

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 18, 2017

MEMO TO: Members of the Retirement Board

THROUGH: Laura Brunson, Manager of Human Resources

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

SUBJECT: Retirement Board Regular Meeting – May 18, 2017

A regular meeting of the Retirement Board will convene at 8:30 a.m. on Thursday, May 18, 2017 in the Training Resource Center (TRC1) of the Administration Building.

Enclosed are the agenda for the May 18, 2017 meeting and the minutes for the March 16, 2017 regular meeting. The package also includes the following: **(1) ACTION** items: Approval to join SACRS as a Non-Profit Affiliate; **(2) INFORMATION** items: 1st Quarter Performance Reviews as of March 31, 2017, Asset-Liability Review Schedule, Capital Market Assumptions, Strategic vs. Traditional Asset Allocation Proxy Service Provider Update, , Presentation from Center Square, Northern Trust Fee Changes; **(3) REPORTS FROM THE RETIREMENT BOARD.**

LS:eg

Enclosures

AGENDA

EBMUD EMPLOYEES' RETIREMENT SYSTEM

May 18, 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 March 16, 2017
2. Ratifying and Approving Investment Transactions by Counselors for February 2017 and March 2017 (R.B. Resolution No. 6859)
3. Ratifying and Approving Short-Term Investment Transactions by Treasurer for February 2017 and March 2017 (R.B. Resolution No. 6860)
4. Approving Treasurer's Statement of Receipts and Disbursements for February 2017 and March 2017

ACTION:

5. Approval to Join SACRS as a Non-Profit Affiliate – E. Grassetti

INFORMATION:

6. 1st Quarter Performance Review as of March 31, 2017 – S. Skoda
7. Asset-Liability Review Schedule – S. Skoda
8. Capital Market Assumptions – S. Skoda
9. Strategic vs. Traditional Asset Allocation – S. Skoda
10. Proxy Service Provider Update– S. Skoda
11. Presentation from Center Square – S. Skoda
12. Northern Trust Fee Changes – S. Skoda

REPORTS FROM THE RETIREMENT BOARD:

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

ITEMS TO BE CALENDARED:

- Proxy Service Provider Vendor Selection
- Select Actuarial Auditor based on RFP responses

MEETING ADJOURNMENT:

The next regular meeting of the Retirement Board will be held at 8:30 a.m. on Thursday, July 20, 2017.

2017 Retirement Board Meetings

July 20, 2017

September 21, 2017

November 16, 2017

MINUTES OF THE RETIREMENT BOARD
March 16, 2017

A regular meeting of the Retirement Board convened on Thursday, March 16, 2017 at 8:42 a.m. in the Large Training Resource Center (TRC) Room. The meeting was called to order by President Doug Higashi.

Roll Call – The following Retirement Board Members were present: Alex Coate, Doug Higashi, Tim McGowan, Frank Mellon, and Lisa Ricketts. Marguerite Young arrived at 9:00 a.m.

The following staff members were present: Damien Charléty, Elizabeth Grassetti, Lourdes Matthew, Sophia Skoda, and Lisa Sorani.

PUBLIC COMMENT

Retiree Dick Ward asked for clarification on whether retirees are Members of the Retirement system, and if retirees are Members then they should be allowed to vote for candidates running for employee Member of the retirement board. Staff provided clarification on how the Retirement Ordinance defines Members and retirees.

CONSENT CALENDAR

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

ACTION

5. **Adopt the Updated Investment Policy to include Mission, Investment Beliefs, and an additional Investment Objective** – Sophia Skoda presented an update regarding the Retirement Board discussions and work on the Environmental, Social, and Governance (ESG) considerations and on updates to the System's Investment Policy and Procedures to include a mission statement, investment beliefs, and an additional investment objective. She asked that the Board update the investment policy to include:

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

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.

Marguerite Young moved adoption of the mission, investment beliefs and investment objective #3 and Frank Mellon seconded the motion. The motion carried (4-1) by the following voice vote: AYES (Coate, Higashi, Mellon, Young), NOES (McGowan), ABSTAIN (none), ABSENT (None).

6. **Approve ESG Implementation Plan** – Sophia Skoda requested that board approve the ESG implementation plan which will provide guidance in implementing the revisions to the investment policy. Marguerite Young moved the resolution and Frank Mellon seconded it. The motion carried (4-1) by the following voice vote: AYES (Coate, Higashi, Mellon, Young), NOES (McGowan), ABSTAIN (none), ABSENT (None).

7. **Authorization to Join INCR** – Sophia Skoda recommended that System join the Investor Network on Climate Risk (INCR) as a cost effective tool for engagement on ESG issues. Membership would allow the ERS to keep abreast of developments and participate in working groups. Tim McGowan 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).

8. **Approve RFP for Proxy Voting Services** – Sophia Skoda presented this item, reviewing the ERS’ past practice of staff voting with management on proxies. While this practice had been common, updating it would ensure that the votes are more closely aligned with the System’s interest. At the January 19, 2017 meeting as an interim measure, the Retirement Board voted to have investment managers vote proxies in line with their individual guidelines while staff and PCA prepared a RFP for a proxy service provider. The Board was asked to approve the RFP to be sent out on March 17, 2017. The Board suggested that the timeline for responses be extended to allow one month for responses and that the period of the contract be two years with three one-year extensions. Frank Mellon moved the item and Marguerite Young 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).

9. **Determine the Annual Retiree Cost Of Living Adjustment (COLA) to be Effective July 1, 2017** – Staff requested the approval of a retiree COLA of 3.0% effective July 1, 2017. The COLA is based on the CPI-U All-Urban for the San Francisco Bay Area as of December 31st of each fiscal year, and capped at a maximum of 3% unless the Projected Benefit Obligation funding ratio is above 85%. The Projected Benefit Obligation funded ratio is 68.8% as of June 30, 2016. Tim McGowan moved the recommendation, and 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).

INFORMATION

10. **Talking Points on Retirement Board Actions on ESG** – Sophia Skoda presented talking points on ESG. The talking points were prepared for Board Members and staff to be able to answer inquiries on the ESG update to the System’s Investment Policy and procedures. A few edits were suggested by the Board which will be incorporated into an updated version.

11. **4th Quarter Performance Review as of December 31, 2016** - Eric White from PCA reviewed the ERS Fund performance as of December 31, 2016 noting that the fund returned 2.1% for the quarter and 8.5% for the year. Domestic equities returned 4.4% for the quarter and 11.5% for the year. International equities were up 0.2% for the quarter and 2.7% for the year. Covered calls were up 2.5% for the quarter and 9.4% for the 1-year. Fixed income produced 4.3% for the year and (-1.0%) for the quarter. Real Estate returned (-1.2) for the quarter and 9.4% for the year. Overall the fund is doing well and is in the 4th percentile for the quarter, 22nd percentile for the 1 year, 1st percentile for the 5 year, and 7th percentile for the ten-year period.

12. **Presentation from WAMCO: Discussion of Bank Loan and Short-Term High-Yield Portfolios** - Frances Coombes and T.J. Settel from WAMCO reviewed the ERS Bank Loan and Short-Term High Yield investments. The Bank Loan Fund produced 0.8% year to date and 13.2% for the 1- year; but since inception (3/10/2014) the fund has returned 2.6% vs. 4.0% for the index. They explained that the returns were due to being overweight in certain sectors (Energy) that didn’t have strong returns and underweight in others that did well (Technology/Metals and Mining).

The Short-term High-Yield portfolio returned 1.3% year to date, 14.6% for the year, and 0.8% since inception on 3/10/2014. Returns were affected by investments in healthcare where political trends created uncertainty, and retail, where shifts to online and away from traditional retail and

brand loyalty have affected investments. WAMCO feels that they are well positioned moving forward.

13. **Training Module: Crisis/Risk Offset** – Eric White from PCA presented a training on Crisis Risk Offset CRO), which is a strategic asset class meant to diversify a portfolio to produce modest returns in most markets, and to produce significant positive results during bear markets. CRO uses three strategies: Treasury rate duration, trend following and liquid alternative risk premia. He reviewed how each strategy works and the risks and benefits of each, and provided a model of how the class would have responded historically.

14. **Election for Expired Term of Employee Member of Retirement Board** – Staff provided an election schedule for the retirement board seat currently held by Doug Higashi, whose term expires on June 23, 2017.

15. **Annual Report on Retiree COLA and HIB** – Staff provided an annual update of the report which shows retiree COLA's and changes to the Retiree HIB and the funded ratio for the past 20 years.

REPORTS FROM THE RETIREMENT BOARD:

16. **Brief report on any course, workshop, or conference attended since the last Retirement Board meeting** – Tim McGowan and Doug Higashi both attended the CALAPRS General Assembly March 5 – 7, 2017 in Monterey. They discussed some highlights of the conference.

Tim McGowan asked about attending the SACRS UC Berkeley Asset allocation for Public Pensions Conference in July.

Frank Mellon notes that he plans to attend the CERES Conference in San Francisco in May.

ITEMS TO BE CALENDERED / UPCOMING ITEMS

- Actuarial Audit scheduling
- Report on proxy voting
- Center Square Presentation

ADJOURNMENT – Tim McGowan moved to adjourn the meeting at 12:35p.m. and Frank Mellon seconded the motion; the motion carried (4-0) by the following voice vote: AYES (Coate, Higashi, McGowan, and Mellon), NOES (none), ABSTAIN (none), ABSENT (Young).

President

ATTEST: _____
Secretary

5/18/2017

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: April 26, 2017

MEMO TO: Members of the Retirement Board



FROM: Sophia D. Skoda, Director of Finance

SUBJECT: Investment Transactions by Retirement Fund Managers for February 2017 and March 2017

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

Attachment

SDS:DSK:MH

INVESTMENT TRANSACTIONS BY RETIREMENT FUND MANAGERS

February 2017

	PURCHASES	SALES	PORTFOLIO VALUE
FIXED INCOME			
Western Asset Management Co.-IG	\$4,308,744	\$14,049	\$66,235,814
Western Asset Management Co.-HI	\$0	\$0	\$33,825,519
Western Asset Management Co.-HY	\$0	\$0	\$30,879,589
C.S. McKee	\$12,190,027	\$9,769,663	\$138,285,865
TOTAL	\$16,498,770	\$9,783,712	\$269,228,787
DOMESTIC EQUITY			
Barrow Hanley	\$3,397,964	\$2,369,325	\$179,555,552
Opus Capital	\$2,829,518	\$3,163,866	\$36,089,992
Russell 1000 Growth Index Fund	\$0	\$0	\$272,129,501
Russell 2000 Growth Index Fund	\$0	\$0	\$27,989,167
INTECH	\$10,744,753	\$10,720,297	\$77,583,837
T. Rowe Price	\$3,178,744	\$3,137,867	\$77,068,652
Total Domestic Equity	\$20,150,979	\$19,391,355	\$670,416,701
COVERED CALLS			
Parametric (BXM)	\$2,370,026	\$2,270,860	\$109,903,350
Parametric (Delta-Shift)	\$642,030	\$491,072	\$114,767,970
Van Hulzen	\$25,737,776	\$22,328,230	\$102,236,950
Total Covered Calls	\$28,749,832	\$25,090,163	\$326,908,270
INTERNATIONAL EQUITY			
Franklin/Templeton	\$4,922,900	\$5,488,261	\$93,179,745
Fisher Investments	\$2,854,304	\$2,795,852	\$100,043,175
Total International Equity	\$7,777,204	\$8,284,113	\$193,222,920
REAL ESTATE EQUITY			
RREEF America II	\$0	\$0	\$34,538,463
CenterSquare	\$3,295,702	\$3,679,946	\$50,177,365
Total Real Estate	\$3,295,702	\$3,679,946	\$84,715,828
TOTAL ALL FUND MANAGERS	\$76,472,488	\$66,229,288	\$1,544,490,506

March 2017

	PURCHASES	SALES	PORTFOLIO VALUE
FIXED INCOME			
Western Asset Management Co.-IG	\$1,873,921	\$4,786	\$66,311,165
Western Asset Management Co.-HI	\$0	\$0	\$33,810,586
Western Asset Management Co.-HY	\$0	\$0	\$30,745,528
C.S. McKee	\$15,157,424	\$11,855,124	\$138,244,361
TOTAL	\$17,031,345	\$11,859,910	\$269,111,640
DOMESTIC EQUITY			
Barrow Hanley	\$1,261,433	\$2,301,682	\$179,331,968
Opus Capital	\$3,366,570	\$2,605,330	\$36,288,443
Russell 1000 Growth Index Fund	\$0	\$0	\$272,305,299
Russell 2000 Growth Index Fund	\$0	\$0	\$28,329,119
INTECH	\$3,075,513	\$2,790,918	\$78,515,205
T. Rowe Price	\$2,663,674	\$2,729,843	\$78,530,654
Total Domestic Equity	\$10,367,190	\$10,427,773	\$673,300,688
COVERED CALLS			
Parametric (BXM)	\$2,987,889	\$2,590,934	\$110,678,926
Parametric (Delta-Shift)	\$2,083,297	\$1,794,919	\$115,089,535
Van Hulzen	\$16,514,631	\$19,708,845	\$102,659,446
Total Covered Calls	\$21,585,817	\$24,094,698	\$328,427,907
INTERNATIONAL EQUITY			
Franklin/Templeton	\$751,619	\$717,257	\$95,887,893
Fisher Investments	\$0	\$0	\$103,878,969
Total International Equity	\$751,619	\$717,257	\$199,766,863
REAL ESTATE EQUITY			
RREEF America II	\$0	\$0	\$34,538,463
CenterSquare	\$4,547,719	\$3,778,151	\$49,119,214
Total Real Estate	\$4,547,719	\$3,778,151	\$83,657,677
TOTAL ALL FUND MANAGERS	\$54,283,689	\$50,877,790	\$1,554,264,775

Prepared By: Matt Houck

Matt Houck, Accounting Technician

Date: 4/24/17

R.B. RESOLUTION NO. 6859

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY THE COUNSELORS
FOR MONTHS OF FEBRUARY, 2017 AND MARCH, 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 February, 2017 and March, 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

05/18/2017

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 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 February 2017

The attached Short Term Investment Transactions report for the month of February 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 FEBRUARY 2017**

<u>COST/ FACE VALUE</u>	<u>DESCRIPTION</u>	<u>DATE OF PURCHASE</u>	<u>DATE OF SALE/MATURITY</u>	<u>YIELD (%)</u>
\$ 3,577,000.00	Local Agency Investment Fund	9-Feb-17		0.777
3,561,000.00	Local Agency Investment Fund	24-Feb-17		0.777
<u>(8,231,000.00)</u>	Local Agency Investment Fund		27-Feb-17	0.777
<u>\$ (1,093,000.00)</u>	Net Activity for Month			

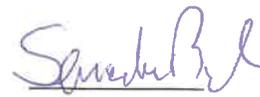
\$ 5,890,741.99	Beginning Balance
<u>(1,093,000.00)</u>	Net Activity for Month
<u>\$ 4,797,741.99</u>	Ending Balance

SUBMITTED BY _____


D. Scott Klein
Controller

DATE _____

4-7-17


Semadar Barzel
Treasury Manager


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

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: April 24, 2017
MEMO TO: Members of the Retirement Board
THROUGH: Sophia D. Skoda, Director of Finance *SDS*
FROM: D. Scott Klein, Controller *DSK*
SUBJECT: Short Term Investment Transactions for March 2017

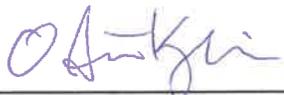
The attached Short Term Investment Transactions report for the month of March 2017 is hereby submitted for Retirement Board approval.

Attachment

SDS:DSK:MH

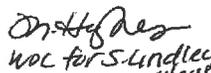
**EBMUD EMPLOYEES' RETIREMENT SYSTEM
SHORT TERM INVESTMENT TRANSACTIONS
CONSUMMATED BY THE TREASURER
MONTH OF MARCH 2017**

<u>COST/ FACE VALUE</u>	<u>DESCRIPTION</u>	<u>DATE OF PURCHASE</u>	<u>DATE OF SALE/MATURITY</u>	<u>YIELD (%)</u>
\$ 3,564,000.00	Local Agency Investment Fund	9-Mar-17		0.821
3,541,000.00	Local Agency Investment Fund	22-Mar-17		0.821
<u>(8,246,000.00)</u>	Local Agency Investment Fund		29-Mar-17	0.821
<u>\$ (1,141,000.00)</u>	Net Activity for Month			
\$ 4,797,741.99	Beginning Balance			
<u>(1,141,000.00)</u>	Net Activity for Month			
<u>\$ 3,656,741.99</u>	Ending Balance			

SUBMITTED BY 
D. Scott Klein
Controller

DATE 4-25-17


Semadar Barzel
Treasury Manager


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

R.B. RESOLUTION NO. 6860

RATIFYING AND APPROVING INVESTMENT TRANSACTIONS BY THE TREASURER FOR FEBRUARY, 2017 AND MARCH, 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 February 2017, and March, 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 February 2017, and March, 2017 are hereby ratified and approved.

