

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources 

FROM: Lisa Sorani, Manager of Employee Services 

SUBJECT: Retirement Board Regular Meeting – 5/23/2024

A regular meeting of the Retirement Board will convene at 9:00 a.m. on Thursday, May 23, 2024. This meeting will be conducted in person with all Retirement Board members physically present in the Administration Training Resource Center, 375 Eleventh Street, Oakland, California, which shall serve as the physical location for members of the public who wish to attend the meeting in person. Please note, however, that members of the public will also be provided the opportunity to participate via video and teleconference. Public participation will also be available by live audio stream at <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.

Some Staff and Presenters will be attending via Zoom which will be broadcast at the meeting.

Enclosed are the agenda items for the May 23, 2024 meeting, and the minutes for the March 21, 2024 regular meeting and the April 16, 2024 special meeting. The package also includes the following: **(1) CONSENT items:** Approval of Minutes of the Retirement Board – Regular Meeting of March 21, 2024, Approval of Minutes of the Retirement Board – Special Meeting of April 16, 2024, Ratifying and Approving Investment Transactions by Retirement Fund Managers for February 2024 and March 2024, Ratifying and Approving the Short-Term Investment Transactions for February 2024 and March 2024, Approving Treasurer’s Statement of Receipts and Disbursements for February 2024 and March 2024, Acknowledgement of Information Memo Packet; **(2) ACTION items:** Declare Interest Rate to Apply to Balance of Member Contributions and Interest for Period Ending December 31, 2023, Declare Results of the Election of an Employee Member of the Retirement Board, Asset Allocation Review and Determination; **(3) INFORMATION items:** Discussion of Changes to Board of Director Pension, HIB Study: Discussion of Goals and Interests, Role of Board President and Succession Planning, PEPRAs Contribution Rate Survey, Performance Report and Economic Review (Meketa Investment Group), Private Placement Update; **(4) REPORTS FROM THE RETIREMENT BOARD:**

CC:ls

Enclosure

(Amended)  
**AGENDA**

**EBMUD EMPLOYEES' RETIREMENT SYSTEM**  
**May 23, 2024**

A regular meeting of the Retirement Board will convene at 9:00 a.m. on Thursday, May 23, 2024. This meeting will be conducted with Retirement Board Members physically present in the Administration **Training Resource Center**, 375 Eleventh Street, Oakland, California. This location shall serve as the physical location for members of the public who wish to attend the meeting in person. Please note, however, that members of the public will also be provided the opportunity to participate via video and teleconference. Public participation will also be 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. Some Presenters may be attending via Zoom.

*Retirement Board Members: Clifford Chan, Marguerite Young, April Chan, Tim McGowan, Jae Park and Elizabeth Grassetti*

*Staff to the Retirement Board: Sophia Skoda, Lourdes Matthew, Cindy Charan, Robert Hannay, Lisa Sorani, Steven Goodman-Leibof, Valerie Weekly and Mae Shepherd*

*Consultants & Presenters: Meketa - Colin Bebee, Sarah Bernstein, Eric Larsen, and Jonathan Camp, Alliant - Tom Sher and Billie Brown*

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

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

**RETIREMENT BOARD MEMBERS:**

1. Consider the request of Director Marguerite Young to appear remotely pursuant to Government Code section 54953(f)(2)(A)(i).

**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.

**REGULAR BUSINESS MEETING**

**CONSENT CALENDAR:**

1. Approval of Minutes of the Retirement Board – Regular Meeting of March 21, 2024
2. Approval of Minutes of the Special Retirement Board Meeting of April 16, 2024
3. Ratifying and Approving Investment Transactions by Retirement Fund Managers for February 2024 and March 2024
4. Ratifying and Approving Short-Term Investment Transactions for February 2024 and March 2024

5. Approving Treasurer's Statement of Receipts and Disbursements for February 2024 and March 2024
6. Acknowledgement of Information Memo Packet that includes: Introduction to New Information Memo Packet, Disability Earnings Income Verification for 2023, Annual Retirement Board Training Report, Report on Low Income Adjustments for Retired Members and Surviving Spouses, May 2024 LRS Pension Gold Implementation Update, and Private Placement Update, HIB Study-Retiree Survey Data Updated, HIB Study-2023 Peer HIB Benchmark Survey Results Updated

**ACTION:**

7. Declare Interest Rate to Apply to Balance of Member Contributions and Interest for Period Ending December 31, 2023 – C. Charan
8. Declare Results of the Election of an Employee Member of the Retirement Board – C. Charan
9. Asset Allocation Review and Determination – S. Skoda

**INFORMATION:**

10. Discussion of Changes to Board of Director Pension – L. Matthew
11. HIB Study: Discussion of Goals and Interests – C. Charan
12. Filling the Role of Board President and Succession Planning – C. Charan
13. PEPRA Contribution Rate Survey – S. Skoda
14. Performance Report and Economic Review (Meketa Investment Group) – S. Skoda

**REPORTS FROM THE RETIREMENT BOARD:**

**ITEMS TO BE CALENDARED:**

**MEETING ADJOURNMENT:**

**The next meeting of the Retirement Board is a Special Meeting that will be held at 9:00 a.m. Tuesday, June 4, 2024. The next regular meeting of the Retirement Board will be held on Thursday, July 18, 2024.**

**Retirement Board Meetings**

- June 4, 2024 (Special)
- July 18, 2024
- September 19, 2024
- November 21, 2024

## APPENDIX

Retirement Board Meeting  
Thursday, March 23, 2024  
9:00 a.m.

This meeting will be conducted with Retirement Board Members physically present in the Administration Training Resource Center, 375 Eleventh Street, Oakland, California. Members of the public are welcome to attend in person or virtually as described below.

Please note that Retirement Board meetings are recorded and live-streamed.

To view the livestream of 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>

### **Zoom Webinar Information**

**When:** May 23, 2024 09:00 AM Pacific Time (US and Canada)

**Topic:** May 23, 2024 EBMUD Retirement Board Meeting

Please click the link below to join the webinar:

<https://ebmud.zoom.us/j/84444016572>

Or One tap mobile :

+16694449171,,84444016572# US

+16699006833,,84444016572# US (San Jose)

Webinar ID: 844 4401 6572

International numbers available: <https://ebmud.zoom.us/j/84444016572>

### **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

## AGENDA

### EBMUD EMPLOYEES' RETIREMENT SYSTEM

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#### **ROLL CALL:**

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Or One tap mobile :

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- 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

(Corrected)

**MINUTES OF THE RETIREMENT BOARD**  
**March 21, 2024**

A regular meeting of the Retirement Board convened on Thursday, March 21, 2024 at 9:04 a.m.

The meeting was called to order by Retirement Board President Tim McGowan. This meeting was conducted with Retirement Board Members physically present in the Administration Building **Training Resource Center**, 375 Eleventh Street, Oakland, California. This location served as the physical location for members of the public who wish to attend the meeting in person. Please note, however, that members of the public were also provided the opportunity to participate via video and teleconference.

**Roll Call** – The following Retirement Board Members were *present*: *Clifford Chan, Marguerite Young, April Chan, Tim McGowan, Jae Park*

The following staff members were present: Sophia Skoda, Lourdes Matthew, Cindy Charan, Robert Hannay, Lisa Sorani, Steven Goodman-Leibof, Valerie Weekly and Mae Shepherd

The following consultants were present: Meketa - Colin Bebee, Sarah Berstein, Jonathan Camp, Eric Larsen. Segal-Andy Yeung and Dirk Adamsen. Alliant-Billie Brown and Tom Sher; Cheiron – Graham Schmidt, Anne Harper, Heather Fantz

**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.

Ivette Rivera expressed that other water agencies provide a higher HIB benefit and she hopes the District considers matching other water agencies' levels.

John Hayden (online comment) questioned whether the outsourcing of HIB administration was part of today's agenda, or if it was already a done deal. He would like to speak against the outsourcing of HIB administration. His reimbursement is currently received in his retirement benefit check and he doesn't have to worry about it. He thinks the HIB administration is unnecessary. Lisa responded we have contracted with FBA and have initiated the outsourcing process, which we anticipate will happen in fall 2024. Staff want to make this as seamless as possible.

Lisa Sorani summarized two letters from the public to the Retirement Board:

Steven Wollmer offered suggestions about changing the amount and vesting of the HIB benefits.

Catherine Humphrey raised concerns about the availability of various Medicare plan options. Lisa Sorani explained the difference between advantage plan and medigap plans. There has been information in news about members who have medigap. Advantage plans give 120 days versus medigap after 20 days they are requesting recertify to make it to the 100th day. We currently, do not speak on this and the member believes we should educate this important difference. Lisa confirmed with Kaiser that this is not a problem with Kaiser Senior Advantage Plans. We are awaiting a response from ACWAJPIA related to the United Healthcare Advantage Plan. Lisa Sorani mentioned that staff will be integrating HICAP into our informational sessions to help share information about the differences between Medigap and Medicare Advantage Plans.

## REGULAR BUSINESS MEETING

### CONSENT CALENDAR:

April Chan pulled item #2, approval of February Minutes. Marguerite Young motioned to approve items #1, 3-5. Jae Park seconded the motion and the motion carried (5-0) by the following vote: AYES (A. Chan, C. Chan, T. McGowan, J. Park, M. Young), NOES (none), ABSTAIN (none), ABSENT (none).

Regarding item #2, April Chan wanted the minutes to reflect that she was late to the Meeting due to jury duty obligations. April Chan motioned to approve items #2 with the correction mentioned. Marguerite Young seconded the motion and the motion carried (5-0) by the following vote: AYES (A. Chan, C. Chan, T. McGowan, J. Park, M. Young), NOES (none), ABSTAIN (none), ABSENT (none).

### ACTION:

6. **Adopt Cost of Living Adjustment effective July 1, 2024 – C. Charan** – Cindy Charan introduced this item. The calculated current CPI is 3.7%. The current retirement system funding does not exceed the 85% threshold, so the maximum COLA is 3.0% with up to 0.7% to be added to Cola banks. Motion made by Marguerite Young. Clifford Chan seconded the motion and the motion carried (5-0) by the following vote: AYES (A. Chan, C. Chan, T. McGowan, J. Park, M. Young), NOES (none), ABSTAIN (none), ABSENT (none).
7. **Authorize Extending Glass Lewis Contract – S. Skoda** – Sophia Skoda introduced this item then handed it off to Robert Hannay. The Glass Lewis agreement expires this year. Staff recommends extending it for next 3 years. Motion made by Marguerite Young. Clifford Chan seconded the motion and the motion carried (5-0) by the following vote: AYES (A. Chan, C. Chan, T. McGowan, J. Park, M. Young), NOES (none), ABSTAIN (none), ABSENT (none).
8. **Select Retirement System Actuary – S. Skoda**
  - a. **Accept Ad Hoc Committee Recommendation of Finalists: Segal and Cheiron**

Sophia introduced this item with Stephen Leibof-Goodman presented. In June, the Board decided to use an Ad Hoc committee to evaluate proposals for actuarial services and recommend final candidates to conduct presentations for the Board's consideration. There were four proposals, which the Committee unanimously narrowed to two finalists, Segal and Cheiron. April Chan said it was very easy to get to this consensus and felt it would be a very close decision. Other members of the Committee expressed the same sentiment.

Motion made by April Chan to accept recommendation of Ad Hoc committee. Clifford Chan seconded the motion and the motion carried (5-0) by the following vote: AYES (A. Chan, C. Chan, T. McGowan, J. Park, M. Young), NOES (none), ABSTAIN (none), ABSENT (none).
  - b. **Select Actuary:**

SEGAL: With Andy Yeung presenting, the Segal team stepped through their slide deck for the allotted 15 minutes. Andy Yeung described that the scope of work is what drives the higher fees and offered to reduce the proposed fees by \$10,000 per year. Marguerite Young questioned Segal about how they might improve the materials provided to EBMUD; taking advantage of technology innovation to help understand actuarial assumptions and reports. Andy Yeung responded they're now using PPT presentations.

April Chan asked where EBMUD might need improvement and our strength and then asked about Segal's diversity efforts. Andy responded by stating the District has excellent staff, but could improve with better data; they look forward to when EBMUD has PensionGold. Segal has about 10% women. Segal has a mentorship program.

Cheiron: With Graham Schmitt presenting, the Cheiron team stepped through their slide deck for the allotted 15 minutes. Clifford Chan asked about employee retention rate. Graham Schmitt responded that retention has been 100% among senior team. Marguerite Young asked what the client retention rate is. Anne Harper responded that the client retention rate is 100% in California. April Chan asked about DEI initiatives and transition. Graham Schmitt described recruitment initiatives at Historically Black Colleges and Universities and firm focus on data and data processing.

The Board and staff discussed different aspects of the proposals and the presentations. Proposal from Cheiron did not consider intricacies of our plan that they don't know. EBMUD's antiquated systems can't track data that the actuaries need. Tim McGowan asked staff about Segal's performance (change orders, timeliness, etc.) Steve Goodman-Leibof said Segal has operated like an extension of Finance. Lisa Sorani indicated Segal has been very conscientious at keeping track of work requests. Robert Hannay reported they're always on time; they have been an amazing resource. Segal offered assistance with the PEPRA standby pay correction. Most Board members agreed that Cheiron gave a better DEI response but in both case, the firms are limited by supply chain. Segal didn't come with a plan to grow and evolve but Cheiron did. Jae mentioned that while cost is important to him, Segal performance and references gave high marks so he is inclined to stay with them. Clifford Chan asked if this was a good time for a transition to a new actuary? Staff responded that this would be a difficult time because of other high priority projects. If Segal helped us with a transition, it might not be such a heavy lift. Marguerite Young noted frustration that staff did not previously suggest giving Segal a 2-year extension and then do the RFP once PensionGold has implemented.

Max Fefer from Local 2019 made a public comment. Max had concern with dashboard style offering, as they can highly simplify complicated concepts. Putting too much value into something like that would need lots of vetting. There is lots of room for error in creating dashboard tools.

President McGowan asked if we were due for an audit. Maybe that is something we can engage Cheiron for that audit. Some members of the Board expressed frustration that staff was being resistant to change. Sophia Skoda was sorry to hear that the impression is staff is resistant to a change. Staff was indicating it was a difficult time but would make it happen if the Board decided to move forward with Cheiron.

Tim McGowan made a motion for staff to negotiate a 2 year contract with Segal. There was discussion about conditions that should be included in the motion.

The Board took a 10 min break; then resumed at 11:59am

Marguerite Young offered the following amendments to Tim McGowan's motion. Staff will attempt to negotiate a 2 year extension of the Segal contract conditioned on Segal's commitment to advancing the following:

- Enhancing the layperson's understanding of actuarial materials utilizing the latest presentation technology and graphics.
- Integration and advancement with the greater Segal DEI Plan.
- Development of succession planning for the team supporting EBMUD.

Tim McGowan accepted the recommended amendment to his original motion. April Chan seconded the motion and the motion carried (5-0) by the following vote: AYES (A. Chan, C. Chan, T. McGowan, J. Park, M. Young), NOES (none), ABSTAIN (none), ABSENT (none).

### **INFORMATION:**

**Informational items were not taken in the order on the agenda. After item #8, item #16 was presented followed by item #11 and item #9. Items #10 & 14 were not discussed, item #15 was moved to the April meeting and items #12, #13, were moved to the informational packet for the May meeting.**

**16. Amending the Retirement Ordinance to Modify Accrual of Service Credit by Board Members – L. Matthew**

Members of the EBMUD Board Directors have been treated as employee members since 1997, when Board Members were originally granted membership. Under current ordinance language, there is potential for a windfall benefit to Directors who receive a benefit based on earnings other than the compensation as a Board member. Two options will be presented to the Board of Directors. Option 1 – Revert back to pre-1997 language, which excluded Directors from participation. Option 2 – Amend the ordinance to prorate the years of service accrued by Board of Director member. Option 3 Do nothing, with the understanding that this could result in a windfall for the retiree and an unfunded liability for EBMUDERS. –Any changes to the Ordinance would be effective prospectively, not impacting anyone currently on the Board. Considering a Retirement Ordinance change requires two readings at the Board of Directors meetings, staff is targeting a July 21, 2024 adoption date. There was discussion about treatment of service for vesting and HIB. Director Young would like to eliminate the reciprocity for Board of Directors, however, staff advised that there could be legal complications arising from the District’s contract with CalPERS to provide reciprocity.

**11. Asset Allocation Modeling Kickoff – S. Skoda**

Colin from Meketa presented. Capital market assumptions are key inputs on the asset side of the equation. We look at what just happened over the last year with the market and interest rates. Last year was a strong year for equity about 26% non us about 18% as of January 2024 assumptions are a little lower compared to 2023. Pg 189 shows expected returns. Tim McGowan’s concern is that in the 10 year returns in the last asset allocation study led to a 50/50 mix of US and international equities but US equities significantly outperformed international and we did not earn what we could have because not invested in that rally. Colin explained that it is most important to have a well-grounded reasonable expectations to come up with an appropriate mix Public Comment Max Fefer how do we translate the standard deviation. Jonathan that is an annual standard deviation we take what has occurred in the last 15 years and take into consideration both qualitative and quantitative factors. Marguerite Young pointed out that this is just our best guess and it will be wrong 95% of the time but we have to have something that we land on. All models are wrong but some models are useful. Colin bonds are the only ones with high predictability with 1% deviation. The goal of this meeting is get consensus or develop a definition and view of risks for EBMUDERS. Slide 197 is about how do we do this. There was discussion of funded status and employer contributions. Funded status is when the fund has 100% meaning they have monies to pay all of the systems obligations. Marguerite Young everyone is trying to get to 100% funded but not sure if that is where we should be aiming. Tim McGowan asked if we are comfortable with 5% to private debt? Marguerite Young wants to see this in the tool to see how that 5% affects the return in coordination with the other asset classes. April Chan asked if we rebalance annually. Robbie

Hannay responded that we rebalance quarterly. We take money to pay expenses from classes that are over allocated and a rebalancing may occur at that time. We have not gone over a, b, or c because we are interested in what is your focus. Tim McGowan asked if Meketa was looking for feedback on which options, A, B, or C, the Board preferred. Johnathan pointed out that you would pick option A if you are looking to get there as fast as possible. If you wanted less volatility, that would be option C. Marguerite Young asked if any of this display related to the change in the demographics, i.e. more PEPRA folks and passing of legacy members? Jonathan: that baseline assumption is built into this model. We are focused on only what happens if we change the asset allocation. Tim McGowan: felt like you took unfunded [liability] based on our information today and you have not talked to see how the unfunded liability does change every year. This is just an asset lens. April Chan expressed her concern with theory. She needs to see the components used in the modeling.

**9. PensionGold (LRS) Implementation Project Update – C. Charan**

Adam Froio presented. The Retirement Board raised questions about the critical path. Are there changes we can make to improve efficiency or shorten the timeline. Adam doesn't believe anything The project team has asked LRS to provide the design documents for each phase as they are ready of EBMUD review, rather than wait for all to be ready. 99.7% of data converted properly. The project is a few hundred thousand dollars under budget, largely because of unfilled positions. A couple of people left the project and were not replaced. Another technical resources was hired to support the project team. Valerie mentioned the data cleanup has been delayed. The project team would like to fill one of the vacant analyst positions to support those efforts. Vendor easy to work with; very responsive. Staffing: hired another technical resource. Not able to remove anything from critical path. Adam assumes that position may not be entirely charged to the project since much of the work is HR data cleanup.

**REPORTS FROM THE RETIREMENT BOARD:**

Tim attended CALAPRS General Assembly March, 2024. He discussed a few of the topics addressed in that session, including funds that are looking at being fully funded and artificial intelligence.


**ITEMS TO BE CALENDARED:**

Items 12, 13, and 15 will be moved to future meetings.

**MEETING ADJOURNMENT:**

Meeting adjourned at 2:03pm. April Chan motioned for the adjournment of the meeting. The motion was seconded by Jae Park and the motion passed 5-0 by the following vote: AYES (T. McGowan, C. Chan, J. Park, M. Young, A. Chan), NOES (none), ABSTAIN (none), ABSENT (none).

Minutes  
Retirement Board Meeting  
March 21, 2024

  
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President

ATTEST:

  
\_\_\_\_\_

Secretary

5/23/2024

(Corrected)  
**MINUTES OF THE RETIREMENT BOARD**  
**April 16, 2024**

A regular meeting of the Retirement Board convened on Tuesday, April 16, 2024 at 9:02 a.m.

The meeting was called to order by Retirement Board President Tim McGowan. This meeting was conducted with Retirement Board Members physically present in the Administration Building **Training Resource Center**, 375 Eleventh Street, Oakland, California. This location served as the physical location for members of the public who wish to attend the meeting in person. Please note, however, that members of the public were also provided the opportunity to participate via video and teleconference.

**Roll Call** – The following Retirement Board Members were present: Clifford Chan, April Chan, Tim McGowan, Jae Park, and Elizabeth Grasseti. Marguerite Young joined the meeting at 9:07 a.m.

The following staff members were present: Cindy Charan, Sophia Skoda, Lisa Sorani, Lourdes Matthew, Robert Hannay, Steven Goodman-Leibof, and Valerie Weekly.

The following consultants were present: Alliant - Billie Brown and Tom Sher.

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Ivette Rivera: Thanked staff for the data, looked forward to hearing the presentation, noted that 15 to 20 percent of those in the survey did not respond, wondered who those were, and asked the Board to request a list from staff of those retirees whose HIB (or actually health insurance premium) is more than 20% of their monthly pension check.

**SPECIAL RETIREMENT BOARD MEETING**

**CONSENT CALENDAR:**

No Items

**ACTION:**

No Items

**INFORMATION:**

**1. Options for Amending the Retirement Ordinance with Respect to Pension Benefits for Board Members – L. Matthew**

Lourdes Matthew reviewed the information that was presented to the Board of Directors on May 9, 2024, with respect to Pension benefits for Board Members. She noted that District Board President Katz requested that further exploration on whether an amendment could, instead of affecting final service, affect final compensation based on a provision in CALPERS which defines final compensation for elected and appointed members for city, county, and state membership but not others. Lourdes is currently looking into the legal issues of this option; it is unclear if this runs

afoul of the reciprocal rules also governed by CALPERS, and to which the District has elected to participate. Marguerite Young noted that the District Board was in favor of this option if it is available. April Chan reminded Lourdes that the District Board also wanted to ensure that HIB is not impacted in either case. The second topic discussed with the District Board was the issue of the District retirees. Further discussion reviewed the timeline of finalizing these issues for inclusion in the Retirement Ordinance. Lourdes noted she is striving to get both issues finalized to take to the May 14, 2024, meeting for a first reading. If staff can make that date, the amendments would take effect July 1, 2024.

## **2. HIB Study: HIB Peer Benchmark Survey Results (2023 data updated) – C. Charan**

Cindy Charan introduced this item. Lisa Sorani reminded the Retirement Board that this item answers a question they asked last year, “What are retiree out-of-pocket costs for health insurance at comparative agencies?” Lisa shared that the survey data is from 2023, not updated for 2024, and walked through the assumptions used with the data to answer the Retirement Board’s question. Lisa then introduced Billie Brown of Alliant to present the data. The board reviewed the survey findings and questioned the comparability of health plans among the agencies, “Is their Kaiser plan just like our Kaiser plan?”, Tom Sher confirmed that staff were not able to dive into that level of detail but that over 50% of the agencies are using CalPERS; and CalPERS has very rich plans, similar in design to the District. In addition, the plans chosen were those most used by retirees in each agency; so for out-of-pocket costs, the most used does provide an appropriate comparator. A second question was asked about Zone 7 and ACERA to determine if they were separate data points and requested to remove or collapse Zone 7 with ACERA. The Retirement Board also requested that although less than half of the agencies reimburse for Medicare Part B, that staff bring back the comparison retiree out-of-pocket costs including the cost of Part B in for all agencies. They also requested that Median data be used instead of average, and that the health plan premiums also be included.

**PUBLIC COMMENT HERE:** Max Fefer thanked staff for the data; felt that it did not address an important group which are those retirees under age 65. Max would like the Board to consider this group.

Marguerite Young asked what % of District under age 65 retirees are working elsewhere. April Chan asked Elizabeth if she hears from these under age 65 retirees, Elizabeth said she recalls that staff counsel these retirees and they leave aware of the costs they will incur for healthcare, and they are planning for that. Tim stated that those agencies with defined benefit are paying the full cost of healthcare for under or over age 65 retirees. Would like to see the actuarially assumed age of retirement for PEPRA members. Clifford mentioned we are off topic from what was on the agenda, and maybe it would be appropriate close this out with a request of staff.

Eric Larsen: President Local 444, he has had questions from employees who are looking to retire before age 65, and would they be able to come back later to enroll in District healthcare plans. Staff briefly replied that under our current rules this is not allowed.

Ivette Rivera: Wanted to touch on what Elizabeth Grassetti said about retirees who retired a long time ago and what they are earning, and how that impacts their healthcare costs today.

## **3. HIB Study: Retiree HIB Survey Results – C. Charan**

Lisa Sorani presented the results of the Retiree HIB Survey, highlighting retiree perspectives on the HIB. The survey aimed to gather feedback on the adequacy, accessibility, and affordability of healthcare coverage for retirees. Four key items were presented: The satisfaction level, the retiree

annual out-of-pocket costs for health, retiree annual household income, and the retiree comments about the benefit.

**4. HIB Study: Prior HIB Increases vs Prior Health Plan Premiums, and Present Value of Prior HIB Values – C. Charan**

Lisa Sorani presented a comparison of prior HIB increases and health plan premium trends over time and a report showing the 2024 present value of the prior HIB values. The data showed that our HIB was never a benefit that fully paid for retiree health insurance. In many years, there was at least one plan than may be paid fully for a retiree eligible for the full benefit, but not always.

**REPORTS FROM THE RETIREMENT BOARD:**

None

**ITEMS TO BE CALENDARED:**

Staff were requested to bring back items from this meeting.

**MEETING ADJOURNMENT:** Meeting adjourned at 11:03 a.m.; moved by M. Young; seconded by J. Park. Motion passed 5-0 by the following vote: AYES (McGowan, C. Chan, Park, Young, A. Chan), NOES (none), ABSTAIN (none), ABSENT (none).

**The next regular meeting of the Retirement Board will be held on Thursday, May 23, 2024.**

**Retirement Board Meetings**

- May 23, 2024
- June 4, 2024 (Special)
- July 18, 2024
- September 19, 2024
- November 21, 2024

Minutes  
Retirement Board Meeting  
April 16, 2024



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President

ATTEST:



Secretary

5/23/2024

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

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

SUBJECT: Investment Transactions by Retirement Fund Managers for February 2024 and March 2024

The attached Investment Transactions by Retirement Fund Managers report for the months of February 2024 and March 2024 is hereby submitted for Retirement Board approval.

SDS:RLH:SGL

Attachment: Investment Transactions by Retirement Fund Managers

R.B. RESOLUTION NO. 7005

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY FUND MANAGERS  
FOR FEBRUARY 2024 AND MARCH 2024

Introduced by: Clifford Chan ; Seconded by: Jae Park

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 February 2024 and March 2024, in accordance with the provisions of said rule and in securities designated as acceptable by Retirement Board Resolution No. 4975, as amended;

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

  
\_\_\_\_\_  
President

ATTEST:

  
\_\_\_\_\_  
Secretary

5/23/2024

INVESTMENT TRANSACTIONS BY RETIREMENT FUND MANAGERS			
<b>February 2024</b>			
	PURCHASES	SALES	PORTFOLIO VALUE
<b>FIXED INCOME</b>			
C.S. McKee	\$31,649,890	\$28,172,507	\$214,042,107
Federated Bank Loans	\$2,727,479	\$375,313	\$56,501,984
Garcia Hamilton Associates	\$3,972,175	\$2,059,973	\$208,803,868
Mackay Shields - HY	\$1,689,756	\$179,781	\$60,006,295
<b>TOTAL</b>	<b>\$40,039,301</b>	<b>\$30,787,574</b>	<b>\$539,354,253</b>
<b>DOMESTIC EQUITY</b>			
Russell 3000 Index Fund	\$0	\$0	\$671,125,392
<b>Total Domestic Equity</b>	<b>\$0</b>	<b>\$0</b>	<b>\$671,125,392</b>
<b>COVERED CALLS</b>			
Parametric (BXM)	\$7,177,425	\$7,281,336	\$162,981,774
Parametric (Delta-Shift)	\$3,699,410	\$3,564,222	\$171,200,989
Van Hulzen	\$7,309,305	\$9,375,548	\$159,221,786
<b>Total Covered Calls</b>	<b>\$18,186,139</b>	<b>\$20,221,106</b>	<b>\$493,404,550</b>
<b>INTERNATIONAL EQUITY</b>			
ACWI Index fund	\$0	\$0	\$584,648,031
Global Transition	\$0	\$0	\$869,028
<b>Total International Equity</b>	<b>\$0</b>	<b>\$0</b>	<b>\$585,517,058</b>
<b>REAL ESTATE EQUITY</b>			
RREEF America II	\$0	\$0	\$54,829,790
CenterSquare	\$1,507,362	\$1,296,723	\$62,660,387
<b>Total Real Estate</b>	<b>\$1,507,362</b>	<b>\$1,296,723</b>	<b>\$117,490,178</b>
<b>TOTAL ALL FUND MANAGERS</b>	<b>\$59,732,803</b>	<b>\$52,305,403</b>	<b>\$2,406,891,430</b>
<b>March 2024</b>			
	PURCHASES	SALES	PORTFOLIO VALUE
<b>FIXED INCOME</b>			
C.S. McKee	\$11,487,887	\$10,195,637	\$216,200,648
Federated Bank Loans	\$270,896	\$0	\$56,942,636
Garcia Hamilton Associates	\$1,024,477	\$0	\$210,963,311
Mackay Shields - HY	\$2,275,757	\$463,745	\$60,563,519
<b>TOTAL</b>	<b>\$15,059,017</b>	<b>\$10,659,382</b>	<b>\$544,670,115</b>
<b>DOMESTIC EQUITY</b>			
Russell 3000 Index Fund	\$0	\$0	\$692,740,537
<b>Total Domestic Equity</b>	<b>\$0</b>	<b>\$0</b>	<b>\$692,740,537</b>
<b>COVERED CALLS</b>			
Parametric (BXM)	\$5,733,601	\$5,555,703	\$165,945,763
Parametric (Delta-Shift)	\$3,652,177	\$3,413,980	\$174,254,467
Van Hulzen	\$9,176,993	\$9,026,043	\$161,825,521
<b>Total Covered Calls</b>	<b>\$18,562,771</b>	<b>\$17,995,726</b>	<b>\$502,025,751</b>
<b>INTERNATIONAL EQUITY</b>			
ACWI Index fund	\$0	\$24,627	\$602,654,338
Global Transition	\$0	\$0	\$866,921
<b>Total International Equity</b>	<b>\$0</b>	<b>\$24,627</b>	<b>\$603,521,259</b>
<b>REAL ESTATE EQUITY</b>			
RREEF America II	\$0	\$0	\$54,829,793
CenterSquare	\$1,037,439	\$924,790	\$63,723,932
<b>Total Real Estate</b>	<b>\$1,037,439</b>	<b>\$924,790</b>	<b>\$118,553,725</b>
<b>TOTAL ALL FUND MANAGERS</b>	<b>\$34,659,227</b>	<b>\$29,604,524</b>	<b>\$2,461,511,387</b>

Prepared By: Aaron Cinco  
Aaron Cinco, Accounting Technician


Date: 4/19/24

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance 

SUBJECT: Short Term Investment Transactions for February 2024 and March 2024

The attached Short Term Investment Transactions reports for the months of February 2024 and March 2024 are hereby submitted for Retirement Board approval.

SDS:RLH:SGL

Attachments: Short Term Investment Transactions February 2024  
Short Term Investment Transactions March 2024

R.B. RESOLUTION NO.7006


RATIFYING AND APPROVING SHORT TERM INVESTMENT TRANSACTIONS BY THE  
TREASURER FOR FEBUARY 2024 AND MARCH 2024

Introduced by: Clifford Chan ; Seconded by: Jae Park

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 February 2024 and March 2024, 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 reports for February 2024 and March 2024 are hereby ratified and approved.

  
\_\_\_\_\_  
President

ATTEST:

  
\_\_\_\_\_  
Secretary

5/23/2024

**EBMUD EMPLOYEES' RETIREMENT SYSTEM  
SHORT TERM INVESTMENT TRANSACTIONS  
CONSUMMATED BY THE TREASURER  
MONTH OF FEBRUARY 2024**

<u>COST/ FACE VALUE</u>	<u>DESCRIPTION</u>	<u>DATE OF PURCHASE</u>	<u>DATE OF SALE/MATURITY</u>	<u>YIELD (%)</u>
\$ 5,358,000.00	Local Agency Investment Fund	2-Feb-24		4.122
\$ 480,000.00	Local Agency Investment Fund	6-Feb-24		4.122
\$ 5,333,000.00	Local Agency Investment Fund	16-Feb-24		4.122
(13,768,000.00)	Local Agency Investment Fund		29-Feb-24	4.122
<b>\$ (2,597,000.00)</b>	Net Activity for Month			

\$ 5,969,077.14	Beginning Balance
(2,597,000.00)	Net Activity for Month
<b>\$ 3,372,077.14</b>	Ending Balance

SUBMITTED BY David Glasser  
David Glasser (Apr 22, 2024 17:00 PDT)  
 David Glasser  
 Controller

DATE Apr 22, 2024

*Robert L. Hannay*

Robert L. Hannay  
 Treasury Mgr.

*Kevin Ma*

Kevin Ma  
 Acctg. Systems Supvr.  
 prepared by Acinco

**EBMUD EMPLOYEES' RETIREMENT SYSTEM  
SHORT TERM INVESTMENT TRANSACTIONS  
CONSUMMATED BY THE TREASURER  
MONTH OF MARCH 2024**

<u>COST/ FACE VALUE</u>	<u>DESCRIPTION</u>	<u>DATE OF PURCHASE</u>	<u>DATE OF SALE/MATURITY</u>	<u>YIELD (%)</u>
\$ 5,347,000.00	Local Agency Investment Fund	1-Mar-24		4.232
\$ 5,346,000.00	Local Agency Investment Fund	15-Mar-24		4.232
\$ (13,785,000.00)	Local Agency Investment Fund		28-Mar-24	4.232
\$ 5,322,000.00	Local Agency Investment Fund	29-Mar-24		4.232
<b>\$ 2,230,000.00</b>	Net Activity for Month			

\$ 3,372,077.14	Beginning Balance
<u>2,230,000.00</u>	Net Activity for Month
<b>\$ 5,602,077.14</b>	Ending Balance

SUBMITTED BY David Glasser  
David Glasser (Apr 22, 2024 17:00 PDT)  
 David Glasser  
 Controller

DATE Apr 22, 2024

*Robert L. Hannay*

Robert L. Hannay  
 Treasury Mgr.

*Kevin Ma*

Kevin Ma  
 Acctg. Systems Supvr.  
 prepared by Acinco

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

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

SUBJECT: Treasurer's Statement of Receipts and Disbursements for February 2024 and March 2024

**SUMMARY**

The attached Treasurer's Statement of Receipts and Disbursements reports for the months of February 2024 and March 2024 are hereby submitted for Retirement Board approval.

SDS:RLH:SGL

Attachments: Statement of Receipts and Disbursements February 2024  
Statement of Receipts and Disbursements March 2024

STATEMENT OF RECEIPTS AND DISBURSEMENTS  
EMPLOYEES' RETIREMENT FUND  
MONTH OF FEBRUARY 2024

CASH BALANCE at January 31, 2023	\$	4,462,801.33
<u>Receipts</u>		
Employees' Contributions	\$	1,851,965.89
District Contributions		8,957,059.19
LAIF Redemptions		13,768,000.00
Northern Trust Redemptions		479,724.07
Refunds and Commission Recapture		<u>23,397.78</u>
TOTAL Receipts		25,080,146.93
<u>Disbursements</u>		
Checks/Wires Issued:		
Service Retirement Allowances	\$	12,050,531.79
Disability Retirement Allowances		163,978.93
Health Insurance Benefit		1,310,056.20
Payments to Retiree's Resigned/Deceased		102,071.76
LAIF Deposits		11,171,000.00
Administrative Cost		<u>338,257.39</u>
TOTAL Disbursements		<u>(25,135,896.07)</u>
CASH BALANCE at February 29, 2024	\$	<u>4,407,052.19</u>
LAIF		<u>3,372,077.14</u>
LAIF and CASH BALANCE at February 29, 2024	\$	<u>7,779,129.33</u>
<u>Domestic Equity</u>		
Russell 3000 Index Fund	\$	<u>671,125,391.75</u>
Subtotal Domestic Equity		671,125,391.75
<u>Covered Calls</u>		
Parametric (BXM)	\$	162,981,774.10
Parametric (Delta-Shift)		171,200,989.22
Van Hulzen		<u>159,221,786.37</u>
Subtotal Covered Calls		493,404,549.69
<u>International Equity</u>		
ACWI Index fund	\$	584,648,030.58
Global Transition		<u>869,027.63</u>
Subtotal International Equity		585,517,058.21
<u>Real Estate</u>		
RREEF America REIT II	\$	54,829,790.42
Center Square		<u>62,660,387.39</u>
Subtotal Real Estate		117,490,177.81
<u>Fixed Income</u>		
CS Mckee	\$	214,042,107.04
Federated Bank Loans		56,501,983.57
Garcia Hamilton Associates		208,803,867.50
Mackay Shields-High Yield		<u>60,006,294.86</u>
Subtotal Fixed Income		539,354,252.97
Total for Domestic and International Equities		<u>2,406,891,430.43</u>
MARKET VALUE of ASSETS at February 29, 2024	\$	<u>2,414,670,559.76</u>

Respectfully submitted,

*David Glasser*

David Glasser (Apr 22, 2024 17:00 PDT)

David Glasser  
Controller

*Robert L. Hannay*

Robert L. Hannay  
Treasury Mgr.

*Kevin Ma*

Kevin Ma  
Acctg Sys Supvr.

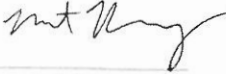
prepared by Acinco

STATEMENT OF RECEIPTS AND DISBURSEMENTS  
EMPLOYEES' RETIREMENT FUND  
MONTH OF MARCH 2024

CASH BALANCE at February 29, 2023		\$	4,407,052.19
<u>Receipts</u>			
Employees' Contributions	\$	2,779,096.52	
District Contributions		13,415,547.69	
LAIF Redemptions		13,785,000.00	
Northern Trust Redemptions		0.00	
Refunds and Commission Recapture		<u>19,755.38</u>	
TOTAL Receipts			29,999,399.59
<u>Disbursements</u>			
Checks/Wires Issued:			
Service Retirement Allowances	\$	11,840,126.85	
Disability Retirement Allowances		162,259.67	
Health Insurance Benefit		1,040,117.27	
Payments to Retiree's Resigned/Deceased		231,847.77	
LAIF Deposits		16,015,000.00	
Administrative Cost		<u>849,867.48</u>	
TOTAL Disbursements			<u>(30,139,219.04)</u>
CASH BALANCE at March 31, 2024		\$	<u>4,267,232.74</u>
LAIF			<u>5,602,077.14</u>
LAIF and CASH BALANCE at March 31, 2024		\$	<u>9,869,309.88</u>
<u>Domestic Equity</u>			
Russell 3000 Index Fund	\$	<u>692,740,537.12</u>	
Subtotal Domestic Equity		692,740,537.12	
<u>Covered Calls</u>			
Parametric (BXM)	\$	165,945,762.65	
Parametric (Delta-Shift)		174,254,467.41	
Van Hulzen		<u>161,825,520.80</u>	
Subtotal Covered Calls		502,025,750.86	
<u>International Equity</u>			
ACWI Index fund	\$	602,654,338.28	
Global Transition		<u>866,920.54</u>	
Subtotal International Equity		603,521,258.82	
<u>Real Estate</u>			
RREEF America REIT II	\$	54,829,793.17	
Center Square		<u>63,723,932.10</u>	
Subtotal Real Estate		118,553,725.27	
<u>Fixed Income</u>			
CS Mckee	\$	216,200,648.47	
Federated Bank Loans		56,942,636.28	
Garcia Hamilton Associates		210,963,310.89	
Mackay Shields-High Yield		<u>60,563,519.37</u>	
Subtotal Fixed Income		544,670,115.01	
Total for Domestic and International Equities			<u>2,461,511,387.08</u>
MARKET VALUE of ASSETS at March 31, 2024		\$	<u>2,471,380,696.96</u>

Respectfully submitted,

*David Glasser*  
David Glasser (Apr 22, 2024 17:00 PDT)  
**David Glasser**  
 Controller

  
 Robert L. Hannay  
 Treasury Mgr.

*Kevin Ma*  
 Kevin Ma  
 Acctg Sys Supvr.  
prepared by Acinco

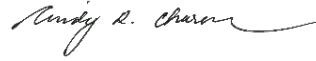
## EAST BAY MUNICIPAL UTILITY DISTRICT

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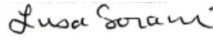
DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources



FROM: Lisa Sorani, Manager of Employee Services



SUBJECT: New Information Memo Packet

### BACKGROUND

Staff has made an administrative change that will allow the Retirement Board Meeting Agenda to hold the most important items for review. Staff will now provide items that are informational only, and do not require discussion as informational memos only. These memos will be provided as a single item on the Consent Calendar.

### DISCUSSION

In review of the long Retirement Board meetings over the past year, staff suggested to Retirement Board President Tim McGowan that the Retirement Board might use the same process used by the Board of Directors to share informational memos that do not need to be on the agenda.

Staff discussed this concept with President McGowan, who agreed that this will help reduce the length of the Retirement Board meetings. At each Retirement Board meeting, any memos such as annual reviews and updates, or special requests from the Board that does not require further discussion, will be brought as a single item on the Consent Calendar. These documents will not appear on the agenda at the meeting under Information, but as a Consent Calendar item; a Retirement Board member could pull the item for any question or comment related to any of the Information Memo Packet items.

### Information Memo Packet - May 23, 2024

1. Disability Earnings Income Verification for 2023 (from March 21, 2024)
2. Annual Retirement Board Training Report (from March 21, 2024)
3. Report on Low Income Adjustments for Retired Members and Surviving Spouses (New)
4. May 2024 LRS Pension Gold Implementation Update (New)
5. Private Placement Update (New)
6. HIB Study – Retiree Survey Data Updated (updates from April 16, 2024)
7. HIB Study – 2023 Peer HIB Benchmark Survey Results Updated (from April 16, 2024)

CC:ls


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## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: March 21, 2024

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources 

FROM: Konana Gregory, Human Resources Analyst II 

SUBJECT: Disability Earnings Income Verification for 2023

### SUMMARY

This memo is brought to the Retirement Board each year to review the status of requirements related to earnings caps for Disability Retirees. Section 18(c) of the Retirement Ordinance and related Board Rule C-21 provide that Members who retire on disability and have not attained Normal Retirement Age, currently age sixty-five, are required to report their outside earnings to the Retirement System that are in excess of their earnings safeguard. Their earnings safeguard is defined as their final monthly salary inflated by wage increases minus their retirement allowance.

