**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: November 15, 2018

MEMO TO: Members of the Retirement Board

THROUGH: Laura Acosta, Manager of Human Resources L.A.

FROM: Lisa Sorani, Manager of Employee Services L.S.

SUBJECT: Retirement Board Regular Meeting – November 15, 2018

A regular meeting of the Retirement Board will convene at 8:30 a.m. on Thursday, November 15, 2018 in the Training Resource Center (TRC1) of the Administration Building.

Enclosed are the agenda for the November 15, 2018 meeting and the minutes for the September 20, 2018 regular meeting. The package also includes the following: **(1) ACTION** items: Determination of Eligibility for Surviving Spouse Benefits for Blanca Basch, CenterSquare Release from Watch Status, Direction to Continue Holding Private Placement Securities; **(2) INFORMATION** items: Audited Financial Report, 3rd Quarter Performance Review as of September 30, 2018, Review of FY 2018 Proxy Voting, Update on Fixed Income, CEM Benchmarking Report, District Retirement Health Plan Update; **(3) REPORTS FROM THE RETIREMENT BOARD**.

LS:eg

Enclosures

**AGENDA**

**EBMUD EMPLOYEES' RETIREMENT SYSTEM**
**November 15, 2018**
**Training Resource Center (TRC1) 8:30 a.m.**

**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.

**ANNOUNCEMENT OF CLOSED SESSION AGENDA:**

1. Significant exposure to litigation pursuant to Government Code Section 54956.(9)(e)(2): *Blanca Basch's Claim for Surviving Spouse Benefits.*

2. Personnel matters pursuant to Government Code Section 54957:
    a. Application for Disability Retirement of Melissa Carreon (R.B. Resolution No. 6884)

**REGULAR BUSINESS MEETING: Upon completion of Closed Session**

**CONSENT CALENDAR:**

1. Approval of Minutes – Regular meeting of September 20, 2018

2. Ratifying and Approving Investment Transactions by Counselors for August 2018 and September 2018 (R.B. Resolution No. 6885)

3. Ratifying and Approving Short-Term Investment Transactions by Treasurer for August 2018 and September 2018 (R.B. Resolution No. 6886)

4. Approving Treasurer's Statement of Receipts and Disbursements for August 2018 and September 2018

**ACTION:**

5. Determination of Eligibility for Surviving Spouse Benefits for Blanca Basch – E. Grassetti

6. CenterSquare Release from Watch Status – S. Skoda

7. Direction to Continue Holding Private Placement Securities – S. Skoda

## INFORMATION:

8. Audited Financial Report – S. Skoda

9. 3rd Quarter Performance Review as of September 30, 2018 – S. Skoda

10. Review of FY 2018 Proxy Voting – S. Skoda

11. Update on Fixed Income – S. Skoda

12. CEM Benchmarking Report – S. Skoda

13. District Retirement Health Plan Update – 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:

- Discuss 2019 Meeting Schedule

## MEETING ADJOURNMENT:

***The next regular meeting of the Retirement Board will be held at 8:30 a.m. on Thursday, January 17, 2019.***

## 2019 Retirement Board Meetings

January 17, 2019
March 21, 2019
May 16, 2019
July 18, 2019
September 19, 2019
November 21, 2019

# MINUTES OF THE RETIREMENT BOARD
## September 20, 2018

A regular meeting of the Retirement Board convened on Thursday, September 20, 2018 at 8:35 a.m. in the Large Training Resource Center (TRC) Room. The meeting was called to order by President Doug Higashi.

**Roll Call –** The following Retirement Board Members were present: Alex Coate, Doug Higashi, Tim McGowan, Frank Mellon, and Lisa Ricketts. Marguerite Young was absent.

The following staff members were present: Laura Acosta, Damien Charléty, Elizabeth Grassetti, Konana Gregory, Robert Hannay, Lourdes Matthew, Sophia Skoda, and Lisa Sorani.

## PUBLIC COMMENT

There was none.

## CLOSED SESSION

1. Significant exposure to litigation pursuant to Government Code Section 54956.9(d)(2): one matter.

   The Retirement Board discussed one matter.

## REGULAR BUSINESS MEETING:

The Regular business meeting commenced at 9:32 a.m. The following Retirement Board Members were present: Alex Coate, Doug Higashi, Tim McGowan, Frank Mellon, and Lisa Ricketts. Marguerite Young was absent.

## CONSENT CALENDAR

**1-4. Consent Calendar** – A motion to move the consent calendar was made by Alex Coate and seconded by Frank Mellon. The motion carried (4-0) by the following voice vote:
AYES (Coate, Higashi, McGowan, Mellon), NOES (none), ABSTAIN (none), ABSENT (Young).

## ACTION

**5. Determination of Eligibility for Surviving Spouse Benefits for Blanca Basch** – Blanca Basch appeared before the Retirement Board seeking reconsideration of the denial of her claim for surviving spouse benefits. Mrs. Basch appeared with her daughter, Shirley. Mrs. Basch informed the Retirement Board that she is represented by counsel, Chris McAllister, who could not attend on her behalf. Mrs. Basch provide the members of the Retirement Board and Staff documents ahead of the Board meeting that were included in the Board package, and at the meeting with a copy of her written statement. To support her request, Mrs. Basch stated that she did not know that Mr. Robert Basch had a pension from EBMUD because he did not communicate with her. She said she learned of the existence of the pension benefit in March of 2017 when certain papers came into her possession and she discovered a check stub from May 31, 2002 from Mr. Basch's pension from EBMUD. She stated that the statute of limitations should start at the time she learned of the pension benefit due to the facts and circumstances, and that she is now asserting her rights to the surviving spouse benefit.

Mrs. Basch stated that she didn't know that Mr. Basch was receiving an EBMUD pension; that Mr. Basch lied to EBMUD about his marital status; that EBMUD didn't require a spousal consent form at the time of Mr. Basch's retirement; that EBMUD didn't contact her when she would have been eligible for surviving spouse benefits; and that she only became aware of rights for surviving spouse benefits in March of 2017, and therefore the statute of limitations should be subject to delayed discovery laws.

Mrs. Basch said that she knew of Mr. Basch's death in 2010, and of the probate proceedings, but that she and her two sons were disinherited in the will. At the time of the probate proceedings, Mrs. Basch had recently suffered the loss of one of her sons and was battling breast cancer. She tried to hire an attorney, but could not afford the fees that she was quoted to contest the probate case. Mrs. Basch reiterated that she was married to Mr. Basch for 47 years and that they never divorced. She said that if she had known there was a surviving spouse benefit, she would have claimed it right away. Mr. Basch apparently told her that he only had Social Security. Mrs. Basch stated that Mr. Basch was bi-polar and very difficult to talk with.

The members of the Retirement Board asked her questions regarding their marital status at the time Mr. Basch retired and at least one year prior to his death. Questions included whether she was on the District's medical plans as Mr. Basch's dependent; whether Mr. and Mrs. Basch filed joint income tax returns; whether Mrs. Basch indicated she was married in her former employment; and whether Mrs. Basch applied for Social Security benefits for surviving spouse.

Mrs. Basch informed the Retirement Board that she worked for Contra Costa County for 30 years as a Clerk in the County Recorder's Office. Mrs. Basch stated that she had her own medical plan through her employer and knew nothing of Mr. Basch's medical plan. She also informed the Retirement Board that she filed her income tax returns separately from Mr. Basch, but indicated on her income tax forms that she was married. Mrs. Basch also stated that she is receiving her Social Security benefit rather than Mr. Basch's because Social Security told her she earned more than he did, and that her own benefit would be higher and more beneficial to her. Mrs. Basch reiterated that Mr. Basch told everyone that he was divorced. Retirement Board member, Tim McGowan, asked if she stated she was married on her Contra Costa County retirement application. She said she thinks she did. She said that Mr. Basch had his own apartment because he was difficult to live with, but came by the house to do his laundry, etc.

Retirement Board member, Tim McGowan, asked Mrs. Basch to provide further documentation to demonstrate she was married to Mr. Basch at the time of his retirement and at least one year prior to his death. Mr. McGowan requested that Mrs. Basch provide documents related to her employment with Contra Costa County to demonstrate that she represented to her employer that she was married to Mr. Basch, and any other documentation she can provide that would substantiate the claim that they were married at the time of his retirement and death.

The Retirement Board decided to table the determination to the next Board meeting pending receipt of the information requested by the Retirement Board and to be provided by Mrs. Basch. Tim McGowan made the motion to table until the November 15, 2018 Board meeting. Doug Higashi seconded the motion. The motion carried (4-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon), NOES (none), ABSTAIN (none), ABSENT (Young).

**6. Declaring the Results of the Election of the Retired Member of the Retirement Board –** Retiree Representative, Lisa Ricketts, was re-elected to a two-year term beginning September 24, 2018. She received 641 votes out of the 662 votes that were cast. Alex Coate moved to ratify the election, and Frank Mellon seconded the motion. The motion carried (4-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon), NOES (none), ABSTAIN (none), ABSENT (Young).

**7. Adopt Economic Assumptions and Response to Actuarial Audit –** Andy Yeung and Dirk Adamsen from Segal reviewed the results of an interim study of economic assumptions. They made the following recommendations:

1) Reduce the inflation assumption from 3% to 2.75%
2) Reduce the cost-of-living adjustments assumption from 3.0% to 2.75%
3) Reduce investment return assumption from 7.25% to 7.00%
4) Reduce inflationary salary increase assumption from 3.00% to 2.75% and maintain “across-the-board” salary increase assumption of 0.50%
5) Introduce an assumption to reflect the cost of election of one of the Retirement System’s optional forms of benefits

Andy Yeung reviewed each of the recommendations in turn. He said that while lowering the inflation rate to 6.75% is an alternative, going to 7.0% is in line with the step-by-step approach the Board has been taking. Andy Yeung reviewed the moving average of inflation over the past 80 years, which has been trending down, in making his recommendation. He then reviewed the investment return assumptions and how they were determined, the administrative costs of the investments, and reviewed the confidence level in return assumption. The Board requested a review in two years. Frank Mellon made the motion to adopt the recommendations, Tim McGowan seconded the motion, and the motion carried (4-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon), NOES (none), ABSTAIN (none), ABSENT (Young).

**8. Selection of Investment Managers –** Sarah Bernstein from PCA reviewed the process used to search for candidates and narrow the candidates for both its Bank Loans and Short-Term High Yield investment mandates. An RFI was sent to seven firms for each mandate; five responses for each were received. The responses were scored and the two finalists for each mandate were invited to interviews by the Retirement Board.

a) **Bank Loan Manager:** The two finalists for Bank Loans were Federated and BlackRock. Federated staff gave a background on the company and described the multi-sector approach they use. The Portfolio Manager, Steve Wagner, described how they combine Trade Finance with Bank Loans for attractive risk adjusted returns with lower volatility, and low correlation between the two types of loans.

BlackRock staff discussed their Bank Loan product, highlighting their emphasis on downside protection and their strong track record in Bank Loans. Their representatives also highlighted the benefits of BlackRock's size when it comes to sourcing and negotiating deals, risk management, and proprietary technology.

Federated received the highest score on its RFI response, scoring 86 out of 100 possible points. The Board appreciated Federated's trade loan strategy, and that Federated would customize the strategy for EBMUD's mandate. BlackRock offered a more standard approach to Bank Loans. Frank Mellon moved to retain Federated, and Tim McGowan seconded the motion. The motion carried (4-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon), NOES (none), ABSTAIN (none), ABSENT (Young).

b) **High-Yield Fixed Income Manager:** The finalists for High-Yield Fixed Income manager were MacKay Shields and Neuberger Berman. MacKay Shields representatives discussed the organization. They only purchase US High-Yield investments and they do not do indexing or add bonds to their portfolio. They do bottom-up research on companies and quality is their primary consideration. They focus on downside risk and tend to outperform in down markets.

Neuberger Berman was the second firm interviewed. They are an employee-owned company. Their philosophy is to aim for stabilizing, avoiding defaults and providing downside protection and upside participation. They have extensive research capabilities, and have issuer diversification. They have a comprehensive best practice checklist.

MacKay Shields received a score of 89 out of 100, while Neuberger Berman received a score of 84 out of 100 on the RFI. The Board was impressed by both presentations. Tim McGowan made the motion to select MacKay Shields, and Doug Higashi seconded the motion. The motion carried (3-0) by the following voice vote: AYES (Coate, Higashi, McGowan), NOES (none), ABSTAIN (none), ABSENT (Mellon, Young).

**INFORMATION**

**9. 2nd Quarter Performance Review as of June 30, 2018** – Sarah Bernstein from PCA reviewed the 2nd quarter results for the fund. The fund outperformed over all time periods against its benchmark and against its peers. WAMCO and Parametric had a status of caution. Parametric is expected to have good returns in down markets, so their returns have lagged during this up-market. WAMCO Short-Term High Yield will be replaced so performance is not of concern.

**10. Working Capital Annual Update** – Sophia Skoda gave an update on the transfer of retirement system funds to working capital to provide for retirement system benefit payments due to the growth in beneficiaries.

**11. <u>Transition Update on Private Placements</u> –** Sophia Skoda gave an update on the private placement securities that were unable to be sold as part of the transition to the new allocations in June 2018. Staff is still exploring options related to these securities.

## REPORTS FROM THE RETIREMENT BOARD

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

There were no reports.

## ITEMS TO BE CALENDERED / UPCOMING ITEMS

- Continuation of the Basch Surviving Spouse item
- Proposal to revise the Investment Policy

**<u>ADJOURNMENT</u> –** Tim McGowan moved to adjourn the meeting at 3:12 p.m. and Alex Coate seconded the motion; the motion carried (3-0) by the following voice vote: AYES (Coate, Higashi, McGowan), NOES (none), ABSTAIN (none), ABSENT (Mellon, Young).

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President

ATTEST: ____________________________
Secretary

11/15/2018

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: October 19, 2018

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: Investment Transactions by Retirement Fund Managers for August 2018 and September 2018

The attached Investment Transactions by Retirement Fund Managers report for the months of August 2018 and September 2018 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

# INVESTMENT TRANSACTIONS BY RETIREMENT FUND MANAGERS

**August 2018**

| | PURCHASES | SALES | PORTFOLIO VALUE |
|---|---|---|---|
| **FIXED INCOME** | | | |
| C.S. McKee | $9,286,519 | $5,504,613 | $178,625,964 |
| Barclays Aggregate Index fund | $0 | $0 | $132,705,723 |
| Western Asset Management Co.-IG | $3,030,899 | $0 | $67,372,765 |
| Western Asset Management Co.-HI | $0 | $0 | $35,478,792 |
| Western Asset Management Co.-HY | $0 | $0 | $32,524,947 |
| **TOTAL** | **$12,317,418** | **$5,504,613** | **$446,708,192** |
| | | | |
| **DOMESTIC EQUITY** | | | |
| Barrow Hanley | $0 | $0 | $3 |
| Opus Capital | $0 | $0 | $0 |
| Russell 1000 Growth Index Fund | $0 | $0 | $0 |
| Russell 2000 Growth Index Fund | $0 | $0 | $0 |
| Russell 3000 Index Fund | $0 | $0 | $462,084,239 |
| INTECH | $0 | $0 | $0 |
| T. Rowe Price | $0 | $0 | $2,896 |
| **Total Domestic Equity** | **$0** | **$0** | **$462,087,139** |
| | | | |
| **COVERED CALLS** | | | |
| Parametric (BXM) | $2,731,203 | $2,585,307 | $122,046,599 |
| Parametric (Delta-Shift) | $1,212,119 | $925,141 | $123,162,069 |
| Van Hulzen | $27,600,401 | $27,683,573 | $120,975,260 |
| **Total Covered Calls** | **$31,543,723** | **$31,194,020** | **$366,183,928** |
| | | | |
| **INTERNATIONAL EQUITY** | | | |
| ACWI Index fund | $0 | $0 | $169,543,615 |
| Franklin/Templeton | $3,124,475 | $2,990,021 | $127,356,573 |
| Fisher Investments | $3,679,245 | $3,739,667 | $129,405,001 |
| Global Transition | $0 | $0 | $743,695 |
| **Total International Equity** | **$6,803,720** | **$6,729,687** | **$427,048,884** |
| | | | |
| **REAL ESTATE EQUITY** | | | |
| RREEF America II | $0 | $0 | $37,945,515 |
| CenterSquare | $1,312,388 | $869,862 | $54,353,118 |
| **Total Real Estate** | **$1,312,388** | **$869,862** | **$92,298,633** |
| | | | |
| **TOTAL ALL FUND MANAGERS** | **$51,977,249** | **$44,298,183** | **$1,794,326,775** |

**September 2018**

| | PURCHASES | SALES | PORTFOLIO VALUE |
|---|---|---|---|
| **FIXED INCOME** | | | |
| C.S. McKee | $8,403,470 | $8,049,345 | $177,637,784 |
| Barclays Aggregate Index fund | $0 | $0 | $131,850,233 |
| Western Asset Management Co.-IG | $1,022,135 | $963,465 | $67,290,938 |
| Western Asset Management Co.-HI | $0 | $0 | $35,661,537 |
| Western Asset Management Co.-HY | $0 | $0 | $32,682,047 |
| **TOTAL** | **$9,425,604** | **$9,012,810** | **$445,122,538** |
| | | | |
| **DOMESTIC EQUITY** | | | |
| Barrow Hanley | $0 | $0 | $8 |
| Opus Capital | $0 | $0 | $0 |
| Russell 1000 Growth Index Fund | $0 | $0 | $0 |
| Russell 2000 Growth Index Fund | $0 | $0 | $0 |
| Russell 3000 Index Fund | $0 | $0 | $462,912,862 |
| INTECH | $0 | $0 | $0 |
| T. Rowe Price | $0 | $0 | $2,892 |
| **Total Domestic Equity** | **$0** | **$0** | **$462,915,762** |
| | | | |
| **COVERED CALLS** | | | |
| Parametric (BXM) | $2,940,705 | $2,659,839 | $122,963,959 |
| Parametric (Delta-Shift) | $1,311,834 | $1,244,066 | $123,932,888 |
| Van Hulzen | $7,688,107 | $7,387,609 | $121,303,629 |
| **Total Covered Calls** | **$11,940,645** | **$11,291,514** | **$368,200,477** |
| | | | |
| **INTERNATIONAL EQUITY** | | | |
| ACWI Index fund | $0 | $0 | $170,563,771 |
| Franklin/Templeton | $4,814,224 | $4,712,251 | $128,694,571 |
| Fisher Investments | $0 | $0 | $129,730,258 |
| Global Transition | $0 | $99,571 | $752,659 |
| **Total International Equity** | **$4,814,224** | **$4,811,822** | **$429,741,259** |
| | | | |
| **REAL ESTATE EQUITY** | | | |
| RREEF America II | $0 | $0 | $37,945,515 |
| CenterSquare | $1,624,067 | $1,466,949 | $53,019,115 |
| **Total Real Estate** | **$1,624,067** | **$1,466,949** | **$90,964,630** |
| | | | |
| **TOTAL ALL FUND MANAGERS** | **$27,804,540** | **$26,583,095** | **$1,796,944,665** |

Prepared By: Matt Houck

Matt Houck, Accounting Technician

Date: 10-19-18

R.B. RESOLUTION NO. 6885

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY THE COUNSELORS FOR MONTHS OF AUGUST, 2018 AND SEPTEMBER, 2018

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 August, 2018 and September, 2018, in accordance with the provisions of said rule and in securities designated as acceptable by Retirement Board Resolution No. 4975, as amended;

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

President

ATTEST:

Secretary

11/15/2018

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: October 3, 2018

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance

FROM: D. Scott Klein, Controller

SUBJECT: Short Term Investment Transactions for August 2018

The attached Short Term Investment Transactions report for the month of August 2018 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

**EBMUD EMPLOYEES' RETIREMENT SYSTEM**
**SHORT TERM INVESTMENT TRANSACTIONS**
**CONSUMMATED BY THE TREASURER**
**MONTH OF AUGUST 2018**

| COST/ FACE VALUE | DESCRIPTION | DATE OF PURCHASE | DATE OF SALE/MATURITY | YIELD (%) |
|---|---|---|---|---|
| $ 3,840,000.00 | Local Agency Investment Fund | 9-Aug-18 | | 1.998 |
| 3,836,000.00 | Local Agency Investment Fund | 24-Aug-18 | | 1.998 |
| (9,446,000.00) | Local Agency Investment Fund | | 31-Aug-18 | 1.998 |
| **$ (1,770,000.00)** | Net Activity for Month | | | |

| | |
|---|---|
| $ 6,868,846.55 | Beginning Balance |
| (1,770,000.00) | Net Activity for Month |
| **$ 5,098,846.55** | Ending Balance |

SUBMITTED BY
D. Scott Klein
Controller

DATE 10-3-18

Robert L. Hanney
Treasury Manager

Sandy Lindley
Acctg. Systems Supvr.

prepared by MHouck

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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| | |
|---|---|
| DATE: | October 19, 2018 |
| MEMO TO: | Members of the Retirement Board |
| THROUGH: | Sophia D. Skoda, Director of Finance SDS |
| FROM: | D. Scott Klein, Controller D S Klein |
| SUBJECT: | Short Term Investment Transactions for September 2018 |

The attached Short Term Investment Transactions report for the month of September 2018 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

**EBMUD EMPLOYEES' RETIREMENT SYSTEM**
**SHORT TERM INVESTMENT TRANSACTIONS**
**CONSUMMATED BY THE TREASURER**
**MONTH OF SEPTEMBER 2018**

| COST/ FACE VALUE | DESCRIPTION | DATE OF PURCHASE | DATE OF SALE/MATURITY | YIELD (%) |
|---|---|---|---|---|
| $ 3,849,000.00 | Local Agency Investment Fund | 7-Sep-18 | | 2.063 |
| 3,860,000.00 | Local Agency Investment Fund | 20-Sep-18 | | 2.063 |
| (9,380,000.00) | Local Agency Investment Fund | | 28-Sep-18 | 2.063 |
| **$ (1,671,000.00)** | Net Activity for Month | | | |

| | |
|---|---|
| $ 5,098,846.55 | Beginning Balance |
| (1,671,000.00) | Net Activity for Month |
| **$ 3,427,846.55** | Ending Balance |

SUBMITTED BY ______________________ DATE 10-24-18

D. Scott Klein
Controller

Robert L. Hannay
Treasury Manager

Sandy Lindley
Acctg. Systems Supvr.

prepared by MHouck

R.B. RESOLUTION NO. 6886

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY THE TREASURER FOR AUGUST, 2018 AND SEPTEMBER, 2018

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 August 2018, and September, 2018 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 August, 2018, and September, 2018 are hereby ratified and approved.

President

ATTEST:

Secretary

11/15/2018

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: October 3, 2018

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance

FROM: D. Scott Klein, Controller

SUBJECT: Statement of Receipts and Disbursements for August 2018

The attached Statement of Receipts and Disbursements report for the month of August 2018 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

**STATEMENT OF RECEIPTS AND DISBURSEMENTS**
**EMPLOYEES' RETIREMENT FUND**
**MONTH OF AUGUST 2018**

| | | | | |
|---|---|---|---|---|
| CASH BALANCE at July 31, 2018 | | | $ | 716,175.92 |
| Receipts | | | | |
| Employees' Contributions | $ | 1,349,101.05 | | |
| District Contributions | | 6,379,742.65 | | |
| LAIF Redemptions | | 9,446,000.00 | | |
| Refunds and Commission Recapture | | 19,760.86 | | |
| TOTAL Receipts | | | | 17,194,604.56 |
| Disbursements | | | | |
| Checks/Wires Issued: | | | | |
| Service Retirement Allowances | $ | 8,346,294.06 | | |
| Disability Retirement Allowances | | 159,643.83 | | |
| Health Insurance Benefit | | 933,844.59 | | |
| Payments to Retiree's Resigned/Deceased | | 54,000.40 | | |
| LAIF Deposits | | 7,676,000.00 | | |
| Administrative Cost | | 349,076.49 | | |
| TOTAL Disbursements | | | | (17,518,859.37) |
| CASH BALANCE at August 31, 2018 | | | $ | 391,921.11 |
| LAIF | | | | 5,098,846.55 |
| LAIF and Cash Balance at August 31, 2018 | | | $ | 5,490,767.66 |
| Domestic Equity | | | | |
| Barrow Hanley | $ | 3.48 | | |
| Russell 1000 Index Fund | | 0.40 | | |
| Russell 2000 Growth Index Fund | | 0.07 | | |
| Russell 3000 Index Fund | | 462,084,239.42 | | |
| T. Rowe Price | | 2,895.65 | | |
| Subtotal Domestic Equity | | 462,087,139.02 | | |
| Covered Calls | | | | |
| Parametric (BXM) | $ | 122,046,599.17 | | |
| Parametric (Delta-Shift) | | 123,162,069.38 | | |
| Van Hulzen | | 120,975,259.77 | | |
| Subtotal Covered Calls | | 366,183,928.32 | | |
| International Equity | | | | |
| ACWI Index fund | $ | 169,543,615.03 | | |
| Franklin Templeton | | 127,356,572.68 | | |
| Fisher Investments | | 129,405,001.21 | | |
| Global Transition | | 743,694.84 | | |
| Subtotal International Equity | | 427,048,883.76 | | |
| Real Estate | | | | |
| RREEF America REIT II | $ | 37,945,515.00 | | |
| Center Square | | 54,353,117.63 | | |
| Subtotal Real Estate | | 92,298,632.63 | | |
| Fixed Income | | | | |
| CS Mckee | $ | 178,625,964.05 | | |
| Barclays Aggregate Index fund | | 132,705,722.94 | | |
| Western Asset Mgt Co-Short Term Inv Grade | | 67,372,765.17 | | |
| Western Asset Mgt Co-Short Term High Income | | 35,478,792.19 | | |
| Western Asset Mgt Co-Short Term High Yield | | 32,524,947.24 | | |
| Subtotal Fixed Income | | 446,708,191.59 | | |
| Total for Domestic and International Equities | | | | 1,794,326,775.32 |
| MARKET VALUE of ASSETS at August 31, 2018 | | | $ | 1,799,817,542.98 |

Respectfully submitted,

D. Scott Klein
Controller

Robert L. Hannay
Treasury Mgr.

S. F. Lindley
Acctg Sys Supvr.

prepared by mhouck

**EAST BAY MUNICIPAL UTILITY DISTRICT**

---

DATE: October 19, 2018

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance

FROM: D. Scott Klein, Controller

SUBJECT: Statement of Receipts and Disbursements for September 2018

The attached Statement of Receipts and Disbursements report for the month of September 2018 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

**STATEMENT OF RECEIPTS AND DISBURSEMENTS**
**EMPLOYEES' RETIREMENT FUND**
**MONTH OF SEPTEMBER 2018**

| | | | | |
|---|---|---|---|---|
| **CASH BALANCE at August 31, 2018** | | | $ | 391,921.11 |
| **Receipts** | | | | |
| Employees' Contributions | $ | 1,354,012.28 | | |
| District Contributions | | 6,402,432.82 | | |
| LAIF Redemptions | | 9,380,000.00 | | |
| Refunds and Commission Recapture | | 12,260.70 | | |
| TOTAL Receipts | | | | 17,148,705.80 |
| **Disbursements** | | | | |
| Checks/Wires Issued: | | | | |
| Service Retirement Allowances | $ | 8,276,333.66 | | |
| Disability Retirement Allowances | | 159,120.97 | | |
| Health Insurance Benefit | | 933,695.02 | | |
| Payments to Retiree's Resigned/Deceased | | 2,955.66 | | |
| LAIF Deposits | | 7,709,000.00 | | |
| Administrative Cost | | 129,221.66 | | |
| TOTAL Disbursements | | | | (17,210,326.97) |
| **CASH BALANCE at September 30, 2018** | | | $ | 330,299.94 |
| **LAIF** | | | | 3,427,846.55 |
| **LAIF and CASH BALANCE at September 30, 2018** | | | $ | 3,758,146.49 |
| **Domestic Equity** | | | | |
| Barrow Hanley | $ | 7.56 | | |
| Russell 3000 Index Fund | | 462,912,862.43 | | |
| T. Rowe Price | | 2,891.81 | | |
| Subtotal Domestic Equity | | 462,915,761.80 | | |
| **Covered Calls** | | | | |
| Parametric (BXM) | $ | 122,963,959.17 | | |
| Parametric (Delta-Shift) | | 123,932,888.31 | | |
| Van Hulzen | | 121,303,629.02 | | |
| Subtotal Covered Calls | | 368,200,476.50 | | |
| **International Equity** | | | | |
| ACWI Index fund | $ | 170,563,770.63 | | |
| Franklin Templeton | | 128,694,571.33 | | |
| Fisher Investments | | 129,730,257.75 | | |
| Global Transition | | 752,659.05 | | |
| Subtotal International Equity | | 429,741,258.76 | | |
| **Real Estate** | | | | |
| RREEF America REIT II | $ | 37,945,515.00 | | |
| Center Square | | 53,019,114.77 | | |
| Subtotal Real Estate | | 90,964,629.77 | | |
| **Fixed Income** | | | | |
| CS Mckee | $ | 177,637,783.88 | | |
| Barclays Aggregate Index fund | | 131,850,232.82 | | |
| Western Asset Mgt Co-Short Term Inv Grade | | 67,290,937.52 | | |
| Western Asset Mgt Co-Short Term High Income | | 35,661,536.77 | | |
| Western Asset Mgt Co-Short Term High Yield | | 32,682,046.85 | | |
| Subtotal Fixed Income | | 445,122,537.84 | | |
| **Total for Domestic and International Equities** | | | | 1,796,944,664.67 |
| **MARKET VALUE of ASSETS at September 30, 2018** | | | $ | 1,800,702,811.16 |

Respectfully submitted,

D. Scott Klein
Controller

Robert L. Hannay
Treasury Mgr.

S. F. Lindley
Acctg Sys Supvr.

prepared by mhouck

**EAST BAY MUNICIPAL UTILITY DISTRICT**

---

DATE: November 15, 2018

MEMO TO: Members of the Retirement Board

THROUGH: Laura Acosta, Secretary to the Retirement Board L.A.

FROM: Elizabeth Grassetti, Senior Human Resources Analyst EG

SUBJECT: Determination of Eligibility for Surviving Spouse Benefits for Blanca Basch

This item was continued from the September 20, 2018 meeting where Retirement Board member Tim McGowan asked Mrs. Basch to provide further documentation to demonstrate she was married to Mr. Basch at the time of his retirement and at least one year prior to his death. Mr. McGowan requested that Mrs. Basch provide documents related to her employment with Contra Costa County to demonstrate that she represented to her employer that she was married to Mr. Basch and any other documentation she can provide that would substantiate the claim that they were married at retirement and death.

Staff received an e-mail from Mrs. Basch's attorney, Chris McAllister with further documentation on November 2, 2018. Mr. McAllister also requested that Mrs. Basch and her daughter Shirley be allowed to make a statement to the Retirement Board and answer any questions the Board may have.

Attachment

{00031058;1}

**EAST BAY MUNICIPAL UTILITY DISTRICT**

DATE: November 15, 2018

MEMO TO: Members of the Retirement Board

THROUGH: Laura Acosta, Secretary to the Retirement Board L.A.

FROM: Elizabeth Grassetti, Senior Human Resources Analyst EG

SUBJECT: Determination of Eligibility for Surviving Spouse Benefits for Blanca Basch

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Staff received an e-mail from Mrs. Basch's attorney, Chris McAllister with further documentation on November 2, 2018. Mr. McAllister also requested that Mrs. Basch and her daughter Shirley be allowed to make a statement to the Retirement Board and answer any questions the Board may have.

Attachment

# LEGAL SERVICES
of
NORTHERN CALIFORNIA

Elizabeth Grassetti
Email: elizabeth.grassetti@ebmud.com

**VIA EMAIL**

Friday, November 02, 2018

RE: Blanca Basch Supporting Documents for November 15, 2018 Retirement Board Meeting

Dear Ms. Grassetti,

This letter and the accompanying documents are in response to the Retirement Board's request that Mrs. Basch provide further documentation to demonstrate that she was married to Robert Basch at the time that he retired in 1996 and that they remained married until his death in 2010. What follows is a list of documents Mrs. Basch would like the Board to consider at the next meeting scheduled for November 15, 2018 along with some clarifying information that may be helpful in interpreting these documents.

1. **Blanca Basch's Certificate of Naturalization**

   Blanca Basch became a naturalized US Citizen on September 09, 2008, two years before Robert Basch's death. Mrs. Basch declared herself to be married on her citizenship application, as reflected on the certificate. The Board should note that United States Citizenship and Immigration Services (USCIS) takes misstatements or misrepresentations on citizenship paperwork very seriously. Misrepresentations on a citizenship application can result in the denial of an application or even revocation of citizenship in the event that USCIS discovers the misrepresentation after the fact.

   Mrs. Basch would like the Board to know that the decision to become a United States Citizen required her to give up her citizenship in her country of origin and that she did not take this decision lightly. When Mrs. Basch decided to become a US Citizen, she had lived in the United States for decades. She had a distinguished career and raised a family in this county. Misstating her marital status on her citizenship application for no apparent benefit would have put her entire life in serious jeopardy.

2. **Blanca Basch's Application for Employment with Contra Costa County**

   Mrs. Basch stated that at the September 20, 2018 meeting of the Retirement Board, members of the Board inquired about documents showing that she represented herself as married to her employer. Asking about marital status in a pre-employment context is prohibited by Title VII of the Civil Rights Act of 1964 and is considered by the United States Department of Labor as evidence of the intent to discriminate. Therefore, Mrs. Basch's employment application with the county does not ask about her marital status.

Although the application does not directly address her marital status, Mrs. Basch would like to call the Board's attention to item 16 of the application where she lists Robert Basch as an emergency contact.

3. **Grant Deed Transferring Ownership of Blanca Basch's Home to Her**

Mrs. Basch acquired her home in 1988. The Grant Deed clearly grants ownership of the property to "Blanca E. Basch, a married woman, as her sole and separate property."

4. **Certificate of Appreciation Issue by Contra Costa County at Blanca Basch's Retirement**

Mrs. Basch stated that at the September 20, 2018 meeting of the Retirement Board, members of the Board inquired about documents showing that she represented herself as married on her own retirement application. Mrs. Basch retired from employment with Contra Costa County on July 5, 2014. Because Robert Basch died in 2010, Mrs. Basch was not married at the time she retired and therefore did not declare herself to be married at that time.

The enclosed documents are included as evidence of Mrs. Basch's retirement date after the date of Robert Basch's death.

Additionally, Mrs. Basch requests that she and her daughter, Shirley Basch, be allowed to be present at the November 15, 2018 Retirement Board meeting to make a statement and answer any questions that the Board may have at that time. If there is any additional information or documentation that Mrs. Basch or I can provide at this time, please feel free to contact me at the number below or via email at cmcallister@lsnc.net.

