

## EAST BAY MUNICIPAL UTILITY DISTRICT

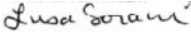
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DATE: March 18, 2021

MEMO TO: Members of the Retirement Board



THROUGH: Laura Acosta, Manager of Human Resources

FROM: Lisa Sorani, Manager of Employee Services 

SUBJECT: Retirement Board Regular Meeting – 3/18/2021

A regular meeting of the Retirement Board will convene at 8:30 a.m. on Thursday, March 18, 2021. This meeting will be conducted via video and teleconference only. Public participation is available by live audio stream <https://www.ebmud.com/about-us/board-directors/board-meetings/retirement-board-meetings/>; however, listeners will not be able to provide public comment via live audio stream. To participate in the meeting or provide public comment, please see the Appendix of the Agenda for instructions on joining the Zoom meeting online or by phone.

Enclosed are the agenda for the March 18, 2021 meeting and the minutes for the January 21, 2021 regular meeting. The package also includes the following: **(1) CONSENT** items: Approval of Minutes – Regular meeting of January 21, 2021, Ratifying and Approving Investment Transactions by Retirement Fund Managers for December 2020 and January 2021, Ratifying and Approving Short-Term Investment Transactions for December 2020 and January 2021, Approving Treasurer's Statement of Receipts and Disbursements for December 2020 and January 2021; **(2) ACTION** items: Determine the Annual Retiree Cost of Living Adjustment (COLA) to be effective July 1, 2021, Approve Changes to Retirement Board Rule No. C-4 Health Insurance Benefit; **(3) INFORMATION:** Performance Report and Economic Review (Meketa Investment Group), Annual Environmental, Social and Governance (ESG) Survey of Investment Managers, Environmental, Social and Governance (ESG) Annual Update and Potential Next Steps, National Association of State Retirement Administrators (NASRA) Report on Funding Status Metrics, Low Income Adjustment, Review of Ordinance Guidelines, Update on 2021 Retirement Board Election, Update on the Human Resources Information System (HRIS) Replacement Project; **(4) REPORTS FROM THE RETIREMENT BOARD.**

LS:jm

Enclosures

## **AGENDA**

### **EBMUD EMPLOYEES' RETIREMENT SYSTEM**

**March 18, 2021**

Due to COVID-19 and in accordance with Alameda County's Health Order 20-04 (issued March 31, 2020), and with the Governor's Executive Order N-29-20 which suspends portions of the Brown Act, **this meeting will be conducted via video and teleconference only.** In compliance with said orders, a physical location will not be provided for this meeting. These measures will only apply during the period in which state or local public health officials have imposed or recommended social distancing.

*Retirement Board Members: Clifford Chan, Frank Mellon, Marguerite Young, Doug Higashi (President), Tim McGowan, and Elizabeth Grassetti will participate via teleconference*

*Staff to the Retirement Board: Laura Acosta, Sophia Skoda, Lourdes Matthew, Lisa Sorani, Valerie Weekly, Robert Hannay, Damien Charléty, and Karyn Field will participate via teleconference*

*Consultants &Presenters: Meketa - Eric White, Sarah Bernstein, Eric Larsen (will participate via teleconference)*

#### **\*\*Public Participation\*\***

**Please see Appendix at end of Agenda for Public Participation Details**

#### **ROLL CALL:**

**PUBLIC COMMENT:** The Retirement Board is limited by State Law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

#### **CONSENT CALENDAR:**

1. Approval of Minutes of the Retirement Board – Regular meeting of January 21, 2021
2. Ratifying and Approving Investment Transactions by Retirement Fund Managers for December 2020 and January 2021 (R.B. Resolution No. 6928)
3. Ratifying and Approving Short-Term Investment Transactions for December 2020 and January 2021 (R.B. Resolution No. 6929)
4. Approving Treasurer's Statement of Receipts and Disbursements for December 2020 and January 2021

#### **ACTION:**

5. Determine the Annual Retiree Cost of Living Adjustment (COLA) to be effective July 1, 2021 (R.B. Resolution No. 6930) – L. Sorani
6. Approve Changes to Retirement Board Rule No. C-4 Health Insurance Benefit (R.B Resolution No. 6931) – L. Sorani

### **INFORMATION:**

7. Performance Report and Economic Review (Meketa Investment Group) – S. Skoda
8. Annual Environmental, Social and Governance (ESG) Survey of Investment Managers – S. Skoda
9. Environmental, Social and Governance (ESG) Annual Update and Potential Next Steps – S. Skoda
10. National Association of State Retirement Administrators (NASRA) Report on Funding Status Metrics – S. Skoda
11. Low Income Adjustment, Review of Ordinance Guidelines – L. Sorani
12. Update on 2021 Retirement Board Election – L. Sorani
13. Update on the Human Resources Information System (HRIS) Replacement Project – L. Sorani

### **REPORTS FROM THE RETIREMENT BOARD:**

14. Brief report on any course, workshop, or conference attended since the last Retirement Board Meeting

### **ITEMS TO BE CALENDARED:**

- International Equity Review
- Results of Retirement Board Employee Representative Election

### **MEETING ADJOURNMENT:**

**The next regular meeting of the Retirement Board will be held at 8:30 a.m. on Thursday, May 20, 2021.**

### **2021 Retirement Board Meetings**

January 21, 2021  
March 18, 2021  
May 20, 2021  
July 15, 2021  
September 16, 2021  
November 18, 2021

## **APPENDIX**

Retirement Board Meeting  
**Thursday, March 18, 2021**  
8:30 a.m.

EBMUD public Retirement Board meeting will be conducted via Zoom.  
Please note that Retirement Board meetings are recorded, live-streamed, and posted on the District's website.

To **OBSERVE** the Retirement Board Meeting, without making public comment, please visit:  
<https://www.ebmud.com/about-us/board-directors/board-meetings/retirement-board-meetings/>

If you wish to join the meeting, or to make public comment, please visit this page beforehand to familiarize yourself with Zoom.

<http://support.zoom.us/hc/en-us/articles/201362193-Joining-a-Meeting>

### **8:30 a.m. Retirement Board Meeting**

When: Mar 18, 2021 08:30 AM Pacific Time (US and Canada)  
Topic: 3/18/2021 Retirement Board Meeting

Please click the link below to join the webinar:

<https://ebmud.zoom.us/j/91973512497?pwd=amtrU3lvVUhqdjlzUkhwa01EMnpxMQT09>

**Passcode: 538547**

**Or iPhone one-tap :**

US: +16699006833,,91973512497# or +13462487799,,91973512497#

**Or Telephone:**

Dial (for higher quality, dial a number based on your current location):

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

Webinar ID: 919 7351 2497

International numbers available: <https://ebmud.zoom.us/u/axHW2gubX>

### **Providing Public Comment**

The EBMUD Retirement Board is limited by State Law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

#### **If you wish to provide public comment please:**

- Use the raise hand feature in Zoom to indicate you wish to make a public comment  
<https://support.zoom.us/hc/en-us/articles/20055661-Raising-your-hand-in-a-webinar>
  - If you participate by phone, press \*9 to raise your hand
- When prompted by the Asst. Secretary, please state your name, affiliation if applicable, and topic
- The Assistant Secretary will call each speaker in the order received
- Comments on non-agenda items will be heard at the beginning of the meeting
- Comments on agenda items will be heard when the item is up for consideration
- Each Speaker is allotted 3 minutes to speak; The Retirement Board President has the discretion to amend this time based on the number of speakers
- The Assistant Secretary will keep track of time and inform each speaker when time is up.

## **MINUTES OF THE RETIREMENT BOARD**

### **January 21, 2021**

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A regular meeting of the Retirement Board convened on Thursday, January 21, 2021 at 8:37 a.m. The meeting was called to order by President Doug Higashi.

Due to COVID-19 and in accordance with Alameda County's Health Order 20-04 (issued March 31, 2020), and with the Governor's Executive Order N-29-20 which suspends portions of the Brown Act, **this meeting was conducted via teleconference only**. In compliance with said orders, a physical location was not provided for this meeting. These measures will only apply during the period in which state or local public health officials have imposed or recommended social distancing.

**Roll Call** – The following Retirement Board Members were present: Clifford Chan, Frank Mellon, Marguerite Young, Douglas Higashi, Timothy McGowan, and Elizabeth Grassetti.

The following staff members were present: Laura Acosta, Sophia Skoda, Lourdes Matthew, Lisa Sorani, Robert Hannay, Damien Charléty, and Valerie Weekly.

### **PUBLIC COMMENT**

Eric Larsen, President Local 444, would like to comment on item 5 after the presentation is completed.

Jae Park from Local 2019 informed that George McQuary who was the Second Representative for Local 2019 is stepping down and Max Fefer will be taking his place.

Meeting was adjourned at 8:42 for closed session.

### **CLOSED SESSION**

1. Closed session was held pursuant to Government Code Section 54956.9(d)(2):
  - a. One matter

Retirement Board meeting reconvened at 9:18 a.m.

**Roll Call** – The following Retirement Board Members were present: Clifford Chan, Frank Mellon, Marguerite Young, Douglas Higashi, Timothy McGowan, and Elizabeth Grassetti.

### **PUBLIC COMMENT**

No additional public comment.

### **CONSENT CALENDAR**

**1-4. Consent Calendar** – Elizabeth Grassetti had a comment on item 1. In the 11/19/20 minutes under item 8 the minutes should read “The number of active and vested members.” Lisa Sorani will make the adjustment to the minutes. A motion to move the consent calendar with the

update to the minutes was made by Frank Mellon and seconded by Marguerite Young. The motion carried (5-0) by the following voice vote: AYES (Chan, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (none).

## **ACTION**

**5. Adopt Annual Actuarial Valuations and Review of Pension Plan and Health Insurance Benefit Plan of the Retirement System as of June 30, 2020** – Robert Hannay provided a brief overview of the actuarial reports. Notable items include: a significant increase in the actuarially-determined contribution rates due to the changes in assumptions adopted as a result of the most recent experience study; and an increase in the employee contribution in the 2013 tier. This increase is a consequence of the State law which triggers a recalculation of the employee contribution rate for the 2013 tier if the normal cost increases by more than 1% from the original PEPRA Valuation Normal Cost. Andy Yeung and Dirk Adamsen of Segal presented the actuarial report for the Pension and Health Insurance Benefit (HIB) Plans. The number of active members has increased by about 3%, with about 60% of the members still in the legacy plan. Plan assets increased 1.3% to \$1.858 billion on a market value basis for the year ending June 30, 2020. The funded ratio for the Pension Plan decreased to 73.7%, and in combination with the Health Insurance Benefit (HIB) Plan was 71.9% with a \$747.17 million unfunded actuarial accrued liability (UAAL). The actuarially-determined contribution rates were up 3.98% for the 1955/1980 Plan and up 1.68% for the 2013 Plan. Staff recommends adopting the rates in the Actuarial Valuations Report. The recommended employer and member rates, as compared with the adopted rates for FY21, are shown below.

<b>Actuarially Determined Contribution Rates</b>				
	<b>FY22</b>		<b>FY21 (Adopted)</b>	
<b>Employer</b>	<b>1955/1980 Plan</b>	<b>2013 Plan</b>	<b>1955/1980 Plan</b>	<b>2013 Plan</b>
Pension	42.37%	33.32%	37.86%	31.24%
HIB	4.79%	4.52%	5.32%	4.92%
<b>Total</b>	<b>47.16%</b>	<b>37.84%</b>	<b>43.18%</b>	<b>36.16%</b>
<b>Member</b>				
Pension	8.66%	9.41%	8.66%	8.75%
HIB	0.09%	0.09%	0.09%	0.09%
<b>Total</b>	<b>8.75%</b>	<b>9.50%</b>	<b>8.75%</b>	<b>8.84%</b>

Eric Larsen from Local 444 provided public comment regarding the mortality rate tables. Under the old mortality rates table there would have been 374 expected deaths when there were actually 385 deaths, and under the new tables the expected deaths would be 358. Local 444 had hoped to recommend taking a gradual approach to using the new mortality rates tables.

Doug Higashi made the motion to adopt the recommend rates as determined by the actuary for FY22 and Frank Mellon seconded the motion. The motion carried (5-0) by the following voice vote: AYES (Chan, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (none).

**6. Declaring the Interest Rate on Member Contributions for the Period Ending June 30, 2020 (R.B. Resolution No. 6927)** – Lisa Sorani presented this item. The purpose is to declare the rate of interest for the preceding six months on member contributions. The rate to be credited is 3.35% effective December 31, 2020 on balances as of June 30, 2020. The rate is determined by comparing the actuarially-assumed rate of return and the five-year average actual rate of return, taking the lower of the two rates and apportioning half of that percentage for the preceding six-month period. Doug Higashi made the motion to adopt Resolution 6927 with the following edits to the Resolution: the actuarial rate of return in the second paragraph should be seven percent, the rate credited to members accounts in the third paragraph should be 3.35%, and the effective date of December 31, 2020 on balances as of June 30, 2020. Tim McGowan seconded the motion, and the motion carried (5-0) by the following voice vote: AYES (Chan, Mellon, Young, Higashi, McGowan), NOES (none), ABSTAIN (none), ABSENT (None).

**7. Resolve Watch Status from Fisher Investments** – Sophia Skoda presented this item. Fisher Investments (Fisher) was placed on Watch Status on November 21, 2019. Eric White from Meketa provided additional information on Fisher's Watch Status. Options included terminating Fisher, removing the Watch Status, and evaluating the role of active management in the international equity portion of the portfolio or a combination thereof. The Retirement Board chose to deal with the situation in two steps: first to remove Fisher from Watch Status and then to proceed to a holistic review of the international equity portfolio. Doug Higashi made motion to remove Fisher from Watch Status. Marguerite Young seconded the motion, and the motion carried (4-0) by the following voice vote: AYES (Chan, Mellon, Young, Higashi), NOES (none), ABSTAIN (McGowan), ABSENT (None).

**8. Resolve Watch Status for CS McKee** – Sophia Skoda presented this item. CS McKee was placed on Watch Status following organizational changes at the firm including a sale in 2020. CS McKee is a fixed-income manager representing 10% of the portfolio. Staff and Meketa recommend removing CS McKee from Watch Status. Doug Higashi made the motion to adopt staff's recommendation. Frank Mellon seconded the motion. The motion carried (5-0) by the following voice vote: AYES (Chan, Mellon, Young, Higashi, McGowan), NOES (none), ABSTAIN (none), ABSENT (None).

## **INFORMATION**

**9. Performance Report & Economic Recovery** – Eric White from Meketa presented this item and reviewed the 2020 third quarter performance report. On a one-year basis, the portfolio increased by \$121 million, and for the third quarter the plan increased by \$95 million. Since then, markets have continued to do well. Over the past 20 years the overall growth of the plan is 6.6%. The portfolio continues to have a strong performance relative to peers.

**10. Meketa Contract Option** – Sophia Skoda presented this item. The agreement with Meketa is set to expire on March 31, 2021. The latest agreement included three one-year options to renew. Staff intends to exercise the first of the three one-year options extending the agreement with Meketa to March 31, 2022.

- 11. Annual Retirement Board Training Report and Ethic Training Update** – Lisa Sorani presented this item. This is an annual report that is brought to the Retirement Board. Board Rule C-23 was adopted in 2015 and requires 24 hours of training every two years with a budget of \$2,500 per Board member. The Ethics Training is required every two years.
- 12. Disability Earnings Income Verification for 2020** – Lisa Sorani presented this item. Letters are sent to disability retirees confirming income limits they need to report if they are over their earning limit. Letters were sent to 28 disability retirees who were monitored in 2020. None of the 28 members reported income in excess of the limit. Some members reside in California and staff receives reporting from California that helps monitor disability retirees' income. Staff is looking into whether they can obtain a similar report from the IRS for out-of-state members.
- 13. Review Ordinance Amendments for SECURE Act Provisions** – Lisa Sorani presented this item. The SECURE Act was put in place last year. It impacted deferred compensation plans and the District's Retirement Ordinance. The change impacts the administration of the required minimum distribution. The SECURE Act increased the age from 70½ to 72 before required minimum distribution must begin. Staff has until December 31, 2024 to amend the Retirement Ordinance. Staff expects to present an amended Retirement Ordinance to the Retirement Board for approval by June 2021.
- 14. Announce 2021 Retirement Board Election** – Lisa Sorani presented this item. There will be an election this year for Retirement Board Employee Representative Doug Higashi's seat. His term will expire on June 23, 2021. The Special Retirement Board Election Procedures used previously during the pandemic will be used for this election as well. This will allow the use of email and Survey Monkey for employees to participate in the election.
- 15. Review HIB Health Insurance Benefit Survey Results** – Lisa Sorani presented this item. This is an annual survey sent to comparable agencies. Staff surveyed 22 comparable agencies and received responses from 13. The purpose of the survey is to compare our health insurance benefit to other similar agencies. Some highlights from the survey responses: seven agencies experienced an increase in at least one of the coverage tiers; two of the agencies experienced a decrease in at least one of the coverage tiers; three agencies experienced no change in maximum dollar amount of their employer contributions; one agency provides contribution to a Health Reimbursement Account during employment; and three agencies that have not previously provided information responded.

#### **REPORTS FROM THE RETIREMENT BOARD**

- 16. Brief report on any course, workshop, or conference attended since the last Retirement Board meeting**

None



Minutes  
Retirement Board Meeting  
January 21, 2021

**ITEMS TO BE CALENDERED / UPCOMING ITEMS**

- Review and Consider Revisions to Low Income Rules
- Review and Approve Revisions to Administration of the Annual Audit of the Health Insurance Benefit as Outlined in Retirement Board Rule C-4
- International Investment Allocation
- Retirement System Software Upgrades Update

**ADJOURNMENT** – Doug Higashi moved to adjourn the meeting at 12:43 p.m. and Tim McGowan seconded the motion; the motion carried (5-0) by the following voice vote: AYES (Higashi, McGowan, Chan, Mellon and Young), NOES (none), ABSTAIN (none), ABSENT (none).

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President

ATTEST: \_\_\_\_\_  
Secretary


03/18/2021

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance 

SUBJECT: Investment Transactions by Retirement Fund Managers for December 2020  
and January 2021

The attached Investment Transactions by Retirement Fund Managers report for the months of December 2020 and January 2021 is hereby submitted for Retirement Board approval.

Attachment

SDS:AMM:aw

INVESTMENT TRANSACTIONS BY RETIREMENT FUND MANAGERS			
<b>December 2020</b>			
	<b>PURCHASES</b>	<b>SALES</b>	<b>PORTFOLIO VALUE</b>
<b><u>FIXED INCOME</u></b>			
C.S. McKee	\$21,982,189	\$18,911,812	\$191,831,847
Federated Bank Loans	\$458,462	\$150,000	\$44,952,703
Garcia Hamilton Associates	\$11,559,722	\$7,240,642	\$195,452,015
Mackay Shields - HY	\$1,299,360	\$279,551	\$48,181,017
<b>TOTAL</b>	<b>\$35,299,733</b>	<b>\$26,582,005</b>	<b>\$480,417,581</b>
<b><u>DOMESTIC EQUITY</u></b>			
Russell 3000 Index Fund	\$0	\$0	\$558,372,866
<b>Total Domestic Equity</b>	<b>\$0</b>	<b>\$0</b>	<b>\$558,372,866</b>
<b><u>COVERED CALLS</u></b>			
Parametric (BXM)	\$7,339,886	\$7,103,040	\$138,600,805
Parametric (Delta-Shift)	\$2,641,843	\$2,503,668	\$149,111,402
Van Hulzen	\$11,722,263	\$10,220,572	\$131,905,090
<b>Total Covered Calls</b>	<b>\$21,703,992</b>	<b>\$19,827,280</b>	<b>\$419,617,297</b>
<b><u>INTERNATIONAL EQUITY</u></b>			
ACWI Index fund	\$0	\$0	\$392,476,097
Franklin/Templeton	\$0	\$0	\$722,235
Fisher Investments	\$660,624	\$656,965	\$169,150,679
Global Transition	\$0	\$0	\$658,746
<b>Total International Equity</b>	<b>\$660,624</b>	<b>\$656,965</b>	<b>\$563,007,757</b>
<b><u>REAL ESTATE EQUITY</u></b>			
RREEF America II	\$0	\$0	\$49,768,364
CenterSquare	\$3,743,104	\$3,593,154	\$51,703,250
<b>Total Real Estate</b>	<b>\$3,743,104</b>	<b>\$3,593,154</b>	<b>\$101,471,614</b>
<b>TOTAL ALL FUND MANAGERS</b>	<b>\$61,407,453</b>	<b>\$50,659,404</b>	<b>\$2,122,887,116</b>
<b>January 2021</b>			
	<b>PURCHASES</b>	<b>SALES</b>	<b>PORTFOLIO VALUE</b>
<b><u>FIXED INCOME</u></b>			
C.S. McKee	\$17,249,694	\$18,124,854	\$190,403,599
Federated Bank Loans	\$527,510	\$435,000	\$45,298,118
Garcia Hamilton Associates	\$30,940,060	\$19,905,653	\$194,550,830
Mackay Shields - HY	\$1,985,532	\$241,279	\$48,366,033
<b>TOTAL</b>	<b>\$50,702,796</b>	<b>\$38,706,786</b>	<b>\$478,618,580</b>
<b><u>DOMESTIC EQUITY</u></b>			
Russell 3000 Index Fund	\$0	\$0	\$555,922,250
<b>Total Domestic Equity</b>	<b>\$0</b>	<b>\$0</b>	<b>\$555,922,250</b>
<b><u>COVERED CALLS</u></b>			
Parametric (BXM)	\$4,130,492	\$4,028,978	\$138,604,226
Parametric (Delta-Shift)	\$1,496,987	\$813,886	\$148,226,388
Van Hulzen	\$18,942,658	\$19,909,113	\$131,755,092
<b>Total Covered Calls</b>	<b>\$24,570,138</b>	<b>\$24,751,977</b>	<b>\$418,585,706</b>
<b><u>INTERNATIONAL EQUITY</u></b>			
ACWI Index fund	\$0	\$0	\$392,496,069
Franklin/Templeton	\$0	\$0	\$704,567
Fisher Investments	\$2,968,822	\$2,835,055	\$170,845,831
Global Transition	\$0	\$0	\$658,742
<b>Total International Equity</b>	<b>\$2,968,822</b>	<b>\$2,835,055</b>	<b>\$564,705,209</b>
<b><u>REAL ESTATE EQUITY</u></b>			
RREEF America II	\$0	\$0	\$50,157,979
CenterSquare	\$3,133,294	\$2,957,526	\$51,448,739
<b>Total Real Estate</b>	<b>\$3,133,294</b>	<b>\$2,957,526</b>	<b>\$101,606,718</b>
<b>TOTAL ALL FUND MANAGERS</b>	<b>\$81,375,049</b>	<b>\$69,251,344</b>	<b>\$2,119,438,462</b>

Prepared By: Anjanique Walsh  
Anjanique Walsh, Accounting Technician

Date: 2/22/2021

R.B. RESOLUTION NO. 6928

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY FUND MANAGERS  
FOR MONTHS OF DECEMBER, 2020 AND JANUARY, 2021

Introduced by: ; Seconded by:

WHEREAS, Retirement Board Rule No. B-5 provides for investment transactions without prior specific approval by the Retirement Board; and

WHEREAS, investment transactions have been consummated during December, 2020 and January, 2021, in accordance with the provisions of said rule and in securities designated as acceptable by Retirement Board Resolution No. 4974, as amended;

NOW, THEREFORE, BE IT RESOLVED that the investment transactions appearing on the following exhibits are hereby ratified and approved.

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President

ATTEST:

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Secretary

03/18/2021

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance *SDS*

FROM: Andrea Miller, Controller *AM*

SUBJECT: Short Term Investment Transactions for December 2020

The attached Short Term Investment Transactions report for the month of December 2020 is hereby submitted for Retirement Board approval.

Attachment

SDS:AMM:aw



**EBMUD EMPLOYEES' RETIREMENT SYSTEM  
SHORT TERM INVESTMENT TRANSACTIONS  
CONSUMMATED BY THE TREASURER  
MONTH OF DECEMBER 2020**

<u>COST/ FACE VALUE</u>	<u>DESCRIPTION</u>	<u>DATE OF PURCHASE</u>	<u>DATE OF SALE/MATURITY</u>	<u>YIELD (%)</u>
\$ 4,174,000.00	Local Agency Investment Fund	11-Dec-20		0.540
4,158,000.00	Local Agency Investment Fund	24-Dec-20		0.540
(10,707,000.00)	Local Agency Investment Fund		30-Dec-20	0.540
<b><u>\$ (2,375,000.00)</u></b>	Net Activity for Month			

\$ 16,190,744.37	Beginning Balance
<u>(2,375,000.00)</u>	Net Activity for Month
<b><u>\$ 13,815,744.37</u></b>	Ending Balance

SUBMITTED BY Andrea Miller  
Andrea Miller  
Controller

DATE 2/22/2021

	
Robert L. Hannay Treasury Manager	Sandy Lindley Acctg. Systems Supvr. prepared by Awalsh

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance *SDS*

FROM: Andrea Miller, Controller *AM*

SUBJECT: Short Term Investment Transactions for January 2021

The attached Short Term Investment Transactions report for the month of January 2021 is hereby submitted for Retirement Board approval.

Attachment

SDS:AMM:aw

**EBMUD EMPLOYEES' RETIREMENT SYSTEM  
SHORT TERM INVESTMENT TRANSACTIONS  
CONSUMMATED BY THE TREASURER  
MONTH OF JANUARY 2021**

<u>COST/ FACE VALUE</u>	<u>DESCRIPTION</u>	<u>DATE OF PURCHASE</u>	<u>DATE OF SALE/MATURITY</u>	<u>YIELD (%)</u>
\$ 4,249,000.00	Local Agency Investment Fund	8-Jan-21		0.458
33,217.49	Local Agency Investment Fund	15-Jan-21		0.458
4,199,000.00	Local Agency Investment Fund	22-Jan-21		0.458
(10,952,000.00)	Local Agency Investment Fund		28-Jan-21	0.458
 <b><u>\$ (2,470,782.51)</u></b>	Net Activity for Month			
 \$ 13,815,744.37	Beginning Balance			
(2,470,782.51)	Net Activity for Month			
<b><u>\$ 11,344,961.86</u></b>	Ending Balance			

SUBMITTED BY Andrea Miller  
Andrea Miller  
Controller

DATE 2/22/2021

  
Robert L. Hannay  
Treasury Manager

  
Sandy Lindley  
Acctg. Systems Supvr.  
prepared by Awalsh



R.B. RESOLUTION NO. 6929

RATIFYING AND APPROVING SHORT TERM INVESTMENT TRANSACTIONS BY THE  
TREASURER FOR DECEMBER, 2020 AND JANUARY, 2021

Introduced by: ; Seconded by:

WHEREAS, Retirement Board Rule No. B-7 provides for the temporary investment of retirement system funds by the Treasurer or Assistant Treasurer in securities authorized by Sections 1350 through 1366 of the Financial Code or holding funds in inactive time deposits in accordance with Section 12364 of the Municipal Utility District Act; and

WHEREAS, investment transactions during December, 2020 and January, 2021, have been made in accordance with the provisions of the said rule;

NOW, THEREFORE, BE IT RESOLVED that the investment transactions consummated by the Treasurer and included on the attached Exhibit A for December, 2020 and January, 2021 are hereby ratified and approved.

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President

ATTEST:

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Secretary

03/18/2021

## EAST BAY MUNICIPAL UTILITY DISTRICT

---

DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance *SDS*

FROM: Andrea Miller, Controller *AM*

SUBJECT: Statement of Receipts and Disbursements for December 2020

The attached Statement of Receipts and Disbursements report for the month of December 2020 is hereby submitted for Retirement Board approval.

Attachment

SDS:AMM:aw

**STATEMENT OF RECEIPTS AND DISBURSEMENTS  
EMPLOYEES' RETIREMENT FUND  
MONTH OF DECEMBER 2020**

**CASH BALANCE at November 30, 2020** **\$ 2,423,653.13**

**Receipts**

Employees' Contributions	\$	1,397,454.53	
District Contributions		6,992,248.00	
LAIF Redemptions		10,707,000.00	
Refunds and Commission Recapture		<u>21,806.84</u>	
<b>TOTAL Receipts</b>			<b>19,118,509.37</b>

**Disbursements**

<b>Checks/Wires Issued:</b>			
Service Retirement Allowances	\$	9,565,257.65	
Disability Retirement Allowances		152,248.57	
Health Insurance Benefit		1,003,307.87	
Payments to Retiree's Resigned/Deceased		17,495.40	
LAIF Deposits		8,332,000.00	
Administrative Cost		<u>261,882.71</u>	
<b>TOTAL Disbursements</b>			<b><u>(19,332,192.20)</u></b>

**CASH BALANCE at December 31, 2020** **\$ 2,209,970.30**

**LAIF** **13,815,744.37**

**LAIF and CASH BALANCE at December 31, 2020** **\$ 16,025,714.67**

**Domestic Equity**

Russell 3000 Index Fund	\$	<u>558,372,866.02</u>	
<b>Subtotal Domestic Equity</b>		<b>558,372,866.02</b>	

**Covered Calls**

Parametric (BXM)	\$	138,600,804.95	
Parametric (Delta-Shift)		149,111,402.38	
Van Hulzen		<u>131,905,089.89</u>	
<b>Subtotal Covered Calls</b>		<b>419,617,297.22</b>	

**International Equity**

ACWI Index fund	\$	392,476,097.40	
Franklin Templeton		722,235.33	
Fisher Investments		169,150,678.96	
Global Transition		<u>658,745.57</u>	
<b>Subtotal International Equity</b>		<b>563,007,757.26</b>	

**Real Estate**

RREEF America REIT II	\$	49,768,364.00	
Center Square		<u>51,703,250.09</u>	
<b>Subtotal Real Estate</b>		<b>101,471,614.09</b>	

**Fixed Income**

CS Mckee	\$	191,831,846.92	
Federated Bank Loans		44,952,702.70	
Garcia Hamilton Associates		195,452,014.53	
Mackay Shields-High Yield		<u>48,181,016.78</u>	
<b>Subtotal Fixed Income</b>		<b>480,417,580.93</b>	

**Total for Domestic and International Equities** **2,122,887,115.52**

**MARKET VALUE of ASSETS at December 31, 2020** **\$ 2,138,912,830.19**

Respectfully submitted,

*Andrea Miller*

**Andrea Miller  
Controller**

*Robert L. Hannay*

**Robert L. Hannay  
Treasury Mgr.**

*Sandy Lindley*

**S. F. Lindley  
Acctg Sys Supvr.**

prepared by Awalsh

## EAST BAY MUNICIPAL UTILITY DISTRICT

---

DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance *SDS*

FROM: Andrea Miller, Controller *AM*

SUBJECT: Statement of Receipts and Disbursements for January 2021

The attached Statement of Receipts and Disbursements report for the month of January 2021 is hereby submitted for Retirement Board approval.

Attachment

SDS:AMM:aw

**STATEMENT OF RECEIPTS AND DISBURSEMENTS  
EMPLOYEES' RETIREMENT FUND  
MONTH OF JANUARY 2021**

CASH BALANCE at December 31, 2020 \$ 2,209,970.30

**Receipts**

Employees' Contributions	\$	1,509,268.22	
District Contributions		6,976,904.32	
LAIF Redemptions		10,952,000.00	
Refunds and Commission Recapture		<u>16,377.94</u>	
<b>TOTAL Receipts</b>			<b>19,454,550.48</b>

**Disbursements**

<b>Checks/Wires Issued:</b>			
Service Retirement Allowances	\$	9,802,108.81	
Disability Retirement Allowances		152,248.57	
Health Insurance Benefit		984,306.83	
Payments to Retiree's Resigned/Deceased		0.00	
LAIF Deposits		8,448,000.00	
Administrative Cost		<u>214,875.33</u>	
<b>TOTAL Disbursements</b>			<b><u>(19,601,539.54)</u></b>

CASH BALANCE at January 31, 2021 \$ 2,062,981.24

LAIF 11,344,961.86

LAIF and CASH BALANCE at January 31, 2021 \$ 13,407,943.10

**Domestic Equity**

Russell 3000 Index Fund	\$	<u>555,922,249.81</u>	
<b>Subtotal Domestic Equity</b>		<b>555,922,249.81</b>	

**Covered Calls**

Parametric (BXM)	\$	138,604,225.74	
Parametric (Delta-Shift)		148,226,388.25	
Van Hulzen		<u>131,755,091.83</u>	
<b>Subtotal Covered Calls</b>		<b>418,585,705.82</b>	

**International Equity**

ACWI Index fund	\$	392,496,069.28	
Franklin Templeton		704,566.72	
Fisher Investments		170,845,830.82	
Global Transition		<u>658,741.82</u>	
<b>Subtotal International Equity</b>		<b>564,705,208.64</b>	

**Real Estate**

RREEF America REIT II	\$	50,157,979.00	
Center Square		<u>51,448,738.91</u>	
<b>Subtotal Real Estate</b>		<b>101,606,717.91</b>	

**Fixed Income**

CS Mckee	\$	190,403,598.60	
Federated Bank Loans		45,298,117.92	
Garcia Hamilton Associates		194,550,830.01	
Mackay Shields-High Yield		<u>48,366,033.03</u>	
<b>Subtotal Fixed Income</b>		<b>478,618,579.56</b>	

Total for Domestic and International Equities 2,119,438,461.74

MARKET VALUE of ASSETS at January 31, 2021 \$ 2,132,846,404.84

Respectfully submitted,

*Andrea Miller*

**Andrea Miller  
Controller**

*Robert L. Hannay*

**Robert L. Hannay  
Treasury Mgr.**

*Sandy Lindley*

**S. F. Lindley  
Acctg Sys Supvr.**

prepared by Awalsh

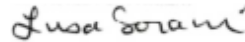
## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

FROM: Lisa Sorani, Manager of Employee Services



SUBJECT: Determination of Retiree Cost of Living Adjustment

ACTION: Vote on Resolution No. 6930

### RECOMMENDATION

Adopt Resolution No. 6930 authorizing a 1.7 percent COLA for retirees effective July 1, 2021 including a reduction of up to 1.3 percent to eligible retiree COLA banks.

### DISCUSSION

In accordance with Retirement Board Rule c-24 the Retirement System actuary, Segal, have confirm the annual average CPI-U for each of the two immediately preceding calendar years and determined the current year COLA as the percentage by which such index for the most recent full calendar year shall have increased or decreased over or below such index for the full calendar year immediately prior to the most recent calendar year. In addition, the Treasury Manager and the Manager of Employee Services have both reviewed and confirmed Segal's calculations.

Segal's memo detailing their review and determination of the July 2021 COLA amount is attached.

Upon approval of the attached Resolution, the COLA shall be applied to Retirement Allowances effective on July 1, 2021.

LS

R. B. RESOLUTION NO. 6930

DECLARING THE COST OF LIVING ADJUSTMENT  
TO BE EFFECTIVE AS OF JULY 1, 2021

Introduced by: \_\_\_\_\_; seconded by: \_\_\_\_\_

Pursuant to the provision of Section 33 of Ordinance No. 40 as amended, the Retirement Board adopted the Cost of Living Adjustment to be effective July 1, 2021. The COLA is hereby established to be 1.7 percent.

Members who retired on or before July 1, 2020 will receive a 1.7 percent increase, and their COLA bank, where available, will be reduced by up to 1.3 percent allowing for an increase of up to 3 percent. Employees who retired after July 1, 2020 will receive a proration of 1.7 percent, or 1/12 of the full COLA for each full month retired since July 1, 2020.

Any other resolution or parts of resolution in conflict herewith are hereby rescinded and cancelled.

\_\_\_\_\_  
President

ATTEST: \_\_\_\_\_  
Secretary

3/18/2021



Andy Yeung, ASA, MAAA, FCA, EA  
Vice President & Actuary  
415.263.8283  
ayeung@segalco.com

180 Howard Street  
Suite 1100  
San Francisco, CA 94105-6147  
segalco.com

March 4, 2021

Ms. Sophia Skoda  
Director of Finance  
East Bay Municipal Utility District  
375 11<sup>th</sup> Street  
Oakland, CA 94607-4240

**Re: East Bay Municipal Utility District Employees' Retirement System (EBMUDERS)  
Cost of Living Adjustment (COLA) as of July 1, 2021**

Dear Sophia:

We have determined the cost of living adjustment for retirees effective July 1, 2021 in accordance with Section 33 of the Employees' Retirement System Ordinance.

Pursuant to our understanding of the Ordinance, the cost of living adjustment to be used by the System each July 1 is determined by the change in the Consumer Price Index for All Urban Consumers (CPI-U) for the San Francisco-Oakland-Hayward Area<sup>1</sup> as published by the Bureau of Labor Statistics, for each of the two immediately preceding calendar years (i.e., the annual average CPI). The ratio of the past two annual average CPI, 300.084 in 2020 and 295.004 in 2019,<sup>2</sup> is 1.017 and the resulting percentage change (rounded to the nearest one-tenth of one percent) is 1.7%.

Under Section 33 of the Ordinance, the annual retiree COLA is limited to 3%, unless the Retirement System is funded on a Projected Benefit Obligation (PBO) basis at or above 85%, in which case the maximum COLA is 5%. This funding measure is defined as the ratio of the market value of assets to the PBO. Any excess of the change in the CPI above the maximum COLA is accumulated in individual retiree COLA banks. Withdrawals from the COLA banks can be made in years when the change in the CPI is less than 3%. We further understand that, effective October 1, 2000, in years when the Retirement System is more than 85% funded on a PBO basis (which allows for up to 5% COLA) and the change in the CPI is less than 4%, withdrawals from the banks can be made to allow COLAs up to 4% (not up to 5%).

Based on the June 30, 2020 actuarial valuations, the PBO funding ratio of the Retirement System as a whole (including both the Pension and Health Plans) was 71.2%, while the PBO funding ratios for each of the Pension and Health Plans were 73.3% and 33.4%, respectively. Accordingly, the COLA payable effective July 1, 2021 is 1.7%. For retirees who retired (or

<sup>1</sup> We note that reference was made to the change in the Consumer Price Index in the San Francisco-Oakland Metropolitan Area in the Ordinance, but such Index is now only available for the San Francisco-Oakland-Hayward Area from the Bureau of Labor Statistics.

<sup>2</sup> Source: <https://data.bls.gov/timeseries/CUURS49BSA0>

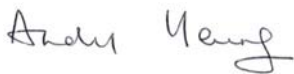


Members who died) less than one full year before July 1, 2021, the 1.7% COLA is to be prorated by one-twelfth of 1.7% for each full calendar month between the date of retirement (or date of death) and July 1, 2021.

Since the change in the CPI mentioned above was 1.7%, this means that up to 1.3% can be subtracted from each eligible retiree's COLA bank as of July 1, 2021 to be granted up to the maximum 3% COLA.

Please give us a call if you have any questions.

Sincerely,



Andy Yeung, ASA, MAAA, FCA, EA  
Vice President & Actuary

DNA/bbf

cc: Robert Hannay  
Lisa Sorani

## EAST BAY MUNICIPAL UTILITY DISTRICT

---

DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

FROM: Lisa Sorani, Manager of Employee Services *Lisa Sorani*

SUBJECT: Review updates to Retirement Board Rule C-4

### BACKGROUND

Staff is requesting that the Retirement Board review and consider an updated Retirement Board Rule C-4 Health Insurance Benefit (HIB). The requested edits are the first step in HIB administration changes which staff will introduce as we try to improve the day-to-day efficiency of retirement system administration tasks.

### SUMMARY

The Retirement Ordinance Rule C-4 requires staff to perform an annual audit of the HIB recipients to ascertain whether or not the HIB benefit is being used for its intended purpose to purchase health insurance. This work requires mailing letters and HIP application forms to 1,780 retirees who are eligible for HIB benefits.

Retirees are required to complete the applications and return the application and supporting documents to staff in order to support reimbursement claims. The retirees on District-sponsored health plans (medical & dental) are not required to provide documentation or proof of coverage for reimbursement because District-records containing that information already exist. All other reimbursements require backup records showing evidence of coverage and proof of payment.

Of the 1,780 retirees who receive the letter all must return the signed HIB application, and approximately 894 of those retirees must submit additional paperwork to show proof of their non-District insurance coverage and proof of payment for the insurance.

Over the past five years, this audit has become extremely time-consuming and challenging to complete. In recent years, staff has not managed to collect all documentation required due to lack of response from retirees, nor have HIB benefits been stopped due to lack of documentation.

As an example, during the 2020 audit, six staff members worked together on the HIB audit for nine months. Because this process is so time-consuming and inefficient, staff recommended several changes to more efficiently and accurately manage the HIB audit. The recommended

changes will help the current process, and staff expects additional efficiencies will be available with the implementation of a new Retirement Administration System.

Staff recommends the following three changes to Retirement Board Rule C-4:

1. Remove the requirement of a signed application from retirees where 100% of their HIB reimbursement is paid toward District sponsored Health Insurance plans or Dental plans and base Medicare Part B. This change impacts approximately 1,150 of the 1,780 retirees who have HIB benefits. Staff would continue to notify all retirees each year regarding their HIB benefit calculation, and the remaining retirees requiring documentation would be required to submit both an application and backup data.
2. Staff also recommends allowing for an automatic update of District HIB records for the base cost of Medicare Part B. This change means we would not require any further proof of payment for a) the Medicare Part B base rate for those retirees who are in a District-sponsored Medicare-coordinated Health Plan and where we have proof of their Medicare Part B enrollment tied to their health plan enrollment; and b) those retirees who have a non-District Health Plan, but who previously chose to submit proof of their enrollment in Medicare Part B for our records and future use. In many cases, the Health Plan's reimbursement alone utilizes most of the HIB benefit; and in these cases, some portion of the Medicare Part B is then reimbursed with the remaining HIB benefit. All Medicare-eligible retirees are charged for their Medicare Part B at either the base rate or at higher rates for retirees who earn pension or other benefits beyond certain thresholds. The base Medicare Part B rate is published each year and staff can update that rate in our systems for all the retirees where we have proof of their Part B enrollment. Those retirees who pay and want to be reimbursed for more than the Part B base rate would need to provide a record of payment of the higher rate.
3. Lastly, staff recommends including in rule the 10-year requirement for holding the records related to the annual HIB reimbursements.

All other parts of the Retirement Board Rule C-4 would continue at this time. All other retirees with non-District insurance would complete both an annual application form and submit backup documentation for proof of coverage and proof of payment for all non-District-sponsored Insurance expenses, with the exception of the base Medicare Part B expenses for which we maintain records.

The Health Insurance Benefit must follow the rules of the underlying IRS 401H plans that require the funds only be used for eligible health care expenses, and the Retirement Ordinance which lays out which forms of Healthcare expenses our plan will reimburse. In all instances of

reimbursement, records are needed that can confirm the eligibility of the expenses the plan is reimbursing. Outside counsel has stated that these records must be kept for ten years. The Employee Services staff holds records that can confirm eligibility of the expenses in all instances where staff is requesting revision of the rules requiring annual collection of paper records from retirees.

The recommended Retirement Board Rule C-4 changes will greatly improve the efficiency of the HIB Audit process. An updated rule would allow for annual letters to be sent to all HIB eligible retirees and collection of HIB Applications and other backup documentation only from approximately 618 retirees rather than 1,780. Staff will focus their effort on gathering the required records from these 618 retirees during the annual HIB audit at the start of the year to reduce the amount of over or underpayments due to insurance changes.

Staff recommends the changes be immediately implemented for the 2021 HIB audit process.

LS:VW

R.B. RESOLUTION NO. 6931

EDITING RULE C-4 HEALTH INSURANCE BENEFIT

Introduced by: ; Seconded by:

WHEREAS, Section 4(b) of the Retirement Ordinance authorizes the Retirement Board to adopt such rules and regulations as are necessary and proper in the administration of the provisions of the Retirement Ordinance; and

WHEREAS, Section 35 of the Retirement Ordinance provides for a Health Insurance Benefit (HIB); and

WHEREAS, the Retirement Board has previously given direction for the administration of the Health Insurance Benefit under Retirement Board Rule c-4; and

WHEREAS, the continued growth of the retiree population has made it more difficult to administer the Health Insurance Benefit under the current Retirement Board Rule C-4; and

WHEREAS, a review of the annual Health Insurance Benefit process has identified adjustments to the process that would improve the efficiency and accuracy of the annual audit; and

WHEREAS, the development of more efficient administrative procedures can reduce the chance of errors and mitigate risk to the Retirement System; and

WHEREAS, the proposed adjustments are in compliance with both the Retirement Ordinance and the requirements of Internal Revenue Code section 401(h) which govern the Health Insurance Benefit; and

WHEREAS, the Retirement Board wishes to edit Retirement Board Rule C-4 to codify the updated administrative procedures to be used in managing the Health Insurance Benefit and to minimize the risk related to staff errors;

NOW, THEREFORE, BE IT RESOLVED, that Retirement Board Rule C-4 shall be amended as follows:

RULE NO. C-4  
(PREVIOUS RULE NO. 24)

- Health Insurance Benefit  
Res. 5988; Amended by Res. 6216  
9/25/90; Revised by Motion 1/28/92;  
Amended by Resolution No. 6457  
7/15/99; Amended by Resolution  
No. 6634 5/19/07; **Amended by Resolution**

**No.6931**

A. Authorization

The purpose of this Rule is to provide those regulations that are necessary and proper in the administration of the health insurance benefit provided in Section 36 of the Retirement Ordinance.

