EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Laura Acosta, Manager of Human Resources *Laura A Acosta*

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

SUBJECT: Retirement Board Regular Meeting – 7/15/2021

A regular meeting of the Retirement Board will convene at 8:30 a.m. on Thursday, July 15, 2021. This meeting will be conducted via video and teleconference only. Public participation is available by live audio stream https://www.ebmud.com/about-us/board-directors/board-meetings/retirement-board-meetings/ ; however, listeners will not be able to provide public comment via live audio stream. To participate in the meeting or provide public comment, please see the Appendix of the Agenda for instructions on joining the Zoom meeting online or by phone.

Enclosed are the agenda for the July 15, 2021 meeting and the minutes for the May 20, 2021 regular meeting. The package also includes the following: **(1) CONSENT** items: Approval of Minutes–Regular meeting of May 20,2021, Ratifying and Approving Investment Transactions by Retirement Fund Managers for April 2021 and May 2021, Ratifying and Approving Short-Term Investment Transactions for April 2021 and May 2021, Approving Treasurer's Statement of Receipts and Disbursements for April 2021 and May 2021; **(2) ACTION** items: Election of Retirement Board Officers, Adopt Update to Retirement Board Rule C-22 Minimum Required Distributions, Declare Interest Rate Credited to Members, Selection of Retirement System Custody Services Provider, Move International Equity Assets to Passive Management; **(3) INFORMATION:** Performance Report and Economic Review (Meketa Investment Group), Discussion on Retiree and Retiree Retirement Board Communications, Actuarial Risk Assessment, Review FY21 Low Income Adjustment Process; **(4) REPORTS FROM THE RETIREMENT BOARD**.

LS:jm

Enclosures

AGENDA

EBMUD EMPLOYEES' RETIREMENT SYSTEM
July 15, 2021

In accordance with the Governor's Executive Order N-08-21 which suspends portions of the Brown Act, this meeting will be available for public participation by webinar and teleconference only. A physical location will not be provided for this meeting.

Retirement Board Members: Clifford Chan, Frank Mellon, Marguerite Young, Jae Park, Tim McGowan, and Elizabeth Grassetti will participate via teleconference

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

Consultants &Presenters: Meketa - Eric White, Sarah Bernstein, Eric Larsen; Segal - Andy Yeung, Dirk Adamsen will participate via teleconference

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

ROLL CALL:

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

REGULAR BUSINESS MEETING

CONSENT CALENDAR:

1. Approval of Minutes of the Retirement Board – Regular meeting of May 20, 2021

2. Ratifying and Approving Investment Transactions by Retirement Fund Managers for April 2021 and May 2021 (R.B. Resolution No. 6937)

3. Ratifying and Approving Short-Term Investment Transactions for April 2021 and May 2021 (R.B. Resolution No. 6938)

4. Approving Treasurer's Statement of Receipts and Disbursements for April 2021 and May 2021

ACTION:

5. Election of Retirement Board Officers (R.B Resolution No. 6939) – L. Sorani
6. Adopt Update to Retirement Board Rule C-22 Minimum Required Distributions (RB Resolution No. 6940 – L. Sorani
7. Declare Interest Rate Credited to Members (R.B Resolution No. 6941) – L. Sorani

8. Selection of Retirement System Custody Services Provider– S. Skoda
9. Move International Equity Assets to Passive Management – S. Skoda

INFORMATION:

10. Performance Report and Economic Review (Meketa Investment Group) – S. Skoda
11. Discussion on Retiree and Retiree Retirement Board Communications – L. Sorani
12. Actuarial Risk Assessment – S. Skoda
13. Review FY21 Low Income Adjustment Process – L. Sorani

REPORTS FROM THE RETIREMENT BOARD:

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

ITEMS TO BE CALENDARED:

15. Announce 2022 Board Meeting Calendar – L. Sorani
16. Proxy Voting

MEETING ADJOURNMENT:

The next regular meeting of the Retirement Board will be held at 8:30 a.m. on Thursday, September 16, 2021**.**

2021 Retirement Board Meetings

September 16, 2021
November 18, 2021

APPENDIX

Retirement Board Meeting
Thursday, July 15, 2021
8:30 a.m.

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

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

If you wish to join the meeting, or to make public comment, please visit this page beforehand to familiarize yourself with Zoom.
http://support.zoom/us/hc/en-us/articles/201362193-Joining-a-Meeting

Please click the link below to join the webinar:
https://ebmud.zoom.us/j/94944506835?pwd=N3ZIV2xrREZ0dWlxSG5pLzh0Q3hEZz09
Passcode: 833094
Or One tap mobile :
US: +16699006833,,94944506835# or +13462487799,,94944506835#
Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: +1 669 900 6833 or +1 346 248 7799 or +1 253 215 8782 or +1 301 715 8592 or +1 312 626 6799 or +1 929 205 6099
Webinar ID: 949 4450 6835
International numbers available: https://ebmud.zoom.us/u/aiiUlr8FI

Providing Public Comment

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

If you wish to provide public comment please:

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

MINUTES OF THE RETIREMENT BOARD
May 20, 2021

A regular meeting of the Retirement Board convened on Thursday, May 20, 2021 at 8:38 a.m. The meeting was called to order by President Doug Higashi.

Due to COVID-19 and in accordance with Alameda County's Health Order 20-10 (issued April 29, 2020), and with the Governor's Executive Order N-29-20 which suspends portions of the Brown Act, **this meeting was conducted via teleconference only.** In compliance with said orders, a physical location was not provided for this meeting. These measures will only apply during the period in which state or local public health officials have imposed or recommended social distancing.

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

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

PUBLIC COMMENT

No public comment

CLOSED SESSION

1. Significant Exposure to Litigation pursuant to Government Code Section 54956.9
    a. One item
2. Personnel matters Pursuant to Government Code Section 54957
    a. Application for disability retirement of Adam Erlach (R.B. Resolution No. 6936)

Retirement Board meeting reconvened at 9:36 a.m.

REGULAR BUSINESS MEETING

The regular business meeting reconvened at 9:36 a.m. The following Retirement Board members were present: Clifford Chan, Frank Mellon, Marguerite Young, Douglas Higashi, Timothy McGowan, and Elizabeth Grassetti.

ANNOUNCEMENT FROM CLOSED SESSION:

1. The decision on the application for disability retirement of Adam Erlach will be deferred to the July 15, 2021 meeting.

CONSENT CALENDAR

1-4. **Consent Calendar** – Tim McGowan had a question on item 4. A motion to move the consent calendar items 1-3 was made by Frank Mellon and seconded by Clifford Chan. The motion carried (5-0) by the following voice vote: AYES (Chan, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (none). Tim McGowan posed a question on item 4 for the March 2021 Treasurer's Statement of Receipts and Disbursements regarding the negative balance. Damien Charléty provided an answer regarding the apparent negative cash balance, which is caused by a lag between month end closing and transfers being made between the Wells Fargo and LAIF accounts. The overall working capital balance of the Retirement System was still positive as of month-end. Tim McGowan made a motion to approve item 4 and Doug Higashi seconded the motion. The motion carried (5-0) by the following voice vote: AYES (Chan, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (none).

ACTION

5. Declaring Election Results for an Employee Member of the Retirement Board (R.B. Resolution No. 6934) – Valerie Weekly presented this item. Three candidates ran to fill the seat being vacated by Doug Higashi. A total of 427 votes were cast, of those votes 407 were valid. Ken Minn received the most votes, but on May 3, 2021 Ken noticed the employee services staff of his resignation from the District effective May 14, 2021. Therefore, Ken Minn is no longer eligible to serve. There is not a Retirement Board rule on how to address this scenario. After consulting with legal counsel, staff chose to follow the state of California approach that once a candidate is on the ballot they cannot be removed. All active employee members were provided with this information on May 3, 2021. Jae Park received the second highest vote count for a two-year term beginning June 24, 2021. Tim McGowan made the motion to adopt Resolution 6934 and declare the election results and Doug Higashi seconded the motion. The motion carried (5-0) by the following voice vote: AYES (Chan, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (none).

6. Resolution Recognizing Doug Higashi's Service to the Retirement Board (R.B. Resolution No. 6935) – Lisa Sorani presented this item expressing appreciation to Doug Higashi for his service to the EBMUD Retirement Board. Doug has served as an employee of EBMUD for 25 years and as an elected Retirement Board member since June 24, 2007. Doug has acted as a Retirement Board representative and President since January 19, 2012 maintaining fiduciary oversight and care of Retirement System assets. During Doug's term of office many significant improvements to the administration of the Retirement System have occurred. Frank Mellon made the motion to adopt Resolution 6935 and Clifford Chan seconded the motion, and the motion carried (5-0) by the following voice vote: AYES (Chan, Mellon, Young, Higashi, McGowan), NOES (none), ABSTAIN (none), ABSENT (None).

7. Adoption of Active vs. Passive International Strategy – Sophia Skoda presented this item. There has been an ongoing discussion regarding the international allocation. During the reallocation of assets in 2018, the Retirement Board made the decision to transfer the majority of its equity assets to passive management. Due to the termination of an international equity manager for performance issues, more international equity assets were transitioned to passive management. However, this introduced a style bias and deviated from the original 2018 allocation choices made by the Retirement Board. Meketa presented additional information on the current positioning of the portfolio and related options. The Retirement Board discussed the possibilities to either remain active or to transition to passive management for the remainder of international equities. The Retirement Board also requested additional information on options for the international allocation at a future meeting. Doug Higashi made the motion to transition international equities toward passive management and Marguerite Young seconded the motion, and the motion carried (5-0) by the following voice vote: AYES (Chan, Mellon, Young, Higashi, McGowan), NOES (none), ABSTAIN (none), ABSENT (None).

INFORMATION

8. Performance Report and Economic Review – Eric White from Meketa reviewed the first quarter report. The portfolio returned 3.6% for the first quarter with the ending market value of the portfolio at $2.2 billion as of March 31, 2021, up 36% from one year prior. Over the last three years the portfolio returned 10.3%, 10.8% over five years, 9.4% over ten years, and 7.7% over twenty years, all outperforming the plan benchmark. The portfolio increased approximately $600 million over one year. For the first quarter, U.S equities returned 6.4%, international equities 3.4%, covered calls 6.0%, real estate 4.7%, and fixed income had a negative return of 1.8%.

9. Staff Response to Board Data Requests, Cost of Living Adjustment (COLA) Bank Statistics – Lisa Sorani presented this item. At the March 18, 2021 meeting the Board requested information on the balances of COLA banks. To reach the 3% maximum for the 2021 COLA, retirees would need 1.3% from their COLA bank. The majority of retirees retired prior to 2018 and have 1.3% or more available in their COLA bank. Those who retired in 2018 have 0.83% - 1.28% available in their COLA bank and those who retired in 2019 and 2020 have 0.68% or less in their COLA bank.

10. Review Update to Retirement Board Rule C-22 Minimum Required Distributions – Valerie Weekly presented this item. This item was previously discussed at the January 21, 2021 Retirement Board meeting. Retirement Board Rule C-22 needs to be updated to reflect the recent change to the Setting Every Community Up for Retirement Enhancement Act of 2019 (SECURE ACT). The act changes the age for minimum required distributions from 70½ to 72. A redlined version of Rule C-22 was provided to the Board for review. The rule update will be brought to the Board at the July 15, 2021 Retirement Board meeting as an action item.

11. Private Placement Update – Damien Charléty presented this item. This is an annual update on the private placement securities. Airbnb, Inc. has gone public and launched an Initial Public Offering (IPO) on December 10, 2020. Staff is working with Northern Trust to transfer and then sell the Retirement System's shares. Didi Chuxing Technology Co. filed for an IPO in April 2021. A public listing is planned for the summer of 2021. Magic Leap is looking at restructuring from consumer goods to enterprise goods after its founder resigned in 2020. WeWork Companies Inc. announced it plans to merge with BowX Acquisition Company and the transaction is expected to close in the third quarter of this year.

REPORTS FROM THE RETIREMENT BOARD

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

None

ITEMS TO BE CALENDERED / UPCOMING ITEMS

- Retiree Communications
- Disability Application
- International Investment Allocation
- Elect Retirement Board Officers
- Action to Update Retirement Board Rule C-22 Minimum Required Distributions

ADJOURNMENT – Frank Mellon moved to adjourn the meeting at 12:38 p.m. and Doug Higashi seconded the motion; the motion carried (5-0) by the following voice vote: AYES (Higashi, McGowan, Chan, Mellon and Young), NOES (none), ABSTAIN (none), ABSENT (none).

____
President

ATTEST: ______________________________
Secretary

07/15/2021

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: Investment Transactions by Retirement Fund Managers for April 2021 and May 2021

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

Attachment

SDS:AM:MH

INVESTMENT TRANSACTIONS BY RETIREMENT FUND MANAGERS

April 2021

	PURCHASES	SALES	PORTFOLIO VALUE
FIXED INCOME			
C.S. McKee	$25,879,867	$22,750,402	$186,949,477
Federated Bank Loans	$2,108,859	$0	$45,885,425
Garcia Hamilton Associates	$20,502,138	$21,485,650	$192,611,001
Mackay Shields - HY	$3,333,824	$10,250	$49,323,355
TOTAL	**$51,824,688**	**$44,246,301**	**$474,769,258**
DOMESTIC EQUITY			
Russell 3000 Index Fund	$0	$0	$624,419,761
Total Domestic Equity	**$0**	**$0**	**$624,419,761**
COVERED CALLS			
Parametric (BXM)	$10,604,086	$10,362,144	$148,926,557
Parametric (Delta-Shift)	$2,975,466	$3,041,693	$165,319,601
Van Hulzen	$26,360,149	$27,182,752	$141,842,573
Total Covered Calls	**$39,939,702**	**$40,586,590**	**$456,088,731**
INTERNATIONAL EQUITY			
ACWI Index fund	$100,000	$0	$418,292,025
Franklin/Templeton	$0	$0	$32,174
Fisher Investments	$5,109,739	$4,297,917	$182,391,218
Global Transition	$0	$0	$1,316,885
Total International Equity	**$5,209,739**	**$4,297,917**	**$602,032,303**
REAL ESTATE EQUITY			
RREEF America II	$0	$0	$50,157,979
CenterSquare	$2,112,513	$1,952,571	$60,369,190
Total Real Estate	**$2,112,513**	**$1,952,571**	**$110,527,169**
TOTAL ALL FUND MANAGERS	**$99,086,641**	**$91,083,378**	**$2,267,837,223**

May 2021

	PURCHASES	SALES	PORTFOLIO VALUE
FIXED INCOME			
C.S. McKee	$16,195,815	$17,583,306	$187,396,275
Federated Bank Loans	$1,516,335	$762,145	$46,109,835
Garcia Hamilton Associates	$22,764,556	$21,957,164	$192,898,808
Mackay Shields - HY	$1,605,805	$319,783	$49,682,537
TOTAL	**$42,082,511**	**$40,622,398**	**$476,087,455**
DOMESTIC EQUITY			
Russell 3000 Index Fund	$0	$0	$627,301,346
Total Domestic Equity	**$0**	**$0**	**$627,301,346**
COVERED CALLS			
Parametric (BXM)	$2,676,832	$2,531,763	$151,423,321
Parametric (Delta-Shift)	$80,255	$2,249	$167,380,486
Van Hulzen	$17,473,001	$18,044,771	$143,581,517
Total Covered Calls	**$20,230,088**	**$20,578,783**	**$462,385,324**
INTERNATIONAL EQUITY			
ACWI Index fund	$0	$0	$431,444,318
Franklin/Templeton	$0	$0	-$4
Fisher Investments	$939,465	$929,535	$187,398,037
Global Transition	$0	$0	$1,323,977
Total International Equity	**$939,465**	**$929,535**	**$620,166,329**
REAL ESTATE EQUITY			
RREEF America II	$0	$0	$50,157,979
CenterSquare	$1,479,946	$1,470,606	$61,077,937
Total Real Estate	**$1,479,946**	**$1,470,606**	**$111,235,916**
TOTAL ALL FUND MANAGERS	**$64,732,009**	**$63,601,322**	**$2,297,176,370**

Prepared By: Matt Houck

Matt Houck, Accountant II

Date: 7-2-2021

R.B. RESOLUTION NO. 6937

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY FUND MANAGERS FOR MONTHS OF APRIL 2021 AND MAY, 2021

Introduced by: ; Seconded by:

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

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

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

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President

ATTEST:

____

Secretary

07/15/2021

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance SDS

FROM: Andrea Miller, Controller AM

SUBJECT: Short Term Investment Transactions for April 2021

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

Attachment

SDS:AM:aw

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

COST/ FACE VALUE	DESCRIPTION	DATE OF PURCHASE	DATE OF SALE/MATURITY	YIELD (%)
$ (11,005,000.00)	Local Agency Investment Fund		1-Apr-21	0.339
4,209,000.00	Local Agency Investment Fund	5-Apr-21		0.339
16,843.34	Local Agency Investment Fund	15-Apr-21		0.339
4,204,000.00	Local Agency Investment Fund	15-Apr-21		0.339
(11,006,000.00)	Local Agency Investment Fund		28-Apr-21	0.339
4,185,000.00	Local Agency Investment Fund	30-Apr-21		0.339
$ (9,396,156.66)	Net Activity for Month			

$ 17,223,961.86	Beginning Balance
(9,396,156.66)	Net Activity for Month
$ 7,827,805.20	Ending Balance

SUBMITTED BY Andrea Miller
Andrea Miller
Controller

DATE 6/29/2021

Robert L. Hannay
Treasury Manager

KH
Kirk Hutchins
Acctg. Systems Supvr.

prepared by AWalsh

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance SDS

FROM: Andrea Miller, Controller AM

SUBJECT: Short Term Investment Transactions for May 2021

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

Attachment

SDS:AM:MH

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

COST/ FACE VALUE	DESCRIPTION	DATE OF PURCHASE	DATE OF SALE/MATURITY	YIELD (%)
$ 4,183,000.00	Local Agency Investment Fund	14-May-21		0.315
(11,117,000.00)	Local Agency Investment Fund		25-May-21	0.315
$ (6,934,000.00)	Net Activity for Month			

$ 7,827,805.20	Beginning Balance
(6,934,000.00)	Net Activity for Month
$ 893,805.20	Ending Balance

SUBMITTED BY Andrea Miller
Andrea Miller
Controller

DATE 7/6/2021

Robert L. Hannay
Treasury Manager

KH
Kirk Hutchins
Acctg. Systems Supvr.

prepared by Mhouck

R.B. RESOLUTION NO. 6938

RATIFYING AND APPROVING SHORT TERM INVESTMENT TRANSACTIONS BY THE TREASURER FOR APRIL 2021 AND MAY 2021

Introduced by: ; Seconded by:

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

WHEREAS, investment transactions during April, 2021 and May, 2021, have been made in accordance with the provisions of the said rule;

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

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President

ATTEST:

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Secretary

07/15/2021

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance SDS

FROM: Andrea Miller, Controller AM

SUBJECT: Statement of Receipts and Disbursements for April 2021

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

Attachment

SDS:AM:aw

STATEMENT OF RECEIPTS AND DISBURSEMENTS
EMPLOYEES' RETIREMENT FUND
MONTH OF APRIL 2021

CASH BALANCE at March 31, 2021			$	(9,148,476.81)
Receipts				
Employees' Contributions	$	2,254,171.85		
District Contributions		10,434,253.29		
LAIF Redemptions		22,011,000.00		
Refunds and Commission Recapture		27,167.37		
TOTAL Receipts				34,726,592.51
Disbursements				
Checks/Wires Issued:				
Service Retirement Allowances	$	9,860,086.54		
Disability Retirement Allowances		151,163.95		
Health Insurance Benefit		1,014,389.67		
Payments to Retiree's Resigned/Deceased		182,591.86		
LAIF Deposits		12,598,000.00		
Administrative Cost		130,913.70		
TOTAL Disbursements				(23,937,145.72)
CASH BALANCE at April 30, 2021			$	1,640,969.98
LAIF				7,827,805.20
LAIF and CASH BALANCE at April 30, 2021			$	9,468,775.18
Domestic Equity				
Russell 3000 Index Fund	$	624,419,761.10		
Subtotal Domestic Equity		624,419,761.10		
Covered Calls				
Parametric (BXM)	$	148,926,556.80		
Parametric (Delta-Shift)		165,319,601.21		
Van Hulzen		141,842,573.40		
Subtotal Covered Calls		456,088,731.41		
International Equity				
ACWI Index fund	$	418,292,025.36		
Franklin Templeton		32,174.47		
Fisher Investments		182,391,217.71		
Global Transition		1,316,885.26		
Subtotal International Equity		602,032,302.80		
Real Estate				
RREEF America REIT II	$	50,157,979.00		
Center Square		60,369,190.33		
Subtotal Real Estate		110,527,169.33		
Fixed Income				
CS Mckee	$	186,949,477.23		
Federated Bank Loans		45,885,424.74		
Garcia Hamilton Associates		192,611,000.94		
Mackay Shields-High Yield		49,323,355.20		
Subtotal Fixed Income		474,769,258.11		
Total for Domestic and International Equities				2,267,837,222.75
MARKET VALUE of ASSETS at April 30, 2021			$	2,277,305,997.93

Respectfully submitted,

Andrea Miller

Andrea Miller
Controller

Robert L. Hannay
Treasury Mgr.

KH

Kirk Hutchins
Acctg Sys Supvr.

prepared by AWalsh

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance SDS

FROM: Andrea Miller, Controller AM

SUBJECT: Statement of Receipts and Disbursements for May 2021

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

Attachment

SDS:AM:MH

STATEMENT OF RECEIPTS AND DISBURSEMENTS
EMPLOYEES' RETIREMENT FUND
MONTH OF MAY 2021

CASH BALANCE at April 30, 2021			$	1,640,969.98
Receipts				
Employees' Contributions	$	1,498,487.45		
District Contributions		6,929,662.02		
LAIF Redemptions		11,117,000.00		
Refunds and Commission Recapture		18,390.26		
TOTAL Receipts				19,563,539.73
Disbursements				
Checks/Wires Issued:				
Service Retirement Allowances	$	9,961,149.50		
Disability Retirement Allowances		151,163.95		
Health Insurance Benefit		980,328.59		
Payments to Retiree's Resigned/Deceased		0.00		
LAIF Deposits		4,183,000.00		
Administrative Cost		261,514.97		
TOTAL Disbursements				(15,537,157.01)
CASH BALANCE at May 31, 2021			$	5,667,352.70
LAIF				893,805.20
LAIF and CASH BALANCE at May 31, 2021			$	6,561,157.90
Domestic Equity				
Russell 3000 Index Fund	$	627,301,345.67		
Subtotal Domestic Equity		627,301,345.67		
Covered Calls				
Parametric (BXM)	$	151,423,321.27		
Parametric (Delta-Shift)		167,380,486.32		
Van Hulzen		143,581,516.54		
Subtotal Covered Calls		462,385,324.13		
International Equity				
ACWI Index fund	$	431,444,318.49		
Franklin Templeton		(3.53)		
Fisher Investments		187,398,037.20		
Global Transition		1,323,976.55		
Subtotal International Equity		620,166,328.71		
Real Estate				
RREEF America REIT II	$	50,157,979.00		
Center Square		61,077,937.46		
Subtotal Real Estate		111,235,916.46		
Fixed Income				
CS Mckee	$	187,396,275.15		
Federated Bank Loans		46,109,835.01		
Garcia Hamilton Associates		192,898,807.86		
Mackay Shields-High Yield		49,682,536.95		
Subtotal Fixed Income		476,087,454.97		
Total for Domestic and International Equities				2,297,176,369.94
MARKET VALUE of ASSETS at May 31, 2021			$	2,303,737,527.84

Respectfully submitted,

Andrea Miller

Andrea Miller
Controller

Robert L. Hannay
Treasury Mgr.

KH

Kirk Hutchins
Acctg Sys Supvr.

prepared by Mhouck

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Lisa Sorani, Manager of Employee Services Lisa Sorani

FROM: Valerie Weekly, Principal Management Analyst

SUBJECT: Election of Retirement Board Officers

Section 4 of the Retirement Ordinance requires that the Retirement Board elect from its members a President and Vice-President. With the retirement of Doug Higashi, who served as Retirement Board President for 8 1/2 years, the position of President is vacant. In addition, a Vice President was not previously elected when Director Patterson, the prior Vice President left the Retirement Board and Director Young was assigned to the Retirement Board; therefore it is required that the Retirement Board elect a President and Vice President.