President

ATTEST:

Secretary

05/18/2017

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 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 February 2017

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

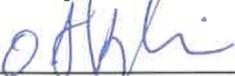
Attachment

SDS:DSK:MH

**STATEMENT OF RECEIPTS AND DISBURSEMENTS
EMPLOYEES' RETIREMENT FUND
MONTH OF FEBRUARY 2017**

CASH BALANCE at January 31, 2017		\$	3,108,781.85
<u>Receipts</u>			
Employees' Contributions	\$		1,241,677.61
District Contributions			5,930,715.41
LAIF Redemptions			8,231,000.00
Refunds and Commission Recapture			<u>12,734.18</u>
TOTAL Receipts			15,416,127.20
<u>Disbursements</u>			
Checks/Wires Issued:			
Service Retirement Allowances	\$		7,215,673.52
Disability Retirement Allowances			141,597.91
Health Insurance Benefit			855,681.00
Payments to Retiree's Resigned/Deceased			179,079.78
LAIF Deposits			7,138,000.00
Administrative Cost			<u>104,549.23</u>
TOTAL Disbursements			(15,634,581.44)
CASH BALANCE at February 28, 2017		\$	<u>2,890,327.61</u>
LAIF			<u>4,797,741.99</u>
LAIF and Cash Balance at February 28, 2017		\$	<u>7,688,069.60</u>
<u>Domestic Equity</u>			
Barrow Hanley	\$		179,555,552.22
Russell 1000 Index Fund			272,129,500.66
Russell 2000 Growth Index Fund			27,989,166.72
Opus			36,089,991.51
Intech			77,583,837.39
T. Rowe Price			<u>77,068,652.36</u>
Subtotal Domestic Equity			670,416,700.86
<u>Covered Calls</u>			
Parametric (BXM)	\$		109,903,349.91
Parametric (Delta-Shift)			114,767,970.30
Van Hulzen			<u>102,236,950.03</u>
Subtotal Covered Calls			326,908,270.24
<u>International Equity</u>			
Franklin Templeton	\$		93,179,744.81
Fisher Investments			<u>100,043,174.96</u>
Subtotal International Equity			193,222,919.77
<u>Real Estate</u>			
RREEF America REIT II	\$		34,538,463.00
Center Square			<u>50,177,364.87</u>
Subtotal Real Estate			84,715,827.87
<u>Fixed Income</u>			
CS Mckee	\$		138,285,865.06
Western Asset Mgt Co-Short Term Inv Grade			66,235,813.68
Western Asset Mgt Co-Short Term High Income			33,825,518.88
Western Asset Mgt Co-Short Term High Yield			<u>30,879,589.15</u>
Subtotal Fixed Income			269,226,786.77
Total for Domestic and International Equities			1,544,490,505.51
MARKET VALUE of ASSETS at February 28, 2017		\$	<u>1,552,178,575.11</u>

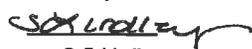
Respectfully submitted,



 D. Scott Klein
 Controller



 Semadar Barzel
 Treasury Mgr.



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

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: April 24, 2017
MEMO TO: Members of the Retirement Board
THROUGH: Sophia D. Skoda, Director of Finance *SDS*
FROM: D. Scott Klein, Controller *DSK*
SUBJECT: Statement of Receipts and Disbursements for March 2017

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

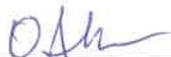
Attachment

SDS:DSK:MH

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

CASH BALANCE at February 28, 2017		\$	2,890,327.61
<u>Receipts</u>			
Employees' Contributions	\$	1,235,678.00	
District Contributions		5,910,342.37	
LAIF Redemptions		8,246,000.00	
Refunds and Commission Recapture		<u>25,698.33</u>	
TOTAL Receipts			15,417,718.70
<u>Disbursements</u>			
Checks/Wires Issued:			
Service Retirement Allowances	\$	7,238,379.27	
Disability Retirement Allowances		141,597.91	
Health Insurance Benefit		863,177.79	
Payments to Retiree's Resigned/Deceased		2,447.24	
LAIF Deposits		7,105,000.00	
Administrative Cost		<u>172,921.25</u>	
TOTAL Disbursements			<u>(15,523,523.46)</u>
CASH BALANCE at March 31, 2017		\$	<u>2,784,522.85</u>
LAIF			<u>3,656,741.99</u>
LAIF and Cash Balance at March 31, 2017		\$	<u>6,441,264.84</u>
<u>Domestic Equity</u>			
Barrow Hanley	\$	179,331,967.53	
Russell 1000 Index Fund		272,305,299.40	
Russell 2000 Growth Index Fund		28,329,119.49	
Opus		36,288,443.35	
Intech		78,515,204.65	
T. Rowe Price		<u>78,530,653.74</u>	
Subtotal Domestic Equity			673,300,688.16
<u>Covered Calls</u>			
Parametric (BXM)	\$	110,678,925.72	
Parametric (Delta-Shift)		115,089,535.33	
Van Hulzen		<u>102,659,446.28</u>	
Subtotal Covered Calls			328,427,907.33
<u>International Equity</u>			
Franklin Templeton	\$	95,887,893.44	
Fisher Investments		<u>103,878,969.22</u>	
Subtotal International Equity			199,766,862.66
<u>Real Estate</u>			
RREEF America REIT II	\$	34,538,463.00	
Center Square		<u>49,119,214.08</u>	
Subtotal Real Estate			83,657,677.08
<u>Fixed Income</u>			
CS Mckee	\$	138,244,361.16	
Western Asset Mgt Co-Short Term Inv Grade		66,311,164.75	
Western Asset Mgt Co-Short Term High Income		33,810,585.61	
Western Asset Mgt Co-Short Term High Yield		<u>30,745,528.26</u>	
Subtotal Fixed Income			269,111,639.78
Total for Domestic and International Equities			<u>1,554,264,775.01</u>
MARKET VALUE of ASSETS at March 31, 2017		\$	<u>1,560,706,039.85</u>

Respectfully submitted,



D. Scott Klein
Controller



Semadar Barzel
Treasury Mgr.



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

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 18, 2017

MEMO TO: Members of the Retirement Board

THROUGH: Lisa Sorani, Manager of Employee Services *L.S.*

FROM: Elizabeth Grasseti, Senior Human Resources Analyst *EG*

SUBJECT: Approval to join State Association of County Retirement Systems (SACRS) as a Non-Profit Affiliate

At the March 16, 2017 Retirement Board Meeting, Board Members requested to attend the SACRS Modern Investment Theory & Practice for Retirement Systems which is being held at UC Berkeley July 24-26, 2017. While the public can attend these conferences, staff researched the SACRS organization and found that EBMUD ERS can join as a non-profit affiliate member for \$1,500 per a year. Joining this SACRS will allow Board Members and staff access to courses and conferences at a discounted rate. Also SACRS provides legislative and pension news updates Membership requires sponsorship by a 37-Act Member Agency which staff can arrange.

The logo for Pension Consulting Alliance (PCA) is displayed in a large, black, serif font. It is positioned in the upper right corner of the page, to the left of the full company name. The background of the top half of the page is a photograph of a sunset over a body of water, with several dark, vertical wooden posts or pilings in the foreground. The sky is a mix of orange, yellow, and blue, and the water is calm, reflecting the sky. A thick, light blue curved line separates the top image from the white background below.

PCA

PENSION
CONSULTING
ALLIANCE

Q1 2017

East Bay Municipal Utility District
Quarterly Report

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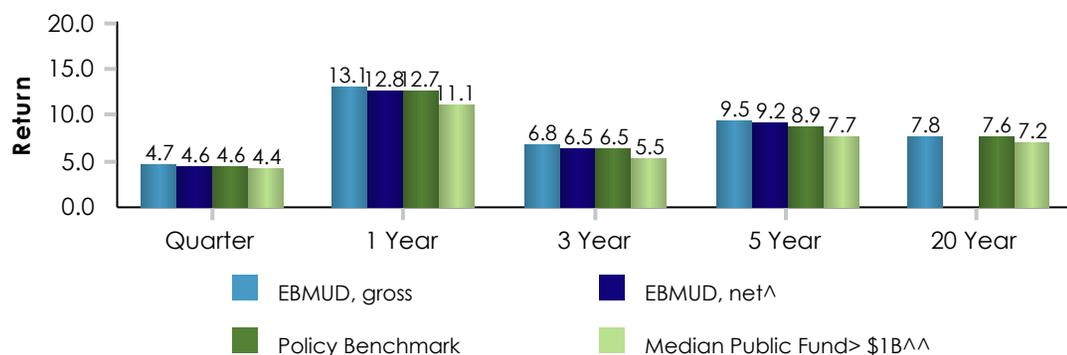
Nothing herein is intended to serve as investment advice, a recommendation of any particular investment or type of investment, a suggestion of purchasing or selling securities, or an invitation or inducement to engage in investment activity.

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	EBMUD Policy Benchmark Composition
	Definition of Benchmarks
	Risk Metric Description

Performance and Market Values As of March 31, 2017

Investment Performance



Portfolio Valuation (000's)

	Quarter	1 Year
EBMUD Total Plan		
Beginning Market Value	1,492,095	1,395,412
Net Contributions	-3,166	-15,167
Fees/Expenses	-1,050	-4,058
Gain/Loss	69,606	181,263
Ending Market Value	1,557,484	1,557,484

Asset Class Performance (gross of fees)

	Quarter	1 Year	3 Year	5 Year	10 Year	20 Year
EBMUD Total Plan	4.7	13.1	6.8	9.5	6.3	7.8
<i>Policy Benchmark^{^^^}</i>	4.6	12.7	6.5	8.9	6.0	7.6
Domestic Equity	6.0	18.4	9.7	13.0	7.4	8.3
<i>Russell 3000[*]</i>	5.7	18.1	9.8	13.2	7.5	9.0
International Equity	7.8	13.3	0.5	5.4	2.7	6.6
<i>MSCI ACWI x US (blend)^{**}</i>	8.0	13.7	1.0	4.8	1.8	5.0
Covered Calls	4.2	13.3	8.5	-	-	-
<i>CBOE BXM</i>	4.0	12.2	6.5	-	-	-
Fixed Income	1.0	3.6	2.1	2.6	4.4	5.7
<i>Fixed Income benchmark (blend)^{***}</i>	1.0	3.6	2.6	2.6	4.4	5.4
Real Estate	1.7	5.8	12.0	11.7	5.6	-
<i>NCREIF/NAREIT (blend)^{****}</i>	1.5	6.0	10.9	10.7	7.2	-
Cash	0.2	0.5	0.4	0.3	1.2	2.8
<i>Citigroup 3 Month T-Bill Index</i>	0.1	0.3	0.1	0.1	0.6	2.1

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

^{^^} IM Total Public Fund >\$1B Universe includes BNY Mellon Public>\$1B Fund Universe and IM 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.

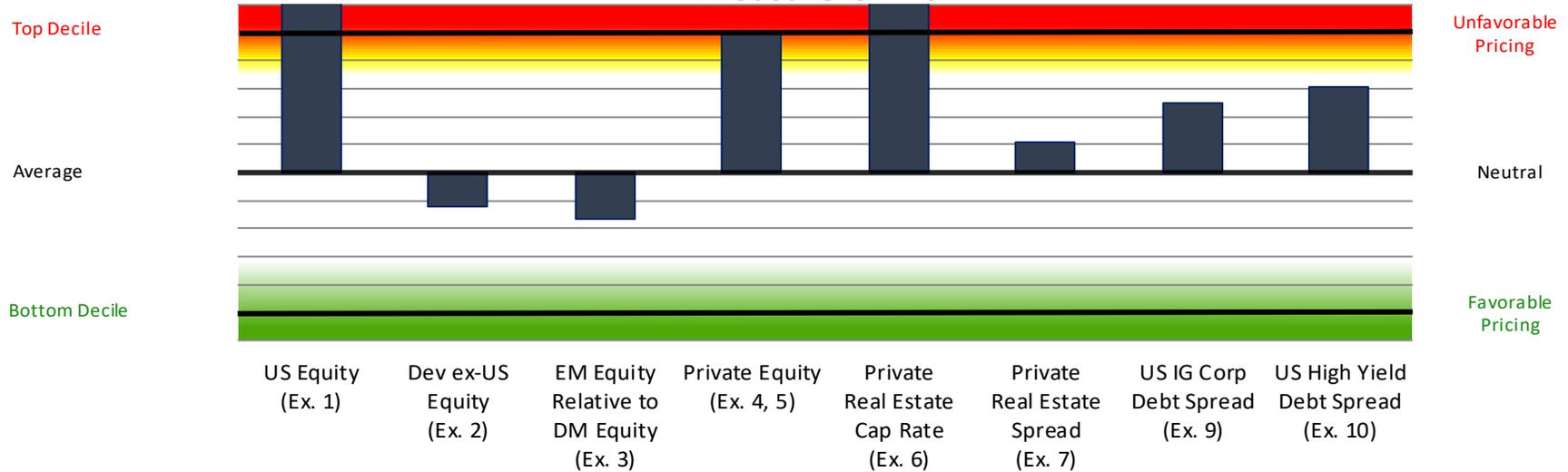
^{****}50% NCREIF (lagged), 50% FTSE NAREIT Equity REITs Index as of 11/1/11; NCREIF (lagged) thru 10/31/11.

Investment Market Risk Metrics

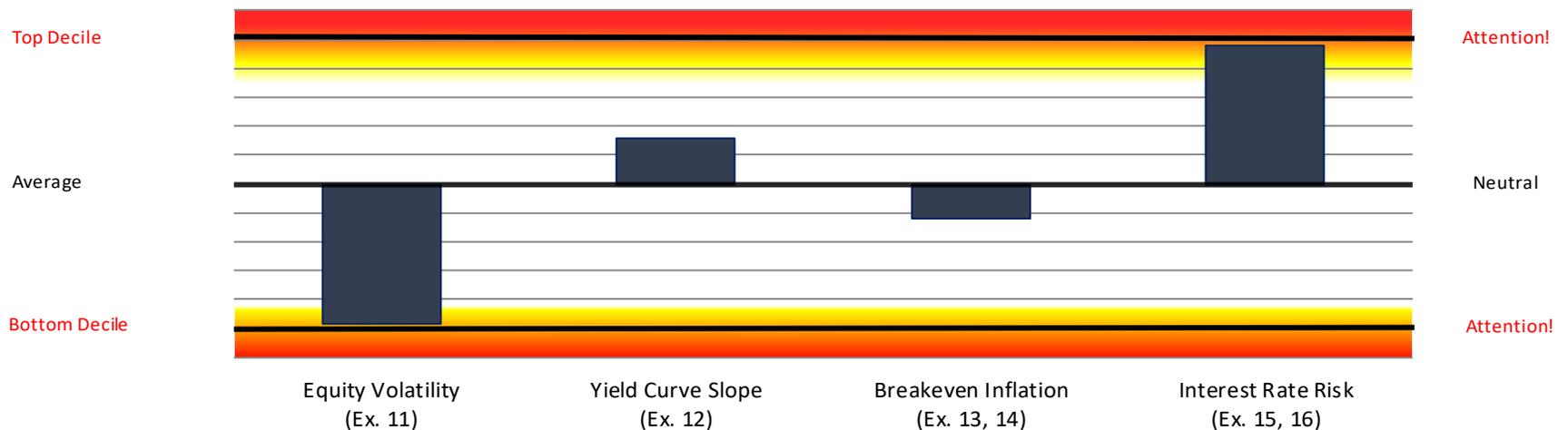
Takeaways

- U.S. public equity valuations (based on normalized price/earnings ratios) remain at levels only surpassed in the late 1990's tech bubble.
- Non-U.S. developed and emerging market equity valuations remain historically cheap relative to their own histories and relative to U.S. levels.
- Credit spreads remain tight (risk seeking) in both investment grade and high yield markets.
- With the 10-year Treasury interest rate moving up to 2.4%, spreads between the cap rate on core real estate and the 10-year Treasury rate (a measure of valuation) tightened to levels not seen since before the global financial crisis (expensive).
- The yield curve flattened (short term rates increased and long term rates stayed the same or fell) in anticipation of further rate increases by the Federal Reserve.
- Inflation indicators remain well behaved, as U.S. dollar strength has kept commodity prices at decade lows. Breakeven inflation levels remain stable.
- Equity volatility levels remain near bottom decile levels.
- PCA's sentiment indicator remains positive. The sentiment indicator remains solidly **green**.