Best Regards,

Chris McAllister

Chris McAllister
Staff Attorney, Western States Pension Assistance Project
Phone: (916) 551-2146
Fax: (916) 551-2197
Email: cmcallister@lsnc.net

Enclosures: Blanca Basch Certificate of Naturalization
Blanca Basch's Application for Employment with Contra Costa County
Grant Deed Transferring Ownership of Blanca Basch's Home to Her
Certificate of Appreciation Issue by Contra Costa County at Blanca Basch's Retirement

# THE UNITED STATES OF AMERICA

No. 31665518

## CERTIFICATE OF NATURALIZATION

*Personal description of holder as of date of naturalization:*

*Date of birth:* **JANUARY 15, 1934**

*Sex:* **FEMALE**

*Height:* **5** *feet* **3** *inches*

*Marital status:* **MARRIED**

*Country of former nationality:*
**GUATEMALA**

*CIS Registration No.* **A008640382**

*I certify that the description given is true, and that the photograph affixed hereto is a likeness of me.*

Blanca Estela Basch
*(Complete and true signature of holder)*

*Be it known that, pursuant to an application filed with the Secretary of Homeland Security*

*at:* **SAN FRANCISCO, CALIFORNIA**

*The Secretary having found that:*

**BLANCA ESTELA BASCH**

*then residing in the United States, intends to reside in the United States when so required by the Naturalization Laws of the United States, and had in all other respects complied with the applicable provisions of such naturalization laws and was entitled to be admitted to citizenship, such person having taken the oath of allegiance in a ceremony conducted by the*

**US CITIZENSHIP AND IMMIGRATION SERVICES**

*at:* **SAN FRANCISCO, CALIFORNIA** *on:* **SEPTEMBER 09, 2008**

*that such person is admitted as a citizen of the United States of America.*

IT IS PUNISHABLE BY U. S. LAW TO COPY, PRINT OR PHOTOGRAPH THIS CERTIFICATE. WITHOUT LAWFUL AUTHORITY.

J R Schaifer 015

*Director, U. S. Citizenship and Immigration Services*

DEPARTMENT OF HOMELAND SECURITY

FORM N-550 REV. 4/04

An Equal Opportunity Employer
CONTRA COSTA COUNTY PERSONNEL DEPARTMENT
651 Pine Street, Martinez, California 94553

RECEIVED
PERSONNEL DEPARTMENT
DATE RECEIVED
JAN 30 4 40 PM '89
(21)

For Personnel Use Only
Accepted  Rejected
Analyst E.G. Date 2-7-89
Reason
VER
(22)

## APPLICATION FOR EXAMINATION

POSITION APPLYING FOR
Clerk - Exp VER
Enter exact Merit System job title

PLEASE TYPE OF PRINT IN INK 5407

1. ___ (3) Social Security Number – for Applicant/Employee Record Control (Voluntary)

2. Name
BASCH (4) Last Name — BLANCA First Name — E Middle Name

3. Address
938 CLARKSON CT CONCORD, CA 94518
No. Street (9) Apt. No. City (10) State/Zip Code (11)

Test Code Area
☐ A – Central
☐ W – West
☐ 3 – East
☐ 9 – Special
OFFICE USE ONLY (12)

4. Phones
(415) (13) 798-4399 Home (14) — (415) (15) 646-4176 Business (16) — ( ) (17) Emergency (18)

5. If you are not a United States Citizen, do you have permission to work in the United States from the U.S. Immigration and Naturalization Service? You will be required to submit proof of your permission to work if employed. Yes ☒ No ☐

6. Have you ever been convicted of any offense by any civilian or military court? If yes, please note in Section 15 the date and place of each offense, the specific charge, the date and place of conviction and the fine or sentence received. You may omit traffic violations for which the only penalty imposed was a fine of less than $50.00. A criminal record is not necessarily a bar to employment. Each case is given individual consideration, based on job relatedness. Yes ☐ No ☒

7. Have you ever been discharged, forced to resign, or rejected during a probationary period from any employment within the last ten years? If yes, give name and address of employer, reason for each release and dates of employment. Yes ☐ No ☒

If answer is yes, it is not necessarily a bar to employment. Each case is given individual consideration, based on job relatedness.

8. Are you fluent in any language other than English? If so, please specify: SPANISH

9. Veterans who have served continuously on active duty for more than 180 days and have received an honorable discharge within the last five years, and disabled veterans without limit as to date of discharge, may be allowed an additional 5% of their total earned score (providing the exam is successfully completed). To obtain this credit, veterans MUST provide FORM DD214, proof of disability if applicable, or other acceptable proof of service WITH EACH APPLICATION by the application filing deadline. This credit does not apply to promotional examinations.

Do you wish to apply for Veterans Credit? Yes ☐ No ☐ (19)

Verify (V)
OFFICE USE ONLY

10. Have you ever worked for Contra Costa County before? Yes ☒ No ☐

11. Are you currently working in a permanent Merit System position for Contra Costa County? Yes ☐ K No ☒ A (20)
Merit System job title

12. List licenses, certificates and/or registrations required for this job (Driver's License, Registered Nurse License, etc.).

| TITLE | DATE ISSUED | DATE EXPIRES | NUMBER | Verified By | |
|---|---|---|---|---|---|
| | | | | | Lic. No. 1 (23) |
| | | | | | Lic. No. 2 (24) |
| | | | | | Lic. No. 3 (25) |

OFFICE USE ONLY

Position Applying for (Show exact title—separate application required for each examination) CLERK-EXPERIENCED LEVEL E
First Name BLANCA
Middle Name E.
Last Name BASCH

AM 1 (4/88)

13. **EDUCATION:** Check appropriate box if you possess one of the following:
☐ High School Diploma ☐ G.E.D. Certificate ☐ California High School Proficiency Certificat
Give Highest Grade or Educational Level Achieved ____

| Names of colleges/universities attended | Dates Attended | Course of Study/Major | Degree Awarded | Units Completed Semester | Quarter | Type Degree | Date Degree Requirements Completed |
|---|---|---|---|---|---|---|---|
| A) INTER-AMERICAN ACADEMY | 1952/54 | BUSINESS | Yes ☐ No ☐ | CERT OF COMPLETION | | | |
| B) UNIVERSITY OF CALIF. S.F | 1965 | FRENCH | Yes ☐ No ☒ | | | | |
| C) BERLITS SCHOOL OF LANGUAGES S.F. | 1955/56 | ENGLISH | Yes ☐ No ☐ | CERTIFICATE OF COMPLETION | | | |
| Other schools/training completed: D) HEAL BUSINESS COLLEGE | 1975 | Course Studied COMPUTERS K-PUNCH | Hours Completed 1 YEAR | Certificate Awarded COMPLETE KEY PUNC | | | |

14. THE FOLLOWING SECTION MUST BE FILLED OUT COMPLETELY, although you may submit a resume or other supporting documentation if so desired. Begin with present or most recent experience and account for ALL time during the past 10 years. Use additional sheets if necessary. Voluntary non-paid experience will be accepted if job-related.

| Dates | Employer's Name and Address | Title / Duties |
|---|---|---|
| A) From 12-85 To PRESENT Total 3 Yrs. 1 Mos. Full time ✓ Part time ____ | CCC. ELECTIONS. DEPT. 524 MAIN ST MARTINEZ, CA. Salary per month $ 1500.00 ☐ Volunteer Hr. Salary Hrs. per week 40 $ ____ | Title DATA ENTRY OPER II Reason for Leaving PRESENTLY EMPLOY Duties performed ENTERING & VERIFYING A WIDE VARIETY OF DATA FROM CODED & UNCODED DOCUMENTS. SORTING, BATCHING & MAINTAINING PRODUCTION & MACHINE UTILIZATION RECORDS. |
| B) From 7-83 To 6-84 Total 11 Mos. Full time ✓ Part time ____ | MASON McDUFFIE MORTGAGE 1550 PARKSIDE DR WALNUT CREEK, CA. Salary per month $ 1165.00 ☐ Volunteer Hr. Salary Hrs. per week 40 $ ____ | Title RECORDS COORDINATOR Reason for Leaving POSITION ELIMINAT Duties performed RECORDS MANAGEMENT - SET UP & MAINTENANCE OF FILES & RECORD RETENTION SYSTEMS FOR HOME OFFICE AND 24 BRANCHES. |
| C) From 10-81 To 10-82 Total 1 Yrs. Full time ✓ Part time ____ | BECHTEL POWER CORP. FIFTY BEALE ST SAN FRANCISCO, CA. Salary per month $ 1200.00 + OT ☐ Volunteer Hr. Salary Hrs. per week 40 $ ____ | Title FIELD ASSISTANT Reason for Leaving HUSBAND TRANSFERRE Duties performed UNIVAC CRT OPERATOR - ASSISTAN TO MAINTAIN RECORDS VIA ON LINE DATA TERMINALS - MAINTAINING & UPDATING DATA BASE. ASSISTING ENGINEERING PERSONNEL & QUALITY CONTROL PERSONNEL. |
| D) From 11-80 To 6-81 Total 7 Mos. Full time ✓ Part time ____ | QUAKER FED. SAVINGS 7021 GREENLEAF AVE WHITTIER, CA. Salary per month $ 900.00 ☐ Volunteer Hr. Salary Hrs. per week 40 $ ____ | Title VAULT CLERK Reason for Leaving RETURNING CO LOU Duties performed VAULT RECORDS & BANKING DOCUMENTATION MAINTENANCE FOR HOME OFFICE & 5 BRANCHES. ASSISTING CUSTOMER SERVICE. |
| E) From 1-79 To 9-80 Total 1 Yrs. 9 Mos. Full time X Part time ✓ | EAST WHITTIER SCHOOL DIST. 14535 E. WHITTIER BLVD WHITTIER, CA. Salary per month $ ____ ☐ Volunteer Hr. Salary Hrs. per week 30 $ ____ | Title INSTRUCTIONAL AID Reason for Leaving FULL-TIME EMPLOYM Duties performed BI-LINGUAL INSTRUCTIONAL AID — PROVIDE SUPPORT TO CLASSROOMS IN THE AREA O MATH — SPANISH-ENGLIS TRANSLATO |

15. Remarks ____

16. In case of emergency please notify: Name ROBERT BASCH OR KARL BASCH
Phone 798-4399 Address 938 CLARKSON CT. CONCORD, CA. 94518

17. I authorize the employers and educational institutions identified in this employment application to release any information they have concerning my employment or education, to the County of Contra Costa. Yes ☐ No ☐
May we contact your present employer? Yes ☒ No ☐

18. I CERTIFY that the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I understand and agree misstatements/omissions of material fact will cause forfeiture of my rights to employment by Contra Costa County.

1-3-89 [signature]

BOOK 14485 PG 27

Order No. 100319
Escrow No.
Loan No.

WHEN RECORDED MAIL TO:

Blanca E. Basch
938 Clarkson Court
Concord, Ca.

88 130110
CDN

CONTRA COSTA CO.
TRANSFER TAX
PAID $ 231.00

RECORDED AT REQUEST OF
FINANCIAL TITLE COMPANY
JUL 29 1988
AT 8 O'CLOCK A M.
CONTRA COSTA COUNTY RECORDS
J.R. OLSSON
COUNTY RECORDER
FEE $ 7.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO:

same as above

DOCUMENTARY TRANSFER TAX $ 231.00
xx Computed on the consideration or value of property conveyed; OR
...... Computed on the consideration or value less liens or encumbrances remaining at time of sale.

THE UNDERSIGNED
Signature of Declarant or Agent determining tax — Firm Name

# GRANT DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

JAMES L. FRANCIS and MYRNA FRANCIS, husband and wife

hereby GRANT(S) to

BLANCA E. BASCH, a married woman, as her sole and separate property

the real property in the City of Concord
County of Contra Costa , State of California, described as

For description of the premises see exhibit "A" attached hereto and made a part hereof.

Dated July 26, 1988

James L. Francis
James L. Francis

Myrna Francis
Myrna Francis

STATE OF CALIFORNIA
COUNTY OF CONTRA COSTA } ss.
On JULY 26, 1988
before me, the undersigned, a Notary Public in and for said State, personally appeared JAMES L. FRANCIS AND MYRNA FRANCIS

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same.

WITNESS my hand and official seal.

Signature Heidi E. Slocomb

OFFICIAL SEAL
HEIDI E. SLOCOMB
NOTARY PUBLIC - CALIFORNIA
CONTRA COSTA COUNTY
My Comm Expires Aug 16, 1989

(This area for official notarial seal)

Form 3195

MAIL TAX STATEMENTS AS DIRECTED ABOVE

# Blanca E. Basch

Ms. Blanca Basch joined the Contra Costa County Clerk-Recorder's office in December 1986 as a Data Entry operator for Elections.

In 1989, Blanca transferred to the Clerk's Data Entry group where she excelled in data entry.

Recognizing her dedication, work ethic and exemplary work quality, Blanca was soon promoted to a Lead position of Clerk Specialist.

In 1998, Blanca was deputized as a Deputy Commissioner of Marriages; and according to her own account, has performed over 10,000 ceremonies joining couples together in matrimony.

During her 28½ years in the Clerk-Recorder's Office, Blanca has contributed to training nearly every employee in the Division.

In May 2014, Blanca received a letter from President Obama recognizing and commending her nearly three decades of civil service and wishing her well as she enters a richly-deserved retirement.

As Contra Costa County Clerk-Recorder and on behalf of Blanca's current and former colleagues and the thousands of customers she has served, we congratulate her and thank her for her remarkable service to Contra Costa County and the Clerk-Recorder's Office as Blanca officially retires on July 5, 2014.

JOSEPH E. CANCIAMILLA
Contra Costa County Clerk-Recorder

THE WHITE HOUSE

WASHINGTON

April 30, 2014

Ms. Blanca Basch
Concord, California

Dear Blanca:

I am pleased to join your family, friends, and colleagues in congratulating you on your retirement.

Your hard work and dedication have helped fulfill important obligations to your community and our Nation. Public service is an honorable calling, and it is my privilege to join in celebrating your career.

I thank you for all you have done, and I wish you happiness and good health in the years ahead.

Sincerely,

**EAST BAY MUNICIPAL UTILITY DISTRICT**

---

DATE: November 15, 2018

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance

SUBJECT: CenterSquare Release from Watch Status SDS

CenterSquare Investment Management (CenterSquare) invests in a public REIT portfolio on behalf of the Retirement System. The CenterSquare account was valued at $53.0 million as of September 30, 2018, representing about 2.9% of total Retirement System assets. In December 2017, CenterSquare was placed on "Watch" status due to a change in the firm's ownership. Pension Consulting Alliance LLC (PCA), the Retirement System's investment consultant, has been monitoring the impact of the change since that time. PCA reports that the firm's investment process and portfolio management team have remained stable. PCA recommends that CenterSquare be removed from "Watch" status and has prepared the attached memo to provide further details.

Staff supports removing the CenterSquare public REIT portfolio from "Watch" status, as recommended by PCA.

SDS:RLH

PENSION
CONSULTING
ALLIANCE

MEMORANDUM

**Date:** October 31, 2018

**To:** East Bay Municipal Utility District (EBMUD)

**From:** Pension Consulting Alliance, Inc. (PCA)

**CC:** Eric White, CFA; Sarah Bernstein; Ashley Yoshida – PCA

**RE:** **CenterSquare "Watch" Status Update**

---

**Summary**

**PCA recommends that the EBMUD Employees' Retirement System (EBMUDERS) remove the CenterSquare public REIT portfolio from "Watch" status.** The firm was placed on "Watch" status as of December 2017 upon BNY Mellon Investment Management announcing the sale of the CenterSquare business to CenterSquare's management team and private equity firm, Lovell Minnick Partners in September 2017. Since the transaction closed on January 2, 2018, there have been no changes to the US REIT strategy's investment process and the portfolio management team has remained stable. Additionally, performance has outperformed the benchmark over short- and long-term periods measured.

**Discussion**

EBMUDERS is invested in CenterSquare Investment Management's public REIT portfolio focusing on real estate in the United States. As of September 30, 2018, the Plan had interests in CenterSquare valued at approximately $53.0 million, equal to approximately 58.5% of its real estate portfolio assets and 2.9% of its total assets.

In September 2017, BNY Mellon, the sole owner of CenterSquare Investment Management, announced it had entered into a definitive agreement to sell CenterSquare Investment Management to CenterSquare's management team and the private equity firm Lovell Minnick Partners. The transaction was subject to standard regulatory approval and closed on January 2, 2018.

Since inception in the EBMUD portfolio, the portfolio has experienced minimal team turnover and positive absolute performance results over the time periods measured. Over the recent quarter and 1-year periods ended September 30, 2018, the portfolio outperformed the FTSE NAREIT Equity REITs Index by 0.6% and 2.7%, respectively, and longer-term performance exceeded the benchmark by over 1.0% annually. The portfolio has also exceeded the benchmark over the last five consecutive calendar years.

Upon the close of the transaction there have been no changes to the CenterSquare US REIT strategy's investment process or investment management team. CenterSquare's senior management team has continued to have day-to-day authority and responsibility for managing CenterSquare and making all investment decisions. The number of clients invested in the US REIT strategy has also remained relatively stable following the transition.

# CenterSquare Investment Management
# Real Estate
# “Watch” Status Update

### Product and Organization Review Summary

| Reason for Update | | | | | |
|---|---|---|---|---|---|
| ☐ **Failed Performance Criteria**<br>☐ **Organizational Changes**<br>☒ **Scheduled Watch Update** | **Level of Concern^** | **Investment process (client portfolio)** | **Investment Team** | **Performance Track Record** | **Team/ Firm Culture** |
| **Product** | | | | | |
| Key people changes | None | | | | |
| Changes to team structure/individuals roles | None | | | | |
| Product client gain/losses | None | | | | |
| Changes to the investment process | None | | | | |
| Personnel turnover | None | | | | |
| | | | | | |
| **Organization** | | | | | |
| Ownership changes | Low | | | | Low |
| Key people changes | None | | | | |
| Firm wide client gain/losses | None | | | | |

^None, low, medium, or high

### Review and Recommendation History

| Date | PCA Findings and Recommendation | Board |
|---|---|---|
| 11/2018 | PCA recommends removal from “Watch” status | Pending |
| 11/2017 | PCA recommended “Watch” status due to organizational changes. | Approved |

**Background**

EBMUDERS is invested in CenterSquare Investment Management's public REIT portfolio focusing on real estate in the United States. EBMUD retained CenterSquare in October 2011 with an initial investment of approximately $24 million. As of September 30, 2018, the account totaled $53.0 million in assets.

**Discussion**

Organizational Review

CenterSquare Investment Management Holdings, Inc. was founded in 1987 to provide direct real estate investment management services to institutional investors. In 1995, CenterSquare Investment Management, Inc. was formed as a wholly-owned subsidiary of CenterSquare Investment Management Holdings, Inc. (collectively referred to as "CenterSquare") to provide U.S. real estate securities investment management services.

In February 2006, CenterSquare was acquired by The Bank of New York Company, Inc. (BNY). BNY and Mellon Financial Corporation merged on July 1, 2007, creating the largest securities servicing and asset management firm globally. The Bank of New York Mellon Corporation (BNY Mellon), is one of the world's leading asset managers. CenterSquare was a real asset investment management subsidiary within BNY Mellon's boutique asset management model and was solely owned by BNY Mellon.

In September 2017, BNY Mellon announced it had entered into a definitive agreement to sell CenterSquare Investment Management to CenterSquare's management team and the private equity firm Lovell Minnick Partners. The transaction was subject to standard regulatory approval and closed on January 2, 2018. CenterSquare management acquired a significant stake in the company (diversified among over 30 senior employees), with the remainder owned by Lovell Minnick Partners. BNY Mellon stated that the sale of CenterSquare was in-line with their strategy to streamline their portfolio to provide a more focused set of specialist investment solutions for clients. Additionally, the new CenterSquare ownership structure, with meaningful equity ownership by management, enhanced the firm's alignment of interest with its clients and sought to ensure a strong and stable future for the firm.

Lovell Minnick Partners was founded in 1999 and has a long track record of investing across the investment management, distribution, and advisory value chain. Lovell Minnick provides developing companies with equity capital to support private company recapitalizations, leveraged buyouts, and pursue growth opportunities. The firm has expertise in investing in the financial and related business services sectors and in addition to capital will provide strategic support and resources to CenterSquare management in driving execution of business plans.

The new governance structure of CenterSquare Investment Management includes a Board of Directors consisting of two members appointed by Lovell Minnick, two members appointed by CenterSquare, and the appointment of an independent director by Lovell Minnick. Strategic decisions will be made by the Board, with formal meetings held quarterly and informal discussions as necessary. The existing senior management team at CenterSquare has continued to have day-to-day authority and responsibility for managing CenterSquare and makes all investment decisions. CenterSquare obtained 100% client consent to assign prior investment management agreements to the new entity.

Investment Team

The investment team for the U.S. public REIT portfolio has remained relatively stable. Over the last several years the team has experienced the departure of one portfolio manager in 2015. The portfolio is currently managed by four portfolio managers and supported by six analysts, including one analyst added this year.

Investment decisions are discussed among the investment team, with final decision-making authority by Global Head of Real Estate Securities Dean Frankel. All members of the investment team have responsibility for making stock selection for companies they cover. The investment team meets at least weekly to discuss macroeconomic events, sector weightings and individual security issues. The team model allows for an open exchange of investment ideas across all property sectors.

Investment Strategy

CenterSquare's strategy is to invest in a diversified portfolio of real estate securities with low-relative stock prices to provide clients with high risk-adjusted returns. CenterSquare aims to uncover low-relative price opportunities across sectors and at different turning points in the real estate cycle.

CenterSquare Investment Management, Inc.'s investment philosophy has remained unchanged since inception in 1995. It is based on the following three tenets:

1. A value-oriented investment philosophy,
2. Both real estate and capital markets research, and
3. Proprietary quantitative analysis.

The firm utilizes a value-oriented investment philosophy, with the goal to identify mispriced assets in the marketplace. The firm's experience has shown that attractive relative valuations provide both downside protection and potential for upside growth.

The process of translating CenterSquare's investment philosophy into prudent decisions is based on real estate and capital markets experience. In general, this experience has convinced the firm that REITs are neither real estate nor stocks alone. They are, in fact, both.

As 'hybrid' investments, REITs are valued based on a number of factors, only one of which is a company's underlying real estate asset value. Therefore, investment returns will be a function of:

- Underlying real estate investment results;
- The management team that operates the real estate and sets the strategic direction for the company and its balance sheet strength; and,
- The company's position within a continuously changing public capital market.

Continuing the thesis above, as 'hybrids', REITs are capable of trading at implied real estate valuations which are materially different from those which would otherwise exist in the private institutional real estate market. Such variances (as measured by a premium or discount to net asset value) may exist for sustained periods of time due to the three non-real estate factors listed above, including management quality, balance sheet strength and the public market environment.

In addition to calculating and comparing REIT net asset values, CenterSquare has also developed a proprietary relative value model that assesses a REIT's value based on factors unrelated to traditional real estate metrics. CenterSquare's cycle-tested performance is grounded in an innovative investment process with the ability to look beyond apparent value to the full range of business, management and capital market factors that determine the true quality of a company, and the value of a client's investment.

Investments are identified based on relative value across their universe of securities. CenterSquare's investment process focuses on identifying attractive securities relative to property sector peers. In addition, they are seeking to identify securities that are valued at discounts to private market values. CenterSquare follows a rigorous investment process, including primary components:

1. Top-down Research: The firm's research process begins by considering the macroeconomic landscape. The team examines factors such as economic growth, interest rates, inflation, employment, and consumer spending. From this perspective, they refine and form an opinion on how each of these macroeconomic factors will impact the different real estate sectors within the U.S. (including office, apartment, retail, hotel, industrial, etc.) They layer pricing considerations into this relative value analysis to determine which property sectors to over or underweight.

2. Bottom-up Research: The bottom-up element focuses on detailed stock-level analysis. Real estate is a management-intensive business, and so the team starts with a qualitative assessment of each REIT by understanding each company's strategic vision, governance practices, and history of value creation in varying economic cycles. Next, they quantify the fundamentals and valuation of the underlying real estate using traditional real estate valuation tools, such as implied capitalization rates, net asset value, and replacement costs. They also evaluate each underlying property from an operating perspective, considering items like rental rates, occupancy, expenses, property locations, and quality of buildings, as well as quality of tenants and tenant turnover. The final phase of the bottom-up portion of their process involves evaluating each security using their proprietary valuation models. The team strives to understand how independent variables drive valuation. Proprietary models look at leverage, growth, size, property type and other critical factors to derive a view of relative value. A critical component is a rigorous underwriting of each company's balance sheet to understand the impact of debt and debt maturities on a company's ability to navigate the capital markets and successfully implement its strategy. This disciplined financial modeling allows the team to compare valuations across the REIT universe on a like-for-like basis over time.

Each REIT in CenterSquare's investment universe is assigned to one of their research analysts. Financial information received directly from companies and other sources is used to build and maintain valuation models. Certain information provided by independent and sell side analysts, such as estimates for recurring capital expenditures, is incorporated into these models. Frequent requests for additional information is made directly to REIT management or requested during quarterly conference calls. Prevailing interest rates, changes in economic data and up-to-the minute industry news are monitored via Bloomberg Financial Markets. The portfolio managers are also involved in the research process.

3. Risk Management: While identifying attractive securities is an important element of the process, risk management ensures a proper balance between alpha generation and risk minimization. With a goal of adding 200-300 basis points of excess return on an annual basis, this third step of the process focuses on identifying and understanding factor exposures and active bets relative to the benchmark. The firm monitors exposures across a number of facets, including, but not limited to,

VaR, tracking error, beta, sector weights, active bet exposures, correlation, standard deviation, and Sharpe ratio.

CenterSquare's research efforts are dedicated to finding relative value opportunities between and within sectors and regions. Firm management, strategy for value creation, the underlying real estate assets, valuation and catalysts have a significant impact on the team's assessment of each company in the research universe. In addition, each company has unique characteristics (factor exposures) which are continuously monitored.

**Other Considerations**

Performance Review

The CenterSquare portfolio performance has been positive on an absolute and relative basis over short- and long-term periods measured. Over the recent quarter and 1-year period ended September 30, 2018, the portfolio outperformed the FTSE NAREIT Equity REIT Index by 0.6% and 2.7%, respectively. Longer-term performance has exceeded the benchmark by 1.2% and 1.6% over the 3- and 5-year periods, respectively. Since its late 2011 inception, the portfolio outperformed by 1.4% annually. On a calendar year basis, the portfolio bested the benchmark over the last five consecutive calendar years.

**Performance Results**

| | Annualized, Ending 9/30/2018 | | | | |
|---|---|---|---|---|---|
| Performance | Qtr | 1 Yr | 3 Yr | 5 Yr | Since Inception (11/2011) |
| CenterSquare | 1.4 | 6.0 | 8.8 | 10.8 | 11.1 |
| *FTSE NAREIT Equity REIT Index* | *0.8* | *3.3* | *7.6* | *9.2* | *9.7* |
| Difference | 0.6 | 2.7 | 1.2 | 1.6 | 1.4 |

| | Calendar Years, ending 12/31 | | | | | |
|---|---|---|---|---|---|---|
| Performance | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| CenterSquare | 17.4 | 3.6 | 32.7 | 5.5 | 9.0 | 7.0 |
| *FTSE NAREIT Equity REIT Index* | 18.1 | 2.5 | 30.1 | *3.2* | *8.5* | *5.2* |
| Difference | -0.7 | 1.1 | 2.6 | 2.3 | 0.5 | 1.8 |

Assets & Accounts

Over the last three calendar years, both, firm and product assets and clients steadily increased. Since the ownership transaction, firm-wide clients declined year-to-date but US REIT clients have been relatively stable; firm and product assets grew slightly over the first half of the year. The U.S. Real Estate Securities product, in which EBMUDERS is invested, currently represents more than half of the firm's assets under management.

**Capital Assets / Clients**

| | Firm-wide | | U.S. Real Estate Securities | |
|---|---|---|---|---|
| | Assets ($ billions) | Clients | Assets ($ billions) | Clients |
| 2018-06 | 9.8 | 147 | 5.9 | 64 |
| 2017-12 | 9.6 | 189 | 5.7 | 67 |
| 2016-12 | 8.8 | 183 | 4.7 | 54 |
| 2015-12 | 8.2 | 138 | 3.8 | 50 |
| 2014-12 | 8.4 | N/A* | 3.3 | N/A* |
| 2013-12 | 6.8 | 177 | 2.3 | 37 |
| 2012-12 | 7.6 | 175 | 2.0 | 34 |
| 2011-12 | 4.6 | 162 | 1.5 | 34 |

*Source: eVestment Alliance*
**data not available from eVestment*

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**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: November 15, 2018

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: Direction to Continue Holding Private Placement Securities

## SUMMARY

In May 2018, the Retirement Board directed staff to oversee a transition in the East Bay Municipal Utility District Employees' Retirement System's (Retirement System's) investment portfolio to implement new allocation targets set in March 2018. The transition was implemented in June 2018. As part of this transition, several holdings were identified as private placement securities. Because these securities are unregistered, the transition manager was unable to sell them as part of the transition. With respect to these holdings, staff has researched the options available to the Retirement System. Staff can pursue a sale of the securities, though selling all shares in each company may not be possible and the cost may be high. Alternatively the Retirement Board can hold the securities until a liquidity event for each company, such as an Initial Public Offering (IPO). After such an event and any lock-out period, the securities could likely be sold in a public market.

Staff recommends that the Retirement System continue monitoring the securities, which will remain with the custodian. Once a public market is created through an IPO or other liquidity event, staff will coordinate liquidating the securities in accordance with the requirements in the securities' governing documents.

## BACKGROUND

As part of the March 2018 asset reallocation, the Retirement Board decided to move to a passive domestic equity strategy. During the transition, the transition manager identified 17 securities issued by five companies in the T. Rowe Price account which were classified as private placement securities. The transition manager subsequently notified staff that these securities could not be sold as part of the transition. The securities totaled about $640,000 based on T. Rowe Price's valuation figures (see table). These securities continue to be held in a custodian account with Northern Trust.

| **Company** | **Listed Value** |
|---|---|
| Airbnb, Inc. | $171,574 |
| Didi Chuxing Technology Co. | 73,804 |
| Magic Leap | 174,020 |
| Uber Technologies Inc. | 155,004 |
| WeWork Companies Inc. | 63,181 |
| **Total** | **$637,583** |

As staff presented in a memo to the Retirement Board in July 2018, T. Rowe Price has stated in a memo that it is unable to repurchase the securities from the Retirement System. Staff has explored two options to address these holdings:

1. Sell the securities privately
2. Hold the securities until they can be sold publicly

**Liquidating the Private Placement Securities**

The Retirement System can attempt to sell the 17 holdings to private buyers, although a sale of all shares in each company may not be possible. A traditional transition manager will likely not be able to sell the securities on the Retirement Board's behalf because the securities are unregistered. Staff has explored directly reaching out to institutional investors potentially interested in the securities and working with newer platforms that facilitate the sale of private securities. Under the first approach, staff has received feedback that the small size of the positions makes it difficult to solicit interest from institutional investors. To explore the second approach, staff has contacted three firms that offer platforms to sell the shares. In either case, a sale will have challenges as detailed below.

- Pricing: Setting an asking price for these securities given the lack of a public market is difficult. Staff could have difficulty determining if the Retirement System is receiving an appropriate value for the shares.
- Size of Holdings: Staff has received feedback that the small size of the positions makes a direct sale approach difficult. Furthermore, the small holdings of each company are distributed across multiple share classes, which could pose challenges for completing a sale. For example, the Retirement System's ownership in Uber totals $155,000 as of the last valuation, but the ownership is spread over 10 different series of shares, with individual series representing as little as $231.
- Transaction Costs: In discussions with representatives of the trading platforms, staff has learned that transaction costs would be relatively high, at about 5% of the purchase price based on the size of the Retirement System's holdings. Even if a transaction is possible (see Company Right of Refusal/Block Sale), the process could take several months.
- Legal Review: A transaction may also involve additional legal fees. Each series has its own legal documentation and provisions that would need to be reviewed by potential buyers.
- Company Right of Refusal/Block Sale: If the Retirement System were to sell the securities, through a direct sale or through a secondary market platform, the original

issuing companies would need to participate in the transaction. The companies could prevent the securities from being sold.

**Holding the Private Placement Securities**
The Retirement Board could choose to hold the securities until a liquidity event occurs such as an initial public offering (IPO). The private placement securities are currently held in a transition account with the Retirement System's custodian, Northern Trust. Staff has confirmed with representatives of Northern Trust that these assets can remain in the account until a liquidity event. This could include an IPO, merger or sale of a company. An IPO of one of the companies would likely result in the Retirement System's ownership converting to publicly tradeable shares. After any lockup period, the Retirement System could sell the shares in the public market using a traditional transition manager. In the case of a sale or merger, the event may result in the Retirement System receiving cash or receiving securities that can more easily be traded.

Airbnb, Didi, and Uber have all been referenced in news articles as companies considering IPOs in 2019. For Magic Leap and WeWork, there has been less recent news on potential IPO dates. This information offers only limited insight into when a liquidity event may occur. In all cases, the timing of an IPO is uncertain and could potentially never occur.

## CONCLUSION

The goal of either option is to liquidate the private placement securities over time. Selling the securities today while they remain unregistered may result in earlier liquidation. However, the sale of all shares may not be possible and the pricing of the securities could be difficult. If the Retirement System holds the securities until a liquidity event, it will likely be able to sell the shares in a more transparent, public market with significantly lower transaction costs. However, the Retirement System may need to hold the securities for a long period of time given the uncertainty of timing of any liquidity event.

Given the small size of the investments, holding the securities would have only limited implications for the overall asset allocation strategy adopted by the Retirement Board. The private placement securities currently represent only 0.04% of the Retirement System's overall investment portfolio. The shares were originally purchased by T. Rowe Price on behalf of the Retirement System in an account with a large-capitalization domestic equity growth mandate. The Retirement Board has since moved all domestic equity assets to a passive strategy tracking the Russell 3000 index. If held, these securities would continue to be accounted for in the domestic equity allocation. The purchase of private placement securities could be restricted in future updates to the investment policy.

Staff recommends that the Retirement System continue monitoring the securities, which will remain with the custodian. Once a public market is created through an IPO or other liquidity event, staff will coordinate liquidating the securities in accordance with the requirements in the securities' governing documents.

SDS:RLH

November 15, 2018

The Retirement Board
East Bay Municipal Utility District Employees' Retirement System
375 Eleventh Street
Oakland, CA 94607

**Letter of Transmittal: Financial Report of the East Bay Municipal Utility District Employees' Retirement System for the Year Ended June 30, 2018**

Dear Board Members:

The financial report of the Employees' Retirement System (Retirement System) for the year ended June 30, 2018, is transmitted herewith as required by Section 9 of the Ordinance establishing the Retirement System. This report consists of the Basic Financial Statements and Supplementary Information for the year ended June 30, 2018 (with the Independent Auditors' report therein) as examined and accompanied by the opinion of Maze & Associates.

The Retirement System's net assets as of June 30, 2018 were $1,753.24 million, an increase of $140.60 million (8.72 percent) during the year. As detailed in the Pension Consulting Alliance report to the Retirement System Board on September 20, 2018, the investment return for Fiscal Year (FY) 2018 was 9.2 percent and the annualized investment return for the five years ending June 30, 2018 was 9.5 percent, or 2.25 percent above the then-in-effect 7.25 percent actuarial assumed investment rate of return.

During FY18, the Retirement Board approved a cost of living adjustment (COLA) benefit of 3.0 percent, effective July 1, 2018.

