EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 16, 2017

MEMO TO: Members of the Retirement Board

THROUGH: Laura Brunson, Manager of Human Resources

FROM: Lisa Sorani, Manager of Employee Services EG for LS

SUBJECT: Retirement Board Regular Meeting – March 16, 2017

A regular meeting of the Retirement Board will convene at 8:30 a.m. on Thursday, March 16, 2017 in the Training Resource Center (TRC1) of the Administration Building.

Enclosed are the agenda for the March 16, 2017 meeting and the minutes for the January 19, 2017 regular meeting. The package also includes the following: **(1) ACTION** items: Adopt Updated Investment Policy to include Mission, Investment Beliefs, and an additional Investment Objective, Approve ESG Implementation Plan, Authorization to Join INCR, Approve RFP for Proxy Voting Services, Determine the annual retiree Cost of Living Adjustment (COLA) to be effective July 1, 2017; **(2) INFORMATION** items: Talking Points on Retirement Board Actions on ESG, 4th Quarter Performance Review as of December 31, 2016, Presentation from WAMCO: Discussion of Bank Loan and Short-Term High Yield Portfolios, Training Module: Crisis/Risk Offset, Election for Expired Term of Employee Member of Retirement Board, Annual Report on Retiree COLA and HIB; **(3) REPORTS FROM THE RETIREMENT BOARD**.

LS:eg

Enclosures

AGENDA

EBMUD EMPLOYEES' RETIREMENT SYSTEM
March 16, 2017
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.

CONSENT CALENDAR:

1. Approval of Minutes – Regular meeting of January 19, 2017

2. Ratifying and Approving Investment Transactions by Counselors for December 2016 and January 2017 (R.B. Resolution No. 6856)

3. Ratifying and Approving Short-Term Investment Transactions by Treasurer for December 2016 and January 2017 (R.B. Resolution No. 6857)

4. Approving Treasurer's Statement of Receipts and Disbursements for December 2016 and January 2017

ACTION:

5. Adopt Updated Investment Policy to include Mission, Investment Beliefs, and an additional Investment Objective – S. Skoda

6. Approve ESG Implementation Plan – S. Skoda

7. Authorization to Join INCR – S. Skoda

8. Approve RFP for Proxy Voting Services – S. Skoda

9. Determine the annual retiree Cost Of Living Adjustment (COLA) to be effective July 1, 2017 (R.B. Resolution No. 6858) – E. Grassetti

INFORMATION:

10. Talking Points on Retirement Board Actions on ESG – S. Skoda

11. 4th Quarter Performance Review as of December 31, 2016 – S. Skoda

12. Presentation from WAMCO: Discussion of Bank Loan and Short-Term High-Yield Portfolios – S. Skoda

13. Training Module: Crisis/Risk Offset – S. Skoda

14. Election for Expired Term of Employee Member of Retirement Board Seat – E. Grassetti

15. Annual Report on Retiree COLA and HIB – E. Grassetti

REPORTS FROM THE RETIREMENT BOARD:

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

ITEMS TO BE CALENDARED:

- Fund Inflection Point
- RFP for Actuarial Audit
- 3-Year Review of Covered Calls Performance

MEETING ADJOURNMENT:

The next regular meeting of the Retirement Board will be held at 8:30 a.m. on Thursday, May 18, 2017.

2017 Retirement Board Meetings

May 18, 2017
July 20, 2017
September 21, 2017
November 16, 2017

MINUTES OF THE RETIREMENT BOARD
January 19, 2017

A regular meeting of the Retirement Board convened on Thursday, January 19, 2017 at 8:40 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, Lisa Ricketts and Marguerite Young.

The following staff members were present: Dari Barzel, Laura Brunson, Elizabeth Grassetti, Lourdes Matthew, Sophia Skoda, and Lisa Sorani.

PUBLIC COMMENT

There was none.

ANNOUNCEMENT FROM CLOSED SESSION:

1. Lourdes Mathew announced that two disability retirements were approved in closed session.

   a. Application for Disability Retirement for Wilson Jones IV was moved by Frank Mellon and Seconded by Tim McGowan. Retirement Board Resolution 6851carried (5-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (None).

   b. Application for Disability Retirement for Karl Mielenz was moved by Frank Mellon and Seconded by Tim McGowan. Retirement Board Resolution 6852 carried (5-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (None).

CONSENT CALENDAR

2 - 5. **Consent Calendar** – A motion to move the consent calendar with one correction was made by Frank Mellon and seconded by Marguerite Young. The motion carried (5-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (None).

ACTION

6. **Adopt the Actuarial Valuation of the Retirement System as of June 30, 2016** – Andy Yeung and Dirk Adamsen from Segal Consulting presented the FY 2016 Actuarial Report. They reviewed the notable results of the study including that the funded ratio decreased slightly from 69% to 68.8% with the decrease to the assumed rate of return to 7.25% from 7.50%. The number of retirees is 1,630, the number of active employees is 1,789, and the number of vested members is 248. There was discussion regarding the inflection point when there will be more active employees than retirees. Currently the active to retired ratio is at 1.05 up from 0.76 in 2007.

There was discussion regarding the possibility of joining a larger pension plan, such as CALPERS, and whether such a move would provide more security to the system particularly in down markets. Mr. Yeung said that there had been a study by Orange County Employees Retirement System about 15 years ago on whether to join a larger fund, and they found it was less expensive to stay independent.

Mr. Yeung then reviewed the Health Insurance Benefit (HIB) report. The funding level increased to 23.3% from 20.7%. The total Employer cost for the HIB declined from 5.43% in FY17 to 5.19% in FY18. The drop in rate was in part due to lower health plan costs for retirees.

The recommended contribution rates for FY 2018 are very similar to the rates for FY 2017 and are shown below:

Actuarially Derived Contribution Rates Employer						
	FY18 Actuary Recommendation		**FY17 Adopted**		**FY17 Actuary Recommendation**	
	1955/1980 Plan	**2013 Plan**	**1955/1980 Plan**	**2013 Plan**	**1955/1980 Plan**	**2013 Plan**
Pension	37.92%	31.30%	37.71%	30.92%	35.91%	29.42%
HIB	5.26%	4.86%	5.51%	5.06%	5.37%	4.95%
Total	**43.18%**	**36.16%**	**43.22%**	**35.98%**	**41.28%**	**34.37%**
Actuarially Derived Contribution Rates: Member						
	FY18 Actuary Recommendation		**FY17 Adopted**		**FY17 Actuary Recommendation**	
	1955/1980 Plan	**2013 Plan**	**1955/1980 Plan**	**2013 Plan**	**1955/1980 Plan**	**2013 Plan**
Pension	8.66%	8.75%	8.66%	8.75%	8.66%	8.75%
HIB	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%
Total	**8.75%**	**8.84%**	**8.75%**	**8.84%**	**8.75%**	**8.84%**

Alex Coate moved adoption of the Actuarial Valuation and the FY18 contribution rates. Doug Higashi seconded the motion. The motion carried (5-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (None).

7. **Declaring the interest rate to be credited to Members Contributions for Period Ending December 31, 2016** - Staff requested approval of the interest rate to be applied to accumulated Member contributions. In compliance with Retirement Board Rule B-9, the annual rate was determined to be 7.50%. The Retirement Board Resolution 6855 declares that a semi-annual rate of 3.75% be credited effective December 31, 2016. Frank Mellon moved the resolution, and Alex Coate seconded it. The motion carried (5-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (None).

INFORMATION

8. **3rd Quarter Performance Review as of September 30, 2016** - Sarah Bernstein from PCA presented the performance review. The portfolio was at $1.40 Billion and was up $50 million for the quarter (3.6%) and $142 million for the year (10.7%). She said that Domestic Equities were in line with benchmarks for the quarter, and that the rest were above the benchmark. She highlighted Covered Calls which returned 12.4% for the year, vs. their benchmark of 8.5%, and real estate which returned 17.4% for the year vs. the benchmark of 15.5%. Intech underperformed the benchmark, as did Opus. They are both on watch. Non-Core Fixed Income outperformed the benchmark modestly. The portfolio was in the top quartile for performance for the 1, 3, 5 and 10 year periods. The 5-year return was at the top for the peer group.

9. **Presentation from Investor Network on Climate Risk (INCR)** – Reverend Kirsten Snow Spaulding, Director, Investor Programs at CERES, spoke on engagement opportunities working with other investors on climate change, water scarcity, and sustainability challenges. Ceres Investor Network on Climate Risk (INCR) has 125 members including the largest pension funds and largest asset managers in North America.

10. **ESG: Update on ERS Climate Change Exposure** - Melissa Galla and Avantika Saisekar from Northern Trust presented the system's ESG portfolio analysis. They reviewed a snapshot of the ERS portfolio. The Carbon Footprint Analysis was below the benchmark.

11. **Draft ESG Investment Objective for Board Discussion** - Staff presented proposed ESG statement to be included in the investment objective. There were minor edits provided by the Board. The Board recommended that the statement be incorporated into the investment policy as the third investment objective under overall performance goals. The recommended statement including edits reads:

> Consistent with the System's Mission and Investment Beliefs, the System recognizes that the consideration of environmental, social and governance ("ESG") factors can have a material impact on corporate performance over the long term, although the impact can vary by industry. ESG factors may affect security selection, proxy voting, engagement, and other areas. The System will consider ESG factors in its proxy voting and other relevant portfolio management activities. ESG factors will be taken into account in selection and ongoing monitoring of the System's investment managers and mandates, and of other service providers as appropriate. The System will leave individual security selection decisions to its investment managers under the assumption that they will make the decisions that are in the best interest of the System incorporating both ESG and non-ESG factors.

12. **Proposed ESG Implementation Plan** – Sarah Bernstein from PCA discussed the proposed ESG implementation plan**.** She reviewed the steps that had been taken to date. She also reviewed engagement activities that are ongoing, and recommended a regular review of ESG factors in the portfolio.

13. **CEM Benchmarking Results** - Sophia Skoda reviewed the results of the CEM Benchmarking survey. The ERS portfolio is among the smallest funds that participate. Fourteen other funds were considered peers, with a median portfolio size of $2.149 Billion. The ERS's portfolio return for calendar year 2015 was 1.1%, well above the median fund return of -0.6%. Investment cost was 38.4 basis points, which was below the median of 53.8 basis points.

14. **Annual Health Insurance Benefit Survey** - Staff reviewed the annual HIB survey results. The survey was expanded this year to include information on cost of living adjustments for health benefits, OPEB funding percentage, and health coverage for Medicare eligible retirees. Eight agencies have increases in health premiums, averaging 21%. Several agencies had OPEB funding levels above 90%.

15. **Retirement Board Training Annual Report** – Staff provided the Retirement Board with a summary of their training hours and costs for the past two years. The Board asked to be appraised of any training opportunities.

REPORTS FROM THE RETIREMENT BOARD

16. **Brief report on any course, workshop, or conference attended since the last Retirement Board meeting** – Tim McGowan noted that he planned to attend the CALAPRS General Assembly March 5 – 7, 2017 in Monterey.

ITEMS TO BE CALENDERED / UPCOMING ITEMS

- Actuarial Audit scheduling
- Risk Offset Investment Class & Goal Based Investing
- Non-Core Fixed Income Review
- Update to Investment Policy to accommodate changes to proxy voting
- Request WAMCO to speak at a future meeting

ADJOURNMENT – Frank Mellon moved to adjourn the meeting at 1:56 p.m. and Alex Coate seconded the motion; the motion carried (5-0) by the following voice vote: AYES (Coate, Higashi, McGowan, Mellon, Young), NOES (none), ABSTAIN (none), ABSENT (None).

____
President

ATTEST: ____________________________
Secretary

3/16/2017

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 16, 2017

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: Investment Transactions by Retirement Fund Managers for December 2016 and January 2017

The attached Investment Transactions by Retirement Fund Managers report for the months of December 2016 and January 2017 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

INVESTMENT TRANSACTIONS BY RETIREMENT FUND MANAGERS

December 2016

	PURCHASES	SALES	PORTFOLIO VALUE
FIXED INCOME			
Western Asset Management Co.-IG	$699,850	$320,250	$65,849,951
Western Asset Management Co.-HI	$0	$0	$33,437,254
Western Asset Management Co.-HY	$0	$0	$30,150,298
C.S. McKee	$13,772,949	$12,692,461	$137,172,166
TOTAL	**$14,472,799**	**$13,012,711**	**$266,609,668**
DOMESTIC EQUITY			
Barrow Hanley	$4,523,419	$5,468,851	$173,267,091
Opus Capital	$3,336,254	$3,402,662	$36,287,130
Russell 1000 Growth Index Fund	$0	$0	$256,812,920
Russell 2000 Growth Index Fund	$0	$0	$26,870,742
INTECH	$3,443,595	$3,172,076	$71,806,315
T. Rowe Price	$4,920,132	$5,100,370	$70,685,867
Total Domestic Equity	**$16,223,400**	**$17,143,960**	**$635,730,064**
COVERED CALLS			
Parametric (BXM)	$4,628,667	$4,325,128	$106,408,376
Parametric (Delta-Shift)	$1,328,506	$1,118,348	$109,696,303
Van Hulzen	$23,911,377	$19,852,780	$99,247,772
Total Covered Calls	**$29,868,550**	**$25,296,255**	**$315,352,451**
INTERNATIONAL EQUITY			
Franklin/Templeton	$416,821	$326,570	$89,719,172
Fisher Investments	$0	$0	$95,651,355
Total International Equity	**$416,821**	**$326,570**	**$185,370,526**
REAL ESTATE EQUITY			
RREEF America II	$0	$0	$33,435,815
CenterSquare	$3,890,284	$4,046,706	$48,586,605
Total Real Estate	**$3,890,284**	**$4,046,706**	**$82,022,420**
TOTAL ALL FUND MANAGERS	**$64,871,854**	**$59,826,202**	**$1,485,085,129**

January 2017

	PURCHASES	SALES	PORTFOLIO VALUE
FIXED INCOME			
Western Asset Management Co.-IG	$629,782	$501,043	$66,020,738
Western Asset Management Co.-HI	$0	$0	$33,714,349
Western Asset Management Co.-HY	$0	$0	$30,547,118
C.S. McKee	$10,125,107	$10,569,358	$137,329,064
TOTAL	**$10,754,889**	**$11,070,401**	**$267,611,270**
DOMESTIC EQUITY			
Barrow Hanley	$4,844,191	$3,063,653	$173,760,914
Opus Capital	$1,591,344	$1,286,740	$36,267,836
Russell 1000 Growth Index Fund	$0	$0	$261,978,777
Russell 2000 Growth Index Fund	$0	$0	$27,309,138
INTECH	$847,424	$838,336	$74,058,149
T. Rowe Price	$2,717,426	$3,185,014	$74,187,881
Total Domestic Equity	**$10,000,385**	**$8,373,744**	**$647,562,695**
COVERED CALLS			
Parametric (BXM)	$1,411,097	$1,371,786	$108,309,165
Parametric (Delta-Shift)	$648,732	$260,781	$111,739,853
Van Hulzen	$19,648,708	$23,654,301	$100,951,351
Total Covered Calls	**$21,708,536**	**$25,286,868**	**$321,000,370**
INTERNATIONAL EQUITY			
Franklin/Templeton	$539,456	$1,034,365	$93,166,522
Fisher Investments	$5,134,749	$5,081,405	$98,994,945
Total International Equity	**$5,674,205**	**$6,115,769**	**$192,161,466**
REAL ESTATE EQUITY			
RREEF America II	$289,623	$0	$34,538,463
CenterSquare	$3,546,873	$3,083,238	$48,485,815
Total Real Estate	**$3,836,496**	**$3,083,238**	**$83,024,278**
TOTAL ALL FUND MANAGERS	**$51,974,511**	**$53,930,020**	**$1,511,360,078**

Prepared By: Matt Houck Date: 2-15-17

Matt Houck, Accounting Technician

R.B. RESOLUTION NO. 6856

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY THE COUNSELORS FOR MONTHS OF DECEMBER, 2016 AND JANUARY, 2017

Introduced by: ; Seconded by:

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

WHEREAS, investment transactions have been consummated during December, 2016 and January, 2017, 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

03/16/2017

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 6, 2017

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 December 2016

The attached Short Term Investment Transactions report for the month of December 2016 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 DECEMBER 2016

COST/ FACE VALUE	DESCRIPTION	DATE OF PURCHASE	DATE OF SALE/MATURITY	YIELD (%)
$ 3,552,000.00	Local Agency Investment Fund	1-Dec-16		0.719
3,554,000.00	Local Agency Investment Fund	16-Dec-16		0.719
(8,100,000.00)	Local Agency Investment Fund		27-Dec-16	0.719
3,600,000.00	Local Agency Investment Fund	30-Dec-16		0.719
$ 2,606,000.00	Net Activity for Month			

$ 4,332,977.06	Beginning Balance
2,606,000.00	Net Activity for Month
$ 6,938,977.06	Ending Balance

SUBMITTED BY ____________________ DATE 2-6-17

D. Scott Klein
Controller

Semadar Barzel
Treasury Manager
for Dari Barzel

S. F. Lindley
Acctg. Systems Supvr.
prepared by MHouck

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 16, 2017

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 January 2017

The attached Short Term Investment Transactions report for the month of January 2017 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 JANUARY 2017

COST/ FACE VALUE	DESCRIPTION	DATE OF PURCHASE	DATE OF SALE/MATURITY	YIELD (%)
$ 15,764.93	Local Agency Investment Fund	12-Jan-17		0.751
3,559,000.00	Local Agency Investment Fund	17-Jan-17		0.751
3,561,000.00	Local Agency Investment Fund	26-Jan-17		0.751
(8,184,000.00)	Local Agency Investment Fund		27-Jan-17	0.751
$ (1,048,235.07)	Net Activity for Month			

$ 6,938,977.06	Beginning Balance
(1,048,235.07)	Net Activity for Month
$ 5,890,741.99	Ending Balance

SUBMITTED BY ______________________ DATE 2-15-17

D. Scott Klein
Controller

Semadar Barzel
Treasury Manager

M. Hughes
woctor
S. Lindley
S. F. Lindley
Acctg. Systems Supvr.

prepared by MHouck

R.B. RESOLUTION NO. 6857

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY THE TREASURER FOR DECEMBER, 2016 AND JANUARY, 2017

Introduced by: ; Seconded by:

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

WHEREAS, investment transactions during December 2016, and January 2017 have been made in accordance with the provisions of the said rule;

NOW, THEREFORE, BE IT RESOLVED that the investment transactions consummated by the Treasurer and included on the attached Exhibit A for December 2016, and January, 2017 are hereby ratified and approved.

President

ATTEST:

Secretary

03/16/2017

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 6, 2017

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 December 2016

The attached Statement of Receipts and Disbursements report for the month of December 2016 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

STATEMENT OF RECEIPTS AND DISBURSEMENTS
EMPLOYEES' RETIREMENT FUND
MONTH OF DECEMBER 2016

CASH BALANCE at November 30, 2016			$	3,356,091.01
Receipts				
Employees' Contributions	$	1,823,612.22		
District Contributions		8,861,388.61		
LAIF Redemptions		8,100,000.00		
Refunds and Commission Recapture		15,915.20		
TOTAL Receipts				18,800,916.03
Disbursements				
Checks/Wires Issued:				
Service Retirement Allowances	$	7,095,726.96		
Disability Retirement Allowances		141,597.91		
Health Insurance Benefit		857,910.25		
Payments to Retiree's Resigned/Deceased		19,376.90		
LAIF Deposits		10,706,000.00		
Administrative Cost		128,430.83		
TOTAL Disbursements				(18,949,042.85)
CASH BALANCE at December 31, 2016			$	3,207,964.19
LAIF				6,938,977.06
LAIF and Cash Balance at December 31, 2016			$	10,146,941.25
Domestic Equity				
Barrow Hanley	$	173,267,090.53		
Russell 1000 Index Fund		256,812,919.62		
Russell 2000 Growth Index Fund		26,870,741.86		
Opus		36,287,129.83		
Intech		71,806,315.22		
T. Rowe Price		70,685,866.72		
Subtotal Domestic Equity		635,730,063.78		
Covered Calls				
Parametric (BXM)	$	106,408,376.16		
Parametric (Delta-Shift)		109,696,303.07		
Van Hulzen		99,247,771.81		
Subtotal Covered Calls		315,352,451.04		
International Equity				
Franklin Templeton	$	89,719,171.62		
Fisher Investments		95,651,354.53		
Subtotal International Equity		185,370,526.15		
Real Estate				
RREEF America REIT II	$	33,435,815.00		
Center Square		48,586,604.78		
Subtotal Real Estate		82,022,419.78		
Fixed Income				
CS Mckee	$	137,172,165.60		
Western Asset Mgt Co-Short Term Inv Grade		65,849,950.53		
Western Asset Mgt Co-Short Term High Income		33,437,253.86		
Western Asset Mgt Co-Short Term High Yield		30,150,297.88		
Subtotal Fixed Income		266,609,667.87		
Total for Domestic and International Equities				1,485,085,128.62
MARKET VALUE of ASSETS at December 31, 2016			$	1,495,232,069.87

Respectfully submitted,

D. Scott Klein
Controller

Semadar Barzel
Treasury Mgr.
for Dori Barzel

S. F. Lindley
Acctg Sys Supvr.
prepared by mhouck

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 16, 2017

MEMO TO: Members of the Retirement Board

THROUGH: Sophia D. Skoda, Director of Finance SDS

FROM: D. Scott Klein, Controller

SUBJECT: Statement of Receipts and Disbursements for January 2017

The attached Statement of Receipts and Disbursements report for the month of January 2017 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

STATEMENT OF RECEIPTS AND DISBURSEMENTS
EMPLOYEES' RETIREMENT FUND
MONTH OF JANUARY 2017

CASH BALANCE at December 31, 2016			$	3,207,964.19
Receipts				
Employees' Contributions	$	1,236,317.48		
District Contributions		5,923,681.18		
LAIF Redemptions		8,184,000.00		
Refunds and Commission Recapture		72,817.55		
TOTAL Receipts				15,416,816.21
Disbursements				
Checks/Wires Issued:				
Service Retirement Allowances	$	7,177,309.64		
Disability Retirement Allowances		141,597.91		
Health Insurance Benefit		859,614.74		
Payments to Retiree's Resigned/Deceased		0.00		
LAIF Deposits		7,120,000.00		
Administrative Cost		217,476.26		
TOTAL Disbursements				(15,515,998.55)
CASH BALANCE at January 31, 2017			$	3,108,781.85
LAIF				5,890,741.99
LAIF and Cash Balance at January 31, 2017			$	8,999,523.84
Domestic Equity				
Barrow Hanley	$	173,760,913.60		
Russell 1000 Index Fund		261,978,777.33		
Russell 2000 Growth Index Fund		27,309,137.75		
Opus		36,267,836.04		
Intech		74,058,149.25		
T. Rowe Price		74,187,880.63		
Subtotal Domestic Equity		647,562,694.60		
Covered Calls				
Parametric (BXM)	$	108,309,165.15		
Parametric (Delta-Shift)		111,739,853.17		
Van Hulzen		100,951,351.34		
Subtotal Covered Calls		321,000,369.66		
International Equity				
Franklin Templeton	$	93,166,521.52		
Fisher Investments		98,994,944.68		
Subtotal International Equity		192,161,466.20		
Real Estate				
RREEF America REIT II	$	34,538,463.00		
Center Square		48,485,815.03		
Subtotal Real Estate		83,024,278.03		
Fixed Income				
CS Mckee	$	137,329,064.33		
Western Asset Mgt Co-Short Term Inv Grade		66,020,738.44		
Western Asset Mgt Co-Short Term High Income		33,714,348.98		
Western Asset Mgt Co-Short Term High Yield		30,547,118.13		
Subtotal Fixed Income		267,611,269.88		
Total for Domestic and International Equities				1,511,360,078.37
MARKET VALUE of ASSETS at January 31, 2017			$	1,520,359,602.21

Respectfully submitted,

D. Scott Klein
Controller

Semadar Barzel
Treasury Mgr.

M. Hughes
w/c for S. Lindley

S. F. Lindley
Acctg Sys Supvr.

prepared by mhouck

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 16, 2017

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance SDS

SUBJECT: Adopt Updated Investment Policy to include Mission, Investment Beliefs, and an additional Investment Objective

The EBMUD Employee Retirement System (ERS) Board has been reviewing methods for addressing Environmental, Social and Governance (ESG) issues. The Board has received training on a variety of ESG topics, including fiduciary considerations, and has had discussions on individual aspects of ESG considerations. The Board devoted over a year of study and discussion to determining whether and how to incorporate ESG considerations into management of the ERS's investment portfolio. Starting in March of 2016, the Board undertook a process to review opportunities for action on climate-related issues using a toolkit with six steps.

Based on work by the Board and staff, staff recommends adoption by the Board of a revised Statement of Investment Policy and Procedures (Investment Policy) incorporating language pertaining to ESG considerations. Among the outcomes of this deliberate process were a Mission statement, a list of Investment Beliefs, and an ESG-focused Investment Objective presented by staff as drafts and discussed by the Board during regular meetings. The final language following input from the Board is shown below, and has been incorporated into the revised Investment Policy (attached). The Mission statement and Investment Beliefs have been added to the document's Introduction and the ESG-focused Investment Objective as the third overall performance goal. Staff and the Board worked with PCA to ensure that all proposed changes are appropriate given the size of the ERS's portfolio and the resources available to it.

Mission

To serve as the fiduciary and responsible steward of the East Bay Municipal Utility District Employees' Retirement System: to deliver promised benefits to members of the retirement system, their survivors and beneficiaries.

Investment Beliefs

<u>The System:</u>

1. Is a long-term investor
2. Articulates clear goals
3. Has well-diversified assets
4. Considers costs
5. Ensures accountability
6. Aims to be a leader, consistent with EBMUD's commitment to excellence and leadership

The Portfolio:

7. Is structured based upon strategic asset allocation
8. Is designed to be fully invested and maintain adequate working capital
9. Relies on passive management where active management is unlikely to reward

Recognize that Risk:

10. Exists in all investment decisions
11. Should be carefully evaluated
12. Must be commensurate with return
13. Cannot be captured solely through quantitative analysis
14. Can be systemic and emerge over time

Investment Objective #3

Environmental, social and governance ("ESG") factors should be considered in portfolio management. Consistent with the System's Mission and Investment Beliefs, the System recognizes that ESG factors can have a material impact on corporate performance over the long term, although the impact can vary by industry. The consideration of ESG factors may affect security selection, proxy voting, engagement, and other areas. The System will consider ESG factors in its proxy voting and other relevant portfolio management activities. ESG factors will be taken into account in selection and ongoing monitoring of the System's investment managers and mandates, and of other service providers as appropriate. The System will leave individual security selection decisions to its investment managers under the assumption that they will make the decisions that are in the best interest of the System incorporating both ESG and non-ESG factors.

Attachment

EAST BAY MUNICIPAL UTILITY DISTRICT
EMPLOYEES' RETIREMENT SYSTEM

Statement of Investment Policy and Procedures

Last Revised March 2017

Table of Contents

East Bay Municipal Utility District
Employees' Retirement System

MISSION

To serve as the fiduciary and responsible steward of the East Bay Municipal Utility District Employees' Retirement System: to deliver promised benefits to members of the retirement system, their survivors and beneficiaries.

INVESTMENT BELIEFS

	The System:
1.	Is a long-term investor
2.	Articulates clear goals
3.	Has well-diversified assets
4.	Considers costs
5.	Ensures accountability
6.	Aims to be a leader, consistent with EBMUD's commitment to excellence and leadership
	The Portfolio:
7.	Is structured based upon strategic asset allocation
8.	Is designed to be fully invested and maintain adequate working capital
9.	Relies on passive management where active management is unlikely to reward
	Recognize that Risk:
10.	Exists in all investment decisions
11.	Should be carefully evaluated
12.	Must be commensurate with return
13.	Cannot be captured solely through quantitative analysis
14.	Can be systemic and emerge over time

I. INTRODUCTION

This document provides a framework for the investment management of the assets of the East Bay Municipal Utility District Employees' Retirement System (the 'System' or "EBMUDERS"). Its purpose is to assist the Board of Administration (the Board' or "Retirement Board") in effectively supervising and monitoring the investments of the System, and achieving its objective of providing adequate retirement, disability, survivorship and other post-employment benefits to eligible Members of the Retirement System in a cost-effective manner. Specifically, it will address:

- The general goals of the investment program;
- Specific asset allocations, rebalancing procedures and investment guidelines;
- Performance objectives; and
- Responsible parties.

This Investment Policy statement includes the provisions of the California Constitution and Statutes and will:

- Set forth investment policies, objectives and procedures which the Retirement Board judges to be appropriate and prudent, in consideration of the needs of the Employees' Retirement System;
- Establish the criteria which the investment management organizations retained by the Retirement System are expected to meet and against which they are to be measured;
- Communicate the investment policies and objectives and performance criteria to the Investment Managers; and
- Serve as a review document to guide the Board's ongoing oversight of the investment of Retirement System's assets.

It is the practice of the Retirement Board to change its policies and objectives in accordance with changing regulatory, economic, financial and administrative conditions as they change over time.

The System is governed by a six-member Retirement Board, with five voting members and one non-voting retired member. In the formation of this investment policy and goal statement, a primary consideration of the Board has been their awareness of the stated purpose of the System. The Board's investment activities are designed and executed in a manner that will fulfill these goals.

This policy statement is designed to allow for sufficient flexibility in the management oversight process to capture investment opportunities as they may occur, while setting forth reasonable parameters to ensure prudence and care in the execution of the investment program.

II. INVESTMENT OBJECTIVES

A. Overall Performance Goals

The System's general investment goals are broad in nature. The following goals, consistent with the above described purpose, are adopted:

1. The overall goal of the System's investment assets is to provide adequate retirement and disability, survivorship and postemployment healthcare benefits to eligible employees in a cost effective manner. This will be accomplished through a carefully planned and executed investment program.

2. A secondary objective is for the System investment assets to achieve a long-term total annual rate of return, including dividends, interest, and capital appreciation which exceeds the assumed actuarial rate of return and a total annual return net of all investment management fees and expenses, which meets or exceeds a weighted average of the asset class benchmarks specified below, where the weights correspond to the System's strategic policy allocation.

3. Environmental, social and governance ("ESG") factors should be considered in portfolio management. Consistent with the System's Mission and Investment Beliefs, the System recognizes that ESG factors can have a material impact on corporate performance over the long term, although the impact can vary by industry. The consideration of ESG factors may affect security selection, proxy voting, engagement, and other areas. The System will consider ESG factors in its proxy voting and other relevant portfolio management activities. ESG factors will be taken into account in selection and ongoing monitoring of the System's investment managers and mandates, and of other service providers as appropriate. The System will leave individual security selection decisions to its investment managers under the assumption that they will make the decisions that are in the best interest of the System incorporating both ESG and non-ESG factors.

4. System investment assets should achieve a real or inflation adjusted return of 4% or more above the nationwide Urban Consumers Price Index.

5. The Retirement System endeavors to achieve the above System investment asset return objectives within a time horizon of three to five years or approximately a full market cycle.

6. System investment assets should remain fully invested.

7. Investment management of System investment assets should recognize that the Retirement System is relatively risk averse and the System's capital should be preserved. Therefore, the goals of the Employees' Retirement System are to be achieved recognizing safety of principal, liquidity and yield in that order.

8. Assets must be diversified by type and issuer.

9. Allocation of assets to Investment Managers shall be determined by the Retirement Board to accommodate changing conditions and laws.

10. The System's investment program shall at all times comply with existing and future applicable local, state, and federal regulations

11. All transactions undertaken will be for the sole benefit of the System's Members and beneficiaries and for the exclusive purpose of providing benefits to them and defraying reasonable administrative expenses associated with the System.

12. All fees and other costs payable to third-party providers of services to the System shall be payable from System assets

13. The System has a long-term investment horizon, and utilizes an asset allocation which encompasses a strategic, long-run perspective of capital markets. It is recognized that a strategic long-run asset allocation plan implemented in a consistent and disciplined manner will be the major determinant of the System's investment performance.

14. Investment actions are expected to comply with "prudent person" standards, meaning:

    "with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims."

B. Performance Goals by Asset Class

1. The performance objective of the portfolio's allocation to each asset class in which the System's assets are invested shall be to achieve a total return net of fees and expenses which equals or exceeds the market indexes listed below over a full market cycle as defined by the Board.

Asset Class Performance Benchmarks

ASSET CLASS	BENCHMARK
1. *U.S. Equities:*	Russell 3000 Index
2. *Non-U.S. Equities:*	MSCI ACWI x US Index
3. *Core Fixed-Income:*	Barclays Aggregate Index
4. *Non-Core Fixed-Income:*	50% Barclay's US 1-3 Yr. Govt./Credit Index, 25% Barclay's 1-5 Yr. US High Yield Cash Pay Index, 25% S&P/LSTA Performing Loans Index
5. *Real Estate:*	50% NCREIF (lagged), 50% FTSE NAREIT All Equity REITs Index
6. Covered Calls:	BXM Covered Calls Index*

*Also known as the CBOE S&P 500 BuyWrite Index

2. Performance results for System investment assets and for each Investment Manager shall be calculated and evaluated quarterly and presented to the Board for review.

3. A special target index will be created and utilized to measure the performance results of the portfolio, serving as a benchmark for the total portfolio. This Total Portfolio Benchmark will be included in evaluation reports presented to the Board for review. The Total Portfolio Benchmark will consist of and be weighted as follows:

Total Portfolio Benchmark

40% Russell 3000 Index

20% BXM Covered Calls Index

15% MSCI ACWI x US

10% Barclay's Aggregate Index

5% Barclays US 1-3 Yr. Govt./Credit Index

2.5% Barclays 1-5 Yr. US High-Yield Cash-Pay Index

2.5% S&P/LSTA Performing Loans Index

2.5% NCREIF (lagged)

2.5% FTSE NAREIT All Equity REITs index

This target benchmark index reflects the asset allocation goal established by the Retirement Board.

III. DUTIES AND RESPONSIBILITIES

A. Duties of the Board or its Designee(s)

The Retirement Board has the responsibility for administration of the System for the benefit of plan participants, although it is not the intent of the Board of Retirement to become involved in the day-today investment decisions. The Board or its designee(s) will adhere to the following procedures in the management of the Board’s assets:

1. The Board develops and approves guidelines for the execution of the Board’s investment program.

2. The Board is responsible for selecting qualified Investment Managers, the General Investment Consultant, the Master Custodian, and other service providers.

3. The Board will ensure a formal review of the System’s investment structure. An asset-liability study including allocation and financial performance reviews will be conducted every three to five years or more frequently as the need arises. The review will include recommended adjustments to the long-term, strategic asset allocation to reflect any changes in policy, applicable regulations, long-term capital market assumptions, actuarial assumptions and the System’s financial condition.

4. The Board may retain investment consultants to provide such services as conducting investment performance reviews, asset-liability studies, asset allocation, Investment Manager reviews, and investment research.

5. The Board will review investments and Investment Managers at least quarterly to ensure that policy guidelines continue to be met. The Board will monitor investment returns on both an absolute basis and relative to appropriate benchmarks as set forth in this policy, including measurements against benchmarks and key qualitative factors and peer group comparisons. The source of information for these reviews may be staff, the General Investment Consultant, the Investment Managers, and others as appropriate. The Board is responsible for taking appropriate action if investment objectives are not being met or if policies and guidelines are not being followed.

6. The Board will provide oversight to ensure investments in a cost-effective manner subject to Board approval. These costs include, but are not limited to, investment management, consulting and custodial fees, transaction costs and other administrative costs. Costs to administer the System are chargeable to and expected to be paid by the System.

B. Duties of the Administrative-Investment Committee

The Administrative-Investment Committee shall meet as needed. Duties of the Administrative-Investment Committee shall be as follows:

1. Make recommendations as to general investment policies, practices, and procedures to the Retirement Board including, but not limited to, asset mix, portfolio diversification, average maturity, portfolio risk level and rate of return.

2. Review the investment performance of the Retirement System.

3. Confer with the Investment Managers to review investments and current market environment.

4. Review the Statement of Investment Policy and Procedures as adopted by the Retirement Board and make recommendations as to the content thereof.

5. Render advice to the Retirement Board relative to the desirability of and the procedure to retain investment advisors, performance measurement services, and bank custody of securities owned.

6. Select one Committee member to serve as Chair at all meetings scheduled by the Administrative-Investment Committee.

C. Duties of the East Bay Municipal Utility District Staff

The Director of Finance of the East Bay Municipal Utility District shall serve as the Manager of Finance of the System. The Director of Finance and his/her staff provide analysis and recommendations to the Board on a wide variety of investments and investment related matters; oversee and direct the implementation of Board policies, and manage the System's portfolio on a day to day basis.

Pursuant to this policy, the Board has delegated to the Director of Finance:

1. Authority to withdraw assets from assigned managers as necessary to efficiently meet operating needs and to invest the System's cash without requiring the Board's permission but only as set forth in this policy.

2. Responsibility to recommend service providers to the Board , including conducting the search process for the General Investment Consultant, Investment Managers, Master Custodian, and other service providers as requested by the Board.

3. Responsibility for implementation and administration of this policy and of the Board's decisions, including:

    a. Managing the relationships with service providers to the System to ensure that they are providing all the necessary assistance to Board and to staff. Should any service provider fail to do so, the Director of Finance may make changes to the extent consistent his/her authority pursuant to this policy, or recommend appropriate changes to the Board;

    b. Ensuring that Investment Managers conform to the terms of their contracts, appropriate policies and guidelines; and

c. Ensuring that performance monitoring systems are consistent with this policy and provide the Board with as timely, accurate and useful information as possible.

4. Authority to manage portfolio restructuring resulting from portfolio rebalancing or manager terminations, with the assistance of the General Investment Consultant, a transition manager, other consultants, and Investment Managers, as needed.

5. Authority to vote proxies in stocks held by the System. Proxies will be voted with Management unless otherwise directed by the Board.

6. Authority to designate individual staff of the District to carry out his/her responsibilities under this policy.

7. The Director of Finance may rely upon the assistance of the General Investment Consultant as needed to fulfil his/her obligations.

8. The Director of Finance and his/her staff, with assistance from the General Investment Consultant as needed, shall also:

   a. Be responsible for organizing and/or participating in any special research for the Board; and

   b. Advise and keep the Board apprised of any other events of investment significance.

D. Duties of the General Investment Consultant

The Investment Consultant shall be responsible for the following:

1. At the request of the Director of Finance or his/her designee, assist Staff in performance of their duties as listed in this investment policy.

2. Prepare a quarterly performance report and a comprehensive annual report which shall include performance attribution on the Board's Investment Managers and performance of total System assets. Performance results shall be presented to show:

   a. The degree to which portfolios and investment managers have achieved Retirement Board investment objectives;

   b. That the investment managers' strategy has been consistent with their stated philosophies; and

   c. How the total portfolio and the individual managers performed in comparison with other pension funds and peer managers.

   d. These reports shall include, but are not limited to:

i. Performance of System asset portfolio as a whole with respect to this policy, including stated benchmarks and policy objectives, and comparison with other pension funds.

ii. A report on the general economic and investment environment as it affects the System asset portfolio as a whole and the asset allocation categories and Investment Managers individually.

iii. Each Investment Manager's performance on an ongoing basis relative to Board investment objectives as stated in this policy, using investment performance criteria relative to specific benchmarks associated with its asset class and to benchmarks incorporated into its agreement.

iv. A check on each Investment Manager's adherence to its stated investment style and discipline.

v. Any instability of Investment Manager personnel and organization.

vi. Any unusual portfolio activity, trading volume, and execution costs.

vii. Risk and performance characteristics with respect to an individual Investment Manager's portfolio not logically explainable in terms of the published style or out-of-step with manager's style peer group.

viii. Failure by an Investment Manager to comply with all investment guidelines

ix. How the individual managers performed in comparison with other pension funds and peer managers;

x. Documentation and recommendations with respect to implementation of this policy pertaining to Watch Status. Documentation includes material pertaining to the Investment Manager's consideration for Watch Status, placement on Watch Status, removal from Watch Status and/or replacement/termination; and

xi. Any other factors considered by the General Investment Consultant to be of material relevance to the Board in their evaluations of the Investment Managers individually or the performance of the System's asset portfolio as a whole.

3. Make recommendations to the Board regarding investment policy and strategic asset allocation, including managing and interpreting the periodic asset-liability study as requested by the Board.

4. Assist the Board in the implementation of this policy pertaining to Watch Status of individual Investment Managers/portfolios, including documentation of relevant factors and recommendations for individual Board actions.

5. Assist the Board in the selection of qualified Investment Managers, and assist in the review of existing managers, including monitoring changes in personnel, ownership and the investment process.

6. Assist the Board in the selection of a qualified custodian if necessary.

7. Provide topical research and education on investment subjects as requested by the Board or Investment staff.

E. Duties of the Investment Managers

The investment managers shall:

1. Contract by written agreement with the Board to invest within approved guidelines.

2. Provide the Board with proof of liability and fiduciary insurance coverage at the time of execution of engagement contract and annually thereafter until the relationship is terminated.

3. Be a SEC-Registered Investment Advisor under the 1940 Act or an authorized bank or trust, and be recognized as providing demonstrated expertise over a number of years in the management of institutional assets within a defined investment specialty.

4. Adhere to the investment management style concepts and principles for which they were retained, including, but not limited to, developing portfolio strategy, performing research, developing buy, hold and sell lists, and purchasing and selling securities.

5. Obtain best execution for all transactions for the benefit of the System with brokers and dealers qualified to execute institutional orders on an ongoing basis at the best net cost to the System, and, where appropriate, facilitate soft dollar credits and the recapture of commissions for the System's benefit.

6. The Board has determined that Investment Managers should be encouraged to direct approximately 25% of their trades through brokers specified by the Board. This may allow the Retirement System to recapture some of the commission costs. It should be understood that the trades should be executed on a competitive basis to ensure best execution and to limit commission costs.

7. Investment Managers should also recognize that it is the intent of the System to encourage the growth and development of firms eligible for the East Bay Municipal Utility District's Contract Equity Program (CEP) when prudently

possible. Investment Managers are encouraged to execute trades through CEP firms. Such trades must be executed on a competitive basis to ensure best execution and to limit commission costs.

8. Investment Managers are required to reconcile monthly accounting, transaction and asset summary data with custodian valuations, and communicate and resolve any significant discrepancies with the custodian and Staff.

9. Investment Managers are required to report the following at least monthly to General Investment Consultant, and upon request to the Board and Director of Finance or his/her designee:

   a. Transaction and asset summary data reported at cost and fair market value;

   b. Rate of return, which calculation shall include net income, realized gains and losses, and,
   if appropriate, unrealized appreciation and depreciation; and

   c. Managers that invest in derivatives are also required to make quarterly reports on the specific risk exposure to the system.

10. If requested by Staff and/or the General Investment Consultant, Investment Managers are required to provide in writing reasons for underperformance with respect to policy and/or agreement benchmarks

11. Investment Managers are required to maintain frequent and open communication with the Board and Director of Finance or his/her designee(s) on all significant matters pertaining to the Investment program, including, but not limited to, the following:

    a. Major changes in the Investment Manager's investment outlook, investment strategy and portfolio structure;

    b. Significant changes in ownership, organizational structure, financial condition or key or senior personnel;

    c. Any changes in the Portfolio Manager, Relationship Manager or other personnel assigned to the System;

    d. Each client that terminates its relationship whose terminated portfolio account represents at the least one percent of the Investment Manager's aggregate portfolio on the day of notice of termination with the Investment Manager, within 30 days of such termination;

    e. Each client that terminates its relationship when the cumulative terminations for a calendar month equals or exceeds one percent of the Investment Manager's aggregate portfolio as of the first business day of the reporting month; and

f. All pertinent issues which the Investment Manager deems to be of significant interest or material importance.

12. Meet with the Board and the Director of Finance or his/her designee as requested.

F. Duties of the Master Custodian

The Master Custodian shall be responsible to the Board for the following:

1. Provide complete global custody and depository services for the designated accounts.

2. Manage a Short Term Investment Fund (STIF) for investment of any uninvested cash, and ensure that all available cash is invested. If the cash reserves are managed externally, full cooperation must be provided.

3. Provide in a timely and effective manner a monthly report of the investment activities implemented by the Investment Managers.

4. Collect all income and principal realizable and properly report it on the periodic statements.

5. Provide monthly and fiscal year-end accounting statements for the portfolio, including all transactions; these should be based on accurate security values for both cost and market. These should include, where appropriate, records of amortized cost. These reports should be provided within acceptable time frames.

6. Report situations where accurate security pricing, valuation and accrued income is either not possible or subject to considerable uncertainty.

7. Provide assistance to the System to complete such activities as the annual audit, transaction verification or unique issues as required by the Board.

8. Manage a securities lending program to enhance income if directed by the Board. If the securities lending program is managed externally, full cooperation must be provided.

9. Process class action processing services including tracking class action lawsuits, filing claims on behalf of the System, responding to inquiries from the claims administrators, following up on rejection notices with additional information where appropriate, posting settlement fund distributions to appropriate System accounts, and providing reports on proceeds received.

IV. INVESTMENT POLICIES AND PROCEDURES

A. Asset Allocation — Asset/Liability

1. The Board regularly adopts and implements an asset allocation policy that is predicated on a number of factors, including:

    a. A projection of actuarial assets, liabilities, benefit payments and required contributions;

    b. Historical and expected long-term capital market risk and return behavior;

    c. An assessment of future economic conditions, including inflation and interest rate levels; and

    d. The current and projected funding status of the System.

2. The asset allocation will be determined through appropriate studies undertaken by consultants retained by the Board. The allocation study will include all asset classes deemed prudent and appropriate by the Board. The Board, with the aid of the Director of Finance and the investment consultant, will determine the assumptions and criteria to be used in the asset allocation study. The following assumptions and criteria will be so determined:

    a. The expected return from each asset category.

    b. The expected standard deviation of each asset category.

    c. The minimum and maximum percent to be invested in each asset category.

    d. The correlation relationship between the asset categories.

    e. The minimum acceptable return over a given time period.

    f. The net contribution as a percent of payroll.

    g. The expected payroll growth rate.

3. The resulting asset allocation mixes will be approved by the Board with input from the Director of Finance and the investment consultant and an optimum selection made. The asset allocation study will be performed no less frequently than every five years. Appropriate adjustments to the existing portfolio will then be made in the most expeditious and appropriate manner. The Director of Finance is authorized to retain a Transition Manager to assist with major re-allocations of the portfolio.

4. On a more frequent, periodic basis, the Director of Finance, with assistance from the investment consultant, will analyze the portfolio structure of each asset class. Analysis shall include:

a. appropriateness of asset class and manager benchmarks,

b. alignment structure of individual portfolios with asset class benchmarks based on manager holdings and mandate,

c. evaluation of whether the asset class is structured in such a manner that is consistent with the Boards objectives,

d. analysis of underperforming managers, and

e. overall risk profile of the asset class.

5. Pursuant to the diversification of the investments of the Retirement System so as to minimize the risk of large losses, the assets of the System shall be diversified according to the specified target percentages:

Strategic Policy Allocation (approved September 2013)

Asset Class	2013 Target
US Equity	40%
Non-US Equity	15%
Core Fixed-Income	10%
Non-Core Fixed Income	10%
Covered Calls	20%
Real Estate	5%

As of December 31, 2014

Segment	Actual $(000)	Actual %	Target %*	Variance
Total Portfolio	1,370,463	100%	100%	---
Domestic Equity	566,026	41.3%	40.0%	1.3%
International Equity	178,536	13.0%	15.0%	-2.0%
Covered Calls	279,419	20.4%	20.0%	0.4%
Total Fixed Income	257,936	18.8%	20.0%	-1.2%
Real Estate**	74,471	5.4%	5.0%	0.4%
Cash	14,075	1.0%	0.0%	1.0%

**RREEF performance results and allocation are lagged one-quarter.

6. The System should remain fully invested. The allocation goal recognizes that at any time equity and fixed income Investment Managers may have transactional cash on hand, however available cash held by individual Investment Managers should not exceed 5% of their individual portfolios. Core and Non-Core Fixed-Income Investment Managers can exceed 5% of the portfolio for strategic purposes only.

7. The District will also maintain enough cash as working capital to effectively meet cash flow demands on the system. These funds are not considered investable System assets. These funds will be invested by Staff in accordance with this policy.

8. Financial derivatives may be used within prudent limits to manage risk, lower transaction costs, or augment returns. Derivative securities should not be utilized to materially increase a portfolio's risk or duration. Leveraged positions are prohibited.

B. Rebalancing Guidelines

As markets move over time, the actual asset mix of the System's portfolio may diverge from the target allocations established by the Board through the asset allocation process.

1. The Board and staff, with the assistance of the General Investment Consultant, will monitor the portfolio's asset allocation relative to target allocations and ranges at least annually.

2. Staff, with the assistance of the General Investment Consultant, will monitor the volatility of the market at least annually utilizing the CBOE Market Volatility Index (the VIX) and other relevant information to identify and measure Turbulent Market Periods. A Turbulent Market Period is defined as one during which the current VIX level is one standard deviation above its three-year moving average.