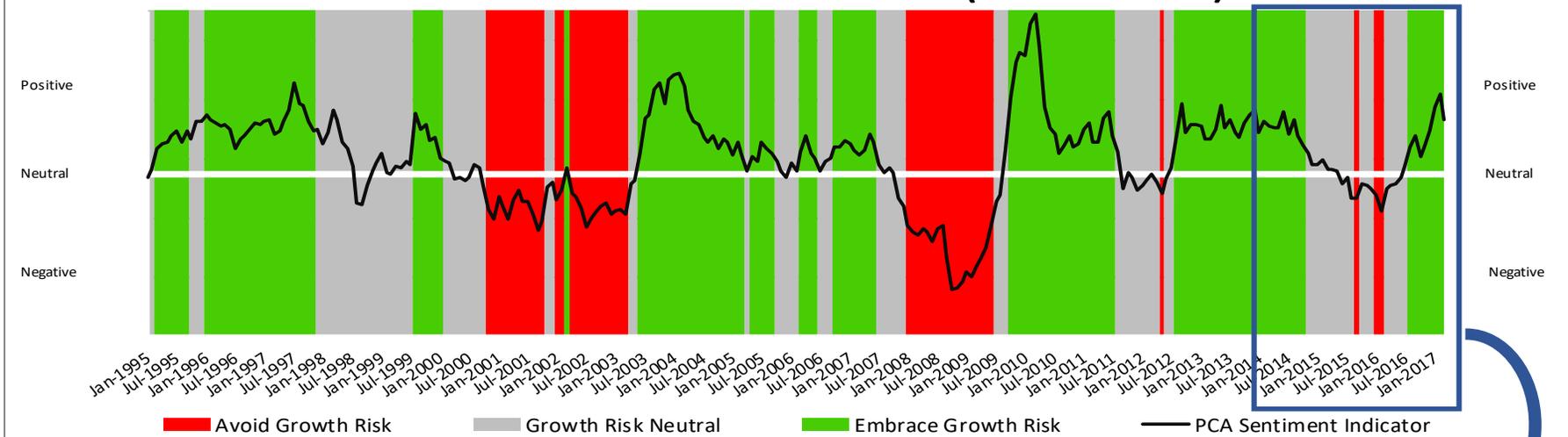
Valuation Metrics versus Historical Range A Measure of Risk



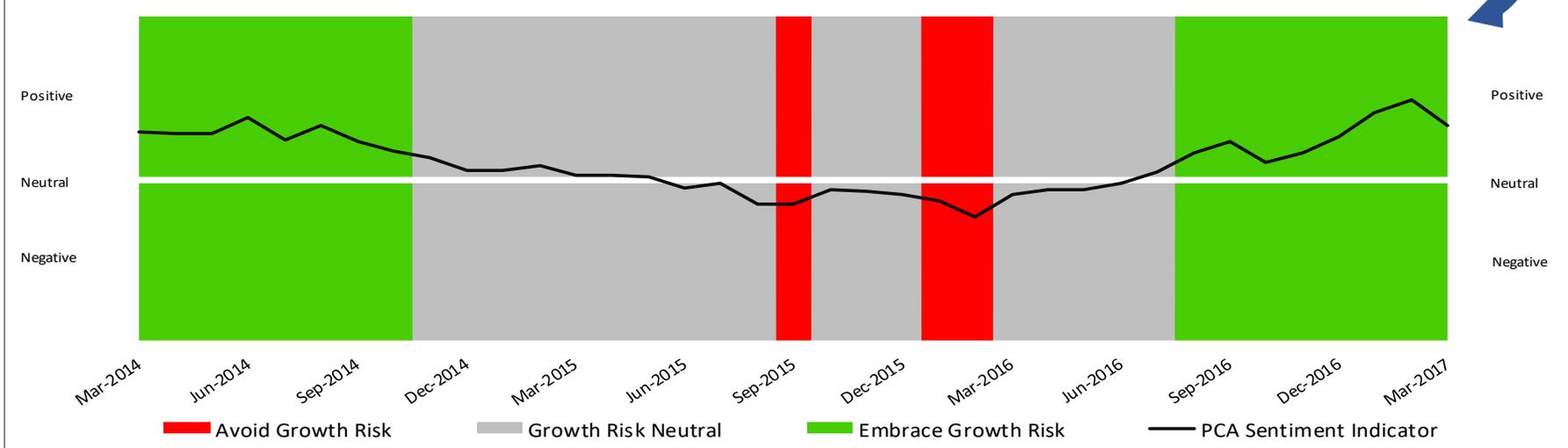
Other Important Metrics within their Historical Ranges Pay Attention to Extreme Readings



PCA Market Sentiment Indicator (1995-Present)



PCA Market Sentiment Indicator - Most Recent 3-Year Period

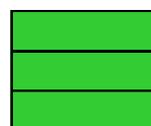


Information Behind Current Sentiment Reading

Bond Spread Momentum Trailing-Twelve Months
 Equity Return Momentum Trailing-Twelve Months
 Agreement Between Bond and Equity Momentum Measures?

Positive
 Positive
 Agree

Growth Risk Visibility (Current Overall Sentiment)

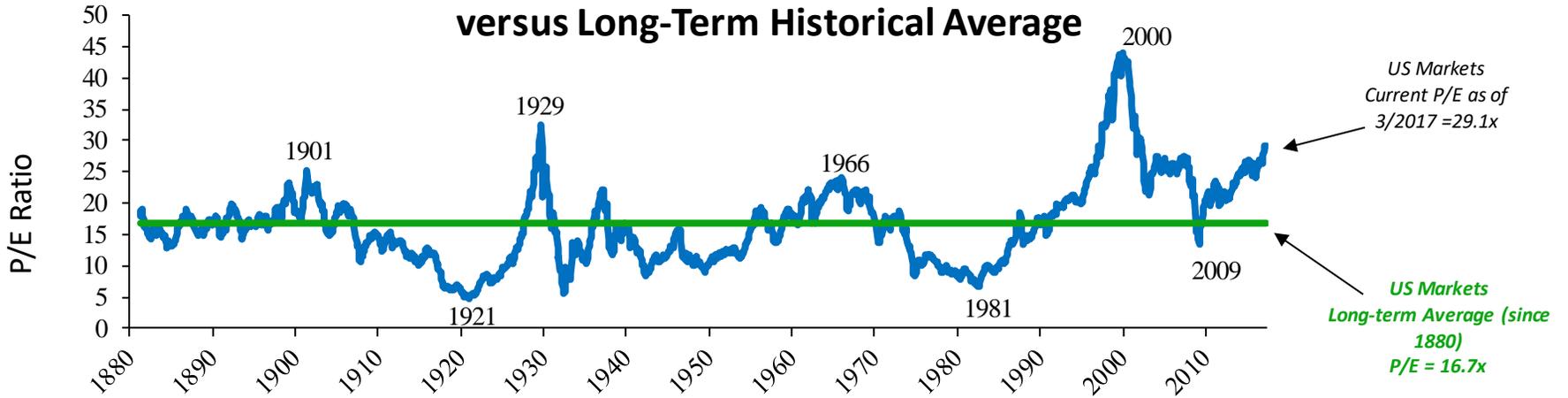


Positive

Developed Public Equity Markets

Exhibit 1

U.S. Equity Market P/E Ratio¹ versus Long-Term Historical Average



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

Developed ex-U.S. Equity Market P/E Ratio¹ versus Long-Term Historical Average²



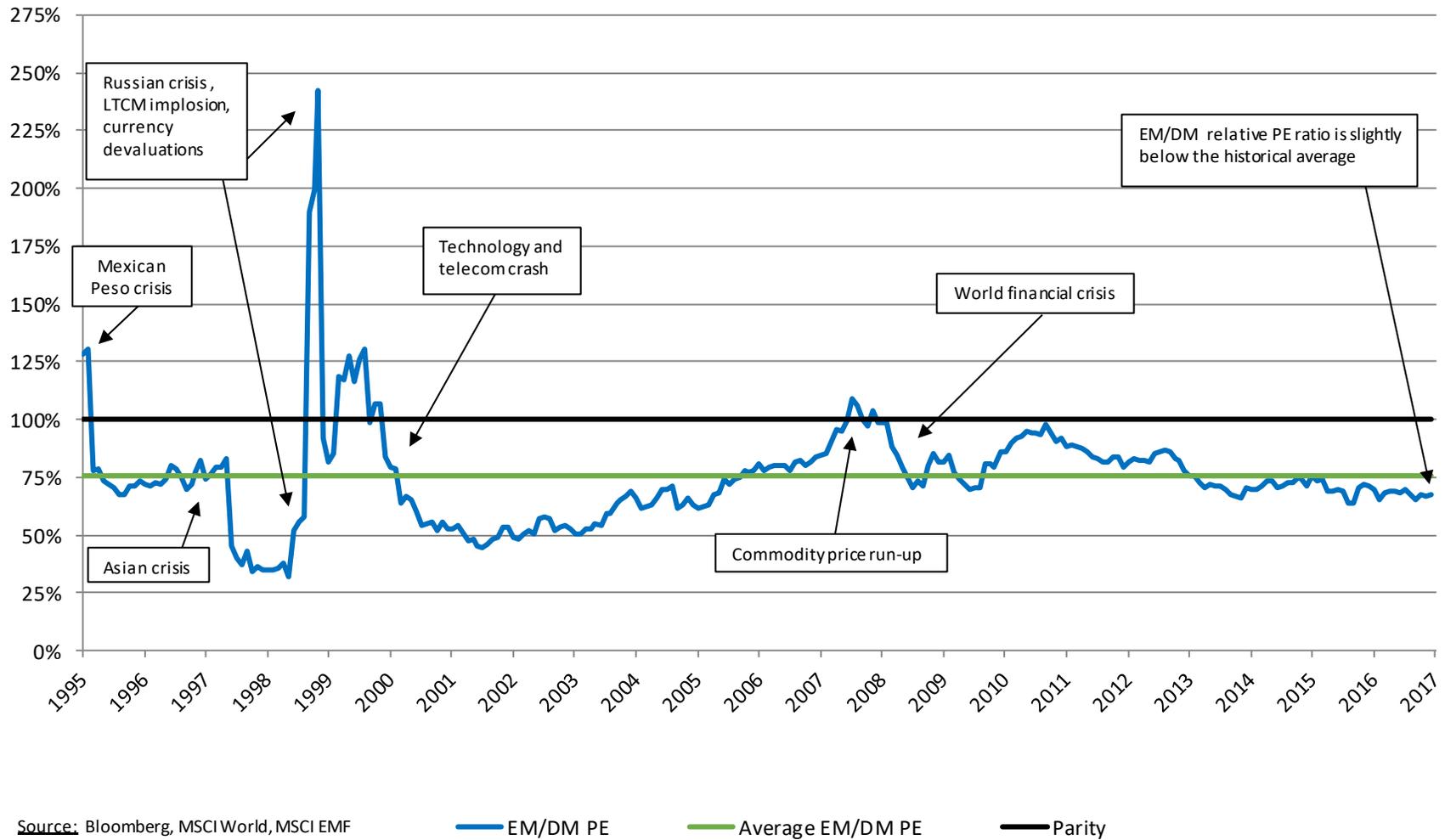
¹ P/E ratio is a Shiller P/E-10 based on 10 year real MSCI EAFE earnings over EAFE index level.

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

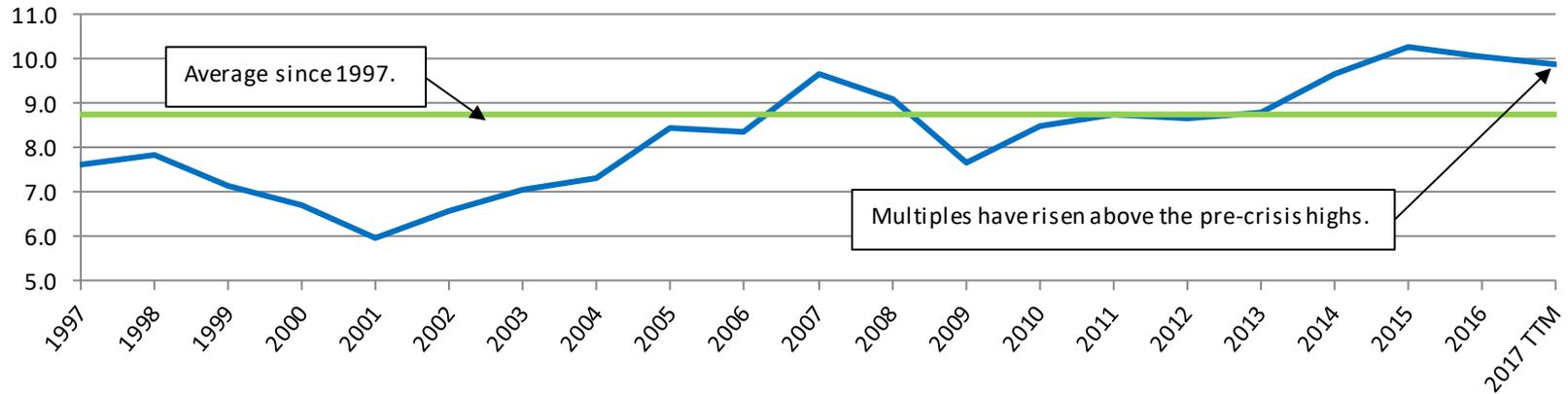
Emerging Markets PE / Developed Markets PE (100% = Parity between PE Ratios)



U.S. Private Equity Markets

Exhibit 4

Price to EBITDA Multiples Paid in LBOs

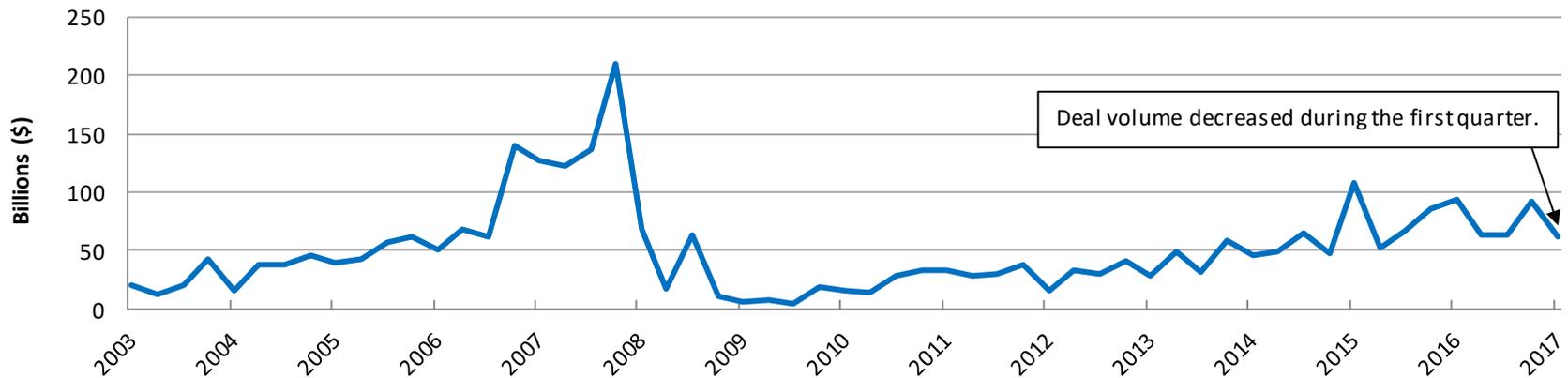


Source: S&P LCD study

(Please note different time scales)

Exhibit 5

Disclosed U.S. Quarterly Deal Volume*



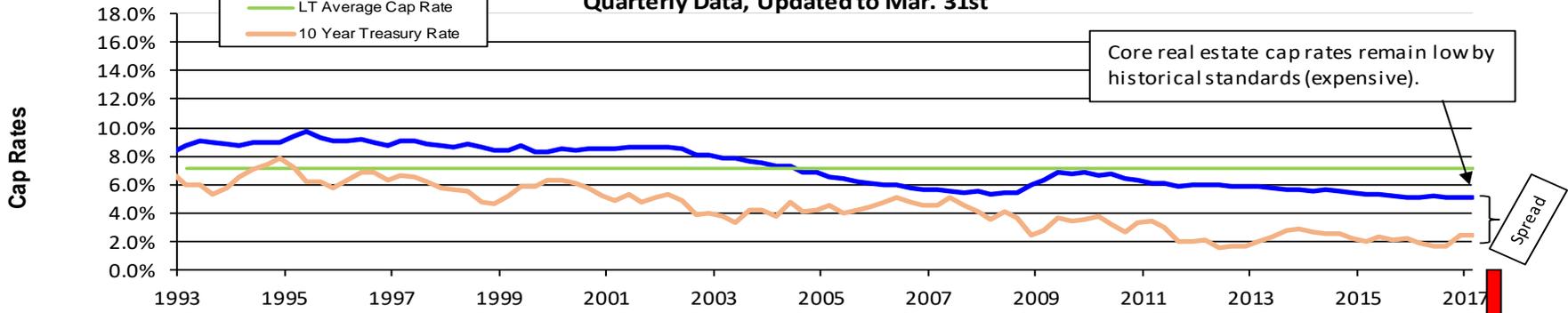
Source: Thomson Reuters Buyouts

* quarterly total deal size (both equity and debt)