### DISCUSSION

Rule C-21 provides that Disability Retired Members whose earnings exceed their earnings safeguard in any quarter must notify the Retirement Board Secretary before the end of that quarter so any necessary adjustment to the retirement allowance can be made. In addition, the Rule provides for staff to verify outside earnings through the State Employment Development Department (EDD) Reports for Disability Retired Members based in California.

Under the current process, each calendar year a cover letter is sent to disability retirees who are under age 65 notifying them of their quarterly earnings safeguard. The letter advises them that if they exceeded their earnings safeguard, they are required to submit an "Employee Retirement System Quarterly Earnings Report Form" to the Retirement System by the end of each quarter for which their earnings exceeded the earnings safeguard. A copy of the form is included with the letter.

Twenty-one disability retirees were monitored in 2023, with no Disability Retired Members reporting income greater than their earnings safeguard. For those Disability Retired Members living in California, Member income was verified through the EDD reports, and it was concluded that Members' self-reporting was consistent as no EDD data indicated Member outside earnings greater than the allowed earnings safeguards.

Seven of the 21 monitored Disability Retired Members reside outside of California, so there is no EDD data available to confirm their earnings. The Retirement Board has previously requested staff to look

Disability Earnings Income Verification for 2023  
Retirement Board Meeting  
March 21, 2024

into whether there is federal access to earnings data that could be used for the out-of-state retirees. Staff have reviewed both the Disclosure of Information to Federal, State, and Local agencies (DIFSLA) program and the Income Verification Express Service (IVES) Program through the Internal Revenue Service (IRS). The DIFSLA does not require authorization from the retiree, but it is not set up to work with a small pension system such as ours. It is used by larger housing, food, and income benefit agencies. The IVES program could provide access to retiree tax data but requires the retiree to authorize the District each time the District request to access their tax records. This process requiring the retiree to authorize the District is not consistent with the way staff access data for California retirees via EDD.

### **NEXT STEPS**

In accordance with the Retirement Board's request that the review process be consistent for all Disability Retired Members under review, staff will continue their review and bring back new suggestions for updating this annual process as defined in Retirement Board Rule C-21.

CC:LS:kg

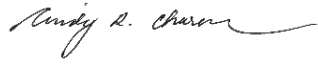
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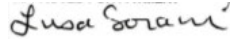
## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: March 21, 2024

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources 

FROM: Lisa Sorani, Manager of Employee Services 

SUBJECT: Annual Retirement Board Training Report and Ethics Training Update

### SUMMARY

The memo below discusses the Retirement Board's training during calendar years 2022 and 2023 and provides a list of upcoming trainings available, as well as many that are available annually.

### DISCUSSION

As designed by the Retirement Board, Retirement Board Rule C-23 requires 24 hours of training every two years for Retirement Board members and provides a budget of \$2,500 per year for each Board member for training expenses.

The attached spreadsheets provide the training hours and costs for each Retirement Board member for the two-year period from January 1, 2022, to December 31, 2023. As a reminder, training sessions brought to Retirement Board meetings are included in the training hours and are noted on the attached worksheet.

The one mandated training requirement is the semi-annual AB 1234 Ethics Training. Retirement Board member Ethics Trainings taken in this two-year period are included on the attached training report so that hours are counted. Board Member Ethics Training is tracked with most recent training dates on the second page of the report.

Several Retirement Board members have asked staff to suggest trainings. Below is a list of trainings for 2024 from the California Association of Public Retirement Systems (CALAPRS) and International Foundation of Employee Benefit plans (IFEBC). The CALAPRS Round Tables are held twice each year, one in-person and one virtual. The Trustee and Investment Officer Round Tables may be of interest to the Retirement Board. They cost \$100 per participant.

The International Federation of Employee Benefits is a U.S. and Canadian agency promoting health and retirement benefit administration. They offer a trustee/administrator

Annual Retirement Board Training Report and Ethics Training Update  
Retirement Board Meeting  
March 21, 2024

level Certificate of Achievement in Public Plan Policy (CAPPP®) that can be earned through two courses (Pensions Part I and Pensions Part II) and an exam. The CAPPP® is designed for public sector benefit plan trustees at all levels of experience. Lastly, the State Association of County Retirement Systems (SACRS) runs a Public Pension Investment Management Program with UC Berkeley each year.

#### **California Association of Public Retirement Systems-CALAPRS**

- Virtual Overview Course in Retirement Plan Administration – 4/26/24
- Virtual Trustee Round Table – 5/3/24
- Principles of Pension Governance for Trustees – 8/26/24 to 8/29/24
- In-person Trustee Round Table – 10/11/24
- Virtual Investment Officer’s Round Table – 11/22/24
- General Assembly – March of each year. The location alternates between the Bay Area and Southern California every other year.

#### **International Foundation of Employee Benefit Plans-IFEBP**

- Washington Legislative Update (Washington, DC) 5/6/24 – 5/7/24
- Advanced Trustees and Administrators Institute (Las Vegas) 6/24/24 to 6/26/24
- IFEBP Annual Conference (San Diego) – 11/10/24 to 11/13/24
- Advanced Investments Management (San Francisco) – 7/22/24 to 7/24/24. This training takes place every other year.
- Certificate of Achievement in Public Plan Policy: Pension Part I (Boston) – 7/30/24 to 7/31/24
- Certificate of Achievement in Public Plan Policy: Pension Part II (Boston) – 8/1/24 – 8/2/24

#### **State Association of Country Retirement Systems-SACRS**

- <https://sacrs.org/Events/SACRS-UC-Berkeley-Program> (Berkeley) – next available in July 2025. Registration has closed for July 2024.

### **NEXT STEPS**

Staff have worked to build a process in Elsie for processing Retirement Board member training authorizations and expense reports. If you are interested in any of these trainings, please send your training request to the Retirement Board president for approval and then contact retirement staff by email to Judy McCree and cc Valerie Weekly.

LS:jm

Attachment: Calendar Years 2022 and 2023 Retirement Board Training Report

## Retirement Board Member Training Pursuant to RB Rule C-23

1/1/2022 - 12/31/2023

Goal is 24 hours in two years - we review in 2 year blocks.

Budgeted amount is \$2,500 per a year/per Member.

Clifford Chan	Training Date	Provider/Topic	Hours	Cost
Hours at Ret. Board Meeting 2022			3	\$ -
Hours at Ret. Board Meetings 2023			4	\$ -
<b>Total</b>			<b>7</b>	<b>\$ -</b>
April Chan	Training Date	Provider/Topic	Hours	Cost
<i>Joined Ret Board March 2023</i>				
	3/4 - 3/07/2023	CalaPRS General Assembly 2023 in Monterrey, CA	16	\$ 1,310.06
	8/28 - 8/31/2023	Principles of Pension Governance for Trustees 2023	16	\$ 3,638.03
Hours at Ret. Board Meetings 2023			4	\$ -
<b>Total</b>			<b>20</b>	<b>\$ 4,948.09</b>
Marguerite Young	Training Date	Provider/Topic	Hours	Cost
	12/31/2022	Ethics Training	2	\$ -
Hours at Ret. Board Meeting 2022			2	\$ -
Hours at Ret. Board Meetings 2023			4	\$ -
<b>Total</b>			<b>6</b>	<b>\$ -</b>
Jae Park	Training Date	Provider/Topic	Hours	Cost
	3/29 - 3/31/2023	Advanced Principles of Pension Governance for Trustees 2023	16	\$ 3,250.00
	7/16 - 7/19/2023	SACRS-UC Berkeley 2023 Conference	16	\$ 2,500.00
Hours at Ret. Board Meeting 2022			3	\$ -
Hours at Ret. Board Meetings 2023			5	\$ -
<b>Total</b>			<b>40</b>	<b>\$ 5,750.00</b>
Tim McGowan	Training Date	Provider/Topic	Hours	Cost
	3/5/2023	Ethics Training ( <i>attended as part of General Assembly</i> )	2	\$ -
	3/4 - 3/7/2023	CALAPRS 2023 General Assembly	14	\$ 944.63
Hours at Ret. Board Meeting 2022			3	\$ -
Hours at Ret. Board Meetings 2023			5	\$ -
<b>Total</b>			<b>24</b>	<b>\$ 944.63</b>
Elizabeth Grasseti	Training Date	Provider/Topic	Hours	Cost
	3/6/2022	Ethics Training ( <i>attended as part of General Assembly</i> )	2	\$ -
	3/5 - 3/8/2022	CALAPRS 2022 General Assembly	16	\$ 324.87
Hours at Ret. Board Meeting 2022			3	\$ -
Hours at Ret. Board Meetings 2023			4	\$ -
<b>Total</b>			<b>23</b>	<b>\$ 324.87</b>

## Ethics Training *Retirement Board*

AB 1234 (effective January 1, 2006) requires all elected officials to undergo two hours of ethics training by December 31<sup>st</sup> of each year. Retirement Board Trustees are required to undergo ethics training within six months of taking office and must renew the training every two years pursuant to California law.

Retirement Board Member	Most Recent Training Date on Record	2020	2021	2022	2023	2024	2025	2026	2027	2028
Clifford Chan	3/13/2024	♣		♣		♣				
Elizabeth Grasseti	3/6/2022		♣	♣		♣				
April Chan (new)	3/04/2024					♣				
Timothy McGowan	3/05/2023		♣		♣					
Jae Park	3/12/2024		♣			♣				
Marguerite Young	12/31/2022	♣		♣		♣				

- ♣ = certificate of completion on file
- ♣ = pending receipt of certificate


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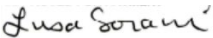
## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources 

FROM: Lisa Sorani, Manager of Employee Services 

SUBJECT: Report on Low Income Adjustments for Retired Members and Surviving Spouses

### **BACKGROUND**

This memorandum provides the results of the 2024 Low Income Adjustment review.

### **DISCUSSION**

Section 35 of the Retirement Ordinance provides for a Low-Income Adjustment for retirees or their surviving beneficiary. To qualify, the retiree must have retired with 20 or more years of service; be in receipt of a Social Security benefit; and the retiree (or spouse) must demonstrate that his or her total income from all sources is below 200% of the Federal Poverty level, and for surviving spouses, 150% of the Federal poverty level.

Staff mailed flyers to 32 potentially eligible members, 19 retirees and 13 surviving spouses. No applications were received in response to the 2024 mailing, so there are no Low-Income Adjustments to be granted this year.

### **NEXT STEPS**

Staff will run the process again next year in accordance with the Retirement Ordinance.

CC:vw

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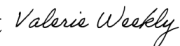
## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: May 23, 2023

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources 

FROM: Valerie Weekly, Principal Management Analyst 

SUBJECT: PensionGold (LRS) Implementation Project Update

### SUMMARY

This memo is the regular status update for the PensionGold (LRS) implementation project.

### DISCUSSION

The project team continues to make progress. We are focused on data cleanup and data conversion issues while the vendor implements the functionality for Software Deliverable 2, Pension Calculation. Testing is expected to begin on June 25th and to continue through late July. Software Deliverable 3 is scheduled to be in early August. The project team met with Payroll and other stakeholders in Finance to discuss the project, its timeline, and their involvement.

### Achievements:

- Identified and prioritized software changes arising out of testing in SWD1. Any change orders resulting from the software requests will be evaluated and proceed or not based on the project team's ROI analysis.
- Worked on changing PeopleSoft's three address line format to a two-line format compatible with PensionGold.
- Configured Classic and PEPRAs calculations within PensionGold.
- Continued data conversion and clean-up activities. This will be ongoing.
- Continued work on key HR interface file to PensionGold.
- Engaged Finance/Payroll for future software deliverables.
- Continued plan administration and ordinance clarification and escalations regarding omissions and ambiguous language within pension provisions.

### Schedule and Resource Risks:

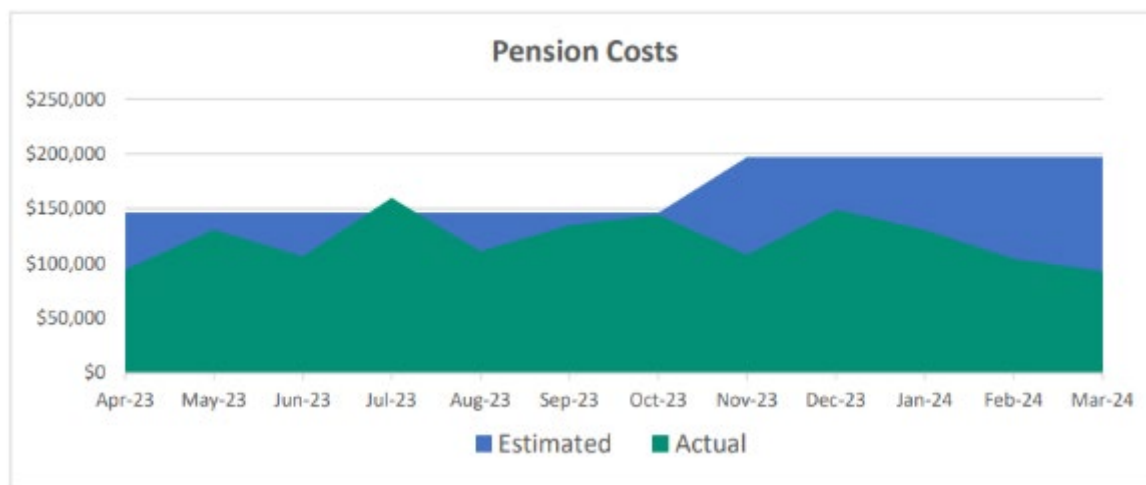
- The need for an additional HRIS Analyst II resource was reported to the Steering Committee in the January status report. The project team is finding itself having to defer tasks such as

HRIS data cleanup, additional testing and future-state business process mapping for higher priority tasks. Filling this role would help to ensure that these tasks get completed without incurring schedule delays.

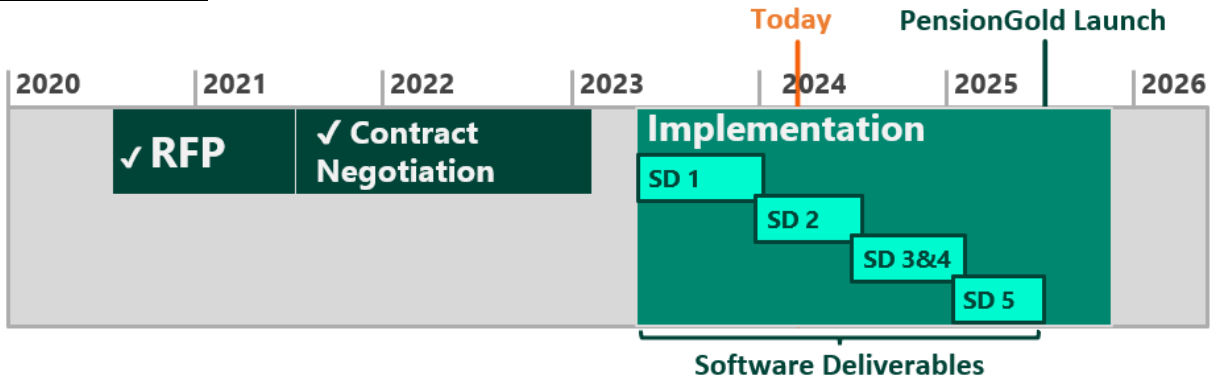
- To fill this role, an appropriate position must be made available. Our HRIS Analyst II position is loaned out until July 2025 and our Finance position is not suitable for this role. This may require Steering Committee action.
- The vendor has scheduled longer than anticipated to perform development for Software Deliverable Two. This will add two weeks to the project. This is likely due to one LRS' key project team members having left the company and needing to be replaced.

**Budget Update**

Total Funding	February Costs	Balance	
HRIS Capital \$11,575,000	\$ 0	\$5,806,000	No capital budget activity
Retirement \$10,500,000	\$ 104,000 + \$ 95,000 FAAZ adjustment	\$7,440,588	Staffing costs. FAAZ costs were not reported for the for Nov - Jan. This has been corrected.



**Schedule Update**



**NEXT STEPS**

- The project team will begin work on a solution to mitigate the architectural differences between PensionGold, PeopleSoft, and the HIB third-party administrator.
- HRIS and Retirement Services to test two-line addresses.
- Monitor the expanding upstream scope of conversion.
- HRIS data cleanup in areas of beneficiaries, leaves, earnings, core HR data.
- Future-state business process design regarding reinstatement, service purchase, and employer reporting.

CC:vw

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## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

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

SUBJECT: Private Placements Update

### SUMMARY

As part of the 2018 Asset Reallocation, the Retirement System moved several actively managed domestic equity accounts to passive management. During that transition, the Northern Trust Transition Management team identified five private placement securities in existing accounts that could not be sold at that time. At its November 15, 2018 meeting, the Retirement Board elected to hold these securities until each had a public liquidity event, such as an Initial Public Offering (IPO). To date, the Retirement System sold its shares in Uber, Airbnb, and WeWork after each had an IPO. The two remaining private shares held by the Retirement System are DiDi and Magic Leap. The shares cannot be sold at this time.

### DISCUSSION

#### DiDi Chuxing Technology Co (DiDi)

DiDi completed an IPO on June 30, 2021. As a foreign company, DiDi listed American Depositary Receipts (ADRs) on the New York Stock Exchange (NYSE). ADRs allow foreign companies to list on US based stock exchanges. Post IPO, staff began to work with Northern Trust to convert the Retirement System's shares to ADRs, though the process has been long and complicated, involving establishing proof of ownership and a reconciliation of the number of shares. Further complicating matters, DiDi de-listed from the NYSE on June 12, 2022. Staff continues to work with Northern Trust to convert the shares to prepare for the possibility of the company re-listing on a public exchange. The Retirement System's investment in DiDi was estimated at \$73,804 at the time of the 2018 reallocation.

#### Magic Leap

The Retirement System owns shares of Magic Leap that are currently not eligible to be sold. Magic Leap Inc. has not announced any plans for an IPO and has recently received a significant cash infusion from the Saudi Sovereign Wealth Fund, the majority owner. Northern Trust is exploring the possibility of registering the shares with the Depository Trust Company (DTC), which could aid in the eventual sale of the shares once an IPO takes place. Northern Trust is keeping staff apprised of the process and the status of the Magic Leap shares. The Retirement System's investment in Magic Leap was estimated at \$174,020 at the time of the 2018 reallocation.

Private Placements Update

May 23, 2024

Page 2

Staff will continue to work with Northern Trust to monitor the status of these companies and look for opportunities to sell the shares in a public and transparent market.

SDS:SGL

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# HIB STUDY: Retiree HIB Survey Results

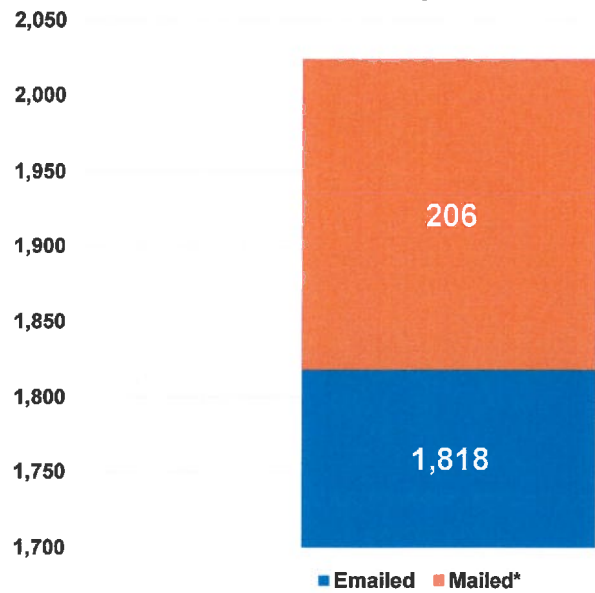
Special Retirement Board Meeting

April 16, 2024 (Updated May 23, 2024)

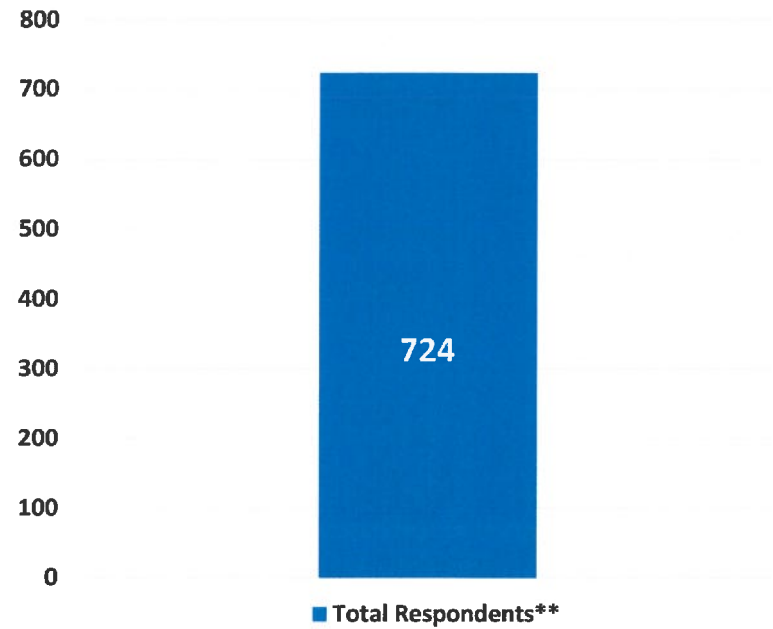
# Survey Responses



### Retiree Survey Distribution



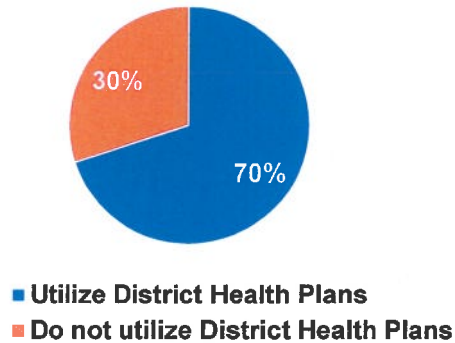
### Total Respondents



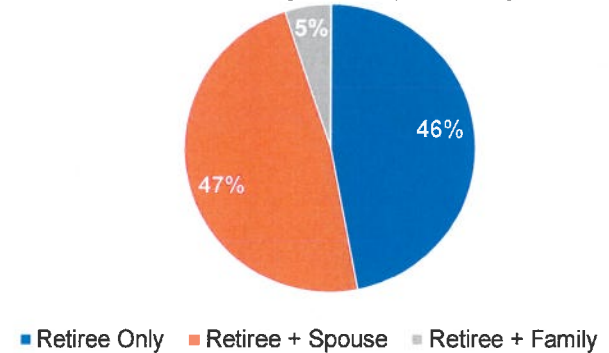
# Health Plan Coverage (EBMUD and External)



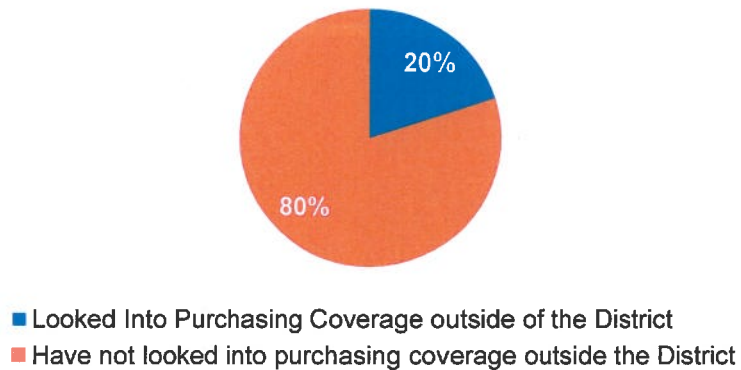
**EBMUD Health Plan Usage (724 responses)**



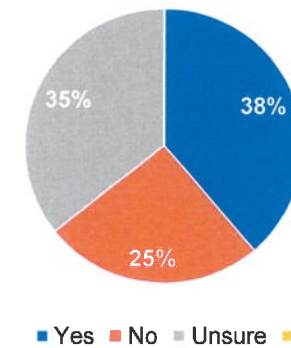
**Members Covered by Plan (496 responses)**



**Coverage Outside the District (496 responses)**



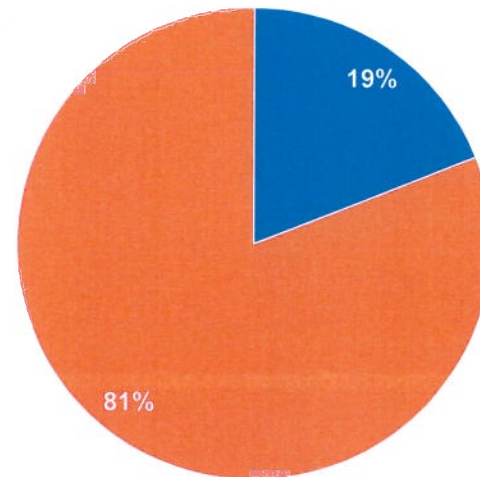
**Would the Retiree be more likely to consider health insurance outside the District if they were able to return to District coverage? (496 responses)**



# Other Health Benefits



**Does the Retiree have insurance benefits from another employer in addition to District benefits? (705 responses)**

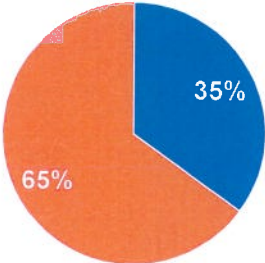


■ Yes ■ No

# Retiree HIB Survey

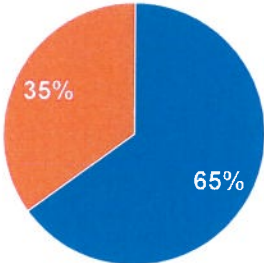


Is the Retiree receiving the single or married HIB? (300 responses)



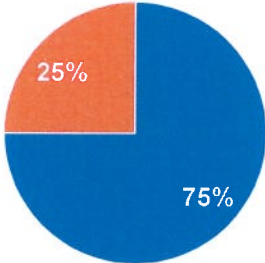
■ Single ■ Married

Is the Retiree receiving the maximum HIB? (300 responses)



■ Maximum Benefit ■ Less than Maximum Benefit

What is the age of the retiree (300 responses)

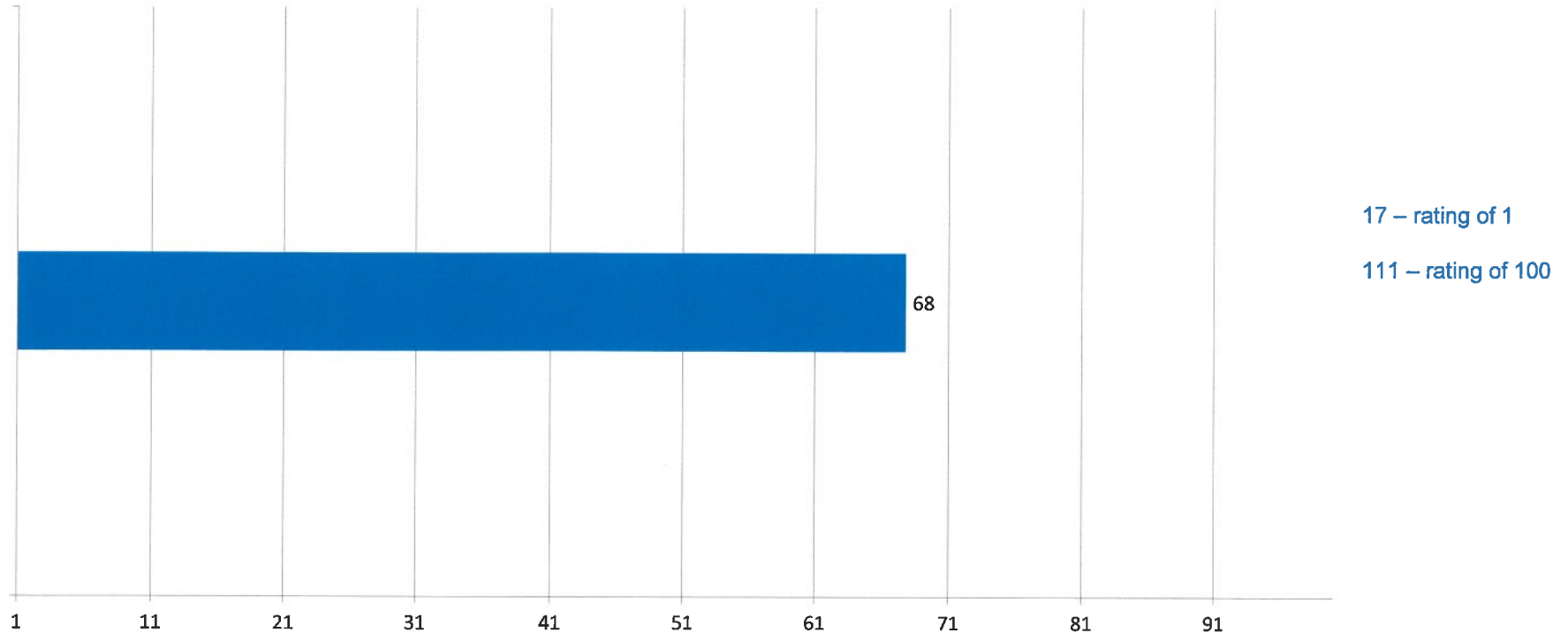


■ Over 65 ■ 55 to 64

# Satisfaction Level



On a scale from 1 to 100, with **100 being highly satisfied**, and **1 being highly dissatisfied**, how satisfied are you with the District's HIB? (662 responses)

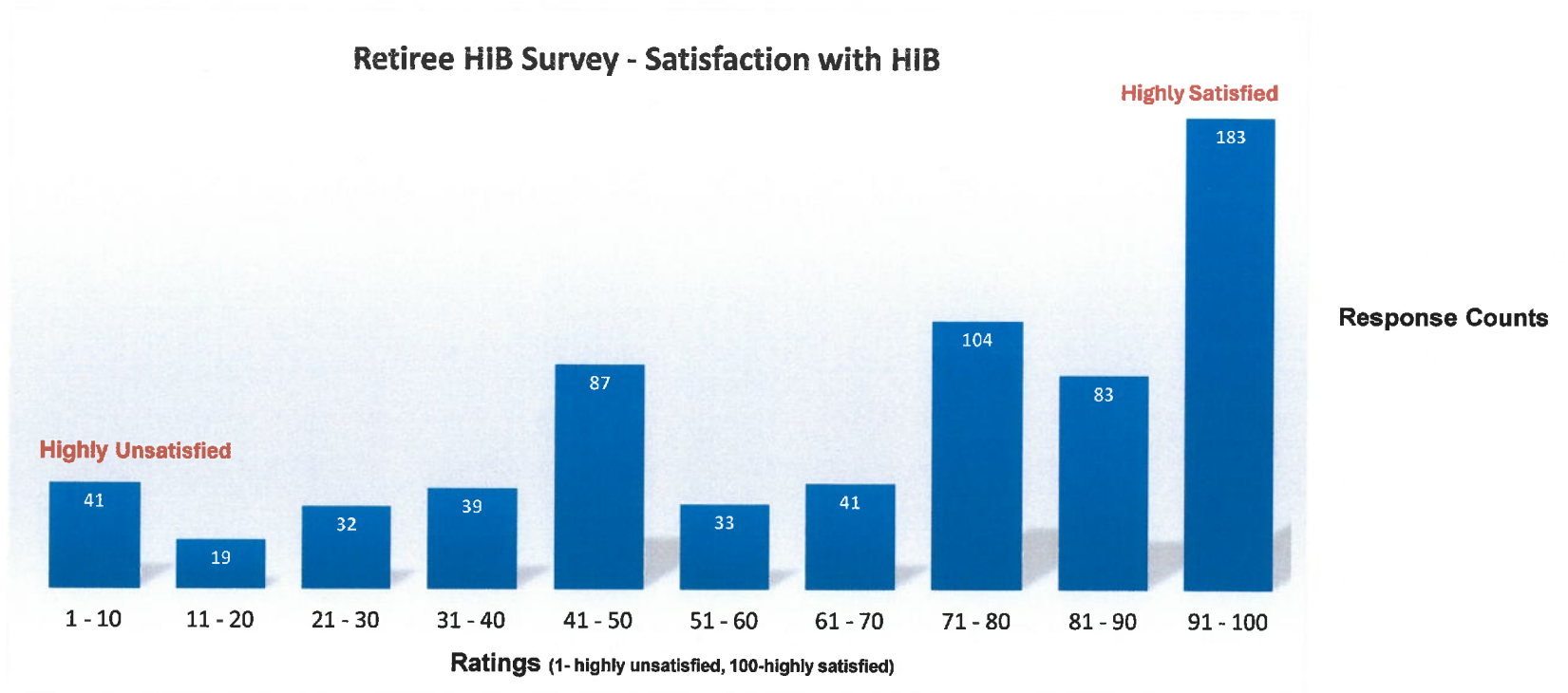


# Satisfaction Level

New View



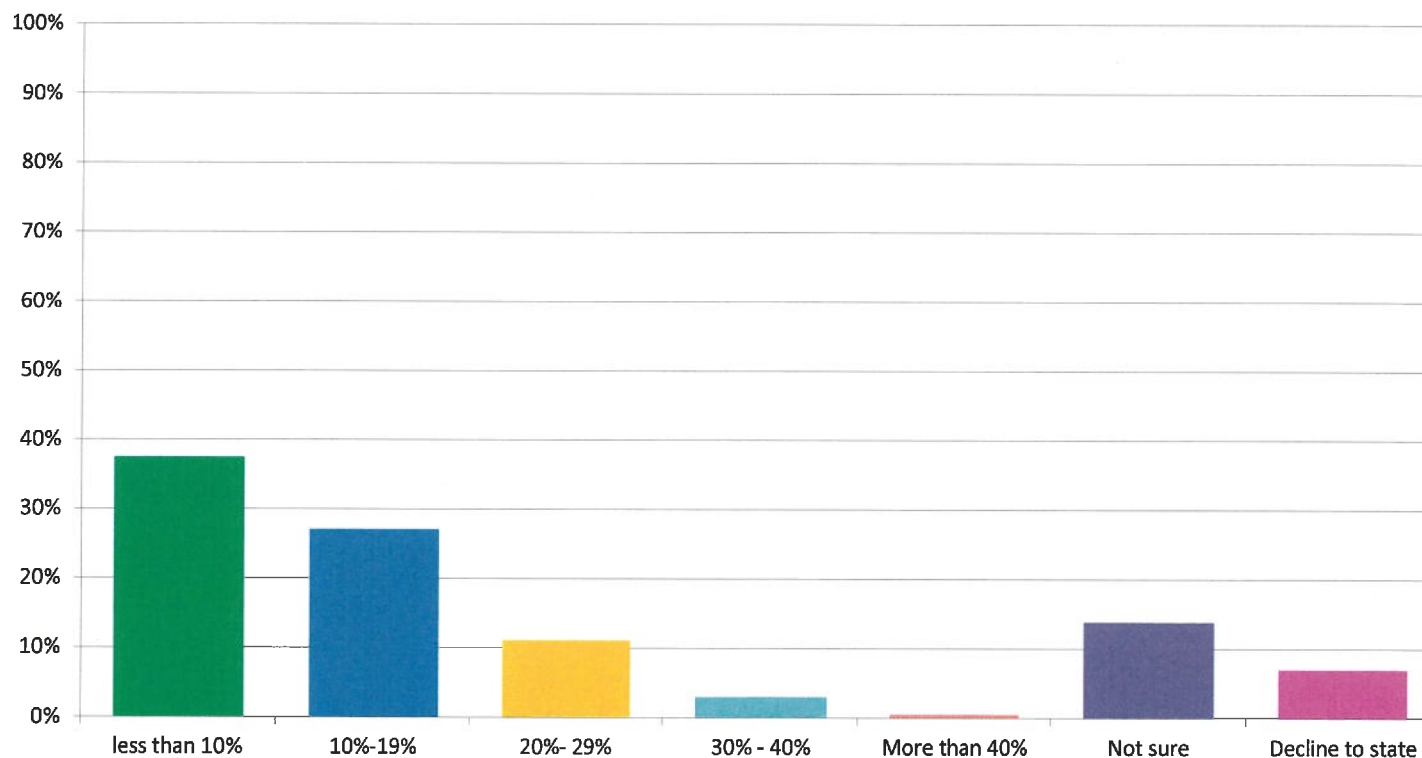
On a scale from 1 to 100, with **100 being highly satisfied**, and **1 being highly dissatisfied**, how satisfied are you with the District's HIB? Average was 68 out of 662 responses to this question.



# Healthcare Expenses as a % of Total Annual Income



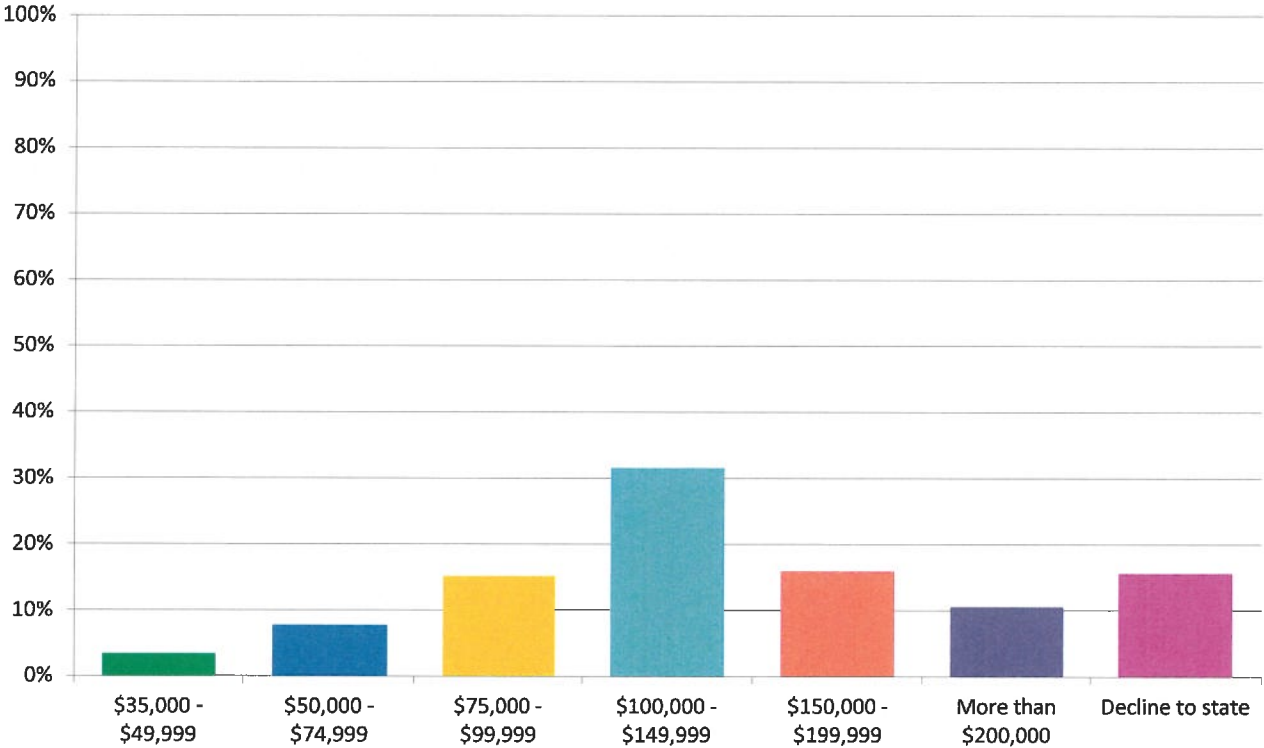
What percent of your total annual income are healthcare expenses for you (and your spouse, if applicable) each year? (672 responses)



# Total Annual Household Income



What is your total annual household income? (672 responses)



# Income vs Healthcare Expenses

New View



This report shows the intersection of reported annual income vs. reported annual healthcare as % of income. Data in each box is the total number of responses for that intersection. The declined to state data was removed.

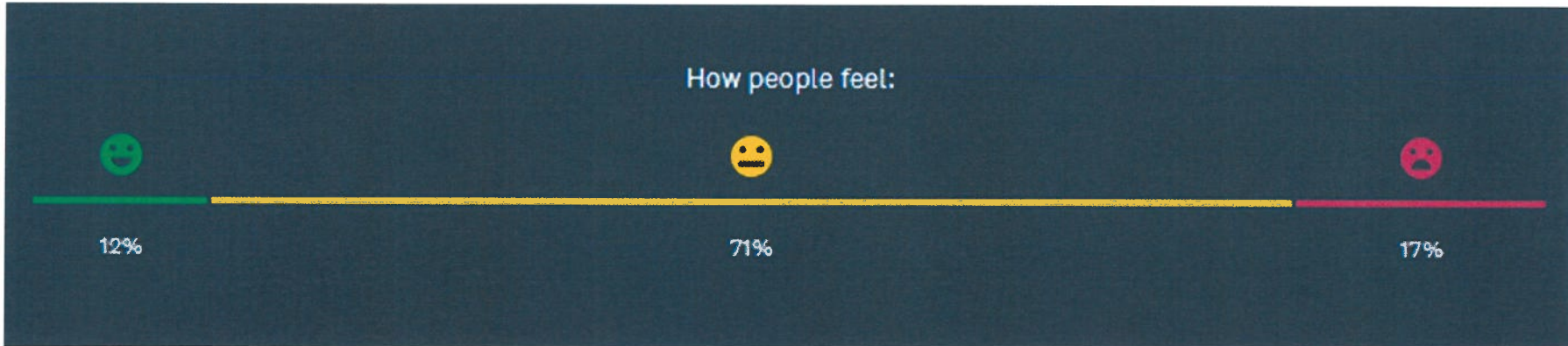
**Annual Healthcare Expenses as a Percent of Total Annual Household Income**

		< 10%	10% -19%	20% - 29%	30% - 40%	> 40%	Not sure	
<b>Total Annual Household Income</b>	\$35k - \$49k	2	3	7	0	0	7	23
	\$50k - \$74k	14	16	7	5	2	8	52
	\$75k - \$99k	40	30	15	2	0	12	102
	\$100k - \$149k	76	78	25	5	1	21	212
	\$150k- \$199k	44	34	11	4	0	13	107
	\$200k +	50	11	3	2	0	5	71
		226	172	69	18	3	67	

# Additional Feedback



Is there any additional information that you would like us to know about your use of the District retiree HIB? (381 responses / 152 just 'no')



45 respondents gave a positive response in their comments, appreciation for the benefit, with description of how they use the benefit. And a Thank you to the volunteer Retirement Board

119 respondents gave a neutral comment. They did not suggest an increase to HIB but discussed other items such as ability to return to District health plans, improved dental benefits, vision plan, or HIB administration.

65 respondents made a request for an increase to the HIB, or made a complaint about the value of the benefit.