**Review of Schedule and Charts**

Membership Activity

As of June 30, 2018, the number of active or terminated vested employees increased by 56 to 2,126, while the number of member beneficiaries increased by 52 to 1,766.

Chart 1: Service, Disability, Death and Health Benefits Paid to Retired Members

During FY18, $105.98 million was paid to beneficiaries, an increase of 7.98 percent from FY17. Pension benefit payments increased by 8.23 percent while health insurance benefit payments increased by 5.10 percent.

Chart 2: Contributions Received

During FY18 District and member contributions (net of members' refunds) were $81.10 million and $16.68 million, respectively, for a total of $97.78 million, an increase of 5.81 percent from FY17. The District's $81.10 million contribution was 82.94 percent of the total amount contributed to the Plan, an increase of $4.24 million from FY17. The District adopted FY18 contribution rates at the actuarially recommended levels, 43.18 percent for the 1980 Plan and 36.16 percent for the 2013 Plan. The contribution rates for employees remained unchanged in FY18. For the 1980 Plan, the contribution rate was last increased from 8.41 to 8.75 percent, effective April 18, 2016. For the 2013 Plan, the contribution rate remained at 8.84 percent. The 2013 Plan contribution rate is set at 50 percent of the total normal cost rate and would only be adjusted if a change in assumptions would result in an adjustment to the normal rate of more than 1 percent of payroll.

Chart 3: Sources of Funds

The Retirement System is funded from three sources: District contributions, Members contributions (net of refunds), and gross investment income (or loss). The District and Member contributions increased in FY18 due to the changes in the District's contribution rate and an increase in overall payroll. Gross investment income or loss includes interest, dividends, earnings from real estate investments and net realized and unrealized gains or losses on investments, and tends to vary from year to year. To help maintain stable contribution rates, investment returns (or losses) are amortized equally over a 5-year period. Since July 1, 2011 changes in Unfunded Actuarial Accrued Liability (UAAL) are amortized over separate decreasing 15-year periods, assumption changes are amortized over separate decreasing 25-year periods, and experience gains/losses are amortized over separate decreasing 20-year periods.

Chart 4: Unfunded Pension Actuarial Accrued Liability (UAAL) and Funded Ratio (For this item, FY17 data is the latest available from the actuary at the time of the audit.)

During the year ended June 30, 2017, the actuarial value of Pension assets increased from $1,425.78 million to $1,549.21 million, using the valuation value of pension plan asset basis (VVA). Over the same time-period, the actuarial accrued liability increased from $1,995.86 million to $2,068.01 million. This generated a net decrease of unfunded actuarial accrued liability (UAAL) of $51.28 million to $518.80 million. As of June 30, 2017, the funded ratio is 74.9 percent.

Chart 5: Unfunded Health Insurance Benefits Actuarial Accrued Liability (UAAL) and Funded Ratio (For this item, FY17 data is the latest available from the actuary at the time of the audit.)

During the year ended June 30, 2017, the actuarial value of Health Benefit assets increased from $27.00 million to $31.45 million using actuarial value of assets basis (AVA). Over the same time-period, the actuarial accrued liability decreased from $147.58 million to $117.66 million. This generated a net decrease of unfunded actuarial accrued liability (UAAL) of $2.92 million to $86.21 million. As of June 30, 2017, the funded ratio is 26.7 percent.

Chart 6: Membership Growth

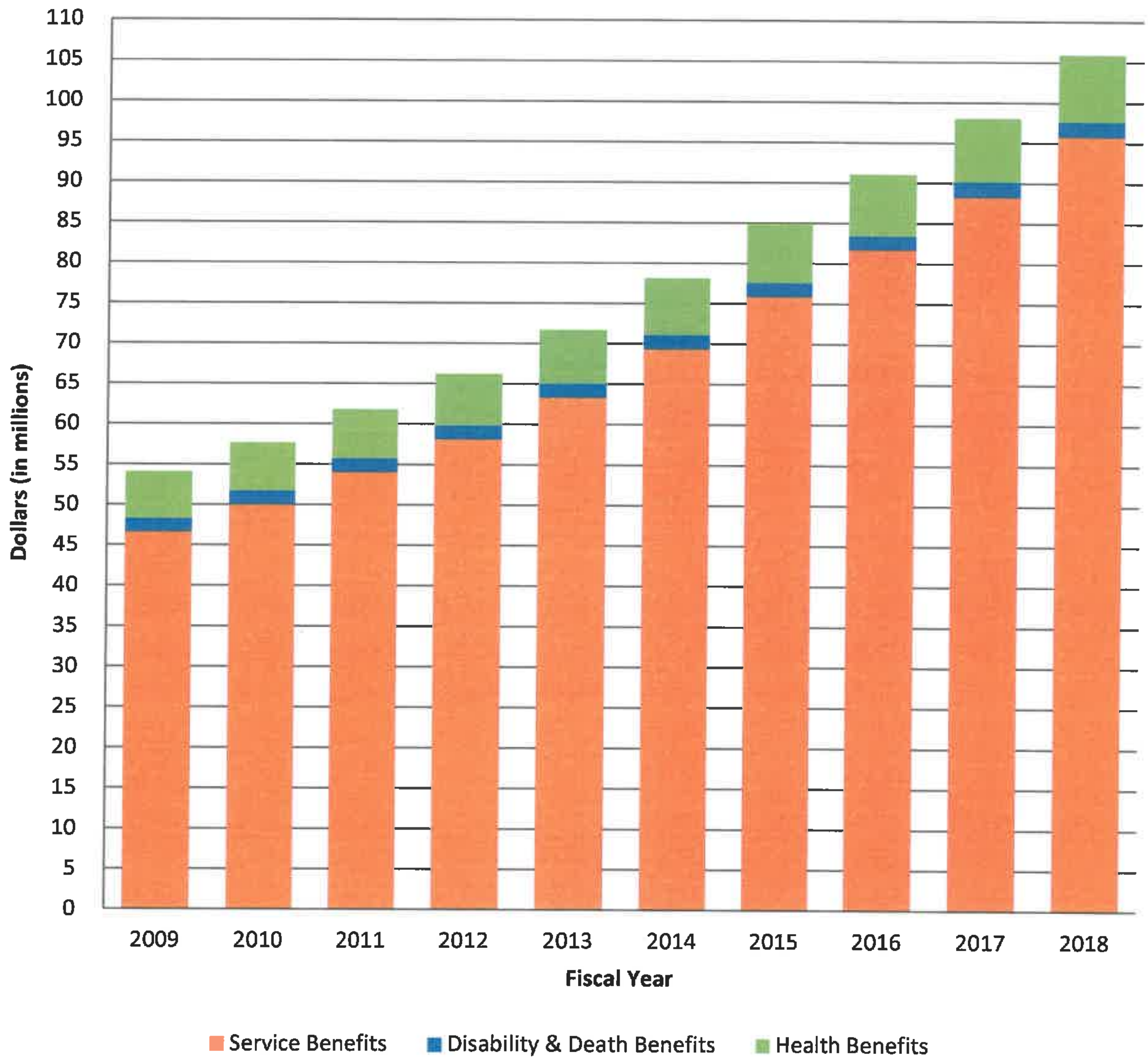
The number of active members (including terminated vested employees) increased in FY18 to a total of 2,126 as of June 30, 2018. The number of members receiving retirement, disability retirement, or survivor benefits increased to 1,766 people as of June 30, 2018. This represents an average increase of 3.96 percent per year over the last 10 years.

Respectfully submitted,

Sophia D. Skoda
Director of Finance – East Bay Municipal Utility District
Treasurer – Employees' Retirement System

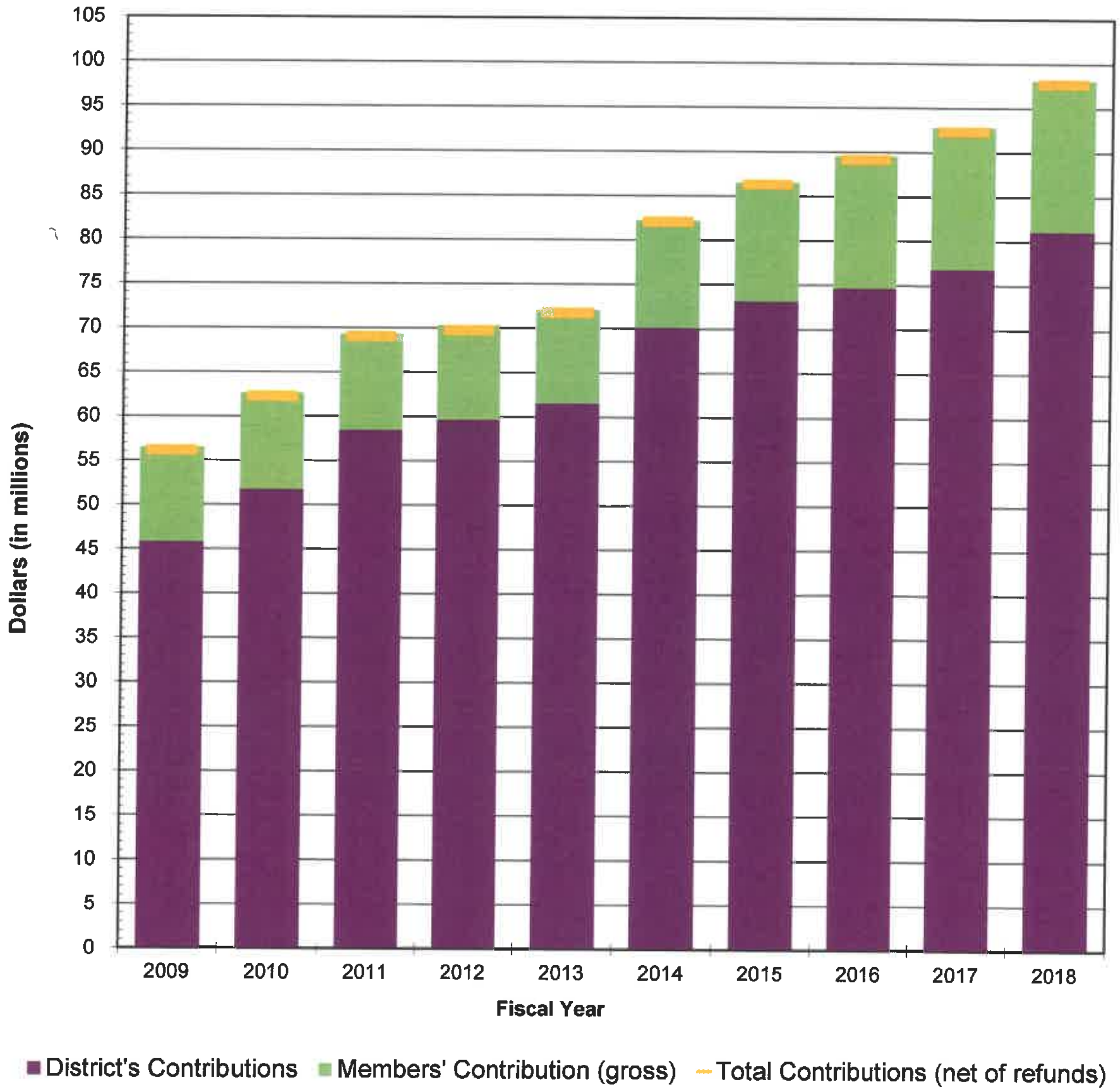
DSK:LF:mw

## CHART 1:
## Service, Disability, Death & Health Benefits Paid to Retired Members



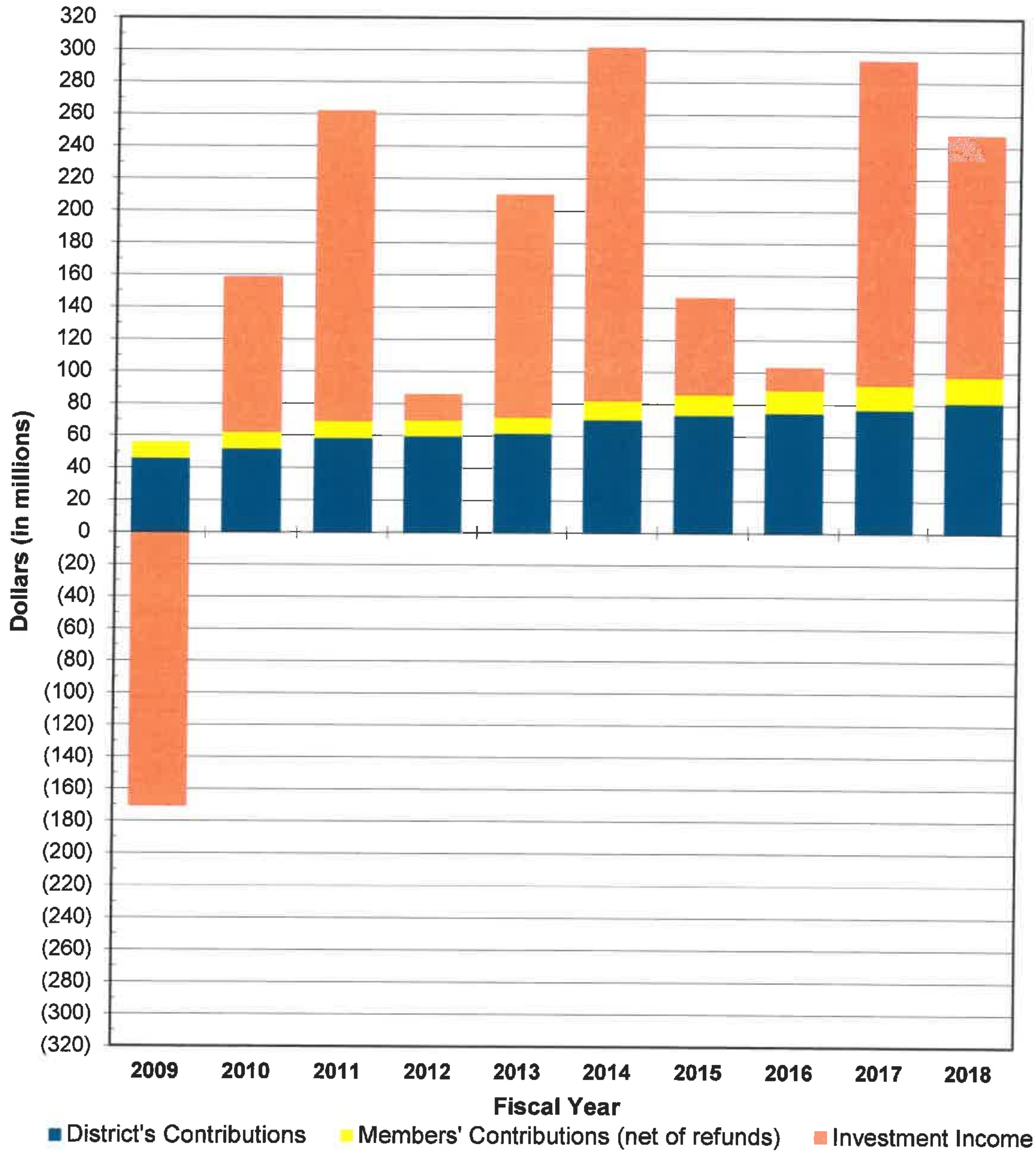

| Service, Disability, Death and Health Benefits (in millions) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Fiscal Year** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** |
| Service Benefits | 46.69 | 50.08 | 54.12 | 58.20 | 63.37 | 69.40 | 75.88 | 81.77 | 88.32 | 95.81 |
| Disability and Death Benefits | 1.63 | 1.69 | 1.67 | 1.68 | 1.72 | 1.72 | 1.71 | 1.70 | 1.92 | 1.86 |
| Health Benefits | 5.82 | 5.96 | 6.07 | 6.37 | 6.67 | 7.03 | 7.39 | 7.68 | 7.91 | 8.31 |
| TOTAL | 54.14 | 57.73 | 61.86 | 66.25 | 71.76 | 78.15 | 84.98 | 91.15 | 98.15 | 105.98 |

# CHART 2:
# Contributions Received



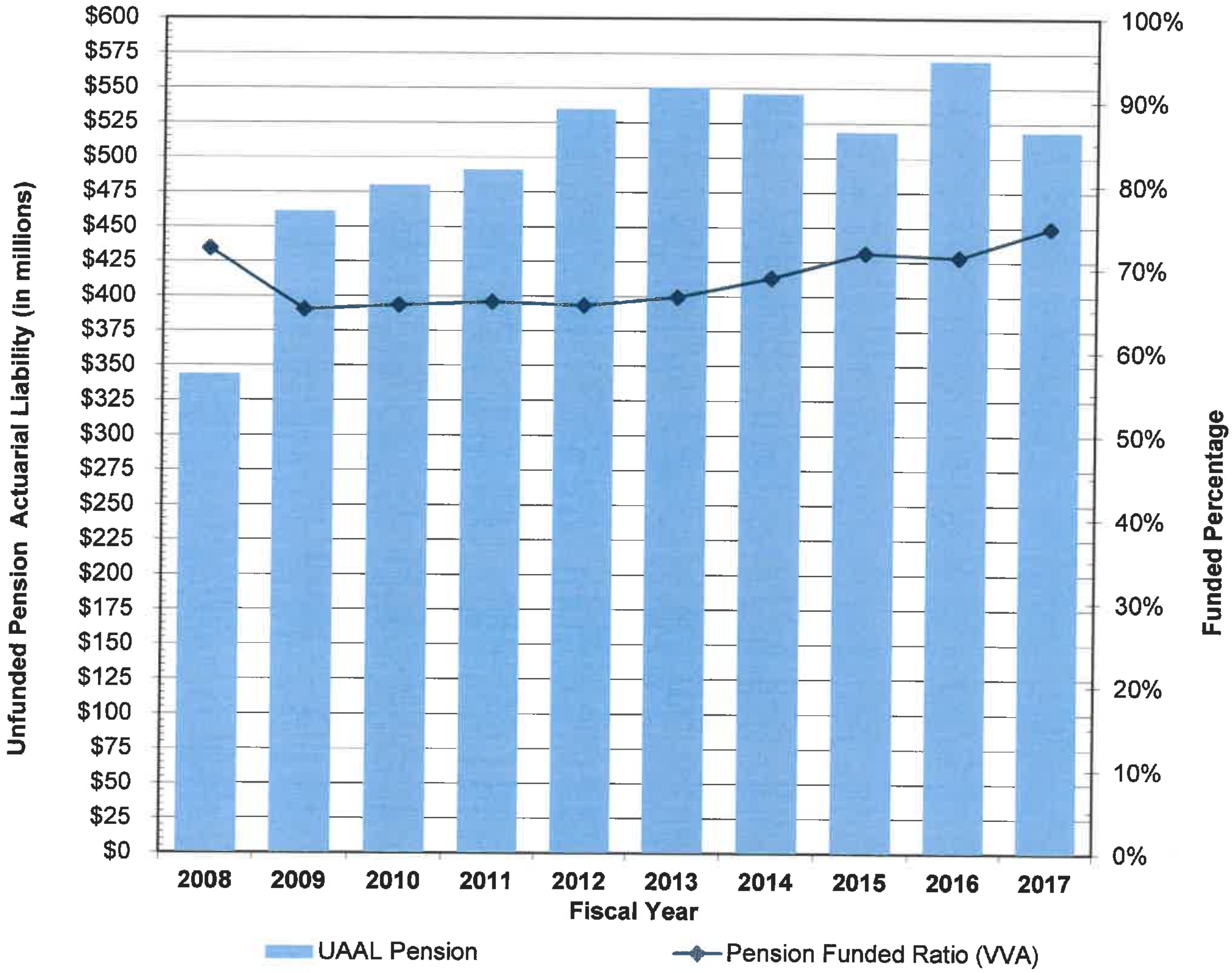

| Contributions Received (in millions) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Fiscal Year** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** |
| District Contributions | 45.80 | 51.76 | 58.48 | 59.65 | 61.57 | 70.12 | 73.14 | 74.67 | 76.86 | 81.10 |
| Members Contributions (gross) | 10.74 | 10.92 | 10.85 | 10.72 | 10.57 | 12.13 | 13.43 | 14.93 | 16.02 | 17.07 |
| (Refund of Members Contributions) | (0.36) | (0.38) | (0.25) | (0.59) | (0.34) | (0.12) | (0.20) | (0.42) | (0.47) | (0.39) |
| Total Contributions (net of refunds) | 56.18 | 62.30 | 69.08 | 69.78 | 71.80 | 82.14 | 86.36 | 89.18 | 92.41 | 97.78 |

# CHART 3:
# Sources of Funds



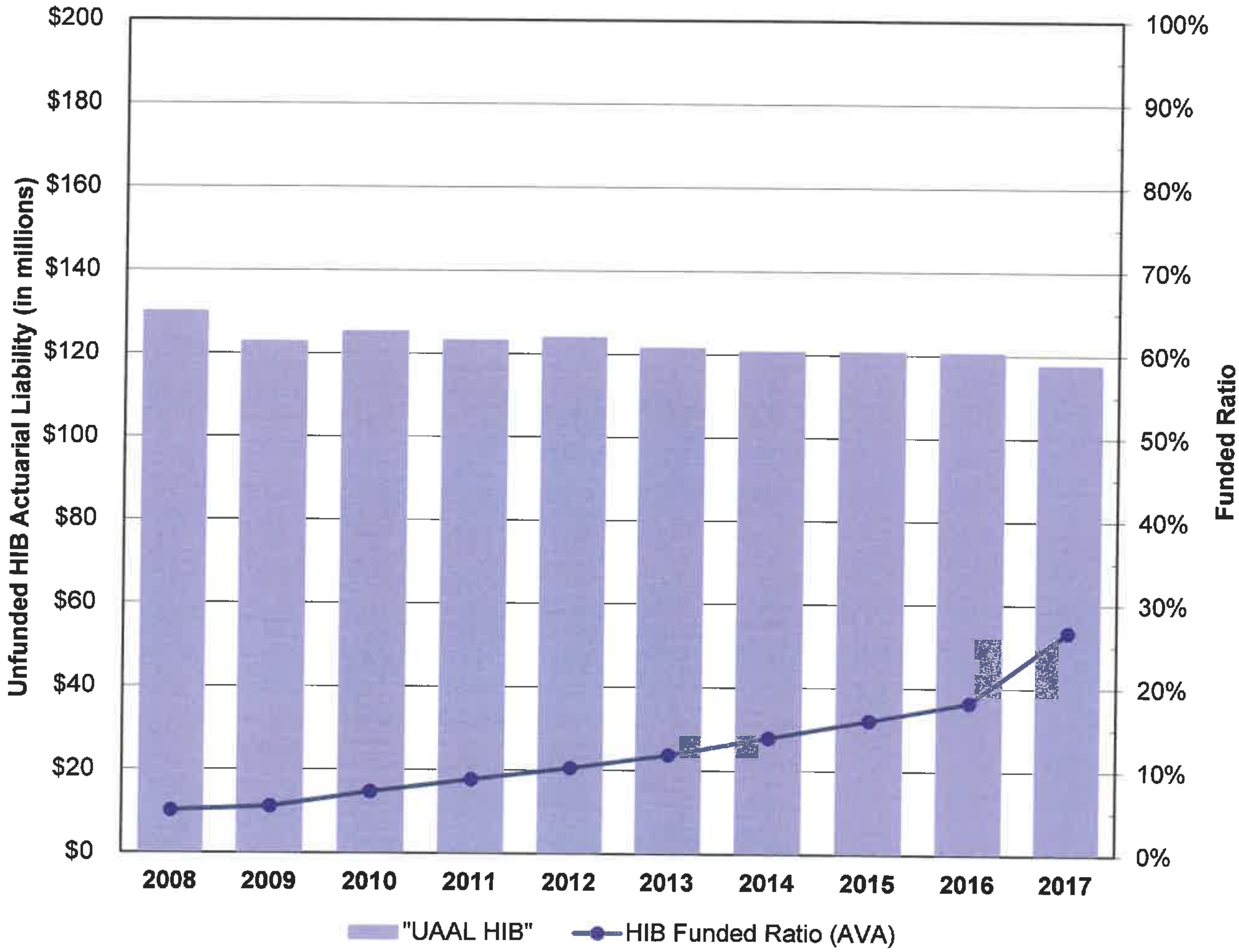

| Total Sources of Funds (in millions) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Fiscal Year** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** |
| Investment Income | (170.93) | 96.79 | 193.11 | 16.29 | 138.54 | 219.83 | 60.23 | 14.20 | 201.68 | 105.35 |
| Members Contributions (net of refunds) | 10.38 | 10.54 | 10.60 | 10.13 | 10.23 | 12.02 | 13.22 | 14.51 | 15.55 | 16.68 |
| District Contributions | 45.80 | 51.76 | 58.48 | 59.65 | 61.57 | 70.12 | 73.14 | 74.67 | 76.86 | 81.10 |

## CHART 4:
## Unfunded Pension Actuarial Accrued Liability & Funded Ratio



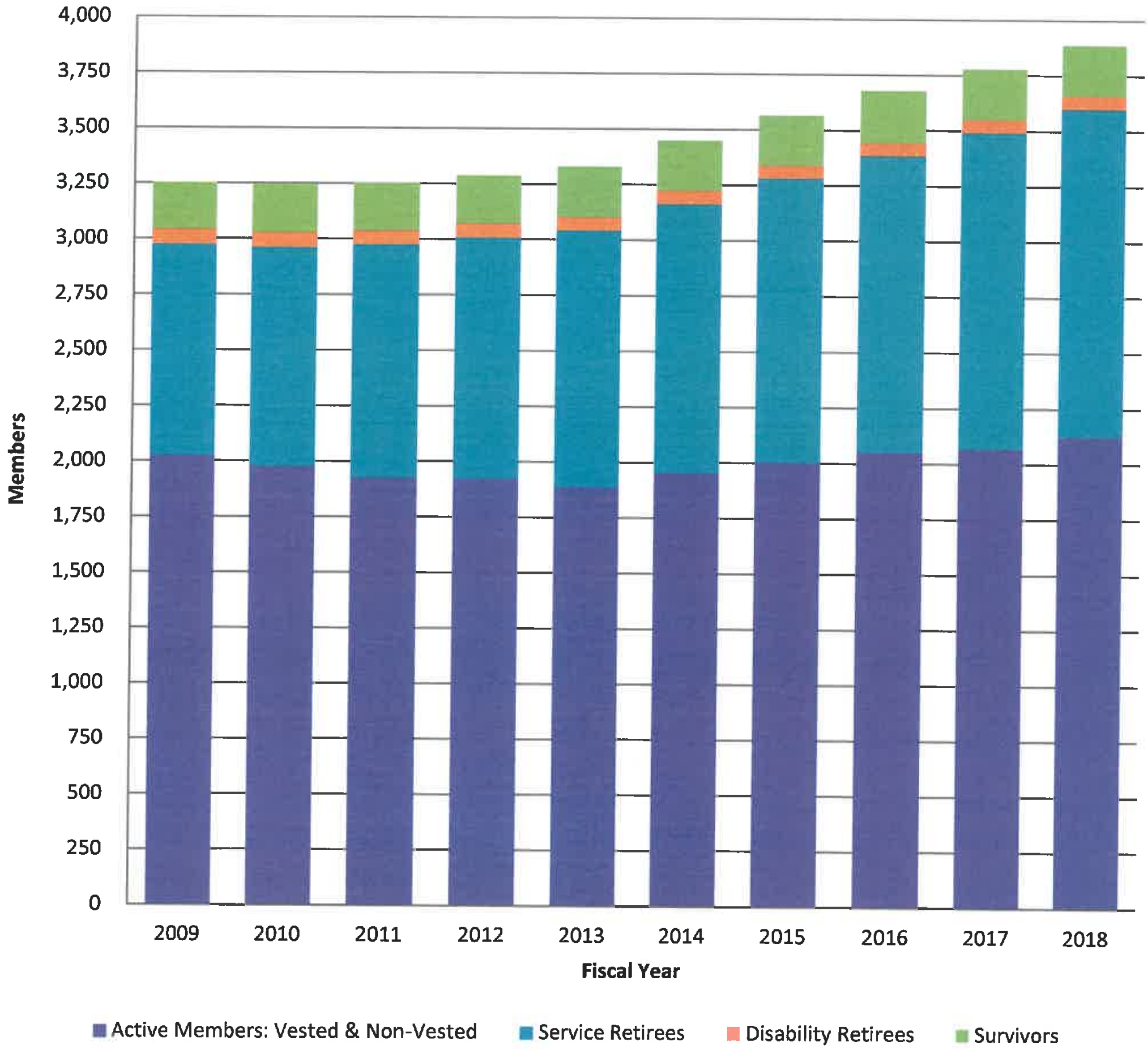

| Unfunded Pension Actuarial Accrued Liability & Funded Ratio (in millions) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Fiscal Year** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| UAAL Pension | 344.08 | 461.53 | 480.16 | 491.32 | 535.15 | 550.69 | 546.39 | 518.80 | 570.08 | 518.80 |
| Pension Funded Ratio | 72.4% | 65.1% | 65.6% | 66.0% | 65.6% | 66.6% | 68.9% | 71.9% | 71.4% | 74.9% |

## CHART 5:
## Unfunded Health Insurance Actuarial Accrued Liability & Funded Ratio




| Unfunded Health Insurance Actuarial Accrued Liability & Funded Ratio (in millions) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Fiscal Year** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| UAAL Health Insurance Benefits | 130.05 | 122.89 | 125.32 | 123.31 | 124.00 | 121.60 | 120.78 | 120.77 | 120.58 | 117.66 |
| HIB Funded Ratio | 5.1% | 5.6% | 7.4% | 8.9% | 10.3% | 11.9% | 14.0% | 16.1% | 18.3% | 26.7% |

# CHART 6:
# Membership Growth




| Membership Growth | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Fiscal Year** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** |
| Active: Vested & Non-Vested | 2,025 | 1,978 | 1,928 | 1,925 | 1,889 | 1,955 | 2,004 | 2,051 | 2,070 | 2,126 |
| Service Retirees | 950 | 985 | 1,049 | 1,084 | 1,154 | 1,209 | 1,278 | 1,335 | 1,422 | 1,474 |
| Disability Retirees | 69 | 68 | 64 | 65 | 62 | 61 | 59 | 59 | 60 | 62 |
| Survivors | 210 | 217 | 212 | 216 | 227 | 227 | 226 | 236 | 230 | 230 |

# EAST BAY MUNICIPAL UTILITY DISTRICT
# EMPLOYEES' RETIREMENT SYSTEM

**(A Component Unit of the East Bay Municipal Utility District)**

**Financial Statements and Supplementary Information**

**For The Year Ended June 30, 2018**

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**EAST BAY MUNICIPAL UTILITY DISTRICT**
**EMPLOYEES' RETIREMENT SYSTEM**

(A Component Unit of the East Bay Municipal Utility District)

For The Year Ended June 30, 2018

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INDEPENDENT AUDITORS' REPORT

The Board of Directors
East Bay Municipal Utility District
Employees' Retirement System
Oakland, California

***Report on Financial Statements***

We have audited the accompanying financial statements of the East Bay Municipal Utility District Employees' Retirement System (the System), a component unit of the East Bay Municipal Utility District (District), as of and for the year ended June 30, 2018, and the related notes to the financial statements, as listed in the Table of Contents.

***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error.

***Auditor's Responsibility***

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the System's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

**Accountancy Corporation**
3478 Buskirk Avenue, Suite 215
Pleasant Hill, CA 94523



T 925.930.0902
F 925.930.0135
E maze@mazeassociates.com
W **mazeassociates.com**

***Opinions***

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net position of the East Bay Municipal Utility District Employees' Retirement System as of June 30, 2018, and changes in plan net position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

***Other Matters***

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis and certain schedules related to the Pension and Post Employment Healthcare Plans be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with generally accepted auditing standards in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards,* we have also issued our report dated August 27, 2018 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

***Report on Summarized Comparative Information***

We have previously audited East Bay Municipal Utility District Employees' Retirement System's 2018 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated August 27, 2018. In our opinion, the summarized comparative information as and for the year ended June 30, 2018 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Maze + Associates

Pleasant Hill, California
August 27, 2018

**EAST BAY MUNICIPAL UTILITY DISTRICT**
**EMPLOYEES' RETIREMENT SYSTEM**
(A Component Unit of the East Bay Municipal Utility District)

Management's Discussion and Analysis

(Dollars in thousands)

June 30, 2018

This section presents management's analysis of the East Bay Municipal Utility District Employees' Retirement System's (the System) financial condition and activities as of and for the year ended June 30, 2018. Management's Discussion and Analysis (MDA) is intended to serve as an introduction to the System's basic financial statements. The MDA represents management's examination and analysis of the System's financial condition and performance.

This information should be read in conjunction with the audited financial statements that follow this section. The information in the MDA is presented under the following headings:

- Organization and Business
- Overview of the Financial Statements
- Financial Analysis: *Financial Highlights*
- Financial Analysis: *Financial Condition*
- Factors Impacting Future Periods
- Request for Information

**Organization and Business**

The East Bay Municipal Utility District (the District) is the sponsoring agency of the System and provides for its funding. The System is accounted for on a flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets and deferred outflow, all liabilities and deferred inflow associated with operations are included on the statement of plan net position, and revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

The System administers a single-employer, contributory, defined benefit pension plan (the Plan) which provides retirement, disability, survivorship, and postemployment healthcare benefits for eligible directors, officers, and employees of the District. The Plan is administered by a retirement board composed of three members appointed by the District's board of directors, two members elected by and from the active membership of the Plan, and a nonvoting member elected by the retirees of the Plan. Retirement Ordinance Number 40 assigns the authority to establish Plan benefit provisions to the District's board of directors.

All regular full-time employees of the District are members of the Plan. In accordance with the ordinance governing the Plan, eligible employees become members on the first day they are physically on the job. Plan defined benefits vest in part with members after completion of five years of continuous, full-time employment.

For additional information, please see the notes to the basic financial statements.

**Overview of the Financial Statements**

The basic financial statements include a *statement of plan net position,* a *statement of changes in plan net position,* and *notes to basic financial statements.* The report also contains other required supplementary information in addition to the financial statements.

The system's financial statements include:

The *Statement of Plan Net Position and the Statement of Changes in Plan Net Position* report information to assist readers in determining whether the System's finances as a whole are better off or worse off as a result of the year's activities. These two statements report the net assets of the System and changes in them, respectively.

The *Statement of Plan Net Position* presents information on all assets and liabilities of the System, with the difference between the two reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the System is improving or deteriorating.

The *Statement of Changes in Plan Net Position* presents the results of the System's activities over the course of the fiscal year and information as to how the *net position* changed during the year. This statement measures the results of the System's investment performance as well as the System's income from contributions and expenses, including the payment of benefits, refunds of contributions, and administrative and investment expense. All changes in net position are reported during the period the underlying event giving rise to the change occurs, regardless of the timing of the related cash flows. Thus, revenues and expenses are reported in this statement for some items that will result in cash flows in future fiscal periods.

The *Notes to the Basic Financial Statements* provide additional information that is essential to a full understanding of the data provided in the basic financial statements. Effective fiscal year 2017, GASB 74 – *Financial Reporting for Postemployment Benefit Plans other than Pension Plans*, requires the System to disclose additional information regarding post-employment health insurance benefits (the OPEB Plan). These disclosures can be found in Note 7.