Private Real Estate Markets

Exhibit 6

Current Value Cap Rates¹ Quarterly Data, Updated to Mar. 31st



Source: NCREIF

¹A 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

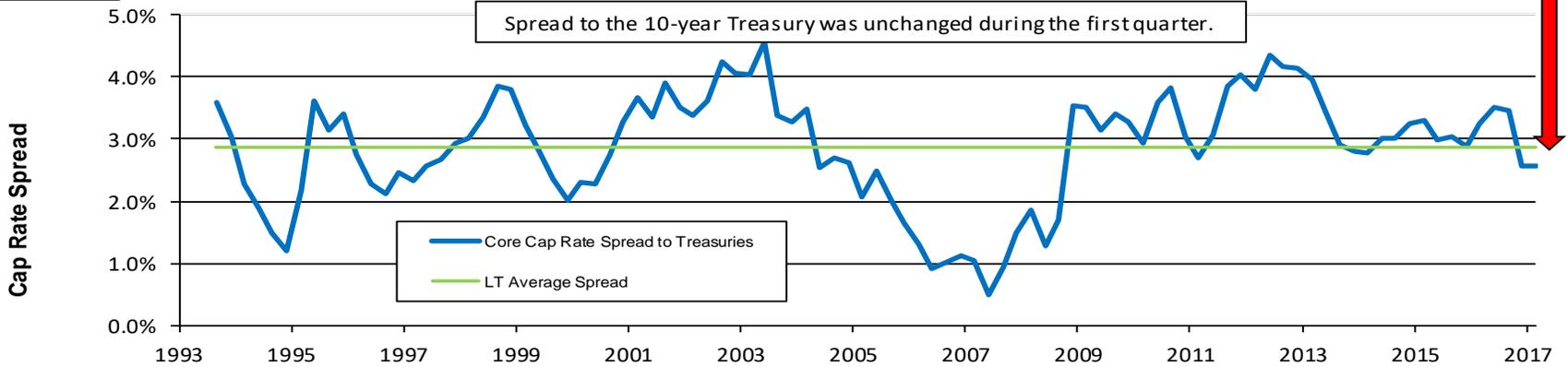
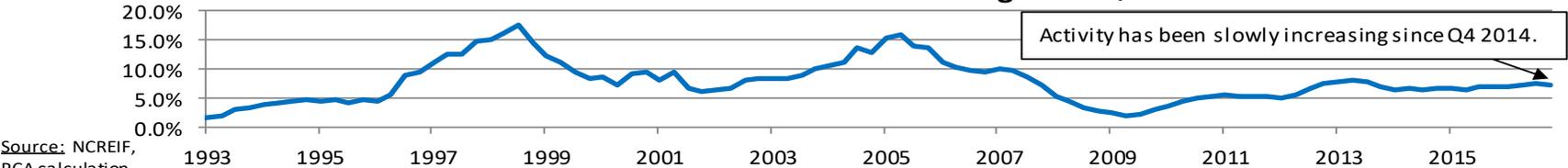


Exhibit 8

Transactions as a % of Market Value Trailing-Four Quarters

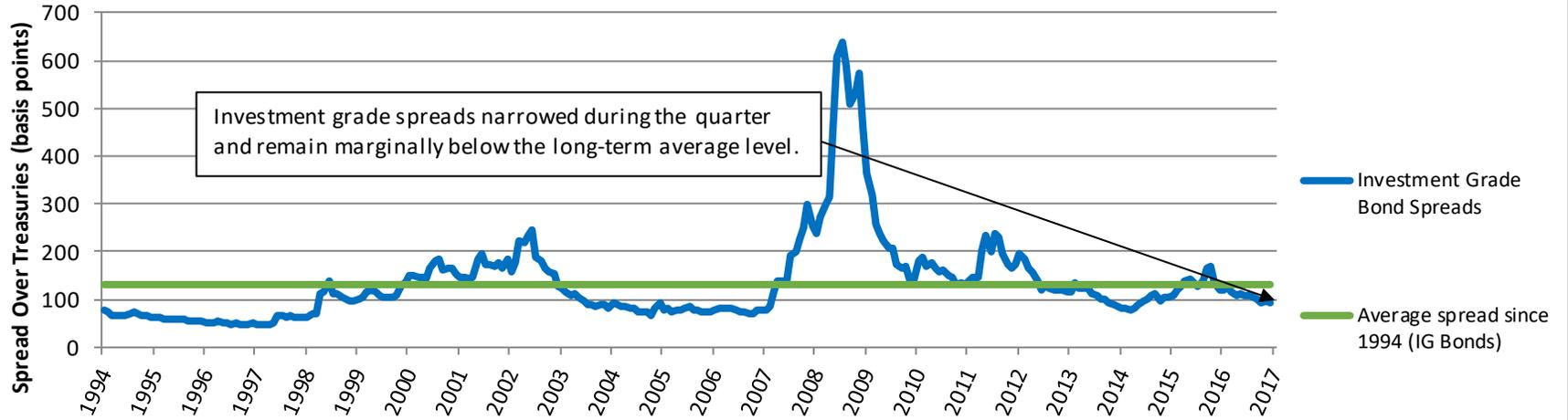


Source: NCREIF, PCA calculation

Credit Markets U.S. Fixed Income

Exhibit 9

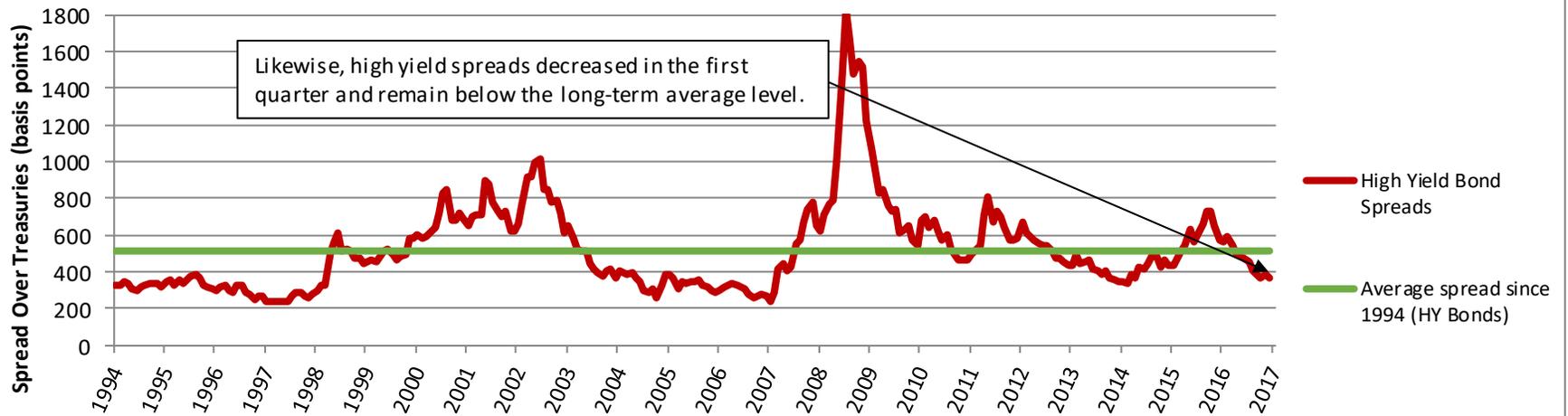
Investment Grade Corporate Bond Spreads



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

Exhibit 10

High Yield Corporate Bond Spreads

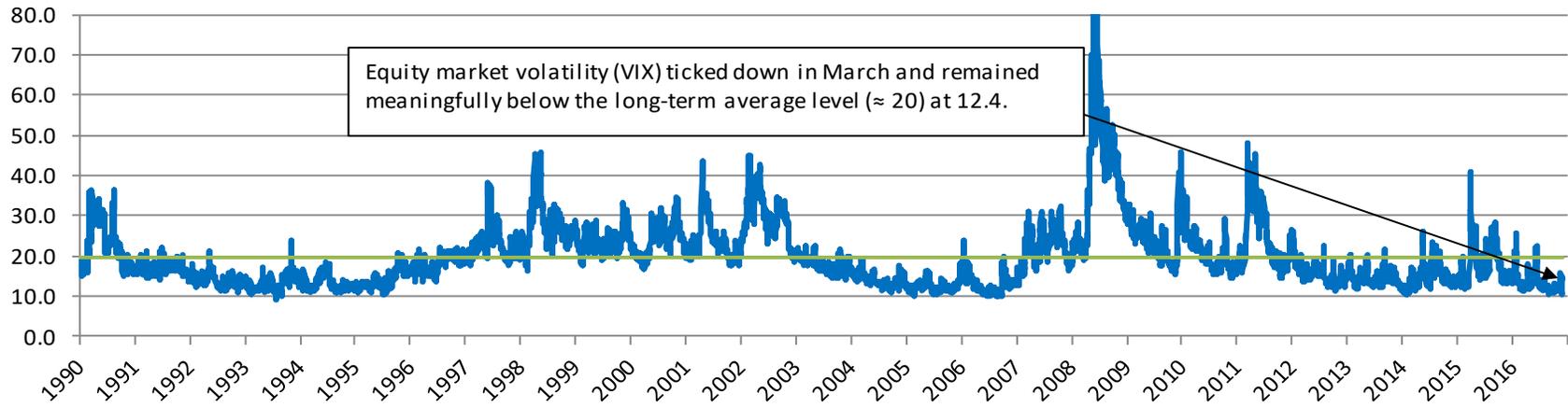


Source: LehmanLive: Barclays Capital U.S. Corporate High Yield Index.

Other Market Metrics

Exhibit 11

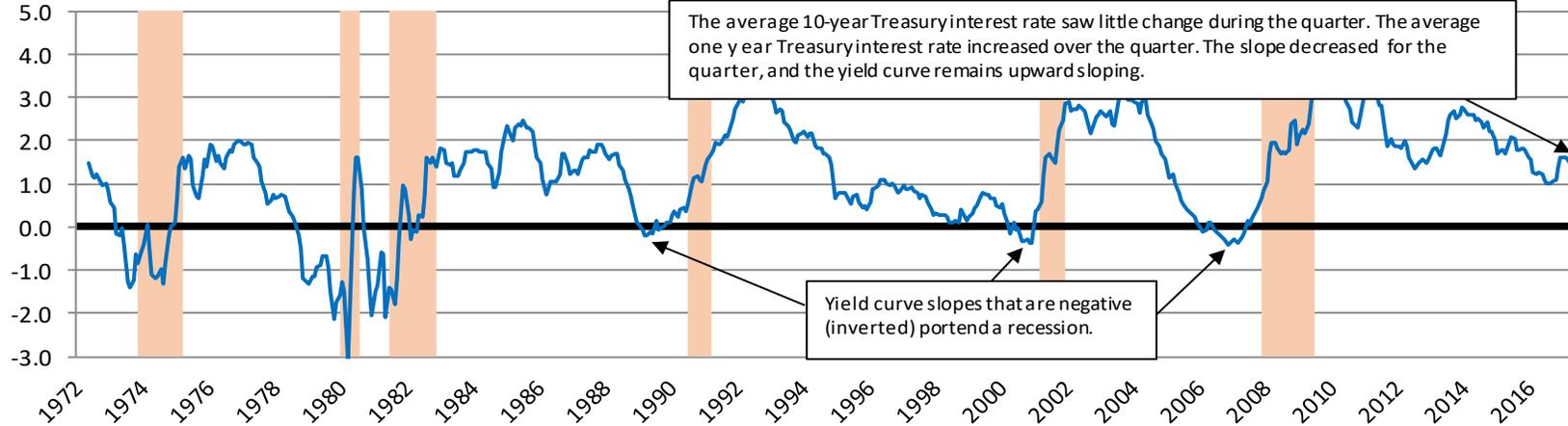
VIX - a measure of equity market fear / uncertainty



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

Exhibit 12

Yield Curve Slope



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

Recession Dating: NBER <http://www.nber.org/cycles.html>

Measures of Inflation Expectations

Exhibit 13

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



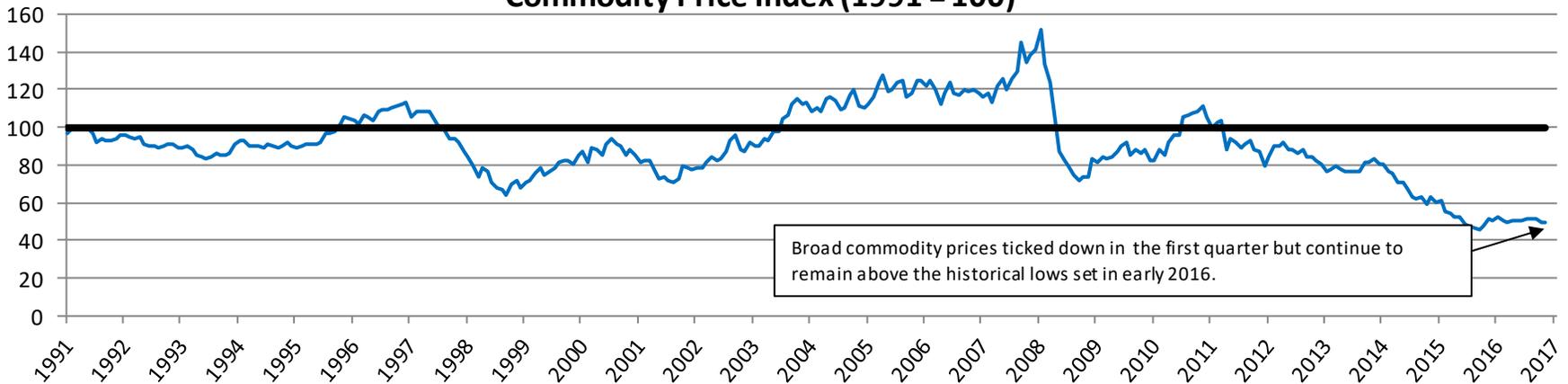
Breakeven inflation ended March at 1.97%, directly in-line with the end of December. The 10-year TIPS real-yield ticked down to 0.43%, and the nominal 10-year Treasury yield decreased to 2.40%.

Source: www.ustreas.gov

(Please note different time scales)

Exhibit 14

Inflation Adjusted Bloomberg Commodity Price Index (1991 = 100)



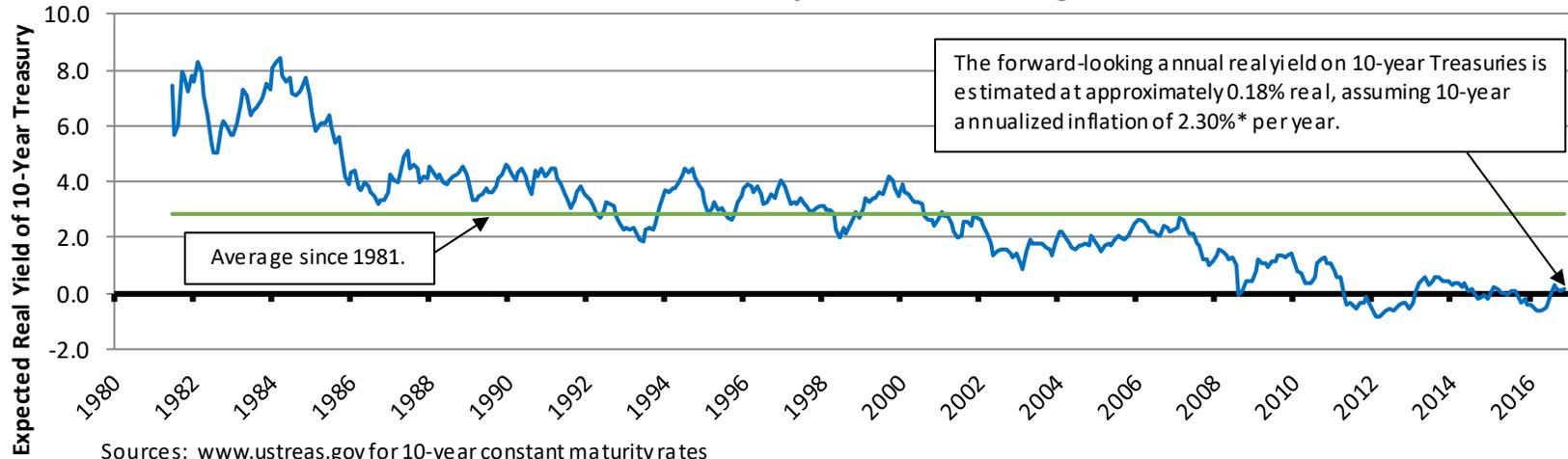
Broad commodity prices ticked down in the first quarter but continue to remain above the historical lows set in early 2016.