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# East Bay Municipal Utility District

## Retiree Benchmarking Survey Results

April 16, 2024, Updated May 23, 2024

Presented by:  
Tom Sher  
Billie Brown

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# Retiree Benchmarking Results

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# HIB Retiree Benchmarking Survey

## Background

Updated

- EBMUD distributed a benchmarking survey to 30 comparative agencies in 2023
- 17 agencies responded to the survey
- This presentation provides an overview of the responses in comparison to the EBMUD HIB program

### # of Survey Respondents

18 Respondents, including EBMUD (Update: two of the respondents were removed as they have the same benefits as other agencies in the survey)

### Respondent Types

6 Counties (including County retirement agencies)  
2 Transportation agencies  
11 Water/Utility Agencies



## List of Agencies who did not respond to the Survey

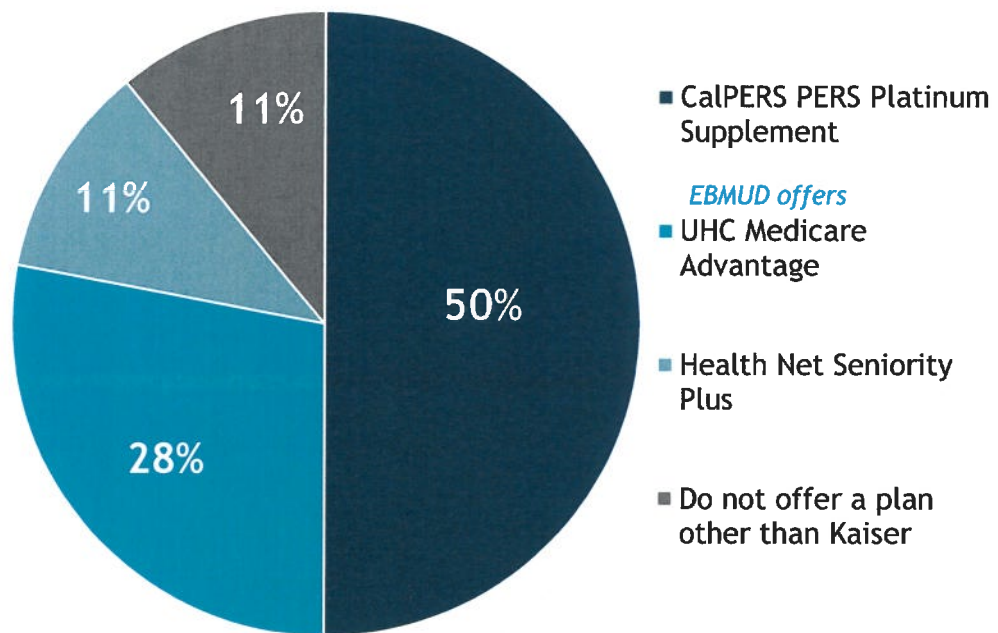
Updated

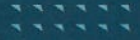
Agency
Central Contra Costa Sanitary District (Central San)
City of Daly City
City of Napa
Contra Costa County Employees Retirement Association
County of Sonoma/Sonoma County Water Agency (SCWA)
Sacramento County
Santa Clara Valley Water District (Valley Water)
Vallejo Flood and Wastewater District (Vallejo San)
City of Oakland
Alameda County
University of California Retirement System
California State Teachers' Retirement System
Eastern Municipal Water District



## HIB Survey Results

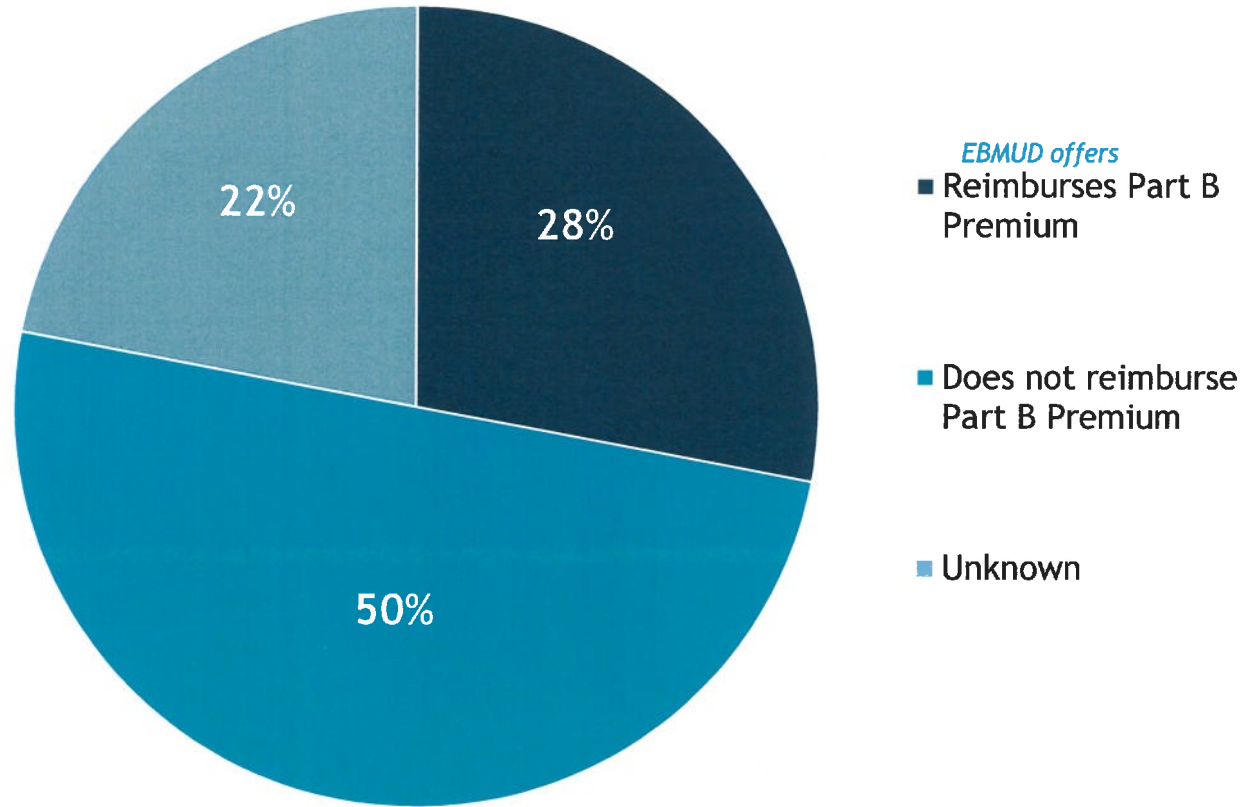
### Name of Non-Kaiser Plan





## HIB Survey Results

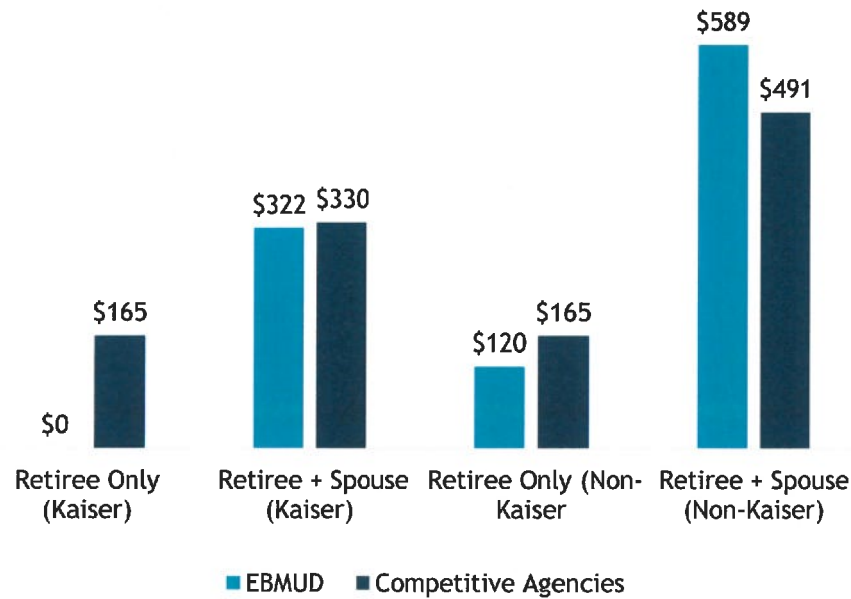
Reimburses Part B Premium (\$164.90 in 2023)





## Median Retiree Out of Pocket Premiums (2023 Rates)

Includes Part B Premiums\*



*\*The premiums have been adjusted to include the cost of Part B premiums*



# HIB Survey Results

## Median Retiree Out of Pocket Premiums

Updated

	EBMUD	Comparative Data (Averages)	
<b>NOT Including Part B Premiums</b>	<b>Average Kaiser Out of Pocket Premium (All Respondents - not including Part B Premiums)</b>		
	Retiree	\$0	\$0
	Retiree + Spouse	\$0	\$0
	<b>Average Non-Kaiser Out of Pocket Premium (All Respondents - not including Part B Premiums)</b>		
	Retiree	\$0	\$0
	Retiree + Spouse	\$259	\$161
<b>Including Part B Premiums</b>	<b>Average Kaiser Out of Pocket Premium for those who reimburse Part B Premiums</b>		
	Retiree	\$0	\$165
	Retiree + Spouse	\$322	\$330
	<b>Average Non-Kaiser Out of Pocket Premium for those who reimburse Part B Premiums</b>		
	Retiree	\$120	\$165
	Retiree + Spouse	\$589	\$491

*Data reflects 2023 premiums and contributions*



# HIB Survey Results

## Retiree Out of Pocket Premiums (without Part B)

Updated

Medicare Plans Only - 2023 Data Entity Name	WITHOUT PART B			
	Kaiser Out of Pocket Premium		Non-Kaiser Out of Pocket Premium	
	Retiree	Retiree + Spouse	Retiree	Retiree + Spouse
<b>EBMUD</b>	\$0	\$0	\$0	\$259
<b>AC Transit</b>	\$0	\$227	\$496	\$1,327
<b>Alameda County Employees' Retirement Association (ACERA)</b>	\$0	\$162	N/A	N/A
<b>Alameda County Water</b>	\$132	\$416	\$269	\$689
<b>BART</b>	\$161	\$161	\$161	\$161
<b>City &amp; County of San Francisco</b>	\$0	\$154	\$0	\$226
<b>Contra Costa Water District (CCWD)</b>	\$0	\$0	\$0	\$0
<b>County of Santa Clara</b>	\$0	\$368	\$0	\$715
<b>Delta Diablo Sanitation District</b>	\$0	\$0	\$0	\$0
<b>DSRSD</b>	\$0	\$0	\$0	\$0
<b>Marin County Employees' Retirement Association (MCERA)</b>	\$0	\$0	\$0	\$67
<b>Marin Water Municipal District (MWMD)</b>	\$0	\$0	\$0	\$0
<b>Metro Water District of Southern California (MWD)</b>	\$0	\$0	\$0	\$0
<b>Sacramento Municipal Utility District (SMUD)</b>	\$123	\$221	\$214	\$386
<b>Union Sanitary District</b>	\$0	\$0	\$0	\$190
<b>West County Wastewater</b>	\$0	\$0	\$0	\$0
<b>AVERAGE</b>	\$26	\$107	\$76	\$268
<b>MEDIAN</b>	\$0	\$0	\$0	\$161



# HIB Survey Results

## Retiree Out of Pocket Premiums (with Part B)

Updated

Medicare Plans Only - 2023 Data	WITH PART B			
Entity Name	Kaiser Out of Pocket Premium		Non-Kaiser Out of Pocket Premium	
	Retiree	Retiree + Spouse	Retiree	Retiree + Spouse
EBMUD	\$0	\$322	\$120	\$589
AC Transit	\$125	\$476	\$621	\$1,577
Alameda County Employees' Retirement Association (ACERA)	\$10	\$491	N/A	N/A
Alameda County Water	\$297	\$745	\$434	\$1,019
BART	\$326	\$491	\$326	\$491
City & County of San Francisco	\$165	\$484	\$165	\$555
Contra Costa Water District (CCWD)	\$165	\$330	\$165	\$330
County of Santa Clara	\$0	\$533	\$0	\$931
Delta Diablo Sanitation District	\$165	\$330	\$165	\$330
DSRSD	\$165	\$330	\$165	\$330
Marin County Employees' Retirement Association (MCERA)	\$0	\$270	\$0	\$397
Marin Water Municipal District (MWMD)	\$165	\$330	\$165	\$330
Metro Water District of Southern California (MWD)	\$165	\$330	\$165	\$330
Sacramento Municipal Utility District (SMUD)	\$288	\$551	\$379	\$716
Union Sanitary District	\$165	\$330	\$165	\$520
West County Wastewater	\$165	\$330	\$165	\$330
<b>AVERAGE</b>	<b>\$148</b>	<b>\$417</b>	<b>\$213</b>	<b>\$585</b>
<b>MEDIAN</b>	<b>\$165</b>	<b>\$330</b>	<b>\$165</b>	<b>\$491</b>

# HIB Survey Results

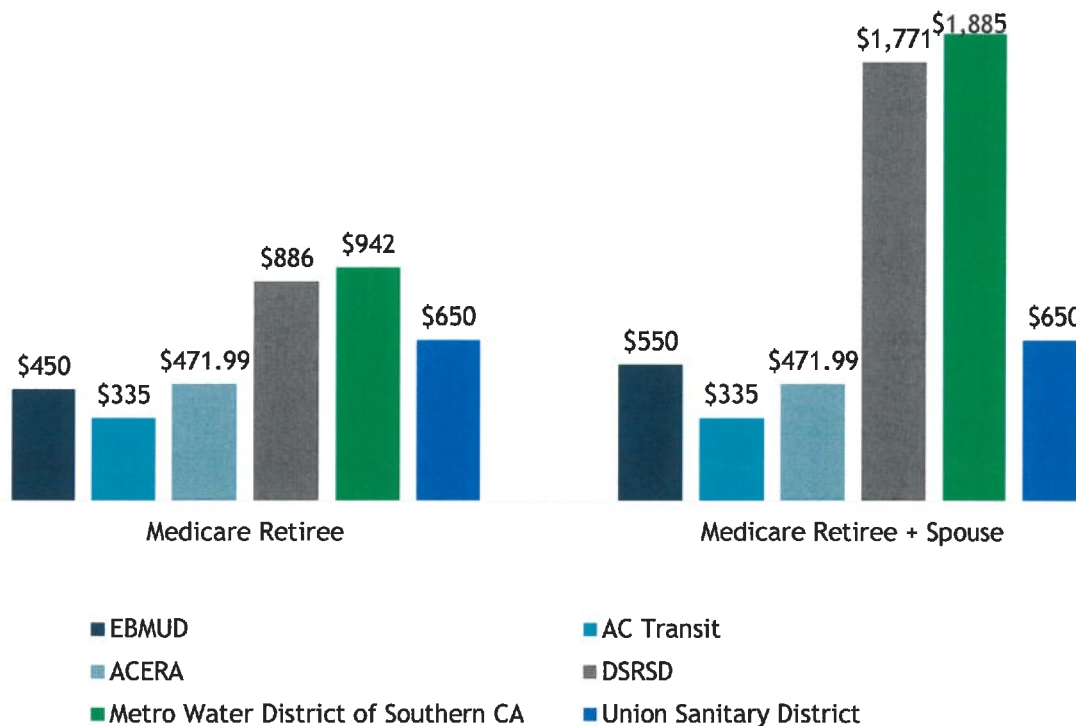
## Medicare Plan Premiums

Updated

Entity Name	Kaiser Premium		Non-Kaiser Premium		Name of Non-Kaiser Medicare Plan
	Medicare Retiree	Medicare Retiree + Spouse	Medicare Retiree	Medicare Retiree + Spouse	
<b>EBMUD</b>	<b>\$271.01</b>	<b>\$542.02</b>	<b>\$404.70</b>	<b>\$809.40</b>	<b>UHC Medicare Advantage</b>
<b>AC Transit</b>	\$280.78	\$561.56	\$831.15	1662.3	Health Net Seniority Plus
<b>Alameda County Employees' Retirement Association (ACERA)</b>	\$316.81	\$633.62	N/A	N/A	None
<b>Alameda County Water</b>	\$283.25	\$566.50	\$420.02	\$840.04	PERS Platinum
<b>BART</b>	\$283.25	\$566.50	\$420.02	\$840.04	PERS Platinum
<b>City &amp; County of San Francisco</b>	\$311.15	\$619.32	\$454.37	\$905.76	UHC PPO Medicare
<b>Contra Costa Water District (CCWD)</b>	\$283.25	\$566.50	\$420.02	\$840.04	PERS Platinum
<b>County of Santa Clara</b>	\$368.30	\$736.60	\$714.62	\$1,429.24	Health Net Seniority Plus
<b>Delta Diablo Sanitation District</b>	\$283.25	\$566.50	\$420.02	\$840.04	PERS Platinum
<b>DSRSD</b>	\$283.25	\$566.50	\$420.02	\$840.04	PERS Platinum
<b>Marin County Employees' Retirement Association (MCERA)</b>	\$338.89	\$677.78	\$402.50	\$805.00	UHC Medicare Advantage
<b>Marin Water Municipal District (MWMD)</b>	\$283.25	\$566.50	\$420.02	\$840.04	PERS Platinum
<b>Metro Water District of Southern California (MWD)</b>	\$283.00	\$567.00	\$420.02	\$840.04	PERS Platinum
<b>Sacramento Municipal Utility District (SMUD)</b>	\$245.25	\$490.51	\$428.88	\$857.76	UHC Medicare Advantage
<b>Union Sanitary District</b>	\$283.25	\$566.50	\$420.02	\$840.04	PERS Platinum
<b>West County Wastewater</b>	\$283.25	\$566.50	\$420.02	\$840.04	PERS Platinum
<b>AVERAGE</b>	<b>\$293</b>	<b>\$585</b>	<b>\$468</b>	<b>\$935</b>	
<b>MEDIAN</b>	<b>\$283</b>	<b>\$567</b>	<b>\$420</b>	<b>\$840</b>	

## Employers with a Flat Dollar Contribution

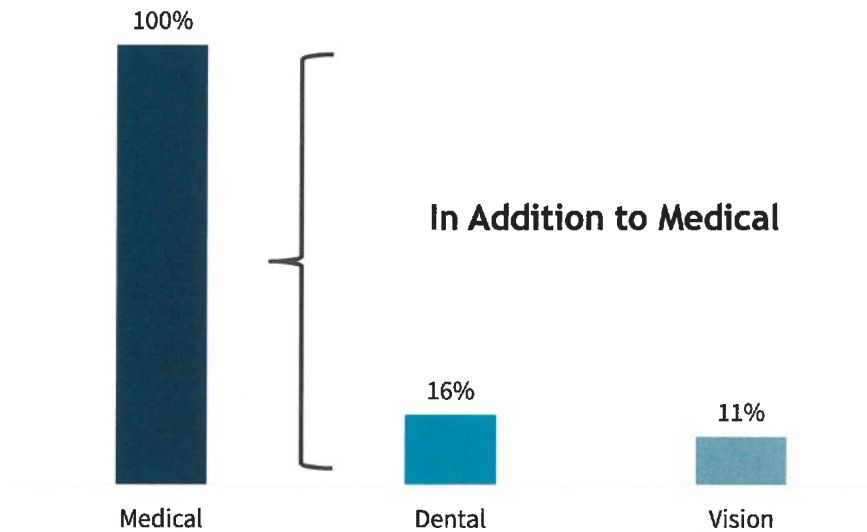
- 6 respondents have a defined contribution (flat dollar contribution)
- 10 respondents have a defined benefit design that effectively is paying the full cost of the healthcare plans (varies by design and generally doesn't cover all plans, but covers the full contribution for at least one plan option)





## HIB Survey Results

### Benefits Covered by Subsidy

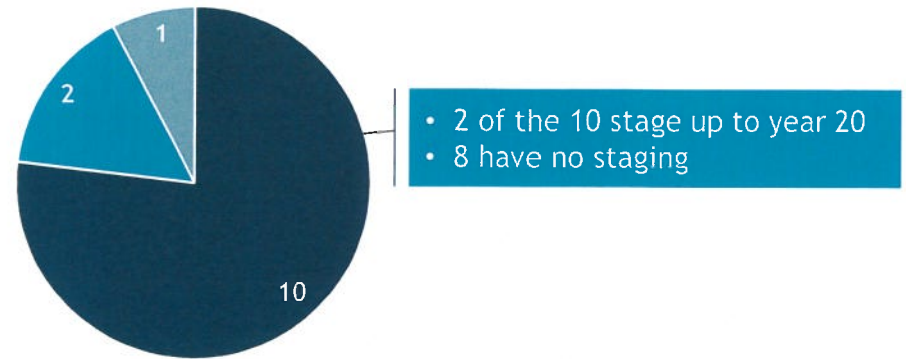


*EBMUD offers Medical, Dental, Vision, and LTC*



# HIB Survey Results: Vesting

## 13 of the competitor agencies start their vesting at year 10



- Vests 50% at 10 years and get to 100% at 20 years
- Vests 100% at 10 years
- Vests 50% at 10 years and then 100% at 15 years

## 4 of the competitor agencies (including EBMUD) start vesting at year 5

- EBMUD vests at 5, 10, 15 and 20 years (25% per 5 years)
- All 3 Marin agencies vest 100% at year 5, but there is variability in what they get at year 5
  - 1 must have 15 years then 100%
  - 1 must have 25 years then 50% (nothing additional)

---

# Assumptions

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## Assumptions

**The following decisions, assumptions, and classifications were used to put together the data in this presentation:**

- One Kaiser plan and one non-Kaiser health plan from each agency was used to run the comparison for retiree out of pocket costs
  - For CalPERS agencies, the PERS Platinum Supplement plan was used for the comparison as it was reported as the plan with the highest enrollment
- Only the rates for Medicare eligible over age 65 plans were included
- The most current tier of each agency's retiree benefit was used as the comparator
- The value of 100% of each agency's benefit was used (comparing the retiree health benefit earned in most cases by 20 or more years of service)
- At a high level, the value of each agency's benefit falls into one of two designs, either a flat dollar value of the benefit like the HIB, or a variable benefit that is tied to the full value of the premium of health plans; this was separated out as needed for comparison purposes



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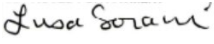
**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources 

FROM: Lisa Sorani, Manager of Employee Services 

SUBJECT: Declare the Interest Rate to Apply on June 30, 2024 to Balance of Member Contributions and Interest for the Period Ending December 31, 2023

ACTION: Vote on Resolution Attached

**RECOMMENDATION**

Approve Resolution Attached

**BACKGROUND**

The Retirement Ordinance, Section 4(d), directs the Retirement Board to semi-annually declare the rate of interest to be credited to accumulated Member contributions.

In accordance with Retirement Board Rule B-9, the annual rate of interest credited to Member contributions on June 30, 2024 will be the lesser of the actuarially assumed rate of return or the five (5) year average rate of return on Retirement System investments for the period ending December 31, 2023. As of December 31, 2023, the actuarially assumed rate of return is 6.75% and the five-year average rate of return was 8.8%.

Therefore, the attached Resolution declares the annual interest rate of 6.75%. The rate credited to Member accounts will be prorated to a semi-annual rate of 3.375%. The interest will be credited effective June 30, 2024 to the balance of employee contributions and interest as of December 31, 2023.

CC:ls:vw

R.B. RESOLUTION NO. 7007

DECLARING THE INTEREST RATE

Introduced by: Marguerite Young ; Seconded by: Jae Park

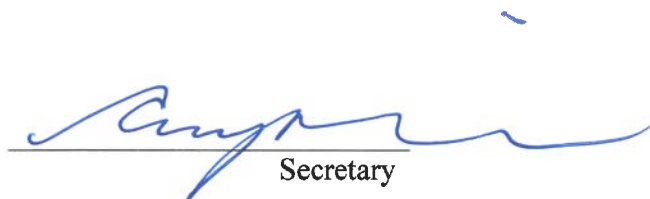
WHEREAS, section 4(d) of Ordinance, as amended, provides that the Retirement Board shall semi-annually declare the rate of interest for the preceding six (6) months to be credited on accumulated contributions of members, which rate shall be based upon criteria to be established by the Retirement Board; and

WHEREAS, the crediting rate will be the lesser of the actuarial assumed rate of six and seventy-five hundredths percent (6.75%) as of December 31, 2023, or the actual five (5) year earnings rate of the fund, determined to be eight and eight-tenths percent (8.8%) for the period ending December 31, 2023;

NOW THEREFORE, BE IT RESOLVED that the Retirement Board does hereby declare a six and seventy-five hundredths percent (6.75%) annual interest rate. The rate credited to member accounts effective June 30, 2024 will be three and three hundred seventy-five thousandths percent (3.375%) for the balance of employee contributions and interest as of December 31, 2023, in accordance with Rules B-8 and B-9 of the Retirement Board.

  
President

ATTEST:

  
Secretary

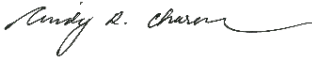
05/23/2024

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

FROM: Cindy Charan, Director, Human Resources 

SUBJECT: Declare Results of the Election of an Employee Member of the Retirement Board

**INTRODUCTION**

The election of an employee member to the District Retirement Board has been completed for the seat currently held by Tim McGowan.

**DISCUSSION**

On February 13, 2024, the election process was announced to all employees by e-mail, Splashpad, and by bulletin which were posted at worksites. At each stage of the election, multiple emails were sent to all EBMUD email addresses, bulletins were posted throughout EBMUD locations, an announcement was posted in Splashes, and SplashPad was updated to reflect the status of the election and deadlines for each phase.

As of March 4, 2024, the date the Candidacy period closed, three (3) Retirement System participants had submitted an application indicating interest in running. As of the deadline for nominations, Winnie Anderson, Max Fefer and Ivette Rivera had all received the required 50 nominations required to be included on the ballot.

A total of 524 votes were cast in the 2024 election of an employee member to the Retirement Board. Staff determined that 524 of the votes case were valid.

The results of the voting were as follows:

Winnie Anderson	135 votes
Max Fefer	312 votes
Ivette Rivera	77 votes

Cindy Charan, Secretary to the Retirement Board, has reviewed documents and procedures for this election and has certified the results.

For an employee to be elected as the employee member of the Retirement Board, they must earn the most votes and be eligible to serve on the Retirement Board. This year, the employee

Retirement Board Member Election  
Retirement Board Meeting  
May 23, 2024

member who received the most votes, Max Fefer, satisfies the criteria to be elected to the employee Retirement Board member seat.

Therefore, I hereby certify that Max Fefer has been elected to the Retirement Board for a two-year term beginning June 24, 2024.

CC:vw

EAST BAY MUNICIPAL UTILITY DISTRICT

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R.B. RESOLUTION NO. 7008

DECLARING THE RESULTS OF AN ELECTION OF AN EMPLOYEE MEMBER OF THE  
RETIREMENT BOARD

Introduced by: Marguerite Young ; Seconded by: Clifford ChN

WHEREAS, Section 4(a) of the Retirement Ordinance provides for election by and from membership of the Retirement System to fill a vacancy on the Retirement Board created by the expiration of the term of an elected Retirement Board member, and the Secretary of the Retirement Board has certified that **Max Fefer** has been elected by the membership of the Retirement System as a member of the Retirement Board pursuant to an election conducted for said purpose;

NOW, THEREFORE, BE IT RESOLVED that **Max Fefer** is hereby declared a member of the Retirement Board and that said member shall serve a period of two years commencing June 24, 2024.

  
President

ATTEST:

  
Secretary

05/23/2024

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

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

SUBJECT: Asset Allocation Study: Updated Results

### SUMMARY

The Retirement System's investment consultant, Meketa, will provide updated results for the System's Asset Allocation modeling effort covering several sample portfolios. The sample portfolios are optimized to improve system funding while considering expressed preferences and risk tolerance.

### DISCUSSION

The Retirement System is working with Meketa to develop an updated Asset Allocation Study. Under the Retirement System's Statement of Investment Policy and Procedures, the Asset Allocation Study considers investments in a set of asset classes deemed prudent and appropriate by the Retirement Board with the goal of determining a new Asset Allocation. This item is a follow-up to the Asset Allocation Study presentation given on March 21, 2024 and provides the Retirement Board with updated asset allocations for consideration. The Retirement Board will have the opportunity to finalize the Asset Allocation at the May 23, 2024 meeting.

SDS:SGL

Attachment: Presentation – Asset-Liability Study: Updated Results

## East Bay Municipal Utility District Employees' Retirement System

May 2024

Asset-Liability Study:  
Updated Results



# East Bay Municipal Utility District Employees' Retirement System

## Agenda

Month	Preliminary Asset-Liability Study Timeline
November 2023	<ul style="list-style-type: none"><li>• Introduction to Asset-Liability Studies</li><li>• Key Risks to the Plan</li><li>• Actuarial Background and Strategic Considerations</li></ul>
March 2024	<ul style="list-style-type: none"><li>• Capital Market Assumptions</li><li>• Baseline Model Output and Risk Philosophy Selection</li><li>• Optimization Process</li><li>• Sample Portfolio Comparisons</li></ul>
May 2024	<ul style="list-style-type: none"><li>• Updated Model Results</li><li>• Live Demonstration</li><li>• Potential Portfolio Selection</li></ul>



# East Bay Municipal Utility District Employees' Retirement System

## March Meeting Review

Key Requests/Considerations from March	
Topic	Updated Approach
<i>Consider limit on aggregate fixed income assets</i>	<ul style="list-style-type: none"><li>• No limit imposed, but asset class percentages are shown to provide further clarity.</li><li>• It is important to note that “expected return” includes both appreciation and yield, both of which grow a portfolio in identical manners.</li></ul>
<i>Desire to see portfolio allocations prior to major risk/return and asset-liability metrics</i>	<ul style="list-style-type: none"><li>• We will show the potential policy allocations for consideration earlier in the presentation to improve transparency.</li></ul>
<i>Initial feedback indicated the Board was attracted to portfolios with similar/lower risk levels as the current policy</i>	<ul style="list-style-type: none"><li>• Potential portfolio options have been narrowed to a smaller subset that align with this feedback.</li><li>• This corresponds to previously presented “B” and “C” samples presented in March.</li></ul>

## **Modeling Approach Review**



# East Bay Municipal Utility District Employees' Retirement System

## Capital Market Assumptions

### Setting Capital Market Assumptions

- CMAs are the inputs needed to calculate a portfolio's expected return, volatility, and relationships (i.e., correlations) to the broader markets.
  - CMAs are also used in mean-variance optimization, simulation-based optimization, asset-liability modeling, and every other technique for finding "optimal" portfolios.
- Consultants (including Meketa) generally set them once per year.
  - Our results are published in January based on December 31 data.
- This involves setting long-term expectations for a variety of asset class/strategy attributes:
  - Returns
  - Standard Deviations
  - Correlations
- Our process relies on both quantitative and qualitative methodologies.



# East Bay Municipal Utility District Employees' Retirement System

## Capital Market Assumptions

### Developing Expected Returns

- Market practitioners generally make use of three methods for developing long-term expected returns:
  - Historical average returns
  - Financial/economic theory (e.g., higher risk = higher returns, capital structures, etc.)
  - Current measures (e.g., starting valuations relative to history)
- In addition to the above, practitioners also incorporate general projections for macroeconomic metrics such as GDP and inflation, among others.
- Meketa's methods are in-line with industry standards and represent a mixture of the three mechanisms.
  - Historical average returns play the smallest role in our assumptions.



# East Bay Municipal Utility District Employees' Retirement System

## Capital Market Assumptions

→ Compared to our 2023 CMAs, the majority of the below asset classes exhibit lower expected returns as of January 2024.

→ Expected volatilities are generally the same or slightly lower than in 2023.

2024 CMAs – EBMUDERS Asset Classes						
Strategic Class	10-year Return*	20-year Return*	Standard Deviation	2023 CMAs 10-year Return	2023 CMAs 20-year Return	
<b>US Equity</b>	<b>6.9%</b>	<b>8.5%</b>	<b>17%</b>	<b>7.8%</b>	<b>8.7%</b>	
<b>Non-US Equity</b>	<b>7.7%</b>	<b>8.9%</b>	<b>18%</b>	<b>10.3%</b>	<b>10.0%</b>	
<b>Buy Write (Covered Calls)</b>	<b>5.8%</b>	<b>7.0%</b>	<b>13%</b>	<b>6.7%</b>	<b>7.2%</b>	
<b>REITs</b>	<b>5.6%</b>	<b>7.8%</b>	<b>24%</b>	<b>6.4%</b>	<b>8.0%</b>	
<b>Core Private Real Estate</b>	<b>4.8%</b>	<b>6.9%</b>	<b>12%</b>	<b>4.3%</b>	<b>6.5%</b>	
<b>Investment Grade Bonds</b>	<b>4.6%</b>	<b>4.8%</b>	<b>4%</b>	<b>4.8%</b>	<b>4.7%</b>	
<b>High Yield Bonds</b>	<b>6.5%</b>	<b>6.8%</b>	<b>11%</b>	<b>8.0%</b>	<b>7.3%</b>	
<b>Bank Loans</b>	<b>6.5%</b>	<b>6.6%</b>	<b>10%</b>	<b>7.6%</b>	<b>7.0%</b>	
<b>Private Debt</b>	<b>9.2%</b>	<b>9.2%</b>	<b>15%</b>	<b>9.4%</b>	<b>9.0%</b>	

\* Geometric returns (annual compound returns)



# East Bay Municipal Utility District Employees' Retirement System

## Constraints

→ The constraints below were developed to provide a spectrum of expectation and risk measure profiles.

Strategic Class	Min.	Max.	Current Target	10-year Return*	20-year Return*	Standard Deviation
US Equity	20%	40%	25%	6.9%	8.5%	17%
Non-US Equity	20%	40%	25%	7.7%	8.9%	18%
Buy Write (Covered Calls)	0%	20%	20%	5.8%	7.0%	13%
REITs	0%	7.5%	2.5%	5.6%	7.8%	24%
Core Private Real Estate	0%	7.5%	2.5%	4.8%	6.9%	12%
Investment Grade Bonds	10%	30%	20%	4.6%	4.8%	4%
High Yield Bonds	0%	7.5%	2.5%	6.5%	6.8%	11%
Bank Loans	0%	7.5%	2.5%	6.5%	6.6%	10%
Private Debt	0%	5%	0%	9.2%	9.2%	15%

\* Geometric returns (annual compound returns)



# East Bay Municipal Utility District Employees' Retirement System

## Simulation Process

### Modeling/Simulation Process

- An asset-liability study is a dimension reducing exercise.
  - Take the immense complexities of a retirement system and the global capital markets and reduce them to a digestible form.
- Analysis is based on integrated, Monte Carlo asset-liability simulations.
  - Asset returns are simulated based on the utilized CMAs and asset class constraints.
  - Liability behavior is based on Segal-provided projections/data.<sup>1</sup>
- All portfolios<sup>2</sup> are examined across thousands of potential long-term scenarios (e.g., 20-years).
  - Scenarios encompass a multitude of economic/asset return scenarios and how the liability/funding attributes react based on the portfolio returns over time.
  - After each year in the simulation, full asset-liability metrics are updated (e.g., funding level, contribution levels, payroll, etc.). The model then proceeds to the next year.

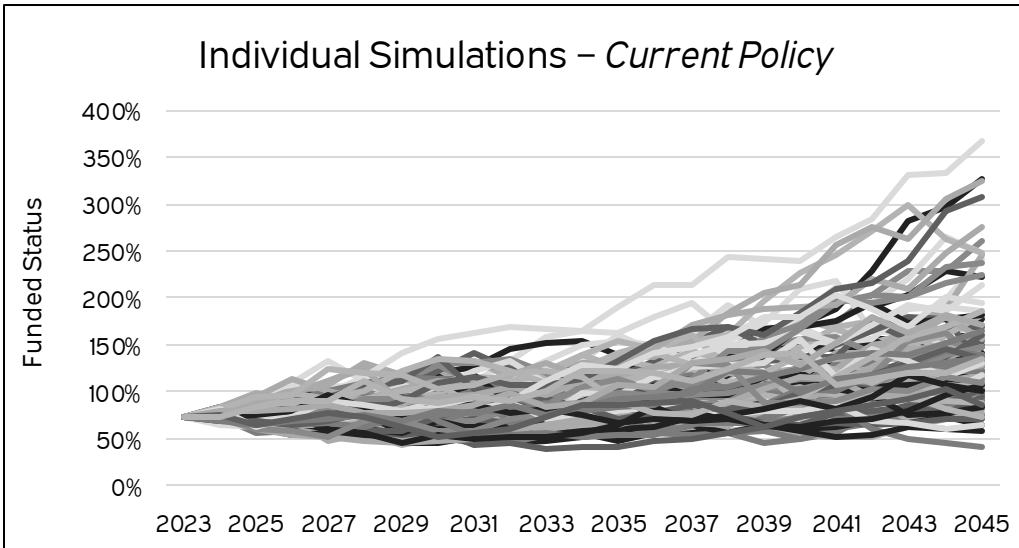
<sup>1</sup> Note that Meketa's modeling is not expected to produce the same results as any forecasting Segal has completed with the primary reason being our asset forecasts/simulations are stochastically modeled and use Meketa's capital market assumptions. Other less material modeling differences exist and can be discussed.

<sup>2</sup>Based on the asset class constraints, there are trillions of potential portfolio options that are explored during the process.

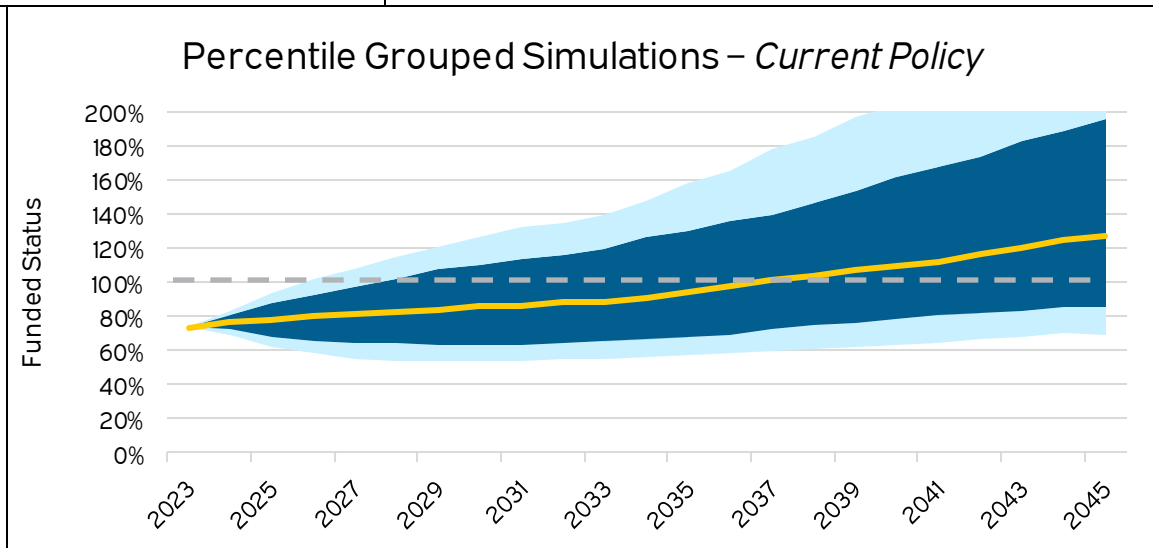
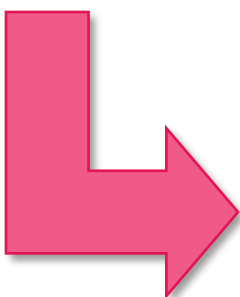


# East Bay Municipal Utility District Employees' Retirement System

## Simulation Process



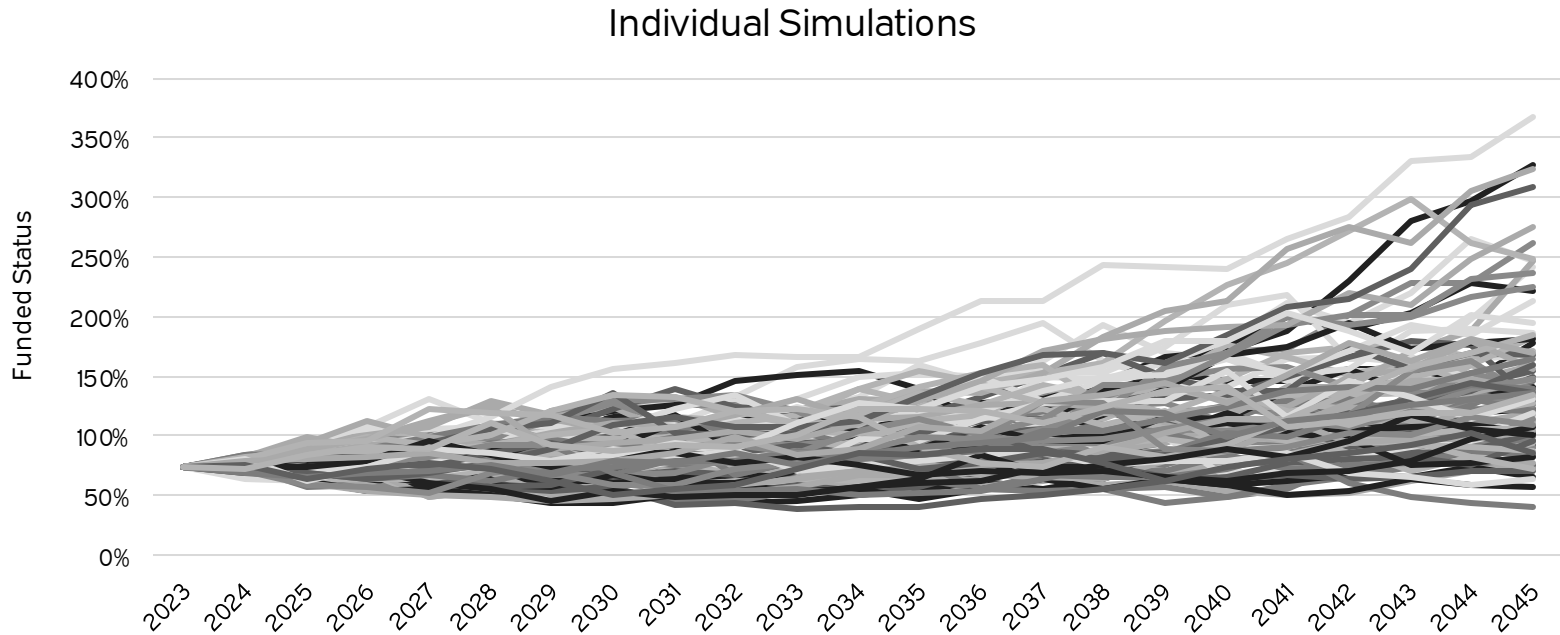
- ### Model Output Explanation
- For each examined portfolio, there are thousands of simulations and corresponding asset-liability metrics (e.g., funding ratio).
  - These are then grouped into percentiles for improved interpretability and comparability among portfolio options.