3. With respect to each asset class group for which the Board has set a target allocation, the Board, in consultation with Staff and its investment consultant, have establish the rebalancing range limitations illustrated in the table entitled Strategic Policy Allocation Rebalancing Ranges – Non-Turbulent Market Periods, incorporated in this policy. These rebalancing range limitations are to be used during market periods that are not defined as Turbulent.

Strategic Policy Allocation Rebalancing Ranges – Non-Turbulent Market Periods

Asset Class	2013 Target	Range	Min	Max
US Equity	40%	-/+ 5%	35%	45%
Non-US Equity	15%	-/+ 3%	12%	18%
Core Fixed-Income	10%	-/+ 2%	8%	12%
Non-Core Fixed Income	10%	-/+ 3%	7%	13%
Covered Calls	20%	-/+ 4%	16%	24%
Real Estate	5%	-/+ 2%	3%	7%

4. The Board, in consultation with staff and its investment consultant, has established wider rebalancing range limitations to be in effect during a Turbulent Market Period with respect to each asset class group for which the Board has set a target allocation. These ranges are illustrated in the table entitled Strategic Policy Allocation Rebalancing Ranges –Turbulent Market Periods and incorporated in this policy.

Strategic Policy Allocation Rebalancing Ranges – Turbulent Market Periods

Asset Class	2013 Target	Range	Min	Max
US Equity	40%	-10% to +6%	30%	46%
Non-US Equity	15%	-5% to +2%	10%	17%
Core Fixed-Income	10%	-2% to +5%	8%	15%
Non-Core Fixed Income	10%	-3% to +3%	7%	13%
Covered Calls	20%	-4% to +6%	16%	26%
Real Estate	5%	-2% to +2%	3%	7%

5. Whenever an allocation to a particular asset class is above or below target, but within the target range as illustrated in the table Strategic Policy Allocation Rebalancing Ranges – Non-Turbulent Market Periods, the Director of Finance or his/her designee may rebalance partially or fully back to target subject to the considerations below. During Turbulent Market Periods the Director of Finance, in his/her discretion, may move to the wider rebalancing ranges for the major classes (US equity, non-US equity, and fixed-income) as outlined in the table Strategic Policy Allocation Rebalancing Ranges – Turbulent Market Periods. Staff will immediately report any such move to wider rebalancing ranges to the Board at its next meeting.

6. The Director of Finance or his/her designee may rebalance a particular asset class partially or fully back to target if:

    a. The assets are publicly traded;
    b. There is an opportunity to rebalance efficiently utilizing cash inflows and cash balances held by managers; and
    c. Trading opportunities can be utilized to the extent that they permit liquidating or adding to positions while limiting trading costs.

    Staff will immediately report any such rebalancing to the Board at its next meeting.

7. The Director of Finance will not be required to reallocate private market asset classes, given the difficulty in managing the allocations to these less liquid asset classes. If the actual allocation for such assets falls outside the predetermined range Staff, in consultation with the General Investment Consultant, will make a recommendation to the Board for bringing the allocation as close as practicable to the policy target within a reasonable time-frame.

V. ELIGIBLE INVESTMENTS

The Board will utilize the following portfolio components to fulfill the asset allocation targets and total System performance goals established elsewhere in this document.

A. Public Equities Portfolio

The Board expects that over the long run, total returns to equities will be higher than the returns to fixed-income securities, but may be subject to substantial volatility over shorter periods. Public equity holdings may include:

1. U.S. Equities

a. Index Funds / Core Stocks — This component of the portfolio will provide broadly diversified, core exposure through index funds to the U.S. equity market, primarily in large capitalization companies. Index funds provide primary liquidity for asset allocation.

b. Large Cap Stocks — As a more defensive portion of the equity portfolio, value stocks, covering the upper range of market capitalization, are expected to outperform the broad market during periods of flat or declining trends, while underperforming during rising markets. Value stocks typically exhibit higher dividend yield, lower Price/Earnings ratios, and lower Price/Book ratios.

c. Large Cap Growth Stocks — Large cap growth stock allocation provides exposure to stocks of large capitalization, whose valuations are more directly tied to future earnings prospects. Often, growth stocks sell at higher prices relative to expected or historical earnings growth. Growth stock volatility tends to be higher than value stocks, although such stocks generally outperform during rising markets while trailing the market in flat or declining periods.

d. Small Cap Stocks — The principal characteristic of the small value stock component is its emphasis in stocks with a market capitalization generally ranging from $200 million - 1.5 billion that are characterized by faster growth and higher long-term returns during periods of flat or declining trends. Value stocks typically exhibit higher dividend yield, lower Price/Earnings ratios, and lower Price/Book ratios.

e. Small Cap Growth Stocks — The principal characteristic of the small cap growth stock component is its emphasis in stocks with a market capitalization generally ranging from $200 - $1.5 billion that are characterized by faster growth and higher long-term returns during rising markets. Growth stock volatility tends to be higher than for value stocks.

f. The objectives for investment of the US equity portfolio are:

   i. Achieve a total return net of management fees which exceeds the Russell 3000 Index;

   ii. Achieve a minimum long-term rate of return which shall exceed the inflation rate as measured by the nationwide Urban Consumers Price Index by 4%;

   iii. Achieve performance results which will rank in the top third of Investment Managers which utilize a similar investment style;

   iv. The use of futures and options in the domestic equity accounts may be used for hedging purposes as part of their portfolio management strategy and will be incidental to their securities trading activities; and

   v. In order to minimize the risk associated with investment in the small cap market, it is expected that over the long term (3-5 years) Index Funds / Core Stocks, Large Value Stocks, and Large Growth Stocks combined will comprise approximately 92% of the System's target allocation to the U.S. Equity investment asset class while Small Value Stocks and Small Growth Stocks together will comprise approximately 8% of the System's target allocation to the U.S. Equity investment asset class. It is understood that this is a long-term objective, and that over short- or medium-term (less than 3 years) investments inconsistent with these percentages are not in violation of this policy. During periods when investments are inconsistent with these percentages, Staff and/or the General Investment Consultant will include in their regular report(s) to the Board the rationale behind this inconsistency.

g. The equity portfolio shall be diversified. When fully invested in equities or at its normal level of investment, System investment assets should be invested in a minimum of 20 U.S. Equity securities. At no time may a single equity investment exceed 5% of the value of total System assets. Additionally, at no time may the System own more than 5% of any individual company.

2. Non-U.S. Equities

a. <u>Developed Markets</u> — This category includes broadly diversified equity markets outside the U.S. and consequently plays a significant role in diversifying the portfolio. This segment will concentrate on larger companies in established equity markets around the world utilizing a top/down approach.

b. Emerging Markets — This component is made up of equity positions in companies located in emerging, rapidly growing countries around the world. Because these are countries which are typically in the early development stages of economic growth, the returns in these countries tend to be higher and more volatile on a year-to-year basis.

c. The objectives for investment of the non-US equity portfolio are:

   i. Achieve a total return net of management fees which exceeds the Morgan Stanley Capital International (MSCI) ACWI x U.S. Index;

   ii. Achieve a minimum long-term rate of return which shall exceed the inflation rate as measured by the nationwide Urban Consumers Price Index by 5%;

   iii. Achieve performance results which will rank in the top third of a peer group of international Investment Managers; and

   iv. Currency hedging will be permitted as part of a defensive strategy to protect an international equity portfolio.

d. In order to minimize the risk associated with investment in emerging market securities, it is expected that over the long term (3-5 years) investment in Developed Markets will constitute approximately 80% of the System's target allocation to the Non-U.S. Equity investment asset class while investments in Emerging Markets will constitute approximately 20% of the System's target allocation to the Non-U.S. Equity investment asset class. It is understood that this is a long-term objective and that over short- or medium-term (less than 3 years) investments inconsistent with these percentages are not in violation of this policy. During periods when investments are inconsistent with these percentages, staff and/or the General Investment Consultant will include in their regular report(s) to the Board the rationale behind this inconsistency.

e. Each international equity portfolio shall be diversified. When fully invested in Non-U.S. Equities or at its normal level of investment, System investment assets should be invested in a minimum of 20 securities. At no time may a single Non-U.S. Equity investment exceed 5% of the value of the total System assets. Additionally, at no time may the System own more than 5% of any individual company.

B. Fixed-Income Portfolio

The primary role of the fixed-income portfolio is to provide a more stable investment return and to generate income while diversifying the System's investment assets. The fixed-income holdings may be comprised of the following segments:

1. Core Fixed Income

a. The Core Fixed Income component will provide core exposure to the U.S. fixed-income market including Treasury and government agency bonds, corporate debt, mortgages and asset-backed securities. This component will be composed primarily of investment grade issues with duration similar to that of an applicable core bond index.

b. The objectives for investment of the core fixed income component of the Fixed-Income portfolio are:

   i. Preserve capital and provide a reasonable level of income on a consistent basis;

   ii. Earn an average annual return from income and capital appreciation net of management fees which exceeds 50 basis points of the Barclay's US Aggregate Bond Index;

   iii. Achieve performance results that will rank in the top third of fixed income results achieved by a peer group of Investment Managers and counselors;

   iv. Achieve a minimum long-term rate of return which shall exceed the inflation rate as measured by the nationwide Urban Consumers Price Index by 3%; and

   v. Achieve the above objectives within a time horizon of a minimum of three to five years or approximately a full market cycle.

c. Holdings 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. Investment in U.S. dollar denominated bonds of foreign governments, international organizations, foreign corporations, and U.S. subsidiaries of foreign corporations are permitted, however, shall not exceed 35% of the market value of the portfolio.

d. 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.

e. Short (sold) options positions will generally be hedged, either with current portfolio security holdings, 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 positions in other mortgage derivatives, or b) offset by other portfolio positions.

f. 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.

g. 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 & Agencies) will be considered allowable investments, and are restricted to 25%.

h. 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 holdings.

i. 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.

j. Cash can exceed 5% of the portfolio for strategic purposes only.

2. Non-Core Fixed Income

a. Non-Core Fixed Income will primarily consist of U.S. denominated fixed income securities. It is expected that this component of the Fixed-Income portfolio may have a material allocation to below investment grade securities.

b. The objectives for investment of the non-core fixed income component of the Fixed-Income portfolio are:

   i. Diversify the Fixed-Income portfolio, by reducing exposure to increasing interest rates, provide current income, and to earn, over time, an average annual total rate of return which is equal to or exceeds T-Bills plus 4% net of management fees;

   ii. Provide a high level of income consistent with capital preservation;

   iii. Minimize exposure to interest rate risk, and

   iv. Achieve the above objectives within a time horizon of a minimum of three to five years or approximately a full market cycle.

c. The non-core fixed income component shall be composed primarily of two segments; one segment consisting of investment grade securities and one segment consisting of non-investment-grade securities. Investment-grade securities are defined as securities rated investment-grade by two or more rating agencies. Noninvestment-grade securities are defined as securities rated non-investment-grade (BB+ or Ba1) by two or more rating agencies. If a bond is rated by two rating agencies, it must be rated below-investment-grade by at least one rating agency. If only one rating agency rates the bond, then a rating below BBB-or Baa3 is considered non-investment-grade. The portfolio may contain unrated bonds. Unrated and/or SEC Rule 144A high yield fixed income instruments without registration rights must not exceed 25% of the market value of the Non-Core Fixed Income portfolio.

d. In the event of a downgrade below single C, or in the case of a default, Manager(s) must notify staff and the General Investment Consultant of the downgrade within two days of the date that the downgrade occurs. In the event of a downgrade below single C, or in the case of a default, if the Manager(s) elects to retain the bond in the portfolio the Manager(s) must inform Staff and the General Investment Consultant of the downgrade within two days of the date that the downgrade occurs, and provide a rationale for continued retention of the holding.

e. There may be instances when debt issues convert into equity-oriented securities (i.e. preferred stock, common stock or warrants to purchase other equity securities). To handle these situations, fixed income managers are allowed to hold equity-oriented positions when received in exchange for, or conversion or cancellation of debt securities held in the portfolio. The manager(s) is required to inform staff and the General Investment Consultant 30 days prior to the conversion when they intend to hold the resulting equity-oriented positions. Equity-oriented securities can be held in the portfolio no longer than six months. The manager(s) is required to provide 30 days advance notice to extend the holding period beyond the original six-month period. No more than 10% of the portfolio shall be invested in equity-oriented securities resulting from fixed-to-equity exchanges.

f. Permissible securities include corporate bonds, convertible bonds, government bonds, government agency bonds, government-sponsored entity bonds (e.g., FNMA), mortgage bonds, asset-backed bonds, emerging market debt, Eurodollar bonds, Yankee bonds, SEC Rule 144A securities, high yield CMBS securities, REIT bonds, zero coupon bonds, bank loans (rated or unrated), preferred, structured notes and financial futures. Allowable emerging countries are those investable markets that are open for foreign investments. Investment in U.S. dollar denominated bonds of foreign governments, international organizations, foreign corporations, and U.S. subsidiaries of foreign corporations are permitted, however, shall not exceed 35% of the market value of the portfolio.

g. Derivatives used for substitution, risk control, and arbitrage strategies are permitted. Use of derivatives for speculation is prohibited. No securities shall be purchased on margin or sold short other than any initial and maintenance margin required in connection with futures transactions which may be used only for risk management purposes.

h. For prudent diversification, the portfolio shall have a minimum of 25 issues. No more than 10% of the lesser of cost or market value of the portfolio will be invested in any one issuer with the exception of U.S. Government, U.S. Government Agency, and bonds of U.S. Government sponsored entities.

i. Cash can exceed 5% of the portfolio for strategic purposes only.

j. The portfolio shall have a maturity range of 0 to 10 years with portfolio modified duration expected to range from -3 to 3 years.

C. Covered Calls Portfolio

The Covered Calls Portfolio is an equity-based asset class that is designed to provide some incremental income during flat to modestly rising markets, while providing some level of downside protection during market crises. The Board expects that over the long run, Covered Calls will produce total returns in line with U.S. public equity with less volatility, but will vary markedly from U.S. public equity during market extremes. Under a bull/recovery market scenario, Covered Calls generally underperform U.S. public equity, but still tend to produce substantial upside returns. During a bear/down market scenario, Covered Calls are likely to decline in value, but by a lesser degree than U.S. public equity, providing investors with some principal protection. As a result of these attributes, Covered Calls tend to compound at a smoother rate than U.S. public equity, allowing for a potentially higher amount of wealth creation over a long-horizon holding period (i.e. 10 years).

a. The objectives for investment of the covered call portfolio are:

   v. For active managers, the performance objective is to outperform the benchmark, net of all fees, over 3-5 years;

   vi. For replication managers, the performance objective is to match the benchmark, gross of fees, over 3-5 years;

vii. For replication managers, the volatility of their portfolio's incremental return compared to that of the benchmark should not exceed 2.0% annualized over 3-5 years;

viii. The Covered Calls class shall have a benchmark index of the Chicago Board Options Exchange S&P 500 BuyWrite Index (the "BXM Index");

ix. Derivatives used for risk control and income are permitted. However, the notional value of the options may not exceed the total value of the underlying equity portfolio; and

x. All holdings will be of sufficient size and held in issues that are traded actively enough to facilitate transactions at minimum cost and accurate market valuation.

b. The covered call portfolio should consist of three components:

i. underlying equity,

ii. call options, and

iii. cash.

c. The underlying equity should be designed to gain broad market exposure. This can be accomplished through individual stock ownership, or the utilization of ETFs to gain broad market exposure.

d. No purchase should be made that causes an individual security to exceed 5% of the underlying equity portfolio, where those securities constitute less than 3% of the current market capitalization of the S&P 500 Index, unless an ETF is employed.

e. Call options may be used to provide income and risk control.

f. The notional value of the options may not exceed the total value of the underlying equity portfolio.

g. Call options may only be written on domestic stock indices, broad market or sector ETFs, and individual domestic stocks that are held in the underlying portfolio.

h. Managers may purchase back options in order to close out positions.

i. Cash may exist as an intermediary component from additional funding or option premiums. The balance should not normally exceed 5% of the manager's total portfolio.

j. Leverage may not be used.

D. Real Estate Portfolio

The Real Estate portfolio will consist primarily of public and private real estate interests such as 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. Real estate is expected to provide portfolio diversification due to real estate's low correlation with returns on equities and fixed-income.

a. The objectives for investment of the real estate portfolio are:

   i. Attractive Risk-Adjusted Returns: To obtain superior risk-adjusted returns by taking advantage of the inefficiencies of real estate as compared to other asset classes. Active management, value creation and opportunistic strategies, as well as the prudent use of third-party debt, are approved methods for generating expected returns;

   ii. Increased Program Diversification/Reduced Program Risk: To use real estate to enhance overall Program diversification and, in turn, reduce overall Program risk, given the historically low to negative return correlations that exist between real estate and other asset classes;

   iii. Significant Current Cash Yields: Significant cash return based primarily on current rental income. In general, as a portion of total investment return, higher levels of current income are expected from core and value than opportunistic investments; in contrast, higher levels of appreciation are expected from opportunistic than value and core investments;

   iv. Inflation-Hedge: To make investments primarily in real estate equity investments that are likely to provide a reasonable hedge against price inflation; and

   v. Preservation of Principal: To achieve meaningful risk-adjusted returns without undue exposure to loss of investment principal.

b. The public real estate portfolio shall be diversified. When fully invested in exchange traded Real Estate Investment Trusts (REITs) or at its normal level of investment, a minimum of 20 securities should be held. At no time may a single REIT investment exceed 5% of the value of the total System investment assets.

c. Due to their limited liquidity, private real estate investments shall be approved by the Board only on a case-by-case basis. Agreements with private real estate Investment Managers shall include specific Investment Objectives and Policies that must be approved by the Board prior to execution of the agreement.

E. Cash

Cash may be invested in:

1. Treasury and Agency instruments with maturities no longer than 90 days;
2. AAA-rated money market funds invested exclusively in Treasury and Agency instruments;
3. Short Term Investment Funds (STIF) managed by the Master Custodian; and
4. Local Agency Investment Fund (LAIF).

VI. INVESTMENT MANAGER POLICY

A. Introduction

1. The Board will retain external Investment Managers to manage portfolios using a specific style and methodology. Managers will have authority for determining investment strategy, security selection, and timing subject to the Policy and Manager Guidelines and legal restrictions or other Board direction. Performance objectives will also be developed for each manager.

2. The performance of each Investment Manager's portfolio will be monitored and evaluated on a regular basis relative to each portfolio component's benchmark return and, if available, relative to a peer group of managers following similar investment styles.

3. Investment actions are expected to comply with "prudent person" standards.

4. Each Investment Manager will be expected to know the practices of the Board and comply with those practices. It is each manager's responsibility to identify policies that have an adverse impact on performance and to initiate discussion with staff toward possible improvement of the practices of the Board.

5. The Board will also review each Investment Manager's adherence to its investment policy, and any material changes in the manager's organization (e.g. personnel changes, new business developments, etc.). The Investment Managers retained by the Board will be responsible for informing the Board by communication with staff of such material changes.

6. All bond and stock business shall be executed seeking best execution. "Best execution" means seeking to achieve the most favorable price and execution available, having in mind the System's best interest, and considering all relevant factors. These factors include price, the size of the transaction, the nature of the market for the security, current market levels and trends, the reputation, experience and financial stability of the broker involved and the quality of service rendered by the broker in other transactions. Where feasible, the stock or bonds trades shall be distributed to brokerage firms where the Administrative-Investment Committee has established a commission recapture directed brokerage program.

B. Manager Selection

The selection of Investment Managers shall be accomplished in accordance with all applicable Local, State and Federal laws and regulations. Each Investment Manager, consultant and custodian shall function under a formal contract that delineates responsibilities and appropriate performance expectations.

C. Manager Authority

The Board's Investment Managers shall direct and manage the investment and reinvestment of assets allocated to their accounts in accordance with this document; Board practices or direction; applicable Local, State and Federal statutes and regulations; and individual management investment plans and executed contracts.

D. Limitations on Concentrations of Single Managers/Firms

In order to minimize any potential risk associated with large concentrations of System investment assets being managed by a single firm, any single manager/firm, when all mandates associated with that manager/firm are aggregated, shall represent no more than 25% of the total System investment assets. If any single manager/firm exceeds this limitation, the Investment Consultant and staff shall provide the Board its solution to reallocate funds from that manager/firm within the portfolio to reduce the concentration within a reasonable time period.

E. Investment Manager Guidelines

In accordance with the Investment Objectives stated above, the Board shall provide each of the System's Investment Managers with a set of investment guidelines as stated in section V. Eligible Securities. These guidelines shall specify eligible investment, minimum diversification standards, and applicable investment restrictions necessary for diversification and risk control. Managers do not have authority to depart from their guidelines.

F. Investment Manager Performance Measurement

1. The Board has the right to evaluate investment performance at any time on an ongoing basis using investment performance criteria relative to specific benchmarks over varying periods of time by asset class. Performance results for each Investment Manager shall be calculated and evaluated at least quarterly.

2. Each Investment Manager shall be evaluated against factors including the following:

   a. Active Investment Managers in each asset class will be expected to:

      i. outperform passive benchmarks listed in this policy in the table titled Asset Class Performance Benchmarks related to both their asset class and their investment style; and

      ii. outperform the median manager in their investment style in the universe employed by the System's investment performance measurement consultant over full market cycles (usually3-5 years).

b. Qualitative indicators will be evaluated such as:

   i. Changes in investment strategy and style;

   ii. Instability of Investment Manager personnel and organization;

   iii. Unusual portfolio activity, trading volume, and execution costs

   iv. Risk and performance characteristics not logically explainable in terms of the published style or out-of-step with manager's style peer group; and

   v. Failure to comply with all investment guidelines.

c. None of the qualitative indicators may be taken as conclusive evidence of inconsistency with this policy. Such a finding would be based upon the facts and circumstances of each situation as described below.

3. Any Investment Manager not meeting performance objectives will be subject to the manager Watch List criteria set forth below.

4. *<u>Watch Status of an Investment Manager/Portfolio</u>*

Watch status serves two basic purposes. First, it is a major decision step the Board takes to begin transitioning from one Investment Manager to another Investment Manager. Second, it allows the Investment Manager on watch status time to take any corrective action (or justify its changing condition) before the Board elects to terminate its existing relationship with the Investment Manager.

a. An Investment Manager/portfolio is placed on "watch" status if at least one of two events occurs:

   i. the portfolio's investment performance does not meet one of the criteria found in the following table; or

   ii. after the Manager Performance has been measured as described above staff and/or the investment consultant recommends to the Board that an Investment Manager is a candidate for watch status.

   The Board approves or disapproves placing the Investment Manager/portfolio on "Watch" Status.

b. If the Board approves the recommendation to place a specific Investment Manager on watch status, staff will issue a formal notification to the Investment Manager. This formal notification of watch status will include, but is not necessarily limited to, the following items:

   i. Meeting date when the Board approved the recommendation to place the Investment Manager on watch;

ii. Reason(s) for placing the Investment Manager on watch status; and

iii. Conditions for being released from watch status (see ***Manager "Watch" Criteria*** table below).

c. Typically, once a manager is placed on watch status, it should be able to exhibit improvement within a time frame of twelve to twenty four months, if not sooner.

d. Private Real Estate Funds -- Private real estate funds are primarily invested in assets that are largely illiquid and generally have limited peer sets. In addition, these assets generally have imperfect benchmarks by which performance, according to vintage year and strategy, can be assessed. Funds are closely monitored for factors including, but not limited to:

   i. style drift,
   ii. key-person and other management/organizational changes,
   iii. performance relative to original underwriting,
   iv. fees,
   v. transparency, and
   vi. J-curve impact.

   Underperforming fund managers will be brought to the Board's attention as soon as the consultant and staff agree the manager should be placed on watch. The termination and/or replacement of private real-estate managers is commonly more challenging than terminating managers that operate in the public markets. Terminating these types of managers can exacerbate poor performance beyond that which has already been experienced. For example, in many instances the only exit option available is via secondary sales of interests, which are often transacted at an appreciable discount to existing net asset values.

Manager "Watch" Criteria*			
Asset Class	**Short-term (Rolling 12 month periods)**	**Medium-term (Rolling 36 month periods)**	**Long-term (60+ Months)**
U.S. Equity –Active	Portfolio Return[1] < Benchmark Return -3.5%	Portfolio Annualized Return[1, 2] < Benchmark Annualized Return -1.75% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
U.S. Equity –Passive	Tracking Error[3] > 0.03%	Tracking Error[3] > 0.25% for 6 consecutive months	Portfolio Annualized Return[1, 2] < Benchmark Annualized Return -0.40% for 6 consecutive months
Non-U.S. Equity	Portfolio Return[1] < Benchmark Return -4.5%	Portfolio Annualized Return[1, 2] < Benchmark Annualized Return -2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Covered Calls – Active	Portfolio Return[1] < Benchmark Return -3.5%	Portfolio Annualized Return[1, 2] < Benchmark Annualized Return -1.75% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Covered Calls – Replication	Tracking Error[3] > 0.3%	Tracking Error[3] > 0.25% for 6 consecutive months	Portfolio Annualized Return[1, 2] < Benchmark Annualized Return -0.40% for 6 consecutive months
Fixed-Income – Core – Active	Portfolio Return[1] < Benchmark Return -1.5%	Portfolio Annualized Return[1, 2] < Benchmark Annualized Return-1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months
Fixed-Income – Core – Passive	Tracking Error[3] > 0.25%	Tracking Error[3] > 0.20% for 6 consecutive months	Portfolio Annualized Return[1, 2] < Benchmark Annualized Return -0.30% for 6 consecutive months
Fixed-Income – Non-Core	Portfolio Return[1] < Benchmark Return -4.5%	Portfolio Annualized Return[1, 2] < Benchmark Annualized Return -2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months

*Notes:

- Benchmarks are presented in this policy under table titled **Asset Class Performance Benchmarks.**
- All portfolio returns are gross of manager fees.

Footnotes:

[1] Return discounts from a benchmark return based on 2/3 of the typical tracking error estimates of the specified type of portfolio.
[2] Annualized Return is the average annual return of either the portfolio or its benchmark.
[3] Tracking error is a measure of the volatility of the average annual difference between the portfolio's return and the benchmark's return.

5. *Release from Watch Status*

a. Investment Managers that show indications of an improvement, as reviewed by the investment consultant and determined by the Board, in one or more of the factors described earlier, may be released from watch status. Examples of improvements warranting a change in status are:

i. Improved investment performance in approximately twenty four months (or less) from the time of being placed on watch status;

ii. Investment style characteristics return to, and remain at, levels originally agreed upon; and

iii. Qualitative factors (such as organizational structure stabilizes, personnel adjustments, compliance requirements, etc.) are satisfactorily addressed.

b. To release an Investment Manager from watch status, the Board must formally take action to do so. This action should be supported by documentation (produced by the investment consultant) similar in format to the Portfolio Review described above. This document should highlight original reasons for the watch status and discussion of how the Investment Manager has addressed these issues and warrants release from watch status.

6. *Replacement/Termination*

To terminate and/or replace an Investment Manager, the Board must formally take action to do so. This action should be supported by documentation (produced by staff and/or investment consultant). This document shall highlight original reasons for the watch status and discussion of continued developments during watch status that led to the termination/replacement recommendation.

G. Securities Lending

An agreement may be made with the System's bank custodian or other third-party custodian retained by the Board to loan securities on behalf of the Retirement System. Securities that are loaned shall be fully
collateralized in cash or other acceptable securities having at least 102% of the market value of the loaned
security.

H. Commingled Group Trusts

Investments may be made in commingled group trusts. When the group trust is tax exempt, to meet the requirements of IRS Ruling 8 1-100 the declaration of trust governing each such group trust shall be deemed adopted as part of EBMUD Employees' Retirement System plan.

I. Derivatives

Investment in “derivatives” is permitted, however, leveraged derivatives or purchase of derivatives on credit is not permitted. Credit risk, market risk and legal risk will be determined by the Administrative-Investment Committee to be appropriate before any investment is made in a derivative product. For these purposes, derivatives shall be defined as securities whose return or market value is derived from another security or market index.

J. Currency Hedging

With the approval of the Administrative-Investment Committee, Investment Managers may hedge the currency risk associated with securities they manage for the Retirement System. Hedging may be accomplished through mechanisms approved by staff, including, but not limited to, currency futures contracts, currency purchases, and currency options. Approval to hedge must be obtained in advance and may be given orally or in writing. Managers need not obtain approval for each individual investment as long as the investment vehicle has been approved.

K. Proxy Voting of Securities

Investment Managers may be given the authority to vote proxies on behalf of the Retirement System. Investment Managers must vote in accordance with Board policy.

L. Transaction with Retirement Board Members, Staff, and Consultants to the Employee Retirement System

Retirement Board Members, staff, and consultants to the System, if any (including but not limited to investment officers, retirement administrators, and legal counsel) are prohibited from selling investment products to the System or any other public retirement system while they are Members of the System Board, or staff, or consultants to the System, and for two years after leaving the Board, or employment with the District, or serving as consultants to the System.

VII. POLICY FOR THE USE OF PLACEMENT AGENTS

In accordance with Sections 20098, 31528, 7508.57513.8 7513.85, 7513.9, and 7513.95 of the Government Code the System shall require the specific and timely disclosure of payments and compensation to Placement Agents[1] in connection with the System's investments. This Policy is intended to apply broadly to all investment contracts made by the System. The goal of this Policy is to help ensure that the System investment decisions are made by the Board solely on the merits of the investment opportunity in accordance with the Board Members' fiduciary responsibility and to avoid the appearance of undue influence on the Board or illegal pay-to-play practices in the award of investment related contracts.

A. Manager Placement Agent Disclosures

1. Each Manager shall provide to the System in writing the required information listed below within 45 days of the initiation of investment discussions between the Manager and the System but in any event prior to contract execution. The Manager must notify the System staff of any changes to any of the information required within 14 calendar days of the Manager knowing of the change(s).

   a. Disclosure of Payments Made to Placement Agents

      i. A written statement of whether the Manager or any of its principals, employees, agents or affiliates has compensated or agreed to compensate any person or entity to act as a Placement Agent in connection with the System's investments;

      ii. The name of the Placement Agent, and resumes of every officer, partner and principal of the Placement Agent. The resumes shall include educational history, professional designations, regulatory licenses and investment and work experience;

      iii. Description of any and all compensation paid or agreed to be paid to the Placement Agent, including payment to employees of the Manager who are retained in order to solicit, or who are paid based in whole or in part upon, an investment from the System;

      iv. Description of the services rendered or the services expected to be performed by the Placement Agent and a list of the prospective clients for which such Placement Agent is utilized;

      v. Copies of all agreements between the Manager and the Placement Agent;

      vi. Name of the regulatory agencies the Placement Agent or any of its

[1] "Placement Agent" includes any person or entity hired, engaged, retained by, acting on behalf of or serving for the benefit of an Investment Manager or on behalf of another Placement Agent as a third-party marketer, finder, solicitor, marketer, consultant, broker, or other intermediary to market, solicit, obtain access to the System, and/or raise money or investments either directly or indirectly from the System. Notwithstanding the foregoing, an individual who is an employee, officer, director, equity holder, partner, member or trustee of an Investment Manager and who spends one-third or more of his or her time, during a calendar year, managing the securities or assets owned, controlled, invested or held by the Investment Manager is not a Placement Agent.

affiliates are registered with, such as the Securities and Exchange Commission (SEC), the Financial Industry Regulatory Association (FINRA), or any similar regulatory agency; proof and details of such registration shall be included, or an explanation as to why no registration is required; and

vii. A statement as to whether the Placement Agent, or any of its affiliates, is registered as a lobbyist with any state or national government.

b. *Disclosure of Relationships to the Board; Campaign Contributions*

i. Full disclosure of any connection between the Placement Agent or the Manager and the System, including whether anyone receiving compensation or who will receive compensation with respect to an investment from the System from the Placement Agent or the Manager is: a current or former System Board Member, System employee, or System consultant; a member of the immediate family of anyone connected to or formerly connected to the System;

ii. Full disclosure of the donations made by the Placement Agent or the Manager during the prior 24-month period to any organization (including contributions to political campaign funds and donations to non-profits) in which any person listed in Paragraph 2.a is an officer, employee, or member of the Board or Advisory Board (or similar body). Additionally, any subsequent donations made by the Placement Agent or the Manager to any such organization during the time the Placement Agent or the Manager is receiving compensation in connection with a the System investment shall also be disclosed; and

iii. Full disclosure of the names of any current or former System Board Members, System employees or the System consultants who suggested the retention of the Placement Agent.

2. All Investment Managers must provide written confirmation that they are in compliance with this Policy and complete form as required by EBMUDERS.

B. <u>Responsibilities of Staff and Consultants</u>

1. At the time that investment discussions between a Manager and the System for a prospective investment commence, Staff is responsible for providing Managers and Placement Agents with a copy of this Placement Agent Policy.

2. Staff and Consultants must confirm that the applicable Placement Agent disclosures have been received prior to the completion of due diligence and completion of any recommendation to proceed with the decision to invest with the Manager. For new contracts and amendments to existing contracts, the System will:

a. Stop investment negotiations with a Manager who refuses to disclose the required information.

b. Decline the opportunity to retain or invest with a Manager who has used or intends to use a Placement Agent who is not registered with the SEC, FINRA, or any similar regulatory agency and cannot provide an explanation as to why no registration is required.

3. Staff and Consultants will assist legal counsel as necessary for securing in the final contract terms and side letter agreements between the System and the Manager, including but not limited to, the following:

   a. The Manager's agreement that it has complied with and will continue to comply with this Policy.

   b. The Manager's representation and warranty that it will notify the System Staff of any changes to any of the information required above within 14 calendar days of when the Manager knows or should have known of the change(s).

4. At any meeting where an investment decision with a Manager will be considered, Staff and Consultants must notify the Board of the name(s) of any Placement Agent(s) used by the Manager in connection with the proposed investment, and any campaign contributions or gifts reported by each Placement Agent.

5. Staff must maintain records of all information disclosed to the System in accordance with this policy, and provide the Board with notice of any violation of this policy as soon as practicable.

C. <u>Responsibilities of Counsel</u>

Legal counsel to the System must review the final contract terms and side letter agreements between the System and the Manager, including all requisite agreements and representations and warranties by the Manager, for compliance in accordance with this Policy for the Use of Placement Agents.

D. <u>Responsibilities of the Board</u>

The Board must review all violations of this policy reported by Staff, consider whether each violation is material, and consider whether to prohibit that Manager and/or Placement Agent from soliciting new investments from the System for a period of five years from the date of violation**.** However, the Retirement Board may reduce this prohibition, by majority vote, at a public session upon a showing of good cause that such action is consistent with the Board's fiduciary duties.

Appendix I – GLOSSARY OF INVESTMENT TERMS

144(a) Securities – 144a securities are in concept "semi-private placement securities," that are normally traded by sophisticated institutional investors with limited financial information on the issuing company. SEC rule 144a exempts issuers from SEC registration requirements. While not legally required to file with the SEC, issuers normally do provide some sort of documentation describing the issue and financial information about the issuing company.

Accrual Basis Accounting – As opposed to cash basis accounting, this values assets based upon accrued changes in values, not actual cash flows. For example, dividends are included in the portfolio value (i.e. accrued) as of the ex-dividend date, rather than the payment date (or the declaration date).

Active Management – A form of investment management which involves buying and selling financial assets with the objective of earning positive risk-adjusted returns.

Alpha – A statistical measurement to determine whether a portfolio of securities in which a fund has invested is priced as would be expected, given the fund's beta. If the alpha of a fund is zero, the portfolio is priced as would be expected. If its alpha is greater than zero, the portfolio is priced higher than could be expected, and vice versa.

Alternative Investments – These generally refer to institutional blind pool limited partnerships/LLCs which make private debt and equity investments in privately held companies, as well as hedge funds and other publicly traded derivatives-based strategies.

American Depository Receipts (ADRs) – Financial assets issued by U.S. banks that represent indirect ownership of a certain number of equity shares in a foreign firm. ADRs are held on deposit in a bank in the firm's home country.

American Shares – American shares are securities issued in the US by a transfer agent acting on behalf of a foreign firm.

Asset Allocation – The process of determining the optimal allocation of a fund's portfolio among broad asset classes.

Asset Allocation Risk – The risk that a non-optimal asset allocation will be undertaken which does not meet the fund's return and risk targets.

Balanced Fund – An investment strategy which is a combination of equities and bonds.

Basis Point – 1/100th of 1%.

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

Barclay's US 1-3 Yr. Govt/Credit Index – see BC US 1-3 Yr. Govt/Credit Index

Barclay's 1-5 Yr. US High Yield Cash Pay Index – see BC 1-5 Year US High Yield Cash Pay Index

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

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

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

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

BC US 1-3 Year Government/Credit Index – measures the performance of investment-grade corporate debt and sovereign, supranational, local authority and non-U.S. agency bonds that are U.S. dollar denominated and have a remaining maturity of greater than or equal to one year and less than three years.

BC 1-5 Year US High Yield Cash Pay Index – A component of the U.S. Corporate High-Yield Bond Index, which covers the universe of fixed-rate, non-investment grade corporate debt that have a remaining maturity of greater than or equal to one year and less than five years.

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

Benchmark – The standards against which investment performance is measured. An ideal benchmark is (1) clearly defined; (2) representative of the targeted strategies, opportunities, or activities; (3) investable; and (4) measurable. Good benchmarks meeting these criteria are available for virtually all traditional asset classes.

Benchmark Portfolio – A portfolio against which the investment performance of an investment manager can be compared for the purpose of determining the value-added of the manager. A benchmark portfolio must be of the same style as the manager, and in particular, similar in terms of risk.

Best Execution – This is formally defined as the difference between the strike price (the price at which a security is actually bought or sold) and the "fair market price," which involves calculating opportunity costs by examining the security price immediately after the trade is placed. Best execution occurs when the trade involves no opportunity cost, for example when there is no increase in the price of a security shortly after it is sold.

Beta – A statistical measure of the volatility, or sensitivity, of rates of return on a portfolio or security in comparison to a market index. The beta value measures the expected change in return per one percent change in the return on the market. For example, if the beta of a portfolio is 1.5, a 1 percent increase (decrease) in the return of the market will result, on average, in a 1.5 percent increase (decrease) in the return of the portfolio.

Boardroom Risk – The risk that Trustees will not ride out short term volatility (and therefore wind up altering a sound long-term strategy) due to pressure put on them in their role as Trustees.

Bottom-up Analysis – An approach to valuing securities which first involves analyzing individual companies, then the industry, and finally the economy and overall capital market.

BXM Covered Calls Index – see CBOE S&P 500 Buy Write Index

Capital Asset Pricing Model – An equilibrium model of asset pricing which states that the expected return of a security increases as the security's sensitivity to the market (i.e. beta) increases. That is, as the expected return of a security or portfolio increases (decreases), risk increases (decreases) as well.

Capitalization-weighted Market Index – A method of calculating a market index where the return of a security (or group of securities) is weighted by the market value of the security (or group of securities) relative to total value of all securities.

Cash Sweep Accounts – A money market fund into which all new contributions, stock dividend income and bond interest income is placed ("swept") for a certain period of time. At regular intervals, or when rebalancing is necessary, this cash is invested in assets in line with the asset allocation stipulated in the IPS.

CBOE – Chicago Board Options Exchange **–** Chicago Board Options Exchange (CBOE), the largest U.S. options exchange and creator of listed options, continues to set the bar for options trading through product innovation, trading technology and investor education. CBOE offers equity, index and ETF options, including proprietary products, such as S&P 500 options (SPX), the most active U.S. index option, and options on the CBOE Volatility Index (VIX), the world's barometer for market volatility.

CBOE S&P 500 Buy Write Index – is a passive total return index based on (1) buying an S&P 500 stock index portfolio, and (2) "writing" (or selling) the near-term S&P 500 Index (SPXSM) "covered" call option, generally on the third Friday of each month. The SPX call written will have about one month remaining to expiration, with an exercise price just above the prevailing index level (i.e., slightly out of the money). The SPX call is held until expiration and cash settled, at which time a new one-month, near-the-money call is written.

CBOE Market Volatility Index (VIX) – measures the market's perceived future volatility (read: risk and uncertainty), most often associated with a fear that the market will drop. More specifically, the VIX measures the market's expectation of future volatility implied by S&P 500 stock index (SPX) option prices. While technically it does not measure the probability that the market is going to drop in the near future, at times it does represent a measure of fear that it will.

CFA Institute – The CFA Institute is the umbrella organization for the two large investment management advisers' groups, the Institute of Chartered Financial Analysts and the Financial Analysts Federation. This organization administers the annual examinations for the CFA designation and also publishes industry guidelines for performance measurement reporting and calculations. The CFA Institute instituted a standardized performance reporting format on January 1, 1993.

Commingled Fund – An investment fund which is similar to a mutual fund in that investors purchase and redeem units that represent ownership in a pool of securities.

Commission Recapture – An agreement by which a plan sponsor earns credits based upon the amount of brokerage commissions paid. These credits can be used for services which will benefit the plan, such as consulting services, custodial fees, or hardware and software expenses.

Convertible Bond – A bond which may, at the holder's option, be exchanged for common stock.

Core Bond – A fixed income investment strategy which constructs portfolios to approximate the investment results of the BC Government/Corporate Bond Index with a modest amount of variability in duration around the index. The objective is to achieve value added from sector or issue selection.

Core Equity – An investment strategy where the portfolio's characteristics are similar to that of the S&P 500 Index, with the objective of adding value over and above the index, typically from sector or issue selection.

Correlation Coefficient – A statistical measure similar to covariance, in that it measures the mutual variation between two variables. The correlation coefficient is bounded by the values -1 and +1.

Covariance – A statistical measure of the mutual variation between two variables.

Current Yield – The annual dollar amount of coupon payments made by a bond divided by the bond's current market price.

Defensive – A fixed income investment strategy where the objective is to minimize interest rate risk by investing only in short to intermediate term securities. The average portfolio maturity is typically two to five years.

Derivative – A financial derivative is a security which derives its value from a more fundamental financial security such as a stock or bond. For example, the value of a stock option depends upon the value from the underlying stock. Because the stock option cannot exist without the underlying stock, the stock option is derived from the stock itself.

Dividend Yield – The current annualized dividend paid on a share of common stock, expressed as a percentage of the stock's current market price.

Duration – A measure of the average maturity of the stream of interest payments of a bond. The value of a given bond is more sensitive to interest rate changes as duration increases, i.e. longer duration bonds have greater interest rate volatility than shorter duration bonds.

Dollar-weighted Measurement – In calculating summary statistics, a process by which performance measures are weighted by the dollar amounts of assets in each time period.

Earnings Per Share – A firm's reported earnings divided by the number of its common shares outstanding.

Economically-targeted Investment – Investments where the goal is to target a certain economic activity, sector or area in order to produce corollary benefits in addition to the main objective of earning a competitive risk-adjusted rate of return.

Efficient Market – A theory which claims that a security's market price equals its true investment value at all times since all information is fully and immediately reflected in the market price.

Efficient Portfolio – A portfolio which offers maximum expected return for a given level of risk or minimum risk for a given level of expected return.

ERISA – The Employee Retirement Security Act, signed into law in September 1974. ERISA established a strict set of fiduciary responsibilities for corporate pension funds, and some states have adopted the ERISA provisions for public plans. It is recommended that public pension plans use the ERISA regulations as guidelines for managing the plan's assets in a procedurally prudent manner.

Eurobond – An international bond denominated in a currency other than that of the country where the bond is issued.

Exchange Traded Funds (ETF's) – ETF's are registered, open-ended unit investment trusts that invest in a basket of stocks designed to track the performance of a given index. However, like a closed-end fund, investors buy shares in ETF's from another shareholder on the open market rather than from a fund company.

Exculpatory – A clause or set of regulations, for example the "safe harbor rules", which generally frees Trustees from responsibility and liability.

Extended Maturity – A fixed income investment strategy where average portfolio maturity is greater than that of the Barclays Capital Government/Corporate Bond Index. Variations in bond portfolio characteristics are made to enhance performance results.

Fiduciary – Indicates the relationship of trust and confidence where one person (the fiduciary) holds or controls property for the benefit of another person. For example, the relationship between a Trustee and the beneficiaries of the trust.

FTSE – is a British provider of stock market indices and associated data services, wholly owned by the London Stock Exchange.

FTSE NAREIT All Equity REITs Index – contains all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property that also meet minimum size and liquidity criteria.

Funding Risk – The risk that anticipated contributions to the plan will not be made.

Geometric Returns – A method of calculating returns which links portfolio results on a quarterly or monthly basis. This method is best illustrated by an example, and a comparison to *arithmetic returns*, which does not utilize a time link. Suppose a $100 portfolio returned +25% in the first quarter (ending value is $125) but lost 20% in the second quarter (ending value is $100). Over the two quarters the return was 0%, and the method of calculating the geometric return would indicate this. However, the arithmetic calculation would simply average the two returns: (25%)(.5) + (20%)(.5) = +2.5%.

Global Equity – Managers who invest in both foreign and domestic equity securities but excludes regional and index funds.

Growth Equity – Managers who invest in companies that are expected to have above average prospects for long-term growth in earnings and profitability.

High Yield – A fixed income investment strategy where the objective is to obtain high current income by investing in lower rated, higher default-risk fixed-income securities. As a result, security selection focuses on credit risk analysis.

Index Fund – A passively managed investment in a diversified portfolio of financial assets designed to mimic the performance of a specific market index.

Interest Rate Risk – The uncertainty in the return on a bond caused by unanticipated changes in its value due to changes in the market interest rate.

Intermediate – A fixed income investment strategy where the objective is to lower interest rate risk by investing only in intermediate-term securities. The average portfolio maturity is typically five to seven years.

J Curve – The J curve is used to illustrate the historical tendency of private real estate funds to deliver negative returns in early years and investment gains in the outlying years as the portfolio matures. In the early years of the fund, a number of factors contribute to negative returns including management fees, property improvement and maintenance. Over time the fund will begin to experience unrealized gains (through increases in property value) followed eventually by events in which gains are realized (e.g., rising rents, property sells, leveraged recapitalizations). The J-curve impact is larger for value-add and opportunistic funds relative to core funds.

Liquidity – In general, liquidity refers to the ease by which a financial asset can be converted into cash. Liquidity is often more narrowly defined as the ability to sell an asset quickly without having to make a substantial price concession.

Liquidity Risk – The risk that there will be insufficient cash to meet the fund's disbursement and expense requirements.

Lost Opportunity Risk – The risk that through inappropriate market timing strategies a fund's portfolio will miss long-run market opportunities.

Manager Search – The selection of specific managers following the manager structure.

Manager Structure – The identification of the type(s) of managers to be selected within each broad class of assets.

Marked to the Market – The daily process of adjusting the value of a portfolio to reflect daily changes in the market prices of the assets held in the portfolio.

Market Risk – See Systematic Risk.

Market Timing – A form of active management that shifts funds between asset classes based on short-term expectations of movements in the capital markets.

Merrill Lynch 91-Day Treasury Bill Index – This index is computed by linking monthly the return on 91-day Treasury Bills. The Treasury Bill rate is generally accepted as a proxy for the return on a risk-free asset.

Money Markets – Financial markets in which financial assets with a maturity of less than one year are traded.

MSCI – Morgan Stanley Capital International, - MSCI Inc. is a US-based provider of equity, fixed income, and hedge fund stock market indexes, and equity portfolio analysis tools. It is best known for publishing the MSCI World and MSCI EAFE Indexes

MSCI ACWI xUS Index – MSCI ACWI (All Country World Index) Free excluding US (gross dividends): is a free-floating adjusted market capitalization index designed to measure equity performance in the global developed and emerging markets. As of April 2002, the index consisted of 49 developed and emerging market country indices.

MSCI Europe, Australia, Far East ("EAFE") Index – The EAFE Index consists of stocks within the world's major equity markets. The EAFE index typically includes the larger companies in each market, around 60% of each market by value and covers over 1000 companies in total. In addition to national price indices, regional indexes (e.g., Europe) and industry indexes (e.g., automobiles) are included. The reports also contain key valuation data for the markets, such as price-to-earnings ratios and dividend yields. The index is based on market capitalization and, as of May 2005, contained 21 countries.

MSCI EAFE plus Canada Index – Is a free float-adjusted market capitalization index that is designed to measure developed market equity performance similar to the MSCI EAFE. This index excludes the US, but includes Canada.

MSCI Emerging Markets Free – This index contains securities of the following countries which are available to all investors regardless of local status: Argentina, Brazil, Chile, Colombia, Greece, India, Indonesia, Israel, Jordan, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Portugal, South Africa, Sri Lanka, Thailand, Turkey and Venezuela.

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

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

NCREIF – NCREIF is a not-for-profit trade association that serves its membership, and the academic and investment community's need for improved commercial real estate data, performance measurement, investment analysis, information standards, education, and peer group interaction.

Passive Management – For a given asset class, the process of buying a diversified portfolio which attempts to duplicate the overall performance of the asset class (i.e. the relevant market index).

Performance Attribution – The identification of the sources of returns for a security or portfolio over a particular time period.

Preferred Stock – Preferred stocks actually behaves as a fixed-income investment because the dividend payment is fixed. However, unlike bonds, the dividend payment is not legally binding.

Price-earnings Ratio – A firm’s current stock price divided by its earnings per share.

Private Placement – The direct sale of a newly issued security to one or a small number of large institutional investors.

Proxy Voting – A written authorization given by a shareholder to someone else to vote his or her shares at a stockholders annual or special meeting called to elect directors or for some other corporate purpose.