LS:vw

R.B. RESOLUTION NO. 6939

DECLARING THE RESULTS OF AN ELECTION OF OFFICERS FOR THE RETIREMENT BOARD

Introduced by: ; Seconded by:

WHEREAS, Doug Higashi was elected President of the Retirement Board on January 19, 2012;

WHEREAS, Doug Higashi did not run for reelection upon expiration of his term on the Retirement Board, thus leaving the seat of President of the Retirement Board vacant;

WHEREAS, the seat of Vice President of the Retirement Board is also vacant;

WHEREAS, Section 4(b) of the Retirement Ordinance provides that the Retirement Board shall elect from its members a President and Vice-President;

NOW, THEREFORE, BE IT RESOLVED that:

____________________________________is hereby declared President of the Retirement Board

and

____________________________________ is hereby declared Vice President of the Retirement Board.

____
Acting President

ATTEST:

____
Secretary

07/15/2021

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Laura Acosta, Manager of Human Resources

FROM: Lisa Sorani, Manager of Employee Services Lisa Sorani

SUBJECT: Approve Update to Retirement Board Rule C-22 Minimum Required Distributions

Staff reported to the Retirement Board at the January 21, 2021 meeting that the Setting Every Community Up for Retirement Enhancement Act of 2019 (SECURE Act) amends the Internal Revenue Code Section 401(a)(9)(C) to change the age for minimum required distributions from 70 ½ to 72 for individuals turning 70 ½ after this change. This information has been updated in the Retirement Ordinance.

Retirement Board Rule C-22 outlines the process District staff will follow to find and notice members who are nearing the deadline for beginning the minimum required distributions. The rule references the age of 70 ½ and needs to be updated to age 72 for those turning 70 ½ after January 1, 2020.

The redlined version was brought to the Retirement Board for review at the May 20, 2021 meeting. Today staff request that the Retirement Board approved the updates to Board Rule C-22 as shown in the attached Resolution #6940.

LA:ls

R.B. RESOLUTION NO. 6940

REVISING RULE C-22 REGARDING
MINIMUM REQUIRED DISTRIBUTIONS

Introduced by: ; Seconded by:

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

WHEREAS, Section 41 of the Retirement Ordinance outlines the Internal Revenue regulations for Minimum Required Distributions;" and

WHEREAS, the Setting Every Community Up for Retirement Enhancement Act of 2019 (SECURE Act) amends the Internal Revenue Code Section 401(a)(9)(C) to change the age for minimum required distributions from 70 ½ to 72 for individuals turning 70 ½ after January 1, 2020; and

WHEREAS, Section 41 of the Retirement Ordinance has been updated to reflect the change to minimum required distributions in accordance with the SECURE Act; and

WHEREAS, the Retirement Board wishes to update Retirement Board Rule C-22 to codify the Retirement System's administrative procedures to be in line with the Internal Revenue Code Section 401(a)(9)(C);

NOW, THEREFORE, BE IT RESOLVED, that Retirement Board Rules shall be amended as follows:

RULE NO. C-22

Minimum Required Distributions
Adopted by motion 5/20/10
Resolution No. 6712
Updated by motion
Resolution No. 6940

In order to comply with Federal Minimum Required Distribution (MRD) requirements, Members of the EBMUDERS must begin receiving a retirement benefit or take a refund of their retirement contributions by the required beginning date which is April 1 of the calendar year following the year in which they attain age ~~70½~~ **72** unless they are still employed by the District, **or a reciprocal agency**. **MRD age of 70 ½ continues to apply to members who turned 70 ½ prior to 1/1/2020**.

Annually, the EBMUDERS will verify which Members are actively employed or separated and who will attain the age of ~~70½~~ **72** in the following year.

Separated Members will be notified in writing that they will be subject to MRD and will be given two options:

1. Retire no later than April 1 the year following the year in which they attain age ~~70½~~ **72**, or

2. Receive a full refund of their contributions and interest no later than April 1 of the calendar year following the year in which the Member attains the age of ~~70½~~ **72** and forfeit future benefits from Plan.

Active Members who are employed by the District beyond ~~70½~~ **72** years of age will be subject to MRD in the year they leave employment with the District, when they must choose one of the two options listed above. These Members will be notified of the MRD requirements at the time of separation from the District.

This rule will follow guideline of the Internal Revenue Code Section 401(a)(9)(C), as amended if it is in conflict with the timeframes noted in this rule C-22

____
Acting President

ATTEST:

____
Secretary

07/15/2021

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

FROM: Lisa Sorani, Manager of Employee Services Lisa Sorani

SUBJECT: Declare the Interest Rate on Member Contributions for the Period Ending December 31, 2020

ACTION: Vote on Resolution No. 6941

RECOMMENDATION

Approve Resolution No. 6941

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 effective June 30, 2021 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, 2020. As of December 31, 2020, the actuarially assumed rate of return is 7.0% and the five-year average rate of return was 10.1%.

Therefore, Resolution No. 6941 declares the annual interest rate of 7.0%. The rate credited to Member accounts will be prorated to a semi-annual rate of 3.5%. The interest will be credited effective June 30, 2021 to the balance of employee contributions and interest as of December 31, 2020.

LS

R.B. RESOLUTION NO. 6941

DECLARING THE INTEREST RATE

Introduced by: ; Seconded by:

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 be the lesser of the actuarial assumed rate of seven percent (7.0%) as of December 31, 2020 or the actual five (5) year earnings rate of the fund, determined to be ten and one tenth percent (10.1%), for the period ending December 31, 2020;

NOW THEREFORE, BE IT RESOLVED that the Retirement Board does hereby declare a seven percent (7.0%) annual interest rate. The rate credited to member accounts effective June 30, 2021 will be three and five tenth percent (3.5%) for the balance of employee contributions and interest as December 31, 2020, in accordance with Rules B-8 and B-9 of Retirement Board.

____

President

ATTEST:

____

Secretary

07/15/2021

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: Selection of Retirement System Custody Services Provider

SUMMARY

The Retirement System has maintained a custody services contract with The Northern Trust Company (Northern Trust) for over 20 years. As periodic reevaluation of service providers is a best practice, staff worked with Meketa to conduct a custodian search. The Retirement System used a Request for Information (RFI) process, relying on Meketa's expertise to narrow the field and review data. Following a series of interviews, a team comprising a Retirement System Board member, District staff, and staff from Meketa recommend selection of Northern Trust under new pricing terms.

BACKGROUND

Northern Trust has been the Retirement System's custodian since 1997. Over the past 23 years, Northern Trust has provided good service to the Retirement System. As is best practice, the Retirement System conducted an RFI for custody services in part to ensure the Retirement System is being provided with industry leading services at market prices. The process for the 2021 reevaluation of the custodian services leveraged the Retirement System's investment consultant, Meketa, and its knowledge of the custody market.

Meketa conducts an annual survey of public fund custodians, large and small, throughout the United States. In 2021, Meketa sent their survey to 20 firms and received 13 responses. For the Retirement System's assets, Meketa recommended setting a suitability threshold of $1 trillion in assets under custody with at least $5 billion under custody for public pensions funds for firms to be considered. Out of these 13 respondents, five fit the suitability criteria listed above: Bank of New York Mellon, J.P. Morgan, Northern Trust, State Street, and U.S. Bank.

As a next step, staff developed a supplemental questionnaire to add to Meketa's custodian search template to reflect recent Retirement System requests to its other service providers. The supplemental questionnaire included questions similar to those asked during the Retirement System's most recent annual manager survey. These questions included items on Environmental, Social, and Governance (ESG) criteria, diversity and inclusion, and racism in the investment management industry.

The custodian search template and supplemental questionnaire were then sent as a follow-up RFI to the five firms identified as suitable. Three firms provided responses (Bank of New York Mellon, Northern Trust, U.S. Bank) and two (J.P. Morgan, State Street) declined to participate. While the two firms who declined to participate did not state a reason, Meketa believes that the relatively smaller size of the Retirement System assets played a part. Meketa subsequently prepared a high-level summary of the responses from Bank of New York Mellon, Northern Trust, U.S. Bank, a final version of which is attached to this memo.

Along with Retirement Board member Tim McGowan, Meketa and staff conducted interviews with all three responding firms. Based on the interviews, the team then narrowed the field to two firms, Northern Trust and U.S. Bank for a set of demonstrations of their online platform technology and to discuss their approach to cybersecurity.

Following all the interviews and demonstrations, the team recommends that the Retirement System continue use of Northern Trust as its custodian under the terms proposed in their final response to the RFI which includes lower rates guaranteed for five years. The recommendation is based on the continued strong service provided by Northern Trust's customer service team, significant updates to the user interface, strong cybersecurity systems, significant liability protection, and a significant reduction in fees when compared to the current fees paid by the Retirement System.

While the recommendation is to retain the Retirement System's current provider, the custodian search presented the opportunity for staff to evaluate the current services and pricing currently available in the custody services market. Other proposals received did offer potential advantages but overall, did not outweigh the current service level received from Northern Trust and the uncertainty associated with a change of service provider. Staff would like to thank all responding firms for participating in the process.

SDS:DC

Attachment

EBMUDERS Custody Search

Selecting a Custodian

- The primary services provided by custodians involve record keeping. In today's world, these services are highly automated functions. A top-tier custodian will:
  - Maintain on-going investment in state-of-the-art computer systems.
  - Work on a direct automated basis with the System's money managers.
  - Provide accurate statements and accounting information in a timely manner every month.
  - Appoint a dedicated team that will respond to client requests in a quick and timely manner.
  - Offer additional services, including performance measurement and securities lending.
- Annually, Meketa requests a full response that evaluates the above information as well as additional matters important to our clients. Custodians provide the requested information in February or March of each year. When a client is seeking a new custodian, Meketa requests additional information through a smaller Request for Proposal (RFP) or Request for Information (RFI) from Custodians who we believe are best suited to service the mandate. This will include a formal price proposal from each respondent.
- In the case of the 2021 EBMUDERS custodian search, five firms were deemed suitable and three provided a response to the RFI. Two firms declined to submit a bid. Included in this document are data from the three responding firms.

Firm Overviews

	BNY Mellon	Northern Trust	U.S. Bank
Firm Location	New York, NY	Chicago, IL	Minneapolis, MN
Master Trust/Custody Location	New York, NY	Chicago, IL	Minneapolis, MN
Firm Inception	1869	1889	1863
Total Custody/Administration Assets	$41.7 trillion	$10.4 trillion	$2.0 Trillion
Median Client Size	$906 million	$459 million	$15.4 million
Master Trust/Custody Inception	1869	1974	1863
Credit Rating (Long-Term)[1]	AA-	AA-	Aa1
Tier 1 Capital Ratio	15.8%	14.6%	11.0%
Fiduciary Liability Coverage	$75 million	$100 million	$25 million
Errors & Omissions Coverage	$100 million	$100 million	$25 million

- BNY Mellon, Northern Trust, and U.S. Bank are all firms that Meketa has worked with in the past and have capabilities and that we feel are a good fit for the System.
- The statistics above outline the size of the institutions and their financial stability.
  - When choosing the respondents, Meketa weighed scale and technical capabilities vs. personalized service and the importance of the System's relationship to the firm.
  - While the financial stability metrics vary amongst the custodians, all are within a reasonable range.

[1] As rated by S&P.

Firm Statistics

	BNY Mellon	Northern Trust	U.S. Bank
% of Revenues from Custody	77%	65%	13%[1]
% of Custody Assets Consisting of Public Systems	46%	34%	1.1%
# of Clients between $1 billion - $3 billion	31	427	362
Custodial Client Turnover (Gain/Lost):			
2020	12/8	62/21	246/36
2019	17/11	79/32	182/47
2018	10/6	87/40	158/49
2017	14/7	108/33	182/66
Size of Master Trust/Custody Team	6,000	13,471[1]	950[2]

- The above table highlights firm level statistics for the three firms that give an idea of the size of the custody business and team within the organization, and the types of clients they work with.
- Northern Trust has the largest team supporting the master trust and custody business.
- Northern Trust has the largest number of clients in the $1 billion -$3 billion size range. Having clients within this size range demonstrates experience working with clients of similar complexity and needs to the System.
- All three firms have net positive client turnover over the last five years.

[1] Total number of employees involved in and supporting master trust/custody business.

[2] Excludes nearly 1,000 additional employees providing support to the business line.

Accounting, Reporting, and Systems

- Top-tier custodians must be able to provide highly automated custodial operations, as well as accurate and timely statements, preferably with online access to data.
- It is important to note that IT infrastructure and systems can vary widely as can be seen with the technology budget. With larger organizations comes upgraded technology and operational efficiencies on their technology platforms.

	BNY Mellon	Northern Trust	U.S. Bank
When are audited statements available online?	3-5 business days	3-5 business days	4 business days
Ability to create custom reports online?	Yes	Yes	Yes
Real time data available online?	Yes	Yes	Yes
Is a SOC internal controls report available?	Yes	Yes	Yes
Can the auditors be provided with view-only access to the on-line account?	Yes	Yes	Yes
Disaster recovery program in place?	Yes	Yes	Yes
Internally Developed System?	Yes	Yes	No
Annual Technology Budget?	~$1 billion	~$1 billion	~$300 million

Client Servicing

- It is crucial that the System's custodian provide excellent client service. This includes a quick response time to client inquiries.
  - Each firm assigns clients a dedicated client service team with years in custody services, supported by the entire custody department.

	BNY Mellon	Northern Trust	U.S. Bank
Relationship Manager (RM)	Jon Bangor	Kathy Stevenson	Tim Banach
Years' Experience (Industry / Company)	25/15	34/31	20/9
How many clients does the RM service?	9	7	8
Maximum Number of Clients	12	8	15
Location of Relationship Manager	Pittsburgh, PA	Chicago, IL	San Diego, CA

- The client service lead for US Bank has the least experience and largest number of potential clients.
- BNY, U.S. Bank, and Northern Trust would all assign experienced service teams with years of experience.

Cash Management

- Meketa Investment Group recommends designating a US government-only cash sweep vehicle, which would hold primarily U.S. government securities and repurchase agreements, collateralized with U.S. government securities.
- Currently, most money market systems and short-term investment vehicles yield less than 0.10%. Although the risk of capital loss in money market and short-term investment systems is relatively small, it does exist. That risk is sharply reduced by holding Treasuries, rather than the time deposits and commercial paper investments typically held in a short term investment fund.
- Each of the respondents offers a U.S. government-only cash sweep vehicle. We show the relevant yields and expense ratios below.

	BNY Mellon	Northern Trust	U.S. Bank
Gross 30-day Yield	0.00%	0.07%	0.03%
Expense Ratio	0.15%	0.10%	0.18%

ESG Summary

	BNY Mellon	Northern Trust	US Bank
Participate in PRI and/or other institutional ESG related organizations?	• Yes (underlying entities, no mechanism at the PRI organization for us to join at the corporate, global level)	• Yes, among others	• Not a PRI signatory • Discloses environmental impacts to CDP
Are there women and minority representation on Board of Directors, and in executive management?	• BNY Mellon's Board of Directors total 11 people, including three women. • Of the 11 members on the Board of Directors, one is Latinx and three are Black. • Executive Committee, 29% women; 20% of which include underrepresented ethnic/racial backgrounds (BNY Mellon in the U.S.)	• 360 Executive/Senior Management employees. • 170 Executive/Senior Management are women. • 51 Executive/Senior Management identify as non-White	• U.S. Bank has 13 managing committee members. Of those, three self-identify as female and three identify as minority. • U.S. Bank has 15 directors, of those, seven self-identify as female and four identify as minority. • No managing committee member or director identifies as a veteran or as a person with a disability.
Has ESG firmwide guidelines?	Yes	Yes	Yes
Integrates ESG factors into operations?	Yes	Yes	Yes
Dedicated ESG Staffing?	Yes	No but uses 3rd party specialists for ESG data	Yes

Fee Summary

- Based on best and final data, all providers were within a range of estimated fees of $40,000.
- Northern Trust will guarantee their fees longer.
- There could be a slight increase in fees if indexed assets were moved from Northern Trust (<$10,000 if utilizing commingled funds or mutual funds), but fees would still be similar to BNY Mellon and US Bank.

Summary

- Top-tier custodians are able to provide highly automated custodial data. It is important to provide accurate and timely statements, preferably with online access.
- Exceptional client service is critical in a custodial relationship, including quick responses to client inquiries, and accuracy in recordkeeping and effecting transactions.
- These critical factors along with the other items discussed in this document, including pricing, should be considered when selecting a custodian to meet the System's needs.
- If EBMUDERS is happy with the current level of service, Meketa would recommend that you continue to utilize Northern Trust with the revised fee schedule.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: International Equity Transition

At its May 20, 2021 meeting, the Retirement Board voted to transition its remaining actively-managed international equity assets (the last of all its actively managed equities) to passive management. The Retirement Board also asked staff and Meketa to review and present passive options for consideration as part of the Retirement Board's re-evaluation of its international equity assets.

As the first part of this re-evaluation, Meketa has analyzed the current positioning of the international portion of the portfolio. Meketa concludes that a prompt transition to passive is beneficial to the Retirement System because it eliminates the current style bias in the portfolio and significantly reduces management fees. Therefore, Meketa recommends, and staff concurs, that the remaining actively managed international assets be moved to the Retirement System's existing passive manager Northern Trust Asset Management as soon as practicable. Meketa further notes that there is not a benefit to waiting for a review of alternatives as the cost of a future transition would be minimal.

Eric White from Meketa will present the results of the analysis at the July 15, 2021 Retirement Board Meeting.

SDS:DC

Attachment

MEKETA
INVESTMENT GROUP

2175 NW Raleigh Street
Suite 300A
Portland, OR 97210

503.226.1050
Meketa.com

MEMORANDUM

TO: East Bay Municipal Utility District Employees' Retirement System ("EBMUDERS")
FROM: Meketa Investment Group ("Meketa")
DATE: July 15, 2021
RE: International Equity Portfolio Decision – Implementation and Transition

Summary & Recommendation

The EBMUDERS Retirement Board voted to transition the International Equity portfolio to an entirely passive management structure at the May 20, 2021 Board Meeting. As of May 31, 2021, the International Equity portfolio was roughly 70% passive with the remaining 30% still actively managed. Key factors in the decision making process included eliminating the current growth bias and the fee savings in light of trying to consistently pick the winning managers in the space. At this time Meketa recommends transitioning remaining assets held within the active sleeve to the existing passive manager.

As of 5/31/2021	Market Value ($)	Composite Weight (%)
Non-US Equity Composite	618,842,356	100.0
Northern Trust ACWI ex US	431,444,318	69.7
Fisher Investments	187,398,037	30.3

Discussion

The decision to move the International Equity portfolio to an entirely passive structure followed great consideration and discussion regarding the goals and intentions of the portfolio. Following the termination of Franklin Templeton, the portfolio's value oriented manager, the portfolio was left with a growth bias. Upon the decision to employ 100% passive management this growth bias will remain until assets are transferred, as no search will take place for the value side of the equation. Given the Board's desire to maintain a balanced portfolio it would be prudent to transition to the target portfolio sooner rather than later. Meketa will explore alternatives within the international space and provide education and analysis regarding these opportunities. In the meantime, it is easiest to start from and maintain a neutral position during the exploration stage. The move to passive will accomplish neutral portfolio exposure.

The second key consideration is with respect to fees. The current active manager within the International Equity space carries an average annual fee of 52 basis points. Based on the market value under active management this reflects an average annual fee of $980,000. The current passive management fee is 4 basis points, which equates to an annual fee on currently active assets of $75,000. This equates to a roughly $900,000 in fee savings over the course of a calendar year by transitioning to the passive portfolio in the immediate future.

Conclusion

As the Board has voted to move the International Equity portfolio to passive management it is Meketa's opinion that assets should be transitioned promptly. As outlined above, the first priority is to eliminate the current growth bias within the International Equity portfolio. Additionally, there is not a strong case continue paying active management fees when the decision has been made to employ a passive strategy. There is little to no concern over transaction costs as they will be incurred at the time assets are transitioned whether today or a year from now and will likely be minimal. The current passive option within the portfolio is a healthy, well-funded product that performs as intended.

EDW/STB/EL/ndb

MEKETA
INVESTMENT GROUP

East Bay Municipal Utility District Employees' Retirement System

July 15, 2021

Economic & Market Update and May 2021 Performance Update

Economic and Market Update

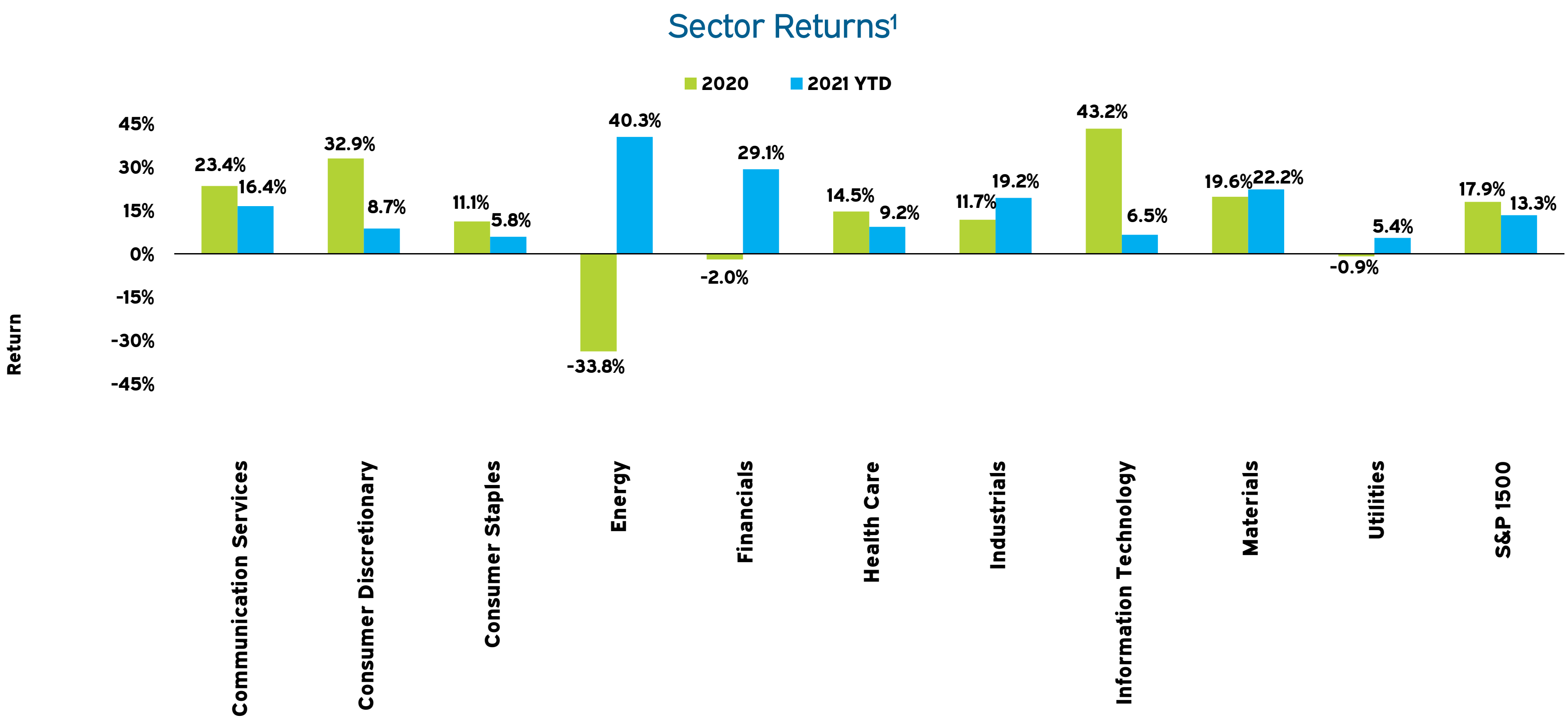
Data as of May 31, 2021

Market Returns[1]

Indices	May	YTD	1 Year	3 Year	5 Year	10 Year
S&P 500	0.7%	12.6%	40.3%	18.0%	17.2%	14.4%
MSCI EAFE	3.3%	10.1%	38.4%	8.2%	9.8%	5.9%
MSCI Emerging Markets	2.3%	7.3%	51.0%	9.7%	13.9%	4.1%
MSCI China	0.8%	1.7%	38.7%	8.4%	16.8%	7.3%
Bloomberg Barclays Aggregate	0.3%	-2.3%	-0.4%	5.1%	3.3%	3.3%
Bloomberg Barclays TIPS	1.2%	1.1%	7.1%	6.5%	4.5%	3.4%
Bloomberg Barclays High Yield	0.3%	2.3%	15.0%	7.1%	7.4%	6.4%
10-year US Treasury	0.6%	-5.4%	-7.1%	5.4%	2.2%	3.5%
30-year US Treasury	0.7%	-13.0%	-17.4%	6.7%	3.4%	6.3%

- So far this year, global risk assets continue to rise, leading to significant gains over the trailing year. This has largely been driven by record fiscal and monetary policy stimulus and positive developments with the COVID-19 vaccine. US Treasuries have not fared as well, given the rise in interest rates driven by inflationary fears.
- In May, Treasury yields declined as the Federal Reserve maintained its position that inflation will be transitory. TIPS moved into positive territory for the year, helped by fears of rising prices.
- Equity markets rose in May with international markets leading the way, partly driven by a weakening US dollar.

