmark over the trailing 1-year period by 1.9%. Among its peers, Brown ranks below the Median fund as of March 2022.

### International Equity

→ For the quarter, the international equity segment returned (4.6%), outperforming the MSCI ACWI ex US benchmark by 0.7%; it has similarly outperformed over the 1-, 3-, and 5-year trailing periods by 3.1%, 1.2%, and 1.0% respectively.

- The Vanguard passive international developed markets portfolio posted (5.8%). Due to Vanguard's fair-value pricing methodology, the strategy has slightly deviated from its tracked index's return of (5.3%); however, the deviation along with its excess return are expected to equalize over the longer term.
- **SGA MSCI ACWI ex US**, the Plan's active core international equity manager, returned (3.9%) outperforming its benchmark by 1.4% over the quarter placing it in the top quartile amongst its peers. It has also outperformed its benchmark over the 1-year trailing period by 3.4% even though it has trailed the benchmark by (1.4%) since inception in December 2019.

**Fixed Income**

- Over the quarter, the Fixed Income aggregate returned (6.0%), slightly outperforming the Bloomberg Universal benchmark by 0.1%. Reflecting the broad market trends, core fixed income managers in this portfolio posted similar absolute returns with mixed relative performance over the quarter.
- Over the other time periods, except **Wellington Core Bond**, which was funded one year ago, the managers have consistently outperformed their benchmark and have generally maintained an above average peer ranking across time.
- **Ramirez** returned (6.1%) over the quarter, trailing the benchmark by (0.2%) placing it below the Median rank in the peer group. However, Ramirez has outperformed its benchmark over the 1-, 3-, and 5-year trailing periods by 0.7%, 0.4%, and 0.7% respectively, and maintained an above average ranking over the 1- and 5-year trailing periods.
  - **Reams** posted (5.5%) over the quarter outperforming its benchmark by 0.6% and placing it above average in its peer group. It has also outperformed the benchmark over 1-, 3-, and 5-year trailing periods by 1.0%, 3.8%, and 2.5% respectively and maintained an above average rank over all these periods. It is noteworthy that over the 3- and 5-year periods, **Reams** ranks in the 3<sup>rd</sup> percentile amongst its peers.
  - **Wellington Core Bond**, the core fixed income manager funded a year ago in April 2021, returned (6.3%) over the quarter trailing the benchmark by (0.4%). It has also trailed the benchmark over the past year by the same magnitude.

**Credit**

→ With **Polen Capital** as the Plan's sole Credit manager, the **Credit** portfolio returned (1.1%) over the quarter, outperforming the asset class's benchmark, Bloomberg US High Yield, by 3.7%. It has also outperformed the same over the 1-, 3-, and 5-year periods by 5.3%, 1.1%, and 1.3% respectively. Among its peers, **Polen** ranks in the top quartile across all these periods; in the shorter term (2022 Q1 and 1-year period), it ranks within top-ten among its peers.

- This manager was formerly known as DDJ. As DDJ was recently acquired by **Polen Capital**, the manager remains on the Watchlist to monitor its progress and organization changes.

### Covered Calls

→ Over the quarter, the **Covered Calls** portfolio returned (2.6%) trailing its benchmark by (3.4%). The segment also trailed the benchmark over the trailing 1-year period; however, over the longer 3- and 5-year periods, it has outperformed the benchmark by 5.9% and 4.5% respectively.

- **Parametric DeltaShift**, the Plan's active covered calls allocation returned (3.3%), trailing its benchmark, the CBOE BXM, index by (4.1%) over the quarter. However, it has outperformed the benchmark over all other time periods measured. In comparison with the managers in the US Large Cap Core Equity – which is an imperfect peer group for the strategy – it has ranked above average during the quarter and over 1- and 3-year trailing periods while moderately below average over the long-term 5-year trailing period.
- **Parametric BXM**, the Plan's passive covered calls allocation returned (1.6%), trailing its benchmark, the CBOE BXM index, by (2.4%). It has also trailed the benchmark over the 1-year trailing period by (3.7%) while outperforming it over the 3- and 5-year periods. While this passive strategy ranks in the top quartile during the quarter, it ranks in the bottom quartile over all other, longer trailing periods. As noted above, we ought to keep in mind that the peer group available for the **Covered Calls** asset class is an imperfect comparison.

**Crisis Risk Offset**

→ Over the quarter, the **Crisis Risk Offset** (CRO) portfolio posted (8.6%), trailing its benchmark SG Multi Alternative Risk Premia Index by (8.2%). While the CRO component is benchmarked against the SG Multi Alternative Risk Premia Index, **Vanguard Long-Term Treasury ETF** was the sole funded investment in the portfolio for most part of the quarter; it therefore requires caution in evaluating the segment's performance.

- **Vanguard Long-Term Treasury ETF** performed within expectations as a passive manager during the quarter as well as over the trailing 1-year period.
- As part of the long-term development of this asset class, **Kepos** was added as the Alternative Risk Premia manager in February.
- Another manager, **Versor**, was added to the portfolio after this reporting period in April 2022 as the Systematic Trend Following manager.

**1Q 2021 Performance  
as of March 31, 2022**

### OPFRS Total Plan | As of March 31, 2022

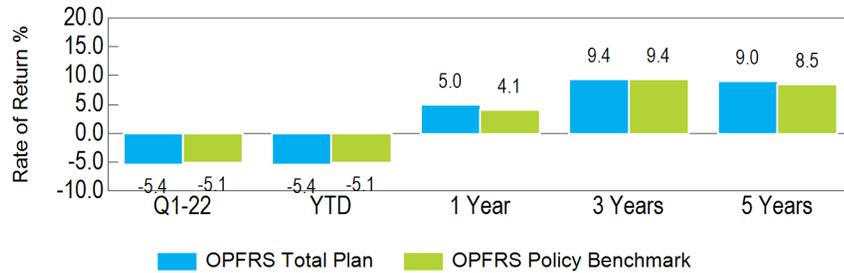
3 Months Ending March 31, 2022		
	Anlzd Return	Standard Deviation

OPFRS Total Plan	-2.39%	3.08%
OPFRS Policy Benchmark	-2.78%	2.67%
InvMetrics Public DB \$250mm-\$1B Gross Median	-1.96%	2.61%

1 Year Ending March 31, 2022		
	Anlzd Return	Standard Deviation

OPFRS Total Plan	4.96%	2.44%
OPFRS Policy Benchmark	4.10%	2.22%

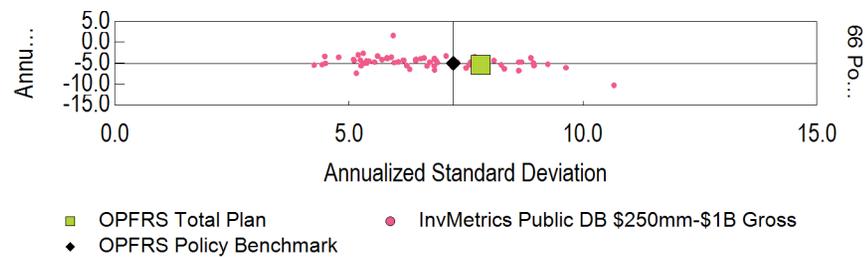
### Return Summary Ending March 31, 2022



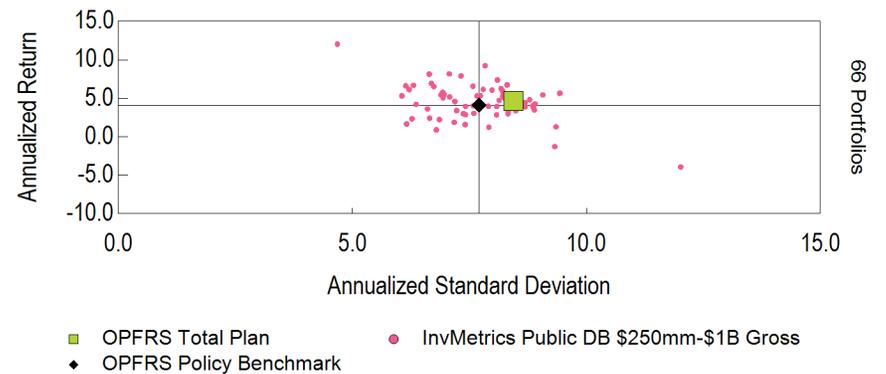
### Summary of Cash Flows

	Quarter-To-Date	One Year
Beginning Market Value	\$483,220,978	\$443,301,342
Net Cash Flow	-\$7,726,635	-\$17,426,181
Capital Appreciation	-\$26,120,897	\$23,498,003
Ending Market Value	\$449,373,445	\$449,373,445

### Annualized Return vs. Annualized Standard Deviation 3 Months Ending March 31, 2022

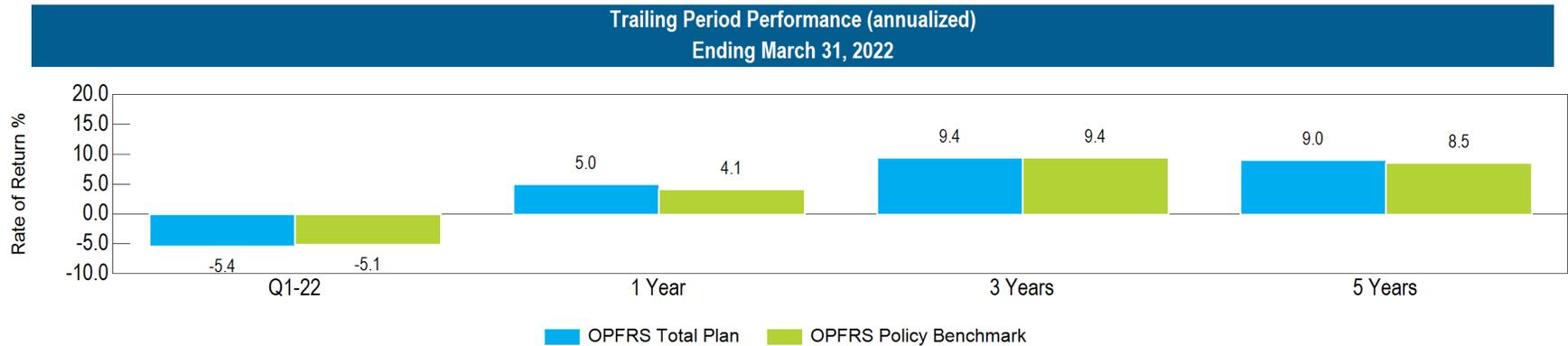


### Annualized Return vs. Annualized Standard Deviation 1 Year Ending March 31, 2022

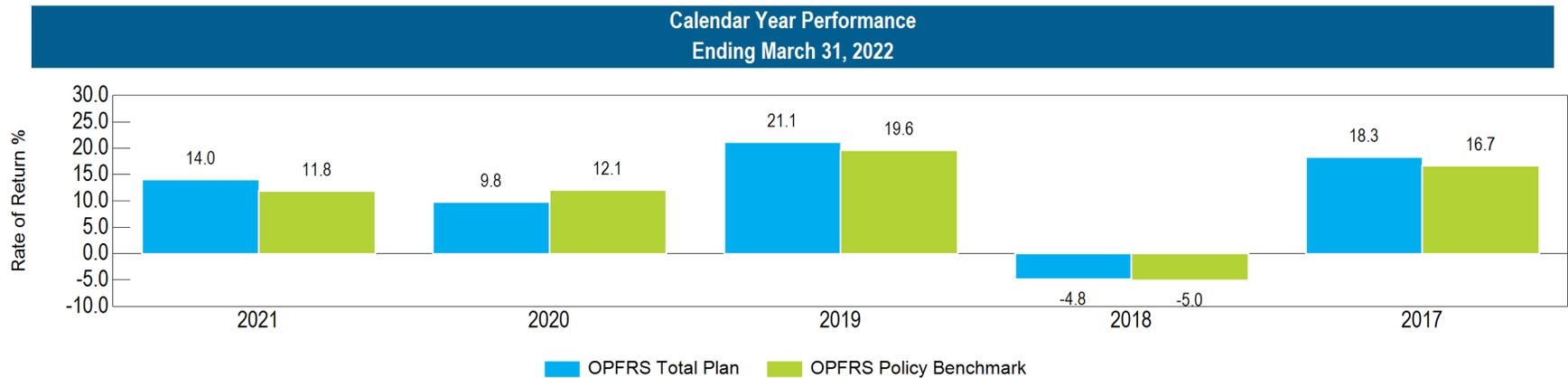


	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>OPFRS Total Plan</b>	<b>-5.4</b>	<b>-0.1</b>	<b>5.0</b>	<b>9.4</b>	<b>9.0</b>	<b>8.0</b>	<b>8.2</b>
<i>OPFRS Policy Benchmark</i>	<i>-5.1</i>	<i>-1.1</i>	<i>4.1</i>	<i>9.4</i>	<i>8.5</i>	<i>7.9</i>	<i>7.8</i>
Excess Return	-0.3	1.0	0.9	0.0	0.5	0.1	0.4
<b>Domestic Equity</b>	<b>-5.6</b>	<b>3.2</b>	<b>10.0</b>	<b>16.7</b>	<b>14.5</b>	<b>12.7</b>	<b>13.8</b>
<i>Russell 3000 (Blend)</i>	<i>-5.3</i>	<i>3.4</i>	<i>11.9</i>	<i>18.2</i>	<i>15.4</i>	<i>13.4</i>	<i>14.3</i>
Excess Return	-0.3	-0.2	-1.9	-1.5	-0.9	-0.7	-0.5
<b>International Equity</b>	<b>-4.6</b>	<b>-2.8</b>	<b>2.1</b>	<b>9.2</b>	<b>8.3</b>	<b>6.5</b>	<b>6.9</b>
<i>MSCI ACWI ex US (Blend)</i>	<i>-5.3</i>	<i>-6.3</i>	<i>-1.0</i>	<i>8.0</i>	<i>7.3</i>	<i>5.7</i>	<i>6.0</i>
Excess Return	0.7	3.5	3.1	1.2	1.0	0.8	0.9
<b>Fixed Income</b>	<b>-6.0</b>	<b>-5.8</b>	<b>-3.5</b>	<b>2.2</b>	<b>2.9</b>	<b>2.6</b>	<b>2.9</b>
<i>Bloomberg Universal (Blend)</i>	<i>-6.1</i>	<i>-6.1</i>	<i>-4.2</i>	<i>1.9</i>	<i>2.3</i>	<i>2.2</i>	<i>2.6</i>
Excess Return	0.1	0.3	0.7	0.3	0.6	0.4	0.3
<b>Credit</b>	<b>-1.1</b>	<b>1.3</b>	<b>4.6</b>	<b>5.7</b>	<b>6.0</b>	<b>6.0</b>	<b>--</b>
<i>Bloomberg US High Yield TR</i>	<i>-4.8</i>	<i>-3.3</i>	<i>-0.7</i>	<i>4.6</i>	<i>4.7</i>	<i>5.0</i>	<i>--</i>
Excess Return	3.7	4.6	5.3	1.1	1.3	1.0	--
<b>Covered Calls</b>	<b>-2.6</b>	<b>7.2</b>	<b>14.3</b>	<b>14.8</b>	<b>11.8</b>	<b>11.0</b>	<b>--</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>0.8</i>	<i>9.3</i>	<i>14.9</i>	<i>8.9</i>	<i>7.3</i>	<i>7.3</i>	<i>--</i>
Excess Return	-3.4	-2.1	-0.6	5.9	4.5	3.7	--
<b>Crisis Risk Offset</b>	<b>-8.6</b>	<b>-6.8</b>	<b>-1.2</b>	<b>-11.3</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>SG Multi Alternative Risk Premia Index</i>	<i>-0.4</i>	<i>1.2</i>	<i>3.3</i>	<i>-2.8</i>	<i>--</i>	<i>--</i>	<i>--</i>
Excess Return	-8.2	-8.0	-4.5	-8.5	--	--	--

Fiscal year begins on July 1.



	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	2017 (%)	2018 (%)	2019 (%)	2020 (%)	2021 (%)
<b>OPFRS Total Plan</b>	-5.4	-0.1	5.0	9.4	9.0	18.3	-4.8	21.1	9.8	14.0
<i>OPFRS Policy Benchmark</i>	-5.1	-1.1	4.1	9.4	8.5	16.7	-5.0	19.6	12.1	11.8
<i>InvMetrics Public DB \$250mm-\$1B Gross Median</i>	-4.8	-0.7	4.5	10.7	9.2	15.8	-4.1	18.6	13.1	13.6

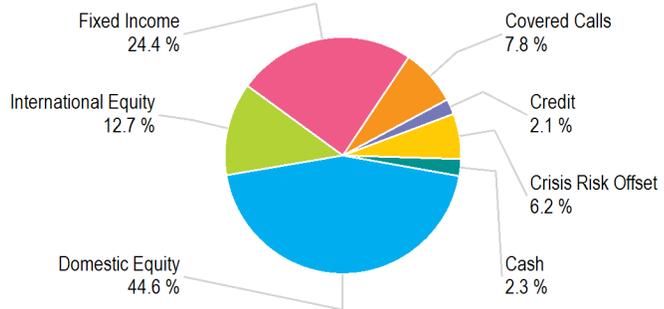


Fiscal year begins on July 1.

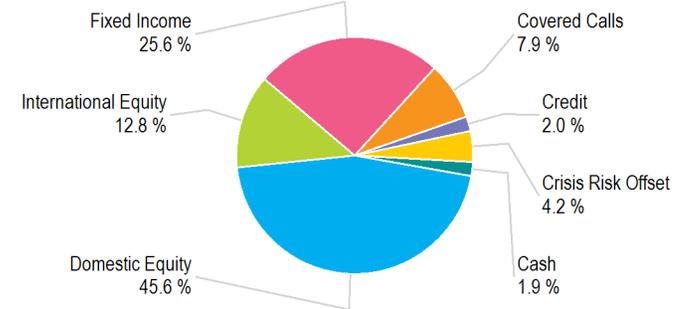
#### Asset Allocation vs. Target As Of March 31, 2022

	Current	%	Policy	Difference*
Domestic Equity	\$200,637,476	44.6%	40.0%	4.6%
International Equity	\$56,850,045	12.7%	12.0%	0.7%
Fixed Income	\$109,591,367	24.4%	31.0%	-6.6%
Covered Calls	\$35,018,022	7.8%	5.0%	2.8%
Credit	\$9,250,051	2.1%	2.0%	0.1%
Crisis Risk Offset	\$27,661,952	6.2%	10.0%	-3.8%
Cash	\$10,364,533	2.3%	0.0%	2.3%

March 31, 2022: \$449,834,415



March 31, 2021: \$483,220,978



Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers.

Target weightings reflect the Plan's evolving asset allocation (effective 5/31/2017.)

	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Domestic Equity</b>	<b>200,637,476</b>	<b>100.0</b>	<b>-5.6</b>	<b>10.0</b>	<b>16.7</b>	<b>14.5</b>	<b>9.4</b>	<b>Jun-97</b>
<i>Russell 3000 (Blend)</i>			<i>-5.3</i>	<i>11.9</i>	<i>18.2</i>	<i>15.4</i>	<i>9.6</i>	<i>Jun-97</i>
Excess Return			-0.3	-1.9	-1.5	-0.9	-0.2	
Northern Trust Russell 1000	103,327,856	51.5	-5.1	13.3	18.7	15.8	15.0	Jun-10
<i>Russell 1000</i>			<i>-5.1</i>	<i>13.3</i>	<i>18.7</i>	<i>15.8</i>	<i>15.0</i>	<i>Jun-10</i>
Excess Return			0.0	0.0	0.0	0.0	0.0	
<i>eV US Large Cap Core Equity Gross Rank</i>			<i>55</i>	<i>58</i>	<i>35</i>	<i>40</i>	<i>43</i>	<i>Jun-10</i>
EARNEST Partners	48,590,675	24.2	-5.7	8.2	18.3	16.1	11.2	Apr-06
<i>Russell MidCap</i>			<i>-5.7</i>	<i>6.9</i>	<i>14.9</i>	<i>12.6</i>	<i>9.6</i>	<i>Apr-06</i>
Excess Return			0.0	1.3	3.4	3.5	1.6	
<i>eV US Mid Cap Core Equity Gross Rank</i>			<i>45</i>	<i>41</i>	<i>13</i>	<i>8</i>	<i>28</i>	<i>Apr-06</i>
iShares Edge MSCI Min Vol ETF	22,076,344	11.0	-3.8	13.6	--	--	21.8	Apr-20
<i>MSCI USA Minimum Volatility GR USD</i>			<i>-3.8</i>	<i>13.8</i>	<i>--</i>	<i>--</i>	<i>21.9</i>	<i>Apr-20</i>
Excess Return			0.0	-0.2			-0.1	
<i>eV US Low Volatility Equity Gross Rank</i>			<i>53</i>	<i>51</i>	<i>--</i>	<i>--</i>	<i>80</i>	<i>Apr-20</i>
Rice Hall James	15,430,352	7.7	-11.5	-5.1	11.4	--	10.5	Jul-17
<i>Russell 2000 Growth</i>			<i>-12.6</i>	<i>-14.3</i>	<i>9.9</i>	<i>--</i>	<i>9.9</i>	<i>Jul-17</i>
Excess Return			1.1	9.2	1.5		0.6	
<i>eV US Small Cap Growth Equity Gross Rank</i>			<i>31</i>	<i>37</i>	<i>85</i>	<i>--</i>	<i>91</i>	<i>Jul-17</i>
Brown Fundamental Small Cap Value	11,212,249	5.6	-5.1	5.2	--	--	5.2	Apr-21
<i>Russell 2000 Value</i>			<i>-2.4</i>	<i>3.3</i>	<i>--</i>	<i>--</i>	<i>3.3</i>	<i>Apr-21</i>
Excess Return			-2.7	1.9			1.9	
<i>eV US Small Cap Value Equity Gross Rank</i>			<i>72</i>	<i>55</i>	<i>--</i>	<i>--</i>	<i>55</i>	<i>Apr-21</i>

	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>International Equity</b>	<b>57,310,971</b>	<b>100.0</b>	<b>-4.6</b>	<b>2.1</b>	<b>9.2</b>	<b>8.3</b>	<b>5.7</b>	<b>Jan-98</b>
<i>MSCI ACWI ex US (Blend)</i>			<i>-5.3</i>	<i>-1.0</i>	<i>8.0</i>	<i>7.3</i>	<i>5.7</i>	<i>Jan-98</i>
Excess Return			0.7	3.1	1.2	1.0	0.0	
SGA ACWI ex-U.S. Equity	40,766,479	71.1	-3.9	2.4	--	--	6.3	Dec-19
<i>MSCI ACWI ex USA Gross</i>			<i>-5.3</i>	<i>-1.0</i>	--	--	<i>7.7</i>	<i>Dec-19</i>
Excess Return			1.4	3.4			-1.4	
<i>eV ACWI ex-US All Cap Core Eq Gross Rank</i>			<i>19</i>	<i>26</i>	--	--	<i>89</i>	<i>Dec-19</i>
Vanguard Developed Markets ETF	16,083,566	28.1	-5.8	0.7	--	--	10.4	Sep-19
<i>FTSE Developed All Cap Ex US TR USD</i>			<i>-5.2</i>	<i>1.9</i>	--	--	<i>11.0</i>	<i>Sep-19</i>
Excess Return			-0.6	-1.2			-0.6	
<i>eV ACWI ex-US All Cap Core Eq Gross Rank</i>			<i>41</i>	<i>39</i>	--	--	<i>73</i>	<i>Sep-19</i>

	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Fixed Income</b>	<b>109,591,411</b>	<b>100.0</b>	<b>-6.0</b>	<b>-3.5</b>	<b>2.2</b>	<b>2.9</b>	<b>5.1</b>	<b>Dec-93</b>
<i>Bloomberg Universal (Blend)</i>			<i>-6.1</i>	<i>-4.2</i>	<i>1.9</i>	<i>2.3</i>	<i>4.9</i>	<i>Dec-93</i>
Excess Return			0.1	0.7	0.3	0.6	0.2	
Ramirez	74,513,589	68.0	-6.1	-3.5	2.1	2.8	2.8	Jan-17
<i>Bloomberg US Aggregate TR</i>			<i>-5.9</i>	<i>-4.2</i>	<i>1.7</i>	<i>2.1</i>	<i>2.2</i>	<i>Jan-17</i>
Excess Return			-0.2	0.7	0.4	0.7	0.6	
<i>eV US Core Fixed Inc Gross Rank</i>			83	28	72	33	33	<i>Jan-17</i>
Reams	27,928,505	25.5	-5.5	-3.2	5.7	4.8	5.6	Feb-98
<i>Bloomberg Universal (Blend)</i>			<i>-6.1</i>	<i>-4.2</i>	<i>1.9</i>	<i>2.3</i>	<i>4.5</i>	<i>Feb-98</i>
Excess Return			0.6	1.0	3.8	2.5	1.1	
<i>eV US Core Plus Fixed Inc Gross Rank</i>			36	42	3	3	44	<i>Feb-98</i>
Wellington Core Bond	7,149,273	6.5	-6.3	-4.6	--	--	-4.6	Apr-21
<i>Bloomberg US Aggregate TR</i>			<i>-5.9</i>	<i>-4.2</i>	--	--	<i>-4.2</i>	<i>Apr-21</i>
Excess Return			-0.4	-0.4			-0.4	
<i>eV US Core Fixed Inc Gross Rank</i>			95	96	--	--	96	<i>Apr-21</i>

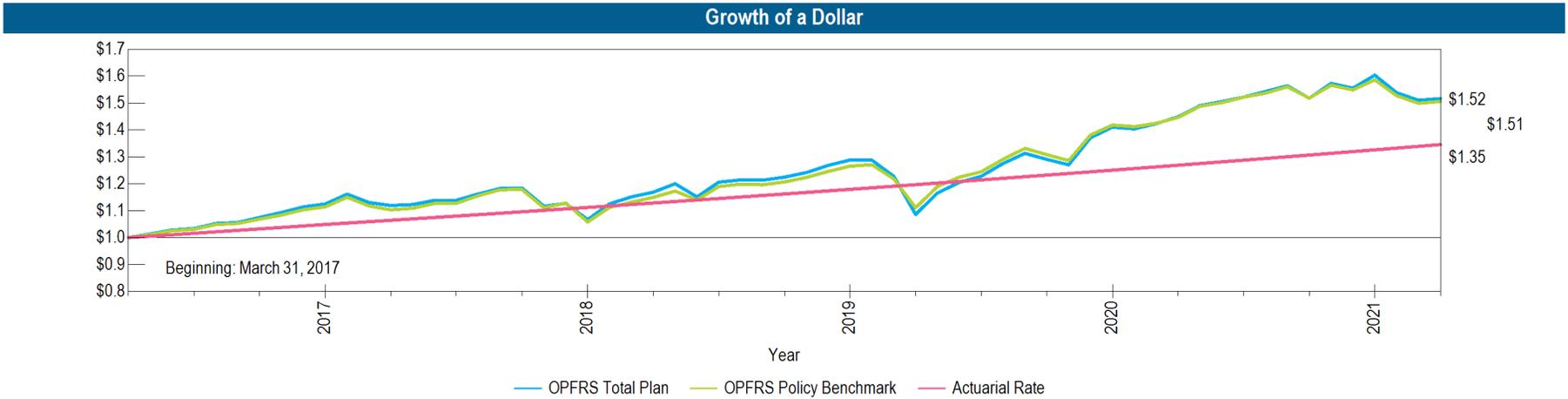
## Oakland Police and Fire Retirement System Total Plan

### Manager Performance - Gross of Fees | As of March 31, 2022

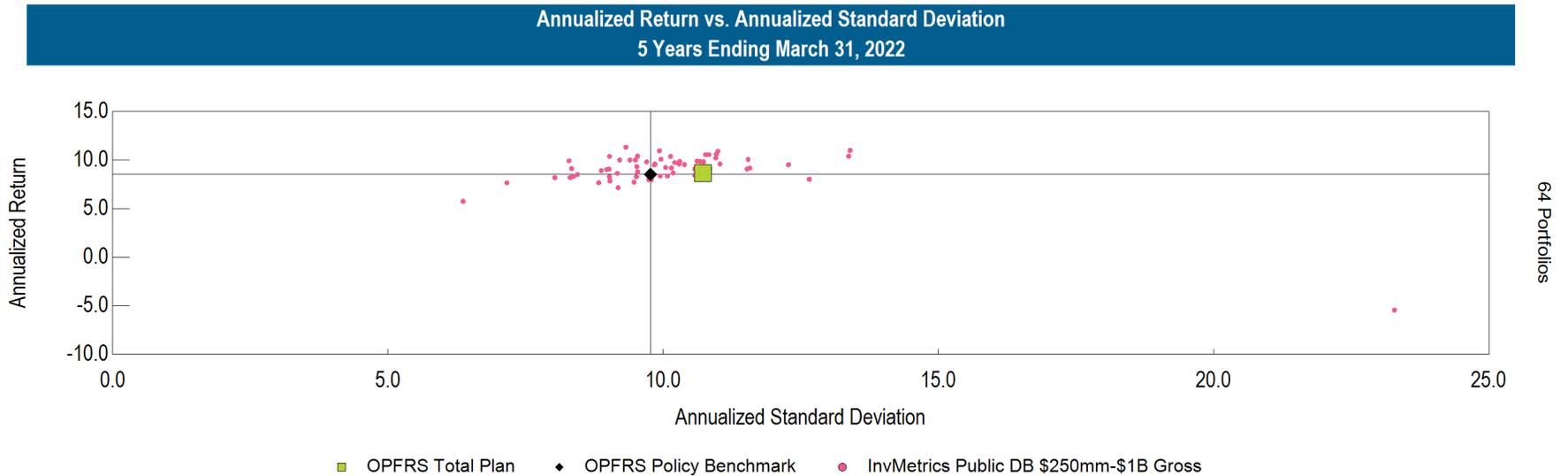
	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Credit</b>	<b>9,250,051</b>	<b>100.0</b>	<b>-1.1</b>	<b>4.6</b>	<b>5.7</b>	<b>6.0</b>	<b>6.2</b>	<b>Feb-15</b>
<i>Bloomberg US High Yield TR</i>			<i>-4.8</i>	<i>-0.7</i>	<i>4.6</i>	<i>4.7</i>	<i>5.2</i>	<i>Feb-15</i>
Excess Return			3.7	5.3	1.1	1.3	1.0	
Polen Capital	9,250,051	100.0	-1.1	4.6	5.7	6.0	6.2	Feb-15
<i>ICE BofA High Yield Master TR</i>			<i>-4.5</i>	<i>-0.3</i>	<i>4.4</i>	<i>4.6</i>	<i>5.1</i>	<i>Feb-15</i>
Excess Return			3.4	4.9	1.3	1.4	1.1	
<i>eV US High Yield Fixed Inc Gross Rank</i>			<i>8</i>	<i>5</i>	<i>23</i>	<i>12</i>	<i>16</i>	<i>Feb-15</i>

	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Covered Calls</b>	<b>35,018,022</b>	<b>100.0</b>	<b>-2.6</b>	<b>14.3</b>	<b>14.8</b>	<b>11.8</b>	<b>10.4</b>	<b>Apr-14</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>0.8</i>	<i>14.9</i>	<i>8.9</i>	<i>7.3</i>	<i>7.0</i>	<i>Apr-14</i>
Excess Return			-3.4	-0.6	5.9	4.5	3.4	
Parametric DeltaShift	17,664,992	50.4	-3.3	16.8	18.6	14.6	12.8	Apr-14
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>0.8</i>	<i>14.9</i>	<i>8.9</i>	<i>7.3</i>	<i>7.0</i>	<i>Apr-14</i>
Excess Return			-4.1	1.9	9.7	7.3	5.8	
<i>eV US Large Cap Core Equity Gross Rank</i>			<i>25</i>	<i>17</i>	<i>37</i>	<i>64</i>	<i>64</i>	<i>Apr-14</i>
Parametric BXM	17,353,030	49.6	-1.6	11.2	10.5	8.8	8.2	Apr-14
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>0.8</i>	<i>14.9</i>	<i>8.9</i>	<i>7.3</i>	<i>7.0</i>	<i>Apr-14</i>
Excess Return			-2.4	-3.7	1.6	1.5	1.2	
<i>eV US Large Cap Core Equity Gross Rank</i>			<i>12</i>	<i>75</i>	<i>98</i>	<i>98</i>	<i>98</i>	<i>Apr-14</i>

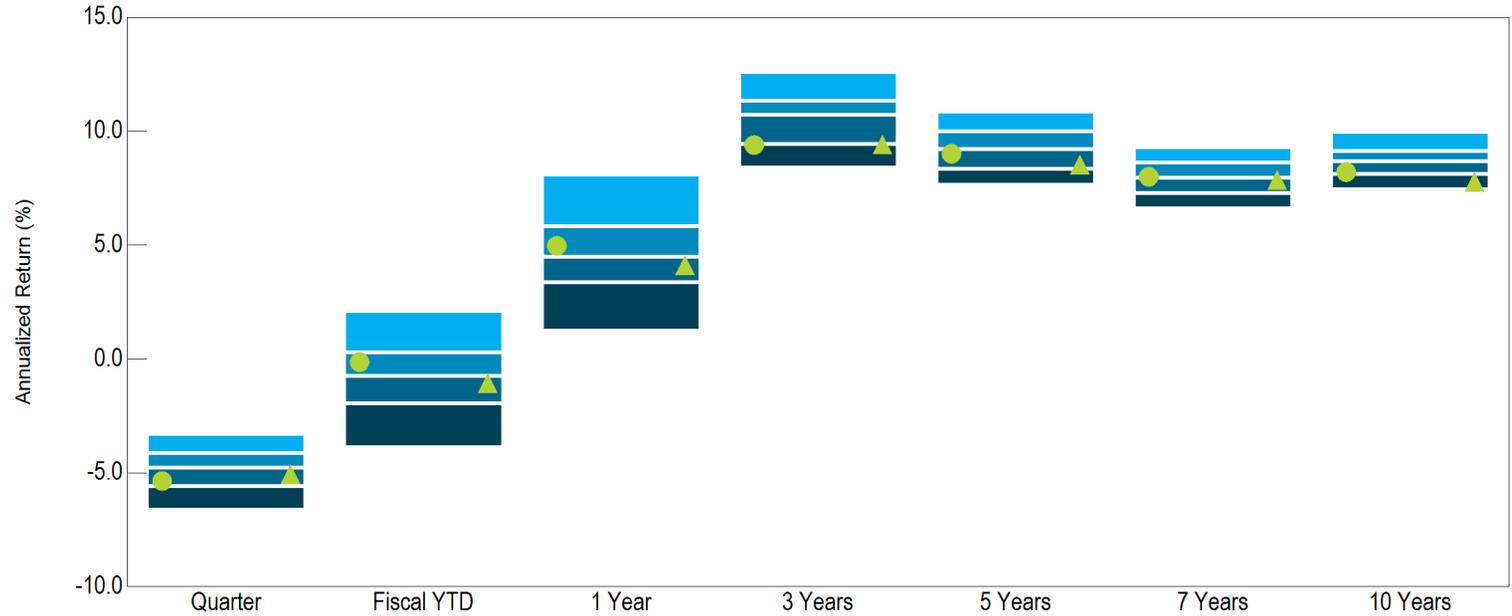
	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Crisis Risk Offset</b>	<b>27,661,952</b>	<b>100.0</b>	<b>-8.6</b>	<b>-1.2</b>	<b>-11.3</b>	<b>--</b>	<b>-9.7</b>	<b>Aug-18</b>
<i>SG Multi Alternative Risk Premia Index</i>			<i>-0.4</i>	<i>3.3</i>	<i>-2.8</i>	<i>--</i>	<i>-2.0</i>	<i>Aug-18</i>
Excess Return			-8.2	-4.5	-8.5		-7.7	
Vanguard Long-Term Treasury ETF	17,883,935	64.7	-10.1	-2.8	--	--	0.8	Jul-19
<i>Bloomberg US Govt Long TR</i>			<i>-10.6</i>	<i>-1.5</i>	<i>--</i>	<i>--</i>	<i>1.4</i>	<i>Jul-19</i>
Excess Return			0.5	-1.3			-0.6	
<i>eV US Long Duration - Gov/Cred Fixed Inc Net Rank</i>			<i>24</i>	<i>36</i>	<i>--</i>	<i>--</i>	<i>99</i>	<i>Jul-19</i>
Kepos Alternative Risk Premia	9,778,017	35.3	--	--	--	--	-2.1	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>			<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.2</i>	<i>Feb-22</i>
Excess Return							-0.9	



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



#### InvMetrics Public DB \$250mm-\$1B Gross Return Comparison



	Quarter		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
<b>5th Percentile</b>	-3.3	2.1	8.1	12.6	10.9	9.3	10.0							
<b>25th Percentile</b>	-4.1	0.3	5.8	11.4	10.0	8.6	9.1							
<b>Median</b>	-4.8	-0.7	4.5	10.7	9.2	8.0	8.7							
<b>75th Percentile</b>	-5.6	-1.9	3.4	9.4	8.4	7.3	8.1							
<b>95th Percentile</b>	-6.6	-3.9	1.2	8.4	7.7	6.6	7.4							
<b># of Portfolios</b>	66	66	66	66	64	62	60							
<b>● OPFRS Total Plan</b>	-5.4 (70)	-0.1 (37)	5.0 (46)	9.4 (78)	9.0 (63)	8.0 (50)	8.2 (73)							
<b>▲ OPFRS Policy Benchmark</b>	-5.1 (66)	-1.1 (55)	4.1 (55)	9.4 (78)	8.5 (72)	7.9 (58)	7.8 (85)							

Fiscal year begins on July 1.

### Manager Monitoring/Probation Status Return vs. Benchmark since Corrective Action (As of March 31, 2022)

Portfolio	Status	Concern	Months Since Corrective Action	Performance <sup>1</sup> Since Corrective Action (Gross, %)	Peer Group Percentile Ranking <sup>2</sup>	Date of Corrective Action <sup>3</sup>
Polen Capital <sup>4</sup>	On Watch	Performance/ Org changes	33	6.0	18	5/29/2019
ICE BofAML US High Yield				4.6		
Rice Hall James	On Watch	Performance	33	13.5	84	5/29/2019
Russell 2000 Growth				12.3		
Parametric	On Watch	Org changes	15	21.5	NA	10/28/2020
CBOE S&P 500 BuyWrite USD				19.5		

### Investment Performance Criteria for Manager Monitoring/Probation Status

Asset Class	Short-term (Rolling 12 months)	Medium-term (Rolling 36 months)	Long-term (60 + months)
<b>Active Domestic Equity</b>	Fund return < benchmark return by 3.5%	Annualized Fund return < benchmark return by 1.75% for 6 consecutive months	VRR <sup>5</sup> < 0.97 for 6 consecutive months
<b>Active International Equity</b>	Fund return < benchmark return by 4.5%	Annualized Fund return < benchmark return by 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
<b>Passive International Equity</b>	Tracking Error > 0.50%	Tracking Error > 0.45% for 6 consecutive months	Annualized Fund return < benchmark return by 0.40% for 6 consecutive months
Fixed Income	Fund return < benchmark return by 1.5%	Annualized Fund return < benchmark return by 1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months

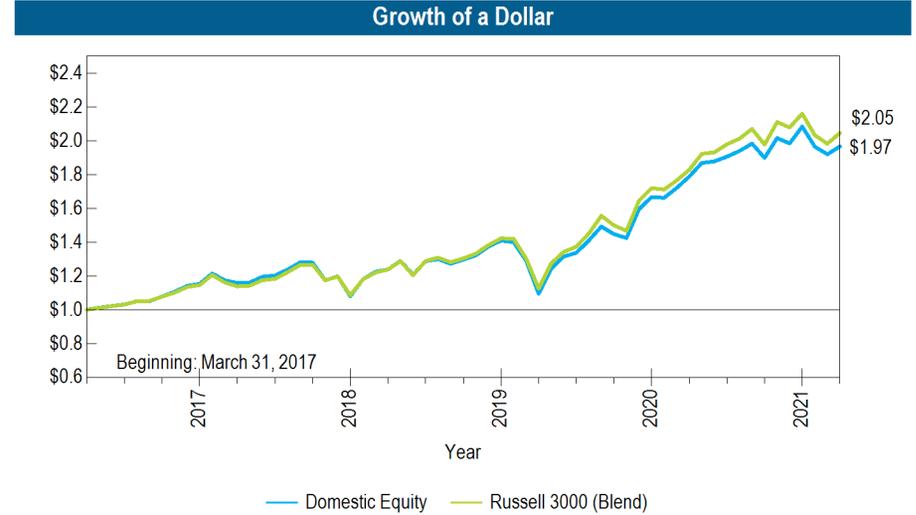
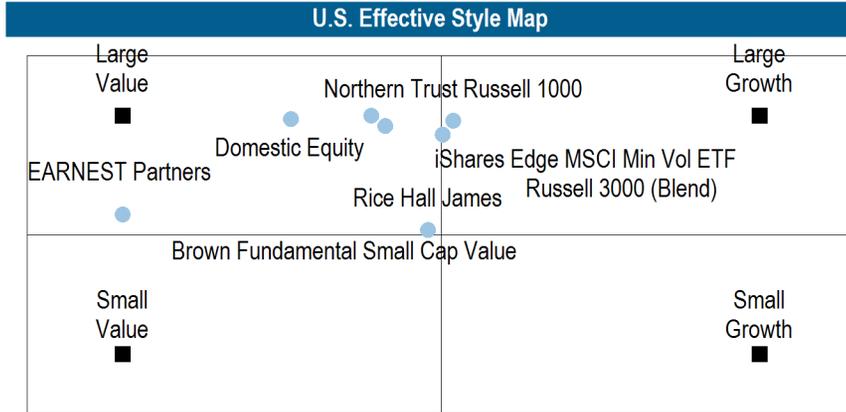
<sup>1</sup> Annualized performance if over one year

<sup>2</sup> Ranking over most recent quarter if on watch for less than 1 year, or over 1 year if on watch for more than a year.

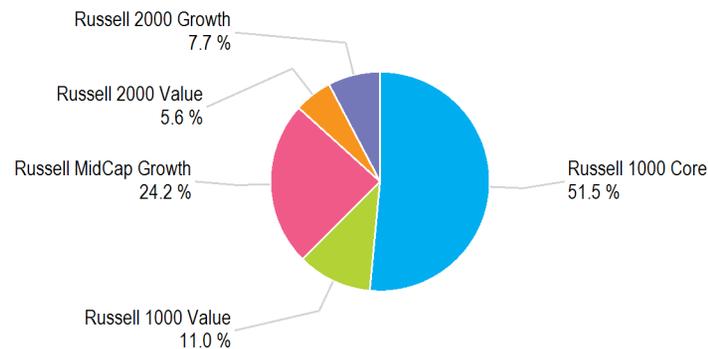
<sup>3</sup> Approximate date based on when the Board voted to either monitor a manager at a heightened level or place it on probation.

<sup>4</sup> Polen Capital High Yield strategy was formerly known as DDJ High Yield prior to 2022.

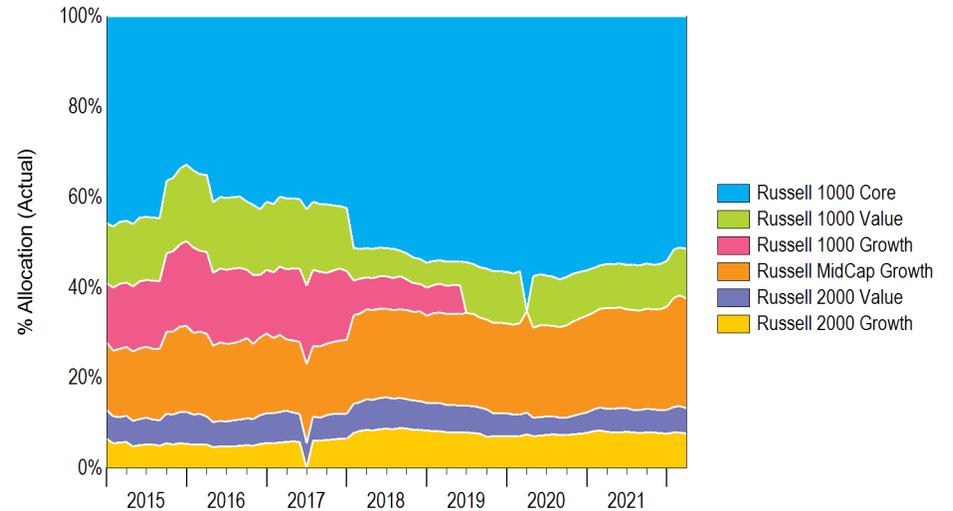
<sup>5</sup> VRR (Value Relative Ratio) is calculated as manager cumulative return/ benchmark return.



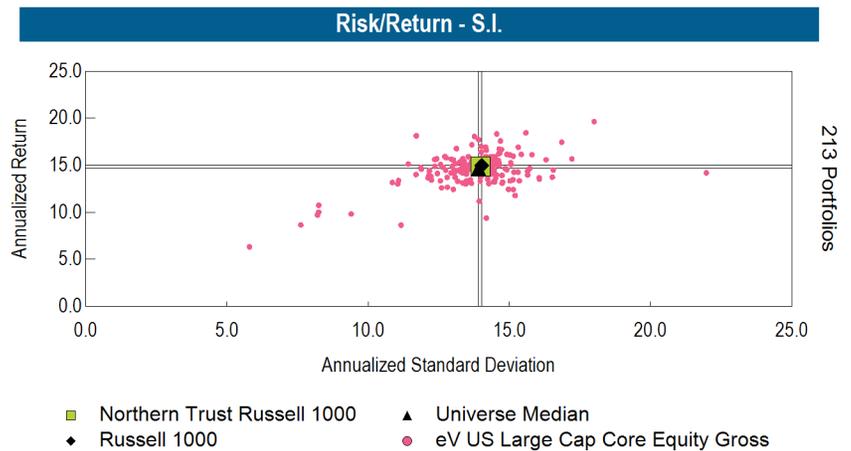
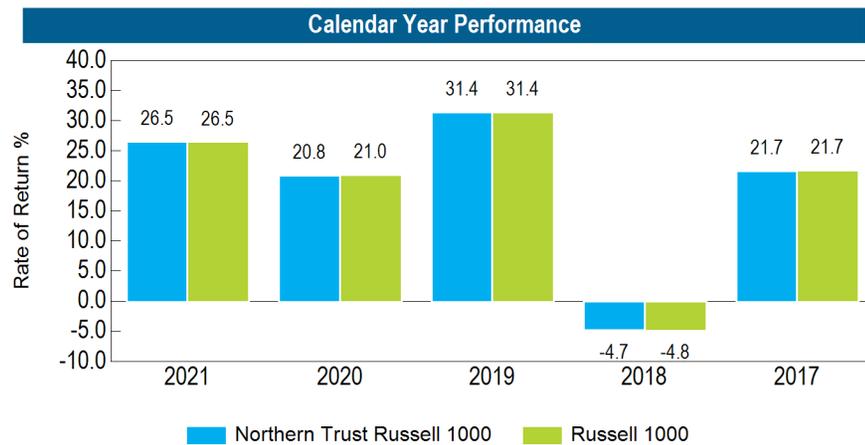
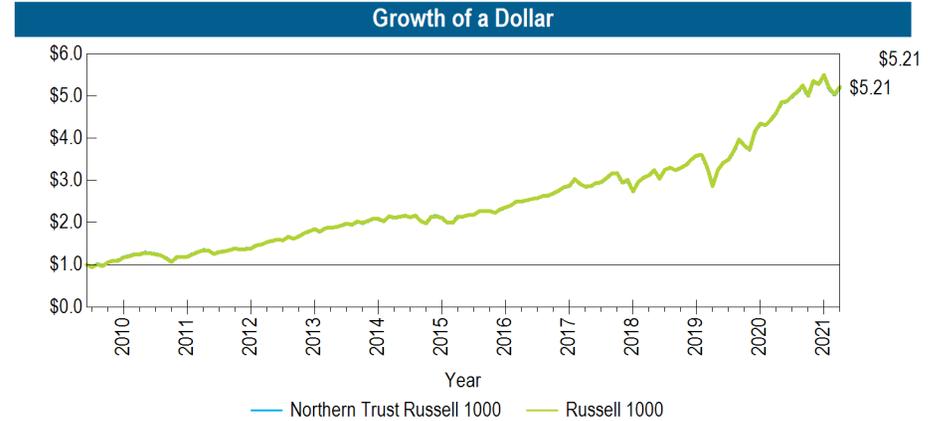
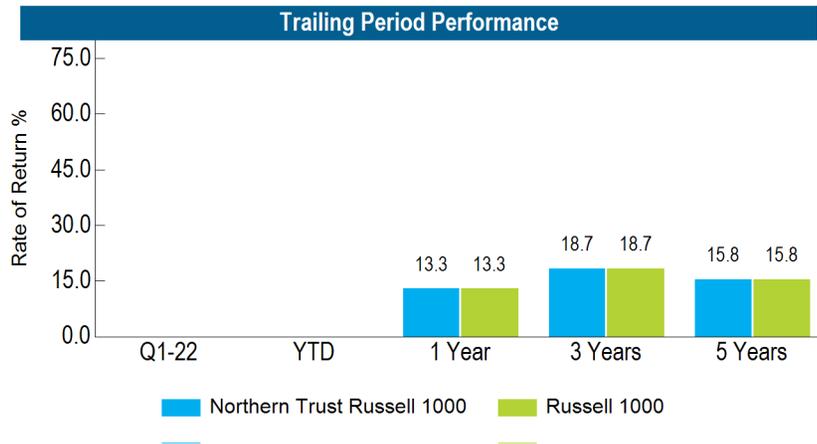
#### Style Exposure



#### Style History (5-Year)

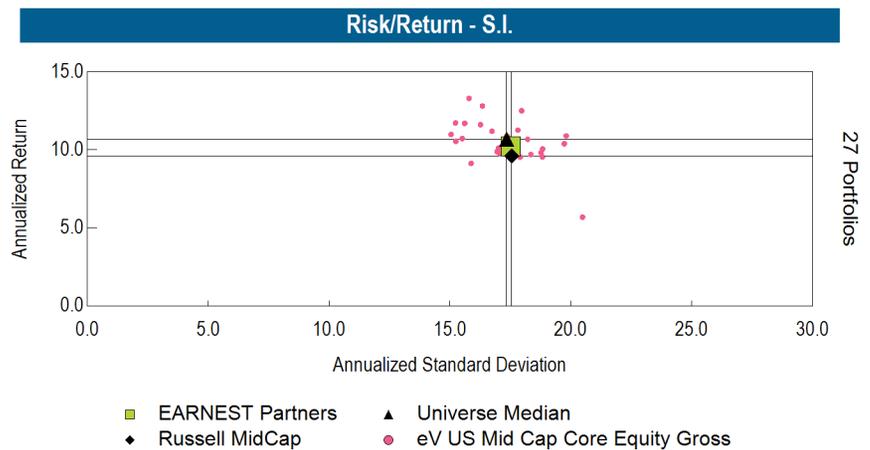
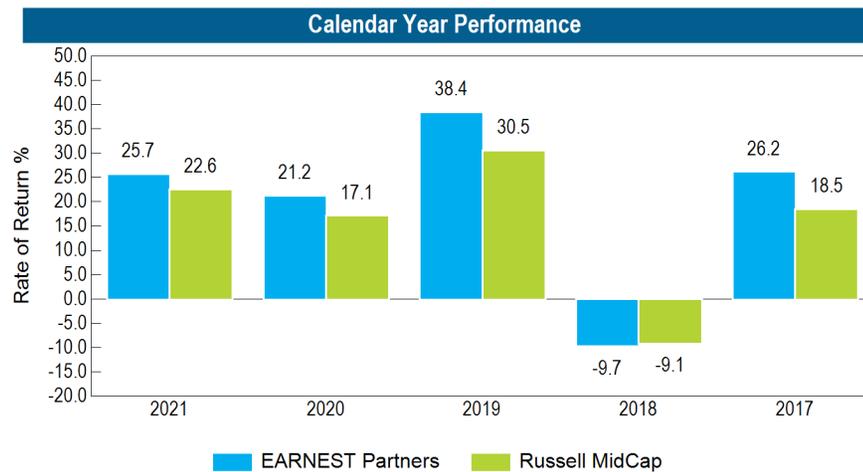
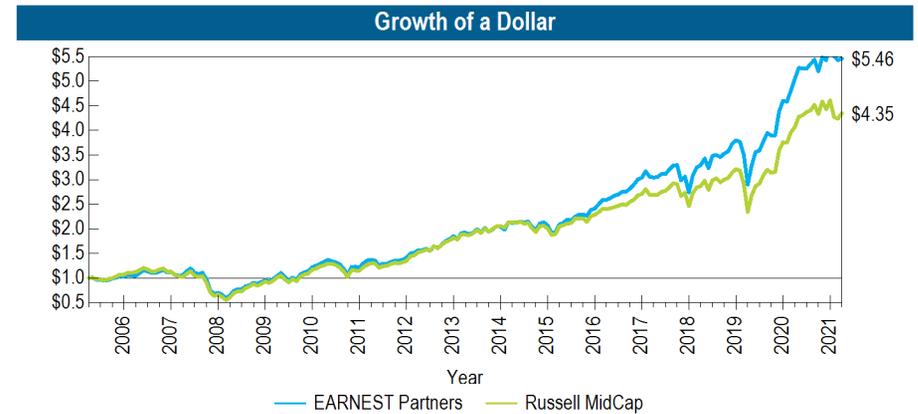
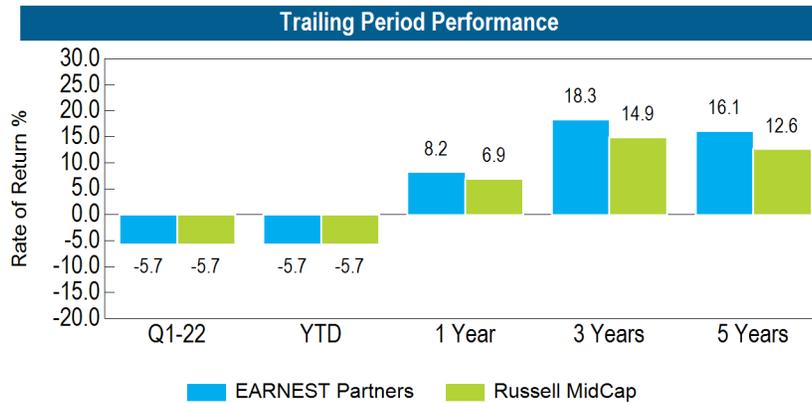


	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Northern Trust Russell 1000	14.89%	13.98%	0.00%	1.00	-0.58	0.15%	98.53%	99.84%
Russell 1000	14.97%	14.02%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