Purchasing Power Risk – The risk that a portfolio will earn a return less than the rate of inflation, i.e., a negative real return.

Real Estate Investment Trust (REIT) – An investment fund whose objective is to hold real estate-related assets, either through mortgages, construction and development loans, or equity interests.

Restatement Third, Trusts (Prudent Investor Rule) – A set of new and more specific standards for the handling of the investment process by fiduciaries. These standards were adopted in 1992 and rely heavily on modern investment theory.

Return On Equity – The earnings per share of a firm divided by the firm's book value per share.

Risk-adjusted Return – The return on an asset or portfolio, modified to explicitly account for the risk of the asset or portfolio.

R-squared (R^2) – Formally called the coefficient of determination, this measures the overall strength or "explanatory power" of a statistical relationship. In general, a higher R^2 means a stronger statistical relationship between the variables which have been estimated, and therefore more confidence in using the estimation for decision-making.

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

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

Russell 1000 Value Index – This index contains those Russell 1000 securities with a less-than-average growth orientation. It represents the universe of stocks form which value managers typically select. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

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

Russell 3000 Index – Represents the largest 3,000 US companies based on total market capitalization, representing approximately 98% of the investable US equity market.

Russell 3000 Growth Index – This index measures the performance of those Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth values. The stocks in this index are also members of either the Russell 1000 Growth or the Russell 2000 Growth indexes.

S&P/LSTA Performing Loans Index – A subset of the S&P/LSTA Leveraged Loan Index, and comprises non-investment-grade and non-rated loans. Tracking only performing loans unlike its parent index, it removes defaulted issues at the price they reach directly following the default.

Sharpe Ratio – This statistic is a commonly used measure of risk-adjusted return. It is calculated by subtracting the "risk-free" return (usually 3 Month Treasury Bill) from the portfolio return and dividing the resulting "excess return" by the portfolio's risk level (standard deviation). The result is a measure of return gained per unit of risk taken. The higher the Sharpe ratio, the better the fund's historical risk-adjusted performance.

Small Capitalization – Managers who invest in equities of companies with relatively small capitalization. The cut-off point for small capitalization varies from manager to manager, but on average targets firms with capitalization of $200-$600 million.

Socially-targeted Investment – An investment which is undertaken based upon social, rather than purely financial, guidelines.

Soft Dollars – The portion of a plan's commissions expense incurred in the buying and selling of securities that is allocated through a directed brokerage arrangement for the purpose of acquiring goods or services for the benefit of the plan. In many soft dollar arrangements, the payment scheme is effected through a brokerage affiliate of the investment consultant. Broker-investment consultants servicing smaller plans receive commissions directly from the counseled account. Other soft dollar schemes are effected through brokerages that, while acting as the clearing/transfer agent, also serve as the conduit for the payment of fees between the primary parties to the directed fee arrangement.

Specific Risk – The part of a security's total risk which is not related to movements in the market and therefore can be diversified away.

Standard Deviation – A statistical measure of portfolio risk. It reflects the average deviation of the observations from their sample mean. Standard deviation is used as an estimate of risk since it measure how wide the range of returns typically is. The wider the typical range of returns, the higher the standard deviation of returns, and the higher the portfolio risk. If returns are normally distributed (i.e. has a bell shaped curve distribution) then approximately 2/3 of the returns would occur within plus or minus one standard deviation from the sample mean.

Standard & Poors 500 Equity Index (S&P 500) – The most widely used U.S. index of the equity market. The S&P 500 is comprised of 500 large, successful U.S. companies and is constructed to represent movements in common stocks. Stocks are chosen so that in aggregate, they represent a broad distribution by industry group, comparable to that of stocks traded on the New York Stock Exchange. Decisions about stocks to be included and deleted are made by the S&P Index Committee. The S&P 500 represents approximately 75% of the cap-weight of all U.S. stocks.

Strategic Asset Allocation – Rebalancing back to the normal mix at specified time intervals (quarterly) or when established tolerance bands (e.g., + and - 10%) are violated

Systematic Risk – The part of a security's total risk that is related to movements in the market and therefore cannot be diversified away.

Tactical Asset Allocation – Closely related to a strategy of market timing, this strategy uses certain indicators to make adjustments in the proportions of a portfolio invested in stocks, bonds, and cash.

Term-to-maturity – The time remaining until a bond's maturity date.

Time-weighted Return – A method of measuring the performance of a portfolio over a particular period of time. It is the cumulative compounded rate of return of the portfolio, calculated on each date that cash flow moves into or out of the portfolio.

Top-down Analysis – An approach to valuing equities which first looks at the economy and overall capital market, then industries, and finally individual firms.

Total fund policy benchmark – The average return of the asset class benchmark indices weighted by asset class benchmark allocations.

Treynor Ratio – The portfolio's average excess return over a specified period divided by the beta relative to its benchmark over the same time frame. This is used to measure the excess return per unit of systematic risk taken.

Turbulent Market Period – A market period during which the current VIX level is one standard deviation above its three-year moving average.

Urban Consumers Price Index (CPI-U) – The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. It is the most widely used measure of inflation. The CPI-U is the CPI value for Urban Consumers, represents the buying habits of the residents of urban or metropolitan areas.

Value Equity – Managers who invest in companies believed to be undervalued or possessing lower than average price/earnings ratios, based on their potential for capital appreciation.

VIX – see CBOE Market Volatility Index

Appendix II –SAMPLE PLACEMENT AGENT QUESTIONNAIRE

East Bay Municipal Utility District Employees' Retirement System (EBMUDERS)

Investment Manager: ______________________________

Contact Person: ______________________________

Investment Type: ☐ Prospective / New Investment

☐ Amendment to an existing Investment

1. Manager acknowledges that it will comply with the *East Bay Municipal Utility District Employees' Statement of Investment Policy and Procedures, VII. Policy for the Use of Placement Agents*

   ☐ Yes ☐ No

2. Placement Agent Firms used?

   ☐ Yes ☐ No

If the answer to question #2 is "No", please proceed to the end of this form, sign and return to EBMUDERS. Otherwise, please continue filling out the form.

3. If Yes, please complete:

   A. Name of Placement Agent Firm: ______________________________

   Primary Contact: ______________________________

B. Name of Placement Agent Firm: ______________________________

Primary Contact: ______________________________

C. Name of Placement Agent Firm: ______________________________

Primary Contact: ______________________________

If additional space is needed, please attach a separate piece of paper.

4. Please provide description of payment/compensation agreement by the investment Manager or any of its principals, employees, agents or affiliates, directly or indirectly, to any person or entity to act as a Placement Agent in connection with EBMUDERS investments:

A. Description of agreement for Placement Agent A.

B. Description of agreement for Placement Agent B.

C. Description of agreement for Placement Agent C.

If additional space is needed, please attach a separate piece of paper.

5. Please attach a resume for each officer, partner, principal of the Placement Agent detailing the person's education, professional designations, regulatory licenses and investment and work experience.

Attachments? ☐ Yes ☐ No

6. Is any such person, described in the response to question number 5 above, a current or former EBMUDERS Board Member, employee or Consultant or a member of the immediate family of any such person?

☐ Yes ☐ No

If yes, please provide the name(s) of the individual(s):

7. Please describe any and all compensation of any kind provided or agreed to be provided to a Placement Agent, including the nature, timing and value thereof.

8. Please describe the services to be performed by the Placement Agent and a statement as to whether the Placement Agent is utilized by the investment.

9. Please attach a copy of any and all agreements with the Placement Agent.

Attachments? ☐ Yes ☐ No

10. Is the placement agent, or any of its affiliates, registered with the Securities and Exchange Commission or the Financial Industry?

☐ Yes ☐ No

11. Is the placement agent, or any of its affiliates, registered as a lobbyist with any state or national government?

☐ Yes ☐ No

12. Please list the names of any current or former EBMUDERS Board Members, employees, or Consultants who suggested the retention of the Placement Agent. ☐ N/A

The undersigned represents and warrants the information provided above, and also understands that the provided information must be updated within 14 calendar days that the investment manager knew or should have known of the change in information.

By: ______________________________

Name: ______________________________

Title: ______________________________

Date: ______________________________

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 16, 2017

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance

SUBJECT: Adopt ESG Implementation Plan

At its March 2016 meeting the Board discussed an ESG roadmap presented by Staff which outlined steps that the Board could take as it considered integrating Environmental, Social and Governance (ESG) issues into its investment decisions.

The steps in the ESG Roadmap were:

Step 1: Be clear about your mission as an organization and an investor
Step 2: Specify your objectives and your investment beliefs
Step 3: Understand your climate change exposure
Step 4: Analyze options and decide on the mix that best meets your objectives
Step 5: Implement your plan
Step 6: Monitor and evaluate outcomes

The Board decided to undertake this roadmap and has considered steps 1 through 4 over the past year with the next step being to implement the plan. The proposed guidelines shown as Attachment A on the next page have been prepared in concert with PCA and are based upon a draft implementation plan presented by PCA to the Board at its January 2017 meeting.

These guidelines are intended to help Staff achieve the System's objective with respect to ESG. Specifically, they will provide direction for Staff as they seek to incorporate ESG considerations into System activities. Already, actions proposed in today's agenda would address listed guidelines: Item 4 through joining INCR and Item 5 via the proposed Request for Proposal for proxy voting services. Item 3 has been accomplished already as part of the Board's deliberations regarding ESG. Items 1 and 2 will be addressed in the upcoming asset allocation study. Item 6 will be incorporated in future reviews of current and prospective actions.

ATTACHMENT A

EAST BAY MUNICIPAL UTILITY DISTRICT
EMPLOYEES' RETIREMENT SYSTEM

Environmental, Social and Governance Investment Objective: Implementation Guidelines

At its March 16, 2017 meeting the Board of Directors of the East Bay Municipal Utility District Employees' Retirement System (ERS) adopted revisions to the System's Statement of Investment Policy and Procedures to incorporate Environmental, Social and Governance (ESG) factors. The following guidelines are intended to help the System achieve its objective with respect to ESG.

1. Incorporate ESG considerations into asset allocation discussions.

2. Incorporate ESG considerations into investment manager search Request for Proposals.

3. Monitor investment managers' performance with respect to ESG issues.

4. Engage on ESG issues.

5. Incorporate ESG considerations into proxy voting policy and process.

6. Conduct regular reviews of the System's portfolio with respect to ESG and climate change risk.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 16, 2017

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance

SUBJECT: Authorization to Join INCR

The EBMUD Employee Retirement System (ERS) Board has been reviewing methods for addressing Environmental, Social and Governance (ESG) issues generally and climate change exposure specifically. At its November 17, 2016 meeting, the Board reviewed tools to address engagement on climate change issues. At the January 19, 2017 meeting PCA presented options for ESG engagement. Given staff time and expense constraints with regards to engagement on climate change and other ESG matters after reviewing alternatives, PCA recommended that the ERS Board consider joining the Investor Network on Climate Risk (INCR). Membership would allow the ERS to keep abreast of developments and participate in engagement efforts as it deems appropriate.

Staff from INCR subsequently made a presentation to the Board at the January 19, 2017. The cost for the ERS to join INCR, based on current ERS assets under management, would be approximately $1,500 annually.

Following the reviews and presentation in November 2016 and January 2017, and in line with the approved ESG implementation guidelines on the topic of engagement, Staff recommend Board approval of the recommendation to join INCR.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 16, 2017

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance

SUBJECT: Approve Request for Proposal for Proxy Voting Services

Over the past year, the EBMUD Employee Retirement System (ERS) Board reviewed its proxy voting policy. Staff had been voting proxies with management. At its November 17, 2016 meeting, the Board requested staff take actions to change that practice. At its January 19, 2017 meeting, the Board voted to have Investment Managers vote the ERS proxies in accordance with their individual guidelines as an interim measure and requested that Staff prepare a Request for Proposal (RFP) for proxy voting services. Staff is requesting approval of the attached Request for Proposals for Proxy Voting Services. Also attached is a cover memorandum from PCA.

In addition to standard public funds voting policies and approaches, the RFP asks proposers to outline their Environmental, Social and Governance (ESG) approach and ESG guidelines. This step will allow the Board to consider proxy voting as part of its ESG implementation plan. Results for the RFP and selection will be presented for approval at the next Board meeting.

Attachment

PCA | PENSION CONSULTING ALLIANCE

MEMORANDUM

Date: March 16, 2017

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

From: Pension Consulting Alliance, LLC (PCA)

RE: Updates: EBMUDERS investment managers voting proxies on behalf of the System; Request for Proposals ("RFP") for proxy service provider

During the EBMUDERS November 2016 Board meeting, the Board voted to direct EBMUDERS managers to begin voting proxies on behalf of the System immediately, according to each manager's own proxy voting guidelines. The Board also voted to begin a search for a proxy service provider to determine whether they wanted to retain a proxy service provider for any aspect of EBMUDERS proxy voting process.

The delivery of the EBMUDERS proxy ballots was successfully transitioned. EBMUDRS custodian, Northern Trust, confirmed that all managers are now being sent EBMUDERS proxy ballots. The System's managers will continue to vote EBMUDERS proxies until directed otherwise by EBMUDERS. EBMUDERS staff confirms that the last proxy ballot received by staff was on December, 31 2016.

Pending Board approval at its March 16, 2017 meeting, the Request for Proposals ("RFP") for a proxy service provider is scheduled to be sent to the following firms on Friday, March 17, 2017:

- Broadridge Financial Solutions
- Egan-Jones Proxy Services
- Glass Lewis
- ISS
- Marco Consulting Group

The deadline for responses to the RFP is scheduled for Friday, March 31, 2017. PCA intends to review all responses and currently plans to recommend finalists to EBMUDERS at the Board's May 2017 meeting. At that time, the Board may decide whether to interview finalists, or to delegate the final decision-making to staff.

PCA PENSION CONSULTING ALLIANCE

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While PCA has reviewed the terms of the Fund referred to in this document and other accompanying financial information on predecessor partnerships, this document does not constitute a formal legal review of the partnership terms and other legal documents pertaining to the Fund. PCA recommends that its clients retain separate legal and tax counsel to review the legal and tax aspects and risks of investing in the Fund. Information presented in this report was gathered from documents provided by third party sources, including but not limited to, the private placement memorandum and related updates, due diligence responses, marketing presentations, limited partnership agreement and other supplemental materials. Analysis of information was performed by PCA.

An investment in the Fund is speculative and involves a degree of risk and no assurance can be provided that the investment objectives of the Fund will be achieved. Investment in the Fund is suitable only for sophisticated investors who are in a position to tolerate such risk and satisfy themselves that such investment is appropriate for them. The Fund may lack diversification, thereby increasing the risk of loss, and the Fund's performance may be volatile. As a result, an investor could lose all or a substantial amount of its investment. The Fund's governing documents will contain descriptions of certain of the risks associated with an investment in the Fund. In addition, the Fund's fees and expenses may offset its profits. It is unlikely that there will be a secondary market for the shares. There are restrictions on redeeming and transferring shares of the Fund. In making an investment decision, you must rely on your own examination of the Fund and the terms of the offering.

PCA | PENSION CONSULTING ALLIANCE

REQUEST FOR PROPOSAL:

PROXY SERVICE PROVIDER SEARCH

On behalf of one of our clients, East Bay Municipal Utility District Employees' Retirement System ("EBMUDERS" or "the System"), PCA is asking qualified firms to provide specified proxy voting services for the System. Currently, EBMUDERS investment managers vote the System's proxies on EBMUDERS's behalf in accordance with their own individual proxy voting guidelines. Pending the completion of this RFP process, the EBMUDERS Board will decide whether they want to retain a proxy service provider and what services the firm may be retained to deliver. The proxy services being reviewed include: 1) receipt and administration of domestic and international EBMUDERS proxies, 2) voting of these proxies in line with service provider's policy guidelines that fit with EBMUDERS perspective, 3) recording and reporting of all votes cast, and 4) advice on proxy related matters.

Please note that the EBMUDERS Board/Staff will enter a "quiet period" that begins when the RFP is sent to recipients. During the quiet period, no Board/Staff member may knowingly have any communication with any actual or potential candidate for this mandate, unless authorized by the Board in connection with the due diligence process in selecting a service provider. The quiet period shall cease when the proposer withdraws the response in writing, a contract is executed, or the RFP is cancelled, whichever occurs first. Every RFP recipient will be notified when the RFP process is completed or cancelled. By participating in this RFP, you acknowledge and agree to adhere to the Board's quiet period policy. The quiet period restricts representatives from your firm from having any communication with EBMUDERS's Board/Staff members. A violation of the quiet period rule may result in disqualification of the candidate or other appropriate Board action.

If you have any questions relating to this RFP, please contact Ms. Sarah Bernstein, Ph.D. - PCA. Submit any questions in writing by email no later than 5:00 PM PST, Friday, March 24, 2017. To provide a fair process and complete information, all written questions and the responses will be summarized and emailed to every candidate to which this RFP was sent. Similar inquiries will be consolidated into one question. The name(s) of the firms submitting the questions will not be listed.

We request the completion and return of this RFP to PCA no later than **5:00 PM PST, Friday, March 31, 2017**. Responses received after the above date and time will not be considered. All material received in response to this RFP shall become the property of EBMUDERS, and will not be returned to the vendor. Responses must remain in effect for at least 180 days from the submission deadline and thereafter until either the proposer withdraws the response in writing, a contract is executed, or the RFP is cancelled, whichever occurs first. Regardless of the proposer selected, EBMUDERS reserves the right to use any information presented in a proposal. The content of each vendor's proposal shall become public information once a contract has been awarded. Any proposal determined to be non-responsive to the specifications or other requirements of this RFP, including instructions governing format, may be disqualified without evaluation. EBMUDERS shall reserve the right to clarify and seek supplemental information to any proposal submitted.

If interested, please submit one (1) electronic copy via email and one (1) hard copy of the completed RFP to:

(continued on following page)

411 NW Park Avenue, Suite 401
Portland, OR 97209
Tel: 503.226.1050 Fax: 503.226.7702
www.pensionconsulting.com

PCA PENSION CONSULTING ALLIANCE

Ms. Sarah Bernstein, Ph.D
Principal
Pension Consulting Alliance, LLC
3721 Lankershim Blvd.
Los Angeles, CA 90068
Phone: 818.508.1223
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www.pensionconsulting.com

Please note if chosen as a finalist, your firm may be required to make an in-person presentation in Oakland, California on Thursday, May 18, 2017. Finalists are expected to have presentation decks submitted to EBMUDERS (address to be provided to finalists) by Wednesday, May 10, 2017. All dates may be changed at EBMUDERS's discretion. On EBMUDERS's behalf, PCA will notify all finalists of any schedule changes.

To be evaluated for this mandate, all responses must be completed using the format presented in the RFP. Do not re-order questions, change titles or in any way change the formatting of the RFP.

I. INVESTMENT AND PROXY VOLUME DATA

Northern Trust serves as the custodian for EBMUDERS. As of December 31, 2016, EBMUDERS had assets of approximately $1.5 billion. As of December 30, 2016, the consolidated separately managed EBMUDERS portfolios held investments in approximately 764 domestic stock issues and approximately 157 international stock issues. There were approximately 1,739 total ballots for the fiscal year ending December 30, 2016, including 1,465 domestic and 274 non-U.S. ballots. The separately managed accounts that hold common stock are managed by the following, with total assets under management for each account as of December 30, 1016:

Account name	Market Value
*EBMUDERS-OPUS US SCV	36,287,129.83
*EBMUDERS-BARROW HANLEY US LCV	173,267,090.53
*EBMUDERS-CENTERSQUARE US REITS	48,586,604.78
*EBMUDERS - INTECH US LCG	71,806,315.22
FISHER INVT; INTL E	95,651,354.53
T. ROWE PRICE US LCG	70,685,866.72
EBMUDERS - FRANKLIN TEMPLETON NON-US E	89,719,171.62
EBMUDERS-VAN HULZEN US COVERED CALLS	99,247,771.81
EBMUDERS PARAMETRIC BXM US COVERED CALLS	106,408,376.16
EBMUDERS PARAMETRIC DELTA US COVERED CALLS	109,696,303.07
	901,355,984.27

The above volume data is only an approximation. EBMUDERS makes **no guarantee that any products or services will be purchased** from any contract resulting from this RFP. Any approximations and/or past or current procurement volumes referenced in this RFP are included only for the convenience of proposers and are not to be relied upon as an indication of future levels.

II. SCOPE OF WORK

General Scope and Business Specifications: The scope of the assignment is to assist EBMUDERS in carrying out proxy voting responsibilities and related activities. The objective is to select a firm to help EBMUDERS: 1) maintain and modify as needed domestic and international proxy guidelines, 2) receive, administer and vote domestic and international equity proxies according to EBMUDERS adopted guidelines, 3) periodically report on proxy votes cast on behalf of EBMUDERS, and 4) have availability of service provider staff and consultants for inquiries relating to proxy voting. Specific requirements are as follow:

1. Maintenance and modification of domestic and international proxy voting guidelines developed by your firm and selected by EBMUDERS.

2. EBMUDERS believes Environmental, Social and Governance ("ESG") proxy voting issues can be material to the companies in which it invests and seeks a set of proxy voting guidelines that closely reflect its perspective on ESG, and particularly 'E' matters. EBMUDERS therefore wishes to understand clearly the potential differences in any various sets of proxy voting guidelines that your firm may offer on these subject matters, in addition to any other key differences among the potential general guidelines, both initially and on an ongoing basis.

3. Receive, administer and vote domestic and international equity proxies per EBMUDERS selected guidelines based on available standard guidelines developed by your firm. Proxies would be received directly from the EBMUDERS custodian, Northern Trust.

4. Periodically report on proxy votes cast on behalf of EBMUDERS. At least annually, and more often if, and when requested, provide reports of proxy votes cast by various sorting criteria, including but not limited to issuer, type of proxy issue (e.g., director votes, labor standards, cumulative versus staggered boards, executive compensation, major environmental issues, etc.) and other sorting criteria as requested by EBMUDERS.

5. Availability of service provider staff to EBMUDERS staff and/or consultant for inquiries relating to proxy voting. From time to time if EBMUDERS considers participating in communications to corporations in which EBMUDERS has investments, or for other reasons, EBMUDERS may have the need for clarification about the substance of certain proxy issues. EBMUDERS requires access to service provider staff for discussion of such issues as they relate to proxy item voting.

EBMUDERS reserves the right to review the range of services provided and, at its discretion, add, delete, or amend specific items from the referenced proxy service configuration.

Minimum Qualifications: A firm must satisfy each of the following minimum qualifications in order to be considered for the contract award:

A. Demonstration by the firm of at least five existing pension fund clients with a minimum of $1 billion assets each.

B. At least two of the clients in A, above, must be public pension plans.

C. At least one must be a public pension fund with assets under management ("AUM") of $1 billion - $5billion.

Additional Requirements: The selected proposer must assert or agree to the following:

A. The selected proposer shall agree to provide proxy voting and related services in a manner acceptable to EBMUDERS and as stipulated in this RFP and the contract.

B. The selected proposer will attest that its firm and key professionals do not have or anticipate a potential conflict of interest with EBMUDERS, relevant investment managers, or publicly traded corporations subject to proxy votes by EBMUDERS.

Travel, Shipping and Delivery Fee Exemption: All items covered under this contract are exempt from out of pocket travel, duplicating, shipping, and related administrative charges. The proposer must not include any administrative charges on any invoice.

Confidential Information: The proposer agrees that all discussions or information gained during an engagement shall be considered confidential and that no information gathered by the proposer shall be released without prior consent of EBMUDERS.

Schedule and Pricing: The contractor will state a fee rate for services by unit of service or product, with a stated maximum contract obligation.

Staffing: Using all information contained in or referenced in this RFP and its prior experience, the selected proposer must provide a staffing plan identifying key personnel and their qualifications.

Financial Responsibility: The respondent understands and agrees that EBMUDERS shall have no financial responsibility for any costs incurred by the respondent in responding to this RFP. The successful proposer shall be solely responsible for meeting all terms and conditions specified in the RFP, its proposal, and any resulting contract. EBMUDERS shall approve any subcontractor in advance. The vendor's signature on a proposal submitted in response to this RFP guarantees that the prices quoted have been established without collusion with other eligible vendors and without effort to preclude EBMUDERS from obtaining the best possible competitive proposal.

Right of Rejection by EBMUDERS: Notwithstanding any other provisions of this RFP, EBMUDERS reserves the right to reject all responses, to waive any irregularity or informality in a response, and to accept or reject any item or combination of items, when to do so would be to the advantage of EBMUDERS. It is further within the right of EBMUDERS to reject responses that do not contain all elements and information requested in this document.

III. ESSENTIAL ELEMENTS OF PROPOSAL

The proposer must explicitly respond to all sections of Appendix A, Essential Elements of Proposal. All responses should be concise and well organized, and provide sufficient detail to allow the evaluators to clearly determine the benefit of the vendor's offering. If company product literature or other publications are attached and intended to be used in direct response to an RFP requirement, the response must include reference to the document name and page number.

IV. EVALUATION CRITERIA

The factors to be used in evaluating the responses will include the following:

1) Experience (quantity, quality, and timeliness) of the firm and its staff with providing services to other public entities with similar pension programs.

   a) Qualifications of staff to be assigned to the EBMUDERS account. Particular attention will be paid to relevant experience with public entities, including ESG and specifically E issues.

2) Proposed fees and compensation.

3) Quality and conciseness of responses.

4) The ability to provide the requested services.

5) Quality of references.

6) The value of any new product, service suggestions, or other new ideas and enhancements.

7) Financial stability and ability to provide long-term service.

Fees and compensation will be an important factor in the evaluation of responses. However, EBMUDERS is not required to select the lowest cost proposer but may select the bid that demonstrates the "best value" overall (including proposed alternatives) and that meets the objectives of this RFP. EBMUDERS reserves the right to negotiate a change in any element of contract performance or cost identified in the RFP.

ATTACHMENT A
Essential Elements of Proposal

The purpose of the following section is to identify the information that should be submitted in response to this RFP and the order in which it should appear in the response. The purpose of the proposer's response is to demonstrate capacity, qualifications, and competence to provide the services outlined in this RFP.

Part I - Cover Letter

The response should contain a cover letter and introduction, including: the company name, address, and the name and telephone number of the person or persons authorized to represent the respondent regarding all matters related to the response. The cover letter should also contain the following statement:

"We have read EBMUDERS's *Request for Proposals (RFP) for Provide Proxy Voting Services* and fully understand its intent. We certify that we have adequate personnel, equipment, and facilities to provide EBMUDERS's requested services that we have indicated we can meet."

In addition, the cover letter must certify that:

1) The response is genuine, and is not a sham or collusive.
2) The response is not made in the interest of or on the behalf of any person not named therein.
3) The proposer has not directly or indirectly induced or solicited any person to submit a false or sham response or to refrain from submitting a proposal.
4) The proposer has not in any manner sought by collusion to secure an advantage over any other respondent.
5) The proposer has thoroughly examined the RFP requirements and proposed fees cover all the services indicated in this RFP.
6) The proposer acknowledges and accepts all terms and conditions included in the RFP.
7) The proposer provides proxy services to at least five pension fund clients with a minimum of $1 billion in assets each. Please identify those clients.
8) At least two of the firm's proxy service clients are public pension plans, and at least one of those clients have assets between $1 billion and $5 billion. Please identify those clients.
9) The proposer agrees to provide proxy voting and other related services in a manner acceptable to EBMUDERS and as stipulated in the RFP and subsequent contract.

10) The proposer and key professionals do not have or anticipate a potential conflict of interest with EBMUDERS, relevant investment managers, or publicly traded corporations subject to proxy votes by EBMUDERS.

A person authorized to bind the firm to all commitments made in its response shall sign this letter.

Part II - Services to be Provided by Selected Proposer

Indicate whether your firm can provide the services identified below, and submit these pages with your response. Additional explanation should be included in Part III below.

1) Availability of service provider staff to EBMUDERS staff and/or consultant for inquiries relating to proxy voting. From time to time EBMUDERS may consider participating in communications to corporations in which EBMUDERS has investments, or for other reasons, EBMUDERS may have the need for clarification about the substance of certain proxy issues. EBMUDERS requires access to service provider staff for discussion of such issues as they relate to proxy item voting.

DEVELOPMENT AND MAINTENANCE OF PROXY VOTING GUIDELINES

1)	Assist EBMUDERS in selecting one of your firm's proxy voting guidelines that is suited to EBMUDERS's approach, including its attention to ESG, and E matters in particular.	Yes		No	
2)	Inform EBMUDERS of modifications of such voting guidelines in a timely fashion.				

RESEARCH AND VOTE PROXIES

1)	Receive domestic and international proxies from custodian, file, and prepare for research.	Yes		No	
2)	Research proxy policy relative to guidelines and create vote recommendations.	Yes		No	
3)	Apply vote recommendations to proxies and transmit proxies as directed to issuer.	Yes		No	

PERIODIC REPORTS

1)	Provide reports on proxy votes cast on behalf of EBMUDERS as discussed in this RFP by various sorting criteria.	Yes		No	

AVAILABILITY OF STAFF

1)	Staff is available to EBMUDERS staff and consultant for discussion of specific proxy issues.	Yes		No	

Part III - Narrative Outline

1) Describe the proxy voting services your firm is prepared to provide to EBMUDERS. EBMUDERS seeks a set of proxy voting guidelines that closely reflect its perspective on ESG matters (for more information please see http://www.ebmud.com/about-us/board-directors/board-meetings/retirement-board-meetings/.
2) Clearly elucidate the potential differences among any various sets of proxy voting guidelines that your firm may offer on these subject matters in particular, in addition to any other key differences among the potential general guidelines.
3) Describe briefly your process for developing proxy guidelines and determining individual votes according to voting guidelines, including proxy issue research, any ESG analysis, a decision-making process.
4) Discuss your ability to provide reporting services that compare EBMUDERS's voting to other U.S. public pension plans in aggregate, including based on various sorting criteria as discussed in this RFP. Please include capability for reporting on ESG items, votes, rationale and comparisons to other US public pension plans in aggregate.
5) Please indicate if there are any additional fees for comparative reporting, or if it is included.
6) State briefly what you believe differentiates the services you would provide to EBMUDERS.
7) Briefly describe any other related services your firm can provide that have not been otherwise fully described in your response.

Part IV - Description of Firm

1. **HISTORY**
   a. What are your firm's complete name, address, voice telephone, email, and fax numbers?
   b. Briefly, what is your firm's corporate history? Within the past three years, have there been any significant developments in your organization, such as changes in ownership, restructuring, or personnel reorganizations? Do you anticipate future significant changes in your organization? If yes, please describe.

2. **OWNERSHIP**
   a. Briefly describe the ownership structure of your firm, giving specific details with regard to any parent or affiliates.
   b. Include an ownership organizational chart. Show and describe, if any, the distinct lines of business of your firm that are in addition to your proxy service business.

3. **ORGANIZATION**
   a. Briefly describe the line(s) of business of your firm, any parent organization, and any affiliated companies.
   b. Within the last five years, has your firm or any officer or principal been involved in any business litigation or other legal proceedings relating to your proxy service activities? If so, provide an explanation and indicate the current status or disposition.
   c. Briefly describe, in not more than one page, how you apply ESG factors to management of your own firm.

4. **ORGANIZATION RELATIONSHIPS**

Does your firm, its parent, or affiliate(s) sell information or any other services to corporate clients? If so, describe the nature of these services (by class of client), in detail. Describe your procedures regarding the avoidance of conflicts of interest that may affect EBMUDERS.

5. **EMPLOYEES**
   a. Provide biographies or resumes of the key individuals who would be assigned to EBMUDERS account. Include the contact information of your proposed primary consultant, and the location from which the consulting work will be done.
   b. List senior staff hires and departures over the last three years.
   c. Provide data relating to turnover ratios of your research and technical staff over the last three years.
   d. List employees who would be assigned to this engagement and the extent of their proxy voting and/or plan sponsor experience. Please give details.

6. **CURRENT CLIENTS**
   a. Please provide the names, portfolio sizes, and length of engagements for the client base using your services for: (a) proxy voting services only, (b) research services only, and (c) both types of services. Based on this list, we may request contact information for purposes of references.
   b. Disclose the number of public clients to which your firm provides voting services. List three public clients as references (including at least one public pension plan with AUM between $1 billion and $5 billion), including contact names, addresses, and phone numbers. EBMUDERS shall assume that any and all of these three contacts may be called as a reference without further request.
   c. Disclose the number of current public fund clients that have adopted your public fund, ESG specialized, or E proxy voting guidelines. Please indicate the number of clients that have customized each version of your guidelines, and how many clients have adopted each version without adjustments to your guidelines. Please include contact information for at least one public fund client that we may contact as a reference for each of these versions of your proxy voting guidelines.

7. **FORMER CLIENTS**

   Please provide the names of all clients who have terminated your firm's proxy voting services in the last three years. In each case, detail the reason for termination. Please note which, if any, of these clients used your public fund, E or ESG proxy voting guidelines.

8. **NEW CLIENTS**

   Please provide the names of all new proxy voting client relationships gained in the last three years. Please note which if any of these relationships include E/ESG proxy voting services.

Part V – Fee Schedule

Please provide a quote of your annual proposed fees for the full range of services specified in this RFP. These fee quotes must be all-inclusive and include but not be limited to all services, out-of-pocket travel expenses, office supplies and communications expenses, etc. Please also provide quotes for any additional services. If there are one-time services in the first year, please itemize those separately. The proposer should use the following format to submit cost proposal:

Services:	Year 1 Maximum Fee	Year 2 Maximum Fee	Optional Renewal Period (up to two 1-year renewals)
All services described herein: provision of policy guidelines and maintenance; proxy voting; reports and staff availability			
Provision of policy guidelines and maintenance (in event managers vote)			
Proxy voting			
Reporting on voting			
a) If EBMUDERS managers vote EBMUDERS proxies based on our guidelines			
b) If your firm votes EBMUDERS proxies			
Staff availability to discuss			

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 17, 2017

MEMO TO: Members of the Retirement Board

THROUGH: Lisa Sorani, Manager of Employee Services

FROM: Elizabeth Grassetti, Sr. Human Resources Analyst EG

SUBJECT: Determination of Retiree Cost of Living Adjustment

ACTION: Vote on Resolution No. 6858

RECOMMENDATION

The Board adopt Resolution No. 6858 authorizing a 3.0% COLA for retirees effective July 1, 2017.

DISCUSSION

Section 33 of the Retirement Ordinance and Retirement Board Rule No. B-11 provide for Cost of Living Adjustments (COLA) for retirees. The COLA is effective every July 1st and is based on the change in the Consumer Price Index-Urban (CPI-U) for the Bay Area from December to December.*

The change in the CPI-U for purposes of calculating the COLA for the fiscal year beginning July 1, 2017 is the percentage difference between 258.572 and 266.344 or 3.0%.

The retiree COLA is limited to a maximum of either 3% or 5%, depending on the Pension Benefit Obligation (PBO) funding ratio, which is the ratio Retirement System market assets to liabilities. If the funding ratio is less than 85%, then the maximum COLA is 3%; otherwise, the maximum COLA is 5%.

According to the June 30, 2016 Actuarial Valuation, the PBO funding ratio of the Retirement System was 68.8%. Therefore, the maximum COLA payable is 3.0 %. Retirees who were not retired 12 full months prior to the July 1st effective date of the COLA increase receive a prorated increase equal to 1/12th of the COLA for each full month they were retired before the effective date of the COLA.

The Retirement Ordinance also directs that if the CPI-U is more than the maximum permissible amount, then the excess is accumulated in retirees' COLA banks for use in later years when the CPI-U is less than the maximum level. Because the CPI-U is equal to the maximum COLA of 3% allowed under Section 33, there will be no percentage applied to retiree COLA banks.

EG:eg

[1] * The Department of Labor, San Francisco Office "Consumer Price Index, All Items, 1982-1984=100, San Francisco-Oakland-San Jose, Consumer Price Index for All Urban Consumers. (NOTE: The CPI-U is different from the "Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) used for District employee COLAs. The CPI-U index which is specified in the Retirement System rules covers approximately 32 percent of the same population. In addition to blue collar and clerical workers, the CPI-U includes professional, managerial, and technical workers, as well as the self-employed, short-term workers, the unemployed and retirees not in the labor force.)

R. B. RESOLUTION NO. 6858

DECLARING THE COST OF LIVING ADJUSTMENT
TO BE EFFECTIVE AS OF JULY 1, 2017

Introduced by: ; seconded by:

Pursuant to the provision of Section 33 of Ordinance No. 40 as amended, the Retirement Board Rule No B-11 adopted in accordance with said Section 33, the Cost of Living Adjustment to be effective July 1, 2017 is hereby established to be 3.0 percent.

Employees who retired on or before July 1, 2016 will receive a 3.0 percent increase. Employees who retired after July 1, 2016 will receive a proration of 3.0 percent, or 1/12 of the full COLA for each full month retired since July 1, 2016. Employees who retired after July 1, 2016 will receive a proration of 3.0 percent, or 1/12 of the full COLA for each full month retired since July 1, 2016.

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

____
President

ATTEST: ____________________________
Secretary

3/16/2017

Talking Points on EBMUD Employees' Retirement System Actions on Environmental, Social, and Governance

- The Board of the EBMUD Employees' Retirement System has adopted new environmental, social and governance considerations to the Retirement System's Investment Policy and Procedures. This action provides guidance for the careful consideration of environmental, social and governance (ESG) issues, along with other fiduciary considerations, in the Retirement System's investment decisions.

- With $1.5 billion in assets and over 3,600 employees and retirees relying on the EBMUD Employees' Retirement System's continued financial stability, careful consideration of impacts from our investments continues our employees' and organization's focus on stewardship. Stewardship, of both finances and the environment we depend on, is critical to maintaining this system for future generations. By taking this action, the Retirement System has the ability to support both the financial needs of current and future retirees, while considering the various impacts of its investment decisions for current and future generations.

- This update to the Retirement System's investment policy and procedures follows over a year of consideration, consultation, training, and education by the Retirement Board on ESG issues. The Retirement System's revised Statement of Investment Policy and Procedures now incorporates language pertaining to ESG considerations. Among the outcomes of this deliberate process are a Mission statement, a list of Investment Beliefs, and an ESG-focused Investment Objective.

- The EBMUD Employees' Retirement System joins other public pension funds including the California Public Employees' Retirement System (CalPERS) and the University of California's pension system in adding consideration of ESG factors as part of its investing framework.

- The EBMUD Retirement Board consists of three members appointed by the Board of Directors of the District, two members elected by and from the membership of the Retirement System, and one non-voting Retired Member elected by retired members. The Retirement Board is publicly charged with responsibility to administer the Retirement System and the Retirement Fund for the benefit of its members, and to secure the payment retirement allowances and other post-retirement benefits authorized by the Retirement Ordinance.

- The Retirement Board meets bi-monthly on the third Thursday of January, March, May, July, September, and November, respectively.

Q4 2016

East Bay Municipal Utility District

Quarterly Report

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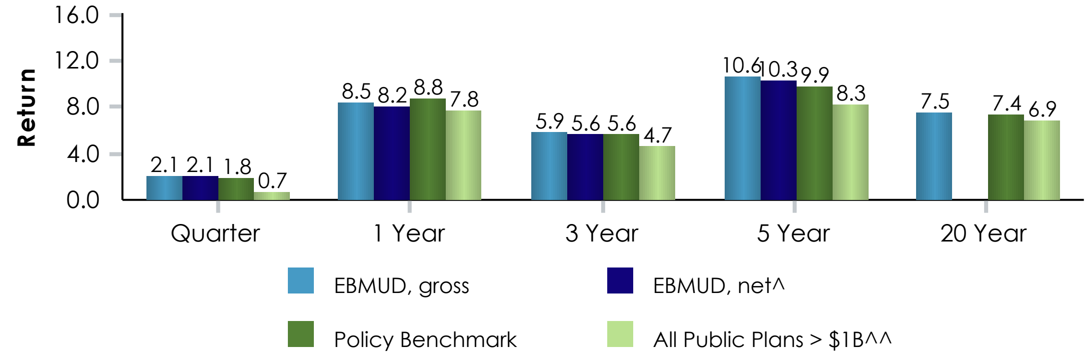
Performance and Market Values As of December 31, 2016

Investment Performance



Portfolio Valuation (000's)

	Quarter	1 Year
EBMUD Total Plan		
Beginning Market Value	1,460,784	1,387,029
Net Contributions	1,108	-7,551
Fees/Expenses	-1,035	-4,000
Gain/Loss	31,204	116,583
Ending Market Value	1,492,095	1,492,095

Asset Class Performance (gross of fees)

	Quarter	1 Year	3 Year	5 Year	10 Year	20 Year
EBMUD Total Plan	2.1	8.5	5.9	10.6	6.0	7.5
*Policy Benchmark^^^*	*1.8*	*8.8*	*5.6*	*9.9*	*5.7*	*7.4*
Domestic Equity	4.4	11.5	8.3	14.6	6.9	7.8
*Russell 3000**	*4.2*	*12.7*	*8.4*	*14.7*	*7.1*	*8.8*
International Equity	0.2	2.7	-1.8	6.3	2.3	6.2
*MSCI ACWI x US (blend)***	*-1.2*	*5.0*	*-1.3*	*5.5*	*1.4*	*4.5*
Covered Calls	2.5	9.4	-	-	-	-
CBOE BXM	*2.6*	*7.1*	-	-	-	-
Fixed Income	-1.0	4.3	2.5	2.8	4.4	5.6
*Fixed Income benchmark (blend)****	*-1.0*	*4.9*	*2.9*	*2.6*	*4.5*	*5.4*
Real Estate	-1.2	9.4	13.8	12.9	5.8	-
*NCREIF/NAREIT (blend)*****	*-0.5*	*9.2*	*12.6*	*11.9*	*7.5*	-
Cash	0.1	0.5	0.3	0.3	1.4	3.0
Citigroup 3 Month T-Bill Index	*0.1*	*0.3*	*0.1*	*0.1*	*0.7*	*2.2*

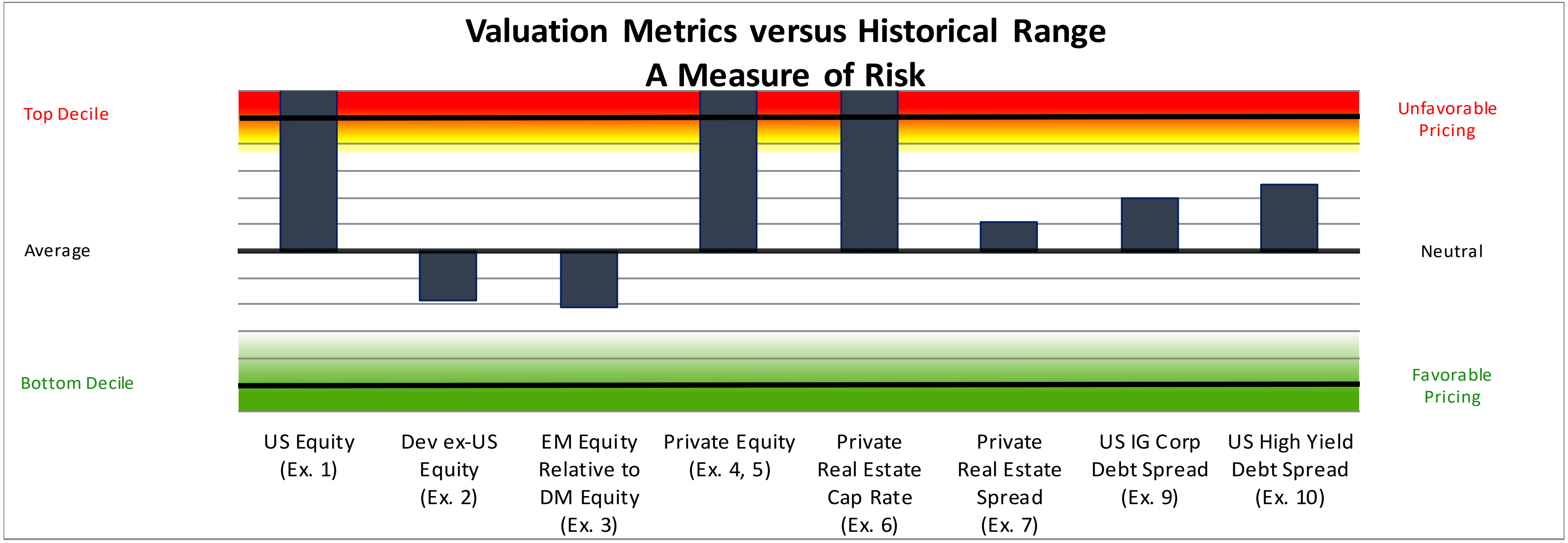
^Historical net returns for the Total Portfolio aggregate are currently available from 2Q 2011.
^^ Median Public Fund consists of the BNY Mellon Universe and Investment Metrics client data.
^^^ Policy Benchmark consists of 40% Russell 3000 (blend), 15% MSCI ACWIxU.S. (blend), 20% CBOE BXM, 10% BC Aggregate, 5% BC US 1-3 Year Government/Credit, 2.5% 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 4/1/14-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.
***50% BC Aggregate, 25% BC US 1-3 Year Government/Credit, 12.5% BC 1-5 Year U.S. High Yield Cash Pay, and 12.5% S&P/LSTA Performing Loans index 4/1/14-present; 75% BC Aggregate, 12.5% BC 1-5 Year U.S. High Yield Cash Pay, and 12.5% S&P/LSTA Performing Loans index 3/1/14-3/31/14; BC Universal 1/1/08-2/28/14; BC Aggregate thru 12/31/07.
****50% NCREIF (lagged), 50% FTSE NAREIT Equity REITs Index as of 11/1/11; NCREIF (lagged) thru 10/31/11.

Investment Market Risk Metrics

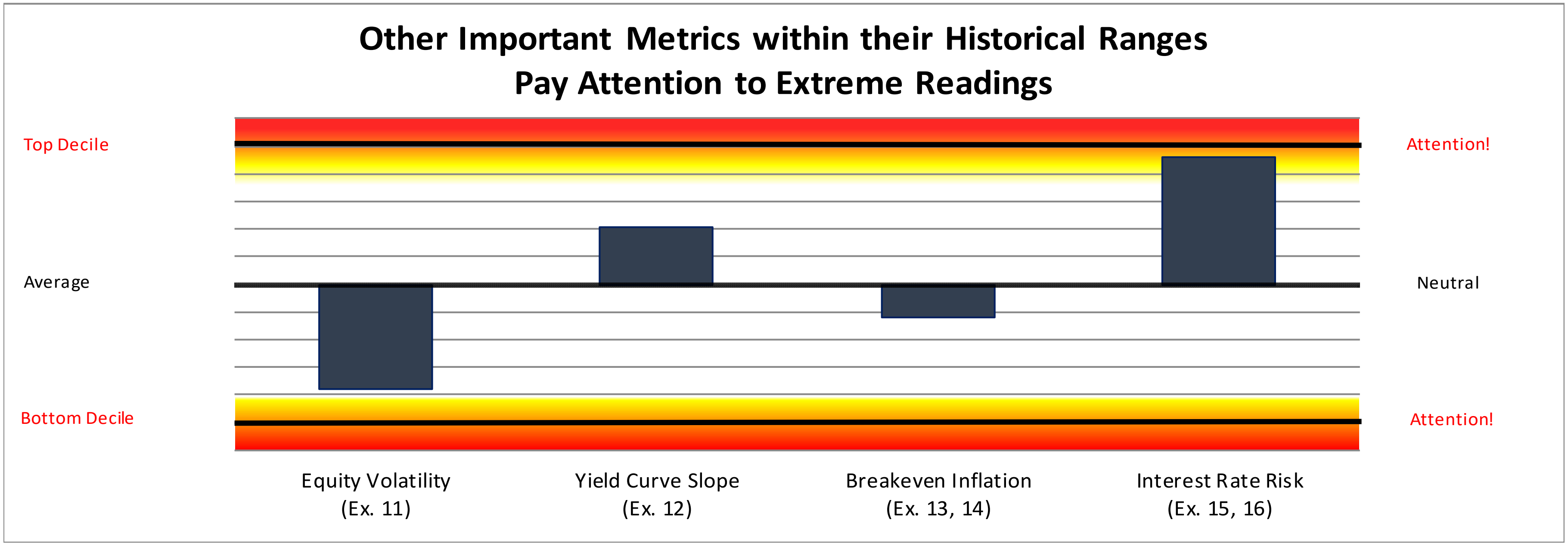
Takeaways

- U.S. public equity and private equity valuation became even more extended in December.
- U.S. credit spreads narrowed in both investment grade and high yield in December.
- Non-U.S. developed and emerging market valuations are historically cheap relative to their own histories and relative to U.S. levels, even after appreciating into year-end.
- At quarter-end, the 10-year Treasury interest rate moved up sharply from earlier in the year to 2.5%.
- Fundamental momentum remains positive in most U.S. markets and rents are expected to move up with interest rates. However, historically high private-real-estate valuations may be worth examining, given the 100 basis point rise in rates since October. Real estate financing tends to be driven by expectations for the 10-year Treasury rates.
- Inflation indicators moved up at year-end off of decade low levels.
- Real yields moved up and into positive territory for the first time in over a year, indicating growth concerns easing somewhat in the U.S.
- The yield curve slope steepened, potentially indicting higher levels of uncertainty concerning rates / growth / inflation.
- PCA's sentiment indicator became significantly more positive by year end, as risk assets rallied strongly from earlier in the year. The sentiment indicator remains green.