# East Bay Municipal Utility District Employees' Retirement System

## Stochastic Forecast of the Current Policy Allocation

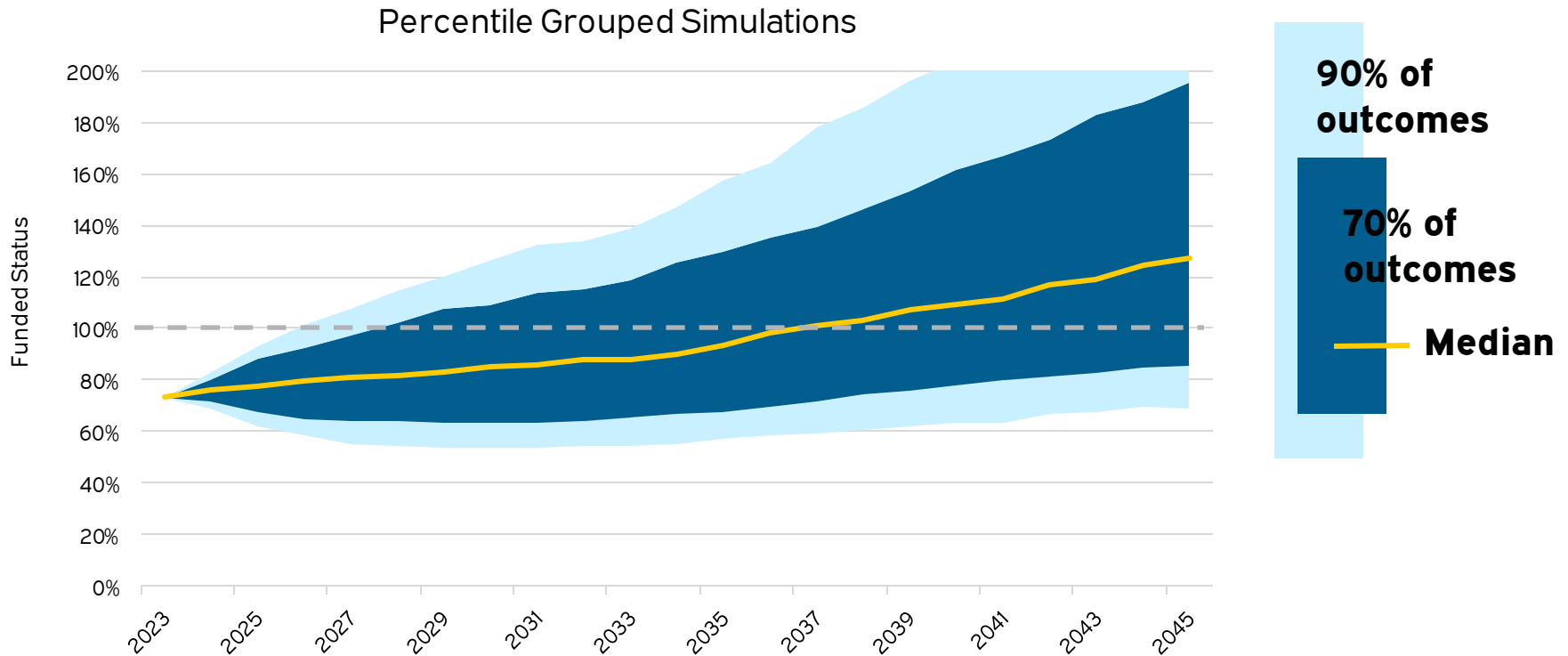


- Funded Status (assets divided by liabilities) are simulated in a variety of market environments
- Analysis reflects the current:
  - Asset allocation
  - Actuarial funded status
  - Projected benefit payments
  - Funding policy
  - Plan provisions
  - Actuarial assumptions
  - Meketa 2024 Capital Market Assumptions



# East Bay Municipal Utility District Employees' Retirement System

## Stochastic Forecast of the Current Policy Allocation (cont.)



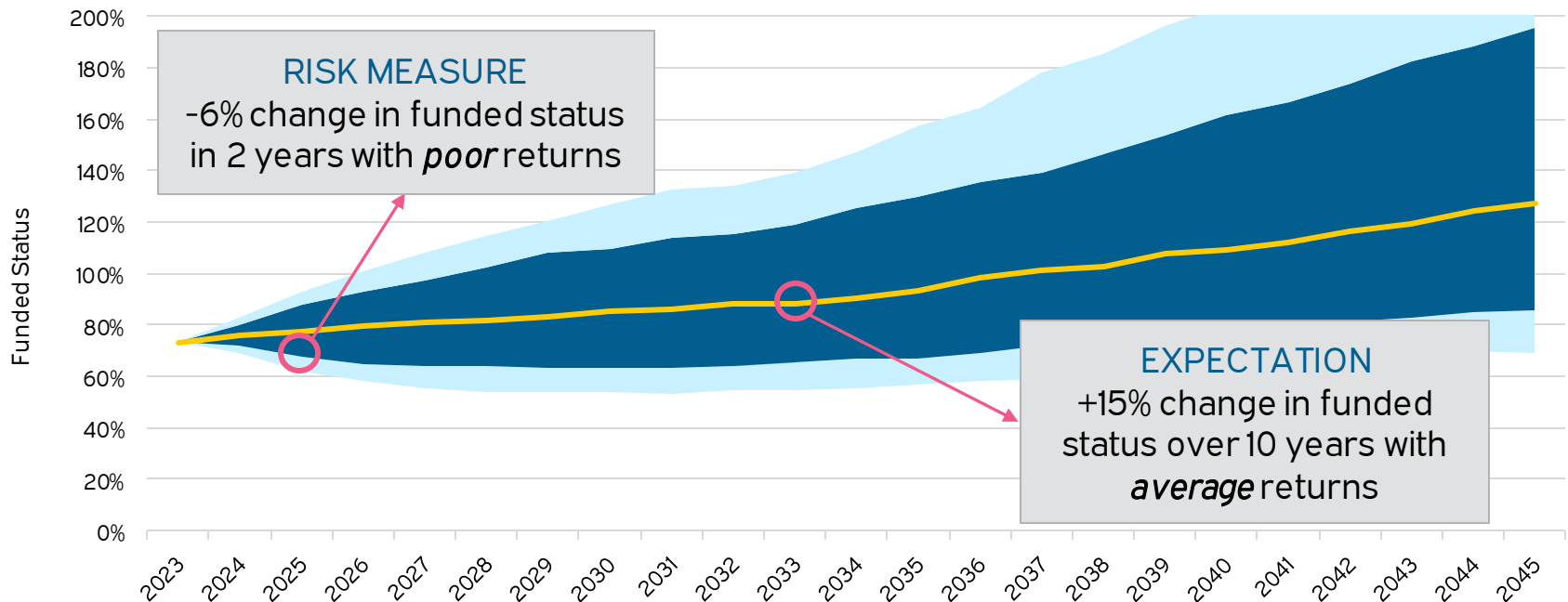
- Simulations are summarized in percentiles, providing an analysis of enterprise risk, given the current asset allocation.
- As an example, the median (50<sup>th</sup> Percentile) Funded Status in 2037 is 100% -> there is a 50% probability the Funded Status will be greater than 100% and 50% probability it will be less than 100%.



# East Bay Municipal Utility District Employees' Retirement System

## Key Observations

- Key observations are determined during objective setting discussion and analyzed in a “Expectation/Risk Measure” framework.
  - **Expectation** – Outcome where all the underlying assumptions prove to be accurate over the long-term (Example: 50<sup>th</sup> percentile over a 10-year time horizon).
  - **Risk Measure** – Outcome with a lower probability (Ex: 15<sup>th</sup> percentile) and detrimental impact, especially when that outcome occurs in the short-term (Ex: 2-year time horizon).



## **Updated Model Results**



# East Bay Municipal Utility District Employees' Retirement System

## Current and Proposed Portfolios

	Current Policy	Sample 1	Sample 2	Sample 3
US Equity	25.0%	30.0%	35.0%	25.0%
Non-US Equity	25.0%	30.0%	25.0%	25.0%
Buy Write (Covered Calls)	20.0%	0.0%	0.0%	0.0%
REITs	2.5%	2.5%	0.0%	2.5%
Core Private Real Estate	2.5%	0.0%	2.5%	0.0%
Investment Grade Bonds	20.0%	20.0%	20.0%	30.0%
High Yield Bonds	2.5%	7.5%	7.5%	7.5%
Bank Loans	2.5%	5.0%	5.0%	5.0%
Private Debt	0.0%	5.0%	5.0%	5.0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Expected Return (20 Years)	8.0%	8.2%	8.2%	7.8%
Standard Deviation	13.1%	13.3%	12.9%	11.6%
Sharpe Ratio	0.42	0.43	0.44	0.46
Probability of 6.75% Over 20 Years	68%	72%	72%	68%
		↑ More Volatility		↑ Less Volatility

### Key Takeaways:

*Sample 1:* Reallocation of less efficient asset classes into classes that will boost overall return.

*Sample 2:* Same as Sample 1, but with a US Equity bias and retention of current Core Real Estate Allocation.

*Sample 3:* Reallocation of Covered Calls into yield-oriented investments (Public and Private debt)

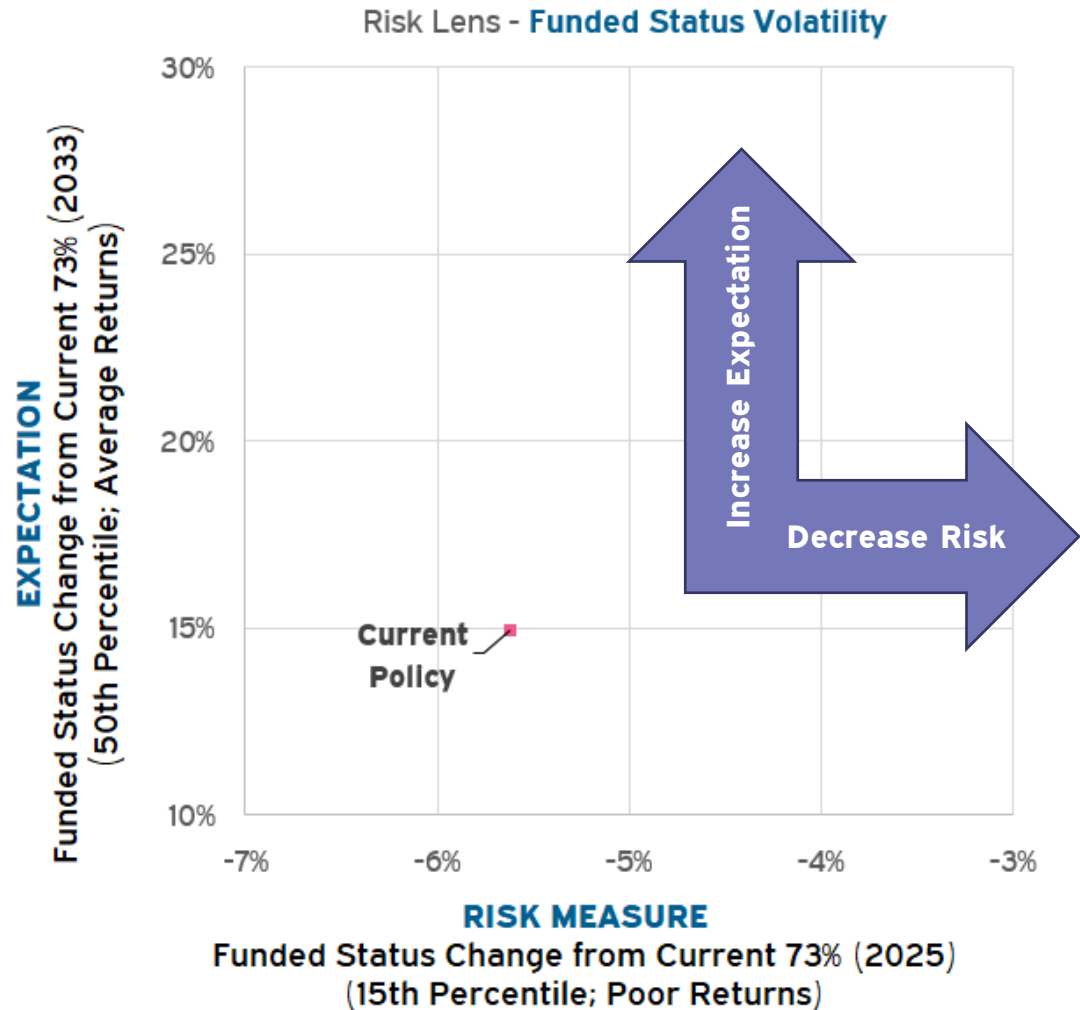


# East Bay Municipal Utility District Employees' Retirement System

## Plot the Baseline (i.e., Current Policy)

### Notes

- The goal of Optimization is to align the projected health of the pension plan to match the objectives and risk tolerance of the Board.
- Market value funded status as of 6/30/2023 = 73%



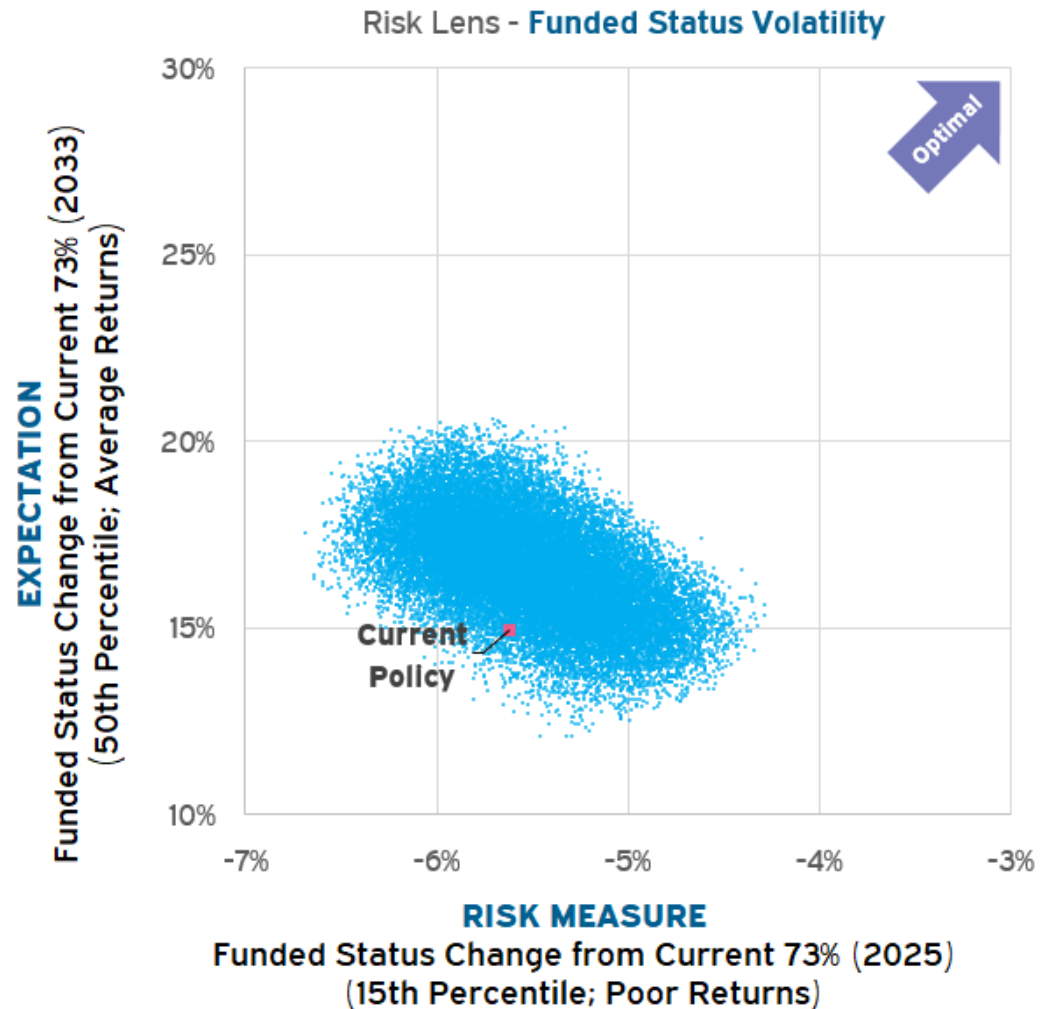


# East Bay Municipal Utility District Employees' Retirement System

## Compare Current Policy to Alternative Asset Allocations

### Notes

- The constraints are used to create thousands of combinations of asset allocations.
- The Current Policy is compared to these alternative asset allocations to determine if an alternative provides more optimal outcomes.
- Each blue dot represents a unique asset allocation within the asset class constraints shown on the prior slide.
- Market value funded status as of 6/30/2023 = 73%





# East Bay Municipal Utility District Employees' Retirement System

## Asset-Liability Output – Review from March

### Review from March

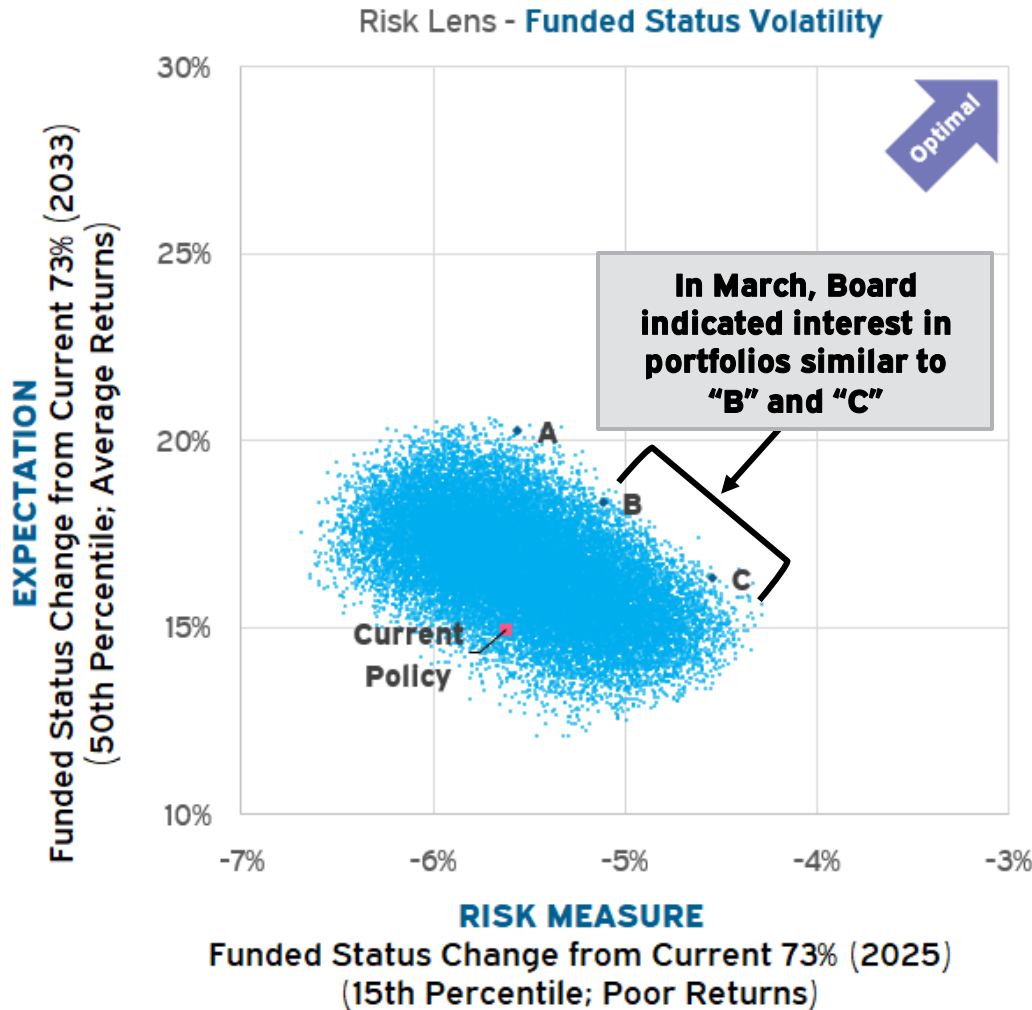
- The following two slides were presented in March and remain unchanged.
- They are presented in this presentation to help review the process and highlight where the proposed portfolio options (#1, #2, and #3) compared to the previously presented sample portfolio options (A, B, and C).
- Following this review, portfolios #1, #2, and #3 will be presented on similar graphics to illustrate how they compare to the Current Policy and previously highlighted samples.
  - Of note, portfolios A, B, and C were presented not as recommendations, but rather, to gauge the relative attractiveness of portfolios that exhibit different attributes (e.g., risk).



# East Bay Municipal Utility District Employees' Retirement System

## Preliminary Samples

**PRESENTED IN MARCH**



### Notes

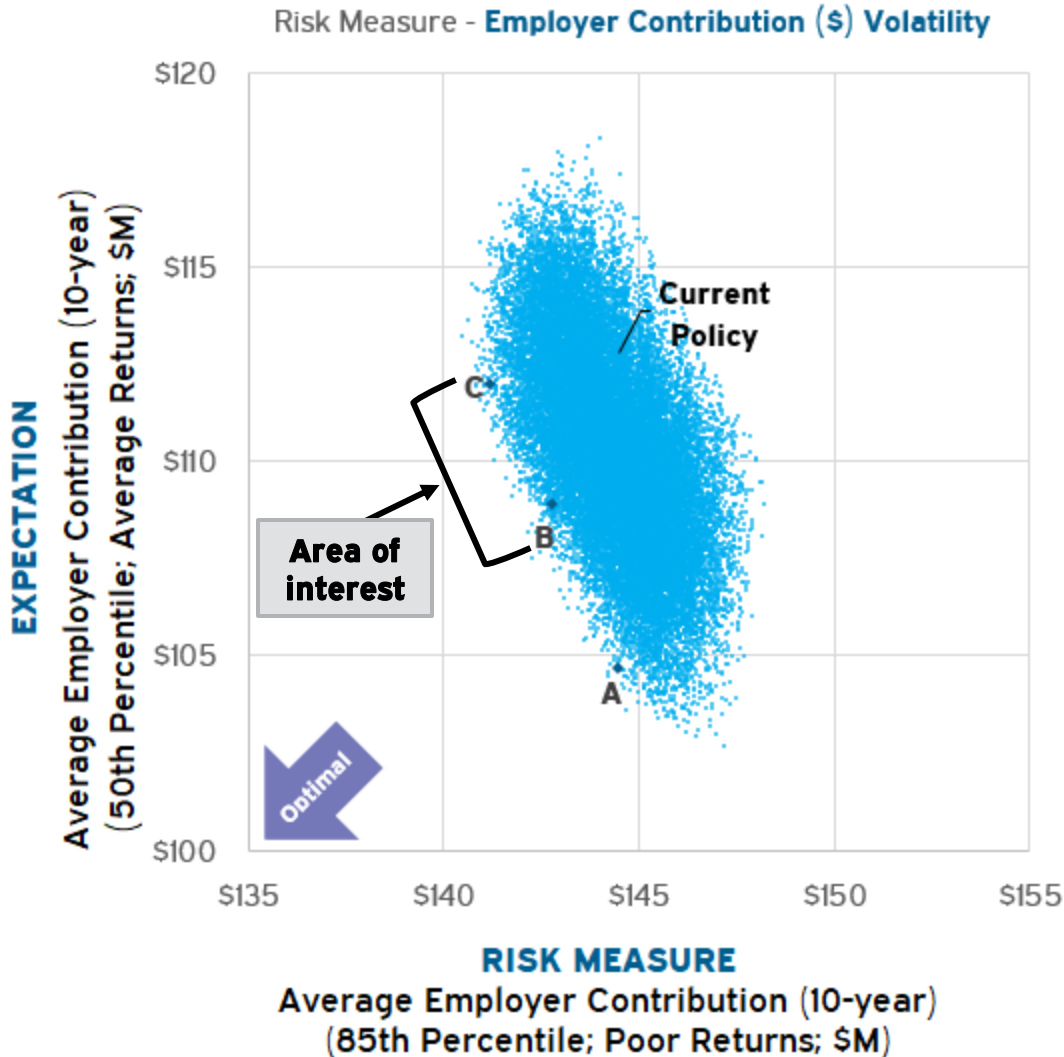
- Alternative asset allocations (Samples A to C) are identified as having "efficient" funded status outcomes.
- Samples are selected spanning the spectrum of expectation/risk measure.
- Sample A is an example of a higher expectation alternative relative to Policy.
- Sample C is the opposite - lower funded status volatility.
- No outcome is "better" than another given each have beneficial quantitative outcomes.



# East Bay Municipal Utility District Employees' Retirement System

## Preliminary Samples

PRESENTED IN MARCH



### Notes

- Plan risk is viewed through another lens – Employer Contributions.
- Current Policy is expected to have average recommended contributions of \$113M for 10 years with *average* returns.
- With *poor* returns, the average recommended contribution is expected to be \$144M for 10 years.
- Similar to the funded status optimization, samples A-C attempt to reduce expected and/or risk measure contributions.

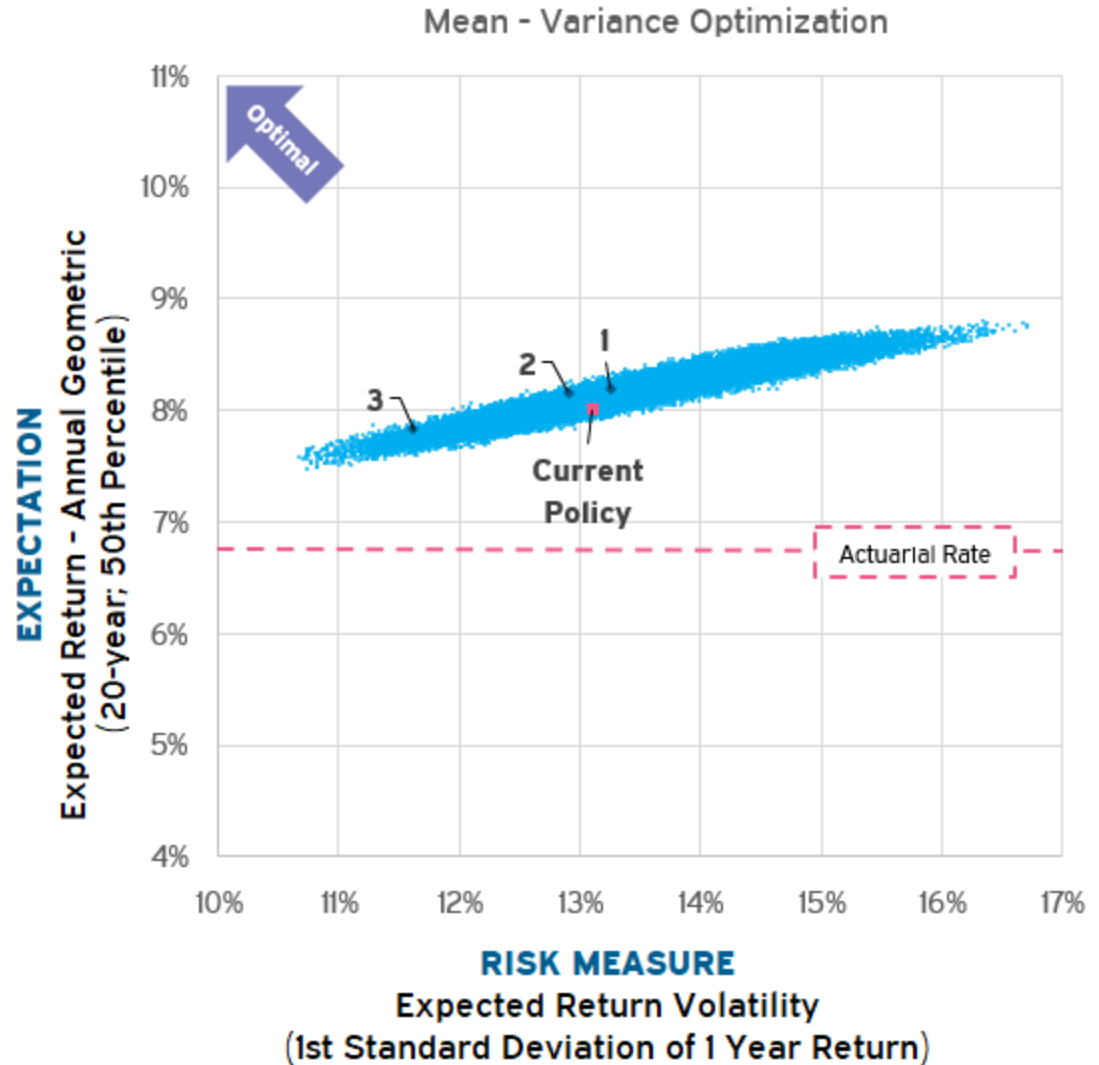


# East Bay Municipal Utility District Employees' Retirement System

## Mean-Variance Optimization

### Notes

- While expected return is not an asset/liability risk measure, it's important to ensure the expected return exceeds the current assumption (6.75%).
- Within the constraints, every asset allocation has an expected return greater than the actuarial assumption (blue dots).

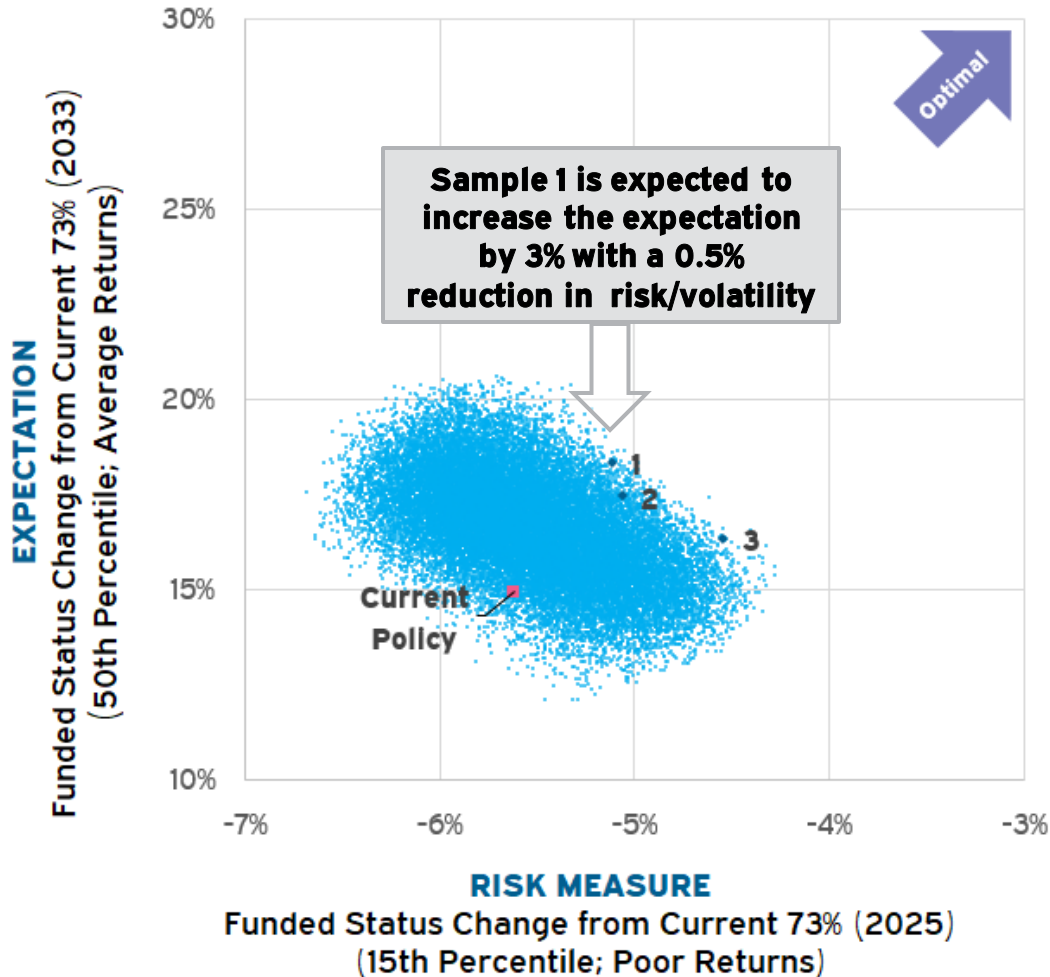




# East Bay Municipal Utility District Employees' Retirement System

## Examine Sample Portfolios

Risk Lens - **Funded Status Volatility**



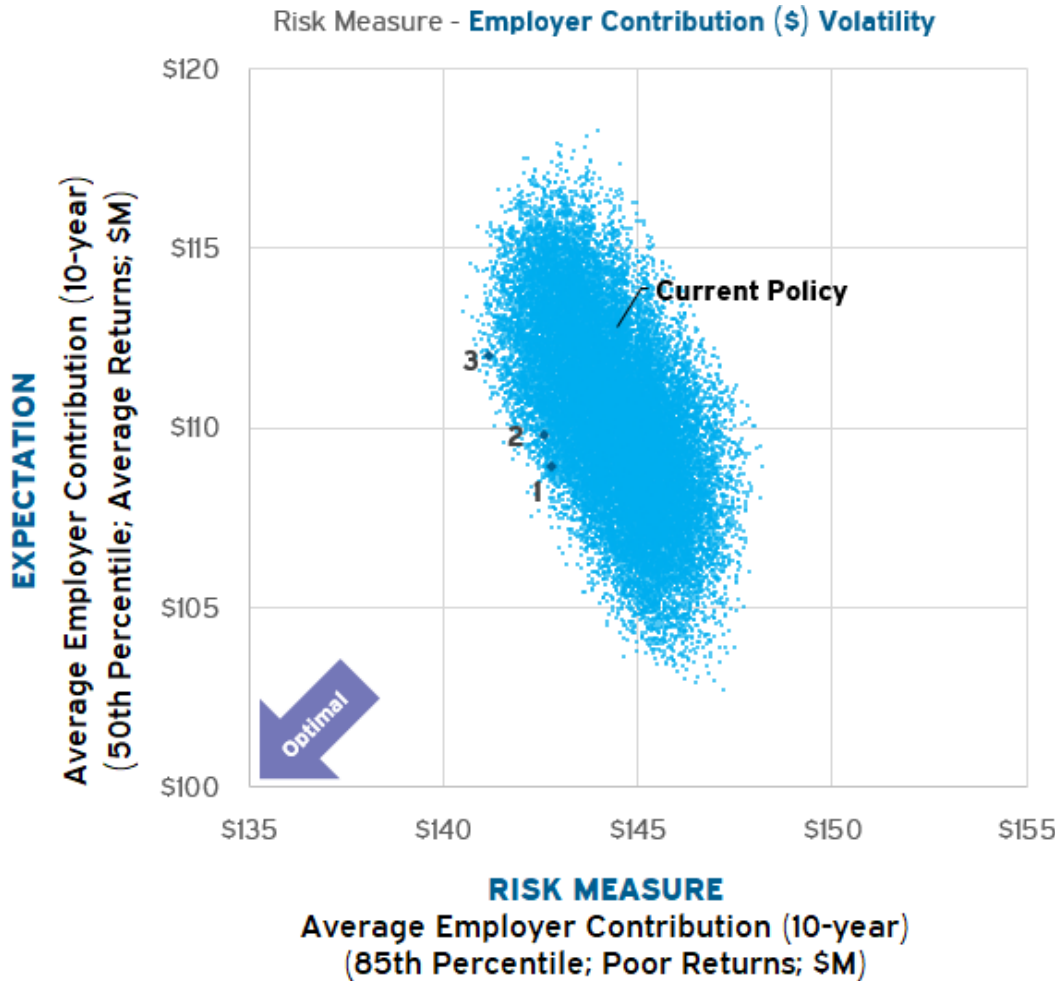
### Notes

- Alternative asset allocations (Samples 1 to 3) are identified as having relatively “efficient” funded status outcomes.
- Samples are selected spanning the spectrum of expectation/risk measure in accordance with the Board’s risk reduction instructions.
- Sample 1-3 are examples with higher expectations and reductions in risk/volatility relative to Policy.
- No Sample is “better” than another given each have beneficial quantitative outcomes.



# East Bay Municipal Utility District Employees' Retirement System

## Analyze Additional Risk Measures



### Notes

- Plan risk is viewed through another lens – Recommended Employer Contributions.
- Current Policy is expected to have average recommended contributions of \$113M for 10 years with *average* returns.
- With *poor* returns, the average recommended contribution is expected to be \$144M for 10 years.
- Similar to the funded status optimization, Samples 1-3 attempt to reduce expected and/or risk measure recommended employer contributions.



# East Bay Municipal Utility District Employees' Retirement System

## Conclusion

- Additional portfolios can be explored via live modeling.
- After further discussion and exploration of alternative portfolios, Meketa recommends that the Board select a new long-term policy portfolio.
- Based on the approved long-term policy portfolio, an *Evolving Policy Plan* will be presented to the Board at a subsequent meeting.
  - This seeks to outline the general timeline for transitioning to the new long-term policy portfolio in a prudent and efficient manner.
- Furthermore, corresponding policy documents (e.g., “Statement of Investment Policy and Procedures”) will be updated to reflect the Board’s decision.

# Appendix



# East Bay Municipal Utility District Employees' Retirement System

## Strategy Definitions

EBMUDERS Asset Classes	Basic Definition
<b>US Equity</b>	Ownership interests in small, medium, and large market capitalization publicly traded companies across the United States. Represented by the Russell 3000 Index (i.e., largest 3,000 stocks in the US).
<b>Non-US Equity</b>	Ownership interests in medium and large market capitalization publicly traded companies across developed and emerging markets. Represented by the MSCI ACWI ex. US Index.
<b>Buy Write (Covered Calls)</b>	An equity-related strategy that contains long equity positions and writes call options (i.e., covered calls) against those positions. Seeks to generate equity-like returns but with lower volatility over full market cycles.
<b>REITs</b>	Publicly traded companies that mainly own, and in most cases operate, income-producing real estate such as apartments, shopping centers, offices, hotels, and warehouses. REITs distribute at least 90% of their taxable income to shareholders annually.
<b>Core Private Real Estate</b>	Equity ownership in established/stable, income-producing properties that tend to exist in major markets in the United States. Includes sectors such as apartments, industrial, office, retail, and other (e.g., data centers, storage, etc.). As private funds, entry/exit from the vehicles may be limited.
<b>Investment Grade Bonds</b>	High-quality (i.e., investment-grade) debt in U.S. dollars of corporations, governmental entities or agencies, and securitized products (e.g., mortgage-backed securities). All instruments are “fixed rate” and exposed to interest rate risk.
<b>High Yield Bonds</b>	Lower credit quality debt in U.S. dollars of corporations. All instruments are “fixed rate” and exposed to both interest rate risk and credit risk (i.e., risk of default).
<b>Bank Loans</b>	Similar to High Yield Bonds, but the instruments are “floating rate” where coupon payments will vary based on interest rate levels. Referred to as “bank loans” due to the original underwriting and syndication across banking institutions. They historically were “senior” to fixed rate debt in the capital structure of companies.
<b>Private Debt</b>	The largest segment of the market (direct lending) is similar to that of Bank Loans but is originated in private transactions. Other sectors (e.g., asset backed securities) represent pools of other forms of debt (e.g., credit card receivables) that are packaged together into a broader security. Primarily “floating rate”.

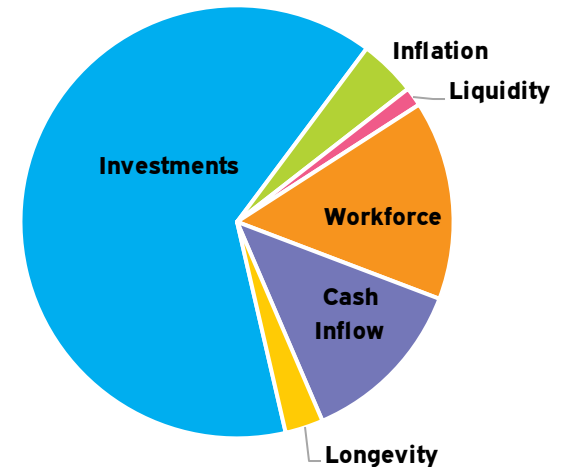


# East Bay Municipal Utility District Employees' Retirement System

## Summary of the Key Risks

1. **Investments:** Asset return volatility is the biggest risk to the Plan.
2. **Cash Inflow:** While unlikely, the risk of not meeting recommended contribution is important to the Plan due to the underfunded state.

**Risks in Aggregate**



**Recommendation:** Optimize the asset return and asset return volatility to ensure all investment risks are compensated appropriately. Secondly, discuss strategies for consideration when the Plan reaches higher funded status levels.



# East Bay Municipal Utility District Employees' Retirement System

## Risk Philosophy

- The **Risk Philosophy** summarizes the different “lenses” that will be used to evaluate the financial condition of the Plan.
- Most systems will primarily rely on an analysis of:
  - ✓ The **funded status** to evaluate the ongoing health of the Plan; and
  - ✓ The size of the **recommended employer contribution** to evaluate the resources required to achieve the health of the Plan
- *Proposed* risk measures to be analyzed during this asset-liability study:

Risk Lens	Risk Measure	Expectation
Funded Status Volatility	Change in Funded Status by 2025 with Poor Returns (15th Percentile)*	Change in Funded Status by 2033 with Average Returns (50th Percentile)*
Recommended Employer Contribution (\$) Volatility	Average actuarial recommended contribution for the next 10 years with Poor Returns (85th Percentile)	Average actuarial recommended contribution for the next 10 years with Average Returns (50th Percentile)

\* 6/30/20XX



# East Bay Municipal Utility District Employees' Retirement System

## Optimization Process Steps

### How does Meketa optimize the asset allocation?

#### 1 – Plot the Baseline

Plot the primary expectation and risk measure for the asset allocation in the Investment Policy Statement

#### 2 – Create Constraints

Asset classes are constrained to a minimum and maximum allocation to prevent impractical allocation recommendations

#### 3 – Compare Alternatives

The Board agrees on tolerance for allocation levels for each existing or new asset classes

#### 4 – Produce Samples

Meketa will provide samples of asset allocations that reflect the feedback received from the Board with regards to risk tolerance and return expectations

#### 5 – Analyze Additional Risks

Repeat the process for additional risk measures that are important to the Board's decision making



# East Bay Municipal Utility District Employees' Retirement System

## Assumptions and Methods

- Capital Market Assumptions: Meketa 2024 Capital Market Expectations – 10 & 20-year assumptions.
- Assets: Market value of assets of \$2.2B as of June 2023, updated to reflect Q3 and Q4 2023 returns from the performance reports.
- Asset Rebalancing: annual
- Liabilities and normal cost: The liabilities, normal cost and expected benefit payments used in this study were provided by Segal as of June 30, 2023. All liability projections assume a 6.75% long-term rate of return unless the dynamic capital market expectation suggest a discount rate of lower than 6.75%. In that event, the discount rate is set equal to the 20-year geometric capital market expectation. The liabilities and normal cost are then adjusted based on their estimated duration.
- Funding policy: Assumes recommended contributions are made in full as described in the actuarial valuation report.
- Plan Provisions and Additional Assumptions: Additional details regarding provisions and assumptions are documented in the June 30, 2023 actuarial valuation report issued by Segal.