**Financial Analysis: Financial Highlights**

- The total assets of the System exceeded the total liabilities by $1,753,240 as of June 30, 2018 (Table 1). All of the net assets are available to meet the System's ongoing obligations to Plan participants and their beneficiaries.
- Net position increased by $140,596 or 8.72% during the fiscal year ended June 30, 2018 compared to the increase of $194,515 or 13.72% of the prior year. This is primarily due to the decline in net investment income of $51,334 or 25.45%. Contributions from the District of $81,096 and employee contributions of $17,079 were offset in part by the cost of pension, health insurance benefits, refunds of contributions, and administrative expenses of $107,928.
- As of June 30, 2018, 25.40% of the System's investments were in fixed income securities, 24.80% were in domestic equities, 24.40% were in international equities, 20.00% were in covered calls, 5.10% was in Real Estate, and 0.30% were in cash and cash equivalents. As of June 30, 2017, 16.90% of the System's investments were in fixed income securities, 43.50% were in domestic equities, 13.30% were in international equities, 20.90% were in covered calls, 5.20% was in Real Estate, and 0.20% were in cash and cash equivalents.
- The Plan's funding objective is to meet long-term benefit obligations through contributions and investment income. As of June 30, 2017, the date of the last actuarial valuation, the Pension Plan's funded ratio was 74.90% and the Post-employment Health Care plan funded ratio was 26.70%.
- During the fiscal year ended June 30, 2018, combined District and employee contributions increased by $5,297 or 5.70% to $98,175 (Table 2). For the 1980 Plan, the District's average contribution slightly

decreased to 43.18% and the employees' contribution rate remained unchanged at 8.75% for fiscal year 2018. For the 2013 Plan, the District's average contribution rate increased to 36.16% and the employees' contribution rate remained unchanged at 8.84% for fiscal year 2018.

- Retirement, Disability, and Survivor Benefit payments increased by $7,429 or 8.23% to $97,669 (Table 3). Along with the 3.0% cost-of-living increase in July 2017, there was an additional 4.98% increase from July 1, 2017 to June 30, 2018, in monthly benefits paid due to net increases in the number of retirees and beneficiaries.
- Health Insurance Benefits increased by $403, or 5.09%, to $8,315 (Table 3), primarily due to the increase in the number of retirees receiving health benefits.
- Refunds of Contributions to terminated or deceased employees decreased by $72, or 15.48%, to $393.
- Administrative expenses (not including Investment Advisors' Fees or Custodial Asset Management Fees) increased by $122, or 8.54%, to $1,551, primarily due to increased actuarial audit and consulting services of $157 offset by decreased administrative services fee allocated to labor of $37.
- Investment Advisors' Fees decreased by $570, or 12.37%, to $4,037 primarily due to asset reallocation in mid-June and the payments of the fees of five newly added investments associated with the asset reallocation are made after fiscal year 2018.

**Financial Analysis: Financial Condition**

The System's financial condition reflects an increase of $76,281 in the Projected Benefit Obligation (PBO) as of the June 30, 2017, versus the previous actuarial report of June 30, 2016. Because of the increased contributions and strong market performance, the market value of assets as of June 30, 2017, increased $194,515 during the same period based on the actuarial reports. The PBO funded percentage at the end of the previous fiscal year is used to determine the cost-of-living adjustment (COLA) at the end of the current fiscal period. The Funded PBO percentage was 75.40% as of June 30, 2017, versus 68.80% as of June 30, 2016. Whenever the PBO funded percentage is less than 85.00%, the COLA for pension beneficiaries is limited to 3.00%.

The overall Actuarial Accrued Liability funding ratio for the System increased from 68.80% to 72.30% as of the June 30, 2017 actuarial report versus the previous actuarial report of June 30, 2016. The component Plans of Pension and Health Insurance Benefit changed from 71.40% to 74.90% and 23.30% to 26.70% funded, respectively.

(Dollars in thousands)

During the year ended June 30, 2018, the System's net position increased by $140,596 compared to an increase of $194,515 in 2017.

**(Table 1)**
**Net Position**
Years ended June 30, 2018 and 2017

| | 2018 | 2017 | Variance | % |
|---|---|---|---|---|
| Other assets | $95,581 | $166,417 | ($70,836) | (42.57)% |
| Investments at fair value | 1,718,398 | 1,563,978 | 154,420 | 9.87% |
| Total assets | 1,813,979 | 1,730,395 | 83,584 | 4.83% |
| Total liabilities | 60,739 | 117,751 | (57,012) | (48.42)% |
| Net position | $1,753,240 | $1,612,644 | $140,596 | 8.72% |

**(Table 1)**
**Net Position**
Years ended June 30, 2017 and 2016

| | 2017 | 2016 | Variance | % |
|---|---|---|---|---|
| Other assets | $166,417 | $168,656 | ($2,239) | (1.33)% |
| Investments at fair value | 1,563,978 | 1,377,665 | 186,313 | 13.52% |
| Total assets | 1,730,395 | 1,546,321 | 184,074 | 11.90% |
| Total liabilities | 117,751 | 128,192 | (10,441) | (8.14)% |
| Net position | $1,612,644 | $1,418,129 | $194,515 | 13.72% |

(Dollars in thousands)

The financial reserves needed to fund retirement and health benefits are accumulated through the collection of employer and employee contributions and through earnings on investment income. As Table 2 shows, the System experienced net investment gain for 2018.

**(Table 2)**
**Additions to Net Position**
Years ended June 30, 2018 and 2017

| | 2018 | 2017 | Variance | % |
|---|---|---|---|---|
| Employer contributions | $81,096 | $76,860 | $4,236 | 5.51% |
| Members' contributions | 17,079 | 16,018 | 1,061 | 6.62% |
| Total contributions | $98,175 | $92,878 | $5,297 | 5.70% |
| Net investment gain/(loss)* | $150,349 | $201,683 | ($51,334) | (25.45)% |
| Total additions, net | $248,524 | $294,561 | ($46,037) | (15.63)% |

* Net of investment expenses and borrower's rebates and other agent fees on securities lending transactions of $5,504 for June 30, 2018, and $5,394 for June 30, 2017.

**(Table 2)**
**Additions to Net Position**
Years ended June 30, 2017 and 2016

| | 2017 | 2016 | Variance | % |
|---|---|---|---|---|
| Employer contributions | $76,860 | $74,672 | $2,188 | 2.93% |
| Members' contributions | 16,018 | 14,925 | 1,093 | 7.32% |
| Total contributions | $92,878 | $89,597 | $3,281 | 3.66% |
| Net investment gain/(loss)* | $201,683 | $14,205 | $187,478 | 1,319.80% |
| Total additions, net | $294,561 | $103,802 | $190,759 | 183.77% |

* Net of investment expenses and borrower's rebates and other agent fees on securities lending transactions of $5,394 for June 30, 2017, and $4,642 for June 30, 2016.

(Dollars in thousands)

As summarized in Table 3, the Plan provides retirement, disability, survivor, and health insurance benefits to qualified members and their beneficiaries. The Plan must also provide refunds of employee contributions with interest to terminated employees who do not choose or are not qualified to vest.

**(Table 3)**
**Deductions in Net Position**
Years ended June 30, 2018 and 2017

| | 2018 | 2017 | Variance | % |
|---|---|---|---|---|
| Pension benefits paid | $97,669 | $90,240 | $7,429 | 8.23% |
| Health insurance benefits paid | 8,315 | 7,912 | 403 | 5.09% |
| Refunds of contributions | 393 | 465 | (72) | -15.48% |
| Administrative expenses | 1,551 | 1,429 | 122 | 8.54% |
| Total deductions | $107,928 | $100,046 | $7,882 | 7.88% |

**(Table 3)**
**Deductions in Net Position**
Years ended June 30, 2017 and 2016

| | 2017 | 2016 | Variance | % |
|---|---|---|---|---|
| Pension benefits paid | $90,240 | $83,467 | $6,773 | 8.11% |
| Health insurance benefits paid | 7,912 | 7,685 | 227 | 2.95% |
| Refunds of contributions | 465 | 419 | 46 | 10.98% |
| Administrative expenses | 1,429 | 1,311 | 118 | 9.00% |
| Total deductions | $100,046 | $92,882 | $7,164 | 7.71% |

(Dollars in thousands)

Beginning fiscal year 2014, the District is required to present the past 10 years of net pension liability for the Employees' Retirement System pension plan (excluding Other Post-Employment Benefits) as it becomes available. The District has provided the past two fiscal years 2017 and 2016 in the footnotes and required supplemental information. The Net Pension Liability (NPL) was measured as of June 30, 2017 and 2016 have been determined from the actuarial valuations as of June 30, 2017 and 2016 respectively. As summarized in Table 4, the NPL decreased by $116,633 from $604,092 as of June 30, 2017 to $487,459 as of June 30, 2018 primarily due to strong return on the market value of assets of 14.27% during fiscal year 2017 that was more than the assumption rate of 7.25% used in June 30, 2017 valuation.

**(Table 4)**
**Net Pension Liability**
Years ended June 30, 2018 and 2017

| | 2018 | 2017 | Variance | % |
|---|---|---|---|---|
| Net Pension Liability | $487,459 | $604,092 | ($116,633) | (19.31)% |
| Plan net position as a percentage of Total Pension Liability | 76.43% | 69.73% | 6.70% | 9.61% |

**(Table 4)**
**Net Pension Liability**
Years ended June 30, 2017 and 2016

| | 2017 | 2016 | Variance | % |
|---|---|---|---|---|
| Net Pension Liability | $604,092 | $462,859 | $141,233 | 30.51% |
| Plan net position as a percentage of Total Pension Liability | 69.73% | 74.93% | -5.20% | (6.94)% |

(Dollars in thousands)

Beginning fiscal year 2017, the District is required to present the past 10 years of net OPEB liability for the Employees' Retirement System health benefit plan as it becomes available. The District has provided the past two fiscal years 2017 and 2016 in the footnotes and required supplemental information. The Net OPEB Liability (NOL) was measured as of June 30, 2017 and 2016 have been determined from the actuarial valuations as of June 30, 2017 and 2016 respectively. As summarized in Table 5, the NOL decreased by $9,279 from $145,085 as of June 30, 2017 to $135,806 as of June 30, 2018 primarily due to an increase in the discount rate between the 2016 and 2017 valuations.

**(Table 5)**
**Net OPEB Liability**
Years ended June 30, 2018 and 2017

| | **2018** | **2017** | **Variance** | **%** |
|---|---|---|---|---|
| Net OPEB Liability | $135,806 | $145,085 | ($9,279) | (6.40)% |
| Plan net position as a percentage of Total OPEB Liability | 19.11% | 15.37% | 3.74% | 24.33% |

**Request for Information**

This financial report is designed to provide viewers with a general overview of the East Bay Municipal Utility District Employees' Retirement System's finances and demonstrate the District's accountability for the monies it manages. If you have any questions about this report or need additional information, please contact: Controller, Accounting Division MS #402, P.O. Box 24055, Oakland, CA 94623-1055.

EAST BAY MUNICIPAL UTILITY DISTRICT
EMPLOYEES' RETIREMENT SYSTEM
(A Component Unit of the East Bay Municipal Utility District)
STATEMENT OF PLAN NET POSITION
June 30, 2018
(With summarized comparative financial information as of June 30, 2017)
(DOLLARS IN THOUSANDS)

| | 2018 | | | |
|---|---|---|---|---|
| | Pension plan benefits | Post-employment healthcare benefits | Total | 2017 Total |
| Assets: | | | | |
| Cash and cash equivalents, at fair value (Note 5) | $40,348 | $848 | $41,196 | $48,988 |
| Invested securities lending collateral (Note 5) | 46,134 | 970 | 47,104 | 108,858 |
| Prepaid expenses | | 536 | 536 | 518 |
| Receivables: | | | | |
| Brokers, securities sold | 2,374 | 50 | 2,424 | 4,449 |
| Employer | 1,190 | 170 | 1,360 | 1,043 |
| Plan members | 288 | | 288 | 220 |
| Interest and dividends | 2,618 | 55 | 2,673 | 2,341 |
| Total receivables | 6,470 | 275 | 6,745 | 8,053 |
| Investments, at fair value (Note 5): | | | | |
| U.S. government obligations | 105,251 | 2,213 | 107,464 | 66,948 |
| Municipal bonds | 2,413 | 51 | 2,464 | 2,135 |
| Domestic corporate bonds | 297,256 | 6,250 | 303,506 | 166,149 |
| International bonds | 17,899 | 376 | 18,275 | 16,628 |
| Domestic stocks | 762,454 | 16,030 | 778,484 | 1,005,785 |
| International stocks | 409,957 | 8,619 | 418,576 | 222,051 |
| Real estate | 87,784 | 1,845 | 89,629 | 84,282 |
| Total investments | 1,683,014 | 35,384 | 1,718,398 | 1,563,978 |
| Total assets | 1,775,966 | 38,013 | 1,813,979 | 1,730,395 |
| Liabilities: | | | | |
| Accounts payable and accrued expenses | 2,122 | 45 | 2,167 | 2,061 |
| Payables to brokers, securities purchased | 11,232 | 236 | 11,468 | 6,832 |
| Securities lending collateral (Note 2B) | 46,134 | 970 | 47,104 | 108,858 |
| Total liabilities | 59,488 | 1,251 | 60,739 | 117,751 |
| Net position restricted for pension benefits and post-employment healthcare benefits | $1,716,478 | $36,762 | $1,753,240 | $1,612,644 |

See accompanying notes to financial statements

EAST BAY MUNICIPAL UTILITY DISTRICT
EMPLOYEES' RETIREMENT SYSTEM
(A Component Unit of the East Bay Municipal Utility District)
STATEMENT OF CHANGES IN PLAN NET POSITION
For the Year Ended June 30, 2018
(With summarized comparative financial information for the year ended June 30, 2017)
(DOLLARS IN THOUSANDS)

| | 2018 | | | |
|---|---|---|---|---|
| | Pension plan benefits | Post-employment healthcare benefits | Total | 2017 Total |
| Additions: | | | | |
| Contributions (Note 3): | | | | |
| Employer | $71,221 | $9,875 | $81,096 | $76,860 |
| Plan members | 16,860 | 219 | 17,079 | 16,018 |
| Total contributions | 88,081 | 10,094 | 98,175 | 92,878 |
| Investment income: | | | | |
| Net appreciation (depreciation) in fair value of investments: | | | | |
| Traded securities | 120,700 | 2,396 | 123,096 | 176,883 |
| Real estate | 1,365 | 27 | 1,392 | 1,329 |
| Interest | 7,826 | 155 | 7,981 | 6,731 |
| Dividends | 21,786 | 432 | 22,218 | 21,014 |
| Real estate operating income, net | 1,143 | 23 | 1,166 | 1,120 |
| Total investment income | 152,820 | 3,033 | 155,853 | 207,077 |
| Less: | | | | |
| Investment expense | (3,958) | (79) | (4,037) | (4,607) |
| Borrowers' rebates and other agent fees on securities lending transactions | (1,438) | (29) | (1,467) | (787) |
| Net investment income | 147,424 | 2,925 | 150,349 | 201,683 |
| Total additions, net | 235,505 | 13,019 | 248,524 | 294,561 |
| Deductions: | | | | |
| Benefits paid (Notes 1C & 1D) | 97,669 | 8,315 | 105,984 | 98,152 |
| Refund of contributions (Note 4) | 393 | | 393 | 465 |
| Administrative expenses | 1,521 | 30 | 1,551 | 1,429 |
| Total deductions | 99,583 | 8,345 | 107,928 | 100,046 |
| Change in net position | 135,922 | 4,674 | 140,596 | 194,515 |
| Net position: | | | | |
| Beginning of year | 1,580,556 | 32,088 | 1,612,644 | 1,418,129 |
| End of year | $1,716,478 | $36,762 | $1,753,240 | $1,612,644 |

See accompanying notes to financial statements

(Dollars in Thousands)

## NOTE 1 – PLAN DESCRIPTION

### *A. General*

The East Bay Municipal Utility District (the District) Employees' Retirement System (the System) was established in 1937 to administer a single-employer, contributory, defined benefit pension plan (the Pension Plan). The System provides retirement, disability, survivorship, and post-employment health insurance benefits (the OPEB Plan) for eligible directors, officers, and employees of the District. The System is administered by a Retirement Board composed of three members appointed by the board of directors of the District, two members elected by and from the active membership, and one (nonvoting) member elected by and from the retired membership of the System. Retirement Ordinance No. 40 (Ordinance) assigns the authority to establish Plan benefit provisions to the District's board of directors.

The System is exempt from the regulations of the Employee Retirement Income Security Act of 1974. The System is also exempt from federal income taxes and California franchise taxes.

The System is an integral part of the District and the District appoints the majority of the retirement board of the System and provides for its funding. Accordingly, the System's operations have been reported as a Pension and Other Employee Benefit Trust Fund in the District's basic financial statements.

### *B. Membership*

All regular full-time employees of the District are members of the Plan in addition to certain job share and intermittent employees. In accordance with the ordinance governing the System, eligible employees become members on the first day they are physically on the job. Members become vested in the Plan after five years of continuous full-time employment. Vested members who terminate employment may elect a refund of their contributions or leave them in the Plan until eligible to receive benefits.

Investment income is credited semiannually to the accounts of the members using a rate of interest approved by the Retirement Board and determined as the lower of the latest five year average of the plan or the actuarial assumed earnings rate of the plan (7.25%). Interest was credited at an annual rate of 3.65% for the six months ended December 31, 2017 and 3.625% for the six months ended June 30, 2018.

Membership in the Pension Plan consisted of the following as of June 30, 2017, the date of the latest actuarial valuation:

| | |
|---|---|
| Retirees and beneficiaries receiving benefits | 1,713 |
| Terminated plan members entitled to but not yet receiving benefits | 267 |
| Active plan members | 1,802 |
| Total | 3,782 |

## NOTE 1 – PLAN DESCRIPTION (Continued)

### *C. Retirement Benefits and Allowances*

There are two tiers in effect currently, the 1980 Plan and the 2013 Plan. Employees who became Members of the retirement system prior to January 1, 2013, or who have reciprocal Membership are in the 1980 Plan, Employees who became Members on or after January 1, 2013 are in the 2013 Plan.

1980 Plan Members may elect voluntary reduced service retirement upon attaining the age of 54 and completing 5 years of continuous full-time employment. Members may elect voluntary unreduced service retirement upon attaining the age of 62 and completing 5 years of continuous full-time employment or age 65 without restriction. Members who continue to work upon attaining the normal retirement age of 65 continue to contribute to the Plan, and at the time they retire, computation of their retirement allowance is based upon their compensation and length of service as of the date of retirement. Service retirement allowances are computed by formulas specified in the Ordinance and are based on date of employment, length of employment, age at date of retirement, and compensation earned during employment.

2013 Plan Members may elect voluntary reduced service upon attaining the age of 52 and completing 5 years of continuous full-time employment. Members may elect voluntary unreduced service retirement upon attaining the age of 67, and completing 5 years of continuous full-time employment. Members who continue to work upon attaining the normal retirement age of 67 continue to contribute to the Plan, and at the time they retire, computation of their allowance is based upon their compensation and length of service as of the date of retirement. Service retirement allowances are computed by formulas specified in the Ordinance and are based on length of service, age at retirement, and compensation earned during employment.

### *D. Disability and Death Benefits and Allowances*

Members may receive disability retirement benefits prior to age 65 if the member is determined to be physically or mentally incapacitated, provided the member has 8 or more years of continuous full-time employment. The allowance for disability retirement is computed by a formula specified in the Ordinance and is based upon compensation earnable during employment, years of continuous service, and date upon which the retiring individual became a member. There is a guaranteed minimum disability benefit equal to the greater of one-third of terminal compensation (final average salary) or the retirement allowance, based on the disability formula.

Death benefits are payable to the estate or beneficiary of a member who dies before retirement. Survivorship benefits are payable to the spouse of a member who dies after retirement, or who was eligible but had not retired from service, provided the spouse was married to the member at the date of retirement and for at least one year prior to the member's death.

(Dollars in Thousands)

## NOTE 1 – PLAN DESCRIPTION (Continued)

### E. *Post-Employment Healthcare Benefits*

Post-employment healthcare and similar benefit allowances are provided to eligible employees who retire from the District or to their surviving spouses. As of June 30, 2017, there were 1,548 participants receiving these health care benefits.

Effective July 1, 1996, a 20-year vesting schedule for full benefits was implemented for all new participants. Eligible participants are reimbursed up to $450 per month for service members and up to $550 for members with a spouse or registered domestic partner for any combined health, dental, or long-term care insurance premiums paid by the participant or his/her surviving spouse. Effective July 1, 1999, retirees may be reimbursed up to the designated maximum for the combined health insurance premiums for themselves, their current spouses, or registered domestic partners. The benefits were funded entirely by the District on an actuarial basis up until June 17, 2002. Effective June 18, 2002, a portion of the post-employment healthcare benefit costs is recovered through employee contributions. The actual benefits paid in cash to retirees were $8,315 and $7,912 and for the years ended June 30, 2018 and 2017, respectively.

Membership in the OPEB Plan consisted of the following as of June 30, 2017, the date of the latest actuarial valuation:

| | |
|---|---|
| Retirees and beneficiaries receiving benefits | 1,548 |
| Terminated plan members entitled to but not yet receiving benefits | 267 |
| Active plan members | 1,802 |
| Total | 3,617 |

## NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### A. *Basis of Accounting and Presentation*

The System's activities are accounted for on a flow of economic resources measurement focus, using the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions to the Plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits, refunds, and other liabilities are recognized when due and payable in accordance with the terms of the Plan.

The basic financial statements include partial prior year comparative information. A complete presentation of the prior year information can be found in the System's financial statements for the year ended June 30, 2017.

## NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

### *B. Investments and Fair Value Measurements*

Investments are reported at fair value. Securities and bonds traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Investments that have no quoted market price are reported at estimated fair value, which is determined based on yields equivalent for such securities or for securities of comparable maturity, quality, and type as obtained from market makers. Measurement of the fair value of real estate investments is estimated by the investment managers and reflects both internal and independent appraisals of real estate properties.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The fair value hierarchy categorizes the inputs to valuation techniques used to measure fair value into three levels based on the extent to which inputs used in measuring fair value are observable in the market.

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs are inputs – other than quoted prices included within level 1 – that are observable for an asset or liability, either directly or indirectly.

Level 3 inputs are unobservable inputs for an asset or liability.

If the fair value of an asset or liability is measured using inputs from more than one level of the fair value hierarchy, the measurement is considered to be based on the lowest priority level input that is significant to the entire measurement.

The System presents in the Statements of Changes in Plan Net Position the net change in the fair value of its investments, which consists of the realized gains or losses and the unrealized appreciation (depreciation) on those investments. Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

Each of the financial instruments invested in by the System represents a potential concentration of credit risk. However, as the portfolio and the components of the various instruments are diversified and issuers of securities are dispersed throughout many industries and geographical locations, the concentrations of credit risk are limited.

The System invests in a combination of stocks, bonds, fixed income securities, real estate, and other investment securities. These investments are exposed to various risks, such as interest rate and market risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and those such changes could materially affect the amounts reported in the Statement of Plan Net Position.

## NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Retirement Board policies permit the System to use investments of the Plan to enter into securities lending transactions, which are loans of securities to broker-dealers and other entities for collateral with a simultaneous agreement to return collateral for the same securities in the future. The System's securities custodian is an agent in lending the Plan's securities for cash collateral, U.S. government securities, and irrevocable letters of credit of 102% for domestic securities and 105% for international securities lent.

As of June 30, 2018, the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System. Contracts with the lending agent require them to indemnify the System under certain circumstances if the borrowers fail to return the securities (and if the collateral is inadequate to replace the securities lent) or fail to pay the System for income distributions by the securities issuers while the securities are on loan. The risk of any loss of collateral or investment of cash collateral (including a loss of income or principal, or loss of market value thereon) lies with the System, except for losses resulting from negligence or intentional misconduct of the agent in performing the duties allocated under the securities lending agreement with respect to collateral. During the year ended June 30, 2018, there were no violations of legal or contractual provisions, and no borrower or lending agent default losses known to the securities lending agent.

In lending securities, cash collateral is invested in the lending agent's short-term investment pool, which as of June 30, 2018, had a weighted average maturity of 29 days. The relationship between the maturities of the investment pool and the System's loans is affected by the maturities of the securities loans made by other entities that use the agent's pool, which the System cannot determine. Cash collateral may also be invested separately in term loans, in which case the maturity of the collateral investment generally matches the term of the loan. Noncash collateral cannot be pledged or sold unless the borrower defaults. All securities loans can be terminated on demand by either the lender or the borrower, although the average term of overall loans for the System was approximately 87 days. There are no dividends or coupon payments owing on the securities lent. Cash received as collateral on securities lending transactions is reported as an asset of the System with a corresponding liability.

As of June 30, 2018, the fair value of securities on loan was $47,104. The total cash and noncash collateral held by the System's custodian to secure these securities on loan was valued at $45,937 (all cash collateral).

### C. *Allocation of Income and Expenses*

Contributions and benefit expenses are booked against the separate trusts as incurred. The recognition of investment income/loss is based on a pro rata share of total income/loss allocated quarterly on the basis of net position held in trust for pension benefits and post-employment healthcare benefits of the previous quarter. General expenses of the trust are allocated consistent with investment income/loss based on asset balances of the previous quarter.

## NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

### *D. Use of Estimates*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

### *E. New GASB Pronouncements*

Management adopted the provisions of the following Governmental Accounting Standards Board (GASB) Statement, which became effective during the year ended June 30, 2018:

**GASB Statement No. 75** – *Accounting and Financial Reporting For Postemployment Benefits Other Than Pensions.* The objective of this Statement is to establishes new accounting and financial reporting requirements for governments whose employees are provided with OPEB plans improving the accounting and financial reporting by state and local governments for OPEB and provides information provided by state and local government employers about financial support for OPEB that is provided by other entities. This statement replaces the requirements of Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions and Statement No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans.

## NOTE 3 – CONTRIBUTION INFORMATION

The System is funded by contributions from its members and from the District. District contribution percentages are recommended by the Retirement Board, and employee contribution rates are established by the Board of Directors pursuant to the Retirement Ordinance, giving consideration to actuarial recommendations and prospective changes in factors which affect funding. Each member contributes to the 1980 Plan based upon a percentage of his or her covered compensation, which was 8.75% effective April 18, 2016 and 8.84% for the 2013 members effective January 1, 2013. The District's contribution is based upon the aggregate amount of members' covered compensation, at an actuarially determined rate.

The individual entry age normal method is used to determine the normal cost for other post-employment benefits (OPEB) and service cost for pension, and the OPEB unfunded actuarial accrued liability (past service liability) is amortized as a level percentage of future payroll over 30 years open period.

(Dollars in Thousands)

## NOTE 3 – CONTRIBUTION INFORMATION (Continued)

District contributions for the year ended June 30, 2018 are as follows:

| | |
|---|---|
| 1980 Plan: | |
| Pension plan: | |
| Employer service cost | 15.57% |
| Toward unfunded pension liability | 22.35% |
| Other post-employment benefits: | |
| Employer normal cost | 1.16% |
| Unfunded actuarial accrued liability | 4.10% |
| 2013 Plan: | |
| Pension plan: | |
| Employer service cost | 8.95% |
| Toward unfunded pension liability | 22.35% |
| Other post-employment benefits: | |
| Employer normal cost | 0.76% |
| Unfunded actuarial accrued liability | 4.10% |

Effective June 30, 2017, contributions for fiscal year 2018/2019 are as follows:

| | |
|---|---|
| 1980 Plan: | |
| Pension plan: | |
| Employer service cost | 15.56% |
| Toward unfunded pension liability | 21.10% |
| Other post-employment benefits: | |
| Employer normal cost | 1.14% |
| Unfunded actuarial accrued liability | 4.18% |
| 2013 Plan: | |
| Pension plan: | |
| Employer service cost | 8.81% |
| Toward unfunded pension liability | 21.10% |
| Other post-employment benefits: | |
| Employer normal cost | 0.74% |
| Unfunded actuarial accrued liability | 4.18% |

(Dollars in Thousands)

## NOTE 3 – CONTRIBUTION INFORMATION (Continued)

Contributions for the years ended June 30, 2018 and June 30, 2017, based on the June 30, 2017, actuarial valuation (latest available and includes amounts for post-employment healthcare benefits), were as follows:

| | 2018 | | | 2017 |
|---|---|---|---|---|
| | Pension | Healthcare Benefit Plan | Totals | |
| Regular contributions: | | | | |
| District contributions | $71,220 | $9,875 | $81,095 | $76,860 |
| Member contributions | 16,807 | 177 | 16,984 | 15,945 |
| | 88,027 | 10,052 | 98,079 | 92,805 |
| Other contributions: | | | | |
| Member buybacks | 53 | 42 | 95 | 73 |
| | $88,080 | $10,094 | $98,174 | $92,878 |

Regular District and member contributions in fiscal 2018 represent an aggregate of 41.70% and 8.78% of covered payroll, respectively. The District's contributions include amounts for post-employment healthcare benefits at a rate of 5.36% of covered payroll, determined by the actuarial dated June 30, 2017. The actual payroll for the District employees covered by the Plan for the year ended June 30, 2018, was $194,498, which was 91.10% of the total District payroll of $213,505.

The total District contribution $81,096 in regular contributions ($29,576 for normal cost and service cost; also includes $51,520 for amortization of the unfunded actuarial accrued liability).

Regular District and member contributions in fiscal 2017 represent an aggregate of 42.10% and 8.77% of covered payroll, respectively. The District's contributions include amounts for post-employment healthcare benefits at a rate of 5.32% of covered payroll, determined by the actuarial dated June 30, 2016. The actual payroll for the District employees covered by the Plan for the year ended June 30, 2017, was $182,548, which was 90.60% of the total District payroll of $201,483.

The total District contribution of $77,235 as of June 30, 2017, consisted of $76,860 in regular contributions ($26,532 for normal cost and service cost; also includes $50,328 for amortization of the unfunded actuarial accrued liability) and $375 of interest on contributions.

Member buyback contributions relate to prior years' service credits for Plan participants. The Plan was amended in 1998 for limited temporary construction workers and in 2003 for intermittent employees to allow current members, who previously worked for the District in a status which did not qualify for membership in the System, to establish retirement service credit for prior service with payments over a period of two to eight years.

**EAST BAY MUNICIPAL UTILITY DISTRICT**
**EMPLOYEES' RETIREMENT SYSTEM**
(A Component Unit of the East Bay Municipal Utility District)

Notes to Basic Financial Statements
(Dollars in Thousands)
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## NOTE 3 – CONTRIBUTION INFORMATION (Continued)

During the fiscal year ended June 30, 2017, the District made contributions to the Health Insurance Benefit Plan toward the Annual Required Contribution (ARC) amounting to $9,764 which represented 4.85% of the $201,483 total District payroll. As a result, the District has recorded the Net OPEB Obligation (NOO), representing the difference between the ARC and actual contributions, as presented below for June 30, 2017.

| | | |
|---|---|---|
| Net OPEB obligation at June 30, 2015 | | $23,651 |
| Annual required contribution (ARC) | $11,590 | |
| Interest on net OPEB obligation | 1,671 | |
| Adjustments to the ARC | (1,719) | |
| Annual OPEB cost - fiscal 2014/2015 | 11,542 | |
| Less contributions made during fiscal year: | | |
| Contributions to Northern Trust | (9,454) | |
| Interest on Contributions to Northern Trust | (417) | |
| Contributions | (9,871) | |
| Contributions less than ARC | | 1,671 |
| Net OPEB obligation at June 30, 2016 | | 25,322 |
| Annual required contribution (ARC) | 12,019 | |
| Interest on net OPEB obligation | 1,794 | |
| Adjustments to the ARC | (1,846) | |
| Annual OPEB cost - fiscal 2016/2017 | 11,967 | |
| Less contributions made during fiscal year: | | |
| Contributions to Northern Trust | (9,764) | |
| Interest on Contributions to Northern Trust | (375) | |
| Contributions | (10,139) | |
| Increase in net OPEB obligations | | 1,828 |
| **Net OPEB obligation at June 30, 2017** | | $27,150 |

(Dollars in Thousands)

## NOTE 3 – CONTRIBUTION INFORMATION (Continued)

A schedule of funding progress for the pension and post-employment healthcare plans presenting multiple-year trend information as to whether the actuarial value of plan assets is increasing or decreasing relative to the actuarial accrued liability for benefits over time is presented immediately following the notes to basic financial statements in the Required Supplementary Information Section.

***Public Employees' Pension Reform Act (PEPRA)***

Assembly Bill 340 (AB 340) created the Public Employees' Pension Reform Act (PEPRA) that implemented new benefit formulas and final compensation periods, as well as new contribution requirements for new employees hired on or after January 1, 2013, who meet the definition of new member under PEPRA.

The table below provides the details of the new provisions.

| | |
|---|---|
| Benefit Formula | 2.5% at Age 67 |
| Final Compensation Period | Average of last 3 years |
| Employer Contribution Rate as a percentage payroll | 36.16% of Reportable Compensation |
| Member Contribution Rate as a percentage of payroll | 8.84% of Reportable Compensation |

The employer contribution rate listed above was in effect as of June 30, 2018. In accordance with the provisions of AB 340, the member contribution rate shown above was set at 50 percent of the expected total normal cost rate for the benefits that will apply to new members on January 1, 2013. The total normal cost rate used for this calculation is 45.00% of payroll for new members.

## NOTE 4 – CONTRIBUTION REFUNDS

When a member's District service is terminated, except by death or retirement, and prior to five years of continuous full-time employment, the amount of that member's accumulated contributions, plus interest, is refunded and membership is terminated. After a member has completed five years of continuous full-time employment, upon termination, except death or retirement, the member has the option of (a) ceasing to be a member and receiving the amount of his accumulated contributions, plus interest, or (b) remaining as a member and leaving his accumulated contributions, plus interest, in the Plan. After termination, a member cannot make additional contributions to the Plan.

If a member with fewer than five years of employment terminates employment and within six months becomes a member of the Public Employees' Retirement System or another reciprocal system, the individual may elect to remain a member, leaving his accumulated contributions, plus interest, in the Plan.

## NOTE 5 – CASH AND INVESTMENTS

### *A. Authorized Investment Strategy*

The System's investment policies authorize the System to invest in financial instruments in three broad investment categories: equity, fixed income, and real estate. These financial instruments can include, but are not limited to, corporate bonds, commercial paper, U.S. government securities, common and preferred stock, real estate investment trusts, and mutual funds. Fixed income investments may include futures and options contracts in order to provide added flexibility in managing the fixed income portfolio. The following is a summary of the System investment policy adopted by the System on March 16, 2017.

The Retirement Board is authorized to designate multiple investment managers to manage the assets under their supervision subject to the laws of the State of California and the Investment Guidelines established by the Retirement Board. Allocation of assets to the investment managers are determined by the Retirement Board to accommodate changing conditions and laws. On March 15, 2018, the System adopted an updated asset allocation, which is shown in the table below. The System investment policy has not been updated to reflect this change.

| | |
|---|---|
| US Equity | 25% |
| Non-US Equity | 25% |
| Core Fixed-Income | 20% |
| Non-Core Fixed Income | 5% |
| Covered Calls | 20% |
| Real Estate | 5% |

## NOTE 5 – CASH AND INVESTMENTS (Continued)

The composite asset allocation goal is pursued by the System on a long-term basis and revised if significant changes occur within the economic and/or capital market environment. Progress toward the goal is reviewed at least annually.