[1] See Appendix for the rationale for selection and calculation methodology used for the risk metrics.



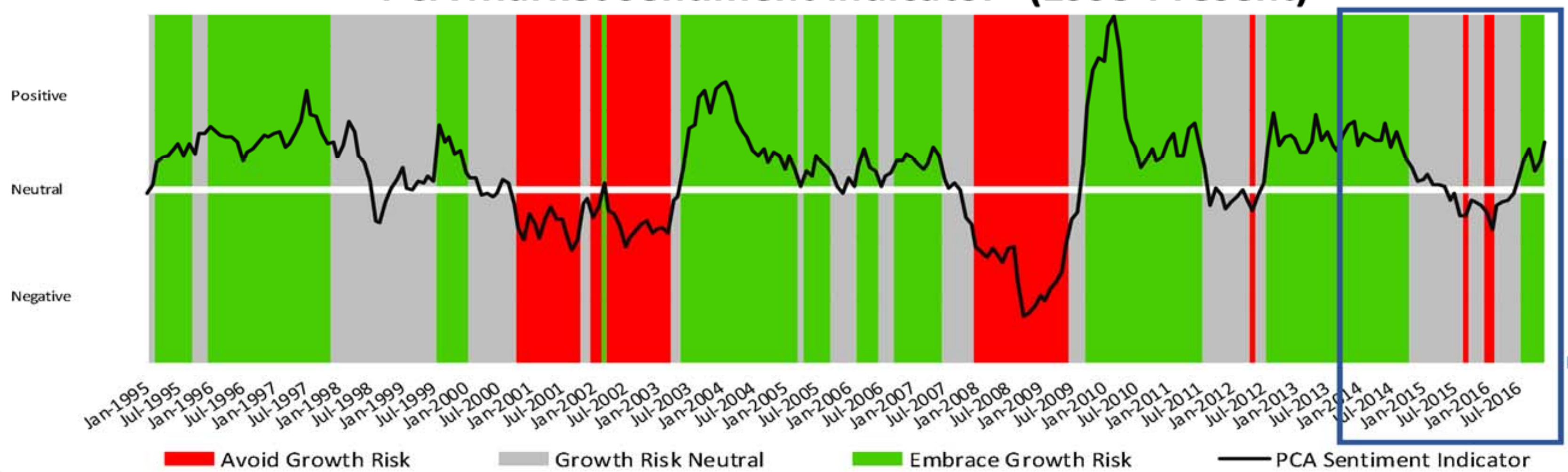
Valuation Metrics versus Historical Range
A Measure of Risk
Top Decile
Average
Bottom Decile
Unfavorable Pricing
Neutral
Favorable Pricing
US Equity (Ex. 1)
Dev ex-US Equity (Ex. 2)
EM Equity Relative to DM Equity (Ex. 3)
Private Equity (Ex. 4, 5)
Private Real Estate Cap Rate (Ex. 6)
Private Real Estate Spread (Ex. 7)
US IG Corp Debt Spread (Ex. 9)
US High Yield Debt Spread (Ex. 10)



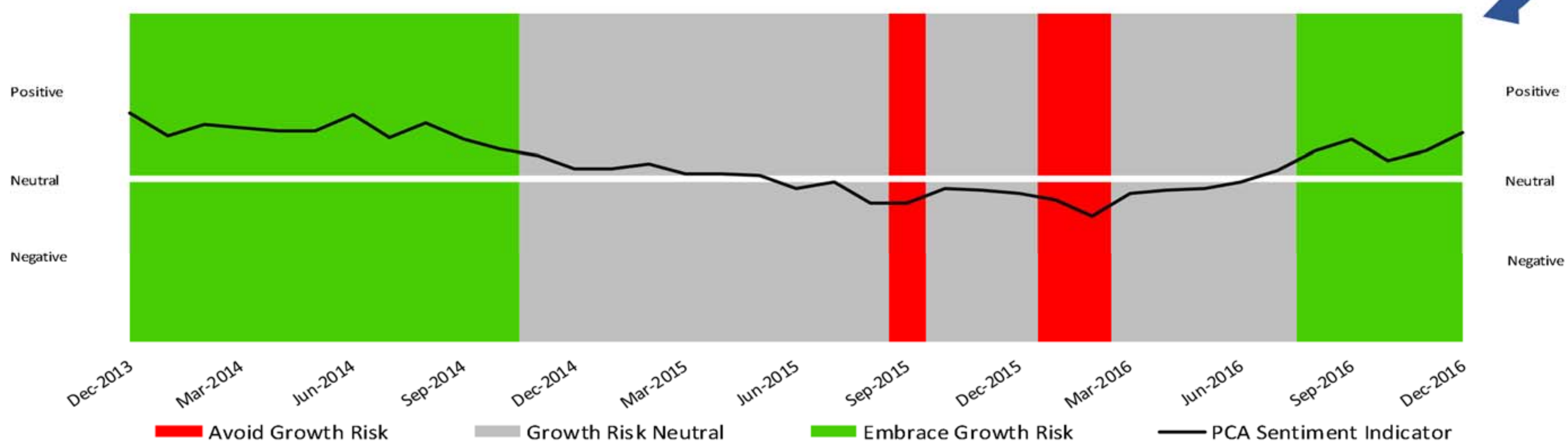
Other Important Metrics within their Historical Ranges
Pay Attention to Extreme Readings
Top Decile
Average
Bottom Decile
Attention!
Neutral
Attention!
Equity Volatility (Ex. 11)
Yield Curve Slope (Ex. 12)
Breakeven Inflation (Ex. 13, 14)
Interest Rate Risk (Ex. 15, 16)

12/31/2016

PCA Market Sentiment Indicator (1995-Present)



PCA Market Sentiment Indicator - Most Recent 3-Year Period

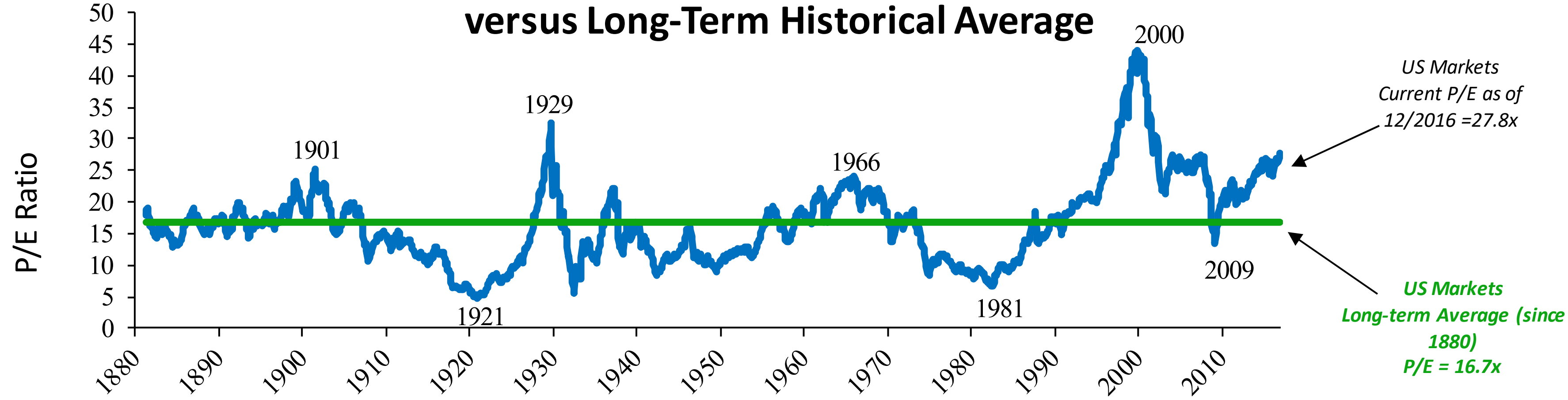


Information Behind Current Sentiment Reading		
Bond Spread Momentum Trailing-Twelve Months	Positive	
Equity Return Momentum Trailing-Twelve Months	Positive	
Agreement Between Bond and Equity Momentum Measures?	Agree	

Growth Risk Visibility (Current Overall Sentiment)	
Positive	

Developed Public Equity Markets

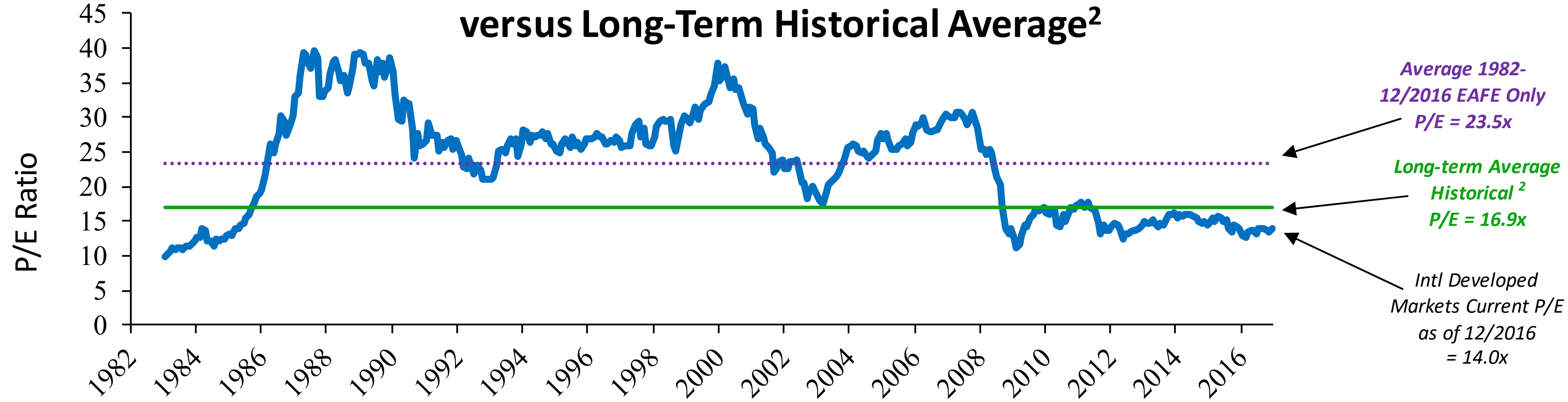
Exhibit 1



[1] P/E ratio is a Shiller P/E-10 based on 10 year real S&P 500 earnings over S&P 500 index level.

(Please note different time scales)

Exhibit 2



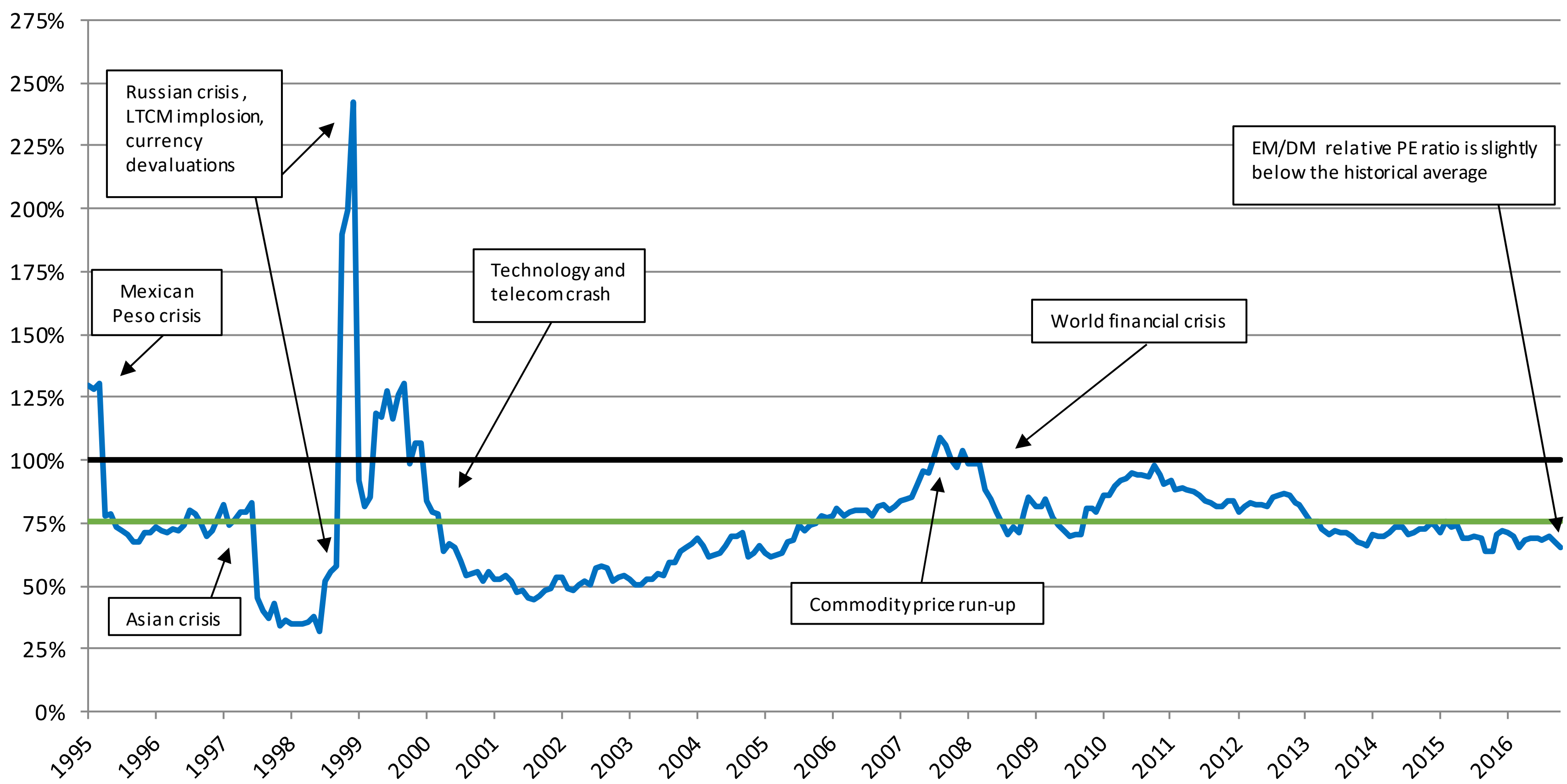
[1] P/E ratio is a Shiller P/E-10 based on 10 year real MSCI EAFE earnings over EAFE index level.

[2] To calculate the LT historical average, from 1881 to 1982 U.S. data is used as developed market proxy. From 1982 to present, actual developed ex-US market data (MSCI EAFE) is used.

Emerging Markets Public Equity Markets

Exhibit 3

Emerging Markets PE / Developed Markets PE
(100% = Parity between PE Ratios)

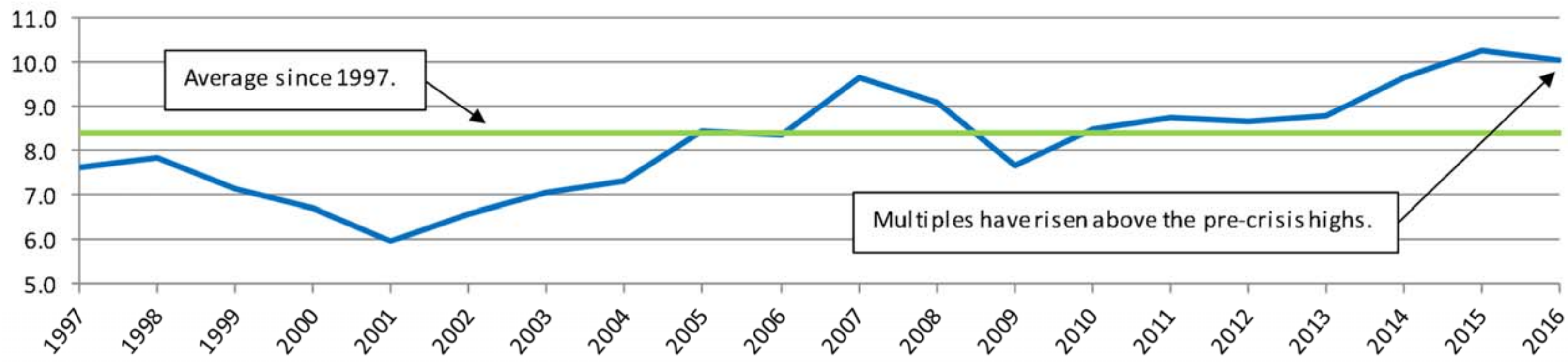


Source: Bloomberg, MSCI World, MSCI EMF

U.S. Private Equity Markets

Exhibit 4

Price to EBITDA Multiples Paid in LBOs

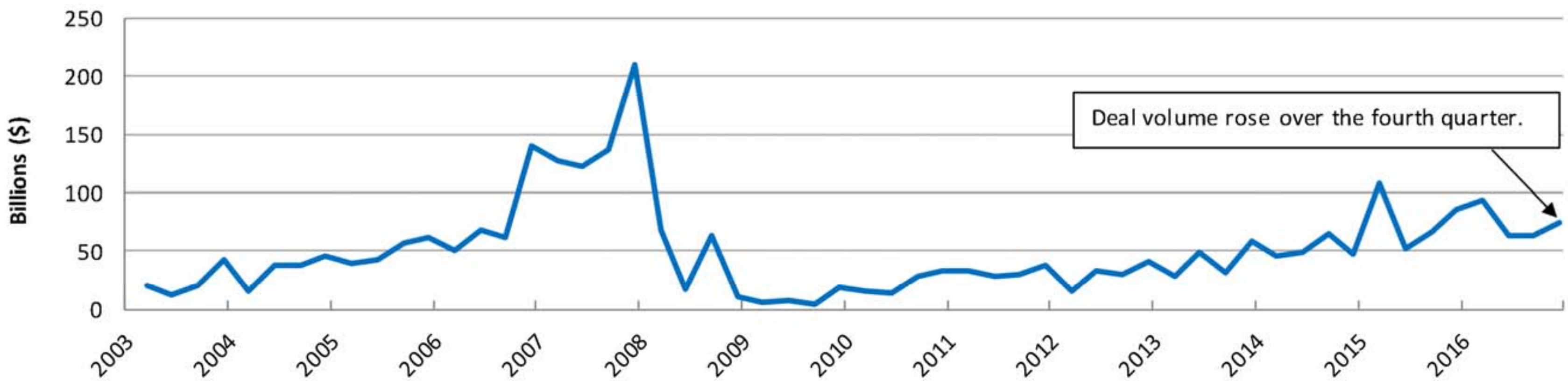


Source: S&P LCD study

(Please note different time scales)

Exhibit 5

Disclosed U.S. Quarterly Deal Volume*



Source: Thomson Reuters Buyouts

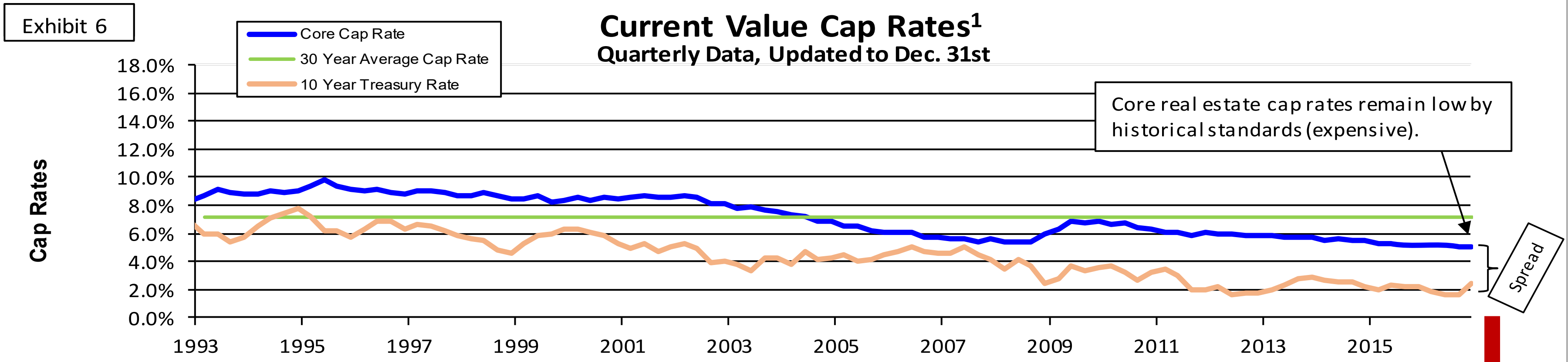
* quarterly total deal size (both equity and debt)

Private Real Estate Markets

Exhibit 6

Current Value Cap Rates[1]

Quarterly Data, Updated to Dec. 31st



Source: NCRIEF

[1]A cap rate is the current annual income of the property divided by an estimate of the current value of the property. It is the current yield of the property. Low cap rates indicate high valuations.

Exhibit 7

Core Cap Rate Spread over 10-Year Treasury Interest Rate

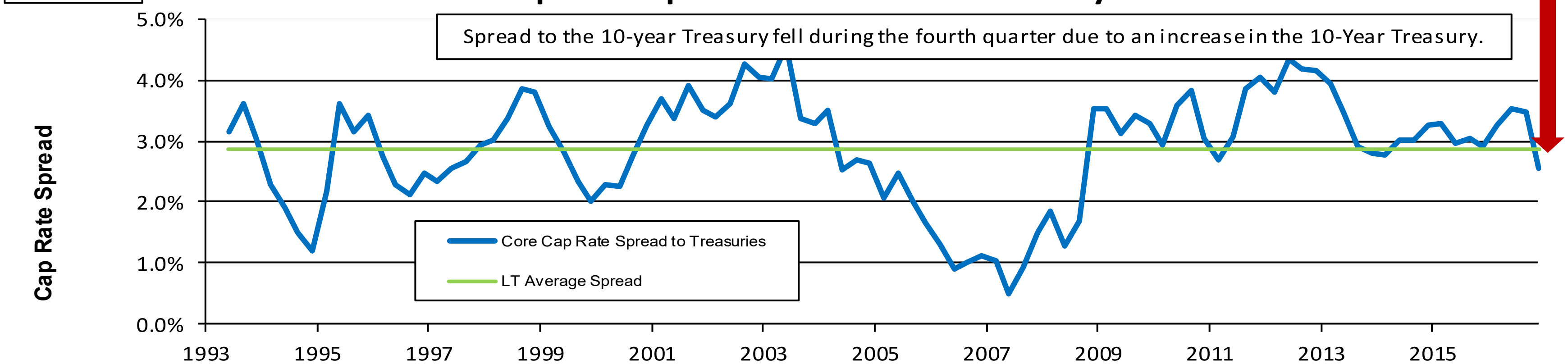
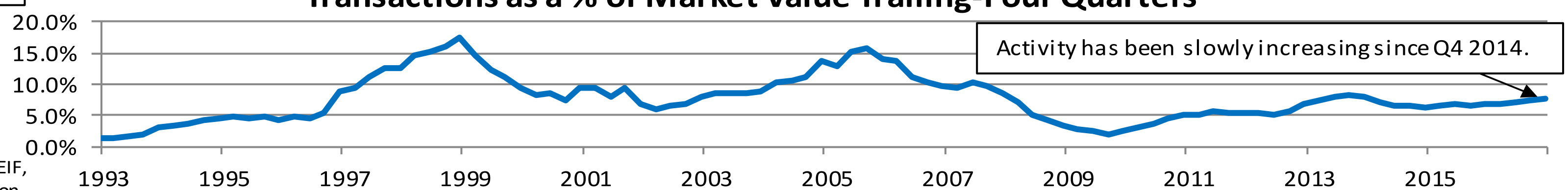


Exhibit 8

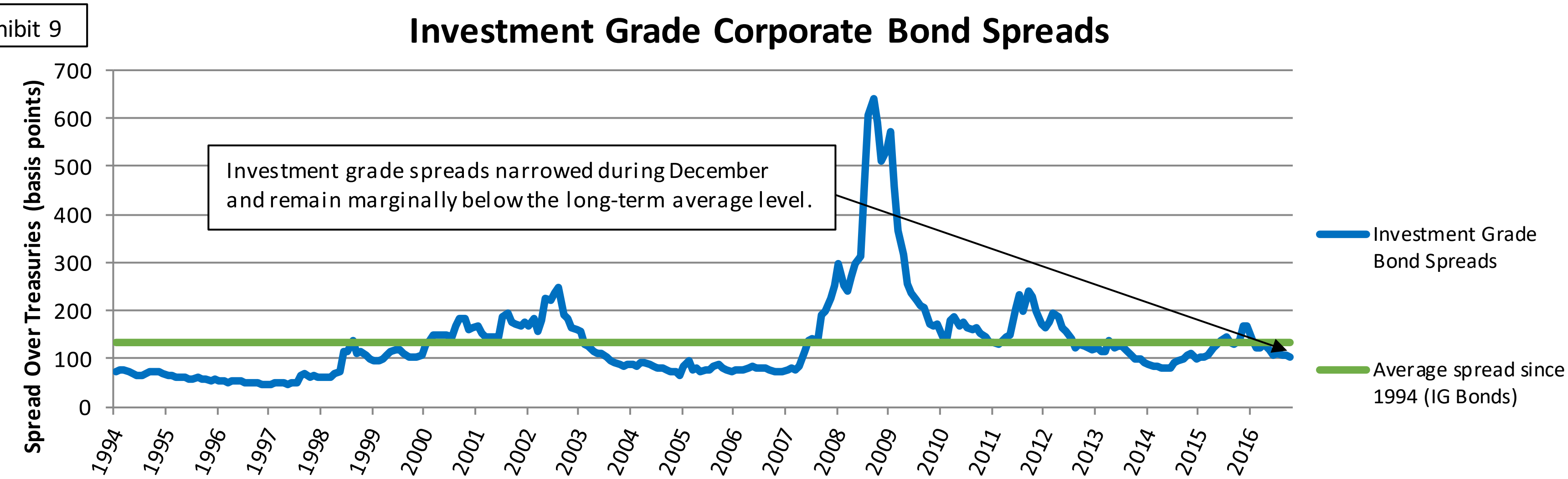
Transactions as a % of Market Value Trailing-Four Quarters



Source: NCREIF, PCA calculation

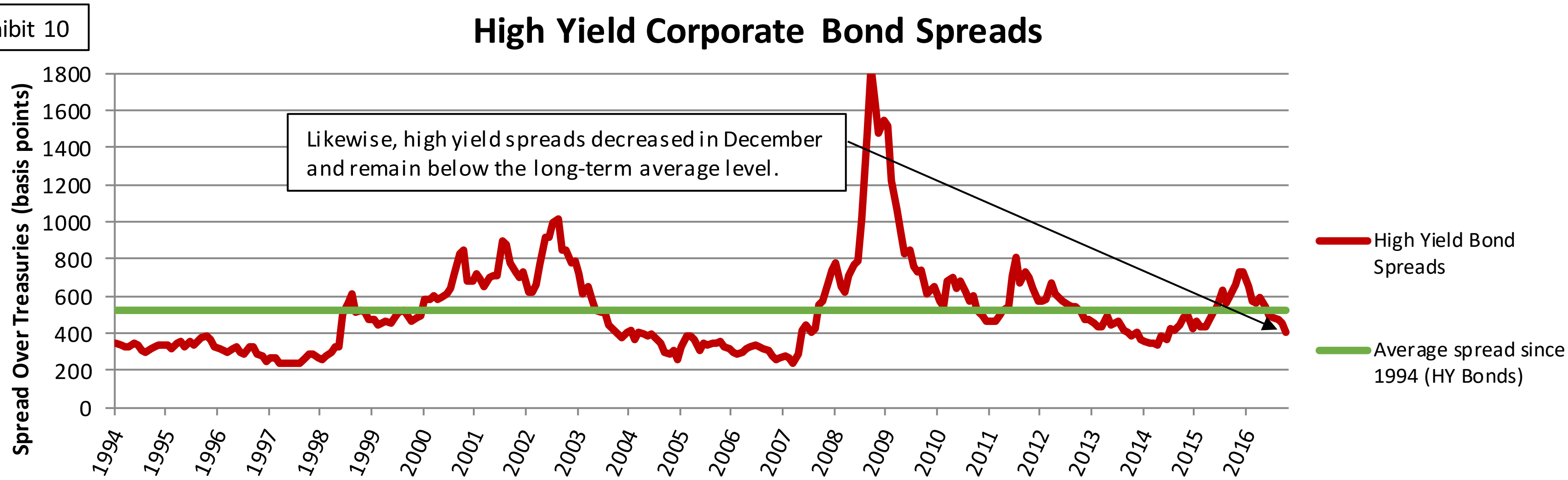
Credit Markets U.S. Fixed Income

Exhibit 9



Source: LehmanLive: Barclays Capital US Corporate Investment Grade Index Intermediate Component.

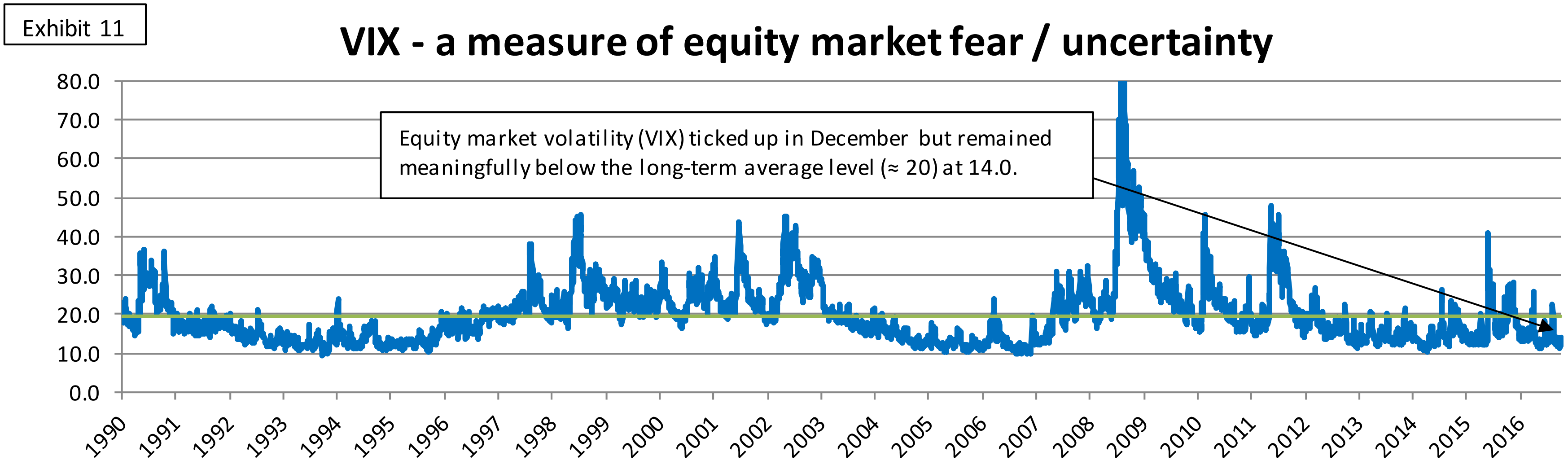
Exhibit 10



Source: LehmanLive: Barclays Capital U.S. Corporate High Yield Index.

Other Market Metrics

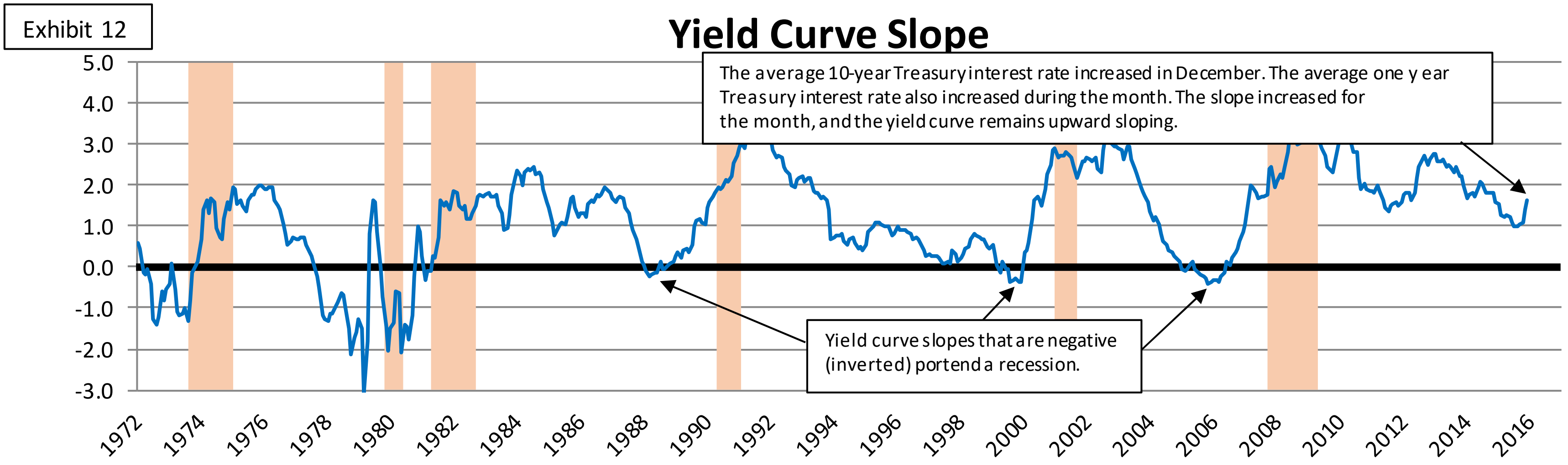
Exhibit 11



Source: http://www.cboe.com/micro/vix/historical.aspx

(Please note different time scales)

Exhibit 12

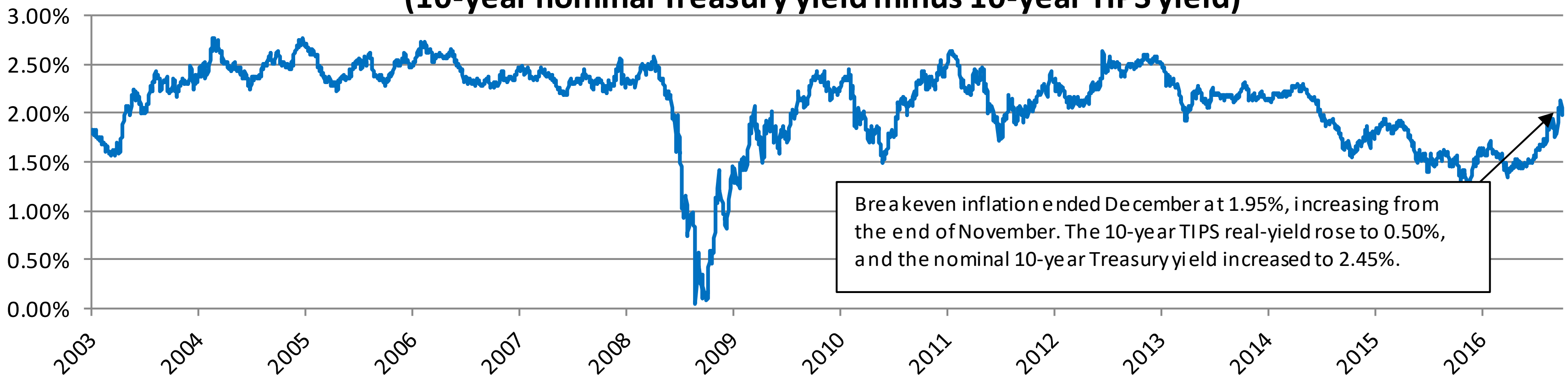


Source: www.ustreas.gov (10-year treasury yield minus 1-year treasury yield)

Measures of Inflation Expectations

Exhibit 13

10-Year Breakeven Inflation
(10-year nominal Treasury yield minus 10-year TIPS yield)

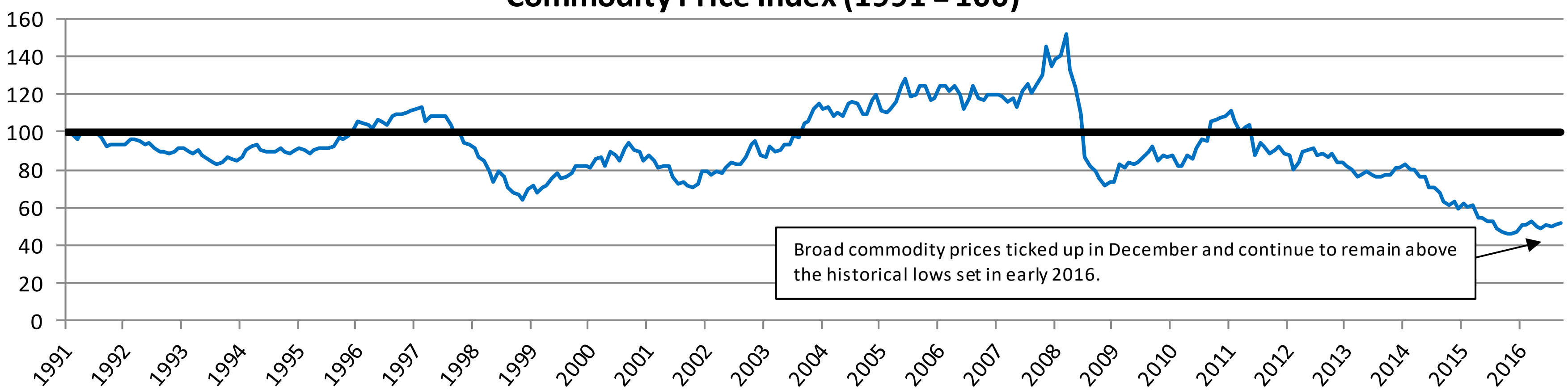


Source: www.ustreas.gov
Daily Yield Curve Rates (10-year nominal treasury yield minus 10-year TIPs yield)

(Please note different time scales)

Exhibit 14

Inflation Adjusted Bloomberg
Commodity Price Index (1991 = 100)



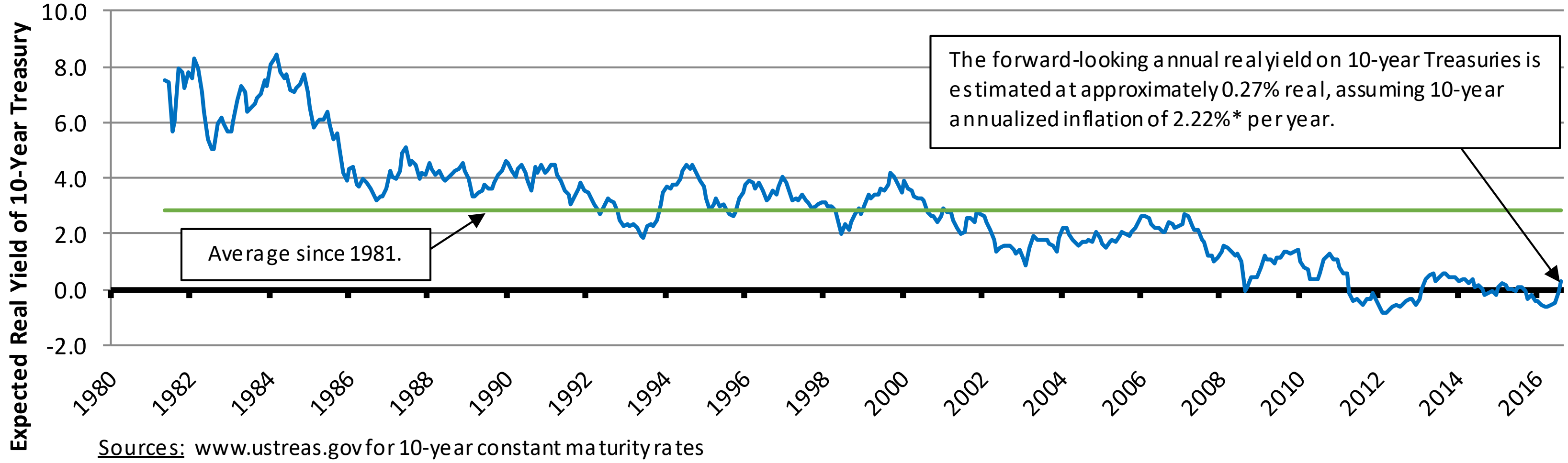
Source: Bloomberg Commodity Index, St. Louis Fed for US CPI all urban consumers.

12/31/2016

Measures of U.S. Treasury Interest Rate Risk

Exhibit 15

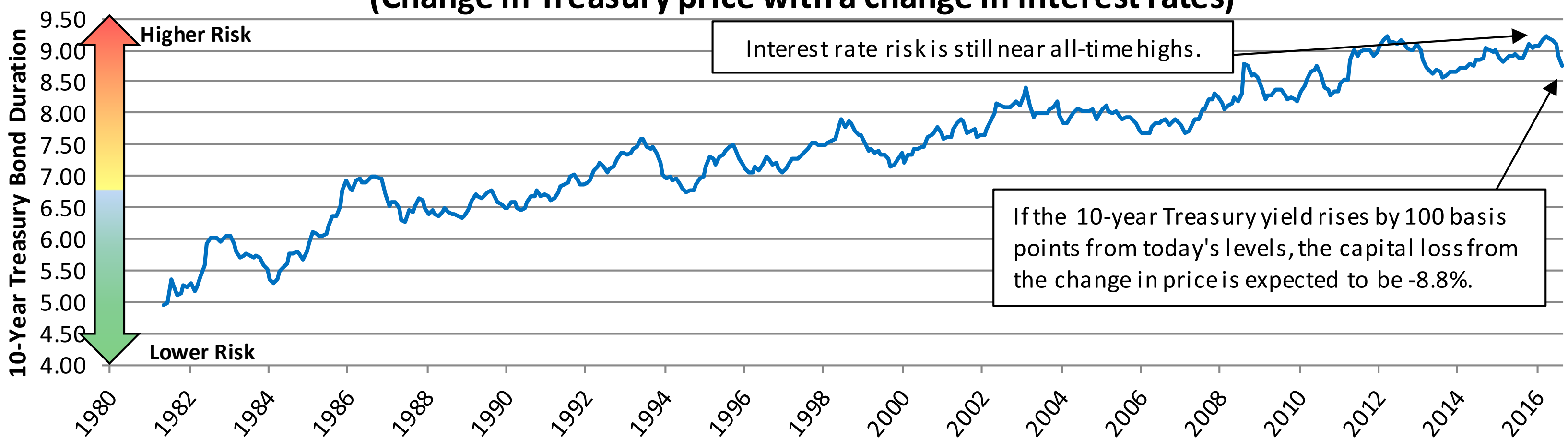
Estimate of 10-Year Treasury Forward-Looking Real Yield



Sources: www.ustreas.gov for 10-year constant maturity rates
*Federal Reserve Bank of Philadelphia survey of professional forecasts for inflation estimates

Exhibit 16

10-Year Treasury Duration
(Change in Treasury price with a change in interest rates)



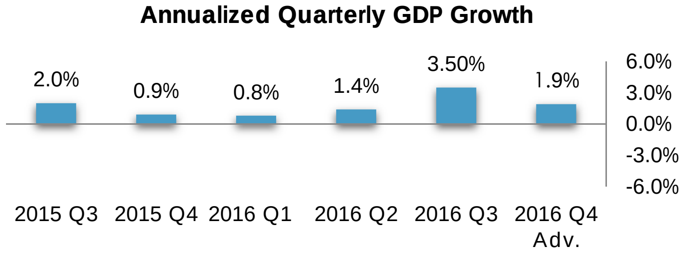
Source: www.ustreas.gov for 10-year constant maturity rates, calculation of duration

Economic & Market Overview

Overview: US GDP growth increased by 1.9% in the fourth quarter. GDP growth during the quarter was driven mostly by consumer spending, private inventory investment, and state and local government spending. The unemployment rate decreased during the fourth quarter to 4.7%. The seasonally adjusted Consumer Price Index for All Urban Consumers increased by 3.4% on an annualized basis during the quarter. Commodities increased during the fourth quarter, and are now up 11.7% over the trailing 1-year period. Global equities were positive for the quarter, 1.3% (MSCI ACWI). The US dollar appreciated against the Euro, Pound, and the Yen. Bond markets produced a negative return over the quarter as the BC Universal decreased by (2.6%).

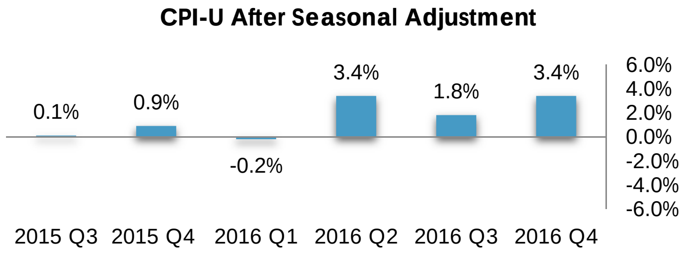
Economic Growth

- Real GDP increased at an annualized rate of 1.9 percent in the fourth quarter of 2016.
- Real GDP growth was driven by increases in consumer spending, private inventory investment, and state and local government spending.
- GDP growth gains were partially offset during the quarter by declines in exports and federal government spending. Imports, which detract from GDP, increased.



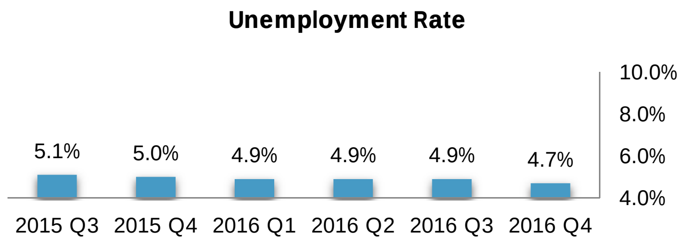
Inflation

- The Consumer Price Index for All Urban Consumers (CPI-U) increased 3.4 percent in the quarter on an annualized basis after seasonal adjustment.
- Quarterly percentage changes may be adjusted between data publications due to periodic updates in seasonal factors.
- Core CPI-U increased by 2.1 percent for the quarter on an annualized basis after seasonal adjustment.
- Over the last 12 months, core CPI-U increased 2.2 percent after seasonal adjustment.



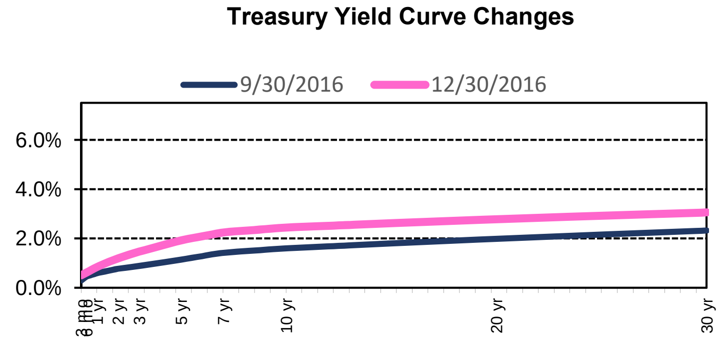
Unemployment

- The US economy gained approximately 495,000 jobs in the quarter.
- The unemployment rate decreased to 4.7% at quarter end.
- The majority of jobs gained occurred in education and health services, professional and business services, and health care and social assistance. The majority of jobs lost occurred mining and logging, nondurable goods, and information.



Interest Rates & US Dollar

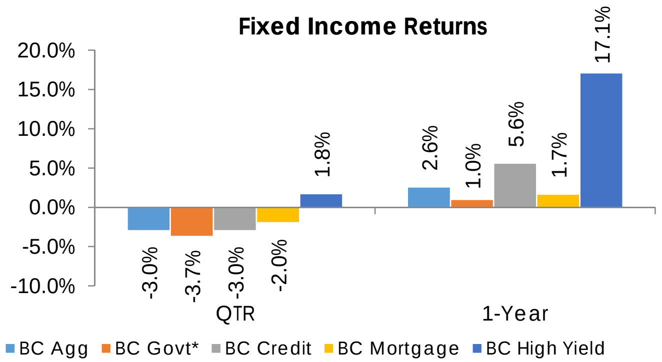
- US Treasury yields rose on average over the quarter.
- The Federal Reserve has increased the federal funds rate to between 0.50 percent and 0.75 percent.
- The US dollar appreciated against the Euro, Pound and the Yen by 6.4%, 4.9%, and 15.4%, respectively.



Source: US Treasury Department

Fixed Income

- US bonds delivered mostly negative returns for the quarter, with high yield performing the best, returning 1.8%, while government performed the worst at (3.7%).
- Over the trailing 1-year period, high yield materially outperformed all other sectors producing a 17.1% return. Credit also performed favorably with an annual return of 5.6%.