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

Measures of U.S. Treasury Interest Rate Risk

Exhibit 15

Estimate of 10-Year Treasury Forward-Looking Real Yield

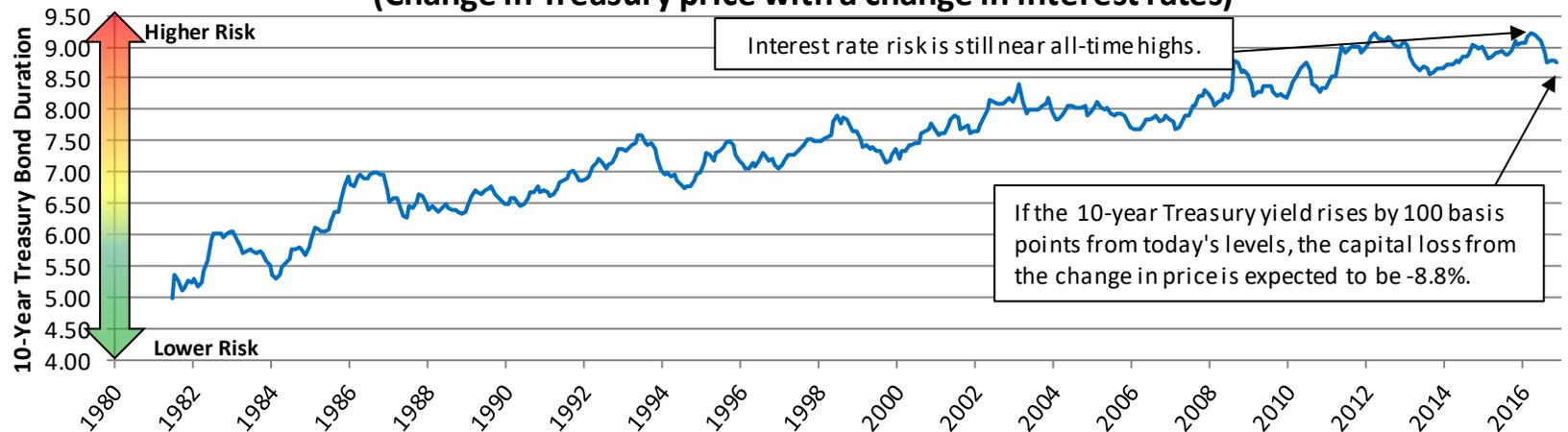


Sources: www.ustreas.gov for 10-year constant maturity rates

*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 – 1Q 2017

Overview: US GDP growth increased by 0.7% in the first quarter of 2017. GDP growth during the quarter was driven mostly by increases in business investment, exports, housing investment, and consumer spending. The unemployment rate remained at 4.7% in the first quarter. The seasonally adjusted Consumer Price Index for All Urban Consumers increased by 1.2% on an annualized basis during the quarter. Commodities decreased during the first quarter, but are still positive over the trailing 1-year period at 11.7%. Global equity returns were positive for the quarter at 7.0% (MSCI ACWI). The US dollar depreciated against the Euro, Pound, and Yen. Bond markets produced positive returns over the quarter as the BC Universal increased by 1.1%.

Economic Growth

- Real GDP increased at an annualized rate of 0.7 percent in the first quarter of 2017.
- Real GDP growth was driven by increases in business investment, exports, housing investment, and consumer spending.
- GDP growth gains were partially offset during the quarter by declines in private inventory investment, state and local government spending, and federal government spending. Also, imports, which detract from GDP, increased over the quarter.

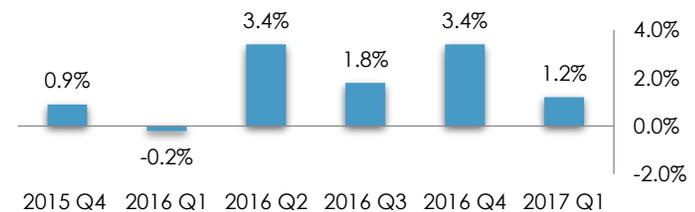
Annualized Quarterly GDP Growth



Inflation

- The Consumer Price Index for All Urban Consumers (CPI-U) increased 1.2 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 1.2 percent for the quarter on an annualized basis after seasonal adjustment.
- Over the last 12 months, core CPI-U increased 1.9 percent after seasonal adjustment.

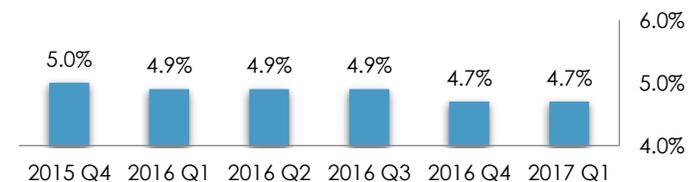
CPI-U After Seasonal Adjustment



Unemployment

- The US economy gained approximately 533,000 jobs in the quarter.
- The unemployment rate remained at 4.7% at quarter end.
- The majority of jobs gained occurred in private service providing, goods producing, and professional and business services. The primary contributors to jobs lost were in utilities, information, and retail trade

Unemployment Rate

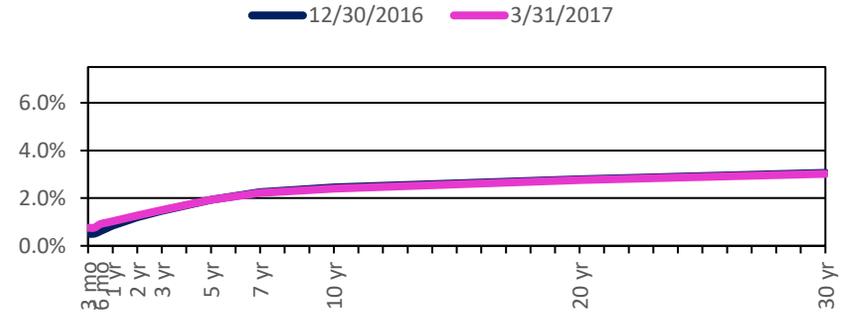


ECONOMIC & MARKET OVERVIEW – 1Q 2017

Interest Rates & US Dollar

- US Treasury yields were generally flat over the quarter.
- The Federal Reserve has increased the federal funds rate to between 0.75 percent and 1.00 percent.
- The US dollar depreciated against the Euro, Pound and Yen by 1.3%, 1.7%, and 4.8%, respectively.

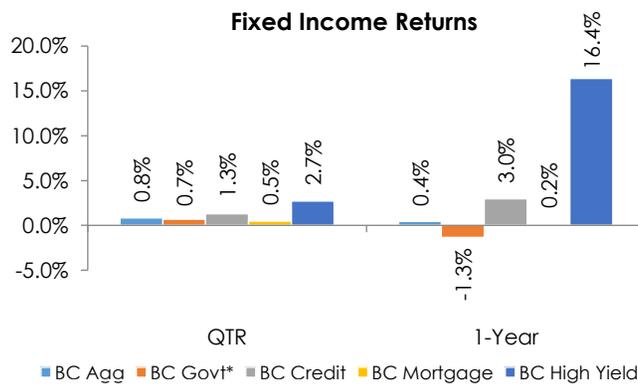
Treasury Yield Curve Changes



Source: US Treasury Department

Fixed Income

- US bonds were essentially flat over the quarter except for Credit and High Yield, returning 1.3% and 2.7%, respectively; Mortgages performed the worst at 0.5%.
- Over the trailing 1-year period, High Yield materially outperformed all other sectors producing a 16.4% return. Government trailed all other bond sectors with a return of minus (1.3%) as rates generally rose over the period.



*US Treasuries and Agencies

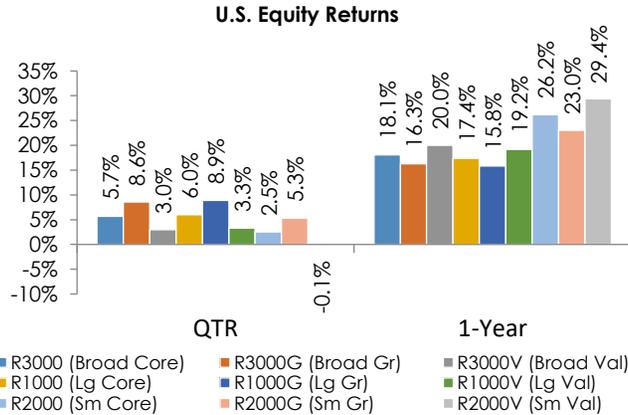
US Fixed Income Sector Performance (BC Aggregate Index)			
Sector	Weight	QTR	1 Year
Governments*	40.4%	0.8%	-1.0%
Agencies	3.6%	1.1%	1.0%
Inv. Grade Credit	25.1%	1.3%	3.3%
MBS	28.5%	0.5%	0.2%
ABS	0.5%	0.5%	1.2%
CMBS	1.8%	0.9%	0.6%

*US Treasuries and Government Related

ECONOMIC & MARKET OVERVIEW – 1Q 2017

US Equities

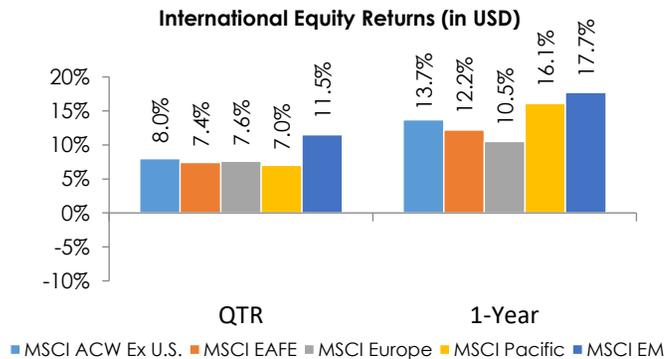
- During the quarter, growth stocks dominated value stocks across the market cap spectrum. In terms of market capitalization, large cap stocks provided the strongest returns across styles. Large cap growth stocks returned this quarter's strongest return at 8.9%, and small cap value provided the weakest result at minus (0.1%).
- During the trailing 1-year period, US equities provided positive double-digit returns, with the top performer, small cap value, returning 29.4%. Conversely, large cap growth trailed all other market caps and styles with a return of 15.8%.



US Equity Sector Performance (Russell 3000 Index)			
Sector	Weight	QTR	1 Year
Financial Services	21.1%	12.7%	14.8%
Technology	18.0%	8.9%	-3.3%
Consumer Disc.	14.0%	7.6%	6.8%
Health Care	13.3%	5.9%	5.8%
Producer Durables	11.0%	-6.8%	26.3%
Consumer Staples	7.5%	6.0%	23.1%
Energy	6.1%	4.0%	20.1%
Utilities	5.3%	3.0%	18.0%
Materials & Proc.	3.9%	2.0%	20.5%

International Equities

- International equities performed well over the quarter as each region provided positive returns. The best performer was Emerging Markets, with a return of 11.5%. The Pacific narrowly trailed all other regions with a return of 7.0%.
- Over the trailing 1-year period, international equities provided double digit returns across the board. Emerging Markets led all other regions with a return of 17.7%, while Europe underperformed all other regions with a 10.5% return.



International Equity Region Performance (in USD) (MSCI ACW Index ex US)			
Sector	Weight	QTR	1 Year
Europe Ex. UK	31.8%	8.6%	11.7%
Emerging Markets	23.5%	11.5%	17.7%
Japan	16.4%	4.6%	14.8%
United Kingdom	12.5%	5.1%	7.5%
Pacific Ex. Japan	8.9%	11.8%	18.5%
Canada	6.9%	2.7%	15.6%

ECONOMIC & MARKET OVERVIEW – 1Q 2017

Market Summary – Long-term Performance*

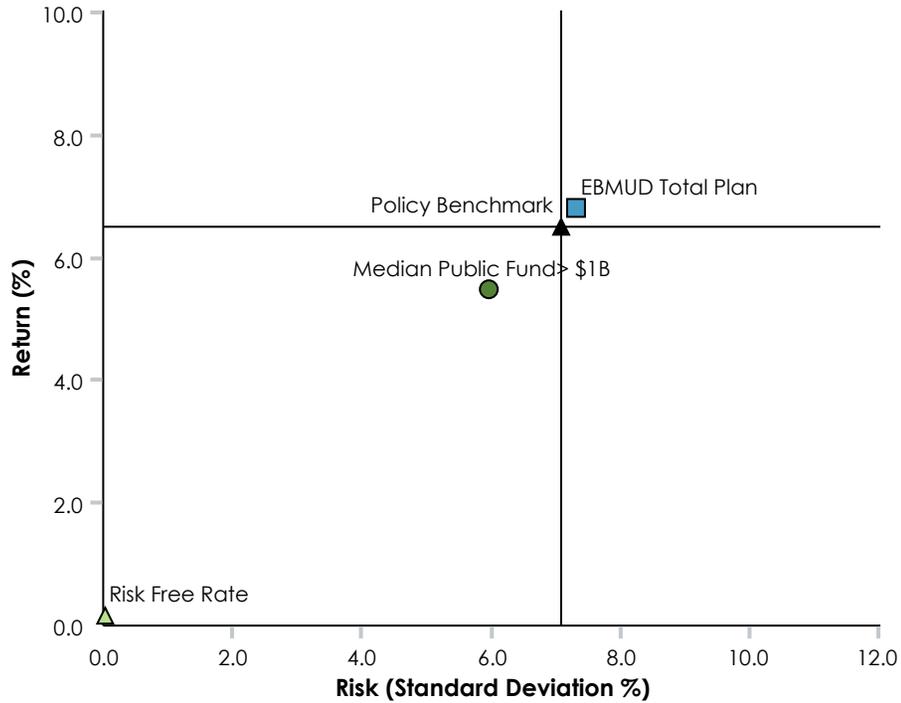
Indexes	Month	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Global Equity							
MSCI AC World Index	1.3%	7.0%	15.7%	5.7%	9.0%	4.6%	6.4%
Domestic Equity							
S&P 500	0.1%	6.1%	17.2%	10.4%	13.3%	7.5%	7.9%
Russell 3000	0.1%	5.7%	18.1%	9.8%	13.2%	7.5%	8.1%
Russell 3000 Growth	1.2%	8.6%	16.3%	10.9%	13.2%	9.0%	7.3%
Russell 3000 Value	-1.0%	3.0%	20.0%	8.6%	13.1%	5.9%	8.4%
Russell 1000	0.1%	6.0%	17.4%	10.0%	13.3%	7.6%	8.1%
Russell 1000 Growth	1.2%	8.9%	15.8%	11.3%	13.3%	9.1%	7.3%
Russell 1000 Value	-1.0%	3.3%	19.2%	8.7%	13.1%	5.9%	8.4%
Russell 2000	0.1%	2.5%	26.2%	7.2%	12.4%	7.1%	8.7%
Russell 2000 Growth	1.2%	5.3%	23.0%	6.7%	12.1%	8.1%	7.2%
Russell 2000 Value	-0.8%	-0.1%	29.4%	7.6%	12.5%	6.1%	9.7%
Russell Microcap	0.9%	0.4%	27.8%	4.9%	12.4%	5.4%	---
CBOE BXM Index	0.4%	4.0%	12.2%	6.5%	7.0%	4.6%	6.8%
International Equity							
MSCI AC World Index ex USA	2.6%	8.0%	13.7%	1.0%	4.8%	1.8%	5.4%
MSCI EAFE	2.9%	7.4%	12.2%	1.0%	6.3%	1.5%	5.0%
MSCI Pacific	4.1%	7.6%	10.5%	-0.9%	6.3%	1.3%	5.9%
MSCI Europe	0.7%	7.0%	16.1%	4.9%	6.5%	2.1%	3.5%
MSCI EM (Emerging Markets)	2.5%	11.5%	17.7%	1.5%	1.2%	3.1%	5.9%
Fixed Income							
BC Universal	0.0%	1.1%	1.9%	3.0%	2.8%	4.5%	5.6%
Global Agg. - Hedged	0.0%	0.4%	1.1%	3.6%	3.4%	4.3%	5.3%
BC Aggregate Bond	-0.1%	0.8%	0.4%	2.7%	2.3%	4.3%	5.4%
BC Government	0.0%	0.7%	-1.3%	2.0%	1.6%	3.8%	5.0%
BC Credit Bond	-0.2%	1.3%	3.0%	3.5%	3.7%	5.3%	6.1%
BC Mortgage Backed Securities	0.0%	0.5%	0.2%	2.7%	2.0%	4.2%	5.2%
BC High Yield	-0.2%	2.7%	16.4%	4.6%	6.8%	7.5%	7.1%
BC WGIL All Maturities - Hedged	-0.1%	0.7%	6.6%	5.3%	3.4%	5.0%	---
Emerging Markets Debt	0.3%	3.3%	8.6%	5.4%	5.2%	6.8%	8.8%
Real Estate							
NCREIF	0.6%	1.8%	8.3%	11.8%	12.0%	5.6%	9.3%
FTSE NAREIT All Equity Index	-1.4%	3.0%	6.3%	10.5%	10.4%	4.8%	9.3%
Commodity Index							
Bloomberg Commodity Index	-2.7%	-2.3%	8.7%	-13.9%	-9.5%	-6.2%	0.2%

* Performance is annualized for periods greater than one year.