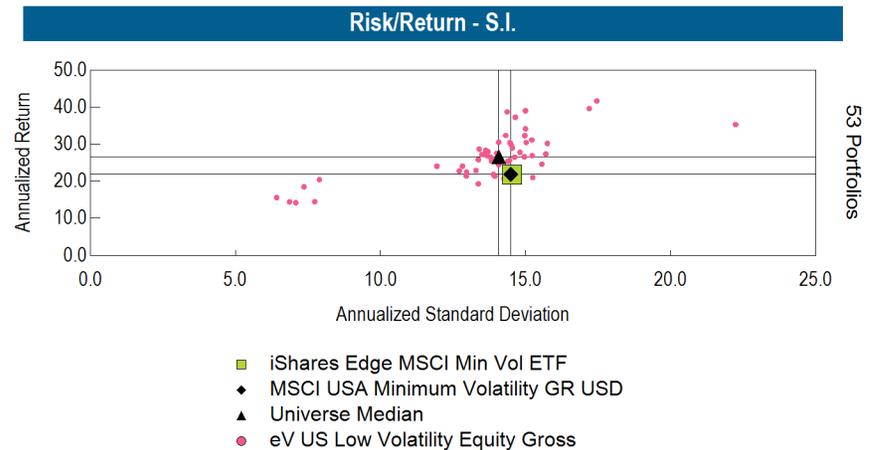
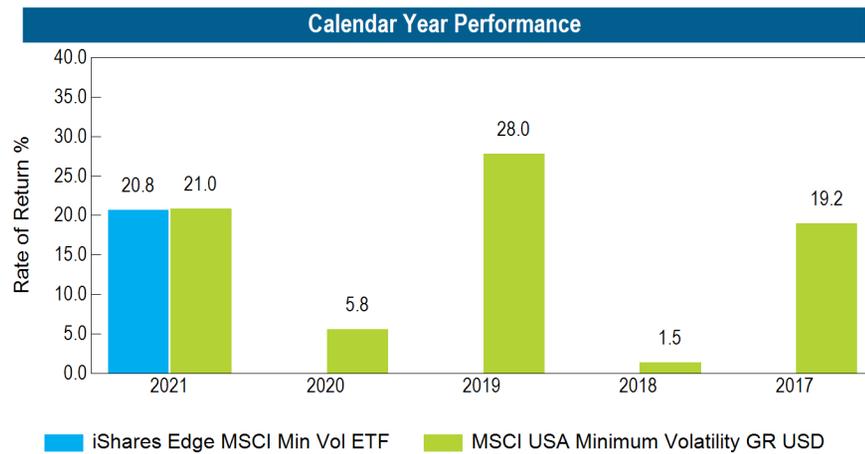
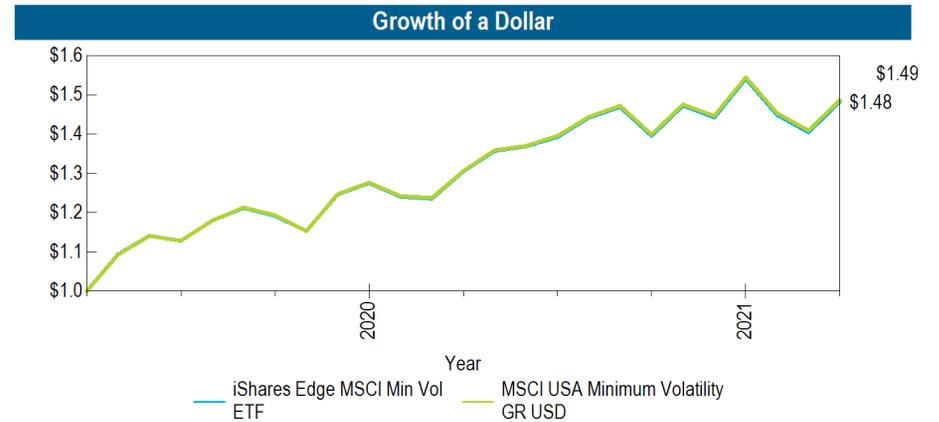
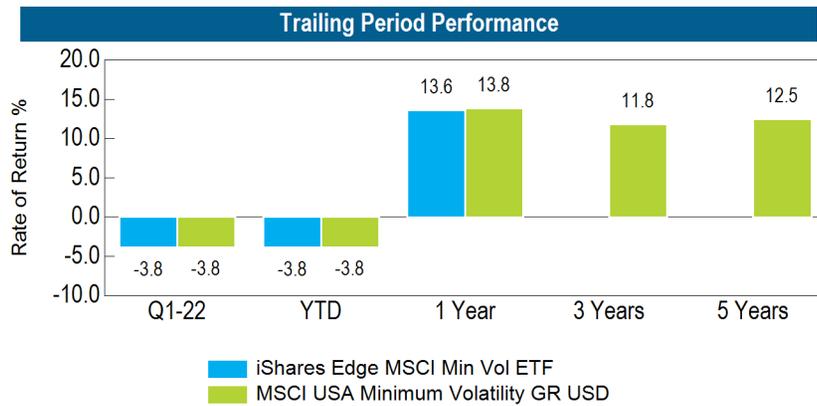
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
EARNEST Partners	10.21%	17.51%	0.06%	0.98	0.17	3.52%	92.96%	98.99%
Russell MidCap	9.62%	17.55%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

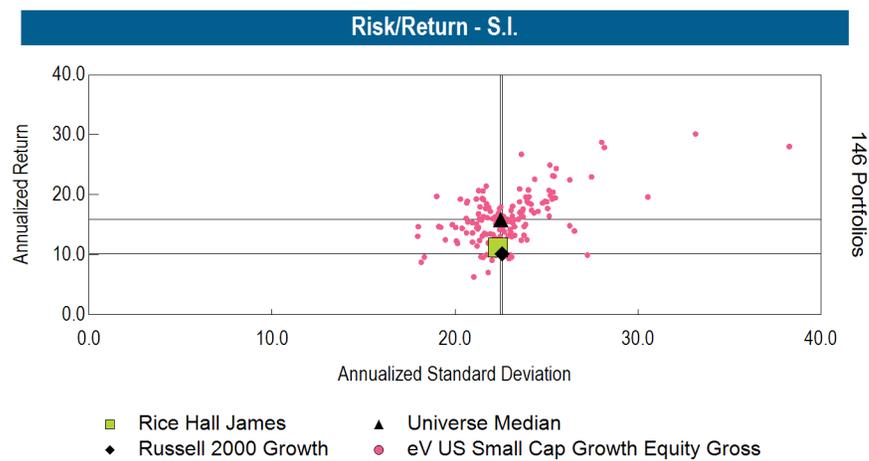
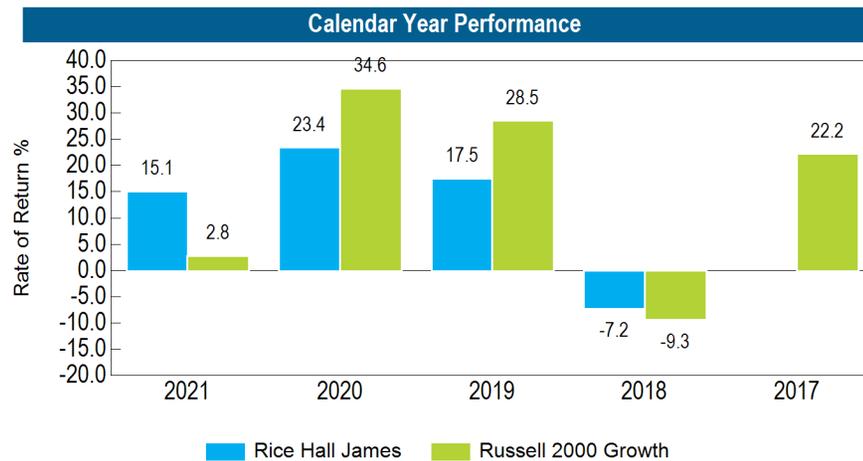
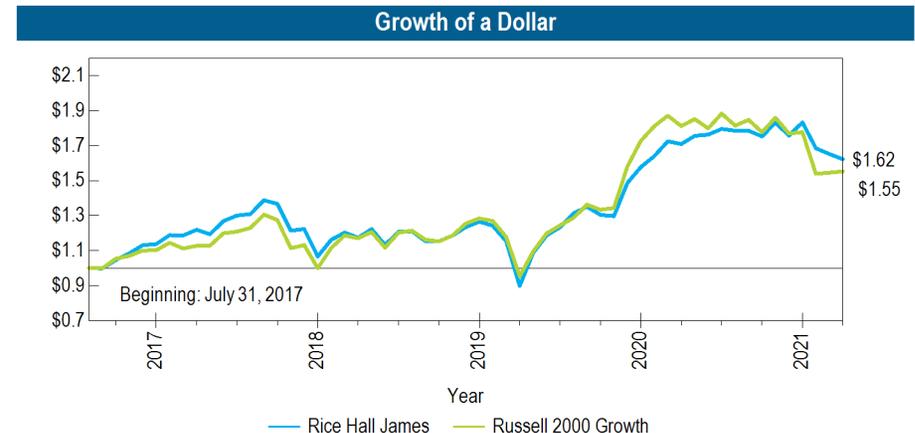
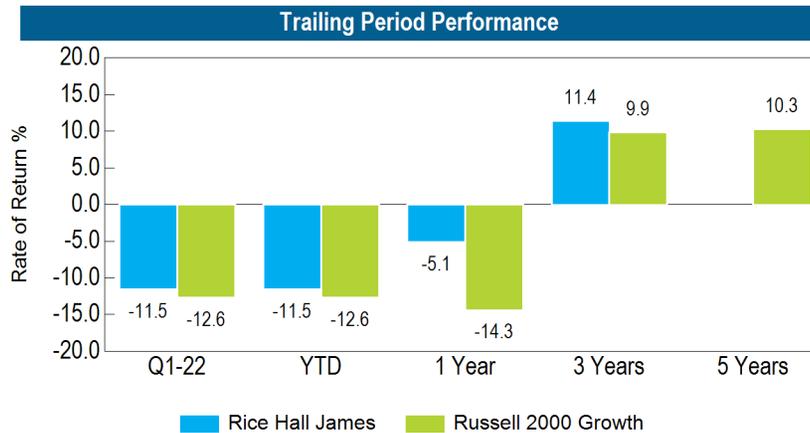
### iShares Edge MSCI Min Vol ETF | As of March 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
iShares Edge MSCI Min Vol ETF	21.77%	14.53%	-0.02%	1.00	-0.55	0.28%	99.80%	100.52%
MSCI USA Minimum Volatility GR USD	21.92%	14.49%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

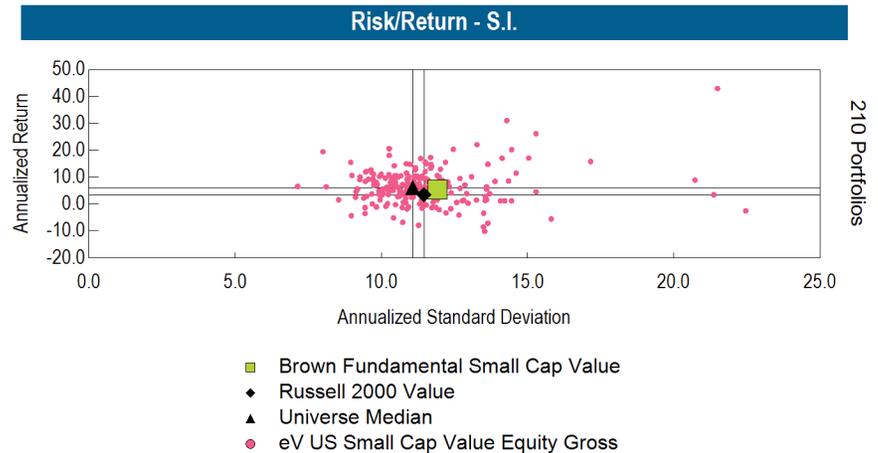
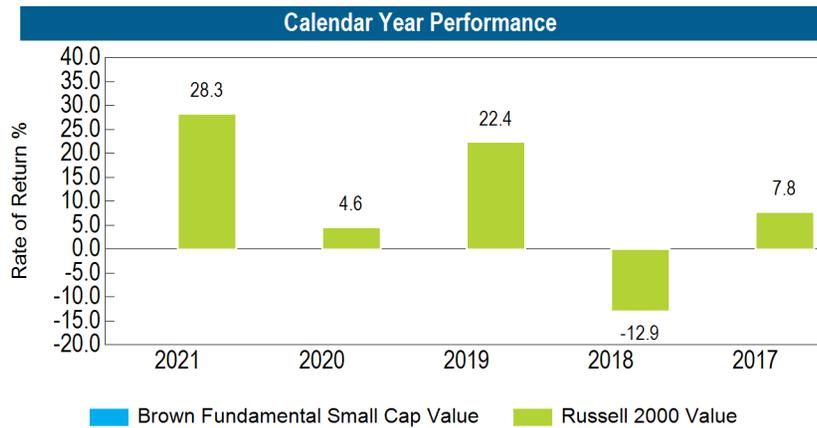
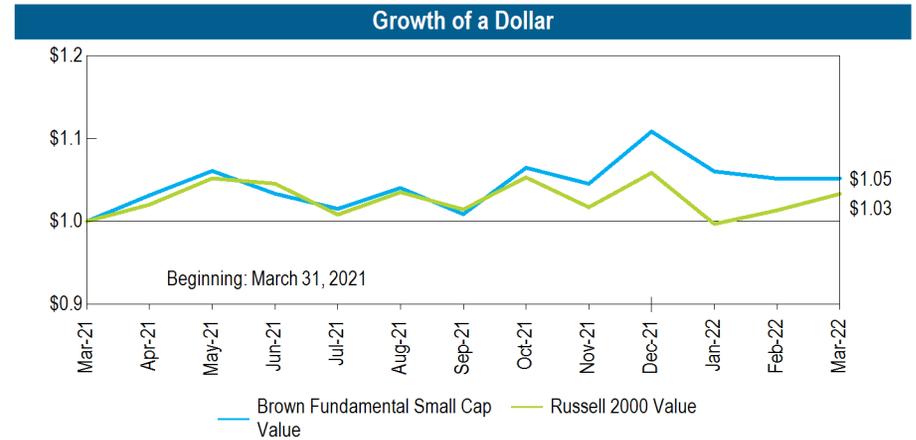
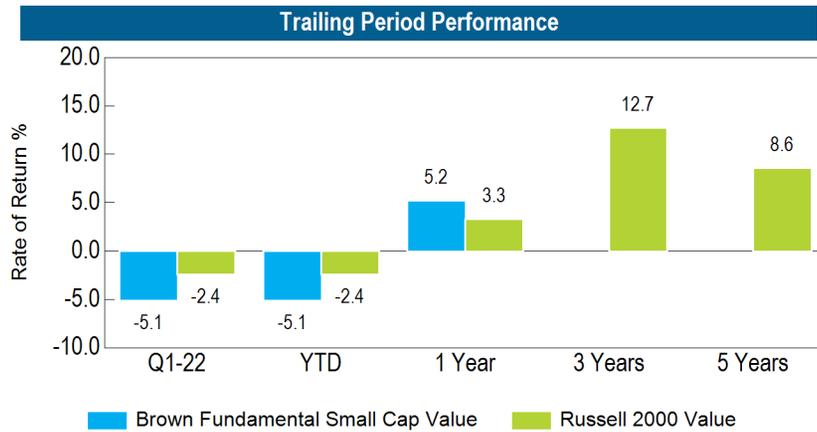
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Rice Hall James	9.82%	22.16%	0.05%	0.94	-0.01	7.25%	84.03%	93.07%
Russell 2000 Growth	9.89%	22.38%	0.00%	1.00	--	0.00%	100.00%	100.00%



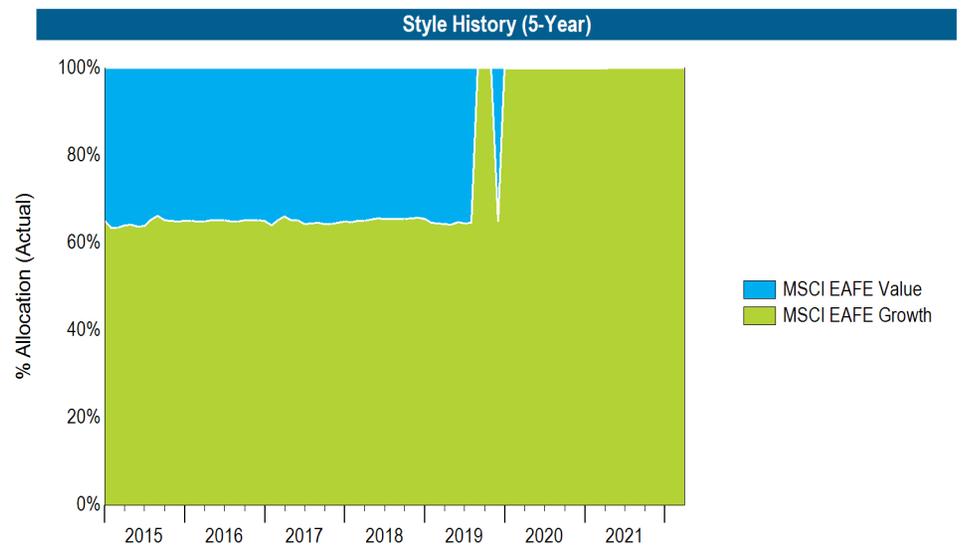
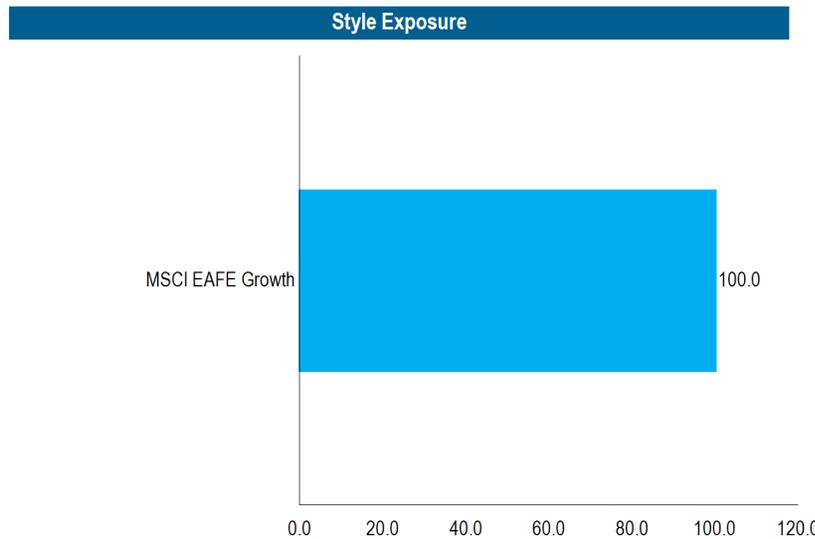
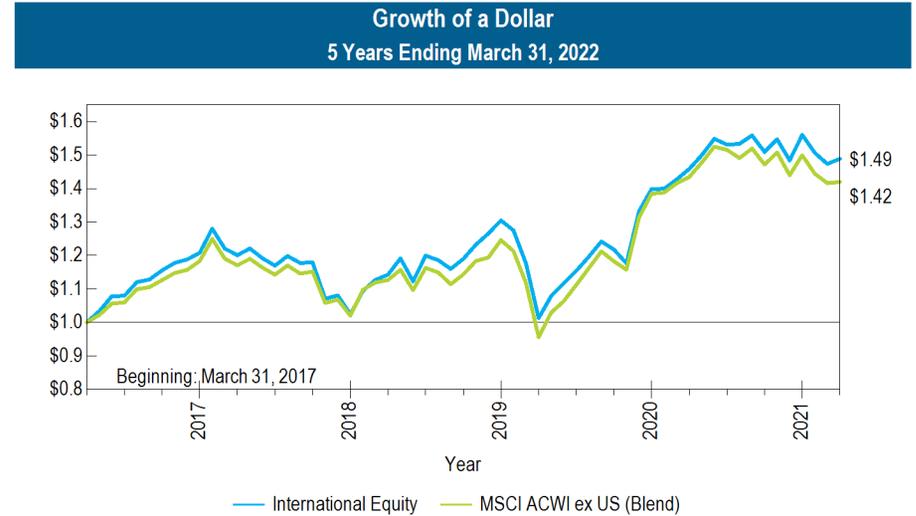
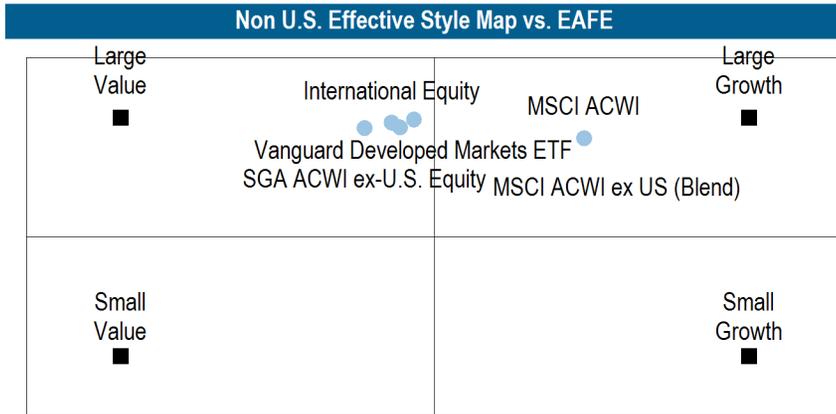
Performance shown is net-of-fees and since inception.

### Brown Fundamental Small Cap Value | As of March 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Brown Fundamental Small Cap Value	4.31%	11.92%	0.11%	0.91	0.17	5.79%	96.02%	90.27%
Russell 2000 Value	3.32%	11.45%	0.00%	1.00	--	0.00%	100.00%	100.00%

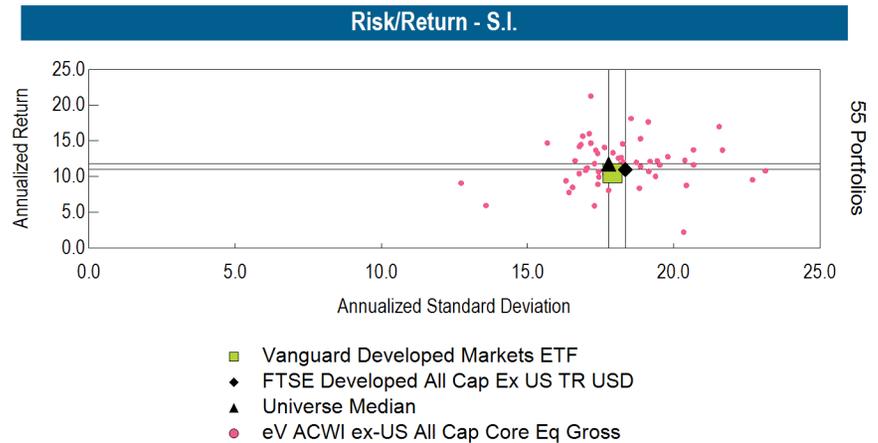
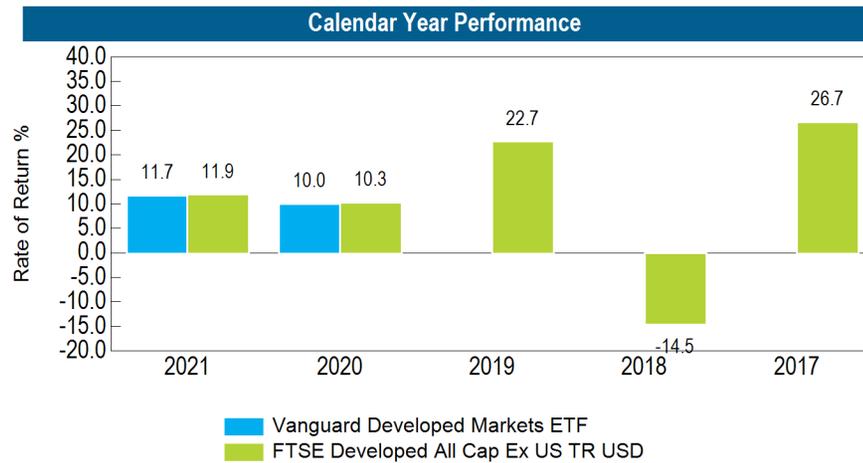
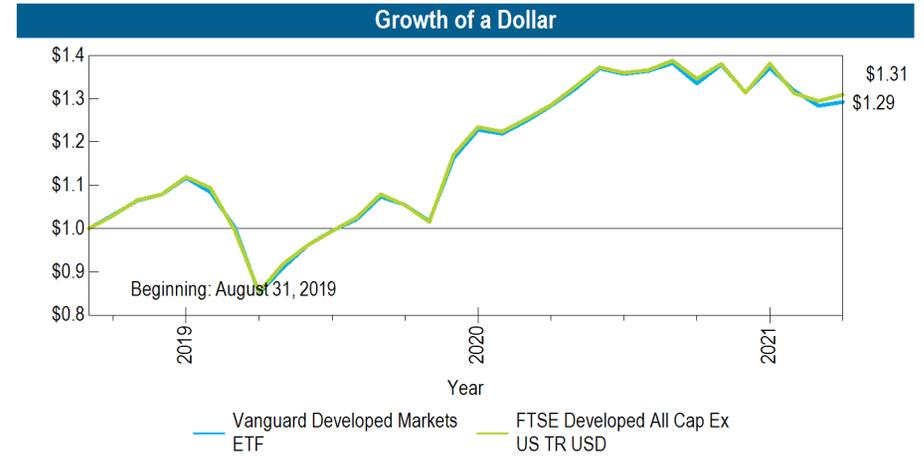
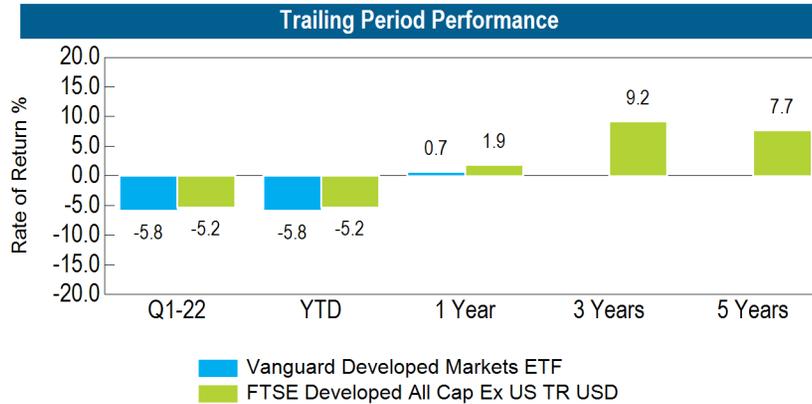


Performance shown is net-of-fees and since inception.



### Vanguard Developed Markets ETF | As of March 31, 2022

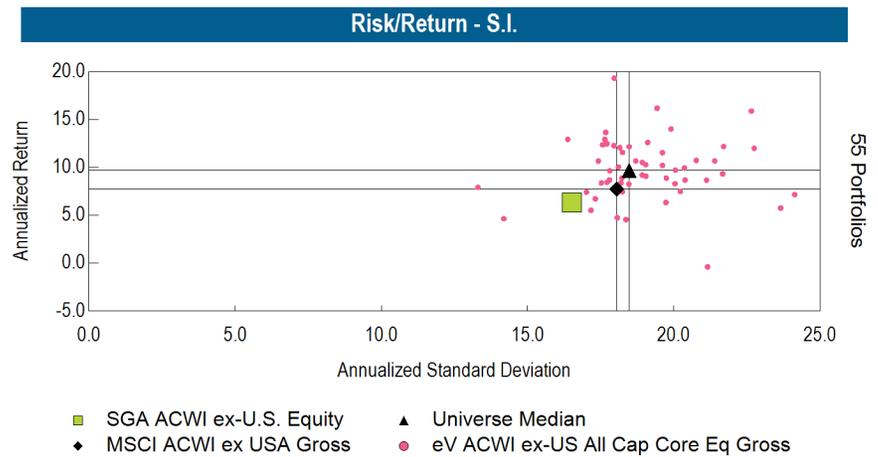
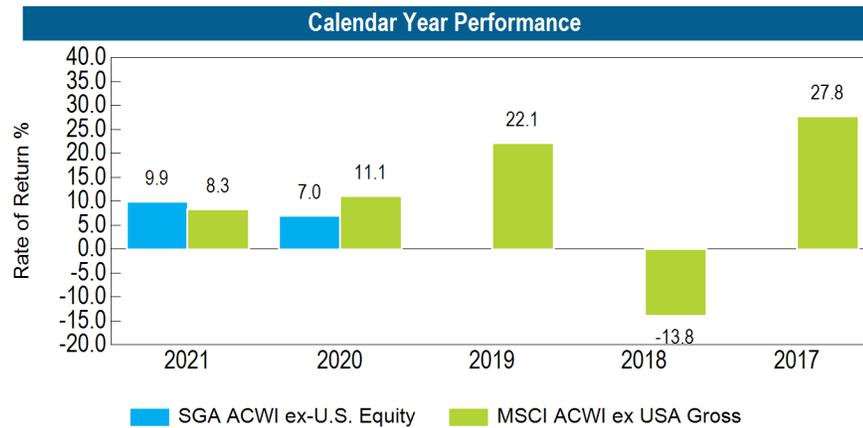
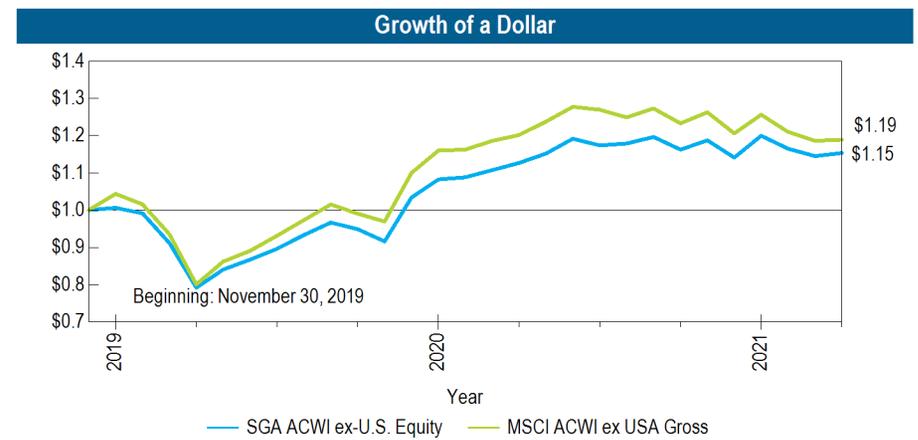
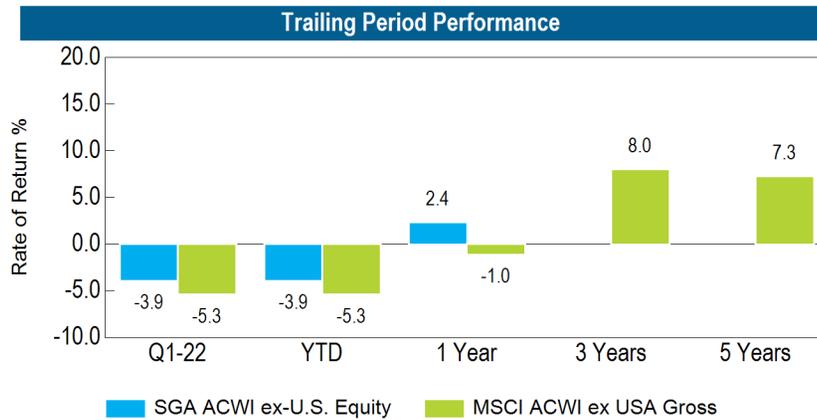
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Developed Markets ETF	10.43%	17.91%	-0.02%	0.97	-0.27	2.09%	96.79%	99.33%
FTSE Developed All Cap Ex US TR USD	10.99%	18.34%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

### SGA ACWI ex-U.S. Equity | As of March 31, 2022

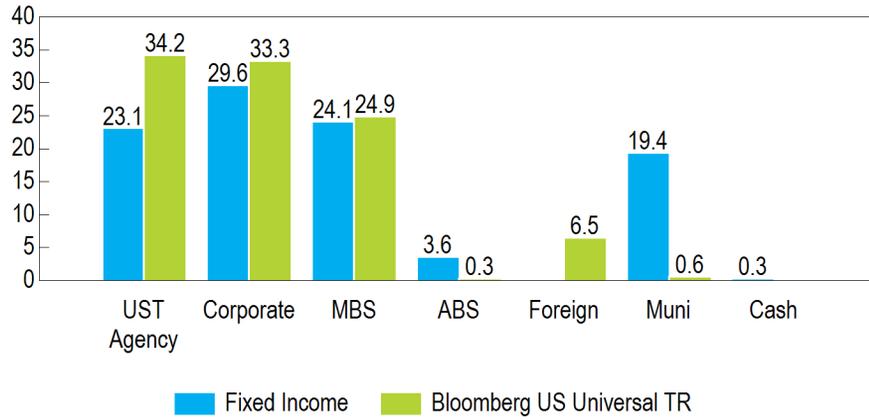
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
SGA ACWI ex-U.S. Equity	5.59%	16.47%	-0.11%	0.89	-0.55	3.80%	81.79%	92.45%
MSCI ACWI ex USA Gross	7.70%	18.04%	0.00%	1.00	--	0.00%	100.00%	100.00%



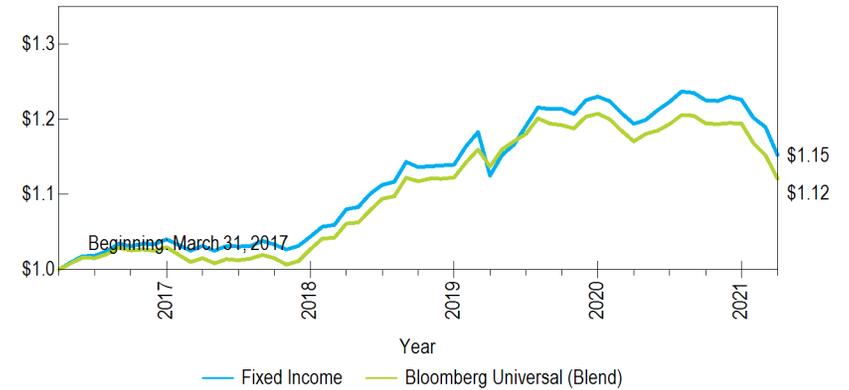
Performance shown is net-of-fees and since inception.

### Fixed Income | As of March 31, 2022

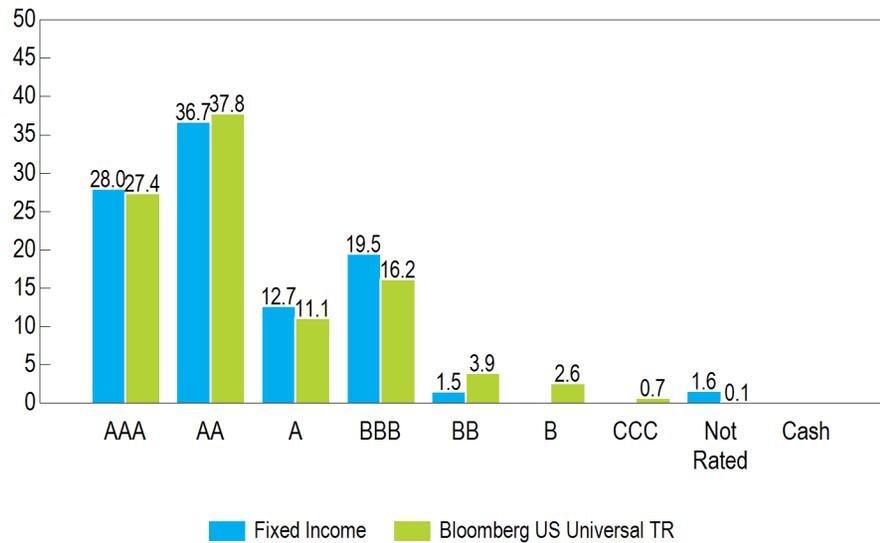
#### US Sector Allocation



#### Growth of a Dollar 5 Years Ending March 31, 2022



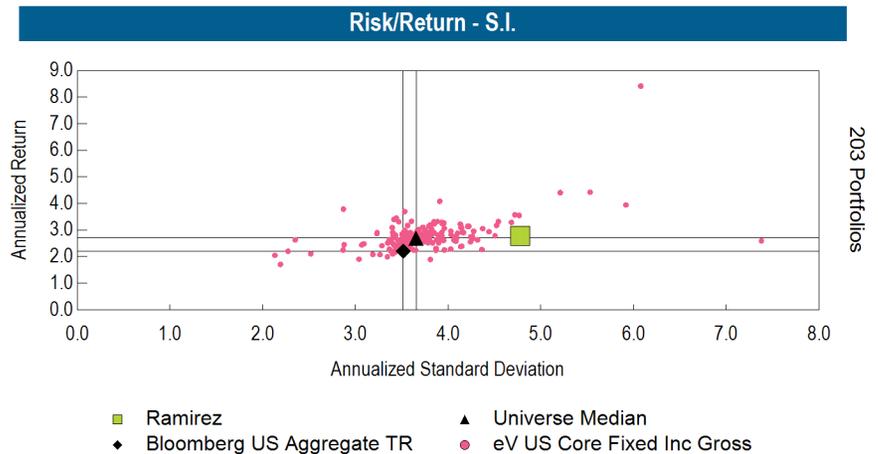
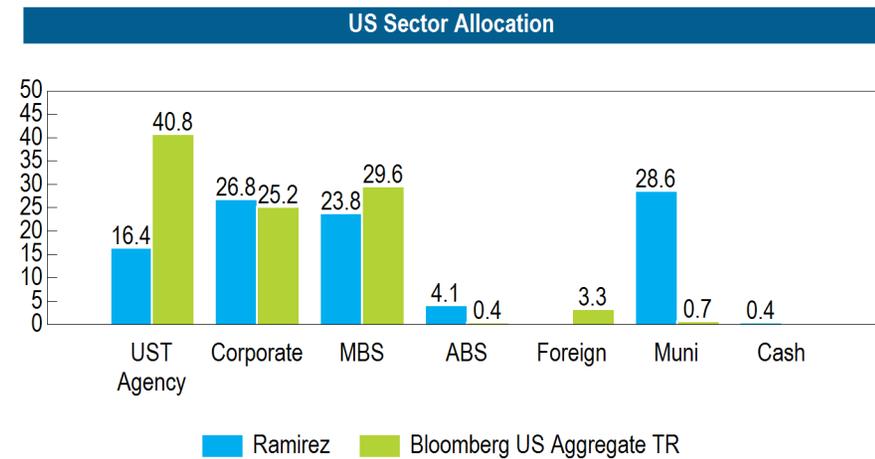
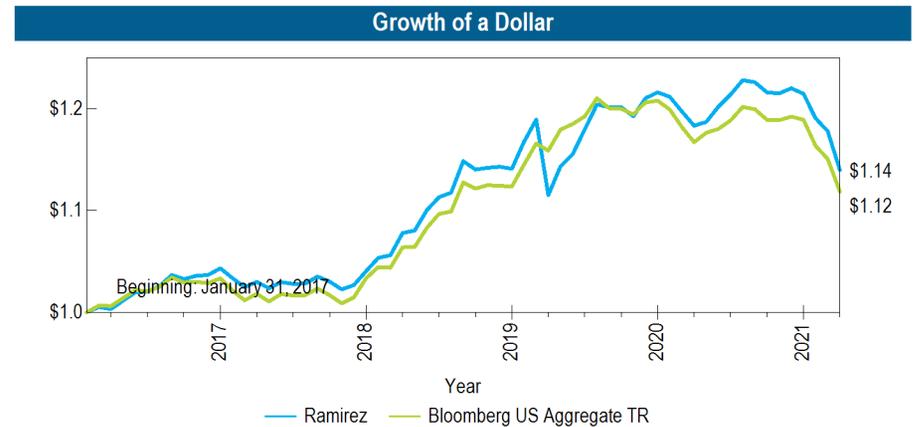
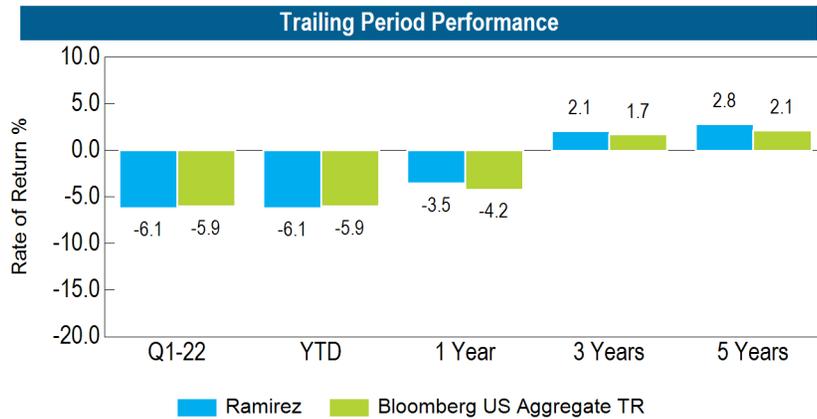
#### Credit Quality Allocation



#### Fixed Income Fixed Income Characteristics vs. Bloomberg US Universal TR

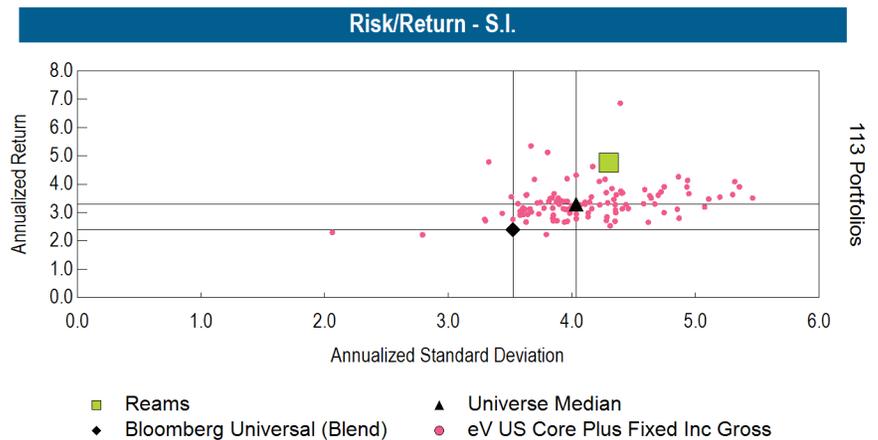
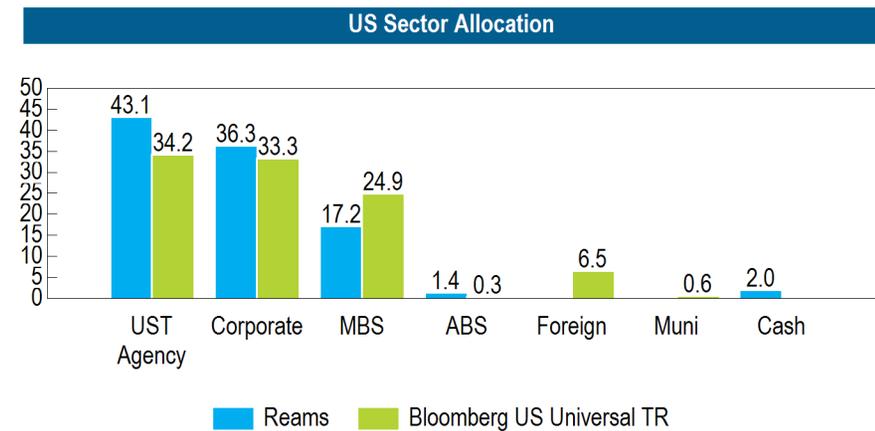
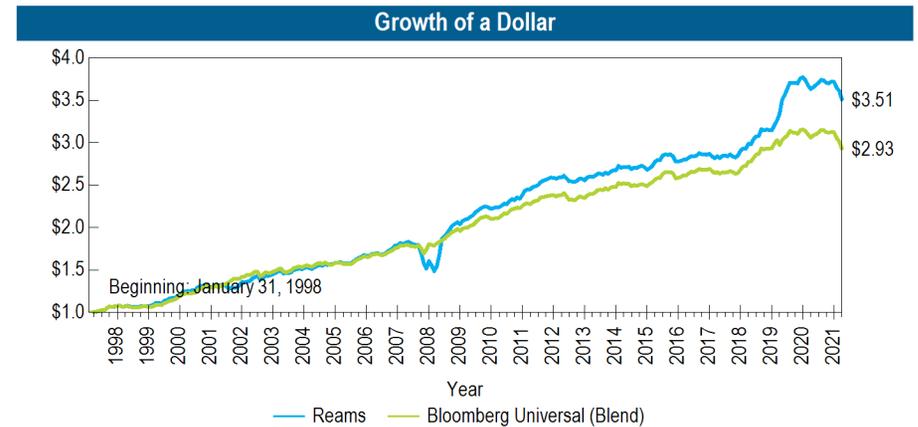
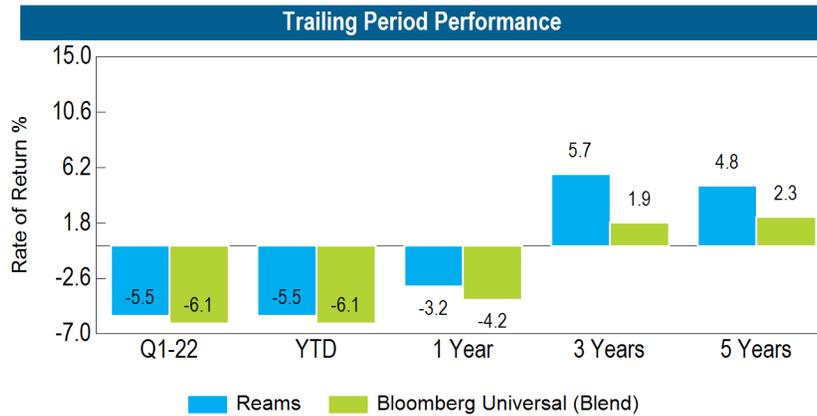
	Portfolio Q1-22	Index Q1-22
<b>Fixed Income Characteristics</b>		
Yield to Maturity	3.39	3.26
Average Duration	6.28	6.64
Average Quality	AA	AA
Weighted Average Maturity	8.95	12.70

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Ramirez	2.57%	4.78%	0.01%	1.11	0.13	2.77%	123.67%	119.37%
Bloomberg US Aggregate TR	2.20%	3.52%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

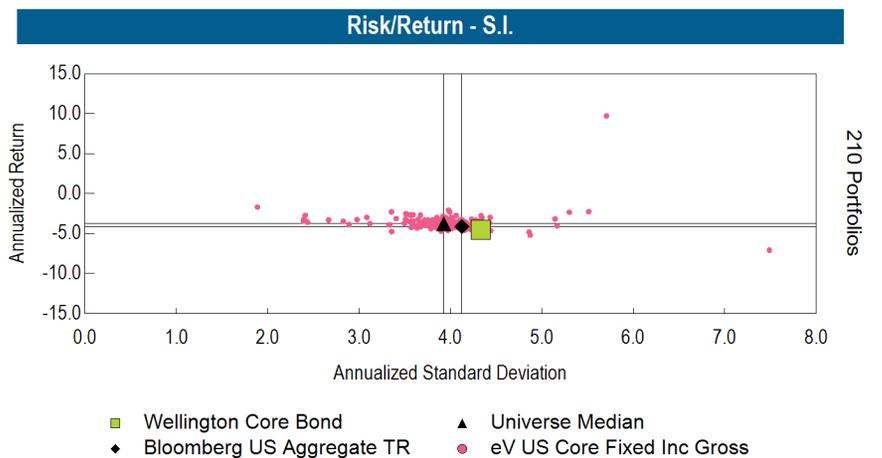
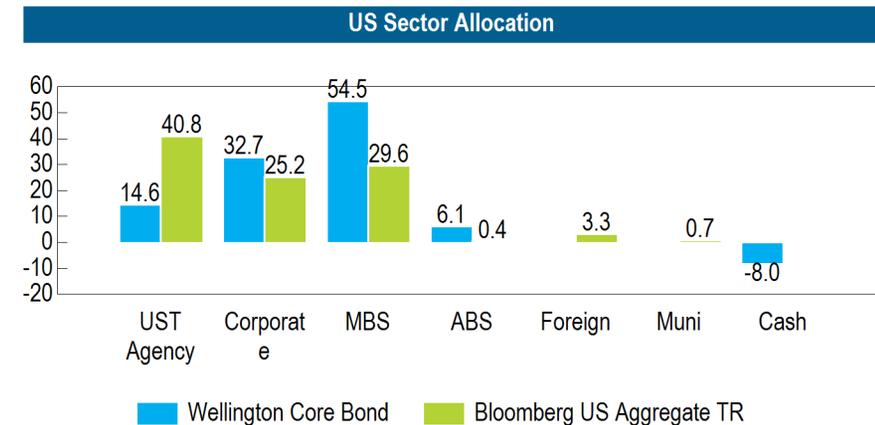
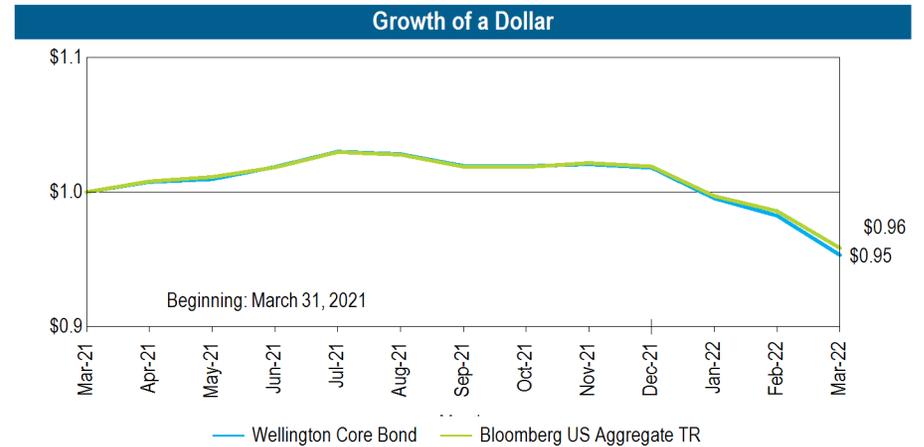
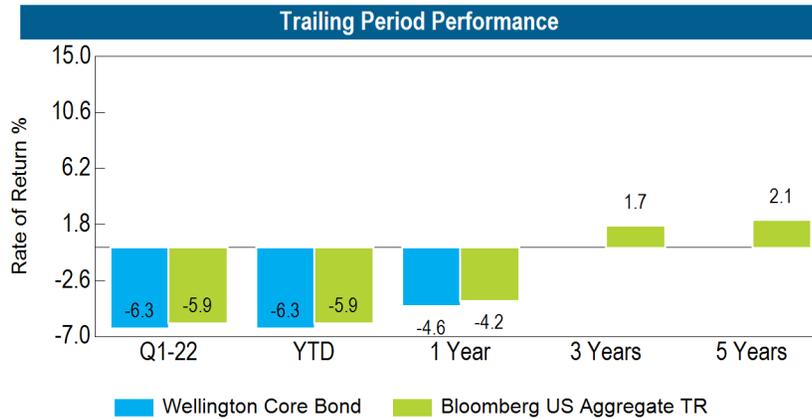
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Reams	5.33%	5.31%	0.05%	1.04	0.20	3.90%	122.26%	98.83%
Bloomberg Universal (Blend)	4.55%	3.47%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

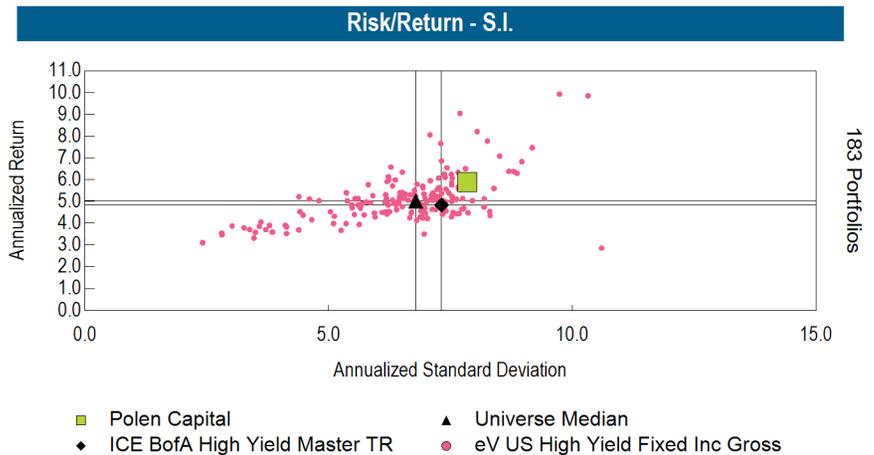
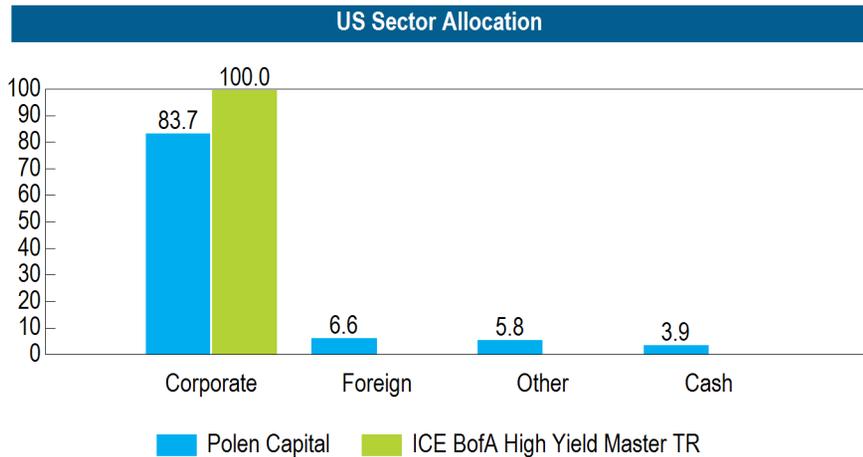
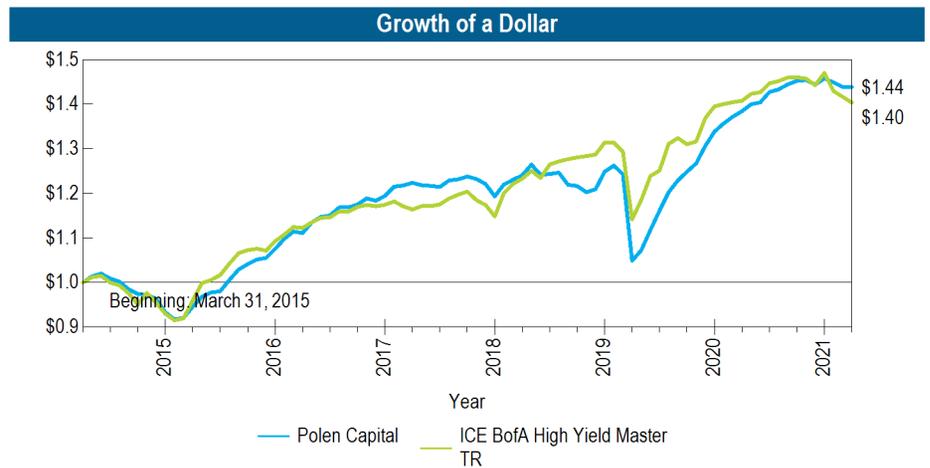
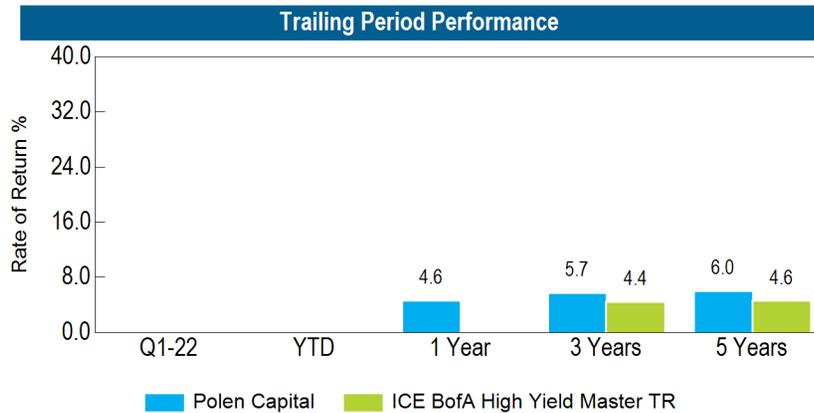
### Wellington Core Bond | As of March 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wellington Core Bond	-4.68%	4.33%	-0.03%	1.05	-1.40	0.37%	96.21%	105.51%
Bloomberg US Aggregate TR	-4.15%	4.12%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

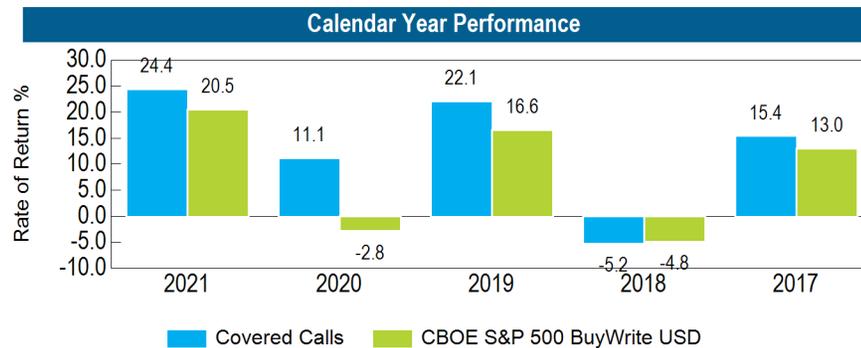
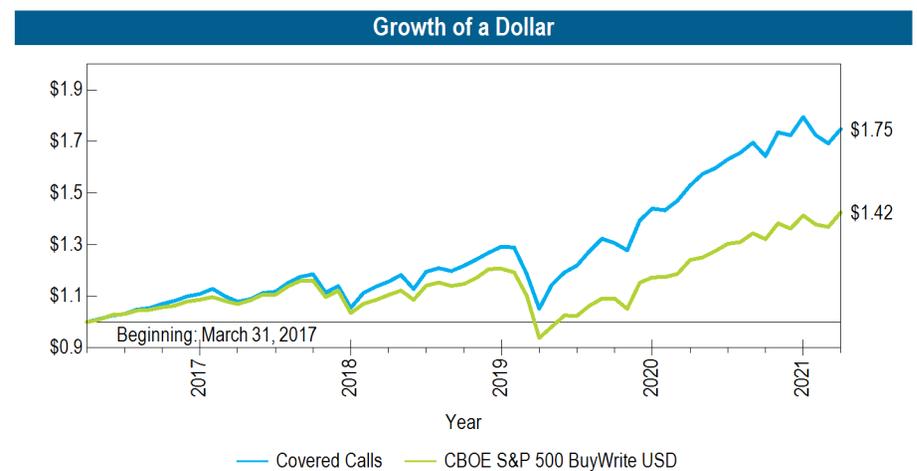
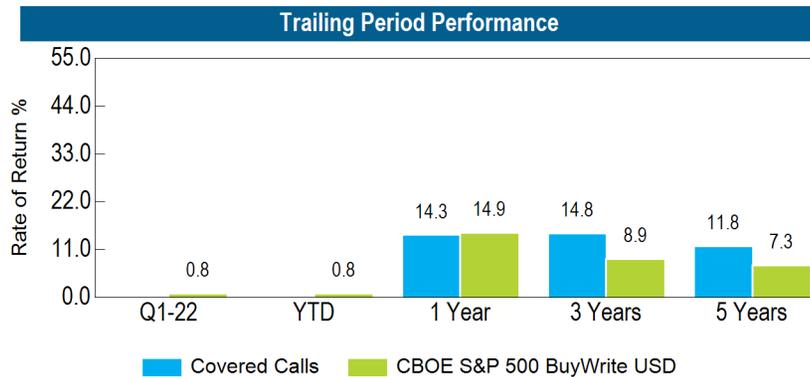
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Polen Capital	5.46%	7.82%	0.06%	0.94	0.09	3.79%	90.03%	84.58%
ICE BofA High Yield Master TR	5.11%	7.31%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

### Covered Calls | As of March 31, 2022

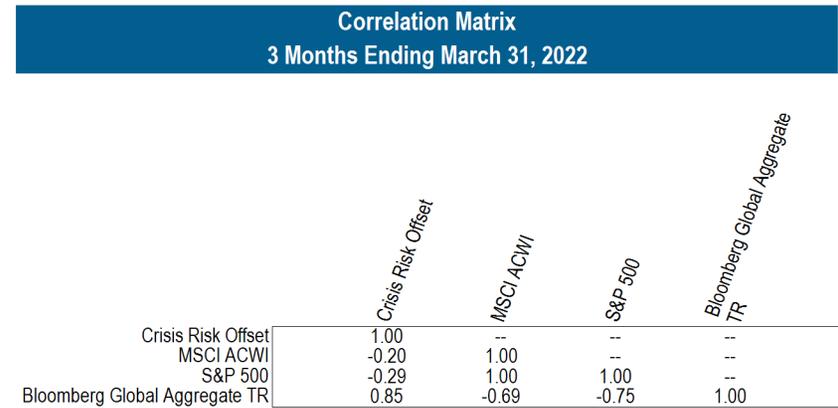
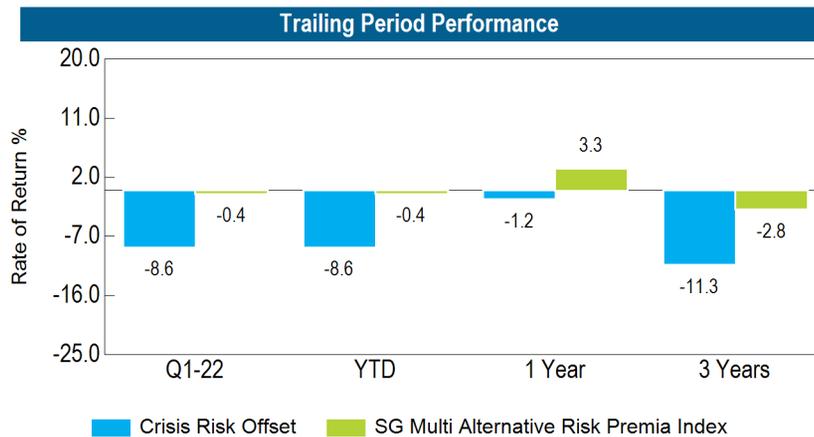
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Covered Calls	10.12%	10.70%	0.25%	0.98	0.91	3.38%	135.87%	100.14%
CBOE S&P 500 BuyWrite USD	7.03%	10.31%	0.00%	1.00	--	0.00%	100.00%	100.00%
Parametric BXM	7.91%	8.88%	0.16%	0.83	0.30	2.93%	93.75%	88.81%
CBOE S&P 500 BuyWrite USD	7.03%	10.31%	0.00%	1.00	--	0.00%	100.00%	100.00%
Parametric DeltaShift	12.46%	12.75%	0.36%	1.13	1.01	5.40%	187.07%	108.08%
CBOE S&P 500 BuyWrite USD	7.03%	10.31%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

### Crisis Risk Offset | As of March 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Crisis Risk Offset	-11.93%	12.93%	-0.81%	0.74	-0.74	12.22%	-45.04%	101.22%
SG Multi Alternative Risk Premia Index	-2.91%	6.09%	0.00%	1.00	--	0.00%	100.00%	100.00%
Kepos Alternative Risk Premia	--	--	--	--	--	--	--	--
SG Multi Alternative Risk Premia Index	-2.91%	6.09%	0.00%	1.00	--	0.00%	100.00%	100.00%
Vanguard Long-Term Treasury ETF	0.77%	13.64%	-0.05%	1.02	-0.35	1.66%	102.47%	104.24%
Bloomberg US Govt Long TR	1.36%	13.26%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since Vanguard Long-Term Treasury ETF's inception (July 2019).