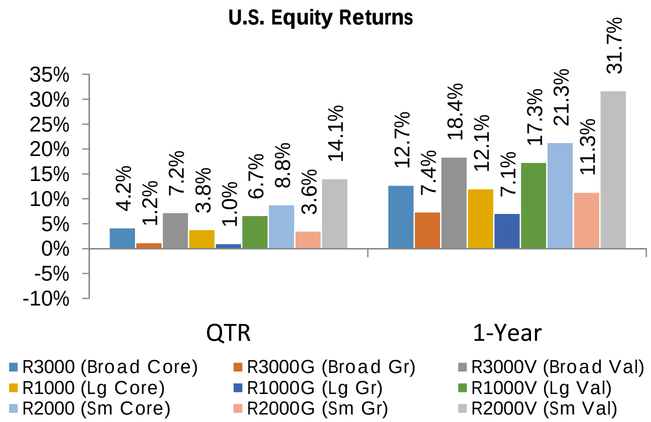
*US Treasuries and Agencies

US Fixed Income Sector Performance (BC Aggregate Index)			
Sector	**Weight**	**QTR**	**1 Year**
Governments*	40.0%	-3.7%	1.3%
Agencies	3.9%	-2.1%	2.3%
Inv. Grade Credit	25.7%	-2.8%	6.1%
MBS	28.1%	-2.0%	1.7%
ABS	0.5%	-0.7%	2.0%
CMBS	1.7%	-3.0%	3.3%

*US Treasuries and Government Related

US Equities

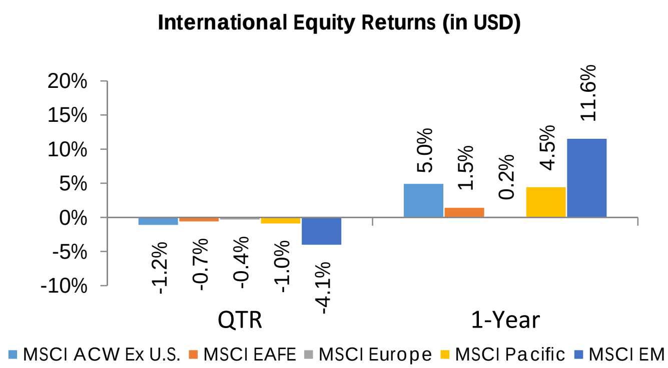
- During the quarter, value stocks dominated growth stocks across the market capitalization spectrum. In terms of market capitalization, small cap stocks provided the strongest returns across styles. Large cap growth stocks returned this quarter's weakest return at 1.0%, and small cap value provided the best results (+14.1%).
- During the 1-year period, US equities provided positive double digit returns, with the top performer, small cap value, returning 31.7%. Conversely, large cap growth trailed all other market caps and styles with a return of 7.1%.



US Equity Sector Performance (Russell 3000 Index)			
Sector	**Weight**	**QTR**	**1 Year**
Information Tech.	19.9%	2.2%	16.4%
Financials	15.5%	22.3%	23.2%
Health Care	13.0%	-2.9%	1.4%
Consumer Disc.	12.5%	4.1%	8.9%
Industrials	10.9%	9.2%	22.6%
Consumer Staples	8.3%	-1.0%	6.3%
Energy	7.0%	8.4%	33.8%
Real Estate	4.0%	-1.9%	9.7%
Utilities	3.1%	1.0%	17.6%
Materials	3.4%	7.5%	31.0%
Telecomm. Serv.	2.4%	5.7%	24.1%

International Equities

- International equities performed poorly over the quarter as each region provided negative returns. The best performer was Europe, with a return of minus (0.4%). Emerging markets trailed all other regions with a return of minus (4.1%).
- Over the trailing 1-year period, international equities were positive across the board. Emerging markets provided a double digit return of 11.6%, while Europe underperformed all other regions with a 0.2% 1-year return.



International Equity Region Performance (in USD) (MSCI ACW Index ex US)			
Sector	**Weight**	**QTR**	**1 Year**
Europe Ex. UK	31.6%	-0.2%	0.3%
Emerging Markets	22.8%	-4.1%	11.6%
Japan	17.0%	-0.1%	2.7%
United Kingdom	13.0%	-0.9%	-0.0%
Pacific Ex. Japan	8.6%	-2.7%	8.0%
Canada	7.1%	3.4%	25.5%

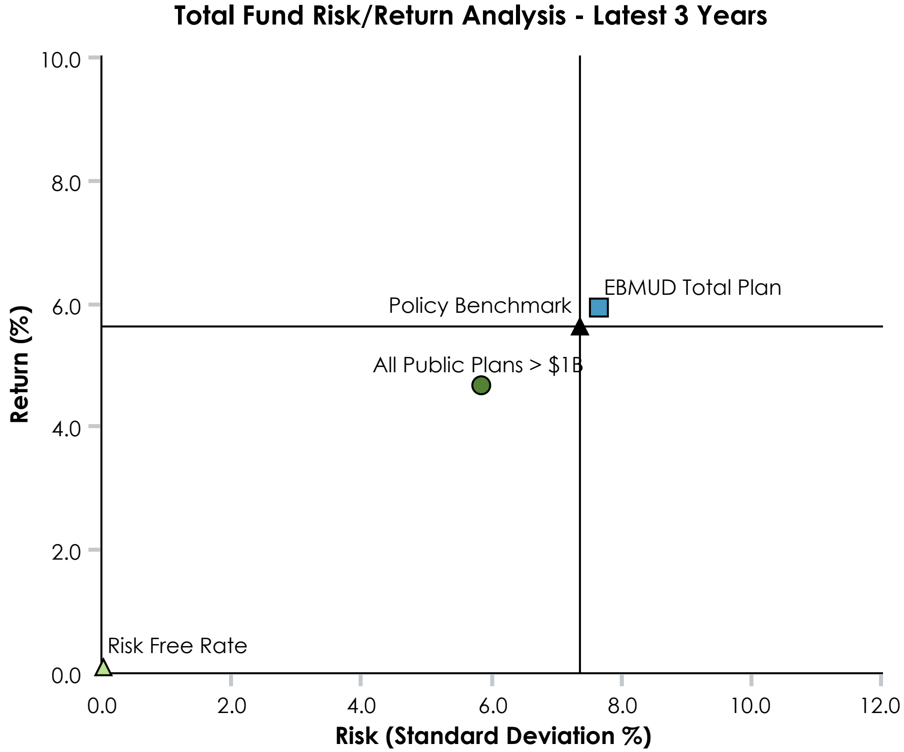
Market Summary – Long-term Performance*

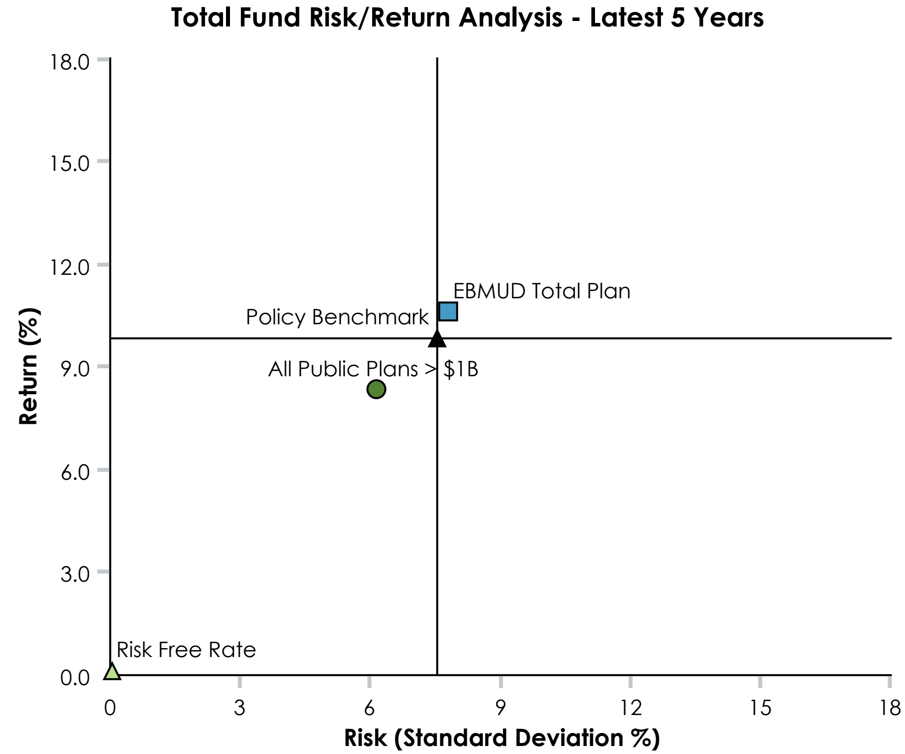
Indexes	Month	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Global Equity							
MSCI AC World Index	2.2%	1.3%	8.5%	3.7%	10.0%	4.1%	6.1%
Domestic Equity							
S&P 500	2.0%	3.8%	12.0%	8.9%	14.7%	6.9%	7.7%
Russell 3000	2.0%	4.2%	12.7%	8.4%	14.7%	7.1%	7.9%
Russell 3000 Growth	1.2%	1.2%	7.4%	8.3%	14.4%	8.3%	6.8%
Russell 3000 Value	2.6%	7.2%	18.4%	8.6%	14.8%	5.8%	8.4%
Russell 1000	1.9%	3.8%	12.1%	8.6%	14.7%	7.1%	7.9%
Russell 1000 Growth	1.2%	1.0%	7.1%	8.6%	14.5%	8.3%	6.9%
Russell 1000 Value	2.5%	6.7%	17.3%	8.6%	14.8%	5.7%	8.3%
Russell 2000	2.8%	8.8%	21.3%	6.7%	14.5%	7.1%	8.2%
Russell 2000 Growth	1.4%	3.6%	11.3%	5.1%	13.7%	7.8%	6.3%
Russell 2000 Value	4.1%	14.1%	31.7%	8.3%	15.1%	6.3%	9.7%
Russell Microcap	4.6%	10.0%	20.4%	5.8%	15.6%	5.5%	---
CBOE BXM Index	0.1%	2.6%	7.1%	6.0%	7.2%	4.3%	6.8%
International Equity							
MSCI AC World Index ex USA	2.6%	-1.2%	5.0%	-1.3%	5.5%	1.4%	5.0%
MSCI EAFE	3.4%	-0.7%	1.5%	-1.2%	7.0%	1.2%	4.6%
MSCI Pacific	5.3%	-0.4%	0.2%	-2.6%	6.9%	1.0%	5.8%
MSCI Europe	0.5%	-1.0%	4.5%	1.7%	7.4%	1.8%	2.6%
MSCI EM (Emerging Markets)	0.3%	-4.1%	11.6%	-2.2%	1.6%	2.2%	5.7%
Fixed Income							
BC Universal	0.3%	-2.6%	3.9%	3.3%	2.8%	4.6%	5.5%
Global Agg. - Hedged	0.3%	-2.3%	3.9%	4.1%	3.6%	4.4%	5.3%
BC Aggregate Bond	0.1%	-3.0%	2.6%	3.0%	2.2%	4.3%	5.3%
BC Government	-0.1%	-3.7%	1.0%	2.3%	1.2%	3.9%	4.9%
BC Credit Bond	0.6%	-3.0%	5.6%	4.1%	3.8%	5.3%	5.9%
BC Mortgage Backed Securities	0.0%	-2.0%	1.7%	3.1%	2.1%	4.3%	5.2%
BC High Yield	1.8%	1.8%	17.1%	4.7%	7.4%	7.5%	7.0%
BC WGIL All Maturities - Hedged	1.4%	-2.1%	10.2%	5.9%	3.5%	5.1%	---
Emerging Markets Debt	1.1%	-2.6%	9.9%	5.3%	5.7%	6.7%	8.8%
Real Estate							
NCREIF	0.7%	2.1%	8.8%	12.1%	12.2%	5.8%	9.3%
FTSE NAREIT All Equity Index	4.2%	-2.9%	9.3%	12.4%	12.0%	4.7%	9.1%
Commodity Index							
Bloomberg Commodity Index	1.8%	2.7%	11.7%	-11.3%	-9.0%	-5.6%	0.5%

* Performance is annualized for periods greater than one year.

EBMUD Portfolio Review

Gross Investment Performance As of December 31, 2016

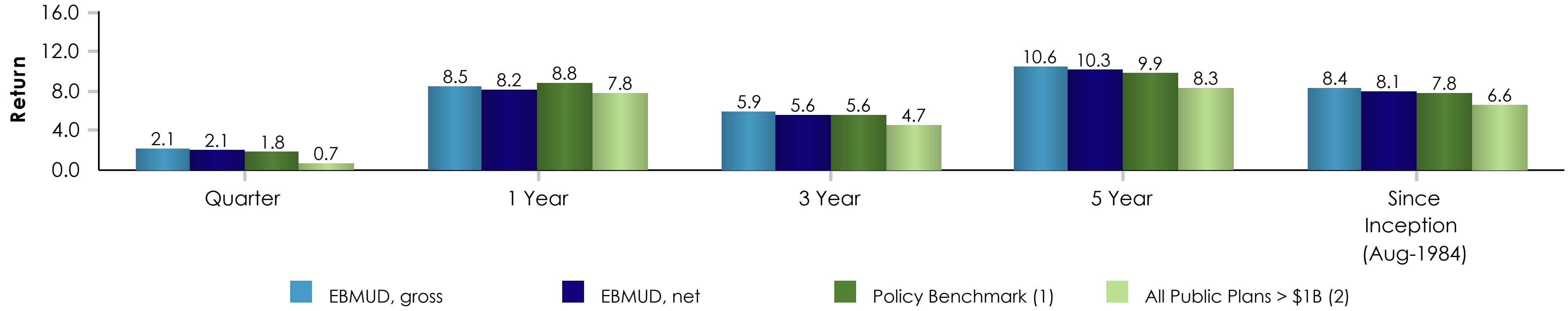




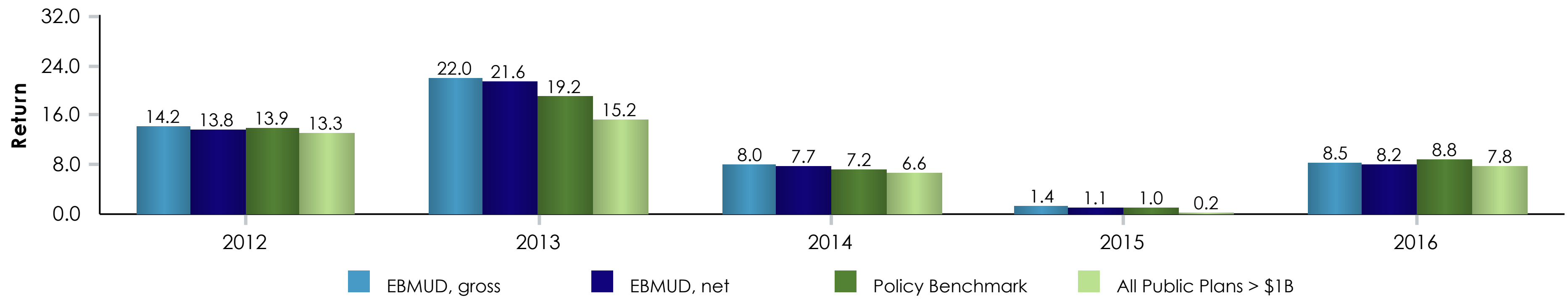
	3 Years Return	3 Years Standard Deviation	3 Years Sharpe Ratio	5 Years Return	5 Years Standard Deviation	5 Years Sharpe Ratio
EBMUD Total Plan	5.9	7.7	0.8	10.6	7.8	1.3
Policy Benchmark	*5.6*	*7.4*	*0.8*	*9.9*	*7.6*	*1.3*
All Public Plans > $1B Median	4.7	5.9	0.8	8.3	6.2	1.3

EBMUD Portfolio Relative Performance Results
As of December 31, 2016

Trailing Period Perfomance (annualized)



12-month Performanc- As of December 31, 2016



(1) Policy Benchmark consists of 40% Russell 3000 (blend), 15% MSCI ACWIxU.S. (blend), 20% CBOE BXM, 10% BC Aggregate, 5% BC US 1-3 Year Government/Credit, 2.5% 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 4/1/14-present; see Appendix for historical Policy Benchmark composition.
(2) IM Total Public Fund >$1B Universe includes BNY Mellon Public>$1B Fund Universe and IM client data.

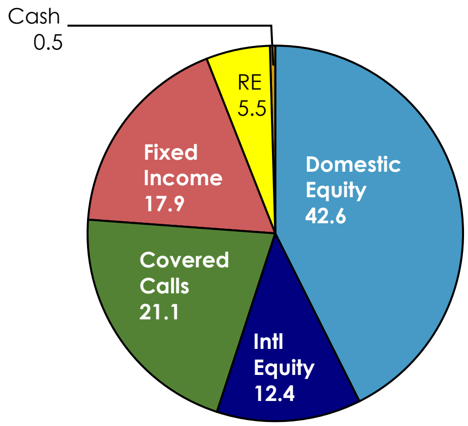
Actual vs. Target Allocation
As of December 31, 2016

	Asset Allocation ($000)	Asset Allocation (%)	Target Allocation* (%)	Variance (%)	Minimum Allocation*** (%)	Maximum Allocation*** (%)
EBMUD Total Plan	1,492,095	100.0	100.0	0.0	-	-
Domestic Equity	635,801	42.6	40.0	2.6	35.0	45.0
International Equity	185,371	12.4	15.0	-2.6	12.0	18.0
Core Fixed Income	137,172	9.2	10.0	-0.8	7.0	13.0
Non-Core Fixed Income	129,437	8.7	10.0	-1.3	8.0	12.0
Covered Calls	315,352	21.1	20.0	1.1	16.0	24.0
Real Estate**	82,022	5.5	5.0	0.5	3.0	7.0
Cash	6,939	0.5	0.0	0.5	0.0	0.0

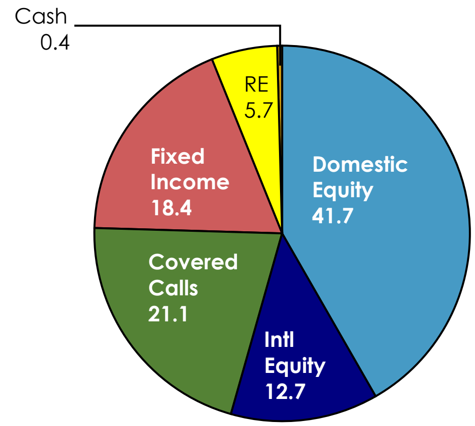
*Policy target allocations elected by the Board in September 2013, which took effect March 2014 upon the funding of the new Covered Calls asset class and Non-Core Bonds allocation within Total Fixed Income.
**RREEF performance results and allocation are lagged one-quarter.
***Policy rebalancing ranges shown are for non-turbulent market periods. The Plan also has established rebalancing ranges to be in effect during turbulent market periods.

Actual Asset Allocation Comparison

December 31, 2016 : $1,492,095,305



September 30, 2016 : $1,460,783,739



Manager Performance - Gross of Fees

As of December 31, 2016

Domestic Equity

Manager - Style	Market Value ($000)	Quarter	1 Year	3 Year	5 Year
Large Cap Core					
Northern Trust Co. - Passive	256,813	3.8	12.1	8.6	14.7
Russell 1000 Index		*3.8*	*12.1*	*8.6*	*14.7*
Large Cap Growth					
Intech - Active*	71,806	0.3	7.3	8.5	14.9
T.Rowe Price - Active	70,757	0.3	2.3	7.7	15.9
Russell 1000 Growth Index		*1.0*	*7.1*	*8.6*	*14.5*
Large Cap Value					
Barrow Hanley - Active	173,267	6.9	14.2	8.2	14.0
Russell 1000 Value Index		*6.7*	*17.3*	*8.6*	*14.8*
Small Cap Growth					
Northern Trust Co. - Passive	26,871	3.7	11.9	5.4	14.1
Russell 2000 Growth Index		*3.6*	*11.3*	*5.1*	*13.7*
Small Cap Value					
Opus - Active**	36,287	14.6	24.0	8.6	13.1
Russell 2000 Value Index		*14.1*	*31.7*	*8.3*	*15.1*

*On watch since 12/2014

**On watch since 12/2012

- During the latest three-month period ending December 31, 2016, four of EBMUD's six Domestic Equity managers either matched or outperformed their respective benchmarks.

- Both of EBMUD''s passive Domestic Equity mandates performed in-line with their respective benchmarks.

- Several of EBMUD's active Domestic Equity managers produces material outperformance/underperformance relative to their respective benchmarks over various trailing periods ending 12/31/16. The following address the drivers of these excess results.

  - **T. Rowe Price**, one of EBMUD's large cap growth managers, trailed the Russell 1000 Growth Index over the latest 1-year period by (4.8%)as stock selection in Health Care and Information Technology primarily detracted from results. Over the 5-year period the portfolio outperformed the benchmark by 1.4% per annum. Stock selection, notably in Consumer Discretionary and Information Technology, drove relative outperformance.
  - **Barrow Hanley**, EBMUD's large cap value manager, trailed the Russell 1000 Value Index over 1-year period by (3.1%) largely due to the portfolio's overweight allocation to Health Care and stock selection in Energy, Financials, and Health Care.
  - **Opus**, EBMUD's active small cap value manager, underperformed the Russell 2000 Value Index over the trailing 1- and 5-year periods by (7.7%) and (2.0%), respectively. Over the recent year, the portfolio's high-quality investment style was out of favor for most of the period, which served as a headwind for the strategy's stock selection. The portfolio's underweight to Energy and Materials accounted for nearly half of the period's underperformance. Over the 5-year period, persistent low-quality factors dominated the markets and challenged the portfolio. Stock selection in Financials, Technology, and Materials detracted from 5-year results.

Manager Performance - Gross of Fees
As of December 31, 2016

International Equity

Manager - Style	Market Value ($000)	Quarter	1 Year	3 Year	5 Year
Fisher Investments - Active	95,651	-1.6	2.5	-0.4	6.3
Franklin Templeton - Active*	89,719	2.2	2.9	-3.2	6.3
*MSCI ACWI x US (blend)***		*-1.2*	*5.0*	*-1.3*	*5.5*

- During the latest three-month period ending December 31, 2016, one of EBMUD's two International Equity managers outperformed the MSCI ACWI x U.S. (blend) Index.
- Both International Equity managers produced material outperformance/underperformance relative to their respective benchmarks over various time periods ending 12/31/16. The following addresses the drivers of these excess returns.
  - **Fisher** underperformed the MSCI ACWI x U.S. (blend) Index by (2.5%) over the trailing 1-year period. Relative underperformance was driven by the portfolio's overweight and stock selection in Health Care. Selection in Financials also detracted.
  - The **Franklin Templeton** account outperformed the MSCI ACWI x U.S. (blend) Index over the quarter by 3.4% as an underweight in Consumer Staples, overweight to Energy, and stock selection in Consumer Staples, Energy, Information Technology, and Industrials benefited results. Over the 1-year period the portfolio trailed the benchmark by (2.1%) as an overweight to Health Care and stock selection in Financials, Industrials, and Consumer Discretionary detracted. Results over the 3-year period underperformed the benchmark by (1.9%); stock selection in Consumer Staples, Industrials, and Financials were the leading detractors.

*Franklin Templeton's historical returns are reported net of fees (inception - 6/30/2011). The Franklin Templeton institutional mutual fund account was liquidated in June 2011 and moved to a transition account, which later funded the Franklin Templeton new separate account in the same month. The Q2 2011 return I san aggregate of the institution mutual fund account, Franklin transient account, and new separate account.

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

Manager Performance - Gross of Fees

As of December 31, 2016

Covered Calls

Manager - Style	Market Value ($000)	Quarter	1 Year	3 Year	5 Year
Parametric BXM	106,408	2.5	8.8	-	-
Parametric Delta Shift	109,696	3.6	11.9	-	-
Van Hulzen	99,248	1.5	7.4	-	-
CBOE BXM		*2.6*	*7.1*	*-*	*-*

- Over the latest quarter ending December 31, 2016, one of EBMUD's three Covered Calls mandates exceeded the CBOE BXM Index.
  - The **Parametric BXM** strategy outperformed the CBOE BXM Index over the latest 1-year period by 1.7%. Outperformance can be attributed to the strategy diversifying option expiration dates to reduce path dependency versus the passive index.
  - **Parametric Delta Shift** strategy exceeded the benchmark by 1.0% and 2.8% for the quarter and the 1-year period, respectively. The Delta Shift strategy utilizes a rules-based approach that seeks to mitigate risk. Delta Shift options written in the fourth quarter were negative of a gross basis. Versus the long-only S&P 500 Index, Delta Shift performs best in down, flat, or moderately trending equity markets. The rules-based risk management of the strategy helps mitigate some of the strategy underperformance versus the Index inherent in strong equity markets and allows the portfolio to capture profits in weak markets.
  - **Van Hulzen**, trailed the CBOE BXM Index over the quarter by (1.1%) largely due to underperformance during the last two months of the year as the portfolio's focus on quality was not favored in the "low quality" market environment. The market's performance was also driven by Financials, Materials, and Industrials, and the portfolio was underweight to neutral in each of those sectors.

Manager Performance - Gross of Fees
As of December 31, 2016

Total Fixed Income

Manager - Style	Market Value ($000)	Quarter	1 Year	3 Year	5 Year
Core Fixed Income					
CS McKee - Active	137,172	-2.6	3.2	3.4	2.7
Bloomberg Barclays U.S. Aggregate Index		*-3.0*	*2.6*	*3.0*	*2.2*
Non- Core Fixed Income					
Western Asset - Short Duration - Active	65,850	-0.5	1.6	-	-
Bloomberg Barclays 1-3 Year Gov/Credit Index		*-0.4*	*1.3*	-	-
Western Asset - Short-Term HY - Active*	30,150	2.2	9.2	-	-
Bloomberg BC 1-5 Yr US High Yield Cash Pay (net)		*2.4*	*16.2*	-	-
Western Asset - Bank Loans - Active**	33,437	2.3	10.4	-	-
S&P/LSTA Performing Loans Index		*2.3*	*10.4*	-	-

*On watch since 4/2016

** On watch since 4/2016

- Over the latest three-month period ending December 31, 2016, two of EBMUD's four Fixed Income mandates matched or outperformed their respective benchmarks.

- One of EBMUD's Fixed Income managers produced material underperformance relative to their respective benchmarks over various trailing time periods ending 12/31/2016. The following items address the primary detractors to these excess returns:

    - The **WAMCO Short-Term High Yield** portfolio underperformed the BC 1-5 Year U.S. High Yield Cash Pay Index by (7.0%) over the 1-year period. Note, the composite portfolio is not measured against a benchmark and accounts that comprise the composite are measured on an absolute basis. The portfolio's absolute results benefitted largely from a quality bias towards the lower end of the rating spectrum. Sub-sector allocation in metals and mining and energy were the biggest contributors to performance. While most rating buckets and sub-sectors generated positive excess returns, a few select names detracted from performance.

Manager Performance - Gross of Fees

As of December 31, 2016

Real Estate

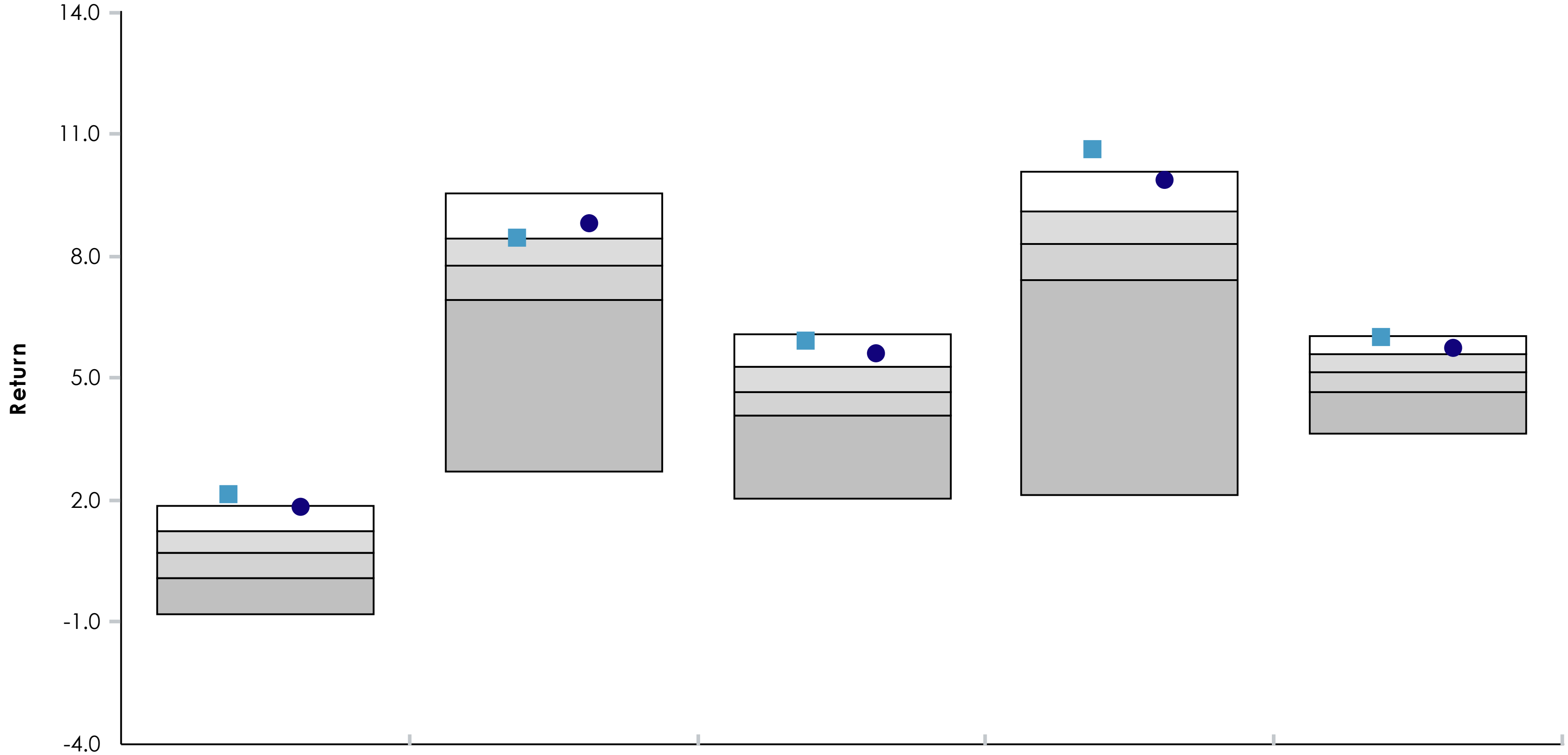
Manager - Style	Market Value ($000)	Quarter	1 Year	3 Year	5 Year
RREEF America II (Lag)*	33,436	2.0	10.3	12.8	13.3
*NCREIF NPI (Lag)**		*1.8*	*9.2*	*11.3*	*11.2*
CenterSquare	48,587	-3.2	8.9	15.1	13.2
FTSE NAREIT Equity REIT Index		*-2.9*	*8.5*	*13.4*	*12.0*

*Results are lagged one quarter.

- East Bay's Real Estate manager, **RREEF II**, outperformed its benchmark, the NCREIF Property Index, during each time period measured. During the lagged quarter, RREEF America REIT II operations generated an income return of 1.1% before fees, slightly lower than the previous quarter. Same store net operating income for the 1-year period increased 7% from the prior year, extending the trend of improving same store income from operations. Occupancy at the end of the quarter decreased to 92 percent overall.

- **CenterSquare**, East Bay's REIT manager, trailed the FTSE NAREIT Equity REITs Index return over the quarter but exceeded its benchmark over the extended time periods measured. From a sector performance perspective, Hotels were the top performer for over the quarter, while freestanding Retail and Health Care were bottom performers.

Plan Sponsor Peer Group Analysis
As of December 31, 2016



	1 Quarter	1 Year	3 Years	5 Years	10 Years
EBMUD Total Plan	2.1 (4)	8.5 (22)	5.9 (10)	10.6 (1)	6.0 (7)
Policy Benchmark	1.8 (6)	8.8 (12)	5.6 (16)	9.9 (8)	5.7 (22)
5th Percentile	1.9	9.6	6.1	10.1	6.0
1st Quartile	1.2	8.4	5.3	9.1	5.6
Median	0.7	7.8	4.7	8.3	5.2
3rd Quartile	0.1	6.9	4.1	7.4	4.7
95th Percentile	-0.8	2.7	2.1	2.1	3.7

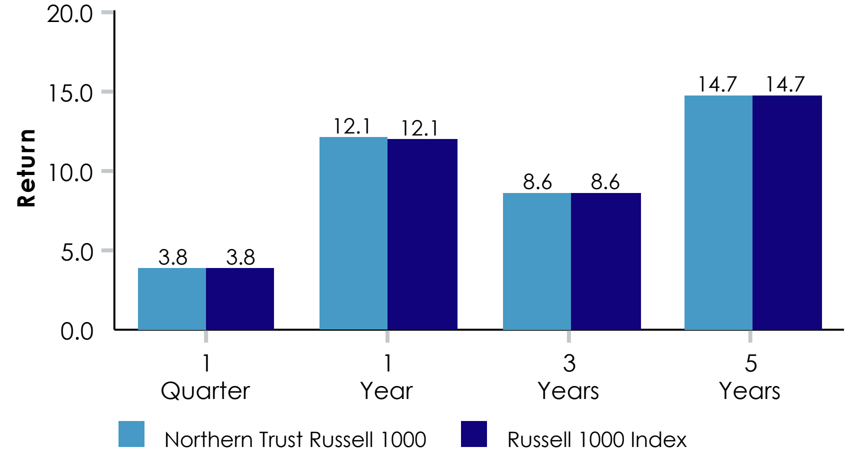
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Northern Trust Russell 1000 - gross of fees

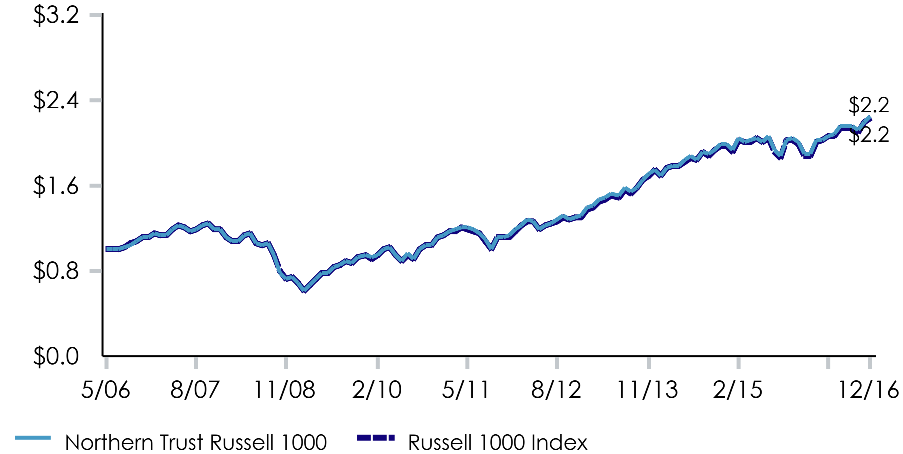
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Northern Trust Russell 1000	0.05	1.00	0.47	0.52	0.14	1.00	100.22	99.94	06/01/2006
Russell 1000 Index	0.00	1.00	-	0.52	0.00	1.00	100.00	100.00	06/01/2006

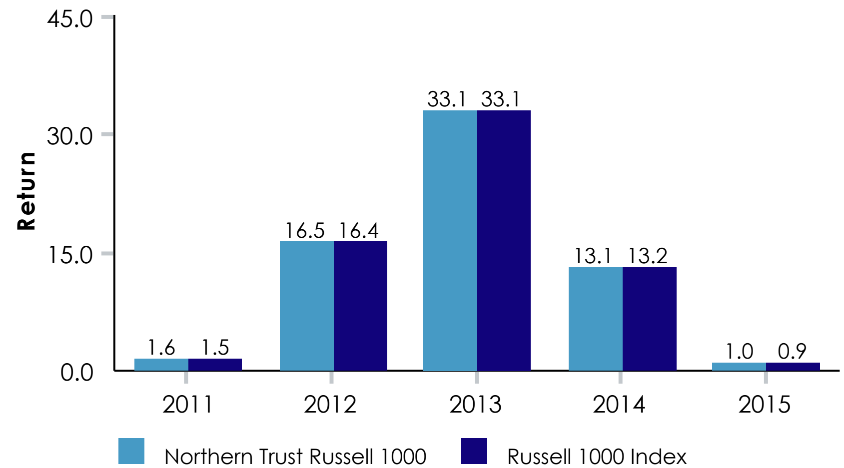
Trailing Period Performance



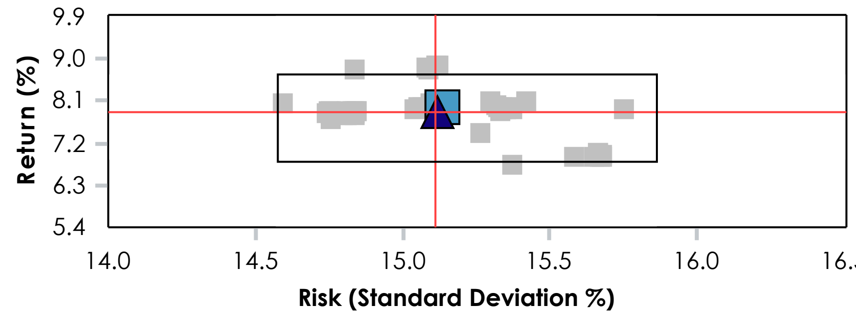
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



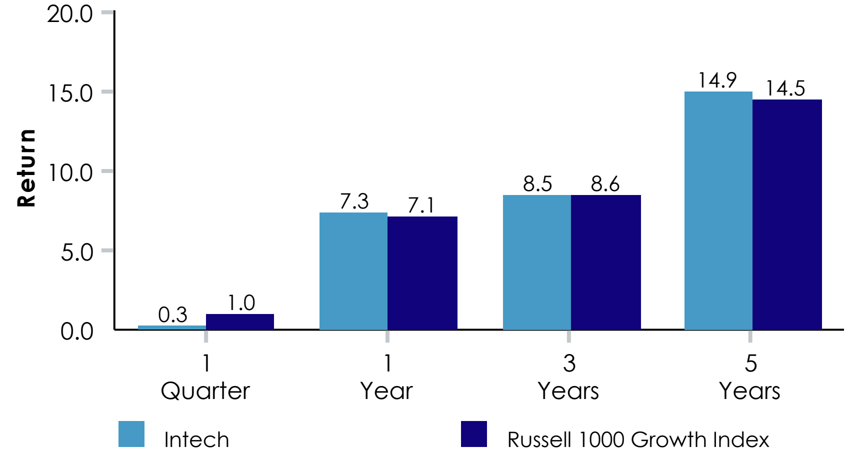
	Return	Standard Deviation
Northern Trust Russell 1000	7.9	15.1
Russell 1000 Index	7.9	15.1
Median	7.9	15.1

Intech - gross of fees

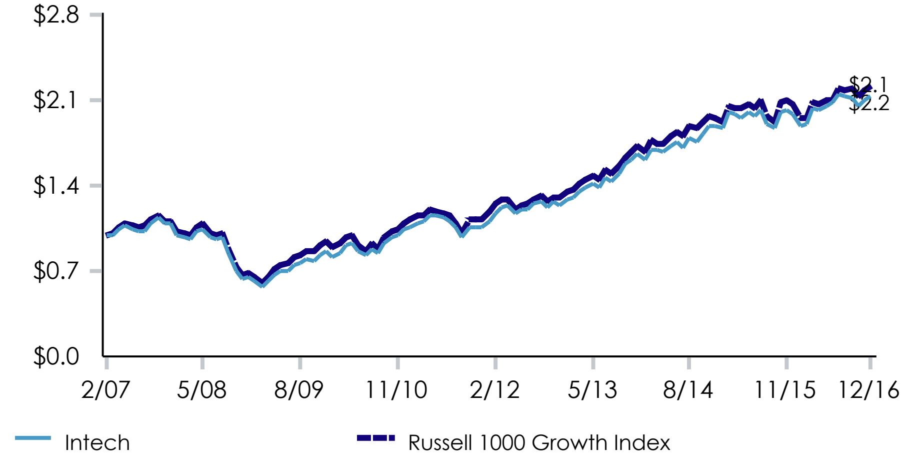
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Intech	-0.11	0.97	-0.14	0.54	2.98	0.96	96.27	96.75	03/01/2007
Russell 1000 Growth Index	0.00	1.00	-	0.56	0.00	1.00	100.00	100.00	03/01/2007

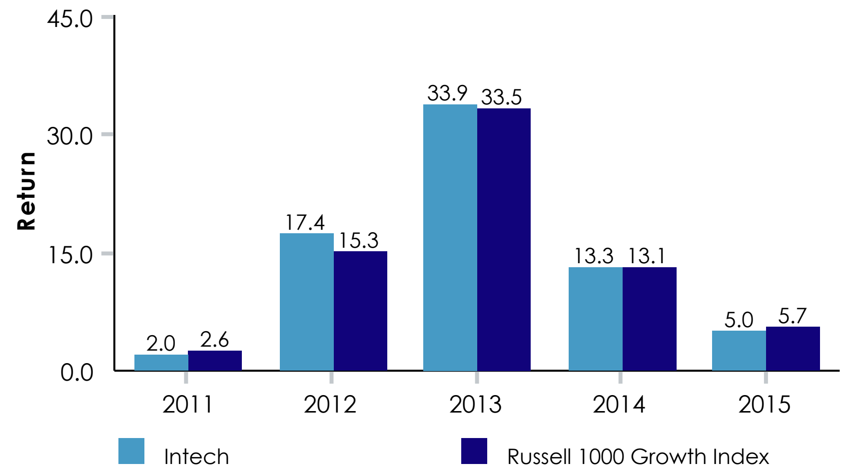
Trailing Period Performance



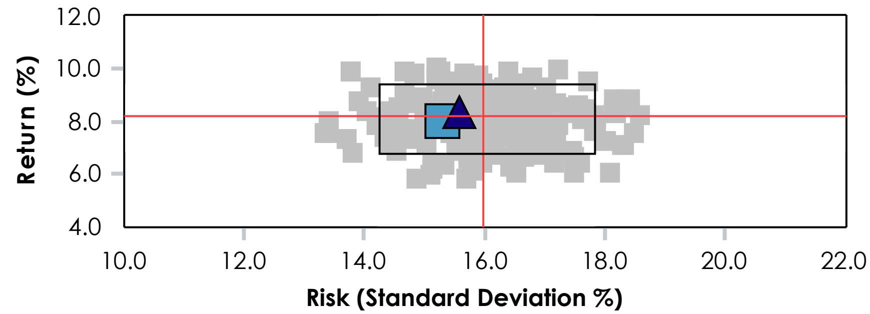
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



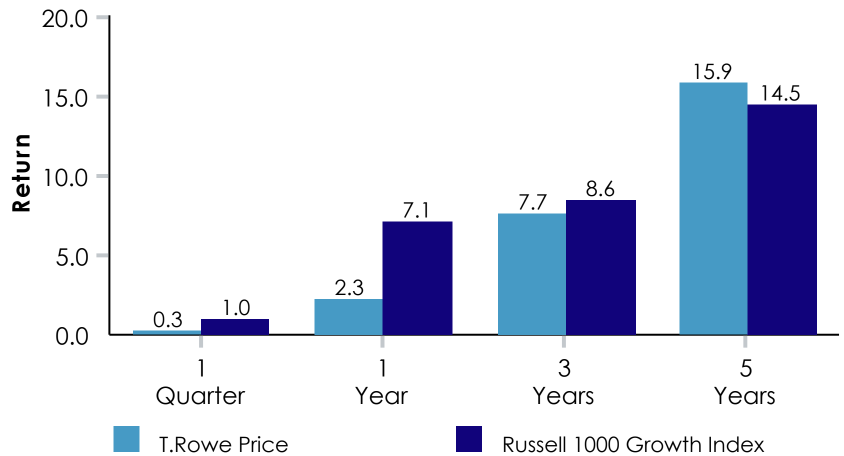
	Return	Standard Deviation
Intech	8.0	15.3
Russell 1000 Growth Index	8.4	15.6
Median	8.2	16.0

T.Rowe Price - gross of fees

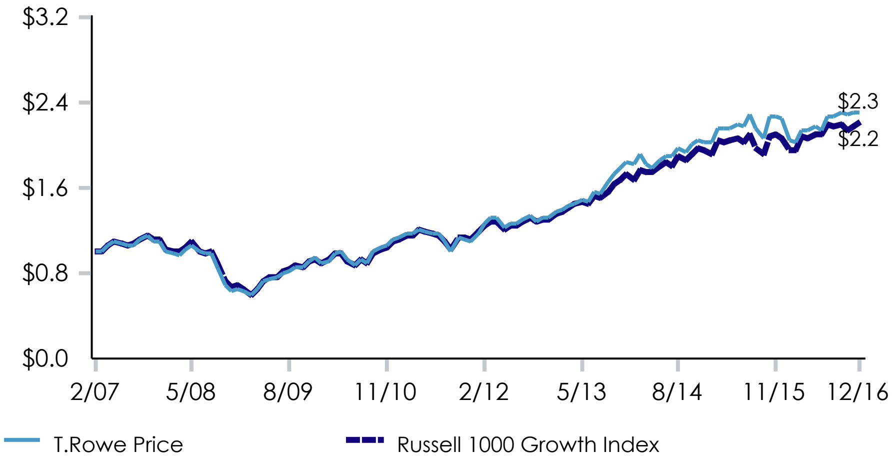
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
T.Rowe Price	0.11	1.06	0.18	0.55	3.70	0.95	105.41	104.51	03/01/2007
Russell 1000 Growth Index	0.00	1.00	-	0.56	0.00	1.00	100.00	100.00	03/01/2007

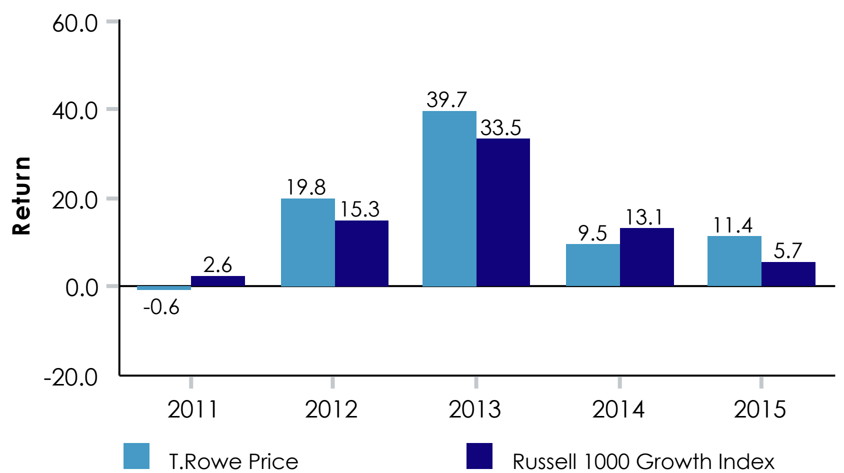
Trailing Period Performance



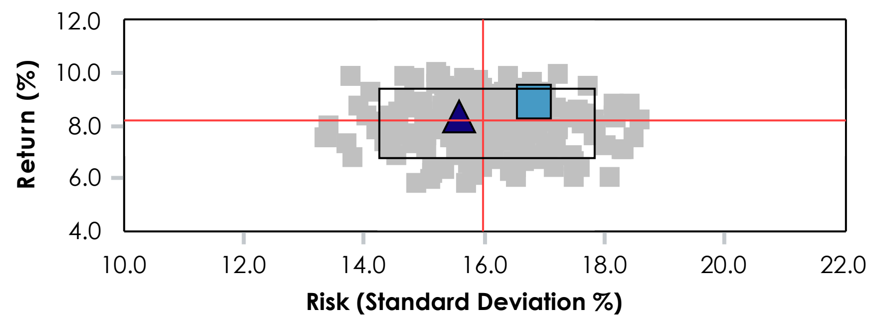
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



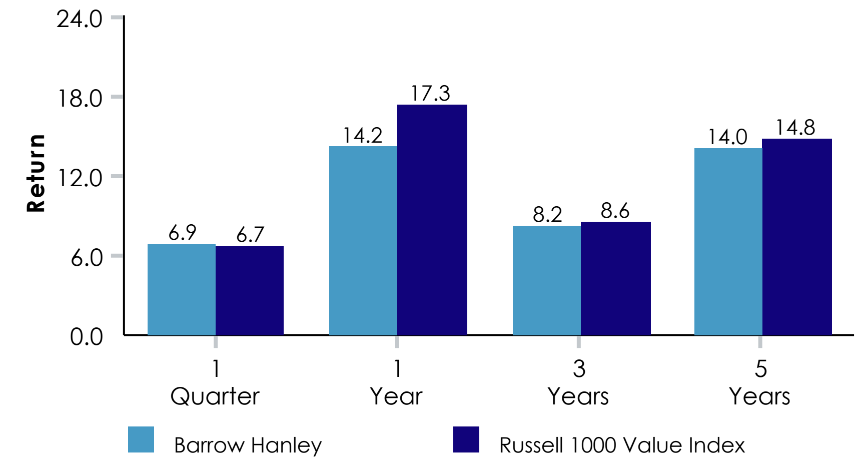
	Return	Standard Deviation
T.Rowe Price	8.9	16.9
Russell 1000 Growth Index	8.4	15.6
Median	8.2	16.0