B. Eligibility

The eligibility of retired members and surviving spouses or registered financially dependent domestic partners to receive the health insurance benefit is provided in Section 36 of the Retirement Ordinance.

As of July 1, 1999, eligible retired members (but not surviving spouses) may use the health insurance benefit for the payment of health care costs incurred by the retired member's current spouse or current registered financially dependent domestic partner, pursuant to this Rule.

Payment of the health insurance benefit shall be made only to eligible retired members and eligible surviving spouses or registered financially dependent domestic partners who participate in District sponsored health insurance plans or who periodically present evidence of having paid premiums for personally-purchased health insurance. Eligibility will be based on District records of health insurance and information submitted by those applying for the benefit.

C. Annual Notice

At least once each year, or upon request of the eligible retired member or eligible surviving spouse or registered financially dependent domestic partner, the Retirement System will notify eligible members of the requirements and procedures for applying for the health insurance benefit. Such notices shall include any required application forms. Similar notice shall be given to members at the time of their retirement, and to eligible surviving spouses or registered financially dependent domestic partners at the time of death of a member.

D. Schedule and Method of Payment

Beginning with the first month of entitlement to a monthly retirement allowance, retirees and eligible surviving spouses or registered financially dependent domestic partners will be eligible for the health insurance benefit reimbursement. Reimbursement will be paid monthly with the retirement allowance. If enrolled on a District sponsored health plan, monthly premium expenses

are deducted from the monthly retirement allowance one month prior to the actual month of coverage.

E. Reimbursement Procedure

1. **HIB Application Form**

To receive reimbursement, all eligible retirees and surviving spouses or registered financially dependent domestic partners must submit a signed Health Insurance Benefit Application to the Retirement System at least once annually. **The exception are for those eligible retirees for whom HIB reimbursement is 100% related to District sponsored Health or Dental plans plus base rate Medicare Part B, and the annual notice from the District specifically states that an application is not necessary.**

2. Supporting Documentation

a) A retired member, surviving spouse, or registered financially dependent domestic partner entitled to a retirement allowance who participates in District sponsored group health insurance and dental plans, **or base rate Medicare Part B when required for a District sponsored Medicare group health insurance plan**; District records of such participation shall be considered conclusive evidence of eligibility **for reimbursement**. If such participation ends, the individual may apply for reimbursement for other non-District personally-purchased health insurance as provided below.

b) Non-District sponsored health insurance plans personally purchased, **including Medicare Part B or Part D not coordinated with a District sponsored Medicare group health plan** by the retired member or surviving spouse or registered financially dependent domestic partner entitled to receive a retirement allowance, shall submit to the Retirement System:

(1) proof that they are insured at a specified premium rate, and (2) evidence of having paid current premiums for such health insurance. **(3) One exception; those retirees on Non-District sponsored health plans that have signed up for Medicare Part B, may submit a copy of their Medicare Part B card or Social Security Statement showing payment toward Part B, and with that data on file, staff will update the Medicare part B reimbursement amount each year to the updated base Medicare rate as posted by Social Security, without additional annual documentation. Reimbursement for anything above the base rate for Medicare Part B requires documentation per 2b(1) and 2b(2) above.**

3. **Records Management: All supporting records for HIB reimbursement, whether District records, or retiree submitted records will be maintained in an electronic format for ten years. All records should be able to be easily produced should the plan be audited by the IRS. The procedure for maintenance will be documented with staff and added to the Districts Record Retention Policy.**

F. Eligible Expenses for Reimbursement

For purposes of health insurance reimbursement, health insurance plans covered by this Rule shall include individual medical insurance, Medicare Part B and D, Medicare-supplement insurance, dental insurance, long-term care insurance, vision insurance, ambulance insurance, COBRA continuation insurance, and prescription drug insurance.

G. Special Requirements Regarding Domestic Partners

1. Purpose

The purpose of this regulation is to administer payment of the health insurance benefit to cover the health care costs incurred by the eligible retired member's current registered domestic partner, pursuant to Section 36(e) of the Retirement Ordinance and to the extent permitted by the Internal Revenue Code and its regulations.

2. Domestic Partnership

For this purpose, a domestic partnership exists when all of the following occur:

- (1) Both persons have a common residence.
- (2) One of the persons is a retired member eligible for the health insurance benefit pursuant to Section 36 of the Retirement Ordinance.
- (3) Both persons agree to be jointly responsible for each others basic living expenses incurred during the domestic partnership.
- (4) Neither person is married nor a member of another domestic partnership.
- (5) Both persons are at least 18 years of age.
- (6) Both persons date, sign and notarize the East Bay Municipal Utility District Affidavit of Domestic Partnership form and/or the California State Registration Form for Domestic Partners, and file it with the Retirement System, along with the application form for reimbursement of payment. By filing either of these forms, both persons shall be certifying that they each understand and agree that he or she may be required to reimburse EBMUD, the Retirement System and the persons designated health service plans for any expenditures made by EBMUD, the Retirement System and the persons designated health service plans for medical claims, processing fees, administrative charges, and other costs on behalf of the domestic partner if any of the submitted documentation is found to be incomplete, inaccurate or fraudulent.
- (7) In compliance with the Internal Revenue Code 152, an Affidavit of Dependency Status certifying that the Domestic Partner is a financial dependent of the retiree must be filed annually with the Retirement System to justify reimbursement of insurance premium expenses attributable to a Domestic Partner.



### 3. Termination of Domestic Partnership

A domestic partnership shall terminate when any of the following occurs:

- (1) One partner gives or sends to the other partner a notarized, written notice that he or she is terminating the partnership.
- (2) One of the domestic partners dies.
- (3) One of the domestic partners marries.
- (4) The domestic partners no longer have a common residence. A temporary separation shall not constitute the cessation of a common residence.

Within thirty (30) days of termination of the partnership, the retired member shall file the East Bay Municipal Utility District Statement of Termination of Domestic Partnership form with the Retirement System. The form shall include a statement whereby the retired member shall certify under penalty of perjury that a copy of the form has been provided to the domestic partner. All reimbursement to the retired member for the health care costs incurred by the domestic partner shall cease as of the last day of the month following the receipt of the Statement of Termination of Domestic Partnership form.

Following termination of such partnership, the retired member cannot file another Affidavit of Domestic Partnership until six (6) months after the Statement of Termination of Domestic Partnership has been filed with the Retirement System, except that such prohibition will not apply to California State Registered Domestic Partners.

### 4. No Vested Right

This Rule shall not be construed to extend any vested rights to any person nor be construed to limit the right of the Retirement Board to subsequently modify or repeal any provision of this Rule regarding domestic partners in order to comply with the Internal Revenue Code and regulations issued thereunder.

### H. Recovery of Overpayments

In the event of overpayment of health insurance benefits as a result of ineligibility or death of the payee, the amount of such overpayment shall be deducted from retirement, death or other benefit payments as they become payable by the Retirement System in respect of the retired or deceased member.

# East Bay Municipal Utility District Employees' Retirement System

March 18, 2021

Q4 2020 Performance Report and  
January Performance Update

1. Introduction
2. Economic & Market Update
3. World Markets in the Fourth Quarter of 2020
4. EBMUDERS Portfolio Review
  - a. Fourth Quarter Performance Review
  - b. January Performance Update
5. Manager Watch Screens
6. Manager Compliance Certification Responses
7. Appendix

# Introduction

## EBMUDERS Total Plan Composite | As of December 31, 2020

Performance Summary								
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)
<b>EBMUDERS Total Plan Composite</b>	<b>2,135,980,626</b>	<b>100.0</b>	<b>10.1</b>	<b>11.4</b>	<b>8.6</b>	<b>10.1</b>	<b>9.6</b>	<b>7.2</b>
<i>Total Plan Bench <sup>1</sup></i>			<i>10.1</i>	<i>9.2</i>	<i>7.5</i>	<i>9.4</i>	<i>8.8</i>	<i>6.7</i>
<b>US Equity Composite</b>	<b>559,031,612</b>	<b>26.2</b>	<b>14.6</b>	<b>20.8</b>	<b>15.0</b>	<b>15.7</b>	<b>14.0</b>	<b>8.3</b>
<i>Russell 3000 Hybrid <sup>2</sup></i>			<i>14.7</i>	<i>20.9</i>	<i>14.5</i>	<i>15.4</i>	<i>13.8</i>	<i>8.3</i>
<b>NonUS Equity Composite</b>	<b>561,626,776</b>	<b>26.3</b>	<b>16.8</b>	<b>10.5</b>	<b>4.3</b>	<b>8.1</b>	<b>5.6</b>	<b>5.8</b>
<i>MSCI ACWI xUS (blend) <sup>3</sup></i>			<i>17.1</i>	<i>11.1</i>	<i>5.4</i>	<i>9.4</i>	<i>5.4</i>	<i>5.1</i>
<b>Covered Calls Composite</b>	<b>419,617,297</b>	<b>19.6</b>	<b>8.6</b>	<b>7.9</b>	<b>7.4</b>	<b>9.2</b>	--	--
<i>CBOE S&amp;P 500 BuyWrite USD <sup>4</sup></i>			<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>	--	--
<b>Real Estate Composite</b>	<b>101,471,614</b>	<b>4.8</b>	<b>7.4</b>	<b>0.7</b>	<b>6.3</b>	<b>7.1</b>	<b>10.6</b>	--
<i>NCREIF NPI Lag</i>			<i>6.2</i>	<i>-2.0</i>	<i>4.9</i>	<i>5.9</i>	<i>9.5</i>	--
<b>Fixed Income Composite</b>	<b>480,417,581</b>	<b>22.5</b>	<b>1.1</b>	<b>6.5</b>	<b>5.3</b>	<b>4.7</b>	<b>4.1</b>	<b>5.2</b>
<i>Fixed Income Composite Bench <sup>5</sup></i>			<i>1.2</i>	<i>6.3</i>	<i>4.9</i>	<i>4.6</i>	<i>3.8</i>	<i>4.8</i>
<b>Cash Composite</b>	<b>13,815,744</b>	<b>0.6</b>	<b>0.1</b>	<b>1.9</b>	<b>2.1</b>	<b>1.5</b>	<b>0.9</b>	<b>2.1</b>
<i>FTSE T-Bill 3 Months TR</i>			<i>0.0</i>	<i>0.6</i>	<i>1.6</i>	<i>1.2</i>	<i>0.6</i>	<i>1.4</i>

<sup>1</sup> Policy Benchmark consists of 25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 10% BBgBarc US Intermediate Gov/Cred / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD index 12/1/2019-present; see Appendix for historical Policy Benchmark composition.

<sup>2</sup> Russell 3000 as of 10/1/05. Prior: 30% S&P500, 10% S&P400, 10% Russell 2000 (4/1/05-9/30/05); 33% S&P500, 10% S&P400, 10% Russell 2000 (9/1/98-3/31/05); 30% S&P500, 15% Wilshire 5000 (4/1/96-8/31/98).

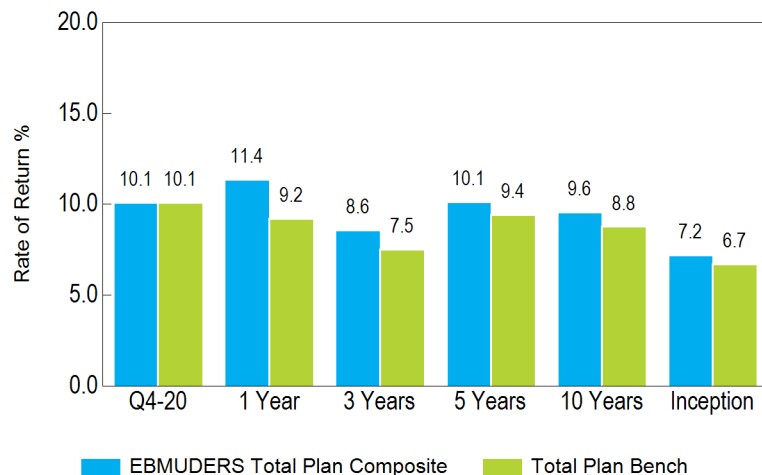
<sup>3</sup> MSCI ACWIxU.S. as of 1/1/07; MSCI EAFE ND thru 12/31/06.

<sup>4</sup> 40% BB Aggregate, 40% BBgBarc US Intermediate Gov/Cred, 10% ICE BofA ML U.S. Corp Cash Pay BB-B 1-5 Year, and 10% Blend 60% Credit Suisse Leverage Loan/40% BBg BC Short Term Gov/Corp 12/1/2019-present. See Appendix for historical Composite benchmark.

<sup>5</sup> 50% NCREIF (lagged), 50% FTSE NAREIT Equity REITs Index as of 11/1/11; NCREIF (lagged) thru 10/31/11.

### EBMUDERS Total Plan Composite | As of December 31, 2020

#### Return Summary\* Ending December 31, 2020



\* Performance is gross of fees.

#### Summary of Cash Flows

	Fourth Quarter	One Year
Beginning Market Value	\$1,942,733,470	\$1,938,636,473
Net Cash Flow	-\$2,857,000	-\$17,812,240
Capital Appreciation	\$196,104,155	\$215,156,393
Ending Market Value	\$2,135,980,626	\$2,135,980,626

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)
<b>EBMUDERS Total Plan Composite - Gross</b>	<b>10.1</b>	<b>11.4</b>	<b>8.6</b>	<b>10.1</b>	<b>9.6</b>	<b>7.2</b>
<b>EBMUDERS Total Plan Composite - Net<sup>1</sup></b>	<b>10.1</b>	<b>11.2</b>	<b>8.4</b>	<b>9.9</b>	--	--
<i>Total Plan Bench</i>	<i>10.1</i>	<i>9.2</i>	<i>7.5</i>	<i>9.4</i>	<i>8.8</i>	<i>6.7</i>
<i>InvMetrics Public DB &gt; \$1B Gross Median</i>	<i>10.3</i>	<i>11.5</i>	<i>8.0</i>	<i>9.5</i>	<i>8.3</i>	<i>6.7</i>

<sup>1</sup> Historical net returns for the Total Portfolio aggregate are currently available from 2Q 2011.

<sup>2</sup> InvMetrics Public DB > \$1B Universe includes BNY Mellon Public > \$1B Fund Universe and IM client data.

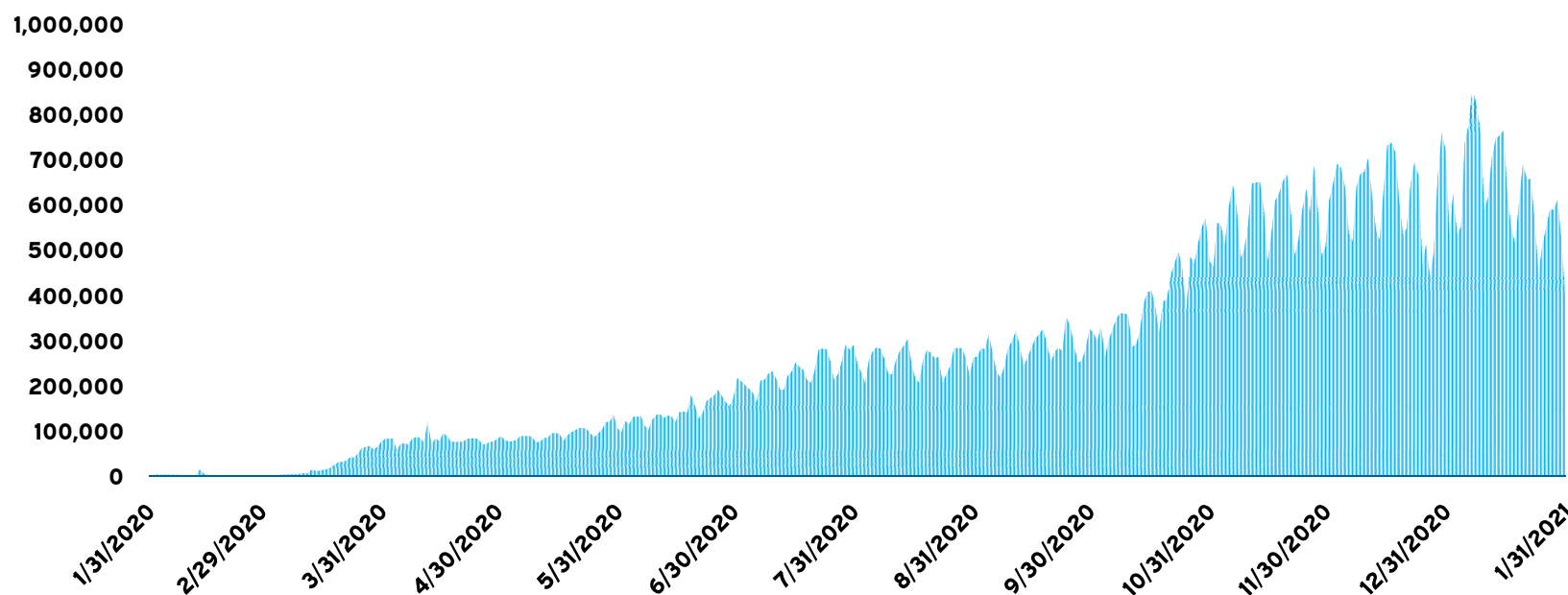
<sup>3</sup> Policy Benchmark consists of 25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 10% BBgBarc US Intermediate Gov/Cred / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD index 12/1/2019-present; see Appendix for historical Policy Benchmark composition.

# Economic and Market Update

Data as of January 31, 2021



### Global Daily Cases<sup>1</sup>

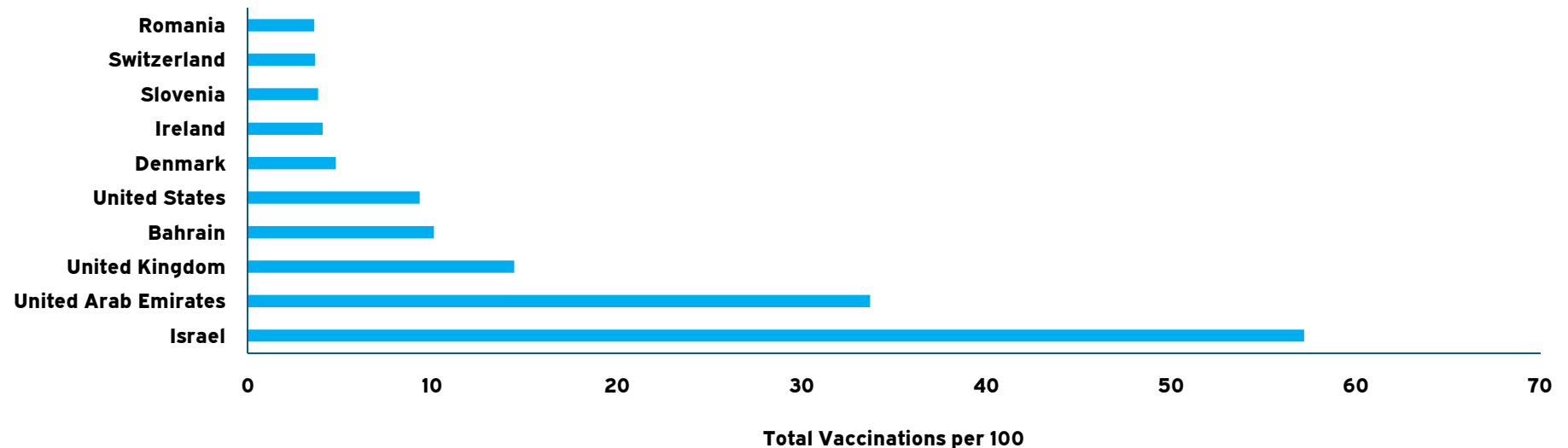


- After peaking in early January at 858,000 daily cases, numbers have since come down globally to 382,000 cases a day, as new restrictions were implemented, the holiday season passed, and vaccines started to rollout.
- Going forward, the rollout of multiple vaccines should continue the trend of declining cases, with the logistics of the rollout, the track of new variants, and access for some countries being key issues.

<sup>1</sup> Source: Our World in Data. Data is as of January 31, 2021.



### Vaccinations by Country<sup>1</sup>



- Vaccines have started to be distributed globally, including the Pfizer-BioNTech, Moderna, and soon Johnson & Johnson vaccines in the US. Outside the US, vaccines have also been developed by China, Russia, India, and the UK.
- Some countries have done better with the vaccine rollout, with Israel being a model for others.

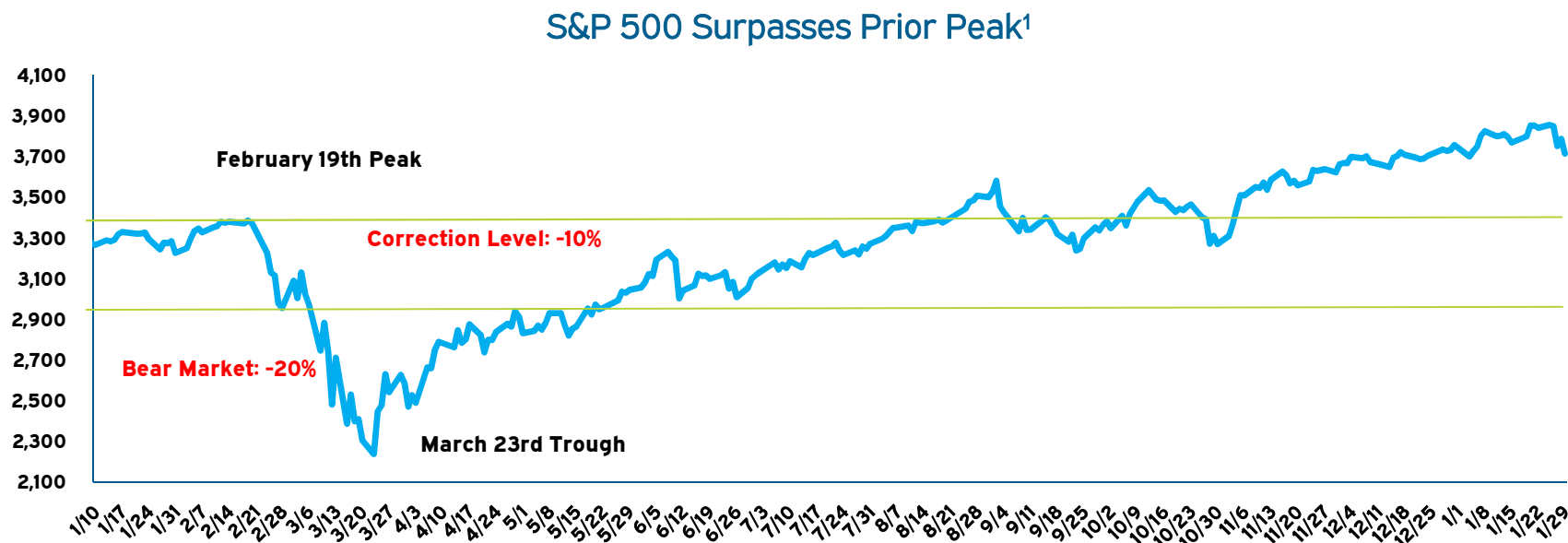
<sup>1</sup> Source: Our World in Data. Data is as of January 31, 2021.

### Market Returns<sup>1</sup>

Indices	January	1 Year	3 Year	5 Year	10 Year
S&P 500	-1.0%	15.6%	11.3%	16.2%	13.6%
MSCI EAFE	-1.1%	7.8%	1.9%	8.8%	5.2%
MSCI Emerging Markets	3.1%	23.8%	4.1%	15.0%	4.2%
MSCI China	7.4%	41.7%	7.0%	19.9%	8.4%
Bloomberg Barclays Aggregate	-0.7%	5.0%	5.5%	4.0%	3.7%
Bloomberg Barclays TIPS	0.3%	9.6%	6.3%	4.8%	3.8%
Bloomberg Barclays High Yield	0.3%	7.3%	6.1%	9.0%	6.6%
10-year US Treasury	-1.5%	5.8%	6.6%	3.3%	4.4%
30-year US Treasury	-4.4%	5.7%	10.1%	6.1%	8.0%

- Global risk assets recovered meaningfully from their declines last year, largely driven by record fiscal and monetary policy stimulus and greater clarity related to the containment of the virus.
- In January, developed market equities fell as rising case counts and logistical issues with the vaccine rollout led to fears the virus would continue to weigh on growth in the near-term.
- Emerging market equities rose in January, driven by large gains in China (+7.4%) where growth expectations for 2021 are strong.
- The yield curve steepened, likely based on better growth expectations and inflation fears, weighing on Treasury prices.

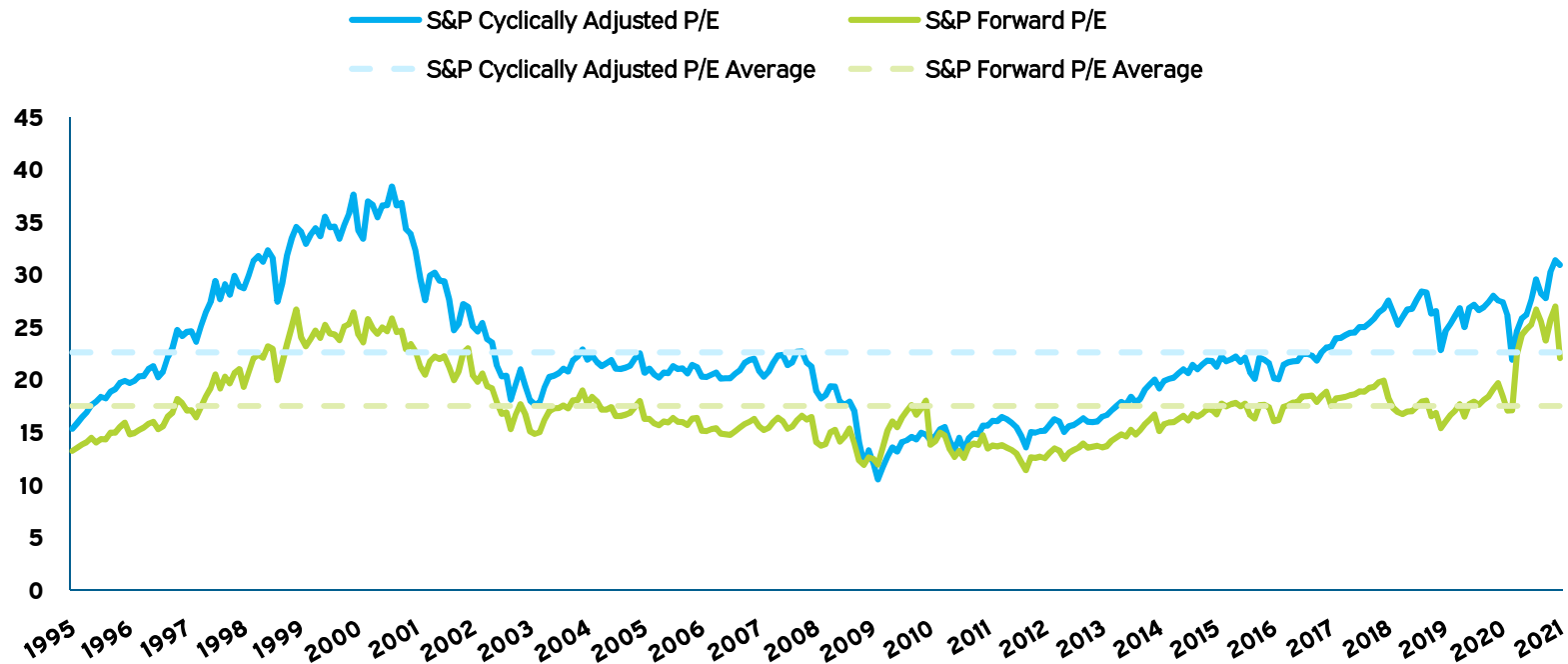
<sup>1</sup> Source: InvestorForce and Bloomberg. Data is as of January 31, 2021.



- Given the anticipated economic disruption surrounding the pandemic, US stocks declined from a February peak into bear market (-20%) territory at the fastest pace in history.
- From the February 19 peak, the S&P 500 plunged 34% in just 24 trading days.
- After quickly rebounding from its lows and finishing above pre-COVID levels by August, the market is now over 60% above the March 2020 low.
- A key risk going forward remains that a spike in COVID-19 cases could slow, or reverse, reopening plans. The distribution process of the vaccine and people's willingness to take it will be important as well.

<sup>1</sup> Source: Bloomberg. Data is as of January 31, 2021.

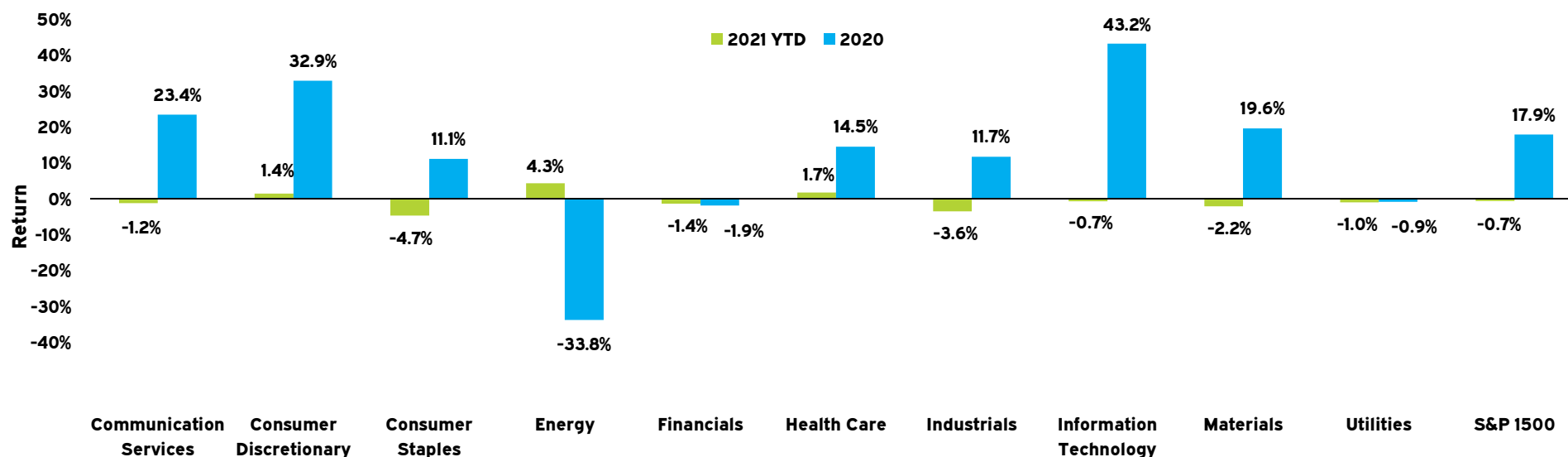
### S&P Equity Valuations<sup>1</sup>



- With positive developments regarding COVID-19 vaccines, valuations based on both forward- and backward-looking earnings rose to levels not seen since 2001.
- Many are looking to expected improvements in earnings growth, as the US economy continues to reopen, to justify market levels, with low interest rates also providing support.

<sup>1</sup> Source: Bloomberg. Data is as of January 31, 2021.

### Sector Returns<sup>1</sup>

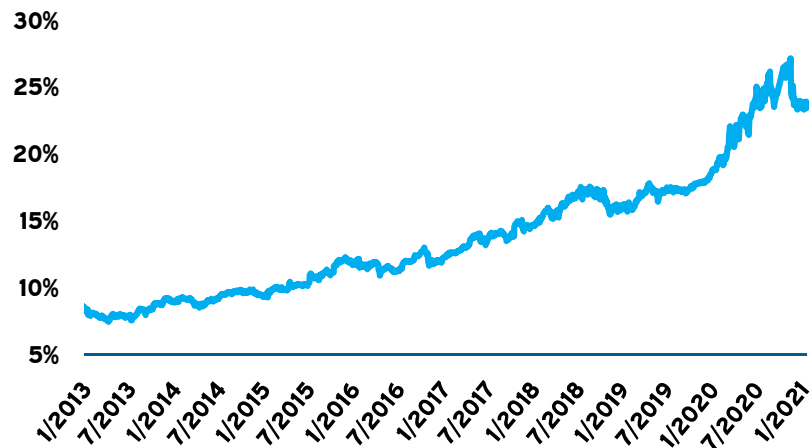


- With the recent development of multiple vaccines, there have been signs of a rotation into more cyclical stocks, but stay-at-home focused companies were clearly the best performers in 2020.
- Information technology has been the best performing sector since the onset of the crisis, with a narrow group of companies including Amazon and Netflix driving market gains. The outperformance was due to consumers moving to online purchases and streaming services.
- The consumer discretionary sector also experienced gains as the economy reopened, people returned to work, and stimulus checks were spent.
- Energy was the top performer in January, supported by record low active rig counts, Saudi Arabia's reductions in output, and expectations of rising demand later in 2021.

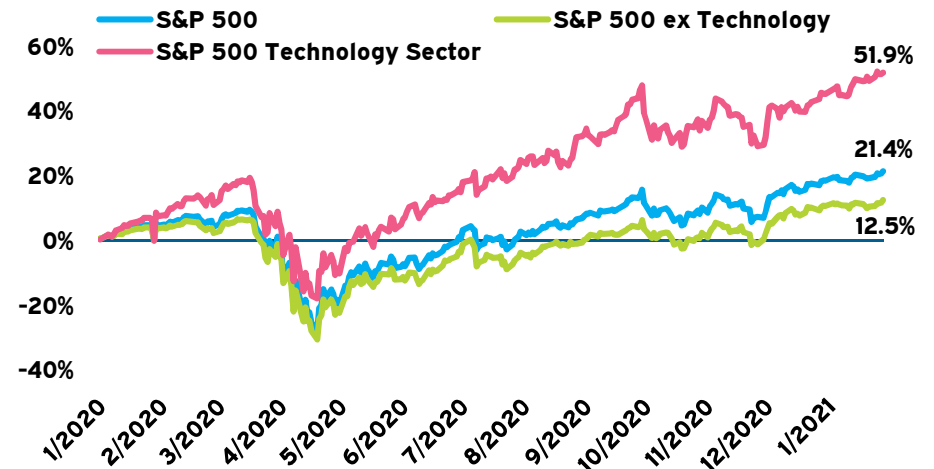
<sup>1</sup> Source: Bloomberg. Data is as of January 31, 2021.

### Technology has led the way in the Rebound

FAANG+M Share of S&P 500<sup>1</sup>



Returns from Start of 2020 through January 31 2021<sup>2</sup>

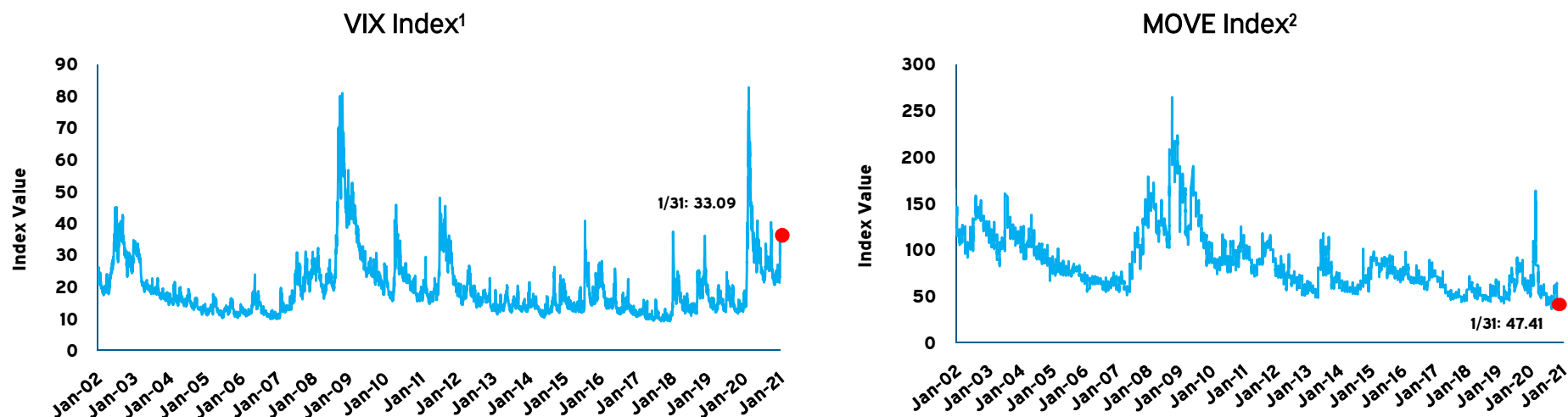


- The market recovery has largely been driven by a few technology companies that benefit from the stay-at-home environment related to the virus.
- Since the start of 2020, the S&P 500 technology sector returned +51.9%, compared to +12.5% for the S&P 500 ex-technology index, with Amazon (+73.5%), Netflix (+64.5%), and Apple (+104.6%) posting especially strong results.
- The outsized relative returns of these companies caused them to comprise an increasingly large portion (23%) of the S&P 500, though this trend eased in the final months of 2020.

<sup>1</sup> FAANG+M = Facebook, Amazon, Apple, Netflix, Google (Alphabet), and Microsoft. The percentage represents the aggregate market capitalization of the 6 companies compared to the total market capitalization of the S&P 500 as of January 31, 2021.

<sup>2</sup> Each data point represents the price change relative to the 12/31/2019 starting value.

### Volatility



- Expectations of short-term equity volatility, as measured by the VIX index, increased at the end of January due to developments in the equity markets. Specifically, retail investors' increased involvement in the markets evidenced by their recent influence on certain stocks with high short interest caused concerns about overall market stability.
- Expectations of volatility within fixed income, as represented by the MOVE index, also spiked earlier in 2020, then dropped to historic lows, helped by the broad level of monetary support and forward guidance by the Fed.

<sup>1</sup> Source: Chicago Board of Exchange. Data is as of January 31, 2021.

<sup>2</sup> Source: Bloomberg. Data is as of January 31, 2021.

## Key Elements of the Next Round of US Fiscal Stimulus

Joint Proposal	
Status	Tentative (House to vote late February, then sent to Senate; Expected to pass via Reconciliation Process )
Direct Payments	Up to \$1,400 per eligible recipient
Enhanced Unemployment	\$400 per week through September
State & Local Aid	\$370 billion
Vaccines, testing and tracing	\$160 billion
School aid/Education Grants	\$170 billion
Health Insurance Support	\$100 billion
Transportation	\$20 billion
Food / Agriculture aid	\$26 billion
Rental Assistance	\$35 billion
Small Business Assistance	\$50 billion
Total	\$1.90 trillion

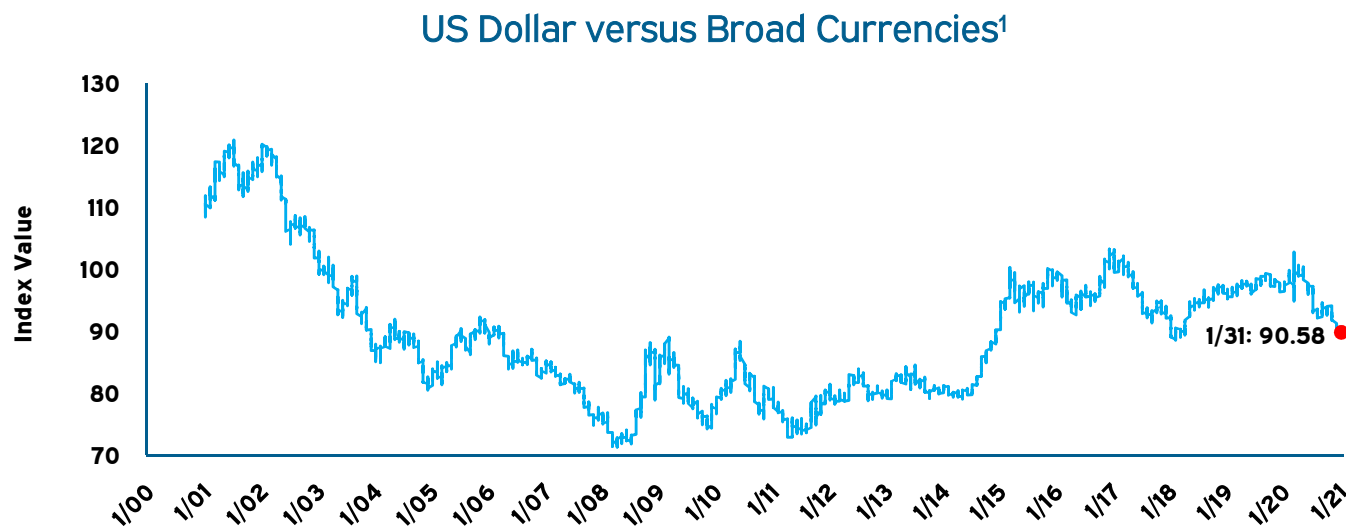
- A fiscal stimulus totaling ~\$900 billion, representing the second largest package in history, was finalized in late December 2020.
- An additional \$1.9 trillion in stimulus was proposed by the Biden administration in mid-January 2021. The package includes additional direct payments, enhanced unemployment benefits, a \$15 minimum wage, extending further the eviction moratorium, and state and local aid.



## Election Results Lead to a Narrowly Democratic Majority

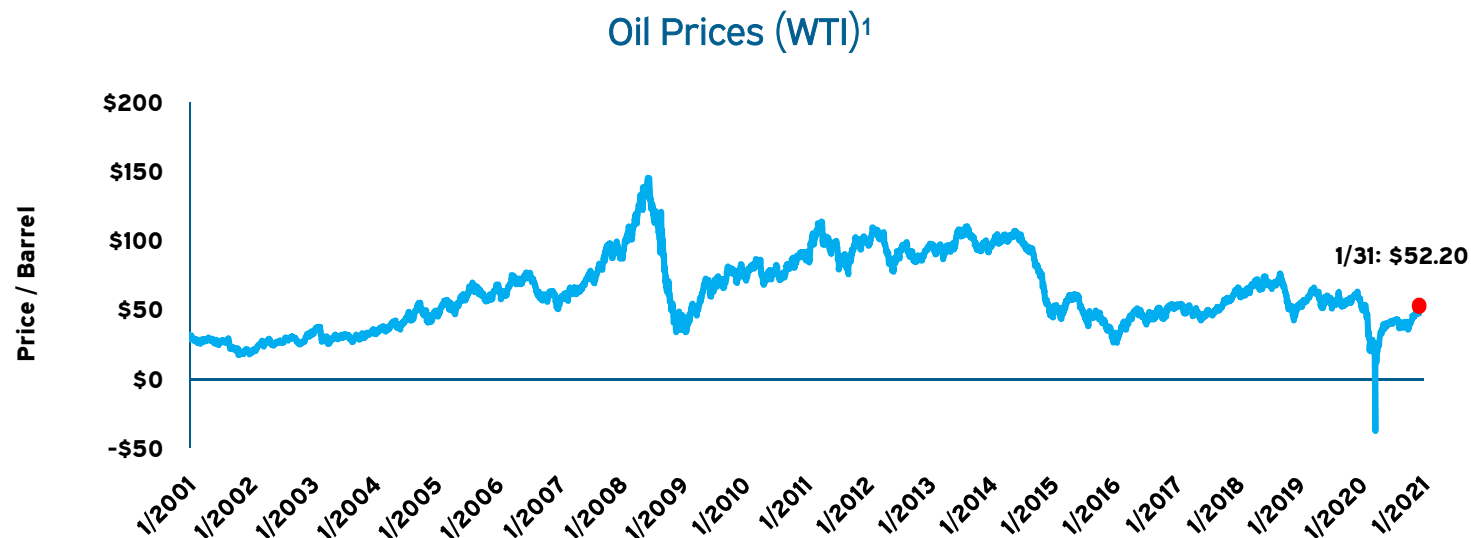
Result		Change from Previous	Potential Implications
Presidency	<ul style="list-style-type: none"> <li>Democratic victory.</li> </ul>	<ul style="list-style-type: none"> <li>Donald Trump, Republican, left office January 20th.</li> </ul>	<ul style="list-style-type: none"> <li>Day one executive actions announced to set new 12 person COVID-19 task force, rejoin the WHO, repeal Muslim travel ban, reinstate DACA program, and rejoin Paris climate accord.</li> <li>Biden listed other priorities on the campaign trail that include addressing systemic racism, climate change, and expanding protections for union employees.</li> <li>Additional plans include bills for infrastructure, trade, foreign policy, and tax increases, that all seem more likely given the results of the recent senate elections in Georgia.</li> </ul>
Senate	<ul style="list-style-type: none"> <li>50 seats for the Democrats.</li> <li>50 seats for the Republicans.</li> </ul>	<ul style="list-style-type: none"> <li>Democrats picked up 4 seats.</li> <li>Democrats won an unlikely, double run-off election in Georgia, and obtained an effective majority with Vice President Harris casting the tiebreaking vote.</li> </ul>	<ul style="list-style-type: none"> <li>Biden's agenda is particularly impacted by a united Senate and Congress in a few key areas, namely the next round of fiscal stimulus (greater amount), cabinet appointments (more liberal), tax reform (more rollbacks of Trump cuts), and infrastructure spending (more green, higher in amount).</li> </ul>
House	<ul style="list-style-type: none"> <li>Democratic majority maintained.</li> <li>As of January 13th 222 seats for Democrats, 211 seats for Republicans, and 2 undecided.</li> </ul>	<ul style="list-style-type: none"> <li>Heading into the November 3, 2020, election, Democrats held a 232-197 advantage in the US House. Libertarians held one seat, and five seats were vacant.</li> </ul>	<ul style="list-style-type: none"> <li>While the Democrats maintained their majority and therefore control of the agenda, Republicans gained ground, setting up a battle for the midterms in 2022.</li> <li>Nancy Pelosi remains Speaker of the House.</li> </ul>

- After much turmoil, including a storming of the US Capitol, Joe Biden was confirmed by Congress as the winner of the presidential election.
- Vice President Kamala Harris has the power of the deciding vote in the US Senate where Democrats won the two run-off elections in Georgia, resulting in a divided Senate.
- The Democratic majority sets the stage for a more liberal agenda with a higher likelihood of a large fiscal stimulus package in the coming months.