# East Bay Municipal Utility District Employees' Retirement System

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**EAST BAY MUNICIPAL UTILITY DISTRICT**  
**Office of the General Counsel**

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DATE: May 16, 2024

MEMO TO: Retirement Board

FROM: Lourdes Matthew, Assistant General Counsel 

SUBJECT: Pension Benefits for Members of the Board of Directors

**SUMMARY**

The Board of Directors (Board) is considering changes to the pension benefits that the District confers on members of the Board to prevent a Board member from receiving a windfall and to allow a District retiree to serve on the Board without reinstatement into the Retirement System. Below is a summary of the discussion and actions taken by the Board at the May 14, 2024 meeting of the Board.

**DISCUSSION**

**Background**

The Retirement Board may recall that a recent lawsuit filed against the District and the Retirement System highlighted the potential for an elected or appointed member of the Board to receive a windfall in pension benefits by establishing reciprocity. Such windfall would also result in an unfunded liability to the Retirement Fund because the pension would be based on the highest salary earned by the Board member at another agency, for which no contributions were made by the District or the Board member during their District service. Another issue highlighted involves Board members who are also District retirees. Under the current language of the Retirement Ordinance, the California Public Employees' Pension Reform Act (PEPRA) would require a District retiree who is appointed or elected to the Board to reinstate from retirement and cease pension payments during their service as a Director.

At the March 15, 2024 meeting, the Retirement Board was informed of the options that would be presented to the Board to address these issues: (1) to exclude all future Board members from participating in the Retirement System; (2) prorate the manner in which future Board members accrue service; or (3) maintain the status quo. If the Board decided to prorate the accrual of service or the status quo, the Board would need to separately include an amendment to exclude District retirees who are elected or appointed to serve on the Board from participating in the Retirement System as a Board member.

These options were presented to the Board at their regular meeting on April 9, 2024. At that meeting, the Board requested staff to explore the additional option of limiting the amount of terminal compensation that may be applied to a Board member's retirement allowance for their service as an elected or appointed Director. This option mirrors a provision for members of the California Public Employees' Retirement System (CalPERS) who are elected or appointed to a city council or county board of supervisors.<sup>1</sup>

### **Board's Discussion at the May 14, 2024 Meeting**

At the May 14, 2024 regular meeting of the Board, the proposed amendments to the Retirement Ordinance that would effectuate the option to limit a Board member's terminal compensation were introduced. During the discussions of the parameters of the proposed amendment, the Board also clarified that, for purposes of the Retirement Allowance calculation, it wishes to bifurcate the service of a future Board member who was formerly employed by the District and accrued service as a District employee. In this case, the former employee's service as a District employee should be treated as separate from their service as a Board member for the purpose of Retirement Allowance calculations attributable to the two distinct periods of service.

For example, a District employee works for the District for 10 years and then separates from the District. At the time of separation, the employee's highest annual compensation is \$100,000. The former employee separates but does not retire and elects to leave their contributions in the Retirement System, remaining a member of the Retirement System. Six months after separating from District employment, the former employee is elected to serve on the Board for the first time and does so for another 10 years with a highest annual compensation of \$20,000. Under this scenario, the Board would like to treat the former employee's service as an employee separately from the former employee's service as a Director. This would result in the employee receiving two forms of Retirement Allowance from the District upon retirement. One allowance would be based on their years of service as an employee and highest annual compensation earned as an employee and the second allowance would be based on their years of service as a Director and on the highest annual compensation earned as a Director.

To illustrate, a former employee, assuming that employee is a member of the 1980 Classic Plan, turned Director would receive two retirement allowances as follows:

Annual Retirement Allowance as an employee: 10 years of service x \$100,000 x 0.026 = \$26,000

Annual Retirement Allowance as a Director: 10 years of service x \$20,000 x 0.026 = \$5,200

A Board member is also entitled to receive Health Insurance Benefits based on the number of years of "continuous service." Under the scenario described above, a former employee who re-enters District service as a Director would have to begin accrual of District service anew as a Director because of the break in service as an employee and as a Director. Thus, the employee

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<sup>1</sup> See Cal. Govt. Code section 20039.

Retirement Board

May 16, 2024

Page 3 of 3

would be eligible for 50% of the HIB for each of the periods served as an employee and as a Director.

Section 12(f) of the Ordinance would be the primary section that would require an amendment to reflect these changes for a member who re-enters District service as a Director, as well as other provisions establishing definitions. As of the date of this memo, the amendments are in the process of being drafted and have not yet been finalized.

#### **NEXT STEPS**

Staff will develop further language amending the Retirement Ordinance to effectuate the additional changes requested by the Board. The Board intends to conduct a first reading of all ordinance amendments at its regular meeting on May 28, 2024.

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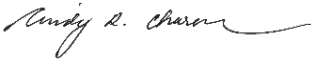
cc: Cindy R. Charan, Director of Human Resources  
Sophia Skoda, Director of Finance  
Lisa Sorani, Manager of Employee Services

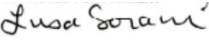
## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources 

FROM: Lisa Sorani, Manager of Employee Services 

SUBJECT: HIB Study Results: Discussion of Goals and Alignment of Interests

### BACKGROUND

At the Retirement Board meeting scheduled for May 23, 2024, staff will facilitate a discussion with the Retirement Board regarding the Board's goals and alignment of interests in response to the HIB survey data presented over the past four Retirement Board meetings.

### DISCUSSION

The Retirement Board requested that staff conduct the HIB study currently underway in response to concerns outlined by a few employees who shared public comments at the Retirement Board meetings. These speakers asserted that it had been too long since the HIB had been increased. A survey of benefits offered by comparable employers (peers) is presented to the Retirement Board each year. Based on feedback received from employees and data through the annual peer survey, the Retirement Board determined that it was time for a deeper review.

Starting last November, staff has brought to the Retirement Board a broad review of data compiled in the HIB Study including:

1. Historical review of the benefit and benefit changes;
2. Demographic data detailing the status of current HIB-eligible retirees as
  - a. % married vs single,
  - b. % eligible for the full benefit and % eligible for something less than the full benefit due to less than 20 years of District service.
3. Healthcare premium cost historical trends and projected future healthcare cost-trends;
4. District retiree out-of-pocket cost for health plans and Medicare part B premiums today and historically at each date the HIB benefit was changed;
5. Feedback from current retirees about how they use the HIB and their satisfaction with the benefit;
6. A report of the 2024 Present Value of each of the prior HIB changes.

At the May 23, 2024 meeting, the Retirement Board will discuss an alignment of interests and goals. Under Meyers Milias Brown Act (MMBA), HIB is a subject of bargaining through MOU negotiations. As such, the discussion is limited to the District's options for evaluating HIB and not making actual decisions.

The following are potential interests that have been identified by the Retirement Board at during the HIB Study meetings.

**Alignment of Interests:**

1. **Sustainability:** Ensuring the long-term sustainability of our retiree health benefits program.
2. **Fairness:** Considering maintaining fairness in our benefits program by evaluating various interest groups: both active employees and retirees receive competitive and sustainable benefits.
3. **Competitiveness:** Effectively managing healthcare costs is crucial for the District's competitiveness. By taking proactive measures to control costs, we can allocate resources more efficiently to other areas of the District, fostering growth and innovation.

**NEXT STEPS**

The outcome of the discussions from the May 23, 2024 and June 4, 2024 Retirement Board meetings will provide insight to the negotiating parties for the upcoming MOU successor negotiations.

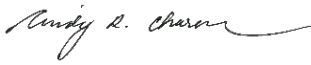
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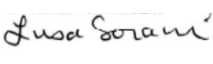
## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

THROUGH: Cindy Charan, Director of Human Resources 

FROM: Lisa Sorani, Manager of Employee Services 

SUBJECT: Filling the Role of Retirement Board President and Succession Planning

### BACKGROUND

The current Retirement Board President will be stepping down from the Retirement Board after the June 4, 2024, Special Retirement Board meeting. In this memo staff has outlined the language from the Retirement Ordinance about the Retirement Board President seat, the timeline for electing the new President, and staff's plan for onboarding the new President.

### DISCUSSION

Section 4b of the Retirement Ordinance reads, “...*The Retirement Board shall elect from its members a President and Vice-President, and appoint from the regular employees or officers of the District a Secretary and an Assistant Secretary, who shall serve without additional compensation. The Vice-President or Assistant Secretary shall act in the absence of the President or Secretary, respectively, or when so authorized by the Retirement Board. The members of the Retirement Board shall serve without compensation for their services thereon*”.

Historically, the longest standing Retirement Board member who was elected from membership acts as the Retirement Board President, and one of the Retirement Board members appointed by the Board of Directors acts as Vice President. Similarly, the HR Director has acted as Retirement Board Secretary, and the Manager of Employee Services as the Assistant Secretary. In July 2021, when the Retirement Board voted to appoint Tim McGowan as the President, Tim had already served on the Retirement Board for nine years.

At the July 18, 2024 Retirement Board meeting, the Retirement Board will vote to elect a new Retirement Board President. At that time, Jae Park will have been on the Retirement Board for three years and Max Fefer will just be joining the Retirement Board.

Staff from Human Resources, Finance and Legal, host educational onboarding sessions for each new Retirement Board member. This year, staff will create and host an additional onboarding session for whichever member is elected as Retirement Board President to clarify the roles and responsibilities of the Retirement Board President.

**NEXT STEPS**

An onboarding session will be planned with Max Fefer ahead of Max's first Retirement Board meeting on July 18, 2024, and a Retirement Board President onboarding meeting will be held with the newly elected President in August.

CC;ls

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

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

SUBJECT: PEPRA Employee Contribution Analysis

### SUMMARY

At the January 18, 2024 Retirement Board meeting, staff and the Retirement System's actuary, Segal, presented the Pension and Health Insurance Benefit (HIB) Actuarial Valuation Reports for June 30, 2023. During this presentation, the Retirement Board inquired why other agencies have different normal costs and employee contribution rates for their California Public Employees' Pension Reform Act (PEPRA) tiers, despite all having PEPRA-compliant benefits. While PEPRA brought uniformity to major elements of pension benefit formulas for public sector employees statewide, certain plan differences across agencies still exist. These differences, and differing actuarial assumptions and methods used in the calculations, can lead to varying employee contribution rates.

### DISCUSSION

PEPRA was implemented statewide beginning January 1, 2013 and created a new tier for public sector pension plans with generally lower pension benefits. PEPRA brought a certain level of uniformity across pension plans, putting limits on pensionable compensation depending on whether employees are also covered under Social Security and setting specific retirement age formulas. The law also required that employees pay at least 50% of their annual normal cost through their employee contributions. (The normal cost for an employee is the contribution necessary, when also incorporating investment return assumption, to pay for future benefits earned that year under the funding method.) During the January 18, 2024 Retirement Board meeting, Board members asked why the employee contribution rates of the District's PEPRA tier employees is higher than that of some other agencies, given the uniformity that PEPRA brought to pension benefits statewide.

Although PEPRA brought some uniformity to pension benefit formulas, there are a multitude of reasons for differences in employee contribution rates. According to Segal, the three areas that lead to the biggest divergences are (1) differences in benefit features and design, (2) actuarial assumptions and actuarial methods, and (3) procedures used in their calculations.

The following table shows a comparison of PEPRA employee contribution rates across several agencies along with cost-of-living adjustments (COLA), investment return assumptions and automatic survivor benefits provided at no additional cost to the retiree with a spouse or domestic partner. The table illustrates how the agencies with more generous benefits and lower

PEPRA Employee Contribution Analysis

May 23, 2024

Page 2

assumed investment returns tend to have higher employee contribution rates (which, under PEPRA, are based on normal costs).

Agency (PEPRA tier only)	PEPRA Employee Contribution Rate	Assumed Investment Rate of Return	COLA	Survivor Benefit
Contra Costa County Employees' Retirement Association	10.37% to 12.49% depending on cost group	6.75%	3% with excess banked	60% annuity to eligible spouse + lump sum of \$5,000
San Francisco Employees' Retirement System (PEPRA equivalent)	7.5% to 9.5% depending on cost sharing of up to 2%*	7.20%	2% with potential for supplement of up to 1.5% if there are excess earnings on the portfolio	Automatic 50%
EBMUDERS	9.41%	6.75%	Up to 3% unless 85% funded then up to 5% excess banked	Automatic 50% survivor with 75% and 100% options with reduced benefit
Alameda County Employees' Retirement Association	9.3%	7.00%	2% with excess banked	60% annuity to eligible spouse + death burial benefit
Contra Costa Water District Retirement Plan	8.75%	6.25%	2% (applicable up to \$75K threshold)	Standard single life annuity with optional Joint and Survivor annuity with reduced benefit
Alameda County Water District (CalPERS)	7.75%	6.80%	2% and purchasing power protection allowance (PPPA)**	Automatic 50% survivor benefit & lump sum of \$2,000
AC Transit Employees' Retirement Plan	6.88%	6.75%	None	Reduced benefit for 50% or 100% to survivor
Marin Municipal Water District (CalPERS)	6.25%	6.80%	2% and PPPA	Lump sum of \$2,000

\*SFERS cost sharing for FY 2025 is 0% for those making under \$34/hour, 1.5% for those making between \$34/hour and \$68/hour and 2% for those making over \$68/hour. Amount of cost sharing is dependent on the employer contribution rate.

\*\*PPPA benefits are cost of living adjustments that are intended to ensure that an individual's allowance is never reduced below 80% of the initial allowance due to inflation

The Contra Cost Water District Retirement Plan (CCWDRP) provides one example of how plan benefits can affect contribution rates. CCWDRP historically did not provide automatic annual COLAs. CCWDRP did periodically provide ad hoc COLAs, the actuarial cost of which were added to the unfunded liability or funded by lump sum payments. Beginning in fiscal year 2022, an annual COLA of up to 2% for benefits under the \$76,500 threshold (threshold increases by 2% annually) was implemented for employees with pensions who are actively employed as of November 1, 2022. Previous contribution rates did not incorporate COLAs. Beginning in fiscal year 2023, contribution rates include the new annual COLA. Given the extra cost of funding a 2% COLA, the recommended employee contribution rate increased from 6.5% to 8.75%. The 8.75% employee contribution rate brings CCWDRP closer to the District's 9.41% employee contribution rate, with the difference likely based in part on CCWDRP's lower COLA.

The table also demonstrates the impact of different benefit elements to the contribution rates. Varying actuarial assumptions and actuarial funding policies can also lead to differences.

In general, PEPRA does not prescribe actuarial assumptions or methods, nor specify all elements of the pension benefit formulas. Differing benefit elements, like provisions for COLA and level of cost, as well as survivor benefits, can lead to different normal costs and contribution rates. All these factors can lead to varying employee contribution rates across agencies for PEPRA tier members.

SDS:RLH:SGL

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: May 23, 2024

MEMO TO: Members of the Retirement Board

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

SUBJECT: Meketa Performance and Economic Review

### SUMMARY

Under section III, part D of the Retirement System's Statement of Investment Policy and Procedures (the Investment Policy), the Retirement System's investment consultant is required to present quarterly performance reports to the Retirement Board. The attached report from the Retirement System's investment consultant, Meketa, provides information on portfolio performance through March 31, 2024.

### DISCUSSION

The Retirement System's portfolio had a market value of \$2.47 billion as of March 31, 2024 – up from \$2.36 billion at the end of the fourth quarter. The portfolio return was 4.7 percent for the first quarter of 2024. Over a one-year period, the portfolio return was 14.6 percent, slightly above the total plan benchmark return of 14.4 percent. The portfolio return remains above the plan benchmark by 0.4 percent over a 20-year period.

SDS:SGL

Attachment: Q1 2024 Performance Report



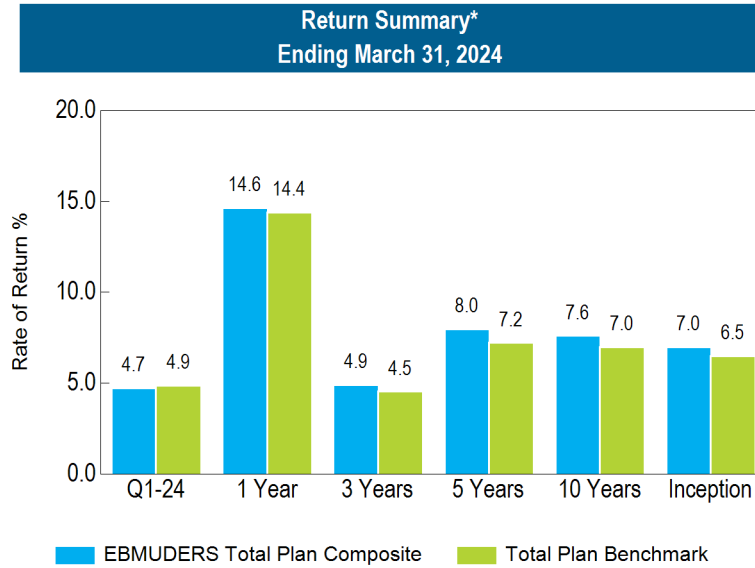
# East Bay Municipal Utility District Employees' Retirement System

May 16, 2024

Q1 2024 Performance Report

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# Introduction



\* Performance is gross of fees.

**Summary of Cash Flows**

	First Quarter	One Year
Beginning Market Value	\$2,360,015,381	\$2,176,371,772
Net Cash Flow	-\$3,455,328	-\$23,664,301
Capital Appreciation	\$110,552,810	\$314,405,393
Ending Market Value	\$2,467,112,864	\$2,467,112,864

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)
<b>EBMUDERS Total Plan Composite - Gross</b>	<b>4.7</b>	<b>14.6</b>	<b>4.9</b>	<b>8.0</b>	<b>7.6</b>	<b>7.5</b>
<b>EBMUDERS Total Plan Composite - Net</b>	<b>4.7</b>	<b>14.5</b>	<b>4.8</b>	<b>7.8</b>	<b>7.4</b>	<b>--</b>
<i>Total Plan Benchmark</i>	<i>4.9</i>	<i>14.4</i>	<i>4.5</i>	<i>7.2</i>	<i>7.0</i>	<i>7.1</i>
<i>InvMetrics Public DB &gt; \$1B Gross Median</i>	<i>3.8</i>	<i>11.5</i>	<i>4.7</i>	<i>7.9</i>	<i>7.1</i>	<i>7.0</i>

Historical net returns for the Total Portfolio Aggregate are currently available from 2Q 2011.

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

Performance Summary								
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)
<b>EBMUDERS Total Plan Composite</b>	<b>2,467,112,864</b>	<b>100.0</b>	<b>4.7</b>	<b>14.6</b>	<b>4.9</b>	<b>8.0</b>	<b>7.6</b>	<b>7.5</b>
<i>Total Plan Benchmark</i>			<i>4.9</i>	<i>14.4</i>	<i>4.5</i>	<i>7.2</i>	<i>7.0</i>	<i>7.1</i>
<b>US Equity Composite</b>	<b>693,607,458</b>	<b>28.1</b>	<b>10.0</b>	<b>29.3</b>	<b>9.8</b>	<b>14.3</b>	<b>12.5</b>	<b>10.0</b>
<i>Russell 3000 Hybrid</i>			<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>	<i>12.3</i>	<i>10.1</i>
<b>Non-US Equity Composite</b>	<b>602,654,338</b>	<b>24.4</b>	<b>4.6</b>	<b>13.1</b>	<b>2.5</b>	<b>6.4</b>	<b>4.2</b>	<b>6.3</b>
<i>MSCI ACWI xUS (blend)</i>			<i>4.8</i>	<i>13.8</i>	<i>2.4</i>	<i>6.5</i>	<i>4.7</i>	<i>5.9</i>
<b>Covered Calls Composite</b>	<b>502,025,751</b>	<b>20.3</b>	<b>5.6</b>	<b>17.5</b>	<b>7.5</b>	<b>9.3</b>	<b>8.6</b>	<b>--</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>			<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>	<i>6.0</i>	<i>--</i>
<b>Real Estate Composite</b>	<b>118,553,114</b>	<b>4.8</b>	<b>-3.1</b>	<b>-3.1</b>	<b>4.6</b>	<b>5.3</b>	<b>7.9</b>	<b>--</b>
<i>Real Estate Composite Benchmark</i>			<i>-1.6</i>	<i>1.4</i>	<i>5.1</i>	<i>4.9</i>	<i>7.2</i>	<i>--</i>
<b>Fixed Income Composite</b>	<b>544,670,125</b>	<b>22.1</b>	<b>-0.2</b>	<b>3.2</b>	<b>-0.5</b>	<b>1.6</b>	<b>2.1</b>	<b>3.6</b>
<i>Fixed Income Composite Benchmark</i>			<i>-0.3</i>	<i>3.3</i>	<i>-0.8</i>	<i>1.3</i>	<i>2.0</i>	<i>3.3</i>
<b>Cash Composite</b>	<b>5,602,077</b>	<b>0.2</b>	<b>1.0</b>	<b>4.1</b>	<b>2.3</b>	<b>2.2</b>	<b>1.5</b>	<b>1.9</b>
<i>FTSE T-Bill 3 Months TR</i>			<i>1.4</i>	<i>5.5</i>	<i>2.7</i>	<i>2.1</i>	<i>1.4</i>	<i>1.5</i>

Benchmark composition and history provided at the end of this report.

# **Economic and Market Update**

## Data as of March 31, 2024

## Commentary

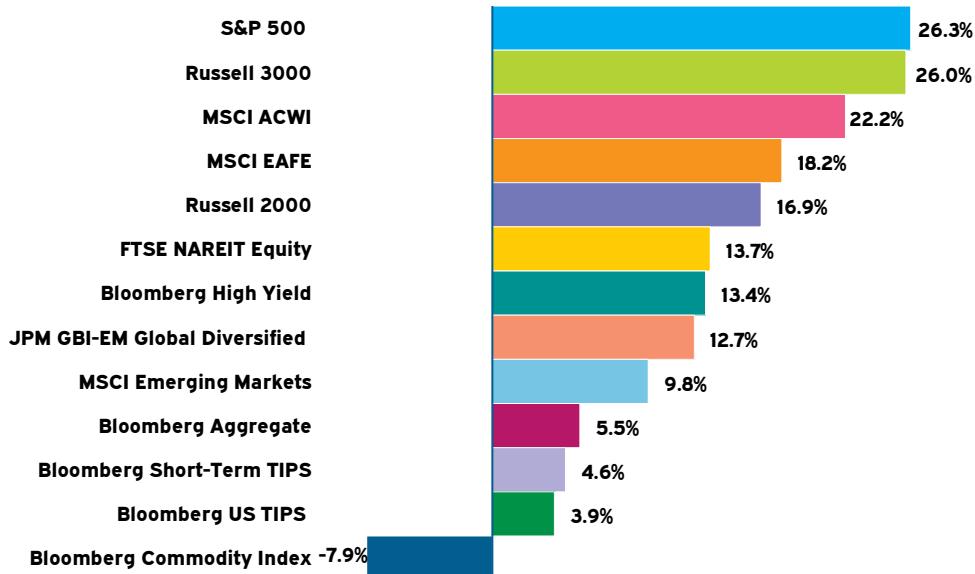
→ Resilient economic data drove global equities higher and pushed out the timing of the expected first Fed rate cut, weighing on bonds.

- Major central banks have largely paused interest rate hikes with expectations that many will still cut rates, but the uneven pace of falling inflation and economic growth could desynchronize the pace of rate cuts.
- In general, inflation pressures have eased in most countries from their pandemic peaks, but some uncertainty remains and levels are still above most central bank targets. Headline inflation in the US rose in March (3.2% to 3.5%) by more than expected, while core inflation was unchanged (3.8%) when it was predicted to decline to 3.7%. Notably, prices in China were up only slightly in March, as the impacts of the recent holiday faded.
- US equity markets (Russell 3000 index) rose 10.0% in the first quarter after a very strong 2023 (+26.0%). The technology sector continued to perform well, with energy gaining on geopolitical tensions.
- Non-US developed equity markets increased 5.8% in the quarter, helped by Japanese equities which hit multi-decade highs. A strengthening US dollar drove the weaker relative results for US investors with returns in local currency terms 4.2% higher (10.0% versus 5.8%).
- Emerging market equities (+2.4%) had the weakest equity returns, depressed by China (-2.2%). While policy efforts to support mainland stock prices helped to stabilize Chinese equities, recent efforts by the US to discourage investments in China weighed on results. The stronger dollar also hurt performance in emerging markets for US investors with returns in local currency terms 2.1% higher.
- Rising interest rates weighed on bonds with the broad US bond market declining 0.8% for the quarter.

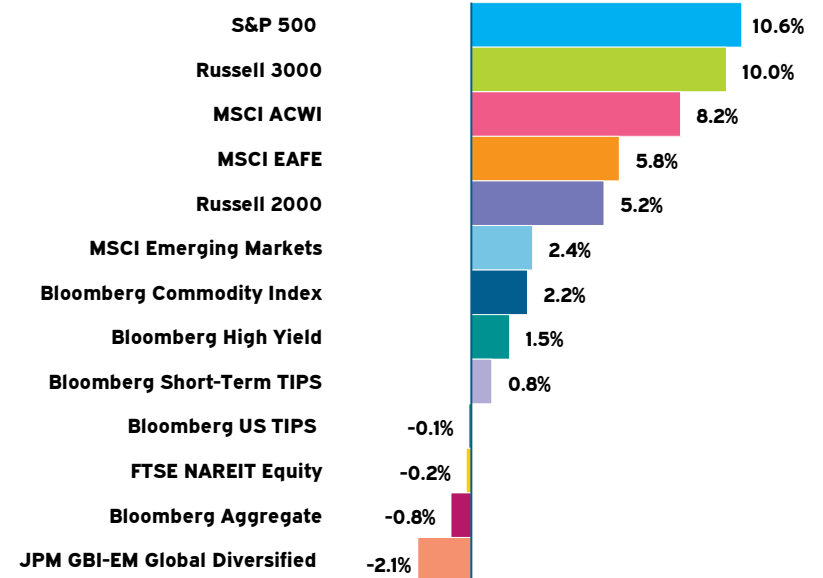
→ Looking to the rest of this year, the paths of inflation and monetary policy, China's economic disorder and slowing economic growth, the many looming elections, and the wars in Ukraine and Israel will be key.

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

2023



Q1 2024



→ In the first quarter, global equity markets continued their strong performance from 2023 with the US leading the way.

→ Resilient economic data weighed on bond markets domestically and dashed hopes of a near-term cut in interest rates.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.

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

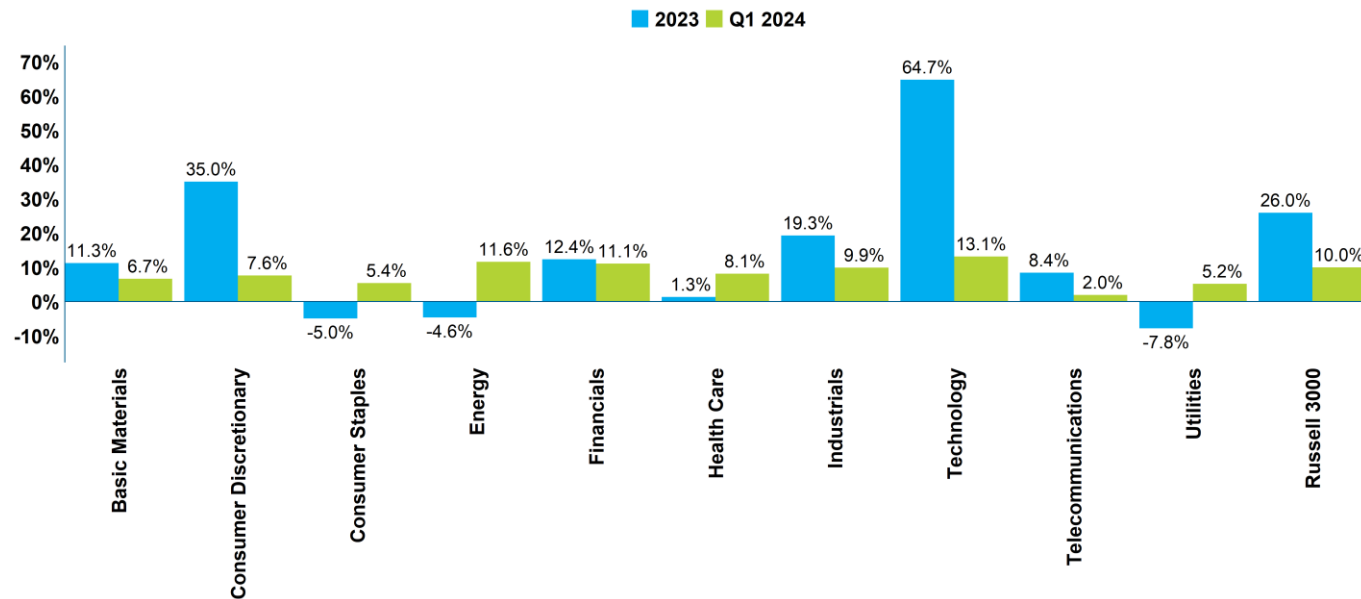
Domestic Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.2	10.6	29.9	11.5	15.1	13.0
Russell 3000	3.2	10.0	29.3	9.8	14.3	12.3
Russell 1000	3.2	10.3	29.9	10.5	14.8	12.7
Russell 1000 Growth	1.8	11.4	39.0	12.5	18.5	16.0
Russell 1000 Value	5.0	9.0	20.3	8.1	10.3	9.0
Russell MidCap	4.3	8.6	22.3	6.1	11.1	9.9
Russell MidCap Growth	2.4	9.5	26.3	4.6	11.8	11.4
Russell MidCap Value	5.2	8.2	20.4	6.8	9.9	8.6
Russell 2000	3.6	5.2	19.7	-0.1	8.1	7.6
Russell 2000 Growth	2.8	7.6	20.3	-2.7	7.4	7.9
Russell 2000 Value	4.4	2.9	18.8	2.2	8.2	6.9

#### US Equities: The Russell 3000 increased an impressive 10.0% in the first quarter of the year.

- US equities continued their ascent after a strong finish to 2023. The gains were driven by strong economic data and corporate earnings, despite signs of interest rates remaining higher for longer.
- Growth stocks outperformed value stocks across the market cap spectrum. Technology stocks continued to be a key driver of results, with NVIDIA and Microsoft alone contributing nearly 30% of the quarter’s gains.
- Large cap stocks produced almost double the return of their small cap peers during the first quarter. The underperformance of small cap financials contributed to this dynamic as fear of further turmoil for regional banks resurfaced.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.

### Russell 3000 Sector Returns<sup>1</sup>



- All sectors posted positive returns in the first quarter. The technology sector (13.1%) continued to lead the way due to the influence of the so-called “Magnificent Seven”.
- Technology was followed by energy (11.6%) and financials (11.1%), driven respectively by increased geopolitical tensions and the strong economic environment. Traditionally defensive sectors like consumer staples (5.4%) and utilities (5.2%) joined the rally but trailed other sectors.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.

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

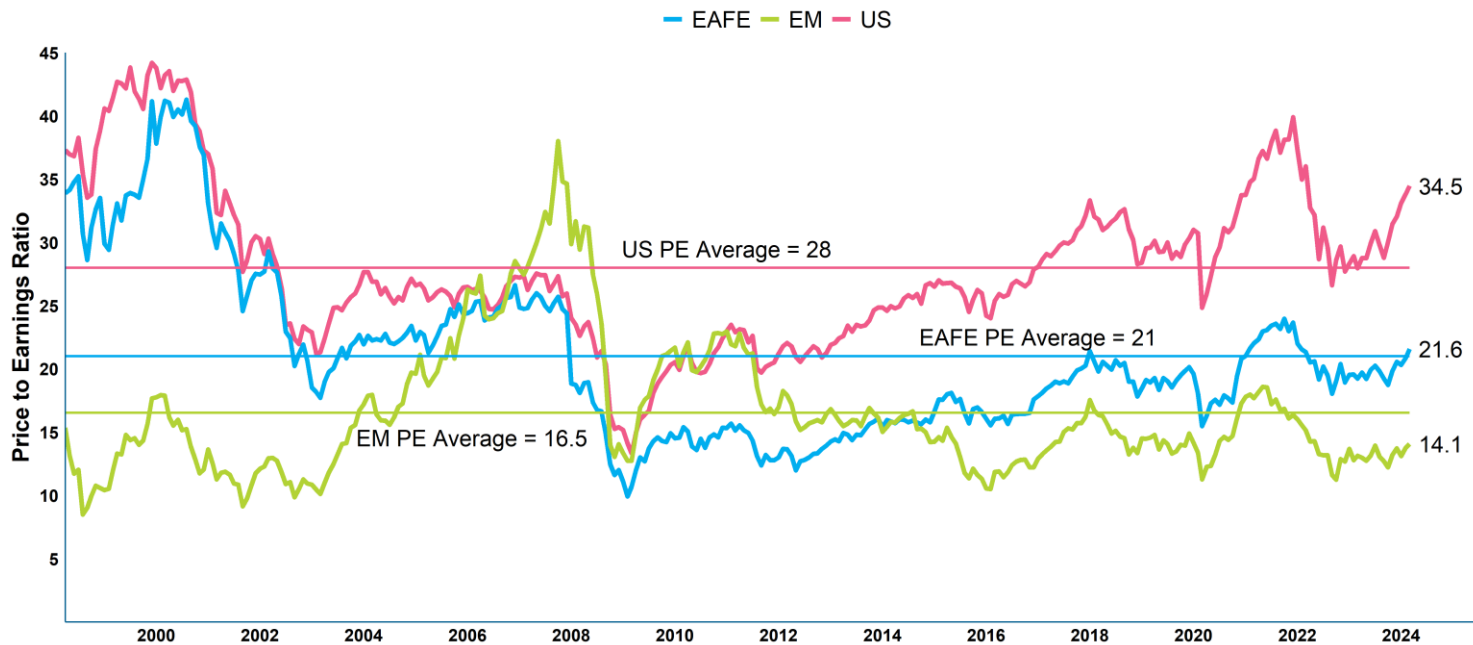
Foreign Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	3.1	4.7	13.3	1.9	6.0	4.3
MSCI EAFE	3.3	5.8	15.3	4.8	7.3	4.8
MSCI EAFE (Local Currency)	4.0	10.0	18.8	9.4	9.4	7.7
MSCI EAFE Small Cap	3.7	2.4	10.4	-1.4	4.9	4.7
MSCI Emerging Markets	2.5	2.4	8.2	-5.1	2.2	2.9
MSCI Emerging Markets (Local Currency)	3.0	4.5	10.6	-2.4	4.4	5.7
MSCI EM ex. China	3.0	4.0	20.5	2.2	6.4	4.2
MSCI China	0.9	-2.2	-17.1	-18.9	-6.3	1.2

**Foreign Equity: Developed international equities (MSCI EAFE) gained 5.8% during the quarter and emerging market equities (MSCI EM) rose 2.4%.**

- Developed international equity markets matched the US for the quarter in local terms but the appreciation of the dollar decreased returns for US investors by over 4.0% (5.8% versus 10.0%). Eurozone and UK equities had gains for the quarter, but Japan was the real standout performer, with the TOPIX returning 18.1% in local terms and the Nikkei breaking the 40,000 level for the first time.
- Emerging market equities again trailed developed markets largely due to China falling 2.2%. Slowing growth, issues in the property sector, and recent efforts by the US to discourage investments into China all weighed on results. Outside of China, interest rate sensitive markets like Brazil were particularly impacted by expectations of delayed interest rate cuts by the Fed. Stripping out China, emerging markets returned 4.0% in the quarter.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.

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



- At the end of the first quarter, the US equity price-to-earnings ratio increased further above its 21st century average, as price appreciation exceeded earnings growth.
- International market valuations also rose in the quarter and remain well below the US. In the case of developed markets, valuations are now slightly above the long-term average, while emerging market valuations remain well below its long-term average.

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

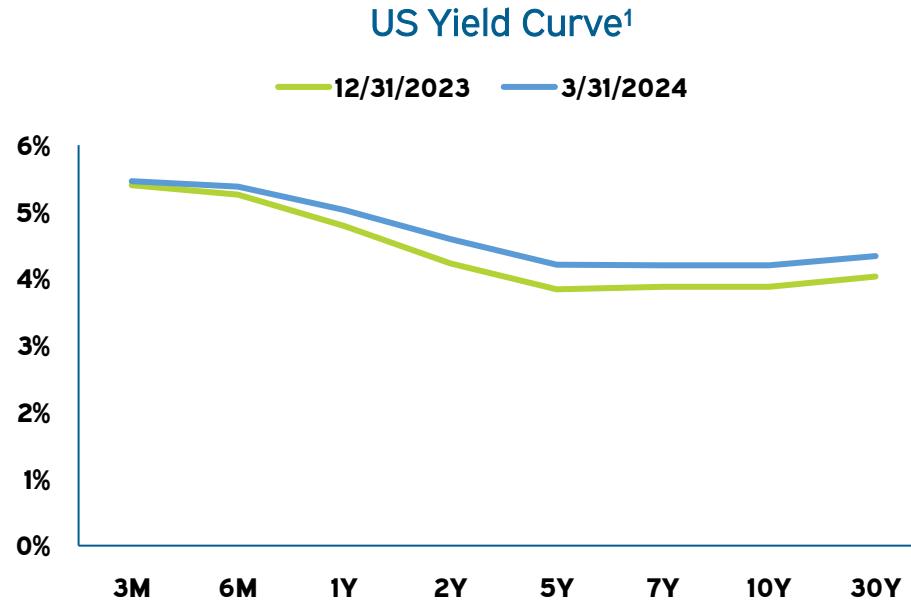
### Fixed Income Returns<sup>1</sup>

Fixed Income	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	1.0	-0.5	2.7	-2.1	0.7	1.8	5.1	6.0
Bloomberg Aggregate	0.9	-0.8	1.7	-2.5	0.4	1.5	4.8	6.2
Bloomberg US TIPS	0.8	-0.1	0.5	-0.5	2.5	2.2	4.6	6.8
Bloomberg Short-term TIPS	0.6	0.8	3.2	2.3	3.2	2.1	4.8	2.4
Bloomberg High Yield	1.2	1.5	11.2	2.2	4.2	4.4	7.7	3.7
JPM GBI-EM Global Diversified (USD)	0.0	-2.1	4.9	-1.6	0.1	-0.3	6.4	5.0

#### Fixed Income: The Bloomberg Universal index fell 0.5% in the first quarter.

- Strong economic growth and inflation readings above forecasts shifted interest rate expectations pushing back the anticipated start date of rate cuts as well as the number of cuts for 2024.
- In this environment the broad US bond market (Bloomberg Aggregate) fell 0.8% with TIPS declining only slightly (0.1%).
- High yield bonds (1.5%) led the way for the quarter as risk appetite continues to be robust and overall yields remain attractive despite the recent tightening of spreads to Treasury equivalents.

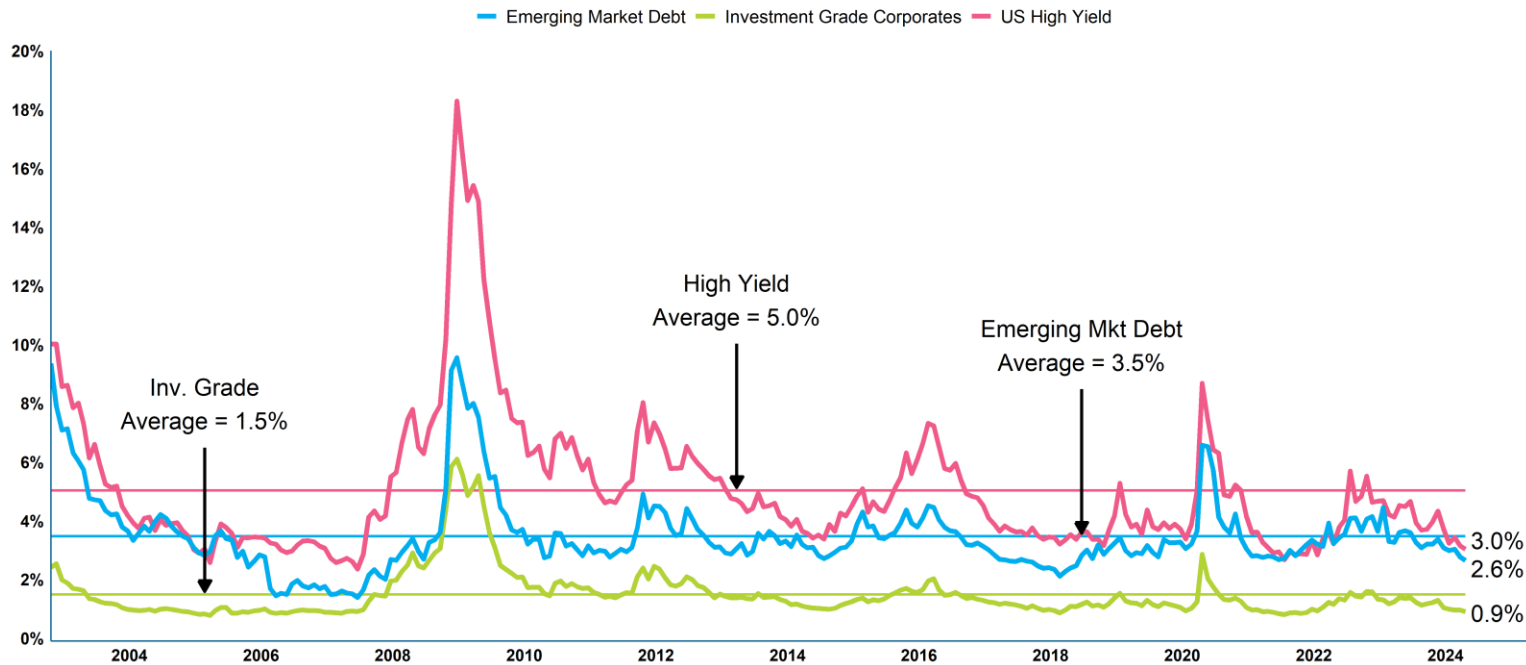
<sup>1</sup> Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of March 31, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.



- Overall interest rates moved higher over the quarter due to the strong economic data and the related shifts in monetary policy expectations.
- The more policy sensitive two-year Treasury yield rose from 4.3% to 4.6% in the first quarter while the ten-year Treasury yield increased from 3.9% to 4.2%.
- The yield curve remained inverted at quarter-end despite a recent flattening trend. The yield spread between the two-year and ten-year Treasury was -0.4% at the end of the quarter.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.