Barrow Hanley - gross of fees

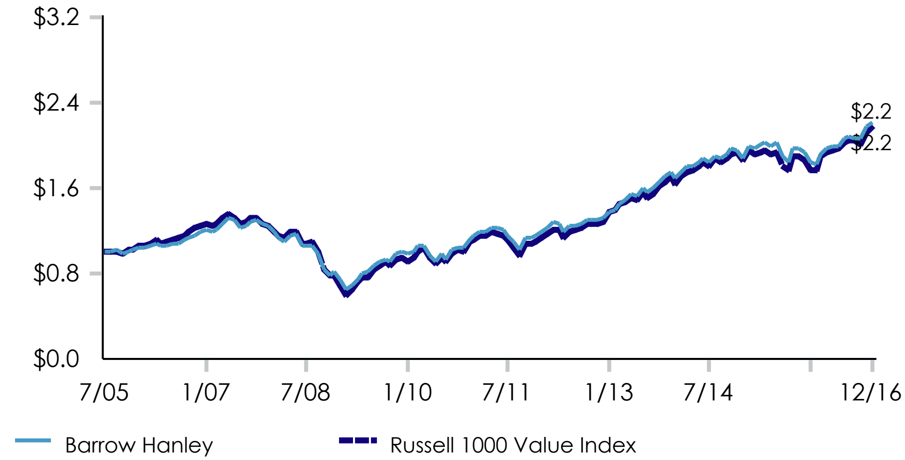
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Barrow Hanley	0.53	0.93	0.00	0.47	3.30	0.95	95.86	93.78	08/01/2005
Russell 1000 Value Index	0.00	1.00	-	0.45	0.00	1.00	100.00	100.00	08/01/2005

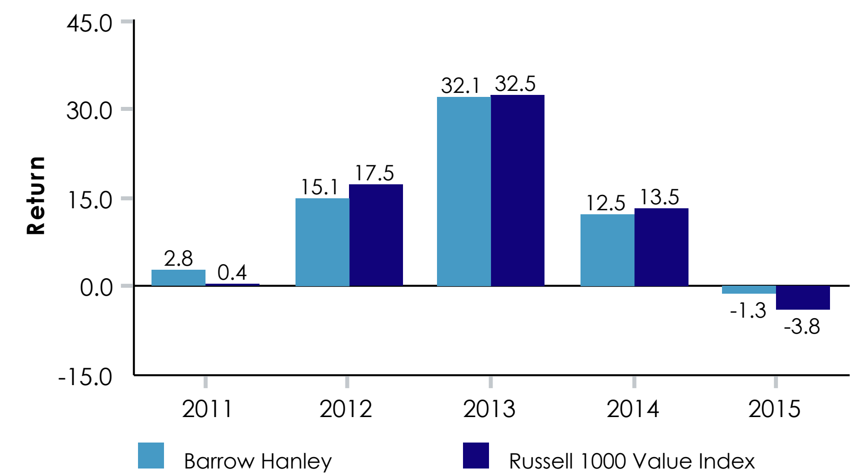
Trailing Period Performance



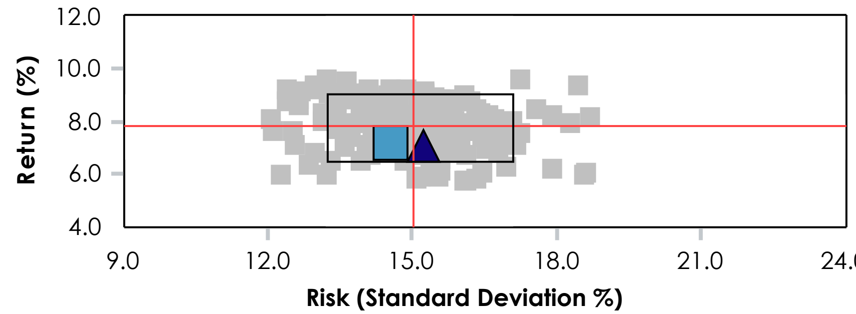
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



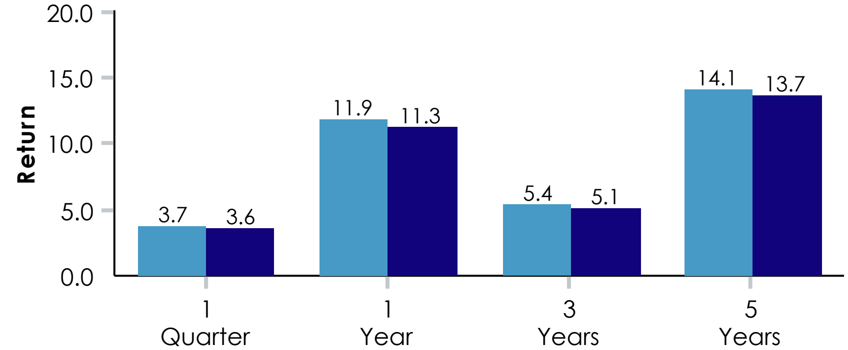
	Return	Standard Deviation
Barrow Hanley	7.2	14.6
Russell 1000 Value Index	7.1	15.2
Median	7.9	15.0

Northern Trust Russell 2000 Growth - gross of fees

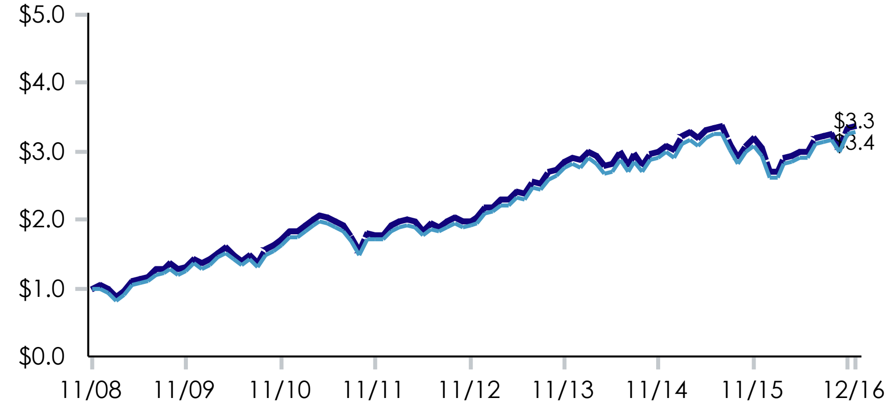
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Northern Trust Russell 2000 Growth	-0.18	0.99	-0.17	0.87	1.95	0.99	98.69	99.25	12/01/2008
Russell 2000 Growth Index	0.00	1.00	-	0.88	0.00	1.00	100.00	100.00	12/01/2008

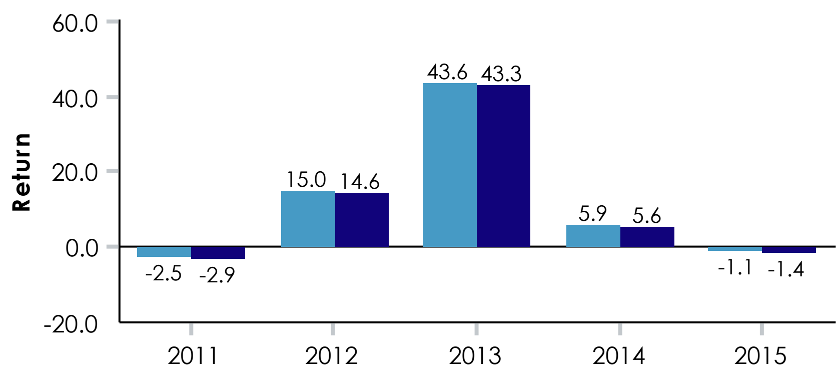
Trailing Period Performance



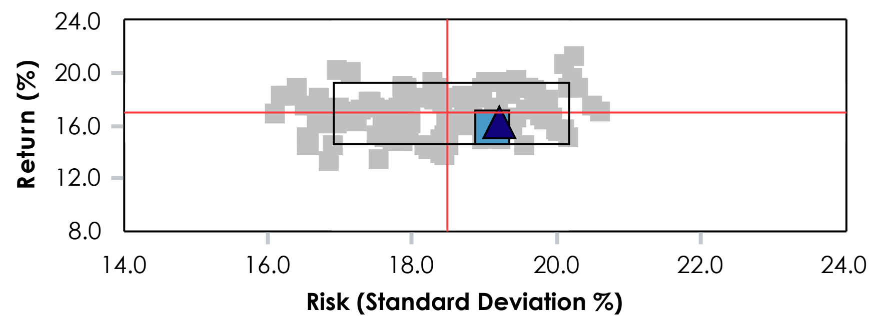
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



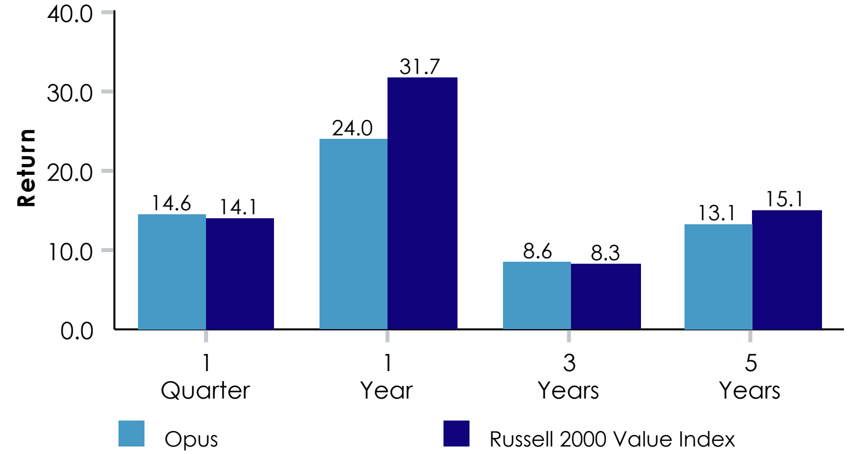
	Return	Standard Deviation
Northern Trust Russell 2000 Growth	15.9	19.1
Russell 2000 Growth Index	16.3	19.2
Median	17.0	18.5

Opus - gross of fees

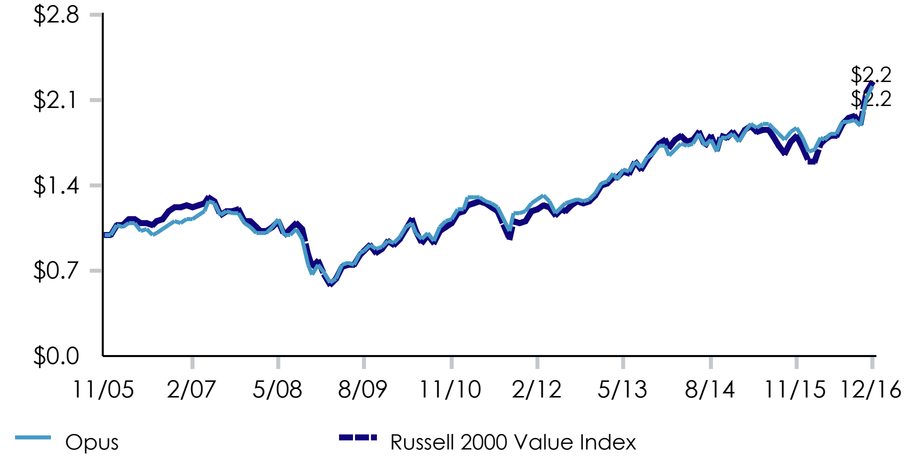
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Opus	0.45	0.92	-0.05	0.42	5.89	0.91	92.27	90.23	12/01/2005
Russell 2000 Value Index	0.00	1.00	-	0.42	0.00	1.00	100.00	100.00	12/01/2005

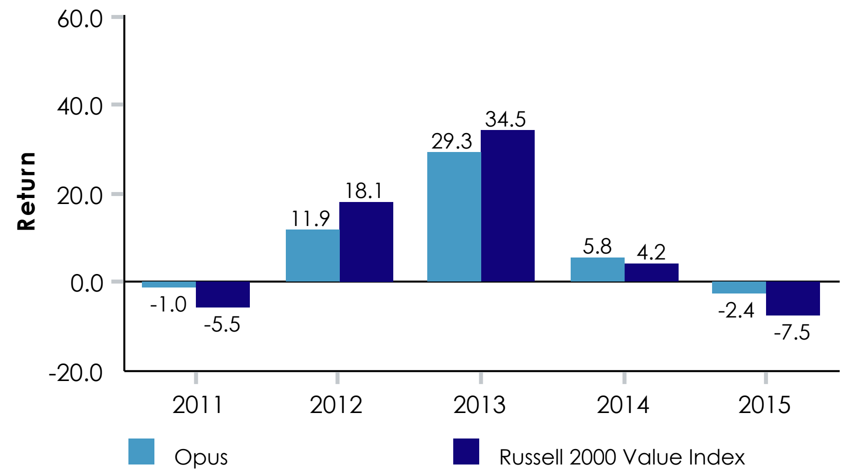
Trailing Period Performance



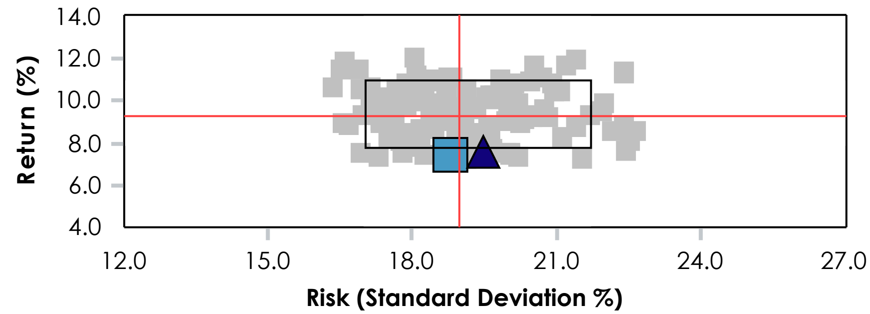
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



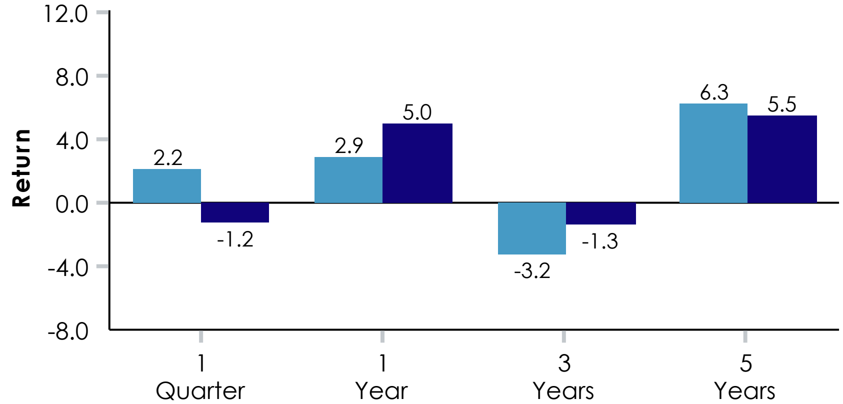
	Return	Standard Deviation
Opus	7.4	18.8
Russell 2000 Value Index	7.6	19.5
Median	9.3	19.0

Franklin Templeton - gross of fees

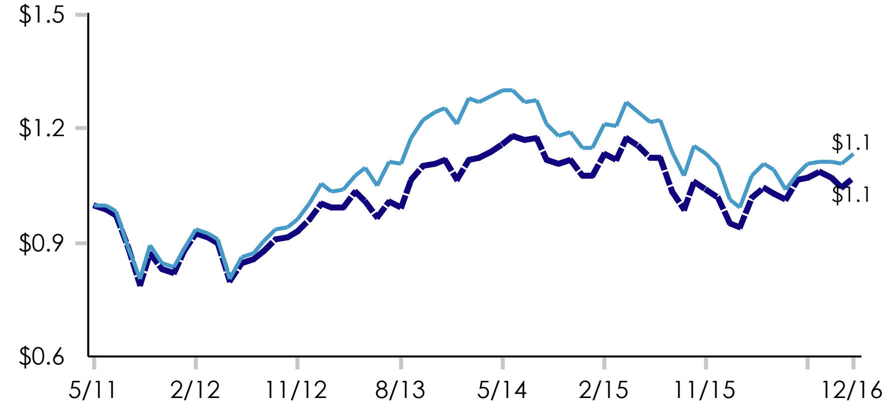
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Franklin Templeton	1.11	1.00	0.29	0.22	3.77	0.94	103.72	98.21	06/01/2011
MSCI ACWI xUS (blend)	0.00	1.00	-	0.15	0.00	1.00	100.00	100.00	06/01/2011

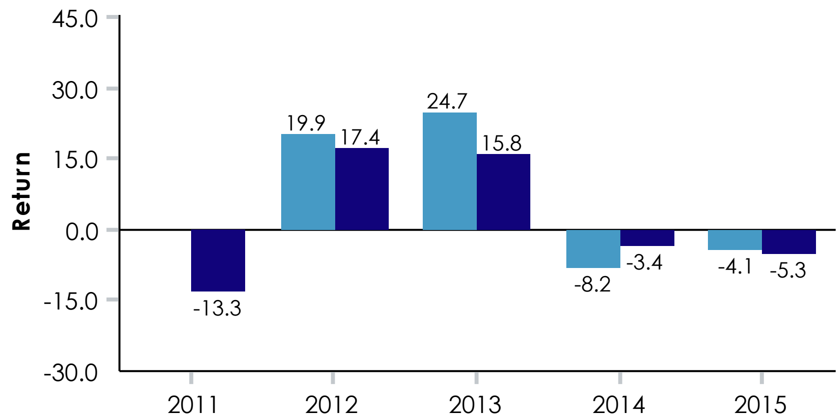
Trailing Period Performance



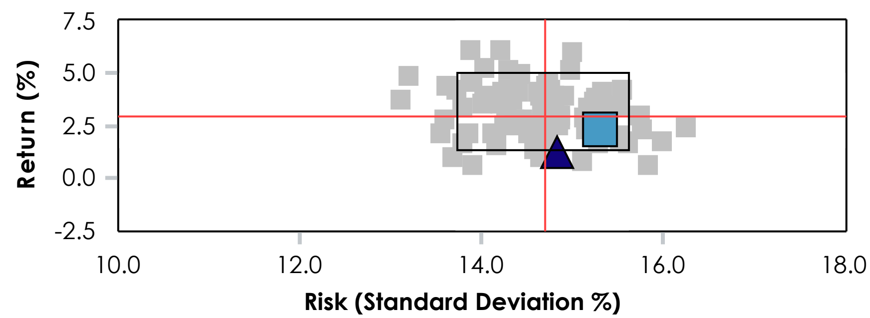
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



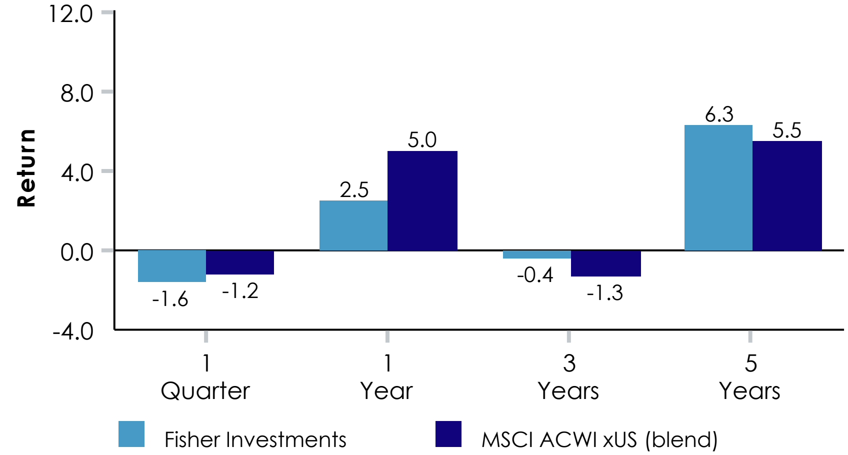
	Return	Standard Deviation
Franklin Templeton	2.3	15.3
MSCI ACWI xUS (blend)	1.2	14.8
Median	3.0	14.7

Fisher Investments - gross of fees

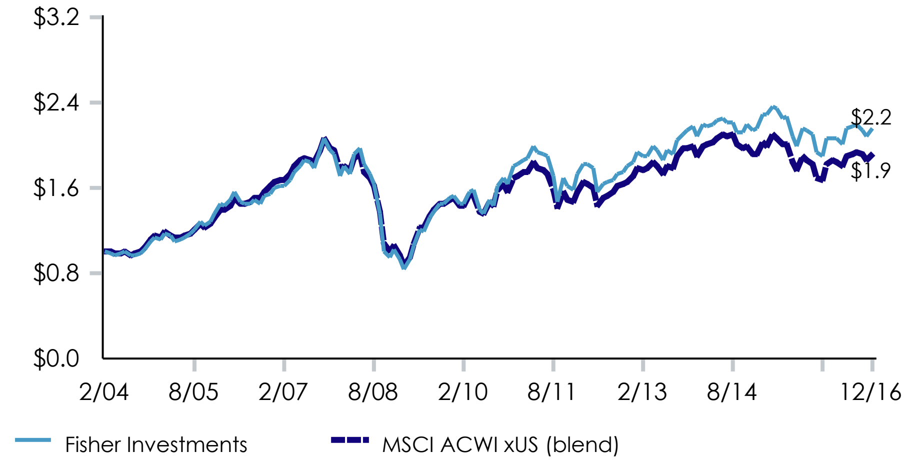
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Fisher Investments	0.56	1.13	0.34	0.34	4.13	0.97	112.85	109.92	03/01/2004
MSCI ACWI xUS (blend)	0.00	1.00	-	0.31	0.00	1.00	100.00	100.00	03/01/2004

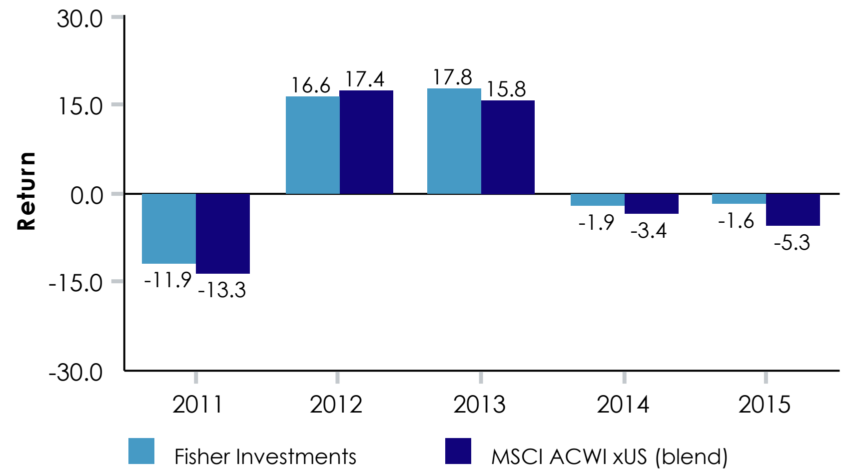
Trailing Period Performance



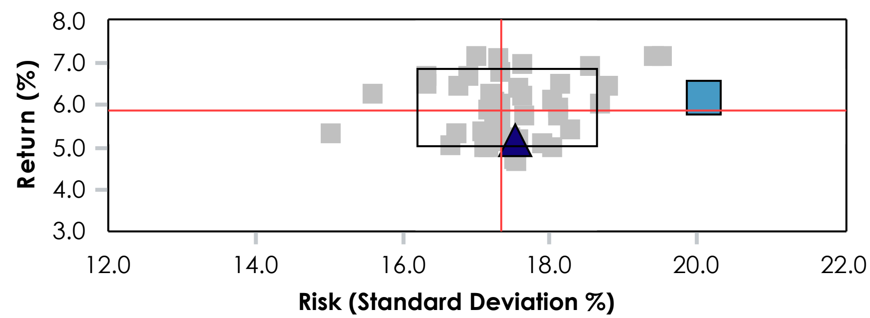
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



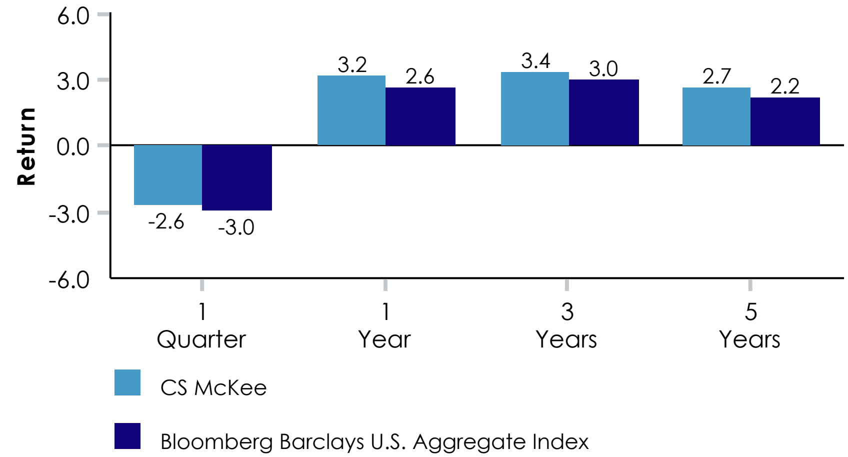
	Return	Standard Deviation
Fisher Investments	6.2	20.1
MSCI ACWI xUS (blend)	5.2	17.5
Median	5.9	17.3

CS McKee - gross of fees

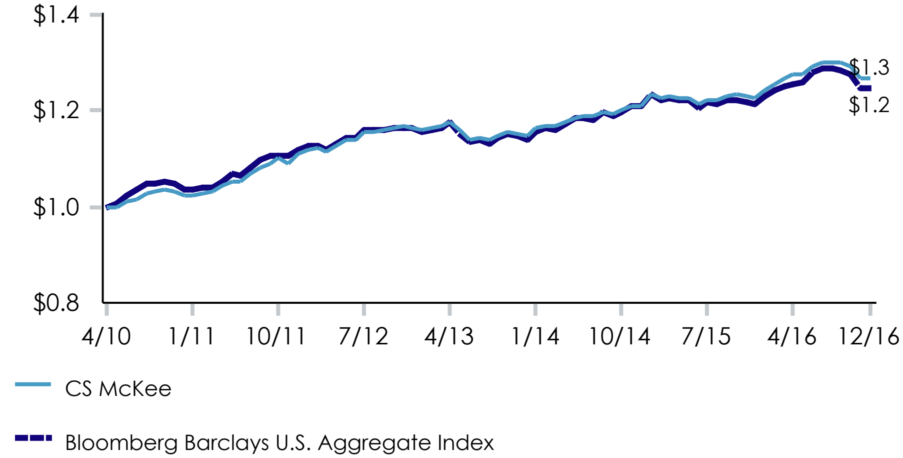
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
CS McKee	0.63	0.88	0.24	1.31	0.90	0.90	98.30	86.84	05/01/2010
Bloomberg Barclays U.S. Aggregate Index	0.00	1.00	-	1.14	0.00	1.00	100.00	100.00	05/01/2010

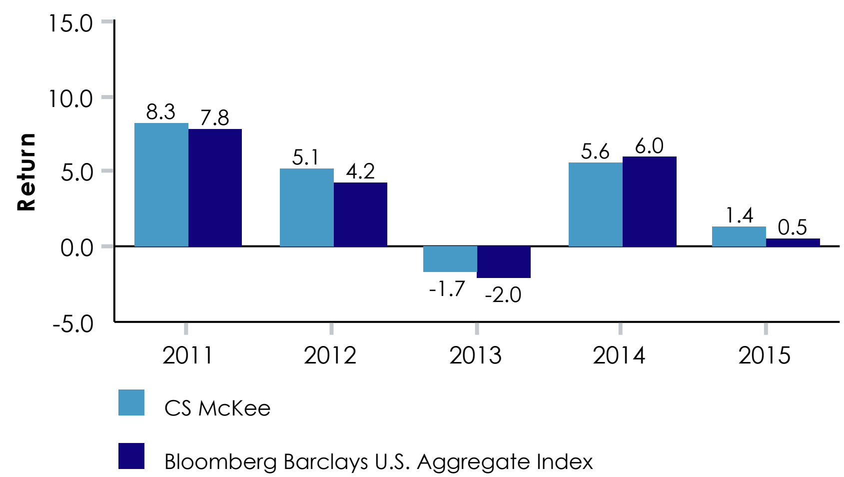
Trailing Period Performance



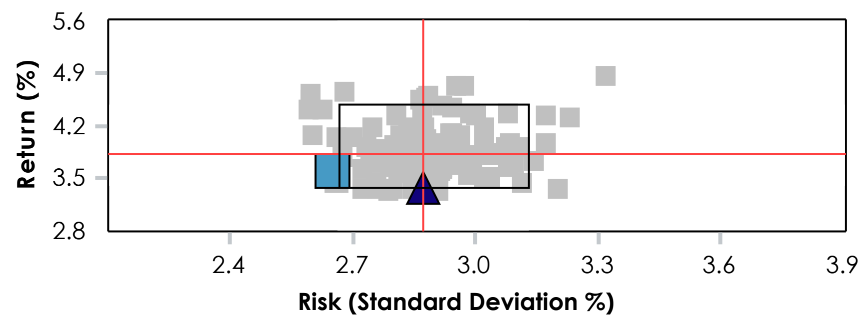
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



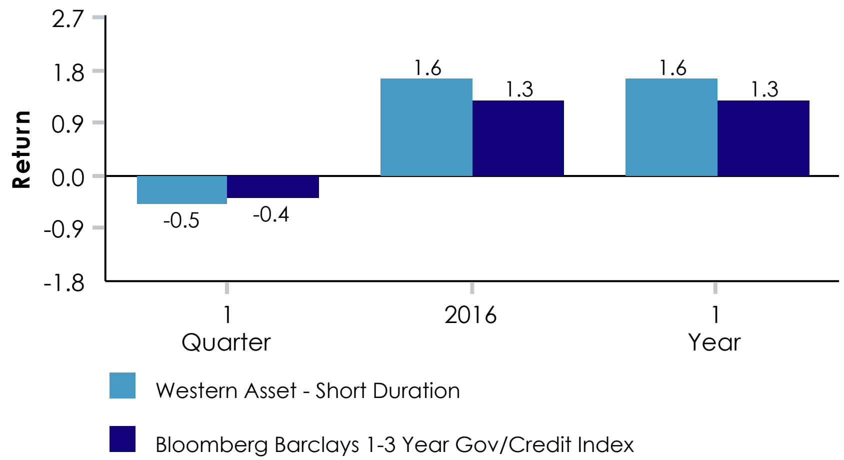
	Return	Standard Deviation
CS McKee	3.6	2.7
Bloomberg Barclays U.S. Aggregate Index	3.4	2.9
Median	3.8	2.9

Western Asset - Short Duration - gross of fees

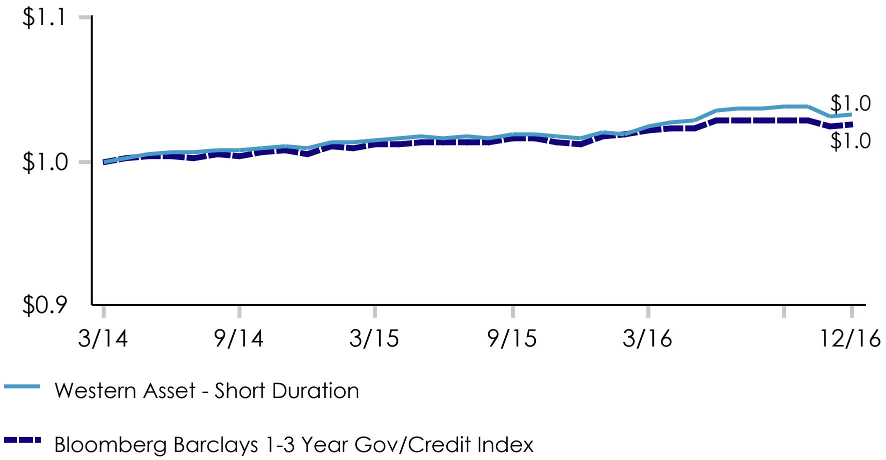
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Western Asset - Short Duration	0.35	0.93	0.89	1.37	0.32	0.84	105.40	67.48	04/01/2014
Bloomberg Barclays 1-3 Year Gov/Credit Index	0.00	1.00	-	1.02	0.00	1.00	100.00	100.00	04/01/2014

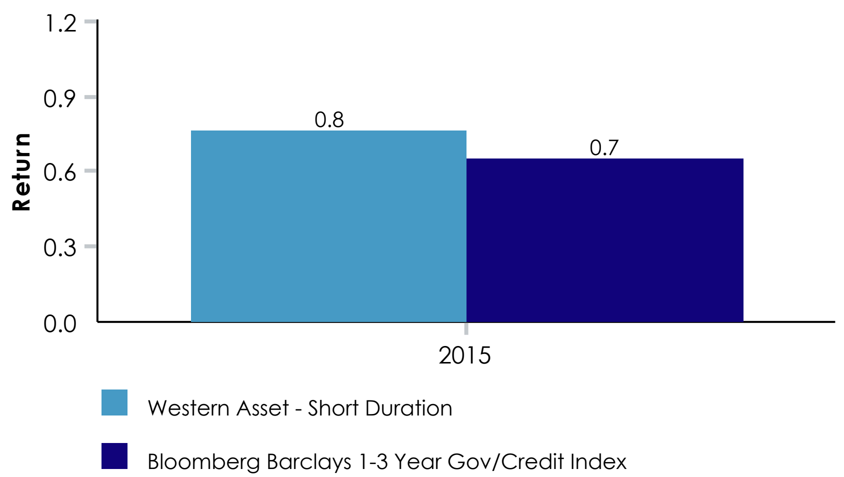
Trailing Period Performance



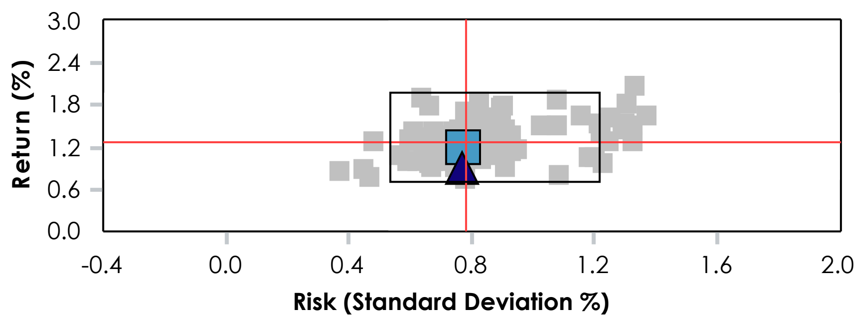
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



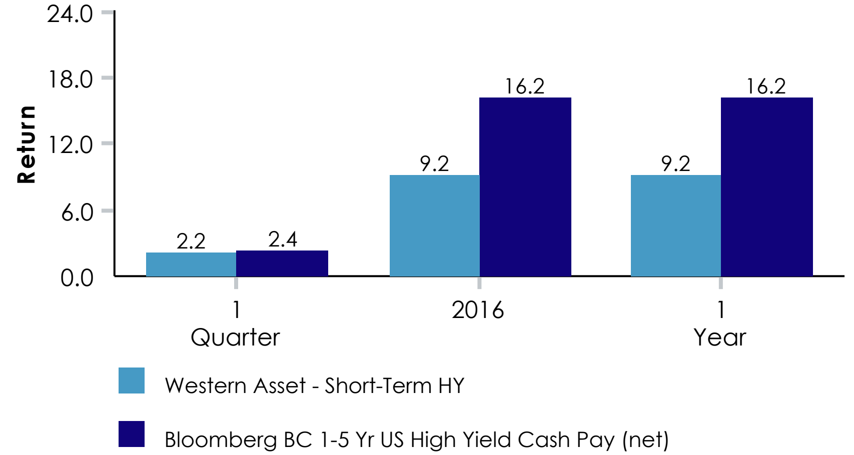
	Return	Standard Deviation
Western Asset - Short Duration	1.2	0.8
Bloomberg Barclays 1-3 Year Gov/Credit Index	0.9	0.8
Median	1.3	0.8

Western Asset - Short-Term HY - gross of fees

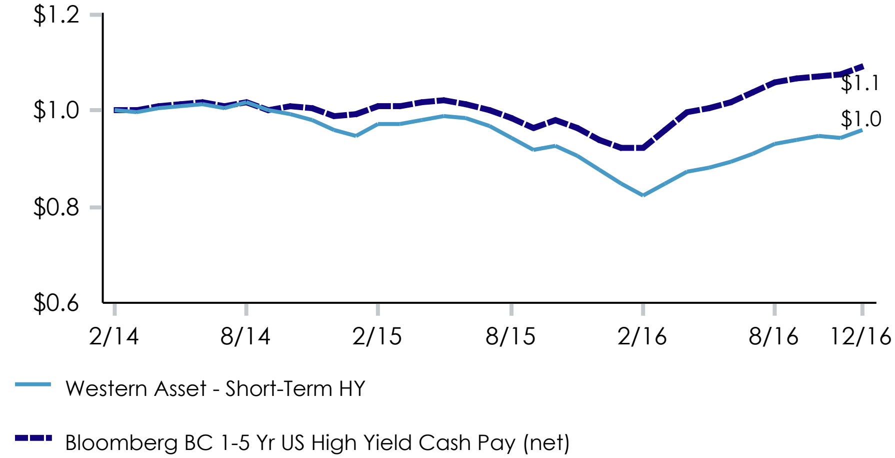
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Western Asset - Short-Term HY	-4.60	1.03	-1.92	-0.24	2.39	0.84	70.35	132.27	03/01/2014
Bloomberg BC 1-5 Yr US High Yield Cash Pay (net)	0.00	1.00	-	0.60	0.00	1.00	100.00	100.00	03/01/2014

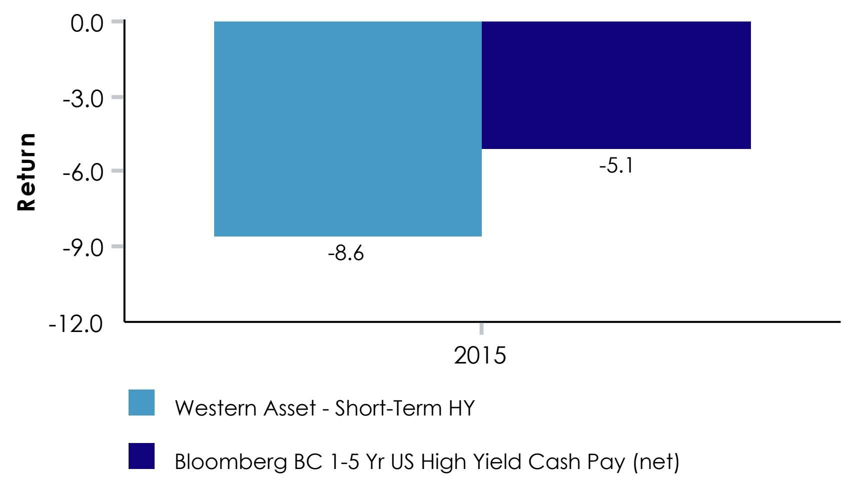
Trailing Period Performance



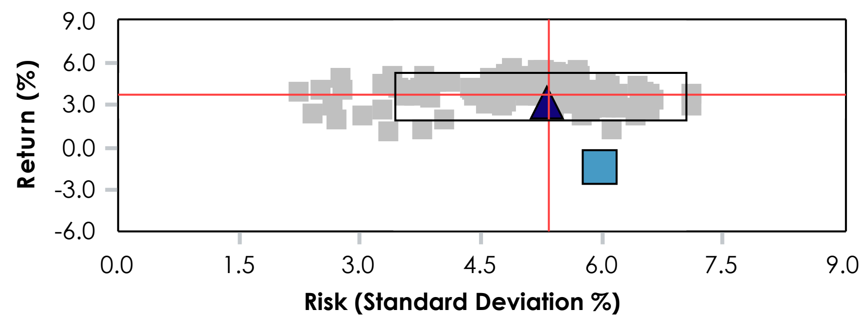
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



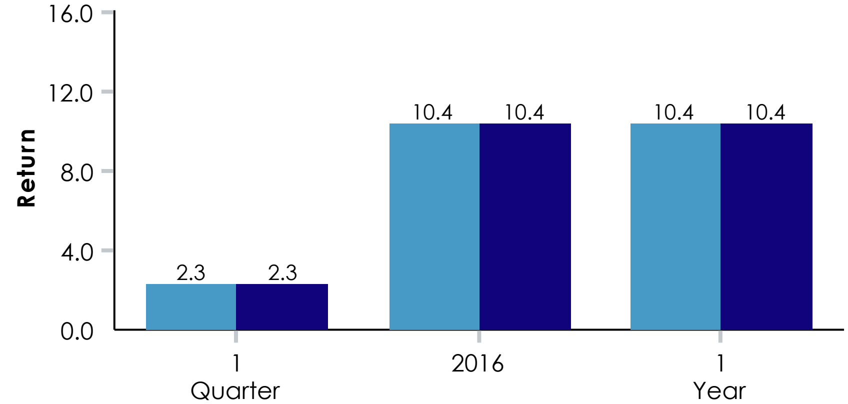
	Return	Standard Deviation
Western Asset - Short-Term HY	-1.5	6.0
Bloomberg BC 1-5 Yr US High Yield Cash Pay (net)	3.2	5.3
Median	3.8	5.3

Western Asset - Bank Loans - gross of fees

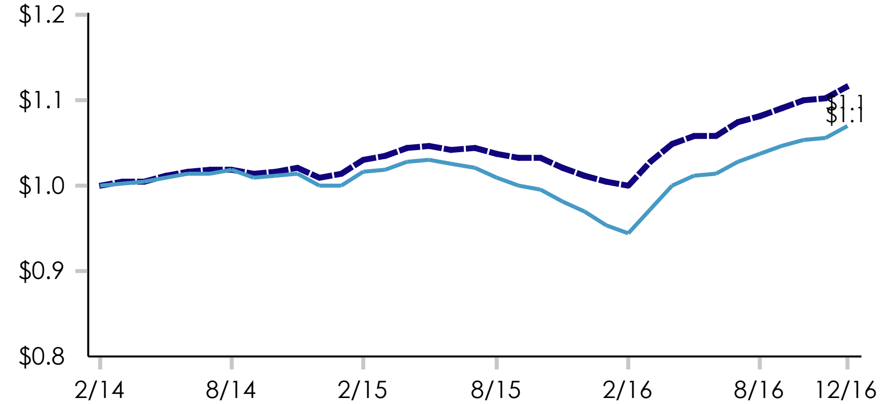
As of December 31, 2016

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Western Asset - Bank Loans	-2.26	1.20	-1.33	0.63	1.12	0.94	97.03	157.09	03/01/2014
S&P/LSTA Performing Loans	0.00	1.00	-	1.29	0.00	1.00	100.00	100.00	03/01/2014

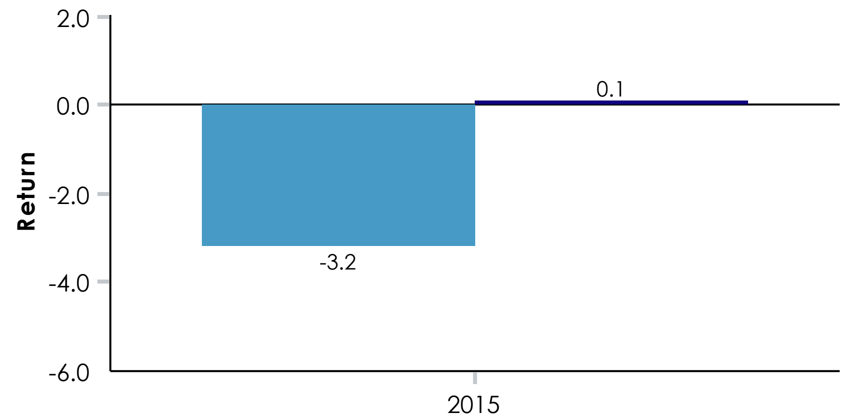
Trailing Period Performance



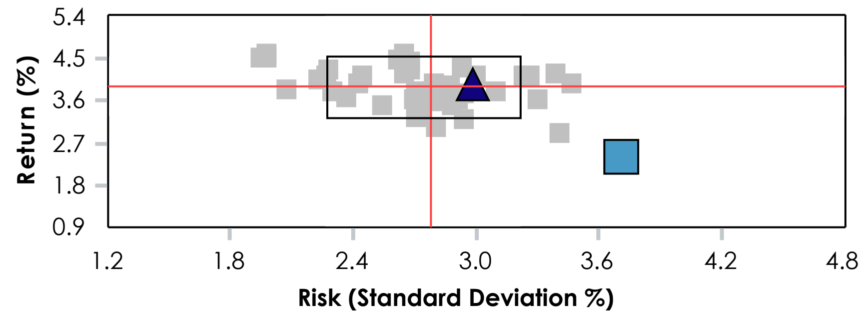
Growth of $1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



	Return	Standard Deviation
Western Asset - Bank Loans	2.4	3.7
S&P/LSTA Performing Loans	4.0	3.0
Median	3.9	2.8

PERFORMANCE MONITORING SUMMARY

				CURRENT STATUS			
Portfolio	Violation Type (Window)*	Date of Initial Violation	Correction Action(s)	Current Status	Est. Beg. Date of Current Status	Months Since Est. Beg. Date	Performance Since Est. Beg. Date**
WAMCO-Short-Term HY	N/A	N/A	Placed on Watch (Mar-16)	Watch	04/01/2016	9	13.1
BC 1-5Yr US HY Cash Pay							*13.7*
WAMCO-Bank Loans	N/A	N/A	Placed on Watch (Mar-16)	Watch	04/01/2016	9	10.0
S&P/LSTA Perf. Loans							*8.5*
Intech	Long-Term	9/30/2014	Placed on Watch (Nov-14)	Watch	12/01/2014	25	5.8
Russell 1000 Growth				---			*5.6*
Opus	Short-Term	9/30/2012	Placed on Watch (Nov-12), (Mar-14)	Watch	12/01/2012	49	14.2
Russell 1000 Value				---			*15.2*

*Defined as: Short-Term (12 months), Medium-Term (36 months), Long-Term (60 months)
**Annualized for periods greater than 12 months

- The Board placed the WAMCO Short-Term High Yield account and the WAMCO Bank Loans account on Watch at the March 2016 Board meeting due to performance concerns. Although the accounts had not breached the Manager Watch Criteria at the time, the accounts' continued benchmark and peer-relative underperformance since its funding in early 2014 raised concern.
    - As of March 2016 the WAMCO Short-Term High Yield portfolio formally breached the short-term relative to benchmark Watch criteria. Since its Watch period began, the portfolio produced a 13.1% 9-month return, which underperformed the benchmark by (60) basis points.
    - Since its Watch period began, the WAMCO Bank Loans account produced a 10.0% return, which outperformed the benchmark by 1.5%.

- The Board placed Intech on Watch as of December 2014 due to performance concerns. Since its Watch period began, Intech produced a 5.8% 25-month return, which outperformed the benchmark by 20 basis points.

- The Board placed Opus on Watch as of December 2012 due to performance concerns. Since its Watch period began, Opus produced an 14.2% 49-month return, which underperformed the benchmark by (1.0%).

- As of the end of the latest quarter, no new managers are recommended for Watch due to performance or material qualitative concerns (please refer to Sections 5 and 6).

ACTIVE MANAGEMENT CRITERIA

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

PASSIVE MANAGEMENT CRITERIA

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

Quantitative Monitoring Results - Overall Status Summary

	Prior Qtr Status	Current Qtr Status
Northern Trust – R1000	Acceptable	Acceptable
Intech	Acceptable	Acceptable
T.Rowe Price	Acceptable	Acceptable
Barrow Hanley	Acceptable	Acceptable
Northern Trust – R2000G	Acceptable	Acceptable
Opus	Acceptable	Acceptable
Franklin Templeton	Acceptable	Acceptable
Fisher Investments	Acceptable	Acceptable
Parametric – BXM	Caution	Caution
Parametric – Delta Shift	Acceptable	Acceptable
Van Hulzen	Acceptable	Acceptable
CS McKee	Acceptable	Acceptable
WAMCO – Short Duration	Acceptable	Acceptable
WAMCO – Short-Term HY	Caution	Caution
WAMCO – Bank Loans	Acceptable	Acceptable

Investment Performance Criteria by Asset Class

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

All criteria are on an annualized basis.
VRR – Value Relative Ratio – is calculated as: manager cumulative return / benchmark cumulative return.