The Director of Finance is authorized to transfer assets from any asset class which varies the long-term asset allocation goal by more than 3% at the end of two or more consecutive quarters, allocating the excess assets to a manager or group of managers with the exception of real estate managers. The Director of Finance is further authorized to withdraw assets from assigned managers as necessary to efficiently meet operating needs.

The equity and fixed income asset allocations may vary by up to ± 5% from the long-range asset allocation goals.

The core fixed income target allocation (10% of the total portfolio) will primarily consist of U.S. denominated fixed income securities. Individual managers may invest up to 20% of their assets in international fixed income securities.

The non-core fixed income target allocation (10% of the total portfolio) will primarily consist of U.S. denominated fixed income securities. Individual managers may invest up to 35% of their assets in international fixed income securities. It is expected that this allocation may have a material allocation to below investment grade securities.

The domestic equity allocation target (40% of the total portfolio) will consist of approximately 37% in large cap market related growth and value (average risk) securities, 3% in small capitalized securities, and 20% in international securities. The international equity allocation target will consist of approximately 17% international equities and 3% emerging markets. It is expected this allocation will allow for exposure to mid cap securities based on tactical decisions by the Retirement Fund's large cap and small cap domestic equity managers.

The covered calls target allocation (20% of the total portfolio) may consist of a combination of Chicago Board Options Exchange S&P 500 BuyWrite Index (the "BXM Index") replication strategy and/or active non-replication strategies and their underlying domestic equity portfolios.

The international equity target allocation (15% of the total portfolio) will consist of approximately 12% in international equities and 3% in emerging markets equities.

The real estate target allocation (5% of the total portfolio) will consist of either equity (ownership) and/or fixed income participation in commercial, industrial, or residential properties. Investments may include interests in mortgages pools secured by loans of underlying properties.

## NOTE 5 - CASH AND INVESTMENTS (Continued)

The allocation goal recognizes that at any time equity and fixed income managers may have transactional cash on hand and the District will maintain enough cash as working capital to effectively meet cash flow demands on the system. However, there is no specific allocation for cash as all investable cash is allocated to specific investment disciplines.

Holding of securities issued by the United States Government or any of its agencies need not be diversified. Securities of any one issuer with maturities of more than one year, other than the United States Government or any of its agencies, shall not exceed 5% of the value of the total portfolio. Securities of any one issuer of foreign government issues shall not exceed 10% of the value of the total portfolio at the time of purchase. Fixed income managers have the authority to make international investments, not to exceed 20% of their total portfolio.

The use of futures and options in the fixed income accounts may be used as part of their portfolio management strategy and will be incidental to their securities trading activities. The resulting aggregate risk profile (volatility) of the portfolio will not be different from that permissible by using securities only.

Short (sold) options positions will generally be hedged, either with current portfolio security holding, other options or futures options. Mortgage derivatives with significant short option characteristics will not exceed 5% of the portfolio, and will generally be a) offset by position in other mortgage derivatives, or b) offset by other portfolio positions.

No derivatives will be executed which will increase the value at risk of the portfolio by more than 25 basis points of the portfolio's market value.

Structured notes with significant short options positions or increasing leverage will not be purchased, and in no case will structured notes exceed 5% of portfolio value. Structured notes issued by the U.S. Government (treasuries and agencies) will be considered allowable investments, and are restricted to 25%.

Fixed income managers are authorized to use futures and options contracts to supplement their investment capabilities to provide flexibility in managing the fixed income portfolios and reduce the cost of implementing strategies to respond to changing market conditions without incurring the higher transaction costs associated with buying and selling specific securities. These transactions are authorized to enable the manager to reduce the exposure of the portfolio to interest rate changes by reducing or increasing the duration of the portfolio without selling any of the actual holding.

No more than 5% of the portfolio will be invested in original futures margin and options premiums, exclusive of any in-the-money portion of the premiums.

(Dollars in Thousands)

**NOTE 5 - CASH AND INVESTMENTS (Continued)**

Each equity portfolio shall be diversified. When fully invested in equities or at its normal level of investment, a minimum of 20 securities should be held. At no time may a single equity investment exceed 5% of the value of the total retirement fund.

Each international equity portfolio shall be diversified. When fully invested in international equities or at its normal level of investment, a minimum of 20 securities should be held. At no time may a single international equity investment exceed 5% of the value of the total retirement fund.

***B. Financial Statement Presentation***

Total cash and investments at fair value as of June 30, consisted of the following:

| | 2018 | | | |
|---|---|---|---|---|
| | Pension plan benefits | Post-employment healthcare benefits | Total | 2017 |
| Cash and cash equivalents | $40,348 | $848 | $41,196 | $48,988 |
| Invested securities lending collateral | 46,134 | 970 | 47,104 | 108,858 |
| Investments | 1,683,014 | 35,384 | 1,718,398 | 1,563,978 |
| Total cash and investments | $1,769,496 | $37,202 | $1,806,698 | $1,721,824 |

***C. Fair Value Hierarchy***

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure fair value of the assets. Level 1 inputs are quoted prices in an active market for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

**EAST BAY MUNICIPAL UTILITY DISTRICT**
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## NOTE 5 - CASH AND INVESTMENTS (Continued)

The following is a summary of the fair value hierarchy of the fair value of investments of the System as of June 30, 2018:

| Investment Type | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| **Investments by Fair Value:** | | | | |
| Asset Backed Securities | | $15,638 | | $15,638 |
| Equity Securities | $633,179 | | $630 | 633,809 |
| Commercial Mortgage - Backed Securities | | 9,808 | | 9,808 |
| Commercial Paper | | 5,340 | | 5,340 |
| Corporate Bonds | | 87,409 | | 87,409 |
| Government Agencies | | 36,639 | | 36,639 |
| Government Bonds | | 37,354 | | 37,354 |
| Government Mortgage - Backed Securities | | 30,117 | | 30,117 |
| Government Issued | | | | |
| Commercial Mortgage - Backed Securities | | 44 | | 44 |
| Non-Government Backed | | | | |
| Commercial Mortgage Obligation | | 1,974 | | 1,974 |
| Index Linked Government Bonds | | 1,542 | | 1,542 |
| Municipal Bonds | | 2,463 | | 2,463 |
| Real Estate | | | 37,231 | 37,231 |
| Other Fixed Income | | 8,146 | | 8,146 |
| Short Term Bills and Notes | | 1,765 | | 1,765 |
| Total Investments at Fair Value | $633,179 | $238,239 | $37,861 | 909,279 |
| **Investments Measured at Net Asset Value:** | | | | |
| Mutual Funds | | | | 809,119 |
| **Investments Measured at Amortized Cost:** | | | | |
| California Local Agency Investment Fund | | | | 4,582 |
| Invested securities lending collateral | | | | 47,104 |
| *Cash in banks* | | | | 36,614 |
| Total District Cash and Investments | | | | $1,806,698 |

Investments classified in Level 1 of the fair value hierarchy, valued at $633,179, are valued using quoted prices in active markets. $238,239 of investments classified in Level 2 of the fair value hierarchy, are valued using matrix pricing techniques maintained by various pricing vendors. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Investments totaling $37,861 classified in Level 3 of the fair value hierarchy are valued using appraisals and estimates by investment managers. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by our custodian bank.

(Dollars in Thousands)

## NOTE 5 - CASH AND INVESTMENTS (Continued)

### *D. Interest Rate Risk*

Interest rate risk is the risk that changes in market rates will adversely affect the fair value of an investment. Normally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The system generally manages its interest rate risk by holding investments to maturity.

Information about the sensitivity of the fair values of the System's investments (including investments held by bond trustees) to market interest rate fluctuations is provided by the following table that shows the distribution of the System's investments by maturity or earliest call date:

| Investment Type | Less than 12 Months | 12 to 72 Months | 72 to 120 Months | More than 120 Months | Maturity not Determined | Total |
|---|---|---|---|---|---|---|
| Asset Backed Securities | $7 | $10,182 | $3,230 | $2,219 | | $15,638 |
| Equity Securities | 633,809 | | | | | 633,809 |
| Commercial Mortgage - Backed Securities | | | 401 | 9,407 | | 9,808 |
| Commercial Paper | 5,340 | | | | | 5,340 |
| Corporate Bonds | 8,412 | 49,198 | 15,631 | 14,168 | | 87,409 |
| Government Agencies | | 10,044 | 23,099 | 3,496 | | 36,639 |
| Government Bonds | 189 | 9,635 | 17,025 | 10,505 | | 37,354 |
| Government Mortgage - Backed Securities | | 3 | 994 | 29,120 | | 30,117 |
| Government Issued Commercial Mortgage - Backed Securities | | 44 | | | | 44 |
| Non-Government Backed Collateralized Mortgage Obligation | | | 153 | 1,821 | | 1,974 |
| Index Linked Government Bonds | | | 1,542 | | | 1,542 |
| Municipal Bonds | | 706 | | 1,757 | | 2,463 |
| Mutual Funds | | | | | $809,119 | 809,119 |
| Real Estate | | | | | 37,231 | 37,231 |
| Other Fixed Income | | 8,146 | | | | 8,146 |
| Short Term Bills and Notes | 1,765 | | | | | 1,765 |
| Total System Investments | $649,522 | $87,958 | $62,075 | $72,493 | $846,350 | $1,718,398 |

The System's investments include the following investments that are highly sensitive to interest rate fluctuations to a greater degree than already indicated above:

| Highly Sensitive Investments | Fair Value at Year End |
|---|---|
| Government Mortgage - Backed Securities | $30,117 |
| Commercial Mortgage - Backed Securities | 9,808 |
| Government Issued Commercial Mortgage - Backed Securities | 44 |

(Dollars in Thousands)

## NOTE 5 - CASH AND INVESTMENTS (Continued)

### *E. Foreign Currency Risk*

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair values of an investment or deposit. Presented below in US dollars is the fair market value of the System's foreign investments at June 30, 2018:

| Foreign Currency | Equity Securities Investment Type |
|---|---|
| Euro | $91,660 |
| British Pound Sterling | 35,464 |
| Japanese Yen | 30,051 |
| Hong Kong Dollar | 18,447 |
| Swiss Franc | 10,609 |
| South Korean Won | 9,355 |
| Canadian Dollar | 7,864 |
| Danish Krone | 5,611 |
| Singapore Dollar | 1,614 |
| Australian Dollar | 3,160 |
| Norwegian Krone | 4,272 |
| Indonesian Rupiah | 1,597 |
| Swedish Krona | 1,080 |
| Thai Baht | 1,591 |
| Mexican Peso | 861 |
| Total | $223,236 |

The Fund's investment policy permits it to invest 20% of total investment on foreign currency-denominated investments. The Fund's current position is 13.00%.

(Dollars in Thousands)

## NOTE 5 - CASH AND INVESTMENTS (Continued)

### F. *Credit Risk*

Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. Presented below is the actual rating as of June 30, 2018, for each investment type as provided by Moody's or Standard and Poor's.

| Investment Type | Aaa | Aa | A | Baa | Ba | U.S. Government Guaranteed | Not Rated | Total |
|---|---|---|---|---|---|---|---|---|
| Asset Backed Securities | $8,280 | $499 | $630 | $189 | $184 | | $5,856 | $15,638 |
| Equity Securities | | | | | | | 633,809 | 633,809 |
| Commercial Mortgage - Backed Securities | 5,094 | | | 513 | | | 4,201 | 9,808 |
| Commercial Paper | | | | | | | 5,340 | 5,340 |
| Corporate Bonds | 3,390 | 11,789 | 45,581 | 23,965 | 2,255 | | 429 | 87,409 |
| Government Agencies | 33,643 | | | 1,333 | | $1,663 | | 36,639 |
| Government Bonds | 35,917 | 315 | 808 | 314 | | | | 37,354 |
| Government Mortgage - Backed Securities | | | 217 | | | 29,505 | 395 | 30,117 |
| Government Issued Commercial Mortgage - Backed Securities | | | | | | 44 | | 44 |
| Index Linked Government Bonds | 1,542 | | | | | | | 1,542 |
| Municipal Bonds | | 2,333 | | | | | 130 | 2,463 |
| Non-Government Backed Commercial Mortgage Obligation | 1,517 | | 88 | 349 | | | 20 | 1,974 |
| Mutual Funds | | | | | | | 809,119 | 809,119 |
| Real Estate | | | | | | | 37,231 | 37,231 |
| Other Fixed Income | | | | | | | 8,146 | 8,146 |
| Short Term Bills and Notes | | | | | | 1,765 | | 1,765 |
| Total System Investments | $89,383 | $14,936 | $47,324 | $26,663 | $2,439 | $32,977 | $1,504,676 | $1,718,398 |

### G. *Concentration Risk*

As of June 30, 2018 and June 30, 2017, the District did not have investments in any one organization exceeding 5% of the System's investments.

The District held demand deposits (overdrafts) amounting to $4,793 and $2,340 on behalf of the System as of June 30, 2018 and 2017, respectively. The financial institution which holds these deposits is required by state law to maintain collateral pools against all public deposits they hold.

(Dollars in Thousands)

## NOTE 5 - CASH AND INVESTMENTS (Continued)

### *H. Custodial Credit Risk*

Custodial credit risk for cash on deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g. broker-dealer) to a transaction, the System will not be able to recover the value of its investment or collateral securities that are in the possession of another party.

California Law requires banks and savings and loan institutions to pledge government securities with a market value of 110% of the System's cash on deposit, or first trust deed mortgage notes with a market value of 150% of the deposit, as collateral for these deposits. Under California Law this collateral is held in a separate investment pool by another institution in the System's name and places the System ahead of general creditors of the institution.

The System invests in individual investments and in investment pools. Individual investments are evidenced by specific identifiable securities instruments, or by an electronic entry registering the owner in the records of the institution issuing the security, called the book entry system. In order to increase security, the System employs the Trust Department of a bank or trustee as the custodian of certain System investments, regardless of their form.

As of June 30, 2018 and 2017, the System's brokers/dealers held $4 and $26 respectively, in cash exposed to custodial credit risk.

## NOTE 6 – NET PENSION LIABILITY

The net pension liability (the Plan's liability determined in accordance with GASB 67 less the fiduciary net position) as of June 30, is as shown below:

| | 2018 | 2017 |
|---|---|---|
| Total Pension Liability | $2,068,015 | $1,995,863 |
| Plan Fiduciary Net Position | (1,580,556) | (1,391,771) |
| Employer Net Pension Liability | $487,459 | $604,092 |
| Plan Fiduciary Net Position as a Percentage of Total Pension Liability | 76.43% | 69.73% |
| Covered payroll | $182,032 | $174,586 |
| Liability as a Percentage of Covered payroll | 267.79% | 346.01% |

(Dollars in Thousands)

## NOTE 6 – NET PENSION LIABILITY (Continued)

Actuarial valuation of the ongoing System involve estimates of the reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The Schedule of Employers' net pension liability presents multi-year trend information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the total pension liability. These schedules are presented in the Required Supplementary Information section. The net pension liabilities was measured as of June 30, 2017 and 2016 and are not adjusted or rolled forward to the June 30, 2018 and 2017 reporting dates, respectively.

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below.

| | |
|---|---|
| Valuation date | June 30, 2017 |
| Actuarial cost method | Entry Age Normal Cost Method |
| Amortization method | Level percent of payroll |
| Remaining amortization period | Plan changes are amortized over separate decreasing 15-year periods; assumptions changes are amortized over separate decreasing 25-year periods; experience gains/losses are amortized over separate decreasing 20-year periods. |
| Assets valuation method | Market value of assets less unrecognized returns in each last five years. Unrecognized return is equal to the difference between the actual market return and the of the expected return on the market value, and is recognized over a five year period, further adjusted, if necessary, to be within 30% of the market value. |
| Actuarial assumptions: | |
| Net Investment Return | 7.25%, net of investment and administrative expenses. |
| Average projected salary increases* | Ranges from 4.00% to 9.50% based on years of service* |
| Inflation rate | 3.00% |
| Cost-of-living adjustments | 3.00% per annum |
| Mortality | *Pre-retirement:* Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females<br>*After Service Retirement and All Beneficiaries:* Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females<br>*After Disability Retirement:* Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward nine years for males and females |

** Includes inflation of 3.00% plus across the board salary increases of 0.50% plus merit and promotional increases*

(Dollars in Thousands)

## NOTE 6 – NET PENSION LIABILITY (Continued)

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target allocation and projected arithmetic real rates of return, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption for each major asset class are summarized below:

| Asset Class | Target Allocation | Long-Term Expected Real Rate of Return |
|---|---|---|
| Domestic Large Cap Equity | 36% | 5.78% |
| Domestic Small Cap Equity | 4% | 6.45% |
| Developed International Equity | 12% | 7.03% |
| Emerging Markets Equity | 3% | 9.46% |
| Domestic Bonds | 10% | 0.99% |
| Non-Core Fixed Income | 10% | 3.46% |
| Real Estate | 5% | 4.50% |
| Covered Calls | 20% | 5.00% |
| Total | 100% | |

The discount rates used to measure the total pension liability was 7.25% as of June 30, 2018 and June 30, 2017. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Pension Plan's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on Pension Plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of both June 30, 2018 and June 30, 2017.

(Dollars in Thousands)

## NOTE 6 – NET PENSION LIABILITY (Continued)

In accordance with GASB 67 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the following table presents the net pension liability of the Plan as of June 30, 2018, calculated using the discount rate of 7.25%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

| | 1% Decrease (6.25%) | Current Discount (7.25%) | 1% Increase (8.25%) |
|---|---|---|---|
| Net Pension Liability | $751,606 | $487,459 | $267,390 |

## NOTE 7 – NET OPEB LIABILITY

The net OPEB liability (The Plan's liability determined according to GASB 74) as of June 30, is shown below:

| | 2018 | 2017 |
|---|---|---|
| Total OPEB Liability | $167,894 | $171,443 |
| Plan Fiduciary Net Position | (32,088) | (26,358) |
| Employer Net OPEB Liability | $135,806 | $145,085 |
| Plan Fiduciary Net Position as a Percentage of Total OPEB Liability | 19.11% | 15.37% |

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an experience study for the period from July 1, 2012 through June 30, 2017. They are the same as the assumptions used in the June 30, 2017 funding actuarial valuation except the discount rate is calculated as a blend of the investment return on plan assets and municipal bond rate in accordance with GASB 74, and implicit subsidy benefit payments are based on the age-based costs shown in the June 30, 2017 GASB 43/45 valuation report. The net OPEB liability measured as of June 30, 2018 and 2017 have been determined by rolling forward. The results of the actuarial valuations as of June 30, 2017 and 2016, respectively. A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

(Dollars in Thousands)

## NOTE 7 – NET OPEB LIABILITY (Continued)

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

| | |
|---|---|
| Valuation date | June 30, 2017 |
| Actuarial cost method | Entry Age Normal Cost Method |
| Amortization method | Level percent of payroll |
| Remaining amortization period | Plan changes, assumption changes, and experience gains/losses prior to July 1, 2011 are amortized over separate decreasing 30-year amortization periods. On or after July 1, 2011, plan changes are amortized over separate decreasing 15-year periods; assumption changes are amortized over separate decreasing 25-year periods; and experience gains/losses are amortized over separate decreasing 20-year periods. |
| Assets valuation method | 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, further adjusted, if necessary, to be within 30% of the market value. |
| Actuarial assumptions: | |
| Net Investment Return | 5.53%, net of investment and administrative expenses. |
| Average projected salary increases* | Ranges from 4.00% to 9.50% based on years of service* |
| Inflation rate | 3.00% |
| Health Care Trend | Non-Medicare: 7% graded to ultimate 4.50% over 10 years<br>Medicare: 6.50% graded to ultimate 4.50% over 8 years |
| HIB increases | 0.00% |
| Mortality | *Pre-retirement:* Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females<br>*After Service Retirement and All Beneficiaries:* Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females<br>*After Disability Retirement:* Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward nine years for males and females |

** Includes inflation of 3.00% plus across the board salary increases of 0.50% plus merit and promotional increases*

(Dollars in Thousands)

## NOTE 7 – NET OPEB LIABILITY (Continued)

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin.

The target allocation and projected arithmetic real rates of return, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption for each major asset class are summarized below:

| Asset Class | Target Allocation | Long-Term Expected Real Rate of Return |
|---|---|---|
| Domestic Large Cap Equity | 36% | 5.78% |
| Domestic Small Cap Equity | 4% | 6.45% |
| Developed International Equity | 12% | 7.03% |
| Emerging Markets Equity | 3% | 9.46% |
| Domestic Bonds | 10% | 0.99% |
| Non-Core Fixed Income | 10% | 3.46% |
| Real Estate | 5% | 4.50% |
| Covered Calls | 20% | 5.00% |
| Total | 100% | |

The municipal bond rates used to determine the blended discount rate, as discussed above, were 3.58% and 2.85%, which are based on the 20-year municipal bond rate for the Bond Buyer 20-Bond GO Index as of June 30, 2018 and June 30, 2017, respectively.

The discount rates used to measure the total OPEB liability were 5.53% and 5.12% as of June 30, 2018 and June 30, 2017, respectively. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates for the $450/$550 HIB Subsidy excluding the implicit subsidy that will continue to be paid on a pay-as-you-go basis. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the OPEB Plan's fiduciary net position was projected to be available to make projected future benefit payments for current plan members through June 30, 2042. Therefore, the long-term expected rate of return on OPEB Plan investments (7.25%) was applied to periods of projected benefit payments through June 30, 2042, and the 20-year municipal bond rate (3.58%) to determine the total OPEB liability as of June 30, 2018.

(Dollars in Thousands)

## NOTE 7 – NET OPEB LIABILITY (Continued)

In accordance with GASB 74 regarding the disclosure of the sensitivity of the net OPEB liability to changes in the discount rate, the following table presents the net OPEB liability of the Plan as of June 30, 2018, calculated using the discount rate of 5.53%, as well as what the Plan's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (4.53%) or 1-percentage point higher (6.53%) than the current rate:

| | 1% Decrease (4.53%) | Current Discount (5.53%) | 1% Increase (6.53%) |
|---|---|---|---|
| Net OPEB Liability | $152,786 | $135,806 | $121,246 |

Additionally, in accordance with GASB 74 regarding disclosure of the sensitivity of the net OPEB liability to changes in the trend rate (only applied to implicit subsidy and not the $450/$550 cash subsidy), the following table presents the net OPEB liability of the Plan as of June 30, 2018, calculated using the trend rate of 7.00% as well as what the Plan's net OPEB liability would be if it were calculated using a trend rate that is 1-percentage-point lower (7.00% graded to ultimate 4.50% over 10 years) or 1-percentage-point higher (6.50% graded to ultimate 4.50% over 8years) than the current rate:

| | 1% Decrease | Current Trend | 1% Increase |
|---|---|---|---|
| Net OPEB Liability | $133,262 | $135,806 | $138,661 |

## NOTE 8 – BENEFIT GUARANTY

### *A. Pension Plan*

The District may, at any time, change or repeal the ordinance governing the Plan. The District's obligations to those members receiving or eligible for a retirement allowance prior to such change or repeal shall continue in full force. The District is obligated to those members neither receiving nor eligible for a retirement allowance at the time of such change or repeal. This allowance will be a retirement allowance at retirement age equal to the actuarial equivalent of the accumulated value of the member's contributions standing to the member's credit at the date of retirement and the accumulated value of the District's contribution for current service to the date of such change or repeal, increased by the accumulation of interest to date of retirement.

### *B. Post-Employment Healthcare Benefits*

In addition to retirement benefits, the District provides post-employment health benefits assistance (administered by the Employees' Retirement System) for employees who retire from the District or their surviving spouses. As of June 30, 2018, there were 1,548 participants receiving these health care benefits.

## NOTE 8 – BENEFIT GUARANTY (Continued)

Effective July 1, 1996, a 20-year vesting schedule for full benefits was implemented for all new participants. Effective January 1, 1999, retired members who had separated from the District prior to their retirement who has at least 10 years of service also became eligible for the post-employment health benefits based on the same sliding scale. The scale provides for 25% of healthcare benefits for service from 5 through 10 years, 50% of healthcare benefits for service from 10 through 15 years, 75% of healthcare benefits for service from 15 through 20 years, and 100% of healthcare benefits for service of 20 years or more. Effective July 1, 2003, the District reimbursed up to $450 per month ($550 per month effective July 1, 2004, for membership of a spouse or registered domestic partner) for any health, dental, or long-term care insurance premiums paid by the retiree for themselves, current spouse, or domestic partner, or any health, dental, or long-term care insurance premiums paid by the eligible surviving spouse of a retiree. These benefits are paid from a separate post-employment healthcare benefits fund which up until June 17, 2002, was advance funded entirely by the District on an actuarially determined basis. Cash reimbursement of these benefits totaled $8,315 in the year ended June 30, 2018. Effective June 18, 2002, a portion of the post-employment healthcare benefits costs is recovered through employee contributions.

Through June 30, 1999, the medical premium subsidy was not a vested benefit and the District reserved the right to modify or terminate the benefit at any time. If the medical subsidy were terminated, assets accumulated from contributions made for the subsidy would be used to provide other pension benefits. Effective July 1, 1999, the medical premium subsidy became a vested benefit to a maximum of $200 per month, was changed effective October 1, 2000, to a maximum of $250 per month, and was changed effective July 1, 2002, to a maximum of $400 per month per month, and was changed effective July 1, 2003, to a maximum of $450 per month, and was changed again effective July 1, 2004, to a maximum of $450 per month and $550 per month for membership of a spouse or registered domestic partner.

## NOTE 9 – RELATED PARTY TRANSACTIONS

The District provides the System with accounting, treasury, and other administrative services, which are reimbursed by the System on a monthly basis. Total reimbursements in fiscal years 2018 and 2017 were $1,013 and $1,049 respectively.

# REQUIRED SUPPLEMENTARY INFORMATION

**EAST BAY MUNICIPAL UTILITY DISTRICT**
**EMPLOYEES' RETIREMENT SYSTEM**
(A Component Unit of the East Bay Municipal Utility District)

Required Supplementary Information

(Dollars in Thousands)

For the Year Ended June 30, 2018

## (1) Pension Plan

Schedule of Changes in Employer's Net Pension Liability (in thousands):

| | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|
| **Total pension liability** | | | | |
| Service cost | $41,106 | $37,828 | $36,791 | $34,987 |
| Interest | 144,392 | 138,135 | 131,595 | 127,558 |
| Change of benefit terms | | | | |
| Differences between expected and actual experience | (22,641) | 5,278 | (1,390) | 438 |
| Changes of assumptions | | 52,596 | | 18,421 |
| Benefit payments, including refunds of employee contributions | (90,705) | (83,886) | (77,790) | (71,232) |
| **Net change in total pension liability** | 72,152 | 149,951 | 89,206 | 110,172 |
| **Total pension liability - beginning** | 1,995,863 | 1,845,912 | 1,756,706 | 1,646,534 |
| **Total pension liability - ending (a)** | $2,068,015 | $1,995,863 | $1,845,912 | $1,756,706 |
| **Plan fiduciary net position** | | | | |
| Contributions - employer | $67,096 | $65,218 | $64,177 | $61,660 |
| Contributions - employee | 15,820 | 14,741 | 13,260 | 11,963 |
| Net investment income | 197,977 | 13,934 | 59,288 | 216,601 |
| Benefit payments, including refunds of employee contributions | (90,705) | (83,886) | (77,790) | (71,232) |
| Administrative expense | (1,403) | (1,289) | (1,269) | (1,233) |
| **Net change in plan fiduciary net position** | 188,785 | 8,718 | 57,666 | 217,759 |
| **Plan fiduciary net position - beginning** | 1,391,771 | 1,383,053 | 1,325,387 | 1,107,628 |
| **Plan fiduciary net position - ending (b)** | $1,580,556 | $1,391,771 | $1,383,053 | $1,325,387 |
| **Plan's net pension liability - ending (a) - (b)** | $487,459 | $604,092 | $462,859 | $431,319 |

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Unaudited

**EAST BAY MUNICIPAL UTILITY DISTRICT**
**EMPLOYEES' RETIREMENT SYSTEM**
(A Component Unit of the East Bay Municipal Utility District)

Required Supplementary Information

(Dollars in Thousands)

For the Year Ended June 30, 2018

## (2) Pension Plan

Schedule of Employer's Net Pension Liability (in thousands):

| | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| Total pension liability | $2,068,015 | $1,995,863 | $1,845,912 | $1,756,706 | $1,646,534 |
| Plan fiduciary net position | (1,580,556) | (1,391,771) | (1,383,053) | (1,325,387) | (1,107,628) |
| Net pension liability | $487,459 | $604,092 | $462,859 | $431,319 | $538,906 |
| Plan fiduciary net position as a percentage of total pension liability | 76.43% | 69.73% | 74.93% | 75.45% | 67.27% |
| Covered payroll * | $182,032 | $174,586 | $166,886 | $159,513 | $153,707 |
| Plan net pension liability as percentage of covered employee payroll | 267.79% | 346.01% | 277.35% | 270.40% | 350.61% |

* In accordance with GASB 82, the covered payroll amounts are defined as the payroll on which contributions to a pension plan are based. The covered payroll amounts for fiscal year 2014 through fiscal year 2016, were updated to adopt the provisions of GASB 82.

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

## (3) Pension Plan

Schedule of Employer's Contributions (in thousands):

| Year ended June 30 | Actuarially determined contributions | Contributions in relation to the actuarially determined contributions | Contributions deficiency (excess) | Covered-employee payroll * | Contributions as a percentage of covered employee payroll |
|---|---|---|---|---|---|
| 2008 | $37,387 | $37,387 | $0 | $152,538 | 24.51% |
| 2009 | 39,485 | 39,485 | 0 | 158,193 | 24.96% |
| 2010 | 44,031 | 44,031 | 0 | 161,641 | 27.24% |
| 2011 | 50,987 | 50,987 | 0 | 160,336 | 31.80% |
| 2012 | 52,156 | 52,156 | 0 | 158,481 | 32.91% |
| 2013 | 53,795 | 53,795 | 0 | 153,707 | 35.00% |
| 2014 | 61,660 | 61,660 | 0 | 159,513 | 38.66% |
| 2015 | 64,177 | 64,177 | 0 | 166,886 | 38.46% |
| 2016 | 65,218 | 65,218 | 0 | 174,586 | 37.36% |
| 2017 | 67,096 | 67,096 | 0 | 182,032 | 36.86% |

* Derived by dividing the contributions in relation to the actuarial determined contributions by the contributions as a percentage of covered employee payroll. These amounts may therefore be different from the actual payrolls of the District. However, in accordance with GASB 82, the covered payroll amounts for the actuarial valuations for fiscal year 2013 through current are defined as the payroll on which contributions to the pension plan are based.

Unaudited

**EAST BAY MUNICIPAL UTILITY DISTRICT**
**EMPLOYEES' RETIREMENT SYSTEM**
(A Component Unit of the East Bay Municipal Utility District)

Required Supplementary Information

(Dollars in Thousands)

For the Year Ended June 30, 2018

## (4) Pension Plan

Schedule of Investment Returns:

| | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| Annual money weighted rate of return, net of investment expense | 16.46% | 19.72% | 4.46% | 6.67% | 19.42% |

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

## (5) Post-Employment Healthcare Plan

Schedule of Changes in Employer's Net OPEB Liability (in thousands):

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| **Total OPEB liability** | | | |
| Service cost | $5,276 | $4,514 | $4,460 |
| Interest | 8,797 | 9,374 | 9,159 |
| Change of benefit terms | | | |
| Difference between actual and expected experience | (1,711) | (3,286) | (309) |
| Change of assumptions | (6,107) | 12,471 | |
| Benefit payments - cash* | | (7,685) | (7,394) |
| Benefit payments - estimated implicit subsidy | (9,804) | (2,164) | (2,241) |
| **Net change in total OPEB liability** | (3,549) | 13,224 | 3,675 |
| **Total OPEB liability - beginning** | 171,443 | 158,219 | 154,544 |
| **Total OPEB liability - ending (a)** | $167,894 | $171,443 | $158,219 |
| **Plan fiduciary net position** | | | |
| Employer contributions - cash | $9,764 | $9,454 | $8,964 |
| Employer contributions - estimated implicit subsidy | | 2,164 | 2,241 |
| Employer contributions - total | $9,764 | $11,618 | $11,205 |
| Employee contributions | 198 | 184 | 167 |
| Net investment income | 3,706 | 271 | 938 |
| Benefit payments - cash* | | (7,685) | (7,394) |
| Benefit payments - estimated implicit subsidy | (9,804) | (2,164) | (2,241) |
| Administrative expense | (26) | (22) | (20) |
| Other | 1,892 | | |
| **Net change in plan fiduciary net position** | 5,730 | 2,202 | 2,655 |
| **Plan fiduciary net position - beginning** | 26,358 | 24,156 | 21,501 |
| **Plan fiduciary net position - ending (b)** | $32,088 | $26,358 | $24,156 |
| **Plan's net OPEB liability - ending (a) - (b)** | $135,806 | $145,085 | $134,063 |

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

* Benefit Payments and Employer contributions - cash and estimated implicit subsidy report together in FY 18

**EAST BAY MUNICIPAL UTILITY DISTRICT**
**EMPLOYEES' RETIREMENT SYSTEM**
(A Component Unit of the East Bay Municipal Utility District)

Required Supplementary Information

(Dollars in Thousands)

For the Year Ended June 30, 2018

**(6) Post-Employment Healthcare Plan**

Schedule of Employer's Net OPEB Liability (in thousands):

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| Total OPEB liability | $167,894 | $171,443 | $158,219 |
| Plan fiduciary net position | (32,088) | (26,358) | (24,156) |
| Employer net OPEB liability | $135,806 | $145,085 | $134,063 |
| Plan fiduciary net position as a percentage of total OPEB liability | 19.11% | 15.37% | 15.27% |
| Covered payroll | $182,032 | $174,586 | $166,886 |
| Plan net OPEB liability as a percentage of covered payroll | 74.61% | 83.10% | 80.33% |

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

**(7) Post-Employment Healthcare Plan**

Schedule of Employer's Contributions (in thousands):

| Year ended June 30 | Actuarially determined contributions | Contributions in relation to the actuarially determined contributions | Contributions deficiency (excess) | Covered payroll * | Contributions as a percentage of covered employee payroll |
|---|---|---|---|---|---|
| 2008 | $7,216 | $7,216 | $0 | $152,538 | 4.73% |
| 2009 | 6,318 | 6,318 | 0 | 158,193 | 3.99% |
| 2010 | 7,725 | 7,725 | 0 | 161,641 | 4.78% |
| 2011 | 7,494 | 7,494 | 0 | 160,336 | 4.67% |
| 2012 | 7,495 | 7,495 | 0 | 158,481 | 4.73% |
| 2013 | 7,772 | 7,772 | 0 | 153,707 | 5.06% |
| 2014 | 8,457 | 8,457 | 0 | 159,513 | 5.30% |
| 2015 | 8,964 | 8,964 | 0 | 166,886 | 5.37% |
| 2016 | 9,454 | 9,454 | 0 | 174,586 | 5.42% |
| 2017 | 9,764 | 9,764 | 0 | 182,032 | 5.36% |

* Derived by dividing the contributions in relation to the actuarial determined contributions by the contributions as a percentage of covered employee payroll. These amounts may therefore be different from the actual payrolls of the District. However, in accordance with GASB 82, the covered payroll amounts for the actuarial valuations for fiscal year 2013 through current are defined as the payroll on which contributions to the pension plan are based.