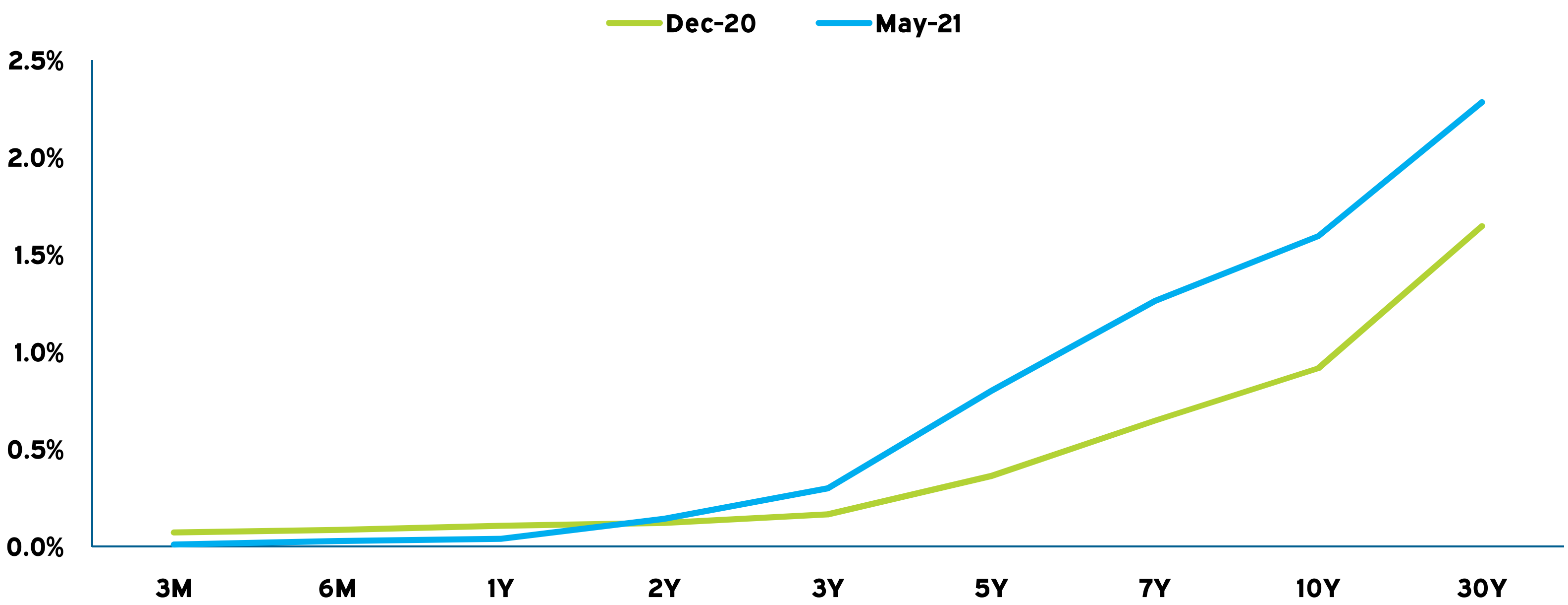
[1] Source: Investment Metrics and Bloomberg. Data is as of May 31, 2021.



- Cyclical sectors like energy and financials continue to lead the way in 2021, as some investors rotate out of stay-at-home focused companies in the technology sector.
- The rotation into value stocks has largely been driven by expectations for the economy to reopen, potentially higher taxes, and rising interest rates. Growth stocks typically produce more of their cash flows further into the future and increased interest rates lead to larger discounts, reducing present values.

[1] Source: Bloomberg. Data is as of May 31, 2021.

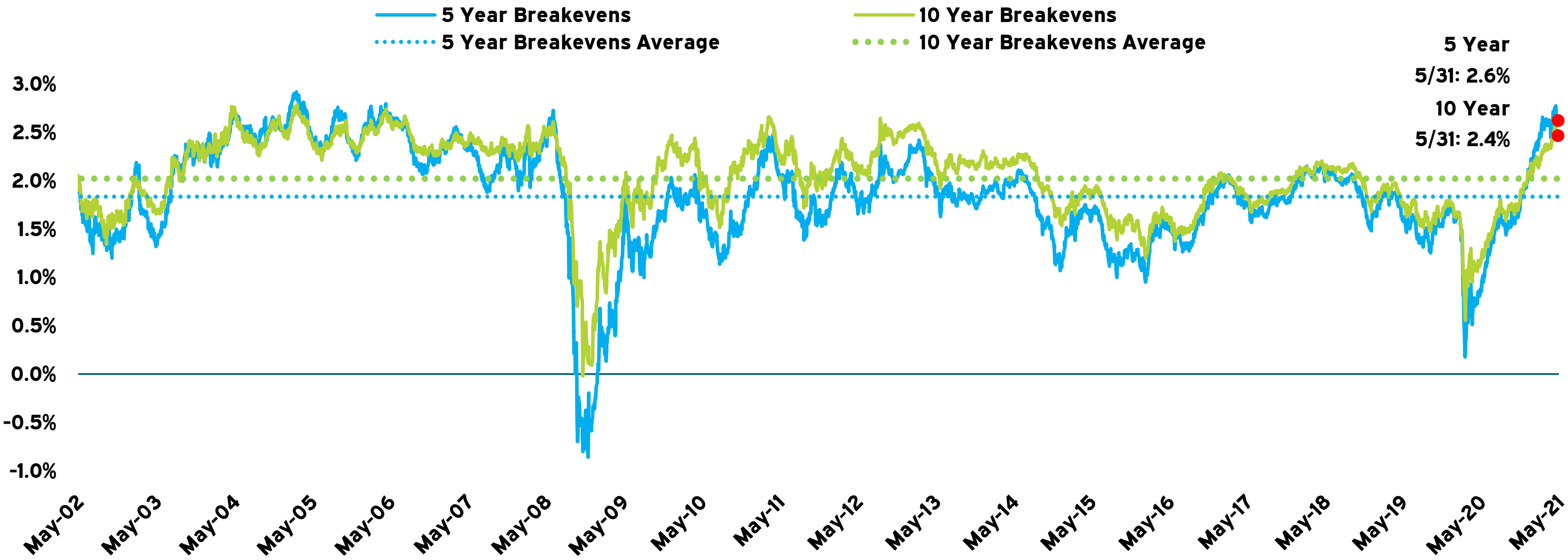
US Yield Curve Steepens[1]



- Thus far in 2021, the yield curve steepened on inflation fears related to gradual signs of economic improvement and developments with the vaccine.
- Shorter-dated rates have largely not moved given Fed policy, while longer-dated rates may continue to steepen if growth and inflation pressures build beyond current expectations.
- Alternatively, the yield curve could decline if the economy starts to weaken or if economic progress is simply accelerated versus the prior expectations.

[1] Source: Bloomberg. Data is as of May 31, 2021.

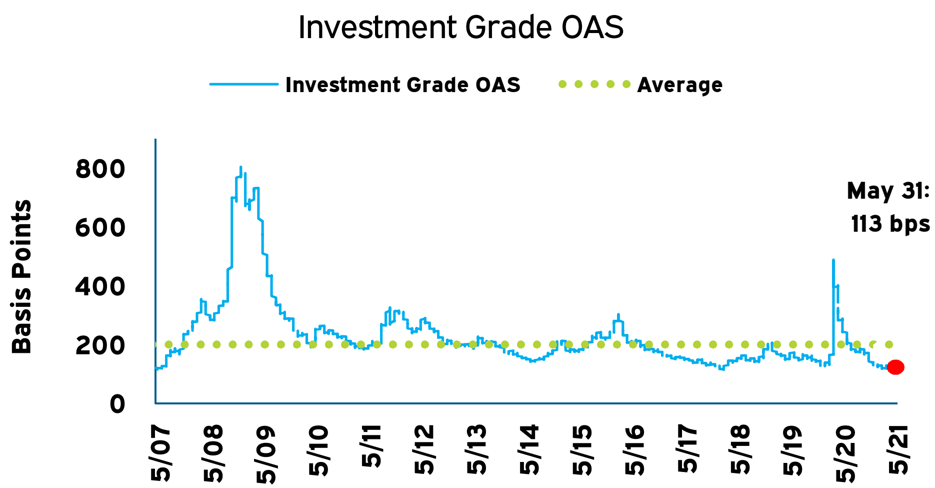
Breakeven Inflation[1]

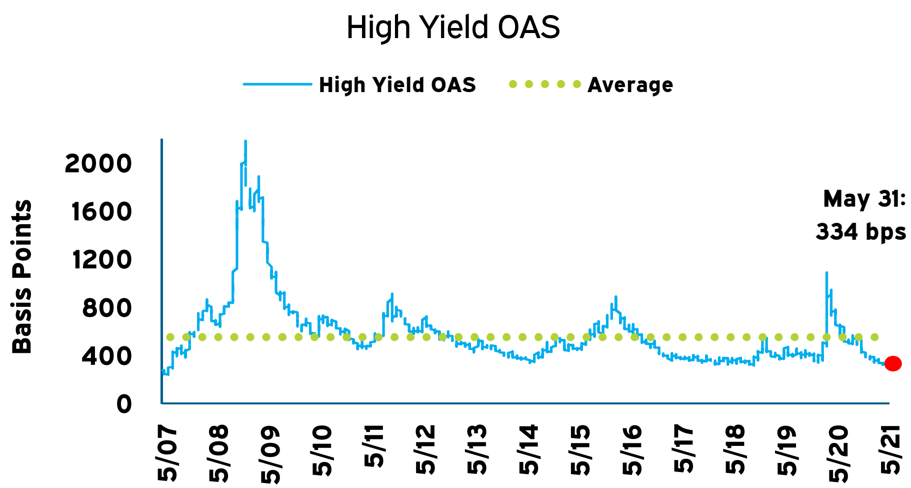


- Inflation expectations remain well above long-term averages, with the vaccine roll-out, rising raw material prices, and expected additional fiscal stimulus as key drivers.
- Looking forward, the track of economic growth and the inflationary effects of the unprecedented US fiscal response will be key issues. Additionally, changes to Fed policy focused on an average inflation target may play a role in the inflation market dynamics.

[1] Source: Bloomberg. Data is as of May 31, 2021.

Credit Spreads (High Yield & Investment Grade)[1]

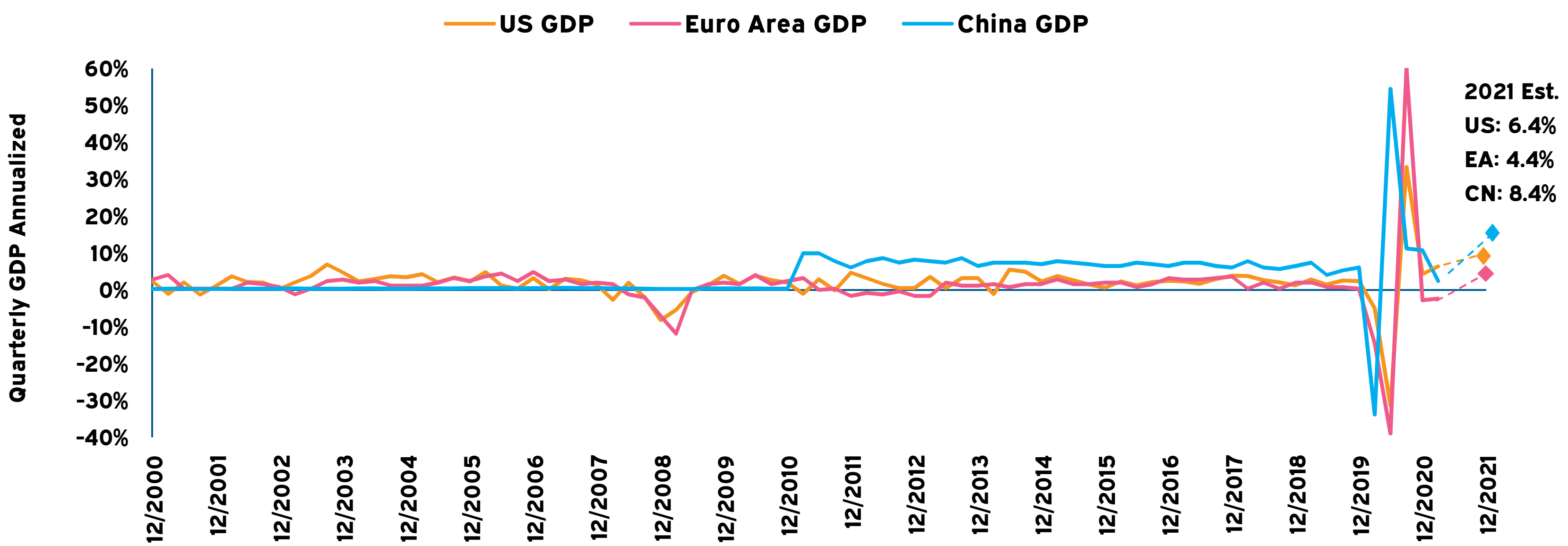




- Credit spreads (the spread above a comparable maturity Treasury) for investment-grade and high yield corporate debt widened sharply at the start of the pandemic as investors sought safety.
- Policy support and the search for yield in a low rate environment led to a decline in credit spreads to below long-term averages, particularly for high yield.

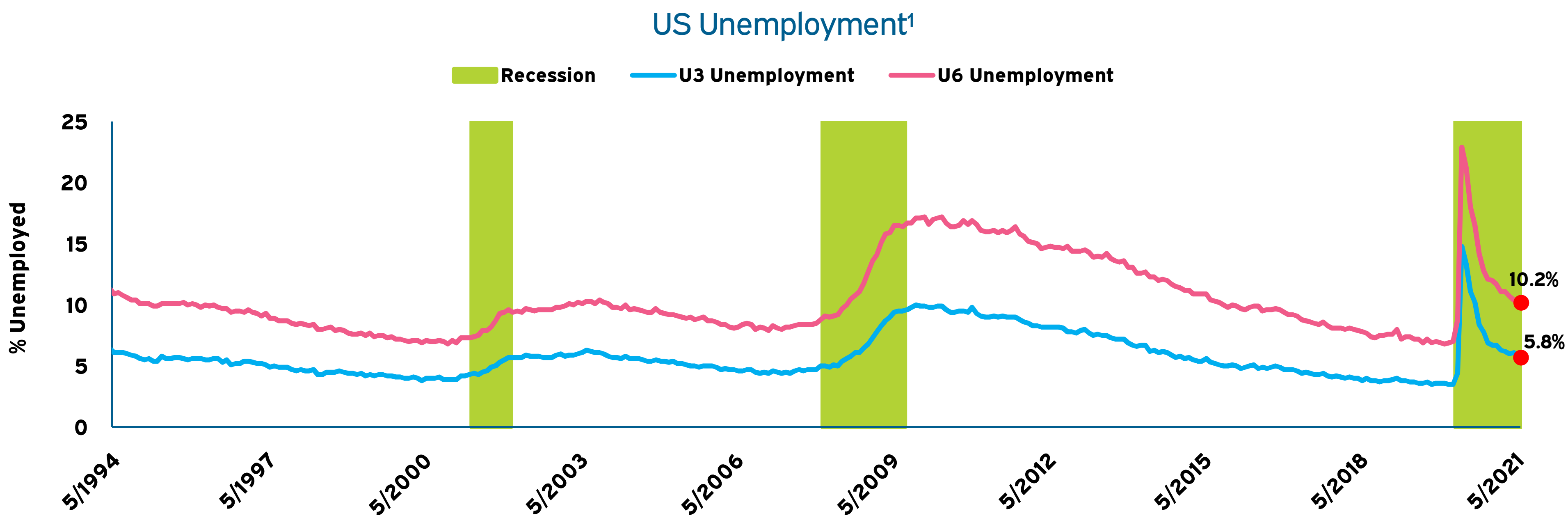
[1] Source: FRED Economic Data. Investment grade represents ICE BofA BBB US Corporate Index OAS. High Yield represents ICE BofA US High Yield Index OAS. Data is as of May 31, 2021.

GDP Data Shows Projected Improvements in 2021[1]



- Major economies experienced historic declines in growth during the second quarter of 2020, followed by record increases in the third quarter driven by pent-up demand from the lockdown measures earlier in the year.
- Looking forward, strong growth is expected in 2021 particularly for China, projected to grow at an impressive 8.4%, due in part to their ability to quickly control the virus and reopen their economy. The US is expected to grow faster than the euro area this year, helped by vaccine distribution.

[1] Source: Bloomberg, and IMF; Euro Area and China figures annualized by Meketa. Projections via April 2021 IMF World Economic Outlook and represent annual numbers.



- In May, the unemployment rate (U3) declined after rising slightly in April. It dropped from 6.1% to 5.8%.
- The broader measure of unemployment (U6) that includes discouraged and underemployed workers continues to decline but remains much higher at 10.2%.
- Pandemic related concerns, childcare issues, and a mismatch of skills and available jobs have all contributed to slack in the labor market.

[1] Source: Bloomberg. Data is as of May 31, 2021. Bars represent recessions as observed by the National Bureau of Economic Research.

Disclaimers

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Performance Update
As of May 31, 2021

EBMUDERS Total Plan Composite | As of May 31, 2021

Performance Summary

	Market Value ($)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)
EBMUDERS Total Plan Composite	**2,298,100,452**	**100.0**	**4.5**	**28.3**	**11.1**	**11.4**	**9.7**	**7.6**
Total Plan Bench			*4.1*	*26.9*	*9.5*	*10.3*	*8.8*	*7.2*
US Equity Composite	**628,618,231**	**27.4**	**5.6**	**43.7**	**18.3**	**17.8**	**14.4**	**8.9**
Russell 3000 Hybrid			*5.6*	*43.9*	*18.0*	*17.4*	*14.2*	*9.1*
NonUS Equity Composite	**618,842,356**	**26.9**	**6.5**	**43.3**	**8.5**	**10.6**	**5.9**	**6.7**
MSCI ACWI xUS (blend)			*6.3*	*43.4*	*9.4*	*11.4*	*5.8*	*6.2*
Covered Calls Composite	**462,385,324**	**20.1**	**3.9**	**28.4**	**11.0**	**10.7**	--	--
CBOE S&P 500 BuyWrite USD			*3.1*	*20.9*	*3.9*	*6.4*	--	--
Real Estate Composite	**111,235,916**	**4.8**	**4.9**	**20.9**	**9.5**	**7.3**	**10.8**	--
NCREIF NPI Lag			*4.6*	*18.8*	*8.2*	*6.8*	*9.7*	--
Fixed Income Composite	**476,124,819**	**20.7**	**0.9**	**2.3**	**5.1**	**4.0**	**3.6**	**4.9**
Fixed Income Composite Bench			*1.0*	*2.0*	*4.7*	*3.7*	*3.4*	*4.6*
Cash Composite	**893,805**	**0.0**	**0.2**	**0.9**	**2.0**	**1.5**	**0.9**	**2.0**
FTSE T-Bill 3 Months TR			*0.0*	*0.1*	*1.4*	*1.1*	*0.6*	*1.3*

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

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

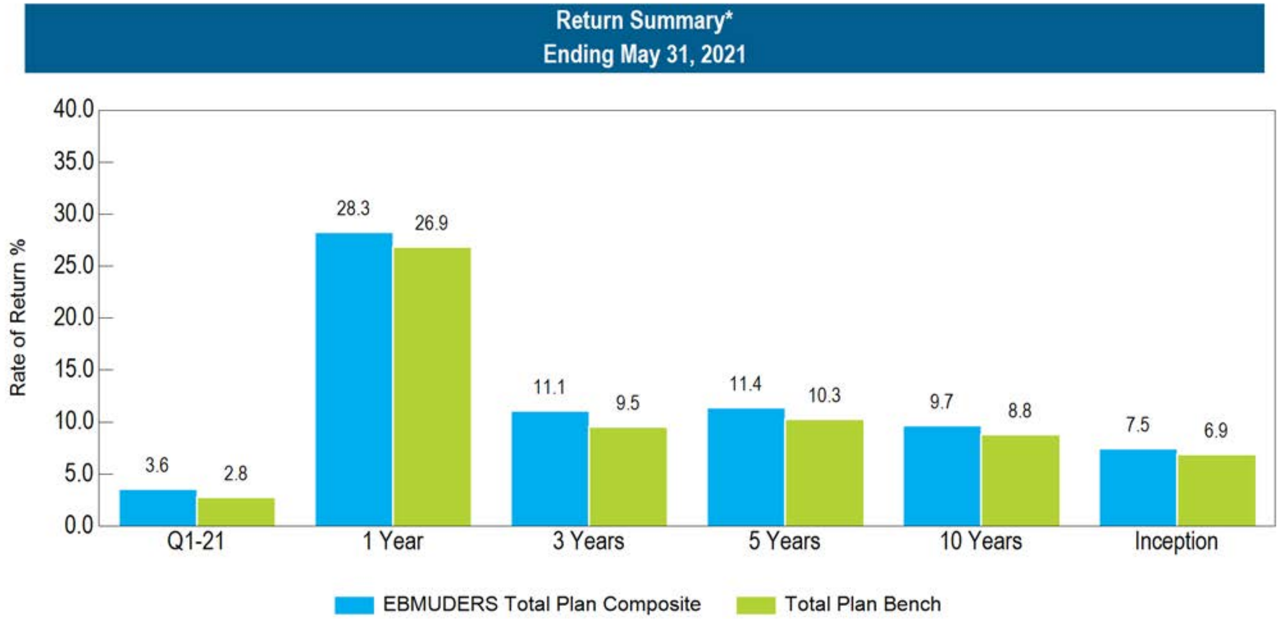
3 MSCI ACWIxU.S. as of 1/1/07; MSCI EAFE ND thru 12/31/06.