Northern R1000 - Domestic Equity: Large Cap Core

Manager Performance

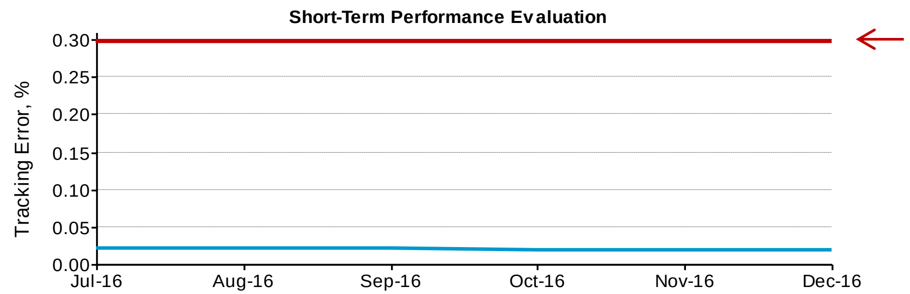
	Quarter	1 Year	3 Year	5 Year
Northern R1000	3.8	12.1	8.6	14.7
Russell 1000	3.8	12.1	8.6	14.7

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

Tracking error > 0.30% for 6 consecutive months

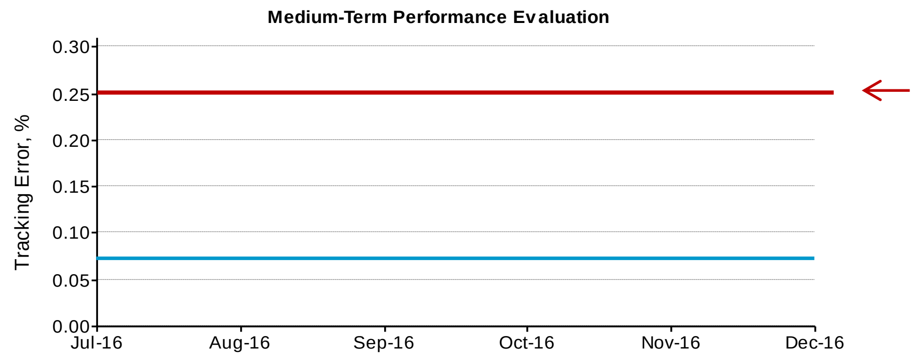
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

Tracking error > 0.25% for 6 consecutive months

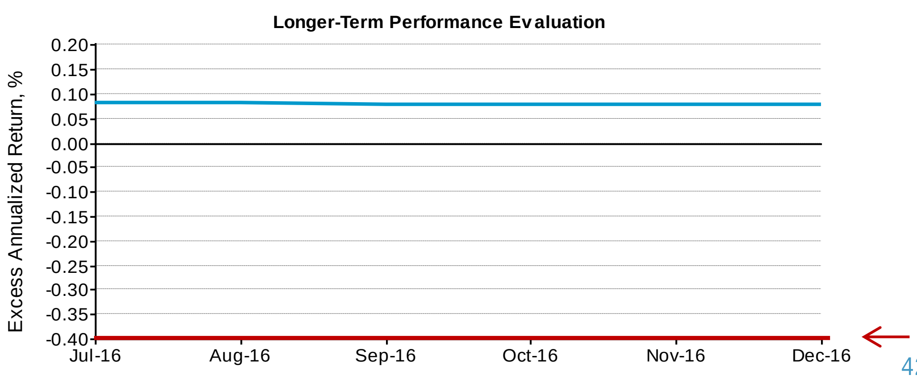
Current Status: Acceptable



Long-Term Criteria (60+ months)

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

Current Status: Acceptable



Intech - Domestic Equity: Large Cap Growth

Manager Performance

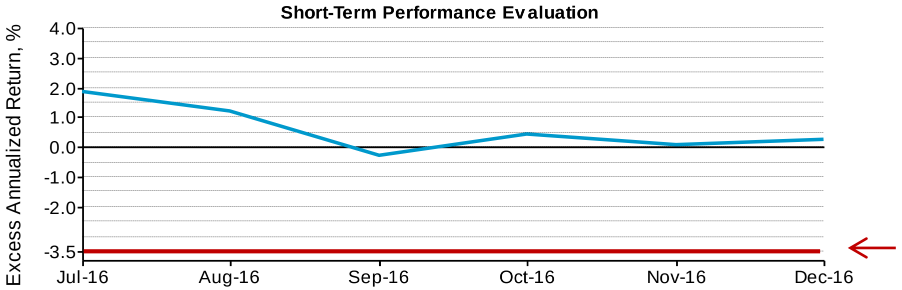
	3 Months	1 Year	3 Years	5 Years	Watch-25 Months
Intech	0.3	7.3	8.5	14.9	5.8
Russell 1000 Growth	1.0	7.1	8.6	14.5	5.6

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

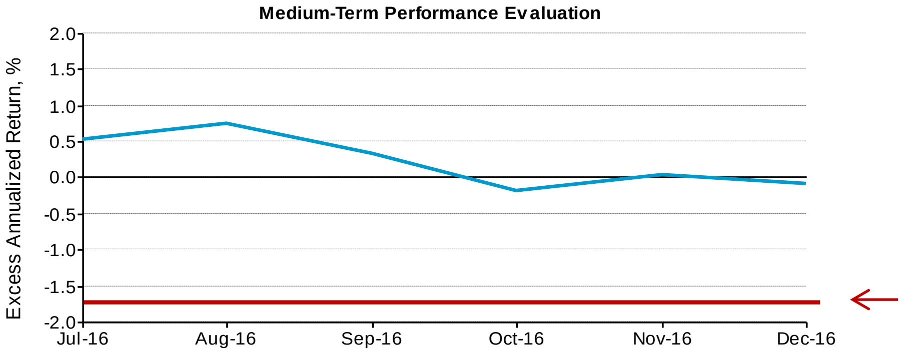
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

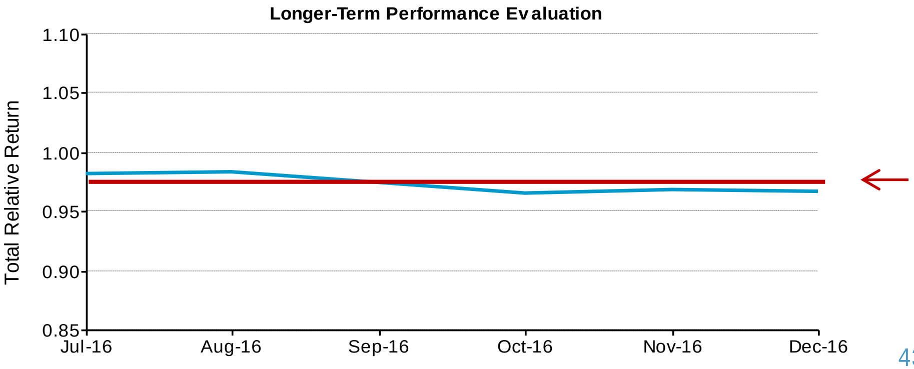
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



T. Rowe Price - Domestic Equity: Large Cap Growth

Manager Performance

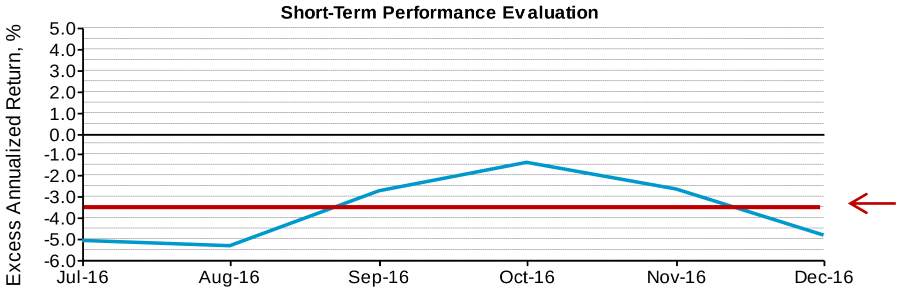
	Quarter	1 Year	3 Year	5 Year
T Rowe Price	0.3	2.3	7.7	15.9
Russell 1000 Growth	1.0	7.1	8.6	14.5

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

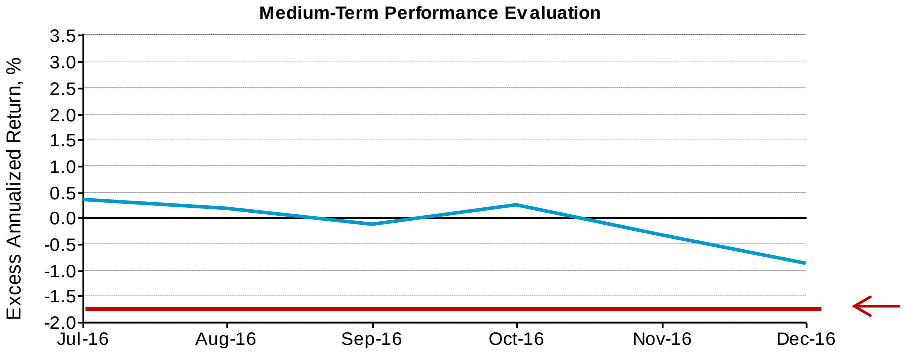
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

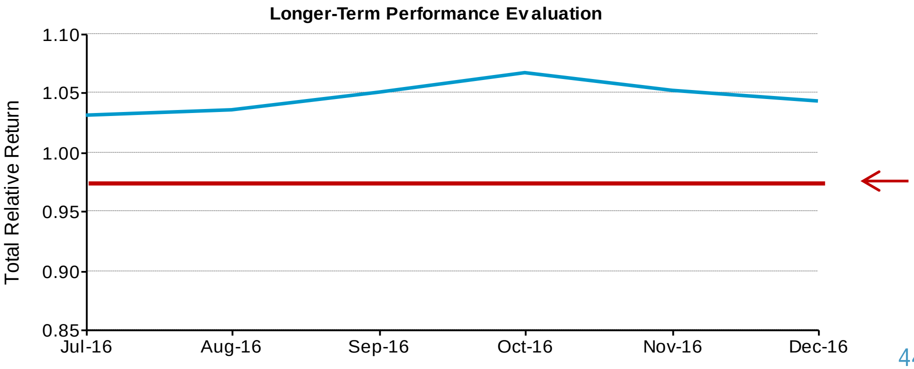
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



Barrow Hanley - Domestic Equity: Large Cap Value

Manager Performance

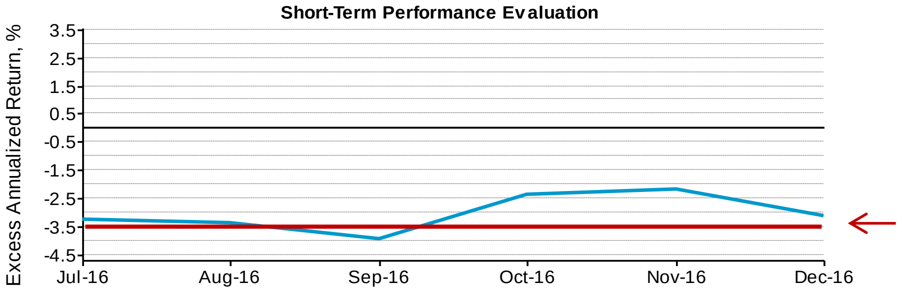
	Quarter	1 Year	3 Year	5 Year
Barrow	6.9	14.2	8.2	14.0
Russell 1000 Value	6.7	17.3	8.6	14.8

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

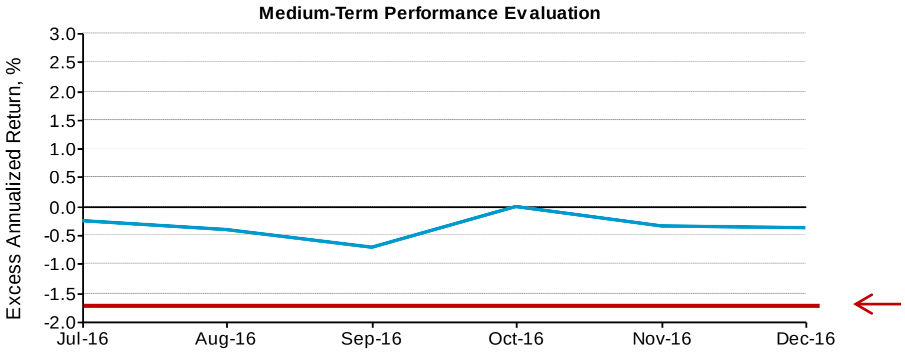
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

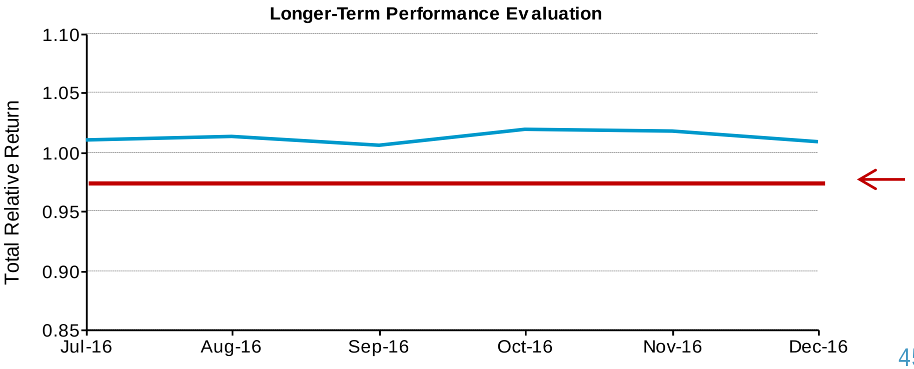
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



Northern R2000 - Domestic Equity: Small Cap Growth

Manager Performance

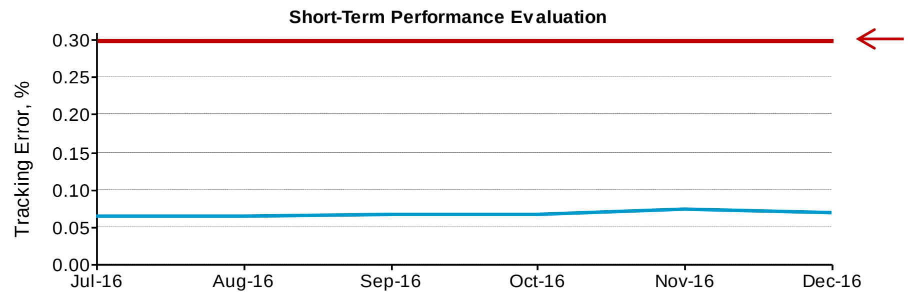
	Quarter	1 Year	3 Year	5 Year
Northern R2000	3.7	11.9	5.4	14.1
Russell 2000 Growth	3.6	11.3	5.1	13.7

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

Tracking error > 0.30% for 6 consecutive months

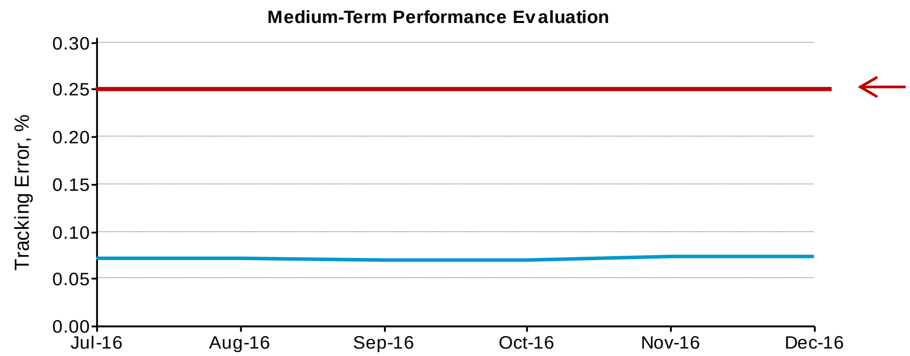
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

Tracking error > 0.25% for 6 consecutive months

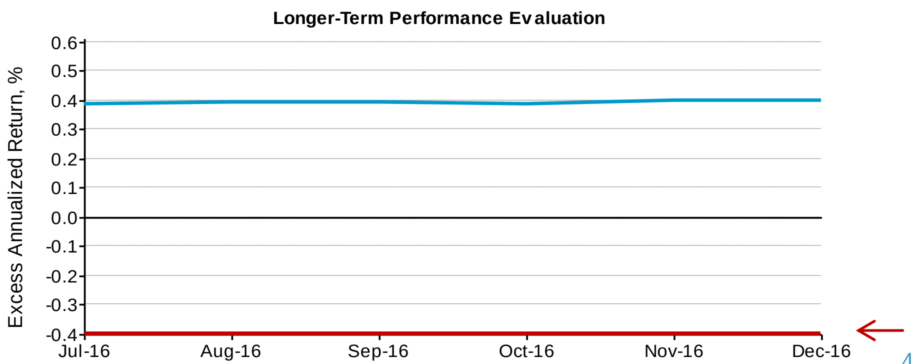
Current Status: Acceptable



Long-Term Criteria (60+ months)

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

Current Status: Acceptable



Opus - Domestic Equity: Small Cap Value

Manager Performance

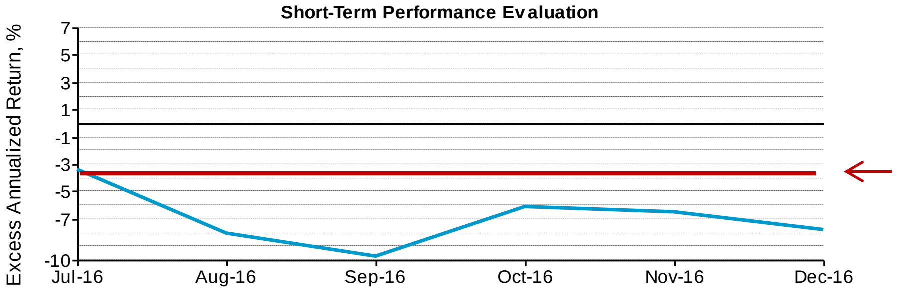
	3 Months	1 Year	3 Years	5 Years	Watch-49 Months
Opus	14.6	24.0	8.6	13.1	14.2
Russell 2000 Value	14.1	31.7	8.3	15.1	15.2

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

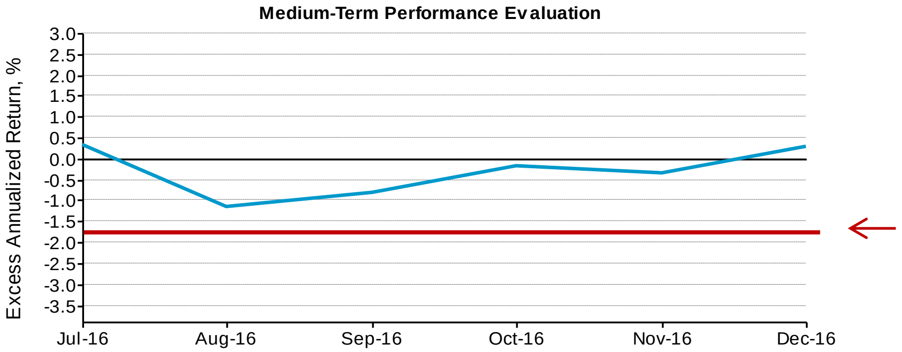
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

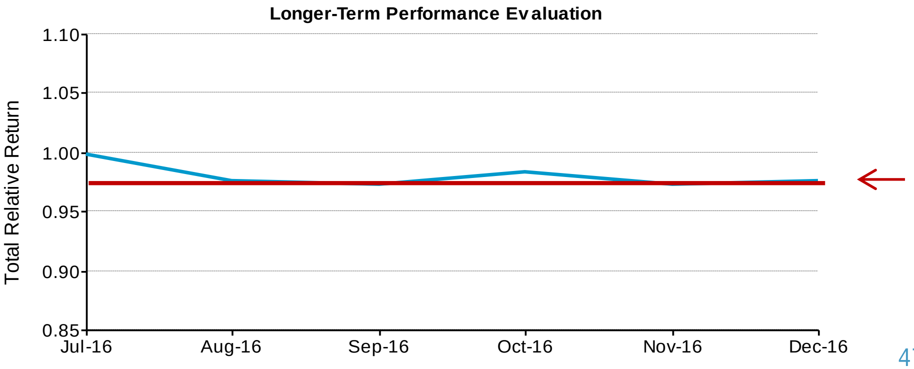
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



PCA

Franklin Templeton - International Equity

Manager Performance

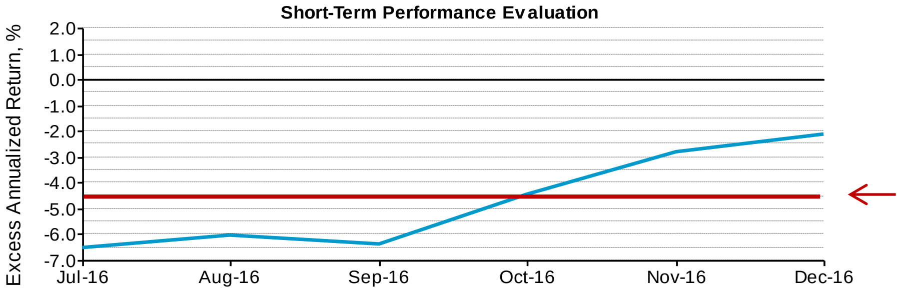
	Quarter	1 Year	3 Year	5 Year
Franklin Aggregate	2.2	2.9	-3.2	6.3
EBMUD MSCI ACWI ex US Blend	-1.2	5.0	-1.3	5.5

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

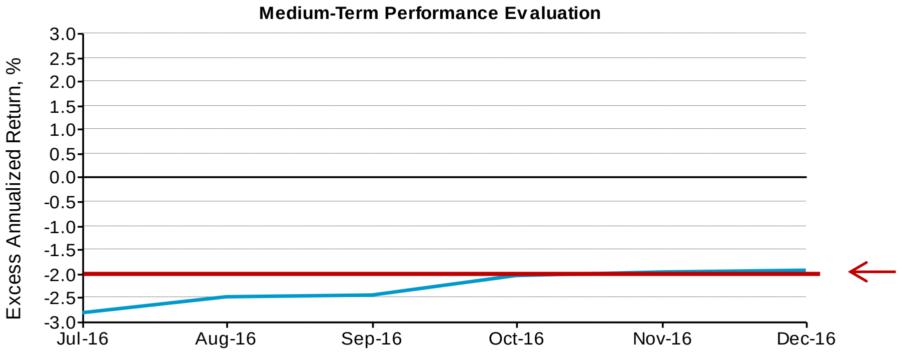
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

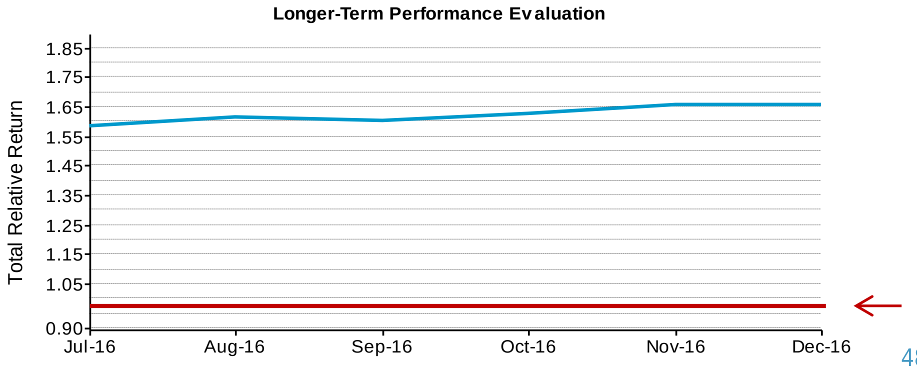
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



Fisher - International Equity

Manager Performance

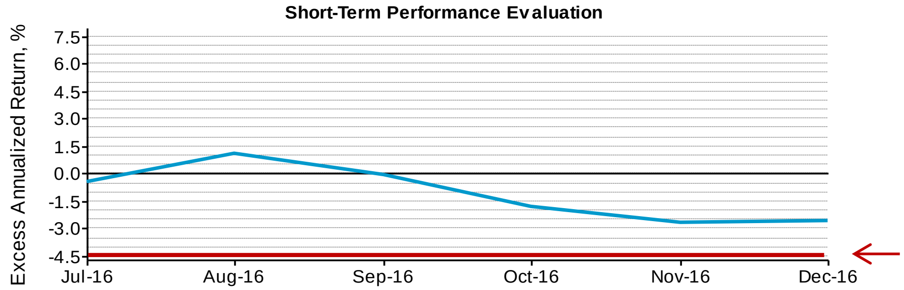
	Quarter	1 Year	3 Year	5 Year
Fisher	-1.6	2.5	-0.4	6.3
EBMUD MSCI ACWI ex US Blend	-1.2	5.0	-1.3	5.5

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

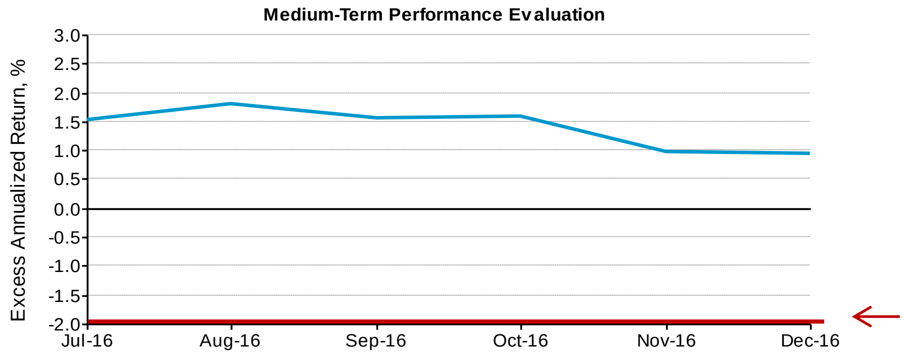
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

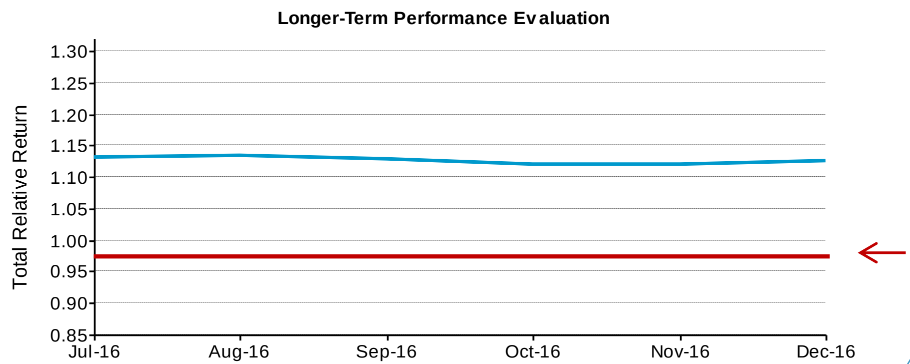
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable

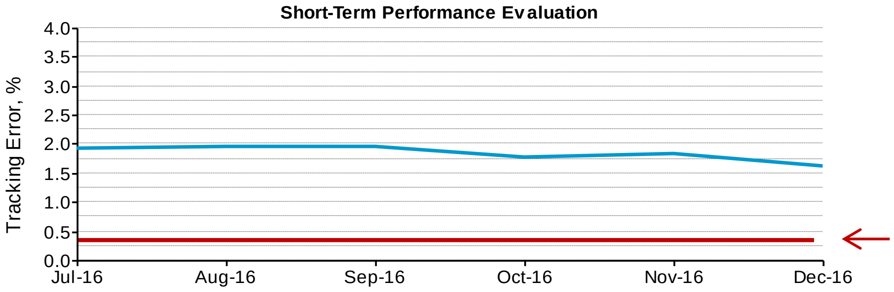


Parametric - BXM - Covered Calls: Replication

Manager Performance

	Quarter	1 Year	3 Year	5 Year
Parametric BXM	2.5	8.8	NA	NA
CBOE BXM Index	2.6	7.1	6.0	7.2

Overall Status: Caution*



Short-Term Criteria (rolling 12-month periods)

Tracking error > 0.30% for 6 consecutive months

Current Status: Caution*

Medium-Term Criteria (rolling 36-month periods)

Tracking error > 0.25% for 6 consecutive months

Current Status: N/A (will take effect 3Q 2017)

Long-Term Criteria (60+ months)

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

Current Status: N/A (will take effect 3Q 2019)

*The Parametric BXM covered calls strategy breached the short-term relative to benchmark Watch Criteria. The strategy is currently monitored utilizing the covered calls replication (passive management) Watch Criteria. Since the strategy is not solely passively managed PCA believes the actively managed covered calls Watch Criteria would be more suitable for monitoring the fund. As such, PCA does not recommend Watch status for this strategy at this time.

Parametric - Delta Shift - Covered Calls: Semi-Active

Manager Performance

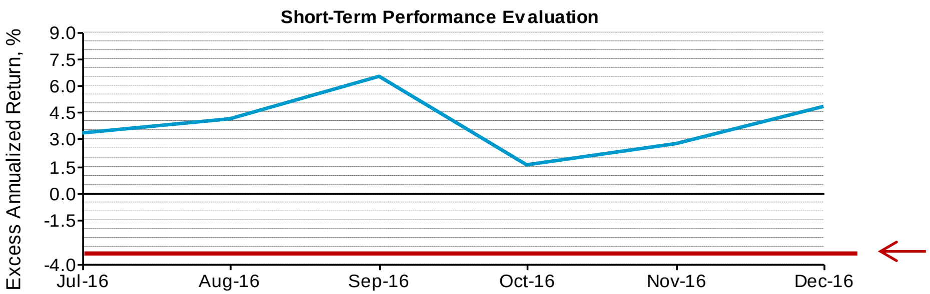
	Quarter	1 Year	3 Year	5 Year
Parametric Delta	3.6	11.9	NA	NA
CBOE BXM Index	2.6	7.1	6.0	7.2

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

Current Status: N/A (will take effect 3Q 2017)

Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

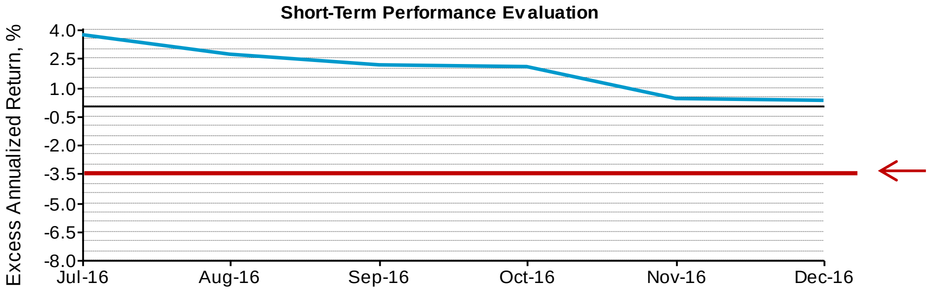
Current Status: N/A (will take effect 3Q 2019)

Van Hulzen - Covered Calls: Active

Manager Performance

	Quarter	1 Year	3 Year	5 Year
Van Hulzen	1.5	7.4	NA	NA
CBOE BXM Index	2.6	7.1	6.0	7.2

Overall Status: Acceptable



Short-Term Criteria (rolling 12-month periods)

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

Current Status: Acceptable

Medium-Term Criteria (rolling 36-month periods)

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

Current Status: N/A (will take effect 3Q 2017)

Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: N/A (will take effect 3Q 2019)

CS McKee - Fixed Income: Core

Manager Performance

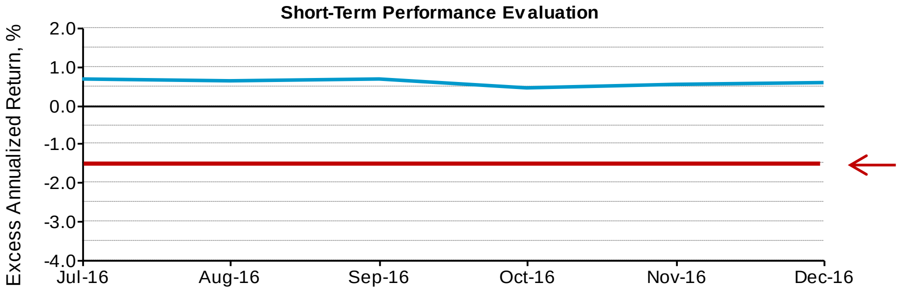
	Quarter	1 Year	3 Year	5 Year
CS McKEE	-2.6	3.2	3.4	2.7
BC Aggregate Bond	-3.0	2.6	3.0	2.2

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

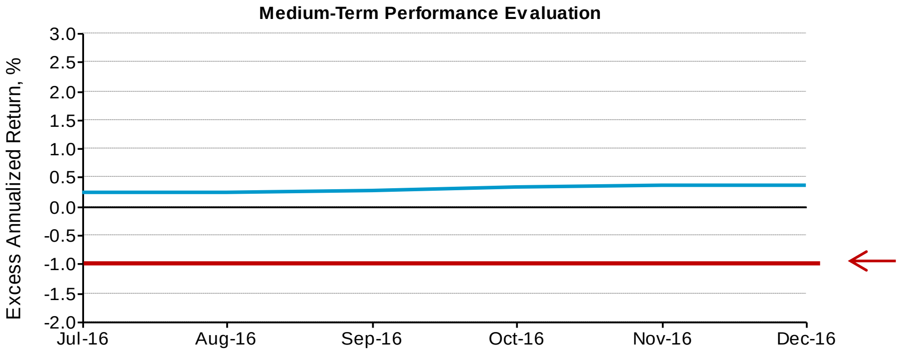
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

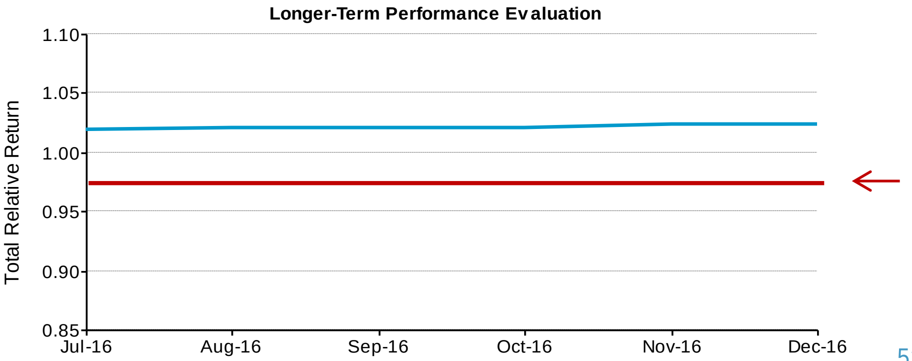
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

Current Status: Acceptable



WAMCO - Short Duration - Fixed Income: Non-Core

Manager Performance

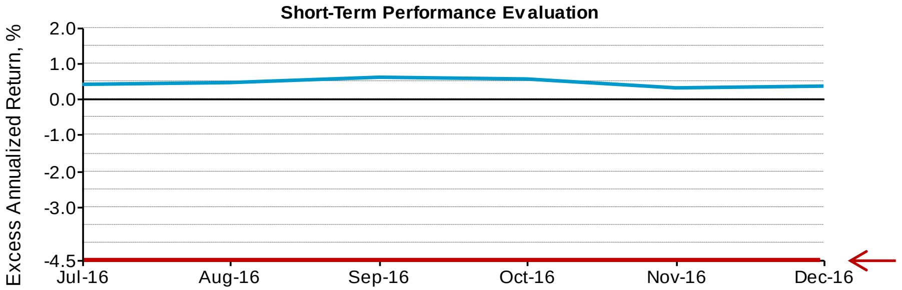
	Quarter	1 Year	3 Year	5 Year
WAMCO Short Dur	-0.5	1.6	NA	NA
Barclays 1-3 Yr Gov/Credit	-0.4	1.3	0.9	0.9

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

Current Status: N/A (will take effect 3Q 2017)

Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

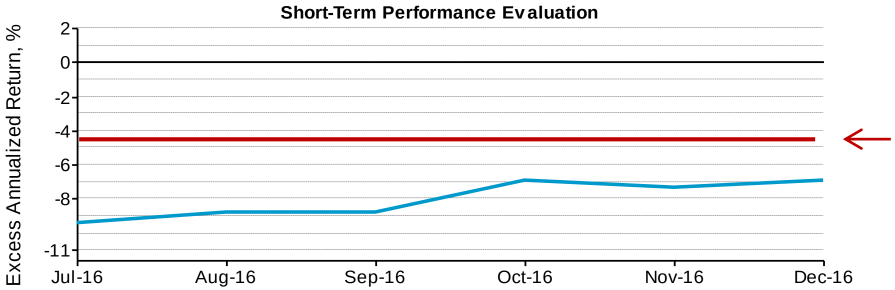
Current Status: N/A (will take effect 3Q 2019)

WAMCO - Short-Term High Yield - Fixed Income: Non-Core

Manager Performance

	Quarter	1 Year	3 Year	5 Year	Watch - 9 mon
WAMCO High Yield	2.2	9.2	NA	NA	13.1
Barclays US High Yield 1-5 Yr Cash Pay 2%	2.4	16.2	3.5	6.7	13.7

Overall Status: Caution



Short-Term Criteria (rolling 12-month periods)

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

Current Status: Caution

Medium-Term Criteria (rolling 36-month periods)

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

Current Status: N/A (will take effect 3Q 2017)

Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: N/A (will take effect 3Q 2019)

WAMCO - Bank Loans - Fixed Income: Non-Core

Manager Performance

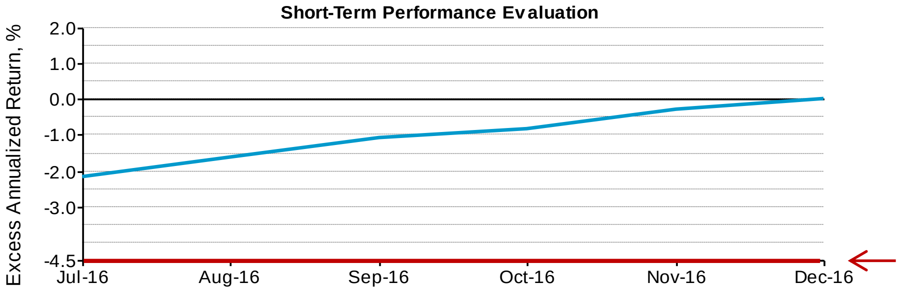
	Quarter	1 Year	3 Year	5 Year	Watch - 9 mon
WAMCO Bank Loans	2.3	10.4	NA	NA	10.0
S&P/LSTA Performing Loans Index	2.3	10.4	4.0	5.4	8.5

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

Current Status: N/A (will take effect 3Q 2017)

Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: N/A (will take effect 3Q 2019)

CenterSquare - Real Estate: Public REITs

Manager Performance

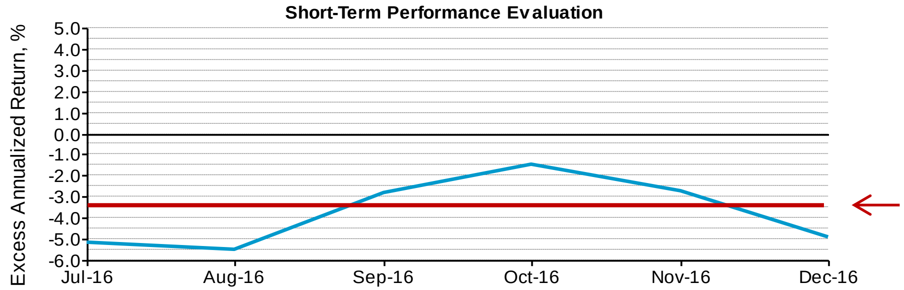
	Quarter	1 Year	3 Year	5 Year
CenterSquare	-3.2	9.0	15.1	13.2
FTSE NAREIT Equity REITS	-2.9	8.5	13.4	12.0

Overall Status: Acceptable

Short-Term Criteria (rolling 12-month periods)

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

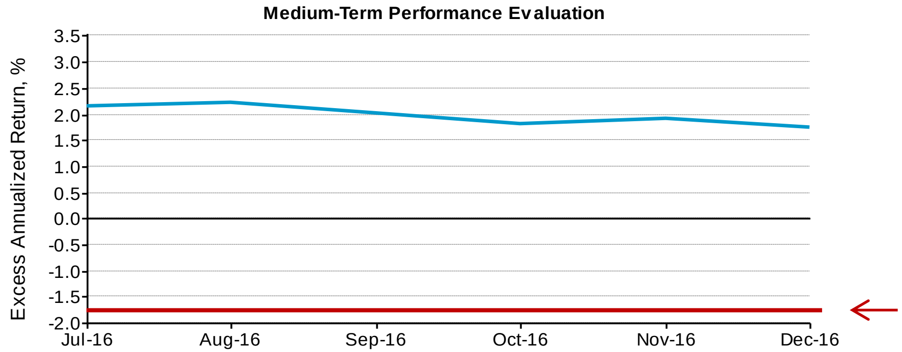
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

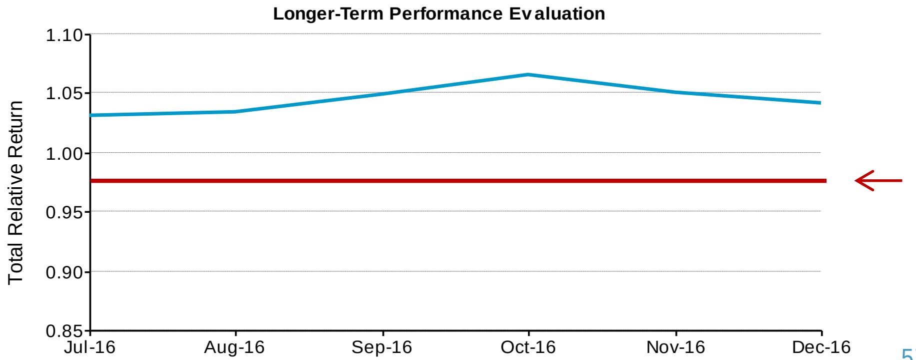
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



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

These indicators include:

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

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

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

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

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

MANAGER COMPLIANCE CERTIFCATION RESPONSES

		Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8	
Manager	Asset Class	Compliance with 'Eligible Investments' for mandate	Good standing as Registered Investment Advisor	Litigation?	Changes in manager's investment outlook, strategy, structure	Investment team personnel changes	Management level personnel changes	Material business changes	Compliance with IPS	Additional Comments
Northern R1000	Domestic Equity – LCC	Yes	Yes	Yes*	No	Yes*	Yes*	No	Yes	
Intech	Domestic Equity – LCG	Yes	Yes	Yes*	No	No	No	No	Yes	
T. Rowe Price	Domestic Equity – LCG	Yes	Yes	Yes*	No	No	Yes*	No	Yes	See below
Barrow Hanley	Domestic Equity – LCV	Yes	Yes	No	No	Yes*	No	No	Yes	
Northern R2000G	Domestic Equity – SCG	Yes	Yes	Yes*	No	Yes*	Yes*	No	Yes	
Opus	Domestic Equity – SCV	Yes	Yes	No	No	No	No	No	Yes	
Franklin Templeton	International Equity	Yes	Yes	Yes*	No	Yes*	Yes*	No	Yes	
Fisher	International Equity	Yes	Yes	No	No	No	No	No	Yes	
Parametric	Covered Calls	Yes	Yes	Yes*	No	Yes*	Yes*	Yes*	Yes	
Van Hulzen	Covered Calls	Yes	Yes	No	No	No	No	No	Yes	
CS McKee	Fixed Income – Core	Yes	Yes	No	No	No	No	No	Yes	
WAMCO	Fixed Income – Short Dur.	Yes	Yes	No	No	Yes*	No	No	Yes	
WAMCO	Fixed Income – Short-term HY	Yes	Yes	No	No	Yes*	No	No	Yes	
WAMCO	Fixed Income – Bank Loans	Yes	Yes	No	No	Yes*	No	No	Yes	
RREEF	Real Estate	Yes	Yes	Yes*	No	No	No	No	Yes	
CenterSquare	Real Estate	Yes	Yes	No	No	No	No	No	Yes	

*see detailed manager response below

= no concern; = low concern; = high concern (Watch status)

<u>Northern Trust – R1000 and R2000 Growth</u>

Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?

Yes – As one of the world's largest asset managers, Northern Trust Investments, Inc. (NTI) is occasionally named as a defendant in asset management-related litigation. While NTI has not been (and is not currently) party to any litigation that has had (or will have) a material effect on its ability to perform services for its clients, it has been sued before and is currently defending a claim. The following matters are the principal cases naming NTI that were either resolved in the last 5 years or remain pending.

<u>Pending Civil Litigation Related to NTI</u>
Louisiana Firefighters' Retirement System, et al. and all others similarly situated v. Northern Trust Investments, N.A., and The Northern Trust Company, United States District Court for the Northern District of Illinois, Case No. 09-CV-7203 (the case was filed on November 17, 2009; the case relates to securities lending-related losses during the financial crisis; a tentative, partial class-wide settlement for $24 million was reached in the fourth quarter of 2013, and was approved by the court in August 2015; the remaining claims were settled in June 2016 for a total of $46.5 million; final court approval is being sought).

<u>Resolved Civil Litigation Related to NTI</u>
Joseph L. Diebold, Jr., on behalf of the ExxonMobil Savings Plan and all others similarly situated v. Northern Trust Investments, N.A. and The Northern Trust Company, United States District Court for the Northern District of Illinois, Case No. 09-CV-1934 (the case was filed on March 30, 2009; the case relates to securities lending-related losses during the financial crisis; a tentative class-wide settlement for $36 million was reached in the fourth quarter of 2013, and was approved by the court in August 2015).

People of the State of California v. Northern Trust Corporation, et al., Case No. BC478165, Superior Court of Los Angeles County, California (the case was filed on February 1, 2012 by the Los Angeles City Attorney's Office (LACAO) in the name of the People of the State of California; the case relates to securities lending-related losses incurred by the Los Angeles City Employees' Retirement System in the 2008 financial crisis; the client (LACERS) is not litigating against NTI or its affiliates; the case is brought by the LACAO, in September 2016, the matter settled for $3.5 million).

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

Basit Amin was added to the Global Index Equity team in November 2016.

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

As a result of the constantly changing landscape of asset management, we believe the occasional organizational changes are a natural progression and necessary in order to adapt to new market and regulatory environments. The most recent changes to senior personnel are the following: in 2015, Craig R. Carberry was appointed Chief Compliance Officer of NTI in addition to his role as Senior Vice President and Associate General Counsel, replacing Anthony Pecora. Additionally, in 2016, Lisa Taylor replaced Sheri Hawkins as CFO for Northern Trust Asset Management.

Intech

Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?

INTECH is not currently involved in any litigation that would be considered material. However, in June 2011, INTECH was served with a complaint related to the leveraged buyout ("LBO") of Tribune Company ("Tribune") in 2007 (Deutsche Bank Trust Co. Americas, et al. v. Sowood Alpha Fund LP, et al., U.S. District Court, Southern District of New York). On December 8, 2008, one year after completion of the LBO, Tribune and certain of its subsidiaries filed for relief under Chapter 11 of the Bankruptcy Code in the Bankruptcy Court for the District of Delaware. We believe INTECH was improperly named in this lawsuit as it never owned the stock at issue.

INTECH intends to defend the action once the stay is lifted.

T. Rowe Price

Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?

T. Rowe Price Associates, Inc., its subsidiaries, affiliates, officers, and employees (collectively the "Company") has not been involved as a defendant in any notable litigation matter relating to any business practice or relating to services rendered to the firm's clients, with the exceptions of the cases noted below.

At times, the Company may be a claimant or a plaintiff in various matters involving portfolio company investments. Additionally, from time to time in the normal course of business, the Company is named as a party to minor litigation matters involving the accounts of Price mutual fund shareholders, retirement plan participants, or of retail customers in the Company's brokerage unit. Often, the Company is named as a stakeholder. These minor litigation matters are not disclosed here.

Tribune Company Bankruptcy Proceeding: Several of the T.Rowe Price Funds, sub advised clients, and institutional clients are included in a class of defendants in connection with a fraudulent transfer lawsuit that the Unsecured Creditors Committee (the "Committee") of the Tribune Company file in Delaware bankruptcy court. In addition, various T. Rowe Price entities and certain of the T. Rowe Price Funds, institutional clients, and sub advised clients were sued in a number of federal and state courts in various states in connection with receipt of proceeds from a leveraged buyout ("LBO") through which Tribune converted to a privately owned company in 2007. These lawsuits alleged constructive fraudulent transfer claims in an attempt to recover payments made to shareholders at the time of the LBO. The lawsuits did not allege that any of the T. Rowe Price defendants engaged in wrongful conduct. The lawsuits were consolidated by the Multidistrict Litigation Panel for purposes of all pretrial proceedings. On September 23, 2013, the court in the consolidated cases granted our motion to dismiss those cases. The judge ruled that the plaintiff investors may not pursue the constructive fraudulent transfer lawsuits against Tribune's former shareholders while the Litigation Trustee in the bankruptcy case also pursues his intentional fraudulent transfer claims against the same shareholders. The dismissal of the consolidated cases was appealed, and on March 29, 2016, the Second Circuit Court of Appeals affirmed the dismissal. The plaintiffs have filed a petition for a writ of certiorari with the Supreme Court. A motion to dismiss the intentional fraudulent transfer case brought by the bankruptcy trustee is pending.

On December 19, 2011, Sam Zell, through various entities, filed two lawsuits in Cook County, Illinois naming the other shareholder defendants as a means of preserving any rights of recovery the Zell entities may have against former shareholders related to the LBO in the event that the LBO is found to have been a fraudulent conveyance.

Christopher Zoidis, et al. v. T. Rowe Price Associates, Inc.: On April 27, 2016 a lawsuit was filed by Christopher Zoidis, et al. against T. Rowe Price Associates, Inc. in the United States District Court for the Northern District of California, alleging breach of fiduciary duty under Section 36(b) of the Investment Company Act of 1940. The Complaint was served on April 28, 2016, and we are defending the case. On August 4, 2016, the court granted our motion to transfer the case to the District of Maryland.

Additional Comments

With regards to Questions 1 and 8, T. Rowe Price is in compliance with Exhibit A of the Investment Advisory Agreement between The East Bay Municipal Utility District and T. Rowe Price Associates, Inc. ("TRPA") dated February 21, 2007, which they generally believe complies with EBMUD's Statement of Investment Policy and Procedures.