Unaudited

(Dollars in Thousands)

The pension-related information presented in the required supplementary schedules was determined as part of the Pension actuarial valuation at the date indicated. Additional information as of the latest Pension actuarial valuation is as follows:

| | |
|---|---|
| Valuation date | June 30, 2017 |
| Actuarial cost method | Entry Age Normal Cost Method |
| Amortization method | Level percent of payroll |
| Remaining amortization period | Plan changes are amortized over separate decreasing 15-year periods; assumptions changes are amortized over separate decreasing 25-year periods; experience gains/losses are amortized over separate decreasing 20-year periods. |
| Assets valuation method | Market value of assets less unrecognized returns in each last five years. Unrecognized return is equal to the difference between the actual market return and the of the expected return on the market value, and is recognized over a five year period, further adjusted, if necessary, to be within 30% of the market value. |
| Actuarial assumptions: | |
| Net Investment Return | 7.25%, net of investment and administrative expenses. |
| Average projected salary increases* | Ranges from 4.00% to 9.50% based on years of service* |
| Inflation rate | 3.00% |
| Cost-of-living adjustments | 3.00% per annum |
| Mortality | *Pre-retirement:* Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females<br>*After Service Retirement and All Beneficiaries:* Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females<br>*After Disability Retirement:* Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward nine years for males and females |

** Includes inflation of 3.00% plus across the board salary increases of 0.50% plus merit and promotional increases*

Unaudited.

(Dollars in Thousands)

The OPEB-related information presented in the required supplementary schedules was determined as part of the OPEB actuarial valuation at the date indicated. Additional information as of the latest OPEB actuarial valuation is as follows:

| | |
|---|---|
| Valuation date | June 30, 2017 |
| Actuarial cost method | Entry Age Normal Cost Method |
| Amortization method | Level percent of payroll |
| Remaining amortization period | Plan changes, assumption changes, and experience gains/losses prior to July 1, 2011 are amortized over separate decreasing 30-year amortization periods. On or after July 1, 2011, plan changes are amortized over separate decreasing 15-year periods; assumptions changes are amortized over separate decreasing 25-year periods; and experience gains/losses (including year-to-year health assumption changes) are amortized over separate decreasing 20-year periods. |
| Assets valuation method | 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, further adjusted, if necessary to be within 30% of the market value. |
| Actuarial assumptions: | |
| Net Investment Return | 5.53%, net of OPEB Plan investment expense, including inflation |
| Average projected salary increases* | Ranges from 4.00% to 9.50% based on years of service* |
| Inflation rate | 3.00% |
| Health care trend | 6.50% graded to ultimate 4.50% over 8 years |
| HIB increases | 0.00% |
| Mortality | *Pre-retirement:* Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females<br>*After Service Retirement and All Beneficiaries:* Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females<br>*After Disability Retirement:* Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward nine years for males and females |

** Includes inflation of 3.00% plus across the board salary increases of 0.50% plus merit and promotional increases*

Unaudited.

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# INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Board of Directors
East Bay Municipal Utility District
Employees' Retirement System
Oakland, California

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the basic financial statements of the East Bay Municipal Utility District Employees' Retirement System (the System), as of and for the year ended June 30, 2018 and the related notes to the financial statements, and have issued our report thereon dated August 27, 2018.

***Internal Control Over Financial Reporting***

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the System's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

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Pleasant Hill, CA 94523

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***Compliance and Other Matters***

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

We have also issued a separate Memorandum on Internal Control dated August 27, 2018 which is an integral part of our audit and should be read in conjunction with this report.

***Purpose of this Report***

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Maze + Associates

Pleasant Hill, California
August 27, 2018

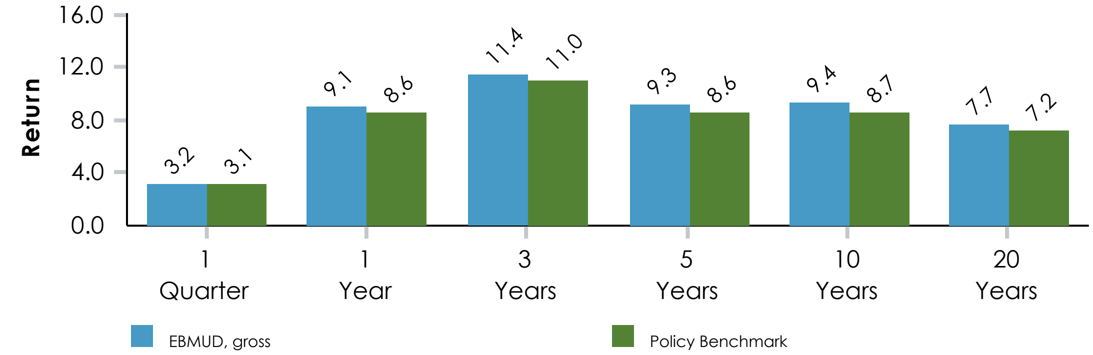

# Q3 2018

## East Bay Municipal Utility District

Preliminary Report

## Performance and Market Values As of September 30, 2018

### Investment Performance




### Portfolio Valuation (000's)

| | Quarter | 1 Year |
|---|---|---|
| EBMUD Total Plan | | |
| Beginning Market Value | 1,747,174 | 1,661,872 |
| Net Contributions | -2,798 | -9,420 |
| Gain/Loss/Expenses | 55,693 | 147,618 |
| Ending Market Value | 1,800,069 | 1,800,069 |

### Asset Class Performance (gross of fees)

| | Quarter | 1 Year | 3 Year | 5 Year | 10 Year | 20 Year |
|---|---|---|---|---|---|---|
| EBMUD Total Plan | 3.2 | 9.1 | 11.4 | 9.3 | 9.4 | 7.7 |
| *Policy Benchmark^^^* | *3.1* | *8.6* | *11.0* | *8.6* | *8.7* | *7.2* |
| Domestic Equity | 7.1 | 19.3 | 17.4 | 13.8 | 12.5 | 8.6 |
| *Russell 3000** | *7.1* | *17.6* | *17.1* | *13.5* | *12.0* | *8.6* |
| International Equity | 0.8 | -0.1 | 9.5 | 4.4 | 6.2 | 7.3 |
| *MSCI ACWI x US (blend)*** | *0.8* | *2.3* | *10.5* | *4.6* | *5.7* | *5.6* |
| Covered Calls | 5.3 | 9.3 | 11.7 | - | - | - |
| *CBOE BXM* | *4.9* | *9.8* | *10.3* | - | - | - |
| Fixed Income | 0.4 | 0.9 | 2.4 | 2.3 | 4.9 | 5.0 |
| *Fixed Income benchmark (blend)**** | *0.5* | *0.6* | *2.5* | *2.5* | *4.2* | *4.6* |
| Real Estate | 1.7 | 7.2 | 9.1 | 11.0 | 5.1 | - |
| *NCREIF/NAREIT (blend)***** | *1.3* | *5.5* | *8.1* | *9.7* | *6.2* | - |
| Cash | 0.5 | 1.4 | 0.9 | 0.6 | 0.7 | 2.5 |
| *FTSE 3 Month T-Bill* | *0.5* | *1.6* | *0.8* | *0.5* | *0.3* | *1.8* |

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

^^^ Policy Benchmark consists of 25% Russell 3000 (blend), 25% MSCI ACWIxU.S. (blend), 20% CBOE BXM, 15% BBg BC Aggregate, 5% BBg BC US 1-3 Year Government/Credit, 2.5% BBg BC 1-5 Year U.S. High Yield Cash Pay, 2.5% S&P/LSTA Performing Loans, 2.5% NCREIF (lagged), and 2.5% FTSE NAREIT Equity REITs index 7/1/18-present; see Appendix for historical Policy Benchmark composition.

*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).

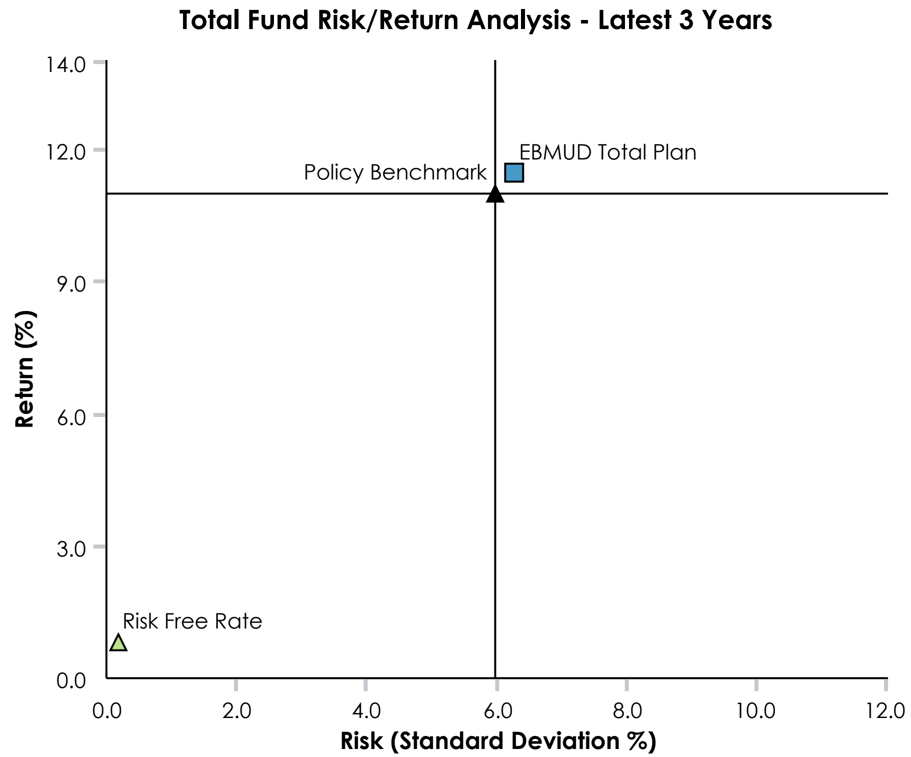
**MSCI ACWIxU.S. as of 1/1/07; MSCI EAFE ND thru 12/31/06.

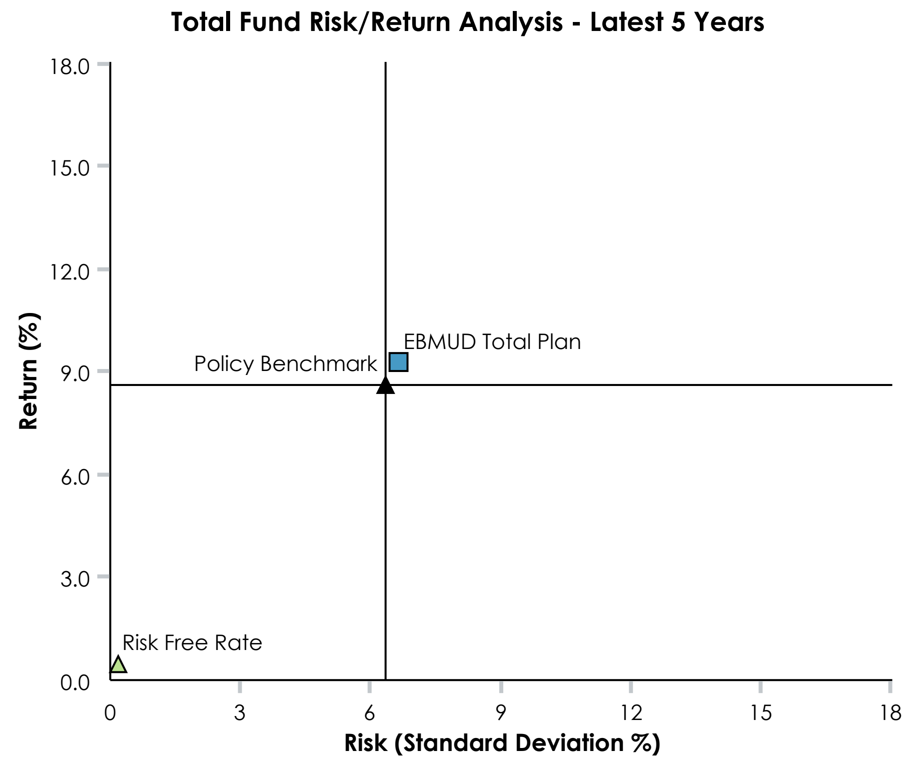
***60% BBg BC Aggregate, 20% BBg BC US 1-3 Year Government/Credit, 10% BBg BC 1-5 Year U.S. High Yield Cash Pay, and 10% S&P/LSTA Performing Loans index 7/1/18-present; 50% BBg BC Aggregate, 25% BBg BC US 1-3 Year Government/Credit, 12.5% BBg BC 1-5 Year U.S. High Yield Cash Pay, and 12.5% S&P/LSTA Performing Loans index 4/1/14-6/30/18; 75% BBg BC Aggregate, 12.5% BBg BC 1-5 Year U.S. High Yield Cash Pay, and 12.5% S&P/LSTA Performing Loans index 3/1/14-3/31/14; BBg BC Universal 1/1/08-2/28/14; BBg BC Aggregate thru 12/31/07.

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

**EBMUD Portfolio Review**

**Gross Investment Performance As of September 30, 2018**




| | 3 Years Return | 3 Years Standard Deviation | 3 Years Sharpe Ratio | 5 Years Return | 5 Years Standard Deviation | 5 Years Sharpe Ratio |
|---|---|---|---|---|---|---|
| EBMUD Total Plan | 11.4 | 6.3 | 1.6 | 9.3 | 6.7 | 1.3 |
| *Policy Benchmark* | *11.0* | *6.0* | *1.6* | *8.6* | *6.4* | *1.3* |

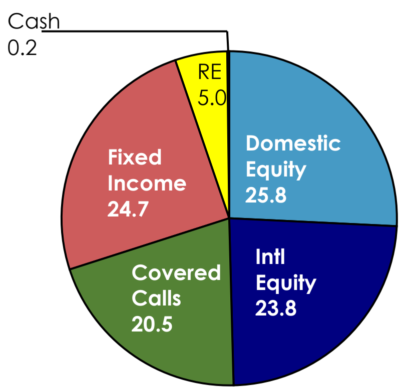
## Actual vs. Target Allocation
### As of September 30, 2018

| | Asset Allocation ($000) | Asset Allocation (%) | Target Allocation* (%) | Variance (%) | Minimum Allocation** (%) | Maximum Allocation** (%) |
|---|---|---|---|---|---|---|
| EBMUD Total Plan^ | 1,800,069 | 100.0 | 100.0 | 0.0 | - | - |
| Domestic Equity^^ | 463,666 | 25.8 | 25.0 | 0.8 | 20.0 | 30.0 |
| International Equity | 428,989 | 23.8 | 25.0 | -1.2 | 22.0 | 28.0 |
| Core Fixed Income | 376,779 | 20.9 | 20.0 | 0.9 | 18.0 | 22.0 |
| Non-Core Fixed Income | 68,344 | 3.8 | 5.0 | -1.2 | 2.0 | 8.0 |
| Covered Calls | 368,200 | 20.5 | 20.0 | 0.5 | 16.0 | 24.0 |
| Real Estate^^^ | 90,661 | 5.0 | 5.0 | 0.0 | 3.0 | 7.0 |
| Cash | 3,428 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 |

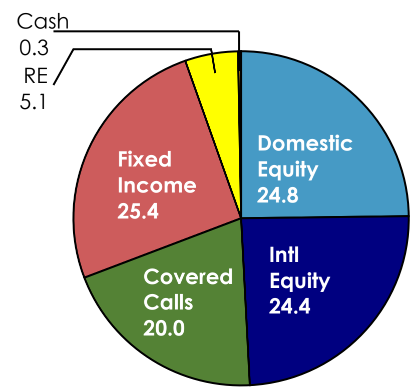
*Current policy target allocations elected by the Board in March 2018, took effect July 2018 upon the transition to the new long-term strategic allocation.
**Policy rebalancing ranges shown are for non-turbulent market periods. The Plan also has established rebalancing ranges to be in effect during turbulent market periods.
^Includes approximately $2,900 in closed T.Rowe Price account as of September 30, 2018.
^^Includes approximately $752,700 in the global transition account.
^^^RREEF performance results and allocation are lagged one-quarter.

### Actual Asset Allocation Comparison

**September 30, 2018 : $1,800,069,366**




**June 30, 2018 : $1,747,174,489**



## Manager Performance (Gross of Fees)
### As of September 30, 2018

| Manager - Style | Mkt Value ($000) | 1 Quarter | 1 Year | 3 Years | 5 Years |
|---|---|---|---|---|---|
| **Domestic Equity** | | | | | |
| Northern Trust (Russell 3000) - Passive | 462,913 | 7.1 | - | - | - |
| *Russell 3000 Index* | | *7.1* | *-* | *-* | *-* |
| **International Equity** | | | | | |
| Fisher Investments - Active | 129,730 | 1.4 | 0.2 | 11.0 | 5.9 |
| Franklin Templeton - Active | 128,695 | 0.6 | 1.3 | 8.5 | 3.2 |
| *MSCI ACWI xUS (blend)** | | *0.8* | *2.3* | *10.5* | *4.6* |
| Northern Trust (ACWI ex-US) - Passive | 170,564 | 0.6 | - | - | - |
| *MSCI ACWI xUS* | | *0.8* | *-* | *-* | *-* |

*As of January 1, 2007, the benchmark changed from MSCI EAFE to MSCI ACWI x U.S.

## Manager Performance (Gross of Fees)
### As of September 30, 2018

| Manager - Style | Mkt Value ($000) | 1 Quarter | 1 Year | 3 Years | 5 Years |
|---|---|---|---|---|---|
| **Covered Calls** | | | | | |
| Parametric BXM - Replication | 122,964 | 5.2 | 8.8 | 11.1 | - |
| Parametric Delta Shift - Semi-active | 123,933 | 7.1 | 12.8 | 15.0 | - |
| Van Hulzen | 121,304 | 3.6 | 5.7 | 8.8 | - |
| *CBOE BXM* | | *4.9* | *9.8* | *10.3* | *-* |
| **Real Estate** | | | | | |
| RREEF America II (Lag)* | 37,642 | 2.2 | 8.8 | 9.8 | 11.7 |
| *NCREIF NPI (Lag)** | | *1.8* | *7.2* | *8.3* | *9.8* |
| CenterSquare**** | 53,019 | 1.4 | 6.0 | 8.8 | 10.8 |
| *FTSE NAREIT Equity REIT Index* | | *0.8* | *3.3* | *7.6* | *9.2* |
| **Total Fixed Income** | | | | | |
| **Core Fixed Income** | | | | | |
| Northern Trust (BBg BC Agg Bond) - Passive | 131,850 | 0.0 | - | - | - |
| CS McKee - Active | 177,638 | 0.1 | -0.7 | 1.9 | 2.5 |
| *Bloomberg BC U.S. Aggregate Index* | | *0.0* | *-1.2* | *1.3* | *2.2* |
| Western Asset - Short Duration - Active | 67,291 | 0.4 | 0.6 | 1.3 | - |
| *Bloomberg BC 1-3 Year Gov/Credit Index* | | *0.3* | *0.2* | *0.7* | *-* |
| **Non-Core Fixed Income** | | | | | |
| Western Asset - Bank Loans** - Active | 35,662 | 1.7 | 5.0 | 4.8 | - |
| *S&P/LSTA Performing Loans Index* | | *1.9* | *5.5* | *5.5* | *-* |
| Western Asset - Short-Term HY*** - Active | 32,682 | 2.6 | 3.8 | 4.4 | - |
| *Bloomberg BC US High Yield 1-5 Yr Cash Pay 2%* | | *2.2* | *4.7* | *7.9* | *-* |

*Results are lagged one quarter.
**On watch as of 4/2016
***On watch as of 4/2016

****On watch as of 12/2017

## Disclosures
## As of September 30, 2018

*DISCLOSURES: This document is provided for informational purposes only. It does not constitute an offer of securities of any of the issuers that may be described herein. Information contained herein may have been provided by third parties, including investment firms providing information on returns and assets under management, and may not have been independently verified. The past performance information contained in this report is not necessarily indicative of future results and there is no assurance that the investment in question will achieve comparable results or that the Firm will be able to implement its investment strategy or achieve its investment objectives. The actual realized value of currently unrealized investments (if any) will depend on a variety of factors, including future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs and the timing and manner of sale, all of which may differ from the assumptions and circumstances on which any current unrealized valuations are based.*

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**EAST BAY MUNICIPAL UTILITY DISTRICT**

DATE: November 15, 2018

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance

SUBJECT: Proxy Voting Results Overview

## SUMMARY

In March 2017, the Retirement Board adopted Implementation Guidelines for its Environmental, Social and Governance (ESG) Investment Objective. Item 5 of the guidelines directed the Retirement System to incorporate ESG considerations into proxy voting policy and process. As a result, the Retirement System issued a Request for Proposal for proxy voting services and, in October 2017, the Retirement System entered into an agreement with Glass, Lewis & Co (Glass Lewis) to provide proxy research and voting services. Under this agreement, Glass Lewis is voting proxies for applicable assets of the Retirement System under its Public Pension Policy guideline.

Prior to retaining Glass Lewis, the Retirement Board made the transitional step to instruct investment managers to vote proxies based on their internal guidelines, away from the previous standard of "vote management." One proxy season (early 2017) occurred under this regime. Most managers indicated at the time that they also subscribed to Glass Lewis, Institutional Shareholder Services (ISS), or both, and that they informed their decision-making using those proxy voting providers' guidelines.

In June 2018, the Retirement System transitioned its domestic equity allocation to passive, index-based strategies provided by Northern Trust Asset Management (NTAM). The account, which represents about 25% of the Retirement System's investment portfolio, is invested in a comingled fund that tracks the Russell 3000 index. The Retirement System also transitioned about 10% of its assets to a passive international equity commingled fund with NTAM that tracks the MSCI All Country World Index (ACWI) ex-US. For both accounts, NTAM applies its internally developed proxy voting policies, procedures and guidelines when voting its shares by proxy.

The following three presentations related to proxy voting will be given at the November 15, 2018 Retirement Board Meeting:

- The Retirement System's investment advisor, Pension Consulting Alliance LLC (PCA), will present an overview of proxy voting results for November 1, 2017 through June 30, 2018

- Glass Lewis will present a proxy voting report covering data since November 1, 2017, along with a comparison to voting under its ESG Policy
- NTAM will present a summary on proxy voting for its domestic and international passive index strategies.

SDS:RLH

PCA
PENSION CONSULTING ALLIANCE

**Date:** November 15, 2018

**To:** East Bay Municipal Utility District Employees' Retirement System ("EBMUDERS" or the "System")

**From:** Pension Consulting Alliance, LLC (PCA)

**RE: EBMUDERS Proxy Voting Results Overview November 1, 2017 – June 30, 2018**

Glass Lewis and Northern Trust are here to present the first annual overview of EBMUDERS proxy voting results since EBMUDERS changed its proxy voting policy to retain Glass Lewis to cast its active manager votes according to the Glass Lewis Public Plan Policy. Under EBMUDERS' prior proxy voting policy, all votes were to be cast with Management. Northern Trust votes the EBMUDERS passive equity account proxies according to the Northern Trust Proxy Voting Policy. The Northern Trust and Glass Lewis formats differ from each other. Each firm provides the Board with a solid overview of how votes were cast. A direct comparison of overlapping votes last year for securities voted by both Glass Lewis and Northern Trust was not possible. The votes presented cover the period of November 1, 2017 through June 30, 2018.

In addition to summarizing the votes Glass Lewis cast on behalf of EBMUDERS, Glass Lewis compares these votes to its Standard Proxy Voting Policy and to the Glass Lewis ESG Proxy Voting Policy. The intent of the comparison is to provide the EBMUDERS Board additional background should they choose to discuss moving from the Glass Lewis Public Plan Policy to the ESG Policy going forward. As shown below, most of the differences between the Glass Lewis Public Plan Policy and ESG Policy fell in two categories: Compensation and Environment. Glass Lewis will discuss.

Glass Lewis EBMUD Proxy Votes
Count of Public Plan Votes Different from ESG Votes

| | % of Total | Number of votes | | |
|---|---|---|---|---|
| **Proxy Category** | **Differ** | **Differ** | **Match** | **Total** |
| SHP: Compensation | 46% | 18 | 21 | 39 |
| SHP: Environment | 51% | 22 | 21 | 43 |
| SHP: Governance | 11% | 22 | 172 | 194 |
| SHP: Misc. | 0% | 0 | 6 | 6 |
| SHP: Social | 12% | 10 | 75 | 85 |
| Grand Total | 20% | 72 | 295 | 367 |

*Source: Glass Lewis*

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PCA PENSION CONSULTING ALLIANCE

## 2018 Transition to 100% Passively Managed U.S. Equity

EBMUDERS now holds 100% of its domestic equity securities in a Northern Trust Russell 3000 passively managed account. following the EBMUDERS June 2018 reallocation of its three U.S. equity active manager accounts to a passive mandate. Going forward, the number of domestic equity accounts that Glass Lewis will execute proxy voting for EMBUDERS has been reduced to the two Covered Call managers - Parametric and Van Hulzen. Both covered call managers hold S&P500 securities. From November 1, 2018 to June 30, 2018, EBMUDERS voted 667 meetings (548 U.S. and 119 non-U.S.). Glass Lewis would have voted 619 securities on EBMUDERS' behalf during the prior voting year with only the two covered call managers, including 500 U.S. meetings and 119 non-U.S. meetings.

PCA PENSION CONSULTING ALLIANCE

**EAST BAY MUNICIPAL UTILITY DISTRICT**

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DATE: November 15, 2018

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: Update on Fixed Income

As part of the 2018 Asset Reallocation, the Retirement System has made some changes in the fixed income asset class over the last few months. This memorandum documents the process of these changes.

- Bank Loans and Short-Term High Yield Allocations: The Retirement Board selected new managers for the Bank Loans and Short-Term High Yield allocations at the Retirement System's September 20, 2018 meeting. Onboarding calls have been held with both selected firms, Federated Investment Counseling (Federated) and MacKay Shields LLC (MacKay Shields). Each firm has provided the documents required to open accounts and the details of the specific investment mandates. Staff and Pension Consulting Alliance LLC (PCA) are reviewing the documents.

- Glide Path: Following the latest move by the Federal Reserve Open Market Committee on September 26, 2018 to increase its federal funds rate by 25 basis points (bps) to an upper bound of 2.25%, staff worked with the current Short Duration fixed income manager, Western Asset Management Company, LLC (WAMCO), to transfer $20 million to the passively-managed core fixed income mandate. This transfer brought the assets in line with the Glide Path schedule.

- WAMCO: The transition of the Bank Loans and Short-Term High Yield mandates, along with the Glide Path transfers, will lower the total amount of assets managed by WAMCO to less than $100 million. Under the terms of the agreement for the Short Duration mandate, the management fee would increase to 20 bps for the remaining assets. In subsequent conversations on future progress of the Glide Path, WAMCO has also indicated that a minimum mandate size of $30 million would be required to continue managing the Short Duration mandate. As adopted, the Glide Path would conclude with a final transfer when assets under management fall below $20 million. Therefore, WAMCO's minimum asset constraint could affect the timing and size of the final planned Glide Path transfer.

SDS:DC

**EAST BAY MUNICIPAL UTILITY DISTRICT**

---

DATE: November 15, 2018

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance

SUBJECT: 2017 Investment Benchmarking Analysis from CEM Benchmarking

For the fourth year, the Retirement System participated in the CEM Benchmarking survey. CEM Benchmarking provides benchmark analysis for pension funds, with a primary focus on investment performance. Participants receive a free, high level report comparing their responses to benchmarks and can also commission more detailed, customized reports for a fee.

Staff provided data to CEM Benchmarking on the Retirement System portfolio from calendar year 2017, the most recently completed year at the time of submittal. The benchmarks in the report this year are based upon 154 U.S. pension funds of differing types, including 55 public funds. The funds vary in size with a median of $8.3 billion in assets. The Retirement System is among the smallest (in the 10$^{th}$ percentile). Of the 154 pension funds in the survey, CEM Benchmarking has identified just 17 as appropriate peers for the Retirement System: public systems with a median portfolio size of $1.7 billion (the same as that of the Retirement System for the time period being evaluated in the report).

The benchmarking analysis is based upon a comparison of the Retirement System to the entire U.S. pension fund database. The report is overall generally positive for the Retirement System, showing:

- The Retirement System's net total return, including investment costs, was 16.4% which is above the U.S. median of 15.2%.
- The Retirement System's "policy return," the return that could have been earned by passively indexing investments based on the Retirement System's investment policy mix, was 15.9%, compared to the U.S. median of 15.2%.
- The "net value added" provided by active management was +0.5%, above the +0.3% U.S. median.
- Total investment cost was 33.4 basis points (bps), well below the median 54.5 bps and a 10.2 bps cost saving compared to our 43.6 bps benchmark. This benchmark was calculated by CEM Benchmarking to reflect the Retirement System portfolio's size and asset mix.
- The Retirement System's asset risk, a measure of price volatility, was 11.3% compared to the 9.7% U.S. median, and its asset-liability risk of 13.0% compared to the 12.0% U.S. median. As discussed in previous years, PCA suggests this is because covered calls are categorized as equity rather than an offset to equity, and because the U.S. median allocates over 20% to private investments which appear less volatile because they are valued less frequently.

Staff recommends continuing to provide CEM Benchmarking with information about the Retirement System portfolio and taking advantage of the complimentary report that they provide.

Attachment

**BenchmarkDB**

2017 Investment Benchmarking Analysis for
East Bay Municipal Utility District

CEM Benchmarking

What gets measured gets managed

## Introduction

We are pleased to present the 27th edition of the annual CEM Investment Benchmarking Report for defined benefit plans. We greatly appreciate your business and continued support.

In this report you will find a comparison of your fund's investment returns, value added and costs to the U.S. universe.

We take pride in our data cleaning process. This ensures that the findings of the analysis are reliable, and can help our clients optimize their performance and maximize retirement income of fund participants.

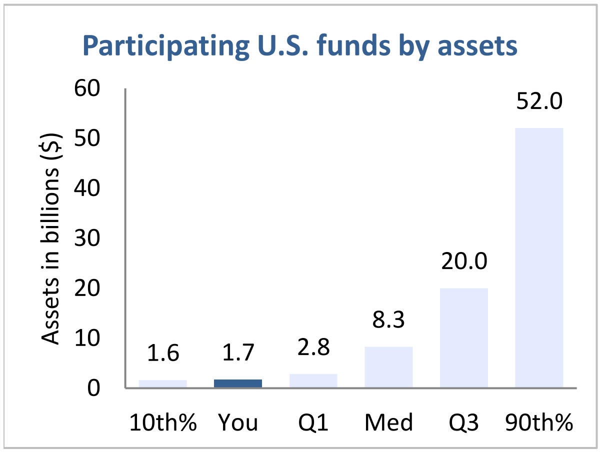


Prepared on September 17, 2018

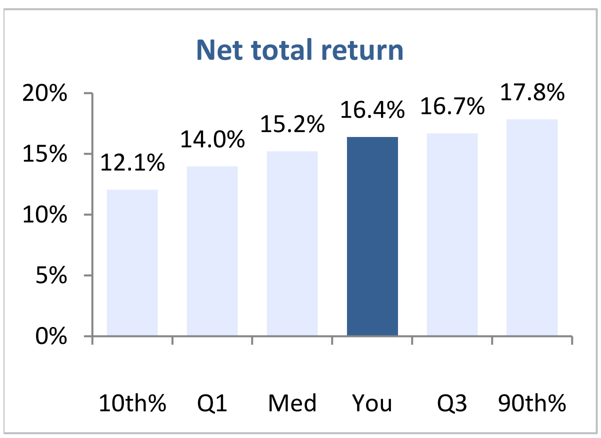
# Table of Contents

# 1

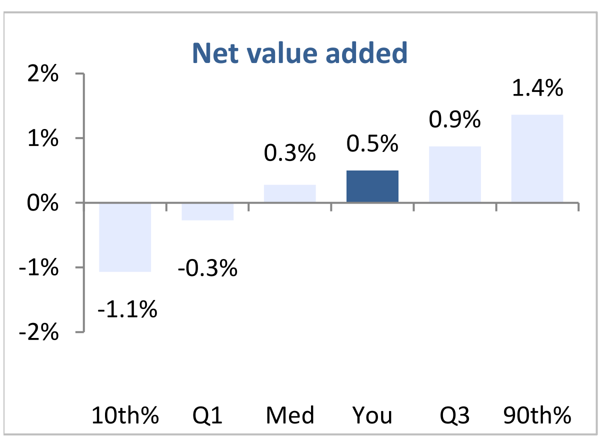
# Executive summary




The primary comparisons in this report are to the U.S. universe. It is comprised of 154 funds with plan size ranging between $235 million and $218.2 billion. The median fund was $8.3 billion which compares to your fund's $1.7 billion.

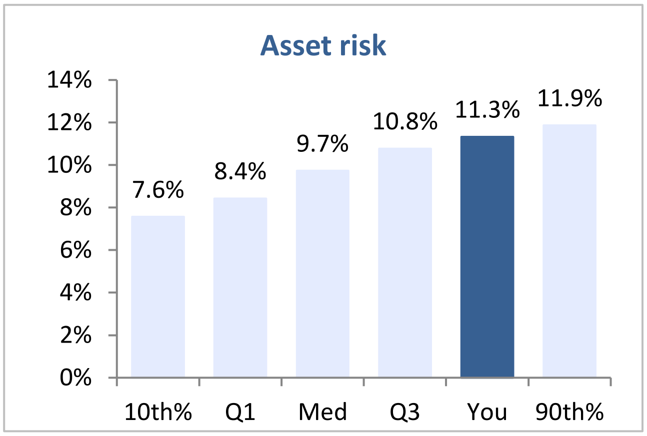



Your fund's 2017 net total return was 16.4%. This was above the U.S. median of 15.2%.



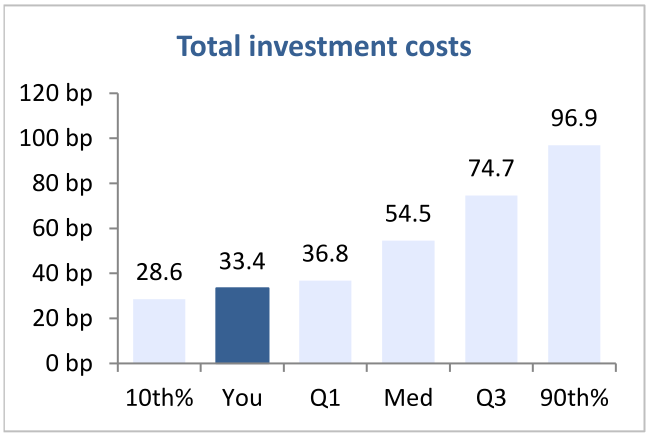

Net value added measures the value produced over what could have been earned by using passive management. It equals net total return minus policy return.