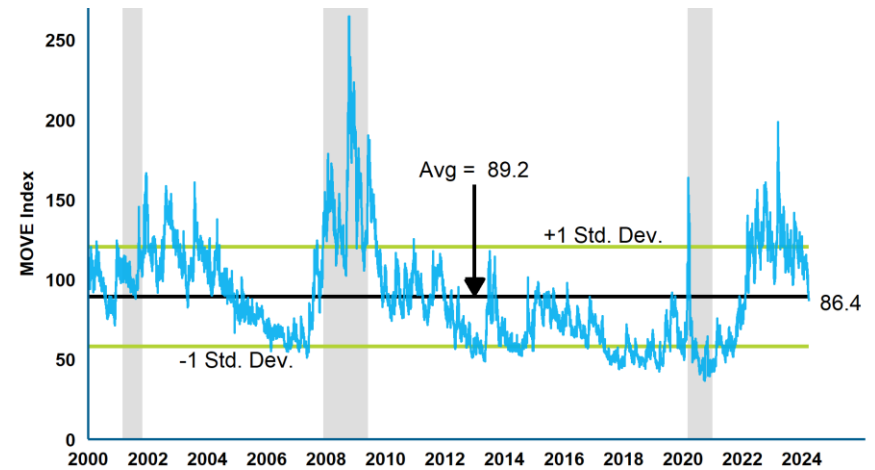
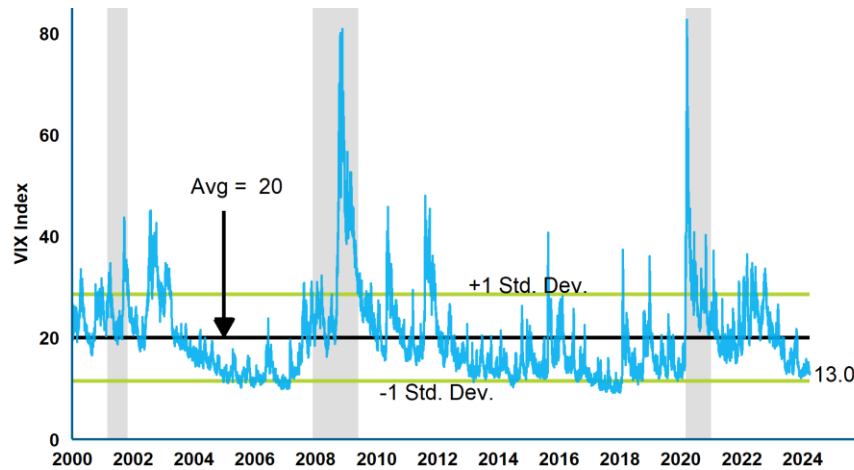
**Credit Spreads vs. US Treasury Bonds<sup>1</sup>**



- A positive economic outlook along with expectations of lower interest rates has led to an increased risk appetite. This has benefited credit, with spreads (the added yield above a comparable maturity Treasury) narrowing.
- This trend continued in the first quarter particularly for riskier bonds. High yield spreads fell from 3.2% to 3.0% and emerging market spreads dropped from 3.0% to 2.6%. Spreads for investment grade corporate bonds fell only slightly over the quarter (1.0% to 0.9%).
- All spreads remain below their respective long-run averages, particularly within high yield.

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

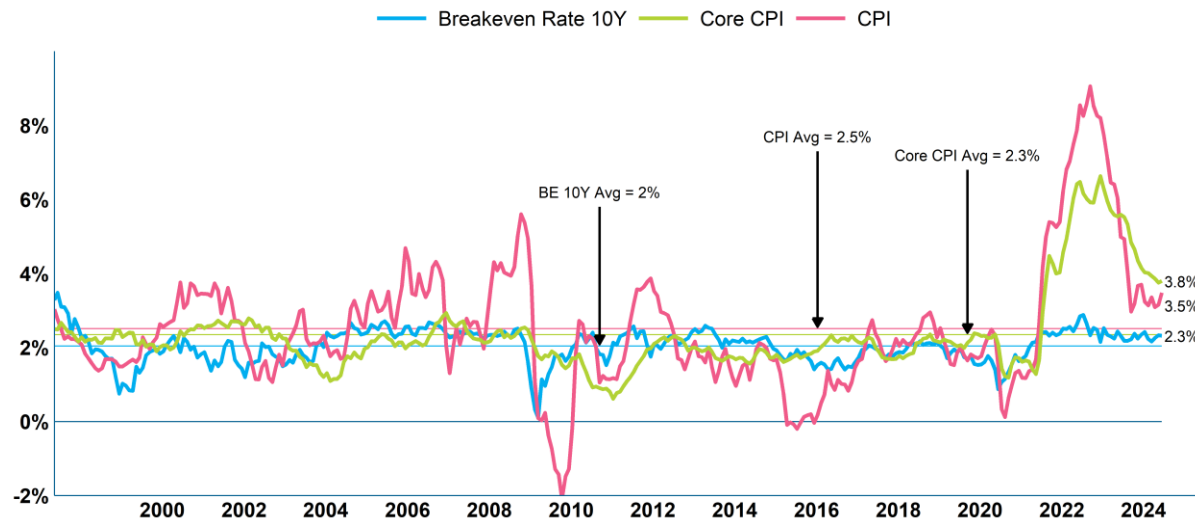
**Equity and Fixed Income Volatility<sup>1</sup>**



- Volatility in equities (VIX) finished the quarter close to one standard deviation below the long-term average as the focus shifted late last year to peaking policy rates and the potential for a soft landing.
- Volatility in the bond market (MOVE) fell significantly over the quarter to a level below the long run average (86.4 versus 89.2). Declining volatility surrounding policy expectations and the more positive growth outlook both contributed to lower volatility in the bond market.

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

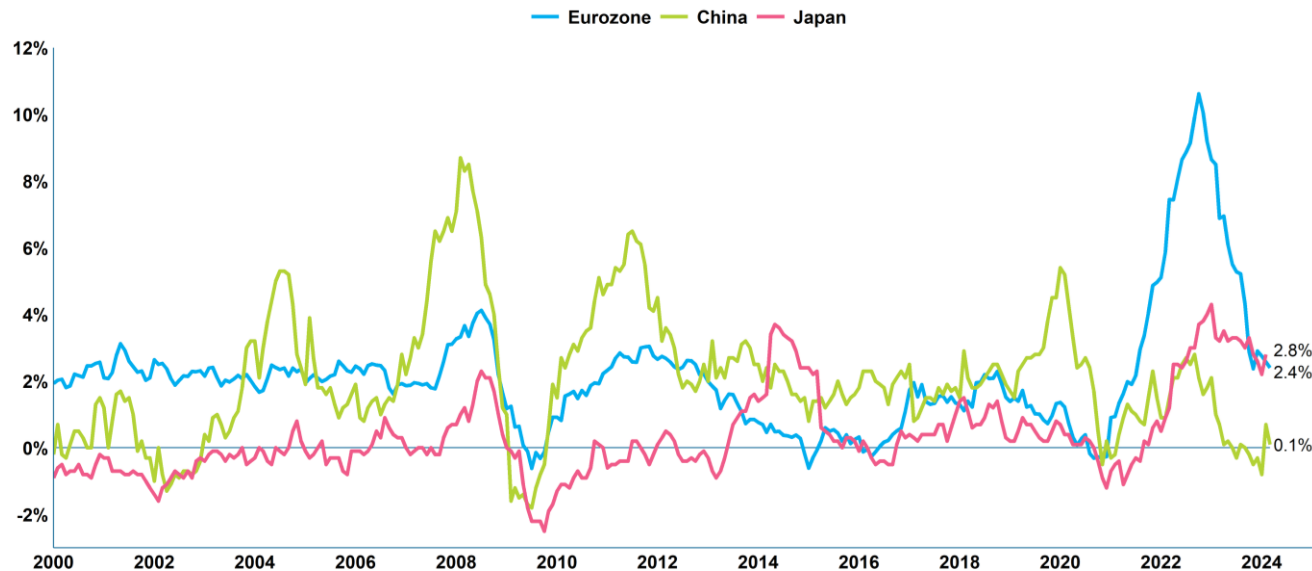
### US Ten-Year Breakeven Inflation and CPI<sup>1</sup>



- Year-over-year headline inflation rose in March (3.2% to 3.5%) and came in slightly above expectations. Prices in service sectors, particularly shelter, remain a key driver of inflation staying above the Fed’s 2% average target, with a recent rise in energy prices contributing too.
- Month-over-month inflation rose 0.4% which was the same as February, but above expectations of a 0.3% reading.
- Core inflation (excluding food and energy) remained at 3.8% but also came in above expectations. Core goods prices dropped, while core services including shelter and transportation prices continued to show persistence.
- Inflation expectations (breakevens) have remained relatively stable despite the significant volatility in inflation.

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

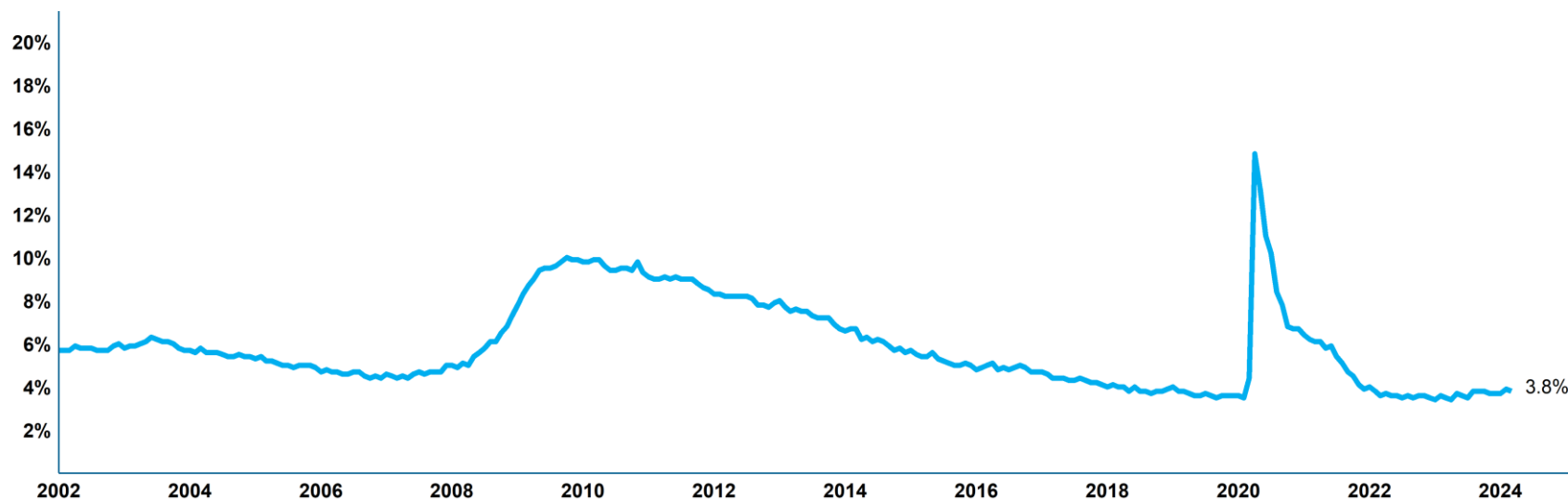
### Global Inflation (CPI Trailing Twelve Months)<sup>1</sup>



- Outside the US, inflation is also easing across major economies from the recent peaks.
- In the eurozone, prices experienced a dramatic decline last year but remain above the central bank's 2% target. In March, inflation fell further (2.6% to 2.4%), a level below the 3.5% year-over-year reading in the US.
- Inflation in Japan has slowly declined from the early 2023 peak of 4.3%, but it remains near levels not seen in a decade. In the most recent reading, inflation rose from 2.4% to 2.8% largely due to the falling impact of government energy subsidies introduced at the same time last year.
- The impacts from spending during the Lunar New Year holiday in China waned in March with inflation falling to just about 0%.

<sup>1</sup> Source: Bloomberg. Data is March 31, 2024, except Japan which is as of February 28, 2024.

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

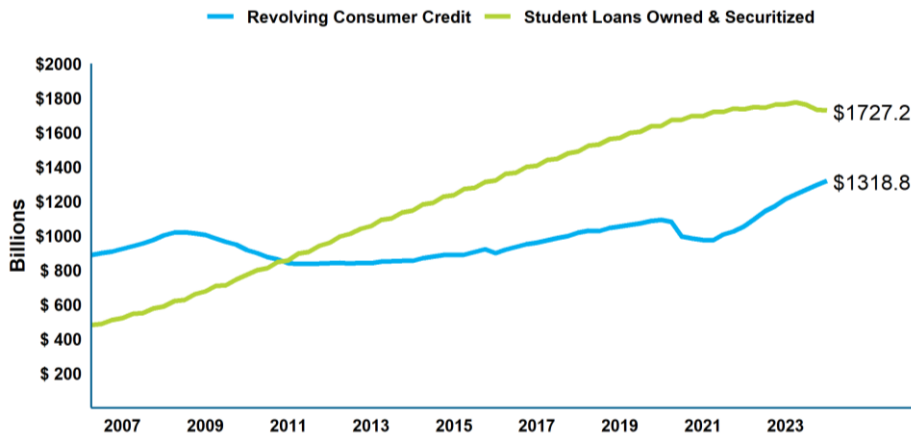


- Overall, the US labor market remains healthy, with the unemployment rate low, wage growth now positive in real terms, and initial claims for unemployment staying subdued.
- Each of the payroll readings over the quarter exceeded expectations. In March, the number of jobs added in the US was 303,000 compared to a 214,000 forecast. The healthcare (72,000), government (71,000), and construction (39,000) sectors added the most jobs.
- The unemployment rate fell from 3.9% to 3.8%, while wage growth dropped slightly from 4.3% to 4.1% compared to a year prior, a level well off the 6.0% peak but above inflation levels.
- Quit rates have declined, and layoffs are stable, with 1.4 job openings per unemployed worker.

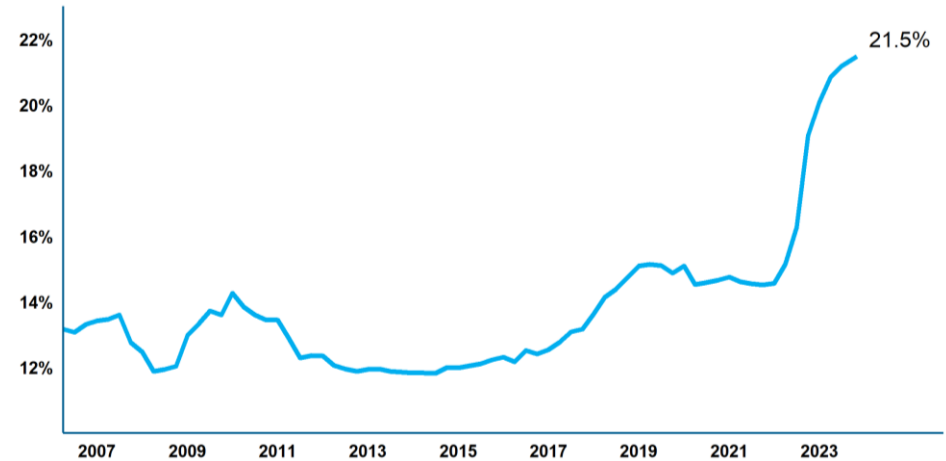
<sup>1</sup> Source: FRED. Data is as March 31, 2024.

### US Consumer Under Stress?<sup>1</sup>

#### Revolving Consumer Credit & Student Loans (\$B)



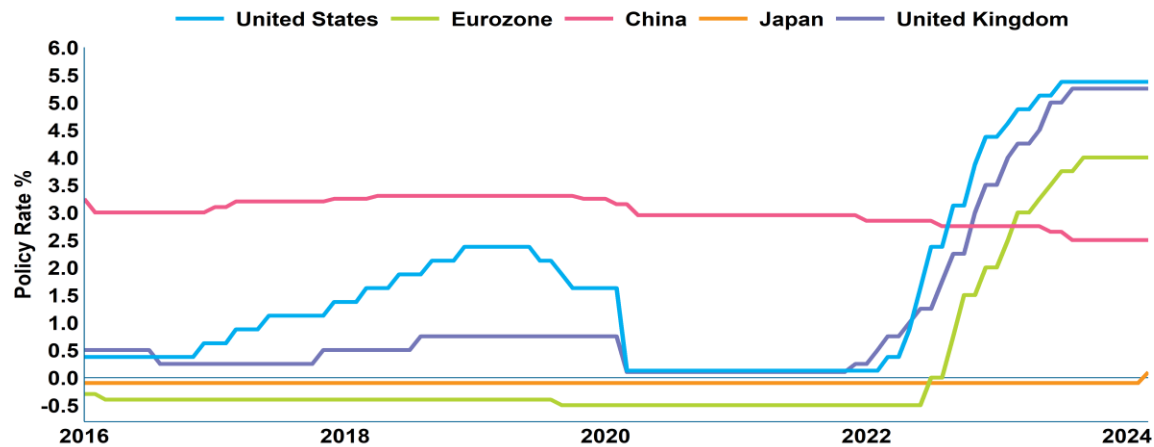
#### Consumer Credit Card Interest Rates (%)



- Despite the strong labor market and higher wages, pressures have started to build on the US consumer. This is an important consideration as consumer spending has been a key driver of economic growth.
- Revolving consumer credit surged to new highs in 2023 even as credit card interest rates hit levels not seen before (the prior peak was around 19% in the 1980s). Recently, we have also seen payment delinquencies on credit cards and auto loans start to increase, particularly for younger people.
- The return of student loan repayments after a three-year pandemic-related reprieve could add to pressures on consumers' budgets. This might be partially mitigated by recently initiated repayment and forgiveness programs.
- As we look ahead, the strength of the US consumer will remain key as this sector makes up most of the domestic economy (GDP).

<sup>1</sup> Source: FRED. Data is as of December 31, 2023. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.

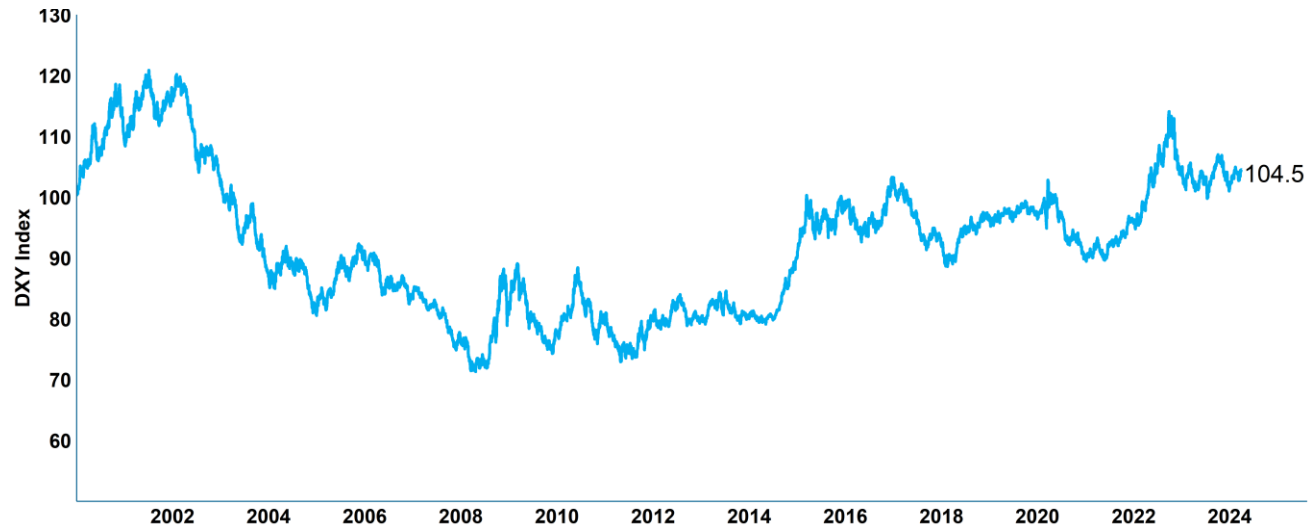
### Policy Rates<sup>1</sup>



- The Fed has been on hold since July 2023 when it raised rates to a range of 5.25%-5.50%. Markets are now pricing in fewer than two rate cuts this year down from close to seven late last year, as economic data has come in better than expectations and inflation persists. Market pricing for the first rate cut has also dramatically changed from an original expectation of a March cut to the probability priced below 50% for a rate cut at all remaining Fed meetings in 2024.
- The European and UK central banks also recently paused their rate increases on slowing inflation. It appears that the ECB could be one of the first central banks to cut rates with expectations close to 90% for a June cut.
- Given the return of inflation driven by wage growth the Bank of Japan (BOJ) recently ended the final negative interest rate policy, stopped purchasing ETFs, and moved away from its yield curve control.
- The central bank in China has maintained interest rates at record low levels and continues to inject liquidity into the banking system, as weaker-than-expected economic data appears to indicate a widespread slowdown.

<sup>1</sup> Source: Bloomberg. Data is as of March 31, 2024.

US Dollar vs. Broad Currencies<sup>1</sup>



- The dollar increased by close to 3% over the quarter versus a basket of major trading partners.
- Strong economic data in the US may delay policy rate cuts this year, which could contribute to continued upward pressure on the dollar as other countries pivot to rate cuts.

<sup>1</sup> Source: Bloomberg. Data as of March 31, 2024.

## Summary

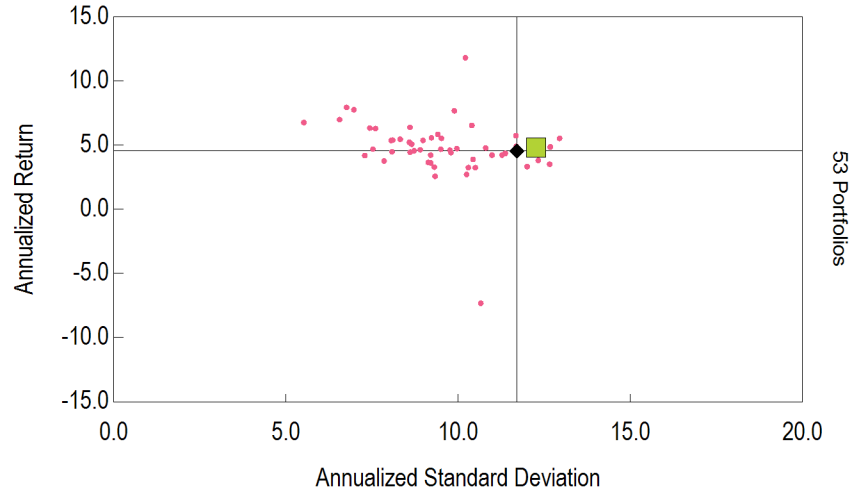
### Key Trends:

- According to the IMF, global growth this year is expected to match the 2023 estimate at around 3.1% with most major economies predicted to avoid a recession. Continued strong economic growth does run the risk of inflation and interest rates staying higher for longer.
- Key economic data in the US is still coming in above forecasts with expectations dramatically evolving for the timing and pace of interest rate cuts. If data remains strong the Federal Reserve may keep rates elevated increasing the risk of an economic slowdown.
- Outside the US we could see other central banks start cutting rates ahead of the Fed, with the ECB particularly in focus. The risk of policy errors remains elevated as central banks try to further reduce inflation toward targets while not tipping their economies into recession.
- US consumers could feel pressure as certain components of inflation (e.g., shelter) remain high, borrowing costs are elevated, and the job market may weaken.
- A focus for US equities going forward will be whether earnings can remain resilient if growth slows. Also, the future paths of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including China's economic uncertainty and on-going weakness in the real estate sector which could spill over into key trading partners' economies. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

## **First Quarter Performance Review**

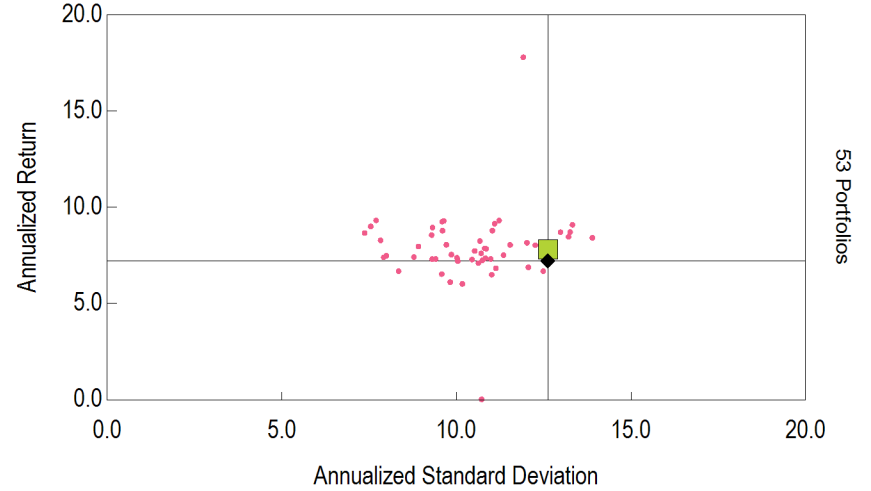
### EBMUDERS Total Plan Composite | As of March 31, 2024

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending March 31, 2024



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

Annualized Return vs. Annualized Standard Deviation  
5 Years Ending March 31, 2024

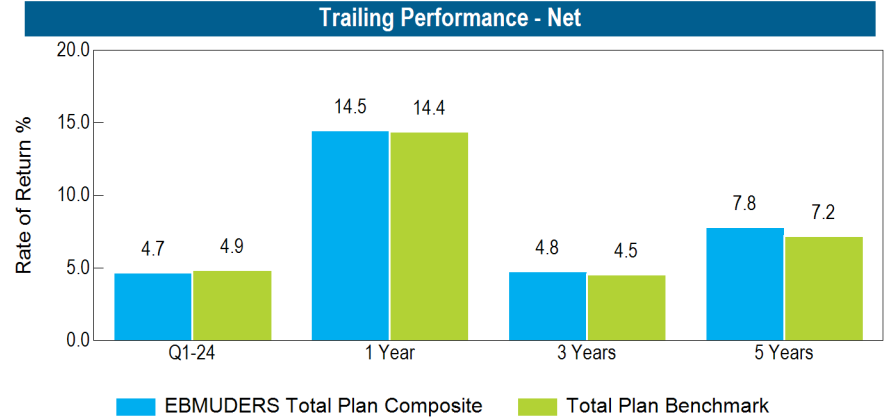
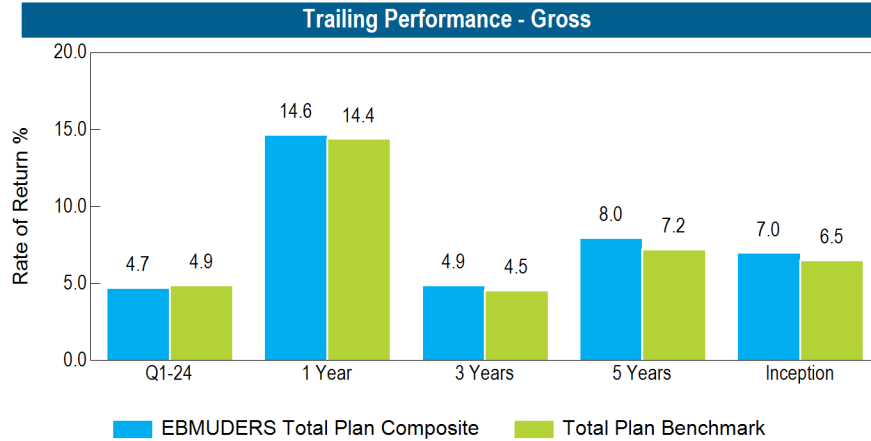


■ EBMUDERS Total Plan Composite    ● InvMetrics Public DB > \$1B Gross  
◆ Total Plan Benchmark

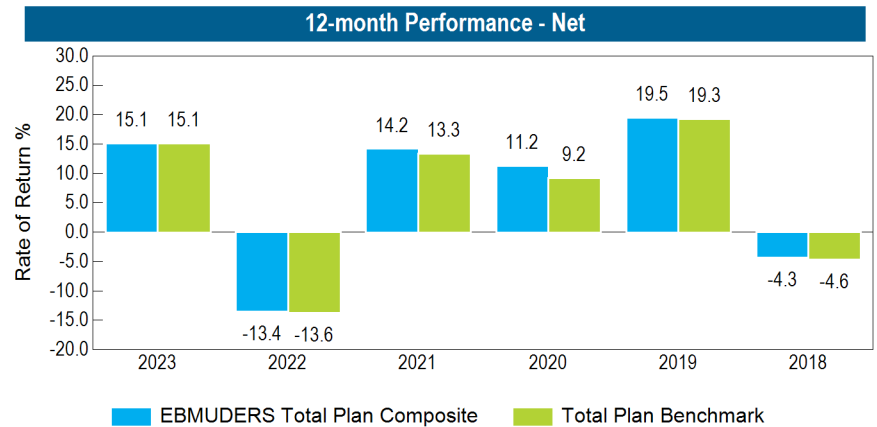
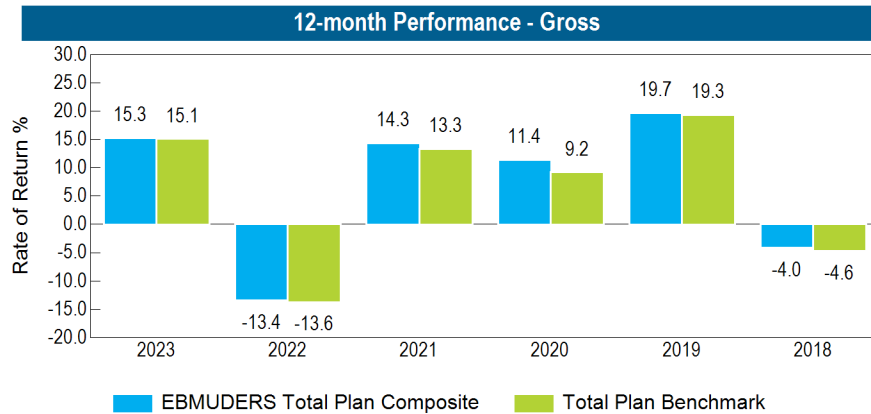
3 Years Ending March 31, 2024			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	4.89%	12.27%	0.19
Total Plan Benchmark	4.53%	11.70%	0.17

5 Years Ending March 31, 2024			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	7.96%	12.63%	0.48
Total Plan Benchmark	7.21%	12.62%	0.42

### EBMUDERS Total Plan Composite | As of March 31, 2024



	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	2018
<b>EBMUDERS Total Plan Composite - Gross</b>	<b>4.7</b>	<b>14.6</b>	<b>4.9</b>	<b>8.0</b>	<b>7.6</b>	<b>15.3</b>	<b>-13.4</b>	<b>14.3</b>	<b>11.4</b>	<b>19.7</b>	<b>-4.0</b>
<b>EBMUDERS Total Plan Composite - Net</b>	<b>4.7</b>	<b>14.5</b>	<b>4.8</b>	<b>7.8</b>	<b>7.4</b>	<b>15.1</b>	<b>-13.4</b>	<b>14.2</b>	<b>11.2</b>	<b>19.5</b>	<b>-4.3</b>
<i>Total Plan Benchmark</i>	<i>4.9</i>	<i>14.4</i>	<i>4.5</i>	<i>7.2</i>	<i>7.0</i>	<i>15.1</i>	<i>-13.6</i>	<i>13.3</i>	<i>9.2</i>	<i>19.3</i>	<i>-4.6</i>
<i>InvMetrics Public DB &gt; \$1B Gross Median</i>	<i>3.8</i>	<i>11.5</i>	<i>4.7</i>	<i>7.9</i>	<i>7.1</i>	<i>11.4</i>	<i>-11.1</i>	<i>14.9</i>	<i>11.5</i>	<i>16.7</i>	<i>-3.7</i>

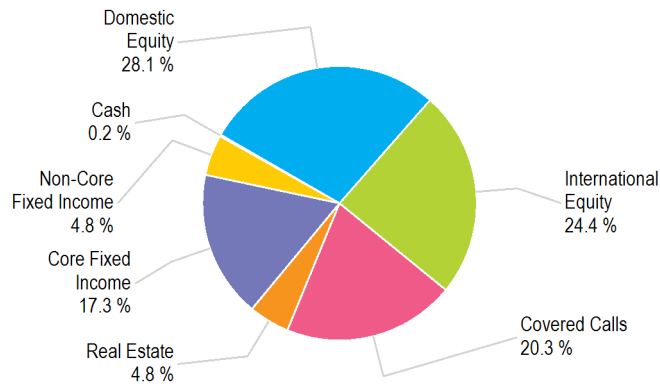


#### Asset Allocation vs. Target

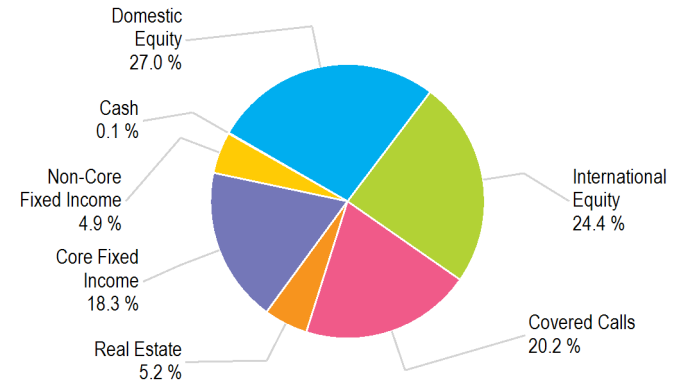
	Current (\$)	Current (%)	Policy (%)	Difference* (%)	Within Range
Domestic Equity	693,607,458	28.1	25.0	3.1	Yes
International Equity	602,654,338	24.4	25.0	-0.6	Yes
Covered Calls	502,025,751	20.3	20.0	0.3	Yes
Real Estate	118,553,114	4.8	5.0	-0.2	Yes
Core Fixed Income	427,163,969	17.3	20.0	-2.7	Yes
Non-Core Fixed Income	117,506,156	4.8	5.0	-0.2	Yes
Cash	5,602,078	0.2	0.0	0.2	Yes
<b>Total</b>	<b>2,467,112,864</b>	<b>100.0</b>	<b>100.0</b>		

\*Difference between Policy and Current Allocation

March 31, 2024 : \$2,467,112,864



December 31, 2023 : \$2,360,015,381



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.

Domestic and International Equity						
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs	
<b>US Equity Composite</b>	<b>693,607,458</b>	<b>10.0</b>	<b>29.3</b>	<b>9.8</b>	<b>14.3</b>	
<i>Russell 3000 Hybrid</i>		<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>	
Northern Trust Russell 3000	692,740,537	10.0	29.3	9.8	14.3	
<i>Russell 3000</i>		<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>	
<b>Non-US Equity Composite</b>	<b>602,654,338</b>	<b>4.6</b>	<b>13.1</b>	<b>2.5</b>	<b>6.4</b>	
<i>MSCI ACWI xUS (blend)</i>		<i>4.8</i>	<i>13.8</i>	<i>2.4</i>	<i>6.5</i>	
Northern Trust ACWI ex US	602,654,338	4.6	13.1	2.2	6.1	
<i>MSCI ACWI ex USA Gross</i>		<i>4.8</i>	<i>13.8</i>	<i>2.4</i>	<i>6.5</i>	

	Covered Calls				
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
<b>Covered Calls Composite</b>	<b>502,025,751</b>	<b>5.6</b>	<b>17.5</b>	<b>7.5</b>	<b>9.3</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>
Parametric BXM	165,945,763	5.3	15.7	7.5	8.7
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>
Parametric Delta Shift	174,254,467	6.4	22.6	9.5	13.2
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>
Van Hulzen	161,825,521	4.7	13.9	5.3	5.8
<i>CBOE S&amp;P 500 BuyWrite USD</i>		<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>

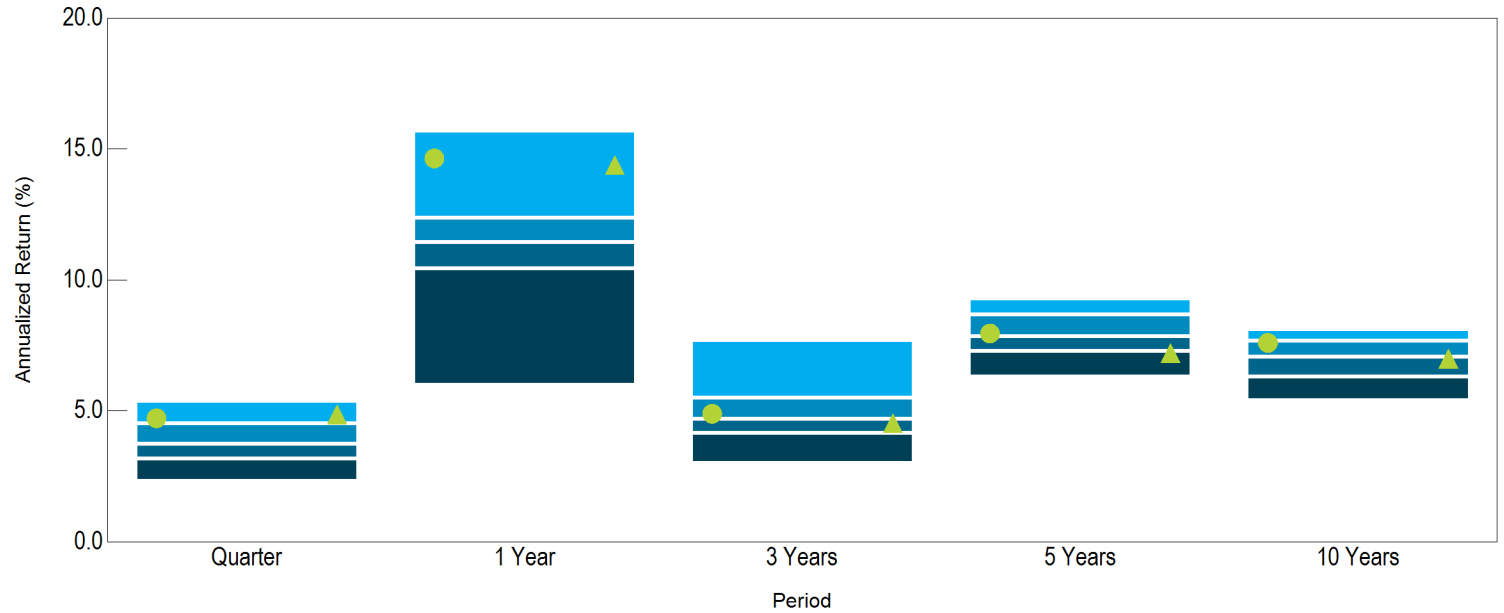
Fixed Income Composite					
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
<b>Fixed Income Composite</b>	<b>544,670,125</b>	<b>-0.2</b>	<b>3.2</b>	<b>-0.5</b>	<b>1.6</b>
<i>Fixed Income Composite Benchmark</i>		<i>-0.3</i>	<i>3.3</i>	<i>-0.8</i>	<i>1.3</i>
CS McKee	216,200,658	-0.3	3.4	-2.0	0.7
<i>Bloomberg US Aggregate TR</i>		<i>-0.8</i>	<i>1.7</i>	<i>-2.5</i>	<i>0.4</i>
Garcia Hamilton	210,963,311	-1.3	0.0	-1.2	--
<i>Garcia Hamilton Custom Benchmark</i>		<i>-0.8</i>	<i>1.7</i>	<i>-1.6</i>	<i>--</i>
MacKay Shields (HY)	60,563,519	2.1	9.8	4.7	5.6
<i>ICE BofA ML US Corp Cash Pay BB-B 1-5Yr</i>		<i>1.4</i>	<i>9.8</i>	<i>3.6</i>	<i>4.1</i>
Federated Investment Counseling (Bank Loans)	56,942,636	2.0	8.1	3.0	3.0
<i>60% CredSuisLevLoan/40% BBStGovCorp</i>		<i>2.0</i>	<i>9.5</i>	<i>4.4</i>	<i>4.1</i>

Benchmark composition and history provided at the end of this report.

Real Estate Composite					
	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
<b>Real Estate Composite</b>	<b>118,553,114</b>	<b>-3.1</b>	<b>-3.1</b>	<b>4.6</b>	<b>5.3</b>
<i>Real Estate Composite Benchmark</i>		<i>-1.6</i>	<i>1.4</i>	<i>5.1</i>	<i>4.9</i>
RREEF America II Lag	54,829,182	-5.9	-15.4	4.7	4.6
<i>NCREIF NPI Mo 1 Qtr Lag</i>		<i>-3.0</i>	<i>-7.9</i>	<i>4.7</i>	<i>4.4</i>
CenterSquare	63,723,932	-0.4	10.9	4.5	5.2
<i>FTSE NAREIT Equity REIT</i>		<i>-0.2</i>	<i>10.5</i>	<i>4.1</i>	<i>4.1</i>

RREEF American II Performance results are lagged one quarter.