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

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

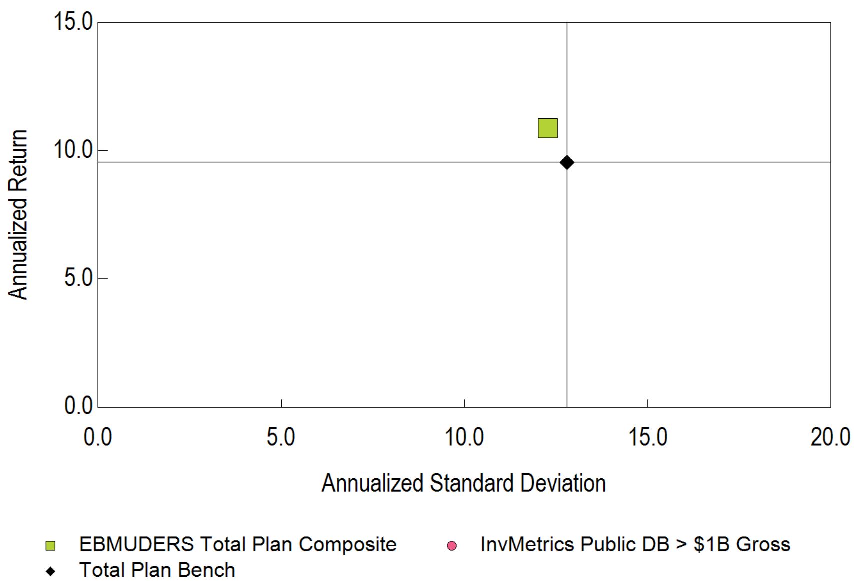
EBMUDERS Total Plan Composite | As of May 31, 2021

Summary of Cash Flows	First Quarter	One Year
Beginning Market Value	$2,136,702,861	$1,814,991,497
Net Cash Flow	$3,816,676	-$23,353,358
Capital Appreciation	$75,513,762	$506,462,313
Ending Market Value	$2,216,033,299	$2,298,100,452

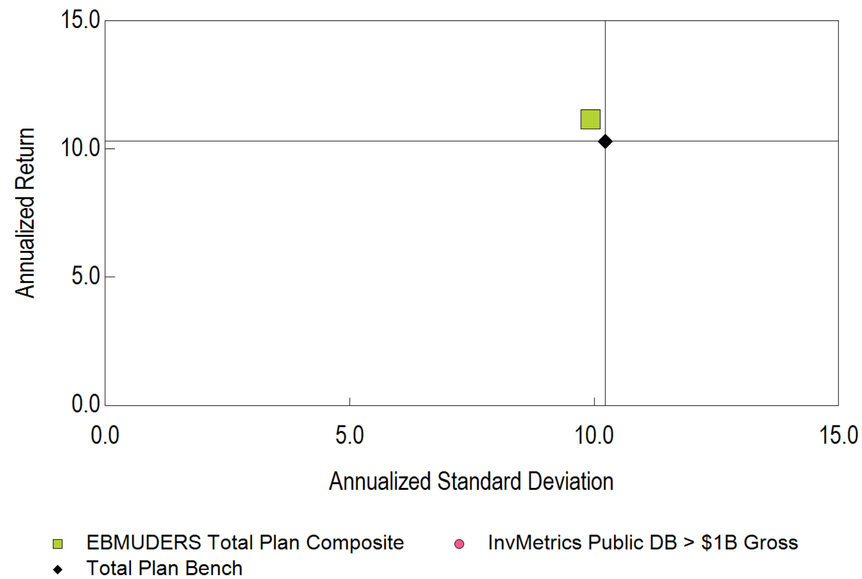


1Policy Benchmark consists of 25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 10% BBgBarc US Intermediate Gov/Cred / 2.5% ICE BofAML US Corp Cash Pay BB -B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5%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

Annualized Return vs. Annualized Standard Deviation
3 Years Ending May 31, 2021



Annualized Return vs. Annualized Standard Deviation
5 Years Ending May 31, 2021



3 Years Ending May 31, 2021

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	11.06%	12.27%	0.80
Total Plan Bench	9.55%	12.79%	0.65

5 Years Ending May 31, 2021

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
EBMUDERS Total Plan Composite	11.39%	9.93%	1.04
Total Plan Bench	10.29%	10.23%	0.90

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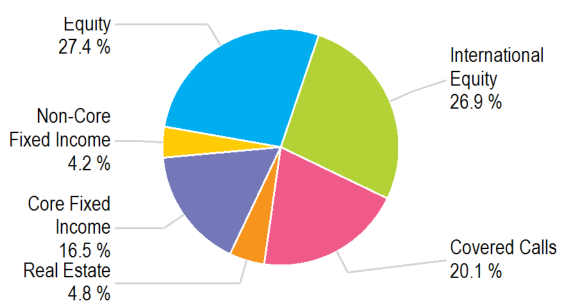
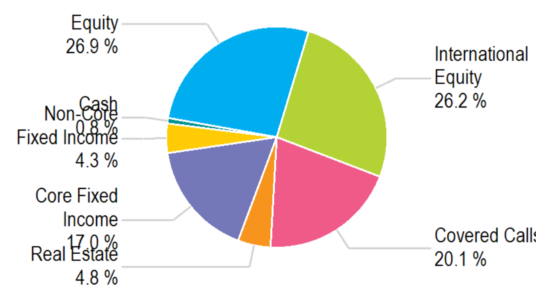
EBMUDERS Total Plan Composite | As of May 31, 2021

Asset Allocation vs. Target	Current ($)	Current (%)	Policy (%)	Difference* (%)	Policy Range (%)	Within Range
Domestic Equity	628,618,231	27.4	25.0	2.4	20.0 - 30.0	Yes
International Equity	618,842,356	26.9	25.0	1.9	20.0 - 30.0	Yes
Covered Calls	462,385,324	20.1	20.0	0.1	17.0 - 23.0	Yes
Real Estate	111,235,916	4.8	5.0	-0.2	3.0 - 7.0	Yes
Core Fixed Income	380,332,447	16.5	20.0	-3.5	17.0 - 23.0	No
Non-Core Fixed Income	95,792,372	4.2	5.0	-0.8	3.0 - 7.0	Yes
Cash	893,806	0.0	0.0	0.0	0.0 - 0.0	No
Total	**2,298,100,452**	**100.0**	**100.0**			

*Difference between Policy and Current Allocation

[1]Current policy target allocations elected by the Board in January 2019 took effect March 2019 upon the transition to the new long-term strategic allocation.
[2]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
[3]RREEF results are lagged 1 quarter





Manager Performance - Gross of Fees | As of May 31, 2021

	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
Domestic Equity	**628,618,231**				
Northern Trust Russell 3000	627,301,345	5.6	43.8	--	--
Russell 3000		*5.6*	*43.9*	--	--
International Equity	**618,842,356**				
Northern Trust ACWI ex US	431,444,318	6.3	41.4	--	--
MSCI ACWI ex USA Gross		*6.3*	*43.4*	--	--
Fisher Investments	187,398,037	7.0	50.1	13.3	14.0
MSCI ACWI xUS (blend)		*6.3*	*43.4*	*9.4*	*11.4*
Covered Calls	**462,385,324**				
Parametric BXM	151,423,321	3.2	28.9	9.3	9.5
CBOE S&P 500 BuyWrite USD		*3.1*	*20.9*	*3.9*	*6.4*
Parametric Delta Shift	167,380,486	5.2	37.9	16.0	14.9
CBOE S&P 500 BuyWrite USD		*3.1*	*20.9*	*3.9*	*6.4*
Van Hulzen	143,581,517	3.2	18.2	7.3	7.3
CBOE S&P 500 BuyWrite USD		*3.1*	*20.9*	*3.9*	*6.4*
Real Estate	**111,235,916**				
RREEF America II Lag	50,157,979	0.0	0.7	5.1	6.5
NCREIF NPI Mo 1 Qtr Lag		*0.0*	*1.1*	*4.5*	*5.6*
CenterSquare	61,077,937	9.3	37.6	12.4	8.5
FTSE NAREIT Equity REIT		*9.2*	*38.6*	*10.7*	*7.2*
Core Fixed Income	**380,332,447**				
CS McKee	187,433,640	1.2	0.2	5.3	3.5
BBgBarc US Aggregate TR		*1.1*	*-0.4*	*5.1*	*3.2*

[1]RREEF results are lagged 1 quarter

	Market Value	QTD	1 Yr	3 Yrs	5 Yrs
Garcia Hamilton	192,898,808	0.5	0.8	--	--
BBgBarc US Intermediate Gov/Cred		*0.9*	*0.7*	*--*	*--*
Non-Core Fixed Income	**95,792,372**				
MacKay Shields (HY)	49,682,537	1.2	11.5	--	--
ICE BofA ML US Corp Cash Pay BB-B 1-5Yr		*1.2*	*11.7*	*--*	*--*
Federated Investment Counseling (Bank Loans)	46,109,835	1.3	8.5	--	--
60% CredSuisLevLoan/40% BBStGovCorp		*0.6*	*7.6*	*--*	*--*
Cash	**893,806**				
Cash LAIF	893,805	0.2	0.9	2.0	1.5
FTSE T-Bill 3 Months TR		*0.0*	*0.1*	*1.4*	*1.1*

Benchmark History
As of May 31, 2021

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

EBMUDERS Total Plan x Securities Lending Composite		
12/1/2019	Present	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 10% BBgBarc US Intermediate Gov/Cred / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
3/1/2019	11/30/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% BBgBarc US Aggregate TR / 5% BBgBarc US Govt/Credit 1-3 Yr. TR / 2.5% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 2.5% 60% CredSuisLevLoan/40% BBStGovCorp / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
7/1/2018	2/28/2019	25% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 25% MSCI ACWI ex USA Gross / 15% BBgBarc US Aggregate TR / 5% BBgBarc US Govt/Credit 1-3 Yr. TR / 2.5% BBgBarc US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
4/1/2014	6/30/2018	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 10% BBgBarc US Aggregate TR / 5% BBgBarc US Govt/Credit 1-3 Yr. TR / 2.5% BBgBarc US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
3/1/2014	3/31/2014	40% Russell 3000 / 20% CBOE S&P 500 BuyWrite USD / 15% MSCI ACWI ex USA Gross / 15% BBgBarc US Aggregate TR / 2.5% BBgBarc US High Yield 1-5Yr Cash Pay 2% / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT / 2.5% S&P/LSTA Performing Loan TR USD
11/1/2011	2/28/2014	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% BBgBarc US Universal TR / 2.5% NCREIF NPI Mo 1 Qtr Lag / 2.5% FTSE NAREIT Equity REIT
1/1/2008	10/31/2011	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% BBgBarc US Universal TR / 5% NCREIF NPI Mo 1 Qtr Lag
1/1/2007	12/31/2007	50% Russell 3000 / 20% MSCI ACWI ex USA Gross / 25% BBgBarc US Aggregate TR / 5% NCREIF Property Index
10/1/2005	12/31/2006	50% Russell 3000 / 25% BBgBarc US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag / 20% MSCI EAFE
4/1/2005	9/30/2005	30% S&P 500 / 10% S&P 400 MidCap / 10% Russell 2000 / 20% MSCI EAFE / 25% BBgBarc US Aggregate TR / 5% NCREIF NPI Mo 1 Qtr Lag
9/1/1998	3/31/2005	33% S&P 500 / 10% S&P 400 MidCap / 10% Russell 2000 / 17% MSCI EAFE / 30% BBgBarc US Aggregate TR
3/31/1996	8/31/1998	30% S&P 500 / 15% Wilshire 5000 / 15% MSCI EAFE / 30% BBgBarc US Aggregate TR / 5% NCREIF Property Index / 5% FTSE T-Bill 3 Months TR
Public Equity Composite		
1/1/2007	Present	71.43% Russell 3000 / 28.57% MSCI ACWI ex USA Gross
10/1/2005	12/31/2006	28.57% MSCI EAFE / 71.43% Russell 3000
4/1/2005	9/30/2005	42.86% S&P 500 / 14.285% S&P 400 MidCap / 14.285% Russell 2000 / 28.57% MSCI EAFE
9/1/1998	3/31/2005	47.14% S&P 500 / 14.285% S&P 400 MidCap / 14.285% Russell 2000 / 24.29% MSCI EAFE
1/1/1994	8/31/1998	50% S&P 500 / 25% Wilshire 5000 / 25% MSCI EAFE

EBMUDERS Benchmark History | As of May 31, 2021

US Equity Composite		
10/1/2005	Present	Russell 3000
4/1/2005	9/30/2005	60% S&P 500 / 20% S&P 400 MidCap / 20% Russell 2000
9/1/1998	3/31/2005	62.23% S&P 500 / 18.87% S&P 400 MidCap / 18.87% Russell 2000
4/1/1996	8/31/1998	33.3% Wilshire 5000 / 66.6% S&P 500
US Equity Large Cap Composite		
10/1/2005	Present	Russell 1000 Value
6/1/1994	9/30/2005	S&P 500
NonUS Equity Composite		
1/1/2007	Present	MSCI ACWI ex USA Gross
1/1/1970	12/31/2006	MSCI EAFE
NonUSE Developed Markets Composite		
1/1/2007	Present	MSCI ACWI ex USA Gross
1/1/1970	12/31/2006	MSCI EAFE
Covered Calls Composite		
	Present	CBOE S&P 500 BuyWrite USD
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
Fixed Income Composite		
12/1/2019	Present	40% BBgBarc US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 40% BBgBarc US Intermediate Gov/Cred / 10% 60% CredSuisLevLoan/40% BBStGovCorp
3/1/2019	11/30/2019	60% BBgBarc US Aggregate TR / 10% ICE BofA ML US Corp Cash Pay BB-B 1-5Yr / 20% BBgBarc US Govt/Credit 1-3 Yr. TR / 10% 60% CredSuisLevLoan/40% BBStGovCorp

EBMUDERS Benchmark History | As of May 31, 2021

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

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

THROUGH: Lisa Sorani, Manager of Employee Services Lisa Sorani

FROM: Valerie Weekly, Principal Management Analyst

SUBJECT: Discussion on Retiree and Retiree Retirement Board Communications

At the request of the Retirement Board, the memo below provides some information on Retiree and Retiree Board member communications meant to facilitate a discussion on ways to update or better facilitate communications between retirees and the Retirement Board.

In review of Retirement Board minutes from the past, staff noted that in the early 2000's, the Retirement Board agenda had a "Communications" section. In this section were incoming letters from retirees as well as copies of the District response letters to retirees. By the time the current Manger of Employee Services joined the District, this section of the Agenda was no longer in use. Since that time, letters from retirees have been sent to the Board of Directors and then forwarded to Staff for response, and responses have not been added to Retirement Board agendas.

Prior to 2012, the District hosted an annual dinner for retirees and District employees with 20 or more years of service. The District stopped hosting these dinners due to austerity measures it adopted linked to the financial downturn during this period. In 2017, the Utility District Employees' Association (UDEA) reinstituted the annual dinner on a smaller scale. This event had previously presented an opportunity for the Retirement System retiree representative to communicate with retirees. Representative Lisa-Ricketts Mann, elected in 2014, requested assistance in facilitating communications with retirees and was provided with an iPad and District email address. While Staff emailed retirees for whom it had email addresses and provided the representative's District email address encouraging retirees to communicate on matters related to the Retirement System, Lisa Ricketts-Mann's engagement with retirees was not robust as she had hoped. To further assist in this area, staff has added the retiree representative District email address to its Destinations newsletter communication sent to retirees.

As part of the 2020 HIB Audit, in which all retirees were requested to provide documentation supporting their claim for HIB reimbursement, a questionnaire was added to allow retirees to voluntarily share their email addresses with the retiree representative. Approximately 500 retirees voluntarily provided their email addresses and indicated their willingness to receive communication from the retiree representative. The emails of those retirees, an iPad, and a

District email address, have all been provided to Elizabeth Grassetti, the current retiree representative, to assist her in her efforts to communicate with retirees.

Staff in the District's Employee Services unit use many tools for communicating with retirees. While U.S. mail is the best method to reach all retirees, staff have email addresses for about 75% of the District retirees; and on occasion, email will be sent to those retirees with email addresses, and hard copy mail sent to those retirees without email addresses on file. Staff also have a shared email address and hotline phone number that all retirees can use to get in touch with the Employee Services team. The email address and hotline number are included in every communication sent to retirees. Many retirees also know staff names and will often call staff members directly. When mail is returned unopened from a retiree, staff works to find the retiree and get updated contact information.

Since the May 2021 Retirement Board meeting, Staff have discussed ideas for how Employee Services staff and the retiree representative might improve communication with retirees. Some of the ideas discussed are noted below, and Staff are open to hearing from the Retirement Board members on this topic.

- Staff will continue to mail most items to retirees as our current main form of broad communications. Otherwise we will continue to communicate via the phone and email with retirees who reach out to staff in those formats.
- Human Resources Information System technology upgrade requirements include a portal for Retirees which will enable both retiree access to information and ability for Staff to share communications. Staff also hope to then collect information from retirees on their preferred method of communications so that multiple methods of communications can be utilized.
- Staff could also create a social media account for the Retirement System through Facebook and or Twitter to encourage greater retiree engagement.

LS:vw

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: Actuarial Risk Assessment

The Retirement System's actuary, Segal, has prepared the attached Risk Assessment for the Retirement System's pension plan as of June 30, 2020. The report discusses key risks to the pension plan on funded status, unfunded actuarial accrued liabilities, and employer contribution rates. This includes a historical analysis of funded status and unfunded liabilities, the assessment of employer contribution rates, and an assessment of primary risk factors going forward. The report additionally includes a scenario analysis exploring the impacts of a deviation in market returns from the assumed rate of 7.0%. Finally, the report provides plan maturity measures that affect primary risks.

A representative from Segal will present the results of the report at the July 15, 2021 Retirement Board Meeting.

SDS:RLH

Attachments

East Bay Municipal Utility District
Employees' Retirement System

Risk Assessment

Including Review of Funded Status of the Pension Plan as of June 30, 2020

April 29, 2021

Andy Yeung, ASA, MAAA, FCA, EA

Segal

Table of Contents

Section 1: Introduction and Executive Summary

Introduction

The purpose of this report is to assist the Retirement Board,[1] the District, the members, and other stakeholders to better understand and assess the risk profile of the Pension Plan for the East Bay Municipal Utility District Employees' Retirement System (EBMUDERS), as well as the particular risks inherent in using a fixed set of actuarial assumptions in preparing the results in our June 30, 2020 funding valuation for EBMUDERS.

The results included in our June 30, 2020 funding valuation report for the Pension Plan were prepared based on a fixed set of economic and non-economic actuarial assumptions under the premise that future experience of EBMUDERS would be consistent with those assumptions. While those assumptions are generally reviewed every four years (with the assumptions from the last quadrennial experience study adopted by the Retirement Board for use starting with the June 30, 2020 valuation), there is a risk that emerging results may differ significantly as actual experience is fluid and will not completely track current assumptions.

It is important to note that this risk assessment is based on plan assets as of June 30, 2020. Due to the COVID-19 pandemic, market conditions have changed significantly since the onset of the Public Health Emergency. The Plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the Plan Year. Moreover, this risk assessment does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after June 30, 2020. While it is impossible to determine how the pandemic will affect market conditions and other demographic experience of the plan in future valuations, the single year investment return scenario test included within this report provides an illustration of the impact of short term market fluctuations on the plan. Additionally, Segal is available to prepare other projections of selected potential outcome scenarios upon request.

Actuarial Standard of Practice on Risk Assessment

The Actuarial Standards Board approved the Actuarial Standard of Practice No. 51 (ASOP 51) regarding risk assessment when performing a funding valuation and it was effective with EBMUDERS' June 30, 2019 actuarial valuation for benefits provided by the Pension Plan. ASOP 51 requires actuaries to identify and assess risks that "may reasonably be anticipated to significantly affect the plan's future financial condition." Examples of key risks listed that are particularly

[1] This risk report has been prepared at the request of the Retirement Board to assist in administering the Fund. This risk report may not otherwise be copied or reproduced in any form without the consent of the Retirement Board and may only be provided to other parties in its entirety, unless expressly authorized by Segal. The measurements shown in this risk report may not be applicable for other purposes.

relevant to EBMUDERS are asset/liability mismatch risk, investment risk, and longevity and other demographic risks. The Standard also requires an actuary to consider if there is any ongoing contribution risk to the plan; however, it does not require the actuary to evaluate the particular ability or willingness of contributing entities to make contributions when due, nor does it require the actuary to assess the likelihood or consequences of future changes in applicable law.

The actuary's initial assessment can be strictly a qualitative discussion about potential adverse experience and the possible effect on future results, but it may also include quantitative numerical demonstrations where informative. The actuary is also encouraged to consider a recommendation as to whether a more detailed risk assessment would be significantly beneficial for the intended user in order to examine particular financial risks. When making that recommendation, the actuary will take into account such factors as the plan's design, risk profile, maturity, size, funded status, asset allocation, cash flow, possible insolvency and current market conditions. This report incorporates a more detailed risk assessment as agreed upon with EBMUDERS.

It should be noted that ASOP 51 does not apply to actuaries performing services related to other post-employment benefits such as the flat monthly health subsidy of $450 ($550 for a retiree with a spouse or EBMUD domestic partner) offered by the Health Insurance Benefit (HIB) Plan. In preparing this Risk Report, we have only analyzed the results for the Pension Plan. While some of the analyses could be expanded to include the HIB Plan, those analyses are not required under the ASOP and the funding requirements for the HIB Plan[2] have not fluctuated as much compared to the Pension Plan.

Plan Risk Assessment

In Section 2, we start by discussing some of the historical factors that have caused changes in EBMUDERS' funded status and employer contribution rates for the Pension Plan. It is important to understand how the combination of decisions and experience has led to the current financial status of the Pension Plan.

We follow this with a discussion of the most significant risk factors going forward. Even though we have not included a numerical analysis of all the risk factors, based on our discussions with EBMUDERS we have illustrated the impact on the funded status and employer contribution rates using relevant economic scenario tests. These tests illustrate the effect of future investment returns on the System's portfolio coming in differently from the current 7.00% annual investment return assumption used in the June 30, 2020 valuation. The Standard also requires disclosure of plan maturity measures and other historical information that are significant to understanding the risks associated with the Pension Plan and this information is included in this report.

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[2] We note that over a 10-year period, the District's contribution rate for the HIB Plan was about 5.1% of total payroll in the June 30, 2011 valuation and about 4.7% of total payroll in the June 30, 2020 valuation.

Executive Summary

Historical Funded Status and Employer Contribution Rates

The following table provides a summary of financial changes to the Pension Plan over the last 10 valuations by showing the beginning and ending year results over that period.

The unfunded actuarial accrued liability (UAAL)[3] and contribution rates[4] increased primarily as a result of the strengthening of the actuarial assumptions used in preparing the valuations that were offset to some degree by favorable investment and non-investment experience.

	Market Value Basis		Valuation Value Basis		Total (Aggregate)[5] Employer Contribution Rate (% of Payroll – Contributions Received End of Pay Period)
Valuation Date	**Funded Status**	**UAAL**	**Funded Status**	**UAAL**	
June 30, 2011	66.1%	$489.9M	66.0%	$491.3M	34.46%
June 30, 2020	71.5%	$721.6M	73.7%	$666.3M	39.06%

Future Funded Status and Employer Contribution Rates

In this report, we highlight key factors that may affect the financial profile of the Pension Plan going forward. As investment experience in the past 10 years has had a significant impact on the funded status and employer contribution rates, we have also provided deterministic projections (using select scenarios for illustration) under hypothetical unfavorable and favorable future market experience so that the impact of market performance can be better understood.

The total (aggregate) employer contribution rate is 39.06% of total payroll in the June 30, 2020 valuation. Using a deterministic projection, this report shows the effect of either unfavorable (0.00%) or favorable (14.00%) hypothetical market returns for 2020/2021 on key valuation results. In particular, the changes in the total employer contribution rate

3 For example, the UAAL increased by $53.4 million in the June 30 2012 valuation, $18.4 million in the June 30, 2014 valuation, $52.6 million in the June 30, 2016 valuation, $12.5 million in the June 30, 2018 valuation, and $104.8 million in the June 30, 2020 valuation (for a total of $241.7M), as a result of the assumptions adopted by the Board following the interim economic assumptions studies and the quadrennial experience studies over the last ten years.

4 For example, the increase in the employer's total rate (normal cost plus UAAL) was 2.79% in the June 30, 2012 valuation, 1.00% in the June 30, 2014 valuation, 2.42% in the June 30, 2016 valuation, 0.71% in the June 30, 2018 valuation, and 4.53% in the June 30, 2020 valuation (for a total of 11.45%), as a result of the assumptions adopted by the Board following the interim economic assumptions studies and the quadrennial experience studies over the last ten years.

5 There are separate contribution rates determined in the June 30, 2020 valuation for the 1955/1980 Plan and the 2013 Tier. The aggregate contribution rate has been calculated based on an average of those rates weighted by the payrolls of the active members reported in that valuation.

(relative to the June 30, 2020 valuation aggregate employer contribution rate of 39.06%) in the June 30, 2021 valuation and in the June 30, 2025 valuation (when all the investment gains or losses are fully recognized at the end of the five-year asset smoothing period) are as shown in the following table:[6]

	2020/2021 Single Plan-Year Investment Return		
Contribution Rate Change	**0.00%**	**7.00% (Baseline)**	**14.00%**
June 30, 2021	+0.6% of payroll	-0.2% of payroll	-1.0% of payroll
June 30, 2025	+4.8% of payroll	+0.3% of payroll	-4.3% of payroll

As of June 30, 2020, the longest-duration amortization base is 25 years, and will be fully amortized on June 30, 2045. We note that under the unfavorable (0.00%) hypothetical market return scenario for 2020/2021, the last portion of the resulting deferred investment loss under the five-year asset smoothing method will be recognized in the June 30, 2025 valuation and paid off in 20 years on June 30, 2045, which is the same year the 25-year base will be fully amortized. This implies that regardless of the hypothetical market return scenario for 2020/2021, the System is projected to reach full funding at the end of 25 years and the total employer contribution rate is projected to approach about 9% of payroll on June 30, 2045.