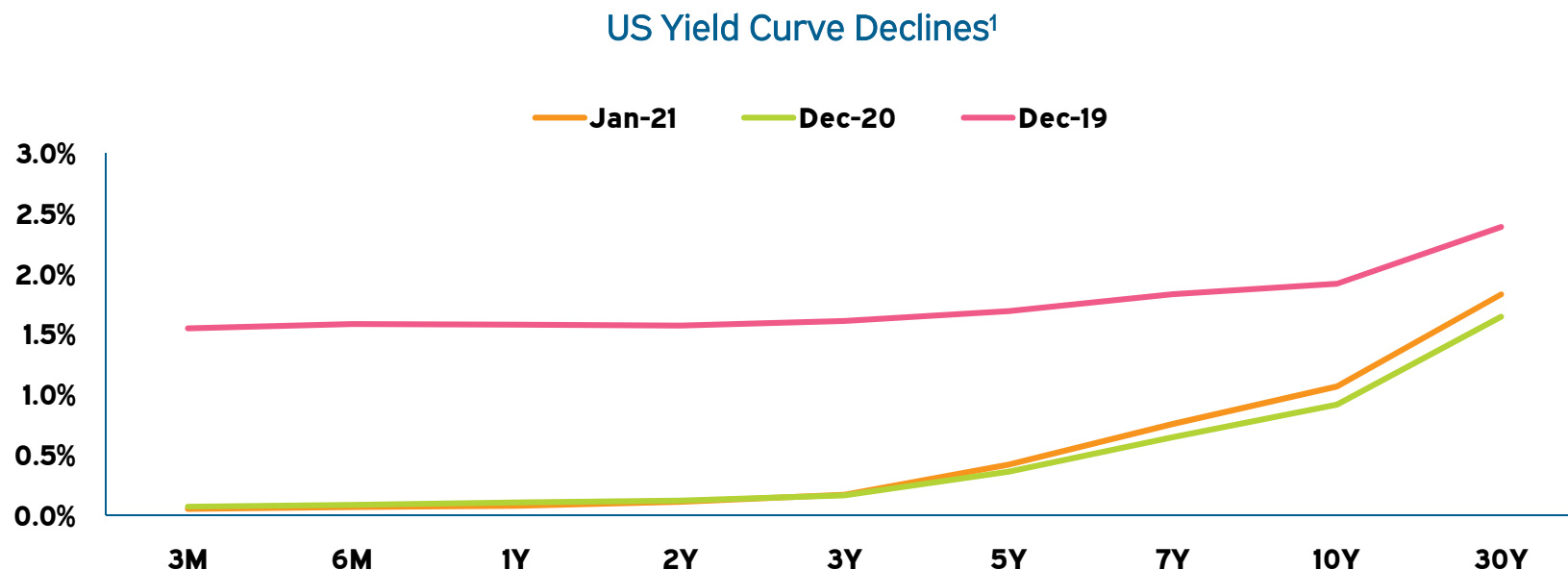
- As the crisis grew into a pandemic, investors' preferences shifted to holding US dollars and highly liquid, short-term securities like US Treasury bills.
- However, the dollar has weakened over the last few quarters as the US struggled with containing the virus and investors sought higher growth non-US assets, particularly in emerging markets. This has created pressures on already stressed export-focused countries, particularly in Europe, as their goods become relatively more expensive for US consumers.
- Going forward, the dollar's safe haven quality and the relatively higher rates in the US could provide support.

<sup>1</sup> Source: Bloomberg. Represents the DXY Index. Data is as of January 31, 2021.



- Global oil prices rallied from April 2020 lows and in January returned to around pre-pandemic levels.
- In a surprise early January announcement, Saudi Arabia agreed to cut oil production by 1 million barrels/day in February and March. Other OPEC+ countries will continue production at current levels, with the exception of Russia and Kazakhstan, which will slightly increase output.
- Looking forward, global economies slowly reopening in 2021, a weaker US dollar, and production cuts should be supportive for prices. However, oil could experience renewed downward pressure in the short-term, as the new variant of the virus and the slow rollout of the vaccine potentially weigh on demand. Shale producers increasing production going forward could also cap price increases.

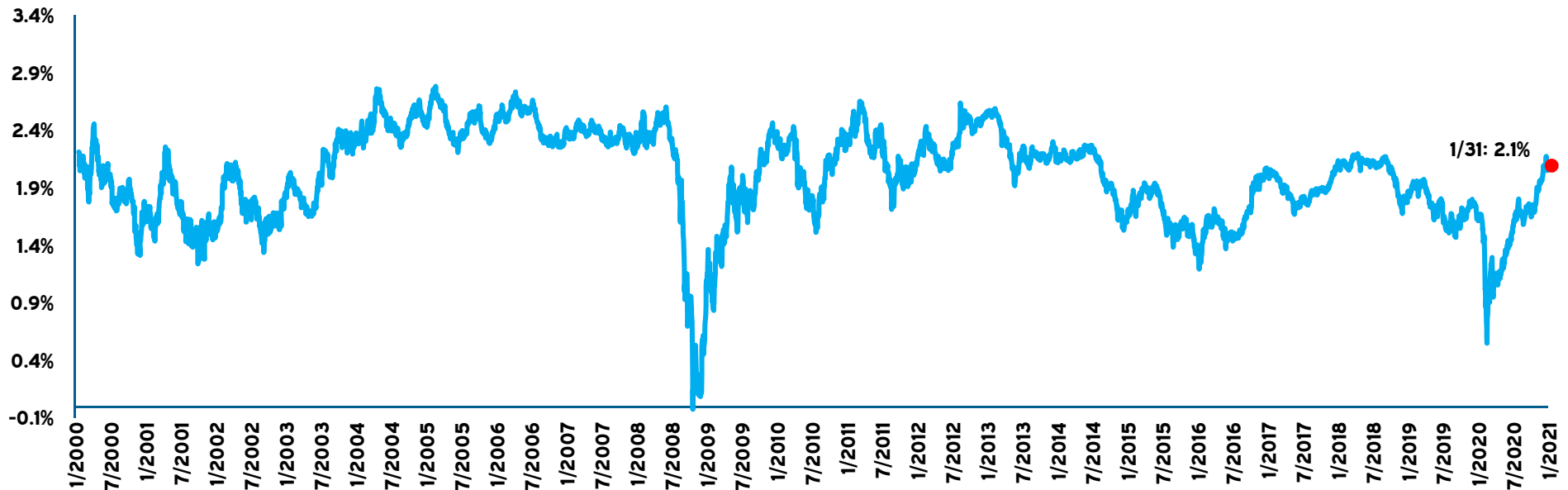
<sup>1</sup> Source: Bloomberg. Represents WTI first available futures contract. Data is as of January 31, 2021.



- The US Treasury yield curve declined materially during 2020, driven by safe-haven demand, Federal Reserve policies (policy rate cuts and the quantitative easing program), and weak US economic fundamentals.
- The curve steepened in January on gradual signs of economic improvement, vaccine developments, and expectations for longer-dated Treasury issuance to support additional fiscal stimulus in the coming months.
- Higher yields relative to other countries and the Fed potentially extending the duration of their purchases could counterbalance steepening trends, but the risk remains that the yield curve could continue to steepen if inflationary pressures build.

<sup>1</sup> Source: Bloomberg. Data is as of January 31, 2021.

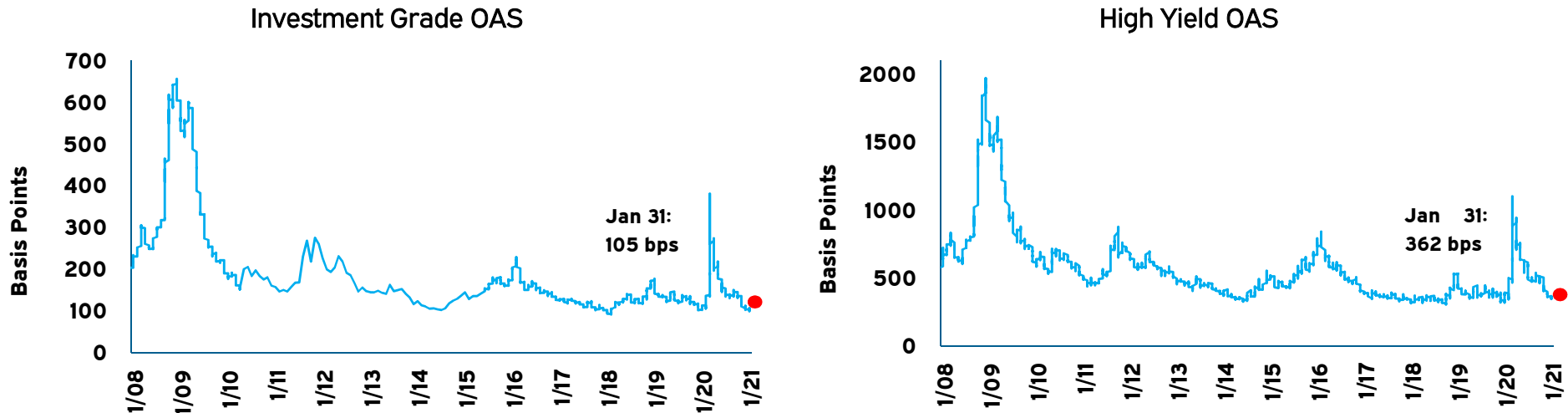
### 10-Year Breakeven Inflation<sup>1</sup>



- Inflation breakeven rates initially declined sharply, due to a combination of lower growth and inflation expectations, as well as liquidity dynamics in TIPS during the height of market volatility.
- Liquidity eventually improved and breakeven rates increased as deflationary concerns moderated. Recently, inflation expectations continued to increase reaching the long-term average given the vaccine announcements and expected additional fiscal stimulus.
- Looking forward, the track of economic growth and the inflationary effects of the unprecedented US fiscal response will be key issues. Additionally, changes to Fed policy which will allow for greater future inflation will also likely impact inflation market dynamics.

<sup>1</sup> Source: Bloomberg. Data is as of January 31, 2021.

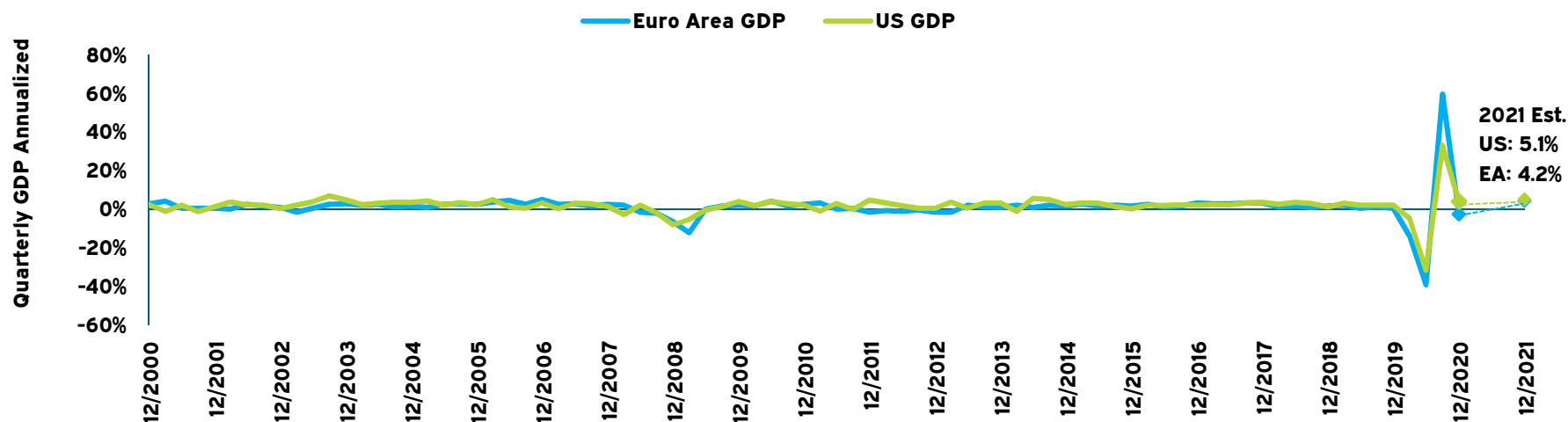
### Credit Spreads (High Yield & Investment Grade)<sup>1</sup>



- Credit spreads (the spread above a comparable Treasury) for investment grade and high yield corporate debt widened sharply at the start of the pandemic as investors sought safety.
- Investment grade bonds held up better than high yield bonds. The Federal Reserve's corporate debt purchase program for investment grade and certain high yield securities recently downgraded from investment grade, was well received by investors. The policy support and the search for yield in the low rate environment led to a decline in spreads to below long-term averages, particularly for high yield.
- Overall, corporate debt issuance across both investment grade and high yield sectors broke records in 2020. For January, issuance across both sectors was again greater than what was experienced prior to the pandemic.

<sup>1</sup> Source: Bloomberg. High Yield represents US Corporate High Yield average OAS. Investment grade represents liquid investment grade corporate average OAS. Data is as of January 31, 2021.

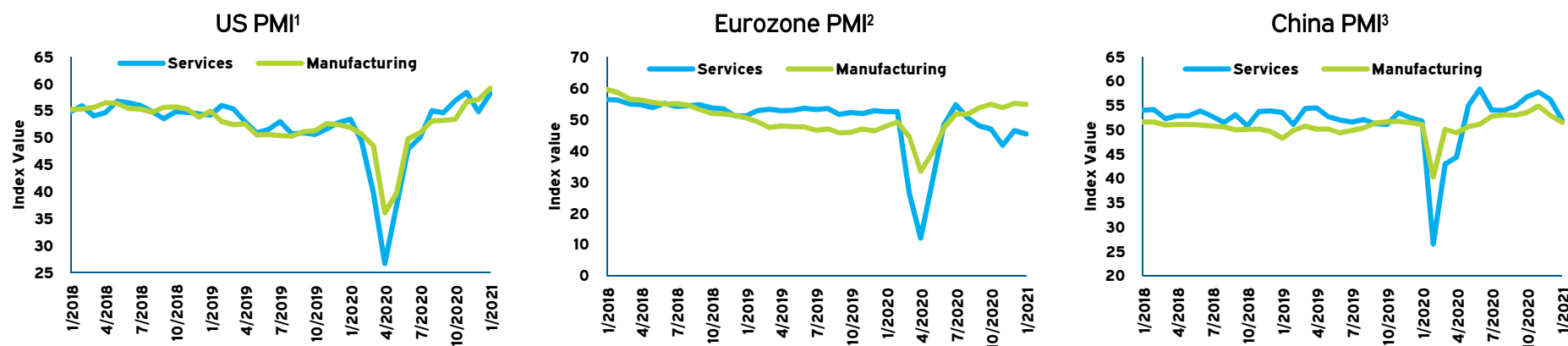
### GDP Data Shows Impact of the Pandemic<sup>1</sup>



- The global economy faced major recessionary pressures last year, but optimism remains for improvements in 2021, as economies are expected to gradually reopen despite the recent spike in virus cases.
- Historic declines in US and European growth during the second quarter were followed by record increases in the third quarter, due to pent-up demand from the lockdown measures earlier in the year.
- Fourth quarter US GDP growth was 4.0% (QoQ annualized). Full year US GDP growth declined 2.5%, better than the forecasted decline of 3.4% by the IMF.
- In the euro area, increased virus cases and a return to restrictions weighed on fourth quarter growth (-2.8% QoQ annualized). For the year, the euro area economy declined by 5.1%, worse than the US but also ahead of forecasts of a 7.2% decline.

<sup>1</sup> Source: Bloomberg, and IMF. Q4 2020 data represents the first estimate of GDP for the Euro Area and United States. Euro Area figures annualized by Meketa. Projections via January 2021 IMF World Economic Outlook and represent annual numbers.

### Global PMIs



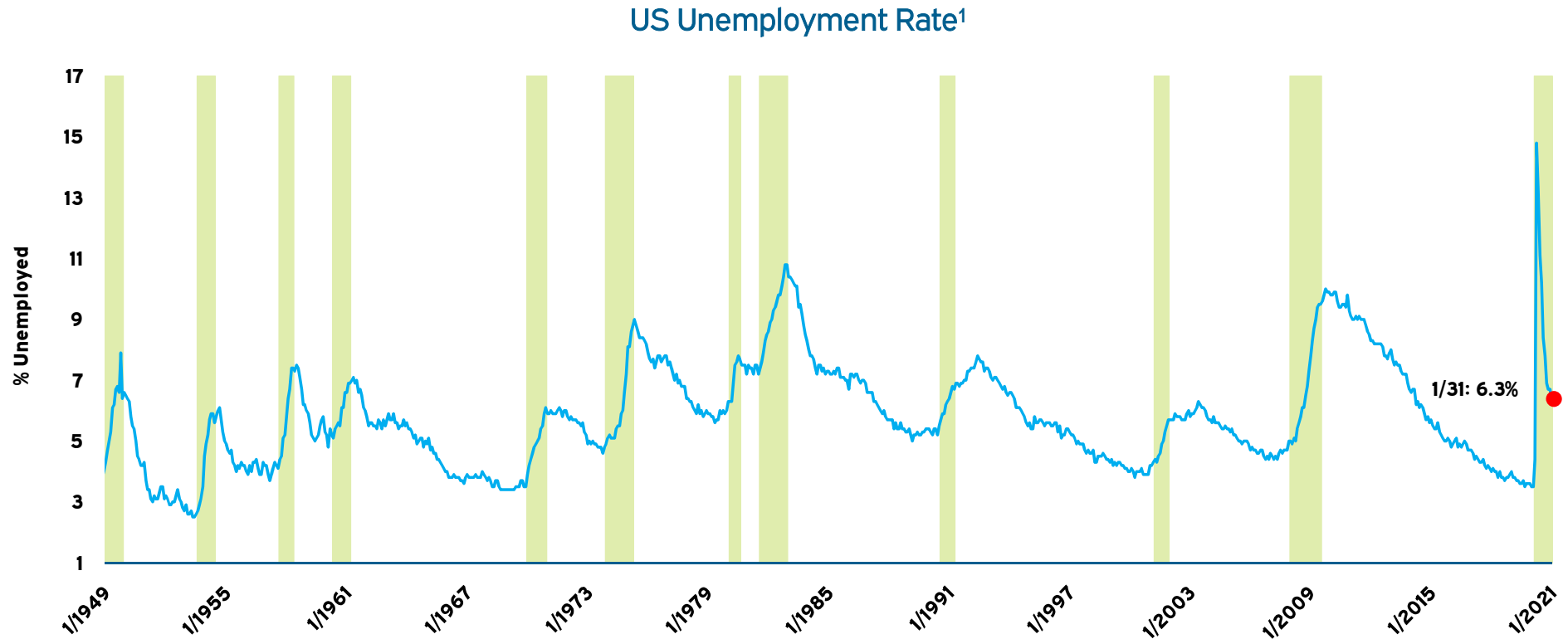
- Purchasing Managers Indices (PMI), based on surveys of private sector companies, initially collapsed across the world to record lows, as closed economies depressed output, new orders, production, and employment.
- Readings below 50 represent contractions across underlying components and are a leading indicator of economic activity, including the future paths of GDP, employment, and industrial production.
- The services sector was particularly hard hit by stay-at-home restrictions.
- After a period of underperformance, US services and manufacturing are in a period of acceleration. In Europe, service and manufacturing sectors have not yet shown acceleration. After a blockbuster return to full economic activity in the second half of 2020 the Chinese economy has stabilized in positive territory.

<sup>1</sup> Source: Bloomberg. US Markit Services and Manufacturing PMI. Data is as of January 2021.

<sup>2</sup> Source: Bloomberg. Eurozone Markit Services and Manufacturing PMI. Data is as of January 2021.

<sup>3</sup> Source: Bloomberg. Caixin Services and Manufacturing PMI. Data is as of January 2021.

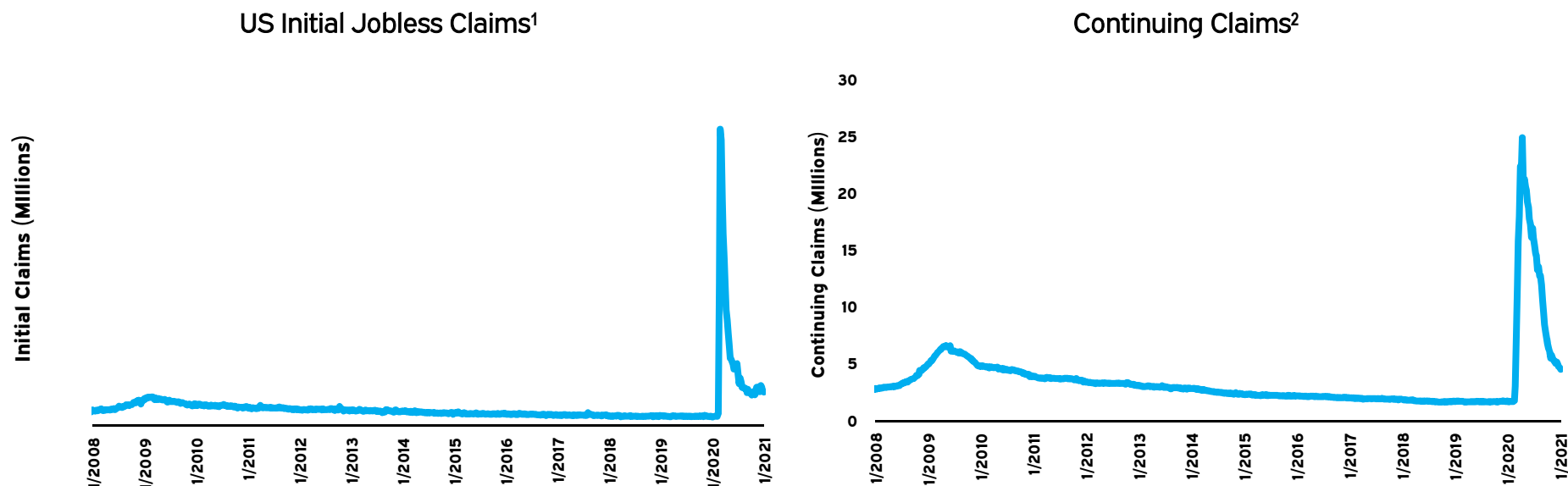




- In January, the unemployment rate continued its decline from the April 14.7% peak, falling to 6.3%.
- Despite the improvement, unemployment levels remain well above pre-virus readings and are likely higher than reported, as some workers appear misclassified. According to the Bureau of Labor Statistics, absent the misclassification issue, the January unemployment rate would be higher by 0.6%.

<sup>1</sup> Source: Bloomberg. Data is as of January 31, 2021. Bars represent recessions.

### US Jobless Claims

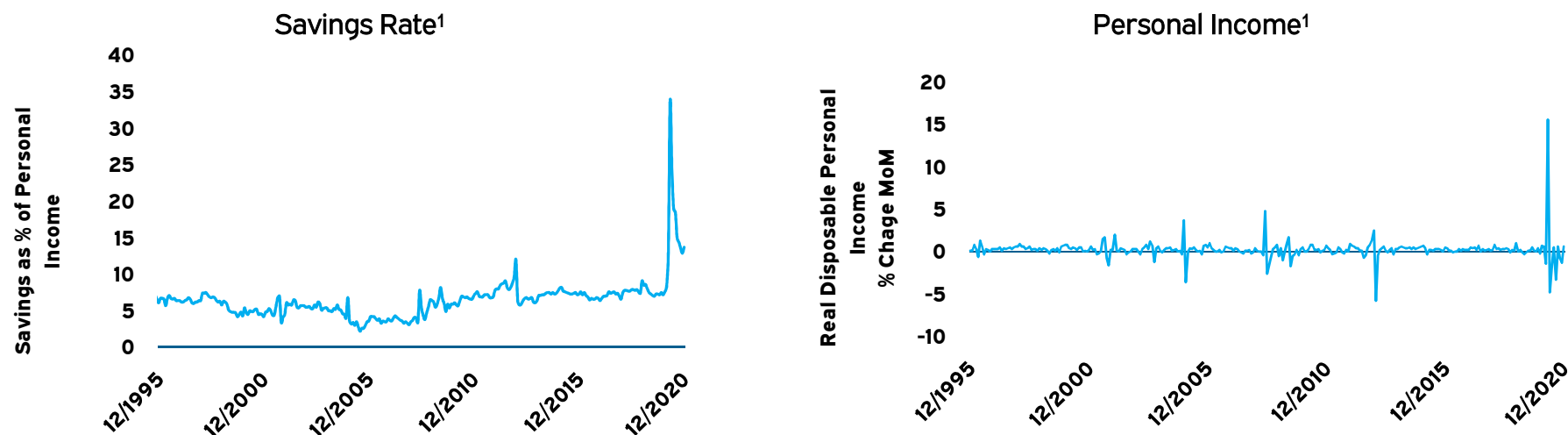


- Over the last 46 weeks, 77 million people filed for initial unemployment. This level is well over three times the 22 million jobs added since the GFC, highlighting the unprecedented impact of the virus.
- Despite the continued decline in initial jobless claims to below one million per week, levels remain many multiples above the worst reading during the Global Financial Crisis.
- Continuing jobless claims (i.e., those currently receiving benefits) have also declined from record levels, but remain elevated at 4.6 million.

<sup>1</sup> Source: Bloomberg. First reading of seasonally adjusted initial jobless claims. Data is as of January 31, 2021.

<sup>2</sup> Source: Bloomberg. US Continuing Jobless Claims SA. Data is as of January 31, 2021.

### Savings and Spending

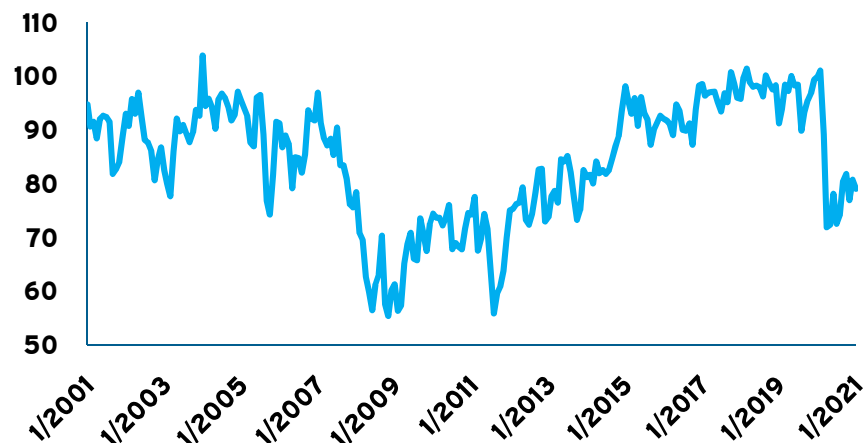


- Fiscal programs including stimulus checks, enhanced unemployment benefits, and loans to small businesses through the Paycheck Protection Program (PPP) have largely supported income levels through the shutdown. The growth in income declined dramatically as fiscal support waned.
- Despite the income support, the savings rate increased due to the decline in consumer spending, driven by the initial lock-down of the economy, and by uncertainties related to the future of the job market and stimulus programs.
- More recently, the savings rate declined from its peak as spending increased with the economy slowly reopening. Going forward, questions remain about how consumers will make use of the recently announced stimulus programs with concerns over the potential inflationary impacts.

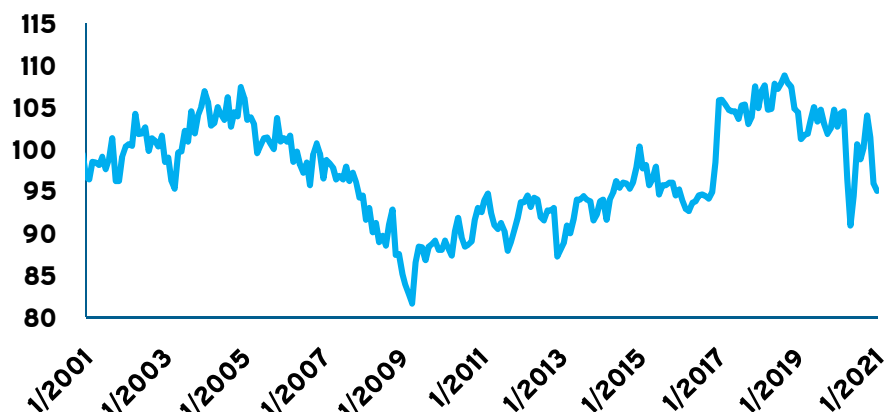
<sup>1</sup> Source: Bloomberg. Latest data is as of December 2020.

### Sentiment Indicators

University of Michigan Consumer Sentiment<sup>1</sup>



Small Business Confidence<sup>2</sup>



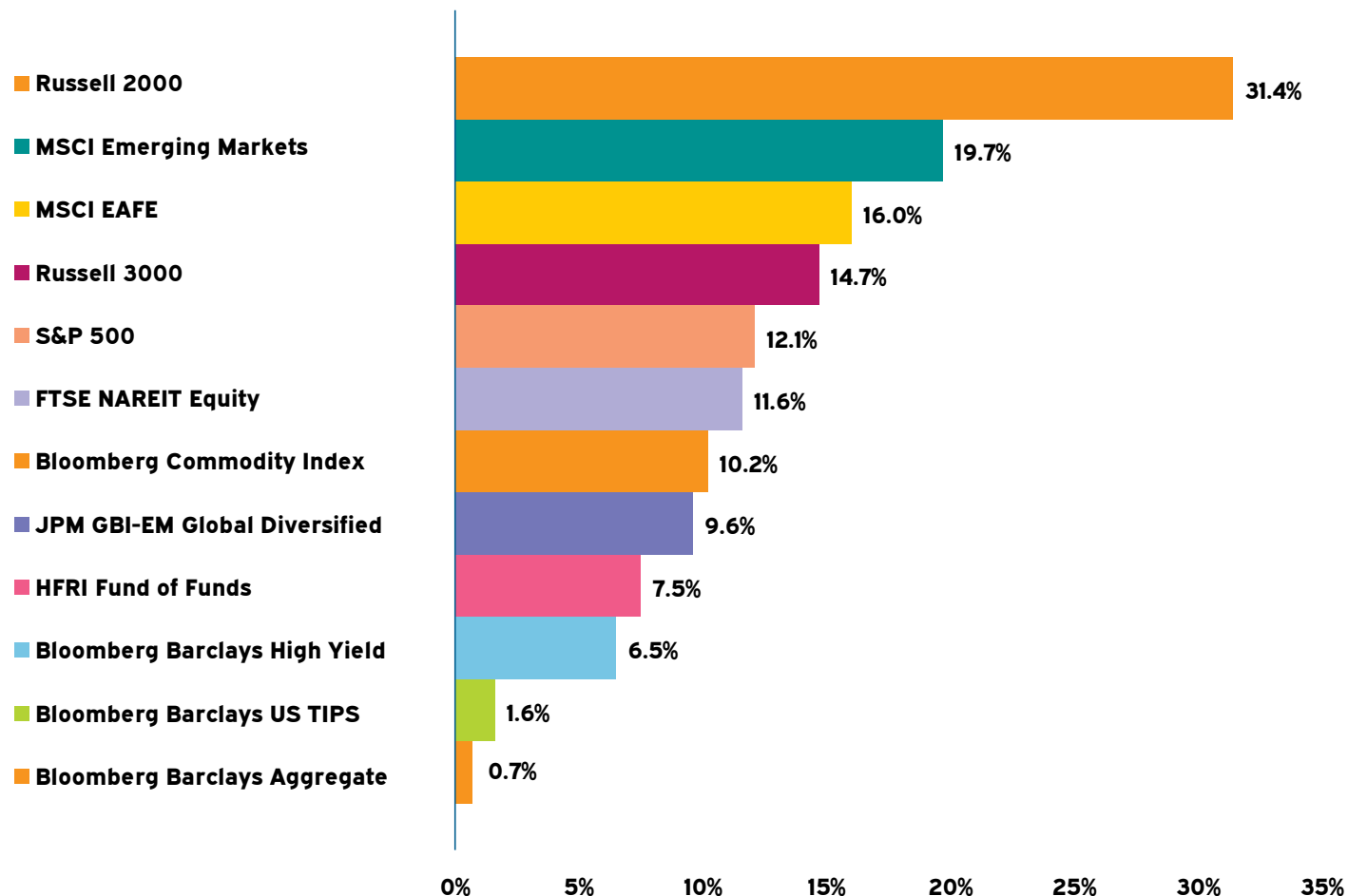
- The attitudes of businesses and consumers are useful indicators of future economic activity.
- Consumer spending comprises close to 70% of US GDP, making the attitudes of consumers an important driver of economic growth. Additionally, small businesses generate around half of US GDP, making sentiment in that segment important.
- Sentiment indicators showed improvements as the economy re-opened, particularly for small businesses. Increasing cases, including from new variants, and a slow vaccine rollout have recently weighed on short-term sentiment and could weigh on future growth.

<sup>1</sup> Source: Bloomberg. University of Michigan Consumer Sentiment Index. Data is as of January 31, 2021.

<sup>2</sup> Source: Bloomberg. NFIB Small Business Optimism Index. Latest data is as of January 31, 2021.

## **The World Markets Fourth Quarter of 2020**

### The World Markets<sup>1</sup> Fourth Quarter of 2020



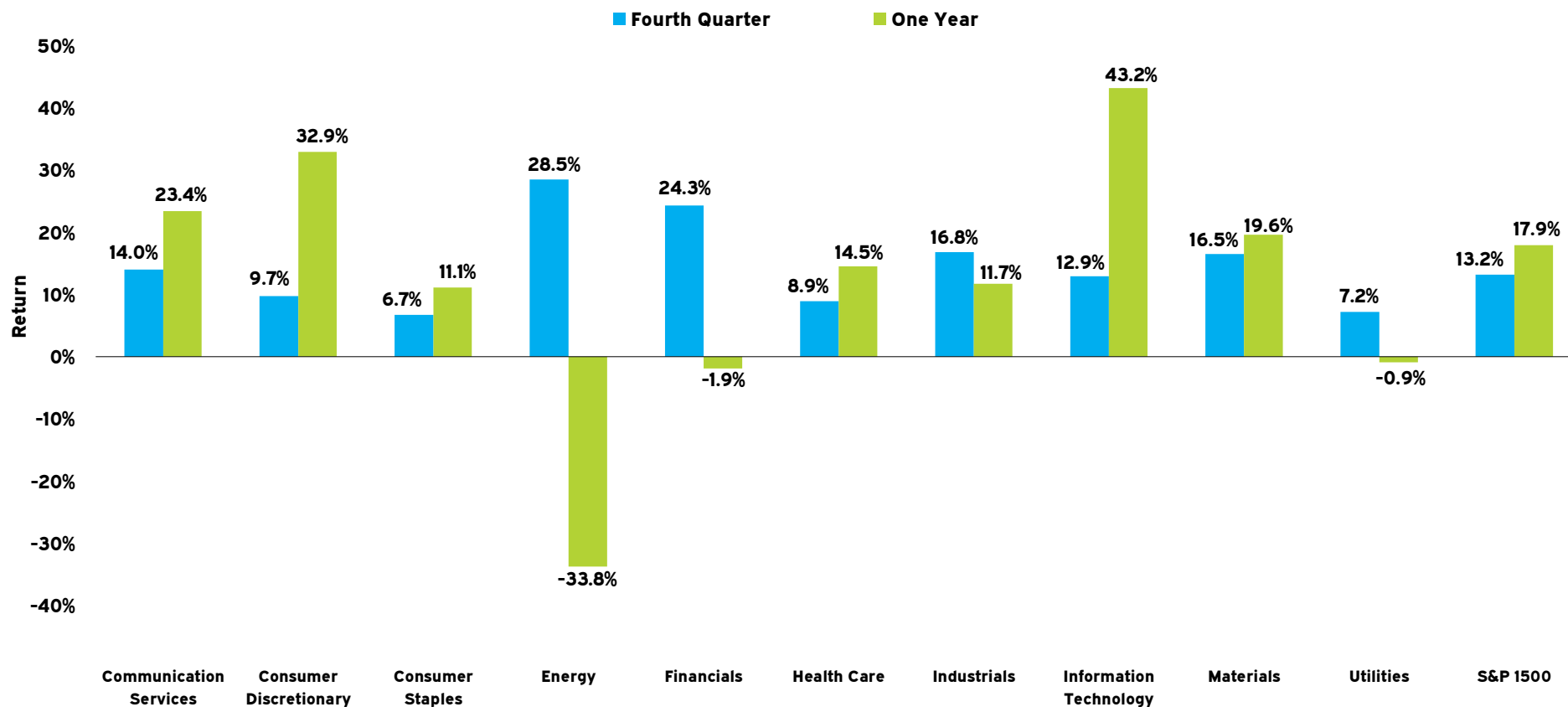
<sup>1</sup> Source: InvestorForce.

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

	4Q20 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
<b>Domestic Equity</b>					
S&P 500	12.1	18.4	14.2	15.2	13.9
Russell 3000	14.7	20.9	14.5	15.4	13.8
Russell 1000	13.7	21.0	14.8	15.6	14.0
Russell 1000 Growth	11.4	38.5	23.0	21.0	17.2
Russell 1000 Value	16.3	2.8	6.1	9.7	10.5
Russell MidCap	19.9	17.1	11.6	13.4	12.4
Russell MidCap Growth	19.0	35.6	20.5	18.7	15.0
Russell MidCap Value	20.4	5.0	5.4	9.7	10.5
Russell 2000	31.4	20.0	10.2	13.3	11.2
Russell 2000 Growth	29.6	34.6	16.2	16.4	13.5
Russell 2000 Value	33.4	4.6	3.7	9.7	8.7
<b>Foreign Equity</b>					
MSCI ACWI (ex. US)	17.0	10.7	4.9	8.9	4.9
MSCI EAFE	16.0	7.8	4.3	7.4	5.5
MSCI EAFE (Local Currency)	11.4	0.8	3.0	5.8	6.8
MSCI EAFE Small Cap	17.3	12.3	4.9	9.4	7.8
MSCI Emerging Markets	19.7	18.3	6.2	12.8	3.6
MSCI Emerging Markets (Local Currency)	16.0	19.1	8.1	12.6	6.6
<b>Fixed Income</b>					
Bloomberg Barclays Universal	1.3	7.6	5.5	4.9	4.2
Bloomberg Barclays Aggregate	0.7	7.5	5.3	4.4	3.8
Bloomberg Barclays US TIPS	1.6	11.0	5.9	5.1	3.8
Bloomberg Barclays High Yield	6.5	7.1	6.2	8.6	6.8
JPM GBI-EM Global Diversified	9.6	2.7	3.0	6.7	1.5
<b>Other</b>					
FTSE NAREIT Equity	11.6	-8.0	3.4	4.8	8.3
Bloomberg Commodity Index	10.2	-3.1	-2.5	1.0	-6.5
HFRI Fund of Funds	7.5	10.3	4.7	4.4	3.3

<sup>1</sup> Source: InvestorForce.

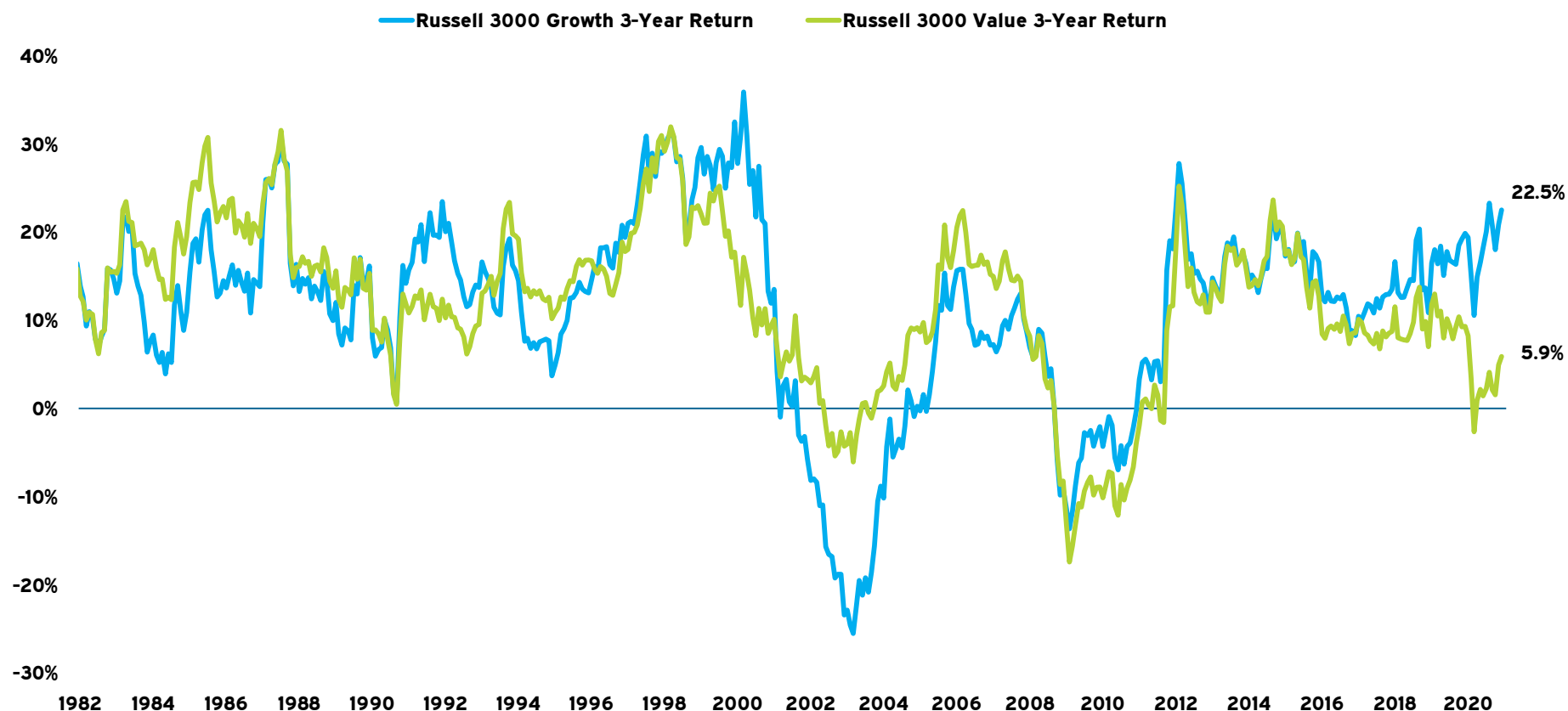
### S&P Sector Returns<sup>1</sup>



<sup>1</sup> Source: InvestorForce. Represents S&P 1500 (All Cap) data.