InvMetrics Public DB > \$1B Gross Return Comparison  
Ending March 31, 2024

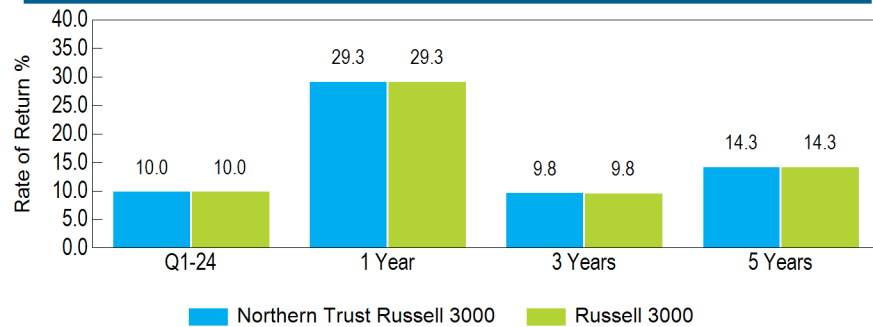


	Quarter		1 Year		3 Years		5 Years		10 Years	
<b>Return (Rank)</b>	5.4		15.7		7.7		9.3		8.1	
5th Percentile	4.5		12.4		5.5		8.7		7.7	
25th Percentile	3.8		11.5		4.7		7.9		7.1	
Median	3.2		10.5		4.2		7.3		6.3	
75th Percentile	2.3		6.0		3.0		6.3		5.4	
95th Percentile	57		57		53		53		49	
# of Portfolios	4.7	(20)	14.6	(11)	4.9	(43)	8.0	(49)	7.6	(32)
EBMUDERS Total Plan Composite	4.9	(14)	14.4	(12)	4.5	(61)	7.2	(81)	7.0	(53)
Total Plan Benchmark										

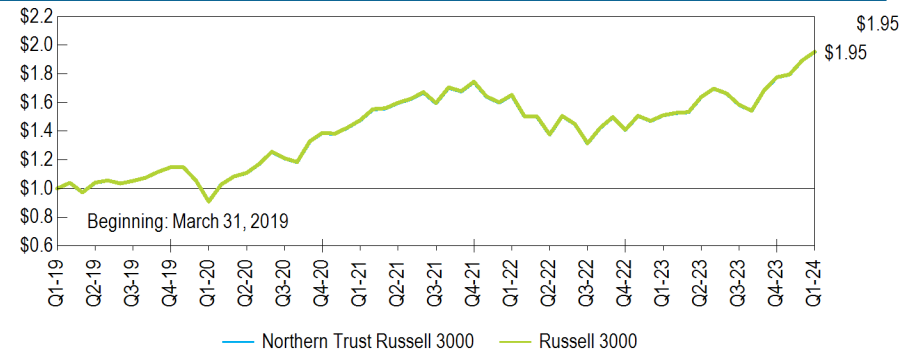
#### 5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Northern Trust Russell 3000	0.00%	1.00	-0.32	0.66	0.06%	1.00	99.65%	99.89%
Russell 3000	0.00%	1.00	--	0.66	0.00%	1.00	100.00%	100.00%

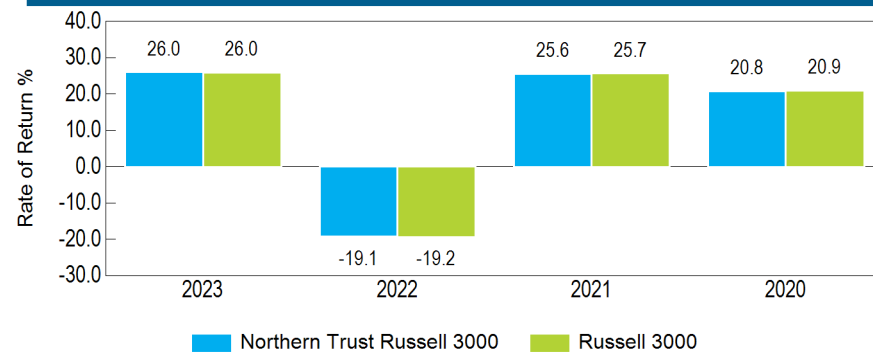
#### Trailing Period Performance



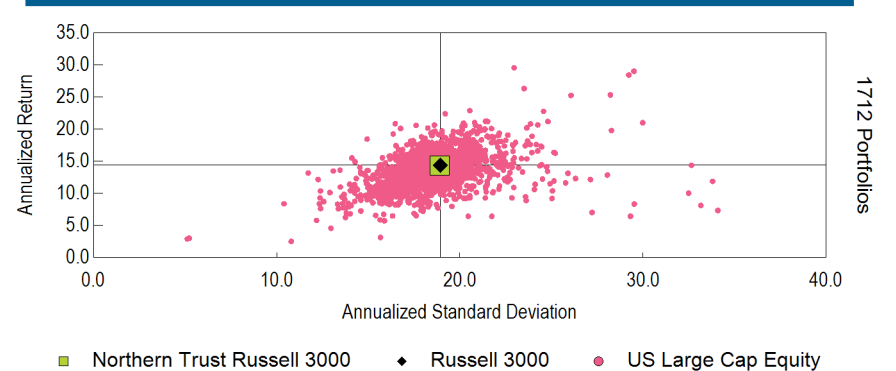
#### Growth of \$1 - 5 Year



#### Calendar Year Performance



#### Risk/Return - 5 Year

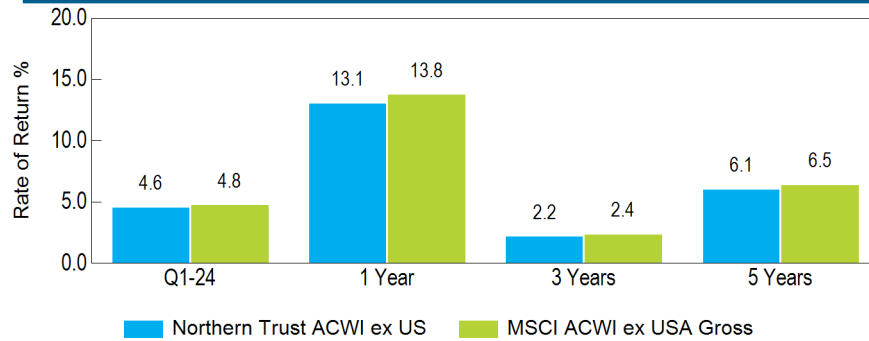


NorthernTrust Russell 3000 has an inception date of June 2018.

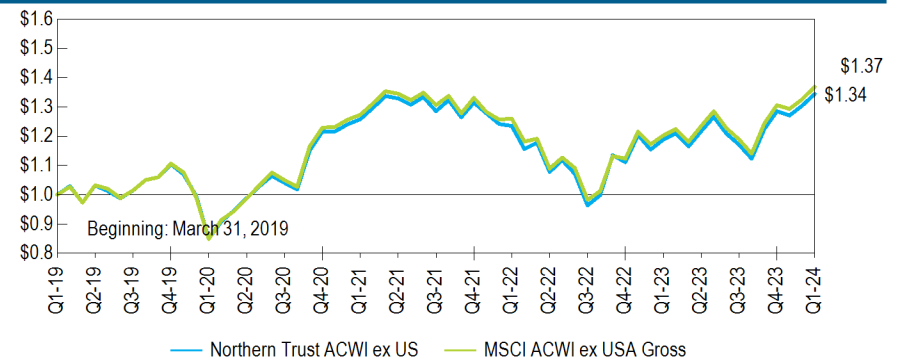
#### 5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Northern Trust ACWI ex US	-0.04%	1.01	-0.24	0.23	1.81%	0.99	102.56%	102.02%
MSCI ACWI ex USA Gross	0.00%	1.00	--	0.26	0.00%	1.00	100.00%	100.00%

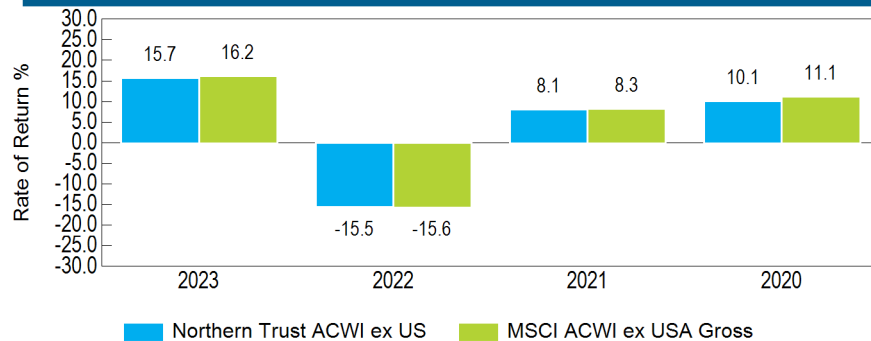
#### Trailing Period Performance



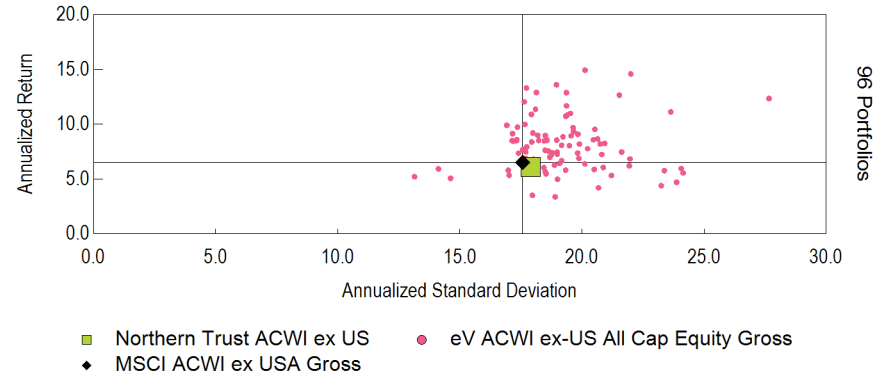
#### Growth of \$1 - 5 Year



#### Calendar Year Performance



#### Risk/Return - 5 Year

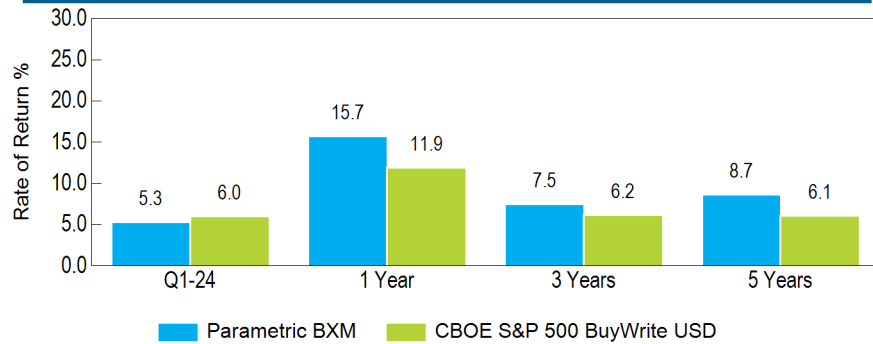


Northern Trust ACWI ex US has an inception date of June 2018.

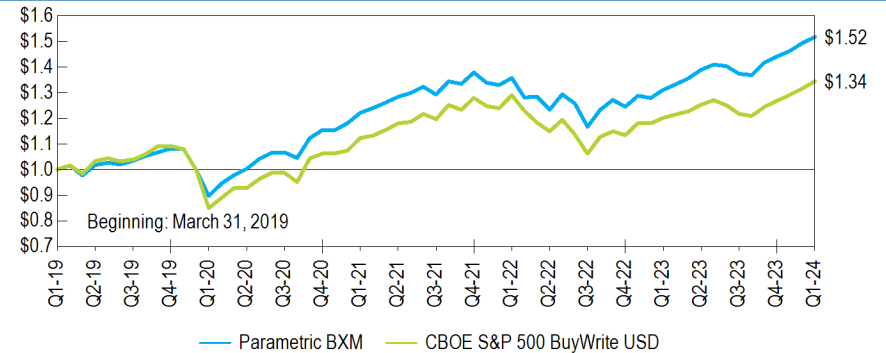
#### 5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Parametric BXM	0.27%	0.82	0.58	0.59	4.19%	0.90	95.35%	84.73%
CBOE S&P 500 BuyWrite USD	0.00%	1.00	--	0.32	0.00%	1.00	100.00%	100.00%

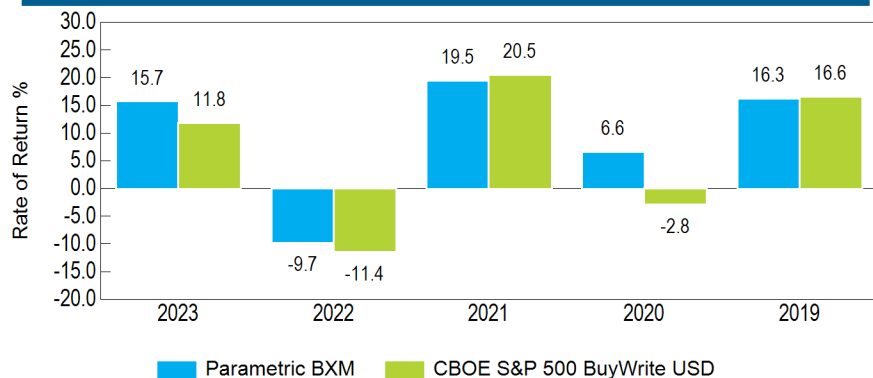
#### Trailing Period Performance



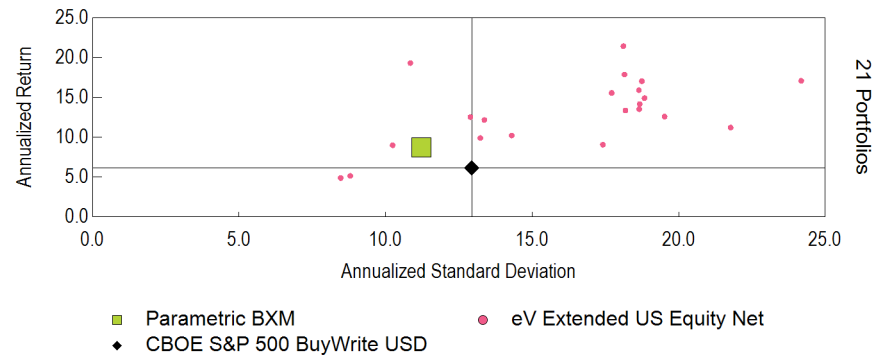
#### Growth of \$1 - 5 Year



#### Calendar Year Performance



#### Risk/Return - 5 Year

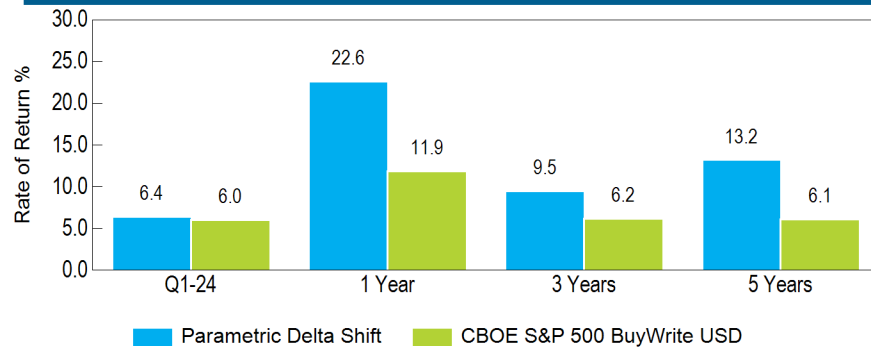


Parametric BXM has an inception date of March 2014.

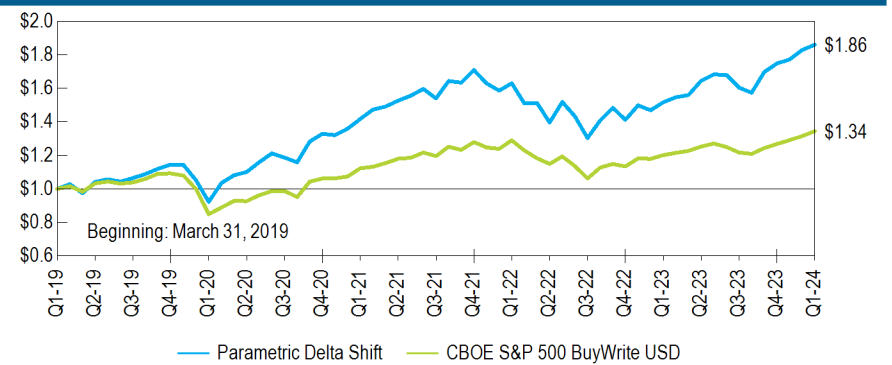
#### 5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Parametric Delta Shift	0.47%	1.18	0.91	0.65	7.50%	0.82	201.31%	116.56%
CBOE S&P 500 BuyWrite USD	0.00%	1.00	--	0.32	0.00%	1.00	100.00%	100.00%

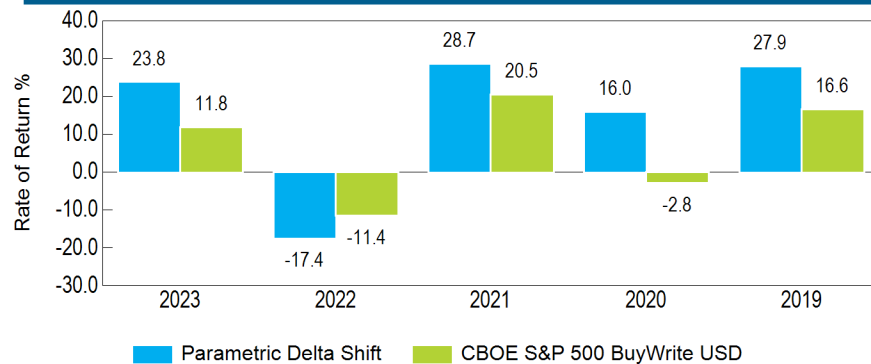
#### Trailing Period Performance



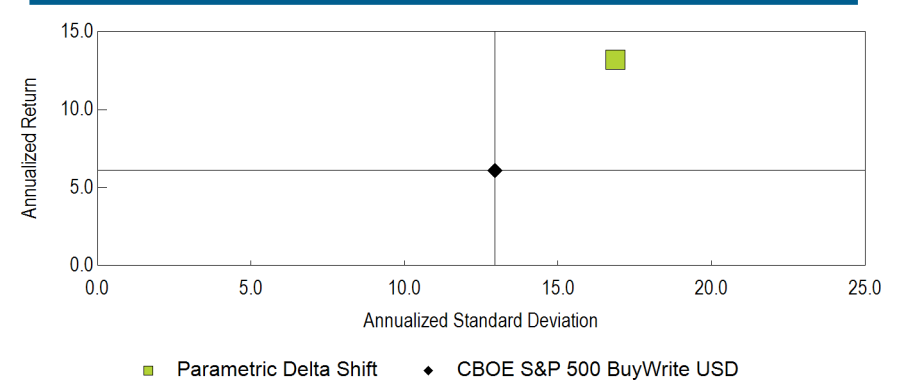
#### Growth of \$1 - 5 Year



#### Calendar Year Performance



#### Risk/Return - 5 Year

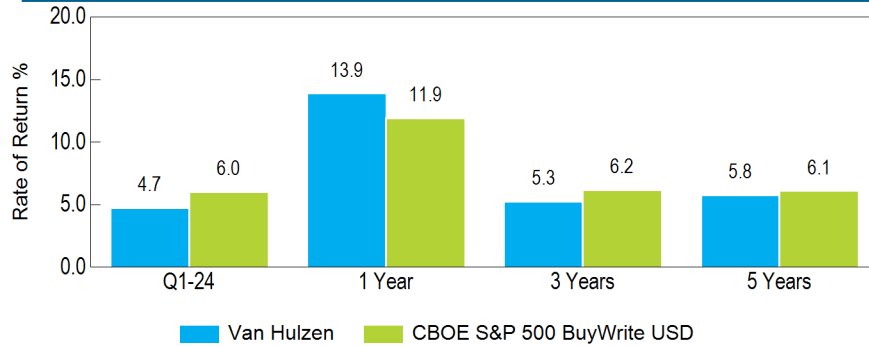


Parametric Delta Shift has an inception date of March 2014.

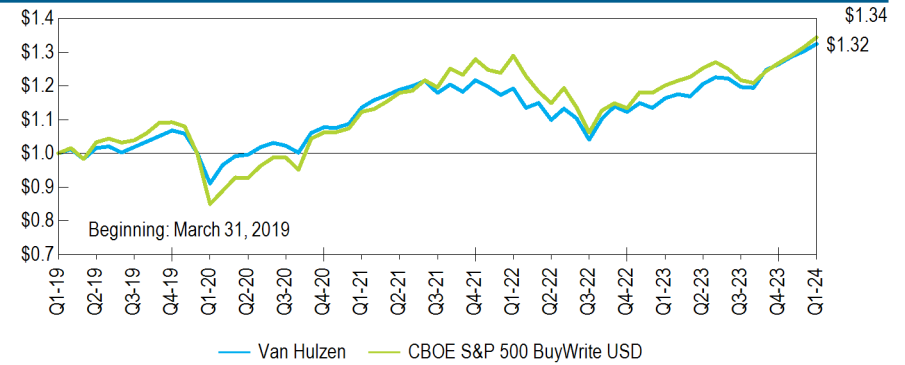
#### 5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Van Hulzen	0.09%	0.71	-0.10	0.36	5.49%	0.84	73.27%	83.04%
CBOE S&P 500 BuyWrite USD	0.00%	1.00	--	0.32	0.00%	1.00	100.00%	100.00%

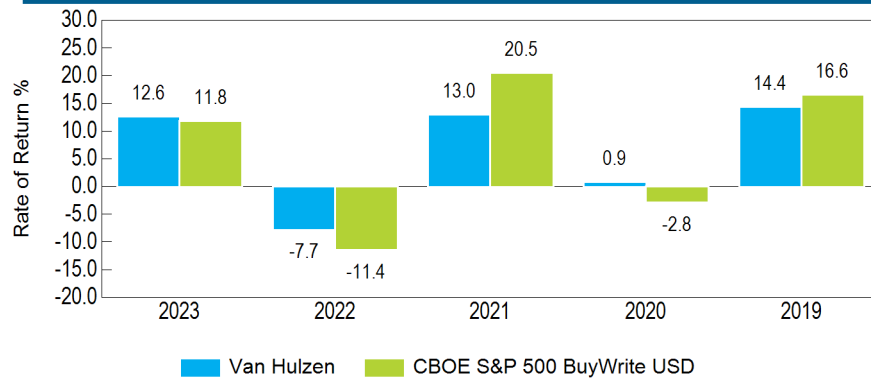
#### Trailing Period Performance



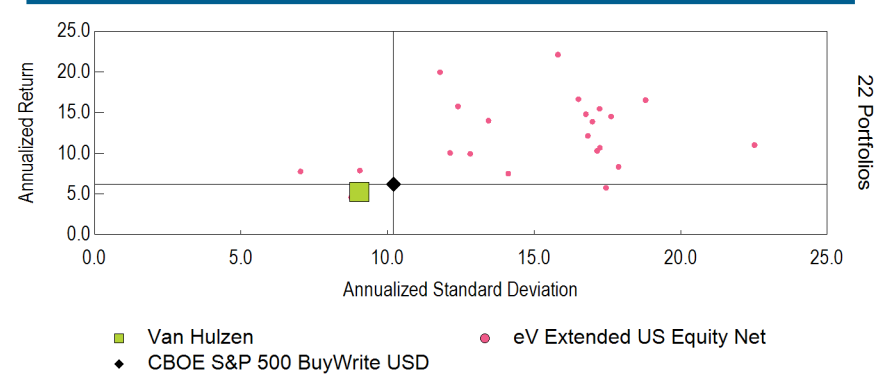
#### Growth of \$1 - 5 Year



#### Calendar Year Performance



#### Risk/Return - 5 Year

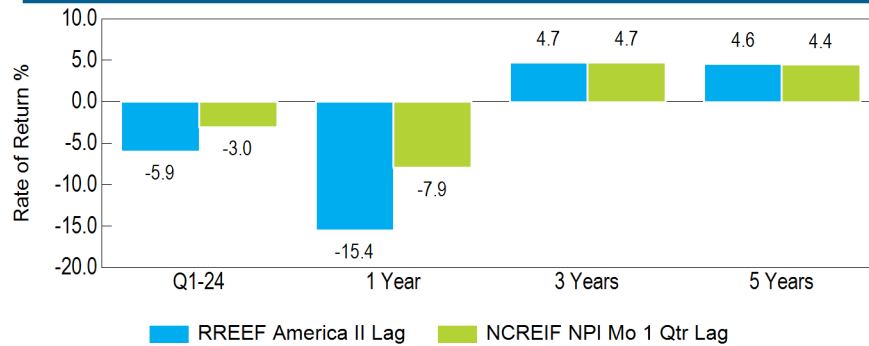


Van Hulzen has an inception date of March 2014.

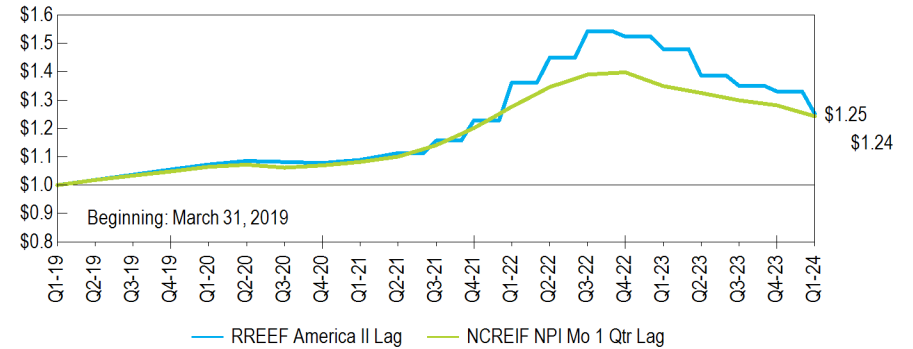
#### 5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
RREEF America II Lag	-0.21%	1.46	-0.11	0.21	7.10%	0.29	116.32%	160.03%
NCREIF NPI Mo 1 Qtr Lag	0.00%	1.00	--	0.82	0.00%	1.00	100.00%	100.00%

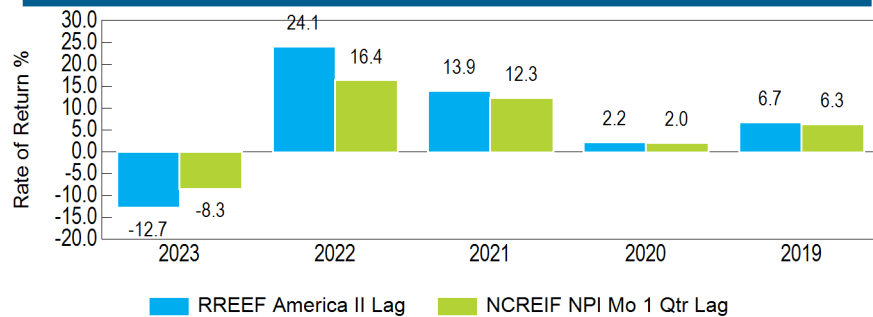
#### Trailing Period Performance



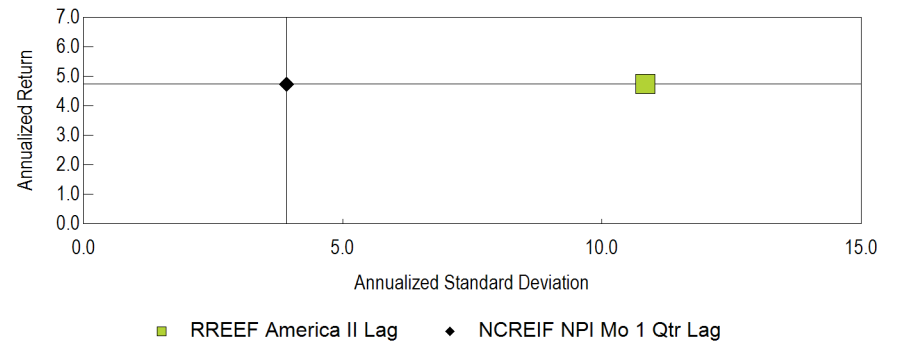
#### Growth of \$1 - 5 Year



#### Calendar Year Performance



#### Risk/Return - 5 Year

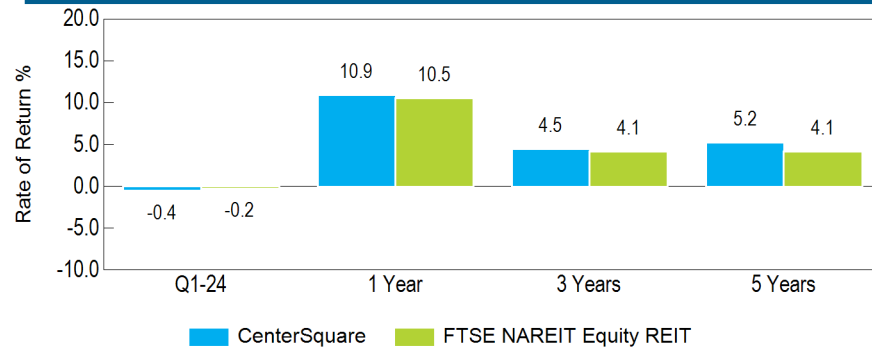


RREEF American II Performance results are lagged one quarter.  
RREEF America II Lag has an inception date of January 2007.

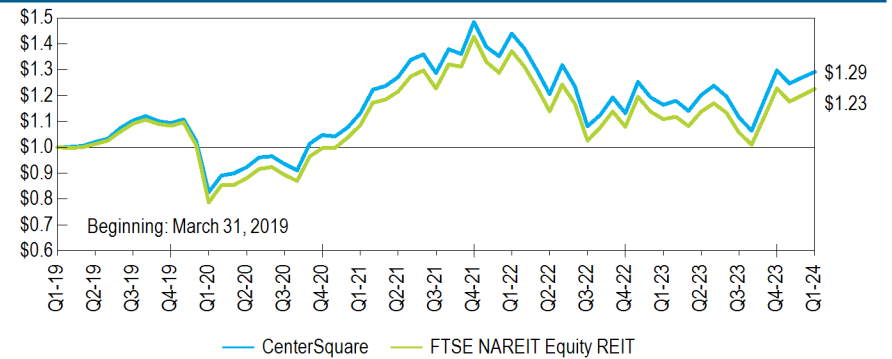
#### 5 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
CenterSquare	0.07%	0.97	0.49	0.15	1.66%	0.99	99.93%	98.50%
FTSE NAREIT Equity REIT	0.00%	1.00	--	0.11	0.00%	1.00	100.00%	100.00%

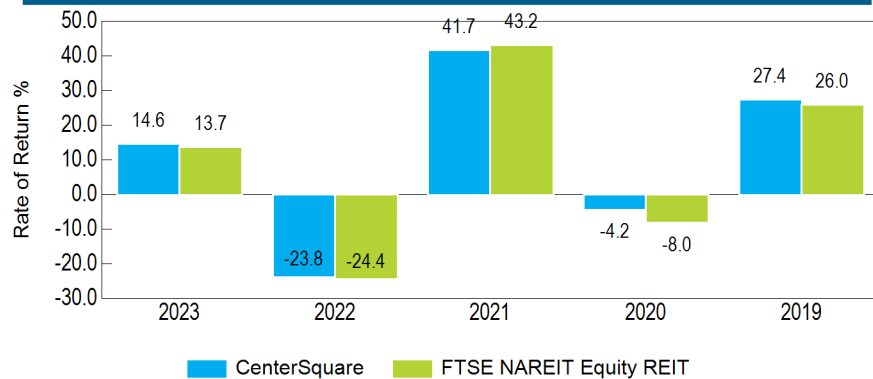
#### Trailing Period Performance



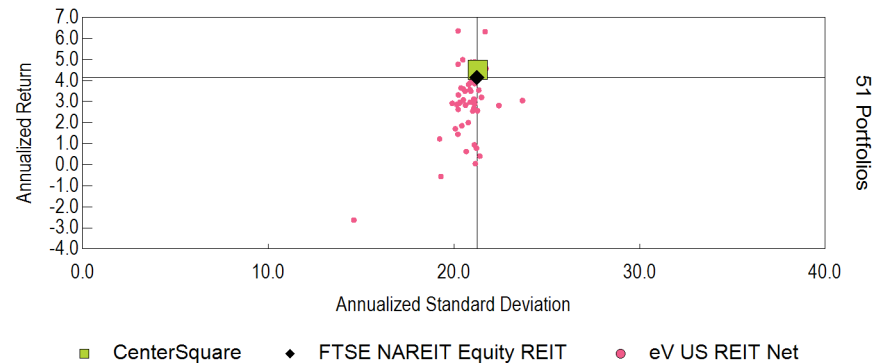
#### Growth of \$1 - 5 Year



#### Calendar Year Performance

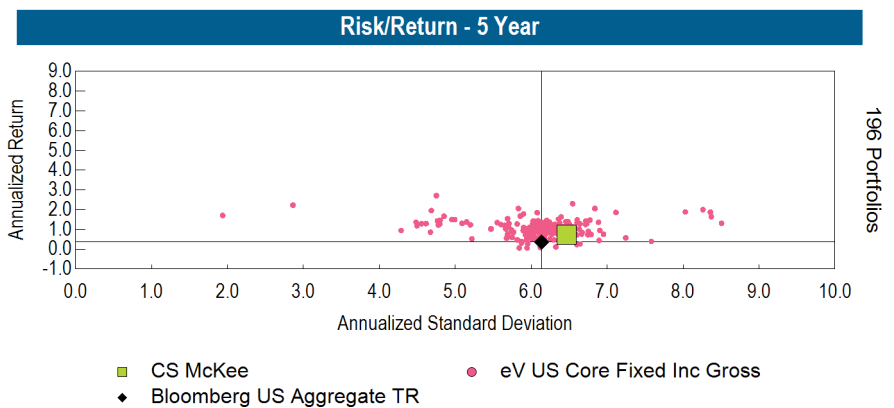
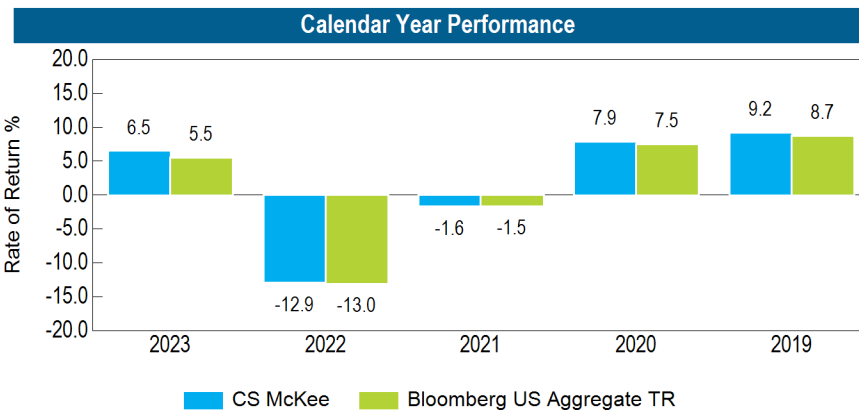
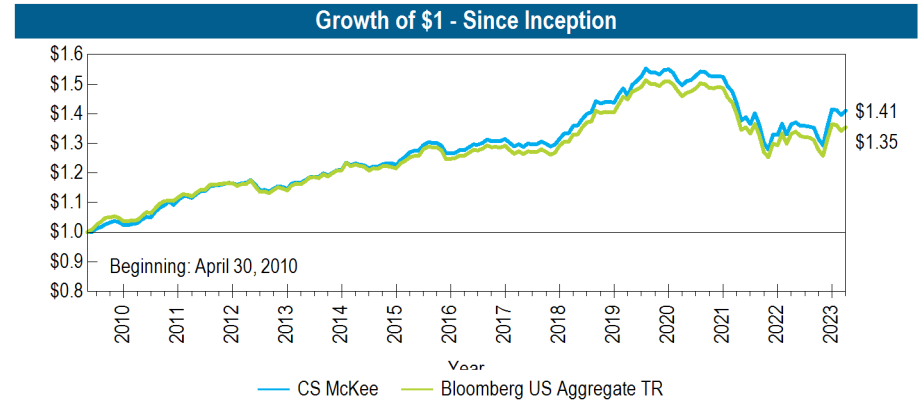
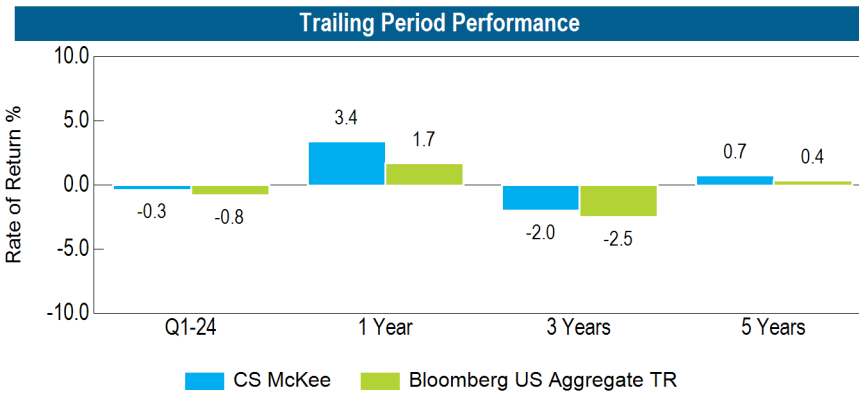


#### Risk/Return - 5 Year



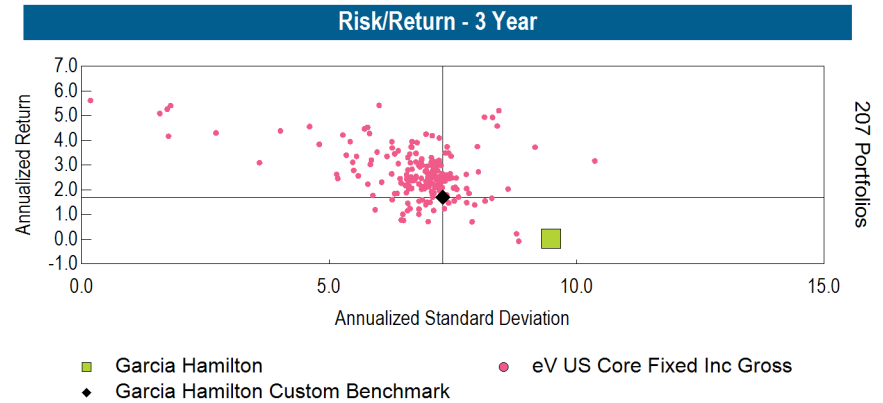
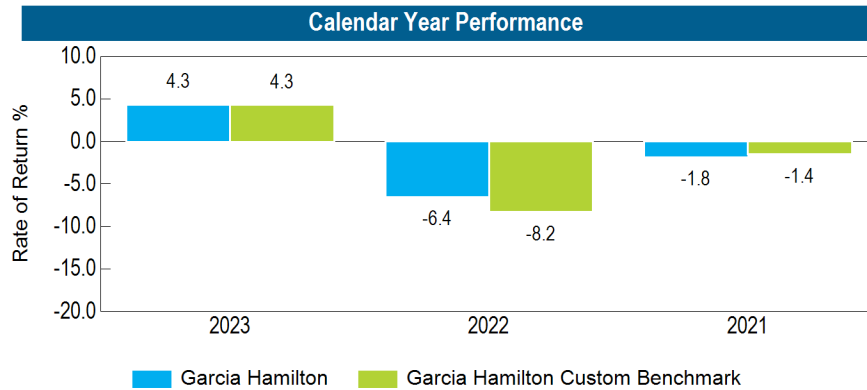
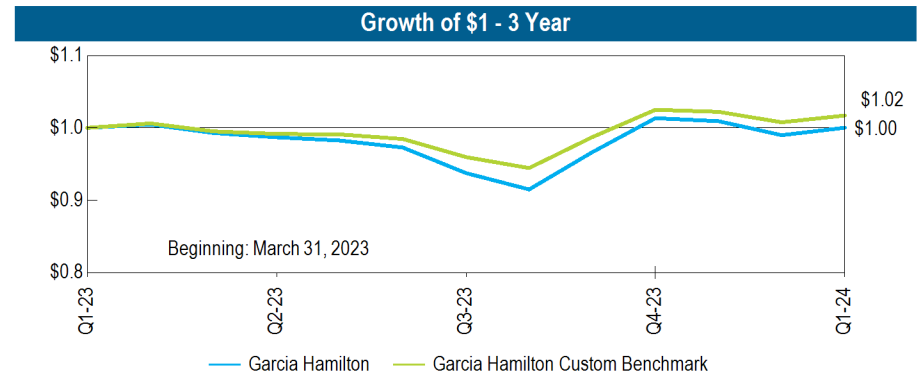
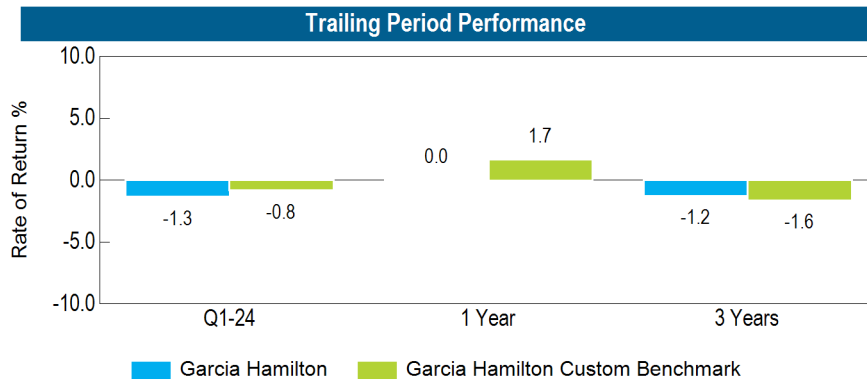
CenterSquare has an inception date of October 2011.

5 Year Statistics Summary									
	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	
CS McKee	0.02%	1.00	0.35	0.34	0.85%	0.96	103.30%	97.41%	
Bloomberg US Aggregate TR	0.00%	1.00	--	0.28	0.00%	1.00	100.00%	100.00%	



CS McKee has an inception date of April 2010.

3 Year Statistics Summary									
	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	
Garcia Hamilton	0.06%	1.22	0.18	-0.52	1.94%	0.96	126.39%	112.66%	
Garcia Hamilton Custom Benchmark	0.00%	1.00	--	-0.71	0.00%	1.00	100.00%	100.00%	

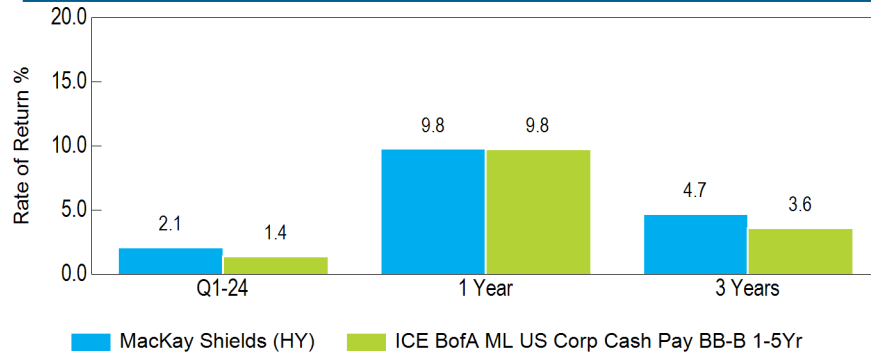


Garcia Hamilton has an inception date of November 2019.  
5 Year risk statistics are not available at this time.

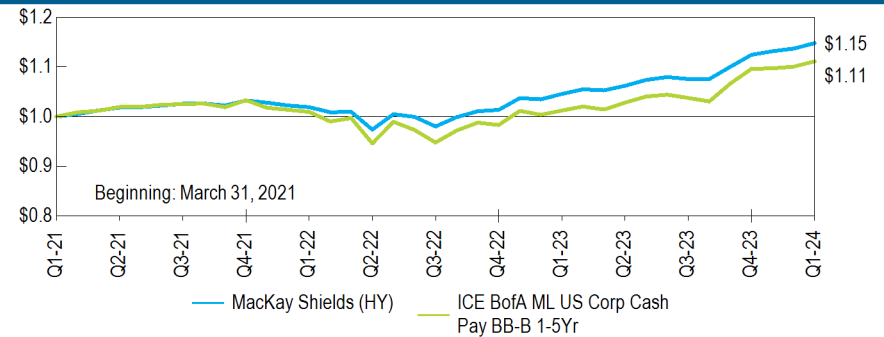
#### 3 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
MacKay Shields (HY)	0.15%	0.67	0.32	0.40	2.19%	0.96	76.59%	57.36%
ICE BofA ML US Corp Cash Pay BB-B 1-5Yr	0.00%	1.00	--	0.16	0.00%	1.00	100.00%	100.00%

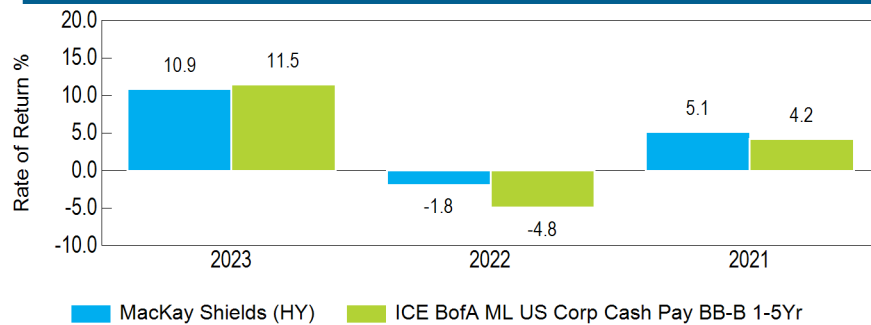
#### Trailing Period Performance



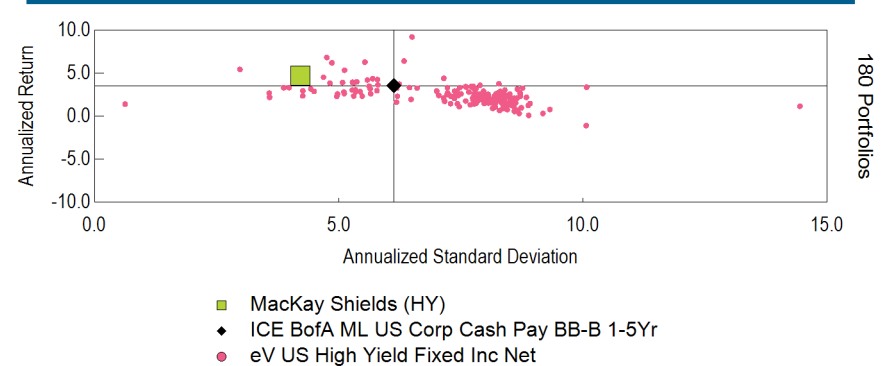
#### Growth of \$1 - 3 Year



#### Calendar Year Performance



#### Risk/Return - 3 Year

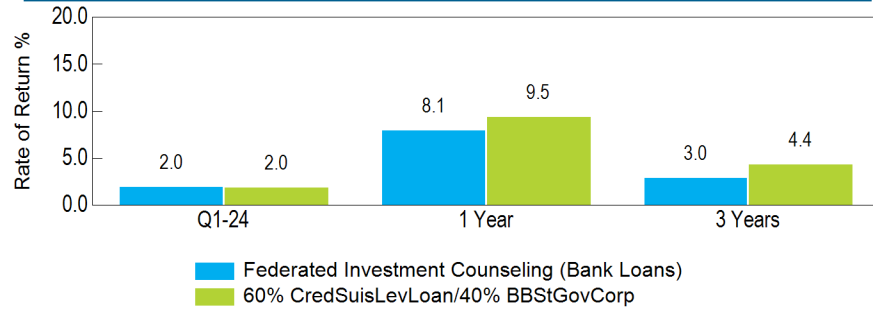


MacKay Shields has an inception date of February 2019.  
5 Year Risk statistics are not available at this time.