### Benchmark History

As of March 31, 2022

#### OPFRS Total Plan

1/1/2019	Present	40% Russell 3000 / 12% MSCI ACWI ex USA Gross / 33% Bloomberg US Universal TR / 5% CBOE BXM / 6.7% SG Multi Alternative Risk Premia Index / 3.3% Bloomberg US Treasury Long TR
5/1/2016	12/31/2018	48% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 20% CBOE BXM
10/1/2015	4/30/2016	43% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 15% CBOE BXM / 10% CPI - All Urban Consumers (unadjusted) +3%
1/1/2014	9/30/2015	48% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 10% CBOE BXM / 10% CPI - All Urban Consumers (unadjusted) +3%
3/1/2013	12/31/2013	40% Russell 3000 / 10% MSCI ACWI ex USA Gross / 17% Bloomberg US Universal TR / 33% ICE BofA 3M US Treasury TR USD
8/1/2012	2/28/2013	20% Russell 3000 / 7% MSCI ACWI ex USA Gross / 18% Bloomberg US Universal TR / 55% ICE BofA 3M US Treasury TR USD
10/1/2007	7/31/2012	53% Russell 3000 / 17% MSCI ACWI ex USA Gross / 30% Bloomberg US Universal TR
4/1/2006	9/30/2007	35% Russell 3000 / 15% MSCI ACWI ex USA Gross / 50% Bloomberg US Universal TR
1/1/2005	3/31/2006	35% Russell 3000 / 15% MSCI ACWI ex USA Gross / 50% Bloomberg US Aggregate TR
4/1/1998	12/31/2004	50% Bloomberg US Aggregate TR / 10% Russell 1000 / 20% Russell 1000 Value / 5% Russell MidCap / 15% MSCI EAFE
12/1/1988	3/31/1998	40% S&P 500 / 55% Bloomberg US Aggregate TR / 5% FTSE T-Bill 3 Months TR

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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.

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Sources: *Investment Terminology*, International Foundation of Employee Benefit Plans, 1999.  
*The Handbook of Fixed Income Securities*, Fabozzi, Frank J., 1991

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

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

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

## MEMORANDUM

**TO:** Oakland Police and Fire Retirement System (OPFRS)  
**FROM:** David Sancewich, Paola Nealon – Meketa Inv. Group  
**DATE:** May 25, 2022  
**RE:** 2022 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.

### 2022 Preliminary Investment Project Agenda

Expected Completion Date	Task
June 2022	<ul style="list-style-type: none"> <li>Flash Performance Report (May 2022)</li> <li>Cash Flow Report (3Q 2022)</li> <li>Watch Update Memo: Rice Hall &amp; James</li> <li>Manager Update: <b>Wellington Fixed Income</b></li> </ul>
July 2022	<ul style="list-style-type: none"> <li>Flash Performance Report (Jun 2022)</li> <li>Manager Update: <b>Reams</b></li> <li>Educational Item: TBD</li> </ul>
August 2022	<ul style="list-style-type: none"> <li>Quarterly Performance Report (2Q 2022)</li> <li>Flash Performance Report (Jul 2022)</li> <li>Manager Update: <b>Strategic Global Advisors</b></li> </ul>
September 2022	<ul style="list-style-type: none"> <li>Flash Performance Report (Aug 2022)</li> <li>Cash Flow Report (4Q 2022)</li> <li>Manager Update: <b>Ramirez</b></li> <li>Thermal Coal List Update: 2022</li> </ul>
October 2022	<ul style="list-style-type: none"> <li>Flash Performance Report (Sep 2022)</li> <li>Manager Update: <b>Rice Hall James</b></li> <li>Watch status update: <b>Rice Hall James</b></li> <li>Educational Item: TBD</li> </ul>
November 2022	<ul style="list-style-type: none"> <li>Quarterly Performance Report (3Q 2022)</li> <li>Flash Performance Report (Oct 2022)</li> <li>Manager Update: <b>Parametric</b></li> </ul>
December 2022	<ul style="list-style-type: none"> <li>Flash Performance Report (Nov 2022)</li> <li>Cash Flow Report (1Q 2023)</li> </ul>

**Bold** are priority strategic items.

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.

Pursuant to California Government Code section 54953(e), the Oakland Police & Fire Retirement System Board and Committee Members, as well as City staff, will participate via phone/video conference, and no physical teleconference locations are required.

Please see the agenda to participate in the meeting. For additional information, contact the Retirement Unit by calling (510) 238-7295.



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

# AGENDA

## RETIREMENT BOARD MEMBERS

**Walter L. Johnson, Sr.**  
President

**Jaime T. Godfrey**  
Vice President

**Robert W. Nichelini**  
Member

**Kevin R. Traylor**  
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, MAY 25, 2022**

**11:30 AM**

**TELE-CONFERENCE BOARD MEETING  
VIA ZOOM WEBINAR**

### **OBSERVE**

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

### **PUBLIC COMMENTS**

There are three ways to submit public comments.

- eComment. To send your comment directly to staff BEFORE the meeting starts, please email to [mvisaya@oaklandca.gov](mailto:mvisaya@oaklandca.gov) with “PFRS Board Meeting” in the subject line for the corresponding meeting. Please note that eComment submission **closes two (2) hours before posted meeting time.**

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM  
REGULAR BOARD MEETING  
MAY 25, 2022**

- To comment by Zoom video conference, click the “Raise Your Hand” button to request to speak when Public Comment is being taken on an eligible agenda item at the beginning of the meeting. You will be permitted to speak during your turn, allowed to comment, and after the allotted time, re-muted. Instructions on how to “Raise Your Hand” is available at: [https://support.zoom.us/hc/en-us/articles/205566129 - Raise-Hand-In-Webinar](https://support.zoom.us/hc/en-us/articles/205566129-Raise-Hand-In-Webinar).
- To comment by phone, please call on one of the above listed phone numbers. You will be prompted to “Raise Your Hand” by pressing “\*9” to speak when Public Comment is taken. You will be permitted to speak during your turn, allowed to comment, and after the allotted time, re-muted. Please unmute yourself by pressing “\*6.”

If you have any questions, please email Maxine Visaya, Administrative Assistant II at [mvisaya@oaklandca.gov](mailto:mvisaya@oaklandca.gov).

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## ORDER OF BUSINESS

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- A. Subject: Police and Fire Retirement System (“PFRS”) Board of Administration Meeting Minutes**  
**From:** Staff of the PFRS Board  

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**Recommendation:** **APPROVE** the April 27, 2022 PFRS Board of Administration Meeting Minutes
- B. AUDIT & OPERATIONS COMMITTEE AGENDA – MAY 25, 2022**
- B1. Subject: Administrative Expenses Report**  
**From:** Staff of the PFRS Board  

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**Recommendation:** **ACCEPT** informational report regarding PFRS administrative expenses as of March 31, 2022
- B2. Subject: Election of a New 3-Year Alternating Retired Police/Fire Representative Board Position**  
**From:** Staff of the PFRS Board  

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**Recommendation:** **ACCEPT** informational report regarding the Election of a new 3-Year Alternating Retired Police/Fire Representative Board Position to fill Board seat currently held by Retired Police Representative Kevin R. Traylor

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM  
REGULAR BOARD MEETING  
MAY 25, 2022

C. INVESTMENT & FINANCIAL MATTERS COMMITTEE AGENDA – MAY 25, 2022

- C1. **Subject:** Investment Manager Performance Update – Northern Trust Investments, Inc.  
**From:** Northern Trust Investments, Inc.  
**Recommendation:** **ACCEPT** informational report regarding a recent management leadership change, managerial assessment, diversity and inclusion policy and practices, and investment portfolio performance of Northern Trust Investments Inc., a PFRS Domestic Equity Large Cap Core Investment Manager
- C2. **Subject:** Investment Manager Performance Review – Northern Trust Investments, Inc.  
**From:** Meketa Investment Group  
**Recommendation:** **ACCEPT** Meketa Investment Group’s review and evaluation of Northern Trust Investments, Inc., a PFRS Domestic Equity Large Cap Core Investment Manager, regarding a recent management leadership change, managerial assessment, diversity and inclusion policy and practices, and investment portfolio performance
- C3. **Subject:** Investment Market Overview as of April 30, 2022  
**From:** Meketa Investment Group  
**Recommendation:** **ACCEPT** informational report regarding the Global Investment Markets as of April 30, 2022
- C4. **Subject:** Preliminary Investment Fund Performance Update as of April 30, 2022  
**From:** Meketa Investment Group  
**Recommendation:** **ACCEPT** informational report regarding the Preliminary Investment Fund Performance Update as of April 30, 2022
- C5. **Subject:** Investment Fund Quarterly Performance Update as of March 31, 2022  
**From:** Meketa Investment Group  
**Recommendation:** **ACCEPT** the Investment Fund Quarterly Performance Update as of March 31, 2022

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM  
REGULAR BOARD MEETING  
MAY 25, 2022**

**D. Subject: Resolution No. 8052 – Resolution Electing to Continue to Conduct Police and Fire Retirement System Board and Committee Meetings Using Teleconferencing in Accordance with California Government Code Section 54953(E).**

**From:** Staff of the PFRS Board

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**Recommendation:** **APPROVE** Resolution No. 8052 – Resolution Electing to Continue to Conduct Police and Fire Retirement System Board and Committee Meetings Using Teleconferencing in Accordance with California Government Code Section 54953(E)

**E. Subject: Resolution No. 8053 – Expressing Appreciation for Staff Member Carol Kolenda, Police & Fire Retirement System Member Benefits Representative**

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**From:** Staff of the PFRS Board

**Recommendation:** **APPROVE** Resolution No. 8053 – Resolution of Appreciation to Staff Member Carol Kolenda, Police & Fire Retirement System Member Benefits Representative

**F. PENDING ITEMS**

**G. NEW BUSINESS**

**H. OPEN FORUM**

**I. FUTURE SCHEDULING**

**J. ADJOURNMENT**

**A REGULAR BOARD MEETING** of the Oakland Police and Fire Retirement System (“PFRS”) was held on Wednesday, April 27, 2022 via Zoom Webinar.

- Board Members:
- Walter L. Johnson            President
  - Jaime T. Godfrey           Vice President
  - Robert W. Nichelini        Member
  - Erin Roseman                Member
  - John C. Speakman          Member (Excused)
  - Kevin R. Traylor            Member
  - R. Steven Wilkinson        Member

- Additional Attendees:
- David F. Jones              PFRS Secretary & Plan Administrator
  - Jennifer Logue              PFRS Legal Counsel
  - Mitesh Bhakta               PFRS Legal Counsel
  - Téir Jenkins                 PFRS Staff Member
  - Maxine Visaya               PFRS Staff Member
  - David Sancewich            Meketa Investment Group
  - Jason Leong Campbell      Meketa Investment Group

The meeting was called to order at 11:33 a.m. PST

- A. PFRS Board Meeting Minutes** – Member Traylor made a motion to approve the March 30, 2022 Regular Board Meeting Minutes, second by Member Nichelini. Motion passed.

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

**B. AUDIT AND OPERATIONS COMMITTEE AGENDA – APRIL 27, 2022**

- B1. Administrative Expenses Report** – Staff Member Jenkins presented an informational report on PFRS’s administrative expenditures as of February 28, 2022. PFRS has an approved annual budget of approximately \$3.5 million and have expensed approximately \$1.7 million fiscal year-to-date. Membership consisted of 697 retired members, which included 428 Police Members and 269 Fire Members.

**MOTION:** Member Nichelini made a motion to accept the administrative expenses report as of February 28, 2022, second by Member Traylor. Motion passed.

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

- B2. PFRS FY2021-2023 Administrative Expenses Budget Mid-Cycle Adjustment** – Staff Member Jenkins presented an informational report on the PFRS’ FY2021-2023 Administrative Expenses Budget Mid-Cycle Adjustment.

**MOTION:** Member Nichelini made a motion to approve the PFRS’ FY2021-2023 Administrative Expenses Budget Mid-Cycle Adjustment, second by Vice President Godfrey. Motion passed.

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

- B3. Resolution 8047** – Resolution to approve a two-year extension of the professional service agreement for the provision of Actuarial Services between the City of Oakland Police and Fire Retirement System Board and Cheiron, Inc. through June 30, 2024 with annual retainer fee amounts to exceed \$47,900 for FY2022-2023 and \$49,400 for FY2023-2024.

**MOTION:** Member Nichelini made a motion to approve Resolution No. 8047, second by Vice President Godfrey. Motion passed.

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

- B4. Resolution No. 8048** – Resolution approving request of Oakland Police and Fire Retirement System Trustee R. Steven Wilkinson to attend The State Association of County Retirement Systems (SACRS) Spring Conference from May 10, 2022 through May 13, 2022, in Rancho Mirage, California and reimbursement of travel-related expenses in an amount not to exceed \$2,500.00 Two Thousand Five Hundred Dollars (\$2,500.00)

**MOTION:** Member Nichelini made a motion to approve Resolution No. 8048, second by Vice President Godfrey. Motion passed.

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

**C. INVESTMENT & FINANCIAL MATTERS COMMITTEE AGENDA – APRIL 27, 2022**

- c1. Investment Manager Performance Update – Brown Advisory, LLC** – Vice President Godfrey provided an overview of the presentation by Brown Advisory, LLC, a PFRS Active Small-Cap Value Investment Manager. Plan Administrator Jones noted Brown Advisory’s presentation was right on-point, crystal clear, and tailored to the needs of PFRS.

**MOTION:** Vice President Godfrey made a motion to accept the informational report regarding the Investment Manager Performance Update regarding Brown Advisory, LLC, a PFRS Active Small-Cap Value Investment Manager, second by Member Nichelini. Motion Passed.

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

- c2. **Investment Manager Performance Review – Brown Advisory, LLC** – David Sancewich of Meketa Investment Group (“Meketa”) provided an overview memo regarding Brown Advisory, LLC, a PFRS Active Small-Cap Value Investment Manager. D. Sancewich noted Meketa continues to have confidence in Brown Advisory, LLC as they have outperformed both their benchmark and the median manager in their universe.

**MOTION:** Member Nichelini made a motion to accept the informational report from Meketa regarding an overview of Brown Advisory, LLC, second by Vice President Godfrey. Motion Passed.

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

- c3. **Investment Market Overview as of March 30, 2022** – David Sancewich of Meketa presented an informational report regarding the Investment Market Overview as of March 30, 2022 and highlighted Index Returns, noted the return of market volatility, and discussed the current factors impacting outcomes.

**MOTION:** Member Nichelini made a motion to accept the informational report provided by Meketa Investment Group regarding the Investment Market Overview as of March 30, 2022, second by Member Wilkinson. Motion passed.

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

- c4. **Preliminary Investment Fund Performance Update as of March 30, 2022** – David Sancewich of Meketa Investment Group provided a summary of the Preliminary Investment Fund Performance Update as of March 30, 2022 and highlighted the Asset Class Performance Summary.

**MOTION:** Vice President Godfrey made a motion to accept the informational report provided by Meketa Investment Group regarding the Preliminary Investment Fund Performance Update as of March 30, 2022, second by Member Nichelini. Motion Passed.

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

- c5. **Informational Overview Regarding Stagflation** – David Sancewich of Meketa Investment Group presented an informational overview regarding Stagflation and noted this is for informational purposes only and not a recommendation for action.

**MOTION:** Member Nichelini made a motion to accept the informational overview regarding Stagflation, second by Member Traylor. Motion Passed.

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

**D. Member Resolutions 8049 – 8050**

D1. Resolution No. 8049 – 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>
▪ Hadwick C. Thompson	Suane Thompson	\$ 4,127.22

**MOTION:** Member Traylor made a motion to approve Resolution No. 8049, second by Vice President Godfrey. Motion passed.

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

D2. **Member Resolution 8050** – Resolution approving death benefit payment and directing a warrant thereunder in the total sum of \$1,000.00 payable to the beneficiary of the following deceased member of the Oakland Police and Fire Retirement System:

- John E. Fahey

**MOTION:** Member Traylor made a motion to approve Resolution No. 8050, second by Vice President Godfrey. Motion passed.

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

**E. Resolution No. 8051** – Resolution Electing to Continue to Conduct Police and Fire Retirement System Board and Committee Meetings Using Teleconferencing in Accordance with California Government Code Section 54953(E).

**MOTION:** Vice President Godfrey made a motion to approve Resolution No. 8051, second by Member Nichelini. Motion passed.

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

**F. Pending Items** – No Report

**G. New Business** – No Report

**H. Open Forum** – President Johnson introduced himself and welcomed new Legal Counsel Mitesh Bhakta to the PFRS Board.

**I. Future Scheduling** – The next regular Board meeting is tentatively scheduled to occur Wednesday, May 25, 2022.

- J. Adjournment** – Vice President Godfrey made a motion to adjourn, second by Member Nichelini. Motion passed.

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

The meeting adjourned at 12:04 p.m. PST

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**DAVID F. JONES**  
**PLAN ADMINISTRATOR & SECRETARY**

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**DATE**

DRAFT

**Table 1**

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM**

**Administrative Budget Spent to Date (Preliminary)**

As of March 31, 2022

	Approved Budget		March 2022		FYTD		Remaining		Percent Remaining	
<b>Internal Administrative Costs</b>										
PFRS Staff Salaries	\$	1,212,000	\$	105,745	\$	813,833	\$	398,167		32.9%
Board Travel Expenditures		52,500		-		1,711		50,789		96.7%
Staff Training		20,000		-		-		20,000		100.0%
Staff Training - Tuition Reimbursement		7,500		-		-		7,500		100.0%
Board Hospitality		3,600		-		-		3,600		100.0%
Payroll Processing Fees		40,000		-		-		40,000		100.0%
Miscellaneous Expenditures		40,000		1,179		8,756		31,244		78.1%
Internal Service Fees (ISF)		88,000		-		53,814		34,186		38.8%
Contract Services Contingency		50,000		1,200		1,200		48,800		97.6%
<b>Internal Administrative Costs Subtotal :</b>	<b>\$</b>	<b>1,513,600</b>	<b>\$</b>	<b>108,124</b>	<b>\$</b>	<b>879,315</b>	<b>\$</b>	<b>634,285</b>		<b>41.9%</b>
<b>Actuary and Accounting Services</b>										
Audit	\$	49,000	\$	-	\$	48,300	\$	700		1.4%
Actuary		46,500		-		23,896		22,604		48.6%
<b>Actuary and Accounting Subtotal:</b>	<b>\$</b>	<b>95,500</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>72,196</b>	<b>\$</b>	<b>23,304</b>		<b>24.4%</b>
<b>Legal Services</b>										
City Attorney Salaries	\$	188,000	\$	20,137	\$	115,863	\$	72,137		38.4%
Legal Contingency		150,000		-		-		150,000		100.0%
<b>Legal Services Subtotal:</b>	<b>\$</b>	<b>338,000</b>	<b>\$</b>	<b>20,137</b>	<b>\$</b>	<b>115,863</b>	<b>\$</b>	<b>222,137</b>		<b>65.7%</b>
<b>Investment Services</b>										
Money Manager Fees	\$	1,353,000	\$	12,380	\$	670,072	\$	682,928		50.5%
Custodial Fee		124,000		-		58,250		65,750		53.0%
Investment Consultant		100,000		25,000		75,000		25,000		25.0%
<b>Investment Subtotal:</b>	<b>\$</b>	<b>1,577,000</b>	<b>\$</b>	<b>37,380</b>	<b>\$</b>	<b>803,322</b>	<b>\$</b>	<b>773,678</b>		<b>49.1%</b>
<b>Total Operating Budget</b>	<b>\$</b>	<b>3,524,100</b>	<b>\$</b>	<b>165,640</b>	<b>\$</b>	<b>1,870,695</b>	<b>\$</b>	<b>1,653,405</b>		<b>46.92%</b>

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Cash in Treasury (Fund 7100) - Preliminary

As of March 31, 2022

	March 2022
<b>Beginning Cash as of 2/28/2022</b>	\$ 6,771,097
<b>Additions:</b>	
City Pension Contribution - March	\$ 3,651,667
Investment Draw	\$ 1,000,000
Misc. Receipts	2,059
<b>Total Additions:</b>	\$ 4,653,725
<b>Deductions:</b>	
Pension Payment (February Pension Paid on 3/1/2022)	(4,260,428)
Expenditures Paid	(232,899)
<b>Total Deductions</b>	\$ (4,493,327)
 <b>Ending Cash Balance as of 3/31/2022*</b>	 \$ 6,931,495

\* On 4/1/2022, March pension payment of appx \$4,241,200 will be made leaving a cash balance of \$2,690,000.

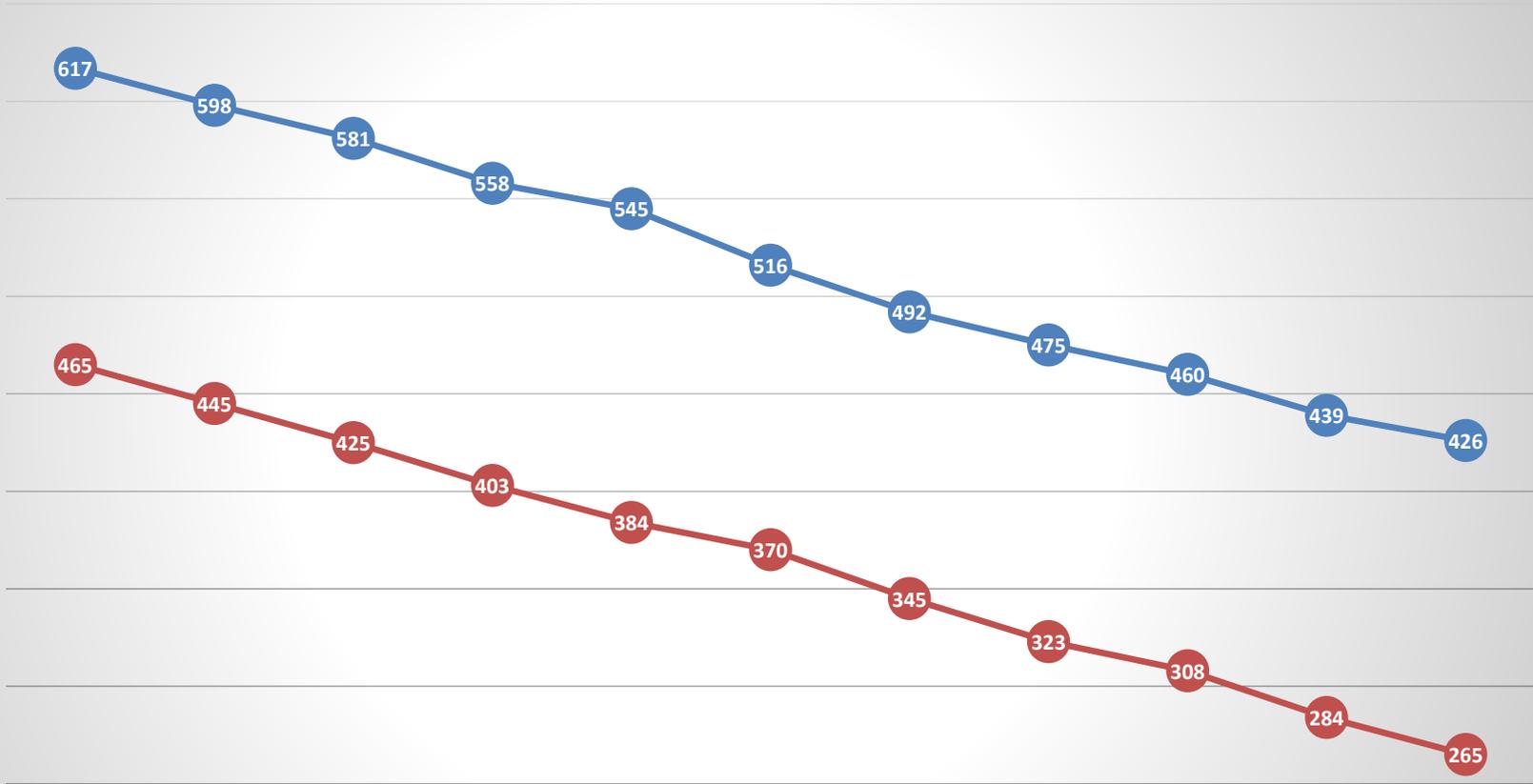
**Table 3**  
**CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM**

Census  
As of March 31, 2022

COMPOSITION	POLICE	FIRE	TOTAL
<b>Retired Member:</b>			
Retiree	303	172	475
Beneficiary	123	93	216
<b><i>Total Retired Members</i></b>	<b>426</b>	<b>265</b>	<b>691</b>
<b><i>Total Membership:</i></b>	<b>426</b>	<b>265</b>	<b>691</b>

COMPOSITION	POLICE	FIRE	TOTAL
<b>Retired Member:</b>			
Service Retirement	287	134	421
Disability Retirement	130	119	249
Death Allowance	9	12	21
<b><i>Total Retired Members:</i></b>	<b>426</b>	<b>265</b>	<b>691</b>
<b><i>Total Membership as of March 31, 2022:</i></b>	<b>426</b>	<b>265</b>	<b>691</b>
<b><i>Total Membership as of June 30, 2021:</i></b>	<b>439</b>	<b>284</b>	<b>723</b>
<b><i>Annual Difference:</i></b>	<b>-13</b>	<b>-19</b>	<b>-32</b>

## Oakland Police and Fire Retirement System Pension Plan Membership Count As of March 31, 2022 (FY 2012 - FY 2022)



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 FYTD
Police	617	598	581	558	545	516	492	475	460	439	426
Fire	465	445	425	403	384	370	345	323	308	284	265
Total	1082	1043	1006	961	929	886	837	798	768	723	691



# AGENDA REPORT

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**TO:** Oakland Police and Fire Retirement System Board (PFRS)      **FROM:** David F. Jones  
Plan Administrator

**SUBJECT:** Election of 3-Year Alternating Police/Fire Department Representative Board Position      **DATE:** May 25, 2022

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## SUMMARY

The 3-year alternating police/fire member board seat currently held by Kevin R. Traylor is due to expire August 31, 2022. Pursuant to the PFRS election guidelines outlined in Article 11 of the PFRS Rules and Regulations, an election for this board seat will be conducted by the Staff of the PFRS board with the assistance of the City Clerk's office.

## BACKGROUND

Kevin R. Traylor, a retired PFRS Police Member, was elected to the 3-year elected term as the 3-year Alternating Police/Fire Retired Member Representative effective February 26, 2020. Member Traylor's election to the Board seat completed Member Robert W. Nichelini's term as 3-year alternating police/fire member following his early resignation from the 3-year alternating police/fire board position to complete Member Muzar's position as the 5-year elected police representative. Member Traylor's board seat is set to expire August 31, 2022 and a new 3-year alternating police/fire member will need to be elected to this seat from the retired **Fire** membership.

Following the PFRS Rules & Regulations Article 11, Section 11.2, the PFRS staff will inform the International Association of Fire Fighters, Local 55 (IAFF Local 55) of the board vacancy and deliver to them the election schedules and nomination forms.

Should no more than one ( 1 ) nomination form be received by the nomination form submission deadline of 5 pm, July 20, 2022, then the single nominee will be automatically elected to the nominated position; an election would otherwise follow on August 24, 2022. The elected board member will begin the new term immediately following certification of results from the City Clerk's Office.

**Attachment (1):** *Rules & Regulations - Excerpt of Election: Article 11*

**Attachment (2):** *Nomination Form - Fire Department Representative for 3-Year Alternating Police/Fire Board Position*

Agenda Item     B2      
PFRS Board Meeting  
May 25, 2022

The following timeline shows the due dates for nominees and PFRS staff during this election cycle:

- Last day for furnishing the International Association of Fire Fighters, Local 55 (IAFF Local 55) a notice stating that nominating papers may be obtained from the Retirement Systems office..... June 1, 2022
- Last day for filing nominees to submit nominating papers to the City Clerk's Office..... July 20, 2022
- Last day for City Clerk to certify to Office of the PFRS Board the names of members nominated..... July 20, 2022
- Last day for mailing of ballots to members..... August 9, 2022
- Last day for delivering to City Clerk the Roster of PFRS Retired Fire Department Members..... August 9, 2022
- Ballots due to City Clerk no later than 10 am..... August 24, 2022
- Day for counting of ballots by City Clerk..... August 24, 2022

Respectfully submitted,



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

**Attachment (1):** Rules & Regulations - Excerpt of Election: Article 11

**Attachment (2):** Nomination Form - Fire Department Representative for 3-Year Alternating Police/Fire Board Position

# **ATTACHMENT 1**

*Rules & Regulations  
Excerpt of Election  
Article 11*

# OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## RULES AND REGULATIONS

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### **Article 11: ELECTION OF MEMBERS OF THE BOARD REPRESENTING RETIRED MEMBERS OF THE RETIREMENT SYSTEM**

#### Section 11.1: Day for Counting of Ballots

The fourth Wednesday in August of the year in which such election is required to be held is hereby the day for counting of ballots.

In the event of a vacancy of one or more of the elected PFRS Retirement Board seats before the completion of the full term, the day for counting ballots for the election to fill the vacant PFRS Retirement Board seat shall be the fourth Wednesday of the month that follows 90 days after the date of being informed of the vacancy.

#### Section 11.2: Notice of Nomination

On or before the first business day in June of each year in which an election is required, the office of the Police and Fire Retirement Board shall send a notice stating that nomination papers may be obtained at the office of said Police and Fire Retirement Board, the place where nomination papers shall be filed and the final date of filing thereof, the date when ballots will be counted and such other information as may be appropriate to the following organizations:

- Retired Oakland Police Officers' Association (ROPOA)
- International Association of Fire Fighters, Local 55 (IAFF Local 55)

In the event of a vacancy of one of the elected PFRS Retirement Board seats before the completion of the full term, the office of the Police and Fire Retirement Board shall send notice as stated above no later than ten (10) calendar days after the date of being informed of the vacancy.

#### Section 11.3: Nomination for Membership

Nomination for membership on the Police and Fire Retirement Board from the retired membership of the Police and Fire Department shall be in writing on forms supplied by the office of said Police and Fire Retirement Board upon request. Nomination papers shall be substantially in the form shown in Appendix A. Nomination papers shall be signed by at least ten retired members of the Police or Fire Department, as the case may be, who are members of the POLICE AND FIRE RETIREMENT SYSTEM, other than the person nominated. Each signatory of a nominating paper shall write the date of his/her signature at the end of the line opposite his/her signature. Beneficiaries of deceased members are not eligible to vote in elections.

# OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## RULES AND REGULATIONS

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### Section 11.4: Date of Filing Nomination Papers

Nominating papers shall be filed in the Office of the Oakland City Clerk, Room 306 of the Oakland City Hall, not less than thirty-five days before the day of counting ballots. If said date falls on a non-business day for the City of Oakland, it shall be filed on the next business day.

### Section 11.5: Determination of Sufficiency of Nominating Papers

The City Clerk of the City of Oakland will determine when a member is nominated and for this purpose shall have access to the records of the Police and Fire Retirement Board the names of those retired members of the respective departments determined by him to have been nominated.

### Section 11.6: Winner by Default

In the event that only one person is nominated in accordance with this Article 11 as a member of the Board, that person shall be declared a winner.

### Section 11.7: Mailing of Ballots

Not less than fifteen days before the day for the counting of the ballots that shall be prepared by and mailed for the office of the Police and Fire Retirement Board to each retired member of the Police Department of Fire Department who is a member of the Police and Fire Retirement System a ballot addressed to his or her address as shown by the records of the Police and Fire Retirement Board. The Ballots shall contain the names in alphabetical order of the candidates certified by the City Clerk as nominated. Such ballot, sealed in a blank envelope provided for this purpose, which shall be enclosed in another envelope, also provided for such purpose, upon which the voter shall place his or her name, may be returned to the City Clerk not later than 10:00 a.m. of the day for the counting of ballots.

### Section 11.8: Roster of Eligible Voters

There shall be prepared in the office of the Police and Fire Retirement Board a roster of eligible voters which shall contain the names of the retired members of the Police or Fire Department who are members of the Police and Fire Retirement System, excluding beneficiaries of deceased members. Such roster of eligible voters shall be delivered to the City Clerk not less than fifteen days before the day for the counting of ballots and shall be in such form as to permit appropriate asking thereon by the City Clerk to indicate that an eligible member has voted.

### Section 11.9: Counting of Ballots

On the day for the counting of ballots at the hour of 10:00 A.M. thereof, the ballot box shall be opened and no ballot received after said hour shall be counted. The ballots will be counted under the

# OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## RULES AND REGULATIONS

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supervision and control of the City Clerk in such manner that the identity of the individual casting any ballot will not be disclosed. No ballot shall be counted unless it is enclosed in an envelope bearing the name of the voter. No ballot shall be counted which contains a vote for a person not nominated in accordance with Article 12. Upon the conclusion of the counting of the ballots, the City Clerk will certify the count and the candidate elected and notify each candidate thereof by mail.

### Section 11.10: Vote Necessary for Election

The candidate receiving the highest number of eligible votes shall be declared elected.

### Section 11.11: Disposition of Ballots after Counting

Upon conclusion of the counting of the ballots they shall be kept by the City Clerk in the manner and for the period the ballots of municipal elections are kept.

### Section 11.12: Procedure to Fill Vacancy of Elected Members

In the event a vacancy occurs before the end of a full term in any of the three (3) elected offices of the Board which are filled by retired members of the Retirement System, a successor shall be elected for the unexpired portion of the term vacated. The successor shall be elected from the same department of the member who is vacating the seat for the remainder of said unexpired three (3) year, or five (5) year, term. The election shall be governed by Article 11.

# **ATTACHMENT 2**

## ***Nomination Form***

***Fire Department Representative***

***for***

***3-Year Alternating  
Police/Fire Department  
Board Position***



ASSET MANAGEMENT

# Oakland Police and Fire Retirement System (PFRS)

## Annual Portfolio Review



CITY OF OAKLAND

*Prepared by: Northern Trust Asset Management*

*Wednesday, May 25, 2022, 10:00 am Pacific*

*Via Zoom*

For One-on-One Use with Institutional Investors Only. Not For Retail Use. This information is intended for one-on-one use with current or prospective clients. This information is confidential and may not be duplicated in any form or disseminated without prior consent.



NORTHERN TRUST

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- Northern Trust Asset Management Overview
- Equity Index Management
- Portfolio Review
- Appendix

# ABOUT THE PRESENTERS

## **Shivani Shah**

Shivani is a Portfolio Manager responsible for managing a variety of equity index portfolios for a broad range of clients. She joined Northern Trust in 2021. Prior to joining Northern Trust, Shivani was a Portfolio Manager and Trader at Vanguard Group managing ETFs and Equity Index investments. She has held various investment management roles where she optimized the performance of domestic and international mutual funds, ETFs, and equity index investments.

Prior firms include: Davis Selected Advisors, The Vanguard Group, and most recently an Independent Consultant via Gerson Lehrman Group, Inc.

Shivani received a Bachelor of Arts degree in Finance and Entrepreneurship from the University of Arizona. Additionally, she earned an Executive Education Certificate in Sustainable Finance and ESG Investing from NYU Stern Business School. She is specialized in Monetizing the Value of Sustainability (ROSI).

## **Tamara Doi Beck**

Tamara Doi Beck is Director of Public Funds & Taft-Hartley Plans for the Institutional Group at Northern Trust Asset Management. In her role, Tamara delivers investment solutions, including equity, fixed income, and alternative asset classes, for these institutional segments on the West Coast. Tamara has covered this region since 2003 and has 22 years of financial industry experience, all of it developing business and managing client relationships with institutional investment programs.

Tamara joined from Janus Henderson Investors, where she was Managing Director, responsible for new business development with public, corporate, endowment and foundation plans. Previously, she was Director of Business Development for LMCG Investments and Senior Vice President for Neuberger Berman. Tamara also held several roles at Morgan Stanley Investment Management for over six years, most recently as Vice President of Institutional Sales on the Public Funds Team.

Tamara earned a BA from Tufts University and graduated summa cum laude with highest thesis honors. She holds Series 3, 7, 30 and 63 licenses.

# Northern Trust Asset Management Overview

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# PRINCIPLES THAT ENDURE



# NORTHERN TRUST

## Service

Relentless drive to provide exceptional service.

## Expertise

Resolving complex challenges with multi-asset class capabilities.

## Integrity

Acting with the highest ethics, utmost honesty and unfailing reliability.

Northern Trust's core principles of service, expertise, and integrity have remained constant for over 125 years, guiding Northern Trust's evolution to a multi-faceted global financial services provider.

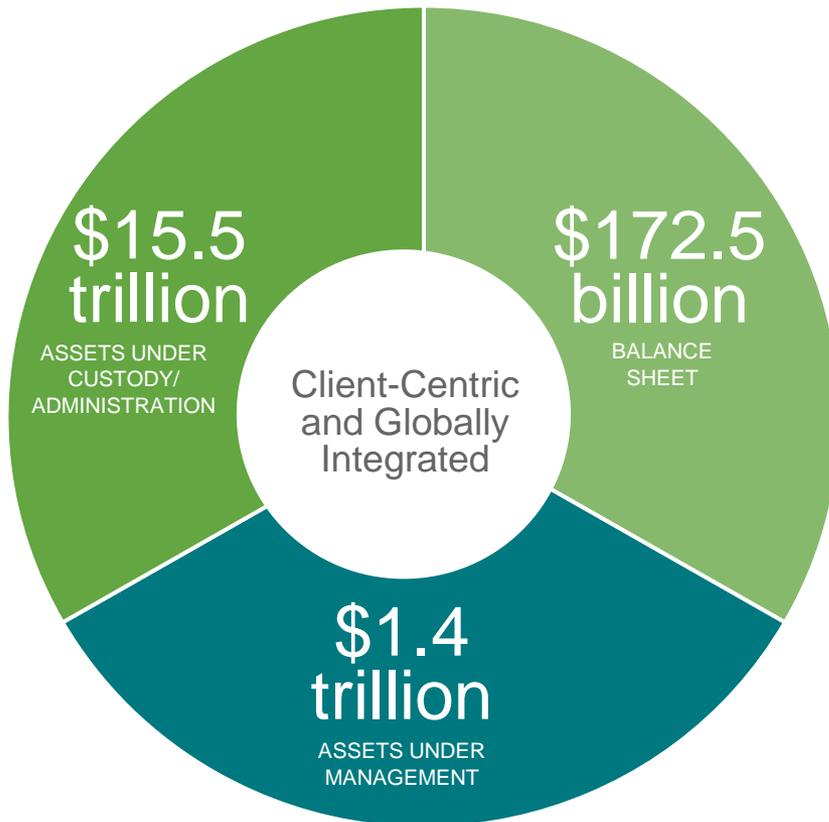
Throughout our history and changing market environments, we have led the financial services industry by aligning our efforts with these guiding principles.

Today, we remain committed to these founding principles which continue to unite and drive our partners around the globe — delivering our clients unparalleled service and expertise, with integrity.

# Northern Trust Corporation

Serving the world's most-sophisticated clients – from sovereign entities and the wealthiest individuals, to the largest global corporations and hedge funds.

## GLOBAL PLATFORM



As of March 31, 2022

<sup>1</sup>Standard and Poor's, senior debt as of June 30, 2021

<sup>2</sup>Source: Fortune, Korn Ferry. In 2022, 635 survey participants with \$10B+ in revenues, from 29 countries and 52 industries, were asked to rate companies in their own industry on nine criteria. A company's score must rank in the top half of its industry survey to be listed among the World's Most Admired Companies. Visit <http://fortune.com/worlds-most-admired-companies> for additional details and survey results. Past performance is not indicative of future results

## AT A GLANCE

- Founded in 1889
- Headquartered in Chicago, IL
- Locations in 26 countries
- 25,000+ global employees
- Diversified revenue streams
- A+ debt rating; well-capitalized<sup>1</sup>



World's most admired companies<sup>®</sup>

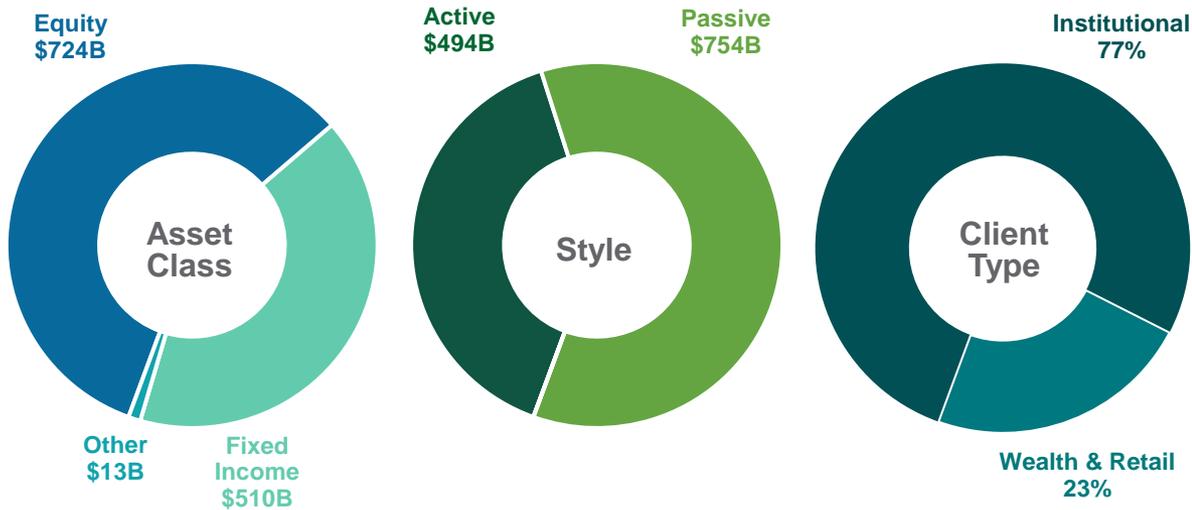
Fortune Magazine<sup>2</sup>  
15<sup>th</sup> consecutive year



# Northern Trust Asset Management

A leading global investment manager with a client-centric culture rooted in a fiduciary heritage.

## TOTAL ASSETS UNDER MANAGEMENT



## A TRUSTED PARTNER

**Leveraging** the strength of Northern Trust

**Global** network of investment professionals with deep expertise

**Demonstrated** ability to thrive in various market environments

**Progressive** thought leadership and differentiated insights

**Solving** complex global challenges with innovative solutions

**Focused** on placing the needs of our clients above all else

**\$1.2 trillion**  
TOTAL AUM\*

World's **17th largest** asset manager<sup>1</sup>

\*Assets under management as of March 31, 2022. For the Northern Trust Asset Management entities included in AUM total, please see disclosure at end of this document.

<sup>1</sup>The above rankings are not indicative of future performance. Unless otherwise noted, rankings are based on total worldwide assets under management of \$1.1 trillion as of December 31, 2020, by Pensions & Investments magazine's 2021 Special Report on the Largest Money Managers. Please see important information in the Appendix for more information about rankings and awards. Past performance is not indicative of future results.

# Investment Management Expertise

*Investment solutions and asset allocation informed by deep capital markets analysis. Comprehensive asset class capabilities from passive and factor-based, to fundamental active and multi-manager.*

## Capital Markets Expertise

### Equity

Factor-Based  
Active  
Passive  
Tax Advantaged  
Multi-Manager

### Fixed Income

Active  
Passive  
Cash Management  
Multi-Manager

### Alternatives

Hedge Funds  
Private Equity  
Private Credit  
Real Assets  
Infrastructure  
Real Estate

### Solutions

Sustainable/ESG  
Retirement  
Target Date  
Multi-Manager  
Investment Advisory  
Investment Institute

### Asset Allocation

Strategic  
Tactical

..... Forward-looking, historically aware investment approach .....

## GLOBAL PRODUCT VEHICLES

Collective Funds | Common Contractual Funds (CCF) | Common Funds | Exchange Traded Funds (ETFs) | Fonds voor Gemene Rekening (FGR)

Investment Company Variable Capital (ICVC) | Managed Accounts | Mutual Funds | Separate Accounts

# A Foundation Rooted in Sustainability

*We believe that the long-term financial success of our clients and shareholders is dependent upon a healthy global environment, a stable society and well-functioning, well-governed companies.*

## Organizational Commitment

Corporate social responsibility and philanthropy are essential elements of our mission and culture.

- **Reduced carbon emissions by 62%** since 2015 vs. 25% goal (2020)
- **3rd consecutive year** in the Bloomberg Gender-Equality Index (2020)
- **58%** of NTAM's Executive Group and **58%** of Northern Trust's Board of Directors **are gender-, racial- and ethnically diverse**

## Industry Leadership

Proudly participating, supporting and contributing to dozens of leading industry groups and initiatives around the globe.

- **Founding signatory** of Climate Action 100+
- **A+ Rated for Strategy and Governance\*** *Principles for Responsible Investment; member since 2009*
- **TCFD Supporter** *Task Force on Climate-Related Financial Disclosures*
- **SASB Investors Advisory Group Member** *Sustainability Accounting Standards Board*



## Stewardship

Representing investors' ownership interests by following and applying a thoughtful, disciplined process.

- **A thematic approach** guides our \$1 trillion global asset base to drive meaningful change through company engagement
- **Best performing U.S. asset manager** — supported 68% of climate resolutions (2021)<sup>1</sup>
- **3,000+** total engagements globally (2020)

## Expertise

Our history and proven expertise managing sustainable portfolios reflects a longstanding commitment to responsibly serving the needs of our clients.

- **\$158 billion<sup>2</sup>** in sustainable strategies AUM
- **30+ years** of expertise and innovation
- **Investment strategies and bespoke solutions** across asset classes and global investment vehicles
- **The Northern Trust ESG Vector Score™** an industry first approach that captures both the magnitude and direction of a company's potential ESG related business risks.

Source: Northern Trust, ShareAction. All data is as of December 31, 2020, unless otherwise stated.

<sup>1</sup>ShareAction 2021 report "Voting Matters" — Northern Trust Asset Management ranked 34th overall globally and 1st among U.S. asset managers. <sup>2</sup>Data as of March 31, 2022.

\*In our most recent 2020 UN PRI report we received an A+ rating for strategy and governance. For the full Northern Trust PRI Transparency Report, visit [www.unpri.org](http://www.unpri.org). Assessment methodology can be found at <https://www.unpri.org/reporting-and-assessment/how-investors-are-assessed-on-their-reporting/3066.article>. Please see important information in the Appendix for more information about rankings and awards. Past performance is not indicative of future results.

# A Firm Commitment to Diversity, Equity & Inclusion

*We're committed to fostering a diverse and inclusive culture. That means we lead — and live — by example, creating greater value for our employees, clients, shareholders and communities.*

## Diverse Talent and Leaders

Recruiting, developing and deploying diverse talent and leadership globally enables us to capitalize on the strength that lies in our differences.

**Diverse Leadership — 58%** gender-, racial- and ethnically diverse Executive Group.

**11 employee-led councils** providing professional development opportunities and amplifying diverse perspectives.

**Creating and maintaining a diverse workforce** has been **recognized** by many groups, including: *Working Mother* and *Black Enterprise*, as well as the Corporate Equality Index.

**100% score in the Disability Equality Index** and Disability:IN list of Best Places to Work for Disability Inclusion.<sup>1</sup>

**Women's Leadership Development Forum** — More than 1,700 high-potential women have participated since 2008.

## Investment Programs

Putting our values into action — driving change by developing innovative investment programs and investing in our communities.

**Established Minority Brokerage Program (2007):**

- Participating firms are majority owned by minorities, women and disabled veterans.
- 15% target for trading commissions executed through minority brokers on equity securities in CITs.<sup>2</sup>

**Multi-Manager Program**, engaging with diverse managers since 1979.

**Developed holistic, 360° framework** to assess diversity within public and private investments.

**\$3.4 billion** in community development investments.

**\$100 million** in low-cost funding committed to communities hard hit by the COVID-19 pandemic.<sup>3</sup>

## Leadership

Advancing diversity, equity and inclusion through industry and civic leadership and notable dialogue engagements.

**Leading organizational sample membership:**

- Signatory of Women in Finance Charter
- The Diversity Project
- LGBT Great
- Hiring Our Heroes
- Hispanic Alliance for Career Enhancement (HACE)
- Women in Super
- Financial Services Pipeline Initiative

**Encouraging transparent dialogue —** Through President's open letters and media engagements.

**Savoy Magazine** named **NTAM president Shundrawn Thomas** as one of the "Most Influential Black Executives in Corporate America."<sup>4</sup>

**Diversity Champion**, *Investment News*.<sup>5</sup>

All data from Northern Trust as of 12/31/2020, unless otherwise noted. <sup>1</sup> American Association of People with Disabilities. <sup>2</sup> Collective investment trusts with trading activity. <sup>3</sup> As of May 2020, Northern Trust announced it had committed to provide US\$100 million in low-cost funding to assist Community Development Financial Institutions (CDFIs), which provide loans, investments, financial services and technical assistance to underserved populations and communities. <sup>4</sup> *Savoy Magazine*, March 2020. <sup>5</sup> Excellence in Diversity & Inclusion Awards, *Investment News*, 2018, 2020, 2021, 2022. Please see important information in the Appendix for more information about rankings and awards. Past performance is not indicative of future results.

# DIVERSITY REPRESENTATION SURVEY FOR OAKLAND POLICE AND FIRE

DATA AS OF 12/31/2021

<b>Firm Name</b>	Northern Trust Investments, Inc.
<b>Product Name</b>	NT Collective Russell 1000 Index Fund - Lending
<b>Total Number of Employees</b>	As of 12/31/21 there were 509 employees for NTI

	Percentage (%) of Board of Directors / Managing Members	Percentage(%) of Firm (Entire Staff)	Percentage (%) of Firm (Investment Professionals)
<b>Race and Ethnicity*</b>			
African American/Black	29%	9%	9%
Asian/Hawaiian/Pacific Islander	14%	9%	9%
Latino/Hispanic	0%	7%	6%
White	57%	73%	74%
American Indian/Alaska Native	0%	0%	0%
Other	0%	2%	2%
<b>Gender</b>			
Male	71%	61%	69%
Female	29%	39%	31%
Non-Identified/Other	0%	0%	0%

*Please note that information above is reflective as of 12/31/21.*

\*Racial/ethnic categories appear as defined by EEOC guidance.  
We provide HR stats and data as of 12/31 and 6/30.



Stability  
+ Strength

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Opportunity

We're referred to as the stable institution that people trust—but trust and stability doesn't mean tired and stationary.

Quite the contrary; trust and stability mean we operate from a position of strength.

And with strength comes the ability to identify, create and seize opportunities for our clients.

# Equity Index Management

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# Index Management Capabilities and Team

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# Global Index Management Platform

*Our transparent index management process considers risk, liquidity and costs at every stage while integrating pointed proxy voting policies and principles targeted at upholding stewardship practices.*

## FAST FACTS

**\$754.6B AUM\***

**5th Largest Index Manager<sup>1</sup>**

**200+ Index Equity and Fixed Income Strategies**

## DECADES OF EXPERIENCE

**40+ Years Index Management**

**30+ Years ESG & Sustainability**

**20+ Years Quantitative Active**

## OUR CAPABILITIES

### Equity

Developed Markets  
Emerging Markets  
ESG & Sustainability Considerations  
Market-Cap Weighted  
Alternatively Weighted

### Fixed Income

Global Broad Fixed Income  
Government Sectors  
Securitized and Credit Sectors  
ESG and Sustainability Considerations  
Alternatively Weighted

### Real Assets

Real Estate  
Infrastructure  
Natural Resources

## Sustainable Investing

<sup>1</sup> Total worldwide assets under management. The above rankings are not indicative of future performance. Unless otherwise noted, rankings are based on total worldwide assets under management of \$1.1 trillion as of December 31, 2020, by Pensions & Investments magazine's 2021 Special Report on the Largest Money Managers. Please see important information on page 11 for more information about rankings and awards. Past performance is not indicative of future results.