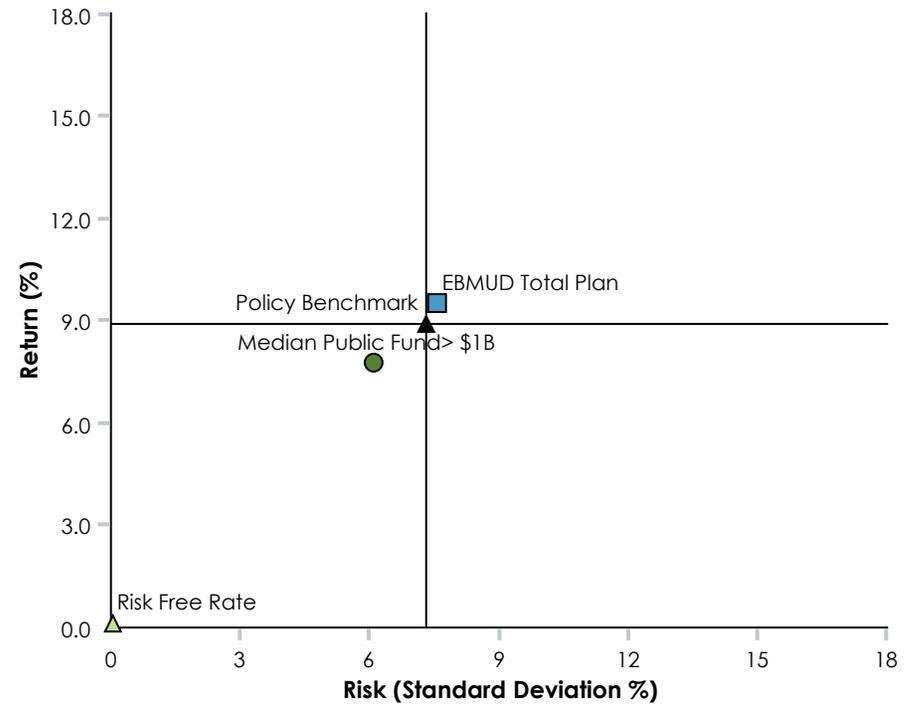
EBMUD Portfolio Review

Gross Investment Performance As of March 31, 2017

Total Fund Risk/Return Analysis - Latest 3 Years



Total Fund Risk/Return Analysis - Latest 5 Years

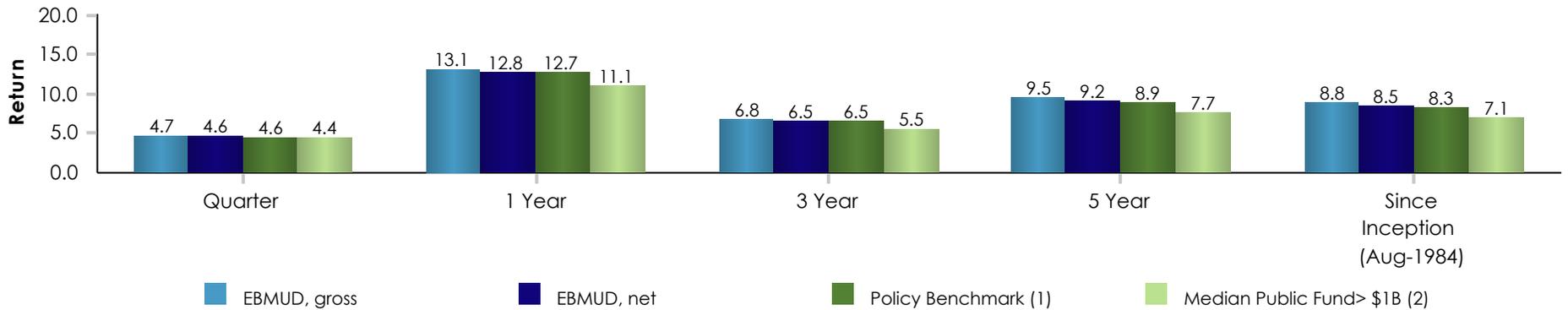


	3 Years Return	3 Years Standard Deviation	3 Years Sharpe Ratio	5 Years Return	5 Years Standard Deviation	5 Years Sharpe Ratio
EBMUD Total Plan	6.8	7.3	0.9	9.5	7.6	1.2
<i>Policy Benchmark</i>	6.5	7.1	0.9	8.9	7.3	1.2
Median Public Fund > \$1B Median	5.5	6.0	0.9	7.7	6.1	1.2

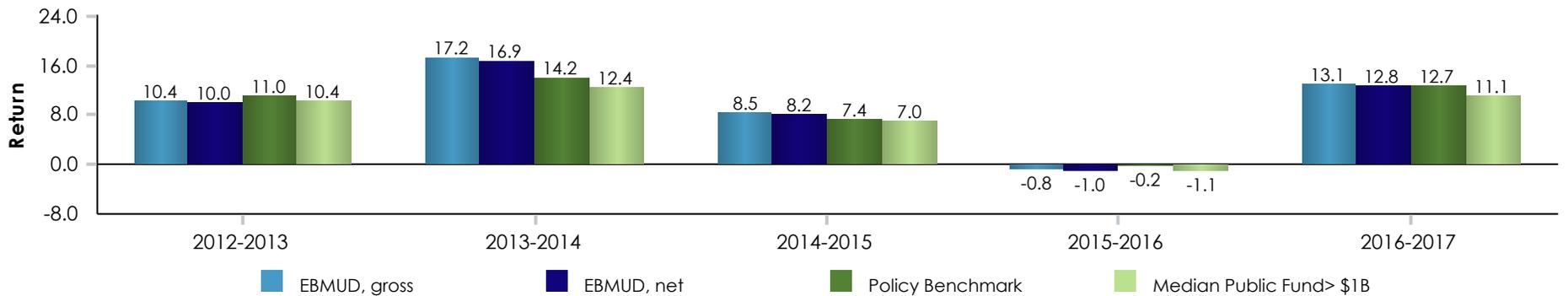
EBMUD Portfolio Relative Performance Results

As of March 31, 2017

Trailing Period Performance (annualized)



12-month Performance- As of March 31, 2017



(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 March 31, 2017

	Asset Allocation (\$'000)	Asset Allocation (%)	Target Allocation* (%)	Variance (%)	Minimum Allocation*** (%)	Maximum Allocation*** (%)
EBMUD Total Plan	1,557,484	100.0	100.0	0.0	-	-
Domestic Equity	673,443	43.2	40.0	3.2	35.0	45.0
International Equity	199,767	12.8	15.0	-2.2	12.0	18.0
Core Fixed Income	138,244	8.9	10.0	-1.1	7.0	13.0
Non-Core Fixed Income	130,867	8.4	10.0	-1.6	8.0	12.0
Covered Calls	328,428	21.1	20.0	1.1	16.0	24.0
Real Estate**	83,078	5.3	5.0	0.3	3.0	7.0
Cash	3,657	0.2	0.0	0.2	0.0	0.0

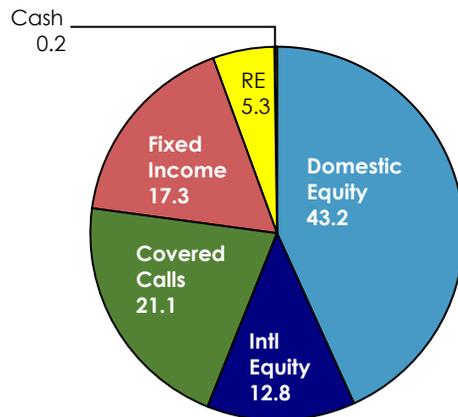
*Policy target allocations elected by the Board in September 2013, which took effect March 2014 upon the funding of the new Covered Calls asset class and Non-Core Bonds allocation within Total Fixed Income.

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

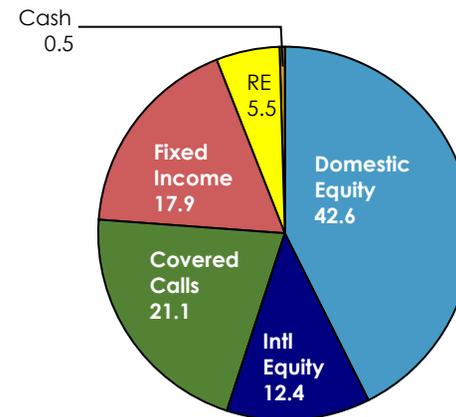
***Policy rebalancing ranges shown are for non-turbulent market periods. The Plan also has established rebalancing ranges to be in effect during turbulent market periods.

Actual Asset Allocation Comparison

March 31, 2017 : \$1,557,484,391



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



Manager Performance - Gross of Fees

As of March 31, 2017

Domestic Equity

Manager - Style	Market Value (\$000)	Quarter	1 Year	3 Year	5 Year
Large Cap Core					
Northern Trust Co. - Passive	272,305	6.0	17.5	10.0	13.3
<i>Russell 1000 Index</i>		6.0	17.4	10.0	13.3
Large Cap Growth					
Intech - Active*	78,515	9.4	14.7	11.3	13.8
T.Rowe Price - Active	78,673	11.3	20.0	12.0	14.3
<i>Russell 1000 Growth Index</i>		8.9	15.8	11.3	13.3
Large Cap Value					
Barrow Hanley - Active	179,332	3.6	19.3	8.2	12.3
<i>Russell 1000 Value Index</i>		3.3	19.2	8.7	13.1
Small Cap Growth					
Northern Trust Co. - Passive	28,329	5.4	23.6	7.1	12.5
<i>Russell 2000 Growth Index</i>		5.3	23.0	6.7	12.1
Small Cap Value					
Opus - Active**	36,288	0.0	23.2	8.3	11.0
<i>Russell 2000 Value Index</i>		-0.1	29.4	7.6	12.5

*On watch since 12/2014

**On watch since 12/2012

- During the latest three-month period ending March 31, 2017, all six of EBMUD's 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 produced material outperformance/underperformance relative to their respective benchmarks over various trailing periods ending 3/31/2017. The following address the drivers of these excess results.
 - Intech, one of EBMUD's large cap growth managers, **trailed** the Russell 1000 Growth Index over the latest 1-year period by (1.1%). The portfolio's underperformance is a demonstration of "negative trending," which, according to Intech, occurs when the proportion of the overweighted stocks with a positive relative return is below that of the underweights.
 - T. Rowe Price, EBMUD's other large cap growth managers, **exceeded** the Russell 1000 Growth Index over the latest quarter, 1-, and 5-year periods by 2.4%, 4.2%, and 1.0%, respectively. Stock selection in Consumer Discretionary drove relative outperformance during these periods.
 - Opus, EBMUD's active small cap value manager, **underperformed** the Russell 2000 Value Index over the trailing 1- and 5-year periods by (6.2%) and (1.5%), 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 stock selection. Stock selection in Technology and Materials, as well as frictional cash balances, were significant detractors for the year. Over the 5-year period, persistent low-quality factors dominated the markets and challenged the portfolio. Stock selection accounted for the majority of the portfolio's relative 5-year underperformance, most notably in Financials, Consumer Discretionary, and Technology.

Manager Performance - Gross of Fees

As of March 31, 2017

International Equity

Manager - Style	Market Value (\$000)	Quarter	1 Year	3 Year	5 Year
Fisher Investments - Active	103,879	8.8	13.8	2.5	5.2
Franklin Templeton - Active*	95,888	6.9	12.7	-1.5	5.6
<i>MSCI ACWI x US (blend)**</i>		<i>8.0</i>	<i>13.7</i>	<i>1.0</i>	<i>4.8</i>

- During the latest three-month period ending March 31, 2017, 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 3/31/2017. The following addresses the drivers of these excess returns.
 - Fisher **outperformed** the MSCI ACWI x U.S. (blend) Index over the trailing 3-year period by 1.5%. The portfolio's overweight to and selection within Information Technology was the primary driver of relative outperformance.
 - The Franklin Templeton account **trailed** the MSCI ACWI x U.S. (blend) Index over the quarter, 1-, and 3-year periods by (1.1%), (1.0%), and (2.5%), respectively. An overweight to Energy and poor stock selection in Consumer Staples and Real Estate detracted from results over the quarter. Relative 1-year results were dampened by the portfolio's overweight to Health Care and Financials, as well as stock selection in Industrials and Consumer Discretionary. For the 3-year period, overall stock selection, notably in Industrials and Financials, detracted from results.

*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 March 31, 2017

Covered Calls

Manager - Style	Market Value (\$000)	Quarter	1 Year	3 Year	5 Year
Parametric BXM	110,679	4.0	13.3	8.9	-
Parametric Delta Shift	115,090	4.9	16.5	10.5	-
Van Hulzen	102,659	3.6	9.8	6.1	-
CBOE BXM		4.0	12.2	6.5	-

- Over the latest quarter ending March 31, 2017, two of EBMUD's three Covered Calls mandates matched or exceeded the CBOE BXM Index.
 - The Parametric BXM strategy **outperformed** the CBOE BXM Index over the latest 1- and 3-year periods by 1.1% and 2.4%, respectively. Outperformance can be attributed to the strategy diversifying option expiration dates to reduce path dependency versus the passive index. The long-term spread between implied and realized volatilities remain attractive.
 - The Parametric Delta Shift strategy **exceeded** the benchmark by 4.3% and 4.0% over the recent 1- and 3-year periods, respectively. The strategy utilizes a systematic rules-based approach which is designed to reduce the potential for outsized losses during sharply rising equity markets. This systematic approach was beneficial to the portfolio during the post US election period.
 - Van Hulzen, **trailed** the CBOE BXM Index over the latest 1-year period by (2.4%) as the recent bull market environment has challenged the portfolio which typically performs better during down periods.

Manager Performance - Gross of Fees

As of March 31, 2017

Total Fixed Income

Manager - Style	Market Value (\$000)	Quarter	1 Year	3 Year	5 Year
Core Fixed Income					
CS McKee - Active	138,244	0.8	0.6	3.0	2.7
<i>Bloomberg Barclays U.S. Aggregate Index</i>		0.8	0.4	2.7	2.3
Non- Core Fixed Income					
Western Asset - Short Duration - Active	66,311	0.7	1.5	1.3	-
<i>Bloomberg Barclays 1-3 Year Gov/Credit Index</i>		0.4	0.7	1.0	-
Western Asset - Short-Term HY - Active*	30,746	2.0	15.3	-0.7	-
<i>Bloomberg BC 1-5 Yr US High Yield Cash Pay (net)</i>		2.4	16.4	3.7	-
Western Asset - Bank Loans - Active**	33,811	1.1	11.2	2.5	-
<i>S&P/LSTA Performing Loans Index</i>		1.2	9.9	4.0	-

*On watch since 4/2016

** On watch since 4/2016

- Over the latest three-month period ending March 31, 2017, two of EBMUD's four Fixed Income mandates matched or outperformed their respective benchmarks.
- Two of EBMUD's Fixed Income managers produced material outperformance/underperformance relative to their respective benchmarks over various trailing time periods ending 3/31/2017. The following items address the primary drivers of these excess returns.
 - The WAMCO Short-Term High Yield portfolio **underperformed** the BC 1-5 Year U.S. High Yield Cash Pay Index by (1.1%) and (4.4%) over the recent 1- and 3-year periods, respectively. Note, the composite portfolio is not measured against a benchmark and accounts that comprise the composite are measured on an absolute basis. Issue selection primarily detracted from results over both periods due in large part to a number of default positions. Positioning in Energy, which was the worst performing sub-sector, also dampened trailing 3-year returns.
 - The WAMCO Bank Loans portfolio **outperformed** the S&P/LSTA Performing Loans Index over the 1-year period by 1.3%. The portfolio's opportunistic exposure to high yield bonds and quality positioning (overweight to CCC rated positions) aided the period's performance. Over the trailing 3-year period the portfolio **underperformed** the benchmark by (1.5%) as an overweight to Energy detracted from results.