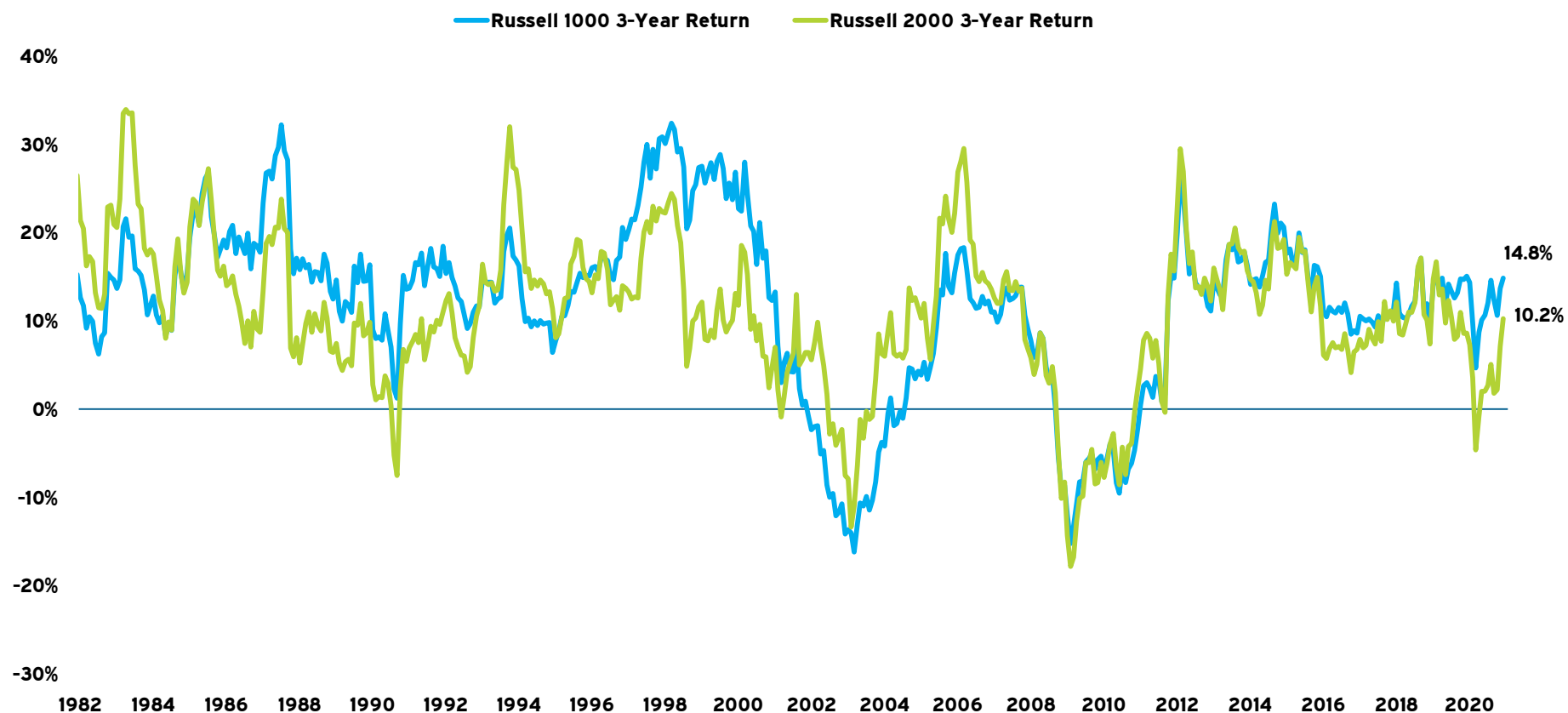


### Growth and Value Rolling Three Year Returns<sup>1</sup>



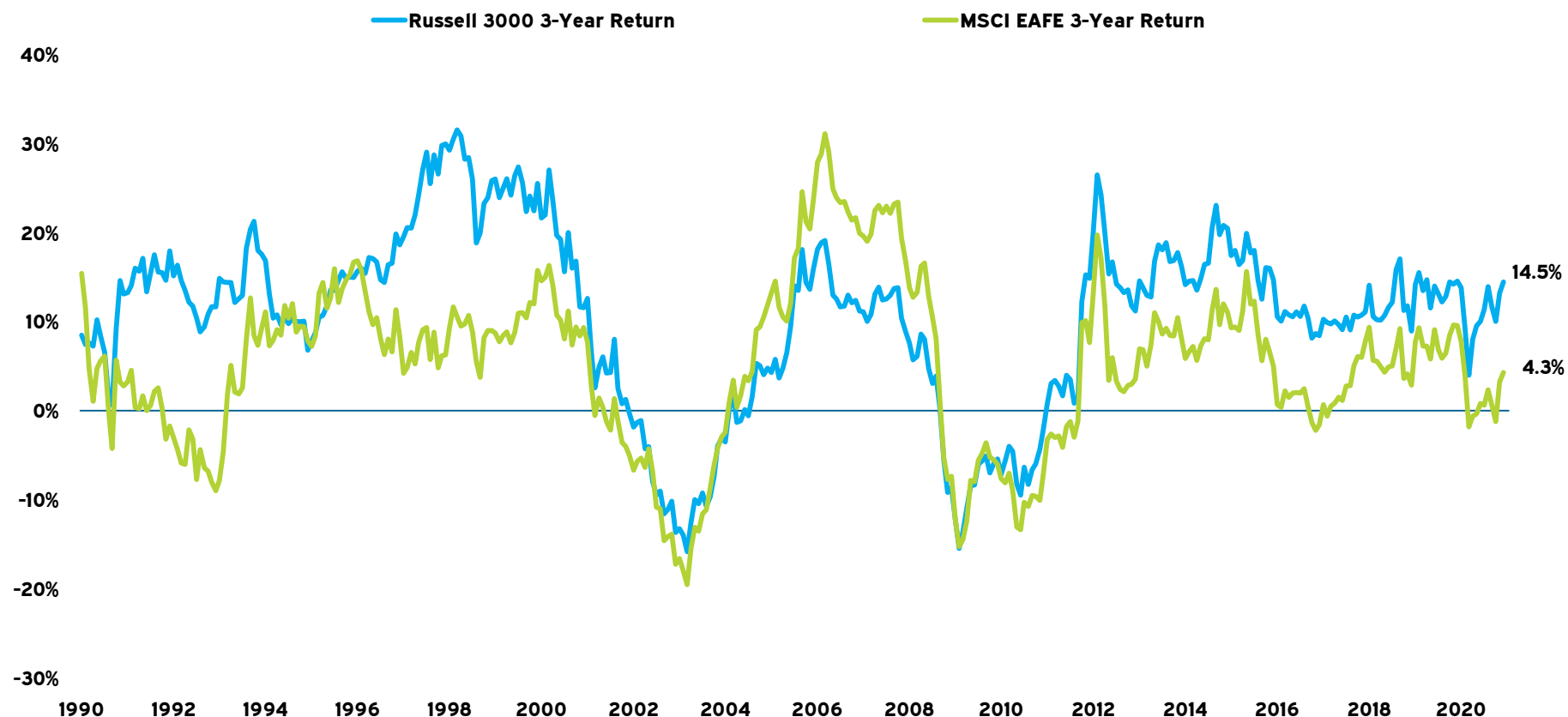
<sup>1</sup> Source: InvestorForce.

### Large Cap (Russell 1000) and Small Cap (Russell 2000) Rolling Three Year Returns<sup>1</sup>



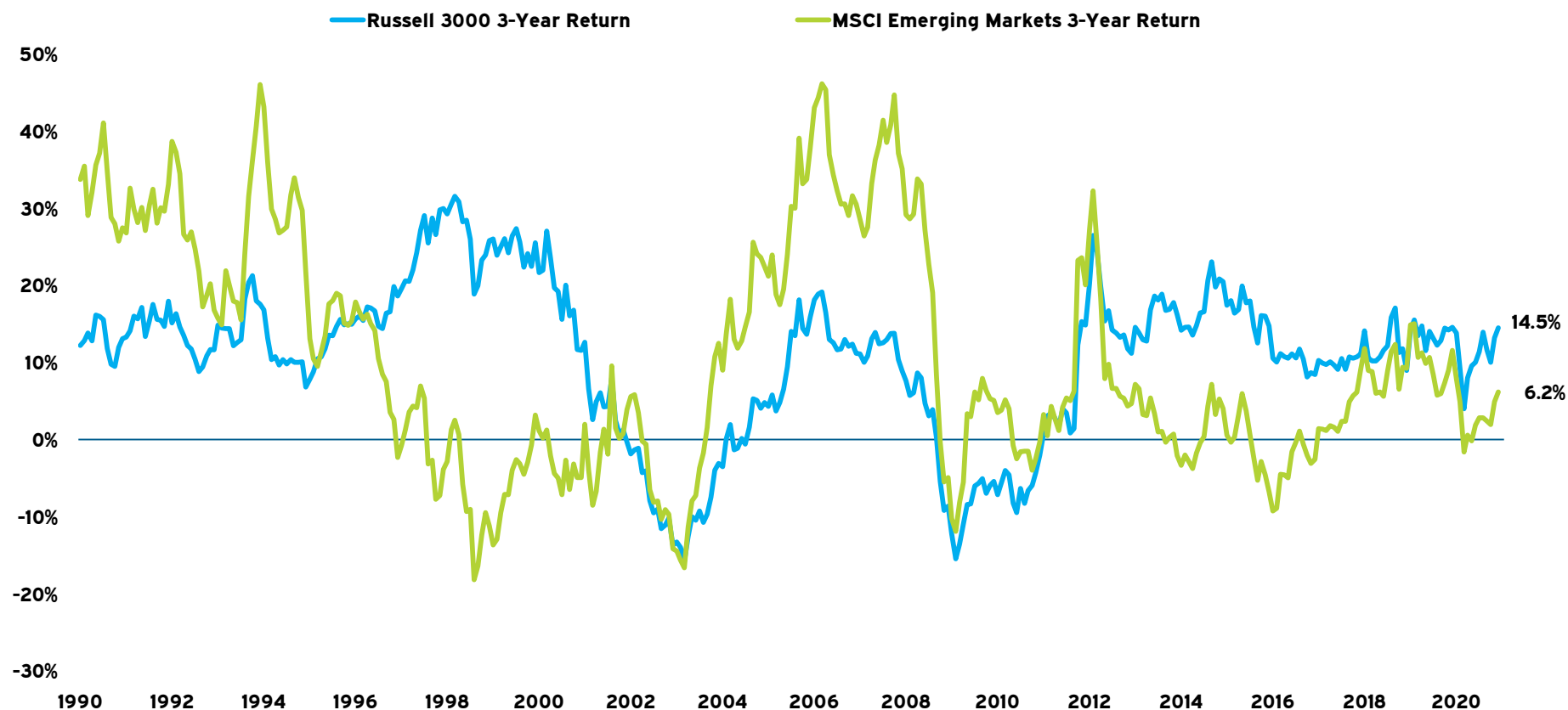
<sup>1</sup> Source: InvestorForce.

### US and Developed Market Foreign Equity Rolling Three-Year Returns<sup>1</sup>



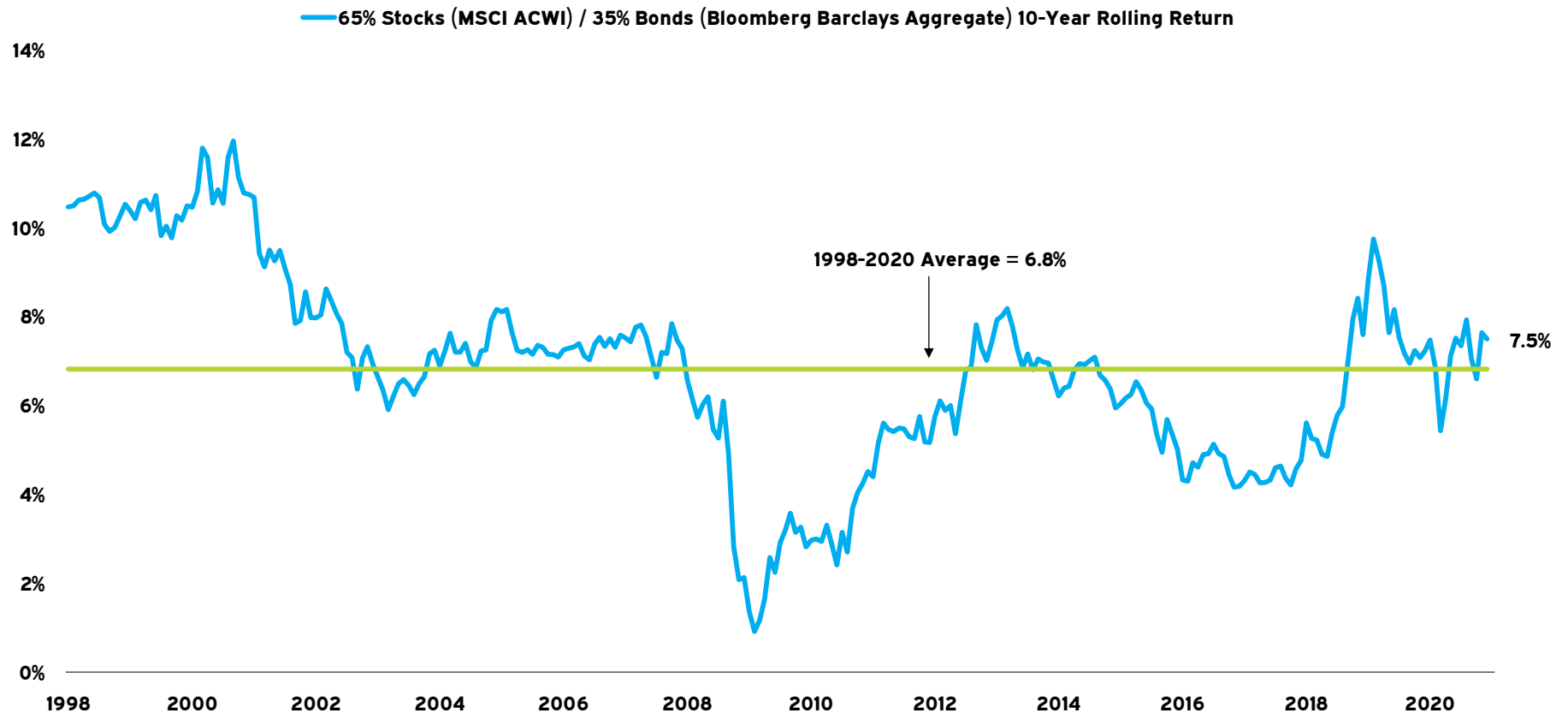
<sup>1</sup> Source: InvestorForce.

### US and Emerging Market Equity Rolling Three-Year Returns<sup>1</sup>



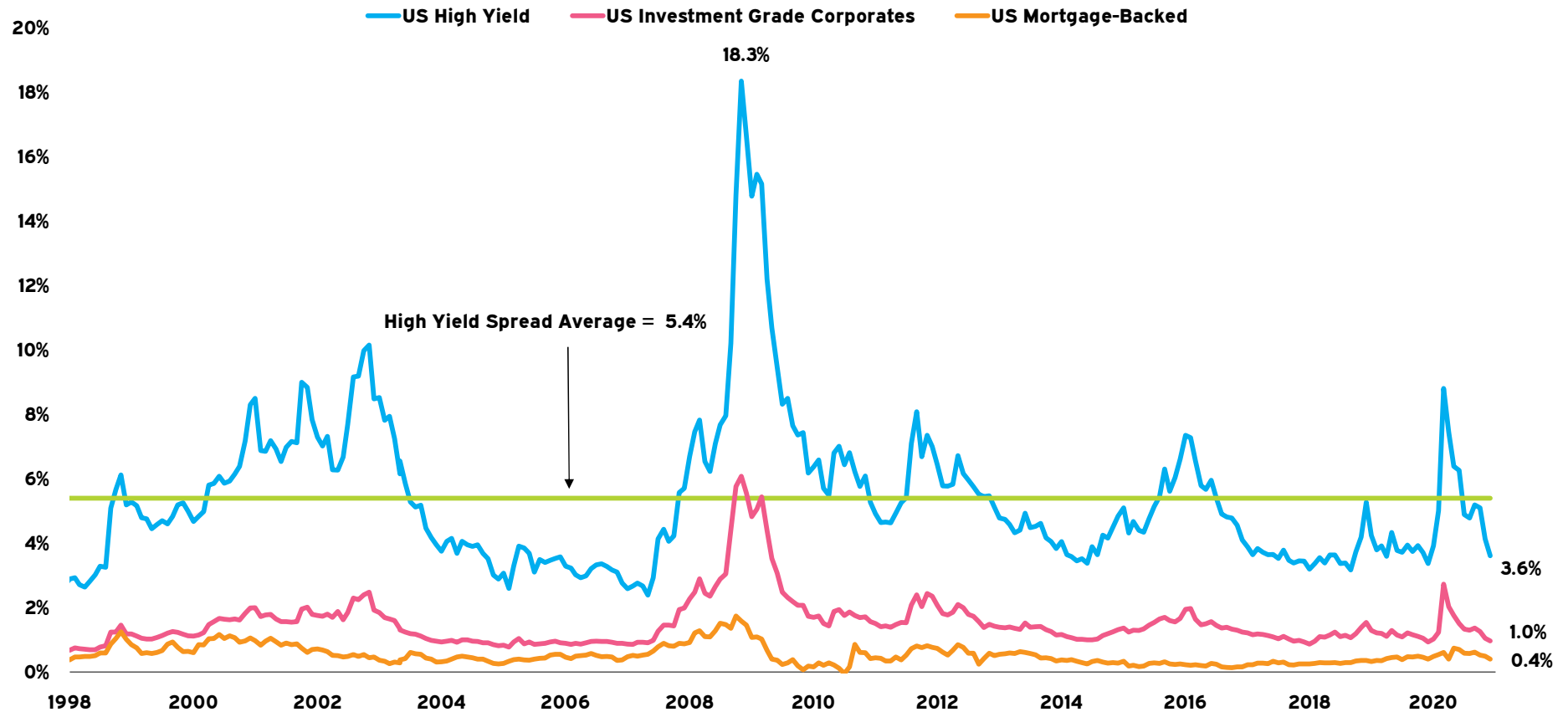
<sup>1</sup> Source: InvestorForce.

### Rolling Ten-Year Returns: 65% Stocks and 35% Bonds<sup>1</sup>



<sup>1</sup> Source: InvestorForce.

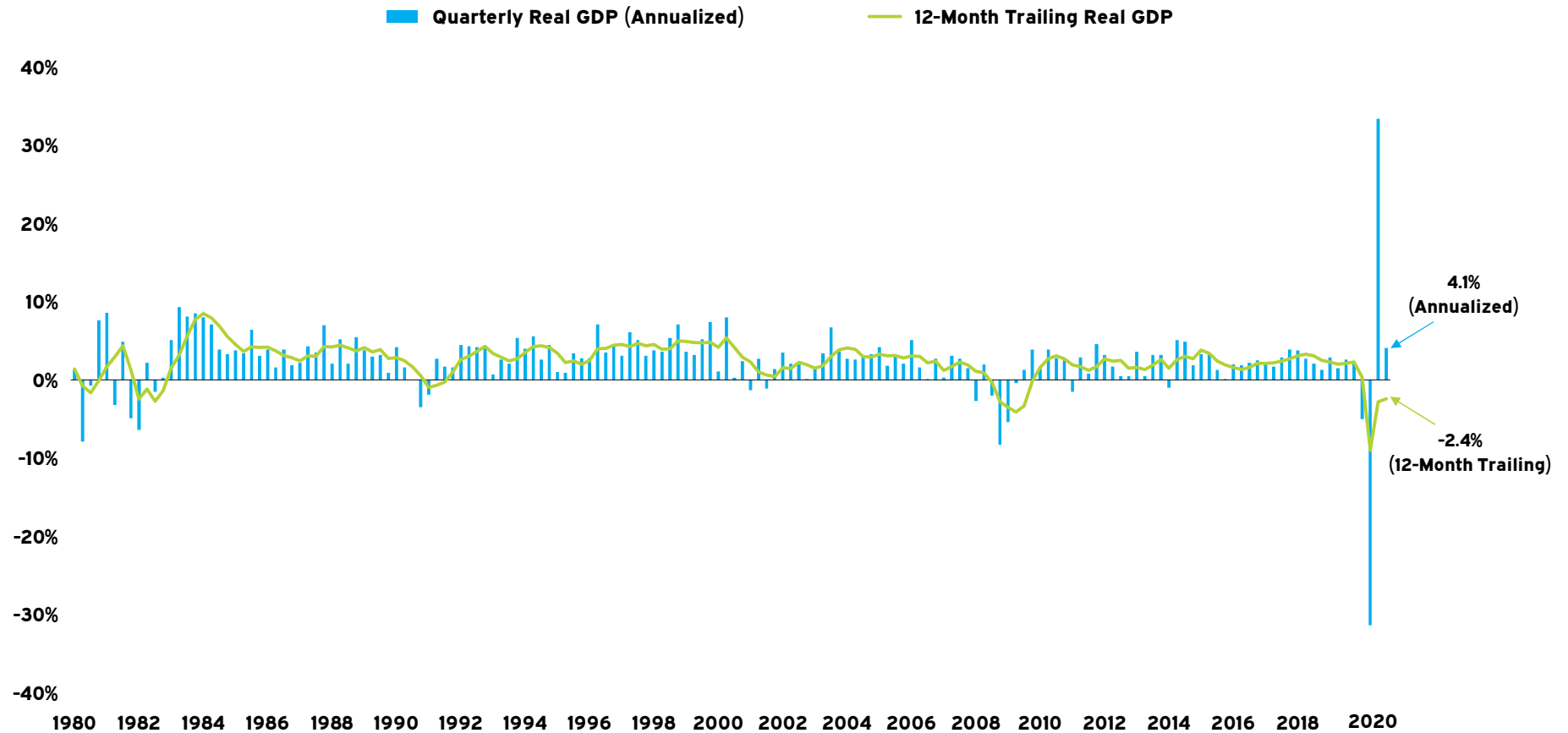
### Credit Spreads vs. US Treasury Bonds<sup>1,2</sup>



<sup>1</sup> Source: Barclays Live. Data represents the OAS.

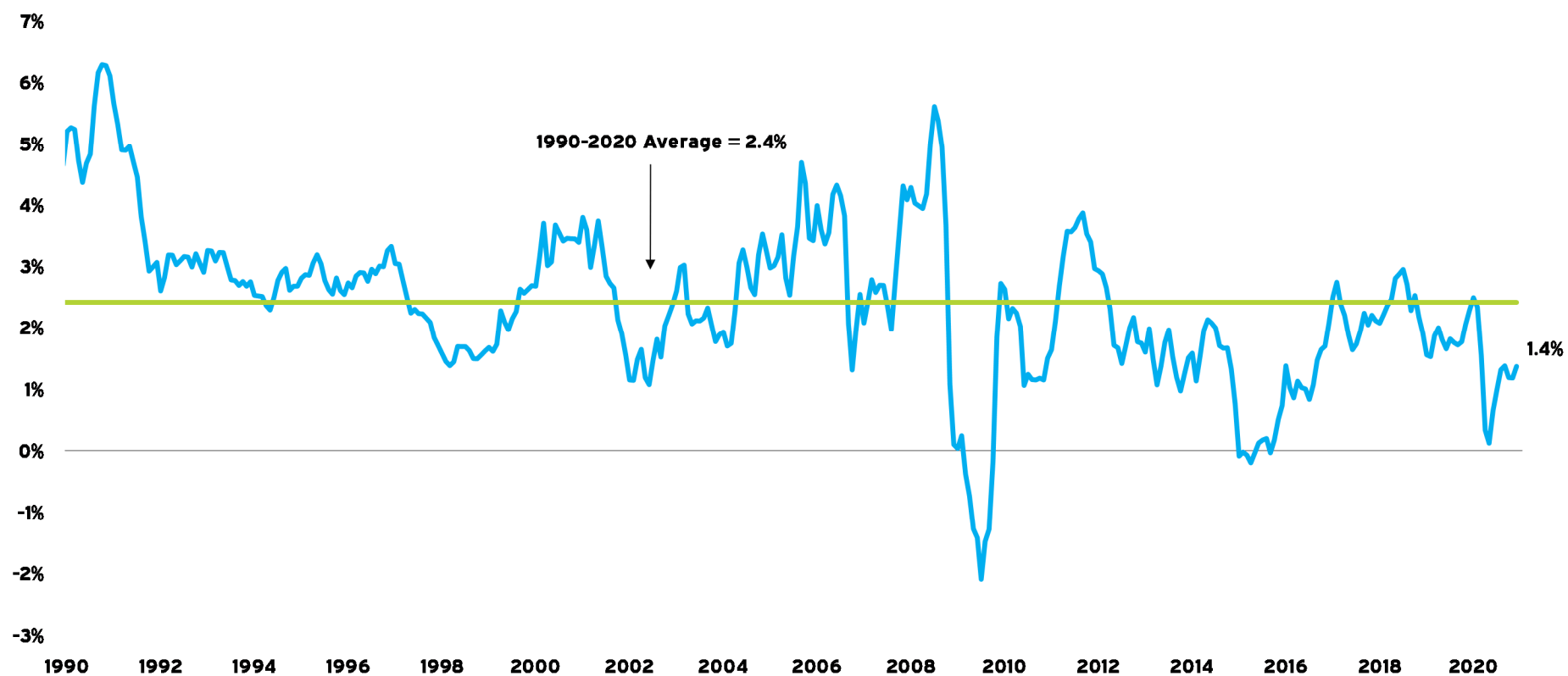
<sup>2</sup> The median high yield spread was 4.8% from 1997-2020.

## US Real Gross Domestic Product (GDP) Growth<sup>1</sup>



<sup>1</sup> Source: Bureau of Economic Analysis. Data is as of Q4 2020 and represents the second estimate.

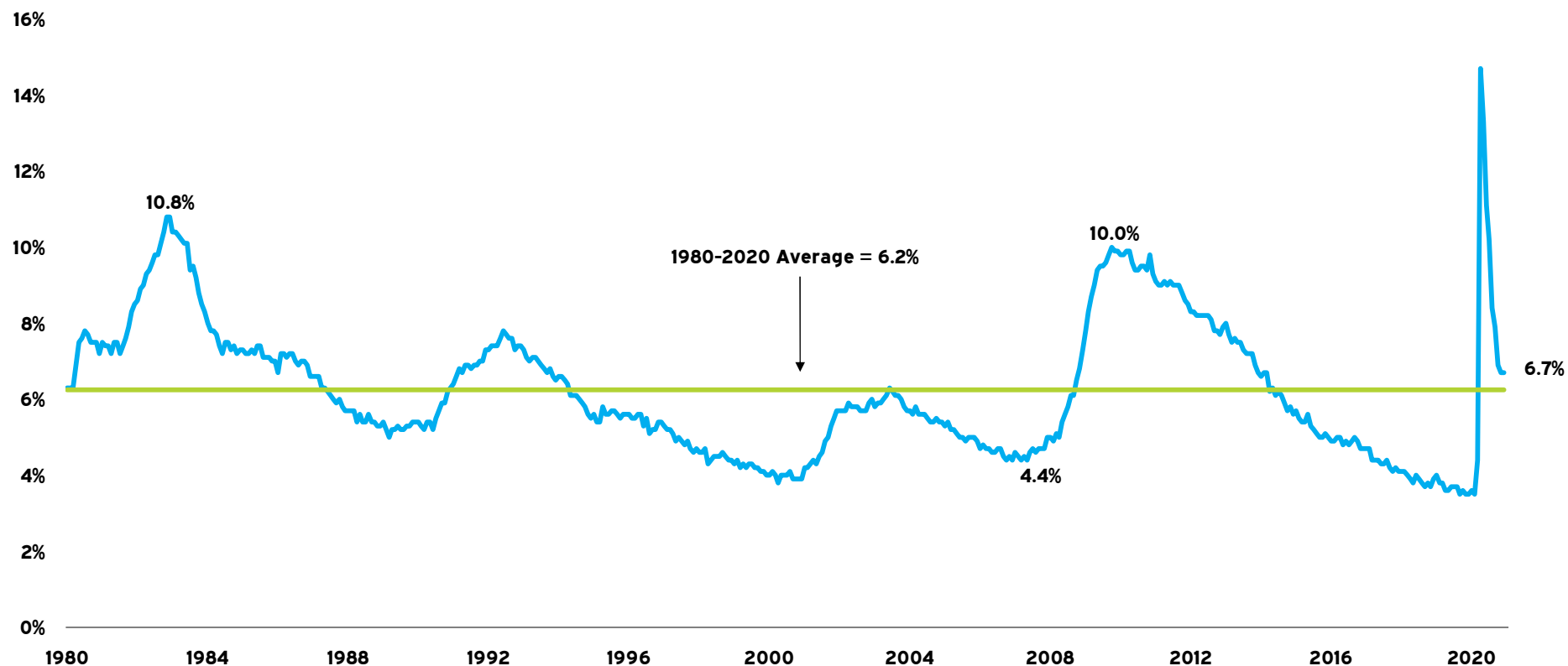
### US Inflation (CPI) Trailing Twelve Months<sup>1</sup>



<sup>1</sup> Source: Bureau of Labor Statistics. Data is non-seasonally adjusted CPI, which may be volatile in the short-term. Data is as of December 31, 2020.



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



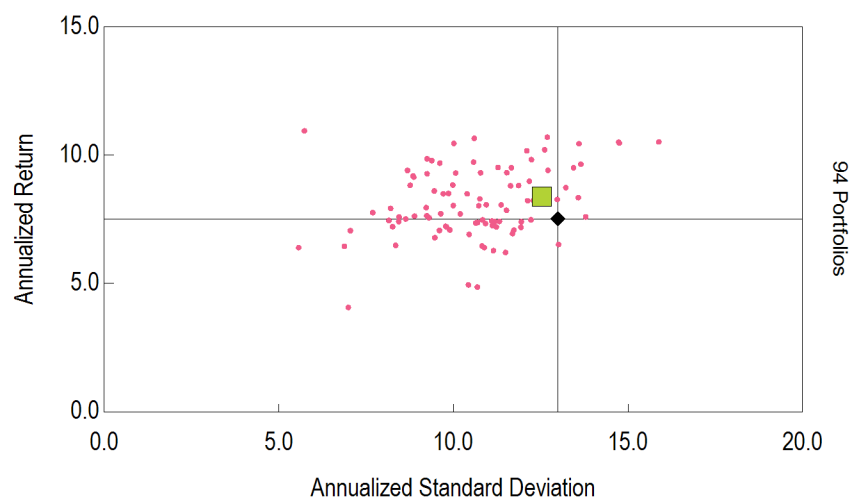
<sup>1</sup> Source: Bureau of Labor Statistics. Data is as of December 31, 2020.

## **EBMUDERS Portfolio Review**

## **Fourth Quarter Performance Review**

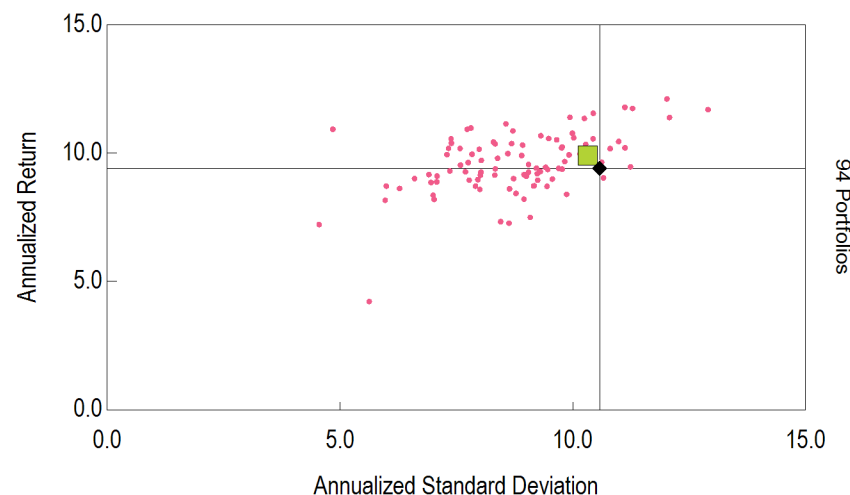
## EBMUDERS Total Plan Composite | As of December 31, 2020

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending December 31, 2020



■ EBMUDERS Total Plan Composite    ● InvMetrics Public DB > \$1B Gross  
◆ Total Plan Bench

Annualized Return vs. Annualized Standard Deviation  
5 Years Ending December 31, 2020



■ EBMUDERS Total Plan Composite    ● InvMetrics Public DB > \$1B Gross  
◆ Total Plan Bench

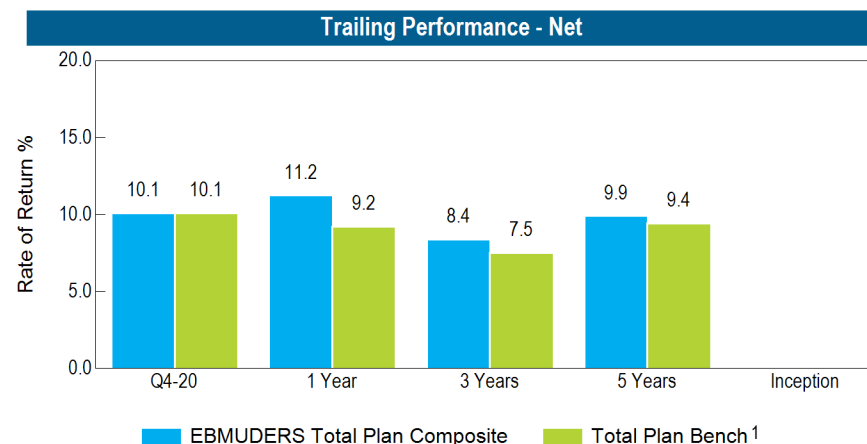
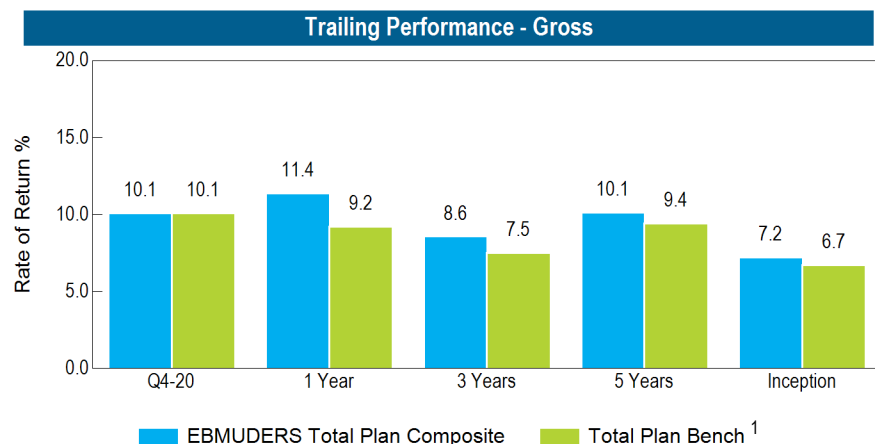
### 3 Years Ending December 31, 2020

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	8.56%	12.53%	0.56
Total Plan Bench	7.52%	12.99%	0.46

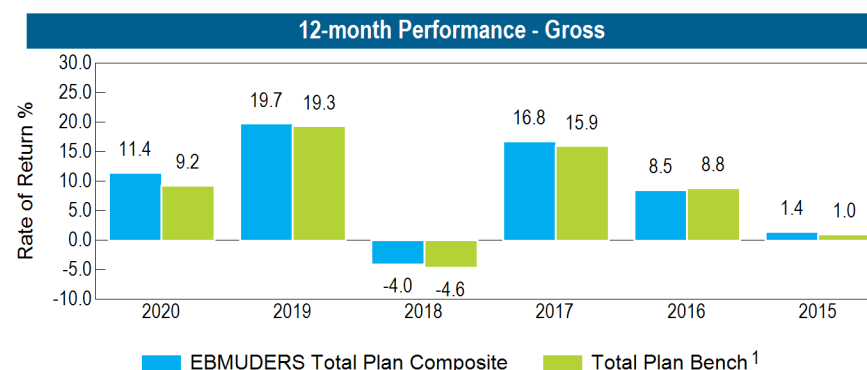
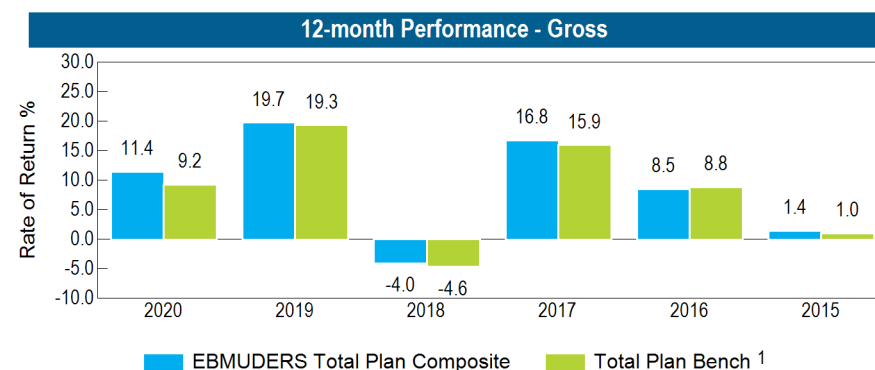
### 5 Years Ending December 31, 2020

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	10.13%	10.31%	0.87
Total Plan Bench	9.41%	10.58%	0.78

## EBMUDERS Total Plan Composite | As of December 31, 2020



	QTD	1 Yr	3 Yrs	5 Yrs	Inception	2020	2019	2018	2017	2016	2015
<b>EBMUDERS Total Plan Composite - Gross</b>	<b>10.1</b>	<b>11.4</b>	<b>8.6</b>	<b>10.1</b>	--	<b>11.4</b>	<b>19.7</b>	<b>-4.0</b>	<b>16.8</b>	<b>8.5</b>	<b>1.4</b>
<b>EBMUDERS Total Plan Composite - Net</b>	<b>10.1</b>	<b>11.2</b>	<b>8.4</b>	<b>9.9</b>	--	<b>11.2</b>	<b>19.5</b>	<b>-4.3</b>	<b>16.4</b>	<b>8.2</b>	<b>1.1</b>
<i>Total Plan Bench</i>	<i>10.1</i>	<i>9.2</i>	<i>7.5</i>	<i>9.4</i>	--	<i>9.2</i>	<i>19.3</i>	<i>-4.6</i>	<i>15.9</i>	<i>8.8</i>	<i>1.0</i>
<i>InvMetrics Public DB &gt; \$1B Gross Median<sup>2</sup></i>	<i>10.3</i>	<i>11.5</i>	<i>8.0</i>	<i>9.5</i>	--	<i>11.5</i>	<i>16.7</i>	<i>-3.7</i>	<i>16.2</i>	<i>8.0</i>	<i>0.3</i>



<sup>1</sup> Policy Benchmark consists of 25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 10% BBgBarc US Intermediate Gov/Cred / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD index 12/1/2019-present; see Appendix for historical Policy Benchmark composition.

<sup>2</sup> InvMetrics Public DB >\$1B Universe includes BNY Mellon Public>\$1B Fund Universe and IM client data.

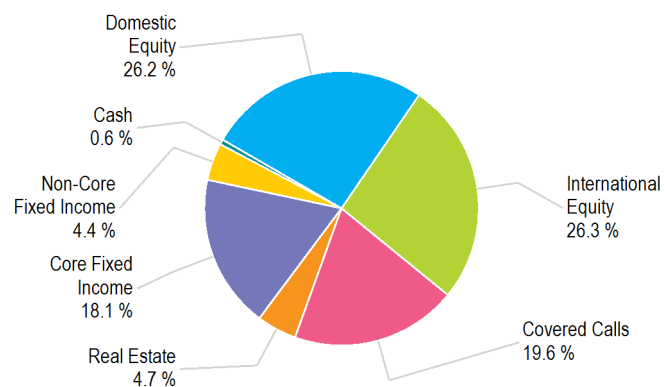
## EBMUDERS Total Plan Composite | As of December 31, 2020

### Asset Allocation vs. Target<sup>1</sup>

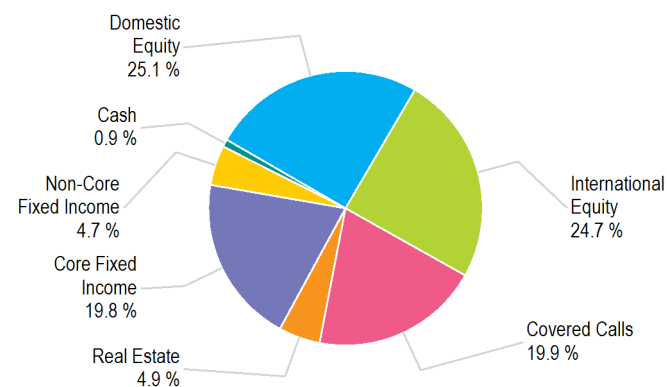
	Current (\$)	Current (%)	Policy (%)	Difference* (%)	Within Range <sup>2</sup>
Domestic Equity <sup>3</sup>	559,031,612	26.2	25.0	1.2	Yes
International Equity	562,349,012	26.3	25.0	1.3	Yes
Covered Calls	419,617,297	19.6	20.0	-0.4	Yes
Real Estate <sup>4</sup>	101,471,614	4.7	5.0	-0.3	Yes
Core Fixed Income	387,283,861	18.1	20.0	-1.9	Yes
Non-Core Fixed Income	93,133,719	4.4	5.0	-0.6	Yes
Cash	13,815,745	0.6	0.0	0.6	No
<b>Total</b>	<b>2,136,702,861</b>	<b>100.0</b>	<b>100.0</b>		

\*Difference between Policy and Current Allocation

December 31, 2020 : \$2,136,702,861



September 30, 2020 : \$1,942,733,470



<sup>1</sup> Current policy target allocations elected by the Board in January 2019 took effect March 2019 upon the transition to the new long-term strategic allocation.

<sup>2</sup> Policy rebalancing ranges shown are for non-turbulent market periods. The Plan also has established rebalancing ranges to be in effect during turbulent market periods.

<sup>3</sup> Includes approximately \$658,745 in the global transition account.

<sup>4</sup> RREEF performance results and allocation are lagged one-quarter.

**Manager Performance - Gross of Fees | As of December 31, 2020**

Domestic and International Equity					
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
<b>US Equity Composite</b>	<b>559,031,612</b>	<b>14.6</b>	<b>20.8</b>	<b>15.0</b>	<b>15.7</b>
<i>Russell 3000 Hybrid</i>		<i>14.7</i>	<i>20.9</i>	<i>14.5</i>	<i>15.4</i>
Northern Trust Russell 3000	558,372,866	14.6	20.8	--	--
<i>Russell 3000</i>		<i>14.7</i>	<i>20.9</i>	--	--
<b>NonUS Equity Composite</b>	<b>561,626,776</b>	<b>16.8</b>	<b>10.5</b>	<b>4.3</b>	<b>8.1</b>
<i>MSCI ACWI xUS (blend) <sup>1</sup></i>		<i>17.1</i>	<i>11.1</i>	<i>5.4</i>	<i>9.4</i>
Northern Trust ACWI ex US	392,476,097	16.9	10.1	--	--
<i>MSCI ACWI ex USA Gross</i>		<i>17.1</i>	<i>11.1</i>	--	--
Fisher Investments	169,150,679	17.6	18.1	8.7	11.4
<i>MSCI ACWI xUS (blend)</i>		<i>17.1</i>	<i>11.1</i>	<i>5.4</i>	<i>9.4</i>
Franklin Templeton	722,235	-3.9	-19.1	-8.2	-0.3
<i>MSCI ACWI xUS (blend)</i>		<i>17.1</i>	<i>11.1</i>	<i>5.4</i>	<i>9.4</i>

The EBMUDERS Domestic Equity class is currently 100% passively-managed. The Plan liquidated all of its actively-managed domestic equity mandates in June 2018 to move towards the Plan's new strategic policy target allocations effective July 1, 2018.

The International Equity class is primarily managed passively through the Northern Trust ACWI ex US Index fund. Fisher remains the lone active manager in the international portfolio, representing about 30% of assets.

- Fisher outperformed the MSCI ACWI x US (blend) Index over all reported periods by 0.5%, 7.0%, 3.3%, and 2.0% respectively. The largest contributors to returns during the fourth quarter was an overweight to Information Technology as well as selection within the Mining and Metals sector.

<sup>1</sup> As of January 1, 2007, the benchmark changed from MSCI EAFE to MSCI ACWI xUS.