\*Index Management AUM includes \$3.3B of Multi-Manager Solutions Assets.

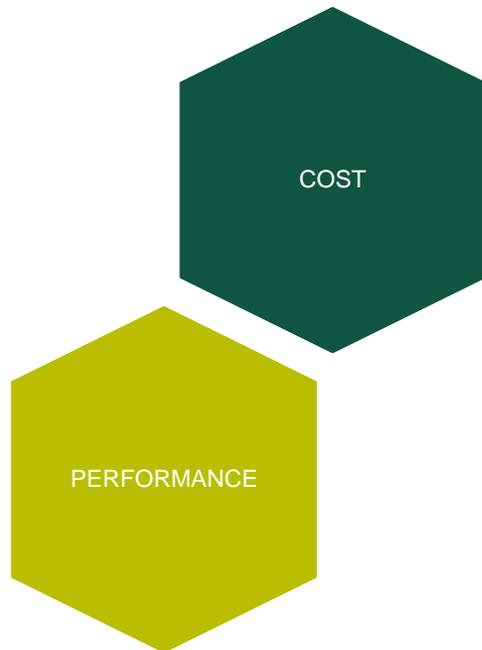
Assets under management as of 03/31/22.

# Solutions For Emerging Trends In Index Management

*The seemingly simple world of index investing continues to grow in breadth and complexity.*

## Indexing in the Past

Narrow solutions



## Indexing Now and into the Future

Innovative and customized solutions as needs evolve



# A Global Index Equity Team

**Angelo Manioudakis**  
Chief Investment Officer

## INDEX EQUITY

**Michael R. Hunstad, Ph.D.**  
Head of Quantitative Strategies

**Jake Weaver, CFA, CPA**  
Head of Equity Index

## PORTFOLIO MANAGEMENT & RESEARCH

### Chicago

**Brent D. Reeder**  
Head of Index, US

**Robert Anstine**  
Senior Portfolio Manager

**Keith Carroll**  
Senior Portfolio Manager

**Michael Gleeman, CFA**  
Senior Portfolio Manager

**Chris Jaeger**  
Senior Portfolio Manager

**Lucy Johnston**  
Senior Portfolio Manager

**Steve Santiccioli**  
Senior Portfolio Manager

**Brendan Sullivan, CFA**  
Senior Portfolio Manager

**Alan Aung, CFA**  
Senior Portfolio Manager

**Volter Bagriy, CFA**  
Senior Portfolio Manager

**Yair Walny, CFA**  
Senior Portfolio Manager

**Shivani Shah**  
Portfolio Manager

**Errol Mitchell**  
Associate Portfolio Manager

### London

**Nicholas Dymond, CFA**  
Head of International Index  
Equity, EMEA

**James Amatt**  
Senior Portfolio Manager

**Josh Fiennes, CFA**  
Senior Portfolio Manager

**Nigel Tyler**  
Senior Portfolio Manager

### Hong Kong

**Gregory Pasieka, CFA**  
Head of Index, APAC

**Manfred Wong, CFA**  
Senior Portfolio Manager

**David Crowe**  
Portfolio Manager

**Hamung Patel**  
Portfolio Manager

**Simona Muresan**  
Associate Portfolio Manager

**Open Position**  
Portfolio Manager

**Celia Chau, CFA, FRM**  
Portfolio Manager

**Sophie Piempreecha**  
Portfolio Manager

## EQUITY TRADING

**Curt Nass**  
Global Head of Equity Trading

### Chicago

**Peter Driscoll**  
Senior Equity Trader

**Christopher Ebel, CFA**  
Equity Trader

**Sean Finegan, CFA**  
Senior Equity Trader

**Walid Karim**  
Senior Equity Trader

**Ashish Mehta**  
Senior Equity Trader

**Paul Howaniec**  
Junior Equity Trader

**Jeffrey J Logan**  
Equity Trader

**Open Position**  
Equity Trader

### London

**Peter Hughes**  
Equity Trader

**Kerem Onder**  
Equity Trader

**Lindsay Anderson**  
Equity Trader

### Hong Kong

**Wilson Har**  
Equity Trader

**Michael Tan**  
Equity Trader

## INVESTMENT STRATEGY

**Jim McDonald**  
Chief Investment Strategist

**Wouter Sturkenboom, CFA**  
Chief Investment Strategist – EMEA

**Daniel Phillips, CFA**  
Senior Investment Strategist

## INDEX SERVICES

**Michael Deverall**  
Head of Index Services

## EQUITY SPECIALISTS

**Christopher Fronk, CFA, CPA**  
Senior Equity Specialist

**Emily Lawrence**  
Senior Equity Specialist – Sustainable Investing

**Austin Guy, CFA**  
Equity Specialist

## BUSINESS MANAGEMENT

**Ali Bleecker**  
Chief Administrative Officer

## RISK MANAGEMENT LEADERSHIP

**Michelle L Pfeiffer**  
Head of Investment Risk Management

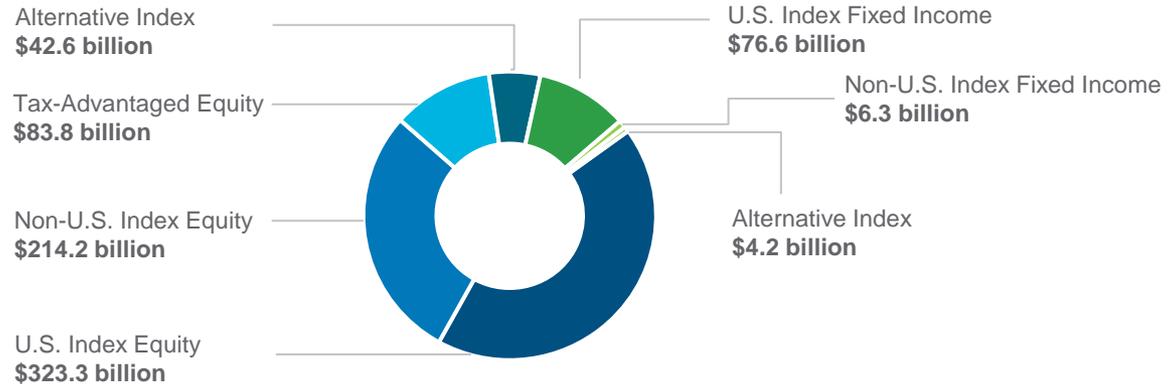
# Index Management

*Traditional market-cap weighted, alternatively-weighted and custom strategies for all asset classes*

Total index management assets under management:  
**\$754.6 billion\***  
 as of March 31, 2022

**Equity:**  
**\$664.0 billion**

**Fixed Income:**  
**\$87.2 billion**



As of March 31, 2022 (updated quarterly). Source: NTAM Finance.

\*Index Management AUM does not include \$3.3B of Multi-Manager Solutions Assets.

Northern Trust Asset Management is composed of Northern Trust Investments, Inc., Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K., NT Global Advisors, Inc., 50 South Capital Advisors, LLC, Belvedere Advisors LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company to offer investment products and services to personal and institutional markets.

For purpose of compliance with the Global Investment Performance Standards (GIPS®) the firm is defined as Northern Trust Asset Management Services, a subset of Northern Trust Asset Management, and includes those investment products managed by NTI, NTGIL, NTGIJ and TNTC that are distributed through global channels.

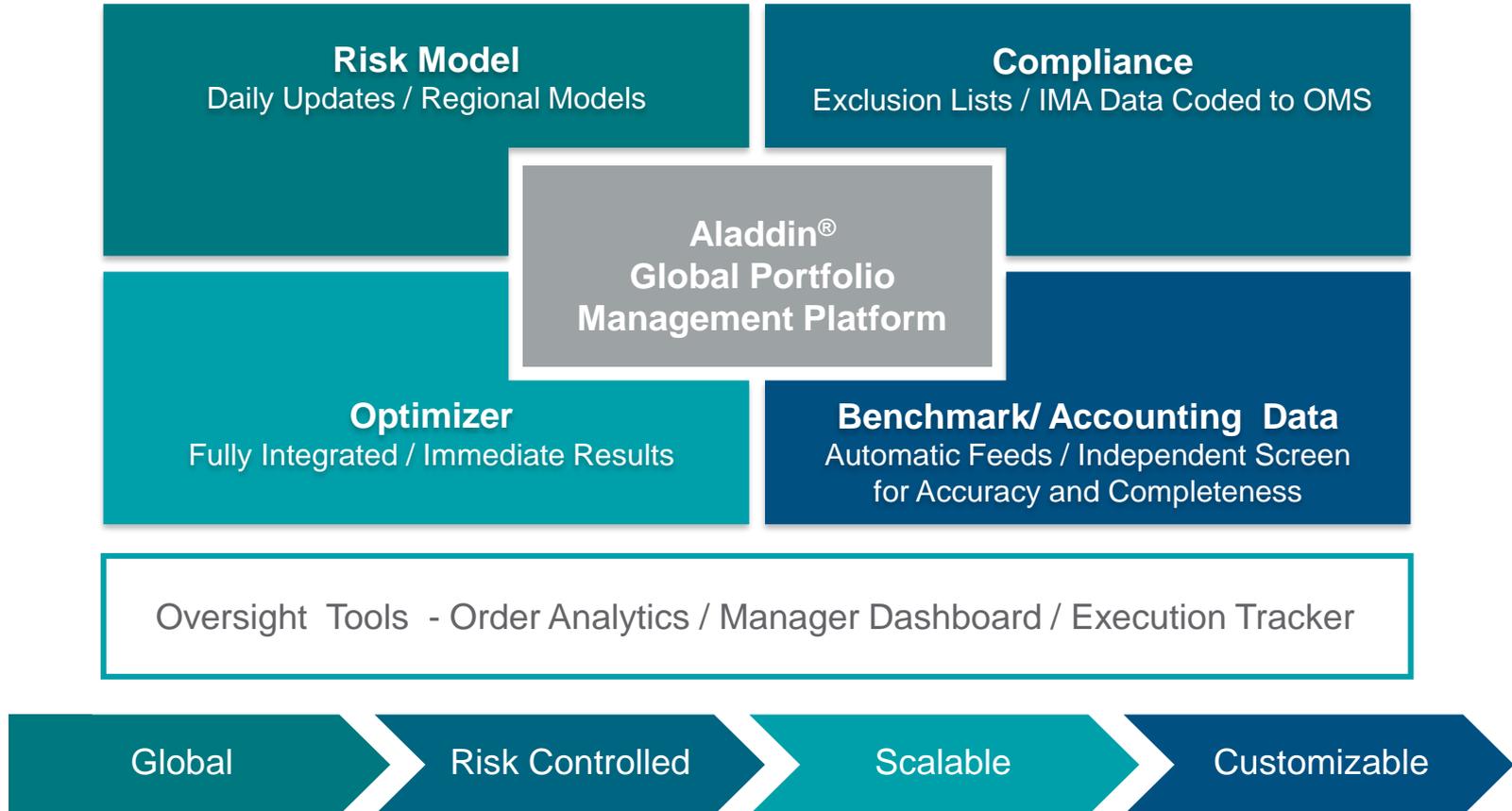
As of 03/31/2022 Northern Trust Asset Management had assets under management totaling \$1.24 trillion of which \$1.17 trillion is part of the GIPS firm

# Investment Process

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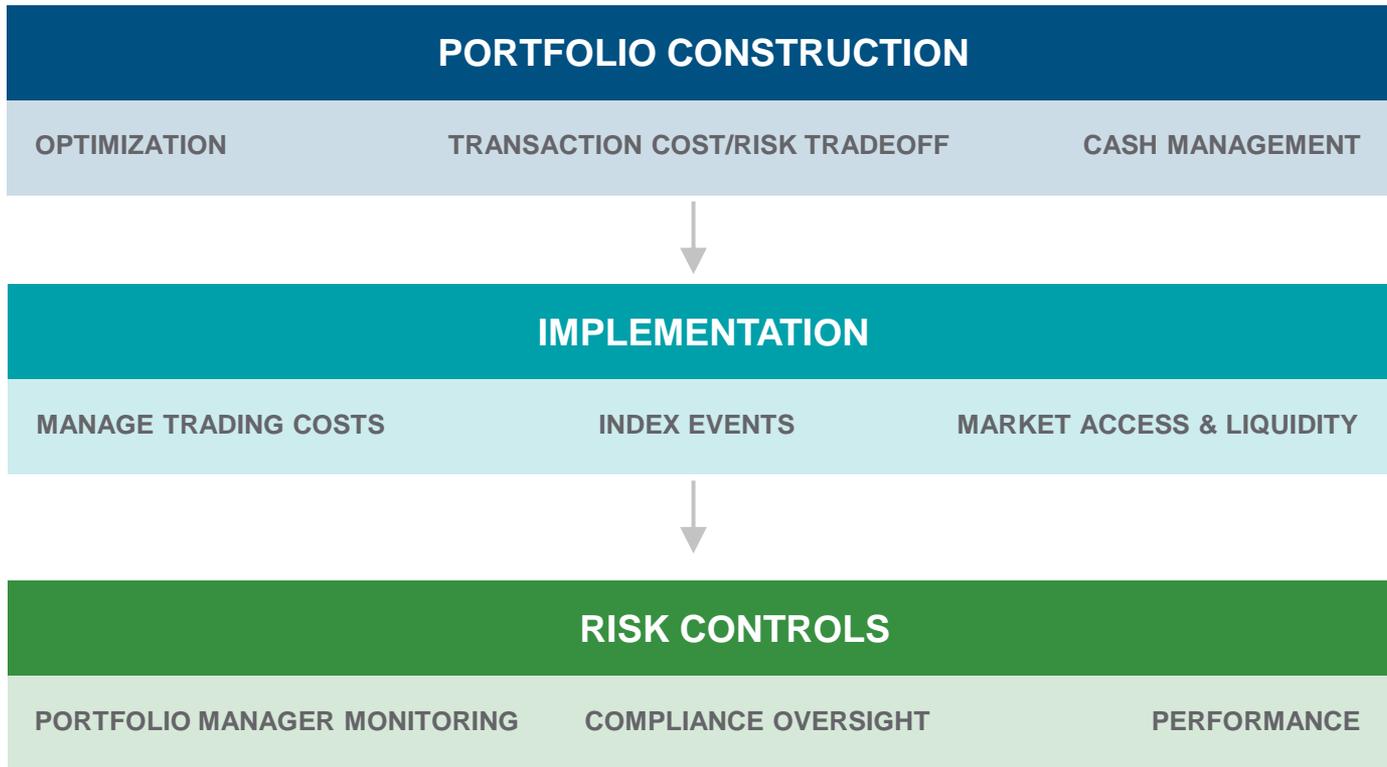
# Integrated Global Technology Platform

*Integrated industry-leading global platform backed by significant scale and infrastructure*



# Liquidity Driven Approach to Portfolio Construction

*Our investment philosophy is grounded in the belief that to efficiently replicate benchmark characteristics, it is vital to consider liquidity, transaction costs, and risk throughout the investment process.*



Please note that this information reflects current processes and that all steps of the analysis may not be taken for each investment.

# Multi-Dimensional Risk Oversight

*Continuous process examining portfolio risk, performance attribution and compliance.*

## Daily Reviews

### Portfolio Management Team

- Observe projected tracking error
- Evaluate positioning, risks and costs
- Monitor changes in index constituents and characteristics
- System validation of holdings versus guidelines, in real time
- Conduct pre-trade compliance

### Compliance Team

- OMS Systems examine holdings vs. guidelines
- Conduct post-trade compliance

## Ongoing Reviews

### Investment Governance Committee (Quarterly)

- Consists of senior investment and risk professionals across firm
- Review performance results and peer group
- Review investment strategy decisions and governance

### Asset Management Risk Committee (Monthly)

- Oversight and monitoring of investment, operational and regulatory risks
- Key members include Chief Risk Officer, Chief Compliance Officer and Chief Investment Officer

There is no guarantee that tracking error targets can be achieved. Tracking error measures the difference between the investment performance of the strategy or fund and that of the Index.

# Global, 24/6 Equity Trading Platform

*Leading market participant with global reach in Equities, Currencies, and Futures across Developed, Emerging, and Frontier markets.*



## Structure

- Global trading team with 24/6 pass the book infrastructure between dedicated dealing teams in Chicago, London, and Hong Kong
- Straight through electronic order processing from portfolio management origination to trade allocation and settlement



## Trading Strengths

- Northern Trust is a sophisticated market participant able to efficiently navigate all markets
- Competitive explicit trading costs in all markets.
- Executes with understanding and optimal blend of opportunity cost and market impact

# Portfolio Review

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Performance as of March 31, 2022

# CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## GROSS AND NET GROSS PERFORMANCE – AS OF APRIL 30, 2022

Northern Trust Asset Management

### CITY OF OAKLAND POLICE AND FIRE RETIREMENT BOARD



PERFORMANCE as of April 30, 2022

						ANNUALIZED			
		One Month	Quarter	YTD	1-Year	3-Year	5-Year	10-Year	Since Inception
		7/1/2013							
<b>City of Oakland Police &amp; Fire Retirement System</b>	<b>Gross of Fees</b>	<b>-8.91</b>	<b>-8.42</b>	<b>-13.58</b>	<b>-2.09</b>	<b>13.56</b>	<b>13.45</b>		<b>13.33</b>
2698026	Net of Fees	-8.91	-8.42	-13.59	-2.11	13.54	13.43		13.30
	Russell 1000	-8.91	-8.42	-13.59	-2.10	13.57	13.44		13.29

Returns for periods greater than one year are annualized. Gross performance returns shown do not reflect the deduction of investment management/advisory fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs and other expenses. Performance results will be reduced by the fees incurred in the management of the account. Net performance returns are reduced by investment management fees and other expenses relating to the management of the account. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Past performance is not indicative of future results. Investment management/advisory fees are described in Northern Trust Investments, Inc. Form ADV Part 2A.

# CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

## PERFORMANCE & MARKET VALUE SUMMARY OF HOLDING – AS OF APRIL 30, 2022

	Inception Date	As of 04/30/22 Market Value	PORTFOLIO PERFORMANCE THROUGH 04/30/22 (%)							
			1 Month	3 Month	Year to Date	1 Year	3 Year	5 Year	10 Year	Since Inception
<b>CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM-(2698026)</b>										
Northern Trust Collective Russell 1000 Index Fund - Lending	07/01/13	USD \$83,008,915.20								
Total Fund Gross of Fees			-8.91	-8.42	-13.58	-2.09	13.56	13.45	NA	13.33
Russell 1000 Index			-8.91	-8.42	-13.59	-2.10	13.57	13.44	NA	13.29
Total Market Value of Legal Agreement		USD \$83,008,915.20								
Total Market Value of Assets		USD \$83,008,915.20								

Annualized gross returns for periods greater than one year. Client's return will be reduced by the advisory fees. Gross performance returns shown do not reflect the deduction of investment management/advisory fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs and other expenses. Performance results will be reduced by the fees incurred in the management of the account. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Past performance is not indicative of future results.

To illustrate the effect of the compounding fees, assuming an annual gross return of 8% and an annual investment management fee of 0.80%, a \$10,000,000 account would grow in value over five years to \$14,693,281 before fees and \$14,157,088 after deduction of fees. The fee illustration represents the deduction of the highest applicable management fee. Investment management/advisory fees are described in Northern Trust Investments, Inc. Form ADV Part 2A. For one-on-one use only.

# RUSSELL 1000 INDEX - CHARACTERISTICS AS OF APRIL 30, 2022

## CHARACTERISTICS

	Fund	Benchmark
Average Weighted Market Cap (\$M)	\$497,909.67	\$497,471.39
Trailing P/E Ratio	20.13	20.12
Forward 12-Month P/E Ratio	18.08	18.07
P/B Ratio	4.04	4.04

	Fund	Benchmark
Dividend Yield	1.44%	1.44%
Return on Equity	25.92%	25.91%
Number of Equity Holdings	1025	1023
5-Year Beta	NA	1.00

## TOP TEN HOLDINGS BY ACCOUNT (%)

	Fund
Apple Inc.	6.33
Microsoft Corporation	5.44
Amazon.com, Inc.	2.81
Tesla Inc	1.89
Alphabet Inc. Class A	1.79
Alphabet Inc. Class C	1.66
Berkshire Hathaway Inc. Class B	1.54
UnitedHealth Group Incorporated	1.24
Johnson & Johnson	1.24
Meta Platforms Inc. Class A	1.20

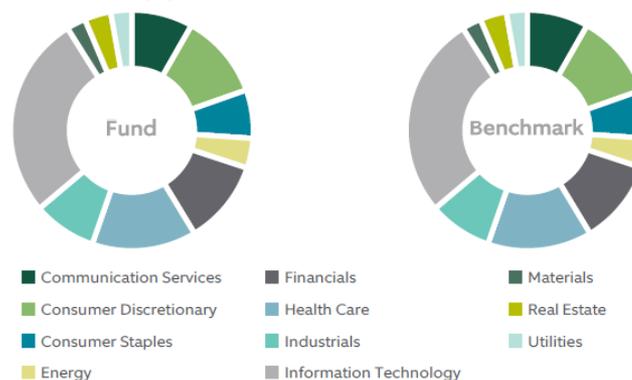
## TOP TEN HOLDINGS BY BENCHMARK (%)

	Benchmark
Apple Inc.	6.32
Microsoft Corporation	5.44
Amazon.com, Inc.	2.80
Tesla Inc	1.88
Alphabet Inc. Class A	1.78
Alphabet Inc. Class C	1.65
Berkshire Hathaway Inc. Class B	1.54
UnitedHealth Group Incorporated	1.24
Johnson & Johnson	1.24
Meta Platforms Inc. Class A	1.20

## SECTOR EXPOSURE (%)

	Fund	Benchmark	Overweight/ Underweight
Information Technology	27.33	27.31	0.02
Consumer Discretionary	11.41	11.40	0.01
Communication Services	8.17	8.17	0.00
Consumer Staples	6.50	6.50	0.00
Industrials	8.47	8.48	-0.01
Utilities	2.81	2.82	-0.01
Materials	2.59	2.60	-0.01
Energy	4.03	4.03	0.00
Real Estate	3.50	3.50	0.00
Health Care	13.89	13.90	-0.01
Financials	11.30	11.31	-0.01

## SECTOR EXPOSURE (%)



\*\*Please note Beta is calculated using the prior month's portfolio and benchmark returns.

Information is provided to illustrate typical sectors and securities in which the portfolio may invest and to reflect representative portfolio characteristics. It should not be considered investment advice or a recommendation to buy or sell any security. There is no guarantee that securities remain in the portfolio or that securities sold have not been repurchased. It should not be assumed that any investments were profitable or will prove to be profitable. Past performance does not guarantee future results.

# Appendix

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# IMPORTANT INFORMATION

## ***2021 One of the World's Most Admired Companies***

Fortune's survey partners at Korn Ferry Group start with approximately 1,500 companies comprised of the Fortune 1,000 (the 1,000 largest U.S. companies ranked by revenue) and non-U.S. companies in Fortune's Global 500 database with revenues of \$10 billion or more. Korn Ferry then selects the companies with the highest-revenues in 52 industries, surveying a total of 670 companies from 30 countries in 2021. To create the 52 industry lists, Korn Ferry polled executives, directors and analysts to rate companies in their own industry on nine criteria, from investment value to social responsibility. A company's score must rank in the top half of its industry survey to be listed. <http://fortune.com/worlds-most-admired-companies>

## ***Barron's 100 Most Sustainable Companies***

Additional information regarding the ranking methodology can be found at: <https://www.barrons.com/articles/barrons-100-most-sustainable-companies-for-2021-51613172493?refsec=top-sustainable-companies>

*(click on 'See our methodology and credits')*

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Investing involves risk – no investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

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All securities investing and trading activities risk the loss of capital. Each portfolio is subject to substantial risks including market risks, strategy risks, adviser risk and risks with respect to its investment in other structures. There can be no assurance that any portfolio investment objectives will be achieved, or that any investment will achieve profits or avoid incurring substantial losses. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Risk controls and models do not promise any level of performance or guarantee against loss of principal. Any discussion of risk management is intended to describe Northern Trust's efforts to monitor and manage risk but does not imply low risk.

Past performance is no guarantee of future results. Performance returns and the principal value of an investment will fluctuate. Performance returns contained herein are subject to revision by Northern Trust. Comparative indices shown are provided as an indication of the performance of a particular segment of the capital markets and/or alternative strategies in general. Index performance returns do not reflect any advisory fees, transaction costs or expenses. It is not possible to invest directly in any index. Performance returns are reduced by investment management fees and other expenses relating to the management of the account. Performance returns contained herein include reinvestment of dividends and other earnings, transaction costs, and all fees and expenses other than investment management fees, unless indicated otherwise. Gross performance returns do not reflect the deduction of investment advisory fees and returns will therefore be reduced by these and any other expenses occurred in the management of the account. For additional information on fees, please refer to Part 2a of the Form ADV or consult a Northern Trust representative.

Forward-looking statements and assumptions are Northern Trust's current estimates or expectations of future events or future results based upon proprietary research and should not be construed as an estimate or promise of results that a portfolio may achieve. Actual results could differ materially from the results indicated by this information.

If presented, hypothetical portfolio information provided does not represent results of an actual investment portfolio but reflects representative historical performance of the strategies, funds or accounts listed herein, which were selected with the benefit of hindsight. Hypothetical performance results do not reflect actual trading. No representation is being made that any portfolio will achieve a performance record similar to that shown. A hypothetical investment does not necessarily take into account the fees, risks, economic or market factors/conditions an investor might experience in actual trading. Hypothetical results may have under- or over- compensation for the impact, if any, of certain market factors such as lack of liquidity, economic or market factors/conditions. The investment returns of other clients may differ materially from the portfolio portrayed. There are numerous other factors related to the markets in general or to the implementation of any specific program that cannot be fully accounted for in the preparation of hypothetical performance results. The information is confidential and may not be duplicated in any form or disseminated without the prior consent of Northern Trust.

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Northern Trust Asset Management is composed of Northern Trust Investments, Inc., Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K., NT Global Advisors, Inc., 50 South Capital Advisors, LLC, Belvedere Advisors LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company.

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NORTHERN  
TRUST



## News Release

*Media Contact:*

Doug Holt  
312-557-1571  
Doug\_Holt@ntrs.com

<http://www.northerntrust.com>

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# Northern Trust Announces Asset Management Leadership Change

**CHICAGO, May 3, 2022** — Northern Trust (Nasdaq: NTRS) announced today that Shundrawn Thomas, President of Northern Trust Asset Management, will be leaving the company on June 1, 2022, in order to pursue an outside entrepreneurial opportunity.

“On behalf of Northern Trust, I would like to thank Shundrawn for his exceptional contributions throughout his 18 years,” Northern Trust Corporation Chairman and Chief Executive Officer Michael O’Grady said. “Shundrawn led with clarity, empathy and purpose and served as an example to us all. He not only embodied our enduring principles of service, expertise and integrity; he also courageously challenged and guided us to evolve how we live our principles in more inclusive and equitable ways.”

Thomas joined Northern Trust in 2004 and served in several executive roles over his tenure, including as a member of the Asset Management executive team since 2008 and as a member of the Management Group since 2017.

Thomas said he made the decision to leave Northern Trust in order to co-found a new, diverse-owned and led business that will provide debt and equity solutions to privately held U.S. companies. A key focus will be identifying untapped market opportunities and partnering with women and ethnically diverse business operators.

“Shundrawn has been a tireless champion for diversity, equity, and inclusion – both at Northern Trust and in the asset management industry – and is a recognized leader in sustainable investing,” O’Grady said. “We support Shundrawn’s commitment to driving social impact, and we wish him nothing but continued success.”

### About Northern Trust

Northern Trust Corporation (Nasdaq: NTRS) is a leading provider of wealth management, asset servicing, asset management and banking to corporations, institutions, affluent families and individuals. Founded in Chicago in 1889, Northern Trust has a global presence with offices in 23 U.S. states and Washington, D.C., and across 23 locations in Canada, Europe, the Middle East and the Asia-Pacific region. As of March 31, 2022, Northern Trust had assets under custody/administration of US\$15.5 trillion, and assets under management of US\$1.5 trillion. For more than 130 years, Northern Trust has earned distinction as an industry leader for exceptional service, financial expertise, integrity and innovation. Visit us on [northerntrust.com](http://northerntrust.com). Follow us on [@NorthernTrust](https://twitter.com/NorthernTrust) or Northern Trust Corporation on [LinkedIn](https://www.linkedin.com/company/northern-trust).



Northern Trust Corporation, Head Office: 50 South La Salle Street, Chicago, Illinois 60603 U.S.A., incorporated with limited liability in the U.S. Global legal and regulatory information can be found at <https://www.northerntrust.com/terms-and-conditions>.

## MEMORANDUM

**TO:** Oakland Police and Fire Retirement System (OPFRS)  
**FROM:** Meketa Investment Group  
**DATE:** May 25, 2022  
**RE:** Northern Trust – Manager Update

### Manager: Brown Advisory

<b>Inception Date:</b>	June 2010	<b>OPFRS AUM (4/30/2022):</b>	\$84.1 million
<b>Strategy:</b>	Large Cap Core Equity Index	<b>Firm-wide AUM (3/31/2022):</b>	\$1.2 trillion
<b>Benchmark:</b>	Russell 1000 Index	<b>Strategy AUM (3/31/2022):</b>	\$47.6 billion

### Summary & Recommendation

Northern Trust began managing OPFRS's large cap core portfolio in June 2010, which is now approximately \$84.1 million or about 20% of OPFRS's total allocation. Over this period, Northern Trust has performed within expectations for a passive manager and has experienced no major organizational changes. *Due to Northern Trust's consistent performance and stable organizational operations, Meketa does not have any major concerns with Northern Trust and does not recommend any action be taken at this time.*

### Discussion

Since inception in 2010, Northern Trust has performed within guidelines expected for a passive manager. It has replicated the risk-return profile of the Russell 1000 Index; over 3- and 5-year trailing periods, the strategy ranks in the upper half in the universe of large cap core equity managers.

### OPFRS Portfolio Annualized Returns (as of 4/30/2022)

Manager	Mkt Value (\$000)	Asset Class	YTD	1 YR	3 YR	5 YR	Since Inception	Inception Date
Northern Trust Russell 1000 (Gross)	84,108	Large Cap Core	-13.6	-2.1	13.5	13.4	14.0	6/2010
<i>Russell 1000</i>	---	---	-13.6	-2.1	13.6	13.4	14.0	---
Excess Return	---	---	0	0	-0.1	0	0	---
<i>Rank (as of 3/31/2022)*</i>	---	---	55	58	35	40	43	---
Northern Trust Russell 1000 (Net)	84,108	Large Cap Core	-13.6	-2.1	13.5	13.4	13.9	6/2010
<i>Russell 1000</i>	---	---	-13.6	-2.1	13.6	13.4	14.0	---

\* Peer group ranking is not yet available for 4/30/2022..

### Product and Organization Review Summary

Brown Advisory	Areas of Potential Impact				
	Level of Concern	Investment process (Client Portfolio)	Investment Team	Performance Track Record	Team/ Firm Culture
<b>Product</b>					
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				
<b>Organization</b>					
Ownership changes	None				
Key people changes	None				
Firm wide client gain/losses	None				
Recommended Action	None - X		Watch Status	Termination	

A review of Northern Trust and the Russell 1000 Equity Index strategy revealed no significant organizational issues or changes. Brent Reeder, who is considered the primary manager for the Russell 1000 core product, has been with the fund since 1998.

### Investment Philosophy & Process, per manager

The Northern Trust Russell 1000 Index fund seeks investment results, before expenses, approximating the aggregate price and dividend performance of the securities included in the Russell 1000 Index. The fund invests at least 80% of its net assets in equity securities in the index and uses proprietary quantitative techniques to minimize trading costs.

Northern Trust's investment philosophy is grounded in the belief that to efficiently replicate benchmark characteristics, it is vital to consider liquidity, transaction costs, and risk throughout the investment process.

Portfolio managers replicate the underlying benchmark's risk and return characteristics while maximizing value for investors through a thoughtful approach to portfolio construction and implementation around index events and client flows, as well as a multi-dimensional risk management framework that incorporates constraints at the security, sector, country and risk factor level.



## Disclosure

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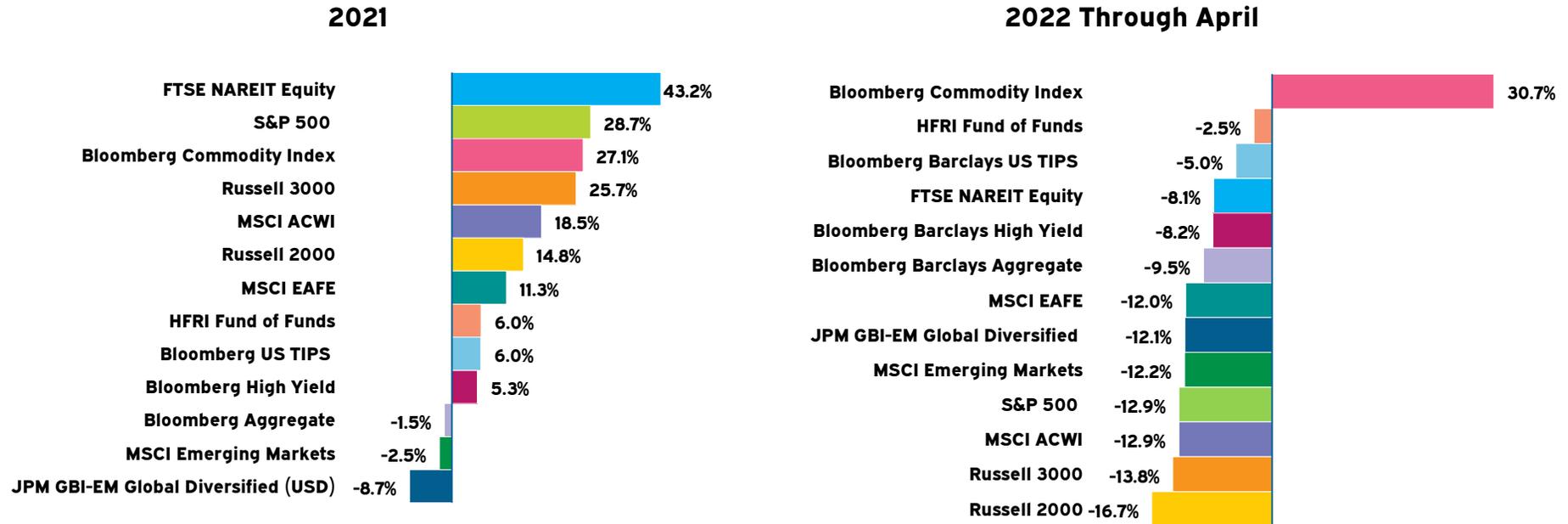
# Economic and Market Update

April 2022 Report

### Commentary

- Market volatility rose sharply in April due to continued inflation pressures, driven by supply chain issues, global stimulus, and the war in Ukraine.
- Except for commodities, all asset classes declined in April.
  - Equities fell across the board with the US experiencing the steepest declines.
  - Value-oriented equities outpaced growth in the US, influenced by higher interest rates and notable weakness in some high-profile technology companies.
  - The global bond selloff continued, as rates rose further on inflation fears and policy expectations.
  - Rates rose across the US yield curve, with the curve steepening after a brief early month inversion.
  - Inflation remains high globally given lingering supply issues from the pandemic and the conflict in Ukraine.
  - The pace of policy tightening will likely increase due to persistent inflation.
- The conflict in Ukraine, lingering COVID-19 issues, persistent inflation, and strict lockdowns in China will all have considerable economic and financial consequences for the global economy going forward.

### Index Returns<sup>1</sup>



→ Outside of emerging markets and the broad US investment grade bond market (Bloomberg Aggregate), most asset classes rose in 2021.

→ In April, most major asset classes extended their losses from the first quarter, with US stocks and bonds having one of their worst starts to a year on record. Commodities continue to be the one exception to the trend, adding 4.1% in April and bringing the year-to-date return to over 30%.

<sup>1</sup> Source: Bloomberg and FactSet. Data is as of April 30, 2022.

### Domestic Equity Returns<sup>1</sup>

Domestic Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-8.7	-4.6	-12.9	-0.5	13.8	13.7	13.6
Russell 3000	-9.0	-5.3	-13.8	-3.9	13.1	13.0	13.2
Russell 1000	-8.9	-5.1	-13.6	-2.8	13.6	13.4	13.5
Russell 1000 Growth	-12.1	-9.0	-20.0	-6.0	16.7	17.3	15.5
Russell 1000 Value	-5.6	-0.7	-6.3	0.5	9.6	9.1	11.1
Russell MidCap	-7.7	-5.7	-12.9	-7.1	10.5	10.7	11.9
Russell MidCap Growth	-11.3	-12.6	-22.4	-17.7	8.7	12.1	12.1
Russell MidCap Value	-5.9	-1.8	-7.7	-0.9	10.2	8.6	11.3
Russell 2000	-9.9	-7.5	-16.7	-17.9	6.7	7.2	9.9
Russell 2000 Growth	-12.3	-12.6	-23.3	-27.4	4.1	7.1	9.8
Russell 2000 Value	-7.8	-2.4	-10.0	-7.7	8.4	6.7	9.7

#### US Equities: Russell 3000 Index declined 9%, and value indices outperformed growth in April.

- The steep declines in US stocks were driven by an overall weakening of economic data and persistent inflation, leading to expectations for the Federal Reserve to increase rates much faster than previously expected.
- Value stocks declined far less than growth stocks for the month, maintaining the recent trend as rising rates and inflation continued to weigh on growth companies.
- Large company stocks outpaced small company stocks for the month, extending year-to-date relative outperformance.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022.

### Foreign Equity Returns<sup>1</sup>

Foreign Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-6.3	-5.4	-11.4	-11.3	4.3	4.9	5.0
MSCI EAFE	-6.5	-5.9	-12.0	-9.1	4.4	4.8	5.7
MSCI EAFE (Local Currency)	-1.4	-3.7	-5.1	2.9	6.5	6.0	8.7
MSCI EAFE Small Cap	-6.9	-8.5	-14.8	-14.4	4.9	5.0	7.6
MSCI Emerging Markets	-5.6	-7.0	-12.2	-19.3	2.2	4.3	3.0
MSCI Emerging Markets (Local Currency)	-3.5	-6.1	-9.4	-15.3	4.1	6.2	6.0
MSCI China	-4.1	-14.2	-17.7	-37.1	-5.0	2.1	3.9

#### International Developed Market Equities: MSCI EAFE -6.5% in April.

- Non-US stocks fell less than US stocks in April, leading to their smaller year-to-date declines.
- The war in Ukraine, high inflation, continued strength in the US dollar, and slowing growth all weighed on stocks in Europe. A particularly weak currency and diverging monetary policy impacted Japan's results.
- Like the US, value stocks outperformed growth stocks by a wide margin across developed markets, but not in emerging markets where value and growth declined equally in the month of April.

#### Emerging Markets: MSCI EM -5.6% in April.

- Emerging market stocks suffered negative returns in April but outperformed developed market stocks.
- China's strict COVID-19 policies, increased hawkishness from the US Fed, the war in Ukraine, and US dollar strength all contributed to declines.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022.

### Fixed Income Returns<sup>1</sup>

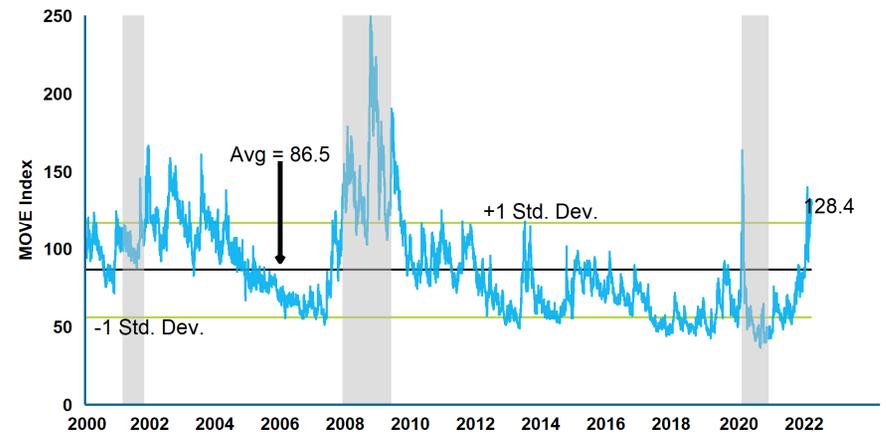
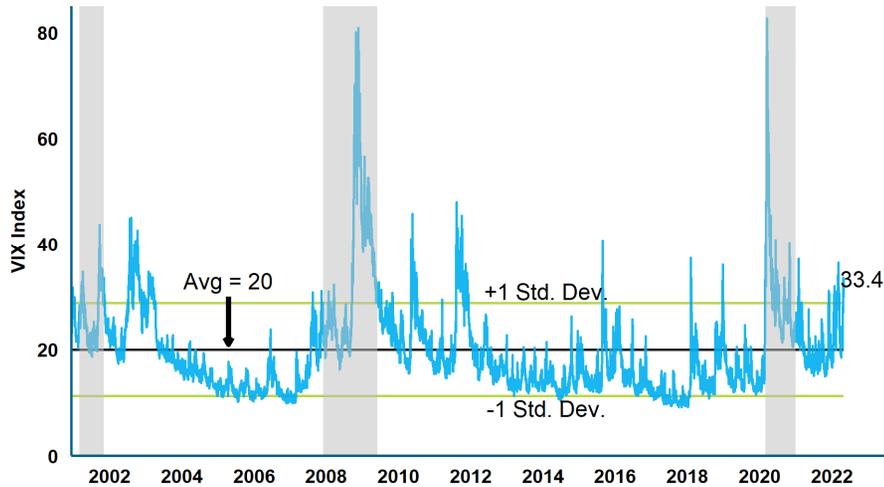
Fixed Income	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-3.7	-6.1	-9.6	-8.5	0.6	1.4	2.1	3.9	6.5
Bloomberg Aggregate	-3.8	-5.9	-9.5	-8.4	0.4	1.2	1.7	3.5	6.7
Bloomberg US TIPS	-2.0	-3.0	-5.0	0.7	5.4	3.9	2.3	3.1	7.5
Bloomberg High Yield	-3.6	-4.8	-8.2	-5.2	2.8	3.7	5.3	7.0	4.8
JPM GBI-EM Global Diversified (USD)	-6.0	-6.5	-12.1	-15.9	-3.1	-1.3	-1.4	6.9	4.9

#### Fixed Income: Bloomberg Universal -3.7% in April.

- Continued concerns about policy tightening and inflation led to rates rising further in April resulting in the broad US investment grade bond market (Bloomberg Aggregate) having its worst start to a year on record. The nominal 10-year Treasury yield approached 3% by month-end and real yields moved toward becoming positive (this eventually happened after month-end).
- US credit spreads continued to widen, particularly in high yield, as risk assets fell.
- Emerging market debt experienced the worst declines for the month and year-to date periods with the conflict in Ukraine, rising rates in the US, and strict lockdowns in China all contributing.

<sup>1</sup> Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of April 30, 2022.

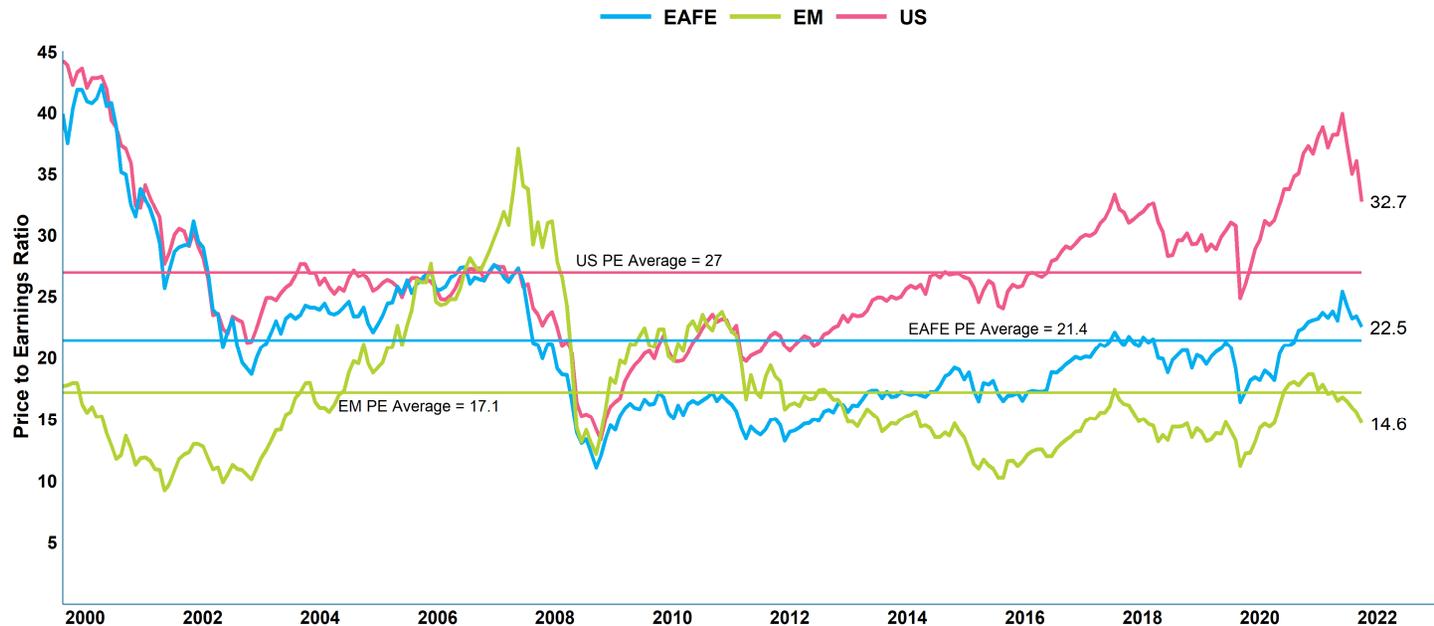
**Equity and Fixed Income Volatility<sup>1</sup>**



- Volatility in both equities (VIX) and fixed income (MOVE) surged in April remaining well above long run averages.
- Concerns over high inflation and the related faster pace of expected policy tightening has led to volatility across markets remaining elevated.

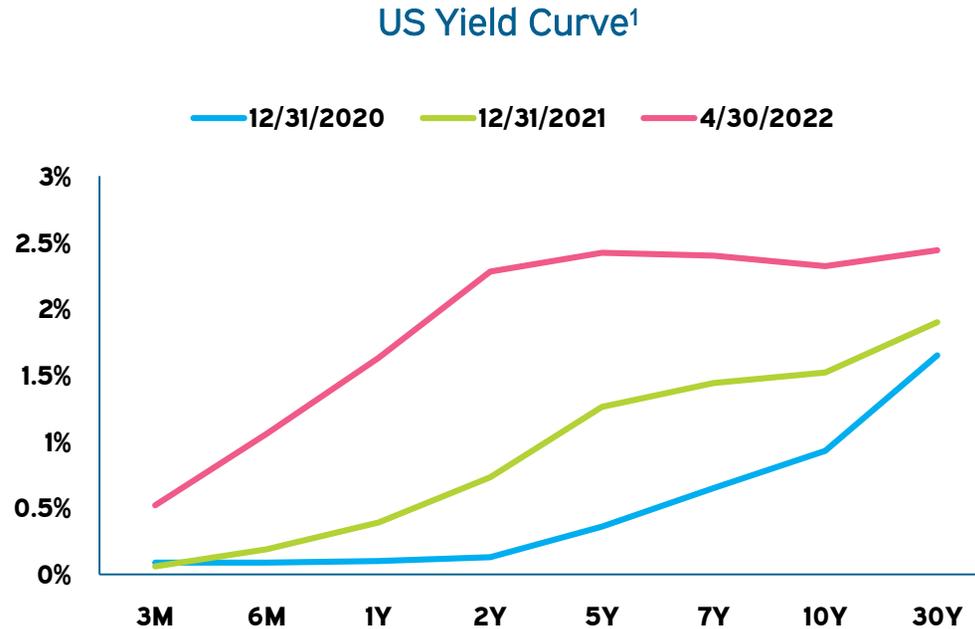
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of April 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the present month-end respectively.

**Equity Cyclically Adjusted P/E Ratios<sup>1</sup>**



- After a pause in March, US stocks resumed their sell-off in April. Despite the recent sell-off, valuations remain well above long-term averages (near +2 standard deviations).
- International developed market valuations remain below the US, with those for emerging markets under the long-term average.

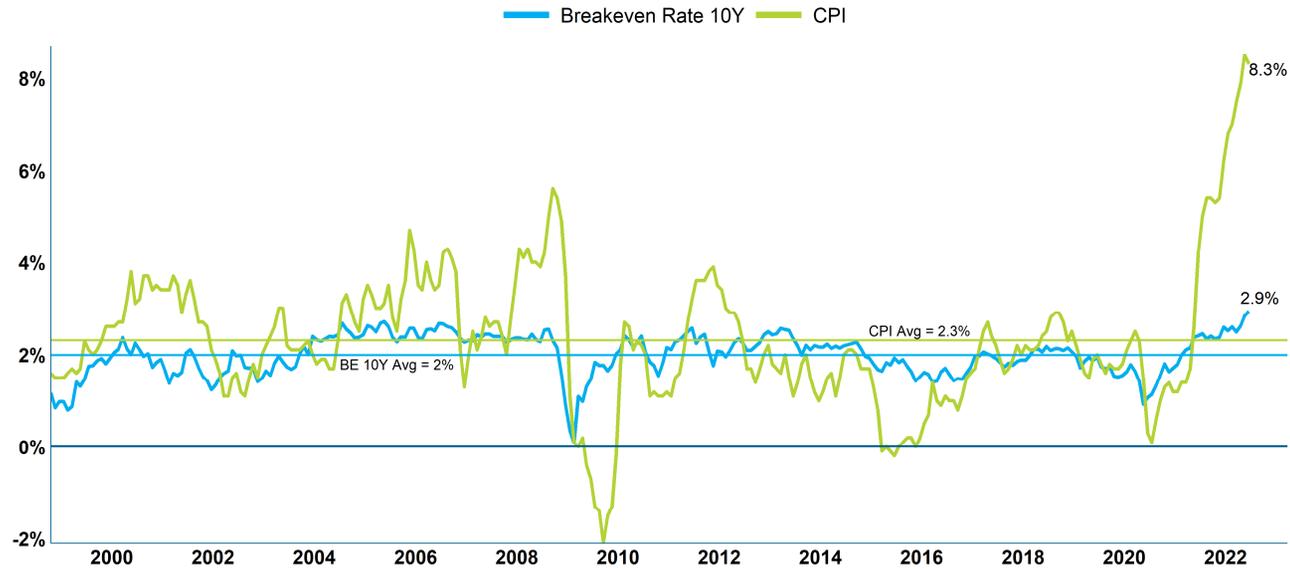
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of April 30, 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to month-end respectively.



- In April, the trend of higher rates across maturities persisted as markets continue to reprice inflation, rate expectations, and an accelerated pace of the Federal Reserve reducing its balance sheet.
- After a brief inversion at the start of the month, which historically has often signaled building recessionary pressures, the curve steepened, with the spread between two-year and ten-year Treasuries finishing April at 22.7 basis points.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022.

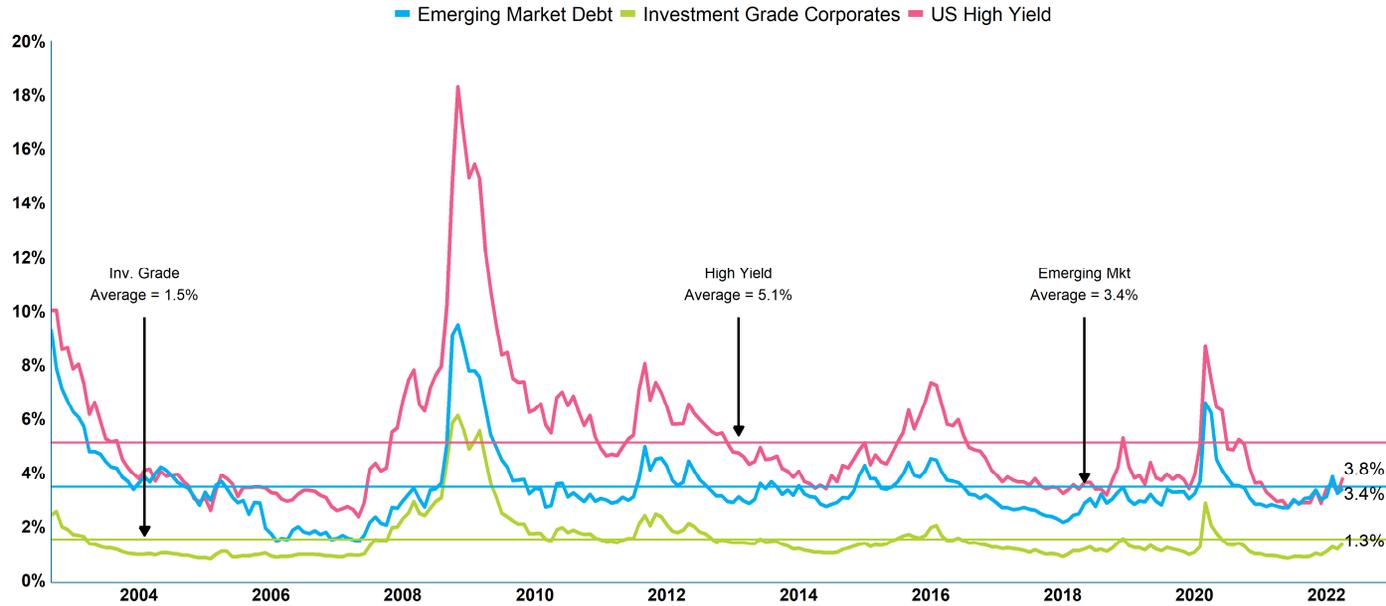
**Ten-Year Breakeven Inflation and CPI<sup>1</sup>**



- Inflation expectations (breakevens) increased slightly in April making a new peak above 3% during the month. It is worth noting that breakevens declined significantly after month-end, on expectations inflation could be peaking.
- Trailing twelve-month CPI declined slightly in April (8.3% versus 8.5%) remaining well above the long-term average of 2.3%.
- Rising prices for energy and food, and for new and used cars, remained key drivers of higher inflation.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022. 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 Bonds<sup>1</sup>**



- Credit spreads (the spread above a comparable maturity Treasury) increased further in April in the risk-off environment extending losses for the year, particularly for riskier bonds.
- In the US, spreads for high yield increased more than investment grade. Emerging market spreads also increased during the month but finished lower than US high yield.
- Despite the recent increase, US high yield spreads remain well below the long-term average (3.8% versus 5.1%).

<sup>1</sup> Sources: Bloomberg. Data is as of April 30, 2022. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the present month-end respectively.