Manager Performance - Gross of Fees

As of March 31, 2017

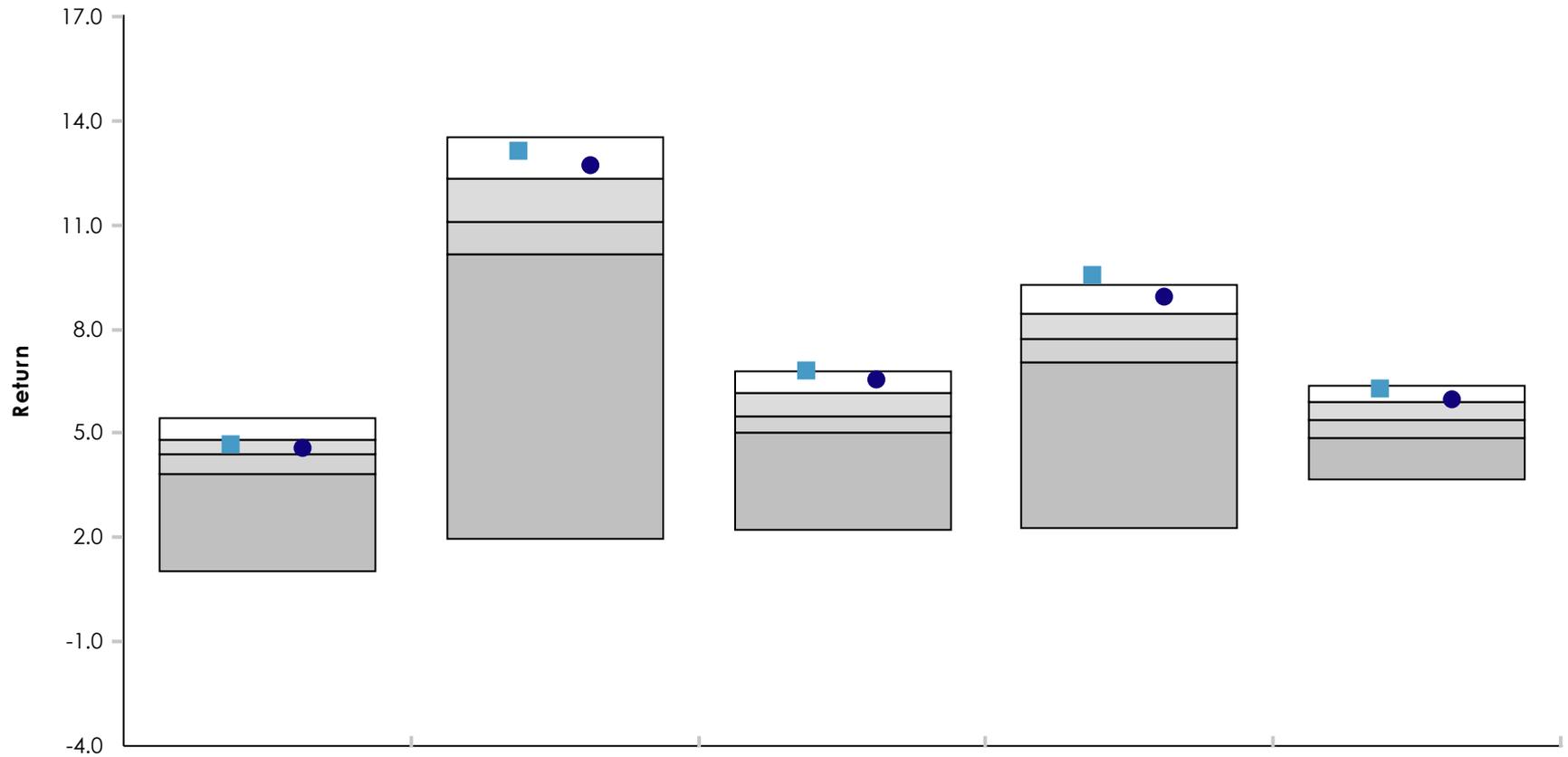
Real Estate

Manager - Style	Market Value (\$000)	Quarter	1 Year	3 Year	5 Year
RREEF America II (Lag)*	33,959	2.7	9.1	12.9	13.2
<i>NCREIF NPI (Lag)*</i>		<i>1.7</i>	<i>8.0</i>	<i>11.0</i>	<i>10.9</i>
CenterSquare	49,119	1.1	3.8	11.8	11.1
<i>FTSE NAREIT Equity REIT Index</i>		<i>1.2</i>	<i>3.6</i>	<i>10.3</i>	<i>10.0</i>

*Results are lagged one quarter.

- East Bay's Real Estate manager, RREEF II, outperformed its benchmark, the NCREIF Property Index, during each period measured. During the lagged quarter, RREEF America REIT II operations generated an income return of 1.1% before fees, remaining steady from the previous quarter. Same store net operating income for the 1-year period increased by 6% from the prior year. Occupancy at the end of the quarter remained at 92 percent overall.
- CenterSquare, East Bay's REIT manager, modestly 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, Specialty REITs, which the portfolio is underweight, posted the strongest gains over the quarter. The Retail sector was the worst performing sector for the period and the portfolio held a neutral position.

**Plan Sponsor Peer Group Analysis
As of March 31, 2017**



	1 Quarter	1 Year	3 Years	5 Years	10 Years
■ EBMUD Total Plan	4.7 (33)	13.1 (10)	6.8 (3)	9.5 (1)	6.3 (11)
● Policy Benchmark	4.6 (38)	12.7 (20)	6.5 (12)	8.9 (12)	6.0 (22)
5th Percentile	5.4	13.5	6.8	9.3	6.4
1st Quartile	4.8	12.4	6.2	8.4	5.9
Median	4.4	11.1	5.5	7.7	5.4
3rd Quartile	3.8	10.2	5.0	7.0	4.9
95th Percentile	1.0	2.0	2.2	2.3	3.7

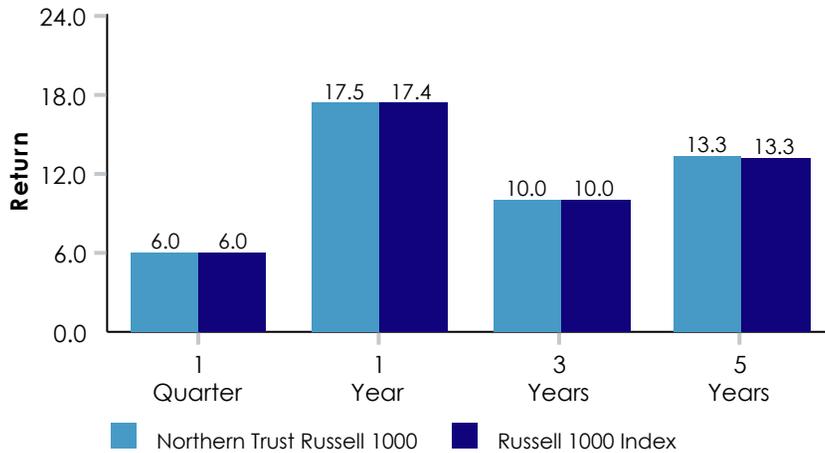
Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Northern Trust Russell 1000 - gross of fees

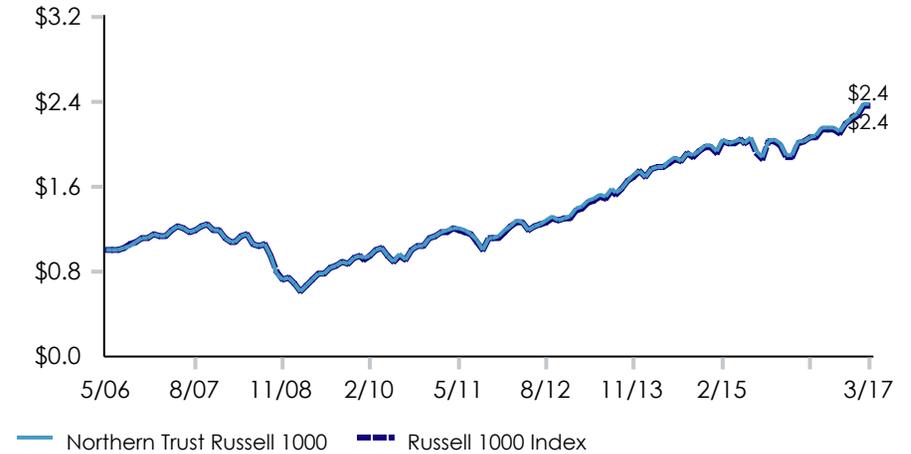
As of March 31, 2017

	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	0.55	0.13	1.00	100.22	99.94	06/01/2006
Russell 1000 Index	0.00	1.00	-	0.54	0.00	1.00	100.00	100.00	06/01/2006

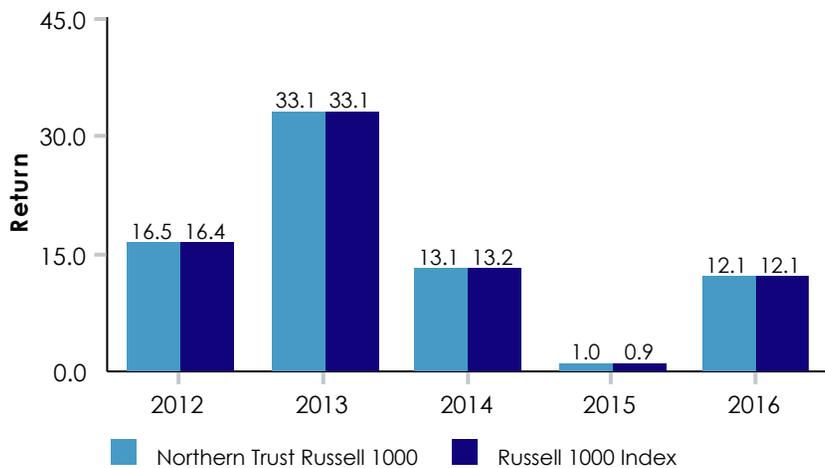
Trailing Period Performance



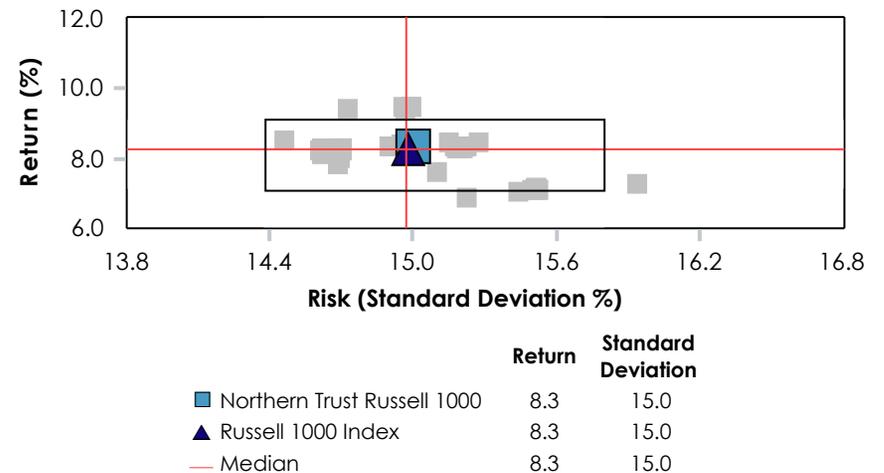
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

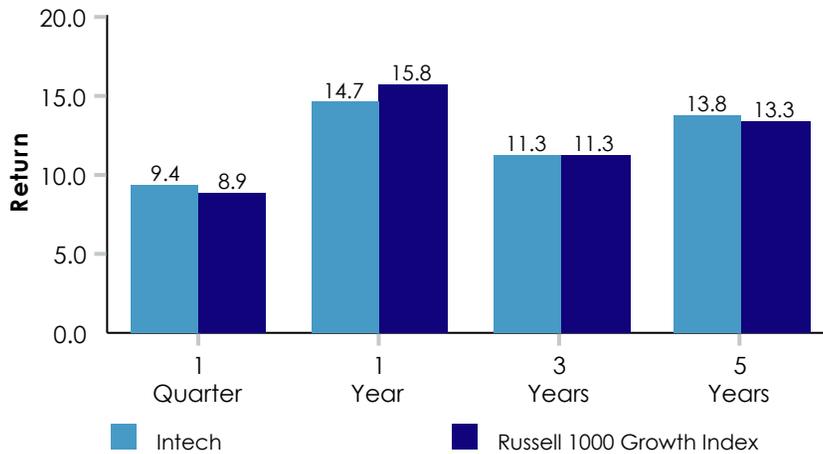


Intech - gross of fees

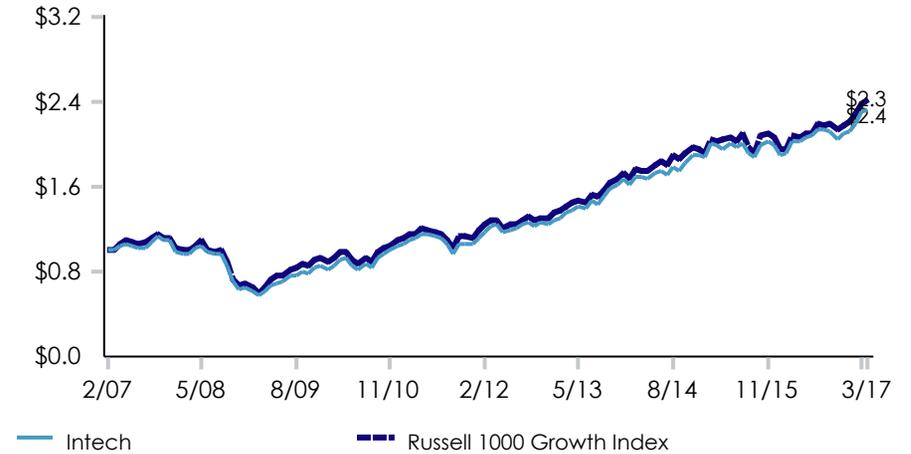
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Intech	-0.04	0.97	-0.13	0.59	2.95	0.96	96.56	96.75	03/01/2007
Russell 1000 Growth Index	0.00	1.00	-	0.60	0.00	1.00	100.00	100.00	03/01/2007

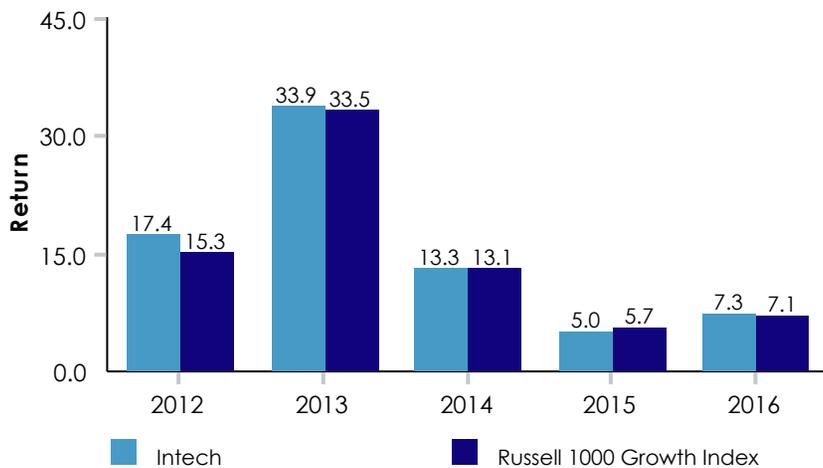
Trailing Period Performance



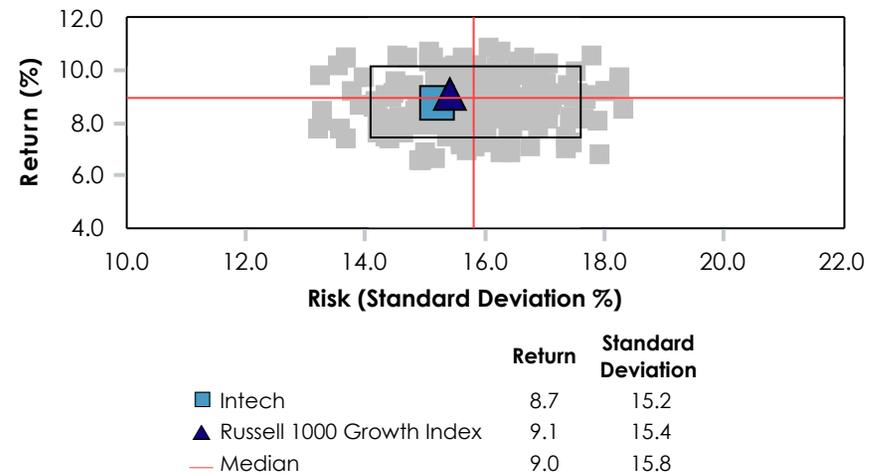
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