**Manager Performance - Gross of Fees | As of December 31, 2020**

	Covered Calls				
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
Parametric BXM	138,600,805	8.1	6.6	6.1	8.1
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>
Parametric Delta Shift	149,111,402	11.9	16.0	11.8	13.0
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>
Van Hulzen	131,905,090	5.3	2.6	4.6	6.5
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>

Over the latest quarter ending December 31, 2020, both of EBMUDERS's Covered Calls mandates managed by Parametric outperformed the CBOE BXM Index. The Van Hulzen strategy underperformed the benchmark. Strong equity returns as well as election driven volatility boosted performance for the quarter.

- The Parametric BXM strategy outperformed the CBOE BXM Index over the most recent quarter. The fund has outperformed its respective benchmark over the trailing 1-, 3-, and 5- year periods by 9.4%, 3.5%, and 2.6% respectively. The Buy-Write Portfolio is implemented by writing at-the money options and diversifying option expiration dates which eliminates the path-dependency of the mechanical, passive BXM Index.
- Parametric Delta Shift strategy outperformed the benchmark over all reported periods by 4.4%, 18.8%, 9.2%, and 7.5% respectively. Delta Shift generally performs best in down, flat, moderately trending or range bound equity markets.
- Van Hulzen, underperformed the CBOE BXM Index in the fourth quarter by 2.2%. Over the 1-, 3-, and 5- year trailing periods the fund has outperformed by 5.4%, 2.0%, and 1.0% respectively. The Van Hulzen covered call strategy uses call options with the goal of reducing portfolio volatility and creating incremental income.



## Manager Performance - Gross of Fees | As of December 31, 2020

Fixed Income Composite					
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
CS McKee	191,831,847	0.8	8.1	5.7	4.8
<i>BBgBarc US Aggregate TR</i>		<i>0.7</i>	<i>7.5</i>	<i>5.3</i>	<i>4.4</i>
Garcia Hamilton	195,452,015	0.6	6.1	--	--
<i>BBgBarc US Intermediate Gov/Cred</i>		<i>0.5</i>	<i>6.4</i>	<i>--</i>	<i>--</i>
MacKay Shields (HY)	48,181,017	3.7	6.6	--	--
<i>ICE BofA ML US Corp Cash Pay BB-B 1-5Yr</i>		<i>4.8</i>	<i>3.6</i>	<i>--</i>	<i>--</i>
Federated Investment Counseling (Bank Loans)	44,952,703	2.6	1.5	--	--
<i>60% CredSuisLevLoan/40% BBStGovCorp</i>		<i>2.2</i>	<i>2.5</i>	<i>--</i>	<i>--</i>

Over the latest quarter ending December 31, 2020, all four of EBMUDERS's Core Fixed Income mandates performed in line with or slightly better than their respective benchmarks. The portfolio's high yield manager MacKay underperformed their respective benchmark while bank loans manager, Federated Investment Counseling, slightly outperformed the blended bank loans benchmark.

- CS McKee performed in line with the BBgBarc US Aggregate Index for the quarter and has outperformed over all longer trailing periods by 0.4%. For the most recent quarter performance was driven primarily by an overweight to US Agency, US TIPS, and Corporate Credit and an underweight to US Treasuries and passthrough MBS versus the benchmark.
- Garcia Hamilton outperformed the BBgBarc US Intermediate Gov/Cred Index over the quarter. Defensive duration positioning benefited the fund as rates ended the quarter higher.
- MacKay Shields underperformed the ICE BofAML US Corp Cash Pay BB-B 1-5Yr Index by 1.1% over the quarter and has outperformed by 3.0% for the 1-year period. Underweights to lower quality and distressed credit detracted from returns for the quarter as did the overweight to higher quality REITS and Health Facilities.
- Federated Investment Counseling (Bank Loans) outperformed the 60% CredSuisLevLoan/40% BBStGovCorp benchmark over the fourth quarter returning 2.6% versus the index (+2.2%). Over the 1-year period the fund has underperformed by 1.0%. Performance for the quarter was driven primarily by an overweight to leveraged loans versus the benchmark as well as sector selection within leveraged loans and high yield markets.

### Manager Performance - Gross of Fees | As of December 31, 2020

	Real Estate Composite				
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
RREEF America II Lag <sup>1</sup>	49,768,364	-0.3	2.2	6.1	7.3
<i>NCREIF NPI Mo 1 Qtr Lag</i>		<i>0.7</i>	<i>2.0</i>	<i>5.1</i>	<i>6.3</i>
CenterSquare	51,703,250	12.0	-4.2	5.1	6.3
<i>FTSE NAREIT Equity REIT</i>		<i>11.6</i>	<i>-8.0</i>	<i>3.4</i>	<i>4.8</i>

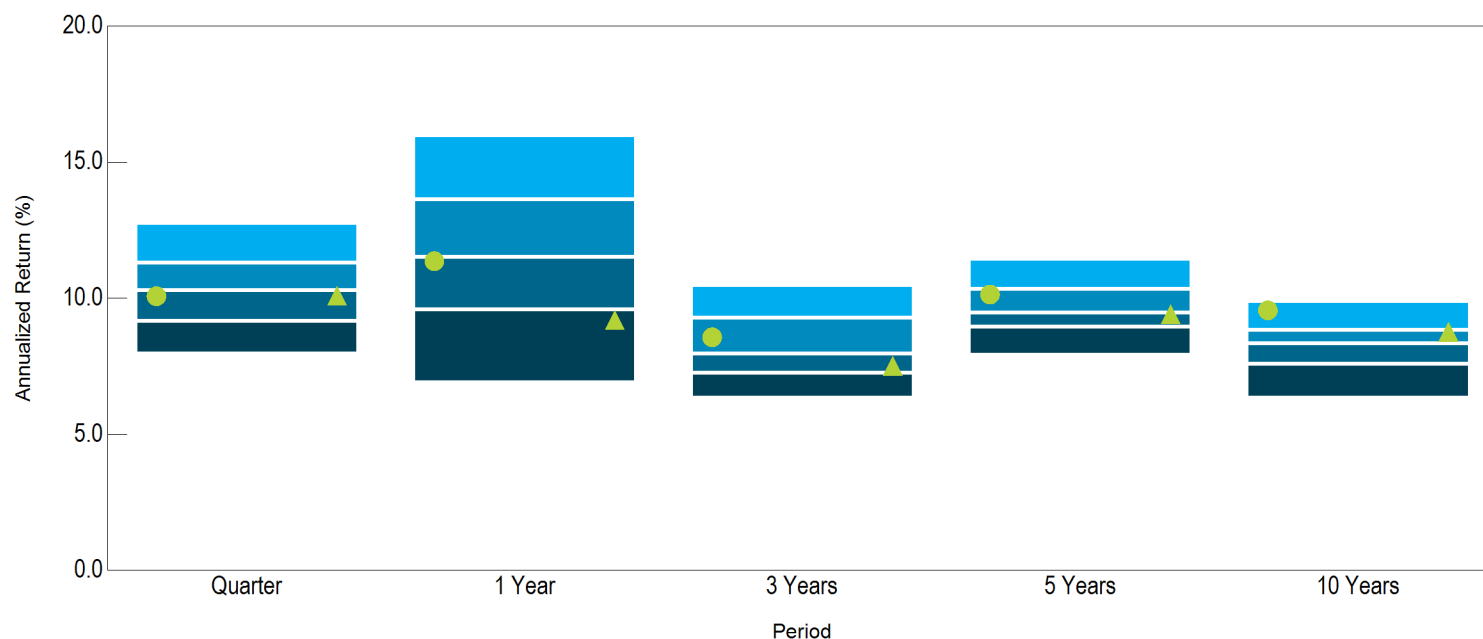
EBMUDERS' Real Estate manager, RREEF II, underperformed its benchmark, the NCREIF Property Index, over the quarter and has outperformed over the trailing 1-, 3-, and 5-year time periods. Pandemic driven lockdowns temporarily hurt income producing assets, though long-run outlook remains positive. During the lagged 12-month period, RREEF America REIT II operations generated an income return of 4.1% before fees. Same store net operating income for the 1-year period increased 1.2%, extending the trend of improving same store income from operations. Occupancy at the end of the quarter at 92 percent overall, slightly increasing from the prior quarter.

CenterSquare, EBMUDERS' REIT manager, outperformed the FTSE NAREIT Equity REITs Index for the fourth quarter and has outperformed over 1-, 3-, and 5-year trailing periods. REIT performance for the quarter was driven by Hotels, Retail, and Office sectors, while Data Centers detracted. EBMUDERSERS portfolio benefited from an overweight to Shopping Centers and a relative underweight to Data Centers.

<sup>1</sup> Results are lagged one quarter.

## EBMUDERS Total Plan Composite | As of December 31, 2020

InvMetrics Public DB > \$1B Gross Return Comparison<sup>1</sup>  
Ending December 31, 2020

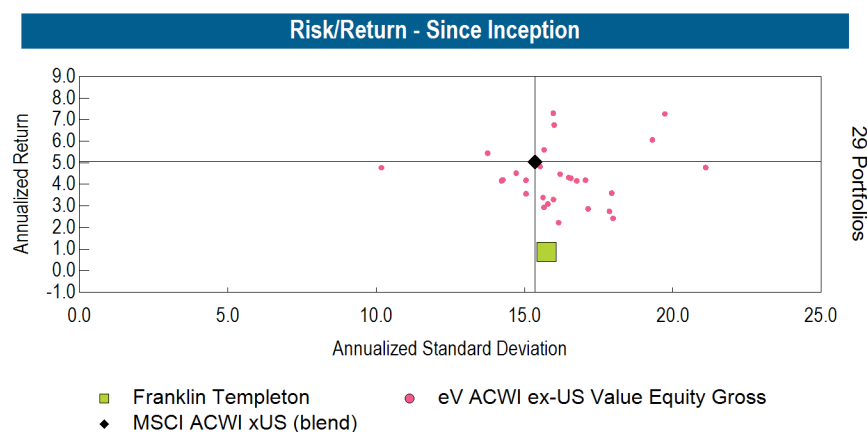
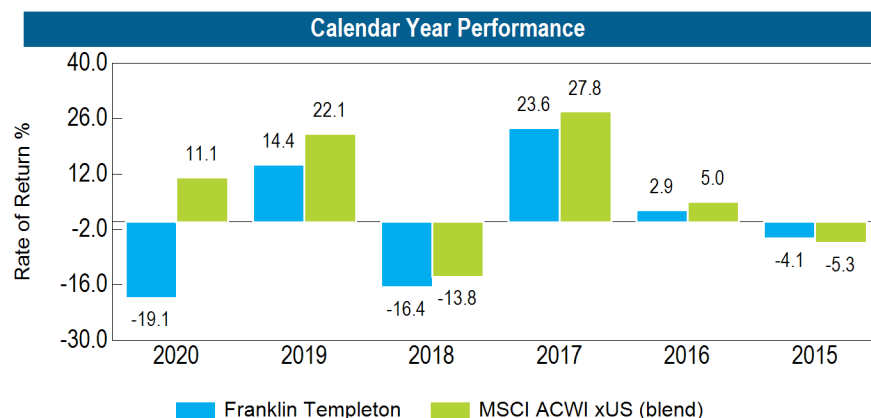
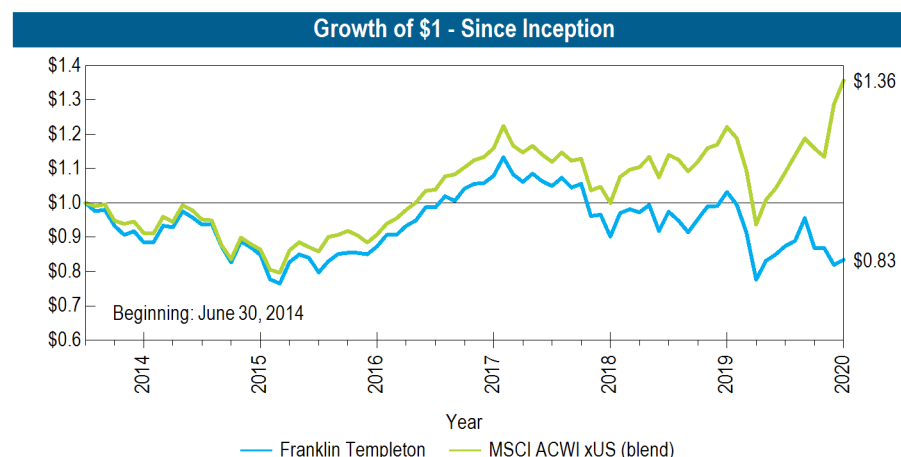
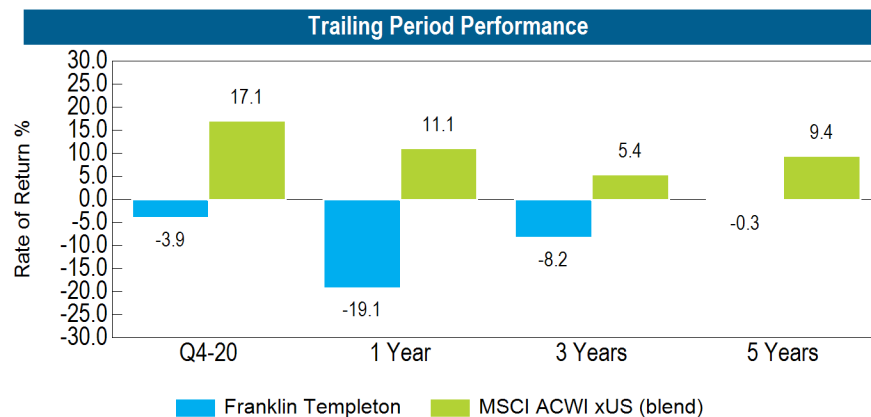


	Return (Rank)									
5th Percentile	12.8		16.0		10.5		11.4		9.9	
25th Percentile	11.3		13.6		9.3		10.4		8.9	
Median	10.3		11.5		8.0		9.5		8.3	
75th Percentile	9.2		9.6		7.3		9.0		7.6	
95th Percentile	8.0		6.9		6.4		7.9		6.4	
# of Portfolios	94		94		94		94		88	
● EBMUDERS Total Plan Composite	10.1	(54)	11.4	(52)	8.6	(37)	10.1	(36)	9.6	(12)
▲ Total Plan Bench	10.1	(54)	9.2	(80)	7.5	(63)	9.4	(54)	8.8	(33)

<sup>1</sup> Calculation based on monthly periodicity.

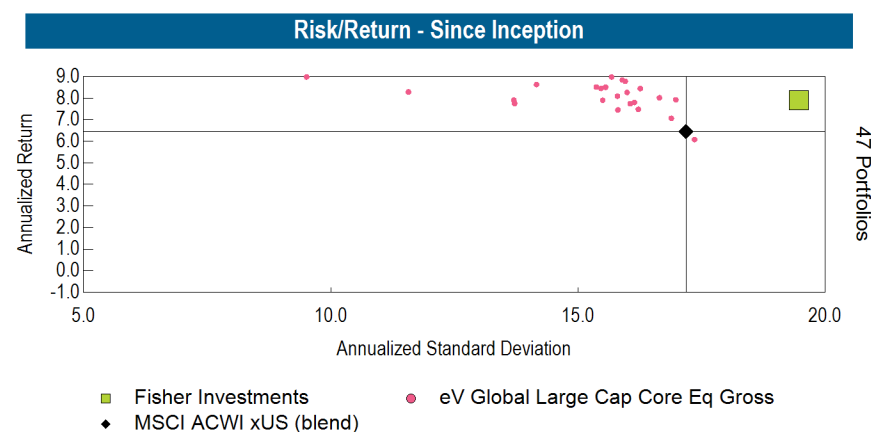
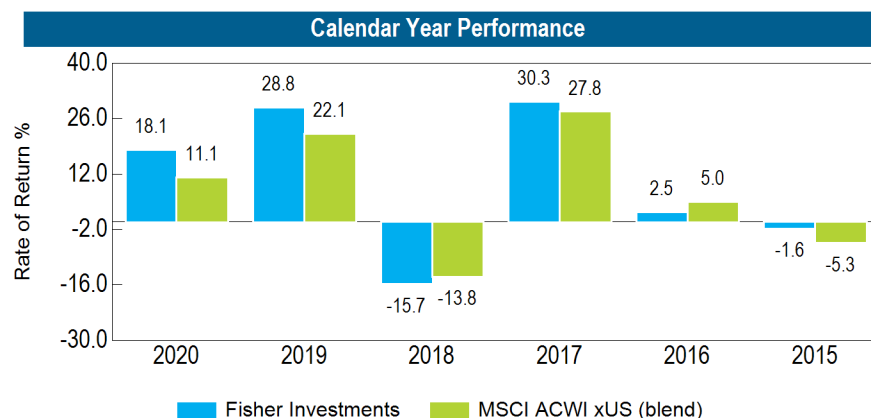
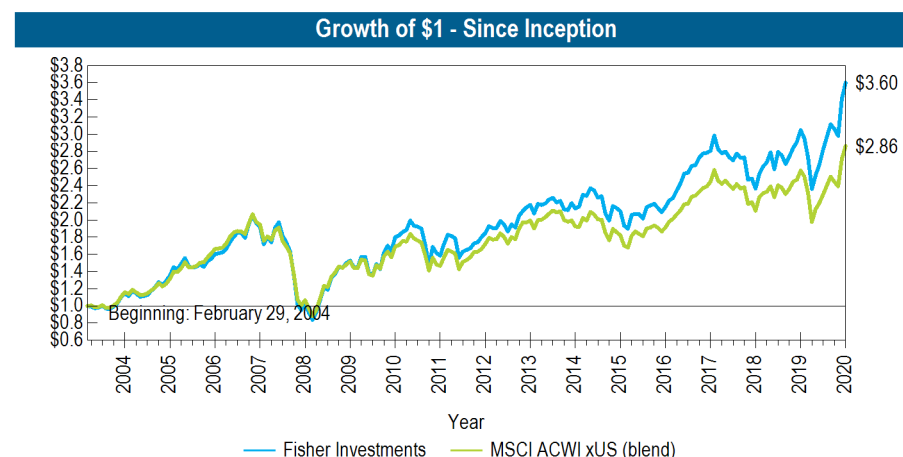
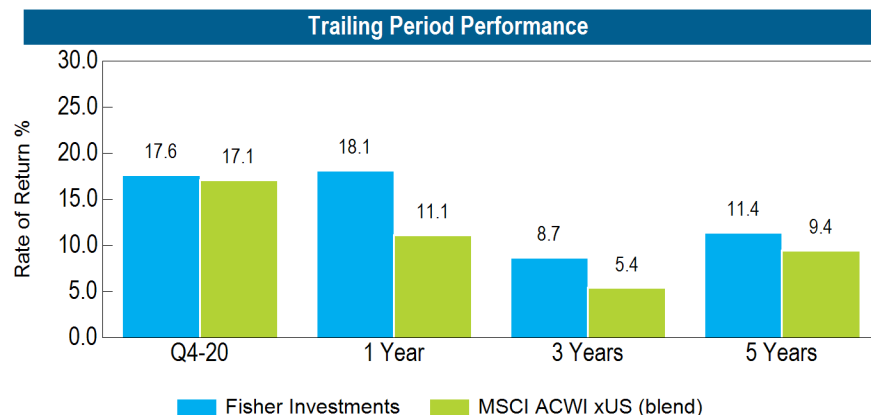
## Franklin Templeton | As of December 31, 2020

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Franklin Templeton	-0.28%	0.90	-0.55	0.02	7.62%	0.77	73.98%	102.56%
MSCI ACWI xUS (blend)	0.00%	1.00	--	0.29	0.00%	1.00	100.00%	100.00%



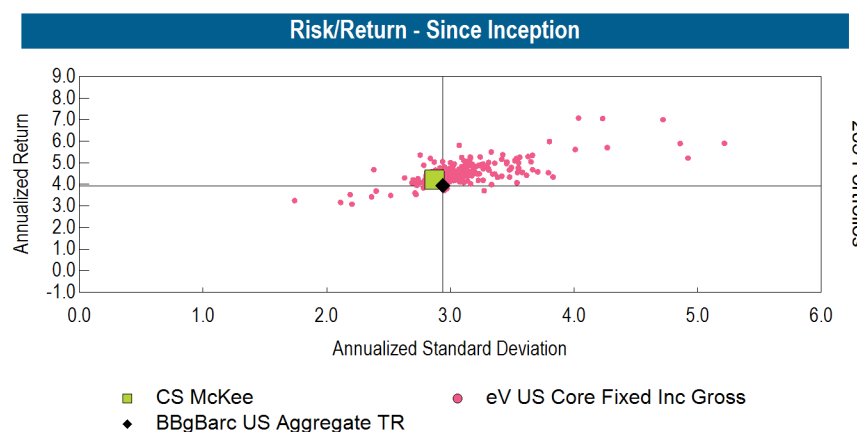
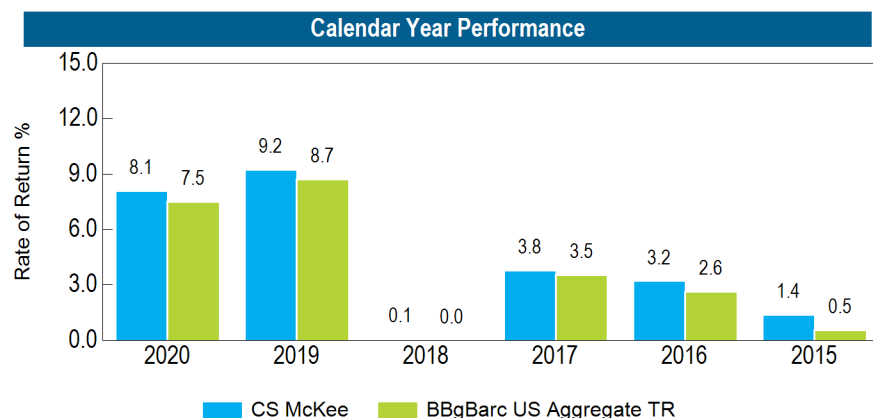
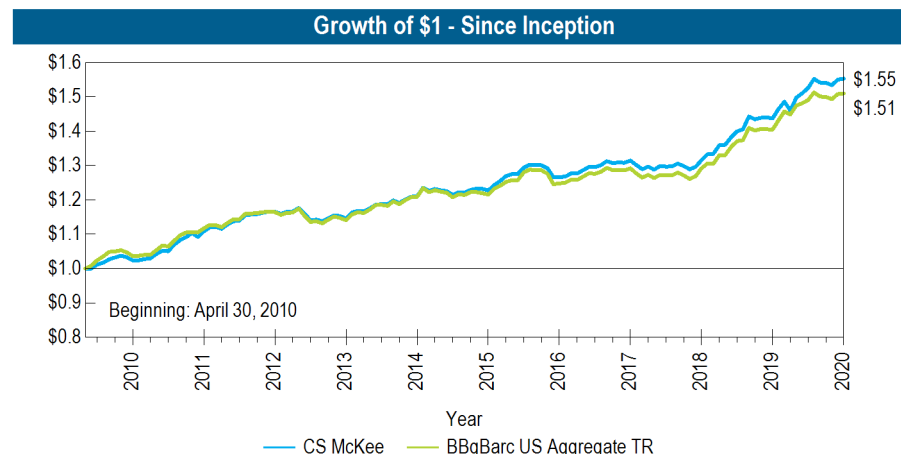
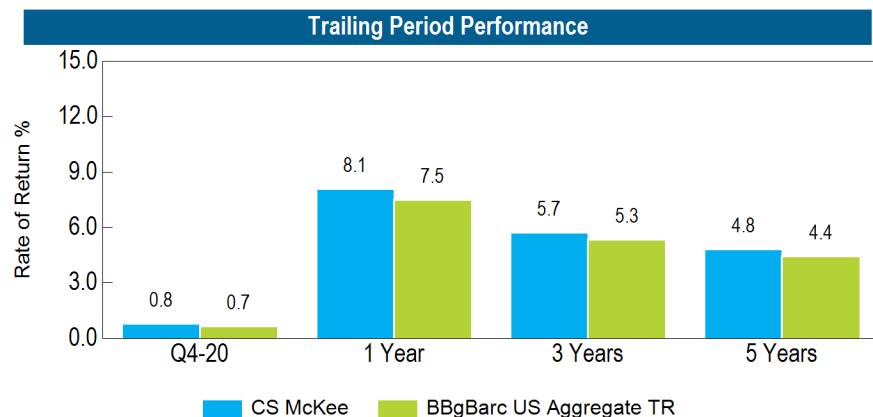
## Fisher Investments | As of December 31, 2020

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Fisher Investments	0.12%	1.08	0.49	0.39	3.64%	0.96	128.88%	101.29%
MSCI ACWI xUS (blend)	0.00%	1.00	--	0.32	0.00%	1.00	100.00%	100.00%



CS McKee | As of December 31, 2020

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
CS McKee	0.04%	0.93	0.31	1.27	0.88%	0.91	102.02%	93.04%
BBgBarc US Aggregate TR	0.00%	1.00	--	1.15	0.00%	1.00	100.00%	100.00%



**Asset Class Returns - Net of Fees | As of December 31, 2020**

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
<b>EBMUDERS Total Plan Composite<sup>1</sup></b>	<b>10.1</b>	<b>11.2</b>	<b>8.4</b>	<b>9.9</b>
<i>Total Plan Bench<sup>2</sup></i>	<i>10.1</i>	<i>9.2</i>	<i>7.5</i>	<i>9.4</i>
<b>US Equity Composite</b>	<b>14.6</b>	<b>20.8</b>	<b>15.0</b>	<b>15.6</b>
<i>Russell 3000 Hybrid<sup>3</sup></i>	<i>14.7</i>	<i>20.9</i>	<i>14.5</i>	<i>15.4</i>
<b>NonUS Equity Composite</b>	<b>16.8</b>	<b>10.4</b>	<b>4.0</b>	<b>7.7</b>
<i>MSCI ACWI xUS (blend)<sup>4</sup></i>	<i>17.1</i>	<i>11.1</i>	<i>5.4</i>	<i>9.4</i>
<b>Covered Calls Composite</b>	<b>8.6</b>	<b>7.8</b>	<b>7.2</b>	<b>8.9</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>
<b>Real Estate Composite</b>	<b>7.2</b>	<b>0.4</b>	<b>5.8</b>	<b>6.6</b>
<i>NCREIF NPI Lag<sup>6</sup></i>	<i>6.2</i>	<i>-2.0</i>	<i>4.9</i>	<i>5.9</i>
<b>Fixed Income Composite</b>	<b>1.1</b>	<b>6.3</b>	<b>5.2</b>	<b>4.5</b>
<i>Fixed Income Composite Bench<sup>5</sup></i>	<i>1.2</i>	<i>6.3</i>	<i>4.9</i>	<i>4.6</i>
<b>Cash Composite</b>	<b>0.1</b>	<b>1.9</b>	<b>2.1</b>	<b>1.5</b>
<i>FTSE T-Bill 3 Months TR</i>	<i>0.0</i>	<i>0.6</i>	<i>1.6</i>	<i>1.2</i>

<sup>1</sup> Historical net returns for the Total Portfolio aggregate is currently available from 2Q 2011

<sup>2</sup> Policy Benchmark consists of 25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 10% BBgBarc US Intermediate Gov/Cred / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD index 12/1/2019-present; see Appendix for historical Policy Benchmark composition.

<sup>3</sup> Russell 3000 as of 10/1/05. Prior: 30% S&P500, 10% S&P400, 10% Russell 2000 (4/1/05-9/30/05); 33% S&P500, 10% S&P400, 10% Russell 2000 (9/1/98-3/31/05); 30% S&P500, 15% Wilshire 5000 (4/1/96-8/31/98)

<sup>4</sup> MSCI ACWixU.S. as of 1/1/07; MSCI EAFE ND thru 12/31/06

<sup>5</sup> 60% BC Aggregate, 20% BC US 1-3 Year Government/Credit, 10% ICE BofA ML U.S. Corp Cash Pay BB-B 1-5 Year, and 10% Blend 60% Credit Suisse Leverage Loan/40% BBg BC Short Term Gov/Corp 3/1/2019-present; 60% BC Aggregate, 20% BC US 1-3 Year Government/Credit, 10% BC 1-5 Year U.S. High Yield Cash Pay, and 10% S&P/LSTA Performing Loans index 7/1/18-2/28/2019; 50% BC Aggregate, 25% BC US 1-3 Year Government/Credit, 12.5% BC 1-5 Year U.S. High Yield Cash Pay, and 12.5% S&P/LSTA Performing Loans index 4/1/14-6/30/18; 75% BC Aggregate, 12.5% BC 1-5 Year U.S. High Yield Cash Pay, and 12.5% S&P/LSTA Performing Loans index 3/1/14-3/31/14; BC Universal 1/1/08-2/28/14; BC Aggregate thru 12/31/07

<sup>6</sup> 50% NCREIF (lagged), 50% FTSE NAREIT Equity REITs Index as of 11/1/11; NCREIF (lagged) thru 10/31/11

**Manager Returns - Net of Fees | As of December 31, 2020**

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
<b>US Equity Composite</b>	<b>14.6</b>	<b>20.8</b>	<b>15.0</b>	<b>15.6</b>
<i>Russell 3000 Hybrid</i>	<i>14.7</i>	<i>20.9</i>	<i>14.5</i>	<i>15.4</i>
Northern Trust Russell 3000	14.6	20.8	--	--
<i>Russell 3000</i>	<i>14.7</i>	<i>20.9</i>	--	--
<b>NonUS Equity Composite</b>	<b>16.8</b>	<b>10.4</b>	<b>4.0</b>	<b>7.7</b>
<i>MSCI ACWI xUS (blend)</i> <sup>1</sup>	<i>17.1</i>	<i>11.1</i>	<i>5.4</i>	<i>9.4</i>
Northern Trust ACWI ex US	16.9	10.1	--	--
<i>MSCI ACWI ex USA Gross</i>	<i>17.1</i>	<i>11.1</i>	--	--
Fisher Investments	17.5	17.5	8.0	10.7
<i>MSCI ACWI xUS (blend)</i>	<i>17.1</i>	<i>11.1</i>	<i>5.4</i>	<i>9.4</i>
Franklin Templeton	-3.9	-19.3	-8.6	-0.8
<i>MSCI ACWI xUS (blend)</i>	<i>17.1</i>	<i>11.1</i>	<i>5.4</i>	<i>9.4</i>
<b>Covered Calls Composite</b>	<b>8.6</b>	<b>7.8</b>	<b>7.2</b>	<b>8.9</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>
Parametric BXM	8.1	6.5	5.9	7.9
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>
Parametric Delta Shift	11.9	15.6	11.5	12.7
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>
Van Hulzen	5.3	2.4	4.4	6.2
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>7.5</i>	<i>-2.8</i>	<i>2.6</i>	<i>5.5</i>

<sup>1</sup> As of January 1, 2007, the benchmark changed from MSCI EAFE to MSCI ACWI x U.S.



**Manager Returns - Net of Fees | As of December 31, 2020**

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
<b>Real Estate Composite</b>	<b>7.2</b>	<b>0.4</b>	<b>5.8</b>	<b>6.6</b>
<i>NCREIF NPI Lag</i>	<i>6.2</i>	<i>-2.0</i>	<i>4.9</i>	<i>5.9</i>
RREEF America II Lag	-0.6	1.2	5.1	6.3
<i>NCREIF NPI Mo 1 Qtr Lag</i>	<i>0.7</i>	<i>2.0</i>	<i>5.1</i>	<i>6.3</i>
CenterSquare	11.9	-4.5	4.9	6.0
<i>FTSE NAREIT Equity REIT</i>	<i>11.6</i>	<i>-8.0</i>	<i>3.4</i>	<i>4.8</i>
<b>Fixed Income Composite</b>	<b>1.1</b>	<b>6.3</b>	<b>5.2</b>	<b>4.5</b>
<i>Fixed Income Composite Bench</i>	<i>1.2</i>	<i>6.3</i>	<i>4.9</i>	<i>4.6</i>
<b>Fixed Income Core Fixed Income Composite</b>	<b>0.6</b>	<b>6.9</b>	<b>5.2</b>	<b>4.4</b>
<i>Fixed Income Core Composite Bench</i>	<i>0.6</i>	<i>7.0</i>	<i>--</i>	<i>--</i>
CS McKee	0.8	8.0	5.6	4.6
<i>BBgBarc US Aggregate TR</i>	<i>0.7</i>	<i>7.5</i>	<i>5.3</i>	<i>4.4</i>
Garcia Hamilton	0.5	5.9	--	--
<i>BBgBarc US Intermediate Gov/Cred</i>	<i>0.5</i>	<i>6.4</i>	<i>--</i>	<i>--</i>
<b>Fixed Income Non-Core Fixed Income Composite</b>	<b>3.0</b>	<b>3.8</b>	<b>3.8</b>	<b>3.9</b>
<i>Fixed Income Non-Core Composite Bench</i>	<i>3.5</i>	<i>3.1</i>	<i>3.7</i>	<i>4.3</i>
MacKay Shields (HY)	3.7	6.4	--	--
<i>ICE BofA ML US Corp Cash Pay BB-B 1-5Yr</i>	<i>4.8</i>	<i>3.6</i>	<i>--</i>	<i>--</i>
Federated Investment Counseling (Bank Loans)	2.6	1.3	--	--
<i>60% CredSuisLevLoan/40% BBStGovCorp</i>	<i>2.2</i>	<i>2.5</i>	<i>--</i>	<i>--</i>

**EBMUDERS Total Plan Composite | As of December 31, 2020**
**Benchmark History**  
**As of December 31, 2020**
**EBMUDERS Total Plan Composite**

12/1/2019	Present	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 10% BBgBarc US Intermediate Gov/Cred / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
3/1/2019	11/30/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% BBgBarc US Aggregate TR / 5% BBgBarc US Govt/Credit 1-3 Yr. TR / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
7/1/2018	2/28/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% BBgBarc US Aggregate TR / 5% BBgBarc US Govt/Credit 1-3 Yr. TR / 2.5% BBgBarc US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
4/1/2014	6/30/2018	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 5% BBgBarc US Govt/Credit 1-3 Yr. TR / 2.5% BBgBarc US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
3/1/2014	3/31/2014	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 15% BBgBarc US Aggregate TR / 2.5% BBgBarc US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
11/1/2011	2/28/2014	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% BBgBarc US Universal TR / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT
1/1/2008	10/31/2011	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% BBgBarc US Universal TR / 5% NCREIF NPI Mo 1 Qtr Lag
1/1/2007	12/31/2007	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% BBgBarc US Aggregate TR / 5% NCREIF Property Index
10/1/2005	12/31/2006	50% Russell 3000 / 25% BBgBarc US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag / 20% MSCI EAFE
4/1/2005	9/30/2005	30% S&P 500 / 10% S&P 400 MidCap / 10% Russell 2000 / 20% MSCI EAFE / 25% BBgBarc US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag
9/1/1998	3/31/2005	33% S&P 500 / 10% S&P 400 MidCap / 10% Russell 2000 / 17% MSCI EAFE / 30% BBgBarc US Aggregate TR
3/31/1996	8/31/1998	30% S&P 500 / 15% Wilshire 5000 / 15% MSCI EAFE / 30% BBgBarc US Aggregate TR / 5% NCREIF Property Index / 5% FTSE T-Bill 3 Months TR

**Fixed Income Composite | As of December 31, 2020**

Benchmark History		
As of December 31, 2020		
Fixed Income Composite		
12/1/2019	Present	40% BBgBarc US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 40% BBgBarc US Intermediate Gov/Cred / 10% 60% CredSuisLevLoan/40% BBStGovCorp
3/1/2019	11/30/2019	60% BBgBarc US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 20% BBgBarc US Govt/Credit 1-3 Yr. TR / 10% 60% CredSuisLevLoan/40% BBStGovCorp
7/1/2018	2/28/2019	60% BBgBarc US Aggregate TR / 10% S&P/LSTA Performing Loan TR USD / 20% BBgBarc US Govt/Credit 1-3 Yr. TR / 10% BBgBarc US High Yield 1-5Yr Cash Pay 2%
4/1/2014	6/30/2018	50% BBgBarc US Aggregate TR / 12.5% S&P/LSTA Performing Loan TR USD / 25% BBgBarc US Govt/Credit 1-3 Yr. TR / 12.5% BBgBarc US High Yield 1-5Yr Cash Pay 2%
3/1/2014	3/31/2014	75% BBgBarc US Aggregate TR / 12.5% BBgBarc US High Yield 1-5Yr Cash Pay 2% / 12.5% S&P/LSTA Performing Loan TR USD
1/1/2008	2/28/2014	BBgBarc US Universal TR
1/1/1976	12/31/2007	BBgBarc US Aggregate TR
Fixed Income Core Fixed Income Composite		
12/1/2019	Present	50% BBgBarc US Aggregate TR / 50% BBgBarc US Intermediate Gov/Cred
Fixed Income Non-Core Fixed Income Composite		
12/1/2019	Present	50% 60% CredSuisLevLoan/40% BBStGovCorp / 50% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr
3/1/2019	11/30/2019	25% 60% CredSuisLevLoan/40% BBStGovCorp / 25% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 50% BBgBarc US Govt/Credit 1-3 Yr. TR
3/1/2014	2/28/2019	25% S&P/LSTA Performing Loan TR USD / 25% BBgBarc US High Yield 1-5Yr Cash Pay 2% / 50% BBgBarc US Govt/Credit 1-3 Yr. TR

**EBMUDERS Total Plan Composite | As of December 31, 2020**

Summary of Cash Flows		
	Fourth Quarter	Year-To-Date
Beginning Market Value	\$1,942,733,470	\$1,938,636,473
Net Cash Flow	-\$2,857,000	-\$17,812,240
Capital Appreciation	\$196,104,155	\$215,156,393
Ending Market Value	\$2,135,980,626	\$2,135,980,626

## **January Performance Update**

### EBMUDERS Total Plan Composite | As of January 31, 2021

	Market Value	1 Mo	YTD	1 Yr	3 Yrs	5 Yrs
<b>EBMUDERS Total Plan Composite</b>	<b>2,130,680,730</b>	<b>-0.2</b>	<b>-0.2</b>	<b>11.6</b>	<b>7.3</b>	<b>11.1</b>
<i>Total Plan Bench</i>		<i>-0.1</i>	<i>-0.1</i>	<i>9.7</i>	<i>6.4</i>	<i>10.3</i>
<b>US Equity Composite</b>	<b>556,580,995</b>	<b>-0.4</b>	<b>-0.4</b>	<b>20.4</b>	<b>12.8</b>	<b>17.0</b>
<i>Russell 3000 Hybrid</i>		<i>-0.4</i>	<i>-0.4</i>	<i>20.5</i>	<i>12.4</i>	<i>16.7</i>
Northern Trust Russell 3000	555,922,250	-0.4	-0.4	20.4	--	--
<i>Russell 3000</i>		<i>-0.4</i>	<i>-0.4</i>	<i>20.5</i>	<i>--</i>	<i>--</i>
<b>NonUS Equity Composite</b>	<b>563,943,769</b>	<b>0.3</b>	<b>0.3</b>	<b>14.5</b>	<b>2.5</b>	<b>10.1</b>
<i>MSCI ACWI xUS (blend)</i>		<i>0.2</i>	<i>0.2</i>	<i>14.4</i>	<i>3.6</i>	<i>11.0</i>
Northern Trust ACWI ex US	392,375,702	0.0	0.0	13.7	--	--
<i>MSCI ACWI ex USA Gross</i>		<i>0.2</i>	<i>0.2</i>	<i>14.4</i>	<i>--</i>	<i>--</i>
Fisher Investments	170,845,831	1.0	1.0	23.2	6.8	13.5
<i>MSCI ACWI xUS (blend)</i>		<i>0.2</i>	<i>0.2</i>	<i>14.4</i>	<i>3.6</i>	<i>11.0</i>
Franklin Templeton	722,235	0.0	0.0	-16.1	-9.7	1.4
<i>MSCI ACWI xUS (blend)</i>		<i>0.2</i>	<i>0.2</i>	<i>14.4</i>	<i>3.6</i>	<i>11.0</i>
<b>Covered Calls Composite</b>	<b>418,585,706</b>	<b>-0.2</b>	<b>-0.2</b>	<b>8.1</b>	<b>6.8</b>	<b>9.9</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>0.1</i>	<i>0.1</i>	<i>-1.5</i>	<i>2.3</i>	<i>6.4</i>
Parametric BXM	138,604,226	0.0	0.0	6.8	5.7	8.9
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>0.1</i>	<i>0.1</i>	<i>-1.5</i>	<i>2.3</i>	<i>6.4</i>
Parametric Delta Shift	148,226,388	-0.6	-0.6	15.5	10.7	14.0
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>0.1</i>	<i>0.1</i>	<i>-1.5</i>	<i>2.3</i>	<i>6.4</i>
Van Hulzen	131,755,092	-0.1	-0.1	3.4	4.3	7.0
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>0.1</i>	<i>0.1</i>	<i>-1.5</i>	<i>2.3</i>	<i>6.4</i>

### EBMUDERS Total Plan Composite | As of January 31, 2021

	Market Value	1 Mo	YTD	1 Yr	3 Yrs	5 Yrs
<b>Real Estate Composite</b>	<b>101,606,718</b>	<b>0.1</b>	<b>0.1</b>	<b>5.2</b>	<b>6.8</b>	<b>6.8</b>
<i>NCREIF NPI Lag</i>		<i>0.1</i>	<i>0.1</i>	<i>-2.8</i>	<i>5.5</i>	<i>6.2</i>
RREEF America II Lag	50,157,979	0.8	0.8	2.4	6.1	7.2
<i>NCREIF NPI Mo 1 Qtr Lag</i>		<i>0.0</i>	<i>0.0</i>	<i>1.5</i>	<i>4.9</i>	<i>6.1</i>
CenterSquare	51,448,739	-0.5	-0.5	-5.9	6.4	6.9
<i>FTSE NAREIT Equity REIT</i>		<i>0.1</i>	<i>0.1</i>	<i>-9.0</i>	<i>4.9</i>	<i>5.5</i>
<b>Fixed Income Composite</b>	<b>478,618,580</b>	<b>-0.4</b>	<b>-0.4</b>	<b>4.6</b>	<b>5.3</b>	<b>4.6</b>
<i>Fixed Income Composite Bench</i>		<i>-0.3</i>	<i>-0.3</i>	<i>4.5</i>	<i>5.0</i>	<i>4.4</i>
CS McKee	190,403,599	-0.9	-0.9	5.1	5.7	4.4
<i>BBgBarc US Aggregate TR</i>		<i>-0.7</i>	<i>-0.7</i>	<i>4.7</i>	<i>5.5</i>	<i>4.0</i>
Garcia Hamilton	194,550,830	-0.5	-0.5	4.2	--	--
<i>BBgBarc US Intermediate Gov/Cred</i>		<i>-0.3</i>	<i>-0.3</i>	<i>4.7</i>	<i>--</i>	<i>--</i>
MacKay Shields (HY)	48,366,033	0.4	0.4	6.9	--	--
<i>ICE BofA ML US Corp Cash Pay BB-B 1-5Yr</i>		<i>0.2</i>	<i>0.2</i>	<i>3.7</i>	<i>--</i>	<i>--</i>
Federated Investment Counseling (Bank Loans)	45,298,118	0.8	0.8	2.0	--	--
<i>60% CredSuisLevLoan/40% BBStGovCorp</i>		<i>0.8</i>	<i>0.8</i>	<i>2.9</i>	<i>--</i>	<i>--</i>
<b>Cash Composite</b>	<b>11,344,962</b>	<b>0.2</b>	<b>0.2</b>	<b>1.4</b>	<b>2.0</b>	<b>1.5</b>
<i>FTSE T-Bill 3 Months TR</i>		<i>0.0</i>	<i>0.0</i>	<i>0.5</i>	<i>1.5</i>	<i>1.2</i>
Cash LAIF	11,344,962	0.2	0.2	1.4	2.0	1.5
<i>FTSE T-Bill 3 Months TR</i>		<i>0.0</i>	<i>0.0</i>	<i>0.5</i>	<i>1.5</i>	<i>1.2</i>

## **Manager Watch Screens**



### Performance Monitoring Summary

Portfolio	Violation Type (Window) <sup>1</sup>	Date of Initial Violation	Correction Action(s)	Current Status			
				Current Status	Est. Beg. Date of Current Status	Months Since Est. Beg. Date	Performance Since Est. Beg. Date <sup>2</sup>
Parametric BXM	Qualitative	10/08/2020	Placed on Watch (Nov-23)	Watch	12/01/2020	1	2.8
CBOE S&P 500 BuyWrite							1.8
Parametric Delta Shift	Qualitative	10/08/2020	Placed on Watch (Nov-23)	Watch	12/01/2020	1	3.6
CBOE S&P 500 BuyWrite							1.8

- Parametric was put on a qualitative watch as a firm following the October 2020 announcement that Morgan Stanley would be purchasing Eaton Vance, Parametric's parent company.
- Fisher and CS McKee were removed from watch status at the January 21<sup>st</sup> Board Meeting.