With that said, we have shown the projected results only to the June 30, 2043 valuation date, as the System has actually been projected to reach full funding earlier than June 30, 2045, and showing additional years of full funding was not deemed to add value. The main reason the System is projected to reach full funding slightly earlier than June 30, 2045 is that each year positive UAAL amortization bases drop off in the future, the System will experience contribution gains from the scheduled 12-month delay in implementing the lower contribution rates determined in the actuarial valuation.

Plan Maturity Measures

During the past 10 valuations, the System has become more mature as evidenced by an increase in the ratio of members in pay status (retirees and beneficiaries) to active members (as shown in Section 2, Chart 8 page 20) and by an increase in the ratios of plan assets and liabilities to active member payroll (as shown in Section 2, Chart 9 on page 21). We expect these trends to continue going forward. This is significant for understanding the volatility of both historical and future employer contribution rates because any increase in UAAL due to unfavorable investment and non-investment experience for the relatively larger group of non-active and active members would have to be amortized and funded over the payroll of the relatively smaller group of only active members. Put another way, as a plan grows more mature, its contribution rate becomes more sensitive to investment volatility and liability changes. As the System continues to mature with time, its risk profile will continue to evolve in this way and contributions will grow more sensitive to plan experience.

[6] Assuming no further assumption changes, method changes or experience that differs significantly from assumptions.

Section 2: Key Plan Risks on Funded Status, Unfunded Actuarial Accrued Liabilities, and Employer Contribution Rates

Evaluation of Historical Trends

Funded Status and UAAL

One common measure of EBMUDERS' financial status is the funded ratio. This ratio compares the valuation[7] and market value of assets to the actuarial accrued liabilities (AAL)[8] of EBMUDERS. After accounting for contributions made at the Actuarially Determined Contribution (ADC) amount, the overall level of funding of EBMUDERS has remained relatively level, and even increased slightly, despite strengthening of the economic and non-economic actuarial assumptions. This was due to generally favorable investment experience after the Great Recession of 2009 as well as favorable non-investment experience. The funded ratios and UAAL for the past 10 valuations from June 30, 2011 to 2020 measured using both valuation and market value of assets in *Chart 1*.

The factors that caused the changes in the UAAL for the past 10 valuations from June 30, 2011 to 2020 are provided in *Chart 2*. The results in *Chart 2* show that the reductions in the investment return assumption in the June 30, 2012, 2014, 2016, and 2018 valuations,[9] together with the changes in the mortality tables and other assumptions from the three quadrennial experience studies recommending assumptions used in the June 30, 2012, 2016, and 2020 valuations, have had the most impact on the UAAL for EBMUDERS.[10]

Chart 2 also shows that the unfavorable investment experience from 2009-2013 was offset by favorable investment experience from 2014-2018 in addition to favorable non-investment experience overall. The non-investment experience included lower than expected COLAs granted to retirees and beneficiaries, as well as lower than expected salary

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[7] The valuation value of assets is the portion of the total actuarial value of assets for the Pension Plan only (i.e., excluding assets for the Health Insurance Benefit Plan). The actuarial value of assets is equal to the market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period.

[8] For the actives, the actuarial accrued liability is the value of the accumulated normal costs allocated to the years before the valuation date. For the pensioners, beneficiaries and inactive vested members, the actuarial accrued liability is the single-sum present value of the lifetime benefit expected to be paid to those members.

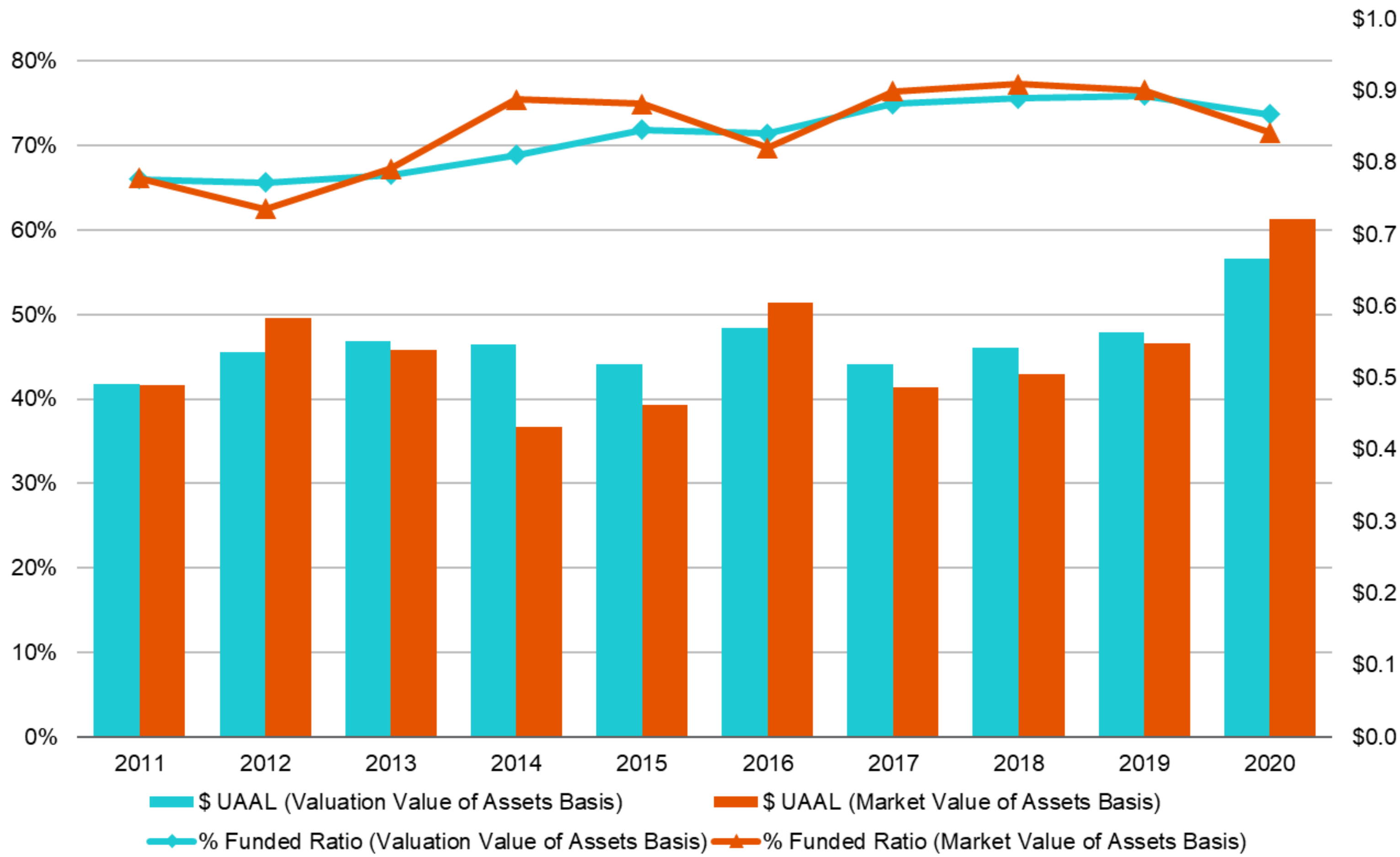
[9] During the past 10 valuations, the Retirement Board had conducted interim reviews of the economic assumptions between the quadrennial experience studies before the June 30, 2014 and 2018 valuations.

[10] For example, the UAAL increased by $53.4 million in the June 30 2012 valuation, $18.4 million in the June 30, 2014 valuation, $52.6 million in the June 30, 2016 valuation, $12.5 million in the June 30, 2018 valuation, and $104.8 million in the June 30, 2020 valuation (for a total of $241.7M), as a result of the assumptions adopted by the Board following the interim economic assumptions studies and the quadrennial experience studies over the last ten years.

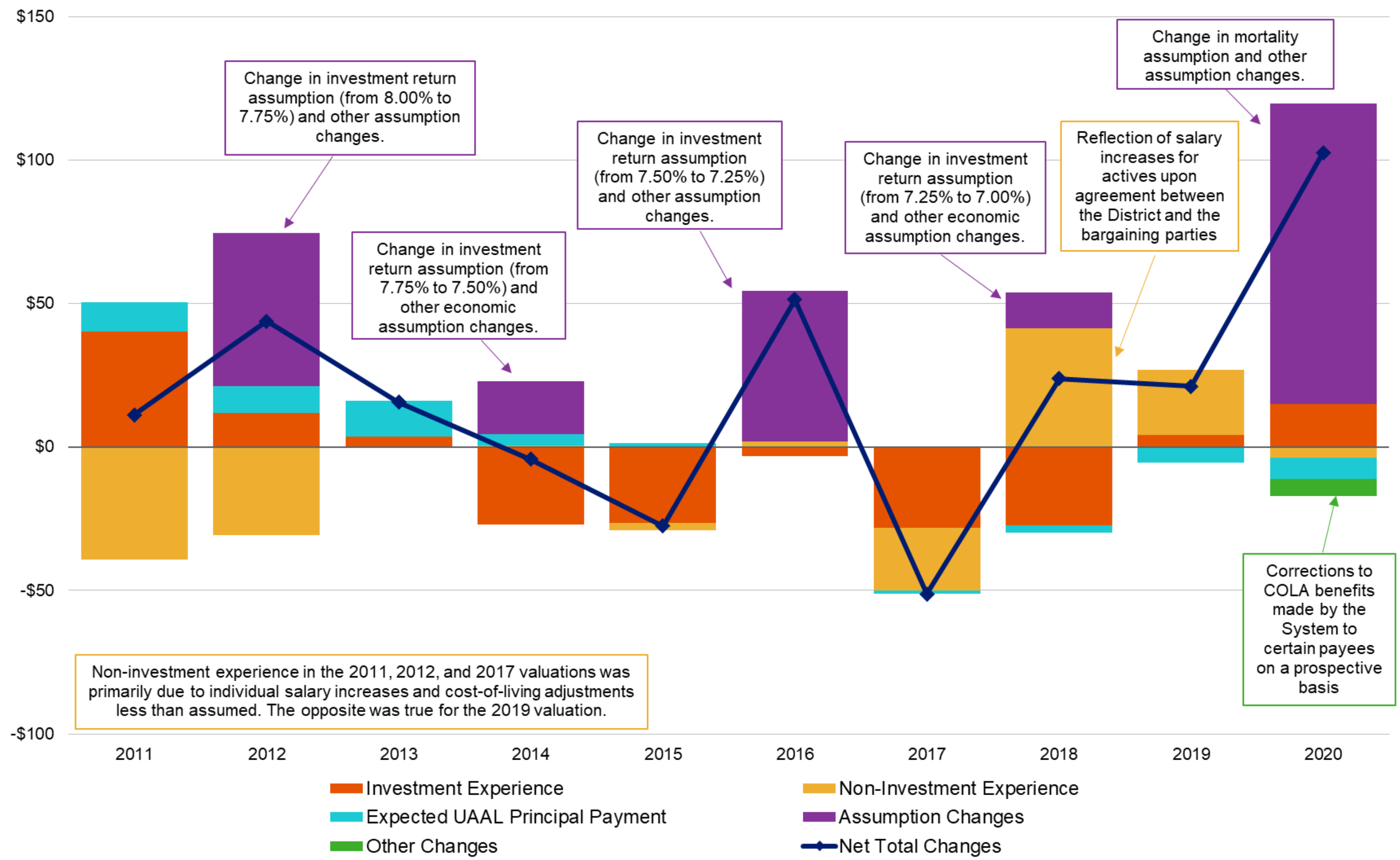
increases for continuing actives for 2011, 2012, and 2017 (offset somewhat by higher than expected salary increases for 2018 and 2019). The non-investment experience also included gains/losses from the scheduled 12-month delay in implementing the contribution rates determined in the annual valuation. Furthermore, there was non-investment experience gain due to the decision made by the Retirement Board to leave the District’s contribution rates unchanged in the June 30, 2015 and June 30, 2017 through 2019 valuations when those contribution rates would have dropped as a result of favorable actuarial experience during the 12-month period immediately before the date of those valuations.

It is important to note that EBMUDERS has strengthened the assumptions over time, particularly lowering the expected investment rate of return, utilizing a generational mortality assumption, and adopting a funding policy that controls future negative amortization. These changes may result in higher contributions in the short term, but in the medium to longer term avoid both deferring contributions and allowing unmanaged growth in the UAAL. We believe these actions are essential for EBMUDERS’ fiscal health going forward.

Funded Ratio (Percentages) and Dollar UAAL ($ Billions) in June 30, 2011 to 2020 Valuations



Factors that Changed UAAL in June 30, 2011 to 2020 Valuations ($ Millions)



Note: The primary source of the investment loss in the June 30, 2011 valuation is the Great Recession in 2008 and 2009, which was recognized in the valuation value of assets over several years.

Employer Contribution Rates

The total (normal cost[11] plus UAAL payment) employer contribution rates determined in the June 30, 2011 to 2020 valuations are provided in *Chart 3*, and the factors that caused the changes in the total aggregate employer rates[12] are provided in *Chart 4*.

Except for the increases caused by using new actuarial assumptions in the June 30, 2012 and June 30, 2020 valuations, the aggregate employer normal cost rates shown in *Chart 3* has stayed relatively flat since the June 30, 2011 valuation. The normal cost rates were decreased to some degree by the plan changes as new members have been enrolled in the lower cost 2013 Tier starting on January 1, 2013. The UAAL rate generally increased between the June 30, 2011 and the June 30, 2020 valuations primarily due to changes in actuarial assumptions.

Chart 4 shows that the changes in the investment return, mortality table and other assumptions have had the most impact on increasing the UAAL contribution rates[13] for the System.

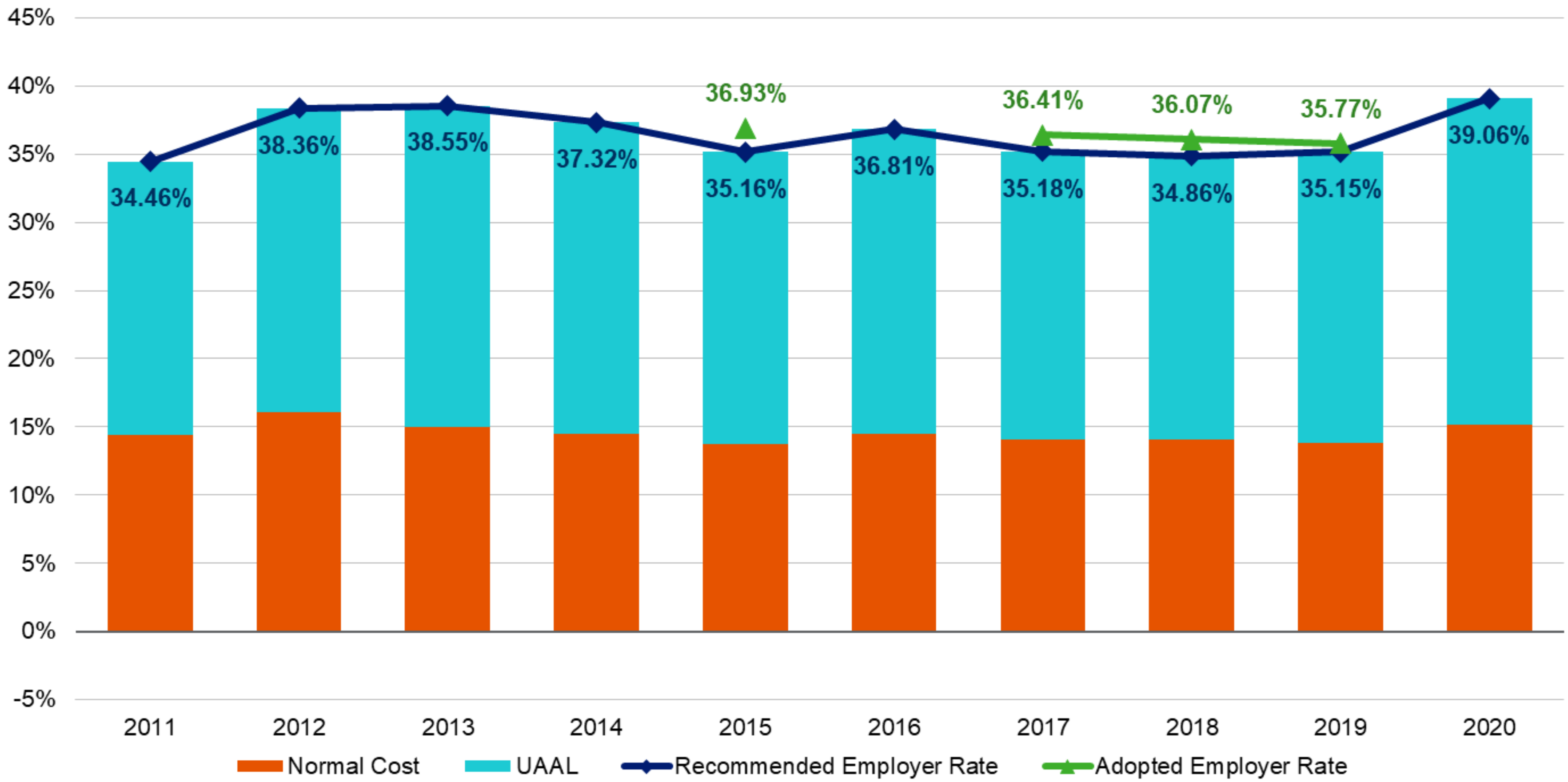
[11] The normal cost is the amount of contributions required to fund the portion of the level cost of the member's projected retirement benefit that is allocated to the current year of service.

[12] Beginning with the June 30, 2013 valuation, there are separate contribution rates determined in the valuation for the 1955/1980 Plan and the 2013 Tier. The aggregate contribution rates have been calculated based on an average of those rates weighted by the payrolls of the active members reported in those valuations.

[13] For example, the increase in the employer's total rate (normal cost plus UAAL) was 2.79% in the June 30, 2012 valuation, 1.00% in the June 30, 2014 valuation, 2.42% in the June 30, 2016 valuation, 0.71% in the June 30, 2018 valuation, and 4.53% in the June 30, 2020 valuation (for a total of 11.45%), as a result of the assumptions adopted by the Board following the interim economic assumptions studies and the quadrennial experience studies over the last ten years.

Chart 3

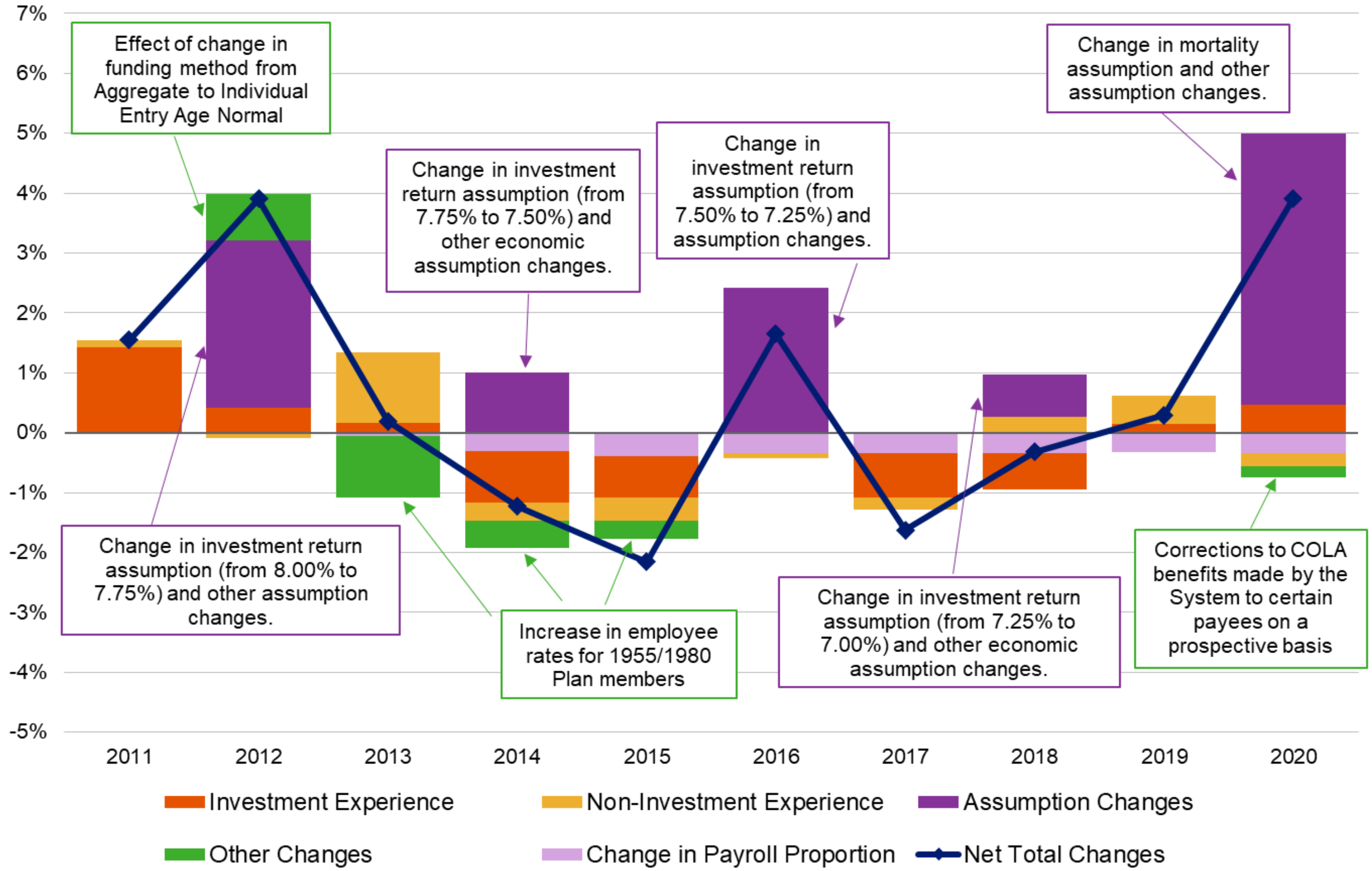
Employer Contribution Rates in June 30, 2011 to 2020 Valuations
(% of Payroll – Contributions Received End of Pay Period)



Notes: 1. The 2012 valuation rate shown above, which was effective during fiscal year 2013-2014, was for the 1955/1980 Plan only, as there were no 2013 Tier members in the June 30, 2012 valuation since the 2013 Tier only became effective on January 1, 2013.

2. The adopted employer rates are the same as the recommended rates, unless otherwise shown. The adopted rates shown represent the aggregate rates for the 1955/1980 Plan and the 2013 Tier, aggregated based on the projected payrolls from the same valuation date.

Factors that Affected Employer Contribution Rates in June 30, 2011 to 2020 Valuations (% of Payroll – Contributions Received End of Pay Period)



Note: The chart above provides the items included in the reconciliation of the recommended employer contribution rates and does not reflect any differences between the adopted and recommended rates. An illustration of the difference between the adopted and recommended rates for the June 30, 2015 and June 30, 2017 through 2019 valuations is provided on Chart 3.

Assessment of Primary Risk Factors Going Forward

As discussed in the Evaluation of Historical Trends section, in the 2011 to 2020 valuations the funded ratios and the employer contribution rates have changed mainly as a result of changes in actuarial assumptions, investment experience, and non-investment experience.

In general, we anticipate the following risk factors to have an ongoing influence on those financial metrics in our future valuations:

- Asset/liability mismatch risk – the potential that future plan experience does not affect asset and liability values in the same way, causing them to diverge.

  The most significant asset/liability mismatch risk to EBMUDERS is investment risk, as defined below. In fact, investment risk has the potential to impact asset/liability mismatch in two ways. The first mismatch is evident in annual valuations: when asset values deviate from assumptions, those changes are essentially independent from liability changes. The second mismatch can be caused when systemic asset deviations from assumptions may signal the need for an assumption change, which causes liability values and contribution rates to move in the opposite direction from the experience of the asset values.

  Asset/liability mismatch can also be caused by longevity and other demographic assumption risks, which affect liabilities but have no impact on asset levels. These risks are also discussed below.