### Global Economic Outlook

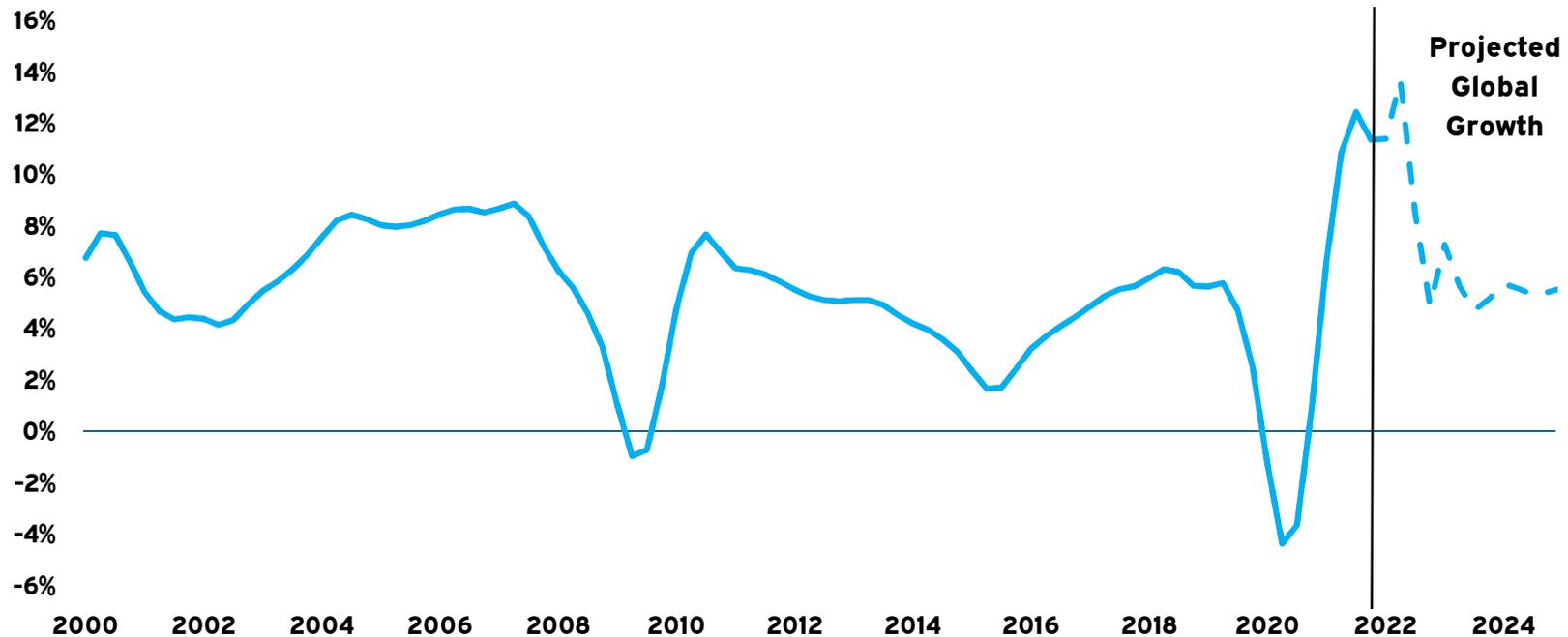
The IMF significantly lowered global growth forecasts in their latest projections, driven by the economic impacts of the war in Ukraine.

- The IMF forecasts final global GDP to come in at 6.1% in 2021 and 3.6% in 2022 (0.8% below the prior 2022 estimate), both still above the past ten-year average of 3.0%.
- In advanced economies, GDP is projected to increase 3.3% in 2022 and 2.4% in 2023. The US has limited economic ties with Russia but saw another downgrade in the 2022 growth forecast (3.7% versus 4.0%) largely due to policy tightening happening faster than previously expected. The euro area saw a significant downgrade in expected growth (2.8% versus 3.9%) in 2022 as rising energy prices particularly weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 2.4% this year.
- Growth projections for emerging markets are higher than developed markets, at 3.8% in 2022 and 4.4% in 2023. China's growth was downgraded (4.4% versus 4.8%) for 2022 given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (7.4% versus 3.8%) due to the war in Ukraine.

	Real GDP (%) <sup>1</sup>			Inflation (%) <sup>1</sup>		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.6	3.6	3.0	7.4	4.8	3.5
Advanced Economies	3.3	2.4	1.6	5.7	2.5	1.5
US	3.7	2.3	2.1	7.7	2.9	1.9
Euro Area	2.8	2.3	0.9	5.3	2.3	1.2
Japan	2.4	2.3	0.5	1.0	0.8	0.5
Emerging Economies	3.8	4.4	4.2	8.7	6.5	5.1
China	4.4	5.1	6.7	2.1	1.8	2.1

<sup>1</sup> Source: IMF World Economic Outlook. Real GDP forecasts from April WEO Update. Inflation forecasts are as of the April 2022 Update. "Actual 10 Year Average" represents data from 2012 to 2021.

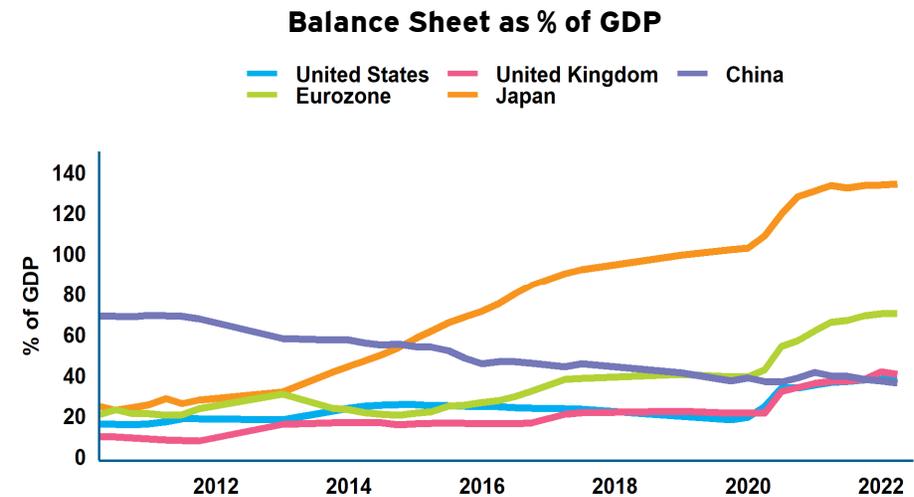
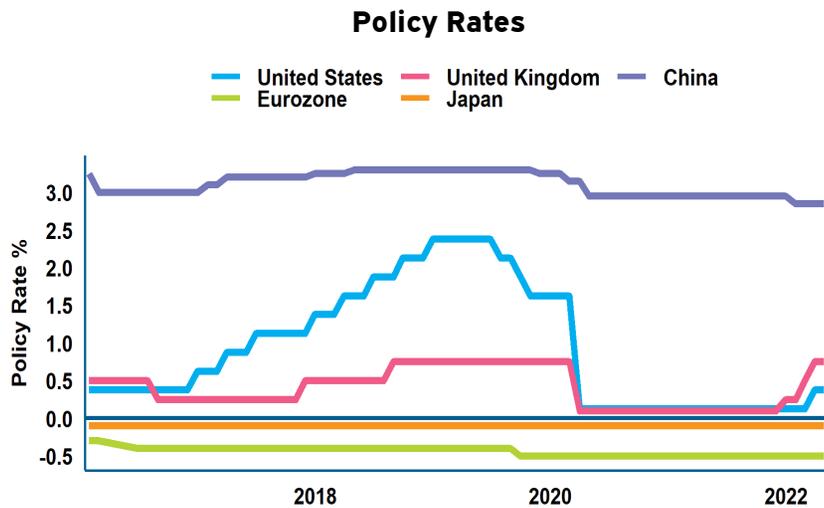
### Global Nominal Gross Domestic Product (GDP) Growth<sup>1</sup>



- Global economies are expected to slow in 2022 compared to 2021 but are forecasted to have another year of largely above-trend growth as economies continue to emerge from the pandemic.
- Looking forward, the track of the conflict between Russia and Ukraine, continued supply chain issues, ongoing inflationary pressures, tighter monetary policy, and lingering pandemic problems all remain key with the risk for continued downgrades in growth forecasts.

<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated April 2022.

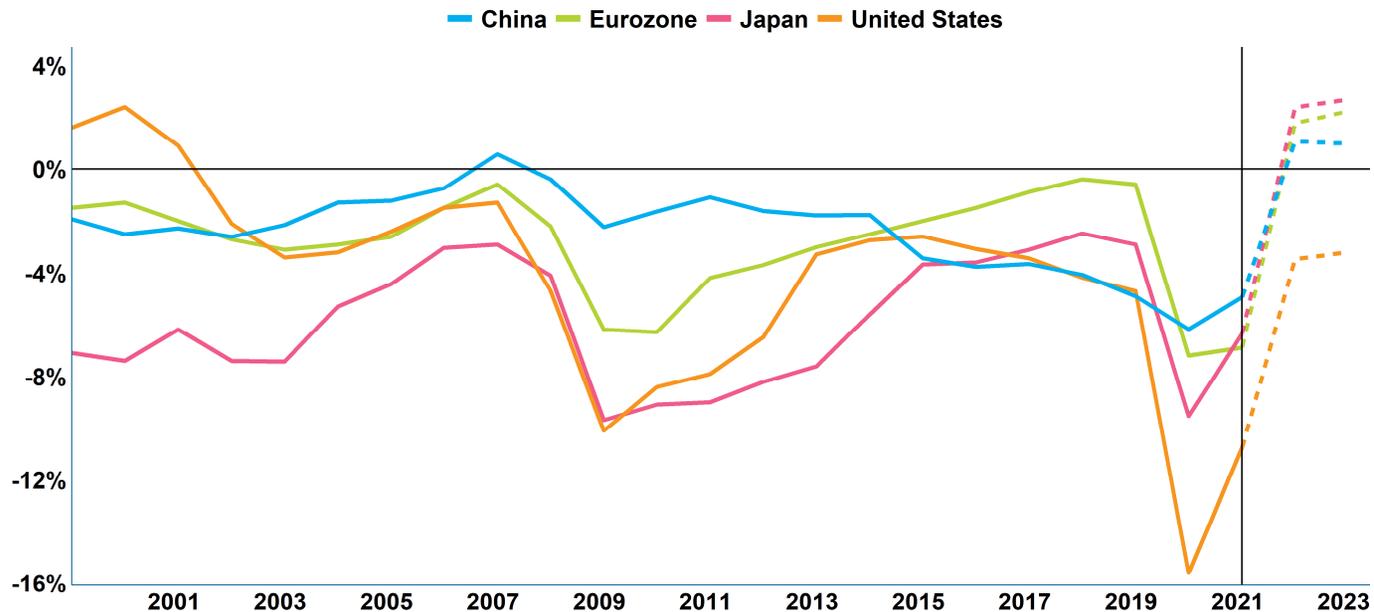
### Central Bank Response<sup>1</sup>



- After global central banks took extraordinary action to support economies during the pandemic including policy rate cuts and emergency stimulus through quantitative easing (QE), many are considering reducing support in the face of high inflation.
- The pace of withdrawing support will likely vary across central banks with the US expected to take a more aggressive approach. The risk remains for a policy error, particularly overtightening, as the war in Ukraine and a tough COVID-19 policy in China could suppress global growth.
- The one notable outlier is China, where the central bank recently lowered rates and reserve requirements in response to slowing growth.

<sup>1</sup> Source: Bloomberg. Policy rate data is as of April 30, 2022. 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, 2022.

### Budget Surplus / Deficit as a Percentage of GDP<sup>1</sup>

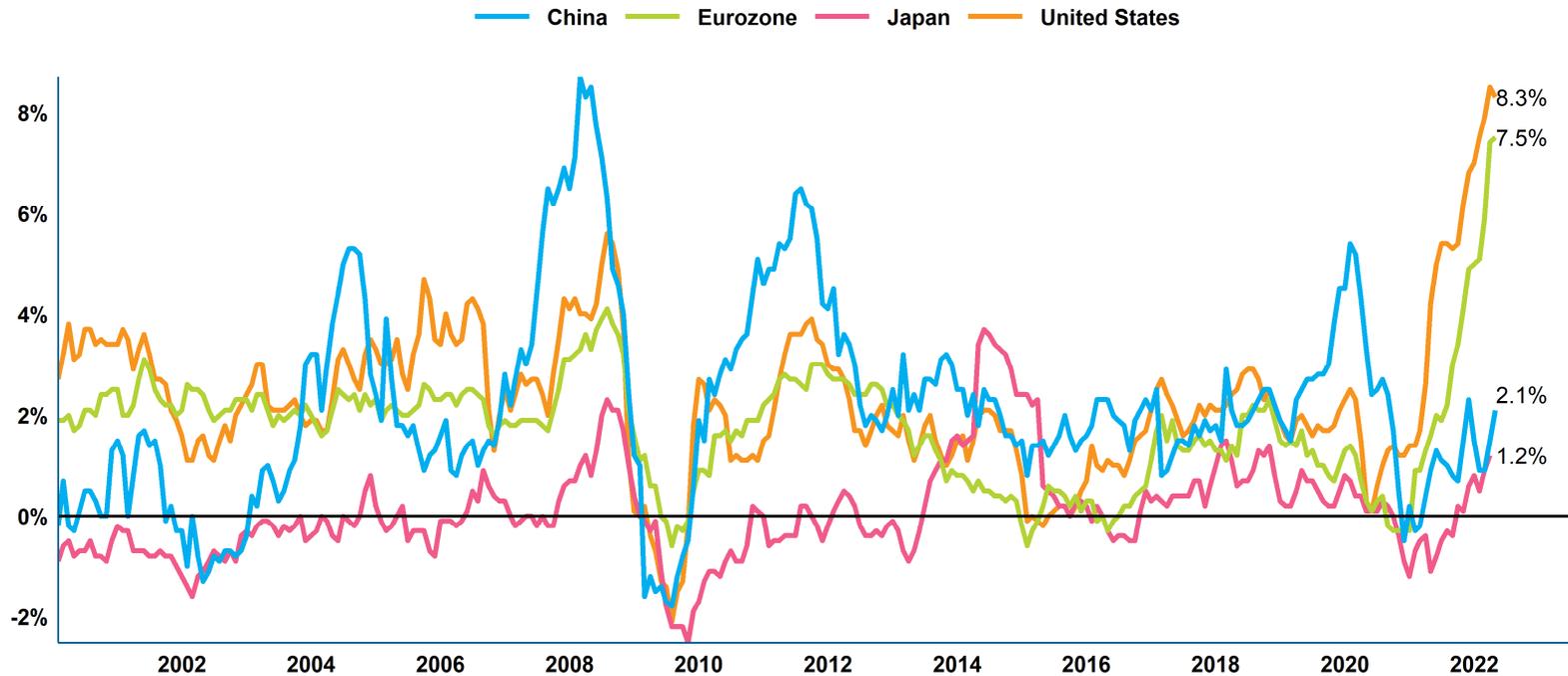


→ Budget deficits as a percentage of GDP drastically increased for major world economies, particularly the US, due to massive fiscal support and the severe economic contraction's effect on tax revenue in 2020 and 2021.

→ As fiscal stimulus programs end, and economic recoveries continue, deficits should improve in the coming years.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022. Projections via IMF Forecasts from April 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

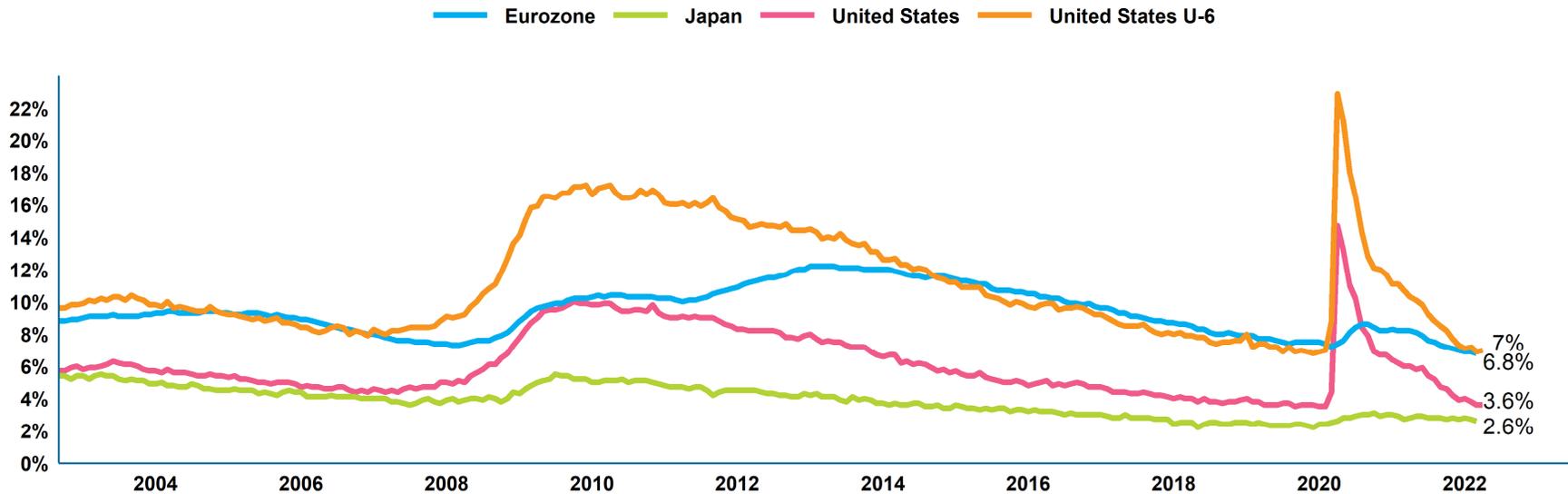
**Inflation (CPI Trailing Twelve Months)<sup>1</sup>**



- Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it remains at levels not seen in decades.
- Supply issues related to the pandemic and higher prices in many commodities driven by the Russia and Ukraine conflict have been key drivers of inflation globally.

<sup>1</sup> Source: Bloomberg. Data is as of April 2022, except for Japan, where the most recent data available is as of March 31, 2022.

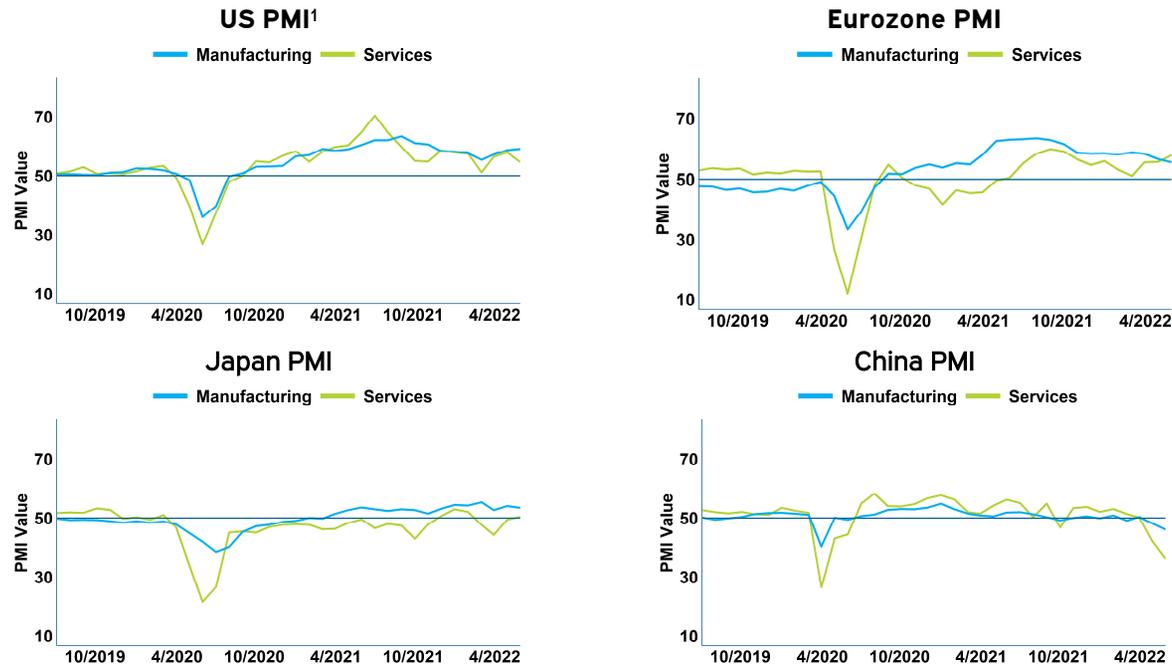
### Unemployment<sup>1</sup>



- As economies have largely reopened, helped by vaccines for the virus, improvements have been seen in the labor market.
- US unemployment, which experienced the steepest rise from the pandemic, has declined back to pre-pandemic levels. The broader measure (U-6) that includes discouraged and underemployed workers declined but is much higher at 7.0%.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of March 31, 2022.

### Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have experienced some pressures recently.
- Service sector PMIs have seen some improvements in the US and Europe lately as the effects of the Omicron variant wane, while Japan and China remain weaker due to a rise in COVID-19 cases, with China still in contraction due to their strict policies.
- In most countries, manufacturing PMIs are in expansion territory as pandemic-related production issues ease and orders increase. China is the one exception, though, with the manufacturing PMI falling below 50 due to increased COVID-19 restrictions.

<sup>1</sup> Source: Bloomberg. US Markit Services and Manufacturing PMI, Caixin Services and Manufacturing PMI, Eurozone Markit Services and Manufacturing PMI, Jibun Bank Services and Manufacturing PMI. Data is as of April 2022. Readings below 50 represent economic contractions.

US Dollar versus Broad Currencies<sup>1</sup>



- The US dollar continued its trend of strengthening against a broad basket of peers in April of 2022 with further increases after month-end.
- Safe-haven flows, relatively stronger growth, and higher rates have all been key drivers of the dollar’s on-going strength.
- The euro, yen, and yuan have all experienced significant declines versus the dollar, adding to inflation and slowing growth concerns.

<sup>1</sup> Source: Bloomberg. Data as of April 30, 2022.

## Summary

### Key Trends in 2022:

- The war in Ukraine has created significant uncertainty, with a wide range of potential outcomes. Volatility will likely remain high.
- Expect growth to slow globally in 2022 but remain above the long-term trend for the year. The pandemic's impact on economic activity and the war will be key.
- Inflationary pressures could linger, particularly if the Russian invasion of Ukraine intensifies or expands.
- The end of many fiscal programs is expected to put the burden of continued growth on consumers. Higher energy and food prices will depress consumer ability to spend in other areas.
- Monetary policy will likely tighten globally but will remain relatively accommodative. The risk of overtightening policy impacting growth remains.
- Valuations remain high in the US, but relatively low interest rates and strong margins could be supportive of equity markets.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but risks remain, including continued strength in the US dollar, higher inflation particularly weighing on Europe, and China maintaining its restrictive COVID-19 policies.

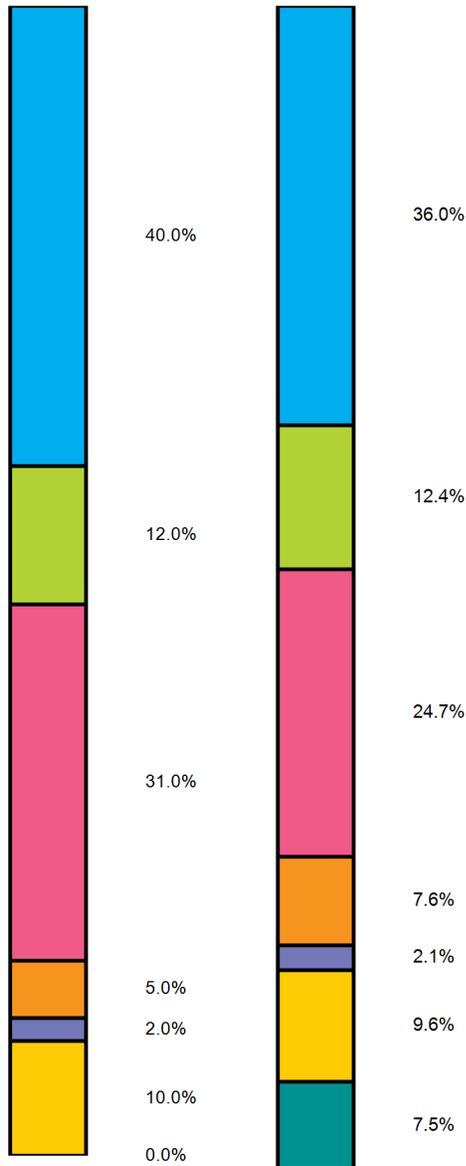
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# Oakland Police and Fire Retirement System

May 25, 2022

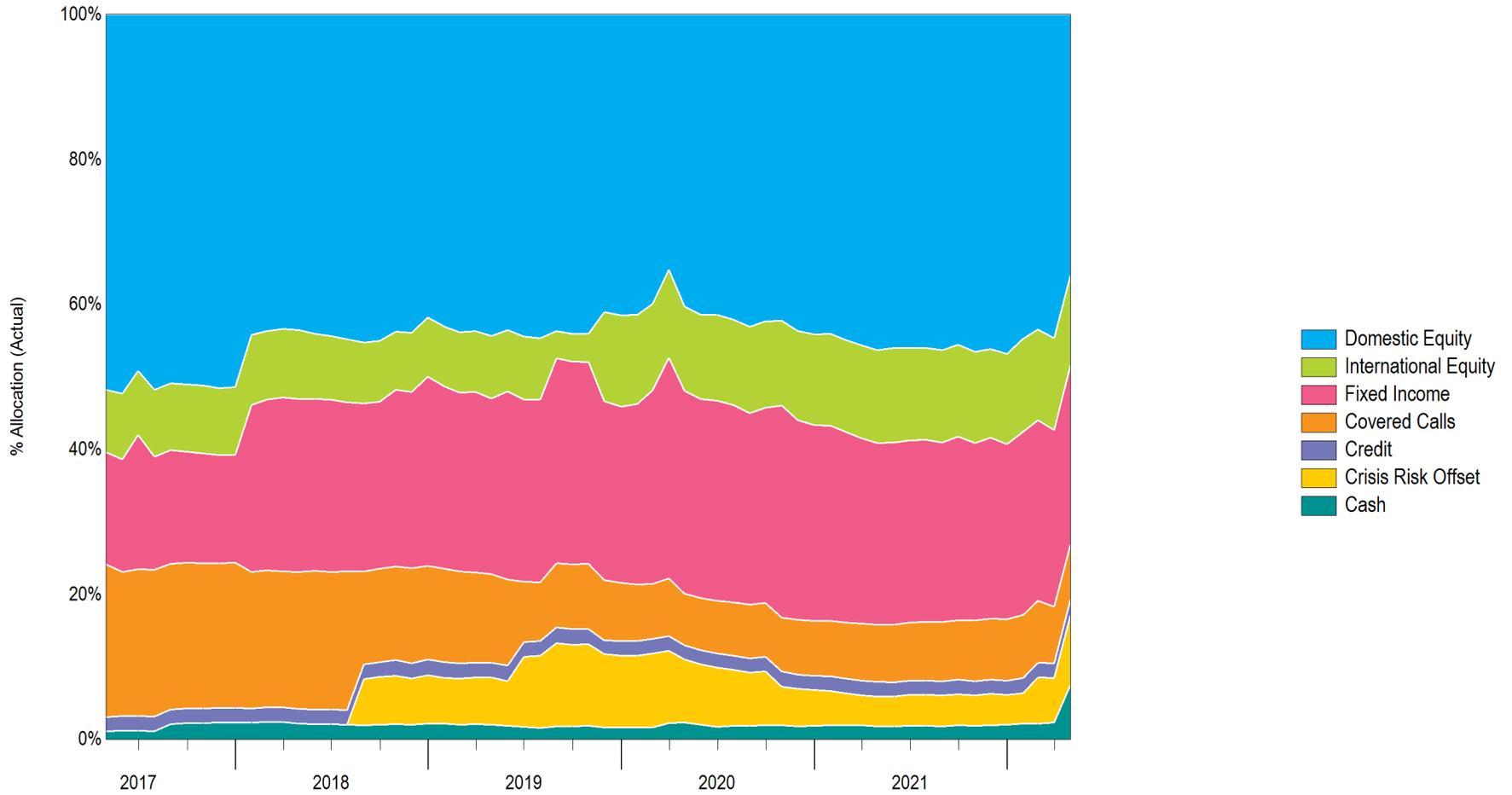
April Flash Report

As of April 30, 2022



Allocation vs. Targets and Policy						
	Current Balance	Current Allocation	Policy	Difference	Within IPS Range?	
Domestic Equity	\$153,955,373	36.0%	40.0%	-4.0%	Yes	
International Equity	\$52,923,051	12.4%	12.0%	0.4%	Yes	
Fixed Income	\$105,696,629	24.7%	31.0%	-6.3%	No	
Covered Calls	\$32,602,534	7.6%	5.0%	2.6%	Yes	
Credit	\$9,070,808	2.1%	2.0%	0.1%	Yes	
Crisis Risk Offset	\$41,159,587	9.6%	10.0%	-0.4%	Yes	
Cash	\$32,017,665	7.5%	0.0%	7.5%	No	
<b>Total</b>	<b>\$427,425,646</b>	<b>100.0%</b>	<b>100.0%</b>			

Asset Allocation History  
5 Years Ending April 30, 2022



As of April 30, 2022

Asset Class Performance Summary											
	Market Value (\$)	% of Portfolio	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
<b>OPFRS Total Plan</b>	<b>427,425,646</b>	<b>100.0</b>	<b>-5.9</b>	<b>-6.0</b>	<b>-10.9</b>	<b>-4.0</b>	<b>6.2</b>	<b>7.4</b>	<b>7.6</b>	<b>6.7</b>	<b>Dec-88</b>
<i>OPFRS Policy Benchmark</i>			<i>-5.9</i>	<i>-6.9</i>	<i>-10.7</i>	<i>-4.8</i>	<i>6.5</i>	<i>7.0</i>	<i>7.2</i>	<i>8.0</i>	<i>Dec-88</i>
<b>Domestic Equity</b>	<b>153,955,373</b>	<b>36.0</b>	<b>-7.9</b>	<b>-5.0</b>	<b>-13.1</b>	<b>-3.1</b>	<b>12.0</b>	<b>12.3</b>	<b>12.9</b>	<b>9.0</b>	<b>Jun-97</b>
<i>Russell 3000 (Blend)</i>			<i>-9.0</i>	<i>-5.9</i>	<i>-13.8</i>	<i>-3.1</i>	<i>13.1</i>	<i>13.0</i>	<i>13.3</i>	<i>9.2</i>	<i>Jun-97</i>
<b>International Equity</b>	<b>52,923,051</b>	<b>12.4</b>	<b>-6.9</b>	<b>-9.5</b>	<b>-11.2</b>	<b>-7.6</b>	<b>5.2</b>	<b>6.0</b>	<b>6.2</b>	<b>5.3</b>	<b>Jan-98</b>
<i>MSCI ACWI ex US (Blend)</i>			<i>-6.2</i>	<i>-12.2</i>	<i>-11.2</i>	<i>-9.9</i>	<i>4.8</i>	<i>5.4</i>	<i>5.5</i>	<i>5.4</i>	<i>Jan-98</i>
<b>Fixed Income</b>	<b>105,696,629</b>	<b>24.7</b>	<b>-3.6</b>	<b>-9.1</b>	<b>-9.3</b>	<b>-7.3</b>	<b>0.9</b>	<b>1.9</b>	<b>2.4</b>	<b>5.0</b>	<b>Dec-93</b>
<i>Bloomberg Universal (Blend)</i>			<i>-3.7</i>	<i>-9.6</i>	<i>-9.6</i>	<i>-8.6</i>	<i>0.5</i>	<i>1.4</i>	<i>2.1</i>	<i>4.8</i>	<i>Dec-93</i>
<b>Credit</b>	<b>9,070,808</b>	<b>2.1</b>	<b>-1.9</b>	<b>-0.6</b>	<b>-3.0</b>	<b>1.4</b>	<b>4.4</b>	<b>5.1</b>	<b>--</b>	<b>5.8</b>	<b>Feb-15</b>
<i>Bloomberg US High Yield TR</i>			<i>-3.6</i>	<i>-6.8</i>	<i>-8.2</i>	<i>-5.2</i>	<i>2.8</i>	<i>3.7</i>	<i>5.3</i>	<i>4.6</i>	<i>Feb-15</i>
<b>Covered Calls</b>	<b>32,602,534</b>	<b>7.6</b>	<b>-6.9</b>	<b>-0.2</b>	<b>-9.3</b>	<b>3.4</b>	<b>11.2</b>	<b>10.0</b>	<b>--</b>	<b>9.3</b>	<b>Apr-14</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>-4.7</i>	<i>4.2</i>	<i>-3.9</i>	<i>8.6</i>	<i>6.6</i>	<i>6.1</i>	<i>6.6</i>	<i>6.3</i>	<i>Apr-14</i>
<b>Crisis Risk Offset</b>	<b>41,159,587</b>	<b>9.6</b>	<b>-3.5</b>	<b>-10.0</b>	<b>-11.8</b>	<b>-6.7</b>	<b>-13.2</b>	<b>--</b>	<b>--</b>	<b>-10.4</b>	<b>Aug-18</b>
<i>SG Multi Alternative Risk Premia Index</i>			<i>3.0</i>	<i>4.2</i>	<i>2.5</i>	<i>5.7</i>	<i>-2.0</i>	<i>--</i>	<i>--</i>	<i>-1.2</i>	<i>Aug-18</i>

Fiscal year begins on July 1.

Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers.

As of April 30, 2022

Trailing Net Performance												
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
<b>OPFRS Total Plan</b>	<b>427,425,646</b>	<b>100.0</b>	<b>--</b>	<b>-5.9</b>	<b>-6.0</b>	<b>-10.9</b>	<b>-4.0</b>	<b>6.2</b>	<b>7.4</b>	<b>7.6</b>	<b>6.7</b>	<b>Dec-88</b>
<i>OPFRS Policy Benchmark</i>				<i>-5.9</i>	<i>-6.9</i>	<i>-10.7</i>	<i>-4.8</i>	<i>6.5</i>	<i>7.0</i>	<i>7.2</i>	<i>8.0</i>	<i>Dec-88</i>
<b>Domestic Equity</b>	<b>153,955,373</b>	<b>36.0</b>	<b>36.0</b>	<b>-7.9</b>	<b>-5.0</b>	<b>-13.1</b>	<b>-3.1</b>	<b>12.0</b>	<b>12.3</b>	<b>12.9</b>	<b>9.0</b>	<b>Jun-97</b>
<i>Russell 3000 (Blend)</i>				<i>-9.0</i>	<i>-5.9</i>	<i>-13.8</i>	<i>-3.1</i>	<i>13.1</i>	<i>13.0</i>	<i>13.3</i>	<i>9.2</i>	<i>Jun-97</i>
Northern Trust Russell 1000	84,107,653	19.7	54.6	-8.9	-4.9	-13.6	-2.1	13.5	13.4	13.5	14.0	Jun-10
<i>Russell 1000</i>				<i>-8.9</i>	<i>-4.9</i>	<i>-13.6</i>	<i>-2.1</i>	<i>13.6</i>	<i>13.4</i>	<i>13.5</i>	<i>14.0</i>	<i>Jun-10</i>
EARNEST Partners	45,339,132	10.6	29.4	-6.7	-3.0	-12.0	-3.3	14.1	14.2	14.2	10.7	Apr-06
<i>Russell MidCap</i>				<i>-7.7</i>	<i>-8.2</i>	<i>-12.9</i>	<i>-6.1</i>	<i>10.5</i>	<i>10.7</i>	<i>12.0</i>	<i>9.0</i>	<i>Apr-06</i>
Rice Hall James	14,060,617	3.3	9.1	-8.9	-17.7	-19.4	-15.8	6.5	--	--	8.2	Jul-17
<i>Russell 2000 Growth</i>				<i>-12.3</i>	<i>-27.7</i>	<i>-23.3</i>	<i>-26.4</i>	<i>4.1</i>	<i>7.1</i>	<i>9.9</i>	<i>6.8</i>	<i>Jul-17</i>
Brown Fundamental Small Cap Value	10,447,971	2.4	6.8	-6.8	-5.1	-11.5	-4.9	--	--	--	-1.8	Apr-21
<i>Russell 2000 Value</i>				<i>-7.8</i>	<i>-8.9</i>	<i>-10.0</i>	<i>-6.6</i>	<i>8.4</i>	<i>6.7</i>	<i>9.8</i>	<i>-4.3</i>	<i>Apr-21</i>
iShares Edge MSCI Min Vol ETF	0	0.0	0.0	-5.3	0.8	-8.9	3.4	--	--	--	17.7	Apr-20
<i>MSCI USA Minimum Volatility GR USD</i>				<i>-5.3</i>	<i>0.9</i>	<i>-8.8</i>	<i>3.6</i>	<i>9.0</i>	<i>10.9</i>	<i>12.3</i>	<i>17.9</i>	<i>Apr-20</i>
<b>International Equity</b>	<b>52,923,051</b>	<b>12.4</b>	<b>12.4</b>	<b>-6.9</b>	<b>-9.5</b>	<b>-11.2</b>	<b>-7.6</b>	<b>5.2</b>	<b>6.0</b>	<b>6.2</b>	<b>5.3</b>	<b>Jan-98</b>
<i>MSCI ACWI ex US (Blend)</i>				<i>-6.2</i>	<i>-12.2</i>	<i>-11.2</i>	<i>-9.9</i>	<i>4.8</i>	<i>5.4</i>	<i>5.5</i>	<i>5.4</i>	<i>Jan-98</i>
SGA ACWI ex-U.S. Equity	37,931,145	8.9	71.7	-7.0	-8.6	-10.5	-6.8	--	--	--	3.0	Dec-19
<i>MSCI ACWI ex USA Gross</i>				<i>-6.2</i>	<i>-12.2</i>	<i>-11.2</i>	<i>-9.9</i>	<i>4.8</i>	<i>5.4</i>	<i>5.5</i>	<i>4.6</i>	<i>Dec-19</i>
Vanguard Developed Markets ETF	14,991,906	3.5	28.3	-6.8	-11.2	-12.2	-8.9	--	--	--	7.2	Sep-19
<i>FTSE Developed All Cap Ex US TR USD</i>				<i>-6.5</i>	<i>-10.0</i>	<i>-11.3</i>	<i>-7.8</i>	<i>5.8</i>	<i>5.7</i>	<i>6.3</i>	<i>7.9</i>	<i>Sep-19</i>

Performance shown is net-of-fees and time-weighted using the Modified Dietz methodology. Fiscal year starts July 1. Since inception date and performance begin in the full calendar month following an investment's initial funding.

As of April 30, 2022

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
<b>Fixed Income</b>	<b>105,696,629</b>	<b>24.7</b>	<b>24.7</b>	<b>-3.6</b>	<b>-9.1</b>	<b>-9.3</b>	<b>-7.3</b>	<b>0.9</b>	<b>1.9</b>	<b>2.4</b>	<b>5.0</b>	<b>Dec-93</b>
<i>Bloomberg Universal (Blend)</i>				<i>-3.7</i>	<i>-9.6</i>	<i>-9.6</i>	<i>-8.6</i>	<i>0.5</i>	<i>1.4</i>	<i>2.1</i>	<i>4.8</i>	<i>Dec-93</i>
Ramirez	71,999,758	16.8	68.1	-3.4	-9.1	-9.3	-7.0	0.8	1.9	--	2.1	Jan-17
<i>Bloomberg US Aggregate TR</i>				<i>-3.8</i>	<i>-9.4</i>	<i>-9.5</i>	<i>-8.5</i>	<i>0.4</i>	<i>1.2</i>	<i>1.7</i>	<i>1.4</i>	<i>Jan-17</i>
Reams	26,835,789	6.3	25.4	-3.9	-8.8	-9.2	-7.5	4.3	3.8	3.3	5.4	Feb-98
<i>Bloomberg Universal (Blend)</i>				<i>-3.7</i>	<i>-9.6</i>	<i>-9.6</i>	<i>-8.6</i>	<i>0.5</i>	<i>1.4</i>	<i>2.1</i>	<i>4.4</i>	<i>Feb-98</i>
Wellington Core Bond	6,861,081	1.6	6.5	-4.0	-10.1	-10.1	-9.1	--	--	--	-7.8	Apr-21
<i>Bloomberg US Aggregate TR</i>				<i>-3.8</i>	<i>-9.4</i>	<i>-9.5</i>	<i>-8.5</i>	<i>0.4</i>	<i>1.2</i>	<i>1.7</i>	<i>-7.2</i>	<i>Apr-21</i>
<b>Credit</b>	<b>9,070,808</b>	<b>2.1</b>	<b>2.1</b>	<b>-1.9</b>	<b>-0.6</b>	<b>-3.0</b>	<b>1.4</b>	<b>4.4</b>	<b>5.1</b>	<b>--</b>	<b>5.8</b>	<b>Feb-15</b>
<i>Bloomberg US High Yield TR</i>				<i>-3.6</i>	<i>-6.8</i>	<i>-8.2</i>	<i>-5.2</i>	<i>2.8</i>	<i>3.7</i>	<i>5.3</i>	<i>4.6</i>	<i>Feb-15</i>
Polen Capital	9,070,808	2.1	100.0	-1.9	-0.6	-3.0	1.4	4.4	5.1	--	5.8	Feb-15
<i>ICE BofA High Yield Master TR</i>				<i>-3.7</i>	<i>-6.5</i>	<i>-8.0</i>	<i>-5.0</i>	<i>2.6</i>	<i>3.6</i>	<i>5.2</i>	<i>4.5</i>	<i>Feb-15</i>
<b>Covered Calls</b>	<b>32,602,534</b>	<b>7.6</b>	<b>7.6</b>	<b>-6.9</b>	<b>-0.2</b>	<b>-9.3</b>	<b>3.4</b>	<b>11.2</b>	<b>10.0</b>	<b>--</b>	<b>9.3</b>	<b>Apr-14</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>				<i>-4.7</i>	<i>4.2</i>	<i>-3.9</i>	<i>8.6</i>	<i>6.6</i>	<i>6.1</i>	<i>6.6</i>	<i>6.3</i>	<i>Apr-14</i>
Parametric BXM	16,357,603	3.8	50.2	-5.7	-0.2	-7.3	3.2	7.8	7.2	--	7.3	Apr-14
<i>CBOE S&amp;P 500 BuyWrite USD</i>				<i>-4.7</i>	<i>4.2</i>	<i>-3.9</i>	<i>8.6</i>	<i>6.6</i>	<i>6.1</i>	<i>6.6</i>	<i>6.3</i>	<i>Apr-14</i>
Parametric DeltaShift	16,244,931	3.8	49.8	-8.0	-0.4	-11.1	3.3	14.2	12.4	--	11.5	Apr-14
<i>CBOE S&amp;P 500 BuyWrite USD</i>				<i>-4.7</i>	<i>4.2</i>	<i>-3.9</i>	<i>8.6</i>	<i>6.6</i>	<i>6.1</i>	<i>6.6</i>	<i>6.3</i>	<i>Apr-14</i>

As of April 30, 2022

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
<b>Crisis Risk Offset</b>	<b>41,159,587</b>	<b>9.6</b>	<b>9.6</b>	<b>-3.5</b>	<b>-10.0</b>	<b>-11.8</b>	<b>-6.7</b>	<b>-13.2</b>	<b>--</b>	<b>--</b>	<b>-10.4</b>	<b>Aug-18</b>
<i>SG Multi Alternative Risk Premia Index</i>				<i>3.0</i>	<i>4.2</i>	<i>2.5</i>	<i>5.7</i>	<i>-2.0</i>	<i>--</i>	<i>--</i>	<i>-1.2</i>	<i>Aug-18</i>
Vanguard Long-Term Treasury ETF	16,211,209	3.8	39.4	-9.3	-16.9	-18.5	-13.8	--	--	--	-2.6	Jul-19
<i>Bloomberg US Govt Long TR</i>				<i>-8.9</i>	<i>-15.6</i>	<i>-18.5</i>	<i>-12.2</i>	<i>0.7</i>	<i>1.7</i>	<i>2.6</i>	<i>-1.9</i>	<i>Jul-19</i>
Versor Trend Following	15,000,000	3.5	36.4	0.0	--	--	--	--	--	--	0.0	Apr-22
<i>SG Multi Alternative Risk Premia Index</i>				<i>3.0</i>	<i>4.2</i>	<i>2.5</i>	<i>5.7</i>	<i>-2.0</i>	<i>--</i>	<i>--</i>	<i>3.0</i>	<i>Apr-22</i>
Kepos Alternative Risk Premia	9,948,378	2.3	24.2	1.8	--	--	--	--	--	--	-0.3	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>				<i>3.0</i>	<i>4.2</i>	<i>2.5</i>	<i>5.7</i>	<i>-2.0</i>	<i>--</i>	<i>--</i>	<i>1.7</i>	<i>Feb-22</i>
<b>Cash</b>	<b>32,017,665</b>	<b>7.5</b>	<b>7.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>1.3</b>	<b>0.7</b>	<b>0.6</b>	<b>Mar-11</b>
<i>FTSE T-Bill 3 Months TR</i>				<i>0.0</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.7</i>	<i>1.1</i>	<i>0.6</i>	<i>0.5</i>	<i>Mar-11</i>
Cash	25,152,665	5.9	78.6	0.0	0.0	0.0	0.0	1.1	1.4	0.8	0.7	Mar-11
<i>FTSE T-Bill 3 Months TR</i>				<i>0.0</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.7</i>	<i>1.1</i>	<i>0.6</i>	<i>0.5</i>	<i>Mar-11</i>
Cash - Treasury	6,865,000	1.6	21.4									

In April 2022 iShares Edge MSCI Min Vol. ETF was liquidated. Upon sale the market value was included in cash. It was subsequently used to fund Wellington Defensive Equity.

Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers.

As of April 30, 2022

Cash Flow Summary

Month to Date

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Brown Fundamental Small Cap Value	\$11,212,249	\$0	-\$764,278	\$10,447,971
Cash	\$3,688,533	\$21,464,133	\$0	\$25,152,665
Cash - Treasury	\$6,676,000	\$189,000	\$0	\$6,865,000
EARNEST Partners	\$48,590,675	\$0	-\$3,251,543	\$45,339,132
iShares Edge MSCI Min Vol ETF	\$22,076,344	-\$21,447,300	-\$629,045	\$0
Kepos Alternative Risk Premia	\$9,778,017	\$0	\$170,362	\$9,948,378
Northern Trust Russell 1000	\$103,327,856	-\$11,000,000	-\$8,220,203	\$84,107,653
Parametric BXM	\$17,353,030	\$0	-\$995,427	\$16,357,603
Parametric DeltaShift	\$17,664,992	\$0	-\$1,420,060	\$16,244,931
Polen Capital	\$9,250,051	\$0	-\$179,243	\$9,070,808
Ramirez	\$74,513,589	\$0	-\$2,513,831	\$71,999,758
Reams	\$27,928,505	\$0	-\$1,092,716	\$26,835,789
Rice Hall James	\$15,430,352	\$0	-\$1,369,736	\$14,060,617
Securities Lending Northern Trust	\$0	-\$10,738	\$10,738	\$0
SGA ACWI ex-U.S. Equity	\$40,766,479	\$0	-\$2,835,335	\$37,931,145
Vanguard Developed Markets ETF	\$16,083,566	\$0	-\$1,091,660	\$14,991,906
Vanguard Long-Term Treasury ETF	\$17,883,935	\$0	-\$1,672,726	\$16,211,209
Versor Trend Following	\$0	\$15,000,000	\$0	\$15,000,000
Wellington Core Bond	\$7,149,273	\$0	-\$288,192	\$6,861,081
<b>Total</b>	<b>\$449,373,445</b>	<b>\$4,195,095</b>	<b>-\$26,142,894</b>	<b>\$427,425,646</b>

**Benchmark History**  
As of April 30, 2022

Total Plan x Securities Lending x Reams LD Exception Comp

1/1/2019	Present	40% Russell 3000 / 12% MSCI ACWI ex USA Gross / 33% Bloomberg US Universal TR / 5% CBOE BXM / 6.7% SG Multi Alternative Risk Premia Index / 3.3% Bloomberg US Treasury Long TR
5/1/2016	12/31/2018	48% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 20% CBOE BXM
10/1/2015	4/30/2016	43% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 15% CBOE BXM / 10% CPI - All Urban Consumers (unadjusted) +3%
1/1/2014	9/30/2015	48% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 10% CBOE BXM / 10% CPI - All Urban Consumers (unadjusted) +3%
3/1/2013	12/31/2013	40% Russell 3000 / 10% MSCI ACWI ex USA Gross / 17% Bloomberg US Universal TR / 33% ICE BofA 3M US Treasury TR USD
8/1/2012	2/28/2013	20% Russell 3000 / 7% MSCI ACWI ex USA Gross / 18% Bloomberg US Universal TR / 55% ICE BofA 3M US Treasury TR USD
10/1/2007	7/31/2012	53% Russell 3000 / 17% MSCI ACWI ex USA Gross / 30% Bloomberg US Universal TR
4/1/2006	9/30/2007	35% Russell 3000 / 15% MSCI ACWI ex USA Gross / 50% Bloomberg US Universal TR
1/1/2005	3/31/2006	35% Russell 3000 / 15% MSCI ACWI ex USA Gross / 50% Bloomberg US Aggregate TR
4/1/1998	12/31/2004	50% Bloomberg US Aggregate TR / 10% Russell 1000 / 20% Russell 1000 Value / 5% Russell MidCap / 15% MSCI EAFE
9/1/1988	3/31/1998	40% S&P 500 / 55% Bloomberg US Aggregate TR / 5% FTSE T-Bill 3 Months TR

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.

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.

# Oakland Police and Fire Retirement System

## Q1 2022

Quarterly Report

## Agenda

1. Total Portfolio Summary
2. Economic and Market Update
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## **Total Portfolio Summary**

### Total Portfolio Summary

As of March 31, 2022, the City of Oakland Police and Fire Retirement System (OPFRS) portfolio had an aggregate value of \$449.4M. This represents a \$26.1M depreciation in investment value after (\$7.7M) in benefit payments over the quarter. Over the one-year period, the OPFRS Total Portfolio value is higher by \$23.5M, after withdrawals totaling (\$17.4M) for benefit payments.

### Asset Allocation Trends

- The asset allocation targets throughout this report reflect those as of March 31, 2022. Target weightings reflect the interim phase (where Crisis Risk Offset component is set to 10%) of the Plan's previously approved asset allocation (effective 5/31/2017).
- Relative to policy targets, the portfolio ended the latest quarter overweight Equities, Covered Calls and Cash, while underweight Fixed Income and Crisis Risk Offset (CRO). The Fixed Income asset class was slightly below its acceptable ranges from the policy target.
  - In February 2022, Kepos was funded as a new Alternative Risk Premia manager to the CRO segment.

### Recent Investment Performance

- During the most recent quarter, the OPFRS portfolio generated an absolute return of (5.4%), gross of fees, trailing its policy benchmark by (0.3%). Over the trailing 1- and 5-year periods, however, the portfolio outperformed its benchmark by 0.9% and 0.5% respectively while keeping pace in the 3-year period.
- In comparison to its peers, the OPFRS portfolio lagged the Median fund's return over the quarter by (0.6%) while outperforming the Median fund by 0.5% over the 1-year period. Over the 3- and 5-year trailing periods, the OPFRS portfolio trailed the Median fund by (1.3%) and (0.2%) respectively.

	Quarter	CYTD	FYTD	1 Year	3 Year	5 Year
Total Portfolio <sup>1</sup>	-5.4%	-5.4%	-0.1%	5.0%	9.4%	9.0%
Policy Benchmark <sup>2</sup>	-5.1%	-5.1%	-1.1%	4.1%	9.4%	8.5%
<b>Excess Return</b>	<b>-0.3%</b>	<b>-0.3%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0.0%</b>	<b>0.5%</b>
Reference: Median Fund <sup>3</sup>	-4.8%	-4.8%	-0.7%	4.5%	10.7%	9.2%
Reference: Total Net of Fees <sup>4</sup>	-5.4%	-5.4%	-0.4%	4.7%	9.1%	8.7%

- Over the quarter, the portfolio reflected the broad market trends with all asset classes generating negative absolute returns. On relative basis, the Credit component was the primary contributor with an excess return of 3.7% in Q1.

<sup>1</sup> Gross of Fees. Performance since 2005 includes securities lending.

<sup>2</sup> Evolving Policy Benchmark consists of 40% Russell 3000, 12% MSCI ACWI ex U.S., 33% Bloomberg Universal, 5% CBOE BXM, 6.7% SG Multi Asset Risk Premia, 3.3% Bloomberg Long Treasury.

<sup>3</sup> Investment Metrics Public Define Benefit Plan with \$250 million to \$1 billion value Universe.

<sup>4</sup> Longer-term (>1 year) Net of fee returns include estimates based on OPFRS manager fee schedule (approximately 34 bps).

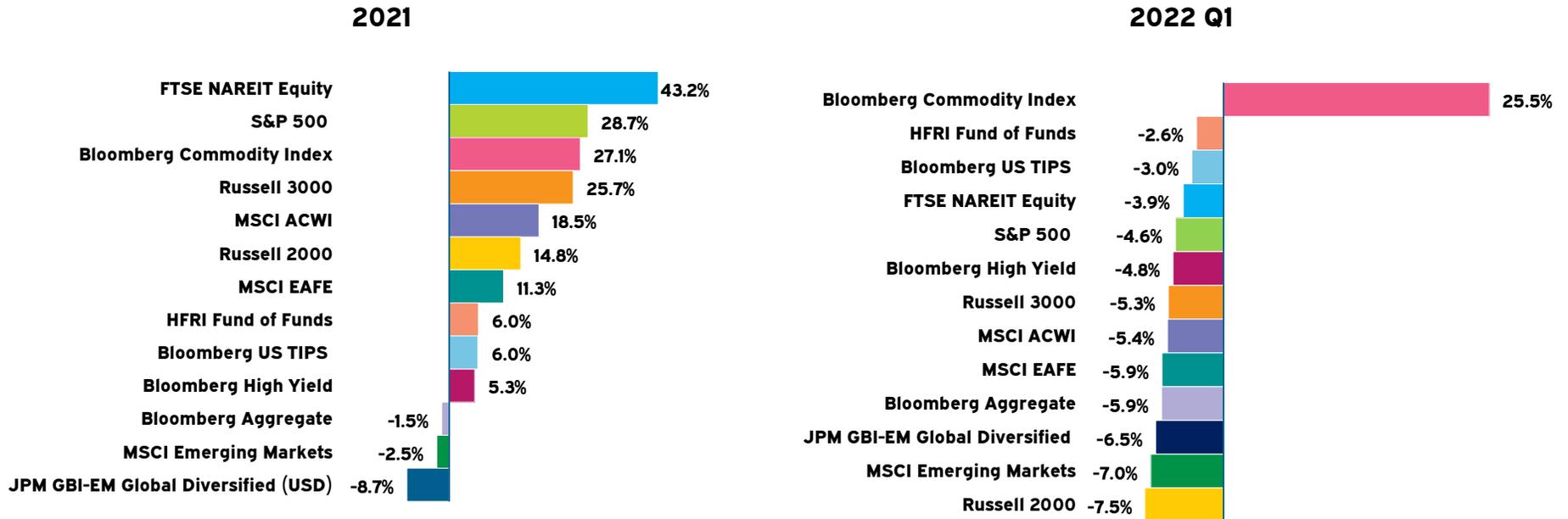
# **Economic and Market Update**

Data as of March 31, 2022

### Q1 Commentary

- The first quarter saw market volatility, driven by persistently high inflation, expectations for policy to tighten faster than previously expected, and Russia's invasion of Ukraine.
- Except for commodities, all asset classes declined during the quarter.
  - Equities declined across the board with double-digit losses in China particularly weighing on emerging markets.
  - Value oriented equities outpaced growth in the US influenced by higher interest rates.
  - Bonds in the US had one of their worst quarters on record, declining more than equities.
  - Rates rose across the US yield curve, with the curve inverting by some measures by month-end.
  - Inflation remains high globally given lingering supply issues from the pandemic and the conflict in Ukraine.
  - The pace of policy tightening will likely increase due to persistent inflation.
- The conflict in eastern Europe will have considerable economic and financial consequences for the global economy including the pacing of policy rate tightening, the risk of policy mistakes, and supply shocks pushing inflation even higher around the world.

### Index Returns<sup>1</sup>



→ Outside of emerging markets and the broad US investment grade bond market (Bloomberg Aggregate), most asset classes appreciated in 2021.

→ Most major asset classes suffered negative returns in the first quarter of 2022 with the notable exception of commodities. TIPS declined less than most other asset classes in the inflationary environment.

<sup>1</sup> Data Source: Bloomberg and FactSet. Data is as of March 31, 2022.

### Domestic Equity Returns<sup>1</sup>

Domestic Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.7	-4.6	15.6	18.9	16.0	14.6
Russell 3000	3.2	-5.3	11.9	18.2	15.4	14.3
Russell 1000	3.4	-5.1	13.3	18.7	15.8	14.5
Russell 1000 Growth	3.9	-9.0	15.0	23.5	20.9	17.0
Russell 1000 Value	2.8	-0.7	11.7	13.0	10.3	11.7
Russell MidCap	2.6	-5.7	6.9	14.9	12.6	12.8
Russell MidCap Growth	1.6	-12.6	-0.9	14.8	15.1	13.5
Russell MidCap Value	3.0	-1.8	11.5	13.6	10.0	12.0
Russell 2000	1.2	-7.5	-5.8	11.7	9.7	11.0
Russell 2000 Growth	0.5	-12.6	-14.3	9.9	10.3	11.2
Russell 2000 Value	2.0	-2.4	3.3	12.7	8.6	10.5

#### US Equities: Russell 3000 Index returned -5.3%, and value indices outperformed growth in Q1.

- Despite positive returns in March, US equities posted negative returns for the first quarter of 2022 across all market capitalizations and styles given persistently high inflation and geopolitical uncertainty.
- Value stocks declined far less than growth stocks in the rising rate environment. Strong returns in the energy sector and weakness in the technology sector contributed to the results.
- Large company stocks (Russell 1000) outperformed small company stocks (Russell 2000).