<sup>1</sup> Defined as: Short-Term (12 months), Medium-Term (36 months), Long-Term (60 months).

<sup>2</sup> Annualized for periods greater than 12 months.

### Quantitative Compliance Monitoring per Watch Criteria

#### Active Management Criteria

- Active investment managers are expected to outperform their respective passive benchmarks related to both their asset class and investment style.
- Relative excess performance that falls below the red acceptable threshold stated in the Watch Criteria for six consecutive months may be a trigger for Watch status.

#### Passive Management Criteria

- Passive investment managers are expected to track the performance of their respective passive benchmarks related to both their asset class and their investment style.
- Tracking error is a measure of how closely a portfolio follows the index to which it is benchmarked.
- For short- and medium-term performance monitoring, a portfolio with tracking error that is above the red acceptable threshold stated in the Watch Criteria for six consecutive months may be a trigger for Watch status.
- For long-term performance monitoring, relative excess performance that falls below the red acceptable threshold

stated in the Watch Criteria for six consecutive months may be a trigger for Watch status.

#### Quantitative Monitoring Results - Overall Status Summary

	Prior Qtr Status	Current Qtr Status
Northern Trust – R3000	Acceptable	Acceptable
Fisher Investments	Caution	Acceptable
Northern Trust – ACWixUS	N/A	N/A
Parametric – BXM	Acceptable	Caution
Parametric – Delta Shift	Acceptable	Caution
Van Hulzen	Acceptable	Acceptable
CS McKee	Caution	Acceptable
Garcia Hamilton	Acceptable	Acceptable
Mackay Shields – Short Term HY	Acceptable	Acceptable
Federated – Bank Loans	Acceptable	Acceptable
CenterSquare	Acceptable	Acceptable

### Investment Performance Criteria by Asset Class

Asset Class	Short-term (rolling 12-month periods)	Medium-term (rolling 36-month periods)	Long-term (60+ months)
Domestic Equity - Active	Fund return < benchmark return - 3.5%	Fund annualized return < benchmark annualized return - 1.75% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Domestic Equity - Passive	Tracking error > 0.30%	Tracking error > 0.25% for 6 consecutive months	Fund annualized return < benchmark annualized return - 0.40% for 6 consecutive months
International Equity - Active	Fund return < benchmark return - 4.5%	Fund annualized return < benchmark annualized return - 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Covered Calls - Active	Fund return < benchmark return - 3.5%	Fund annualized return < benchmark annualized return - 1.75% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Covered Calls - Replication	Fund return < benchmark return - 3.5%	Fund annualized return < benchmark annualized return - 1.75% for 6 consecutive months	Fund annualized return < benchmark annualized return - 0.40% for 6 consecutive months
Fixed Income - Core - Active	Fund return < benchmark return - 1.5%	Fund annualized return < benchmark annualized return - 1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months
Fixed Income - Core - Passive	Tracking error > 0.25%	Tracking error > 0.20% for 6 consecutive months	Fund annualized return < benchmark annualized return - 0.30% for 6 consecutive months
Fixed Income - Non-Core	Fund return < benchmark return - 4.5%	Fund annualized return < benchmark annualized return - 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months

All criteria are on an annualized basis.

VRR – Value Relative Ratio – is calculated as: manager cumulative return / benchmark cumulative return.

## Northern Trust Russell 3000 | As of December 31, 2020

Manager Performance		
	QTD	1 Yr
Northern Trust Russell 3000	14.6	20.8
<i>Russell 3000</i>	<i>14.7</i>	<i>20.9</i>

### Short-Term Criteria (rolling 12-month periods)

Tracking error > 0.30% for 6 consecutive months

**Current Status:** **Acceptable**

### Medium-Term Criteria (rolling 36-month periods)

Tracking error > 0.25% for 6 consecutive months

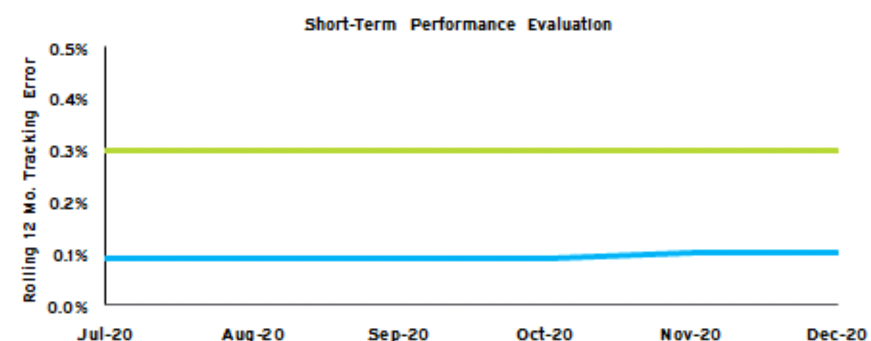
**Current Status:** Not Applicable

### Long-Term Criteria (60+ months)

Fund annualized return < benchmark annualized return  
-0.40% for 6 consecutive months

**Current Status:** Not Applicable

**Overall Status:** **Acceptable**



### Fisher Investments | As of December 31, 2020

#### Manager Performance

	QTD	1 Yr	3 Yrs	5 Yrs
Fisher Investments	17.5	17.5	8.0	10.7
MSCI ACWI xUS (blend)	17.1	11.1	5.4	9.4

#### Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -4.5% for 6 consecutive months

Current Status: **Acceptable**

#### Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -2.0% for 6 consecutive months

Current Status: **Acceptable**

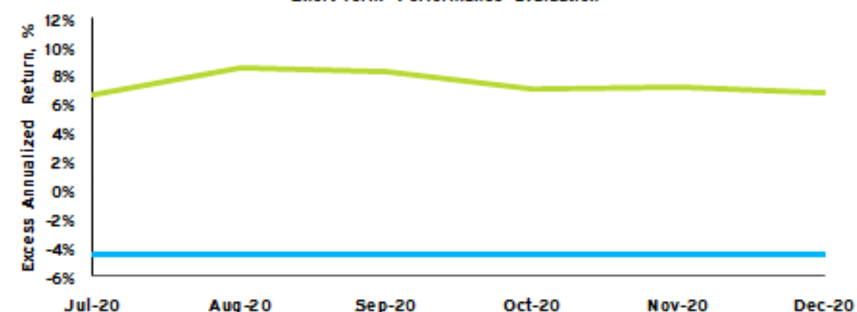
#### Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

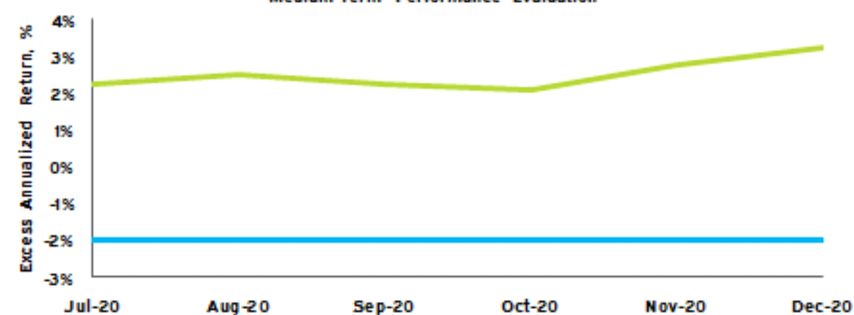
Current Status: **Acceptable**

Overall Status: **Acceptable**

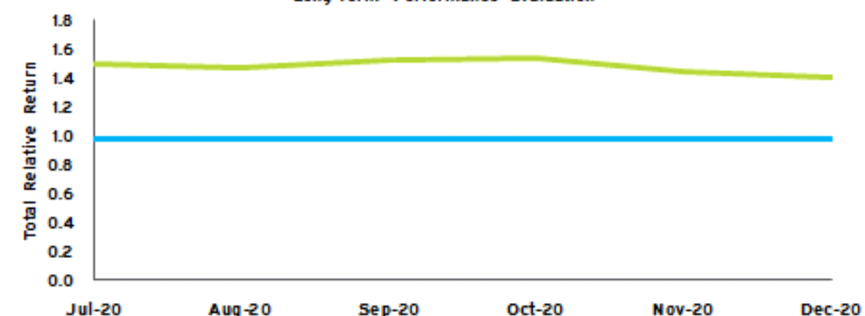
Short-Term Performance Evaluation



Medium-Term Performance Evaluation



Long-Term Performance Evaluation



Fisher Investments is on watch for qualitative reasons.

#### Manager Performance

	QTD	1 Yr	3 Yrs	5 Yrs
Parametric BXM	8.1	6.5	5.9	7.9
CBOE S&P 500 BuyWrite USD	7.5	-2.8	2.6	5.5

#### Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -3.5% for 6 consecutive months

Current Status: **Acceptable**

#### Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months

Current Status: **Acceptable**

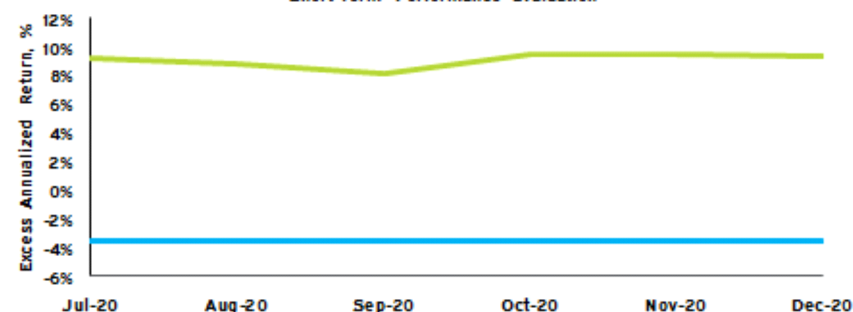
#### Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

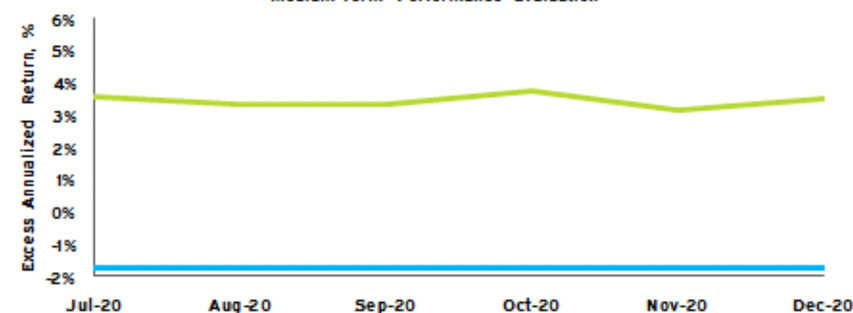
Current Status: **Acceptable**

Overall Status: **Caution**

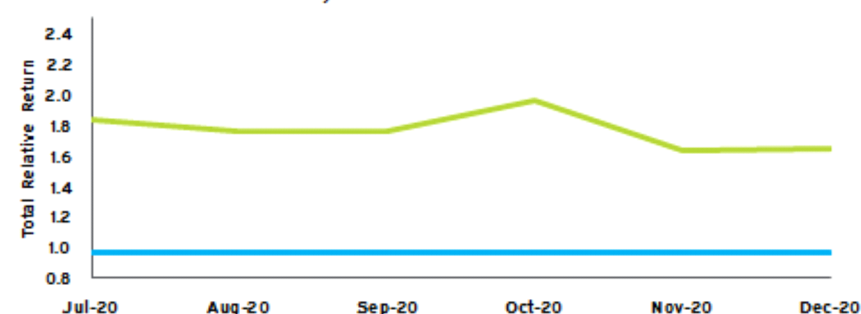
Short-Term Performance Evaluation



Medium-Term Performance Evaluation



Long-Term Performance Evaluation



### Parametric Delta Shift | As of December 31, 2020

Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Parametric Delta Shift	11.9	15.6	11.5	12.7
CBOE S&P 500 BuyWrite USD	7.5	-2.8	2.6	5.5

#### Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -3.5% for 6 consecutive months

**Current Status:** **Acceptable**

#### Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months

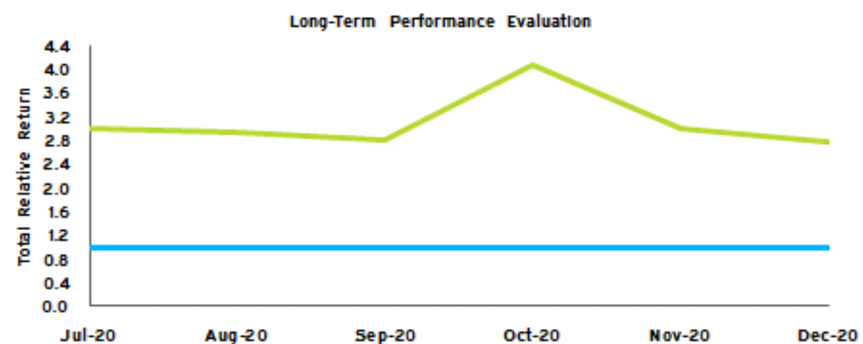
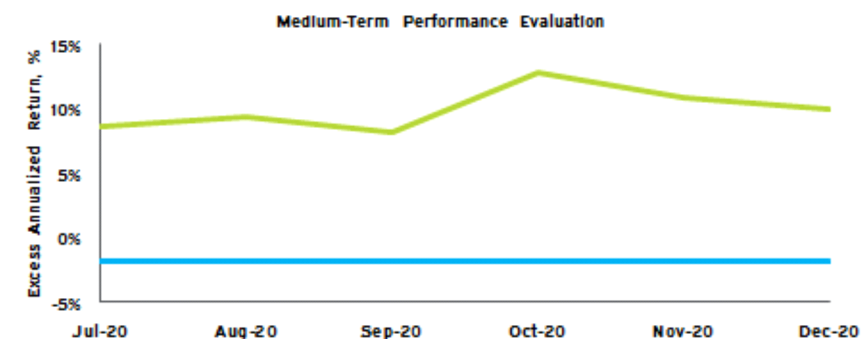
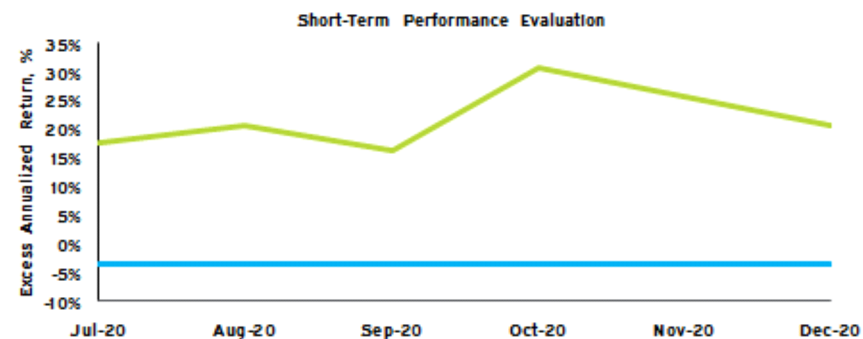
**Current Status:** **Acceptable**

#### Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

**Current Status:** **Acceptable**

**Overall Status:** **Caution**



Van Hulzen | As of December 31, 2020

Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Van Hulzen	5.3	2.4	4.4	6.2
CBOE S&P 500 BuyWrite USD	7.5	-2.8	2.6	5.5

## Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -3.5% for 6 consecutive months

**Current Status:** **Acceptable**

## Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months

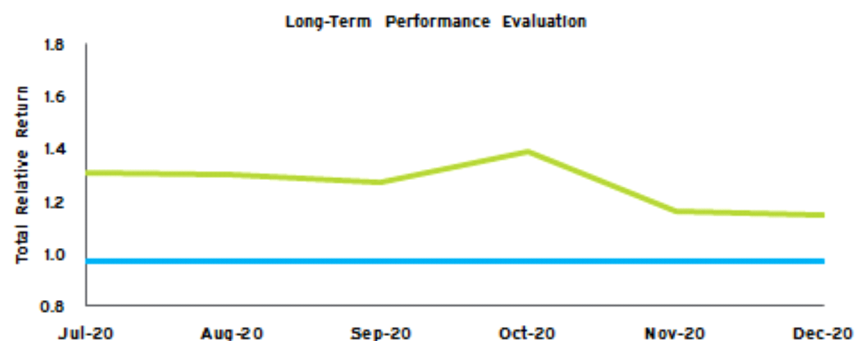
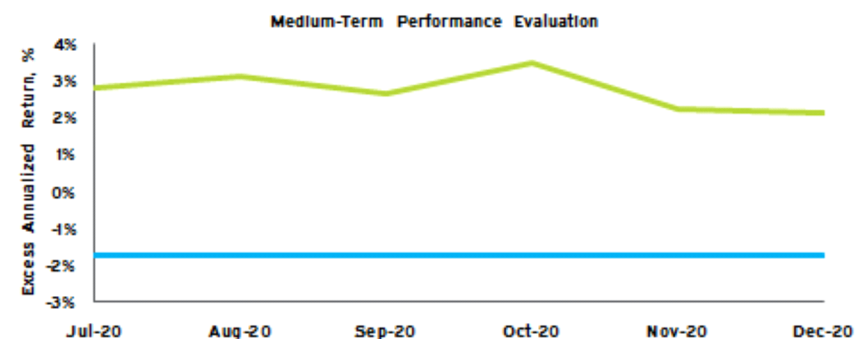
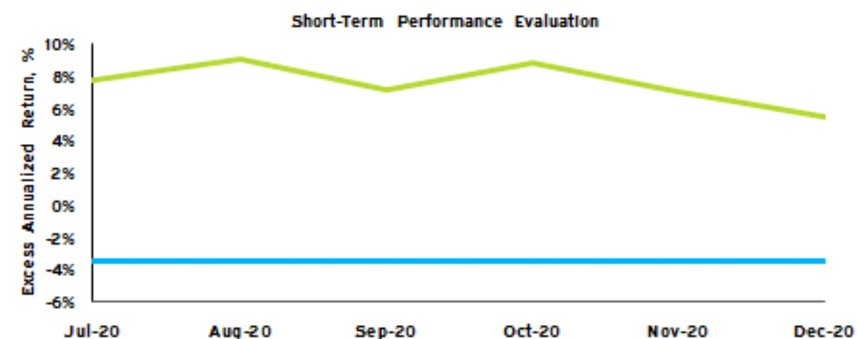
**Current Status:** **Acceptable**

## Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

**Current Status:** **Acceptable**

**Overall Status:** **Acceptable**





Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
CS McKee	0.8	8.0	5.6	4.6
BBqBarc US Aggregate TR	0.7	7.5	5.3	4.4

## Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -1.5% for 6 consecutive months

**Current Status:** Acceptable

## Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.0% for 6 consecutive months

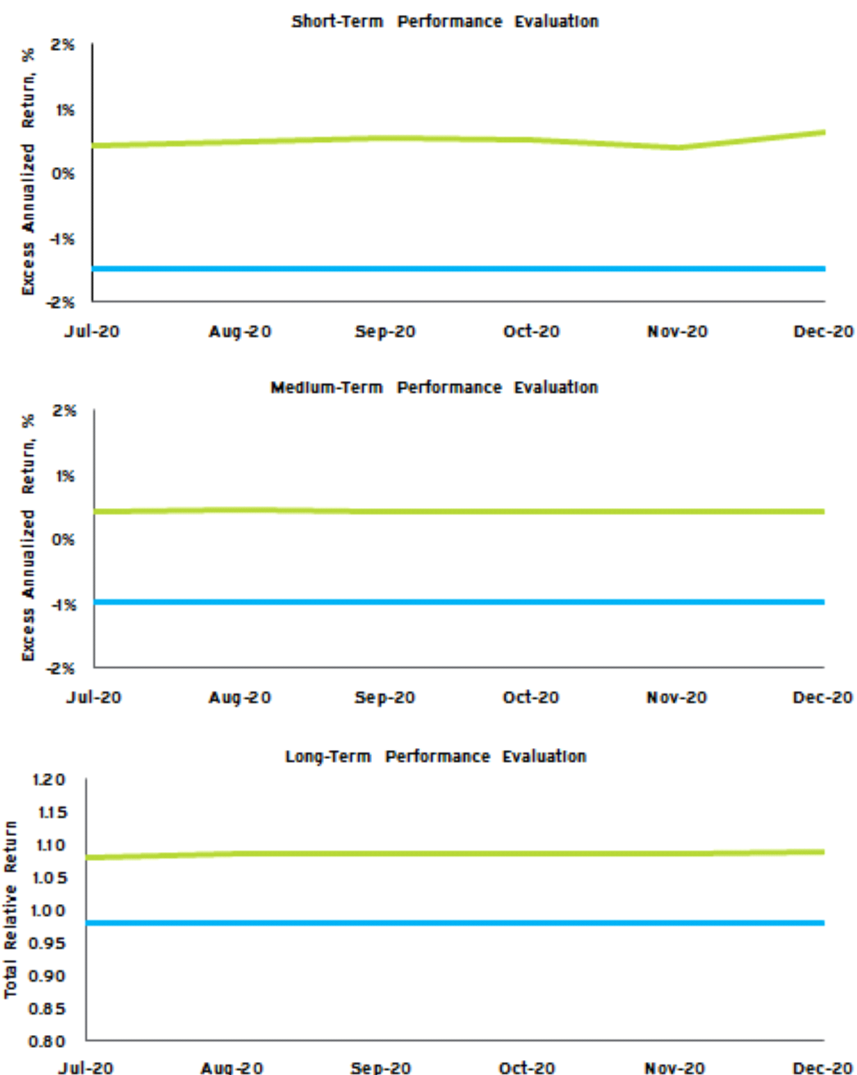
**Current Status:** Acceptable

## Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

**Current Status:** Acceptable

**Overall Status:** Acceptable



Garcia Hamilton | As of December 31, 2020

Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Garcia Hamilton	0.5	5.9	--	--
<i>BBgBarc US Intermediate Gov/Cred</i>	0.5	6.4	4.7	3.6

### Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -1.5% for 6 consecutive months

**Current Status:** **Acceptable**

### Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.0% for 6 consecutive months

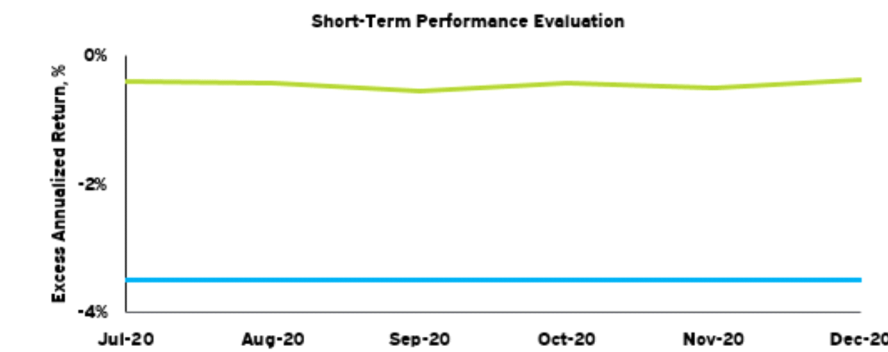
**Current Status:** Not Applicable

### Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

**Current Status:** Not Applicable

**Overall Status:** **Acceptable**



## MacKay Shields (HY) | As of December 31, 2020

### Manager Performance

	QTD	1 Yr	3 Yrs	5 Yrs
MacKay Shields (HY)	3.7	6.4	--	--
ICE BofA ML US Corp Cash Pay BB-B 1-5Yr	4.8	3.6	5.0	6.5

### Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -4.5% for 6 consecutive months

**Current Status:** **Acceptable**

### Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -2.0% for 6 consecutive months

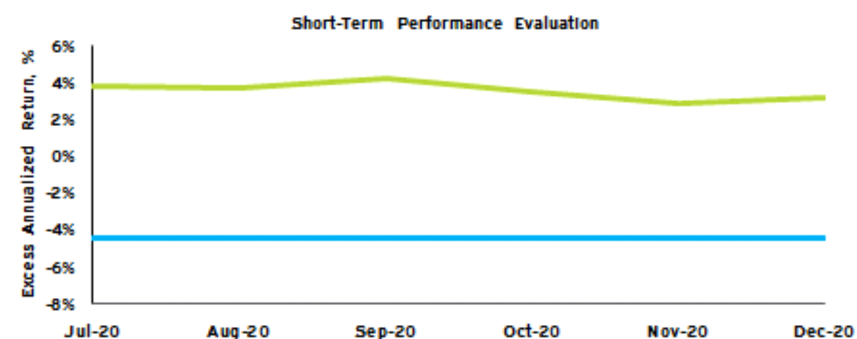
**Current Status:** Not Applicable

### Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

**Current Status:** Not Applicable

**Overall Status:** **Acceptable**



## Federated Investment Counseling (Bank Loans) | As of December 31, 2020

Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Federated Investment Counseling (Bank Loans)	2.6	1.3	--	--
60% CredSuisLevLoan/40% BBStGovCorp	2.2	2.5	3.3	3.8

### Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -4.5% for 6 consecutive months

**Current Status:** **Acceptable**

### Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -2.0% for 6 consecutive months

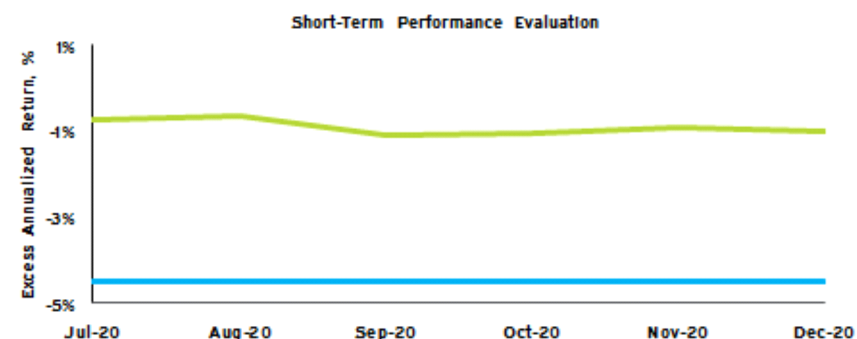
**Current Status:** Not Applicable

### Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

**Current Status:** Not Applicable

**Overall Status:** **Acceptable**



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
CenterSquare	11.9	-4.5	4.9	6.0
FTSE NAREIT Equity REIT	11.6	-8.0	3.4	4.8

## Short-Term Criteria (rolling 12-month periods)

Fund return < benchmark return -3.5% for 6 consecutive months

**Current Status:** **Acceptable**

## Medium-Term Criteria (rolling 36-month periods)

Fund annualized return < benchmark annualized return -1.75% for 6 consecutive months

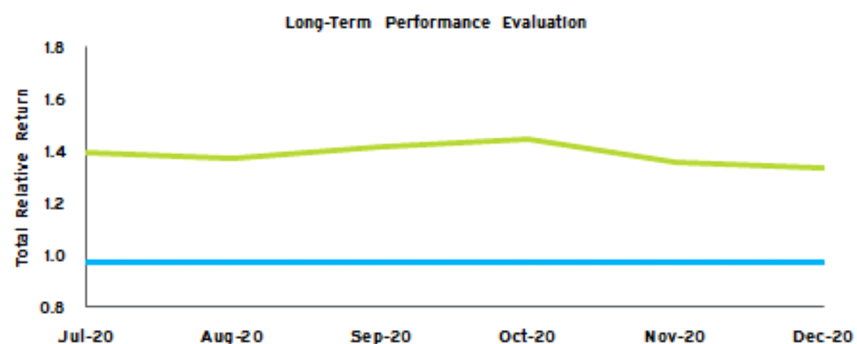
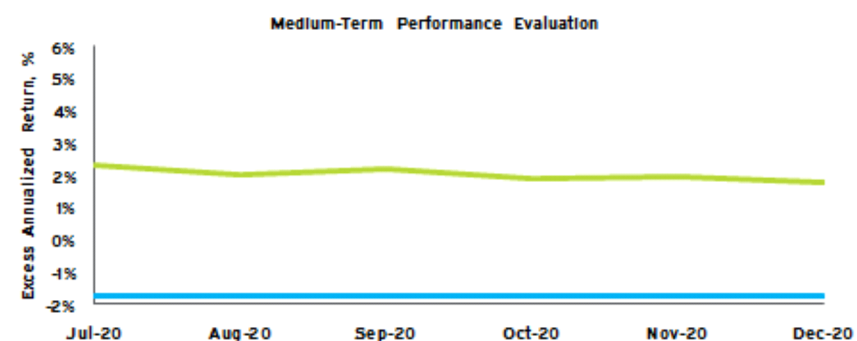
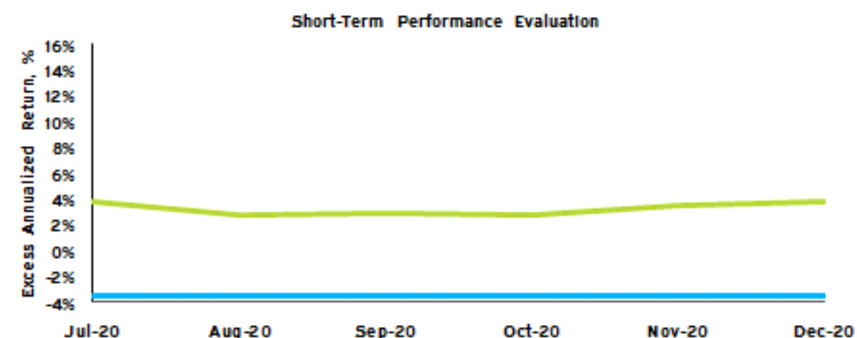
**Current Status:** **Acceptable**

## Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

**Current Status:** **Acceptable**

**Overall Status:** **Acceptable**



## **Manager Compliance Certification Responses**

**Manager Compliance Certification Responses****Manager Compliance Certification Responses****Qualitative Compliance Monitoring per EBMUD Investment Policy**

Each of EBMUD's managers is required to respond to a questionnaire on a quarterly basis to certify their compliance with EBMUD's Investment Policy Statement and provide an update on specific qualitative indicators to be evaluated.

These indicators include:

- Compliance with the guidelines of 'Eligible Investments' for the manager's specific mandate
- Any litigation or governmental regulatory proceedings involving the firm/manager
- Changes to the manager's investment outlook, investment strategy, and/or portfolio structure
- Personnel changes to the investment team responsible for the EBMUD mandate
- Significant personnel changes at the management level of the firm
- Material client terminations
- Compliance with EBMUD's current Investment Policy Statement

The manager's responses are rated based on the potential effects these factors could pose to the performance and management of the EBMUD portfolio.

Reasons for heightened concern triggering Watch status include, but are not limited to:

- Instability of key members of the portfolio management team and organization
- Changes in investment strategy and style
- Failure to comply with investment guidelines

A summary of manager responses as of the latest quarter-end is provided below.

## Manager Compliance Certification Responses

### Manager Compliance Certification Responses

Manager	Asset Class	Question 1 Compliance with 'Eligible Investments' for mandate	Question 2 Good standing as Registered Investment Advisor	Question 3 Litigation?	Question 4 Changes in manager's investment outlook, strategy, structure	Question 5 Investment team personnel changes	Question 6 Management level personnel changes	Question 7 Material business changes	Question 8 Compliance with IPS
Northern Trust R3000	Domestic Equity – All Cap	Yes	Yes	Yes*	No	No	Yes*	No	Yes
Franklin Templeton	International Equity	Yes	Yes	No	No	Yes*	Yes*	No	Yes
Fisher	International Equity	Yes	Yes	No	No	No	No	No	Yes
Northern Trust ACWI ex US	International Equity	Yes	Yes	Yes*	No	No	Yes*	No	Yes
Parametric	Covered Calls	Yes	Yes	No	No	Yes*	No	No	Yes
Van Hulzen	Covered Calls	Yes	Yes	No	No	No	No	No	Yes
CS McKee	Fixed Income – Core	Yes	Yes	No	No	No	No	No	Yes
Garcia Hamilton	Fixed Income – Core	Yes	Yes	No	No	No	No	No	Yes
Mackay Shields	Fixed Income – Short-term HY	Yes	Yes	No	No	No	Yes*	No	Yes
Federated	Fixed Income – Bank Loans	Yes	Yes	No	No	No	No	No	Yes
RREEF	Real Estate	Yes	Yes	No	No	No	No	No	Yes
CenterSquare	Real Estate	Yes	Yes	Yes*	No	No	Yes*	Yes*	Yes

■ no concern 
 ■ low concern 
 ■ high concern (Watch status)

\* see detailed manager response below



**Manager Compliance Certification Responses****Northern Trust – R3000 and ACWI ex US****Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?**

- Yes; As one of the world's largest asset managers, Northern Trust Investments, Inc. (NTI) is occasionally named as a defendant in asset management-related litigation. NTI is not currently party to any litigation that has had (or will have) a material effect on its ability to perform services for its clients. At this time, there are no significant pending cases. As one of the world's leading providers of asset servicing, Northern Trust and its subsidiaries occasionally receive requests for information from government and regulatory agencies. Northern Trust frequently does not know if such requests are related to a formal government or regulatory investigations or, assuming an investigation is underway, whether Northern Trust is a target of such investigation or simply thought to be in possession of information pertinent to such investigation. Northern Trust is not currently involved in any government or regulatory investigation or proceeding that would have a material impact on its ability to provide advisory services to its clients.

**Question 5: Have there been any personnel changes to the investment team responsible for the EBMUD portfolio during the quarter?**

- Yes; There were two departures within the Global Index Equity Team. Manus Stapleton, Portfolio Manager, and Andrew Allison, Portfolio Manager, both left the firm during 3Q.

**Question 6: Have there been any significant changes at the management level of the Firm during the quarter?**

- Yes; As a result of the constantly changing landscape of asset management, we believe the occasional organizational changes are a natural progression and necessary in order to adapt to new market and regulatory environments. The most recent and anticipated changes to senior personnel are the following: March 2020, Mamadou Abou-Sarr, former Director of Product Development and Sustainable Investing, left Northern Trust to pursue other opportunities. We are in the process of recruiting for a Global head of ESG, but in the interim, our Global Head of Product, Sheri Hawkins, is responsible for our Sustainable Investing practice, well supported by a number of talented subject matter experts.

**Manager Compliance Certification Responses****Franklin Templeton****Question 5: Have there been any personnel changes to the investment team responsible for the EBMUD portfolio during the quarter?**

- Yes, Kimberly Reynolds, VP/Research Analyst of Templeton Global Equity Group (TGEG), the managing team of East Bay Municipal Utility District Employees' Retirement System departed the firm on May 1, 2020.

**Question 6: Have there been any significant changes at the management level of the Firm during the quarter?**

- During June 10, 2020, Franklin Templeton announced that Jed Plafker has been named Executive Vice President of Global Alliances and New Business Strategies. In this newly created position, Plafker will be responsible for the expansion of the company's digital wealth management and distribution-related financial technology, ensuring that the firm fully harnesses these capabilities for financial advisors and clients. Plafker will continue to report to CEO Jenny Johnson and serve as a member of the firm's Executive Committee.

**Manager Compliance Certification Responses****Parametric****Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?**

- Parametric is not currently a plaintiff or defendant in any lawsuits or arbitration proceedings related to its investment management services, nor have there been any such lawsuits or arbitration proceedings in the last year, against Parametric or any affiliates controlled by Parametric. From time to time, Parametric receives subpoenas and/or information requests relating to lawsuits to which Parametric is not a party. These subpoenas and/or information request were/are incidental to Parametric's business and were/are handled in the ordinary course of business.
- Parametric believes that these actions have not and will not have a material adverse effect on the firm's ability to manage client assets.

**Question 5: Have there been any personnel changes to the investment team responsible for the EBMUD portfolio during the quarter?**

- As communicated to clients and their consultants in May 2020, Jon Orseck, Managing Director, Investment Management, left Parametric effective September 30, 2020. Jon had led the teams responsible for the implementation of our covered call portfolios, including portfolio management and trading. Larry Berman, Managing Director, assumed Jon's responsibilities overseeing the implementation teams upon his departure. Parametric's call writing programs are rules-based and systematic, so they do not rely on the market views of any individual. Parametric believes that these actions have not and will not have a material adverse effect on the firm's ability to manage client assets.

**Manager Compliance Certification Responses**

MacKay Shields

**Question 6:** Have there been any significant personnel changes at the management level of the Firm during the quarter?

- Janelle Woodward joined as President in September, 2020 and Dale Sang joined as CTOO in July, 2020.

**Manager Compliance Certification Responses****CenterSquare****Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?**

- SEC Examination – Status: Update 3Q2020 CenterSquare received a written inquiry dated January 7, 2020 from the Securities and Exchange Commission (SEC), Division of Enforcement office in Washington, DC. The inquiry requested certain information relating to Soft Dollar practices of CenterSquare for the time period January 1, 2015 through December 31, 2019. We believe this was part of a sweep examination as we have confirmed that at least one other investment advisor received this request. Further, the SEC notice indicated the request was part of a non-public, fact finding inquiry. CenterSquare fully complied with the information request and since our response to the SEC on February 4, 2020, we have received no further communications or requests for documentation. We will provide an update on the matter should we receive any further correspondence from the SEC.
- Legal – Status: Update 3Q2020: On March 25, 2020, CenterSquare Investment Management LLC (“CenterSquare”) was named a party-defendant to a lawsuit filed in the District Court of Harris County, Texas (Docket No. 2020-19362). CenterSquare was advising a separate account client in our private real estate strategy (the “Buyer”) on the acquisition of a property in Texas and, after seller did not complete closing on the closing date, the Buyer delivered to the seller a notice of termination and demand for return of the earnest money deposit (\$250,000). In lieu of agreeing to return the deposit, the seller filed suit against the Buyer, CenterSquare and an employee of CenterSquare making various allegations and requests for relief. The trial court granted a Motion for Summary Judgment in favor of CenterSquare and the Buyer. The court ordered the plaintiff to pay actual damages in the amount the earnest money deposit plus reimbursement for out-of-pocket expenses; interest on actual damages; and all legal fees plus interest. In addition, the plaintiff is responsible to pay all court costs.

**Manager Compliance Certification Responses****CenterSquare (cont.)****Question 6: Have there been any significant personnel changes at the management level of the Firm during the quarter?**

- On October 1, 2020, CenterSquare hired Kevin Robinson as CenterSquare's General Counsel. Kevin succeeds Frank Ferro who will continue with our firm as General Counsel Emeritus. Kevin will direct all legal and compliance activities for CenterSquare. In addition, Michael Brophy, our Chief Compliance Officer, will now report to Kevin. A summary biography is provided below.

- **Kevin Robinson, JD, General Counsel**

Mr. Robinson serves as General Counsel and is currently responsible for overseeing the company's legal and compliance requirements. Mr. Robinson joined the firm in 2020. Prior to joining CenterSquare, Mr. Robinson served as Partner and General Counsel of GreenOak Real Estate Advisors, and previously held positions at Polygon Investment Partners LP and Cravath, Swaine and Moore LLP. He holds a JD from Georgetown University Law Center and a Bachelor of Arts from the University of Notre Dame.

**Question 7: Have there been any material changes in your firm's business during the quarter, including but not limited to:**

- a. any client(s) that terminated its relationship whose terminated portfolio account represents > 1% of the Manager's aggregate portfolio on the day of notice of termination, and/or
- b. any client(s) that terminates its relationship when the cumulative terminations for a calendar month is > 1% of the Manager's aggregate portfolio as of the first business day of the month.
- A U.S. Core REIT client representing 2.5% of the total AUM as of 08/31/2020 decided to terminate their relationship with CenterSquare sighting a change in their overall investment approach.

**Manager Compliance Certification Responses****Required California AB 2833 Disclosure – RREEF AMERICA II**

Effective January 1, 2017 RREEF America REIT II, Inc. (“alternative investment vehicle”) is required to provide to the East Bay Municipal Utility District (“public investment fund” or “District”) specific information at least annually pursuant to Section 7514.7 of the California Government Code (“Section 7514.7”).

1. The fees and expenses that the public investment fund pays directly to the alternative investment vehicle, the fund manager, or related parties.

EBMUD asset management fees – January 2018 – December 2018 = \$359,713.64

2. The public investment fund’s pro rata share of fees and expenses not included in paragraph (1) that are paid from the alternative investment vehicle to the fund manager or related parties.

\$0.00

3. The public investment fund’s pro rata share of carried interest distributed to the fund manager or related parties.

N/A

4. The public investment fund’s pro rata share of aggregate fees and expenses paid by all of the portfolio companies held within the alternative investment vehicle to the fund manager or related parties.

EBMUD asset management fees – January 2018 – December 2018 = \$359,713.64

5. Any additional information described in subdivision (b) of Section 6254.26.

N/A

6. The gross and net rate of return of each alternative investment vehicle since inception.

Gross = 6.46%    Net = 5.65% (as of December 31, 2018)

7. Any other information required to be collected pursuant to Section 7514.7.

N/A

Source: Deutsche Asset Management

## Appendix



### EBMUD Fee Summary

Manager	Mandate	Estimated Annual Fee (bps)*
Northern Trust – R3000	Passive – All Cap Core	1.5
Franklin Templeton	Active – International Equity	53
Fisher	Active – International Equity	62
Northern Trust ACWI ex US	Passive – International Equity	4
Parametric – BXM	Replication – Covered Calls	17
Parametric – DeltaShift	Semi-Active – Covered Calls	32
Van Hulzen	Active – Covered Calls	25
CS McKee	Active – Core Fixed Income	20
Garcia Hamilton	Active – Core Fixed Income	15
MacKay Shields – Short-Term High Yield	Active – Non-Core Fixed Income	42
Federated – Bank Loans	Active – Non-Core Fixed Income	50
RREEF	Real Estate	95
CenterSquare	Real Estate	27.5 bps + 15% on excess returns

### Glossary of Terms

**Alpha:** The premium an investment earns above a set standard. This is usually measured in terms of a common index (i.e., how the stock performs independent of the market). An Alpha is usually generated by regressing a security's excess return on the S&P 500 excess return.

**Annualized Performance:** The annual rate of return that when compounded  $t$  times generates the same  $t$ -period holding return as actually occurred from period 1 to period  $t$ .

**Batting Average:** Percentage of periods a portfolio outperforms a given index.

**Beta:** The measure of an asset's risk in relation to the Market (for example, the S&P 500) or to an alternative benchmark or factors. Roughly speaking, a security with a Beta of 1.5 will have moved, on average, 1.5 times the market return.

**Bottom-up:** A management style that de-emphasizes the significance of economic and market cycles, focusing instead on the analysis of individual stocks.

**Dividend Discount Model:** A method to value the common stock of a company that is based on the present value of the expected future dividends.

**Growth Stocks:** Common stock of a company that has an opportunity to invest money and earn more than the opportunity cost of capital.

**Information Ratio:** The ratio of annualized expected residual return to residual risk. A central measurement for active management, value added is proportional to the square of the information ratio.

**R-Squared:** Square of the correlation coefficient. The proportion of the variability in one series that can be explained by the variability of one or more other series a regression model. A measure of the quality of fit. 100% R-square means perfect predictability.

**Standard Deviation:** The square root of the variance. A measure of dispersion of a set of data from its mean.

**Sharpe Ratio:** A measure of a portfolio's excess return relative to the total variability of the portfolio.

**Style Analysis:** A returns-based analysis using a multi-factor attribution model. The model calculates a product's average exposure to particular investment styles over time (i.e., the product's normal style benchmark).

**Top-down:** Investment style that begins with an assessment of the overall economic environment and makes a general asset allocation decision regarding various sectors of the financial markets and various industries.

**Tracking Error:** The standard deviation of the difference between the performance of a portfolio and an appropriate benchmark.

**Turnover:** For mutual funds, a measure of trading activity during the previous year, expressed as a percentage of the average total assets of the fund. A turnover rate of 25% means that the value of trades represented one-fourth of the assets of the fund.

**Value Stocks:** Stocks with low price/book ratios or price/earnings ratios. Historically, value stocks have enjoyed higher average returns than growth stocks (stocks with high price/book or P/E ratios) in a variety of countries.

### Definition of Benchmarks

**BC Aggregate:** an index comprised of approximately 6,000 publicly traded investment-grade bonds including U.S. Government, mortgage-backed, corporate, and yankee bonds with an approximate average maturity of 10 years.

**BC High Yield:** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included. Must be rated high-yield (Ba1/BB+ or lower) by at least two of the following ratings agencies: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. All issues must have at least one year to final maturity regardless of call features and have at least \$150 million par amount outstanding.

**BC Multiverse Non-US Hedged:** provides a broad-based measure of the international fixed-income bond market. The index represents the union of the BC Global Aggregate Index and the BC Global High Yield Index. In this sense, the term "Multiverse" refers to the concept of multiple universes in a single macro index.