Your 2017 net value added was 0.5%. This was above the U.S. median of 0.3%.




Your asset risk was 11.3%. This was above the U.S. median of 9.7%.

Asset risk is the expected standard deviation of your policy return. It is based on the historical variance of, and covariance between, the asset classes in your policy mix.




Your fund's total investment cost was 33.4 bps. This was below the U.S. median of 54.5 bps.

Total investment costs used in this analysis exclude transaction costs and private asset performance fees.

**Benchmark cost analysis**

| | $000s | Basis points |
|---|---|---|
| Your investment cost | 5,375 | 33.4 bp |
| less: Your benchmark cost | 7,021 | 43.6 bp |
| equals: Your cost savings | 1,645 | 10.2 bp |

Differences in total cost are often due to differences in fund size and asset mix. Therefore, to help you assess whether your costs are high or low, CEM calculates a benchmark cost for your fund that adjusts for differences in fund size and asset mix. Your benchmark cost can be thought of as the median cost for a fund with your size, asset mix and country of origin.

Your total investment cost of 33.4 bps was below your benchmark cost of 43.6 bps.

## Benefits of upgrading to peer-based benchmarking

This report is based on comparisons to the U.S. universe. Over 100 leading funds have upgraded to peer-based benchmarking.

Benefits of peer-based benchmarking include:

- Peer-based analysis - A proposed peer group for your plan is shown on the right. It was selected from plans based on plan size because size is the primary driver of costs.
- Detailed cost comparisons - Shows precisely where you are paying more or less than your peers by asset class and implementation style. Clients often use this analysis to negotiate fees with their external managers and to reduce internal costs.
- Insights into best practices being adopted by leading U.S. and global funds, industry trends, characteristics of top-performing funds, and value added potential by asset class.
- Multi-year periods are critical for assessing investment performance.
- Private equity partnership cost details by LP type and age.
- Customized executive summary highlights the most important findings.
- In-person, on-site presentation of your results.

For more information contact:
Alan Torrance
Tel: 416 369-1078
Email: alan@cembenchmarking.com
or visit our website: www.cembenchmarking.com

**Proposed peer group for East Bay Municipal Utility District**

• 17 peers, median size of $1,731 million versus your $1,731 million.

Blue Cross Blue Shield of Michigan
Campbell Soup Company
CIEBA #006
East Bay Municipal Utility District
Eastman Chemical Company
KPMG LLP
Los Angeles County Metropolitan Transit
Metropolitan Water Reclamation District Retirement Fund
NiSource Inc.
Philips Healthcare
Praxair
Procter & Gamble
Tacoma Employees
The Aerospace Corporation
Thomson-Reuters
Valvoline
Voya Financial

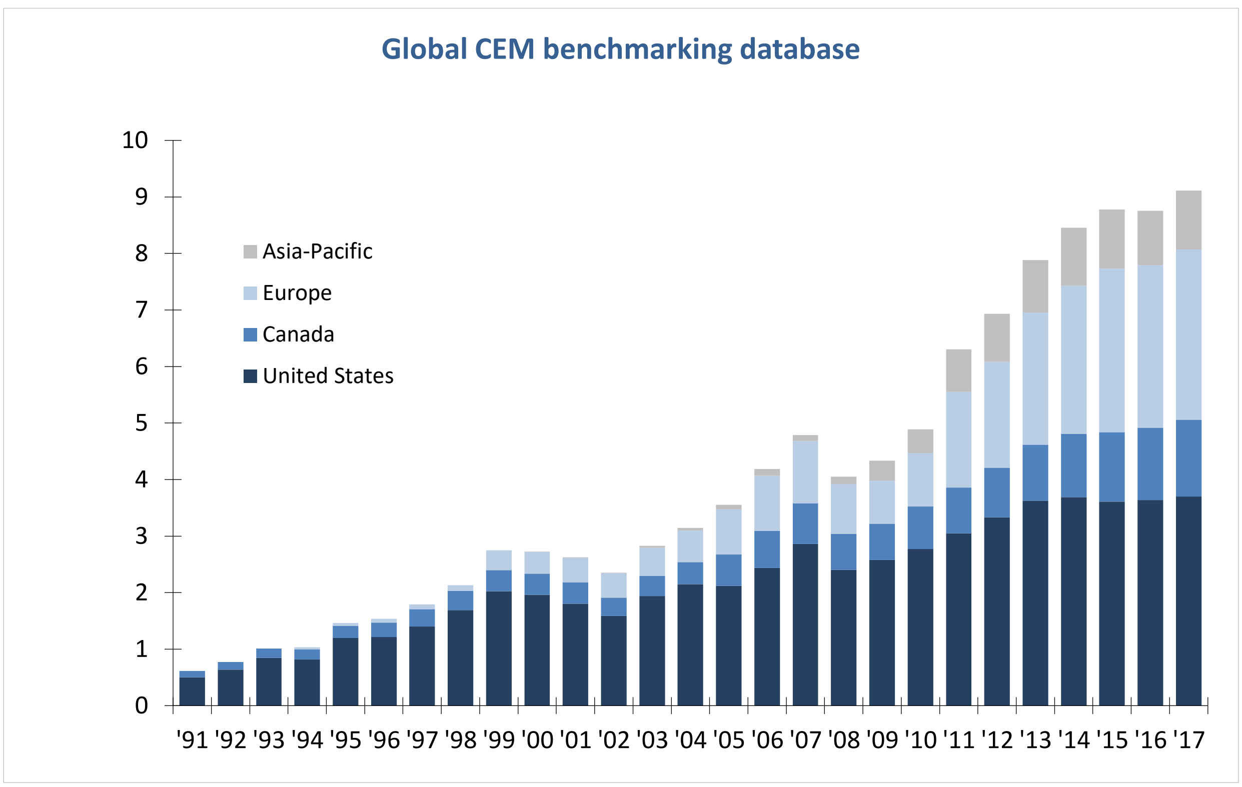
# 2

# The benchmarking database

## CEM's global benchmarking database

CEM has been providing cost benchmarking solutions since 1991. The 2017 survey universe is comprised of 269 funds representing $7.6 trillion in assets. The breakdown by region is as follows:

- 154 U.S. pension funds with aggregate assets of $3.7 trillion.
- 68 Canadian pension funds with aggregate assets of $1.4 trillion.
- 36 European pension funds with aggregate assets of $3.0 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Denmark, the UK, and Ireland.
- 10 Asia-Pacific pension funds with aggregate assets of $1.0 trillion.

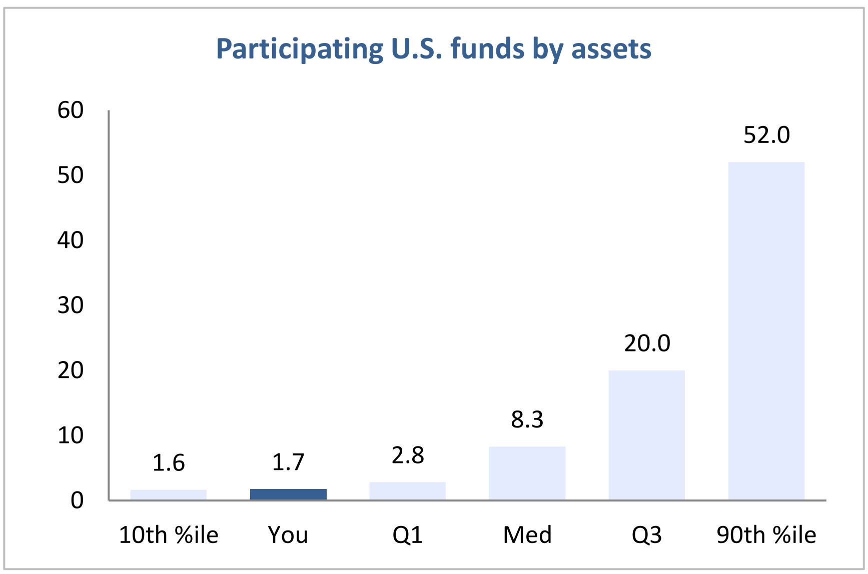


## Characteristics of the U.S. survey universe

In this report, your fund's results are compared to the 2017 U.S. survey universe.

The U.S. universe is comprised of 154 pension funds:

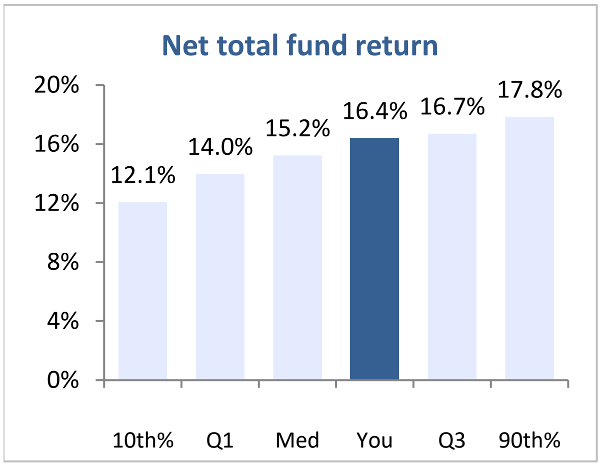
- Combined the funds had aggregate assets of $2.9 trillion.
- The funds range in size between $235 million and $218 billion.
- The median size was $8.3 billion (versus your $1.7 billion).
- 92 are corporate funds, 55 are public, and 7 are other.
- The median membership was 59,726 members (versus your 3,782 members). The median assets per member was $124,708 (versus your $457,774).



# 3

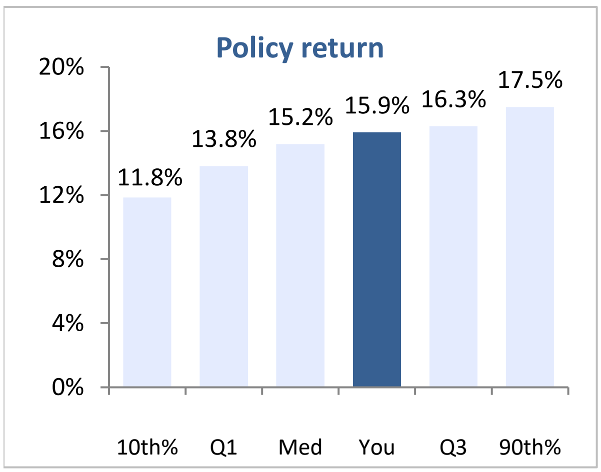
# Returns, value added and risk

## Net returns, policy returns and net value added

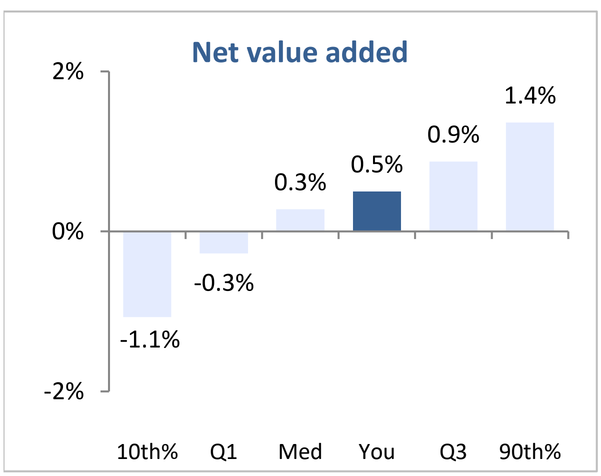



Your 2017 net total fund return was 16.4%. This was above the U.S. median of 15.2%.

Net return is a good indicator of a fund's performance. However, comparisons of total return do not help you understand the reasons behind relative performance. Therefore, we separate total return into its more meaningful components: policy return and net value added.




Policy return is the return you could have earned passively by indexing your investments according to your policy mix. Your 2017 policy return was 15.9%. This is above the U.S. median of 15.2%.




Your 2017 net value added was 0.5%. This was above the U.S. median of 0.3%.

## Policy asset mix

Differences in policy return are caused by differences in policy asset mix. Policy asset mix is a fund's long-term asset mix policy or target asset weights. Policy weights are usually established by an investment committee or board and are determined by long-term considerations, such as liability structure, risk tolerance and long-term capital market expectations.

**2017 Policy asset mix by asset class**

| Asset Class | Your Fund | U.S. Average |
|---|---|---|
| Stock | | |
| Employer Stock | 0.0% | 0.1% |
| U.S. Broad/All | 0.0% | 6.6% |
| U.S. Large Cap | 40.0% | 9.0% |
| U.S. Mid Cap | 0.0% | 0.7% |
| U.S. Small Cap | 0.0% | 1.8% |
| EAFE | 0.0% | 4.5% |
| Emerging | 0.0% | 2.2% |
| Global | 0.0% | 9.3% |
| Other | 20.0% | 0.5% |
| ACWI x U.S. | 15.0% | 5.5% |
| Stock - Total | 75.0% | 40.2% |
| Fixed Income | | |
| U.S. | 17.5% | 9.5% |
| U.S. Gov't | 0.0% | 1.4% |
| U.S. Credits | 0.0% | 1.1% |
| EAFE | 0.0% | 0.0% |
| Emerging | 0.0% | 0.9% |
| Global | 0.0% | 0.8% |
| Inflation Indexed | 0.0% | 1.3% |
| High Yield | 2.5% | 1.5% |
| Mortgages | 0.0% | 0.1% |
| Other | 0.0% | 0.7% |
| Cash | 0.0% | 0.0% |
| Long Bonds | 0.0% | 21.4% |
| Private Debt | 0.0% | 0.4% |
| Bundled LDI | 0.0% | 0.4% |
| Convertibles | 0.0% | 0.0% |
| Fixed Income - Total | 20.0% | 39.3% |
| Real Assets | | |
| Commodities | 0.0% | 0.5% |
| Infrastructure | 0.0% | 0.5% |
| REITs | 5.0% | 0.6% |
| Natural Resources | 0.0% | 0.5% |
| Real Estate ex-REITs | 0.0% | 5.0% |
| Other Real Assets | 0.0% | 0.4% |
| Real Assets - Total | 5.0% | 7.6% |
| Hedge Fund | 0.0% | 4.9% |
| Risk Parity | 0.0% | 0.6% |
| Funded TAA | 0.0% | 1.1% |
| Private Equity | | |
| Diversified Private Equity | 0.0% | 5.2% |
| Venture Capital | 0.0% | 0.2% |
| LBO | 0.0% | 0.4% |
| Private Credit | 0.0% | 0.4% |
| Other Private Equity | 0.0% | 0.1% |
| Private Equity - Total | 0.0% | 6.2% |
| Total | 100.0% | 100.0% |

# Calculation of your policy return and net value added

| Calculation of 2017 policy return and value added for East Bay Municipal Utility District | | | | | |
|---|---|---|---|---|---|
| Asset class | Policy weight | Net return* | Benchmark description | Benchmark return | Net value added |
| Stock | | | | | |
| U.S. Large Cap | 40.0% | 22.6% | Russell 3000 | 21.1% | 1.5% |
| U.S. Small Cap | | 14.6% | Russell 2000 | 14.6% | 0.0% |
| ACWI x U.S. | 15.0% | 26.5% | MSCI ACWI xUS gross | 27.8% | -1.3% |
| Other | 20.0% | 14.1% | CBOE BXM | 13.0% | 1.1% |
| Fixed Income | | | | | |
| U.S. | 17.5% | 3.0% | 57% BC Aggregate; 29% BC US 1-3 year Govt/Credit; 14% S&P/LSTA Performing Loans | 2.8% | 0.2% |
| High Yield | 2.5% | 4.9% | BC US 1-5 Year US High Yield Cash Pay | 6.4% | -1.5% |
| Cash | | 0.8% | US 90 day T bill | 0.8% | 0.0% |
| REITs | 5.0% | 6.6% | Your REIT benchmark | 6.1% | 0.5% |
| Total | 100.0% | | | | |
| Net total fund return | | | | | 16.4% |
| Policy return | | | | | 15.9% |
| Net value added (Net return - policy return) | | | | | 0.5% |

* If you were unable to provide full year net returns the default is to set the unavailable return equal to the benchmark return.

Your 2017 net value added was 0.5%. This was determined by subtracting your policy return of 15.9% from your net return of 16.4%.

- Policy return is the return a fund would have earned if it had passively implemented its policy mix through its benchmark indices. Your policy return equals the sum of your policy weights multiplied by your benchmarks for each asset class.
- Net value added equals your net return minus your policy return. It primarily reflects the contribution of active management.

## Returns and value added by asset class

The table below compares your fund's net returns, benchmark returns and net value added by asset class to the U.S. median.

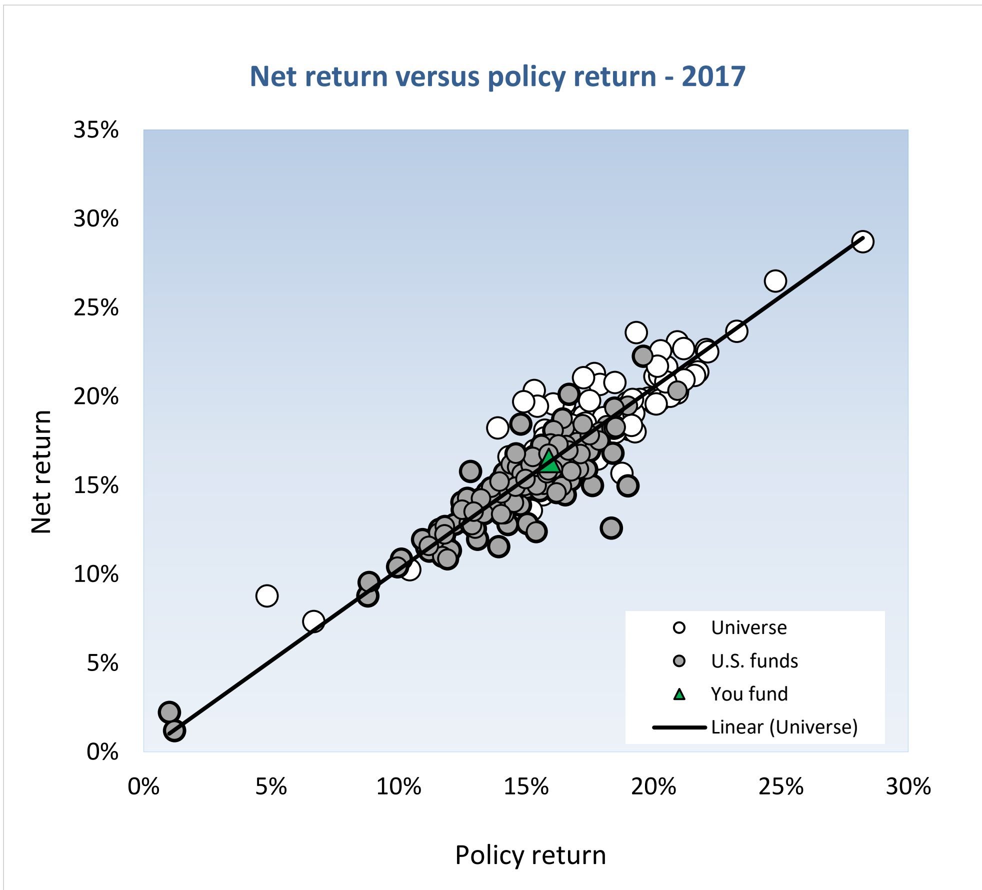
**2017 Returns and net value added by asset class**

| Asset class | Your fund: Net return[1] | Your fund: Benchmark return | Your fund: Net value added[2] | U.S. median: Net return | U.S. median: Benchmark return | U.S. median: Net value added[2] |
|---|---|---|---|---|---|---|
| Stock | | | | | | |
| U.S. Large Cap | 22.6 | 21.1 | 1.5 | 21.8 | 21.8 | 0.1 |
| U.S. Small Cap | 14.6 | 14.6 | 0.0 | 15.1 | 14.7 | 0.0 |
| ACWI x U.S. | 26.5 | 27.8 | -1.3 | 29.0 | 27.8 | 1.2 |
| Other | 14.1 | 13.0 | 1.1 | 16.9 | 17.9 | 0.0 |
| Total Stock | 20.5 | 20.3 | 0.2 | 24.3 | 23.9 | 0.4 |
| Fixed Income | | | | | | |
| U.S. | 3.0 | 2.8 | 0.2 | 4.1 | 3.5 | 0.4 |
| High Yield | 4.9 | 6.4 | -1.5 | 6.9 | 7.5 | -0.2 |
| Cash | 0.8 | 0.8 | 0.0 | 1.0 | 0.9 | 0.1 |
| Total Fixed Income | 3.1 | 3.3 | -0.1 | 7.6 | 7.5 | 0.3 |
| REITs | 6.6 | 6.1 | 0.5 | 8.5 | 6.9 | 0.3 |

1. Net return shown on this page equals the asset-weighted average of internal passive, internal active, external passive and external active actual returns for each asset class.
2. Net value added equals net return minus benchmark return. Net returns are calculated as reported gross return minus management fees, internal costs and performance fees for public assets.

## The correlation between net returns and policy returns

The primary reason for differences in total fund return is usually differences in asset mix policy. But asset mix policy matters more in some years than others. This plot of net return versus policy return demonstrates the extent to which investment policy explained differences in investment returns in 2017.



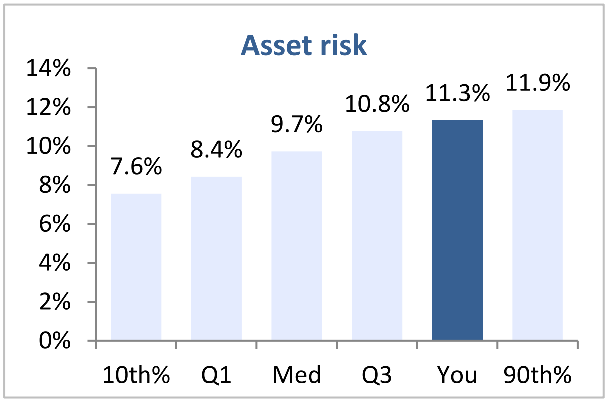

The $R^2$ of the regression of policy returns versus net returns in 2017 was 83%. This means that, on average, 83% of differences in net return for 2017 can be explained by differences in investment policy.

Generally, in any given year, the greater the difference between stock and bond returns, the more differences in net return can be explained by differences in policy return.

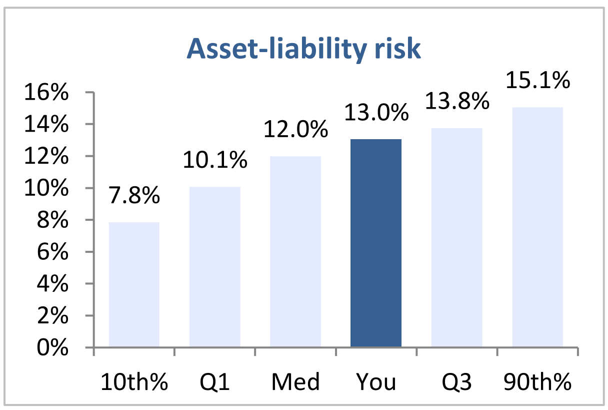
 

# Risk analysis

When assessing returns and value added it is important to also consider investment risk. Two important risk measures are asset risk and asset-liability risk.




Asset risk is the expected volatility of your plan's policy returns. Your asset risk at the end of 2017 was 11.3%, which was above the U.S. median of 9.7%.




Your asset-liability risk was 13.0%. This was above the U.S. median of 12.0%.

Asset-liability risk is the expected volatility of funded status caused by market factors. It is a function of the expected standard deviations of your asset risk, your marked-to-market liabilities and the correlation between the two.

In calculating risk levels, CEM does not use your specific policy benchmarks. Standard asset class proxies are used for each given asset class.

# 4

# Cost and cost effectiveness

# Your 2017 investment costs

Your 2017 total investment cost was 33.4 basis points. It is comprised of asset management fees and costs plus oversight, custodial and other costs. It excludes transaction costs, private asset performance fees and non-investment pension costs such as actuarial costs and benefit administration.

**Your 2017 investment management costs in $000's**

| | Internal & Co-Inv. | | External Passive | | External Active | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Asset Category | Passive | Active | Fees | Monitoring & Other | Base Fees | Under-lying | Perf. Fees[1] | Monitoring & Other | Total |
| Stocks | | | | | | | | | |
| U.S. Large Cap | | | 62 | | 994 | | 93 | | 1,150 |
| U.S. Small Cap | | | 19 | | 19 | | 1 | | 39 |
| ACWI x U.S. | | | | | 1,298 | | | | 1,298 |
| Other | | | | | 805 | | | | 805 |
| Fixed Income | | | | | | | | | |
| U.S. | | | | | 535 | | | | 535 |
| High Yield | | | | | 125 | | | | 125 |
| Real Assets | | | | | | | | | |
| REITs | | | | | 471 | | 40 | | 511 |
| Private Equity | | | | | | | | | |
| Total asset management costs excluding private asset performance fees | | | | | | | | | 4,464 |

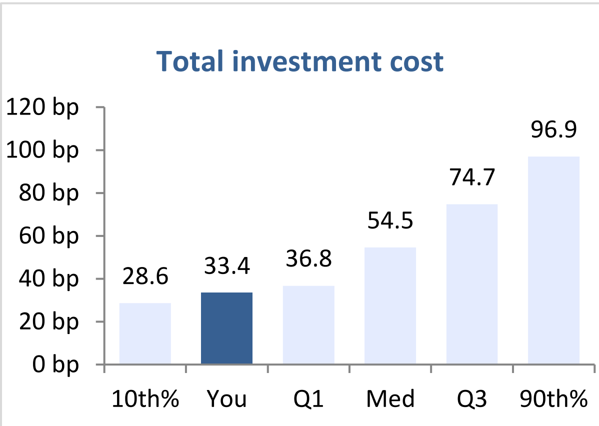
**Your 2017 oversight, custodial & other asset related costs ($000s)²**

| | |
|---|---|
| Oversight of the fund* | 250 |
| Custodial | 474 |
| Consulting and Performance Measurement | 169 |
| Audit | 18 |
| Other | n/a |
| Total oversight, custodial & other asset related costs | 912 |
| | |
| Total investment cost (excluding private asset performance fees and transaction costs) | 5,375 |
| | 33.4 bp |

1. Total cost excludes carry/performance fees for infrastructure, natural resources, real estate, and private equity. Performance fees are included for all other asset classes.
2. Excludes non-investment costs, such as PBGC premiums, actuarial fees, and preparing checks for retirees.
* Default costs applied. Refer to Appendix C.

## Total investment cost

Your plan's total investment cost, excluding transaction costs and private asset performance fees, was $5.4 million or 33.4 bps. This was below the U.S. median of 54.5 bps.




Your total investment cost consists of asset management costs and oversight, custodial and other costs.  A breakdown of these costs can be found on page 17.

Total investment cost excludes transaction costs, private asset performance fees and actuarial costs.

Comparisons of total investment cost must be interpreted with caution because differences are often due to differences in size and asset mix. Therefore, CEM calculates a benchmark cost for each fund to help them understand whether they are high or low cost after adjusting for differences in size and asset mix. The benchmark cost is determined using regression analysis on all participating funds in the CEM database.

## Benchmark cost analysis

Your fund's benchmark cost was 43.6 bps in 2017. Your benchmark cost can be thought of as the average cost for a fund with your size, asset mix and country of origin. Your actual total cost of 33.4 bps was below your benchmark cost.

| Benchmark cost analysis | | | |
|---|---|---|---|
| | | ($000) | basis points |
| | Your investment cost | 5,375 | 33.4 bps |
| *less* | Your fund's benchmark cost | 7,021 | 43.6 bps |
| *equals* | Your fund's cost savings | 1,645 | 10.2 bps |

The primary reasons why a fund's costs might be high (or low) compared to their benchmark cost are:

- Using a higher (or lower) cost implementation style (i.e., internal versus external, passive versus active). See page 20. For example, funds with more passively managed indexed assets tend to be lower cost than funds with active management. Similarly, funds with more internal management tend to be lower cost than those with more external management. Differences in implementation style are not taken into account in the benchmark equation, because they are considered to be within the control of sponsors.

- Paying more (or less) than similar size funds for same-style, same-asset-class investment management.

- Paying more (or less) than similar size funds for oversight, custodial and other costs.

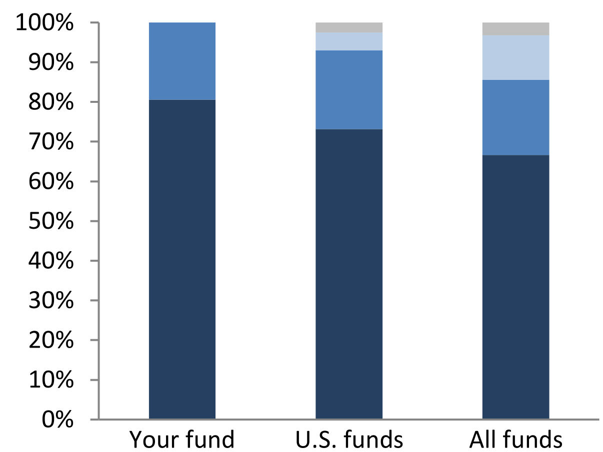
CEM determines a benchmark cost using regression analysis on its entire database. The $R^2$ for the benchmark cost equation was 74%. This means that fund size, asset mix and country of origin explain more than 74% of the differences in costs between funds. This is good explanatory power, but not perfect. Your benchmark cost is intended to be used only as an indicator and should not be interpreted too precisely.

## Implementation style

One reason why funds are high (or low) cost compared to their benchmark cost is differences in implementation style. Implementation style is defined as the way in which you implement your asset allocation. It includes internal, external, active, passive and fund-of-funds styles.

- Internal: managed by in-house investment managers.
- External: managed by outside or external investment managers.
- Passive: managed with the aim of replicating an index, immunizing liabilities, etc.
- Active: managed with the intention of outperforming an index.

**Implementation style**




| | Your fund | U.S. funds | All funds |
|---|---|---|---|
| Internal passive | 0.0% | 3% | 3% |
| Internal active | 0.0% | 4% | 11% |
| External passive | 19.4% | 20% | 19% |
| External active | 80.6% | 73% | 67% |

The greatest cost impact is usually caused by differences in the use of either:

- External active management – External active management tends to be much more expensive than either passive or internal management. Your fund was 81% externally actively managed. This was above the U.S. average of 73%.

- Fund of funds usage - Fund of funds tend to be the most expensive type of external active management because costs include the management fee of the fund of fund manager plus the management fees to the managers of each of the underlying funds invested in by the fund of fund manager.

The benchmark cost analysis does not adjust for the cost impact of implementation style because this is considered to be a choice within your control.

## Comparison of asset management costs by asset class

Comparisons of your costs to the universe must be interpreted with caution, given the breadth of the universe, which encompasses funds with widely varying size and asset mix. Peer-based analysis is needed to truly understand where you are paying more and where you are paying less on a comparable basis. See Page 6.

**2017 Asset management costs in basis points**

| | Your fund | | | | | | U.S. average | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Internal | | External | | | | Internal | | External | | | |
| Asset class | Passive | Active | Passive | Active | LP | FoF[1] | Passive | Active | Passive | Active | LP | FoF[1] |
| Stock | | | | | | | | | | | | |
| Employer Stock | | | | | | | 0.0 | | 11.0 | 1.1 | | |
| U.S. Broad/All | | | | | | | 2.8 | 11.4 | 2.3 | 40.0 | | |
| U.S. Large Cap | | | 2.2 | 30.8 | | | 1.6 | 12.5 | 2.3 | 42.7 | | |
| U.S. Mid Cap | | | | | | | 3.0 | 14.2 | 5.2 | 54.4 | | |
| U.S. Small Cap | | | 6.4 | 5.3 | | | 1.8 | 12.1 | 4.4 | 66.4 | | |
| EAFE | | | | | | | 13.4 | 17.3 | 5.6 | 53.2 | | |
| ACWI x U.S. | | | | 61.9 | | | 3.1 | 31.2 | 6.1 | 54.4 | | |
| Emerging | | | | | | | 8.0 | 33.8 | 8.9 | 72.3 | | |
| Global | | | | | | | 3.3 | 21.0 | 4.5 | 52.5 | | |
| Other | | | | 23.9 | | | 2.1 | 2.4 | 8.3 | 74.0 | | |
| Fixed Income | | | | | | | | | | | | |
| U.S. | | | | 22.3 | | | 2.2 | 4.4 | 3.1 | 22.8 | | |
| U.S. Gov't | | | | | | | | 3.4 | 2.9 | 8.7 | | |
| U.S. Credits | | | | | | | | 0.2 | 16.3 | 31.2 | | |
| Long Bonds | | | | | | | 1.1 | 5.7 | 6.2 | 18.9 | | |
| EAFE | | | | | | | | | | 38.0 | | |
| Emerging | | | | | | | | 29.3 | 2.7 | 54.0 | | |
| Global | | | | | | | | 5.2 | 2.7 | 31.9 | | |
| Inflation Indexed | | | | | | | 1.8 | 1.3 | 2.6 | 23.0 | | |
| High Yield | | | | 40.4 | | | 8.2 | 18.8 | 39.8 | 42.8 | | |
| Mortgages | | | | | | | | 12.8 | 2.5 | 42.8 | | |
| Private Debt | | | | | | | | 14.1 | | 90.3 | | |
| Absolute Return Bonds | | | | | | | | | | | | |
| Bundled LDI | | | | | | | | | 13.9 | 10.0 | | |
| Convertibles | | | | | | | | | | 57.2 | | |
| Other | | | | | | | 14.4 | 17.5 | -6.9 | 54.8 | | |
| Cash | | | | 0.0 | | | | 4.9 | | 10.2 | | |
| Commodities | | | | | | | 5.2 | 10.1 | 27.6 | 70.8 | | |
| Infrastructure[2] | | | | | | | | 43.5 | | 104.2 | 130.3 | 172.6 |
| Natural Resources[2] | | | | | | | | 32.5 | | 73.9 | 133.3 | 195.0 |
| REITs | | | | 60.4 | | | 4.6 | 13.2 | 7.0 | 57.4 | | |
| Real Estate ex-REITsex-REITs[2] | | | | | | | | 27.2 | | 93.1 | 131.2 | 181.4 |
| Other Real Assets[2] | | | | | | | | 12.6 | | 85.2 | | |
| Hedge Funds Total* | | | | | | | | | | 237.9 | | 306.9 |
| • Base fees top layer | | | | | | | | | | 147.3 | | 71.3 |
| • Perf. Fees top layer | | | | | | | | | | 88.7 | | 15.7 |
| • Underlying base & perf | | | | | | | | | | | | 219.5 |
| Risk Parity | | | | | | | | 10.0 | | 49.1 | | |
| Funded TAA | | | | | | | | 32.1 | | 94.2 | | |
| Diversified Private Equity[2] | | | | | | | | 22.8 | | | 162.2 | 231.7 |
| Venture Capital[2] | | | | | | | | 14.8 | | | 196.6 | 251.0 |
| LBO[2] | | | | | | | | | | | 180.5 | 195.2 |
| Private Credit[2] | | | | | | | | | | | 130.2 | 194.8 |
| Other Private Equity[2] | | | | | | | | 9.1 | | | 111.1 | |
| Total before overlays | | | | | | 27.7 | | | | | | 53.7 |
| Overlay management costs | | | | | | | | | | | | 1.1 |
| Total direct investment management cost | | | | | | 27.7 | | | | | | 54.2 |

[1] FoF stands for Fund-of-Funds. Fund of funds costs include management fees paid to the fund of funds manager plus fees paid to the manager of each of the underlying funds selected by the fund of funds manager.