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022.

### Foreign Equity Returns<sup>1</sup>

Foreign Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	0.2	-5.4	-1.5	7.5	6.8	5.5
MSCI EAFE	0.6	-5.9	1.2	7.8	6.7	6.3
MSCI EAFE (Local Currency)	2.1	-3.7	6.2	8.2	6.5	8.6
MSCI EAFE Small Cap	0.0	-8.5	-3.6	8.5	7.4	8.3
MSCI Emerging Markets	-2.3	-7.0	-11.4	4.9	6.0	3.4
MSCI Emerging Markets (Local Currency)	-2.1	-6.1	-9.9	6.2	7.5	6.3
MSCI China	-8.0	-14.2	-32.5	-3.0	3.5	4.5

#### International Developed Market Equities: MSCI EAFE -5.9% in Q1.

- Returns in international developed markets were also negative for the first quarter of 2022.
- Declines were driven by a sharp fall in stocks in Europe hurt by a high reliance on Russian oil and gas.
- Continued strength in the US dollar also weighed on results.

#### Emerging Markets: MSCI EM -7.0% in Q1.

- Emerging market stocks declined more than developed market stocks for the quarter.
- China was a key driver of results as its zero COVID-19 policy led to renewed lockdowns in Shanghai. Concerns related to regulations on US-listed China stocks and overall slower growth also weighed on returns.
- Russian stocks and the ruble plunged with sanctions and trading halts.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022.

### Fixed Income Returns<sup>1</sup>

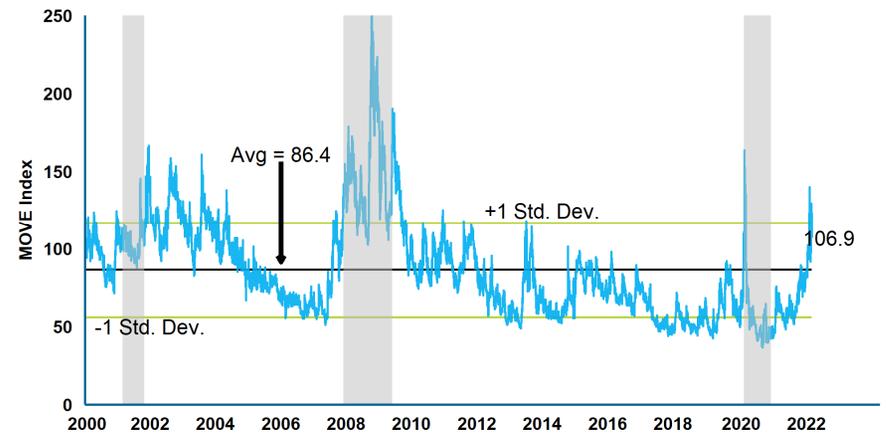
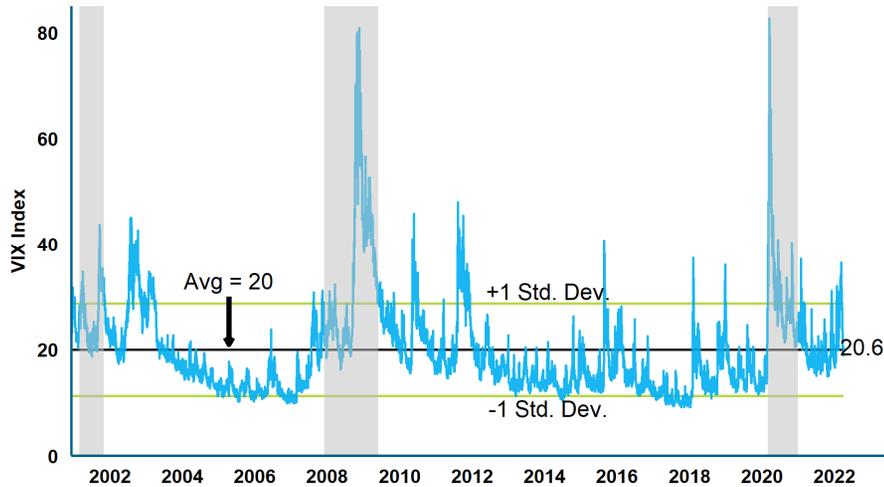
Fixed Income	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-2.7	-6.1	-4.2	1.8	2.3	2.6	3.3	6.6
Bloomberg Aggregate	-2.8	-5.9	-4.2	1.7	2.1	2.2	2.9	6.8
Bloomberg US TIPS	-1.9	-3.0	4.3	6.2	4.4	2.7	2.6	7.6
Bloomberg High Yield	-1.1	-4.8	-0.7	4.6	4.7	5.7	6.0	4.6
JPM GBI-EM Global Diversified (USD)	-1.5	-6.5	-8.5	-1.1	0.2	-0.7	6.4	5.1

#### Fixed Income: Bloomberg Universal -6.1% in Q1.

- The broad US investment grade bond market (Bloomberg Aggregate) experienced one of its worst quarters on record given continued concerns about policy tightening and inflation. The nominal 10-year Treasury yield finished the quarter at 2.3%, a level 0.8% above the end of 2021.
- TIPS also declined in the rising rate environment, but less than other bond sectors, helped by their inflation component.
- US credit spreads widened in the first quarter, particularly in high yield, as risk assets fell. Spreads remain at relatively low levels, though, given strong corporate health and high investor demand in the low-rate environment.
- Emerging market debt prices also declined in the quarter driven by the Russian invasion of Ukraine.

<sup>1</sup> Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of March 31, 2022.

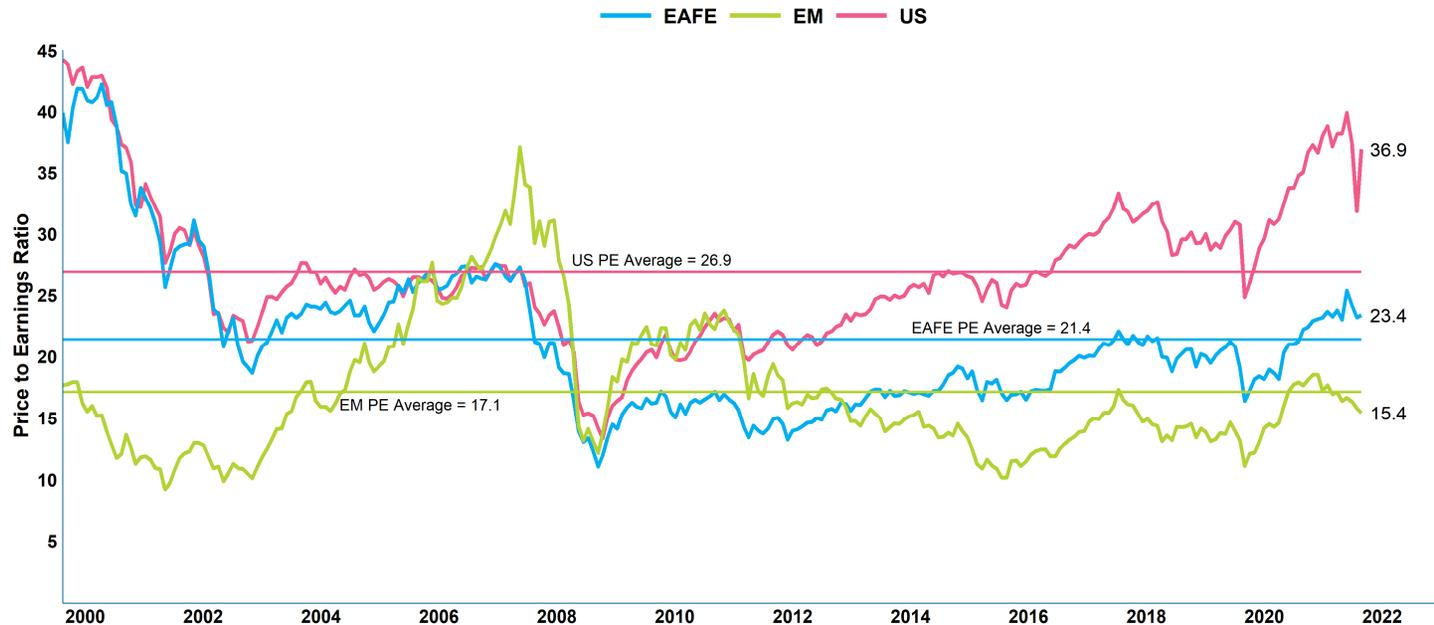
**Equity and Fixed Income Volatility<sup>1</sup>**



- Volatility in equities (VIX) increased for the first quarter but finished well below the March peak of 36.5.
- Fixed income volatility (MOVE) also increased and remains elevated driven largely by expectations that the Federal Reserve would tighten monetary policy faster than previously expected.

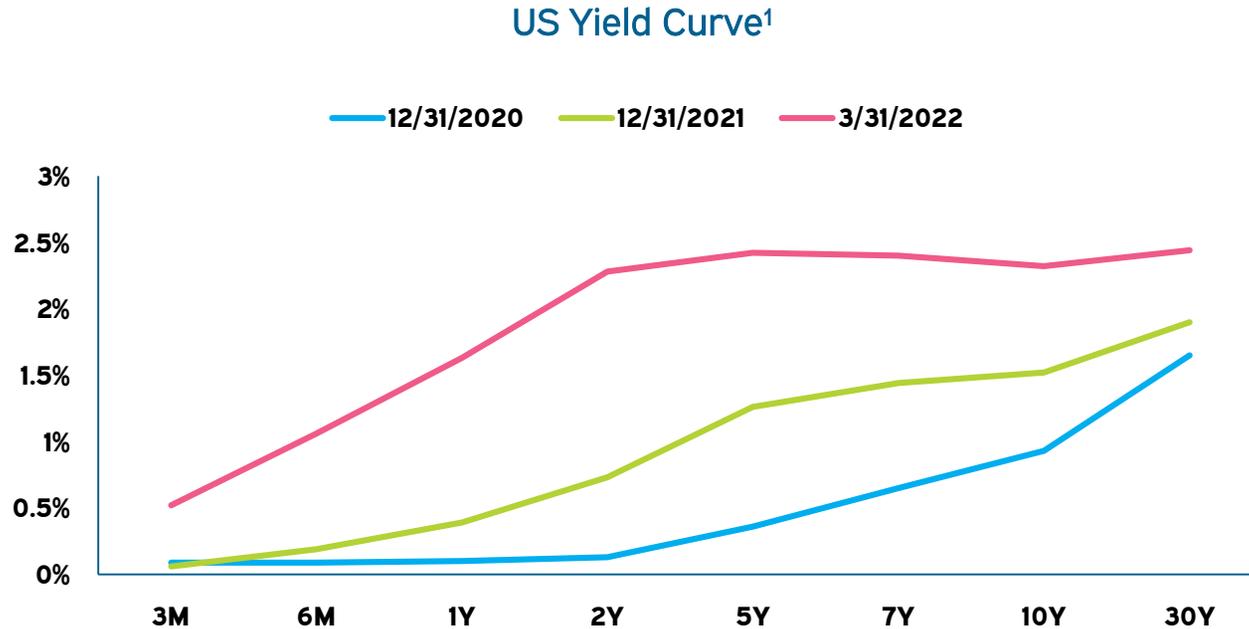
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of March 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the present month-end respectively.

**Equity Cyclically Adjusted P/E Ratios<sup>1</sup>**



- US equity valuations retreated in the first two months of 2022, and rebounded in March with the market recovery. They remain well above long-term averages (near +2 standard deviations).
- International developed market valuations remain below the US, with those for emerging markets under its long-term average.

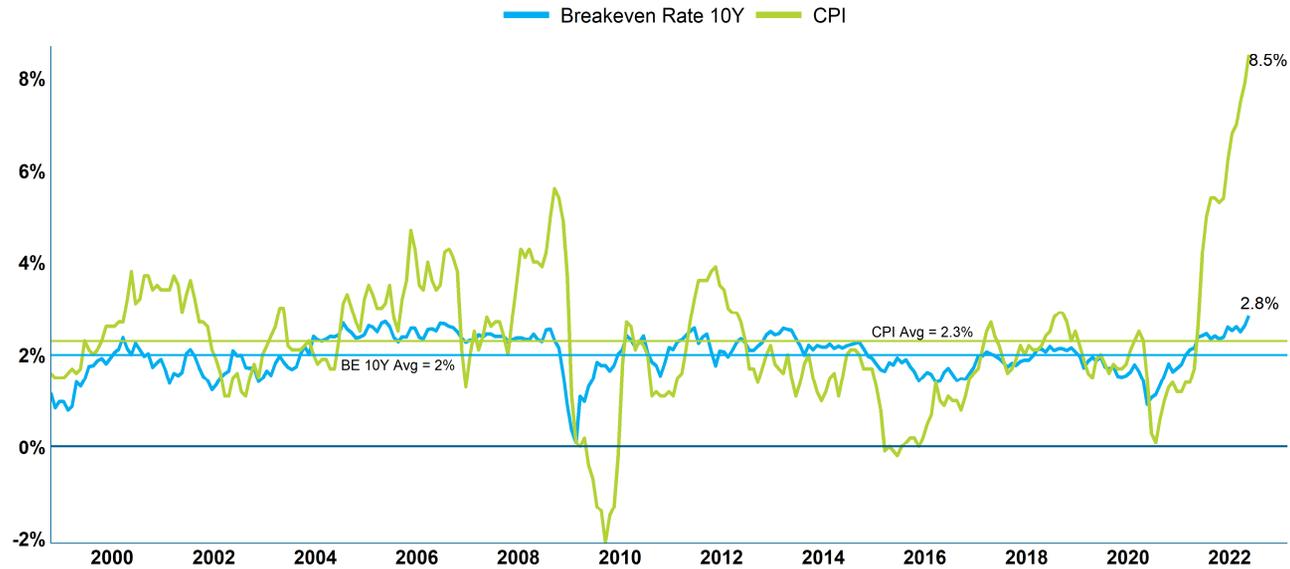
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of March 31, 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to month-end respectively.



- The trends of higher rates across maturities and curve flattening continued during the first quarter of 2022 as markets repriced inflation, rate expectations, and an accelerated pace of the Federal Reserve reducing its balance sheet.
- The spread between two-year and ten-year Treasuries declined significantly over the quarter and became negative after quarter-end which historically has often signaled a recession.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022.

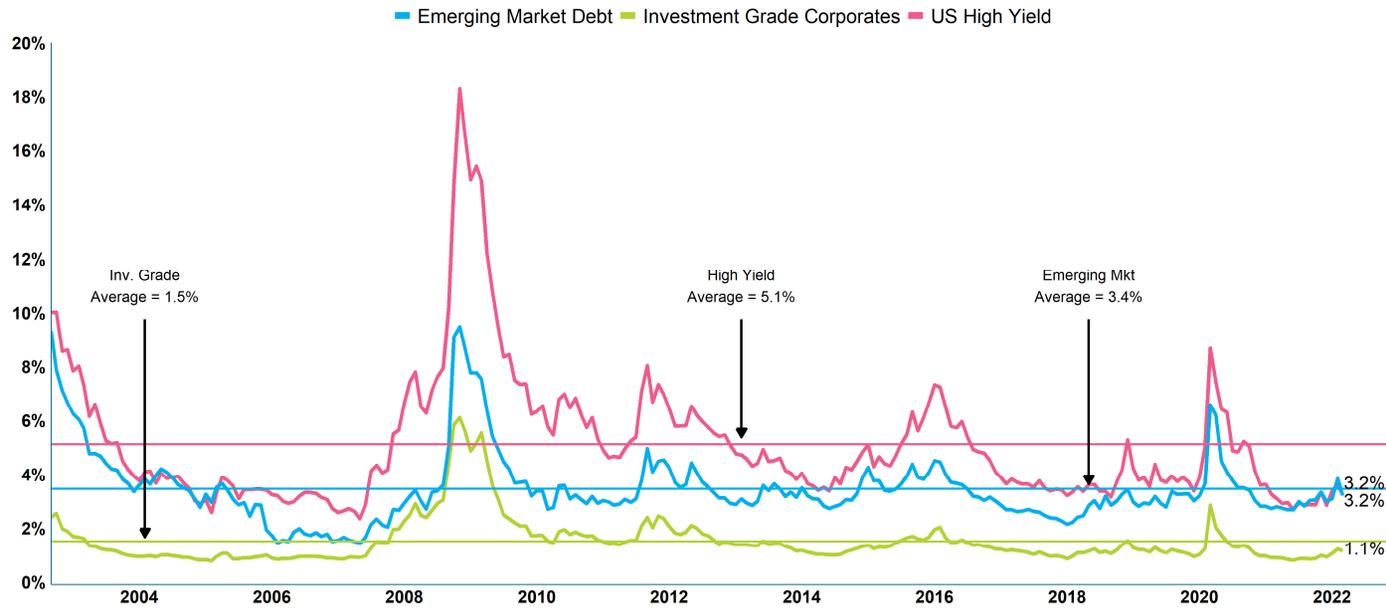
**Ten-Year Breakeven Inflation and CPI<sup>1</sup>**



- Inflation expectations (breakevens) increased during the quarter but are off their peak of close to 3.0%. They remain well above the long-term average.
- Trailing twelve-month CPI continued to rise in March, reaching 8.5%, a level not seen since the early 1980s and far above the long-term average of 2.3%.
- Rising prices for energy and food, and for new and used cars, remained key drivers of higher inflation.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022. 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 Bonds<sup>1</sup>**



- Credit spreads (the spread above a comparable maturity Treasury) increased over the quarter leading to negative returns.
- In the US, high yield spreads increased more than investment grade spreads, but declined less due to the higher relative income. Emerging market spreads finished the quarter at the same level as US high yield.
- The search for yield in a low-rate environment and continued strong corporate fundamentals with low default risk have been key drivers in the decline in credit spreads to below long-term averages in the US. High yield spreads remain well below the long-term average.

<sup>1</sup> Sources: Bloomberg. Data is as of March 31, 2022. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the present month-end respectively.

### Global Economic Outlook

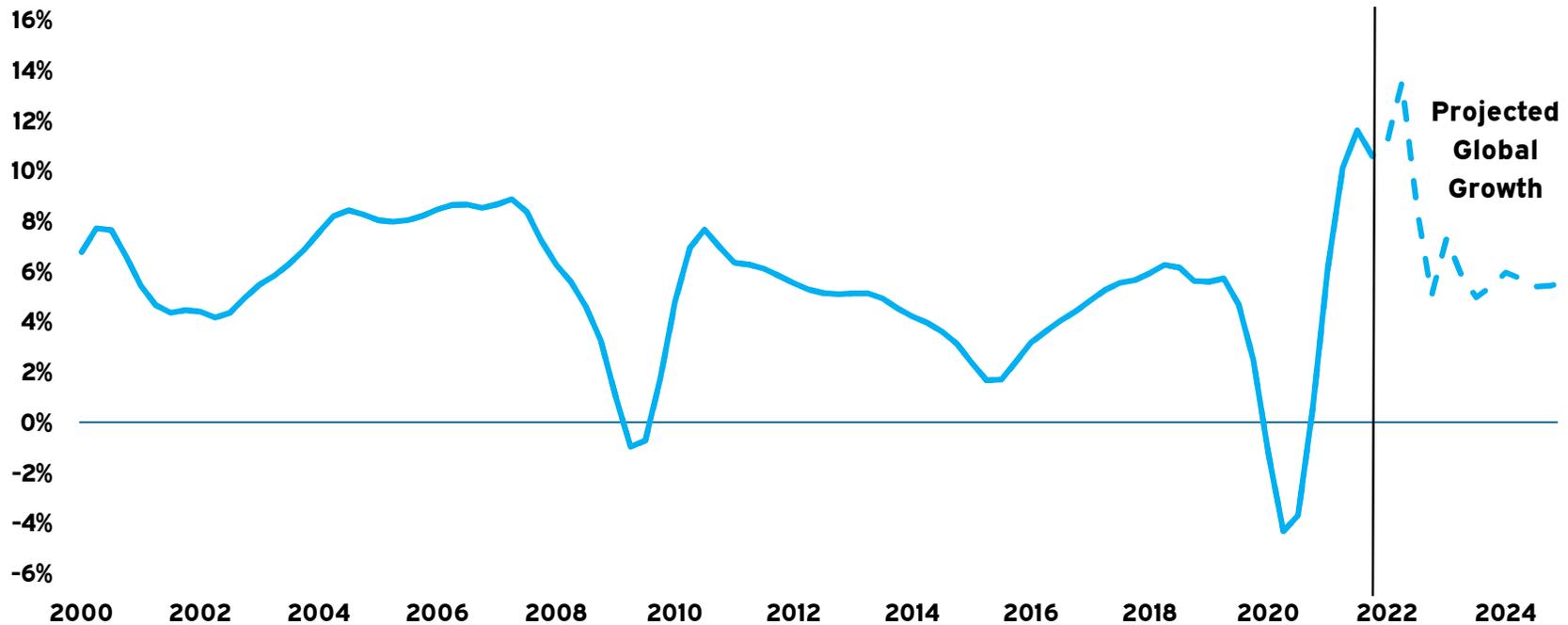
The IMF significantly lowered global growth forecasts in their latest projections, driven by the economic impacts of the war in Ukraine.

- The IMF forecasts final global GDP to come in at 6.1% in 2021 and 3.6% in 2022 (0.8% below the prior 2022 estimate), both still above the past ten-year average of 3.0%.
- In advanced economies, GDP is projected to increase 3.3% in 2022 and 2.4% in 2023. The US has limited economic ties with Russia but saw another downgrade in the 2022 growth forecast (3.7% versus 4.0%) largely due to policy reduction happening faster than previously expected. The euro area economy saw a significant downgrade in expected growth (2.8% versus 3.9%) in 2022 as rising energy prices particularly weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 2.4% this year.
- Growth projections for emerging markets are higher than developed markets, at 3.8% in 2022 and 4.4% in 2023. China’s growth was downgraded (4.4% versus 4.8%) for 2022 given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (7.4% versus 3.8%) due to the war in Ukraine.

	Real GDP (%) <sup>1</sup>			Inflation (%) <sup>1</sup>		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.6	3.6	3.0	7.4	4.8	3.5
Advanced Economies	3.3	2.4	1.6	5.7	2.5	1.5
US	3.7	2.3	2.1	7.7	2.9	1.9
Euro Area	2.8	2.3	0.9	5.3	2.3	1.2
Japan	2.4	2.3	0.5	1.0	0.8	0.5
Emerging Economies	3.8	4.4	4.2	8.7	6.5	5.1
China	4.4	5.1	6.7	2.1	1.8	2.1

<sup>1</sup> Source: IMF World Economic Outlook. Real GDP forecasts from April WEO Update. Inflation forecasts are as of the April 2022 Update. "Actual 10 Year Average" represents data from 2012 to 2021.

### Global Nominal Gross Domestic Product (GDP) Growth<sup>1</sup>

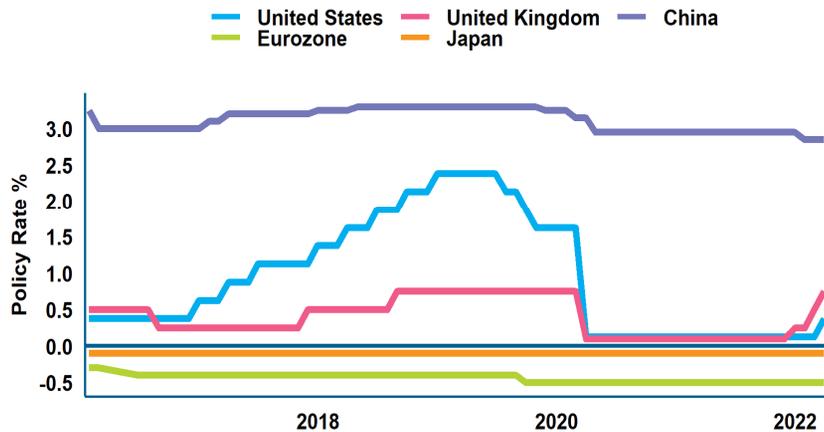


- Global economies are expected to slow in 2022 compared to 2021 but are forecasted to have another year of largely above-trend growth as economies continue to emerge from the pandemic.
- Looking forward, the track of the conflict between Russia and Ukraine, continued supply chain issues, ongoing inflationary pressures, tighter monetary policy, and lingering pandemic problems all remain key.

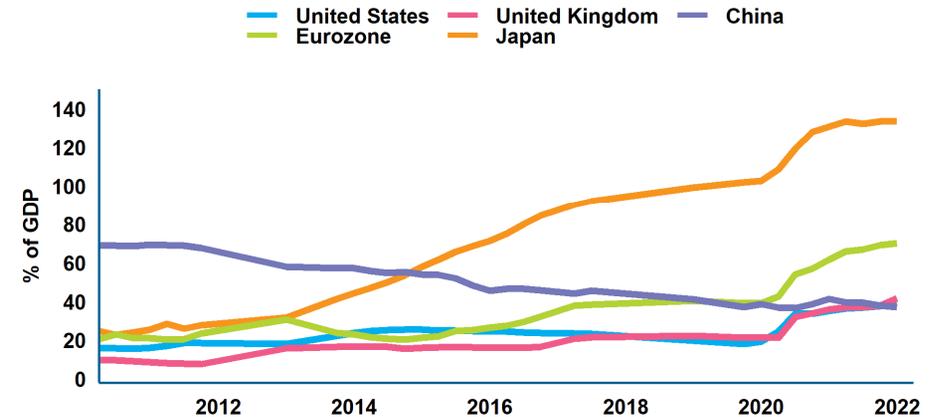
<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated March 2022.

### Central Bank Response<sup>1</sup>

#### Policy Rates



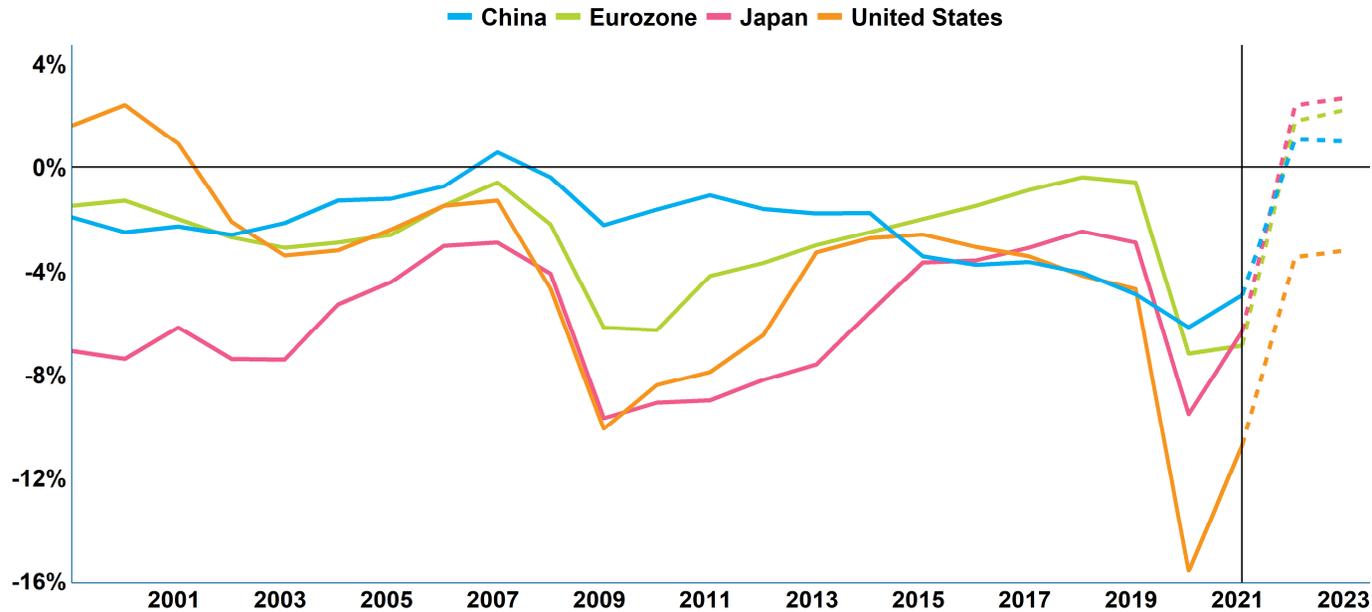
#### Balance Sheet as % of GDP



- After global central banks took extraordinary action to support the economy during the pandemic including policy rate cuts and emergency stimulus through quantitative easing (QE), many are considering reducing support in the face of high inflation.
- The pace of withdrawing support will likely vary across central banks with the US expected to take a more aggressive approach. The risk remains for a policy error, particularly overtightening, as the war in Ukraine could suppress global growth.
- The one notable outlier is China, where the central bank recently lowered rates and reserve requirements in response to slowing growth.

<sup>1</sup> Source: Bloomberg. Policy rate data is as of March 31, 2022. 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 December 31, 2021.

**Budget Surplus / Deficit as a Percentage of GDP<sup>1</sup>**

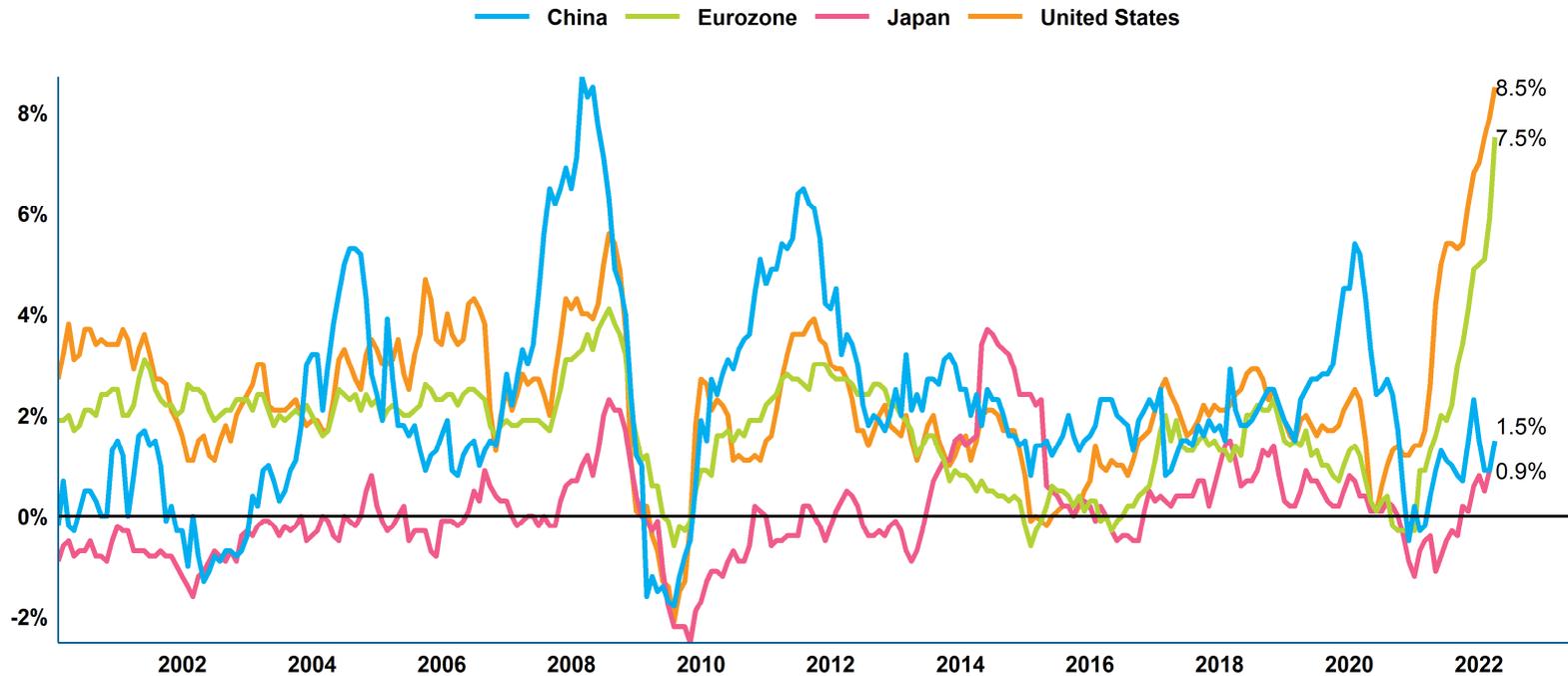


→ Budget deficits as a percentage of GDP drastically increased for major world economies, particularly the US, due to massive fiscal support and the severe economic contraction's effect on tax revenue in 2020 and 2021.

→ As fiscal stimulus programs end, and economic recoveries continue, deficits should improve in the coming years.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022. Projections via IMF Forecasts from April 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

**Inflation (CPI Trailing Twelve Months)<sup>1</sup>**

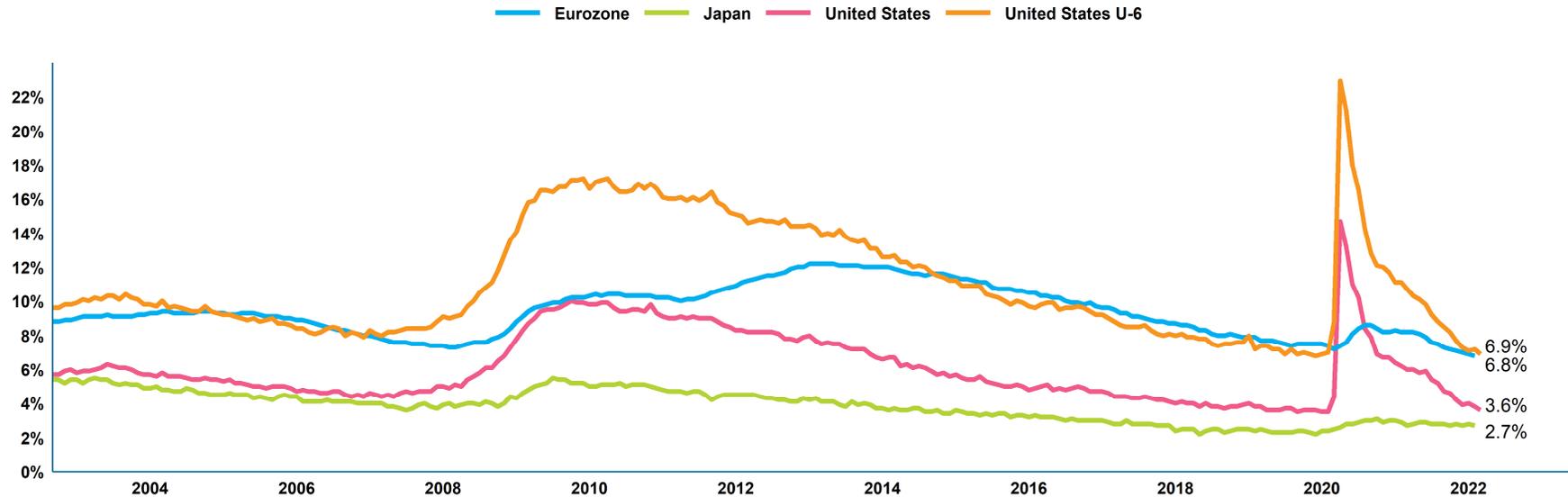


→ Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it continues to reach levels not seen in decades.

→ Supply issues related to the pandemic and higher prices in many key commodities driven by the Russia and Ukraine conflict have been key drivers of inflation globally.

<sup>1</sup> Source: Bloomberg. Data is as of March 2022, except for Japan, where the most recent data available is as of February 28, 2022.

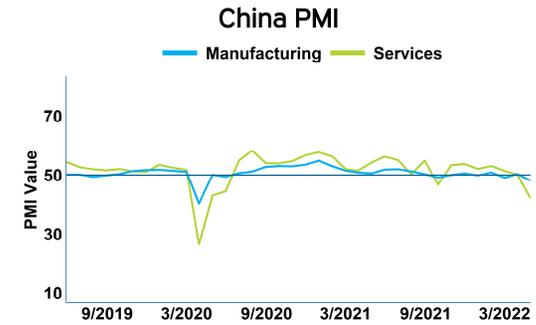
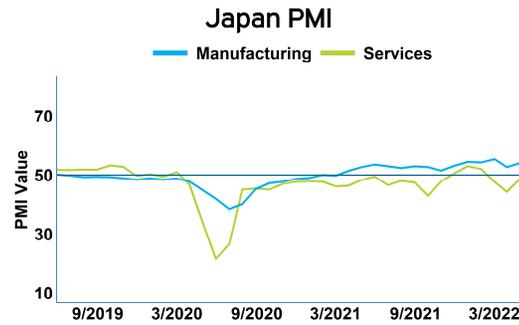
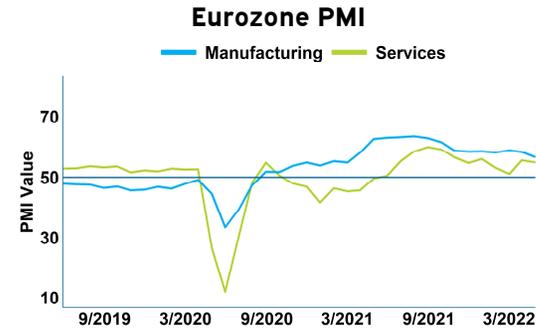
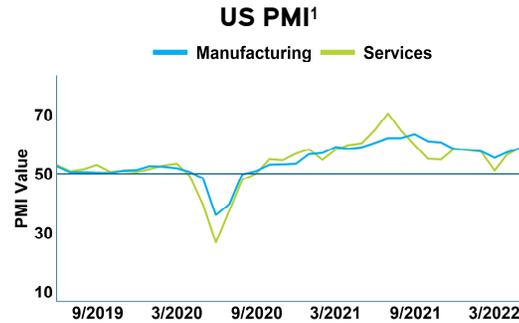
### Unemployment<sup>1</sup>



- As economies have largely reopened due to vaccines for the virus, improvements have been seen in the labor market.
- US unemployment, which experienced the steepest rise from the pandemic, has declined back to pre-pandemic levels. The broader measure (U-6) that includes discouraged and underemployed workers has declined but is much higher at 6.9%.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of February 28, 2022.

Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have experienced pressures recently.
- Service sector PMIs have seen some improvements in the US and Europe lately as the effects of the Omicron variant wane, while Japan and China remain in contraction due to a rise in COVID-19 cases.
- In most countries, manufacturing PMIs are in expansion territory as pandemic-related production issues ease and orders increase. China is the one exception, though, with the manufacturing PMI falling below 50 in March due to increased COVID-19 restrictions.

<sup>1</sup> Source: Bloomberg. US Market Services and Manufacturing PMI, Caixin Services and Manufacturing PMI, Eurozone Market Services and Manufacturing PMI, Jibun Bank Services and Manufacturing PMI. Data is as of March 2022. Readings below 50 represent economic contractions.

US Dollar versus Broad Currencies<sup>1</sup>



- The US dollar continued its 2021 trend of strengthening against a broad basket of peers in the first quarter of 2022 with further increases after month-end.
- Safe-haven flows and higher rates have been key drivers of the dollar’s continued strength.
- A few commodity-sensitive currencies like the Brazilian real, South African rand, and Mexican peso have recently outpaced the dollar, given persistently high commodity prices.

<sup>1</sup> Source: Bloomberg. Data as of March 28, 2022.

## Summary

### Key Trends in 2022:

- The war in eastern Europe has created significant uncertainty going forward with a wide range of potential outcomes. Volatility will likely remain high.
- Expect growth to slow globally in 2022 but remain above trend. The track of the pandemic and war will be key.
- Inflationary pressures could linger, particularly if the Russian invasion of Ukraine intensifies or expands.
- The end of many fiscal programs will put the burden of continued growth on consumers. Higher energy and food prices will depress their ability to spend in other areas.
- Monetary policy will likely tighten globally but will remain relatively low. The risk of policy error remains.
- Valuations remain high in the US, but low rates and strong margins should be supportive.
- Outside the US, valuations remain lower in both emerging and developed markets, but risks remain.

## **Asset Class and Manager Commentary**

### Domestic Equity

→ Over the quarter ending March 31, 2022, domestic equity returned (5.6%), trailing the Russell 3000 benchmark by (0.3%). Reflecting the volatile market over the quarter, all of the managers generated negative absolute returns with mixed performance on relative basis.

- The passive strategies, namely **Northern Trust Russell 1000** and **iShares Edge MSCI Minimum Volatility**, performed in line with their respective benchmarks with acceptable tracking error. While it is not included in the current report, **iShares Edge MSCI Minimum Volatility** was replaced with **Wellington Defensive Equity** (hired in 2021) after the current reporting period.
- **Earnest Partners**, the Plan's active mid cap core manager, returned (5.7%), keeping pace with the Russell Midcap benchmark, placing its slight above the average in its peer group for the quarter. It has also outperformed its benchmark over all other time periods measured and maintained an above-average ranking since its inception in 2006.
- **Rice Hall James**, the Plan's active small cap growth manager, returned (11.5%) outperforming the Russell 2000 Growth benchmark by 1.1%, and placing in the 31<sup>st</sup> percentile for the quarter. The manager also outperformed its benchmark over the 1- and 3-year trailing periods by 9.2% and 1.5% respectively. While it has outperformed the benchmark over all time periods measured, due to its underperformance in 2018, Rice Hall James ranks below the Median fund over the 3-year trailing and since inception periods.
- **Brown Fundamental**, the Plan's active small cap value manager, returned (5.1%) over the quarter lagging its Russell 2000 Value benchmark by (2.7%) while outperforming the benchmark over the trailing 1-year period by 1.9%. Among its peers, Brown ranks below the Median fund as of March 2022.

### International Equity

→ For the quarter, the international equity segment returned (4.6%), outperforming the MSCI ACWI ex US benchmark by 0.7%; it has similarly outperformed over the 1-, 3-, and 5-year trailing periods by 3.1%, 1.2%, and 1.0% respectively.

- The Vanguard passive international developed markets portfolio posted (5.8%). Due to Vanguard's fair-value pricing methodology, the strategy has slightly deviated from its tracked index's return of (5.3%); however, the deviation along with its excess return are expected to equalize over the longer term.
- **SGA MSCI ACWI ex US**, the Plan's active core international equity manager, returned (3.9%) outperforming its benchmark by 1.4% over the quarter placing it in the top quartile amongst its peers. It has also outperformed its benchmark over the 1-year trailing period by 3.4% even though it has trailed the benchmark by (1.4%) since inception in December 2019.

**Fixed Income**

- Over the quarter, the Fixed Income aggregate returned (6.0%), slightly outperforming the Bloomberg Universal benchmark by 0.1%. Reflecting the broad market trends, core fixed income managers in this portfolio posted similar absolute returns with mixed relative performance over the quarter.
- Over the other time periods, except **Wellington Core Bond**, which was funded one year ago, the managers have consistently outperformed their benchmark and have generally maintained an above average peer ranking across time.
- **Ramirez** returned (6.1%) over the quarter, trailing the benchmark by (0.2%) placing it below the Median rank in the peer group. However, Ramirez has outperformed its benchmark over the 1-, 3-, and 5-year trailing periods by 0.7%, 0.4%, and 0.7% respectively, and maintained an above average ranking over the 1- and 5-year trailing periods.
  - **Reams** posted (5.5%) over the quarter outperforming its benchmark by 0.6% and placing it above average in its peer group. It has also outperformed the benchmark over 1-, 3-, and 5-year trailing periods by 1.0%, 3.8%, and 2.5% respectively and maintained an above average rank over all these periods. It is noteworthy that over the 3- and 5-year periods, **Reams** ranks in the 3<sup>rd</sup> percentile amongst its peers.
  - **Wellington Core Bond**, the core fixed income manager funded a year ago in April 2021, returned (6.3%) over the quarter trailing the benchmark by (0.4%). It has also trailed the benchmark over the past year by the same magnitude.

**Credit**

→ With **Polen Capital** as the Plan's sole Credit manager, the **Credit** portfolio returned (1.1%) over the quarter, outperforming the asset class's benchmark, Bloomberg US High Yield, by 3.7%. It has also outperformed the same over the 1-, 3-, and 5-year periods by 5.3%, 1.1%, and 1.3% respectively. Among its peers, **Polen** ranks in the top quartile across all these periods; in the shorter term (2022 Q1 and 1-year period), it ranks within top-ten among its peers.

- This manager was formerly known as DDJ. As DDJ was recently acquired by **Polen Capital**, the manager remains on the Watchlist to monitor its progress and organization changes.

### Covered Calls

→ Over the quarter, the **Covered Calls** portfolio returned (2.6%) trailing its benchmark by (3.4%). The segment also trailed the benchmark over the trailing 1-year period; however, over the longer 3- and 5-year periods, it has outperformed the benchmark by 5.9% and 4.5% respectively.

- **Parametric DeltaShift**, the Plan's active covered calls allocation returned (3.3%), trailing its benchmark, the CBOE BXM, index by (4.1%) over the quarter. However, it has outperformed the benchmark over all other time periods measured. In comparison with the managers in the US Large Cap Core Equity – which is an imperfect peer group for the strategy – it has ranked above average during the quarter and over 1- and 3-year trailing periods while moderately below average over the long-term 5-year trailing period.
- **Parametric BXM**, the Plan's passive covered calls allocation returned (1.6%), trailing its benchmark, the CBOE BXM index, by (2.4%). It has also trailed the benchmark over the 1-year trailing period by (3.7%) while outperforming it over the 3- and 5-year periods. While this passive strategy ranks in the top quartile during the quarter, it ranks in the bottom quartile over all other, longer trailing periods. As noted above, we ought to keep in mind that the peer group available for the **Covered Calls** asset class is an imperfect comparison.

**Crisis Risk Offset**

→ Over the quarter, the **Crisis Risk Offset** (CRO) portfolio posted (8.6%), trailing its benchmark SG Multi Alternative Risk Premia Index by (8.2%). While the CRO component is benchmarked against the SG Multi Alternative Risk Premia Index, **Vanguard Long-Term Treasury ETF** was the sole funded investment in the portfolio for most part of the quarter; it therefore requires caution in evaluating the segment's performance.

- **Vanguard Long-Term Treasury ETF** performed within expectations as a passive manager during the quarter as well as over the trailing 1-year period.
- As part of the long-term development of this asset class, **Kepos** was added as the Alternative Risk Premia manager in February.
- Another manager, **Versor**, was added to the portfolio after this reporting period in April 2022 as the Systematic Trend Following manager.

**1Q 2021 Performance  
as of March 31, 2022**

### OPFRS Total Plan | As of March 31, 2022

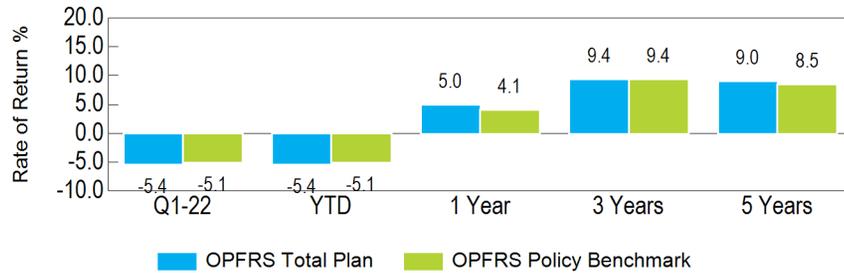
3 Months Ending March 31, 2022		
	Anlzd Return	Standard Deviation

OPFRS Total Plan	-2.39%	3.08%
OPFRS Policy Benchmark	-2.78%	2.67%
InvMetrics Public DB \$250mm-\$1B Gross Median	-1.96%	2.61%

1 Year Ending March 31, 2022		
	Anlzd Return	Standard Deviation

OPFRS Total Plan	4.96%	2.44%
OPFRS Policy Benchmark	4.10%	2.22%

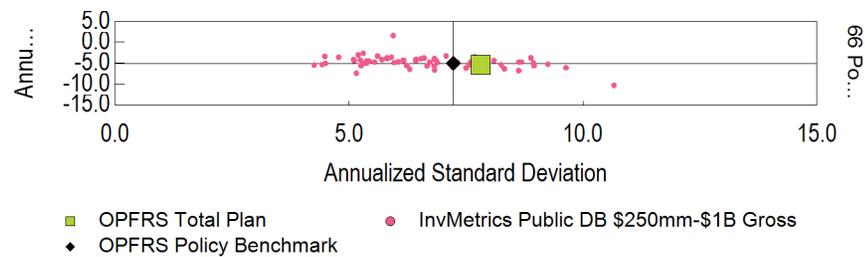
### Return Summary Ending March 31, 2022



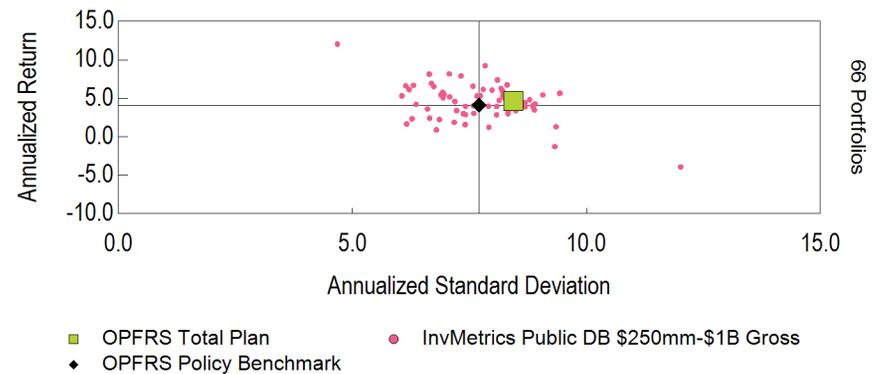
### Summary of Cash Flows

	Quarter-To-Date	One Year
Beginning Market Value	\$483,220,978	\$443,301,342
Net Cash Flow	-\$7,726,635	-\$17,426,181
Capital Appreciation	-\$26,120,897	\$23,498,003
Ending Market Value	\$449,373,445	\$449,373,445

### Annualized Return vs. Annualized Standard Deviation 3 Months Ending March 31, 2022

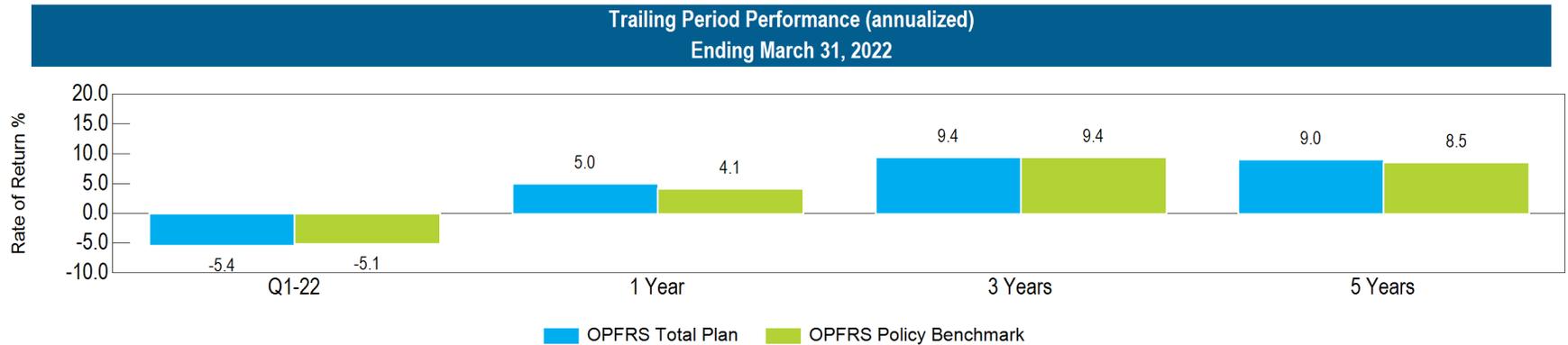


### Annualized Return vs. Annualized Standard Deviation 1 Year Ending March 31, 2022

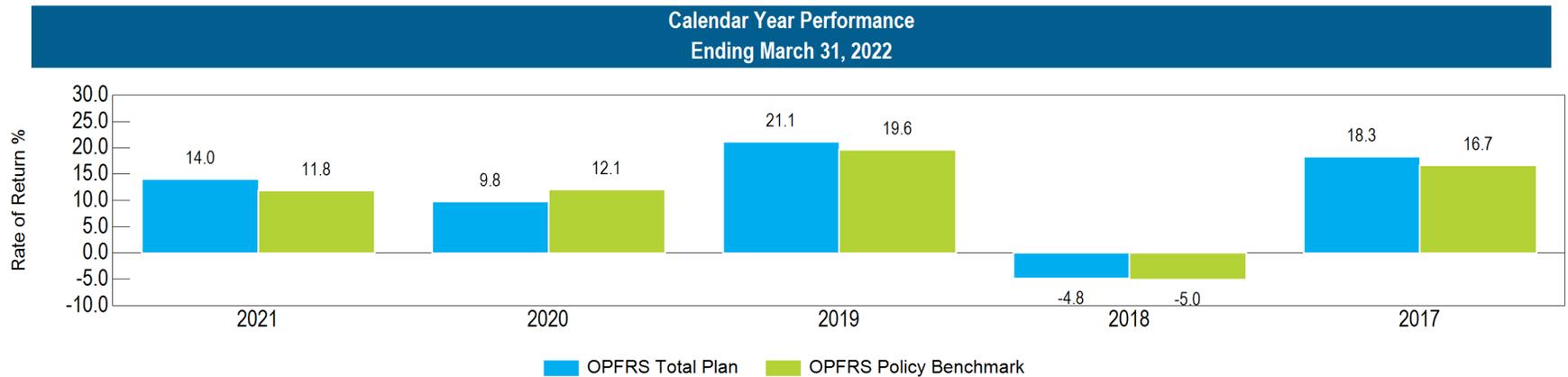


	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>OPFRS Total Plan</b>	<b>-5.4</b>	<b>-0.1</b>	<b>5.0</b>	<b>9.4</b>	<b>9.0</b>	<b>8.0</b>	<b>8.2</b>
<i>OPFRS Policy Benchmark</i>	<i>-5.1</i>	<i>-1.1</i>	<i>4.1</i>	<i>9.4</i>	<i>8.5</i>	<i>7.9</i>	<i>7.8</i>
Excess Return	-0.3	1.0	0.9	0.0	0.5	0.1	0.4
<b>Domestic Equity</b>	<b>-5.6</b>	<b>3.2</b>	<b>10.0</b>	<b>16.7</b>	<b>14.5</b>	<b>12.7</b>	<b>13.8</b>
<i>Russell 3000 (Blend)</i>	<i>-5.3</i>	<i>3.4</i>	<i>11.9</i>	<i>18.2</i>	<i>15.4</i>	<i>13.4</i>	<i>14.3</i>
Excess Return	-0.3	-0.2	-1.9	-1.5	-0.9	-0.7	-0.5
<b>International Equity</b>	<b>-4.6</b>	<b>-2.8</b>	<b>2.1</b>	<b>9.2</b>	<b>8.3</b>	<b>6.5</b>	<b>6.9</b>
<i>MSCI ACWI ex US (Blend)</i>	<i>-5.3</i>	<i>-6.3</i>	<i>-1.0</i>	<i>8.0</i>	<i>7.3</i>	<i>5.7</i>	<i>6.0</i>
Excess Return	0.7	3.5	3.1	1.2	1.0	0.8	0.9
<b>Fixed Income</b>	<b>-6.0</b>	<b>-5.8</b>	<b>-3.5</b>	<b>2.2</b>	<b>2.9</b>	<b>2.6</b>	<b>2.9</b>
<i>Bloomberg Universal (Blend)</i>	<i>-6.1</i>	<i>-6.1</i>	<i>-4.2</i>	<i>1.9</i>	<i>2.3</i>	<i>2.2</i>	<i>2.6</i>
Excess Return	0.1	0.3	0.7	0.3	0.6	0.4	0.3
<b>Credit</b>	<b>-1.1</b>	<b>1.3</b>	<b>4.6</b>	<b>5.7</b>	<b>6.0</b>	<b>6.0</b>	<b>--</b>
<i>Bloomberg US High Yield TR</i>	<i>-4.8</i>	<i>-3.3</i>	<i>-0.7</i>	<i>4.6</i>	<i>4.7</i>	<i>5.0</i>	<i>--</i>
Excess Return	3.7	4.6	5.3	1.1	1.3	1.0	
<b>Covered Calls</b>	<b>-2.6</b>	<b>7.2</b>	<b>14.3</b>	<b>14.8</b>	<b>11.8</b>	<b>11.0</b>	<b>--</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>0.8</i>	<i>9.3</i>	<i>14.9</i>	<i>8.9</i>	<i>7.3</i>	<i>7.3</i>	<i>--</i>
Excess Return	-3.4	-2.1	-0.6	5.9	4.5	3.7	
<b>Crisis Risk Offset</b>	<b>-8.6</b>	<b>-6.8</b>	<b>-1.2</b>	<b>-11.3</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>SG Multi Alternative Risk Premia Index</i>	<i>-0.4</i>	<i>1.2</i>	<i>3.3</i>	<i>-2.8</i>	<i>--</i>	<i>--</i>	<i>--</i>
Excess Return	-8.2	-8.0	-4.5	-8.5			

Fiscal year begins on July 1.