  It may be informative to use the asset volatility and liability volatility ratios and associated contribution rate impacts provided in the following Plan Maturity Measures section when discussing with the District the effect of unfavorable or favorable actuarial experience on the assets and the liabilities of EBMUDERS.

- Investment risk – the potential that future market returns will be different from the current expected 7.00% annual return assumption.

  The investment return assumption is a long-term, deterministic assumption for valuation purposes even though in reality market experience can be quite volatile in any given year. We have included deterministic scenario tests later in this section so that EBMUDERS can better understand the risk associated with earning either less or more than the assumed rate.

  The Board has a policy of reviewing the investment return and the other actuarial assumptions generally every four years, the next quadrennial experience study (recommending assumptions for the June 30, 2024 actuarial valuations) is scheduled to be performed in 2024. (This policy is in addition to the general practice of the Board to conduct interim reviews of the economic assumptions in between the quadrennial studies.[14])

[14] For instance, during the last 10 years, the Board conducted quadrennial experience studies before the June 30, 2012, 2016 and 2020 valuations and interim reviews of the economic assumptions before the June 30, 2014 and 2018 valuations.

- Longevity and other demographic risks – the potential that mortality or other demographic experience will be different than expected.

  The change to the mortality tables was the most major change to the non-economic assumptions in the last experience study conducted before the June 30, 2020 valuation. The changes to the mortality tables include using 1) using benefited-weighted tables, 2) the Pub-2010 Public Retirement Plans Mortality Tables (Pub-2010), which are based exclusively on public sector pension plan experience in the United States, and 3) a generational rather than static approach for projecting mortality improvement. As can be observed from *Charts 2* and *4*, there has been relatively small unfavorable impact on the UAAL and employer contribution rates due to investment and non-investment related experience relative to the assumptions used in the last 10 valuations.

- Contribution risk – the potential that actual future contributions will be different from expected future contributions.

  ASOP 51 does not require the actuary to evaluate the particular ability or willingness of the plan sponsor or other contributing entity to make contributions to the plan when due. However, it does require the actuary to consider the potential for and impact of actual contributions deviating from expected in the future. EBMUDERS has a well-established practice of making the ADC determined in the annual actuarial valuations, based on the Retirement Board's Actuarial Funding Policy and has paid the higher contribution rates adopted by the Board in recent years when the District's contribution rates in the June 30, 2015 and June 30, 2017 through 2019 valuations would have dropped as a result of favorable actuarial experience during the 12-month period immediately before the date of those valuations.[15] As a result, in practice EBMUDERS has essentially no contribution risk.

  Furthermore, when ADCs determined in accordance with the EBMUDERS Actuarial Funding Policy are made in the future by the District (and contributions required by the statute are made by the employees), it is anticipated that the System would have enough assets to provide all future benefits promised to the current members enrolled in the System, if all of the actuarial assumptions used in the valuation are met.

The ASOP also lists interest rate risk as an example of a potential risk to consider. However, the valuations of your Pension Plan's liabilities are not linked directly to market interest rates so the resulting interest rate risk exposure is minimal.

Note that other events that could affect costs going forward, such as future plan changes, are not included herein.

[15] The payment of higher contributions has resulted in accelerated payment towards the District's UAAL.

Scenario Tests: Deterministic Projections

Because the funded ratio, UAAL and the employer contribution rates have fluctuated as a result of deviation in investment experience in the last 10 valuations, we have examined the risk for EBMUDERS associated with earning either lower or higher than the assumed rate of 7.00% in future valuations using projections under a deterministic approach.

To measure such risk, we have included scenario tests to study the change in the UAAL and contribution rates if EBMUDERS were to earn a market return lower or higher than 7.00% in the next year following the June 30, 2020 valuation. In *Charts 5, 6* and *7*, we show the aggregate employer contribution rates, funded ratios, and UAAL respectively assuming that the System's portfolio market return in 2020/2021 will be as follows:

Scenario 1: 0.00%
Scenario 2: 7.00% (baseline)
Scenario 3: 14.00%.

The following table summarizes the resulting aggregate contribution changes (relative to the June 30, 2020 valuation aggregate employer contribution rate of 39.06%) in the immediately next valuation as well as in June 30, 2025 valuations when all of the investment gains and losses are fully recognized in the (smoothed) actuarial value of assets.

	2020/2021 Single Plan-Year Investment Return		
Contribution Rate Change	**0.00%**	**7.00% (Baseline)**	**14.00%**
June 30, 2021	+0.6% of payroll	-0.2% of payroll	-1.0% of payroll
June 30, 2025	+4.8% of payroll	+0.3% of payroll	-4.3% of payroll

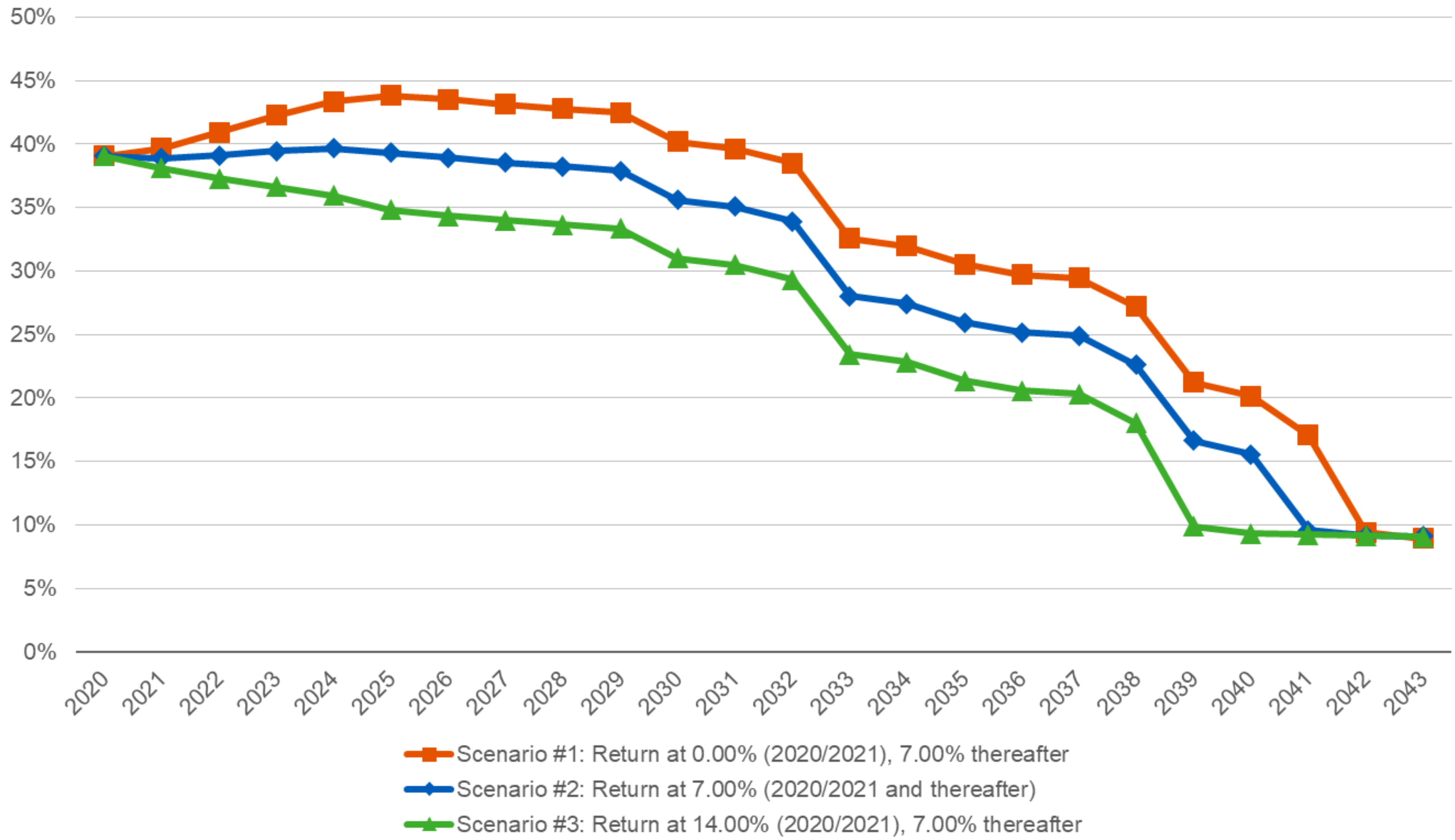
As of June 30, 2020, the longest-duration amortization base is 25 years, and will be fully amortized on June 30, 2045. We note that under the unfavorable (0.00%) hypothetical market return scenario for 2020/2021, the last portion of the resulting deferred investment loss under the five-year asset smoothing method will be recognized in the June 30, 2025 valuation and paid off in 20 years on June 30, 2045, which is the same year the 25-year base will be fully amortized. This implies that regardless of the hypothetical market return scenario for 2020/2021, the System is projected to reach full funding at the end of 25 years and the total employer contribution rate is projected to approach about 9% of payroll on June 30, 2045.[16]

While we have not assigned a probability on the 2020/2021 market return coming in at these rates, the Board and other stakeholders monitoring EBMUDERS can interpolate between these scenarios to estimate the funded status and

[16] Assuming no further assumption changes, method changes or experience that differs significantly from assumptions.

employer contribution rates for the June 30, 2021 and next several valuations as the actual investment experience for the 2020/2021 year becomes available throughout the year. Additionally, comparable experience in upcoming future years is likely to have a similar impact on the System absent any significant plan or assumption changes.

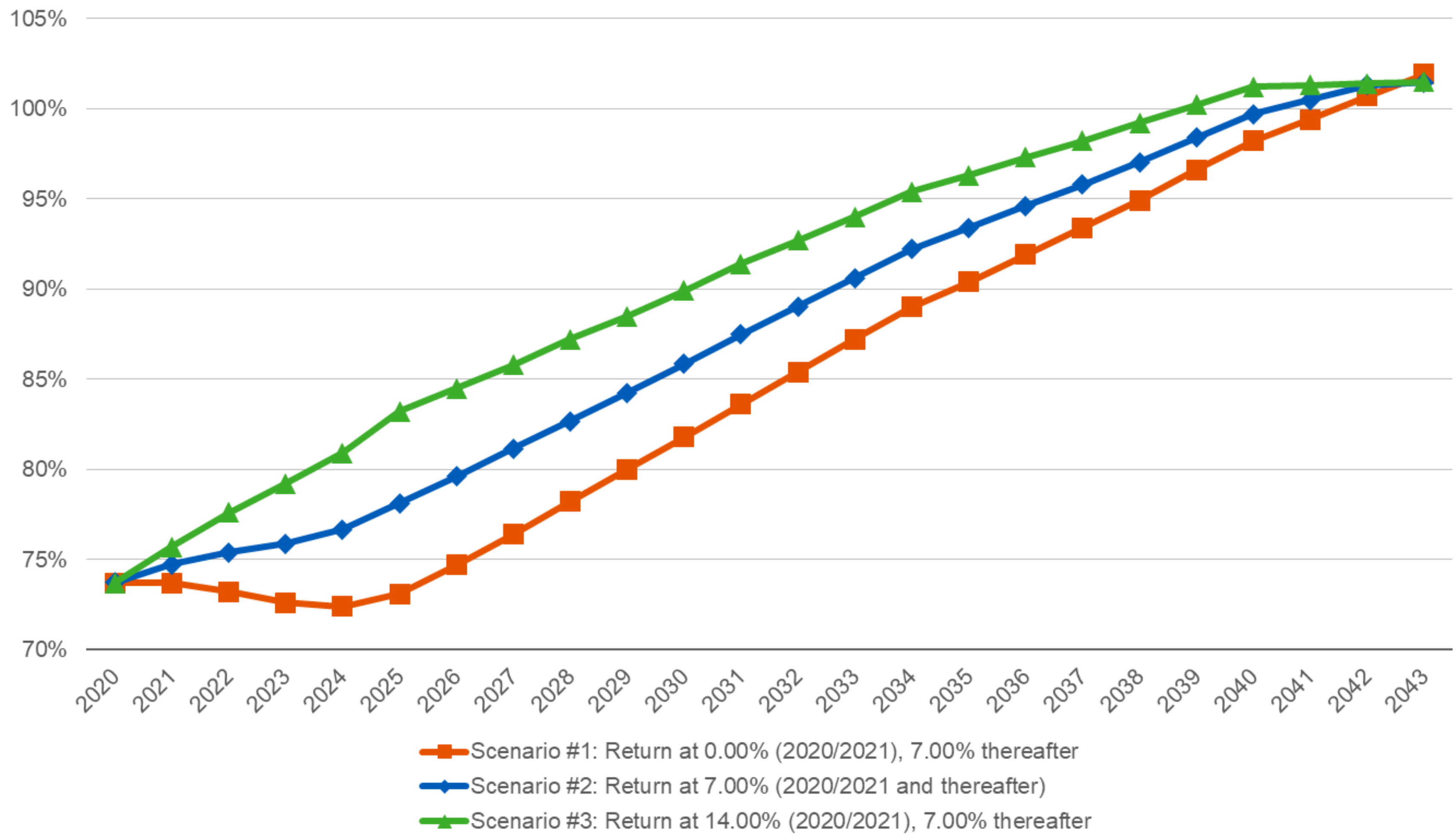
Projected Employer Contribution Rates
Under Three Hypothetical Market Return Scenarios for 2020/2021
for the June 30, 2020 to 2043 Valuations (% of Payroll – Contributions Received End of Pay Period)



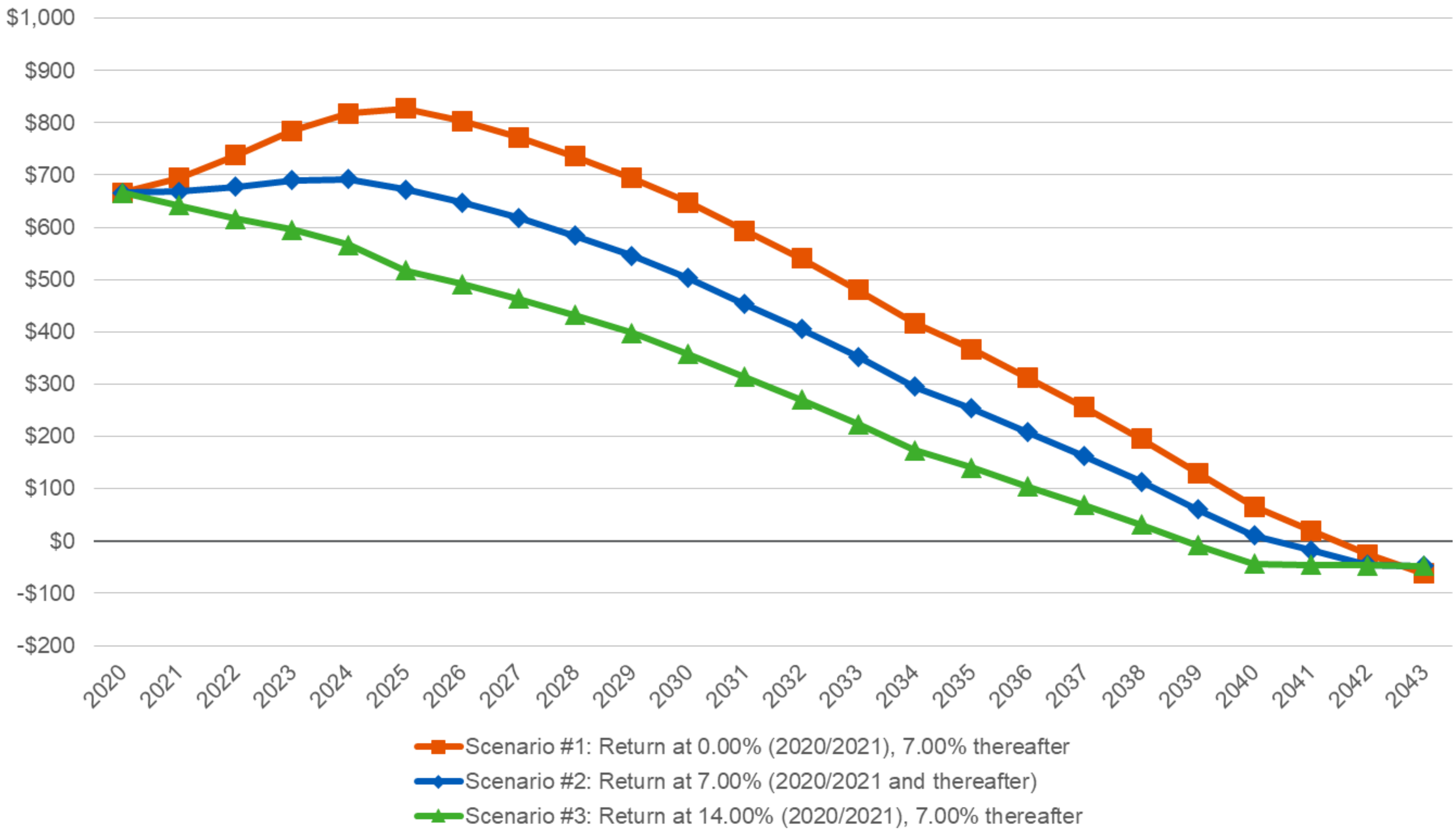
Note: The contribution rates under all scenarios would be expected to approach 9% (the projected aggregate Normal Cost rate) on June 30, 2045 when the final amortization base is fully recognized in 25 years.

Chart 6

Projected Funded Ratios (on Valuation Value of Assets)
Under Three Hypothetical Market Return Scenarios for 2020/2021
for the June 30, 2020 to 2043 Valuations



Projected UAAL (on Valuation Value of Assets) Under Three Hypothetical Market Return Scenarios for 2020/2021 for the June 30, 2020 to 2043 Valuations ($ Millions)



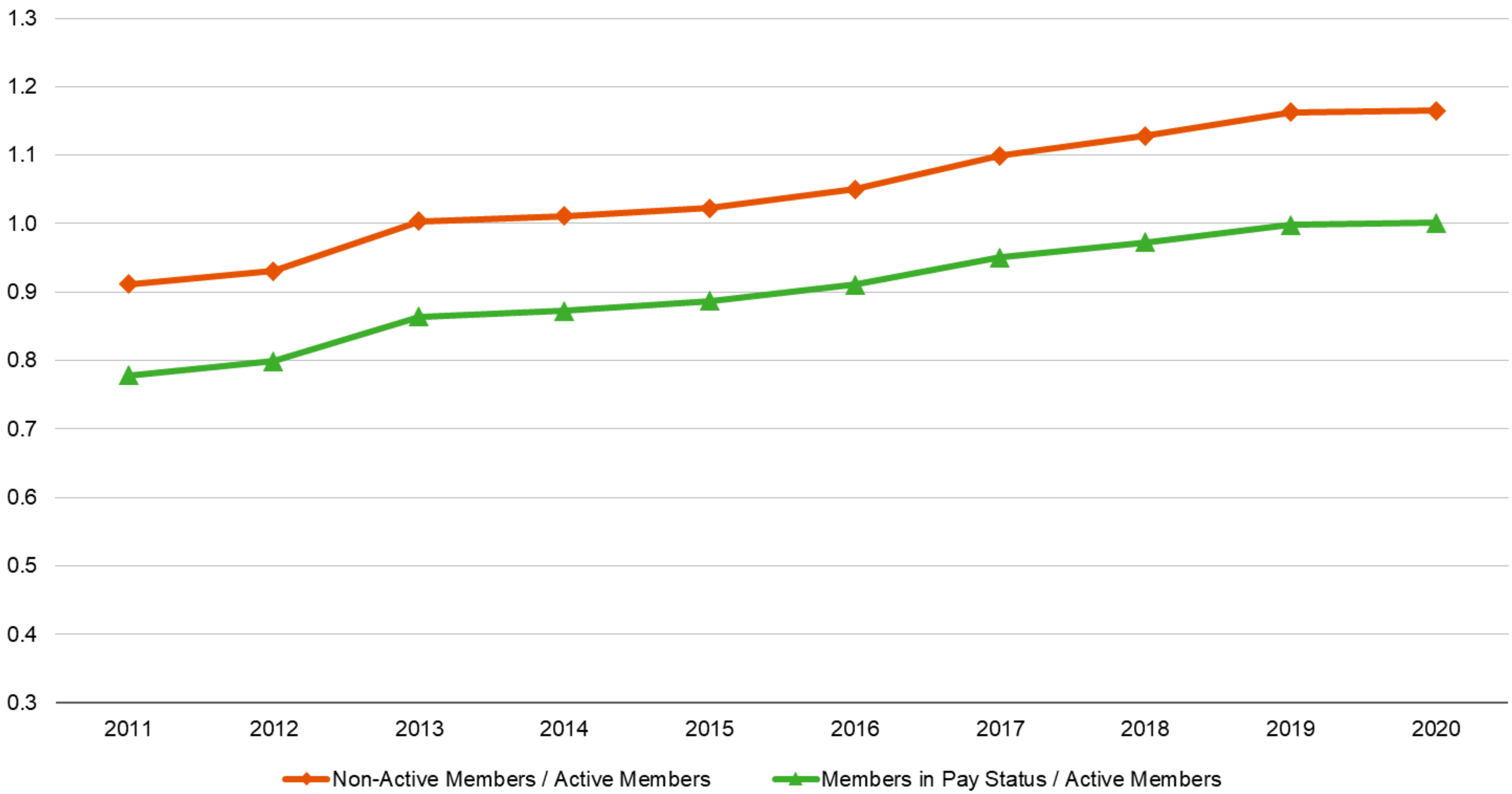
Plan Maturity Measures that Affect Primary Risks

The annual actuarial valuations consider the number and demographic characteristics of covered members, including active members and non-active members (inactive vested, retirees and beneficiaries). In the past 10 valuations from June 30, 2011 to 2020, EBMUDERS has become more mature, indicated by the continued increase in the ratio of non-active to active members covered by the System as shown in *Chart 8*. The Chart also shows the ratio of members in pay status (retirees and beneficiaries) to active members. This ratio excludes the inactive vested members who have relatively smaller liabilities. The increase in the ratios is significant because any increase in UAAL due to unfavorable future investment and non-investment experience for a relatively larger group of non-active members would have to be amortized and funded using the payroll of a relatively smaller group of active members.