**BC US Credit:** includes publicly issued U.S. corporate and foreign debentures and secured notes that which are rated investment grade or higher by Moody's Investor Services, Standard and Poor's Corporation, or Fitch Investor's Service, with all issues having at least one year to maturity and an outstanding par value of at least \$250 million. Issues must be publicly issued, dollar-denominated and non-convertible.

**BC US Government:** includes treasuries (i.e., public obligations of the U.S. Treasury that have remaining maturities of more than one year) and agencies (i.e., publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government).

**BC Universal:** includes market coverage by the Aggregate Bond Index fixed rate debt issues, which are rated investment grade or higher by Moody's Investor Services, Standard and Poor's Corporation, or Fitch Investor's Service, with all issues having at least one year to maturity and an outstanding par value of at least \$100 million) and includes exposures to high yield CMBS securities. All returns are market value weighted inclusive of accrued interest.

**Citigroup 3-Month Treasury Bills (T-bills):** tracks the performance of U.S. Treasury bills with 3-month maturity.

**MSCI ACWI x US ND:** comprises both developed and emerging markets less the United States. As of August 2008, the index consisted of 23 countries classified as developed markets and 25 classified as emerging markets. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

**MSCI EAFE Free (Europe, Australasia, Far East) ND:** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

**MSCI EM (Emerging Markets) GD:** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. This series approximates the maximum possible dividend reinvestment. The amount reinvested is the entire dividend distributed to individuals resident in the country of the company, but does not include tax credits.

**MSCI Europe** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. As of June 2007, this index consisted of the following 16 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**MSCI Pacific** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in the Pacific region. As of June 2007, this index consisted of the following 5 Developed Market countries: Australia, Hong Kong, Japan, New Zealand, and Singapore.

**NAREIT Index:** consists of all tax-qualified REITs listed on the New York Stock Exchange, American Stock Exchange, and the NASDAQ National Market System. The data is market weighted.

**NCREIF Property Index:** the NPI contains investment-grade, non-agricultural, income-producing properties which may be financed in excess of 5% gross market value; were acquired on behalf of tax exempt institutions; and are held in a fiduciary environment. Returns are gross of fees; including income, realized gains/losses, and appreciation/depreciation; and are market value weighted. Index is lagged one quarter.

**Russell 1000:** measures the performance of the 1,000 largest securities in the Russell 3000 Index. Russell 1000 is highly correlated with the S&P 500 Index and capitalization-weighted.

**Russell 1000 Growth:** measures the performance of those Russell 1000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values than the Value universe.

**Russell 1000 Value:** measures the performance of those Russell 1000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

**Russell 2000:** measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

**Russell 2000 Growth:** measures the performance of those Russell 2000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-to-earnings ratios.

**Russell 2000 Value:** measures the performance of those Russell 2000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-to-earnings ratios.

**Russell 3000:** represents the largest 3,000 US companies based on total market capitalization, representing approximately 98% of the investable US equity market.

**Value Relative Ratio (VRR):** Performance metric used to evaluate long-term manager performance relative to a benchmark and to highlight compounded over/under performance data over a certain time frame. VRR is calculated by the growth of a dollar invested with the manager divided by the growth of a dollar invested in the benchmark for the same time period.

### Risk Metric Description – Rationale for Selection and Calculation Methodology

#### **US Equity Markets**

Metric:  $P/E \text{ ratio} = \text{Price} / \text{"Normalized" earnings for the S\&P 500 Index}$

To represent the price of US equity markets, we have chosen the S&P 500 index. This index has the longest published history of price, is well known, and also has reliable, long-term, published quarterly earnings. The price= $P$  of the  $P/E$  ratio is the current price of the market index (the average daily price of the most recent full month for the S&P 500 index). Equity markets are very volatile. Prices fluctuate significantly during normal times and extremely during periods of market stress or euphoria. Therefore, developing a measure of earnings power ( $E$ ) which is stable is vitally important, if the measure is to provide insight. While equity prices can and do double, or get cut in half, real earnings power does not change nearly as much. Therefore, we have selected a well known measure of real, stable earnings power developed by Yale Professor Robert Shiller known as the Shiller E-10. The calculation of E-10 is simply the average real annual earnings over the past 10 years. Over 10 years, the earnings shenanigans and boom and bust levels of earnings tend to even out (and often times get restated). Therefore, this earnings statistic gives a reasonably stable, slow-to-change estimate of average real earnings power for the index. Professor Shiller's data and calculation of the E-10 are available on his website at <http://www.econ.yale.edu/~shiller/data.htm>. We have used his data as the base for our calculations. Details of the theoretical justification behind the measure can be found in his book *Irrational Exuberance* [Princeton University Press 2000, Broadway Books 2001, 2nd ed., 2005].

#### **Developed Equity Markets Excluding the US**

Metric:  $P/E \text{ ratio} = \text{Price} / \text{"Normalized" earnings for the MSCI EAFE Index}$

To represent the price of non-US developed equity markets, we have chosen the MSCI EAFE index. This index has the longest published history of price for non-US developed equities. The price= $P$  of the  $P/E$  ratio is the current price of the market index (the average daily price of the most recent full month for the MSCI EAFE index). The price level of this index is available starting in December 1969. Again, for the reasons described above, we elected to use the Shiller E-10 as our measure of earnings ( $E$ ). Since 12/1972, a monthly price earnings ratio is available from MSCI. Using this quoted ratio, we have backed out the implied trailing-twelve month earnings of the EAFE index for each month from 12/1972 to the present. These annualized earnings are then inflation adjusted using CPI-U to represent real earnings in US dollar terms for each time period. The Shiller E-10 for the EAFE index (10 year average real earnings) is calculated in the same manner as detailed above.

However, we do not believe that the pricing and earnings history of the EAFE markets are long enough to be a reliable representation of pricing history for developed market equities outside of the US. Therefore, in constructing the Long-Term Average Historical P/E for developed ex-US equities for comparison purposes, we have elected to use the US equity market as a developed market proxy, from 1881 to 1982. This lowers the Long-Term Average Historical P/E considerably. We believe this methodology provides a more realistic historical comparison for a market with a relatively short history.

### **Emerging Market Equity Markets**

Metric: Ratio of Emerging Market P/E Ratio to Developed Market P/E Ratio

To represent the Emerging Markets P/E Ratio, we have chosen the MSCI Emerging Market Free Index, which has P/E data back to January 1995 on Bloomberg. To represent the Developed Markets PE Ratio, we have chosen the MSCI World Index, which also has data back to January 1995 on Bloomberg. Although there are issues with published, single time period P/E ratios, in which the denominator effect can cause large movements, we feel that the information contained in such movements will alert investors to market activity that they will want to interpret.

### **US Private Equity Markets**

Metrics: S&P LCD Average EBITDA Multiples Paid in LBOs and US Quarterly Deal Volume

The Average Purchase Price to EBITDA multiples paid in LBOs is published quarterly by S&P in their LCD study. This is the total price paid (both equity and debt) over the trailing-twelve month EBITDA (earnings before interest, taxes, depreciation and amortization) as calculated by S&P LCD. This is the relevant, high-level pricing metric that private equity managers use in assessing deals. Data is published monthly.

US quarterly deal volume for private equity is the total deal volume in \$ billions (both equity and debt) reported in the quarter by Thomson Reuters Buyouts. This metric gives a measure of the level of activity in the market. Data is published quarterly.

### **US Private Real Estate Markets**

Metrics: US Cap Rates, Cap Rate Spreads, and Transactions as a % of Market Value

Real estate cap rates are a measure of the price paid in the market to acquire properties versus their annualized income generation before financing costs (NOI=net operating income). The data, published by NCREIF, describes completed and leased properties (core) on an unleveraged



basis. We chose to use current value cap rates. These are capitalization rates from properties that were revalued during the quarter. This data relies on estimates of value and therefore tends to be lagging (estimated prices are slower to rise and slower to fall than transaction prices). The data is published quarterly.

Spreads between the cap rate (described above) and the 10-year nominal Treasury yield, indicate a measure of the cost of properties versus a current measure of the cost of financing.

Transactions as a % of Market Value Trailing-Four Quarters is a measure of property turnover activity in the NCREIF Universe. This quarterly metric is a measure of activity in the market.

### **Credit Markets Fixed Income**

Metric: Spreads

The absolute level of spreads over treasuries and spread trends (widening / narrowing) are good indicators of credit risk in the fixed income markets. Spreads incorporate estimates of future default, but can also be driven by technical dislocations in the fixed income markets. Abnormally narrow spreads (relative to historical levels) indicate higher levels of valuation risk, wide spreads indicate lower levels of valuation risk and / or elevated default fears. Investment grade bond spreads are represented by the Barclays Capital US Corporate Investment Grade Index Intermediate Component. The high yield corporate bond spreads are represented by the Barclays Capital US Corporate High Yield Index.

### **Measure of Equity Market Fear / Uncertainty**

Metric: VIX – Measure of implied option volatility for US equity markets

The VIX is a key measure of near-term volatility conveyed by implied volatility of S&P 500 index option prices. VIX increases with uncertainty and fear. Stocks and the VIX are negatively correlated. Volatility tends to spike when equity markets fall.

### **Measure of Monetary Policy**

Metric: Yield Curve Slope

We calculate the yield curve slope as the 10 year treasury yield minus the 1 year treasury yield. When the yield curve slope is zero or negative, this is a signal to pay attention. A negative yield curve slope signals lower rates in the future, caused by a contraction in economic activity. Recessions are typically preceded by an inverted (negatively sloped) yield curve. A very steep yield curve (2 or greater) indicates a large difference between shorter-term interest rates (the 1 year rate) and longer-term rates (the 10 year rate). This can signal expansion in economic activity in the future, or merely higher future interest rates.

### **Measures of US Inflation Expectations**

Metrics: Breakeven Inflation and Inflation Adjusted Commodity Prices

Inflation is a very important indicator impacting all assets and financial instruments. Breakeven inflation is calculated as the 10 year nominal treasury yield minus the 10 year real yield on US TIPS (treasury inflation protected securities). Abnormally low long-term inflation expectations are indicative of deflationary fears. A rapid rise in breakeven inflation indicates an acceleration in inflationary expectations as market participants sell nominal treasuries and buy TIPS. If breakeven inflation continues to rise quarter over quarter, this is a signal of inflationary worries rising, which may cause Fed action and / or dollar decline.

Commodity price movement (above the rate of inflation) is an indication of anticipated inflation caused by real global economic activity putting pressure on resource prices. We calculate this metric by adjusted in the Dow Jones UBS Commodity Index (formerly Dow Jones AIG Commodity Index) by US CPI-U. While rising commodity prices will not necessarily translate to higher US inflation, higher US inflation will likely show up in higher commodity prices, particularly if world economic activity is robust.

These two measures of anticipated inflation can, and often are, conflicting.

### **Measures of US Treasury Bond Interest Rate Risk**

Metrics: 10-Year Treasury Forward-Looking Real Yield and 10-Year Treasury Duration

The expected annualized real yield of the 10 year US Treasury Bond is a measure of valuation risk for US Treasuries. A low real yield means investors will accept a low rate of expected return for the certainty of receiving their nominal cash flows. Meketa estimates the expected annualized real yield by subtracting an estimate of expected 10 year inflation (produced by the Survey of Professional Forecasters as collected by the Federal Reserve Bank of Philadelphia), from the 10 year Treasury constant maturity interest rate.

Duration for the 10-Year Treasury Bond is calculated based on the current yield and a price of 100. This is a measure of expected percentage movements in the price of the bond based on small movements in percentage yield. We make no attempt to account for convexity.

### **Definition of “Extreme” Metric Readings**

A metric reading is defined as “extreme” if the metric reading is in the top or bottom decile of its historical readings. These “extreme” reading should cause the reader to pay attention. These metrics have reverted toward their mean values in the past.

### **RISK METRICS DESCRIPTION – Meketa Market Sentiment Indicator**

#### **What is the Meketa Market Sentiment Indicator (MMSI)?**

The MMSI is a measure meant to gauge the market’s sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The MMSI takes into account the momentum<sup>1</sup> (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

#### **How do I read the Meketa Market Sentiment Indicator (MMSI) graph?**

Simply put, the MMSI is a color coded indicator that signals the market’s sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the MMSI indicates that the market’s sentiment towards growth risk is positive. A gray indicator indicates that the market’s sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market’s sentiment towards growth risk is negative. The black line on the graph is the level of the MMSI. The degree of the signal above or below the neutral reading is an indication the signal’s current strength.

#### **How is the Meketa Market Sentiment Indicator (MMSI) Constructed?**

The MMSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:

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<sup>1</sup> Momentum is defined as the persistence of relative performance. There is a significant amount of academic evidence indicating that positive momentum (e.g., strong performing stocks over the recent past continue to post strong performance into the near future) exists over near-to-intermediate holding periods. See, for example, “Understanding Momentum,” *Financial Analysts Journal*, Scowcroft, Sefton, March, 2005.

1. Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months)
2. Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration U.S. Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight). The scale of this measure is adjusted to match that of the stock return momentum measure.

The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure. The color reading on the graph is determined as follows:

1. If both stock return momentum and bond spread momentum are positive = GREEN (positive)
2. If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
3. If both stock return momentum and bond spread momentum are negative = RED (negative)

#### **What does the Meketa Market Sentiment Indicator (MMSI) mean? Why might it be useful?**

There is strong evidence that time series momentum is significant and persistent.<sup>1</sup> In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12 month period. The MMSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

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<sup>1</sup> "Time Series Momentum" Moskowitz, Ooi, Pedersen, August 2010 <http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf>

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.

## MEMORANDUM

**TO:** East Bay Municipal Utility District Employees' Retirement System  
**FROM:** Sarah Bernstein, Eric Larsen,  
Meketa Investment Group (Meketa)  
**DATE:** March 18, 2021  
**RE:** ESG Survey of EBMUDERS Investment Managers

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The second annual survey of the East Bay Municipal Utility District Employees' Retirement System (EBMUDERS) has been completed. Responses are summarized below.

The exercise received responses from all managers. Meketa believes all managers' ESG policies and firm infrastructure is appropriate, given their respective mandates at this time.

### Survey Questions:

- Is your firm a member of PRI and/or other institutional investor ESG related organizations? Please list.
- Do you integrate ESG factors into your investment approach? If so, please describe.
- Have ESG factors affected your investing? If so, please provide example/s.
- What impact have ESG factors had on the fund's risk, return and diversification performance?
- What reporting on ESG does your firm provide for clients?
- How is your organization staffed regarding ESG analysis and investments?
- Do you have ESG Investment Policy and Guidelines? If so, please provide.
- Please provide, if available, an ESG scoring for your mandate and a comparison to its relevant benchmark. Please comment on differences between the scores for you mandate and its benchmark.
- Please report the breadth of women and minority representation on your Board of Directors, and in your firm's executive management and portfolio management.
- Please provide a copy of your firm's policy on diversity, equity, and inclusion.
- What, if any actions, has your firm taken over the last year, or do you plan to take, to combat racism in the investment management industry?

The survey received a wide range of responses from managers. The 2021 survey included three additional questions for managers with respect to women and minority representation within the firm and current actions and initiatives to combat racism. The ESG investment landscape has a variety of solutions. There is no one-size-fits all strategy. Most managers have specific ESG policy or guidelines.

The implementation and practice of incorporating these policies into their respective operations varies widely. All managers with the exception of Van Hulzen are members of PRI with the recent addition of CS McKee following last year's survey. All managers are actively contributing to a wide array of programs and initiatives to combat unconscious bias and improve diversity within their ranks and the investment industry as a whole.

Qualitative measures that directly impact portfolio construction on a broad level are one example of this impact. Another example of this impact is the development of ESG specific strategies.

ESG factors did not directly impact portfolio construction for all managers. Some managers prefer to practice ESG policy through stewardship and engagement with issuers and management. In conclusion, the managers surveyed all appear to have some degree of ESG consideration incorporated in their current business practice, perhaps with the exception of Van Hulzen who implements ESG screens only at the client's request.

Manager	PRI/ESG Organization Member?	Integrate ESG Factors?	Investing Affected by ESG Factors?	Impact of ESG Factors on Risk/Return	ESG Reporting Provided?	ESG Staffing	ESG Investment Policy/ Guidelines?	ESG Score (Benchmark)	Women and Minority Representation	Diversity & Inclusion Policy?	Actions against Racism in the past year
CenterSquare (Real Estate/REIT)	Yes (PRI UN and others)	Yes	Yes	Investment Approach/Risk Management	Quarterly responsible investment updates	Global ESG Coordinator	Yes	73 (GRESB 71)	Employee Owned - 29% women, 8% minority.	Yes	Adopted Diversity Commitment Statement
CS McKee (Fixed Income/Core)	Yes (UN PRI)	Yes	Yes	Negative return impact, though also lowering performance variance	Yes, customized to client needs	No ESG specific staffing	Not Provided	75.3 (GRESB 75.8)	13 Investment Professionals - 3 are women/minority	Yes	Developing committee that includes diversity goals.
DWS RREEF (Real Estate/Core)	Yes (PRI and others)	Yes	Yes	Policies and practices in place that reduce risk and increase return	Yes, numerous standardized reports	Yes, Sustainability Office, Thematic Research Team, Corporate Governance Center	Yes	83 (GRESB 72)	Executive Board - 1 woman RREEF II BoD - 2 women and 1 minority RREEF II PM Team - 2 women and 1 minority	Yes	Employee inclusion networks and external partnership engagement
Federated Hermes (Fixed Income/Non-Core)	Yes (PRI and others)	Yes	Yes, Corporate Governance	Not Provided	Firm-level PRI Transparency Report	Responsible Investing Office, no ESG specific analysts	Yes	Not Provided	16.7% of board is women. 100% White. PMs 16% women, 8% minority	Yes	Yes, hired a Diversity Officer among others
Fisher (International Equity/Active)	Yes (PRI and others)	Yes	Yes	No expected material impact on risk or return characteristics	Yes, numerous standardized reports and customized reports	Five ESG research analysts, ESG Project Manager, and VP of Engagement	Yes	MSCI ESG Score 6.74 (MSCI ACWI ex US Index 6.32)	35% of executive management is women or minority. 44.2% of PM group is women or minority.	Yes	Firm Level Commitment - Updated Vision and Values Statements. Among others
Garcia Hamilton (Fixed Income/Core)	Yes (PRI)	Yes	Yes	No	Yes	No specific staffing, all analysts use ESG reports to define risk/opportunities	Yes	Not Provided	75% of Management Committee is female and/or minority. Employee Ownership is 90% female and/or minority	Yes	Engages, supports, and donates to a variety of non-profit organizations and programs
Mackay Shields (Fixed Income/Non-Core)	Yes (PRI)	Yes	Yes	Risk management and return opportunities	Yes	No ESG specific staffing	Yes	Not Provided	33% of board, 60% of executive leadership, 30% senior level are women or minority.	Yes	Annual contributions to New York Life Initiatives
Northern Trust (Domestic and International Equity/Passive)	Yes (PRI and others)	Not a direct factor in investment process	Yes, Capital Market Assumptions impacted by ESG factors	Not Applicable to EBMUD	Yes	Sustainable Investing Team	Yes	Russell 3000 - 5.6 ACWI ex US- 6.3 Aggregate Bond Index - Not Provided (All ratings match benchmark)	7 Directors - 2 women, 3 minority	Yes, imbedded within Code of Business Conduct and Ethics	Diversity Targets driven through initiatives.
Parametric (Covered Calls)	Yes (PRI)	Not a direct factor in investment process	Not Provided	Not Provided	Yes	9 full-time equivalents	Yes	Not Provided	Total Employees - 34.4% women and 25.4% minority.	Yes	Diversity Targets driven through initiatives.
Van Hulzen (Covered Calls)	No	No	No	No	Yes	None (Rely on third party information)	No (Only specific to client policy)	Not applicable	Portfolio Management Team - 25% women and 25% minority	Yes	Recruitment initiatives



### CenterSquare

- CenterSquare is a member of UNPRI and involved with GRESB, Climate Action 100+, Task Force on Climate-related Financial Disclosures, Nareit, EPRA, and APREA.
- CenterSquare provides quarterly responsible investment updates to clients and reports regarding responsible investment practices through the UNPRI reporting process.
- A Global ESG Coordinator is responsible for facilitating the implementation of ESG considerations into all investment decisions.
- CenterSquare scores on par with the GRESB ESG average score.
- CenterSquare is employee-owned by 38 professionals. 29% of employee owners are women and 8% identify as minorities.
- CenterSquare has adopted a formal Diversity Commitment Statement to inform hiring protocol and requiring managers to consider a diverse talent pool for all open positions.
- The firm also implements unconscious bias and cultural sensitivity training and awareness workshops.

### CS McKee

- CS McKee is a UN PRI signatory.
- ESG factors are being worked into the investment process.
- ESG factors and high quality investing helps to reduce downside risk within portfolios.
- Reporting on ESG is client specific.
- CS McKee does not have any dedicated ESG staff but implements the Charles River Compliance Module which enables rules based compliance procedures that can support ESG initiatives.
- The CS McKee Aggregate SRI composite has a 71.3 ESG score compared to 66.65 for the Aggregate composite and 62.47 for the Barclays IG Corporate. The GRESB industry average is 72.
- CS McKee employs 13 investment professionals, 3 of which identify as women and/or minorities.
- The firm is developing a committee that will help to implement and execute diversity goals across all business practices and operations.

### DWS RREEF

- DWS is a member of UNPRI, International Integrated Reporting Council (IIRC), Institutional Investors Group on Climate Change (IIGCC), Ceres Investor Network on Sustainability and Climate Risk (INCR/Ceres), Forum Nachhaltige Geldanlagen (FNG) and the UK Sustainable

Investment Forum (UKSIF), Global Real Estate Sustainability Benchmark (GRESB) and others that were not reported.

- Reporting capabilities include sharing of annual GRESB results and scorecard, investor ESG scorecard, investor ESG letter, case studies, and annual fund investment plan.
- The ESG team includes the Sustainability Office, Thematic Research team, and the Corporate Governance Center. These components of the CIO Office for Responsible Investments support all DWS investment platforms.
- For 2020 DWS scored an 83 in the GRESB assessment, the industry average is 70.
- 1 woman sits on the DWS executive board
- 2 women and 1 minority sit on the RREEF REIT II Board of Directors
- 2 women and 1 minority are part of the RREEF REIT II management team.
- DWS supports Sponsors for Education Opportunities which provides internship and employment opportunities for sophomores to the Financial Services Industry.
- The firm additionally supports Rise Into Success Early (RISE) which provides networking, exposure, and skill building workshops to diverse pools of college first years.
- Additional programs supported by DWS include the Toigo Foundation, Forte Foundation, The Jumpstart Advisory Group, and the Out for Undergrad and Reaching Out MBA conferences.

### Federated Hermes

- Federated Hermes is a member and/or signatory to UNPRI, the Responsible Investment Association, the CDP, the SASB, and the Council for Institutional Investors.
- ESG principles are included in the qualitative framework of the investment process. It is considered alongside quantitative information when making investment decisions.
- The firm provides firm level ESG reports in compliance with the PRI Transparency Report. They are currently working on a client reporting tool for portfolio level reports.
- The Responsible Investing Office oversees responsible investing initiatives. The Director of Responsible Investing works with investment staff to provide advanced ESG investment research and data.
- 16.7% of the Federated Hermes Board of Directors are women and 100% are white.
- 100% of the executive management staff are white males.
- 16% of the Portfolio Management team are women and 8% identify as minorities.
- In June 2020 Federated Hermes formally denounced racism.
- Additionally, the firm has hired a Diversity Officer and partnered with programs to increase diversity within the recruitment and hiring process.

## Fisher

- Fisher Investments is a member and/or signatory to UNPRI, Japanese Stewardship Code, UN Global Compact, CDP, Climate Action 100+, and supporter of the Task Force on Climate-related Financial Disclosure.
- ESG factors are evaluated at multiple stages of the investment process.
- Fisher provides ESG Quality Score Reporting, Carbon Impact Reporting, Environmental Analysis, and Engagement Examples.
- As of December 31, 2020, EBMUDERS' Fisher portfolio scored a 6.74 (out of 10) from MSCI ESG, compared to the MSCI ACWI ex US Index which scored a 6.32.
- Fisher recently updated the firm's Vision Statement to specifically highlight that "To succeed we must have an inclusive culture, actively developing and supporting diversity across the vast spectrum of human differences, creating a place of authentic belonging for all.
- The firm also completes an internal "Great Place to Work" survey and utilizes a third party to complete an Inclusion Index Survey.

## Garcia Hamilton

- Garcia Hamilton is a member of PRI.
- Garcia Hamilton utilizes multiple ESG considerations in their investment approach. Resources include RobecoSAM, ISS Quality Score, CDP Climate Score, and Bloomberg ESG Disclosure Metrics.
- Garcia Hamilton completes client requested ESG surveys and contributes to major consultant databases, along with completing the annual PRI Transparency Report.
- The firm does not have specific stand-alone ESG staff. Instead, members of various investment teams are given the role of leading ESG considerations. These individuals are supported by the Responsible Investment Advisory Committee.
- 3 of 4 Management Committee members at Garcia Hamilton are women or minorities.
- Additionally, the firm is 100% employee owned and ownership is composed of 90% women and/or minority owners.
- Garcia Hamilton supports the following diversity and inclusion initiatives: National Association of Securities Professionals, Sponsors for Educational Opportunities, Diverse Asset Managers Initiative, Robert Toigo Foundation.

## MacKay Shields

- MacKay Shields is a member of PRI.
- MacKay shields actively engages with issuers to discuss various improvements to their ESG standing.

- The firm does not have specific stand-alone ESG staff. Instead, members of various investment teams are given the role of leading ESG considerations. These individuals are supported by the Responsible Investment Advisory Committee.
- As a subsidiary of New York Life, MacKay Shields supports the following programs and foundations: National Museum of African American History Culture, NAACP Legal Defense and Educational Fund, BET-United Way Worldwide COVID-19 Relief Fund, Rainbow/Push Coalition, The Eagle Academy Foundation

### Northern Trust

- Northern Trust is a member and/or signatory to PRI, The Diversity Project, SASB, Council of Institutional Investors, IIGCC, UNEP FI, Investor Stewardship Group, UK Women in Finance Charter, CEO Action for Diversity and Inclusion, UK Stewardship Code, Hong Kong Stewardship Code, Everglass Foundation, The Nature of Conservancy, Climate Action 100+, and Responsible Investment Association Australasia.
- ESG factors are not employed in the portfolio construction process for EBMUDERS.
- Custom client reports with regards to ESG are available upon request.
- Northern Trust has a Sustainable Investing Team. The team is responsible for ESG research, innovation, product development, and product management.
- EBMUDERS' specific investments are passive funds that are in line with the benchmark sustainability ratings.
- Northern Trust has seven members sitting on the Board of Directors, of those seven members, two are women and 3 are minorities.
- The Diversity, Equity, and Inclusion Councils works to promote an inclusive culture within the firm.
- Recruitment, Development, and Pipeline programs include: Enterprise Talent Leadership Program, Women's Leadership Development Program, Black Business Resource Council PREP Program, and Diverse Leaders Programs in EMEA.
- The firm has also recently increased the magnitude of unconscious bias and inclusive leadership training.

### Parametric

- Parametric is a member and/or signatory to the PRI, CERES, Council of Institutional Investors, and ICCR.
- ESG factors are a component of the investment process. Separate accounts can be developed around ESG factors for specific client goals. They are not currently a part of EBMUDERS.
- Parametric offers a variety of customizable client reports, and the UN PRI transparency report.

- Parametric has six dedicated ESG employees in Strategy and Product Management. These individuals are supported by responsible investing teams that bring the ESG staffing resources to eight full-time equivalents.
- Parametric did not include an ESG scorecard, but has included the UN PRI transparency report with their response.
- Women and Minority Employees:

Category	Total	Women		Racial/Ethnic Minorities*	
	Number	Number	Percentage	Number	Percentage
Total employees	614	211	34.4%	156	25.4%
Leadership/Executives**	10	2	20.0%	2	20.0%
Senior Staff	45	10	22.2%	8	17.8%
Managers***	167	53	31.7%	39	23.4%
Portfolio Managers****	115	23	20.0%	29	25.2%
Investment Professionals	145	26	17.9%	36	24.8%

\*Includes Race/Ethnicities other than "White," "Not Declared"

\*\*Parametric Executive Committee

\*\*\*Managers of Employees

- "In partnership with Eaton Vance's interim-Chief Diversity Officer, Parametric's Diversity and Inclusion Leadership Council drive's strategy and implement initiatives and programs to continue to cultivate a diverse and inclusive environment."

## Van Hulzen

- Van Hulzen is not a member of PRI nor any other ESG specific organization.
- ESG screening and factor investing is not a part of the standard procedure for the firm.
- Client requested ESG investing is provided.
- Van Hulzen's Portfolio Management Team consists of 25% women and 25% who identify as minorities.

## MEMORANDUM

**TO:** East Bay Municipal Utility District Employees' Retirement System  
**FROM:** Sarah Bernstein,  
Meketa Investment Group (Meketa)  
**DATE:** March 18, 2021  
**RE:** EBMUDERS ESG Annual Update and Potential Next Steps

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This memo provides an update on EBMUDERS integration of ESG and outlines potential next steps for consideration. During 2021, Meketa plans to further develop with staff potential next steps in ESG investment management for EBMUDERS based on Board guidance. We review four distinct elements to integrating ESG:

- Portfolio and Manager ESG Monitoring
- Proxy Voting
- Engagement
- Shifting Assets toward lower carbon/higher climate mitigation exposure

### Portfolio and Manager ESG Monitoring

EBMUDERS continues to improve its annual ESG manager survey. Potential next steps include annual monitoring of the EBMUDERS Public market assets based on select ESG Key Performance Indicators, and conducting periodic climate scenario analysis in conjunction with EBMUDERS asset liability reviews.

### ESG Manager Survey

The EBMUDERS second annual ESG manager survey received responses from all managers, and useful information on the three new questions related to diversity, inclusion and equity, and summarized in the ESG Manager Survey Memo. The survey provides additional insights into how each manager integrates material ESG issues that provide information for further engagement with managers on ESG integration.

Internally, Meketa actively works to improve its ESG efforts. We have included summary information on Meketa and ESG and Diversity issues in the Appendix.

## ESG Key Performance Indicators (KPIs)

Portfolio and manager annual monitoring and analysis (would be next step to manager annual survey). Decide on a few metrics to use annually to assess ESG/SDG exposure in the EBMUD portfolio. Present review at March Board meetings. Meketa relies on leading ESG data vendor ISS for ESG metrics.



### **ENVIRONMENTAL (E)**

Climate Change | Energy Transition | Sustainability Best Practices |  
Environment Policy | Water Supply | Sustainable Transport |  
Waste Management



### **SOCIAL (S)**

Consumer Rights | Health and Safety | Product Safety | Labor  
Relations | Community Relations |  
Stakeholder Relations



### **GOVERNANCE (G)**

Board Structure | Board Diversity | Independent Directors |  
Chairman/CEO Split | Executive Pay | Audit/Accounting |  
Shareholder Rights

KPI reporting and analysis can provide a quantitative foundation for assessment of managers and the aggregate public market portfolio on an absolute basis, and compared to benchmarks. There are a wide range of E, S, and G Key Performance Metrics. Meketa could work with EBMUDERS to develop annual monitoring specific to EBMUDERS key concerns and interests. Meketa ESG Portfolio and manager monitoring involve a modest additional ESG services fee.

## Periodic Climate Risk Report on the EBMUDERS portfolio

Both physical (e.g., surface temperature, weather events) and energy transition (e.g., public policy, consumer sentiment shifts) risks arising from climate change may impact long-term investment performance. The magnitude and timing of these impacts are subject to a high degree of uncertainty. Forward-looking climate scenario analysis of the EBMUDERS total investment portfolio may inform overall long-term asset allocation decisions. Such analysis might be conducted in conjunction with EBMUDERS periodic asset-liability analysis. The upcoming EBMUDERS asset-liability review is currently scheduled for 2023.

Meketa's current climate risk analysis adopts a macro analysis approach within an artificial intelligence ("AI") big data framework that looks at carbon emissions and their impact on performance under different International Energy Agency ("IEA") climate scenarios. Our framework is highly flexible, and can be adapted. Meketa finds that analyzing a selection of different "scenarios" which model a range of

potential climate change impacts and incorporating a traditional set of capital market assumptions better reflect the risks faced by investment decision makers and yield more actionable insights

If EBMUDERS is interested, Meketa could provide an educational session on climate scenario analyses with examples of how other clients have implemented such analyses. Climate Scenario analysis is not currently in Meketa's scope of services for EBMUDERS and would be an additional modest service fee that covers getting data, running climate scenario models, etc.

### Proxy Voting

In 2017 EBMUDERS enacted an important change in its proxy voting policy. The policy was revised from directing all votes to be voted with management, to hiring Glass Lewis to vote its proxies for all separately managed equity accounts, which are actively managed strategies in accordance with the Glass Lewis Public Plan proxy voting guidelines. EBMUDERS reviews its proxy voting results annually. All passively managed equities are in co-mingled accounts, and are voted by passive equity manager, Northern Trust Asset Management (NTAM).

Given the shift in the plan's equity investments to nearly all passively managed accounts, the current approach may not represent the most efficient approach to allowing EBMUDERS to vote its proxies in accordance with EBMUDERS preferences. During the 2019-2020 proxy season, of EBMUDERS' 57,221 proxies, 56,566 (98.85%) were voted by NTAM, and the remaining 8,746 (1.15%) were voted by Glass Lewis. EBMUDERS paid Glass Lewis approximately \$17,000.

**Proxy Voting Options** to further improve consistency across all EBMUDERS votes and provide a coherent and cost competitive proxy voting structure.

1. **Retain a passive equity manager with competitive fee structures whose votes are more consistent with EBMUDERS approach** (currently the Glass Lewis Public Policy guidelines).

Meketa finds that there are equity index managers that offer a longer and consistent track record on voting on climate and other ESG issues, and stronger engagement on ESG issues with companies, compared to EBMUDERS current equity index manager. It may be worthwhile to conduct a comparative review of NTAM and a few leading passive equity managers to discern whether an alternative might offer competitive fee structures with votes more consistent with EBMUDERS ESG perspectives. Such a review could be conducted alongside the custodian review which is underway, as Northern Trust serves as both the custodian and passive equity manager for EBMUDERS. It may be possible to include in the passive manager's mandate the voting of the minimal securities held by EBMUDERS active accounts to further ensure consistent voting at minimal expense.



2. **Shift passive equity to separately managed accounts**, from comingled accounts, so that all EBMUDERS proposals could be voted under the same Glass Lewis proxy voting guidelines. This option would be expected to increase the fees to Glass Lewis for increased voting, and likely increase the investment management fees for EBMUDERS passively managed accounts, which are typically least expensive as comingled funds. This option can be investigated alongside the custodian search that is underway this year.

### Engagement

Engagement geared at improving the long-term environment supporting EBMUDERS investments can include engagement with governmental bodies, with EBMUDERS investment managers, and direct engagement with companies.

EBMUDERS actively engages governmental organizations through its participation in signing periodic institutional investor letters to such bodies as the SEC. Engagement with investment managers occurs as an element of the ongoing monitoring of EBMUDERS investment managers, which has been enhanced by annual manager ESG surveys. Direct engagement with companies takes additional resources and could serve as additional development of EBMUDERS ESG efforts.

Meketa offers engagement services to support clients interested in furthering their engagement with companies on specific issues. Typically, asset owners may choose to concentrate their engagement efforts on a particular theme or issue, determine a select company or companies to focus their efforts, and design an approach to maximize the impact of the engagement. Engagement services are not currently part of Meketa's scope of services for EBMUDERS. If EBMUDERS is interested in exploring engagement services, Meketa could provide additional educational framework to outline the possibilities and work with staff to provide a selection of engagement options.

### Shifting Some Passive Equity Assets to Lower Carbon/Stronger ESG

Currently, EBMUDERS assets are all invested in market wide solutions. As the ESG investing market has grown, the range, and quality of market offerings materially expanded, particularly for climate aware index products. EBMUDERS may want to consider a potential shift of some portion of its passive equity assets to a more sustainable index. Such a shift would align with the California Climate Investor Framework that was set forth in 2020 for California State funds – CalPERS, CalSTRS and UC Regents.

Meketa is currently conducting a review of ESG and Climate index products, which is targeted for completion during 2Q2021. Based on this review, Meketa could bring to the Board an overview of such market opportunities today, and potentially interesting climate/ low carbon, or ESG index fund opportunities for consideration.



#### UN-PRI Signatory

- As a signatory of the United Nations-backed Principles for Responsible Investment Initiative (PRI), Meketa has joined a network of international investors working together to put the six Principles of Responsible investing into practice.
- The six Principles for Responsible Investment are:
  1. We will incorporate Environmental, Social and Governance (ESG) issues into investment analysis and decision-making processes.
  2. We will be active owners and incorporate ESG issues into our ownership policies and practices.
  3. We will seek appropriate disclosure on ESG issues by the entities in which we invest.
  4. We will promote acceptance and implementation of the Principles within the investment industry.
  5. We will work together to enhance our effectiveness in implementing the Principles.
  6. We will report on our activities and progress towards implementing the Principles.



## Corporate Responsibility Initiatives



## East Bay Municipal Utility District

### Meketa Initiatives



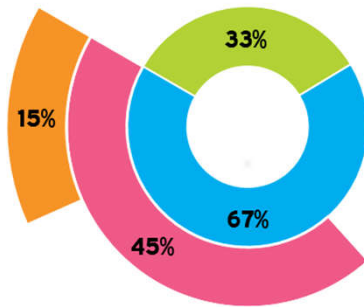
- Corporate climate impact reporting
- Producing generally accepted firm-wide guidance and research
- Initiating firm-wide best practices for corporate responsibility



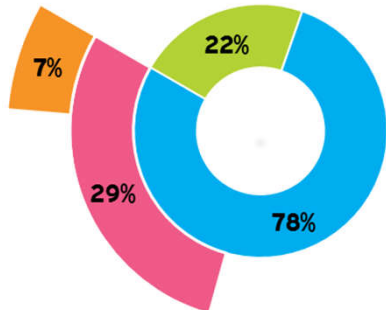
## East Bay Municipal Utility District

### Meketa Initiatives

**Shareholders**



**Senior Management**



- Research has confirmed that diversity of thought results in better organizational decision-making. Meketa continues to enhance our firm's focus on diversity.
- As of December 31, 2020, Meketa Investment Group was 100% independently owned by 60 senior professionals who have direct equity ownership. 27 of our 60 owners, or 45%, are women or minorities.
- Of the 33 professionals who have become shareholders in the last three years (2018-2020), 16 (or 48%) of the new owners are women or minorities.



As of December 31, 2020.



## East Bay Municipal Utility District

### Meketa Initiatives

## Community Stewardship and Social Responsibility

- Meketa supports:
  - Corporate diversity initiatives.
  - Employee volunteerism and charitable giving.
  - Corporate wellness.
  - Green initiatives.
- Corporate Responsibility Committee coordinates with internal partners on:
  - ESG investment management.
  - Diversity within manager selection.
  - Corporate diversity initiatives.





Meketa supports diversity initiatives internally and seeks to improve upon these efforts year over year.

- Unconscious Bias Training
- Employee Resource Groups (Young Professionals, Working Parents, Women in Investments)
- Internal Networking Program
- Internal department transfers and promotions
- Diverse recruitment

In 2020, we created a Diversity and Inclusion Action Plan, to be overseen by the Diversity Leadership Committee, to ensure that actionable steps are taken to demonstrate and account for our commitment to diversity.



## Day for Democracy

- Less than 56% of eligible US voters cast ballots in the last presidential election (one of the lowest rates of any democracy in the world).
- A Day for Democracy is a non-partisan initiative that encourages leaders across the US to take action and give employees the necessary resources to register to vote and the time off to cast their ballot.
- Meketa has joined A Day for Democracy and taken the pledge, which is three-fold:
  - We will be providing Meketa employees with a helpful resource to support you throughout the entire voting process (see following slide on TurboVote).
  - We will be giving Meketa employees the time off needed to go vote on Election Day.
  - We will be making our pledge public on LinkedIn where we will also be encouraging other companies and organizations to do the same.





## Emerging and Diverse Manager Initiatives



# East Bay Municipal Utility District

## Emerging and Diverse Manager Initiatives





## **East Bay Municipal Utility District**

### **Emerging and Diverse Manager Initiatives**

Meketa values diversity within the investment management and consulting industry.

- Speak regularly at conferences, attend industry events, and meet with managers at their offices and ours in an effort to expand our knowledge of the manager universe.
  - Meketa has spoken at a number of events, including AAAIM, NAA, NAIC, NASP, GCM Grosvenor, PEWIN, and the Toigo Foundation, in an effort to enhance the firm's exposure to emerging and diverse managers.
- In our proprietary database we specifically identify emerging, minority, female, and disabled persons business enterprises.
  - Within our database we currently have over 300 minority, female, and disabled persons business enterprises (MWDBE) firms.
  - To be identified as an MWDBE firm, the manager must be majority employee owned and at least 51% owned by a minority, female and/or disabled person.
- Established an Emerging and Diverse Manager Committee to expand our clients' exposure to both small and diverse firms.



### Diversity and Inclusion Initiatives

- Experience assisting numerous clients in establishing emerging and diverse manager programs as well as targeted investment programs across asset classes.
- Meketa regularly holds Emerging and Diverse Manager Days across our various offices to ensure broadest coverage of emerging and diverse managers across asset classes.
- Below are samples of clients with whom we have worked to initiate new, emerging and diverse manager initiatives:
  - California Public Employees' Retirement System
  - California State Teachers' Retirement System
  - City of Baltimore Employees' & Elected Officials' Retirement Systems
  - City of Hartford Municipal Employees' Retirement Fund
  - Maryland State Retirement and Pension System
  - New York State Common Retirement Fund

## ESG Investing Initiatives Initiatives



## East Bay Municipal Utility District

### ESG Initiatives



- ESG Investing Committee seeks to improve Meketa's approach to ESG issues for its clients across all asset classes.

## EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance *SS*

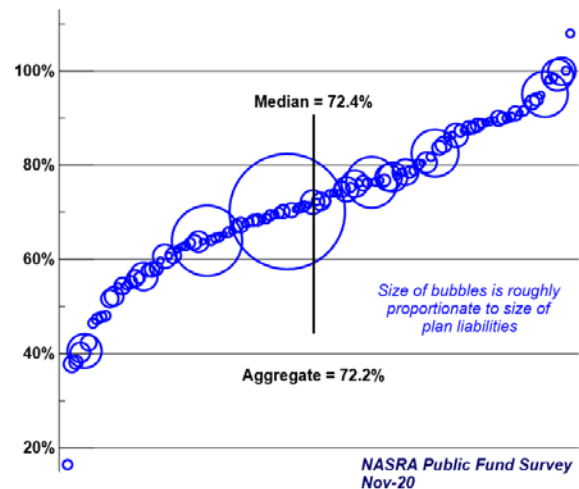
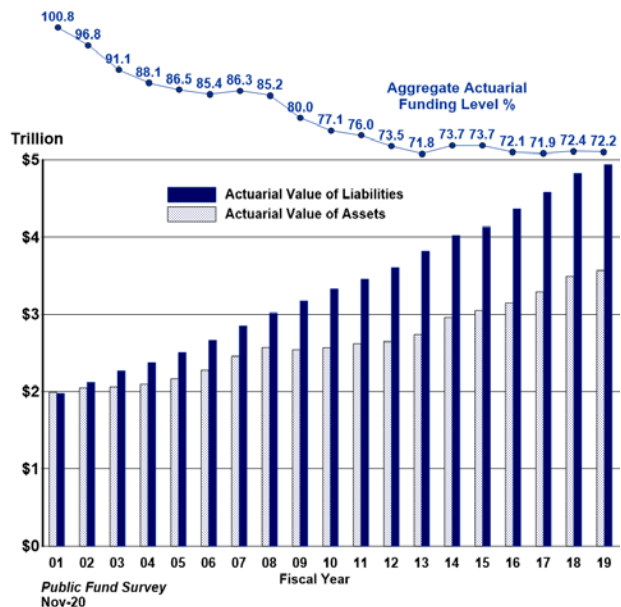
SUBJECT: NASRA Report on Funding Status Metrics

At the January 21, 2021 Retirement Board meeting, Retirement Board Member Marguerite Young requested that staff provide to the Retirement Board the National Association of State Retirement Administrators (NASRA) report on funding status (the NASRA Report) originally published in 2012. The NASRA Report is attached to this memo.

In the NASRA Report, the authors point to the two different contexts under which funded ratios are considered. As a funding target, the Government Finance Officers Association recommends 100 percent as the funded goal, while as a measure of plan health, the benchmark is 80 percent.