	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	2017 (%)	2018 (%)	2019 (%)	2020 (%)	2021 (%)
<b>OPFRS Total Plan</b>	<b>-5.4</b>	<b>-0.1</b>	<b>5.0</b>	<b>9.4</b>	<b>9.0</b>	<b>18.3</b>	<b>-4.8</b>	<b>21.1</b>	<b>9.8</b>	<b>14.0</b>
<i>OPFRS Policy Benchmark</i>	<i>-5.1</i>	<i>-1.1</i>	<i>4.1</i>	<i>9.4</i>	<i>8.5</i>	<i>16.7</i>	<i>-5.0</i>	<i>19.6</i>	<i>12.1</i>	<i>11.8</i>
<i>InvMetrics Public DB \$250mm-\$1B Gross Median</i>	<i>-4.8</i>	<i>-0.7</i>	<i>4.5</i>	<i>10.7</i>	<i>9.2</i>	<i>15.8</i>	<i>-4.1</i>	<i>18.6</i>	<i>13.1</i>	<i>13.6</i>

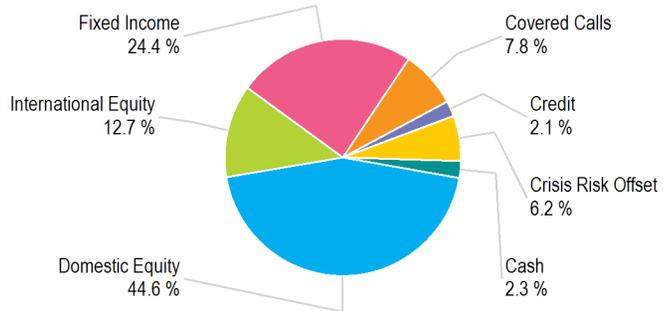


Fiscal year begins on July 1.

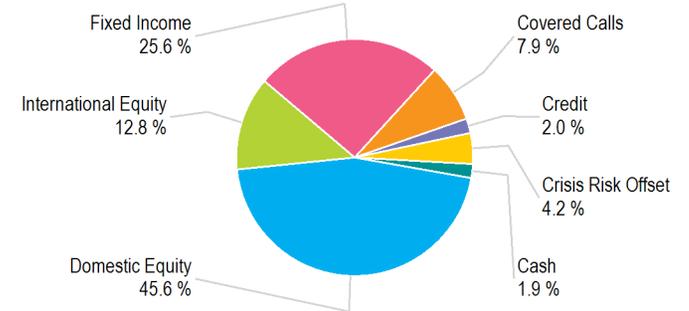
#### Asset Allocation vs. Target As Of March 31, 2022

	Current	%	Policy	Difference*
Domestic Equity	\$200,637,476	44.6%	40.0%	4.6%
International Equity	\$56,850,045	12.7%	12.0%	0.7%
Fixed Income	\$109,591,367	24.4%	31.0%	-6.6%
Covered Calls	\$35,018,022	7.8%	5.0%	2.8%
Credit	\$9,250,051	2.1%	2.0%	0.1%
Crisis Risk Offset	\$27,661,952	6.2%	10.0%	-3.8%
Cash	\$10,364,533	2.3%	0.0%	2.3%

March 31, 2022: \$449,834,415



March 31, 2021: \$483,220,978



Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers.

Target weightings reflect the Plan's evolving asset allocation (effective 5/31/2017.)

	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Domestic Equity</b>	<b>200,637,476</b>	<b>100.0</b>	<b>-5.6</b>	<b>10.0</b>	<b>16.7</b>	<b>14.5</b>	<b>9.4</b>	<b>Jun-97</b>
<i>Russell 3000 (Blend)</i>			<i>-5.3</i>	<i>11.9</i>	<i>18.2</i>	<i>15.4</i>	<i>9.6</i>	<i>Jun-97</i>
Excess Return			-0.3	-1.9	-1.5	-0.9	-0.2	
Northern Trust Russell 1000	103,327,856	51.5	-5.1	13.3	18.7	15.8	15.0	Jun-10
<i>Russell 1000</i>			<i>-5.1</i>	<i>13.3</i>	<i>18.7</i>	<i>15.8</i>	<i>15.0</i>	<i>Jun-10</i>
Excess Return			0.0	0.0	0.0	0.0	0.0	
<i>eV US Large Cap Core Equity Gross Rank</i>			<i>55</i>	<i>58</i>	<i>35</i>	<i>40</i>	<i>43</i>	<i>Jun-10</i>
EARNEST Partners	48,590,675	24.2	-5.7	8.2	18.3	16.1	11.2	Apr-06
<i>Russell MidCap</i>			<i>-5.7</i>	<i>6.9</i>	<i>14.9</i>	<i>12.6</i>	<i>9.6</i>	<i>Apr-06</i>
Excess Return			0.0	1.3	3.4	3.5	1.6	
<i>eV US Mid Cap Core Equity Gross Rank</i>			<i>45</i>	<i>41</i>	<i>13</i>	<i>8</i>	<i>28</i>	<i>Apr-06</i>
iShares Edge MSCI Min Vol ETF	22,076,344	11.0	-3.8	13.6	--	--	21.8	Apr-20
<i>MSCI USA Minimum Volatility GR USD</i>			<i>-3.8</i>	<i>13.8</i>	<i>--</i>	<i>--</i>	<i>21.9</i>	<i>Apr-20</i>
Excess Return			0.0	-0.2			-0.1	
<i>eV US Low Volatility Equity Gross Rank</i>			<i>53</i>	<i>51</i>	<i>--</i>	<i>--</i>	<i>80</i>	<i>Apr-20</i>
Rice Hall James	15,430,352	7.7	-11.5	-5.1	11.4	--	10.5	Jul-17
<i>Russell 2000 Growth</i>			<i>-12.6</i>	<i>-14.3</i>	<i>9.9</i>	<i>--</i>	<i>9.9</i>	<i>Jul-17</i>
Excess Return			1.1	9.2	1.5		0.6	
<i>eV US Small Cap Growth Equity Gross Rank</i>			<i>31</i>	<i>37</i>	<i>85</i>	<i>--</i>	<i>91</i>	<i>Jul-17</i>
Brown Fundamental Small Cap Value	11,212,249	5.6	-5.1	5.2	--	--	5.2	Apr-21
<i>Russell 2000 Value</i>			<i>-2.4</i>	<i>3.3</i>	<i>--</i>	<i>--</i>	<i>3.3</i>	<i>Apr-21</i>
Excess Return			-2.7	1.9			1.9	
<i>eV US Small Cap Value Equity Gross Rank</i>			<i>72</i>	<i>55</i>	<i>--</i>	<i>--</i>	<i>55</i>	<i>Apr-21</i>

	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>International Equity</b>	<b>57,310,971</b>	<b>100.0</b>	<b>-4.6</b>	<b>2.1</b>	<b>9.2</b>	<b>8.3</b>	<b>5.7</b>	<b>Jan-98</b>
<i>MSCI ACWI ex US (Blend)</i>			<i>-5.3</i>	<i>-1.0</i>	<i>8.0</i>	<i>7.3</i>	<i>5.7</i>	<i>Jan-98</i>
Excess Return			0.7	3.1	1.2	1.0	0.0	
SGA ACWI ex-U.S. Equity	40,766,479	71.1	-3.9	2.4	--	--	6.3	Dec-19
<i>MSCI ACWI ex USA Gross</i>			<i>-5.3</i>	<i>-1.0</i>	--	--	<i>7.7</i>	<i>Dec-19</i>
Excess Return			1.4	3.4			-1.4	
<i>eV ACWI ex-US All Cap Core Eq Gross Rank</i>			<i>19</i>	<i>26</i>	--	--	<i>89</i>	<i>Dec-19</i>
Vanguard Developed Markets ETF	16,083,566	28.1	-5.8	0.7	--	--	10.4	Sep-19
<i>FTSE Developed All Cap Ex US TR USD</i>			<i>-5.2</i>	<i>1.9</i>	--	--	<i>11.0</i>	<i>Sep-19</i>
Excess Return			-0.6	-1.2			-0.6	
<i>eV ACWI ex-US All Cap Core Eq Gross Rank</i>			<i>41</i>	<i>39</i>	--	--	<i>73</i>	<i>Sep-19</i>

## Oakland Police and Fire Retirement System Total Plan

### Manager Performance - Gross of Fees | As of March 31, 2022

	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Fixed Income</b>	<b>109,591,411</b>	<b>100.0</b>	<b>-6.0</b>	<b>-3.5</b>	<b>2.2</b>	<b>2.9</b>	<b>5.1</b>	<b>Dec-93</b>
<i>Bloomberg Universal (Blend)</i>			<i>-6.1</i>	<i>-4.2</i>	<i>1.9</i>	<i>2.3</i>	<i>4.9</i>	<i>Dec-93</i>
Excess Return			0.1	0.7	0.3	0.6	0.2	
Ramirez	74,513,589	68.0	-6.1	-3.5	2.1	2.8	2.8	Jan-17
<i>Bloomberg US Aggregate TR</i>			<i>-5.9</i>	<i>-4.2</i>	<i>1.7</i>	<i>2.1</i>	<i>2.2</i>	<i>Jan-17</i>
Excess Return			-0.2	0.7	0.4	0.7	0.6	
<i>eV US Core Fixed Inc Gross Rank</i>			83	28	72	33	33	<i>Jan-17</i>
Reams	27,928,505	25.5	-5.5	-3.2	5.7	4.8	5.6	Feb-98
<i>Bloomberg Universal (Blend)</i>			<i>-6.1</i>	<i>-4.2</i>	<i>1.9</i>	<i>2.3</i>	<i>4.5</i>	<i>Feb-98</i>
Excess Return			0.6	1.0	3.8	2.5	1.1	
<i>eV US Core Plus Fixed Inc Gross Rank</i>			36	42	3	3	44	<i>Feb-98</i>
Wellington Core Bond	7,149,273	6.5	-6.3	-4.6	--	--	-4.6	Apr-21
<i>Bloomberg US Aggregate TR</i>			<i>-5.9</i>	<i>-4.2</i>	--	--	<i>-4.2</i>	<i>Apr-21</i>
Excess Return			-0.4	-0.4			-0.4	
<i>eV US Core Fixed Inc Gross Rank</i>			95	96	--	--	96	<i>Apr-21</i>

## Oakland Police and Fire Retirement System Total Plan

### Manager Performance - Gross of Fees | As of March 31, 2022

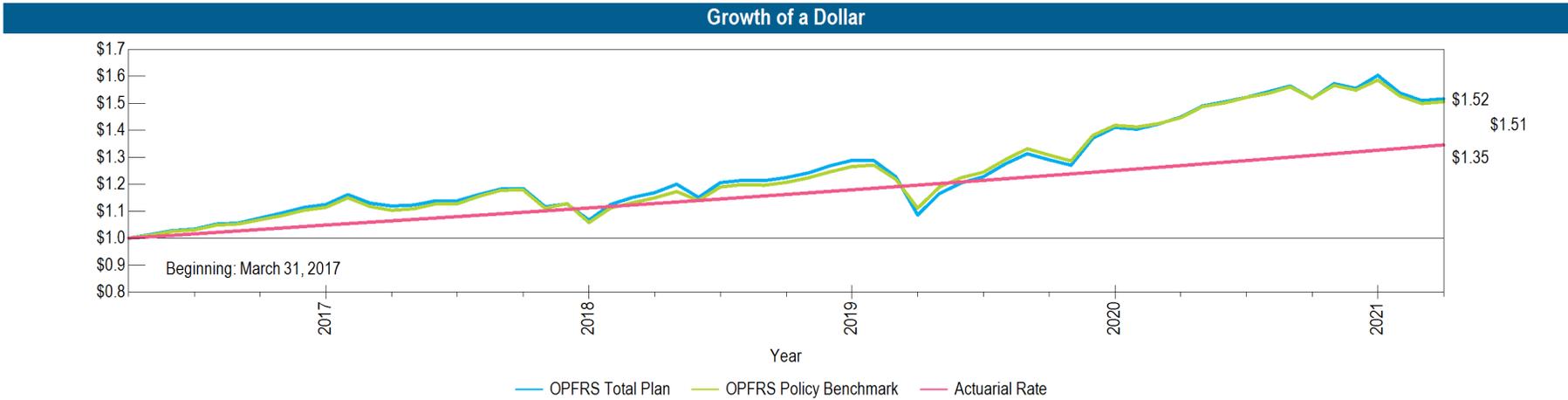
	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Credit</b>	<b>9,250,051</b>	<b>100.0</b>	<b>-1.1</b>	<b>4.6</b>	<b>5.7</b>	<b>6.0</b>	<b>6.2</b>	<b>Feb-15</b>
<i>Bloomberg US High Yield TR</i>			<i>-4.8</i>	<i>-0.7</i>	<i>4.6</i>	<i>4.7</i>	<i>5.2</i>	<i>Feb-15</i>
Excess Return			3.7	5.3	1.1	1.3	1.0	
Polen Capital	9,250,051	100.0	-1.1	4.6	5.7	6.0	6.2	Feb-15
<i>ICE BofA High Yield Master TR</i>			<i>-4.5</i>	<i>-0.3</i>	<i>4.4</i>	<i>4.6</i>	<i>5.1</i>	<i>Feb-15</i>
Excess Return			3.4	4.9	1.3	1.4	1.1	
<i>eV US High Yield Fixed Inc Gross Rank</i>			<i>8</i>	<i>5</i>	<i>23</i>	<i>12</i>	<i>16</i>	<i>Feb-15</i>

	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Covered Calls</b>	<b>35,018,022</b>	<b>100.0</b>	<b>-2.6</b>	<b>14.3</b>	<b>14.8</b>	<b>11.8</b>	<b>10.4</b>	<b>Apr-14</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>0.8</i>	<i>14.9</i>	<i>8.9</i>	<i>7.3</i>	<i>7.0</i>	<i>Apr-14</i>
Excess Return			-3.4	-0.6	5.9	4.5	3.4	
Parametric DeltaShift	17,664,992	50.4	-3.3	16.8	18.6	14.6	12.8	Apr-14
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>0.8</i>	<i>14.9</i>	<i>8.9</i>	<i>7.3</i>	<i>7.0</i>	<i>Apr-14</i>
Excess Return			-4.1	1.9	9.7	7.3	5.8	
<i>eV US Large Cap Core Equity Gross Rank</i>			<i>25</i>	<i>17</i>	<i>37</i>	<i>64</i>	<i>64</i>	<i>Apr-14</i>
Parametric BXM	17,353,030	49.6	-1.6	11.2	10.5	8.8	8.2	Apr-14
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>0.8</i>	<i>14.9</i>	<i>8.9</i>	<i>7.3</i>	<i>7.0</i>	<i>Apr-14</i>
Excess Return			-2.4	-3.7	1.6	1.5	1.2	
<i>eV US Large Cap Core Equity Gross Rank</i>			<i>12</i>	<i>75</i>	<i>98</i>	<i>98</i>	<i>98</i>	<i>Apr-14</i>

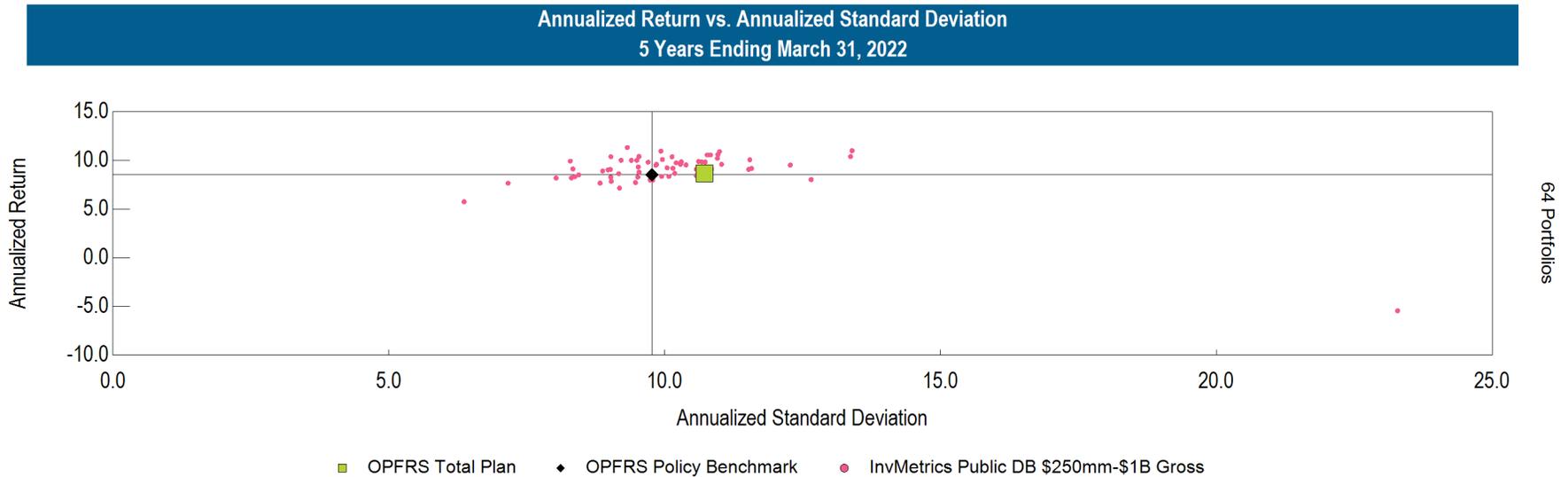
## Oakland Police and Fire Retirement System Total Plan

Manager Performance - Gross of Fees | As of March 31, 2022

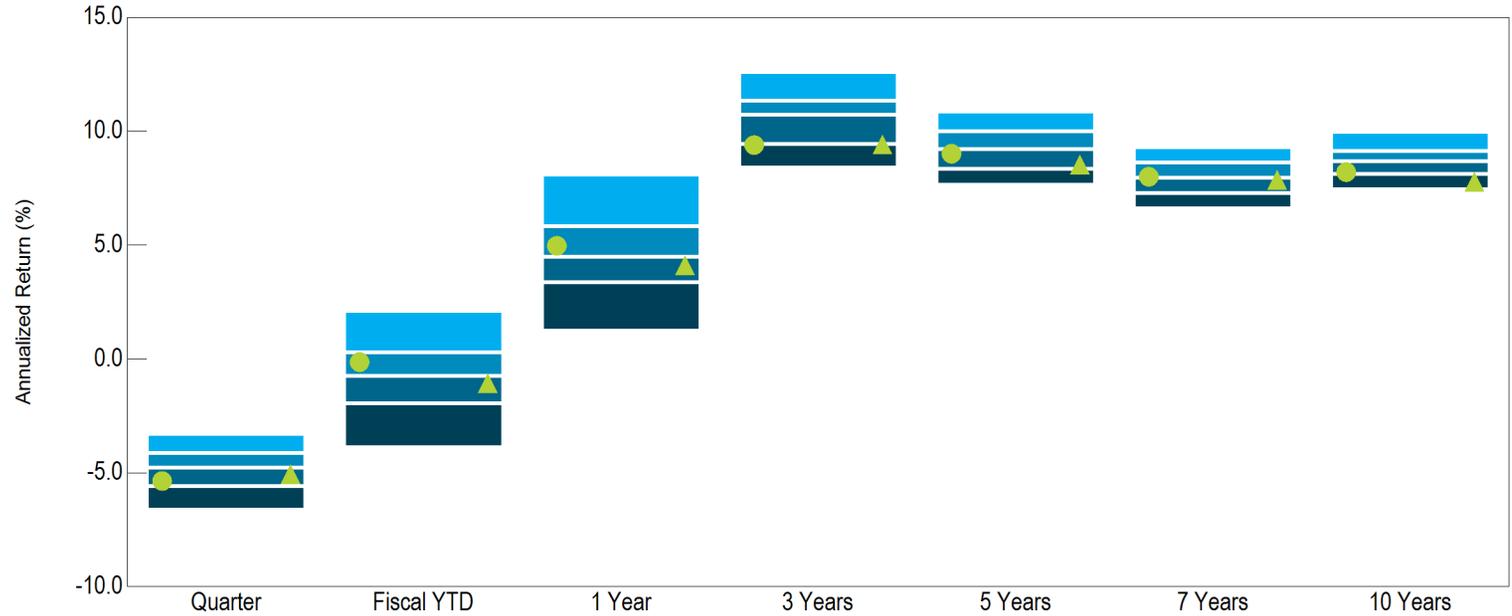
	Market Value	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	S.I.	S.I. Date
<b>Crisis Risk Offset</b>	<b>27,661,952</b>	<b>100.0</b>	<b>-8.6</b>	<b>-1.2</b>	<b>-11.3</b>	<b>--</b>	<b>-9.7</b>	<b>Aug-18</b>
<i>SG Multi Alternative Risk Premia Index</i>			<i>-0.4</i>	<i>3.3</i>	<i>-2.8</i>	<i>--</i>	<i>-2.0</i>	<i>Aug-18</i>
Excess Return			-8.2	-4.5	-8.5		-7.7	
Vanguard Long-Term Treasury ETF	17,883,935	64.7	-10.1	-2.8	--	--	0.8	Jul-19
<i>Bloomberg US Govt Long TR</i>			<i>-10.6</i>	<i>-1.5</i>	<i>--</i>	<i>--</i>	<i>1.4</i>	<i>Jul-19</i>
Excess Return			0.5	-1.3			-0.6	
<i>eV US Long Duration - Gov/Cred Fixed Inc Net Rank</i>			<i>24</i>	<i>36</i>	<i>--</i>	<i>--</i>	<i>99</i>	<i>Jul-19</i>
Kepos Alternative Risk Premia	9,778,017	35.3	--	--	--	--	-2.1	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>			<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.2</i>	<i>Feb-22</i>
Excess Return							-0.9	



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



#### InvMetrics Public DB \$250mm-\$1B Gross Return Comparison



	Return (Rank)													
	Quarter		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-3.3		2.1		8.1		12.6		10.9		9.3		10.0	
25th Percentile	-4.1		0.3		5.8		11.4		10.0		8.6		9.1	
Median	-4.8		-0.7		4.5		10.7		9.2		8.0		8.7	
75th Percentile	-5.6		-1.9		3.4		9.4		8.4		7.3		8.1	
95th Percentile	-6.6		-3.9		1.2		8.4		7.7		6.6		7.4	
# of Portfolios	66		66		66		66		64		62		60	
● OPFRS Total Plan	-5.4	(70)	-0.1	(37)	5.0	(46)	9.4	(78)	9.0	(63)	8.0	(50)	8.2	(73)
▲ OPFRS Policy Benchmark	-5.1	(66)	-1.1	(55)	4.1	(55)	9.4	(78)	8.5	(72)	7.9	(58)	7.8	(85)

Fiscal year begins on July 1.

### Manager Monitoring/Probation Status Return vs. Benchmark since Corrective Action (As of March 31, 2022)

Portfolio	Status	Concern	Months Since Corrective Action	Performance <sup>1</sup> Since Corrective Action (Gross, %)	Peer Group Percentile Ranking <sup>2</sup>	Date of Corrective Action <sup>3</sup>
Polen Capital <sup>4</sup>	On Watch	Performance/ Org changes	33	6.0	18	5/29/2019
ICE BofAML US High Yield				4.6		
Rice Hall James	On Watch	Performance	33	13.5	84	5/29/2019
Russell 2000 Growth				12.3		
Parametric	On Watch	Org changes	15	21.5	NA	10/28/2020
CBOE S&P 500 BuyWrite USD				19.5		

### Investment Performance Criteria for Manager Monitoring/Probation Status

Asset Class	Short-term (Rolling 12 months)	Medium-term (Rolling 36 months)	Long-term (60 + months)
<b>Active Domestic Equity</b>	Fund return < benchmark return by 3.5%	Annualized Fund return < benchmark return by 1.75% for 6 consecutive months	VRR <sup>5</sup> < 0.97 for 6 consecutive months
<b>Active International Equity</b>	Fund return < benchmark return by 4.5%	Annualized Fund return < benchmark return by 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
<b>Passive International Equity</b>	Tracking Error > 0.50%	Tracking Error > 0.45% for 6 consecutive months	Annualized Fund return < benchmark return by 0.40% for 6 consecutive months
Fixed Income	Fund return < benchmark return by 1.5%	Annualized Fund return < benchmark return by 1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months

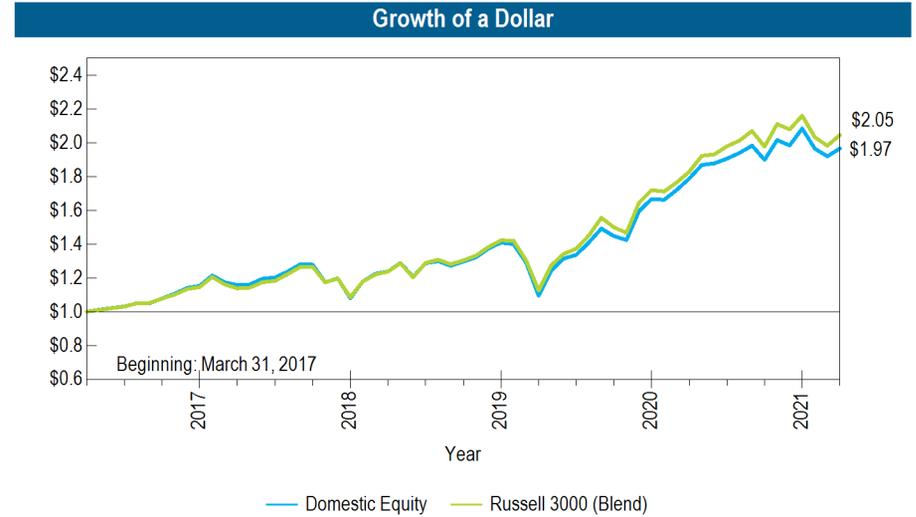
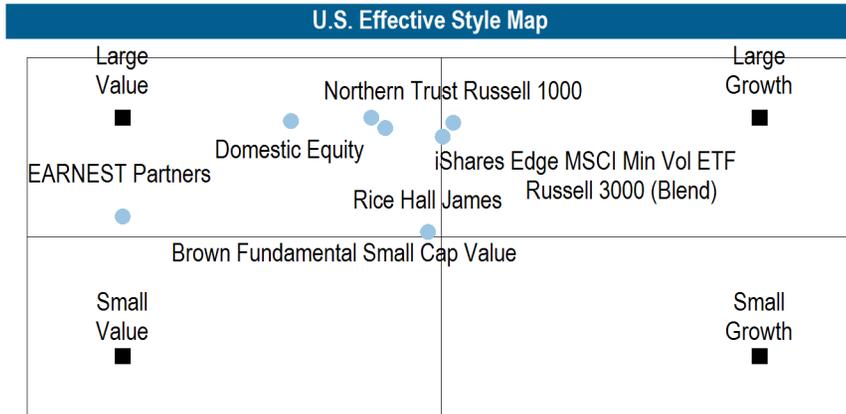
<sup>1</sup> Annualized performance if over one year

<sup>2</sup> Ranking over most recent quarter if on watch for less than 1 year, or over 1 year if on watch for more than a year.

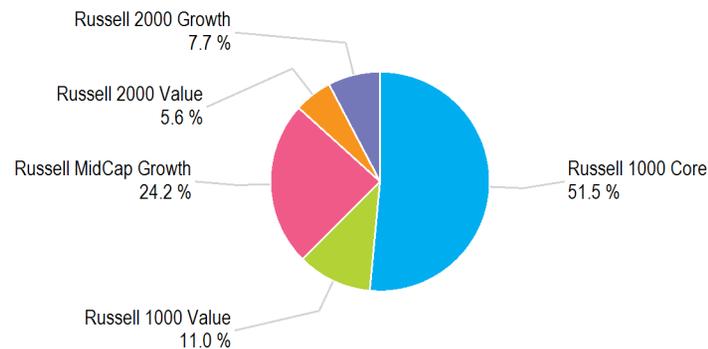
<sup>3</sup> Approximate date based on when the Board voted to either monitor a manager at a heightened level or place it on probation.

<sup>4</sup> Polen Capital High Yield strategy was formerly known as DDJ High Yield prior to 2022.

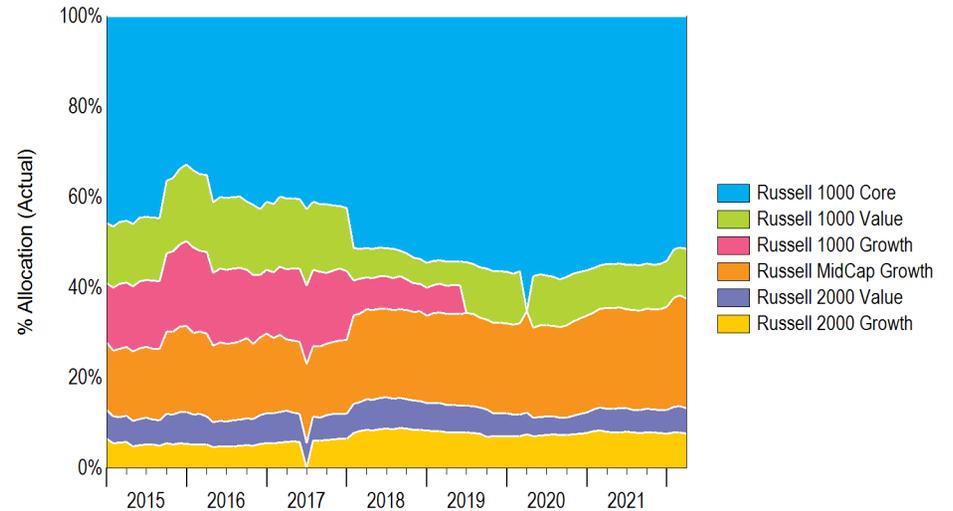
<sup>5</sup> VRR (Value Relative Ratio) is calculated as manager cumulative return/ benchmark return.



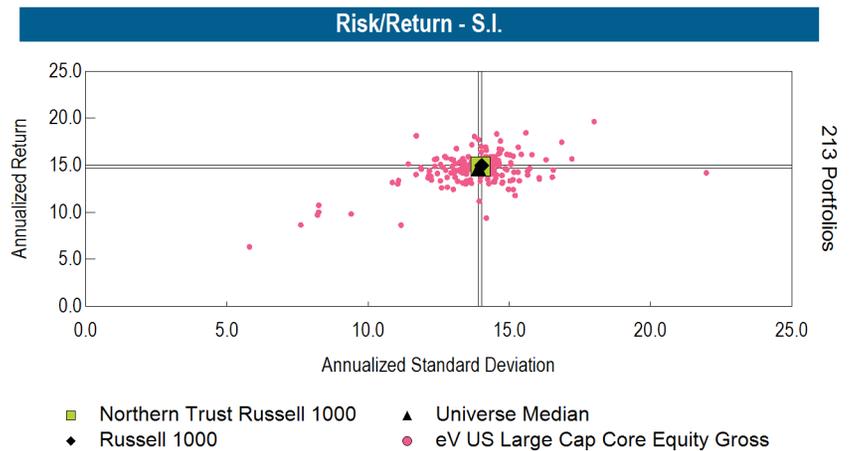
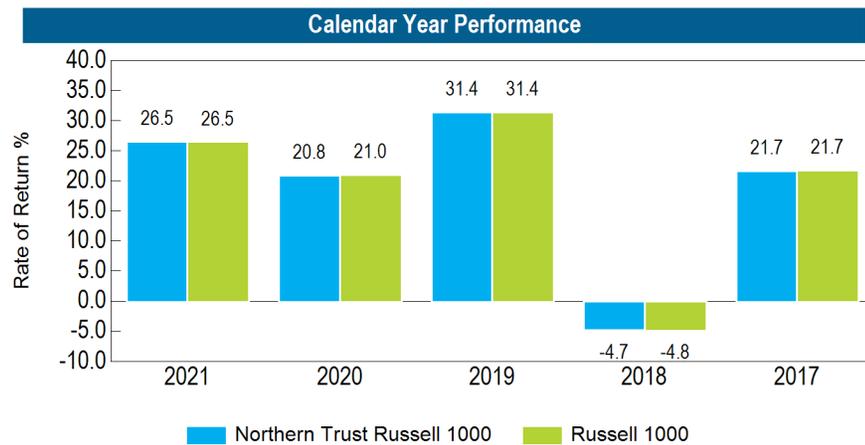
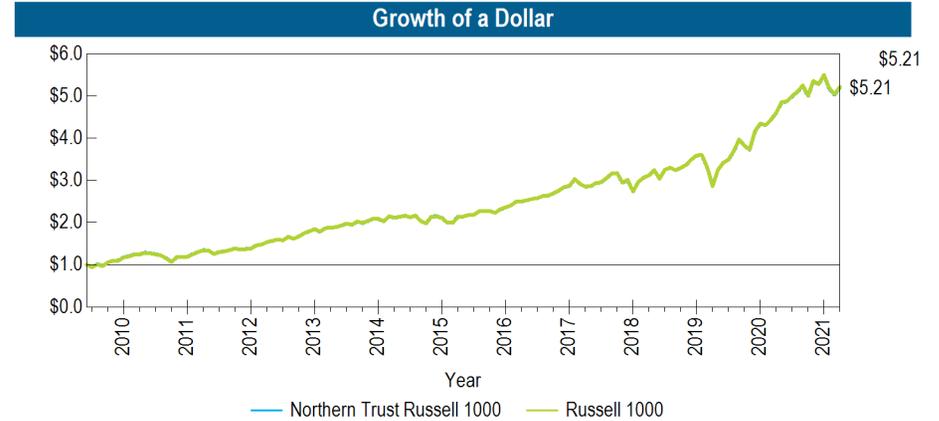
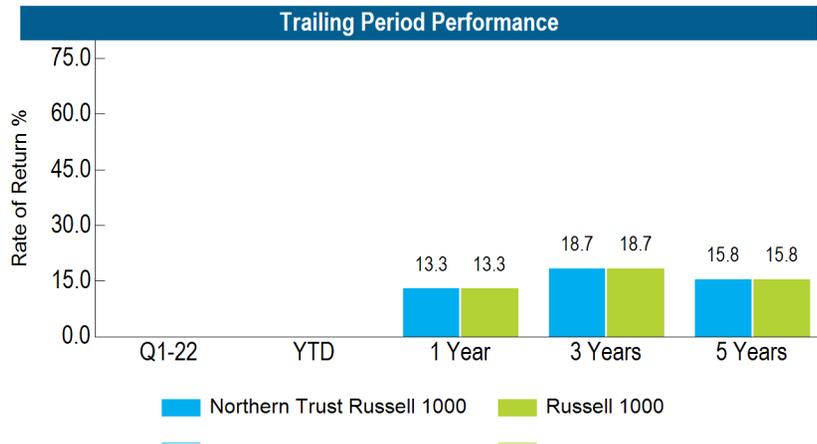
#### Style Exposure



#### Style History (5-Year)

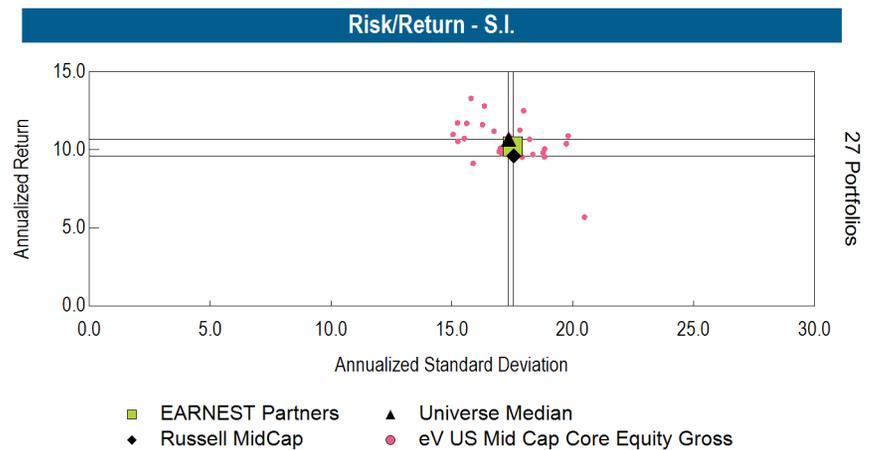
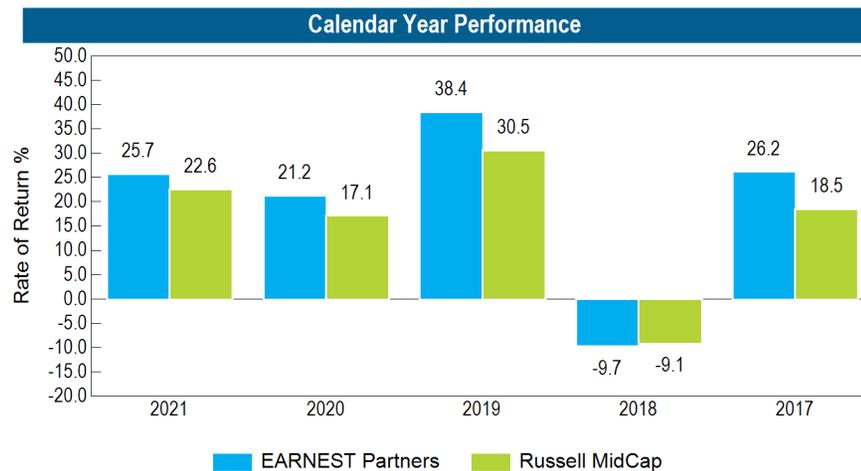
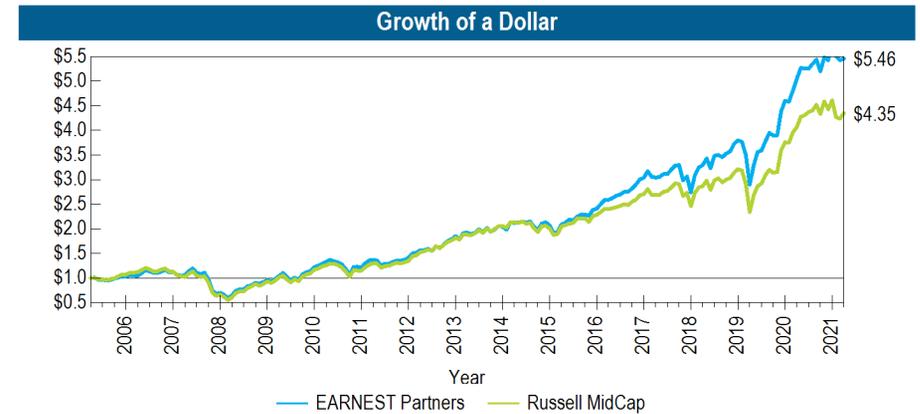
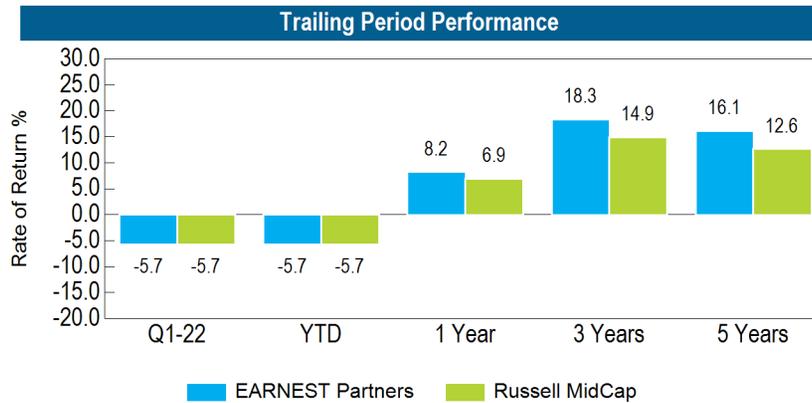


	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Northern Trust Russell 1000	14.89%	13.98%	0.00%	1.00	-0.58	0.15%	98.53%	99.84%
Russell 1000	14.97%	14.02%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

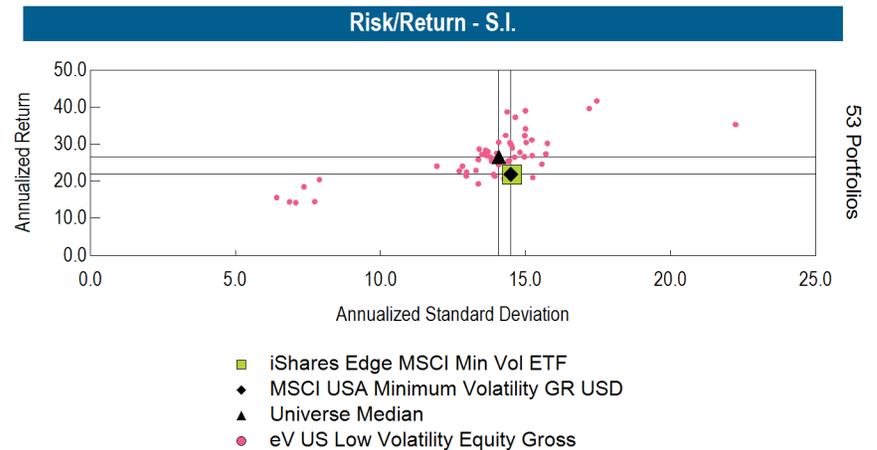
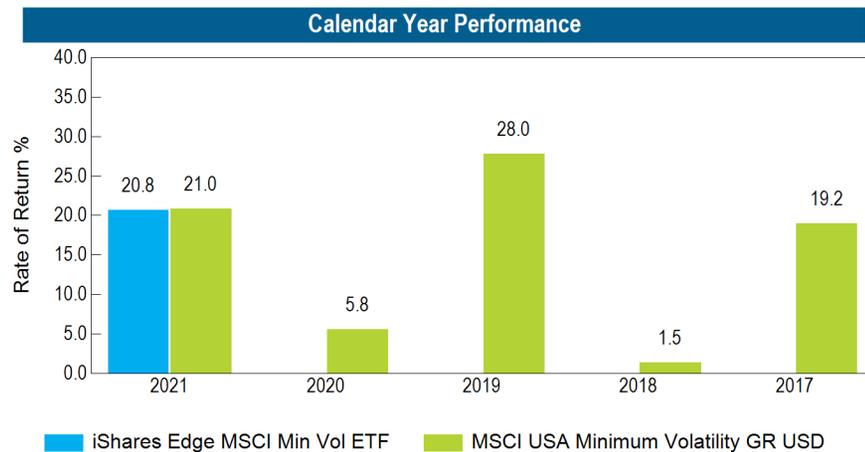
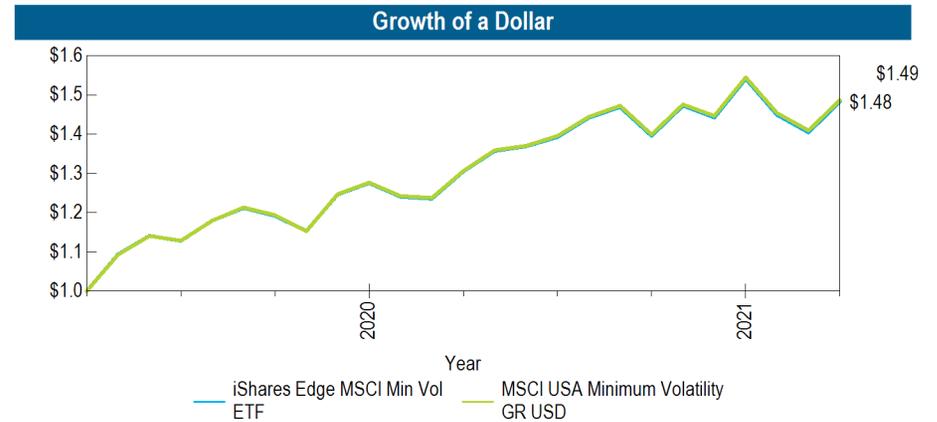
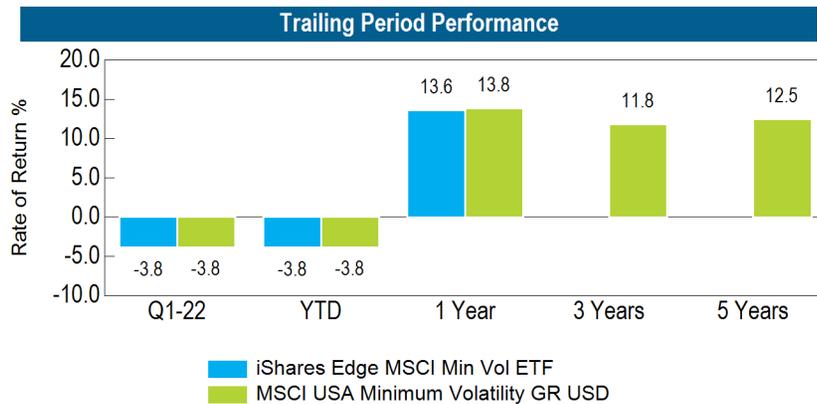
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
EARNEST Partners	10.21%	17.51%	0.06%	0.98	0.17	3.52%	92.96%	98.99%
Russell MidCap	9.62%	17.55%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

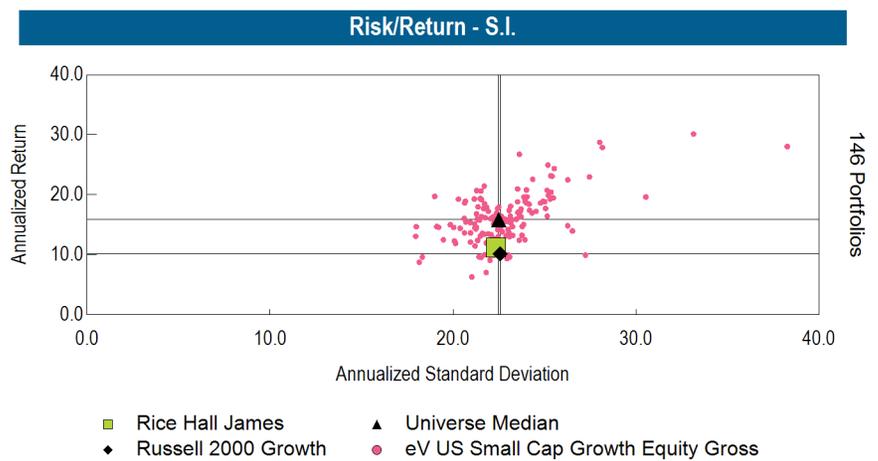
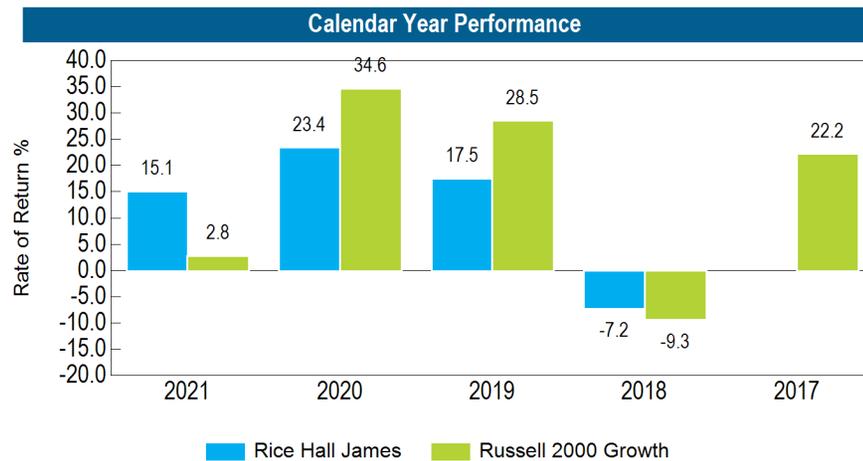
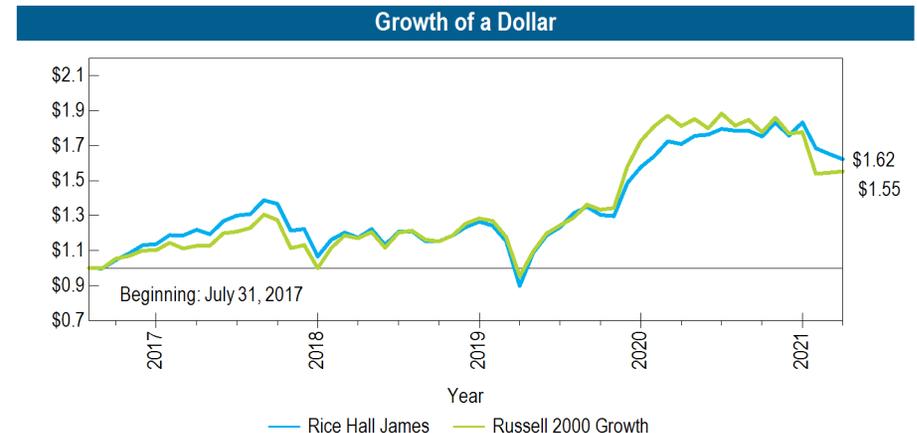
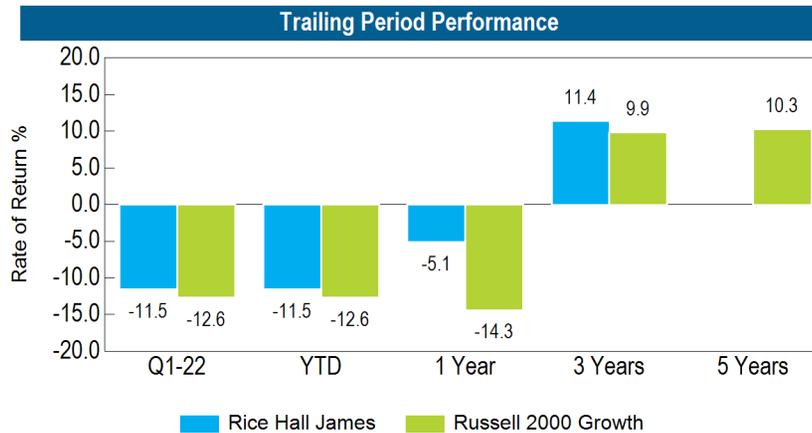
### iShares Edge MSCI Min Vol ETF | As of March 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
iShares Edge MSCI Min Vol ETF	21.77%	14.53%	-0.02%	1.00	-0.55	0.28%	99.80%	100.52%
MSCI USA Minimum Volatility GR USD	21.92%	14.49%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

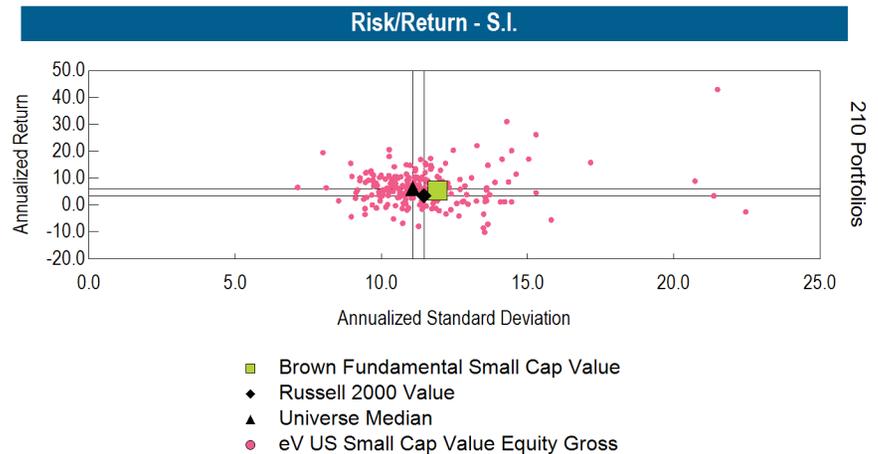
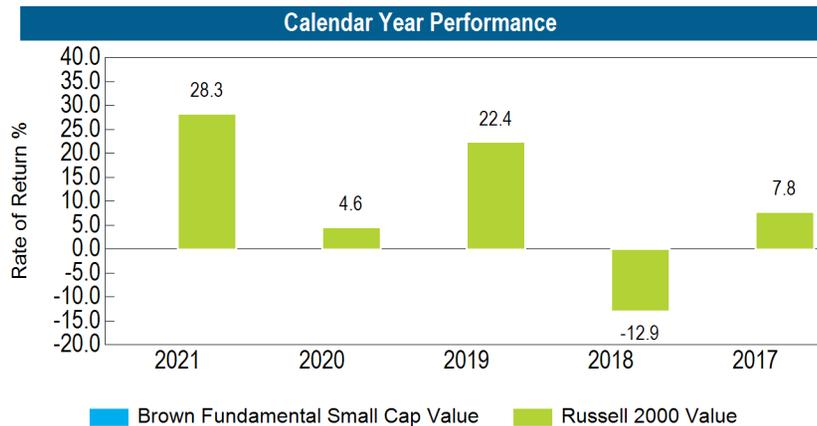
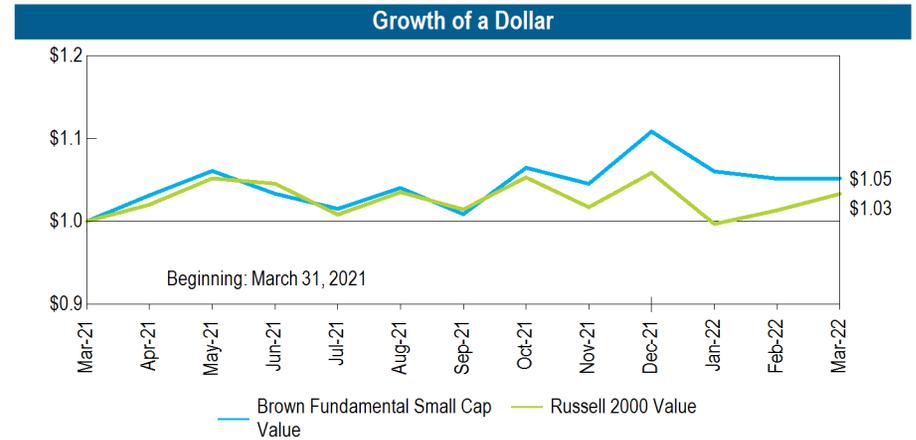
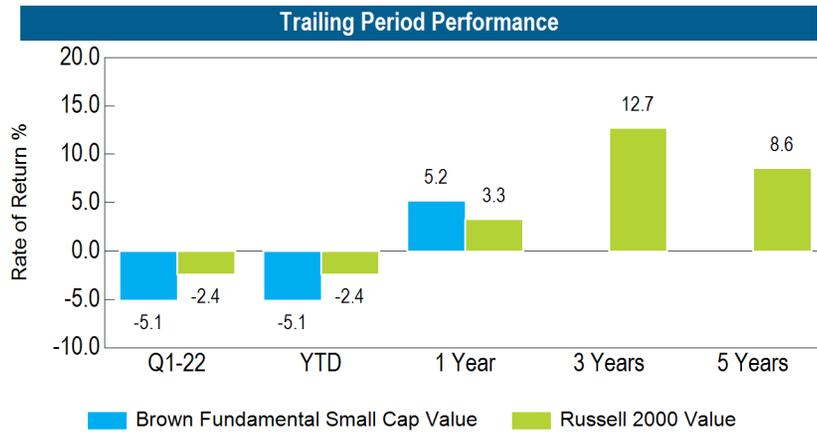
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Rice Hall James	9.82%	22.16%	0.05%	0.94	-0.01	7.25%	84.03%	93.07%
Russell 2000 Growth	9.89%	22.38%	0.00%	1.00	--	0.00%	100.00%	100.00%



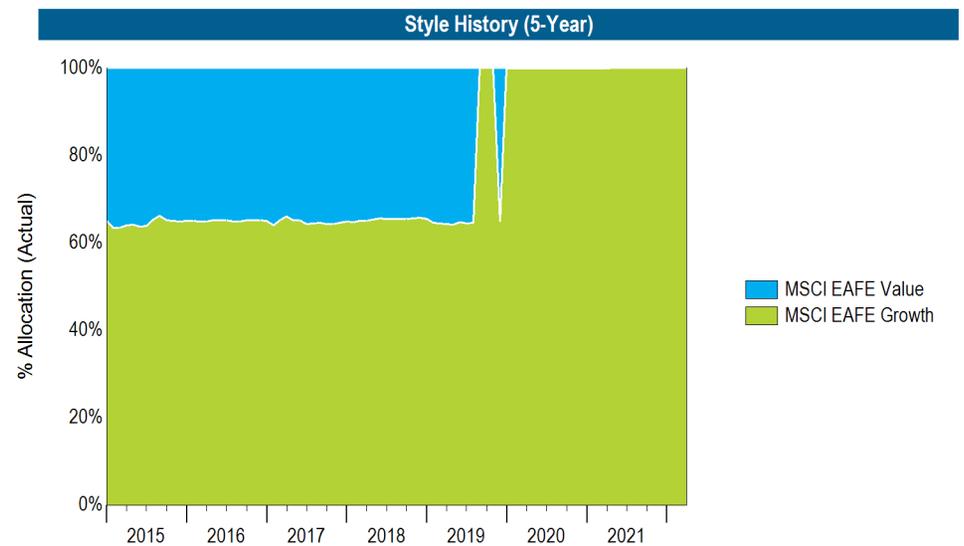
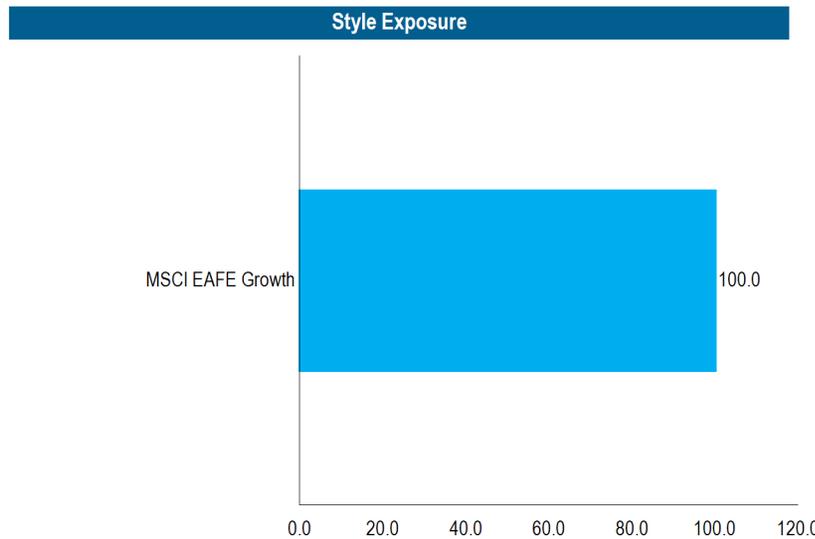
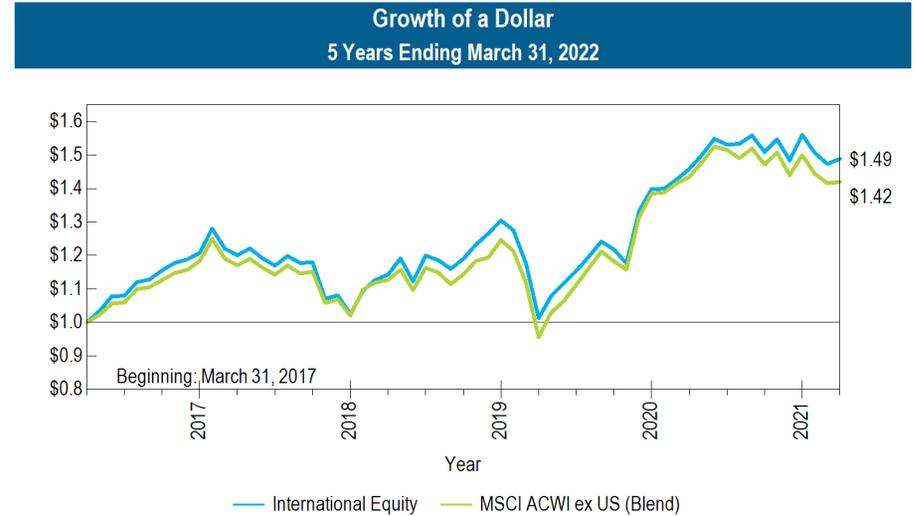
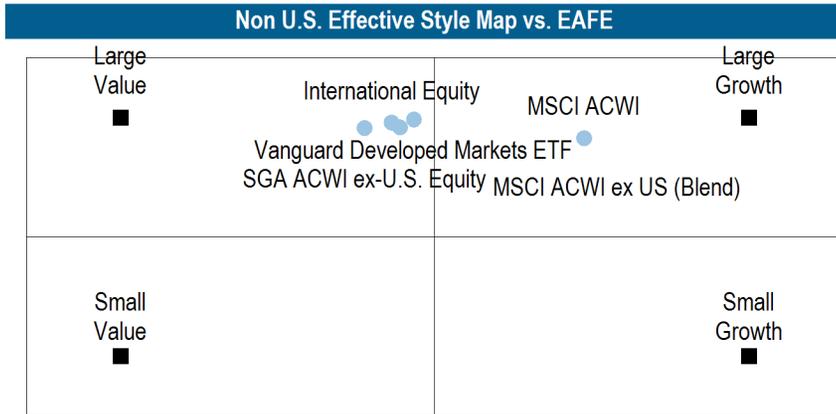
Performance shown is net-of-fees and since inception.