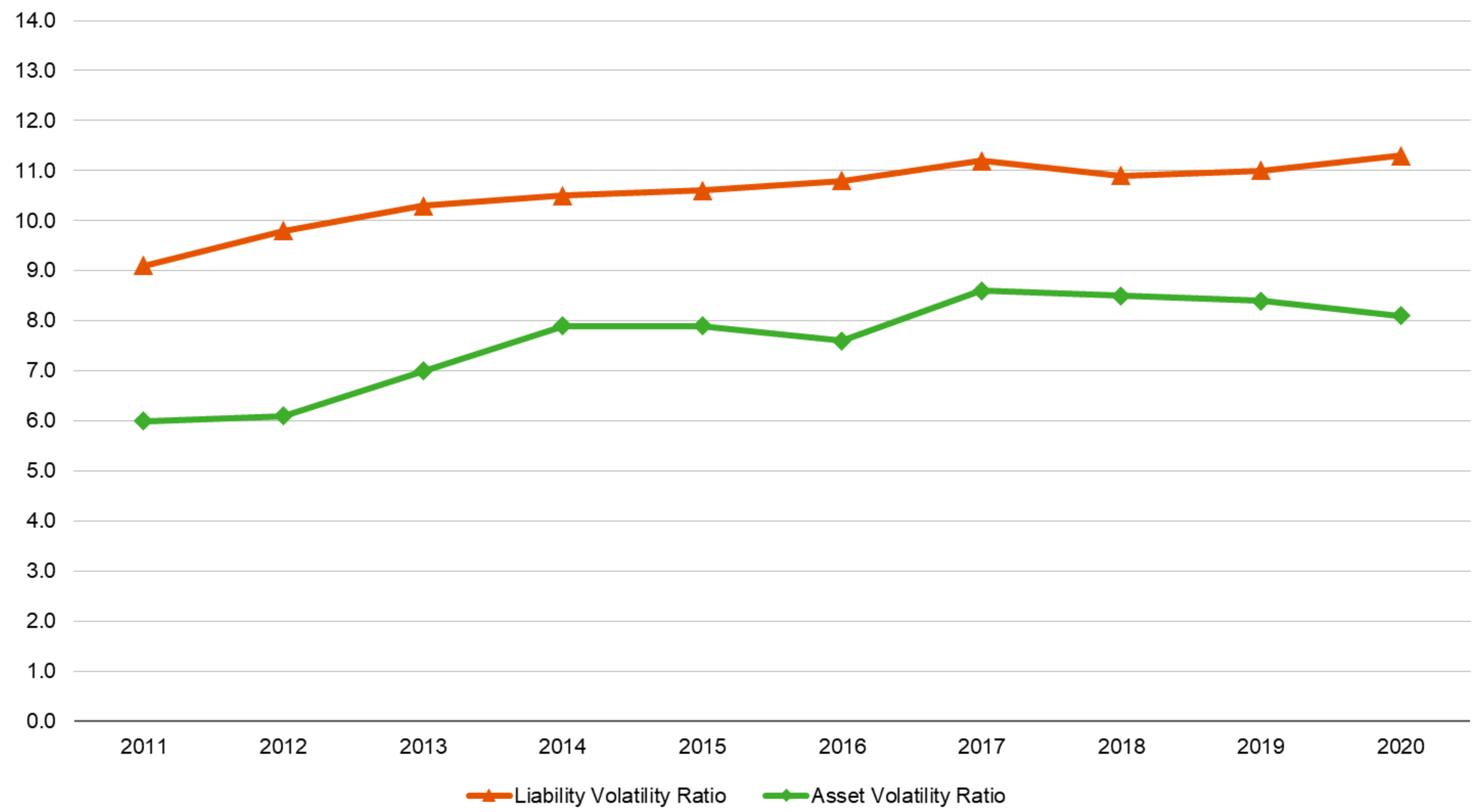
Besides the ratio of members in pay status to active members, another indicator of a more mature plan is relatively large amounts of assets and/or liabilities compared to active member payroll, which leads to increasing volatility in the level of required contributions. The **Asset Volatility Ratio (AVR)**, which is equal to the market value of assets divided by total payroll, provides an indication of contribution sensitivity to changes in the current level of assets and is detailed in *Chart 9*. The **Liability Volatility Ratio (LVR)**, which is equal to the actuarial accrued liability divided by payroll, provides an indication of the contribution sensitivity to changes in the current level of liability and is also detailed in *Chart 9*. Over time, the AVR should approach the LVR because when a plan is fully funded the assets will equal the liabilities. As such, the LVR also indicates the long-term contribution sensitivity to the asset volatility, as the plan approaches full funding.

In particular, the System's AVR was 8.1 as of June 30, 2020. This means that a 1% asset gain or loss in 2020/2021 (relative to the assumed investment return) would amount to 8.1% of one year's payroll. Similarly, the System's LVR was 11.3 as of June 30, 2020, so a 1% liability gain or loss in 2020/2021 would amount to 11.3% of one year's payroll. Based on EBMUDERS' policy to amortize actuarial experience over a period of 20 years, there would be a 0.6% of payroll decrease or increase in the required contribution rate for each 1% asset gain or loss, respectively, and a 0.8% of payroll decrease or increase in the required contribution rate for each 1% liability gain or loss, respectively.

Ratios of Members in Pay-Status (Retirees and Beneficiaries) to Active Members & Non-Active Members (Inactive Vested, Retirees and Beneficiaries) to Active Members in June 30, 2011 to 2020 Valuations



Volatility Ratios in June 30, 2011 to 2020 Valuations



Appendix: Actuarial Assumptions & Methods, Actuarial Certification, and Detailed Scenario Test Results

Actuarial Assumptions & Methods

Unless otherwise noted, the results included in this report for the Pension Plan have been prepared based on the assumptions and methods used in preparing the June 30, 2020 valuation.

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary

Deterministic Projection

In addition, we have prepared the deterministic projection for the Pension Plan using the following assumptions and methods applied in the June 30, 2020 actuarial valuation:

- Non-economic assumptions will remain unchanged.
- Retirement benefit formulas will remain unchanged.
- East Bay Municipal Utility District Employees' Retirement System Ordinance will remain unchanged.
- UAAL amortization method will remain unchanged (i.e., 20-year layers for actuarial gains/losses, 25-year layers for assumption or method changes, 30-year layers for actuarial surplus, and level percent of pay).
- Economic assumptions will remain unchanged, including the annual 7.00% investment earnings and 3.25% active payroll growth assumptions.
- Deferred investment gains and losses will be recognized over a five-year period.

- In estimating the benefit payments for the open group, we have assumed that the annual payments will increase by 6.6%. This assumption has been developed by analyzing the increase in the actual benefit payments over the last five years, combined with the projected benefit payments based on the actuarial assumptions described herein for the next five years.
- All other actuarial assumptions used in the June 30, 2020 actuarial valuation will be realized.

Other Considerations

The results presented in this report are intended to provide insight into key plan risks that can inform financial preparation and future decision making. However, we emphasize that deterministic projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

Actuarial Certification

The actuarial calculations in this report were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary.

The actuarial opinion expressed in this report was prepared by Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Andy Yeung

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

Detailed Scenario Test Results – Under Scenario 2 (Assuming 7.00% Market Return for 2020/2021)

Projection of UAAL, Funded Ratio and District Contributions
(Contributions Received End of Pay Period)
($ In Thousands)

June 30 of Valuation Year				District Contributions (End of Pay Period)					
Valuation Year	UAAL	Funded Ratio	Fiscal Year End	Fiscal Year Pay	Normal Cost	UAAL Amortization	Total Rate	Contribution Amount	Incremental Increase
2019	$ 563,708	75.9%	2021	$ 224,412	13.78%	21.37%	35.15%	$ 78,881	
2020	$ 666,321	73.7%	2022	$ 231,705	15.14%	23.92%	39.06%	$ 90,504	$ 11,623
2021	$ 668,150	74.7%	2023	$ 239,235	14.64%	24.25%	38.89%	$ 93,039	$ 2,535
2022	$ 677,479	75.4%	2024	$ 247,011	14.24%	24.86%	39.10%	$ 96,581	$ 3,542
2023	$ 690,045	75.9%	2025	$ 255,038	13.84%	25.62%	39.46%	$ 100,638	$ 4,057
2024	$ 692,384	76.7%	2026	$ 263,327	13.49%	26.17%	39.66%	$ 104,436	$ 3,798
2025	$ 672,383	78.1%	2027	$ 271,885	13.13%	26.18%	39.31%	$ 106,878	$ 2,442
2026	$ 647,262	79.6%	2028	$ 280,722	12.78%	26.16%	38.94%	$ 109,313	$ 2,435
2027	$ 618,038	81.1%	2029	$ 289,845	12.42%	26.14%	38.56%	$ 111,764	$ 2,451
2028	$ 584,375	82.7%	2030	$ 299,265	12.11%	26.11%	38.22%	$ 114,379	$ 2,615
2029	$ 546,042	84.2%	2031	$ 308,991	11.82%	26.09%	37.91%	$ 117,139	$ 2,760
2030	$ 502,642	85.8%	2032	$ 319,033	11.55%	24.04%	35.59%	$ 113,544	$ (3,595)
2031	$ 453,651	87.5%	2033	$ 329,402	11.31%	23.76%	35.07%	$ 115,521	$ 1,977
2032	$ 405,288	89.0%	2034	$ 340,108	11.07%	22.85%	33.92%	$ 115,364	$ (157)
2033	$ 351,958	90.6%	2035	$ 351,161	10.87%	17.14%	28.01%	$ 98,360	$ (17,004)
2034	$ 295,587	92.2%	2036	$ 362,574	10.68%	16.73%	27.41%	$ 99,381	$ 1,021
2035	$ 253,379	93.4%	2037	$ 374,357	10.51%	15.43%	25.94%	$ 97,108	$ (2,273)
2036	$ 207,802	94.6%	2038	$ 386,524	10.36%	14.79%	25.15%	$ 97,211	$ 103
2037	$ 162,023	95.8%	2039	$ 399,086	10.22%	14.68%	24.90%	$ 99,372	$ 2,161
2038	$ 113,726	97.0%	2040	$ 412,056	10.09%	12.53%	22.62%	$ 93,207	$ (6,165)
2039	$ 60,623	98.4%	2041	$ 425,448	9.98%	6.66%	16.64%	$ 70,795	$ (22,412)
2040	$ 11,032	99.7%	2042	$ 439,275	9.88%	5.68%	15.56%	$ 68,351	$ (2,444)
2041	$ (17,922)	100.5%	2043	$ 453,552	9.80%	-0.23%	9.57%	$ 43,405	$ (24,946)
2042	$ (45,310)	101.3%	2044	$ 468,292	9.71%	-0.55%	9.16%	$ 42,896	$ (509)
2043	$ (47,802)	101.5%	2045	$ 483,512	9.65%	-0.56%	9.09%	$ 43,951	$ 1,055

East Bay Municipal Utility District Employees' Retirement System

Risk Report for the Pension Plan as of June 30, 2020

Meeting on July 15, 2021

Andy Yeung, ASA, MAAA, FCA, EA

 5690393v2

Segal

EBMUDERS' Risk Report for the Pension Plan

Compliance with Actuarial Standard of Practice (ASOP) 51

- **ASOP 51 doesn't apply to actuaries performing services for other post-employment benefits (such as HIB)**
- **Basic information provided in pension plan funding report**
- **Additional information included in pension plan risk report**

Evaluation of historical risk factors

- **Funded status and UAAL**
- **Employer contribution rates**

Quantitative Risk Assessments Methods

- **Scenario tests included in risk report**

Plan maturity measures

Risk Assessments for EBMUDERS

Some information already included in funding report

- Qualitative and quantitative measures
  - Asset/liability mismatch risk
  - Investment risk
  - Longevity risk
  - Reconciliation of changes in UAAL and employer rates
- Historical trends
  - Funded ratios and UAAL amounts
  - Returns on asset
- Plan maturity information
  - Ratio of payees to actives
  - Asset and liability volatility ratios

Additional information included in risk report

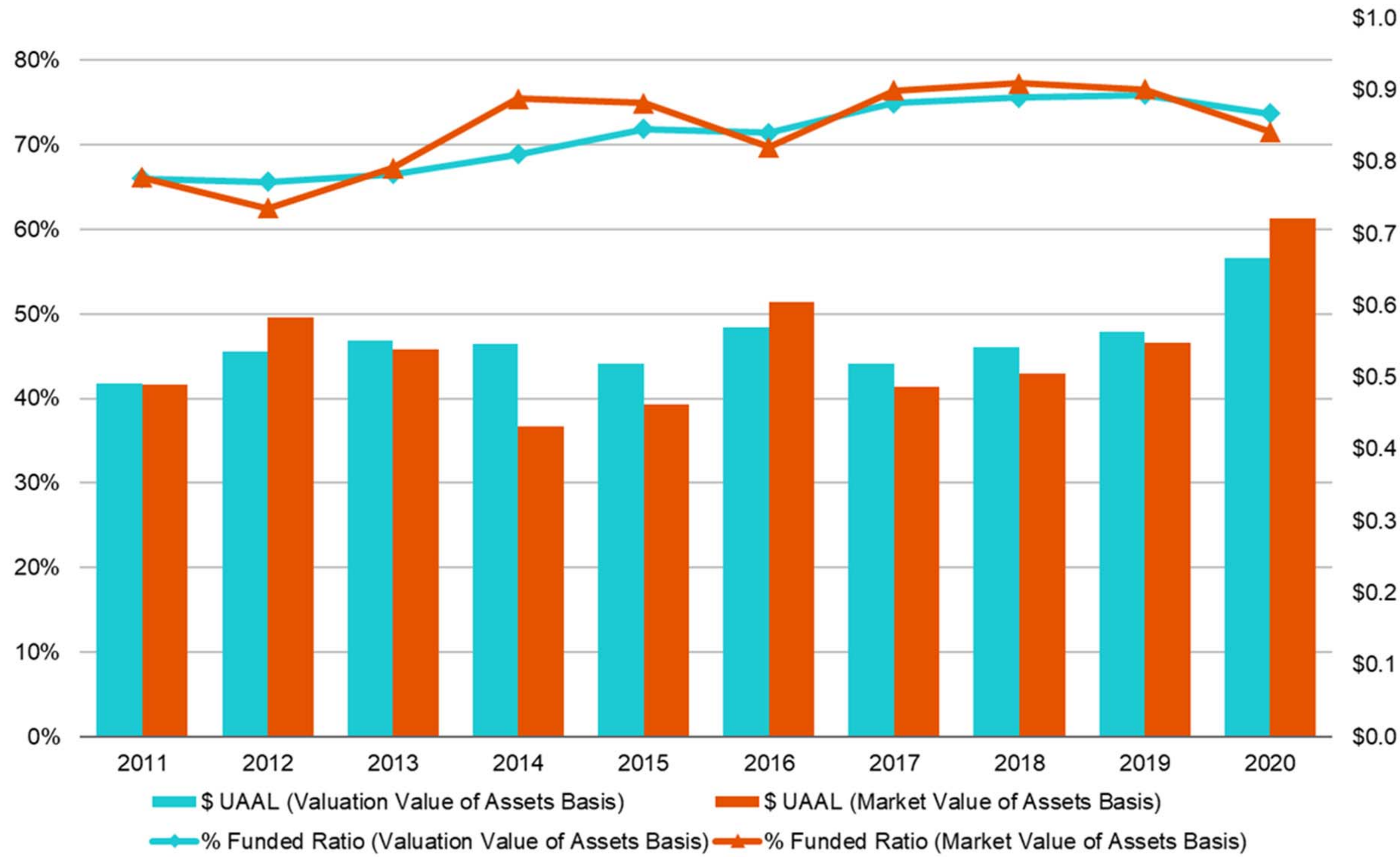
- Two new historical information displays
- Scenario tests

Comparison of Funded Status, UAAL and Employer Contribution Rates in June 30, 2011 and 2020 Valuations

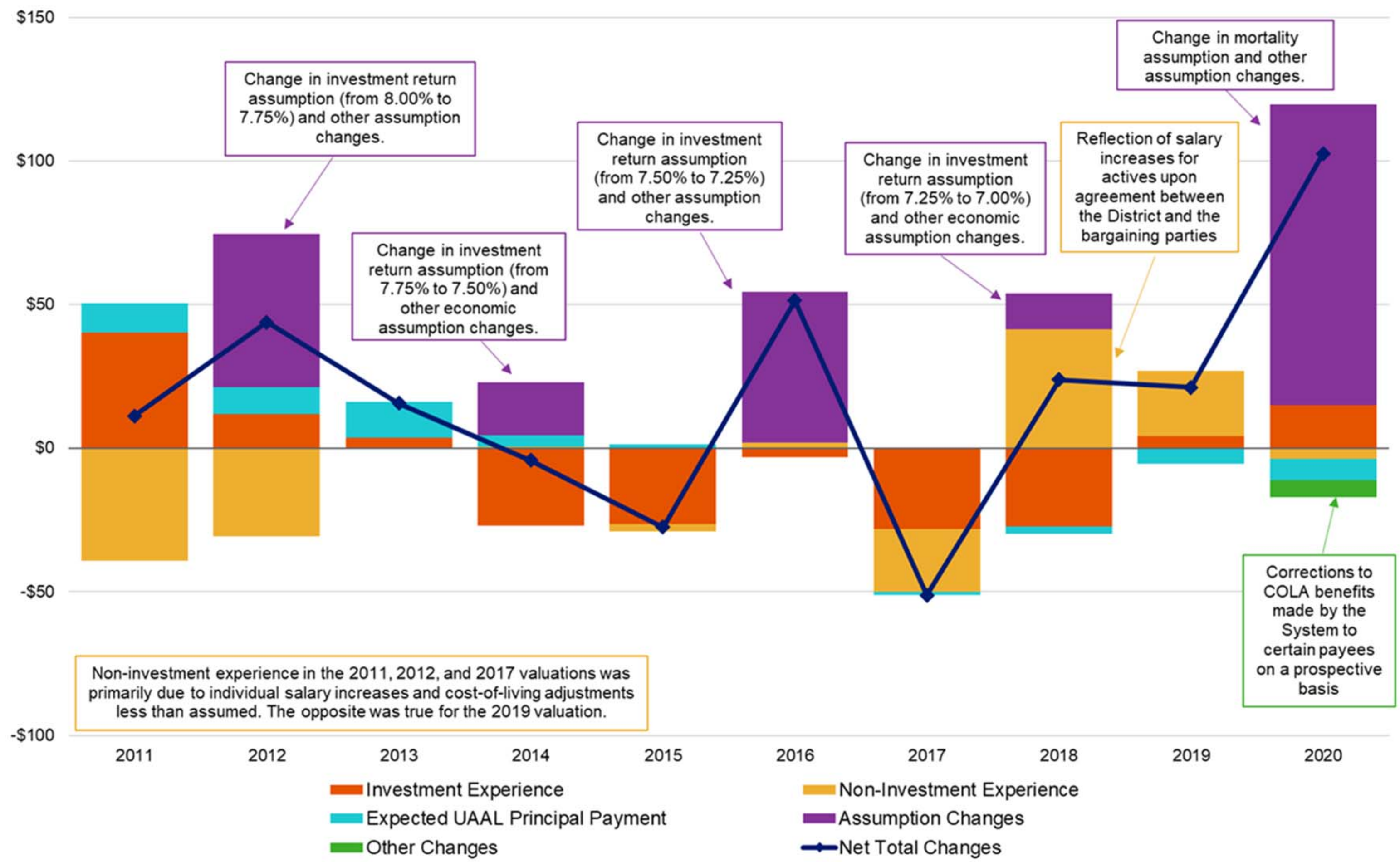
	Market Value Basis		Valuation Value Basis		Total (Aggregate) Employer Contribution Rate (% of Payroll – Contributions Received End of Pay Period)
Valuation Date	**Funded Status**	**UAAL**	**Funded Status**	**UAAL**	
June 30, 2011	66.1%	$489.9M	66.0%	$491.3M	34.46%
June 30, 2020	71.5%	$721.6M	73.7%	$666.3M	39.06%

- Increase in UAAL and employer contribution rates in the last 10 valuations from updating to more current assumptions
  - –$241.7M increase in UAAL (measured on Valuation Value Basis)
  - –11.45% of payroll rate increase

Funded Ratio (Percentage) and Dollar UAAL ($ Billions) in June 30, 2011 to 2020 Valuations

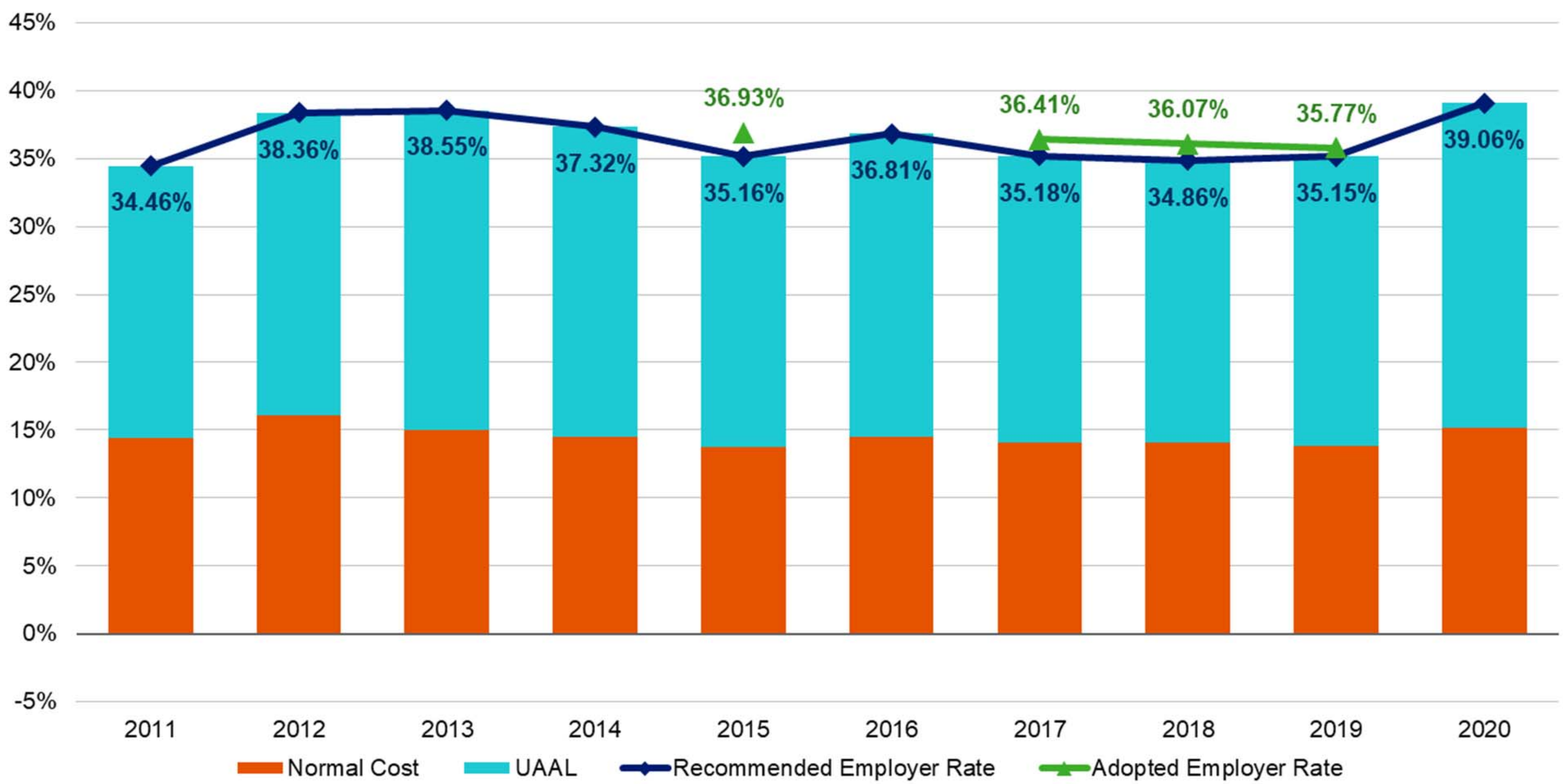


Factors that Changed UAAL in June 30, 2011 to 2020 Valuations ($ Millions)



Note: The primary source of the investment loss in the June 30, 2011 valuation is the Great Recession in 2008 and 2009, which was recognized in the valuation value of assets over several years.