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

Promotion of Rob Sharps to Co-head of Global Equity

Beginning in 2017, Rob Sharps and Chris Alderson will partner as co-heads of Global Equity. They will work closely with Eric Veiel, head of U.S. Equity, to lead our global equity franchise forward. In his new role, Rob's direct reports will include Clive Williams, head of Global Equity Trading, Todd Henry, head of our portfolio specialist team, and Eric. Chris will remain as head of International Equity from our London office. Rob joined Chris, Eric, and others on the firm's Management Committee, effective on January 1, 2017.

Rob is an 18-year veteran of T. Rowe Price and has excelled as an analyst, as a sector leader, and, for the past 14+ years, as a portfolio manager of the US Large-Cap Growth Strategy. His strategy has been a model of consistency, outperforming his peers and his benchmark across every relevant time period. Just as importantly, Rob is a clear strategic thinker and an experienced and effective leader of the firm, having served on the U.S. Equity Steering Committee since 2007. On December 31, 2016, Rob Sharps stepped down as the lead portfolio manager of the US Large-Cap Growth Equity Strategy.

U.S. Large-Cap Growth Equity Succession Plan

In anticipation of Rob Sharps' promotion to co-head of Global Equity, Taymour Tamaddon joined the US Large-Cap Growth Equity Strategy (LCG) team on June 30, 2016, in preparation of his assuming the role as lead portfolio manager for LCG on January 1, 2017. Taymour is a 12-year veteran of T. Rowe Price, and for the last three years, he has led our health care team and managed our highly successful Health Sciences Strategy. Like Rob's, Taymour's results have been outstanding throughout his career. And also like Rob, Taymour is a passionate, talented, and driven investor who effectively utilizes our global research platform. As our Health Care team leader, Taymour has already had meaningful influence on LCG, given that his sector represents one of the strategy's largest allocations. The transition from analyst to sector team leader to diversified portfolio manager is one that has taken place successfully many times in our history, and we are confident this one will continue that tradition.

Changes to Asset Allocation Organization: Retirement of Rich Whitney

Following a remarkable three decades of significant contributions to our business and our clients, Rich Whitney, co-head of Asset Allocation, retired from the firm effective December 31, 2016. Sebastien Page became head of Asset Allocation and chair of the Asset Allocation Steering Committee effective January 1, 2017. The hiring of Sebastien into the Asset Allocation Group last summer strengthened our investment leadership team and enhanced our ability to compete effectively in a strategically important area for the firm. Sebastien quickly established himself as a natural and ready successor to Rich.

Asset Allocation Committee Changes

For more than 25 years, investment decisions regarding the positioning in our asset allocation portfolios have been made by the Asset Allocation Committee (AAC), chaired for the last five years by Rich Whitney. As previously announced, Rich Whitney retired from the firm on December 31, 2016. In preparation for Rich's retirement, on October 1, 2016, Charles Shriver and David Giroux succeeded Rich Whitney as the co-chairs of the AAC. Charles has been a successful portfolio manager of the Asset Allocation group for the last five years, having joined the team in 1999, and has served on the AAC since 2011. David has managed our highly successful Capital Appreciation Strategy since 2006 and has served on the AAC since 2012.

Changes to Investment Risk Group

David Beard-Sackett, formerly head of Investment Risk, joined Global Fixed Income as general manager, effective at the end of 2016. As general manager, Dave will partner closely with Ted Weise and members of the Fixed Income Steering Committee (FISC) and will have responsibility for much of the day-to-day business management activity supporting the group. In addition to providing dedicated support to Fixed Income, Dave will be part of a broader business management team for Investments reporting through Ric Weible, which will enable further integration and coordination of our business management efforts across investment groups. As part of this transition, Chris Edge became head of Investment Risk, and the risk professionals who formerly reported to Dave now report to Chris.

New Global Head of Product

Andrew Astley will be joining T. Rowe Price as global head of Product on January 23, 2017. Andrew joins us from State Street Global Advisors (SSGA), where he has worked for nearly 20 years and recently held the role of head of Global Product and Marketing. Andrew will be based in Baltimore and will report to Robert Higginbotham.

Andrew's 25-year career in the industry has prepared him well for this position. He has strong experience in multiple global roles, having served as head of SSGA Global Product and Marketing for eight years and earlier as the firm's chief operating officer of EMEA based in London. Prior to joining SSGA in 1997, Andrew worked in a variety of client-facing roles at PanAgora Asset Management. Andrew graduated from the University of Michigan with a B.A. in political science and also holds the CFA designation.

Announcement of Brian Rogers Upcoming Retirement

Brian Rogers, chairman and chief investment officer (CIO), has expressed his intent to retire from the firm on March 31, 2017, following nearly 35 years at T. Rowe Price. At that time, he will step down from his role as CIO, which he has held since 2004. He will remain on the Board of Directors and serve as nonexecutive chair. In connection with Brian's planned retirement, we are naming several senior investment leaders as CIOs of the firm. These appointments will take effect with Brian's retirement date next spring:

Rob Sharps—T. Rowe Price Group CIO
Henry Ellenbogen—CIO, U.S. Equity Growth
David Giroux—CIO, U.S. Equity Multi-discipline
John Linehan—CIO, U.S. Equity Value
Justin Thomson—CIO, International Equity
Mark Vaselkiv—CIO, Fixed Income

The multiple CIO structure will best serve the needs of our large and growing global investment firm. It highlights the deep investment talent we have across geographies, asset classes, and investment disciplines. This talented group of investment leaders will share CIO responsibilities, including:

- Providing investment thought leadership
- Partnering with investment division leaders to develop investment talent and capabilities
- Serving as role models and mentors for our investment professionals
- Representing T. Rowe Price investment processes to internal and external audiences
- Interacting with clients and partnering with colleagues across the firm to help build the T. Rowe Price brand in the global marketplace

Our incoming CIOs already handle most of these responsibilities, and they do so extremely well. The goal of this new structure is to empower them to fulfill these duties seamlessly and to elevate the already high level of service our wider team of investment professionals provides to our clients. It is important to note that this shared structure will allow our new CIOs to continue to hold their existing portfolio management and leadership responsibilities. Their current reporting relationships will not change, and their involvement on investment committees will not increase. We are confident that this structure will allow this group to sustain the excellent investment performance for which each of them is known.

This veteran team possesses an average of 24 years of investment experience, including 19 years at T. Rowe Price. Individually, each is an outstanding investor, thought leader, investment committee member, mentor, and representative of our core values.

Barrow Hanley

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

DJ Taylor joined BHMS as an Equity analyst in October 2016.

<u>Franklin Templeton</u>

Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?

This response is made on behalf of Templeton Investment Counsel, LLC (TIC) and is limited in scope to material, investment-management-related private litigation that has been pending at any time during the last five years ended September 30, 2016, in which TIC or any of its *advisory affiliates* has been named as a defendant. This response does not include employment-related litigation, litigation arising in the ordinary course of business, litigation in which TIC or any of its *advisory affiliates* may be a plaintiff, or any regulatory *proceedings*. (Italicized terms are as defined on U.S. Securities and Exchange Commission Form ADV.)

Litigation Specific to TIC
Other than the litigation relating to mutual fund industry issues described below, TIC has not been named as a defendant in any material, investment-management-related private litigation that has been pending at any time during the last five years ended September 30, 2016.

Litigation Relating to Mutual Fund Industry Issues Involving TIC and Certain of Its *Advisory Affiliates*
Between 2003 and 2005, Franklin and certain of its subsidiaries (together the Company) were involved in governmental and regulatory investigations and settlements relating to a number of mutual fund industry issues, including market timing and marketing support payments to securities dealers who sell fund shares. Following those regulatory matters, the Company, including but not limited to TIC and Franklin, certain Franklin Templeton Investments mutual funds (Funds), and, in some instances, current and former Company directors and officers (collectively, Company-related defendants), were named in a number of class action and derivative lawsuits relating to the same issues, and to payment of allegedly excessive commissions and/or advisory or distribution fees. All such lawsuits relating to mutual fund industry issues have now been dismissed either in response to motions to dismiss, pursuant to settlement, or voluntarily by plaintiffs.

The final such lawsuits were U.S. federal lawsuits concerning alleged market timing that were part of coordinated proceedings with similar lawsuits filed against numerous other mutual fund complexes in a multi-district litigation titled "In re Mutual Funds Investment Litigation," pending in the U.S. District Court for the District of Maryland. The consolidated lawsuits involving the Company-related defendants included a class action, a derivative action brought on behalf of certain Funds, and a derivative action brought on behalf of Franklin.

With respect to the consolidated class action, on December 21, 2010, following the court's order granting the Company-related defendants' motion for partial summary judgment, and lead plaintiff's settlement of its claims against the non-Company-related defendants, the Company-related defendants and lead plaintiff reached an agreement to resolve the claims against the Company-related defendants. Pursuant to that agreement, Franklin agreed to pay $2.75 million towards distribution of settlement amounts reached in lead plaintiff's settlements with other, non-Company-related defendants. The court granted final approval of the agreement on December 9, 2011, and dismissed the consolidated class action as to all Company-related defendants. The dismissal is now final and the action is resolved.

The consolidated Fund derivative action had been stayed since December 2010, pending a decision of appeal in another case involving a different mutual fund complex. Following issuance of the decision of appeal in the other case, on December 20, 2011, the plaintiffs in the Fund derivative action filed a voluntary dismissal of the action with prejudice, with no settlement by any Company-related defendants. The court entered the dismissal as its order on December 23, 2011. The dismissal is now final and the action is resolved.

The derivative action brought on behalf of Franklin, which named as defendants certain current and former Franklin directors, had been stayed since 2004 pursuant to stipulation. On February 2, 2012, the plaintiff filed a notice of voluntary dismissal of the action with prejudice without any settlement from any of the defendants, and on February 16, 2012, the court entered the dismissal as its order. The dismissal is now final and the action is resolved.

Other Litigation Involving an TIC *Advisory Affiliate*
In July 2016, a putative class action lawsuit was filed against Franklin, the Franklin Templeton 401(k) Retirement Plan ("Plan") Investment Committee, and unnamed Investment Committee members. The plaintiff attempts to assert a claim for breach of fiduciary duty under the Employee Retirement Income Security Act, alleging that the defendants selected mutual funds sponsored and managed by the Franklin organization (the "Funds") as investment options for the Plan when allegedly lower-cost and better performing non-proprietary investment vehicles were available. The plaintiff also claims that the total Plan costs, inclusive of investment management and administrative fees, are excessive. The plaintiff alleges that Plan losses exceed $88.0 million and seeks, among other things, damages, disgorgement, rescission of the Plan's investments in the Funds, attorneys' fees and costs, and pre- and post-judgment interest. Franklin filed a motion to dismiss the complaint and a motion for summary adjudication on October 24, 2016. Franklin's management strongly believes that the claims made in the lawsuit are without merit and intends to defend against them vigorously. Franklin cannot predict with certainty the eventual outcome of the lawsuit or whether it will have a material negative impact on Franklin, however, TIC is not named as a defendant in the lawsuit and as of September 30, 2016, the litigation is not reasonably expected to have a material adverse effect on TIC's financial condition or its ability to provide investment management services.

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

There were no changes to the key personnel for the fund during the quarter ending December 31, 2016. However, the following changes took place within the Templeton Global Equity Group.

-Clara Lee, CFA joined as a Research Analyst in December 2016.
-Ferdinand Cheuk, CFA joined as a Portfolio Manager/Research Analyst in October 2016.
-Aaron Browning, CPA departed in November 2016. He was a Research Analyst.

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

Co-President Vijay C. Advani departed the firm on December 31, 2016. Co-President Jennifer M. Johnson became president as of this date. As president, Ms. Johnson oversees all divisions of the business with the exception of Finance, Human Resources, Legal, Corporate Communications and Templeton Global Macro, which report directly into the CEO.

<u>Parametric</u>

Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?

From time to time, Parametric and/or its affiliates, including its ultimate parent company Eaton Vance Corp. and its subsidiaries, are and have been plaintiffs or defendants in various lawsuits and received subpoenas or information requests that are incidental to their businesses and are or were handled in the ordinary course of business. Eaton Vance believes that these actions have not and will not have a material adverse effect on its consolidated financial condition, liquidity, results or operations, or the ability to manage client assets.

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

As previously disclosed, in 2015 Brad Berggren, Director and Chief Investment Officer for the Westport Investment Center, announced his plans to retire from Parametric at the end of fiscal year 2016. Effective November 1, 2015, Brad Berggren took on the role of Managing Director - Investment Strategy and Research for the Westport Investment Center, and Kip Chaffee, Managing Principal for the Minneapolis Investment Center, assumed the role of Managing Principal of the Westport Investment Center as well. Tom Lee, Managing Director - Investment Strategy and Research for the Minneapolis Investment Center, now co-leads the investment strategies managed by the Westport team. These changes had no effect on the investment process.

Additionally, at the end of December 2016 Ross Chapin, Managing Director - Corporate Development, stepped down from the Enterprise Management Committee and Reuben Butler, Managing Director - Corporate Development, was appointed to the Committee.

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

See response to Question 5 above.

Question 7: Have there been any material changes in your firm's business during the quarter, including but not limited to:
a. any client(s) that terminated its relationship whose terminated portfolio account represents > 1% of the Manager's aggregate portfolio on the day of notice of termination, and/or
b. any client(s) that terminates its relationship when the cumulative terminations for a calendar month is > 1% of the Manager's aggregate portfolio as of the first business day of the month.

In December 2016, Parametric consolidated the operations of its wholly-owned subsidiary, Parametric Risk Advisors LLC ("PRA"), into Parametric. PRA was formerly separately registered as an investment advisory firm with the U.S. Securities and Exchange Commission, based in Westport, CT. This office continues to serve as Parametric's Westport Investment Center.

WAMCO

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

Yes. During the fourth quarter of 2016, Western Asset hired one investment professional, Ms. Annabel Rudebeck, a Portfolio Manager and Head of Non-US Credit in the London office.

RREEF

Question 3: Is there any litigation or governmental regulatory proceedings involving your Firm, the Manager?

Deutsche Bank A.G. is a large banking institution with substantial domestic operations and numerous domestic and foreign affiliates. As such, Deutsche Bank A.G. and/or its affiliates are occasionally party to litigation, investigations and other proceedings. Although client properties are managed by third party property managers, RREEF America LLC may from time to time be named as a party to litigation relating to property management. RREEF America LLC may also from time to time be involved in litigation with third parties relating to commercial disputes or RREEF America LLC client's properties. Such litigation may be currently pending. However, we know of no pending or completed litigation or investigations that would interfere with RREEF America LLC executing its duty as fiduciary to its clients. Please refer to Form ADV for RREEF America LLC ADV Parts I and II for standard litigation disclosures.

On April 23, 2015, the firm's U.K.-based affiliate, DB Group Services (UK) Ltd. (DBGS), pleaded guilty to wire fraud for its conduct in relation to the London Interbank Offered Rates (LIBOR). Separately, on January 25, 2016, a South Korean Court found the firm's South Korean affiliate, Deutsche Securities Korea Co. (DSK), guilty on a theory of corporate criminal liability arising as a consequence of DSK's failure to properly monitor and supervise the spot/futures linked market manipulation activities of one of its traders. Neither the firm nor Deutsche Asset Management was involved in either the LIBOR matter or the DSK matter in any way. However, absent regulatory relief, the sentencing of DBGS in connection with the LIBOR guilty plea, which sentencing has not taken place yet, and the DSK conviction, would disqualify the firm and certain of its affiliates from using the qualified professional asset manager ("QPAM") class exemption. The firm and its asset management affiliates applied for and received a temporary individual QPAM exemption from the Department of Labor ("DOL"). The firm and its asset management affiliates also applied for a long term exemption in connection with both the LIBOR and the DSK matters, which is currently pending with the DOL.

Please note, RREEF America REIT II is considered a Real Estate Operating Company under ERISA. Therefore, the fund is not subject to ERISA or Section 4975 of the Code and does not require the QPAM exemption to manage its investments.

Deutsche Bank has reached a settlement in principle with the Department of Justice in the United States ("DoJ") to resolve civil claims in connection with the bank's issuance and underwriting of residential mortgage-backed securities (RMBS) and related securitization activities between 2005 and 2007. The agreement is still subject to final documentation.

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

As previously mentioned, the Fund underwent a successful leadership transition during 2016 when John Ehli and Jay Miller were named co-Lead Portfolio Managers, replacing Kevin Howley who remains with the firm and maintains an overweight role for the Fund through his position on the Americas Investment Committee.

EBMUD PERFORMANCE – Net of Fees

Manager	Mandate	Estimated Annual Fee (bps)
Northern Trust – R1000	Passive – Large Cap Core	3
Intech	Active – Large Cap Growth	5 bps + 12.5% on excess returns
T. Rowe Price	Active – Large Cap Growth	49
Barrow Hanley	Active – Large Cap Value	31
Northern Trust – R2000G	Passive – Small Cap Growth	8
Opus	Active – Small Cap Value	5 bps + 25% on excess returns
Franklin Templeton	Active – International Equity	57
Fisher	Active – International Equity	65
Parametric – BXM	Replication – Covered Calls	19
Parametric – Delta Shift	Semi-Active – Covered Calls	34
Van Hulzen	Active – Covered Calls	25
CS McKee	Active – Core Fixed Income	20
WAMCO – Short Duration	Active – Non-Core Fixed Income	16
WAMCO – Short-Term High Yield	Active – Non-Core Fixed Income	40
WAMCO – Bank Loans	Active – Non-Core Fixed Income	45
RREEF	Real Estate	95
CenterSquare	Real Estate	27.5 bps + 15% on excess returns

Asset Class and Manager Performance (Net of Fees)^
As of December 31, 2016

Asset Class	Quarter	1 Year	3 Years	5 Years
EBMUD Total Plan	2.1	8.2	5.6	10.3
*Policy Benchmark^^*	*1.8*	*8.8*	*5.6*	*9.9*
Domestic Equity	4.3	11.3	8.1	14.4
*Russell 3000**	*4.2*	*12.7*	*8.4*	*14.7*
International Equity	0.0	2.0	-2.4	5.6
*MSCI ACWI x US (blend)***	*-1.2*	*5.0*	*-1.3*	*5.5*
Covered Calls	2.5	9.1	-	-
CBOE BXM	*2.6*	*7.1*	*-*	*-*
Fixed Income	-1.0	4.1	2.2	2.5
*Fixed Income benchmark (blend)****	*-1.0*	*4.9*	*2.9*	*2.6*
Real Estate	-1.3	8.9	13.2	12.4
*NCREIF/NAREIT (blend)*****	*-0.5*	*9.2*	*12.6*	*11.9*
Cash	0.1	0.5	-	-
Citigroup 3 Month T-Bill Index	*0.1*	*0.3*	*-*	*-*

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

^^ Policy Benchmark consists of 40% Russell 3000 (blend), 15% MSCI ACWIxU.S. (blend), 20% CBOE BXM, 10% BC Aggregate, 5% BC US 1-3 Year Government/Credit, 2.5% 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 4/1/14-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

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

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

Manager Performance (Net of Fees)

As of December 31, 2016

Manager - Style	Mkt Value ($000)	1 Quarter	1 Year	3 Years	5 Years
Domestic Equity					
Large Cap Core					
Northern Trust Co. - Passive	256,813	3.8	12.1	8.6	14.7
Russell 1000 Index		*3.8*	*12.1*	*8.6*	*14.7*
Large Cap Growth					
Intech - Active*	71,806	0.3	7.2	8.3	14.7
T.Rowe Price - Active	70,757	0.2	1.8	7.2	15.3
Russell 1000 Growth Index		*1.0*	*7.1*	*8.6*	*14.5*
Large Cap Value					
Barrow Hanley - Active	173,267	6.8	13.9	7.9	13.7
Russell 1000 Value Index		*6.7*	*17.3*	*8.6*	*14.8*
Small Cap Growth					
Northern Trust Co. - Passive	26,871	3.6	11.7	5.3	14.0
Russell 2000 Growth Index		*3.6*	*11.3*	*5.1*	*13.7*
Small Cap Value					
Opus - Active**	36,287	14.6	23.9	8.5	12.7
Russell 2000 Value Index		*14.1*	*31.7*	*8.3*	*15.1*
International Equity					
Fisher Investments - Active	95,651	-1.8	1.8	-1.0	5.6
Franklin Templeton - Active***	89,719	2.0	2.3	-3.8	5.7
*MSCI ACWI xUS Hybrid****		*-1.2*	*5.0*	*-1.3*	*5.5*

*On watch as of 12/2014

**On watch as of 12/2012

*** Franklin Templeton's historical returns are reported net of fees (inception-6/30/2011). The Franklin Templeton institutional mutual fund account was liquidated in June 2011 and moved to a transition account which later funded the Franklin Templeton separate account in the same month. The Q2-2011 return is an aggregate of the institutional mutual fund account, Franklin transition account, and separate account.

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

Manager Performance (Net of Fees)
As of December 31, 2016

Manager - Style	Mkt Value ($000)	1 Quarter	1 Year	3 Years	5 Years
Covered Calls					
Parametric BXM - Replication	106,408	2.4	8.6	-	-
Parametric Delta Shift - Semi-active	109,696	3.5	11.5	-	-
Van Hulzen	99,248	1.4	7.2	-	-
CBOE BXM		*2.6*	*7.1*	*-*	*-*
Real Estate					
RREEF America II (Lag)*	33,436	1.8	9.3	11.7	12.1
*NCREIF NPI Monthly (Lag)**		*1.8*	*9.2*	*11.3*	*11.2*
CenterSquare	48,587	-3.2	8.6	14.7	-
FTSE NAREIT Equity REIT Index		*-2.9*	*8.5*	*13.4*	*-*
Total Fixed Income					
Core Fixed Income					
CS McKee - Active	137,172	-2.7	3.0	3.2	2.5
Bloomberg Barclays U.S. Aggregate Index		*-3.0*	*2.6*	*3.0*	*2.2*
Non-Core Fixed Income					
Western Asset - Bank Loans** - Active	33,437	2.2	9.9	-	-
S&P/LSTA Performing Loans Index		*2.3*	*10.4*	*-*	*-*
Western Asset - Short-Term HY*** - Active	30,150	2.1	8.8	-	-
Bloomberg BC 1-5 Yr US High Yield Cash Pay (net)		*2.4*	*16.2*	*-*	*-*
Western Asset - Short Duration - Active	65,850	-0.5	1.5	-	-
Bloomberg Barclays 1-3 Year Gov/Credit Index		*-0.4*	*1.3*	*-*	*-*

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

GLOSSARY OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EBMUD POLICY BENCHMARK COMPOSITION

Time Period	EBMUD Total Fund Policy Benchmark
4/1/2005 – 9/30/2005	30% S&P 500, 10% S&P Midcap, 10% Russell 2000, 20% MSCI EAFE ND, 25% BC Aggregate, 5% NCREIF (lagged)
10/1/2005 – 12/31/2006	50% Russell 3000, 20% MSCI EAFE ND, 25% BC Aggregate, 5% NCREIF (lagged)
1/1/2007 – 12/31/2007	50% Russell 3000, 20% MSCI ACWI x U.S. GD, 25% BC Aggregate, 5% NCREIF (lagged)
1/1/2008 – 10/31/2011	50% Russell 3000, 20% MSCI ACWI x U.S. GD, 25% BC Universal, 5% NCREIF (lagged)
11/1/2011 – 2/28/2014	50% Russell 3000, 20% MSCI ACWI x U.S. GD, 25% BC Universal, 2.5% NCREIF (lagged), and 2.5% FTSE NAREIT Equity REITs
3/1/2014 – 3/31/2014	40% Russell 3000, 20% CBOE BXM, 15% MSCI ACWI x U.S. GD, 15% BC Aggregate, 2.5% BC 1-5 Year U.S. High Yield Cash Pay, 2.5% S&P/LSTA Performing Loans, 2.5% NCREIF (lagged), 2.5% FTSE NAREIT Equity REITs
4/1/2014 – present	40% Russell 3000, 20% CBOE BXM, 15% MSCI ACWI x U.S. GD, 10% BC Aggregate, 5% BC US 1-3 Year Government/Credit, 2.5% BC 1-5 Year U.S. High Yield Cash Pay, 2.5% S&P/LSTA Performing Loans, 2.5% NCREIF (lagged), 2.5% FTSE NAREIT Equity REITs

DEFINITION OF BENCHMARKS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

RISK METRIC DESCRIPTION – Rationale for selection and calculation methodology

US Equity Markets
Metric: P/E ratio = Price / "Normalized" earnings for the S&P 500 Index

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

Developed Equity Markets Excluding the US
Metric: P/E ratio = Price / "Normalized" earnings for the MSCI EAFE Index

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

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

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

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

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

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

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

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

Real estate cap rates are a measure of the price paid in the market to acquire properties versus their annualized income generation before financing costs (NOI=net operating income). The data, published by NCREIF, describes completed and leased properties (core) on an unleveraged basis. We chose to use current value cap rates. These are capitalization rates from properties that were revalued during the quarter. This data relies on estimates of value and therefore tends to be lagging (estimated prices are slower to rise and slower to fall than transaction prices). The data is published quarterly.

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

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

Credit Markets Fixed Income
Metric: Spreads

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

Measure of Equity Market Fear / Uncertainty
Metric: VIX – Measure of implied option volatility for US equity markets

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

Measure of Monetary Policy
Metric: Yield Curve Slope

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

Measures of US Inflation Expectations
Metrics: Breakeven Inflation and Inflation Adjusted Commodity Prices

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

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

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

Measures of US Treasury Bond Interest Rate Risk
Metrics: 10-Year Treasury Forward-Looking Real Yield and 10-Year Treasury Duration

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

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

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

RISK METRICS DESCRIPTION – PCA Market Sentiment Indicator

What is the PCA Market Sentiment Indicator (PMSI)?

The PMSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The PMSI takes into account the momentum17 (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

How do I read the PCA Market Sentiment Indicator (PMSI) graph?

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

How is the PCA Market Sentiment Indicator (PMSI) Constructed?

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

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

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

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

What does the PCA Market Sentiment Indicator (PMSI) mean? Why might it be useful?

There is strong evidence that time series momentum is significant and persistent.18 In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12 month period. The PMSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

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

[18] "Time Series Momentum" Moskowitz, Ooi, Pedersen, August 2010 http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf

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WAMCO Presentation

Sophia Skoda

CRISIS RISK OFFSET STRATEGIC CLASS

EBMUD Employees' Retirement System

March 2017

PCA PENSION CONSULTING ALLIANCE

Agenda Items

PCA PENSION CONSULTING ALLIANCE

Section 1: Introduction: CRO

PENSION CONSULTING ALLIANCE

Introduction: Crisis Risk Offset (CRO)

Rationale: "True" Diversifying Strategic Class

- A diversifying asset class should produce modest results in most time periods but produce significantly positive results during equity bear markets
- A diversifying class must diversify the entire portfolio. Since the portfolio is economic growth dominated, the class should have a very low correlation to growth risk:
  - Desire negative conditional correlation to equities (when equities decline, convexly positive returns, not symmetric)
  - Desire meaningful reaction to negative equity events
- Must have a positive expected standalone return to risk long term
- The goal of the class is not to be low volatility - It is to be diversifying and meaningful (reactive)
- The class must be cost effective (less dependent upon manager skill, more dependent upon market adjustment mechanisms, risk premia)

Introduction: Crisis Risk Offset (CRO)

Rationale: "True" Diversifying Strategic Class

- In recognition that often over 80% of the portfolio's assets have significant exposures to economic growth risk, PCA has created a new strategic class that is designed to diversify economic growth risk
- The purpose-driven Crisis Risk Offset (CRO) class is designed specifically to offset declines in strategic classes having significant growth risk exposure in multiple economic/market scenarios where growth-exposed assets will likely decline precipitously
- A diversifying strategic class such as CRO must have a material allocation in order to diversify portfolio level risk
  - Minimum 10% allocation
- PCA has found three strategies that fulfill the goals of a CRO strategic class:
  - Treasury Rate Duration
  - Trend Following
  - Liquid Alternative Risk Premia

PCA | PENSION CONSULTING ALLIANCE

Introduction: Crisis Risk Offset (CRO)

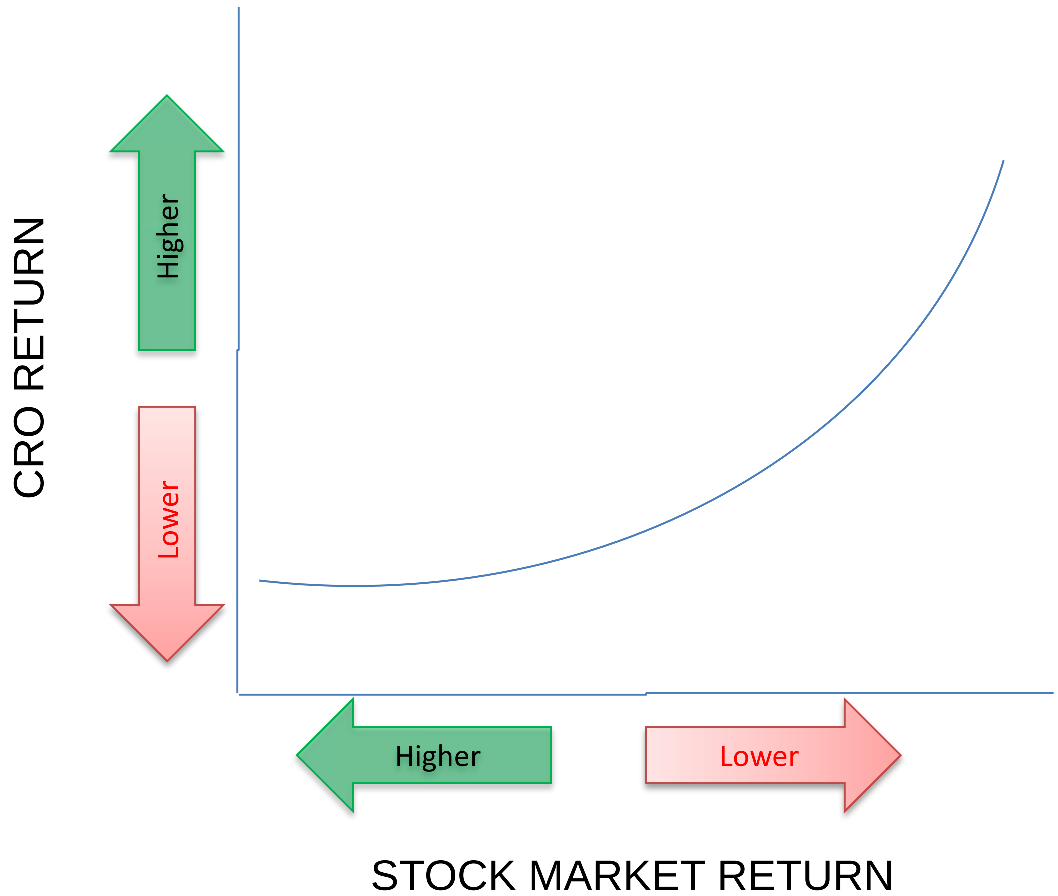
Proposed New Class	Purpose	Risk Exposures	Public / Private?	Policy %
Crisis Risk Offset (CRO)	Produce strong returns and liquidity during a growth crisis	- Interest rates always - Variable based on trends - Alternative factor risks	- 100% public markets - Deep & liquid only	> 10%

- Purpose:
  - Offset economic growth risk | Provide significant positive return during growth crises
- Requirements:
  - Invest only in liquid assets/strategies (for rebalancing)
  - Negative conditional correlation to equities / credit during drawdowns
  - Scalable
  - Equity-like volatility (i.e., positive impact needs to be material)
  - Allocation size needs to be material (i.e., > 10%)
  - Positive expected long-term return (at or above traditional fixed income)
  - Cost effective (rely primarily on systematic exposures and less on manager skill)

PCA PENSION CONSULTING ALLIANCE

Introduction: Crisis Risk Offset (CRO)

Visual of CRO Return Pattern



PCA PENSION CONSULTING ALLIANCE

Section 2: Underlying Strategies

PENSION CONSULTING ALLIANCE

CRO: Underlying Strategies

- Treasury Rate Duration
  - When interest rates decline, instruments with duration increase in value (simple math)
  - First dollar loss when an unexpected crisis hits (not yet a trend, or an exogenous shock), or the beginning of an evolving market trend

- Systematic Trend Following
  - Markets trend (over 100 years of evidence)
  - Systematic capture of these trends is possible (may take time to reposition)
  - Trends are convex, change at an increasing rate (powerful in an endogenous crisis)

- Alternative Risk Premia
  - Not exposed to market risk premia (market neutral)
  - Thus, uncorrelated to market risk premia crises (growth crises)
  - However, not reactive to market risk premia crises either
  - Provide return during non-crisis periods, do no harm during crisis
  - Keeps you in the game, least diversifying during crisis

CRO: Underlying Strategies

Component	Summary	Risks	Benefits
U.S. Treasury Duration	Investments in Long-duration U.S. Treasuries or equivalent investments.	Susceptible to interest rate increases, particularly if they are unexpected. Would be expected to lag in strong equity bull markets.	Tend to appreciate significantly when there is a flight-to-quality during the initial part of economic/ market crises. Exhibit no default risk, meaning an investor can recoup any interim capital loss by holding until maturity.
Systematic Trend Following (STF)	Rules-based investing in markets that have been rising and shorting markets that have been falling, expecting that those trends will continue in the near-to intermediate-term.	Entering/exiting market trends at the wrong time, sharp market reversals, or absence of trends; poor implementation.	Produce largest gains in extended extreme up and down markets. Extended bull or bear markets allow appropriate positioning to be taken to capture market trends.
Alternative Premia	The combination of various low-correlated market risk premia (value, momentum, carry, low-vol, etc.) by simultaneously holding long and short more-extreme position exposures in different liquid markets.	May underperform during market reversals; generally shorter track records relative to other components; potential eroding of certain premia over-time caused by increased investment market interest in specific premia strategies. Requires Leverage.	Provides a consistent source of diversifying returns during calm market periods by investing across a variety of liquid markets and risk factors.

- Designed to have different underlying risk and return drivers
- Provide complementary benefits to the portfolio during various market environments
- Combining each of these diversifying components should provide more robust results

PCA PENSION CONSULTING ALLIANCE

Section 3: CRO Design and Modelling

CRO: Design and Modelling

- **<u>Trend Capture</u>** (or <u>Trend Following</u>) investing involves going long markets that have been rising and going short markets that have been falling, betting that those trends continue. The construction of the data set is an equal weighted combination of 1-month, 3-month, and 12-month time series momentum strategies for 59 markets across four major asset classes – 24 commodities, 11 equity indices, 15 bond markets, and nine currency pairs. Leverage can be added (subtracted) to increase (decrease) the strategy volatility and return.

- The **<u>Treasury Duration</u>** excess return is the excess return on the 10 year "constant maturity" security for the year. It is calculated as the coupon [average of year end rates (e.g., (Dec 1969 rate + Dec 1970 rate)/2)], minus duration times the change in rates, minus the return on cash (T-bills) for the year. The excess return is the return of the strategy in excess of cash. Leverage can be added (subtracted) to increase (decrease) the strategy volatility and return. The Treasuries data in the CRO class is scaled to match the volatility of longer-maturity Treasuries.

- **<u>Alternative Risk Premia</u>** investing involves going long and short securities and markets, in a market neutral fashion, to isolate returns historically attributable to the various factors of value, carry, momentum (cross-sectional), and low-volatility. The excess return is the return of the strategy in excess of cash. Leverage can be added (subtracted) to increase (decrease) the strategy volatility and return.

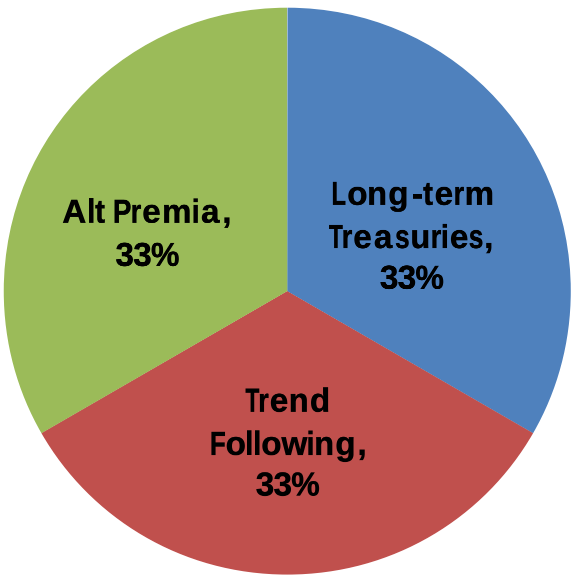
- <u>Trend Capture</u> and <u>Alternative Risk Premia</u> strategies might be considered active management. However, the strategies modeled here are highly systematic in nature, utilizing rules-based approaches to structuring portfolios and capturing the associated risk premiums.

CRO: Design and Modelling

Potential underlying strategies

- Long-term Treasuries (duration)
- Trend Following
- Liquid Alternative Premia

Potential Structure & Modelled Historical Returns

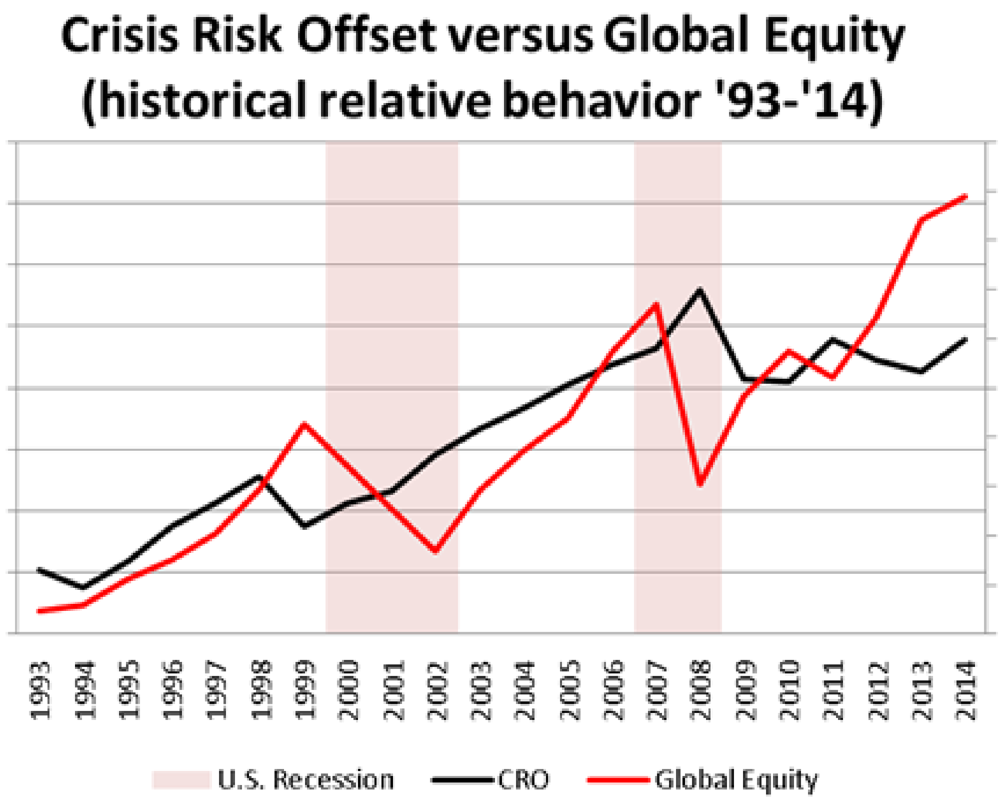


Returns During Challenging Equity Periods

	Global Equities	CRO
1973-1974	-20.2	20.2
1990-1992	-1.4	5.3
2000-2002	-16.3	11.5
2007-2008	-19.2	10.7

CRO: Design and Modelling

Modelled Historical Performance



- Diversifies the largest risk in all institutional portfolios, growth risk
- Structured to be volatile enough to matter versus equities
- Robust to multiple constructions (weighting has little impact on behavior)

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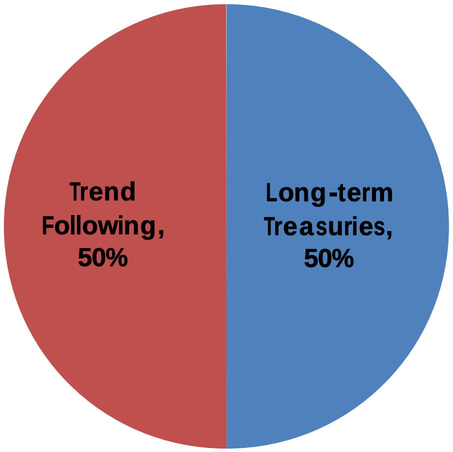
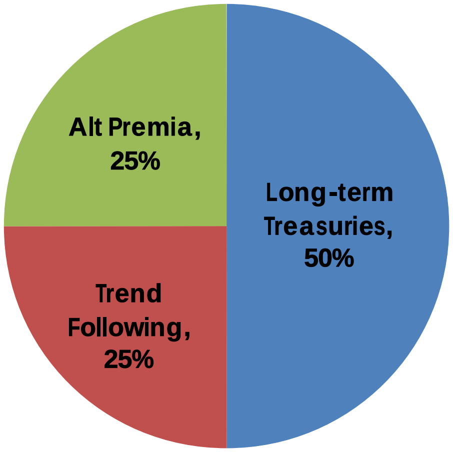
CRO: Design and Modelling

Possible Alternative CRO Structures



Returns During Challenging Equity Periods	Global Eq.	CRO
1973-1974	-20.2	30.5
1990-1992	-1.4	7.0
2000-2002	-16.3	11.1
2007-2008	-19.2	18.5



Returns During Challenging Equity Periods	Global Eq.	CRO
1973-1974	-20.2	14.4
1990-1992	-1.4	7.4
2000-2002	-16.3	13.0
2007-2008	-19.2	13.3

Section 4: CRO Key Considerations

CRO: Key Considerations

Implementation

- Treasury Rate Duration
  - Any fixed income manager, internal staff that trade Treasury futures
  - Extremely low cost (<10 basis points)

- Systematic Trend following
  - Also known as systematic managed futures, systematic CTAs
  - Graham, AQR, Fulcrum, Salient, Systematica, Mount Lucas, CFM, etc.
  - Simple trend following has modest cost (50-100 basis points)

- Alternative Risk Premia
  - Most expensive (100+ basis points)
  - Requires a hedge fund implementer (long-short across many markets), sophisticated trading desk, significant leverage, top shelf risk management
  - Limited number of providers with a track record: AQR, Kepos, GSAM

CRO: Key Considerations

Implementation

- Treasury Rate Duration
  - Can be established in the cash markets, but most managers use both cash bonds and futures to create treasury duration
  - Two 10-year bonds leveraged have the same duration as a 25 year to 30 year bond
- Systematic Trend Following
  - Can be long or short in different markets, depending on trends
  - Different markets have different volatilities (bonds and currencies are less volatile than stock and commodities)
  - Less volatile markets require more “leverage” to establish meaningful exposures
- Alternative Risk Premia
  - Typically market neutral to avoid market correlation
  - Require significant leverage

CRO: Key Considerations

Additional Staff Responsibilities

- Unlike most classes, this class will need more frequent monitoring and rebalancing between subclasses
  - Class is composed of highly volatile subcomponents
  - Expect that staff will typically conduct monthly rebalancing
  - Rebalancing could be more frequent if moves are significant

- In addition to rebalancing within in the class, rebalancing between the CRO class and the broad public growth class is expected

- Best practices in this area require appropriate management of margin accounts

CRO: Key Considerations

Risks to Consider

- Requirements to implement CRO subclasses – LSD
  - Leverage
  - Shorting
  - Derivatives

- There are questions about whether alternative premia strategies can be implemented over long periods of time at high levels of volatility (leverage)

- Current market environment – CRO, by design, greatly increases overall Plan portfolio's interest risk

PCA PENSION CONSULTING ALLIANCE

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 17, 2017

MEMO TO: Members of the Retirement Board

THROUGH: Lisa Sorani, Manager of Employee Services

FROM: Elizabeth Grassetti, Sr. Human Resources Analyst EG

SUBJECT: Election Schedule for Employee Member to the EBMUD Retirement Board

The Retirement Board term of employee representative Douglas Higashi will expire on June 23, 2017. In anticipation of this vacancy the following dates have been set for the upcoming election schedule.

Wednesday	April 5	Notice of election is announced
Monday	April 10	Candidate nomination period opens
Monday	April 24	Candidate nomination period closes
Friday	April 28	Notice of candidates running for the position is posted
Friday	May 5	Ballots mailed to all Retirement System members
Friday	May 26	Deadline for receipt of marked ballots
Thursday	June 1	Tally of ballots and election results announced
Tuesday	June 13	Election results certified to Board of Directors
Wednesday	June 24	Elected member takes office for a two-year term

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 16, 2017

MEMO TO: Members of the Retirement Board

THROUGH: Lisa Sorani, Manager or Employee Services

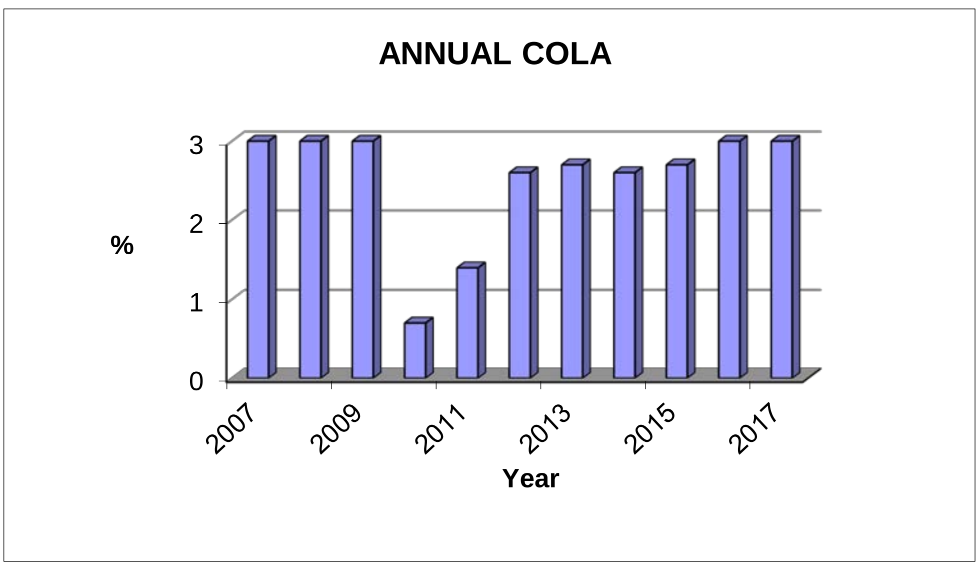
FROM: Elizabeth Grassetti, Senior Human Resources Analyst

SUBJECT: Annual Information on Retiree COLA and the Health Insurance Benefit

This memo provides annual information regarding retiree Cost of Living Adjustments (COLAs) and Health Insurance Benefits (HIB).

COST OF LIVING ADJUSTMENTS

Retirees receive a Cost of Living Adjustment (COLA) to help maintain their purchasing power in retirement. The COLA payable in July2017 will be 3.0%. COLA's are paid every July and are based on the annual CPI-U for the San Francisco Bay Area. Over the past 20 years the COLA has averaged 2.7%.



HEALTH INSURANCE BENEFITS

EBMUD retirees are responsible for paying the full costs of their health insurance, however the District provides a Health Insurance Benefit (HIB) to use as a credit to offset premium costs.
The District's Health Insurance Benefit was implemented on January 1, 1989 at up to $50 per month for each retiree. It has been increased seven times since that date. The HIB was last changed in 2004 to $550 for a retiree and spouse and $450 for single retiree.

COMBINED COLA AND HIB BENEFITS

. The chart below shows the average District retiree's total monthly benefit, including pension and HIB since 1998. The retiree COLA is determined in accordance with Section 33 of the Retirement Ordinance, and is based on the Consumer Price Index (San Francisco-Oakland Metropolitan Area – all items) provided that the increase or decrease does not exceed five percent in any year, and no increase above 3% is allowed unless the Assets/PBO funding is at or above eight-five percent. The average pension benefit and funded ratio is from the actuarial valuation as of June 30 each year.

Year	Average Monthly Pension Amount	Annual COLA %	COLA Draw %	Maximum Monthly HIB Amount	Funded Ratio %
1998	$1,899	3.4%	0%	$150	105.7%
1999	$2,302	3.2%	0%	$200	104.1%
2000	$2,519	4.2%	0%	$250	94.8%
2001	$2,658	4.5%	0%	$250	86.0%
2002	$2,791	5.0%+	0%	$400	77.3%
2003	$2,891	1.6%	1.4%	$450	62.0%
2004	$3,096	1.8%	1.2%	$550	69.0%
2005	$3,233	1.2%	1.8%	$550	69.5%
2006	$3,455	2.0%	1.0%	$550	71.4%
2007	$3,650	3.0%+	0%	$550	78.5%
2008	$3,779	3.0%+	0%	$550	65.0%
2009	$3,956	3.0%+	0%	$550	48.9%
2010	$4,019	.07%	2.3%	$550	53.2%
2011	$4,159	1.4%	1.6%	$550	64.6%
2012	$4,326	2.6%	0.4%	$550	61.4%
2013	$4,519	2.7%	0.3%	$550	66.2%
2014	$4,704	2.6%	0.4%	$550	74.2%
2015	$4,871	2.7%	0.3%	$550	73.8%
2016	$5,041	3.0%+	0%	$550	68.8%

+ Capped due to Ordinance limit.