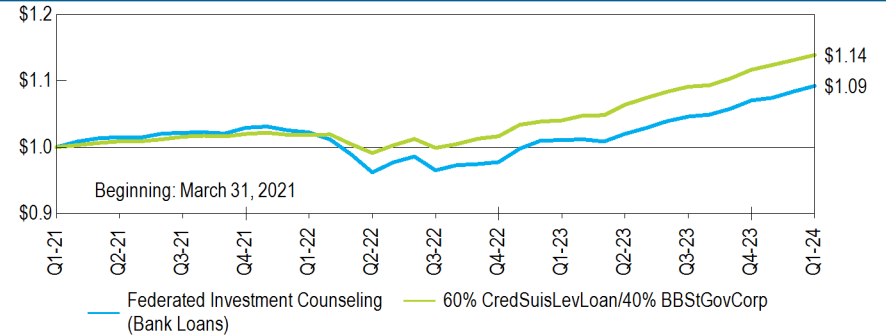
#### 3 Year Statistics Summary

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Federated Investment Counseling (Bank Loans)	-0.28%	1.35	-1.26	-0.03	1.54%	0.86	88.94%	180.90%
60% CredSuisLevLoan/40% BBStGovCorp	0.00%	1.00	--	0.77	0.00%	1.00	100.00%	100.00%

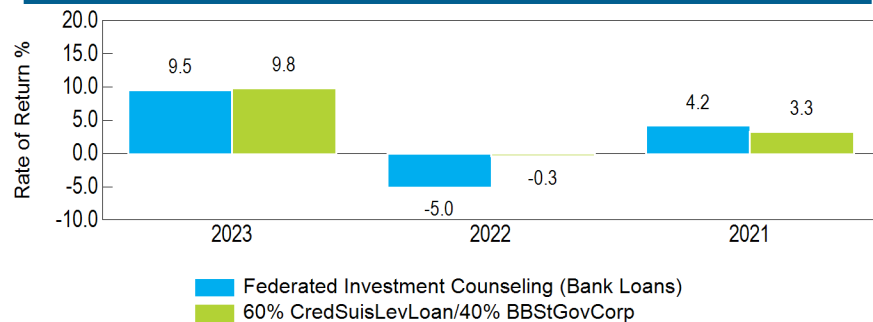
#### Trailing Period Performance



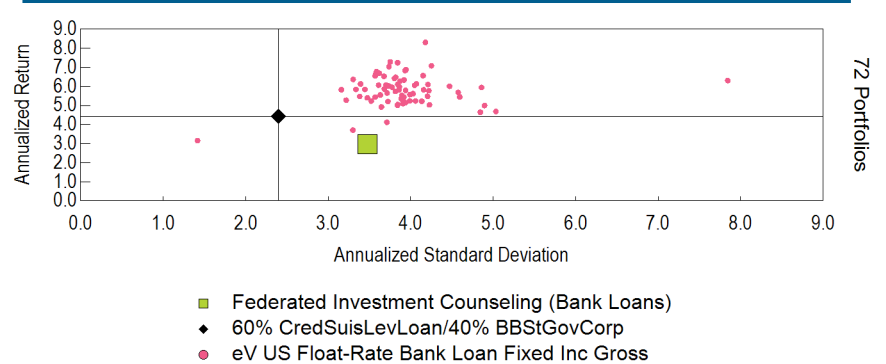
#### Growth of \$1 - 3 Year



#### Calendar Year Performance



#### Risk/Return - 3 Year



Federated Investment Counseling has an inception date of February 2019.  
5 Year Risk statistics are not available at this time.

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
<b>EBMUDERS Total Plan Composite</b>	<b>4.7</b>	<b>14.5</b>	<b>4.8</b>	<b>7.8</b>
<i>Total Plan Benchmark</i>	<i>4.9</i>	<i>14.4</i>	<i>4.5</i>	<i>7.2</i>
<b>US Equity Composite</b>	<b>10.0</b>	<b>29.3</b>	<b>9.8</b>	<b>14.3</b>
<i>Russell 3000 Hybrid</i>	<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>
<b>Non-US Equity Composite</b>	<b>4.6</b>	<b>13.1</b>	<b>2.5</b>	<b>6.3</b>
<i>MSCI ACWI xUS (blend)</i>	<i>4.8</i>	<i>13.8</i>	<i>2.4</i>	<i>6.5</i>
<b>Covered Calls Composite</b>	<b>5.5</b>	<b>17.3</b>	<b>7.3</b>	<b>9.1</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>
<b>Real Estate Composite</b>	<b>-3.2</b>	<b>-3.6</b>	<b>4.2</b>	<b>4.8</b>
<i>Real Estate Composite Benchmark</i>	<i>-1.6</i>	<i>1.4</i>	<i>5.1</i>	<i>4.9</i>
<b>Fixed Income Composite</b>	<b>-0.3</b>	<b>3.0</b>	<b>-0.6</b>	<b>1.5</b>
<i>Fixed Income Composite Benchmark</i>	<i>-0.3</i>	<i>3.3</i>	<i>-0.8</i>	<i>1.3</i>
<b>Cash Composite</b>	<b>1.0</b>	<b>4.1</b>	<b>2.3</b>	<b>2.2</b>
<i>FTSE T-Bill 3 Months TR</i>	<i>1.4</i>	<i>5.5</i>	<i>2.7</i>	<i>2.1</i>

Benchmark composition and history provided at the end of this report.

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
<b>US Equity Composite</b>	<b>10.0</b>	<b>29.3</b>	<b>9.8</b>	<b>14.3</b>
<i>Russell 3000 Hybrid</i>	<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>
Northern Trust Russell 3000	10.0	29.3	9.8	14.3
<i>Russell 3000</i>	<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>
<b>Non-US Equity Composite</b>	<b>4.6</b>	<b>13.1</b>	<b>2.5</b>	<b>6.3</b>
<i>MSCI ACWI xUS (blend)</i>	<i>4.8</i>	<i>13.8</i>	<i>2.4</i>	<i>6.5</i>
Northern Trust ACWI ex US	4.6	13.1	2.2	6.0
<i>MSCI ACWI ex USA Gross</i>	<i>4.8</i>	<i>13.8</i>	<i>2.4</i>	<i>6.5</i>
<b>Covered Calls Composite</b>	<b>5.5</b>	<b>17.3</b>	<b>7.3</b>	<b>9.1</b>
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>
Parametric BXM	5.3	15.6	7.3	8.5
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>
Parametric Delta Shift	6.3	22.3	9.2	12.9
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>
Van Hulzen	4.7	13.6	5.0	5.5
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
<b>Real Estate Composite</b>	<b>-3.2</b>	<b>-3.6</b>	<b>4.2</b>	<b>4.8</b>
<i>Real Estate Composite Benchmark</i>	<i>-1.6</i>	<i>1.4</i>	<i>5.1</i>	<i>4.9</i>
RREEF America II Lag	-6.2	-16.0	3.8	3.6
<i>NCREIF NPI Mo 1 Qtr Lag</i>	<i>-3.0</i>	<i>-7.9</i>	<i>4.7</i>	<i>4.4</i>
CenterSquare	-0.5	10.6	4.2	5.0
<i>FTSE NAREIT Equity REIT</i>	<i>-0.2</i>	<i>10.5</i>	<i>4.1</i>	<i>4.1</i>
<b>Fixed Income Composite</b>	<b>-0.3</b>	<b>3.0</b>	<b>-0.6</b>	<b>1.5</b>
<i>Fixed Income Composite Benchmark</i>	<i>-0.3</i>	<i>3.3</i>	<i>-0.8</i>	<i>1.3</i>
<b>Fixed Income Core Fixed Income Composite</b>	<b>-0.9</b>	<b>1.5</b>	<b>-1.7</b>	<b>0.8</b>
<i>Fixed Income Core Composite Bench</i>	<i>-0.8</i>	<i>1.7</i>	<i>-2.0</i>	<i>--</i>
CS McKee	-0.4	3.2	-2.1	0.6
<i>Bloomberg US Aggregate TR</i>	<i>-0.8</i>	<i>1.7</i>	<i>-2.5</i>	<i>0.4</i>
Garcia Hamilton	-1.3	-0.1	-1.4	--
<i>Garcia Hamilton Custom Benchmark</i>	<i>-0.8</i>	<i>1.7</i>	<i>-1.6</i>	<i>--</i>
<b>Fixed Income Non-Core Fixed Income Composite</b>	<b>1.9</b>	<b>8.5</b>	<b>3.5</b>	<b>4.0</b>
<i>Fixed Income Non-Core Composite Bench</i>	<i>1.7</i>	<i>9.6</i>	<i>4.0</i>	<i>4.1</i>
MacKay Shields (HY)	2.0	9.3	4.3	5.1
<i>ICE BofA ML US Corp Cash Pay BB-B 1-5Yr</i>	<i>1.4</i>	<i>9.8</i>	<i>3.6</i>	<i>4.1</i>
Federated Investment Counseling (Bank Loans)	1.9	7.5	2.5	2.5
<i>60% CredSuisLevLoan/40% BBStGovCorp</i>	<i>2.0</i>	<i>9.5</i>	<i>4.4</i>	<i>4.1</i>

### Benchmark History As of March 31, 2024

#### EBMUDERS Total Plan Composite

2/1/2023	Present	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 20% Bloomberg US Aggregate 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% Morningstar LSTA US Performing Loans Index
12/1/2019	1/31/2023	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% Bloomberg US Intermediate Gov/Cred / 10% Bloomberg US Aggregate 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% Morningstar LSTA US Performing Loans Index
3/1/2019	11/30/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 5% Bloomberg 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% Morningstar LSTA US Performing Loans Index
7/1/2018	2/28/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 5% Bloomberg US Govt/Credit 1-3 Yr. TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
4/1/2014	6/30/2018	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 10% Bloomberg US Aggregate TR / 5% Bloomberg US Govt/Credit 1-3 Yr. TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
3/1/2014	3/31/2014	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 15% Bloomberg US Aggregate TR / 2.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% Morningstar LSTA US Performing Loans Index
11/1/2011	2/28/2014	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% Bloomberg 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% Bloomberg 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% Bloomberg US Aggregate TR / 5% NCREIF Property Index
10/1/2005	12/31/2006	50% Russell 3000 / 25% Bloomberg 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% Bloomberg US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag

### Benchmark History As of March 31, 2024

#### Fixed Income Composite

2/1/2023	Present	80% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 10% 60% CredSuisLevLoan/40% BBStGovCorp
12/1/2019	1/31/2023	40% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 40% Bloomberg US Intermediate Gov/Cred / 10% 60% CredSuisLevLoan/40% BBStGovCorp
3/1/2019	11/30/2019	60% Bloomberg US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 20% Bloomberg US Govt/Credit 1-3 Yr. TR / 10% 60% CredSuisLevLoan/40% BBStGovCorp
7/1/2018	2/28/2019	60% Bloomberg US Aggregate TR / 10% Morningstar LSTA US Performing Loans Index / 20% Bloomberg US Govt/Credit 1-3 Yr. TR / 10% Bloomberg US High Yield 1-5Yr Cash Pay 2%
4/1/2014	6/30/2018	50% Bloomberg US Aggregate TR / 12.5% Morningstar LSTA US Performing Loans Index / 25% Bloomberg US Govt/Credit 1-3 Yr. TR / 12.5% Bloomberg US High Yield 1-5Yr Cash Pay 2%
3/1/2014	3/31/2014	75% Bloomberg US Aggregate TR / 12.5% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 12.5% Morningstar LSTA US Performing Loans Index
1/1/2008	2/28/2014	Bloomberg US Universal TR
1/1/1976	12/31/2007	Bloomberg US Aggregate TR

#### Fixed Income Core Fixed Income Composite

2/1/2023	Present	Bloomberg US Aggregate TR
12/1/2019	1/31/2023	50% Bloomberg US Aggregate TR / 50% Bloomberg 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% Bloomberg US Govt/Credit 1-3 Yr. TR
3/1/2014	2/28/2019	25% Morningstar LSTA US Performing Loans Index / 25% Bloomberg US High Yield 1-5Yr Cash Pay 2% / 50% Bloomberg US Govt/Credit 1-3 Yr. TR

### Benchmark History As of March 31, 2024

#### Real Estate Composite

11/1/2011	Present	50% FTSE NAREIT Equity REIT / 50% NCREIF NPI Mo 1 Qtr Lag
10/1/1998	10/31/2011	NCREIF NPI Mo 1 Qtr Lag
4/1/1978	9/30/1998	NCREIF Property Index

#### Garcia Hamilton

2/1/2023	Present	Bloomberg US Aggregate TR
11/1/2019	1/31/2023	Bloomberg US Govt/Credit Int TR

## **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>2,3</sup>
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--

→ No managers are currently on watch

<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.

<sup>3</sup> Performance figures not yet available.

### 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
Northern Trust – ACWixUS	Acceptable	Acceptable
Parametric – BXM	Acceptable	Acceptable
Parametric – Delta Shift	Acceptable	Acceptable
Van Hulzen	Acceptable	Acceptable
CS McKee	Acceptable	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 - 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
Non-US Equity - Passive	Tracking error > 1.75%	Tracking error > 1.5% for 6 consecutive months	Fund annualized return < benchmark annualized return - 0.50% 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.

Manager Performance			
	QTD	1 Yr	3 Yrs
Northern Trust Russell 3000	10.0	29.3	9.8
<i>Russell 3000</i>	<i>10.0</i>	<i>29.3</i>	<i>9.8</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:** **Acceptable**

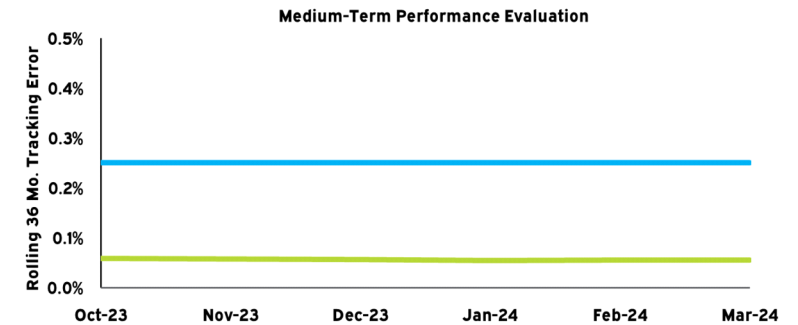
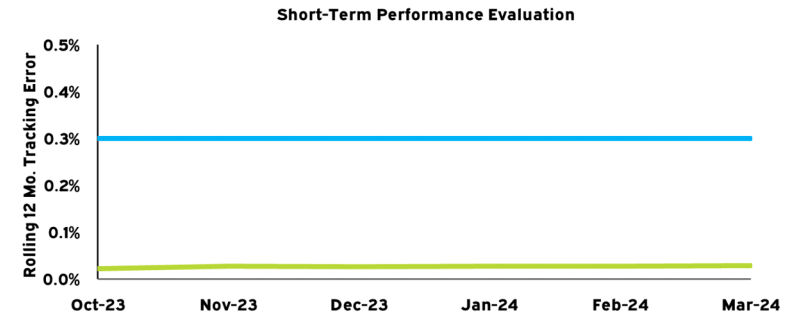
### Long-Term Criteria (60+ months)

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

**Current Status:** Not Applicable

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

— Excess  
— Threshold



Manager Performance			
	QTD	1 Yr	3 Yrs
Northern Trust ACWI ex US	4.6	13.1	2.2
MSCI ACWI ex USA Gross	4.8	13.8	2.4

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

Tracking error > 1.75% for 6 consecutive months

**Current Status: Acceptable**

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

Tracking error > 1.5% for 6 consecutive months

**Current Status: Acceptable**

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

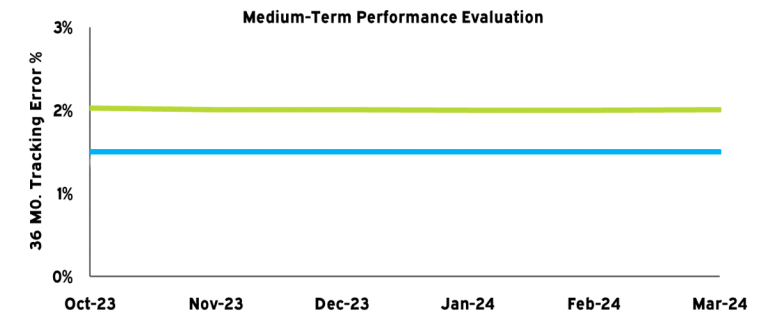
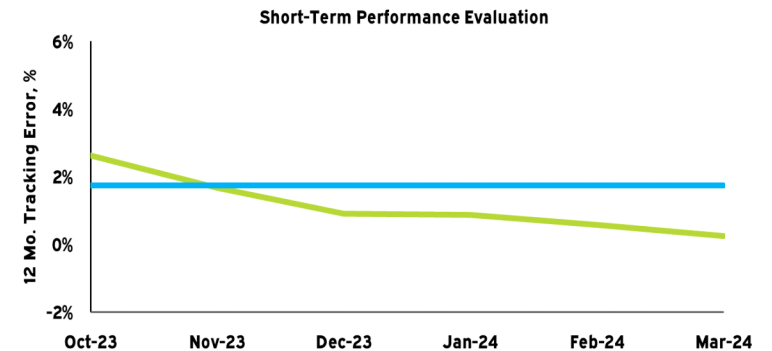
Fund annualized return < benchmark annualized return -0.50% for 6 consecutive months

**Current Status: Not Applicable**

**Overall Status:**

**Acceptable**

— Excess  
— Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Parametric BXM	5.3	15.6	7.3	8.5
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>

#### 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**

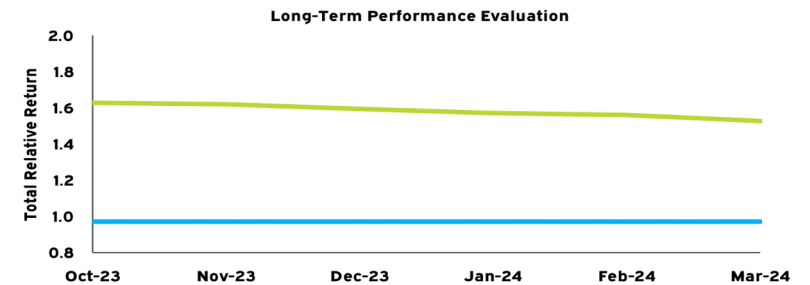
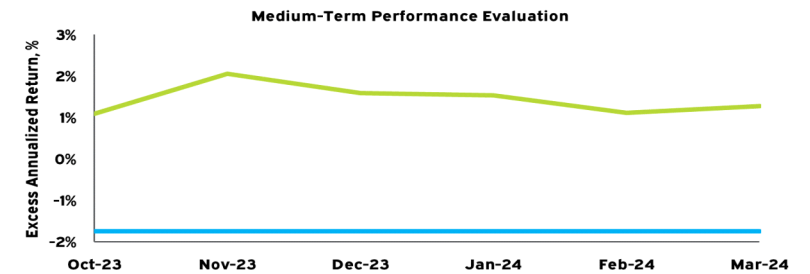
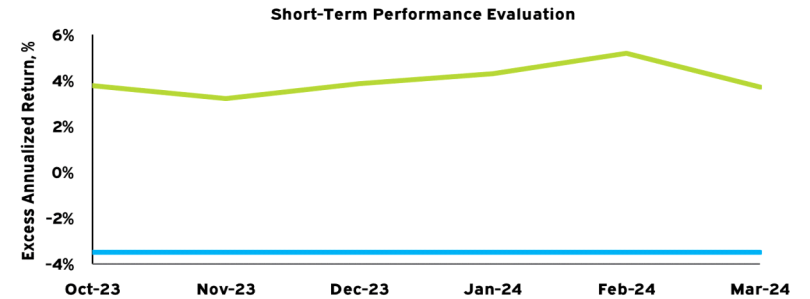
#### Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

**Current Status: Acceptable**

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

Excess  
Threshold



Parametric is on watch for qualitative reasons.

Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Parametric Delta Shift	6.3	22.3	9.2	12.9
<i>CBOE S&amp;P 500 BuyWrite USD</i>	6.0	11.9	6.2	6.1

#### 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

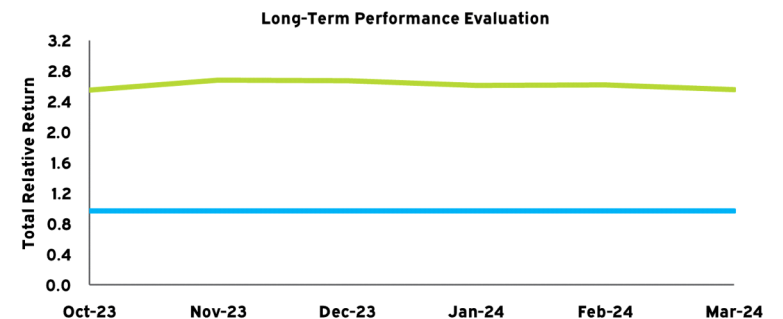
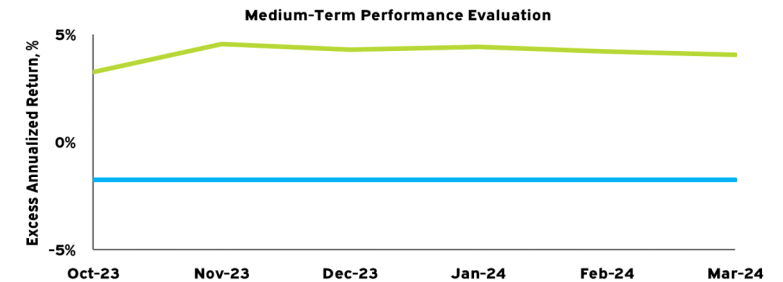
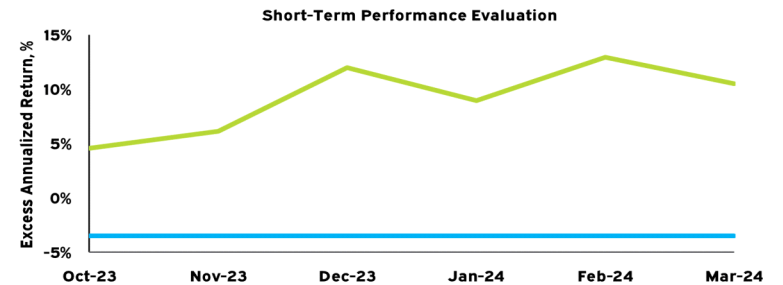
**Current Status: Acceptable**

Parametric is on watch for qualitative reasons.

**Overall Status:**

**Acceptable**

Excess  
Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
Van Hulzen	4.7	13.9	5.3	5.8
<i>CBOE S&amp;P 500 BuyWrite USD</i>	<i>6.0</i>	<i>11.9</i>	<i>6.2</i>	<i>6.1</i>

### 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

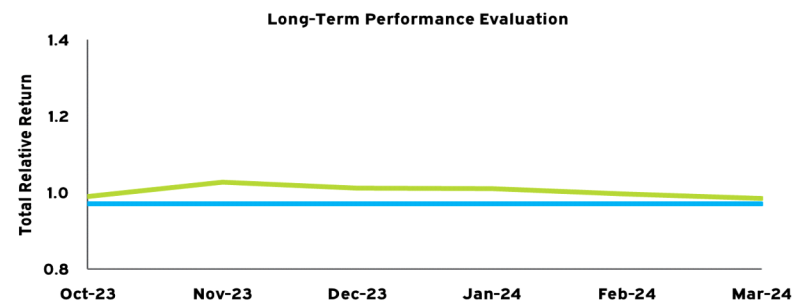
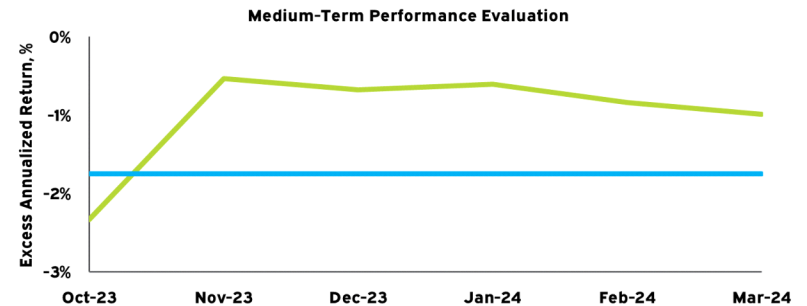
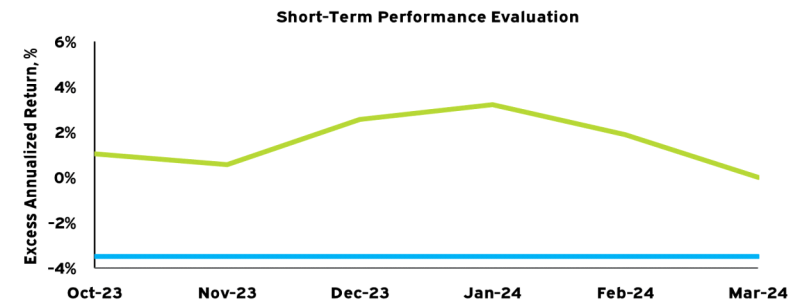
**Current Status: Acceptable**

**Overall Status:**

**Acceptable**

Excess

Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
CS McKee	-0.4	3.2	-2.1	0.6
<i>Bloomberg US Aggregate TR</i>	<i>-0.8</i>	<i>1.7</i>	<i>-2.5</i>	<i>0.4</i>

### 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**

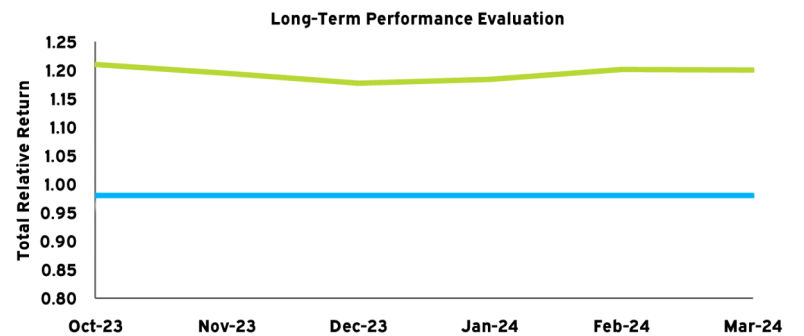
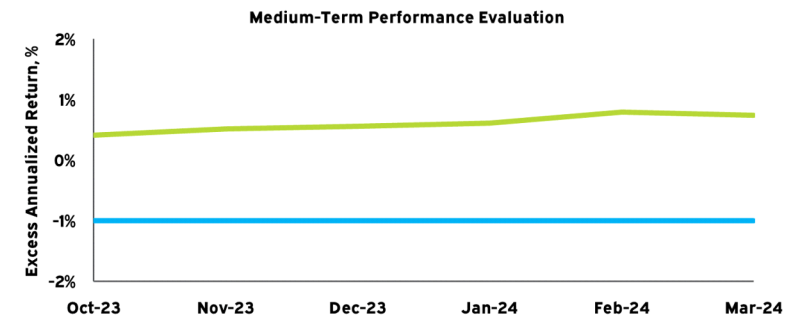
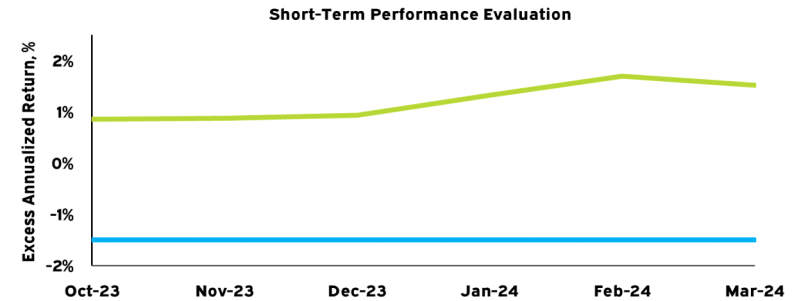
### Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

**Current Status: Acceptable**

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

Excess  
Threshold



Manager Performance			
	QTD	1 Yr	3 Yrs
Garcia Hamilton	-1.3	-0.1	-1.4
<i>Garcia Hamilton Custom Benchmark</i>	<i>-0.8</i>	<i>1.7</i>	<i>-1.6</i>

### 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**

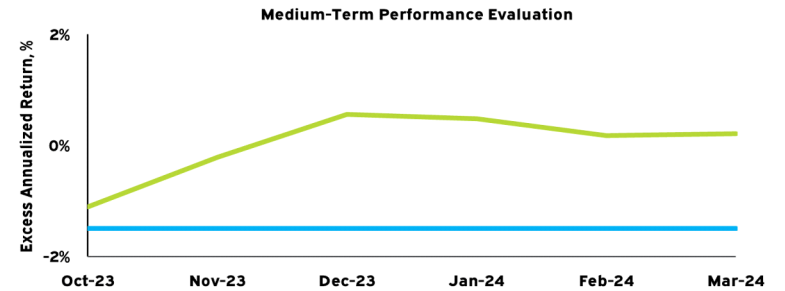
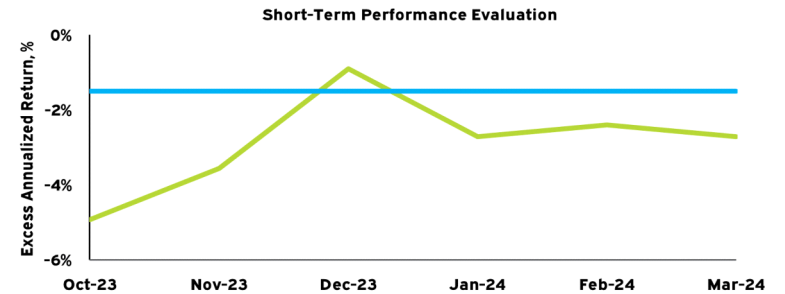
### Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

**Current Status:** Not Applicable

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

Excess  
Threshold



Manager Performance			
	QTD	1 Yr	3 Yrs
MacKay Shields (HY)	2.0	9.3	4.3
ICE BofA ML US Corp Cash Pay BB-B 1-5Yr	1.4	9.8	3.6

### 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**

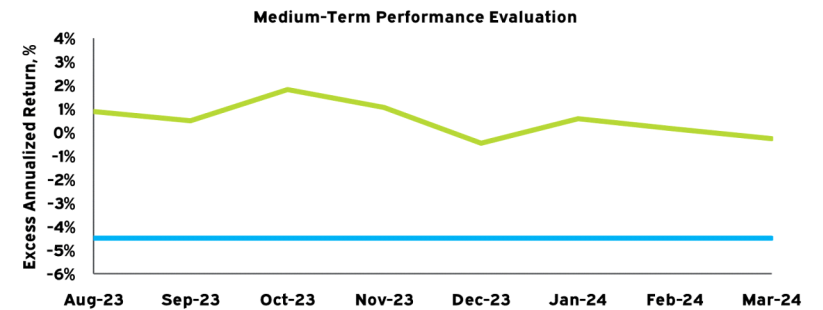
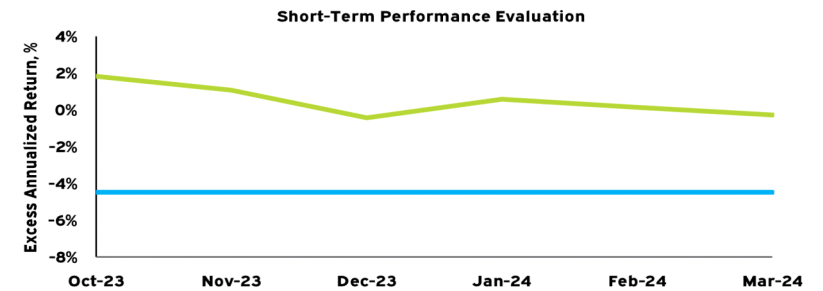
### Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

**Current Status: Not Applicable**

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

— Excess  
— Threshold



Manager Performance			
	QTD	1 Yr	3 Yrs
Federated Investment Counseling (Bank Loans)	1.9	7.5	2.5
60% CredSuisLevLoan/40% BBStGovCorp	2.0	9.5	4.4

#### 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)

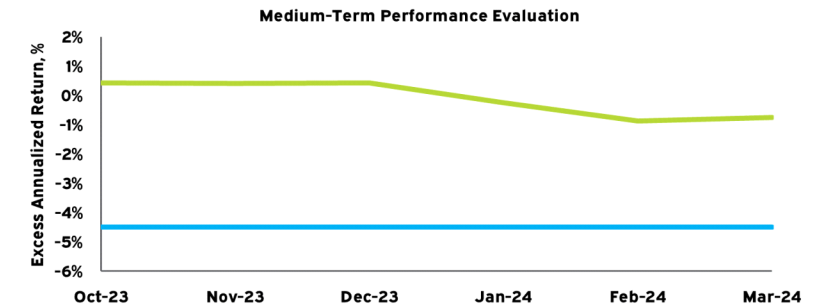
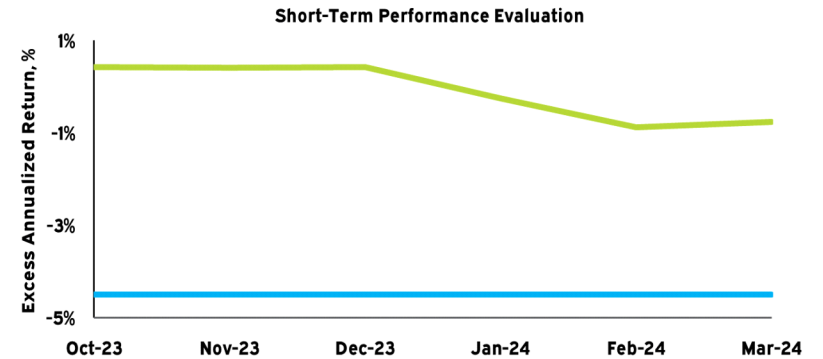
VRR < 0.97 for 6 consecutive months

**Current Status: Not Applicable**

**Overall Status:**

**Acceptable**

— Excess  
— Threshold



Manager Performance				
	QTD	1 Yr	3 Yrs	5 Yrs
CenterSquare	-0.5	10.6	4.2	5.0
<i>FTSE NAREIT Equity REIT</i>	<i>-0.2</i>	<i>10.5</i>	<i>4.1</i>	<i>4.1</i>

### 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)

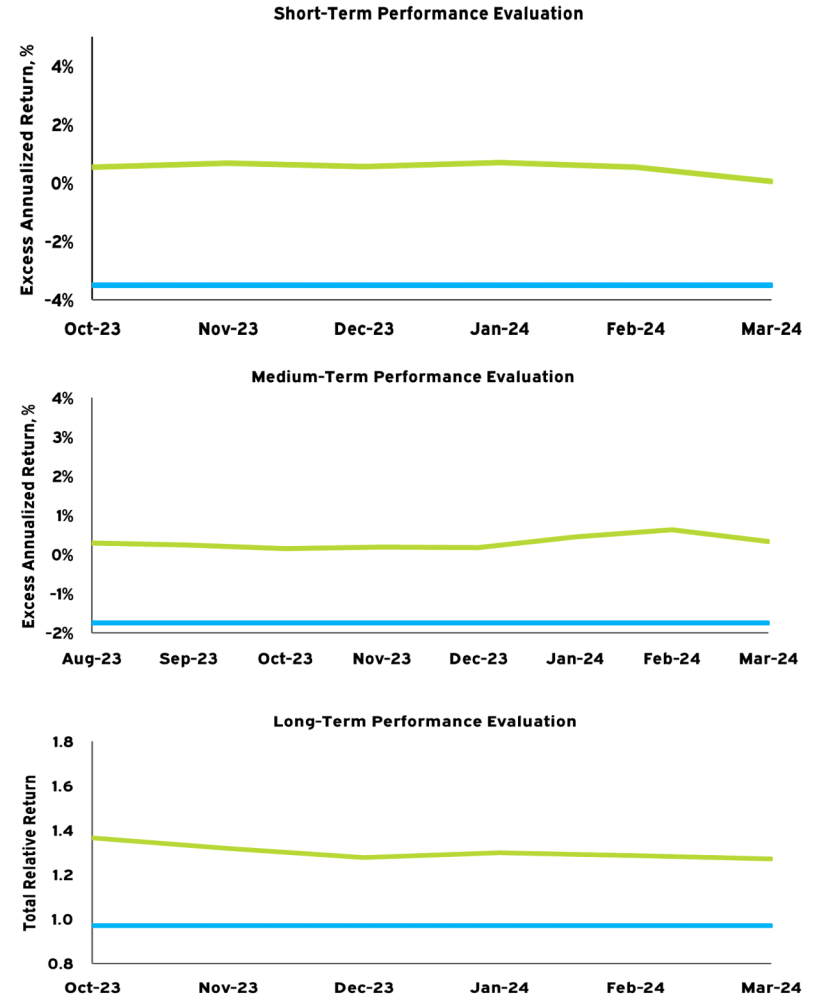
VRR < 0.97 for 6 consecutive months

**Current Status: Acceptable**

**Overall Status:**

**Acceptable**

— Excess  
— Threshold



## **Manager Compliance Certification Responses**

### Manager Compliance Certification Responses

#### Qualitative Compliance Monitoring per EBMUDERS Investment Policy

Each of EBMUDERS managers is required to respond to a questionnaire on a quarterly basis to certify their compliance with EBMUDERS 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 EBMUDERS mandate
- Significant personnel changes at the management level of the firm
- Material client terminations
- Compliance with EBMUDERS 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 EBMUDERS 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	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
Northern Trust ACWI ex US	International Equity	Yes	Yes	Yes*	No	No	Yes*	No	Yes
Parametric	Covered Calls	Yes	Yes	No	No	No	Yes*	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	No	No	No	Yes*	No	Yes

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

\* see detailed manager response below

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

→ As one of the world's largest asset managers, Northern Trust Investments, Inc. ("NTI") is occasionally subject to litigations or governmental regulatory proceedings. NTI is not currently a party to any litigation or governmental regulatory proceeding that has had a material effect on its ability to perform services for its clients. Below is one litigation case that involves NTI that was recently settled in principle and stayed pending approval of the settlement during the review period: ·

- Michael J. Iannone, Jr. and Nicole A. James v. AutoZone, Inc. (W.D. Tenn.). In September 2021, plan participants of the AutoZone, Inc. 401(k) Plan sued AutoZone, Inc., its Investment Committee, and Northern Trust Corporation and Northern Trust, Inc. (later described as Northern Trust Investments, Inc.) (collectively, "Defendants") as investment fiduciaries for breach of fiduciary duty in connection with the use of the GoalMaker® asset allocation service furnished by Prudential Insurance Company ("GoalMaker"). The Complaint alleges that the funds that Defendants selected for GoalMaker paid excessive investment management fees to Prudential and its affiliates while consistently underperforming benchmark indices and lower-cost index fund alternatives. This matter was settled in principle between plaintiffs and Northern Trust on October 22, 2023 and the parties are working through the process to obtain the requisite court approval of a class-wide settlement.

**Northern Trust – R3000 and ACWI ex US (cont.)****Question 6: Have there been any significant personnel changes at the management level of the Firm during the quarter?**

→ 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 changes to senior personnel are the following:

- January; Patrick Hurless joined Northern Trust Asset Management in a new role, Director of Enablement for Sustainable Investing & Stewardship. He reports directly to Sheri Hawkins, CFA, Head of Investment Platform Services and works alongside Julie Moret, Global Head of Stewardship.
- January; Suzanne Casey joins Sunitha C. Thomas, CFA, as co-head of the Wealth Client Group, bringing over 30 years of intermediary distribution experience to the role. She will report directly to Daniel Gamba and join the NTAM Executive Group.

Parametric

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

→ As announced in May 2023, Brian Langstraat assumed a senior advisor role on January 1, 2024 upon his transition out of the CEO role as of December 31, 2023.

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

→ Effective March 8, 2024, Jeffrey Phlegar, Chairman and Chief Executive Officer retired and will remain a Senior advisor through June 30, 2024. Naïm Abou-Jaoudé, Chairman and CEO of New York Life Investment Management, now serves as MacKay Shields' Chairman and Interim CEO working closely with the Senior Leadership Team at MacKay Shields.

**CenterSquare**

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

→ On January 16, 2024, Christina Van Beelen was hired to serve as the Chief Operating Officer of CenterSquare. In her role she oversees the Capital Markets, Marketing, and Investor Relations teams of the Firm.

**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: includes asset management, intermediate, and partnership fees – January 2023 – December 2023 = \$579,085.91
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: includes asset management, intermediate, and partnership fees – January 2023 – December 2023 = \$579,085.91
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 = 6.0%    Net = 5.2% (as of December 31, 2023)<sup>1</sup>
7. Any other information required to be collected pursuant to Section 7514.7.

N/A

<sup>1</sup>Please note that since inception returns provided represent the client’s time frame in the Fund, and not the returns of the Fund as a whole.

# Appendix

### 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 ratio = Price / "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 ratio = Price / "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).

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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.

**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:

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>

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