The 80 percent threshold was used in the Pension Protection Act of 2006 when evaluating the risk of private plans to the Pension Benefit Guaranty Corporation. Rating companies have also set thresholds for public plan financial health using funded ratio, with plans rated 'weak' when below 60 percent funded and plans rated 'adequate' to 'average' when up to 80 percent funded.

The authors note that funded status calculations represent a point-in-time measurement that does not necessarily indicate 'fiscal or actuarial distress' and noted that the critical factor was instead whether the plan sponsor could fund its liability without fiscal stress. The figures below show the most recent trends from the NASRA public fund survey based on fiscal year 2019 data for reference.



SDS:DC

Attachment



**The 80-percent threshold:  
Its source as a healthy or minimum funding level for public pension plans**

*Prepared by Keith Brainard and Paul Zorn  
January 2012*

Recently, some have challenged the idea that an 80 percent funding level is a healthy level for public pension plans and have asked about the origins of such statements.<sup>1</sup> Based on our research, the use of 80 percent as a healthy or minimum public pension funding level seems to have its genesis in corporate plans, for which it was a statutory threshold. This standard was also applied to private sector multiemployer plans.

However, there may be some confusion about the context in which the funding ratio is being used, since it could be considered in two different contexts. The first is the context of the funding ratio as the funding target, or the ultimate funding goal. Public pension plans generally have a funding policy targeting full funding, i.e., a 100 percent funding level. This is recommended by the Government Finance Officers Association (GFOA) in their Best Practice, “Sustainable Funding Practices of Defined Benefit Pension Plans.”<sup>2</sup>

The second context is the funding ratio as a general indicator of a pension plan’s health at a specific point in time, possibly pointing to the need for corrective action. This is the context in which the 80-percent threshold is used by the federal government for private sector pension plans. For example, as explained in a 2008 U.S. Government Accountability Office report:

The Pension Protection Act of 2006 provided that large private sector pension plans will be considered at risk of defaulting on their liabilities if they have less than 80 percent funded ratios under standard actuarial assumptions and less than 70 percent funded ratios under certain additional ‘worst-case’ actuarial assumptions. When private sector plans default on their liabilities, the Pension Benefit Guaranty Corporation becomes liable for benefits. These funding standards will be phased in, becoming fully effective in 2011, and at-risk plans are required to use stricter actuarial assumptions that will result in them having to make larger plan contributions.

Pub. L. No. 109-280, sec. 112(a), § 430(i), 120 Stat. 780, 839-42.<sup>3</sup>



In addition, the 80-percent threshold is used by credit rating agencies as a general indicator of a public plans financial health. For example, in their 2011 report “Enhancing the Analysis of U.S. State and Local Government Pension Obligations,” Fitch Ratings says it “generally considers a funded ratio of 70% or above to be adequate and less than 60% to be weak,” but also goes on to say that the funded ratio is “only one of many factors” used in the analysis of a government’s pension obligations.<sup>4</sup>

Also, in Standard & Poor’s report, “U.S. State Ratings Methodology,” the funding ratio is one of four factors used to evaluate pension liabilities. The other factors are pension funding levels (pertaining to the plan sponsor’s history of paying the Annual Required Contribution); unfunded pension liabilities per capita; and unfunded pension liabilities relative to personal income. S&P assigns a “strong” rating for funding levels above 90 percent; a rating of “above average” for levels between 80 percent and 90 percent; “below average” for funded levels 60 percent to 80 percent; and “weak” below 60 percent.<sup>5</sup>

As explained in the *Public Fund Survey Summary of Findings for FY 2010*, by Keith Brainard:

Funded status is a single-point measure of the degree to which a plan is on course to meet a distant goal. ... The fact that a plan is underfunded is not necessarily a sign of fiscal or actuarial distress; many pension plans remain underfunded for decades without causing fiscal stress for the plan sponsor or requiring benefits to be reduced.

The critical factor in assessing the current and future health of a pension plan is whether or not funding its liabilities creates fiscal stress for the pension plan sponsor. Although a pension plan that is fully funded is preferable to one that is underfunded, other factors held equal, a plan’s funded status is simply a snapshot in a long-term, continuous financial and actuarial process, akin to a single frame of a movie that spans decades.<sup>6</sup>

*Keith Brainard is research director at the National Association of State Retirement Administrators. Paul Zorn is director of governmental research at Gabriel, Roeder, Smith & Company.*

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<sup>1</sup> For example see Girard Miller, “[Pension Puffery](#),” *Governing Magazine*, January 2012.

<sup>2</sup> Government Finance Officers Association, Best Practice, Sustainable Funding Practices of Defined Benefit

Pension Plans, 2009. ([http://www.gfoa.org/index.php?option=com\\_content&task=view&id=1627](http://www.gfoa.org/index.php?option=com_content&task=view&id=1627))

<sup>3</sup> U.S. Government Accountability Office, “State and Local Government Retiree Benefits: Current Funded Status of Pension and Health Benefits,” January 2008. (<http://www.gao.gov/products/GAO-08-223>)

<sup>4</sup> Fitch Ratings, “Enhancing the Analysis of U.S. State and Local Government Pension Obligations,” 2011. (Note: Fitch would base its measure of funded ratio on a 7% discount rate, so their 70% funded ratio would be higher using a higher discount rate.)

[http://www.ncpers.org/Files/2011\\_enhancing\\_the\\_analysis\\_of\\_state\\_local\\_government\\_pension\\_obligations.pdf](http://www.ncpers.org/Files/2011_enhancing_the_analysis_of_state_local_government_pension_obligations.pdf)

<sup>5</sup> Standard & Poor’s, “U.S. State Ratings Methodology, January 3, 2011.

([http://www.standardandpoors.com/spf/upload/Ratings\\_US/US\\_State\\_Ratings\\_Methodology\\_Related\\_2.pdf](http://www.standardandpoors.com/spf/upload/Ratings_US/US_State_Ratings_Methodology_Related_2.pdf))

<sup>6</sup> Keith Brainard, Public Fund Survey Summary of Findings for FY 2010, National Association of State Retirement Administrators, December 2011. (<http://www.publicfundsurvey.org/publicfundsurvey/summaryoffindings.html>)

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

FROM: Lisa Sorani, Manager of HR Employee Services *Lisa Sorani*

SUBJECT: Low Income Adjustment, Review of Ordinance Guidelines

### BACKGROUND

Section 35 of the Retirement Ordinance provides a Low Income Adjustment (LIA) for qualifying retirees or a surviving beneficiary under the following guidelines.

- Retiree must have retired with 20 or more years of service; and
- Receive a Social Security benefit; and
- Demonstrate that their total income from all sources, including their spouse's income, is below 200% of the poverty level of the State of California as of December 31 of each calendar year.
- Surviving beneficiaries must demonstrate that their total income from all sources is below 150% of the poverty level of the State of California as of December 31 of each calendar year.

Retirees or surviving beneficiaries who are not currently receiving federal social security benefits are ineligible, as well as any person who elected to remain a Member of the Retirement System pursuant to Section 12(b)(2) (Term Vested).

Section 35 also states that the Retirement Board will review the formula by which the LIAs are calculated every three (3) years, with the first such review to occur in 1991. It has been many years since the Retirement Board has reviewed the formula by which LIAs are calculated.

**Historical Review:** When the LIA benefit was added to the Retirement Ordinance in 1988, the ordinance language referenced only the metric of 200% or 150% of “the poverty level of California” without further guidance or reference to a specific metric for measurement.

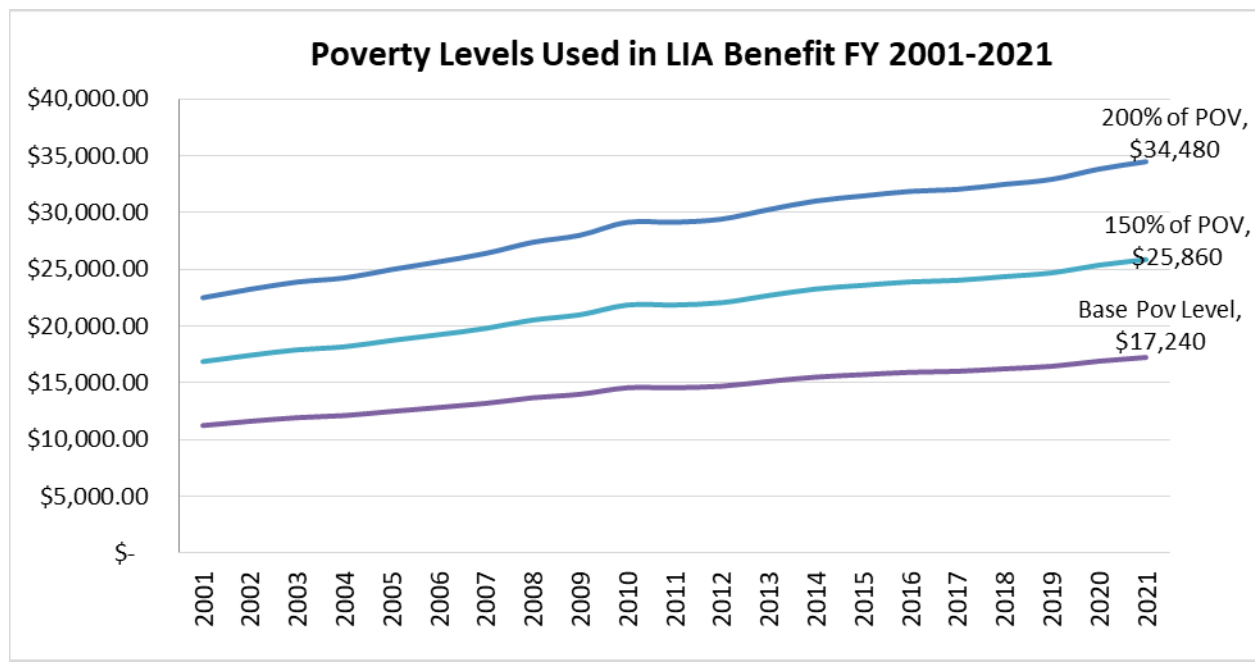
- **1988** – CA PUC and EBMUD's customer assistance programs were each using a single income level for 1 or 2 persons as the basis for low income customer programs. A memo from a 1993 Retirement Board meeting notes that staff used this one income level used by EBMUD customer service as the poverty level for both married retirees and single retirees or surviving beneficiaries as the “poverty level of the State of California as of December 31 of each calendar year” metric for the LIA process beginning in 1988 when the program was first started.

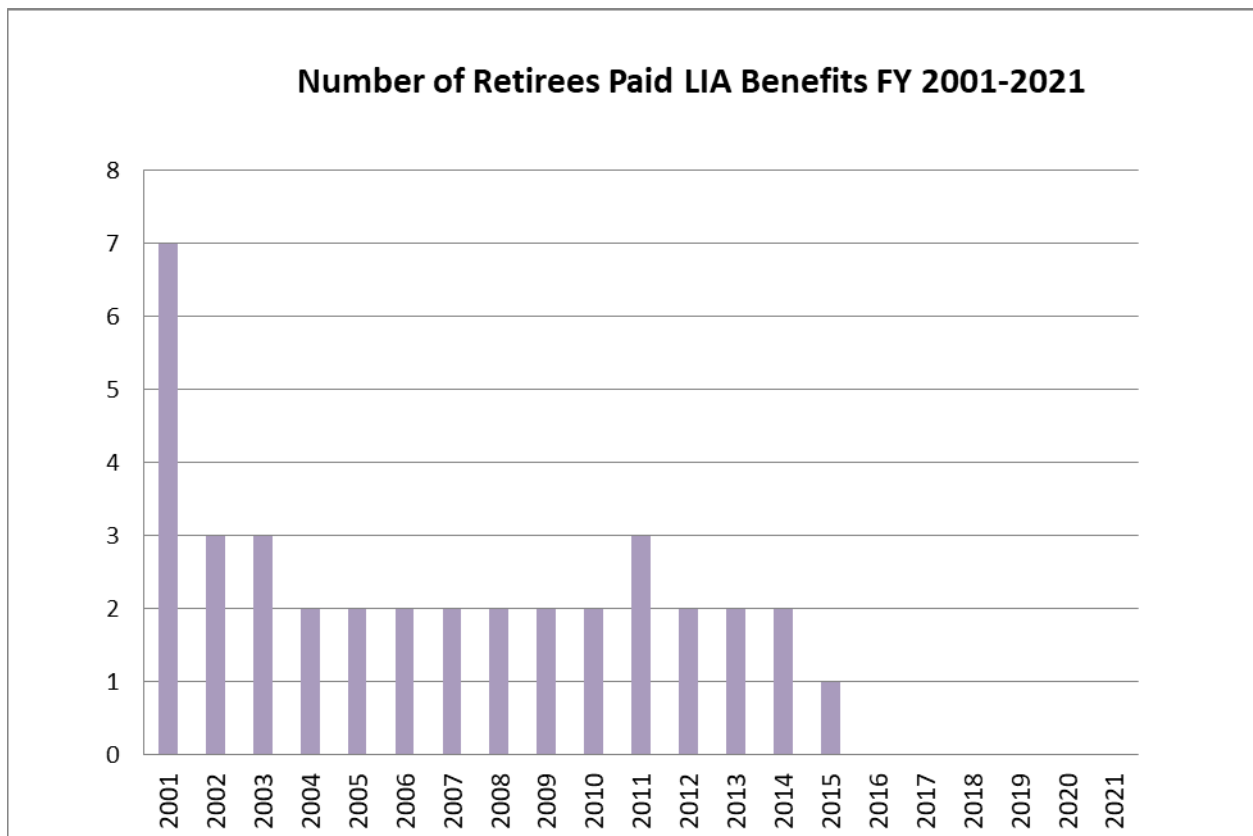
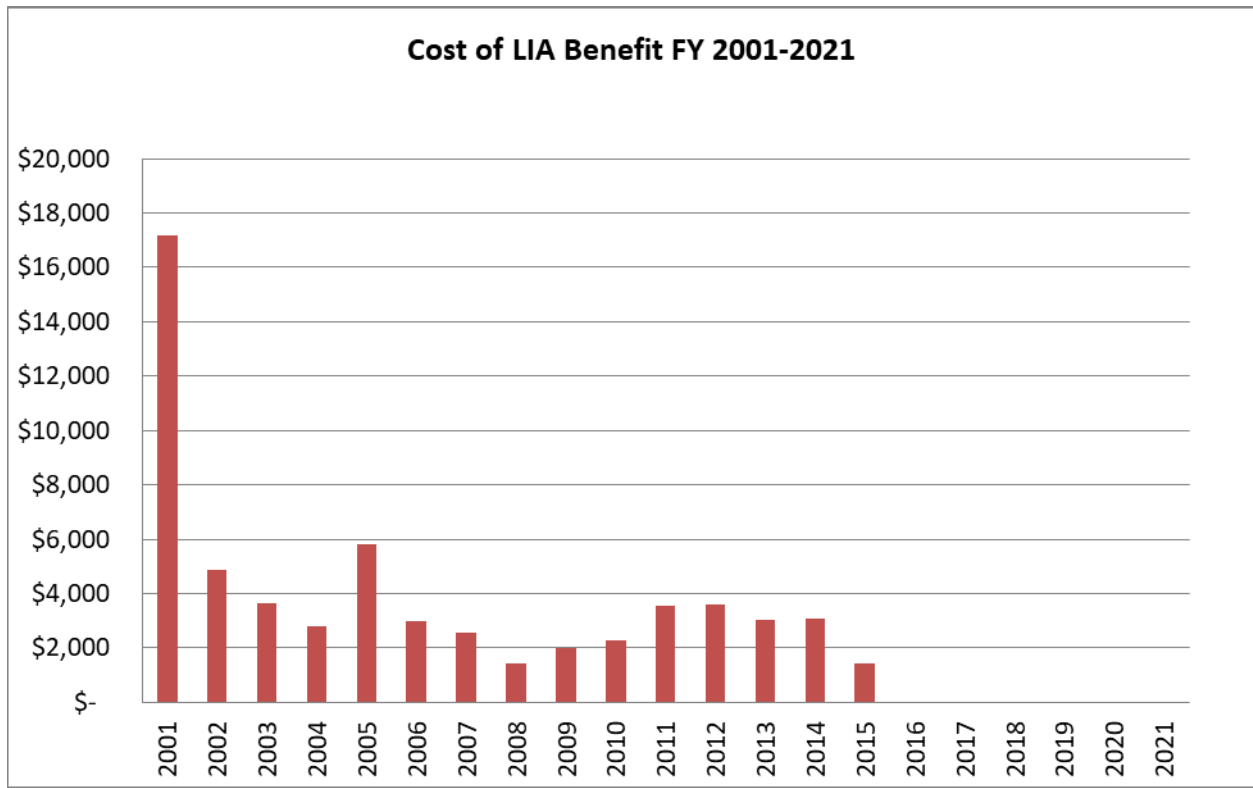
- **1990** - Staff began using the Federal data for California, published in the Federal Register as the “poverty level of the State of California as of December 31 of each calendar year” metric, due to the inability to get updated EBMUD customer assistant program numbers in April when the annual LIA process started (per 9/18/92 Retirement Board Memo).
- **July 1992** - Retirement Board members requested an update from staff on LIA processing, specifically why a 2-person income level was used rather than a single person level, and information on the future financial liability of the LIA benefit.
- **September 1992** - Staff brought a memo to the Retirement Board in response to the Retirement Board request.
  - The memo noted that while initially the CA PUC and EBMUD poverty rate for rate payers was used in the LIA process, this rate was not easily available in April when the LIA process kicked off. It also noted that beginning in 1990, staff transitioned to using the Federal poverty data used by California, published in the Federal Register each February as the “poverty level of California” metric, as this appeared to be the source data for most state and local government poverty levels. They also noted that the Federal data includes different income levels for 1 person or 2 persons, but that the Federal 2-person level matched the CA PUC and EBMUD poverty level, which account for 1 or 2 people. Therefore, staff elected to use the Federal 2-person level for married retirees and single retirees or beneficiaries.
  - In this memo, staff also recommended that the Board consider transitioning to the 1-person level for single retirees and beneficiaries once the Federal 1-person rate surpassed the then 2-person rate of \$9,190.
  - Lastly, the memo discussed the future financial liability of the LIA benefit. It was noted that the majority of the retirees receiving money through the LIA benefit were Surviving Spouses, and that in 1973 the surviving spouse benefit was increased from 25% to 50%. The increase in the surviving spouse benefit for new Surviving Spouses and the continued COLA updates would likely decrease the number of Surviving Spouses eligible for the LIA benefit in the future.
  - The Board did not make any decisions at the September meeting and requested that the information be brought back at a later meeting.
- **May 1993** –
  - The information from the September 1992 meeting was brought back with staff now recommending that the Board Rule C-3 be updated to note that the basis for determination “poverty level of the State of California as of December 31 of each calendar year” would be the most recent Department of Health and Human Services annually updated HHS Poverty Guidelines (Citation 58 FR 8287-03). In addition, the memo had an updated recommendation that the level for non-married retirees and surviving beneficiaries and spouses would be \$9,190 (the 1992 poverty guideline for 2 persons) until such time as the poverty guideline for 1 person exceeds that amount.

- According to the minutes from this meeting, a motion was made to accept the rule changes that staff proposed but no one seconded the motion, and by a show of hands the Board instead elected to keep the 2-person level in use for both married retirees and single retirees and beneficiaries. No changes were made to the Retirement Board rule C-3; not even the notation that the Federal Rate is being used for the “poverty level of the State of California as of December 31 of each calendar year”.

In staff’s review of all Retirement Board documents 1993 to current, no other review of the formula by which the LIAs are calculated was found.


The graphs below show data about the LIA program details for FY 2000 to FY2020.





Retirement staff continues to pull the Federal Health and Human Services data posted in February each year to determine the “poverty level of the State of California as of December 31 of each calendar year” as well as the 200% and 150% rates. Letters are sent to service retirees who are earning less than 200% of the poverty level and those surviving spouses and surviving beneficiaries who are earning less than 150% of the poverty level where the retiree had at least 20 years of service. The letter informs the payee that they may be eligible for the LIA benefit if, after a review of all other income sources, their income is still below the 200% or 150% of poverty level noted in their letter. In April 2020, the number for 200% of poverty level was \$34,480 and 150% of poverty level was \$25,860. Staff mailed flyers to 29 potentially eligible retirement system payees including 12 retirees and 17 surviving spouses. There was one response from the mailing; however that respondent was determined to be ineligible for the benefit. No retirees or surviving beneficiaries have been deemed eligible for the LIA benefit since FY 2015. In 2014, the two surviving spouses who had been receiving the LIA benefit passed away. There have been no LIA benefits paid since their deaths.

In further review of the LIA benefit, staff spoke with the District’s customer service team who provided the 2020 Customer Assistance Program (CAP) Eligibility numbers which are now higher than 200% of the Federal poverty rate. For 2020, the District CAP rate for 1 or 2-person households is \$52,200. This is based on the HUD Very Low Income rating for the Oakland-Fremont, CA HUD Metro FMR Area which is mainly used for housing-related programs. Many other California subsidy programs use some percentage of the Federal poverty guidelines, such as CalFresh food benefits and Covered California health benefits.

CAP Eligibility and Credit		
		
Household Size	2020 District CAP Income Eligibility	2020 Federal Poverty Guidelines (200%)
1	\$52,200	\$25,520
2	\$52,200	\$34,480
3	\$58,750	\$43,440
4	\$65,250*	\$52,400
*\$5,200 for each additional family member		

Staff was not yet able to gather research on other retirement systems use of low income adjustment benefits. An online review did not find any information. A question was posted on the CALAPRS message board and no responses were received; therefore, staff has added low

income benefit information to a survey recently developed to be sent to a wide range of retirement systems related to Health Insurance Benefit administration.

## **NEXT STEPS**

At the Retirement Board meeting, staff is requesting the Retirement Board to provide direction on whether any changes are needed to the metrics used to determine LIA eligibility. Staff recommends the Retirement Board consider the following options:

- Continue to exclude those retirees not eligible for Social Security.
- Continue to use the 2 person household value as the base poverty rate for the process for everyone.
- Begin using the 1 person household rate as the base poverty rate for the single retirees and surviving beneficiaries.
- Is 200% for married retirees and 150% for single retirees and surviving beneficiaries still the right rate for determining eligibility?
- Add to the Retirement Board Rule C-3 that the Health and Human Services annual poverty rate will be used for 'poverty level of the State of California as of December 31 of each calendar year' as noted in the Retirement Ordinance).

If the Board determines that changes should be made to the guidelines, staff will determine any impacts the Retirement Ordinance or Board Rule C-3 and will bring the recommended edits back at a future meeting for consideration and action.

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Attachments: Retirement Ordinance Sec 35 and Retirement Board Rule C-3  
Prior HHS Poverty Guidelines and Federal Register References  
FY 2020 HUD Income Limits – Summary for Oakland-Fremont



Section 35  
LOW-INCOME ADJUSTMENT

(a) Commencing July 1, 1988, the Retirement Board is authorized to grant to service and disability retirees who retired with twenty (20) or more years of service, other than as a member of the Board of Directors, a low-income adjustment sufficient to bring the total gross income of the retiree and his or her spouse to two hundred percent (200%) of the poverty level of the State of California as of December 31 of each calendar year. The Retirement Board shall review the formula by which such low-income adjustments are calculated every three (3) years, with the first such review to occur in 1991. The Retirement Board shall adopt rules governing the administration of the program which shall (1) define "total gross income" to include the combined income of the retiree and his or her spouse from Retirement System pension benefits, federal social security benefits and other sources; and (2) require that applicants submit documentation, including federal income tax and social security data, of the combined income of the retiree and his or her spouse for the prior year. Any person who elected to remain a Member of the Retirement System pursuant to Section 12(b)(2) or who is not currently receiving federal social security benefits shall be ineligible for this low-income adjustment. Amounts payable as low-income adjustments shall not be included in calculation of benefits payable under Section 21(b) or Section 33(a).

(b) Commencing July 1, 1988, the Retirement Board is authorized to grant to Beneficiaries of service and disability retirees who retired with twenty (20) or more years of service, other than as a member of the Board of Directors, a low-income adjustment sufficient to bring the total gross income of the Beneficiary to one hundred fifty percent (150%) of the poverty level of the State of California as of December 31 of each calendar year. The Retirement Board shall adopt rules governing the administration of the program which shall (1) define "total gross income" to include income from Retirement System pension benefits, federal social security benefits and other sources; and (2) require that applicants submit documentation, including federal income tax and social security data, of their income for the prior year. Any Beneficiary of a person who elected to remain a Member of the Retirement System pursuant to Section 12(b)(2) or who is not currently receiving federal social security benefits shall be ineligible for this low-income adjustment. Amounts payable as low-income adjustments shall not be included in calculation of benefits payable under Section 33(a).

(c) The years of service used to calculate the Retirement Allowance will be used to determine eligibility for the Low Income Adjustment.

**RULE NO. C-3**  
**(PREVIOUS RULE NO. 23)**

- **Low Income Adjustment**  
**Res. 5826 – 5/24/88**  
**Revised by motion 1/28/92**

Authorization and Eligibility

The Retirement Board is authorized to grant to service and disability retirees who retired with twenty or more years of service, other than as a member of the Board of Directors, a low-income adjustment sufficient to bring the total gross income of the retiree and his or her spouse to two

hundred percent of the poverty level of the State of California as of December 31 of the prior calendar year. The Retirement Board is also authorized to grant to beneficiaries of retirees described above, a low-income adjustment sufficient to bring the total gross income of the beneficiary to one hundred fifty percent of the poverty level described above. Retired members and beneficiaries of retired members who resigned from District service and elected to remain members of the Retirement System, and retired members and beneficiaries not currently receiving federal social security benefits are ineligible for low-income adjustments. Eligibility for low-income adjustments and the amount of said adjustments shall be determined by the Retirement Board based upon District records and information submitted by those applying for the adjustment.

#### Total Gross Income Defined

For purposes of determining the amount of low-income adjustments payable, the combined total gross income of a retired member and spouse, or the total gross income of a beneficiary, shall include total retirement system benefits, including any health insurance benefit but excluding any low-income adjustment, social security benefits, and all other income from all sources, whether taxable or non-taxable.

#### Annual Notice to Retired Members and Beneficiaries

Not later than June 1 of each year, the Secretary of the Retirement Board will notify retired members and surviving beneficiaries of the requirements and procedure for applying for low-income adjustments.

#### Application Procedure

Retired members and beneficiaries wishing to apply for low-income adjustments will complete an application and return it to the Secretary of the Retirement Board by July 1 and attach (1) a copy of that portion of the prior year's federal income tax form 1040 or equivalent which shows gross income, and (2) copies of current social security forms which show the social security benefit being received by the retired member and spouse or by the beneficiary making application.

#### Determining Adjustments

Except as otherwise provided, low-income adjustments will be determined and established for the twelve months beginning July 1 of each year. The amount of low-income adjustment shall be based upon the total gross income received in the preceding calendar year, plus any retirement benefit increases and social security benefit increases made payable up to and including July 1 of the year in which the low-income adjustment is determined. Low-income adjustments will be payable monthly, in an amount equal to one-twelfth of the annual adjustment determined. Increases in District retirement benefits made effective after July 1 of any year shall result in reduction of low-income adjustments for the remainder of the one-year adjustment period.

#### Death of Retiree

Upon the death of a retired member, the surviving spouse or other beneficiary designated at the time of member retirement to continue to receive Retirement System benefits shall continue to receive the previously authorized low-income adjustment for the remainder of the fiscal year in

which death occurred. Thereafter, the low-income adjustment will cease. However, the surviving spouse or beneficiary who continues to receive regular Retirement System benefits may, on the annual schedule described, apply for a low-income adjustment applicable to beneficiaries, to be payable in addition to other benefits payable under Ordinance provisions. In the event there is no surviving spouse or other beneficiary authorized to continue to receive regular benefits upon the death of the retired member, the low-income adjustment will terminate at the end of the month in which death occurred.

#### Effect on Other Retirement Benefits

Low-income adjustment shall not be included in calculation of survivorship benefits, payments under retirement benefit options selected at retirement, or cost-of-living adjustments.

#### Renewal of Adjustments

Low-income adjustments are applicable only for one fiscal year, and are renewable on July 1 of each year, with approval of the Retirement Board through the application procedure described.



OFFICE OF THE ASSISTANT SECRETARY  
FOR PLANNING AND EVALUATION

## PRIOR HHS POVERTY GUIDELINES AND FEDERAL REGISTER REFERENCES

[HOME](#) · [PRIOR HHS POVERTY GUIDELINES A...](#)

Poverty guidelines since 1982 for the 48 contiguous states and the District of Columbia can be calculated by addition using the figures shown below. (This simple calculation procedure gives correct guideline figures for each year, but it is not identical to the procedure by which the poverty guidelines are calculated from the poverty thresholds each year; see an [example calculation](#).) Before 1982, the poverty guidelines were issued by the Office of Economic Opportunity/Community Services Administration.

**NOTE: The poverty guideline figures below are NOT the figures the Census Bureau uses to calculate the number of poor persons.**

**The figures that the Census Bureau uses are the poverty thresholds.**

### HHS Poverty Guidelines

YEAR	FIRST PERSON	EACH ADDITIONAL PERSON	(FOUR-PERSON FAMILY)	PAGE WITH COMPLETE DETAILS
2021	\$12,880	\$4,540	(\$26,500)	<b>2021 Guidelines</b>
2020	\$12,760	\$4,480	(\$26,200)	<b>2020 Guidelines</b>
2019	\$12,490	\$4,420	(\$25,750)	<b>2019 Guidelines</b>
2018	\$12,140	\$4,320	(\$25,100)	<b>2018 Guidelines</b>
2017	\$12,060	\$4,180	(\$24,600)	<b>2017 Guidelines</b>
2016	\$11,880	Varies	(\$24,300)	<b>2016 Guidelines</b>
2015	\$11,770	\$4,160	(\$24,250)	<b>2015 Guidelines</b>
2014	\$11,670	\$4,060	(\$23,850)	<b>2014 Guidelines</b>
2013	\$11,490	\$4,020	(\$23,550)	<b>2013 Guidelines</b>
2012	\$11,170	\$3,960	(\$23,050)	<b>2012 Guidelines</b>
2011	10,890	3,820	( 22,350)	<b>2011 Guidelines</b>
2010	10,830	3,740	( 22,050)	<b>Guidelines for Remainder of 2010</b> <b>Extension of 2009 Guidelines Until at Least 5/31/2010</b>
2009	10,830	3,740	( 22,050)	<b>2009 Guidelines</b>
2008	10,400	3,600	( 21,200)	<b>2008 Guidelines</b>
2007	10,210	3,480	( 20,650)	<b>2007 Guidelines</b>
2006	9,800	3,400	( 20,000)	<b>2006 Guidelines</b>
2005	9,570	3,260	( 19,350)	<b>2005 Guidelines</b>
2004	9,310	3,180	( 18,850)	<b>2004 Guidelines</b>
2003	8,980	3,140	( 18,400)	<b>2003 Guidelines</b>
2002	8,860	3,080	( 18,100)	<b>2002 Guidelines</b>
2001	8,590	3,020	( 17,650)	<b>2001 Guidelines</b>
2000	8,350	2,900	( 17,050)	<b>2000 Guidelines</b>
1999	8,240	2,820	( 16,700)	<b>1999 Guidelines</b>
1998	8,050	2,800	( 16,450)	<b>1998 Guidelines</b>
1997	7,890	2,720	( 16,050)	<b>1997 Guidelines</b>
1996	7,740	2,620	( 15,600)	<b>1996 Guidelines</b>
1995	7,470	2,560	( 15,150)	
1994	7,360	2,480	( 14,800)	

YEAR	FIRST PERSON	EACH ADDITIONAL PERSON	(FOUR-PERSON FAMILY)	PAGE WITH COMPLETE DETAILS
1993	6,970	2,460	( 14,350)	
1992	6,810	2,380	( 13,950)	
1991	6,620	2,260	( 13,400)	
1990	6,280	2,140	( 12,700)	
1989	5,980	2,040	( 12,100)	
1988	5,770	1,960	( 11,650)	
1987	5,500	1,900	( 11,200)	
1986	5,360	1,880	( 11,000)	
1985	5,250	1,800	( 10,650)	
1984	4,980	1,740	( 10,200)	
1983	4,860	1,680	( 9,900)	
1982*	4,680	1,540	( 9,300)	
* Figures for nonfarm families only.				

For a table showing the poverty guidelines for all family sizes back to 1965, see Table 3.E8 in the most recent Annual Statistical Supplement of the Social Security Bulletin .

Poverty guidelines for the years shown above can be found in the *Federal Register* as follows:

2020 Vol. 85, No. 12, January 17, 2020, pp. 3060-3061  
2019 Vol. 84, No. 22, February 1, 2019, pp. 1167-1168  
2018 Vol. 83, No. 12, January 18, 2018, pp. 2642-2644  
2017 Vol. 82, No. 19, January 31, 2017, pp. 8831-8832  
2016 Vol. 81, No.15 January 25, 2016, pp. 4036-4037

2015 Vol. 80, No. 14, January 22, 2015, pp. 3236-3237  
2014 Vol. 79, No. 14, January 22, 2014, pp. 3593-3594  
2013 Vol. 78, No. 16, January 24, 2013, pp. 5182-5183  
2012 Vol. 77, No. 17, January 26, 2012, pp. 4034-4035  
2011 Vol. 76, No. 13, January 20, 2011, pp. 3637-3638

2010 (Delayed update) Vol. 75, No. 148, August 3, 2010, pp. 45628-45629  
(Extension of the 2009 poverty guidelines until at least March 1, 2010)<sup>1</sup> Vol. 75, No. 14, January 22, 2010, pp. 3734-3735  
2009 Vol. 74, No. 14, January 23, 2009, pp. 4199-4201  
2008 Vol. 73, No. 15, January 23, 2008, pp. 3971-3972  
2007 Vol. 72, No. 15, January 24, 2007, pp. 3147-3148  
2006 Vol. 71, No. 15, January 24, 2006, pp. 3848-3849

2005 Vol. 70, No. 33, February 18, 2005, pp. 8373-8375  
2004 Vol. 69, No. 30, February 13, 2004, pp. 7336-7338  
2003 Vol. 68, No. 26, February 7, 2003, pp. 6456-6458  
2002 Vol. 67, No. 31, February 14, 2002, pp. 6931-6933  
2001 Vol. 66, No. 33, February 16, 2001, pp. 10695-10697

2000 Vol. 65, No. 31, February 15, 2000, pp. 7555-7557  
1999 Vol. 64, No. 52, March 18, 1999, pp. 13428-13430  
1998 Vol. 63, No. 36, February 24, 1998, pp. 9235-9238  
1997 Vol. 62, No. 46, March 10, 1997, pp. 10856-10859  
1996 Vol. 61, No. 43, March 4, 1996, pp. 8286-8288

1995 Vol. 60, No. 27, February 9, 1995, pp. 7772-7774  
1994 Vol. 59, No. 28, February 10, 1994, pp. 6277-6278  
1993 Vol. 58, No. 28, February 12, 1993, pp. 8287-8289  
1992 Vol. 57, No. 31, February 14, 1992, pp. 5455-5457  
1991 Vol. 56, No. 34, February 20, 1991, pp. 6589-6861

1990 Vol. 55, No. 33, February 16, 1990, pp. 5664-5666  
1989 Vol. 54, No. 31, February 16, 1989, pp. 7097-7098  
1988 Vol. 53, No. 29, February 12, 1988, pp. 4213-4214  
1987 Vol. 52, No. 34, February 20, 1987, pp. 5340-5341  
1986 Vol. 51, No. 28, February 11, 1986, pp. 5105-5106

1985 Vol. 50, No. 46, March 8, 1985, pp. 9517-9518 <sup>2</sup>  
1984 Vol. 49, No. 39, February 27, 1984, pp. 7151-7152  
1983 Vol. 48, No. 34, February 17, 1983, pp. 7010-7011  
1982 Vol. 47, No. 69, April 9, 1982, pp. 15417-15418

<sup>1</sup> The Congress subsequently extended the 2009 guidelines until at least March 31 and then until at least May 31, 2010. HHS reported those extensions on the Poverty Guidelines web site.

<sup>2</sup> For a correction of a typographical error in one figure for Hawaii for 1985, see Federal Register , Vol. 50, No. 50, March 14, 1985, p. 10319.

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# FY 2020 INCOME LIMITS DOCUMENTATION SYSTEM

[HUD.gov](#) [HUD User Home](#) [Data Sets](#) [Fair Market Rents](#) [Section 8 Income Limits](#) [MTSP Income Limits](#) [HUD LIHTC Database](#)

## FY 2020 Income Limits Summary

Selecting any of the buttons labeled "Explanation" will display detailed calculation steps for each of the various parameters.

FY 2020 Income Limit Area	Median Family Income <a href="#">Explanation</a>	FY 2020 Income Limit Category	Persons in Family							
			1	2	3	4	5	6	7	8
<b>Oakland-Fremont, CA HUD Metro FMR Area</b>	\$119,200	Very Low (50%) Income Limits (\$) <a href="#">Explanation</a>	45,700	52,200	58,750	<b>65,250</b>	70,500	75,700	80,950	86,150
		Extremely Low Income Limits (\$) * <a href="#">Explanation</a>	27,450	31,350	35,250	<b>39,150</b>	42,300	45,450	48,550	51,700
		Low (80%) Income Limits (\$) <a href="#">Explanation</a>	73,100	83,550	94,000	<b>104,400</b>	112,800	121,150	129,500	137,850

**NOTE:** HUD generally uses the Office of Management and Budget (OMB) area definitions in the calculation of income limit program parameters. However, to ensure that program parameters do not vary significantly due to area definition changes, HUD has used custom geographic definitions for the **Oakland-Fremont, CA HUD Metro FMR Area**.

The **Oakland-Fremont, CA HUD Metro FMR Area** contains the following areas: Alameda County, CA; and Contra Costa County, CA.

\* The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as [established by the Department of Health and Human Services \(HHS\)](#), provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.

Income Limit areas are based on FY 2020 Fair Market Rent (FMR) areas. For information on FMRs, please see our associated FY 2020 [Fair Market Rent documentation system](#).

For last year's Median Family Income and Income Limits, please see here:

[FY2019 Median Family Income and Income Limits for Oakland-Fremont, CA HUD Metro FMR Area](#)

Select another FY 2020 HMFA Income Limit area that is a part of the **San Francisco-Oakland-Hayward, CA MSA**

San Francisco, CA HUD Metro FMR Area

Select any FY2020 HUD Metropolitan FMR Area's Income Limits:

Oakland-Fremont, CA HUD Metro FMR Area

Or press below to start over and select a different state:

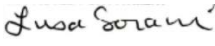
Prepared by the [Program Parameters and Research Division](#), HUD.

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

FROM: Lisa Sorani, Manager of Employee Services 

SUBJECT: Update on 2021 Retirement Board Election

The Retirement Board term of Employee Representative Doug Higashi will expire on June 23, 2021. Both the schedule and process used to run this election will follow the Special Retirement Board Election Procedures that were created and used in 2020 for the employee and retiree seat elections which were based on restrictions from the current shelter in place orders.

At the request of the Retirement Board after the announcement that Board member Doug Higashi would not be running for the Retirement Board seat again, the Retirement Board requested staff add additional communications to the elections activities to ensure all employee understood that the seat is open, and what the work of the Retirement Board entails. Staff worked on several ways to increase outreach including working with Doug Higashi on webcasts.

Below you will find a timeline of all election activities this year with completed items indicated in gray:

Thursday	February 18, 2021	Notice of election was published in Splashes.
Thursday	February 25, 2021	Retirement Services and Doug Higashi conducted an informational session intended to educate interested employees on the responsibilities and duties of a Retirement Board Member.
Friday	February 26, 2021	Notice of election was distributed via email
		Retirement Services met with Superintendents to request assistance in distributing election information to site reporting employees who may not have access to EBMUD email.
Monday	March 1, 2021	Notice of election was distributed via email.
		Request for Candidacy period opens – all interested candidates must submit a candidacy information form and biography via email to RetirementBoardElections@ebmud.com by March 22th.
		Notice of Election was posted on SplashPad Retirement Board Election Page.
		Retirement Services and Doug Higashi conducted an informational session intended to educate interested employees on the responsibilities and duties of a Retirement Board Member. Recording of this session was posted to SplashPad Retirement Board Election page.
Monday	March 22, 2021	Request for Candidacy period closes.



Wednesday	March 24, 2021	Candidate Biographies received will be sent out to all employees via email from RetirementBoardElections@ebmud.com with a reminder that candidates must have 50 nominations (signatures/emails) of support for their name to be included on the final ballot.
		Nominations can be made by sending an email to RetirementBoardElections@ebmud.com and also copying the candidate on the email by cc'ing the candidate's personal email address. Employees may nominate more than one candidate.
Wednesday	April 7, 2021	Email Nomination period ends.
Friday	April 9, 2021	Announcement of final candidates, if only one candidate has 50 nominations, they will take the Retirement Board seat on June 24th.
		If more than one candidate has the 50 required nominations, the announcement will include their names. The voting will begin via Survey Monkey and link-will be sent via email. Voting link will also be added to Splashpad.
Friday	May 7th	Voting Ends. Deadline for Survey Monkey voting.
Wednesday	May 12, 2021	Election results announced via email to all District Employees and posted on Splashpad.
Tuesday	May 25, 2021	Election results sent to EBMUD Board of Directors.
Thursday	June 24, 2021	Elected member takes office for a two-year term.
Thursday	July 15, 2021	First Meeting for new Retirement Board Member.

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## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: March 18, 2021

MEMO TO: Members of the Retirement Board

FROM: Lisa Sorani, Manager of Employee Services *Lisa Sorani*

SUBJECT: Update on the Human Resources Information System (HRIS) Replacement Project

### SUMMARY

The HRIS Replacement Project team continues to make significant progress. Several months have been cut from the schedule since the new full-time Product Owner, Principal Management Analyst, Novine Omana was hired on November 9, 2020. The team released a Request for Proposal (RFP) for the Retirement Administration System on November 20, 2020. They expect to send out the RFP for the broader HRIS Replacement Project by Mid March. Below is an outline of the core details specifically related to the Retirement System steps of the project and the pricing details provided in the Retirement System RFP responses.

### Project Team / Staffing

- Product Owner (hired 11/9/21)
- Project Manager
- Three Business Analysts
  - Recruitment has started for two additional Analyst positions

### Milestones-Retirement Administration System

- RFP posted November 20, 2020
- Responses received from four vendors on January 6, 2021
  - Levi, Ray, & Shoup (Pension Gold)
  - Buck
  - Lynchval
  - Pension Technology Group

### The costing information received in the RFP responses:

#### **Pension Administration Solution RFP Vendor Response Summary**

Vendor	Solution	Hosting	Implementation Timeframe	Implementation Cost	Annual Cost	10 Year Cost	Payroll Function	Benefits Function	Issues 1099-R
Levi, Ray, & Shoup	PensionGold	In-house or cloud (virtual machines)	27 months	\$3,838,000	\$160,000	\$5,499,000	Yes	Yes	Yes
Buck	bEnabled	Not specified	21 months	\$382,000	\$83,500	\$1,134,000	No	No	Not specified
Lynchval	LVAdmin	Cloud-hosted servers	12 months	\$1,476,000	\$130,000	\$2,705,000	Yes	Yes	Yes
Pension Technology Group	PTG Pension Pro	Hosted servers	20-24 months	\$3,400,000	\$450,000, starting in year three	\$7,381,000	Yes	Yes	Yes

- Created Retirement System Administration RFP Review Committee
  - Committee members include key members of Payroll, Pension, HRIS & Finance
  - Reviewed the RFP responses
  - Selected 3 vendors for demonstration
    - Lynchval
    - Pension Technology Group
    - Levi, Ray, & Shoup
  - Contacting Vendors
    - Scheduling Demonstrations
    - Demonstration scripts being developed
    - Creating demo script sections specific to stakeholder groups (Retirees, Payroll, Benefits, Finance)
    - Broad stakeholder group to be invited to participate in demos with core committee to make final ratings of the vendors.
- Important consideration / decision point: After the Retirement System Administration vendor demonstrations will be whether Retiree Benefits and Payroll can be processed through the HRIS Replacement Project's selected vendor or Pension Administration vendor.
- Expect vendor selection to occur in early May 2021

In consideration of the cost of the Pension Administration Systems, the Retirement Board is reminded that Section 27 of the Retirement Ordinance, Expenses of the Administration of the Fund, reads; "All necessary expenses of the administration of the Retirement System shall be paid from the Retirement Fund unless otherwise ordered by the Board of Directors of the District. The cost of such administration expenses shall not cause or be included in any revision or change of the rates of contribution of Members."

### **Overview Timeline of HRIS Replacement Project**



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