### Brown Fundamental Small Cap Value | As of March 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Brown Fundamental Small Cap Value	4.31%	11.92%	0.11%	0.91	0.17	5.79%	96.02%	90.27%
Russell 2000 Value	3.32%	11.45%	0.00%	1.00	--	0.00%	100.00%	100.00%

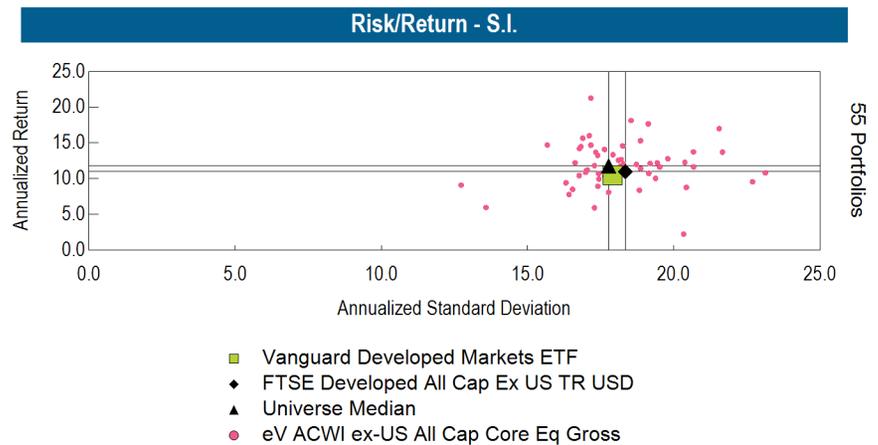
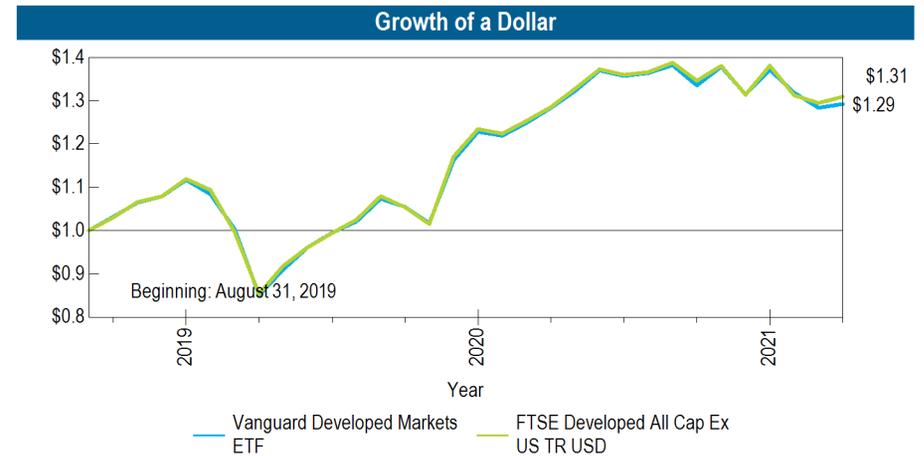
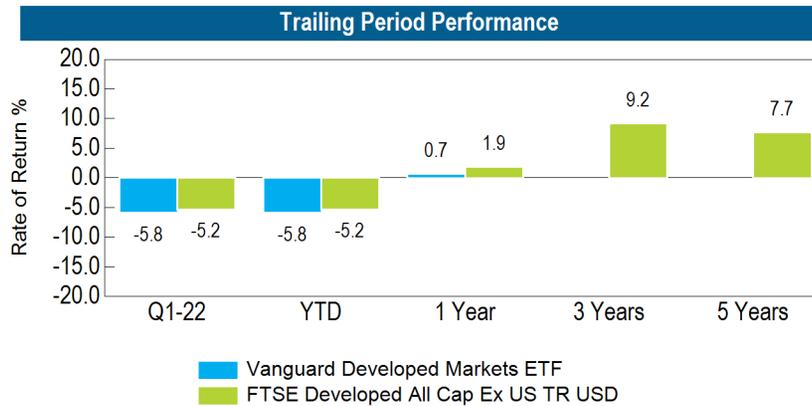


Performance shown is net-of-fees and since inception.



### Vanguard Developed Markets ETF | As of March 31, 2022

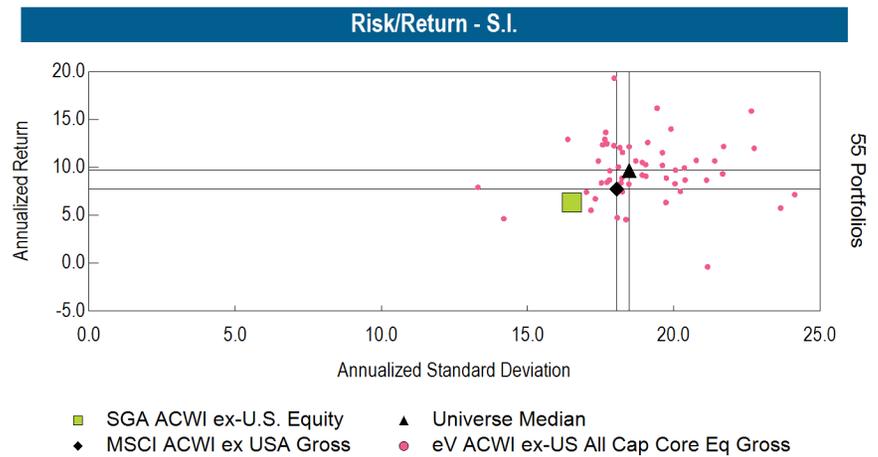
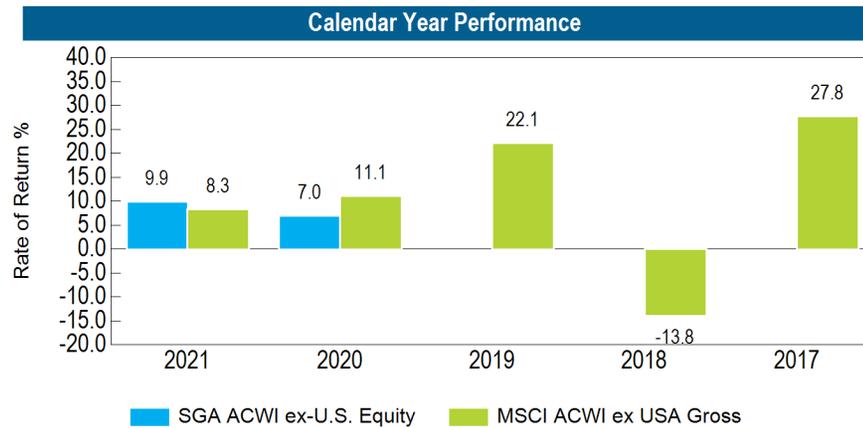
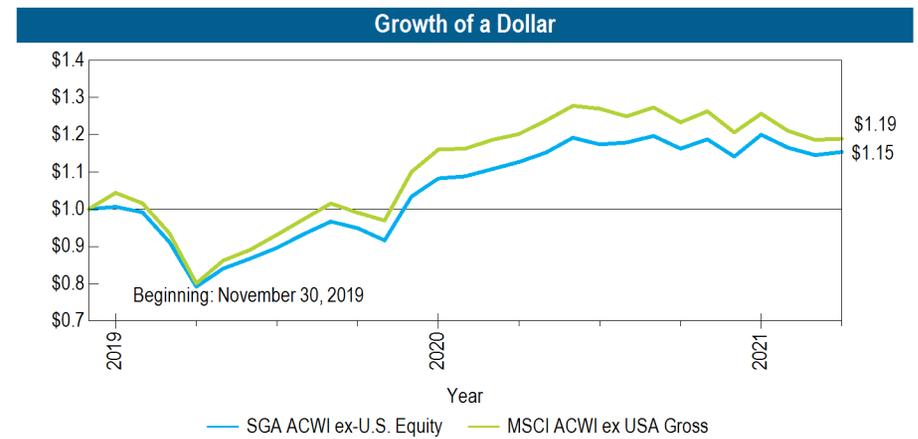
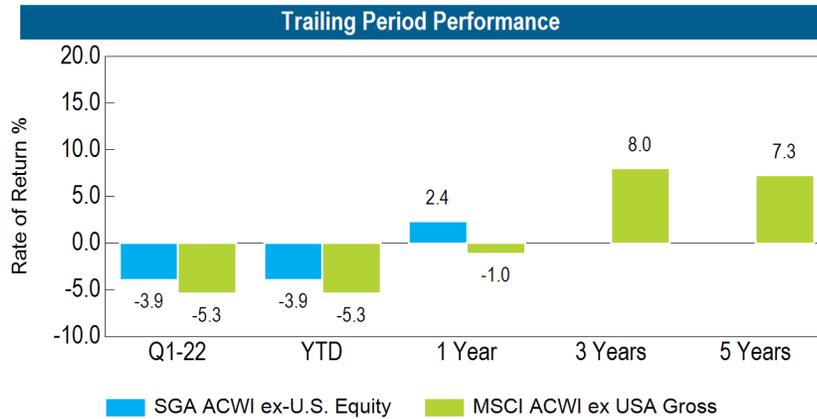
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Developed Markets ETF	10.43%	17.91%	-0.02%	0.97	-0.27	2.09%	96.79%	99.33%
FTSE Developed All Cap Ex US TR USD	10.99%	18.34%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

### SGA ACWI ex-U.S. Equity | As of March 31, 2022

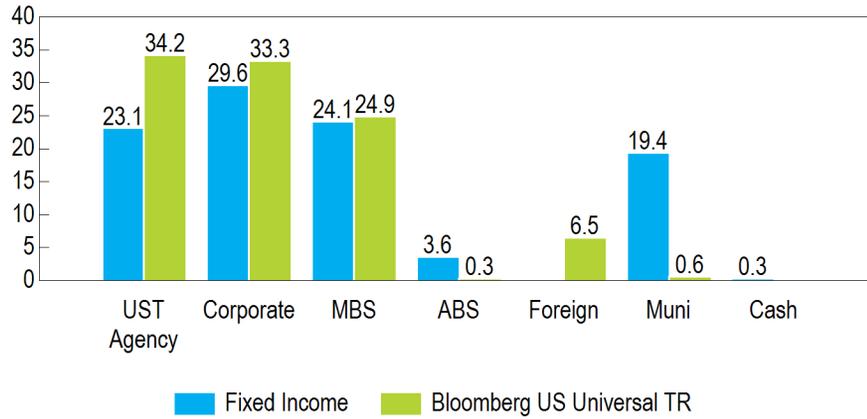
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
SGA ACWI ex-U.S. Equity	5.59%	16.47%	-0.11%	0.89	-0.55	3.80%	81.79%	92.45%
MSCI ACWI ex USA Gross	7.70%	18.04%	0.00%	1.00	--	0.00%	100.00%	100.00%



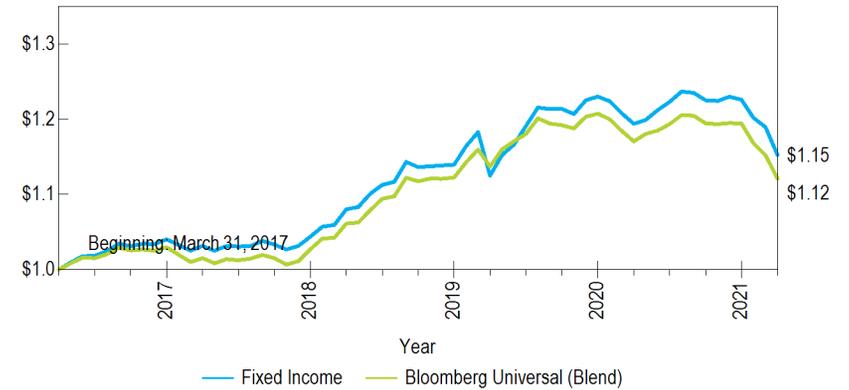
Performance shown is net-of-fees and since inception.

### Fixed Income | As of March 31, 2022

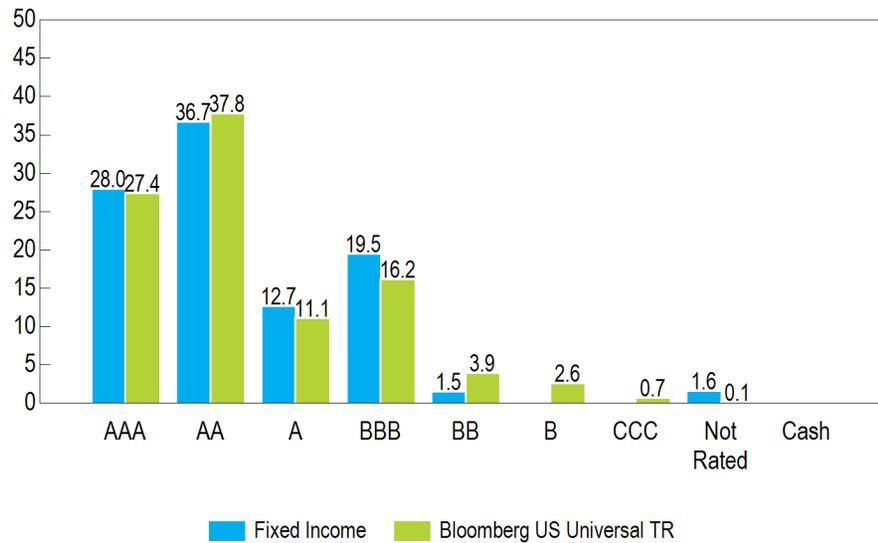
#### US Sector Allocation



#### Growth of a Dollar 5 Years Ending March 31, 2022



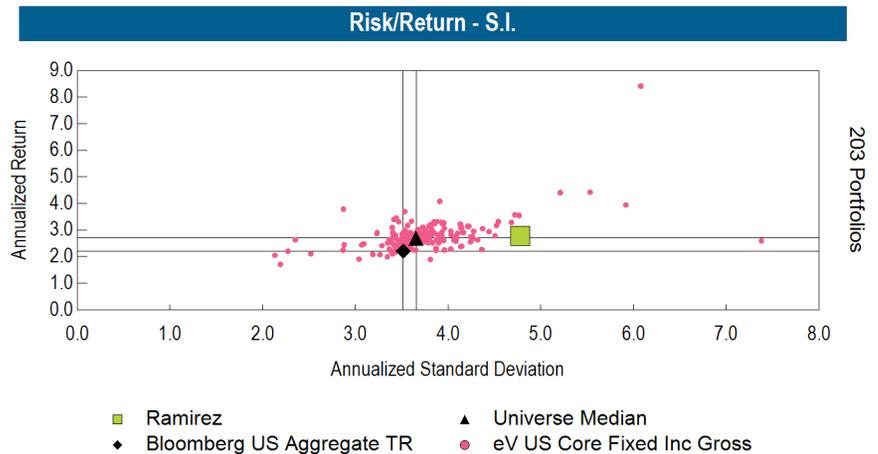
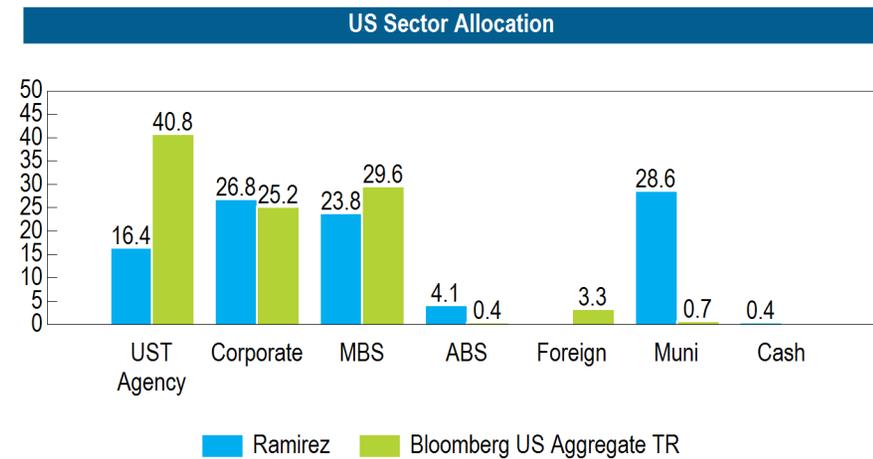
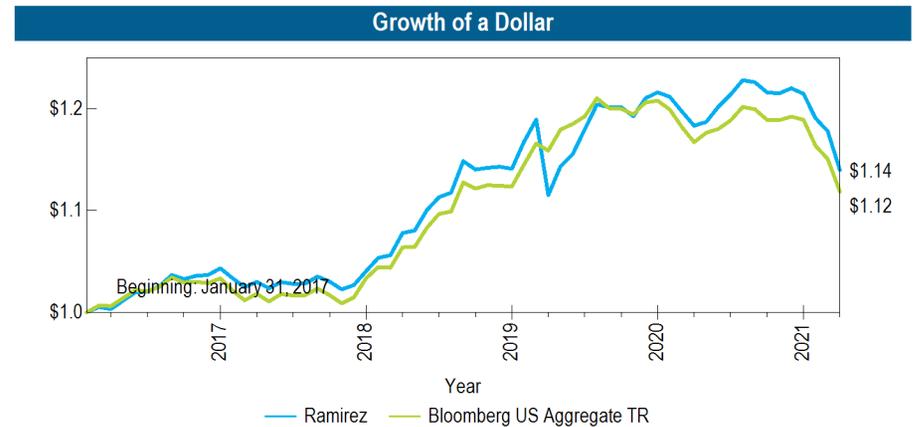
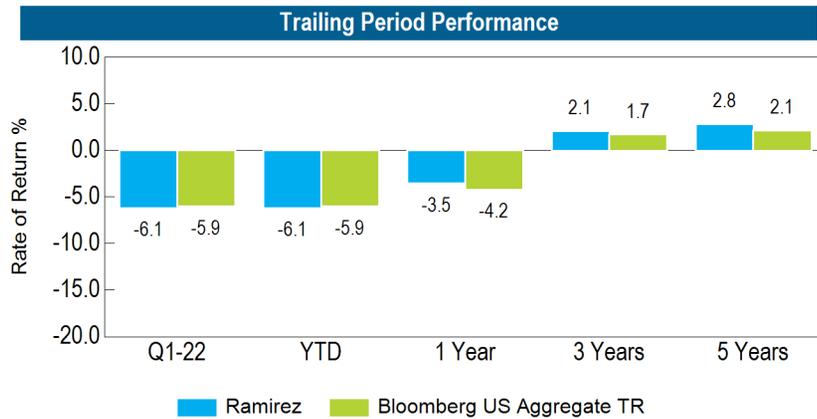
#### Credit Quality Allocation



#### Fixed Income Fixed Income Characteristics vs. Bloomberg US Universal TR

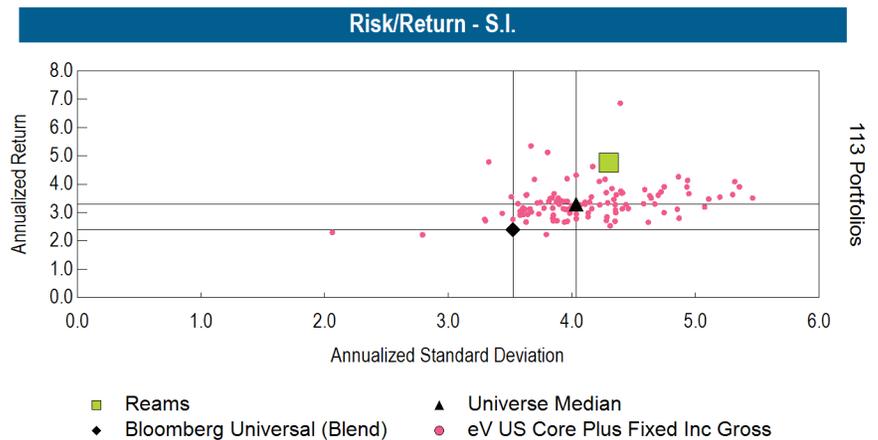
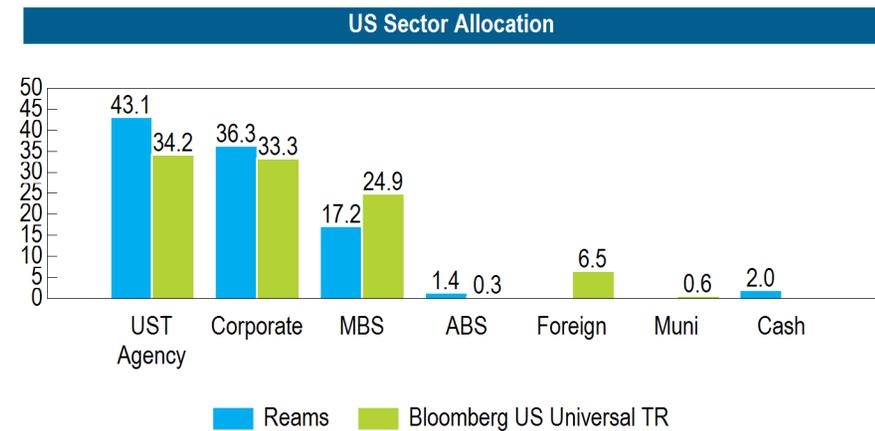
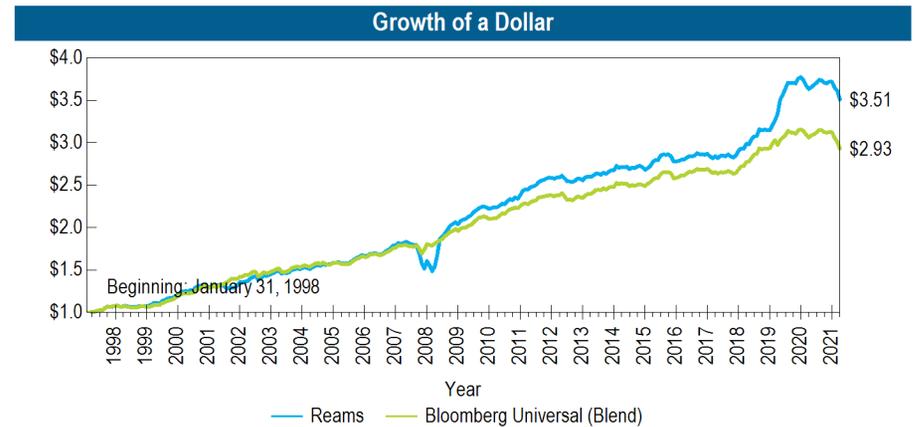
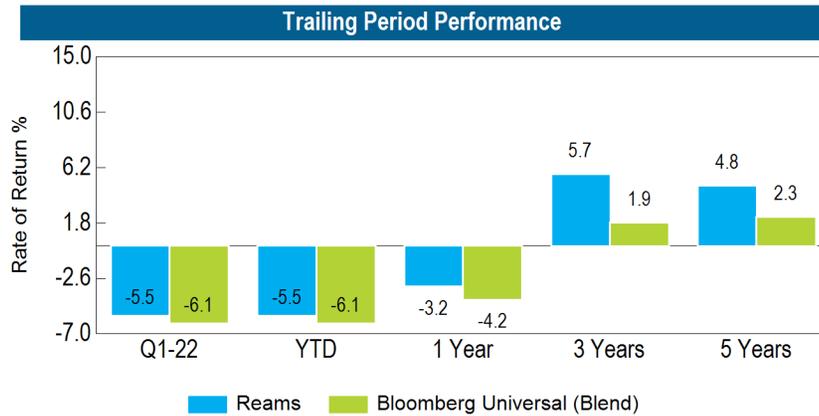
	Portfolio Q1-22	Index Q1-22
<b>Fixed Income Characteristics</b>		
Yield to Maturity	3.39	3.26
Average Duration	6.28	6.64
Average Quality	AA	AA
Weighted Average Maturity	8.95	12.70

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Ramirez	2.57%	4.78%	0.01%	1.11	0.13	2.77%	123.67%	119.37%
Bloomberg US Aggregate TR	2.20%	3.52%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

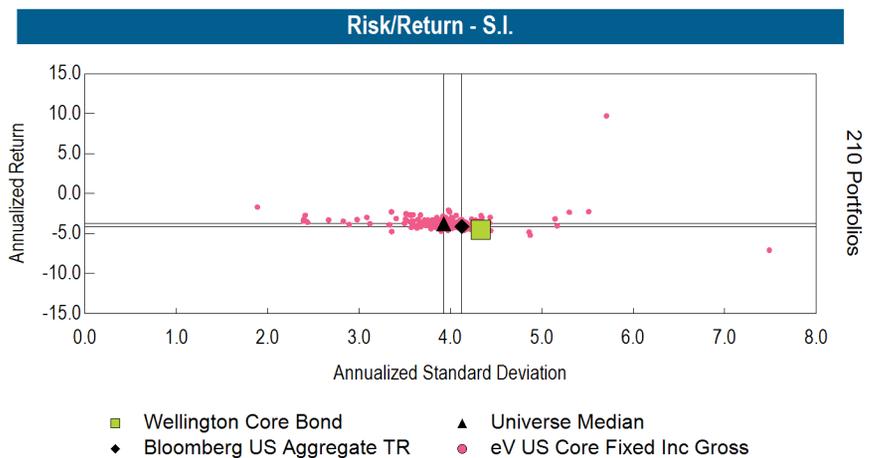
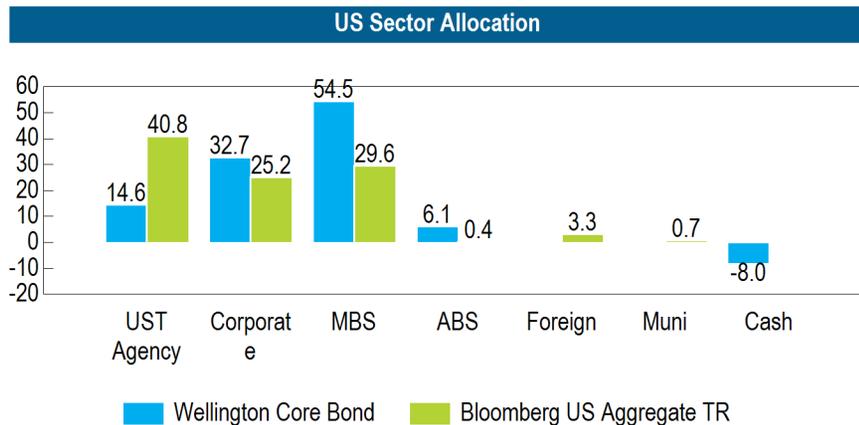
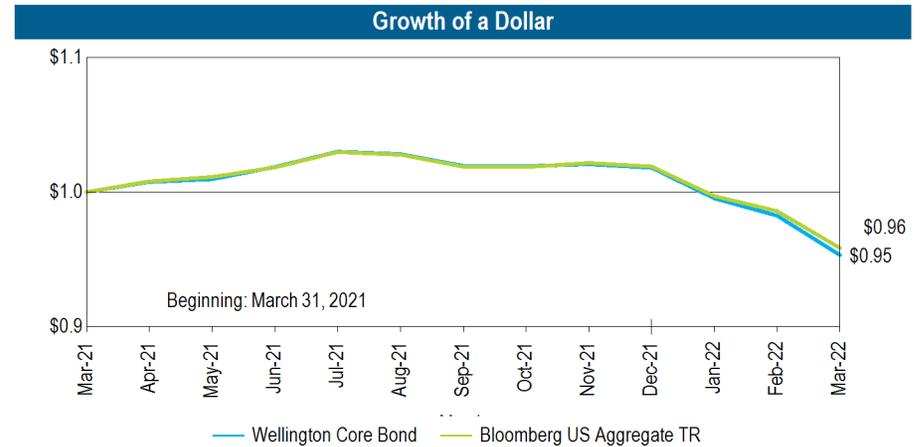
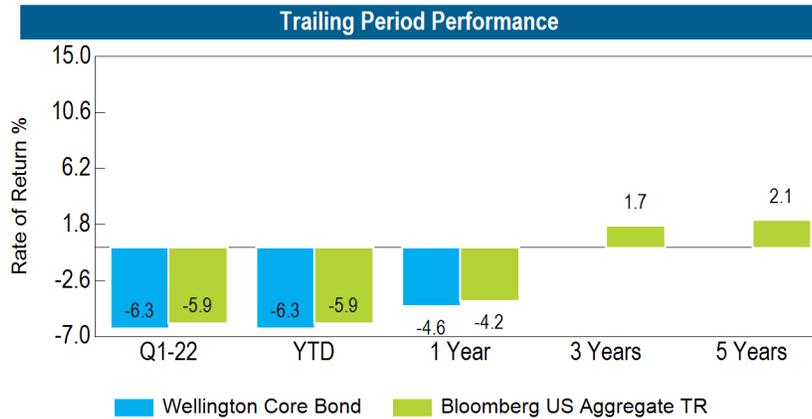
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Reams	5.33%	5.31%	0.05%	1.04	0.20	3.90%	122.26%	98.83%
Bloomberg Universal (Blend)	4.55%	3.47%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

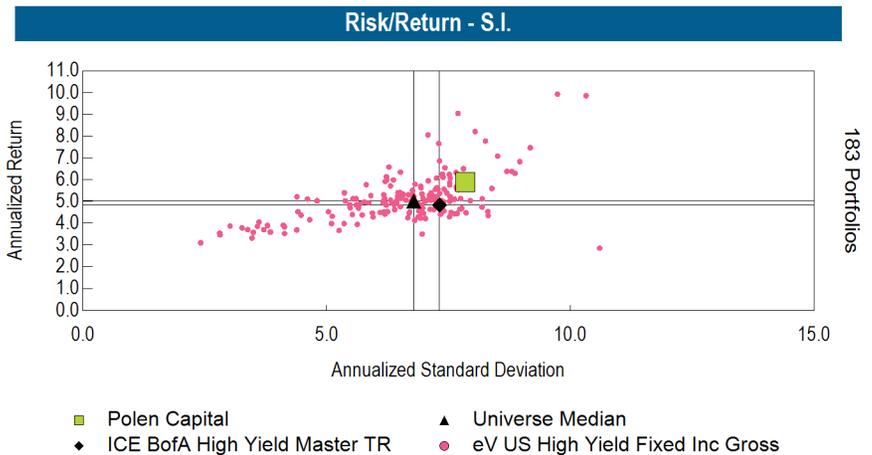
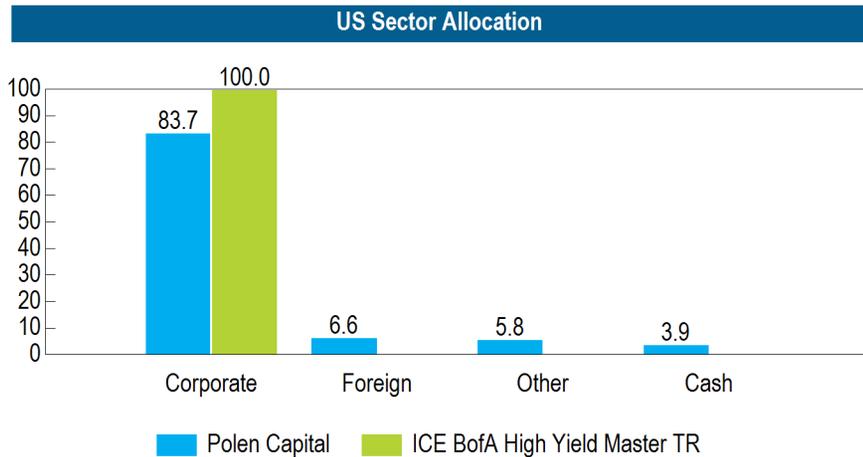
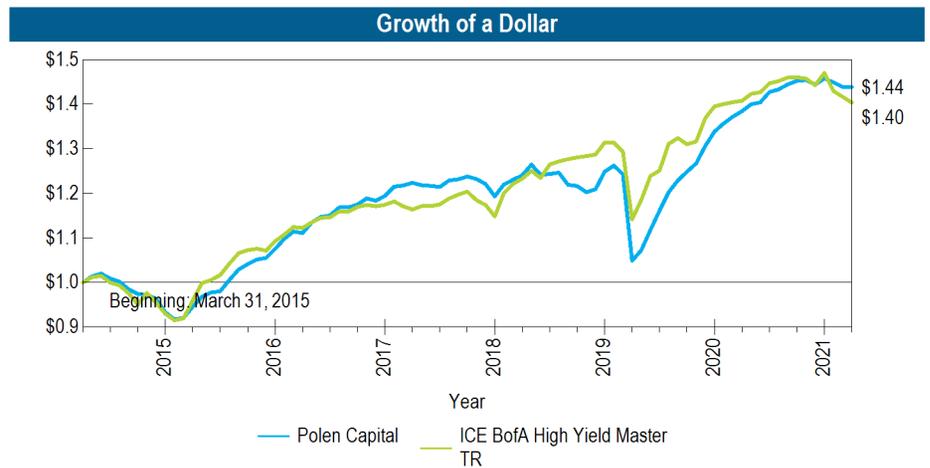
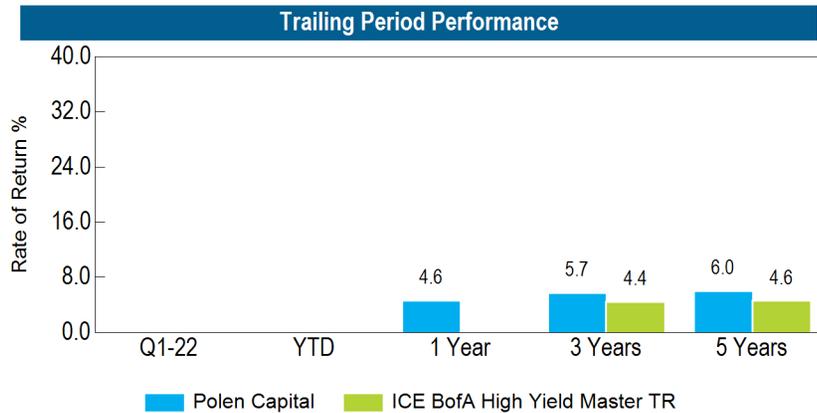
### Wellington Core Bond | As of March 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wellington Core Bond	-4.68%	4.33%	-0.03%	1.05	-1.40	0.37%	96.21%	105.51%
Bloomberg US Aggregate TR	-4.15%	4.12%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

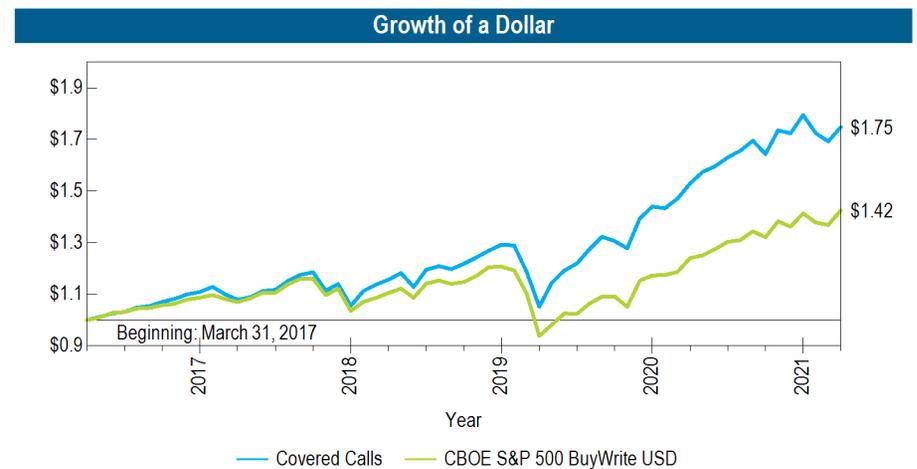
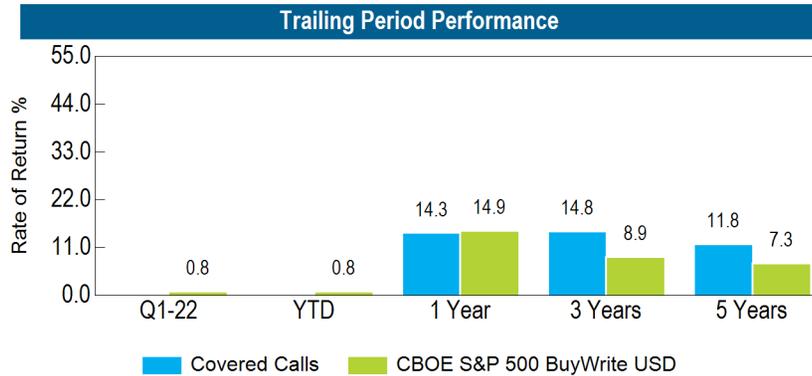
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Polen Capital	5.46%	7.82%	0.06%	0.94	0.09	3.79%	90.03%	84.58%
ICE BofA High Yield Master TR	5.11%	7.31%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

### Covered Calls | As of March 31, 2022

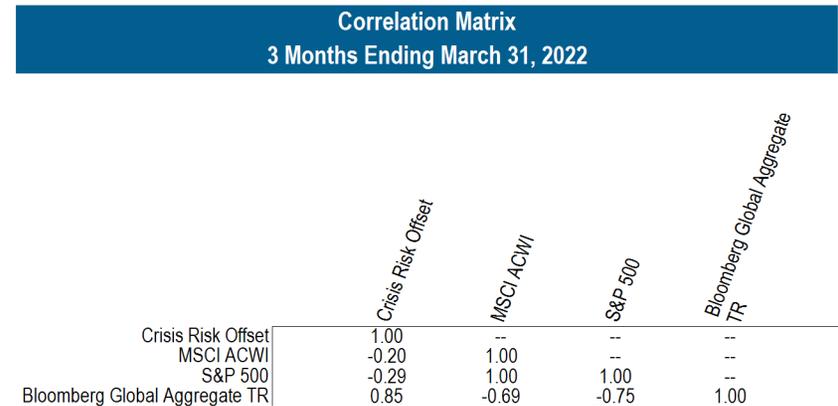
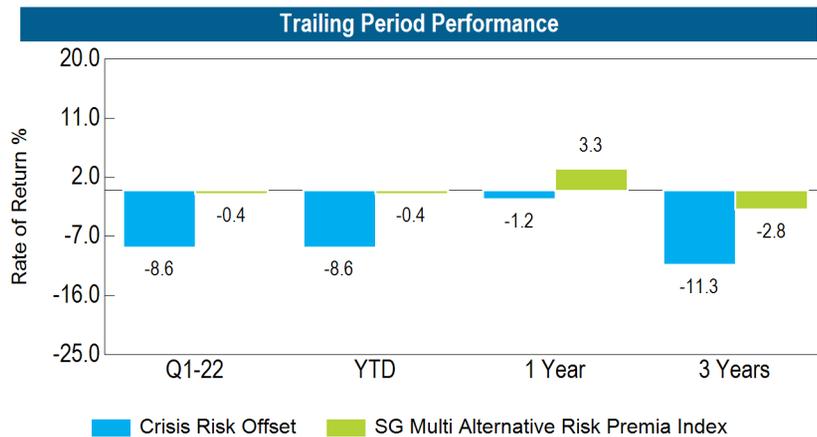
	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Covered Calls	10.12%	10.70%	0.25%	0.98	0.91	3.38%	135.87%	100.14%
CBOE S&P 500 BuyWrite USD	7.03%	10.31%	0.00%	1.00	--	0.00%	100.00%	100.00%
Parametric BXM	7.91%	8.88%	0.16%	0.83	0.30	2.93%	93.75%	88.81%
CBOE S&P 500 BuyWrite USD	7.03%	10.31%	0.00%	1.00	--	0.00%	100.00%	100.00%
Parametric DeltaShift	12.46%	12.75%	0.36%	1.13	1.01	5.40%	187.07%	108.08%
CBOE S&P 500 BuyWrite USD	7.03%	10.31%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since inception.

### Crisis Risk Offset | As of March 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Crisis Risk Offset	-11.93%	12.93%	-0.81%	0.74	-0.74	12.22%	-45.04%	101.22%
SG Multi Alternative Risk Premia Index	-2.91%	6.09%	0.00%	1.00	--	0.00%	100.00%	100.00%
Kepos Alternative Risk Premia	--	--	--	--	--	--	--	--
SG Multi Alternative Risk Premia Index	-2.91%	6.09%	0.00%	1.00	--	0.00%	100.00%	100.00%
Vanguard Long-Term Treasury ETF	0.77%	13.64%	-0.05%	1.02	-0.35	1.66%	102.47%	104.24%
Bloomberg US Govt Long TR	1.36%	13.26%	0.00%	1.00	--	0.00%	100.00%	100.00%



Performance shown is net-of-fees and since Vanguard Long-Term Treasury ETF's inception (July 2019).

### Benchmark History

As of March 31, 2022

#### OPFRS Total Plan

1/1/2019	Present	40% Russell 3000 / 12% MSCI ACWI ex USA Gross / 33% Bloomberg US Universal TR / 5% CBOE BXM / 6.7% SG Multi Alternative Risk Premia Index / 3.3% Bloomberg US Treasury Long TR
5/1/2016	12/31/2018	48% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 20% CBOE BXM
10/1/2015	4/30/2016	43% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 15% CBOE BXM / 10% CPI - All Urban Consumers (unadjusted) +3%
1/1/2014	9/30/2015	48% Russell 3000 / 12% MSCI ACWI ex USA Gross / 20% Bloomberg US Universal TR / 10% CBOE BXM / 10% CPI - All Urban Consumers (unadjusted) +3%
3/1/2013	12/31/2013	40% Russell 3000 / 10% MSCI ACWI ex USA Gross / 17% Bloomberg US Universal TR / 33% ICE BofA 3M US Treasury TR USD
8/1/2012	2/28/2013	20% Russell 3000 / 7% MSCI ACWI ex USA Gross / 18% Bloomberg US Universal TR / 55% ICE BofA 3M US Treasury TR USD
10/1/2007	7/31/2012	53% Russell 3000 / 17% MSCI ACWI ex USA Gross / 30% Bloomberg US Universal TR
4/1/2006	9/30/2007	35% Russell 3000 / 15% MSCI ACWI ex USA Gross / 50% Bloomberg US Universal TR
1/1/2005	3/31/2006	35% Russell 3000 / 15% MSCI ACWI ex USA Gross / 50% Bloomberg US Aggregate TR
4/1/1998	12/31/2004	50% Bloomberg US Aggregate TR / 10% Russell 1000 / 20% Russell 1000 Value / 5% Russell MidCap / 15% MSCI EAFE
12/1/1988	3/31/1998	40% S&P 500 / 55% Bloomberg US Aggregate TR / 5% FTSE T-Bill 3 Months TR

## **Disclaimer, Glossary, and Notes**

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.

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Sources: *Investment Terminology*, International Foundation of Employee Benefit Plans, 1999.  
*The Handbook of Fixed Income Securities*, Fabozzi, Frank J., 1991

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

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

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

OAKLAND POLICE AND FIRE RETIREMENT BOARD  
CITY OF OAKLAND, CALIFORNIA  
RESOLUTION No. 8052

*Approved to  
Form  
and Legality*  


ON MOTION OF MEMBER \_\_\_\_\_ SECONDED BY MEMBER \_\_\_\_\_

**RESOLUTION ELECTING TO CONTINUE TO CONDUCT POLICE AND FIRE RETIREMENT SYSTEM BOARD AND COMMITTEE MEETINGS USING TELECONFERENCING IN ACCORDANCE WITH CALIFORNIA GOVERNMENT CODE SECTION 54953(E).**

**WHEREAS**, on March 4, 2020, Governor Gavin Newsom declared a state of emergency related to COVID-19, pursuant to California Government Code Section 8625, and said declaration has not been lifted or rescinded, see <https://www.gov.ca.gov/wp-content/uploads/2020/03/3.4.20-Coronavirus-SOE-Proclamation.pdf>; and

**WHEREAS**, on March 9, 2020, the City Administrator, as the Director of the Emergency Operations Center (EOC), issued a proclamation of local emergency due to the spread of COVID-19 in Oakland, and on March 12, 2020, the City Council passed Resolution No. 88075 C.M.S. ratifying the proclamation of local emergency pursuant to Oakland Municipal Code (O.M.C.) section 8.50.050(C); and

**WHEREAS**, City Council Resolution No. 88075 remains in full force and effect to date; and

**WHEREAS**, the Centers for Disease Control (CDC) recommends physical distancing of at least six (6) feet whenever possible, avoiding crowds, and avoiding spaces that do not offer fresh air from the outdoors, particularly for people who are not fully vaccinated or who are at high risk of getting very sick from COVID-19, see <https://www.cdc.gov/coronavirus/2019-ncov/preventgetting-sick/prevention.html> ; and

**WHEREAS**, the CDC recommends that people who live with unvaccinated people avoid activities that make physical distancing difficult, see <https://www.cdc.gov/coronavirus/2019-ncov/your-health/about-covid-19/caring-for-children/families.html> ; and

**WHEREAS**, the CDC recommends that older adults limit in-person interactions as much as possible, particularly when indoors, see <https://www.cdc.gov/aging/covid19/covid19-older-adults.html> ; and

**OAKLAND POLICE AND FIRE RETIREMENT BOARD**

CITY OF OAKLAND, CALIFORNIA

**RESOLUTION NO. 8052**

**WHEREAS**, the CDC, the California Department of Public Health, and the Alameda County Public Health Department all recommend that people experiencing COVID-19 symptoms stay home, see <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html> ; and

**WHEREAS**, people without symptoms may be able to spread the COVID-19 virus, see <https://www.cdc.gov/coronavirus/2019-ncov/prevent-gettingsick/prevention.html> ; and

**WHEREAS**, fully vaccinated people who become infected with the COVID-19 Delta variant can spread the virus to others, see <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html> ; and

**WHEREAS**, as of December 20, 2021, the Omicron variant has been detected in most states and territories and is rapidly increasing the proportion of COVID-19 cases it is causing, see <https://www.cdc.gov/coronavirus/2019-ncov/variants/omicron-variant.html>; and

**WHEREAS**, the CDC does not yet know how easily the Omicron variant spreads, the severity of illness it causes, or how well available vaccines and medications work against it, see <https://www.cdc.gov/coronavirus/2019-ncov/variants/omicron-variant.html>; and

**WHEREAS**, the City's public-meeting facilities are indoor facilities that are not designed to provide circulation of fresh/outdoor air, particularly during periods of cold or rainy weather; and

**WHEREAS**, the City's public-meeting facilities are not designed to ensure that attendees can remain six (6) feet apart; and

**WHEREAS**, most of the members of the Police and Fire Retirement System are at higher risk of becoming very sick from COVID-19 due to their age; and

**WHEREAS**, holding in-person meetings will bring people from different households together in an indoor facility against CDC guidance; and

**WHEREAS**, some attendees may use public transportation to travel to an in-person meeting, which will expose them to additional people outside of their household and put them at further risk of contracting COVID-19; and

**OAKLAND POLICE AND FIRE RETIREMENT BOARD**

CITY OF OAKLAND, CALIFORNIA

**RESOLUTION NO. 8052**

**WHEREAS**, in light of the above, on January 26, 2022, the Police and Fire Retirement System Board (“PFRS Board”) determined that conducting in-person meetings of the PFRS Board and its committees would present imminent risk to health or safety of attendees and elected to continue to conduct PFRS Board and committee meetings using teleconferencing in accordance with California Government Code section 54953(e) (Resolution No. 8037); and

**WHEREAS**, pursuant to California Government Code section 54953(e)(3), the PFRS Board has reconsidered the circumstances of the state of emergency and determines that the state of emergency continues to directly impact the ability of the members of the PFRS Board to meet safely in person and that state and local officials continue to recommend measures to promote social distancing; now, therefore, be it:

**RESOLVED:** that the Police and Fire Retirement System Board (“PFRS Board”) finds and determines that the foregoing recitals are true and correct and hereby adopts and incorporates them into this Resolution; and be it

**FURTHER RESOLVED:** that, based on these findings, the PFRS Board determines that conducting in-person board and committee meetings continues to pose imminent risks to the health of attendees; and be it

**FURTHER RESOLVED:** that the PFRS Board firmly believes that the community’s health and safety and the community’s right to participate in local government are critically and equally important, and is committed to balancing the two by continuing to use teleconferencing to conduct public meetings, in accordance with California Government Code Section 54953(e); and be it

**FURTHER RESOLVED:** That the PFRS Board will reconsider the state of emergency and determine whether the state of emergency continues to directly impact the ability of members to meet safely in person at least every thirty (30) days in accordance with California Government Code section 54953(e) until the state of emergency related to COVID-19 has been lifted, or the PFRS Board finds

**OAKLAND POLICE AND FIRE RETIREMENT BOARD**  
CITY OF OAKLAND, CALIFORNIA  
**RESOLUTION No. 8052**

that in-person meetings no longer pose imminent risks to the health of attendees, whichever occurs first.

IN BOARD MEETING, VIA ZOOM CONFERENCE \_\_\_\_\_ MAY 25, 2022 \_\_\_\_\_

PASSED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST: \_\_\_\_\_  
PRESIDENT

ATTEST: \_\_\_\_\_  
SECRETARY

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM BOARD  
CITY OF OAKLAND, CALIFORNIA  
RESOLUTION No. 8053

*Approved to Form  
and Legality*



Nitesh Bhakta

ON MOTION OF MEMBER \_\_\_\_\_ SECONDED BY MEMBER \_\_\_\_\_

**RESOLUTION OF APPRECIATION TO CAROL  
KOLENDA FOR EIGHTEEN YEARS OF  
SERVICE AS BENEFITS REPRESENTATIVE TO  
THE OAKLAND POLICE AND FIRE  
RETIREMENT SYSTEM BOARD**

**WHEREAS**, Carol Kolenda served as Benefits Representative to the Oakland Police and Fire Retirement System (“PFRS”) Board from October 1, 2003 to May 5, 2022 pursuant to section 2601(b) and 2601(e) of the Oakland City Charter; and

**WHEREAS**, Carol Kolenda has provided unwavering support to retired members and beneficiaries of the Oakland Police & Fire Retirement System with continuous professionalism, compassion, and dedication; and

**WHEREAS**, during her time as Benefits Representative to the PFRS Board, Carol Kolenda proved to be an invaluable asset to PFRS members and beneficiaries. She worked tirelessly to provide accurate and timely monthly pension payments; and

**WHEREAS**, she selflessly and consistently went out of her way to provide retirees with excellent customer service and took extra care to assist retirees complete complex paperwork;

**WHEREAS**, she assisted numerous members and beneficiaries with enrollment and changes to critical retiree medical benefits;

**WHEREAS**, during her tenure, Carol Kolenda coordinated quarterly retirement workshops for active employees, and worked closely with various retirement vendors, consultants and Police and Fire union organizations and the PFRS Board;

**WHEREAS**, in addition to her work with retirees and beneficiaries, she assisted in numerous PFRS reports, audits and annual reports, annual member verification projects, and provided regular updates to member files and records;

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM BOARD**

CITY OF OAKLAND, CALIFORNIA

**RESOLUTION No. 8053**

**WHEREAS**, Carol Kolenda proved to be an invaluable asset providing assistance to countless PFRS family members during the passing of PFRS members, reconciliation of PFRS Member accounts, and processing accurate and timely payouts of death benefits and member beneficiary payments; and

**WHEREAS**, Carol Kolenda's professionalism, judgment, dedication, exemplary customer service, and discretion were commendable; and

**WHEREAS**, as of May 5, 2022, Carol Kolenda completed her service to the PFRS Board in order to enjoy a well-deserved retirement; therefore, be it;

**RESOLVED:** that the PFRS Board hereby recognizes Carol Kolenda for her eighteen years of service as Benefits Representative to the Oakland Police and Fire Retirement Board and expresses its sincere appreciation for her dedication and valuable contributions in that role; and be it

**FURTHER RESOLVED:** That the members of the Oakland Police and Fire Retirement System Board express their sincere best wishes to Carol Kolenda for a healthy and rewarding retirement.

IN BOARD MEETING, VIA ZOOM CONFERENCE MAY 25, 2022

PASSED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:

ATTEST: \_\_\_\_\_  
PRESIDENT

ATTEST: \_\_\_\_\_  
SECRETARY