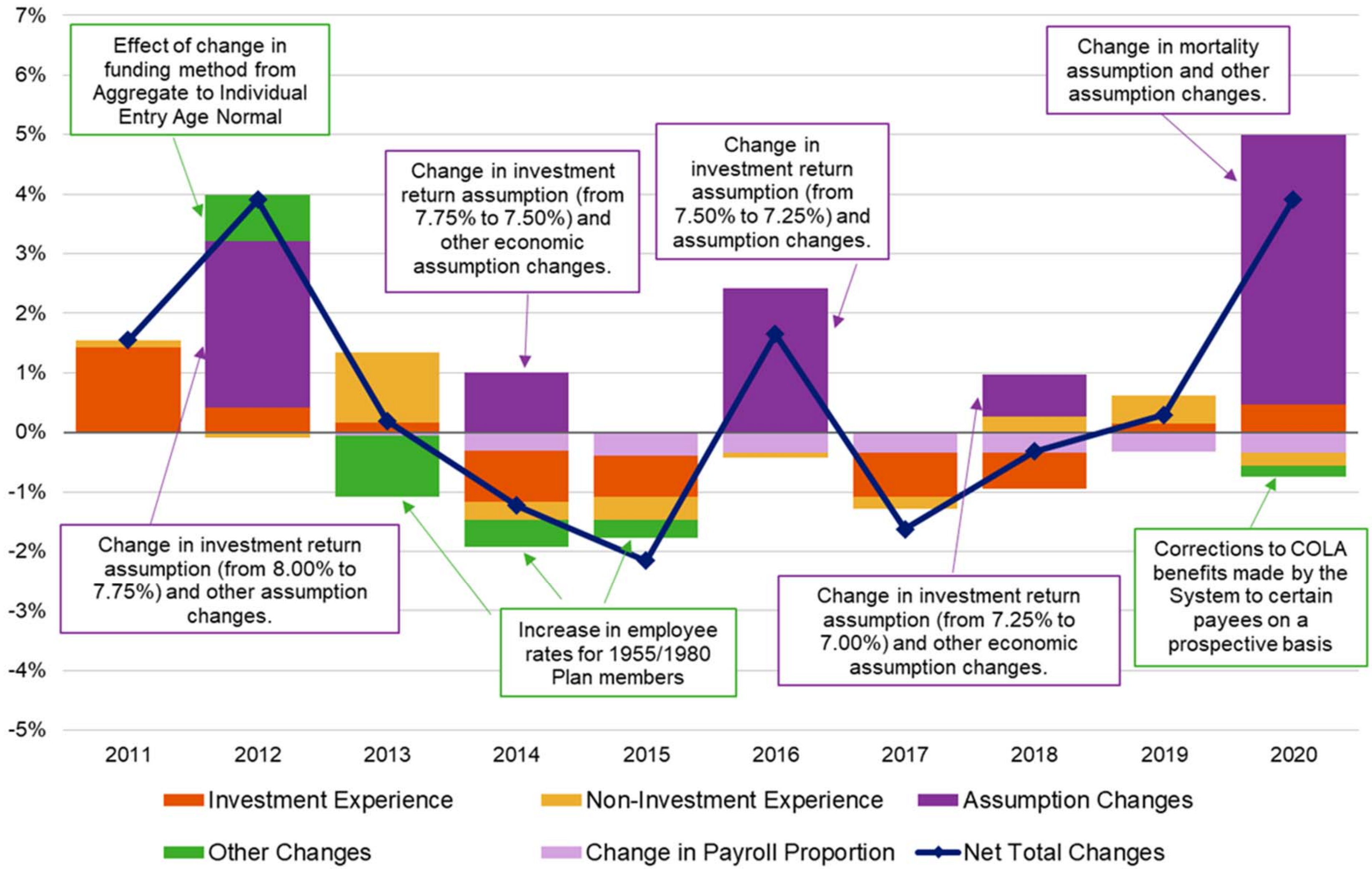
Employer Contribution Rates
in June 30, 2011 to 2020 Valuations (% of Payroll)



Notes: 1. The 2012 valuation rate shown above, which was effective during fiscal year 2013-2014, was for the 1955/1980 Plan only, as there were no 2013 Tier members in the June 30, 2012 valuation since the 2013 Tier only became effective on January 1, 2013.

2. The adopted employer rates are the same as the recommended rates, unless otherwise shown. The adopted rates shown represent the aggregate rates for the 1955/1980 Plan and the 2013 Tier, aggregated based on the projected payrolls from the same valuation date.

Historical Factors that Changed Employer's Contribution Rates in June 30, 2011 to 2020 Valuations (% of Payroll)



Note: The chart above provides the items included in the reconciliation of the recommended employer contribution rates and does not reflect any differences between the adopted and recommended rates. An illustration of the difference between the adopted and recommended rates for the June 30, 2015 and June 30, 2017 through 2019 valuations is provided on the previous slide.

Quantitative Risk Assessment - Scenario Tests

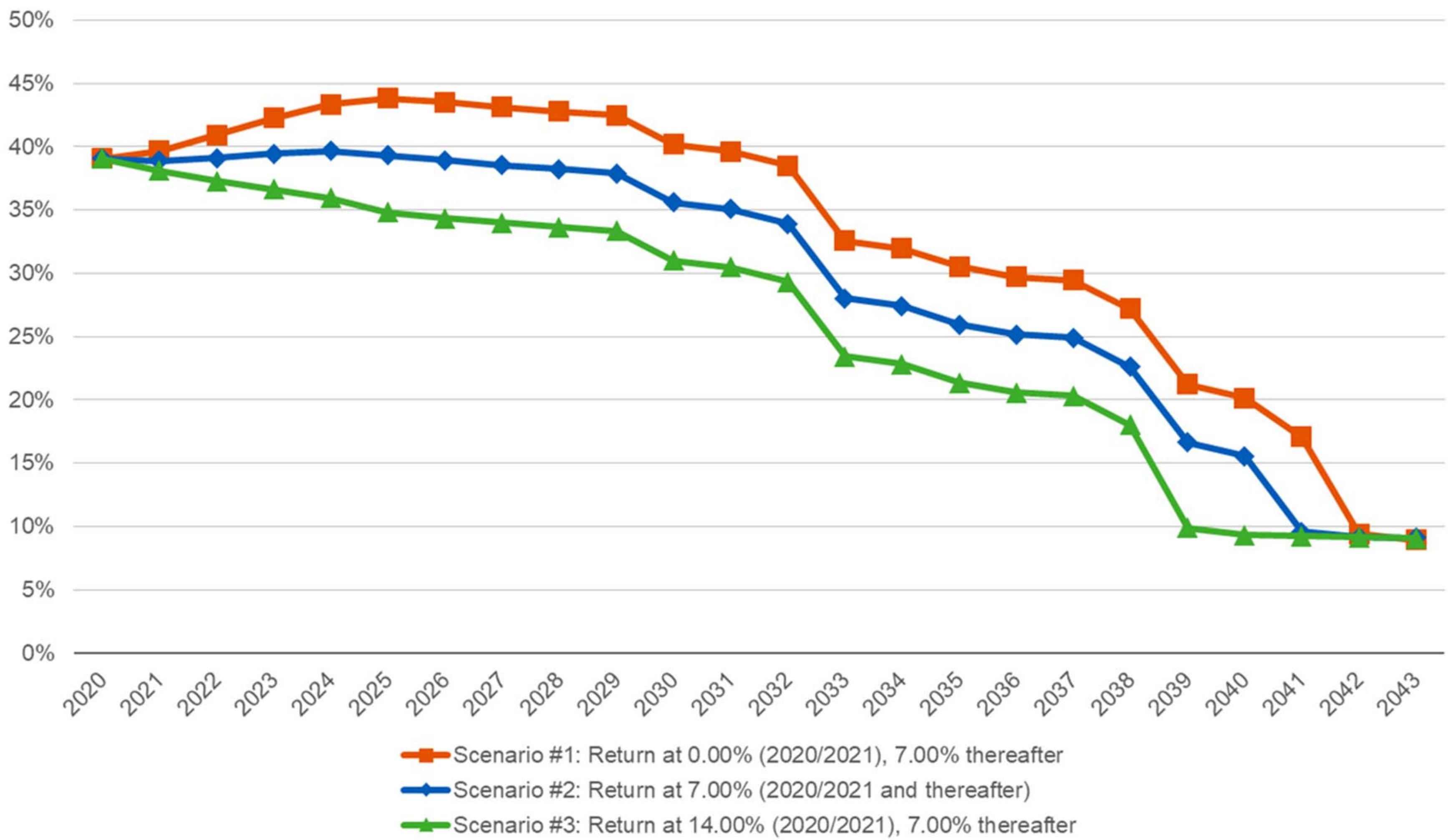
- Baseline: assets earn expected return every year
- Scenario tests: one year of asset gain or loss
  - Actual return either zero or 2 x assumed
- Realistic range of short term experience
  - Avoids looking like a forecast
  - Useful for employer budgeting as actual experience emerges
- Using results from June 30, 2020 valuation
  - Hypothetical 2020/2021 investment return coming in at
    - Scenario #1: 0%
    - Scenario #2 (baseline): 7%
    - Scenario #3: 14%
  - Investment return after 2020/2021 plus actuarial experience in all years assumed to match all other actuarial assumptions

Practical Investment Return Scenario Tests

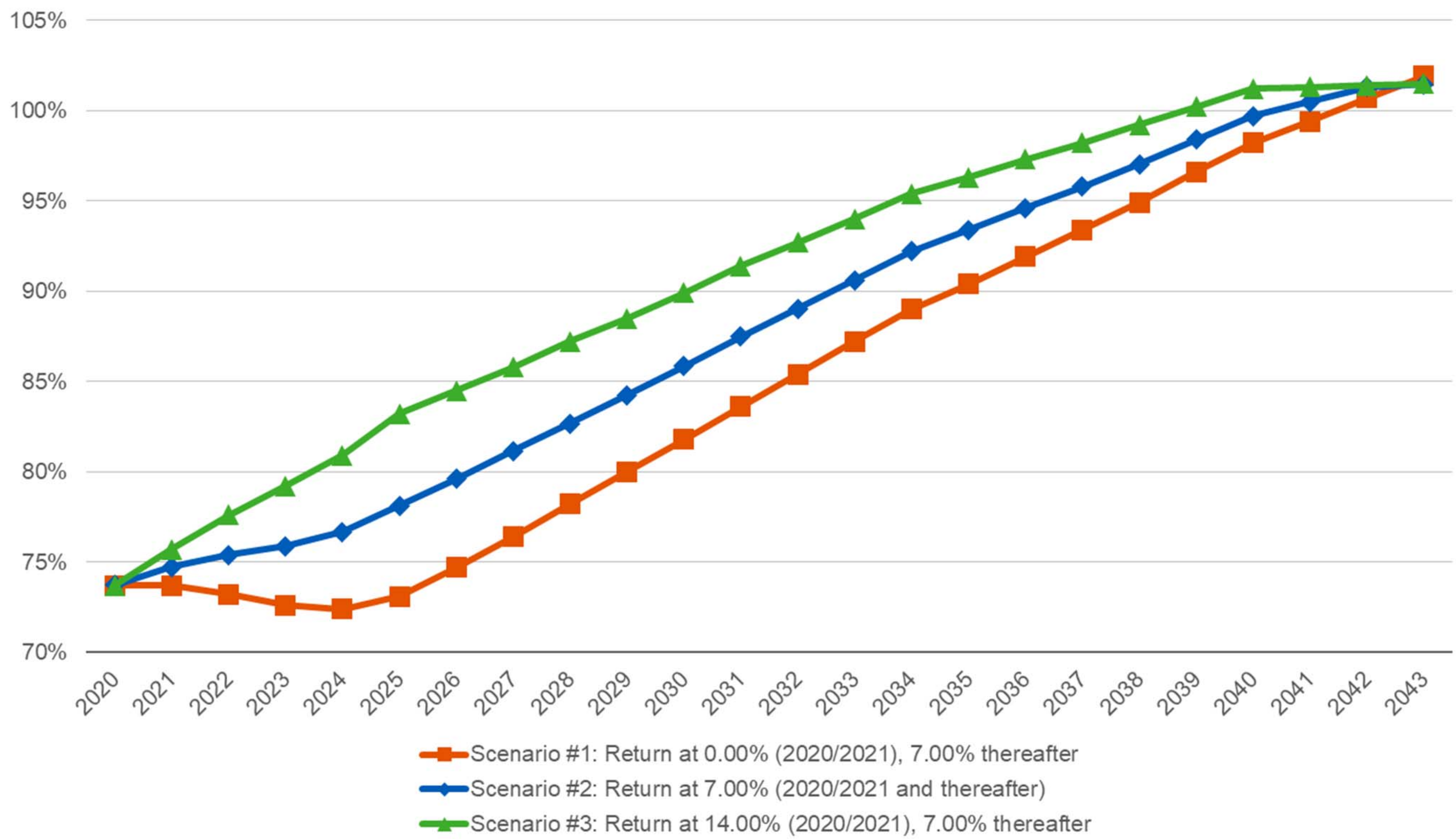
	2020/2021 Single Plan-Year Investment Return		
Contribution Rate Change	**0.00%**	**7.00% (Baseline)**	**14.00%**
June 30, 2021	+0.6% of payroll	-0.2% of payroll	-1.0% of payroll
June 30, 2025	+4.8% of payroll	+0.3% of payroll	-4.3% of payroll

- Short term difference in investment return will cause fluctuation in employer's contribution rate
  - Unfavorable or favorable actuarial experience will be fully reflected in 25 years under Board's actuarial funding policy
    - 25 years reflects 5-year asset smoothing for unfavorable/favorable investment experience and 20-year amortization for actuarial gains/losses
- Board's funding policy is very effective in achieving long-term full funding of cost of benefits

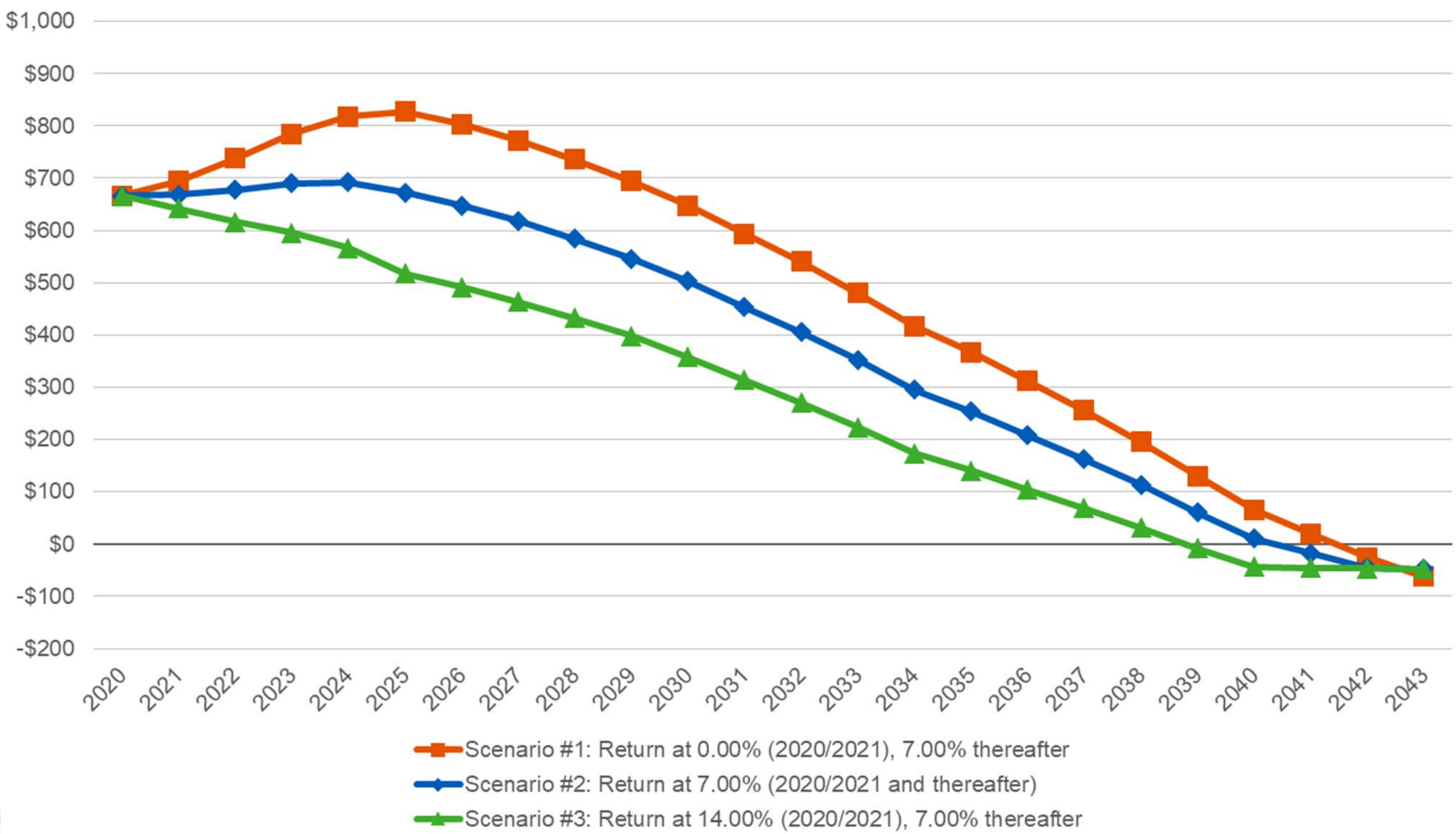
Scenario Tests – Projected Employer Contribution Rates Under Three Hypothetical Market Returns for 2020/2021



Scenario Tests – Projected Funded Ratios Under Three Hypothetical Market Returns for 2020/2021



Scenario Tests – Projected UAAL
Under Three Hypothetical Market Returns for 2020/2021

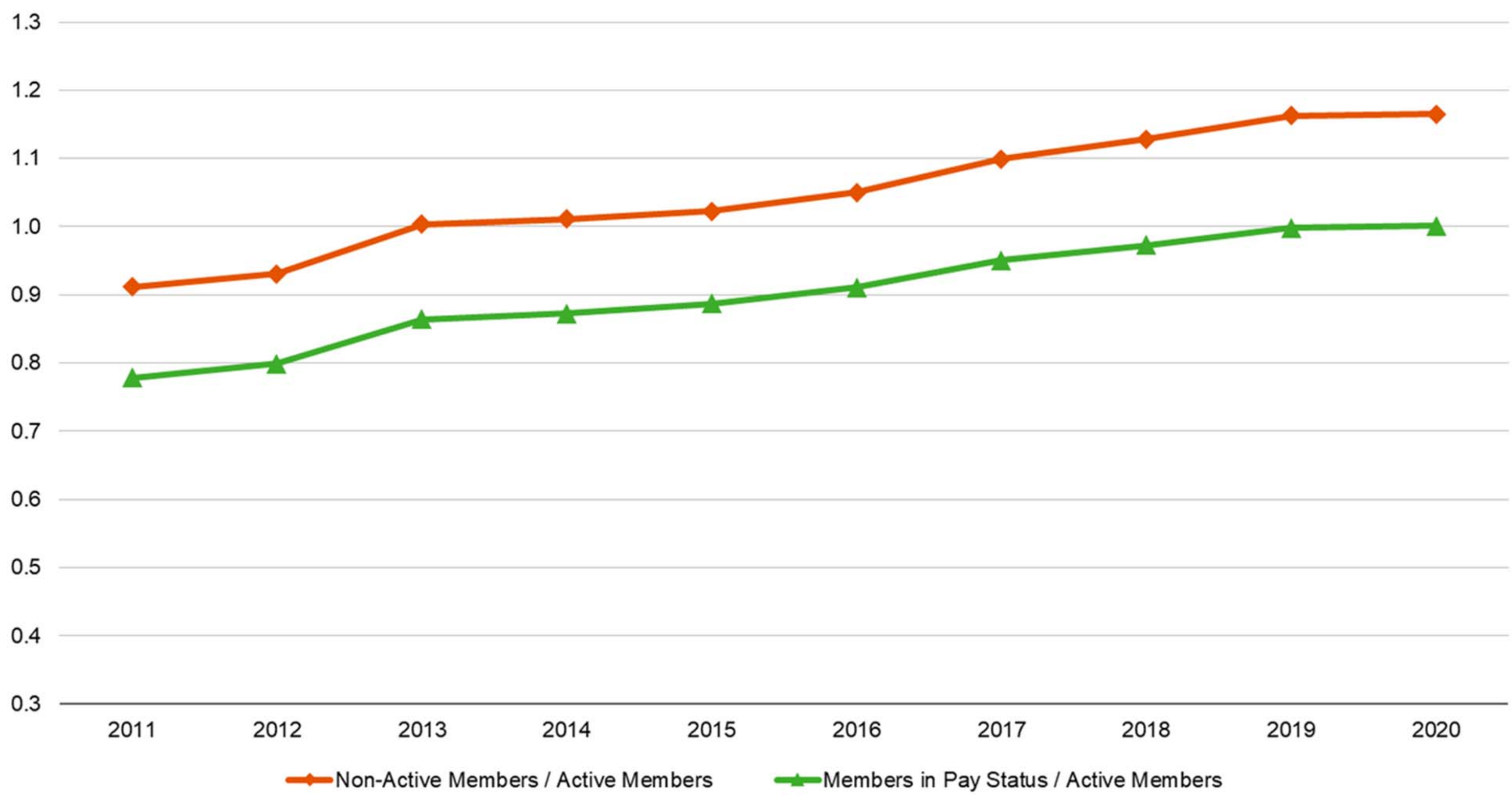


Plan Maturity Measures

- Ratios of members in pay-status (retirees and beneficiaries) and non-active members (inactive vested, retirees and beneficiaries) to actives
- Asset volatility ratio (AVR) or ratio of assets to payroll
- Liability volatility ratio (LVR) or ratio of liability to payroll
- AVR and LVR are quantitative measures that can be used to estimate contribution rate impact due to changes in assets and liability

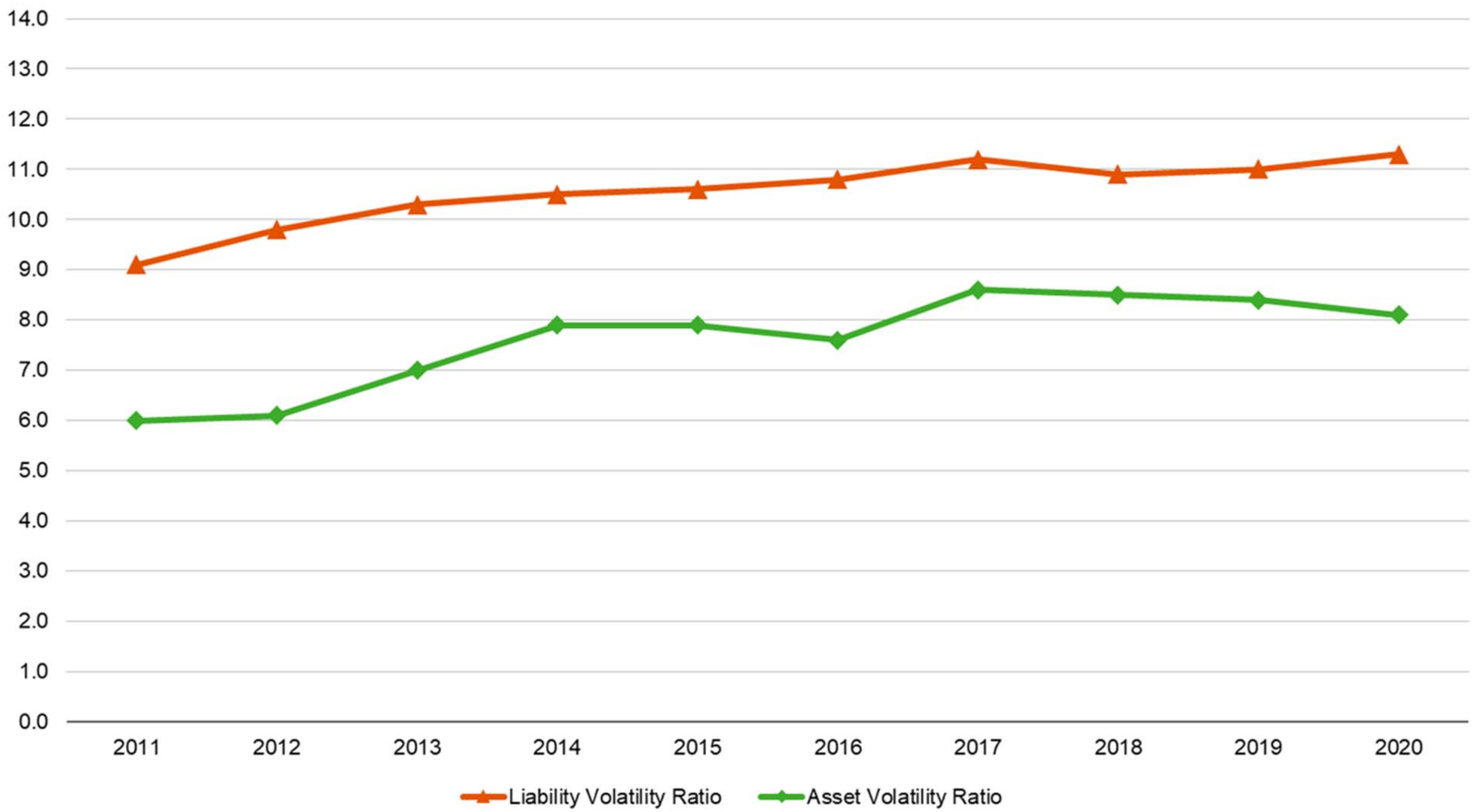
Plan Maturity Measures

- Ratios of members in pay-status (retirees and beneficiaries) and non-active members (inactive vested, retirees and beneficiaries) to actives



Plan Maturity Measures

- Asset volatility ratio (AVR) or ratio of assets to payroll
- Liability volatility ratio (LVR) or ratio of liability to payroll



Questions?

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 15, 2021

MEMO TO: Members of the Retirement Board

FROM: Lisa Sorani, Manager of Employee Services Lisa Sorani

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

BACKGROUND

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 28 potentially eligible members, 11 retirees and 17 surviving spouses. No applications were received in response to the 2021 mailing, so there are no Low Income Adjustments to be granted this year.

LS