2. External performance fees are excluded from private asset costs. Costs are as a percentage of the amount fees are based on; usually the committed amount during the commitment period, and unreturned invested capital afterwards.

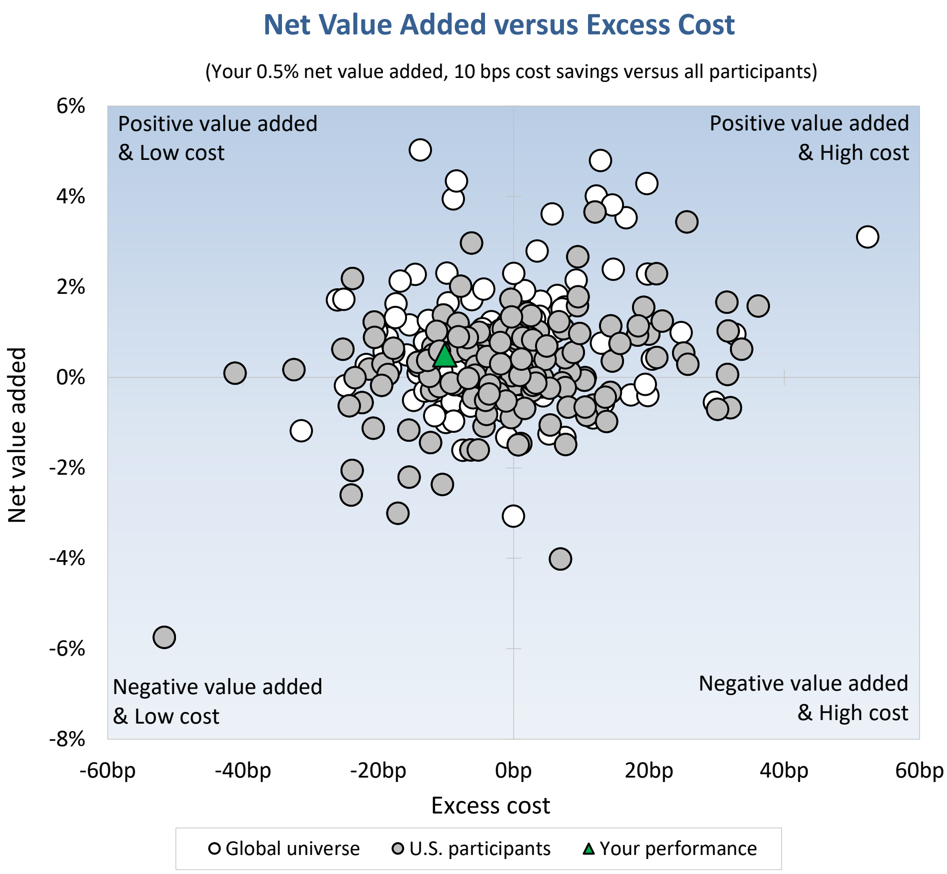
## Comparison of oversight, custodial and other investment costs

| Oversight, custodial and other costs | You | U.S. average |
|---|---|---|
| Oversight | 1.6 bps | 2.0 bps |
| Custodial | 2.9 bps | 1.1 bps |
| Consulting, performance measurement | 1.1 bps | 1.3 bps |
| Audit | 0.1 bps | 0.2 bps |
| Other | | 1.0 bps |
| Total | 5.7 bps | 5.6 bps |

## Cost effectiveness ranking

Being high or low cost is neither good nor bad. The more important question is, are you receiving sufficient value for your excess cost? At the total fund level, we provide insight into this question by combining your value added and your excess cost to create a snapshot of your 2017 cost effectiveness performance relative to that of the survey universe. For the 2017 year, your fund ranked in the positive gross value added, low cost quadrant.

In an ideal world, the more you pay (i.e., the higher your excess cost) the more you would get (i.e., the higher your value added). If this were true, you would see an upward sloping trend in the scatter chart above. Clearly, this is not the case. Our research over the past 27 years shows no consistent relationship between excess costs and the net value added they achieve.



# 5

# Plan data



# Investment and plan structures

## Performance-based fees

Were any of your external stock or fixed income mandates subject to performance fees in 2017?

| | # of funds with data | % Yes | % No |
|---|---|---|---|
| Your fund | 1 | Yes | |
| U.S. | 141 | 48% | 52% |

## Type of plans

| | # funds with data | Flat benefit | Career average | Final average | Other (or multiple) |
|---|---|---|---|---|---|
| Your fund | 1 | - | - | Yes | - |
| U.S. | 147 | 14% | 14% | 84% | 29% |

# Plan liabilities

## Indexation of retired members' benefits

To what extent are your retired members' benefits indexed to inflation?

| | Average contractual[1] indexation as % of CPI | % of Funds with contr. indexation > 0 where indexation is subject to a cap |
|---|---|---|
| Your fund | 100% | - |
| U.S. | 22% | 92% |

1. Several funds had contractual inflation protection subject to caps (ranging from 2% to 8%). Most of these funds have had close to 100% inflation protection during the last 5 years of low inflation and this is how we have recorded their inflation protection. However, in high inflation environments, we will have grossly overestimated their true inflation protection.

## Plan membership

| | # of Funds with data | Average # members | % Active | % Retired | % Other | Avg Assets per Member |
|---|---|---|---|---|---|---|
| Your fund | 1 | 3,782 | 48% | 45% | 7% | 457,774 |
| U.S. | 145 | 142,970 | 35% | 42% | 20% | 169,239 |

## Actuarial fees

| | # of Funds with data | Average Fees ($000s) | % of Total assets |
|---|---|---|---|
| Your fund | 1 | 69 | 0.4bp |
| U.S. | 143 | 724 | 1.3bp |

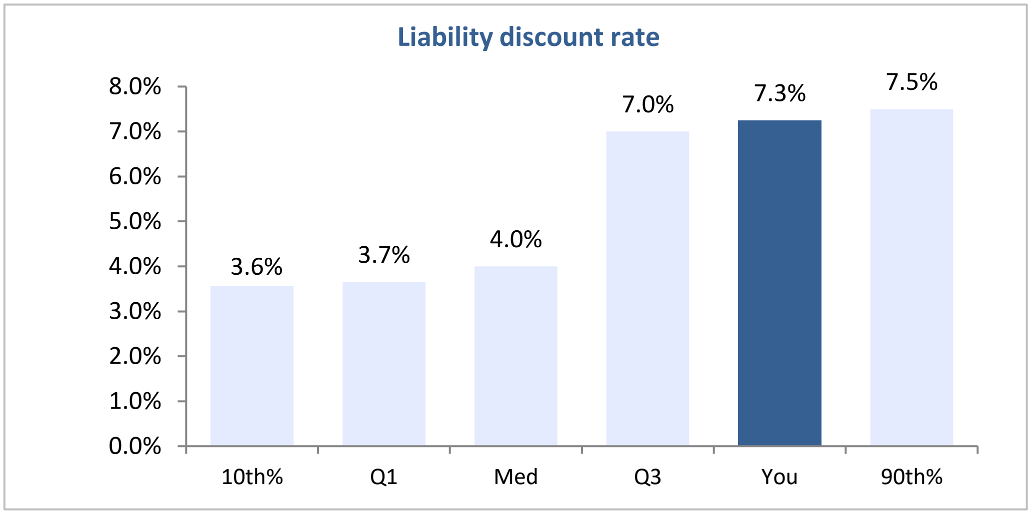
## Other plan data - Plan liabilities

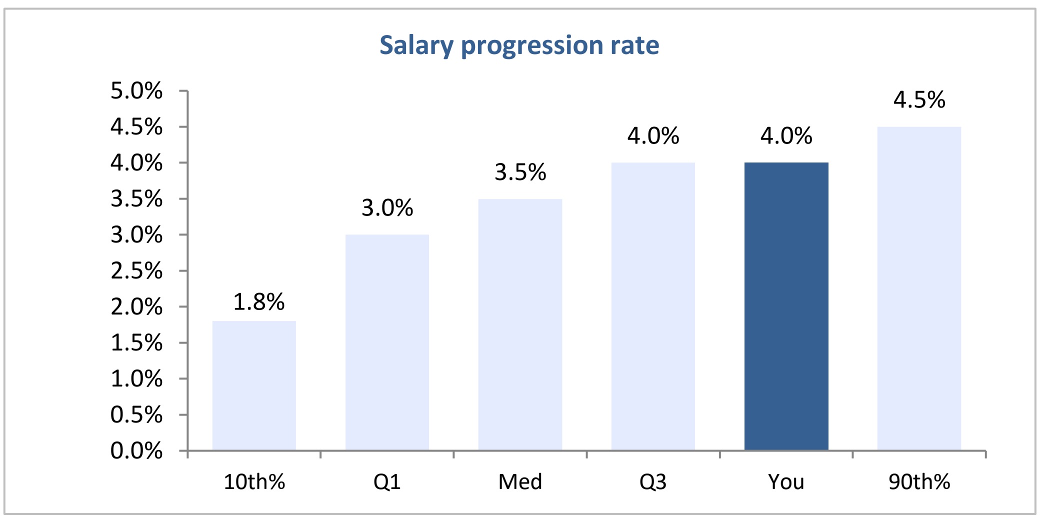
What % of the plan's liabilities are in respect to retired members?

| | # of Funds with data | % Plan liabilities for retired members |
|---|---|---|
| Your fund | 1 | 61% |
| U.S. | 127 | 51% |

## 2017 Valuation assumptions

Actuarial assumptions for funding purposes during 2017.



# 6

# Appendices

## Appendix A - Glossary of terms

**Average** - All averages are fund weighted (i.e., each fund is given equal weight, regardless of size).

**Benchmark cost** - Can be thought of as the predicted operating cost for a fund given its size, asset mix and country of origin. It is calculated using the cost function, which is determined from the survey database using regression analysis.

**Benchmark return** - Rate of return on an index of investable assets (such as the S&P500) designated as the benchmark portfolio against which the fund measures its own performance for that asset class.

**Category benchmarks** - Policy-weighted average of passive and active benchmarks given for each asset class.

**Direct investment management costs -**
a) For externally managed assets, it is the sum of all investment management fees, participation fees, commitment and carrying fees and should include all hidden fees netted from commingled asset pools.
b) For internally managed assets, it is the costs directly traceable to internally managed investments and should include: compensation and benefits of investment employees and support staff, related overhead (office rent, telephone, computer systems, etc.) and associated costs (conference, research, travel, subscriptions and memberships, etc.).

**Excess cost -** Difference between actual cost and benchmark cost.

**F statistic -** Measure of the statistical significance of the regression coefficients taken as a group. Generally, a regression equation with 5 coefficients and sample size greater than 20 is statistically significant if its F-statistic is greater than 3.

**Oversight, custodial and other costs,** the sum of:
a) Oversight costs which are (i) the salaries and benefits of executives and their assistants and clerical staff, carrying out duties directly associated with the oversight of plan assets, (ii) fees/salaries of Board of Trustees or Investment Committee based on the amount of time spent in this capacity, and (iii) office overhead (rent, utilities, telephone, office, computer systems, etc.) and associated costs (travel, subscriptions, memberships, etc.) all of which should be allocated on a pro rata governance and administration.
b) Custodial costs before any reductions relating to securities lending. Note that custodial costs for preparing benefit checks or relating to other asset pools should not be included.
c) Consulting and performance.
d) Audit and other measurements costs.

**Operating costs -** Sum of overlay, direct investment management and oversight, custodial and other costs.

**Overlay -** Derivative-based program, that is unfunded other than margin requirements.

**Passive -** Assets managed passively, i.e., indexed to broad capital market benchmarks or dedicated to matching a specific set of liabilities.

**Policy mix -** Reflects long term policy or target asset weights. Policy mix is often established by an investment committee or board and is determined by such long-term considerations as liability structure, risk tolerance and long-term capital markets prospects. If asset mix policy is expressed in ranges, our default is the midpoint of those ranges.

**Policy return -** The return a fund would have earned if it had passively implemented its policy mix through its benchmark indices. Policy return equals the sum of policy weights multiplied by benchmarks for each asset class.

**$R^2$ (Coefficient of determination) -** The percentage of the differences in the dependent variable explained by the regression equation. For example, an $R^2$ of 1 means 100% of the differences are explained and an $R^2$ of 0 means that none of the differences are explained.

**Value Added -** Difference between actual return and policy return.

# Appendix B - Data quality

We recognize that the value of the information contained in these reports is only as good as the quality of the data we receive. Our procedures for checking and improving the data include:

- **Constant improvement in survey clarity** - Years of feedback from survey participants has led to improved definitions and survey clarity.

- **Client confirmation** - A five-page summary of each respondent's data as it appears in our database was sent to all survey participants for confirmation prior to preparing this report. Your data is summarized in Appendix C (which begins on the following page).

- **Automated & manual checks** - We compare responses to norms for the survey universe and to each sponsor's prior year data when available. This typically results in questions that we email back to each survey respondent and follow up on by phone.

In addition, the quality of our data continues to improve as the universe of participants grows. Our confidence in the results improves with universe size as unbiased errors tend to average themselves out.

# Appendix C - Your data

Your data is summarized on the following pages. As discussed with you or the person who provided the data for your fund during the data confirmation process, there may be changes to your original survey responses for the following reasons:

1. **Returns not available** - We requested that you enter no value if full year returns for an asset class wer unavailable. The default for an unavailable return is to set it equal to your benchmark return for the same asset class, thereby effectively neutralizing that asset class when determining your in-category value added.

2. **Costs not given** - The costs of non-traditional assets and real estate are often buried in commingled funds and may not be worth the effort to obtain if their asset value is immaterial relative to your total fund. Therefore, if you report assets but do not report costs/fees we impute a figure using industry data. See the last page of Appendix C for any defaults used for your fund.

# Appendix C - Your Data

East Bay Municipal Utility District

| Plan info | 2017 | 2016 |
|---|---|---|
| Contact | Sophia Skoda | Dari Barzel |
| Type of fund (corporate, public, other) | Public | Public |
| Total fund size (Millions) | 1,731 | 1,492 |
| Are assets provided year end or average? | Year End | Year End |
| Total return for year ended | 16.4% | 8.2% |
| Is the return net or gross? | Net of all investment costs | Net of all investment costs |
| Do you have costs for selecting and monitoring external managers? | No | No |
| Total fund policy or benchmark return | 15.9% | 8.8% |
| Was your effective asset mix different from your physical asset mix? | No | No |
| External stock or fixed income mandates subject to performance fees? | Yes | Yes |
| **Ancillary data** | **2017** | **2016** |
| What is your hedging policy for: | | |
| Foreign non-U.S. Holdings? | 0.0% | 0.0% |
| What were your actuarial fees in 000s? | 69.1 | 164.1 |
| How many plan members/beneficiaries do you have: | | |
| Active - accruing benefits | 1,802 | 1,789 |
| Active - not accruing benefits | 0 | 0 |
| Retired - receiving benefits | 1,713 | 1,630 |
| Inactive - entitled to future benefits | 267 | 248 |
| What type of plans do you have? | Final Average | Final Average |
| To what extent are your retired members' benefits indexed to inflation? | | |
| Contractual % | 100.0% | 100.0% |
| If the indexation is subject to a cap, describe the cap | 3% (<85%) or 5% (>85%) funding level on a Projected Benefit Obligation basis | 3% (<85) or 5% (>85) funding level on a Projected Benefit Obligation basis |
| What % of the plan's liabilities pertain to retired members? | 61% | 58% |
| Most recent actuarial assumptions: | | |
| Discount rate | 7.3% | 7.3% |
| Expected rate of return on assets | 7.3% | 7.3% |
| Salary increase rate | 4.0% | 4.0% |

# Appendix C - Your data: Policy weights and benchmarks

East Bay Municipal Utility District

| Asset class | Year | Policy weight | Benchmark description | Return |
|---|---|---|---|---|
| Stock - U.S. Large Cap | 2017 | 40.0 | Russell 3000 | 21.1 |
| | 2016 | 40.0 | Russell 3000 | 12.7 |
| | 2015 | 40.0 | Russell 3000 | 0.5 |
| Stock - U.S. Small Cap | 2017 | 0.0 | Russell 2000 | 14.6 |
| | 2016 | 0.0 | Russell 2000 | 21.3 |
| | 2015 | 0.0 | Russell 2000 | -4.4 |
| Stock - ACWI x U.S. | 2017 | 15.0 | MSCI ACWI xUS gross | 27.8 |
| | 2016 | 15.0 | MSCI ACWI xUS gross | 5.0 |
| | 2015 | 15.0 | MSCI ACWI x US gross | -5.3 |
| Stock - Other | 2017 | 20.0 | CBOE BXM | 13.0 |
| | 2016 | 20.0 | CBOE BXM | 7.1 |
| | 2015 | 20.0 | CBOE BXM | 5.2 |
| Fixed Income - U.S. | 2017 | 17.5 | 57% BC Aggregate; 29% BC US 1-3 year Govt/Credit; 14% S&P/LSTA Performing Loans | 2.8 |
| | 2016 | 17.5 | 57% BC Aggregate; 29% BC US 1-3 year Govt/Credit; 14% S&P/LSTA Performing Loans | 3.3 |
| | 2015 | 17.5 | 57% BC Aggregate; 29% BC US 1-3 year Govt/Credit; 14% S&P/LSTA Performing Loans | 0.5 |
| Fixed Income - High Yield | 2017 | 2.5 | BC US 1-5 Year US High Yield Cash Pay | 6.4 |
| | 2016 | 2.5 | BC US 1-5 Year US High Yield Cash Pay | 16.2 |
| | 2015 | 2.5 | BC US 1-5 Year US High Yield Cash Pay | -5.1 |
| Cash | 2017 | 0.0 | US 90 day T bill | 0.8 |
| | 2016 | 0.0 | US 90 day T bill | 0.3 |
| | 2015 | 0.0 | US 90 day T bill | |
| REITs | 2017 | 5.0 | Your REIT benchmark | 6.1 |
| | 2016 | 5.0 | Your REIT benchmark | 9.2 |
| | 2015 | 5.0 | Your REIT benchmark | 8.5 |

# Appendix C - Your Data: Assets, Returns and Costs

East Bay Municipal Utility District

| Asset class | Year | Assets (millions): Externally managed Indexed: Assets | Return | Externally managed Active: Assets | Return | # of mgrs | Fees/Costs in 000s: Externally managed Indexed: Fees | Over-sight | Total 000s | bps[1] | Externally managed Active: Base Fees | Perform Fees | Internal & Other | Total 000s | bps[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stock - U.S. Large Cap | 2017 | 303.7 | 21.7% | 389.4 | 23.6% | 3 | 62.1 | | 62.1 | 2.2 | 994.3 | 93.3 | | 1,087.6 | 30.8 |
| | 2016 | 256.8 | 12.1% | 315.8 | 10.8% | 3 | 72.5 | | 72.5 | 3.0 | 856.2 | 60.4 | | 916.6 | 30.2 |
| | 2015 | 231.1 | 1.0% | 290.3 | 3.0% | 4 | 70.6 | | 70.6 | 3.1 | 827.7 | 63.5 | | 891.2 | 31.1 |
| Stock - U.S. Small Cap | 2017 | 32.9 | 22.4% | 39.4 | 8.6% | 1 | 19.0 | | 19.0 | 6.4 | 18.9 | 1.2 | | 20.1 | 5.3 |
| | 2016 | 26.9 | 11.9% | 36.3 | 24.0% | 1 | 17.5 | | 17.5 | 6.9 | 15.9 | 1.7 | | 17.6 | 5.4 |
| | 2015 | 24.0 | -1.1% | 29.3 | -2.4% | | 12.5 | | 12.5 | 5.2 | 15.1 | 29.0 | | 44.1 | 14.9 |
| Stock - ACWI x U.S. | 2017 | | | 234.3 | 27.1% | 2 | | | | | 1,298.0 | | | 1,298.0 | 61.9 |
| | 2016 | | | 185.4 | 2.7% | 2 | | | | | 1,120.1 | | | 1,120.1 | 61.0 |
| | 2015 | | | 181.6 | -2.8% | 2 | | | | | 1,144.5 | | | 1,144.5 | 63.6 |
| Stock - Other | 2017 | | | 359.5 | 14.3% | 3 | | | | | 805.1 | | | 805.1 | 23.9 |
| | 2016 | | | 315.4 | 9.4% | 3 | | | | | 772.6 | | | 772.6 | 25.6 |
| | 2015 | | | 288.9 | 3.7% | 3 | | | | | 742.7 | | | 742.7 | 26.1 |
| Fixed Income - U.S. | 2017 | | | 243.6 | 3.2% | 3 | | | | | 535.4 | | | 535.4 | 22.3 |
| | 2016 | | | 236.5 | 3.7% | 3 | | | | | 526.8 | | | 526.8 | 22.7 |
| | 2015 | | | 228.5 | 0.6% | 3 | | | | | 512.1 | | | 512.1 | 22.5 |
| Fixed Income - High Yield | 2017 | | | 31.6 | 5.3% | 1 | | | | | 124.9 | | | 124.9 | 40.4 |
| | 2016 | | | 30.2 | 9.2% | 1 | | | | | 113.4 | | | 113.4 | 39.2 |
| | 2015 | | | 27.7 | -8.6% | 1 | | | | | 120.0 | | | 120.0 | 41.4 |
| Cash | 2017 | | | 9.6 | 0.8% | | | | | | | | | | |
| | 2016 | | | 6.9 | 0.5% | | | | | | | | | | |
| | 2015 | | | 4.8 | 0.3% | | | | | | | | | | |
| REITs | 2017 | | | 87.3 | 7.2% | 2 | | | | | 471.0 | 40.4 | | 511.4 | 60.4 |
| | 2016 | | | 82.0 | 9.4% | 2 | | | | | 450.0 | 172.8 | | 622.8 | 76.5 |
| | 2015 | | | 80.8 | 8.6% | 2 | | | | | 411.7 | 172.6 | | 584.3 | 74.8 |

1. Cost in basis points = total cost / average of beginning and end of year holdings

# Appendix C - Your Data: Oversight, custodial and other costs

East Bay Municipal Utility District

| Oversight, custodial and other costs | | | |
|---|---|---|---|
| | | 000s | bps |
| Oversight of the fund assets[1] | 2017 | 249.8 | 1.6bp |
| | 2016 | 190.0 | 1.3bp |
| | 2015 | 177.9 | 1.3bp |
| Custodial total | 2017 | 474.1 | 2.9bp |
| | 2016 | 409.8 | 2.8bp |
| | 2015 | 373.3 | 2.7bp |
| Consulting / performance measurement | 2017 | 169.4 | 1.1bp |
| | 2016 | 183.7 | 1.3bp |
| | 2015 | 164.4 | 1.2bp |
| Audit | 2017 | 18.4 | 0.1bp |
| | 2016 | 18.1 | 0.1bp |
| | 2015 | 17.9 | 0.1bp |
| Total | 2017 | 911.7 | 5.7bp |
| | 2016 | 801.7 | 5.6bp |
| | 2015 | 733.5 | 5.3bp |

1. Oversight includes the salaries and benefits of executives and their staff responsible for overseeing the entire fund or multiple asset classes and the fees / salaries of the board or investment committee. All costs associated with the above including fees / salaries, travel, director's insurance and attributed overhead should be included.

| Summary of total investment costs[2] | | | |
|---|---|---|---|
| | | 000s | bps |
| Investment management costs | 2017 | 4,463.6 | 27.7bp |
| | 2016 | 4,179.9 | 29.0bp |
| | 2015 | 4,122.0 | 29.9bp |
| Oversight, custodial & other costs | 2017 | 911.7 | 5.7bp |
| | 2016 | 801.7 | 5.6bp |
| | 2015 | 733.5 | -- |
| Total | 2017 | 5,375.3 | 33.4bp |
| | 2016 | 4,981.6 | 34.6bp |
| | 2015 | 4,855.5 | 35.2bp |

2. Total investment cost excludes transaction costs and performance fees for private assets.

# Appendix C - Your Data: Defaults

As discussed with you during the data confirmation process, the following defaults and footnotes are applicable to your data:

• Oversight: A default of 1.6 bps was applied because it was not provided.

## EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: November 15, 2018

MEMO TO: Retirement Board

FROM: Lisa Sorani, Manager of Employee Services L.S.

SUBJECT: Benefit Plan Renewals for Calendar Year 2019

The purpose of this memo is to inform the Retirement Board of health plan premium changes for retirees for benefit Plan Year 2019.

The District maintains Health Insurance and Dental Insurance plans for District Retirees. Retirees under age 65 are enrolled on the same plans as District active employees. The retirees over age 65 are enrolled on Medicare plans with lower premiums. When retirees cover family members who are under age 65, the dependents under age 65 are effectively priced based on the active employee pricing. These are called Mixed Medicare Rates, and they account for the asterisks and note stating "depends on coverage level selected and age of dependents."

Listed below is a summary of the retiree medical and dental premium rate changes for 2019. There are two new health plans for Retirees, Sutter Health Plus and Anthem CalCare.

| **Early Retiree Health Plans**<br>**Note: Early Retirees (under age 65) also participate on these Medical Plans** | **Percent Premium Increase/Decrease** |
|---|---|
| Kaiser (includes new hearing aid coverage) | +6.2% |
| Kaiser CDHP (high deductible plan) | +6.0% |
| ACWA/JPIA Blue Cross Classic | +1.7% |
| ACWA/JPIA Blue Cross CDHP | +1.1% |
| Sutter Health Plus HMO vs HealthNet 2018 | NA new plan |
| Sutter Health Plus CDHP vs HealthNet 2018 | NA new plan |
| **Medicare Retiree Health Plans**<br>**Note: Early Retirees (under age 65) are covered on Employee Medical Plans** | **Percent Premium Increase/Decrease** |
| Kaiser Sr. Advantage High (includes new hearing aid coverage) | +7.9 % * |
| Kaiser Sr. Advantage Low (includes new hearing aid coverage) | +7.8 % * |
| ACWA/JPIA Blue Cross Age 65+ | +1.0 % * |
| Anthem Cal Care HMO vs HealthNet 2018 | NA new plan |
| Delta Dental Retiree Delta Care DHMO | flat |
| Delta Dental Retiree Delta Premier PPO | +13.0% |

*Depends on coverage level selected and age of dependents covered

*depends on coverage level selected and age of dependents covered.

Trends

The national trend for medical expenses for 2019, defined as the projected percentage increase in the cost to treat patients from one year to the next assuming that benefits remain the same, is 6% according to Price Waterhouse Coopers. The national trend has been coming down since 2007, and has flattened around 6%. The national trend has been between 6% - 6.5% the past three years.

In California, the cost of care is generally highest in the Bay Area. Both CALPERS and ACWA/JPIA charge their highest premiums in the Bay Area across all plans. CALPERS was able to keep their overall increases across California to 1% but that was in part due to two buy downs, utilizing funds from its health reserve, which offset the cost of otherwise high increases. CALPERS also dropped their Blue Shield Access+ plan from the Bay Area.

The California Exchange, Covered California, can keep rates lower when they have more participation. Under Covered California, there are other (low population) counties with higher costs than the Bay Area. Their overall increase across California for 2019 is 8.7%.

Medical

In 2018, nearly 2% of the increase on Kaiser and Health Net was attributable to the Health Insurance Tax (HIT). This tax was suspended in 2019 (it was also suspended in 2017). The suspension of the HIT had a positive impact on our 2019 rates.

The plan design changes made at the start of 2018 to the Anthem Blue Cross PPO plans at ACWA/JPIA (dropped Castlight, increased out of pocket maximums, added value-based surgery benefit), helped keep their rate increase low again for 2019. ACWA/JPIA made an additional change for 2019 by changing the Pharmacy Benefit Manager from ExpressScripts to MedImpact. This change is expected to provide further cost savings.

Kaiser is using 4.35% as their trend for Northern California. However, a mix of high cost claims of the District's covered employees, and the addition of hearing aid coverage to the District's plans, contributed to our higher than trend increases in the District's premium for 2019. The District's Kaiser premiums are 100% credible. This means the premium costs are based purely on the District members' usage during the prior year. The review period for the 2019 rate is January 2017-December 2017. In this renewal period, the pooling price (which defines the lower limit of a high cost claim) was increased to $280,000 and there were five high cost claims creating a 12.4% increase in the Per Member/Per Month cost over the prior period for District employees' care at Kaiser.

Specifically for our Medicare retirees we added Anthem Cal Care HMO through ACWAJPIA as a replacement for HealthNet, which has a small annual premium savings over HealthNet, but is a very similar plan to the HealthNet Medicare plan. Sutter Health Plus did not have a medicare coordinated plan for us to offer our medicare retirees. Staff has been in direct contact with all 80 retirees who were on HealthNet to ensure a smooth transition for them to their new health plans. The work began in July with letters, meetings, and phone calls. Most of the retirees are transitioning to Cal Care or to the Anthem PPO. A few moved to Kaiser.

Approximately three retirees elected to drop District health insurance coverage all together during open enrollment and after losing HealthNet.

Dental

In 2017, the District also transitioned the retiree dental plan to a self-funded plan. Staff analysis shows that in the long–term, this change will help keep rate increases lower for retirees. Usage in 2018, however, did create a need to increase the funding for this retiree dental plan. The premiums will increase by 13% for 2019. The other retiree dental plan, Delta Dental Retiree Delta Care DHMO, was maintained as a fully-insured plan and costs will remain flat for 2019.

Attachments: EBMUD Retiree Pre Age 65 Health Plan Premium Rates
EBMUD Retiree 65+ Health Plan & Dental Premium Rates January 1, 2019

ATTACHMENT 1

# EBMUD EMPLOYEE and RETIREE PRE AGE 65 HEALTH PLAN PREMIUM RATES
## January 1, 2019

| KAISER | 2018 Rates | 2019 Rates | % Change |
|---|---|---|---|
| **KAISER HMO** | | | |
| Single | $629.22 | $668.09 | 6.18% |
| Double | $1,258.44 | $1,336.17 | 6.18% |
| Family | $1,780.69 | $1,890.68 | 6.18% |
| **KAISER CDHP** | | | |
| Single | $557.83 | $591.51 | 6.04% |
| Double | $1,115.66 | $1,183.03 | 6.04% |
| Family | $1,578.67 | $1,673.98 | 6.04% |

| HEALTHNET 2018 / Sutter Health Plus 2019 | 2018 Rates | 2019 Rates | % Change |
|---|---|---|---|
| **HEALTH NET HMO** | | | |
| Single Rate | $1,354.31 | $736.32 | -45.63% |
| Double | $2,708.58 | $1,472.65 | -45.63% |
| Family | $3,832.61 | $2,083.79 | -45.63% |
| **HEALTH NET CDHP** | | | |
| Single Rate | $1,251.32 | $581.05 | -53.57% |
| Double | $2,502.68 | $1,472.65 | -41.16% |
| Family | $3,541.27 | $1,644.38 | -53.57% |

| BLUE CROSS | 2018 Rates | 2019 Rates | % Change |
|---|---|---|---|
| **BLUE CROSS PPO** | | | |
| Single | $987.92 | $1,026.08 | 3.86% |
| Double | $2,014.85 | $2,093.08 | 3.88% |
| Family | $2,709.26 | $2,702.80 | -0.24% |
| **BLUE CROSS CDHP** | | | |
| Single | $792.31 | $822.84 | 3.85% |
| Double | $1,613.86 | $1,676.44 | 3.88% |
| Family | $2,169.38 | $2,164.21 | -0.24% |

| DELTA DENTAL | 2018 Rates | 2019 Rates | % Change |
|---|---|---|---|
| **DELTA DENTAL** | | | |
| Single | $72.95 | $76.33 | 4.63% |
| Double | $145.90 | $152.66 | 4.63% |
| Famiily | $204.26 | $213.72 | 4.63% |

# EBMUD RETIREE 65+ HEALTH PLAN & DENTAL PREMIUM RATES
## January 1, 2019

| KAISER | 2018 Rates | 2019 Rates | % Change |
|---|---|---|---|
| **Sr Adv - HIGH OPTION PLAN** | | | |
| Single Rate | $318.20 | $345.06 | 8.44% |
| Double (1Sr. Adv + 1 < 65) | $947.42 | $1,013.14 | 6.94% |
| Couple (both with Senior Advantage) | $636.40 | $690.12 | 8.44% |
| Family (1 Sr. Adv + 1 <65 + dep(s) <65) | $1,469.67 | $1,567.65 | 6.67% |
| Couple (both Sr Adv) + dep(s) < 65 | $1,158.65 | $1,244.63 | 7.42% |
| **Sr Adv - LOW OPTION PLAN** | | | |
| Single Rate | $272.96 | $294.67 | 7.95% |
| Double (Sub. Sr. Adv + 1 < 65) | $902.18 | $962.75 | 6.71% |
| Family (Sub Sr. Adv + 1 <65 + dep(s) <65) | $1,424.43 | $1,517.26 | 6.52% |
| Couple (both Sr Adv) + dep(s) < 65 | $1,068.17 | $1,143.85 | 7.09% |

| HealthNet 2018 vs ANTHEM CAL CARE 2019 | 2018 Rates | 2019 Rates | % Change |
|---|---|---|---|
| **HEALTH NET SENIORITY PLUS vs ANTHEM CALCARE** | | | |
| Single Rate | $587.52 | $554.58 | -5.61% |
| Double (1 Senior Plus + 1 <65) | na | na | na |
| Double - both Seniority Plus | $1,175.04 | $1,099.32 | -6.44% |
| Family (Sub Sr. Plus + 1 <65 + dep(s) <65) | na | na | na |
| Family (Couple both Sr. Plus) + dep(s) < 65 | $2,529.35 | $1,563.04 | -38.20% |

| BLUE CROSS | 2018 Rates | 2019 Rates | % Change |
|---|---|---|---|
| **BC MEDICARE COORDINATED PLAN** | | | |
| Single (Retiree >65 with Medicare) | $565.66 | $570.67 | 0.89% |
| Double (1>65 with Medicare + 1 <65) | $1,543.69 | $1,586.86 | 2.80% |
| Double (Couple>65 with Medicare) | $1,149.22 | $1,159.50 | 0.89% |
| Family (1>65 with Medicare + 1 <65 + dep(s) | $2,287.00 | $2,247.39 | -1.73% |
| Family (Couple >65 with Medicare + dep(s) | $1,588.30 | $1,495.97 | -5.81% |

| DELTA DENTAL | 2018 Rates | 2019 Rates | % Change |
|---|---|---|---|
| **DELTA PREMIER** | | | |
| Retiree | $33.32 | $37.67 | 13.06% |
| Retiree + 1 | $59.95 | $67.78 | 13.06% |
| Retiree + 2 or more | $84.97 | $96.07 | 13.06% |
| **DELTA CARE** | | | |
| Retiree | $30.71 | $30.71 | 0.00% |
| Retiree + 1 | $51.50 | $51.50 | 0.00% |
| Retiree + 2 or more | $75.86 | $75.86 | 0.00% |

**NOTE: Retirees/spouses 65+ required to have Part A and Part B Medicare**