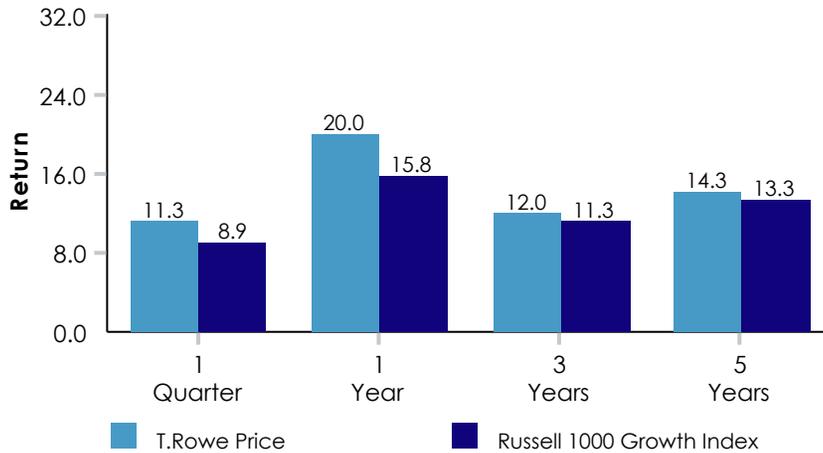


T.Rowe Price - gross of fees

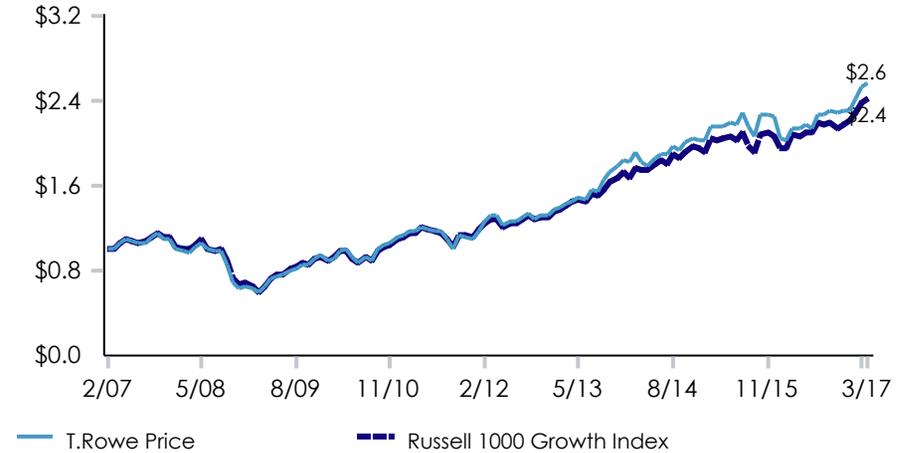
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
T.Rowe Price	0.27	1.06	0.23	0.61	3.69	0.95	106.09	104.51	03/01/2007
Russell 1000 Growth Index	0.00	1.00	-	0.60	0.00	1.00	100.00	100.00	03/01/2007

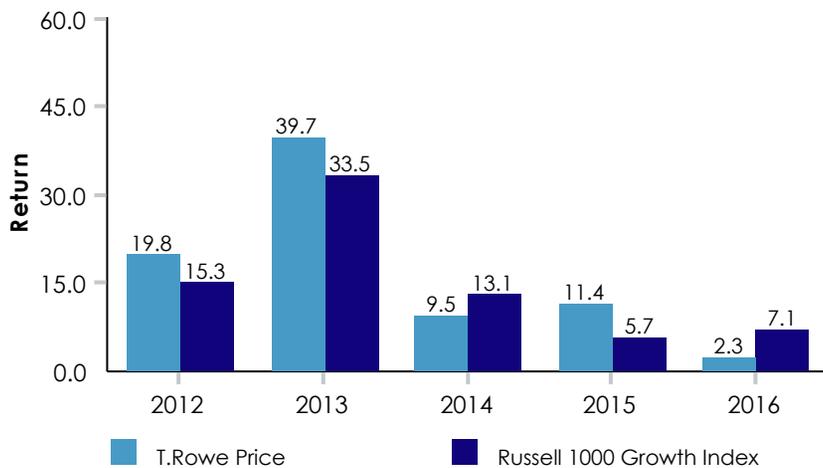
Trailing Period Performance



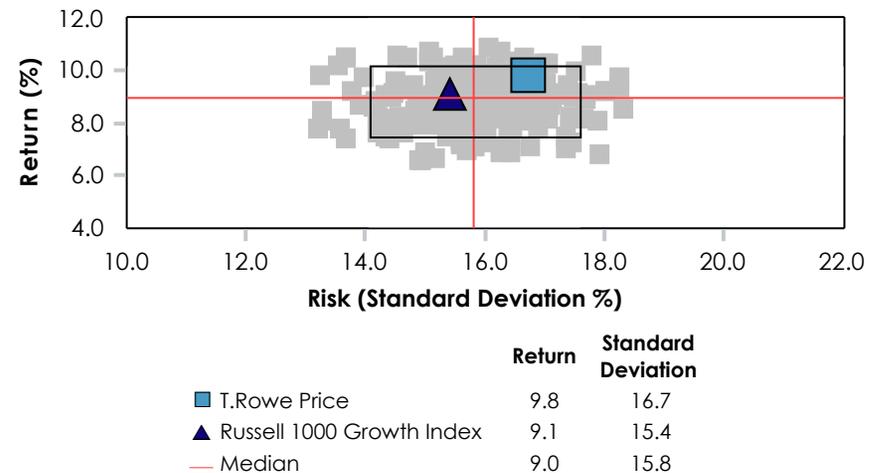
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

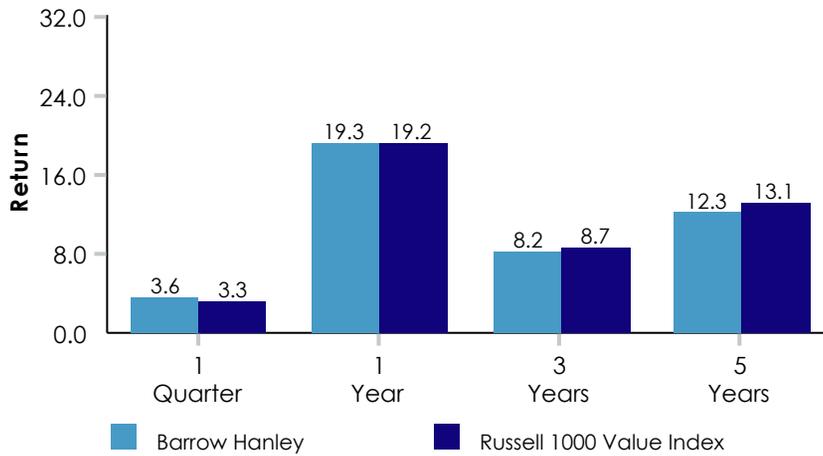


Barrow Hanley - gross of fees

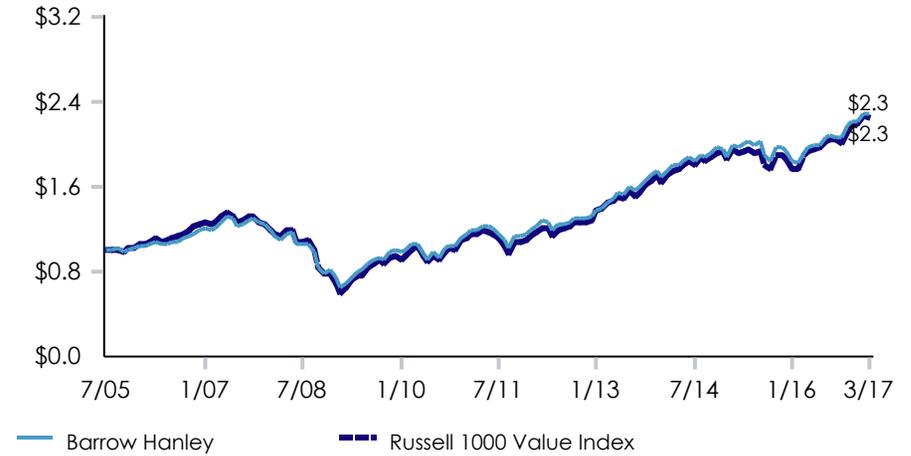
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Barrow Hanley	0.57	0.93	0.01	0.48	3.28	0.95	95.68	93.30	08/01/2005
Russell 1000 Value Index	0.00	1.00	-	0.46	0.00	1.00	100.00	100.00	08/01/2005

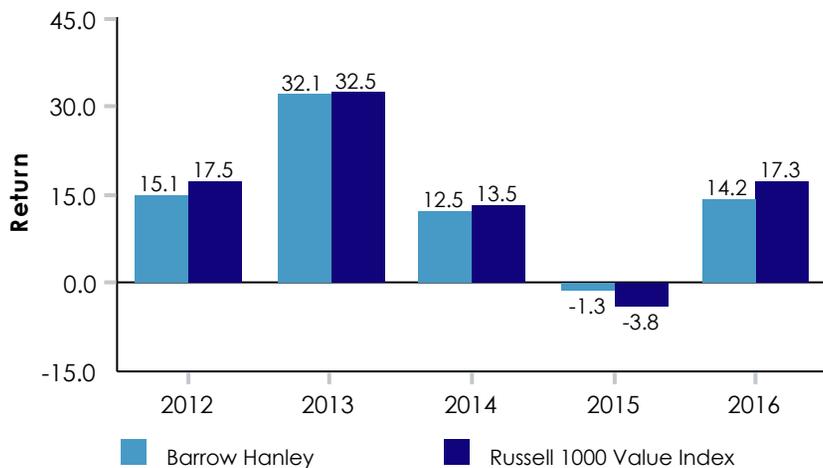
Trailing Period Performance



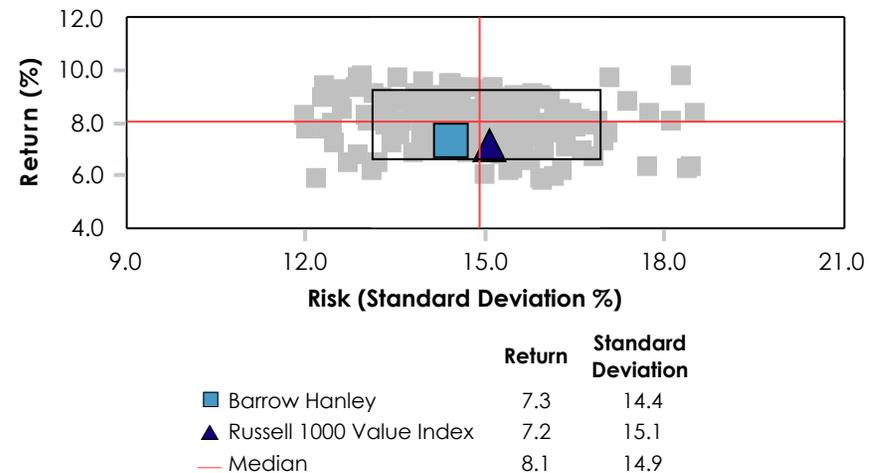
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

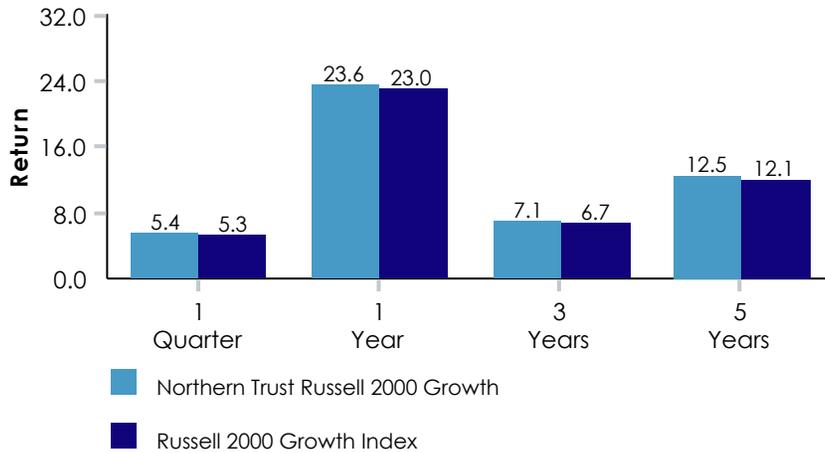


Northern Trust Russell 2000 Growth - gross of fees

As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Northern Trust Russell 2000 Growth	-0.16	0.99	-0.16	0.89	1.92	0.99	98.74	99.25	12/01/2008
Russell 2000 Growth Index	0.00	1.00	-	0.90	0.00	1.00	100.00	100.00	12/01/2008

Trailing Period Performance



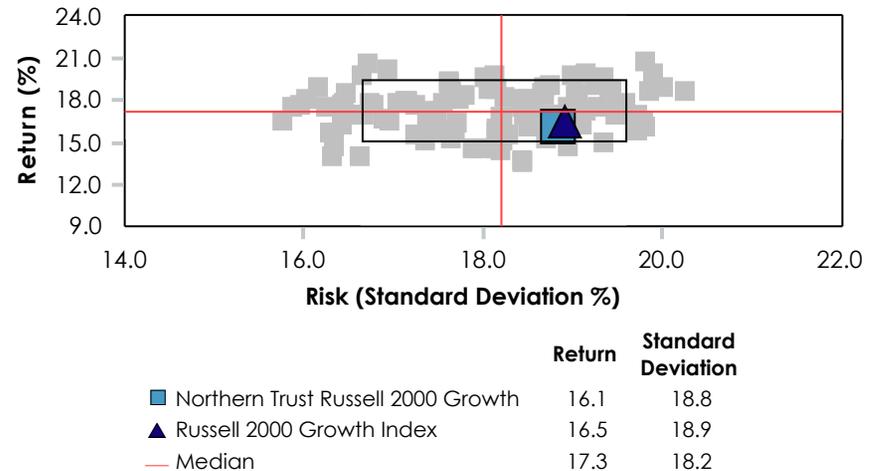
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

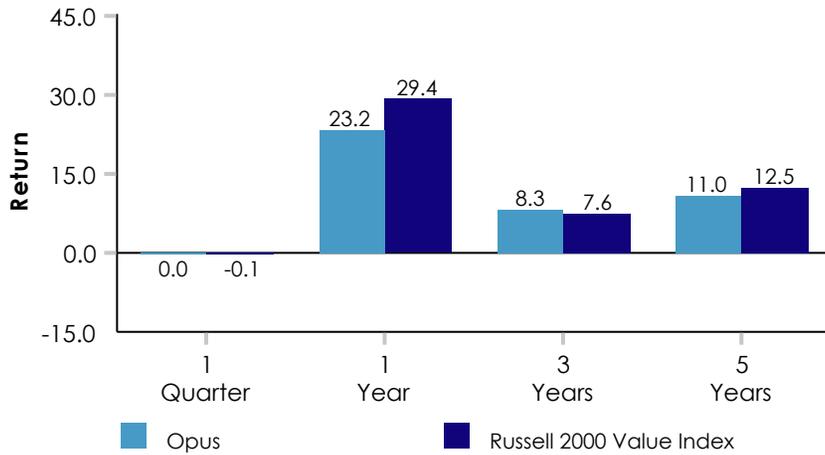


Opus - gross of fees

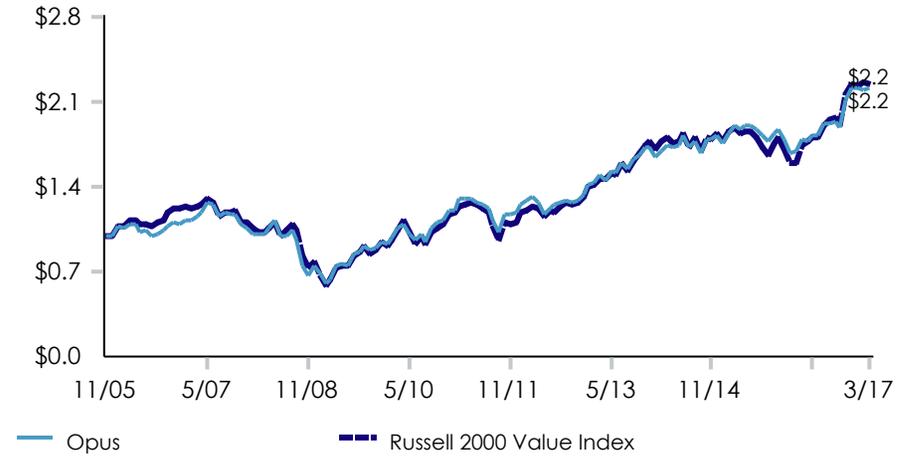
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Opus	0.46	0.92	-0.04	0.41	5.87	0.91	91.74	89.44	12/01/2005
Russell 2000 Value Index	0.00	1.00	-	0.41	0.00	1.00	100.00	100.00	12/01/2005

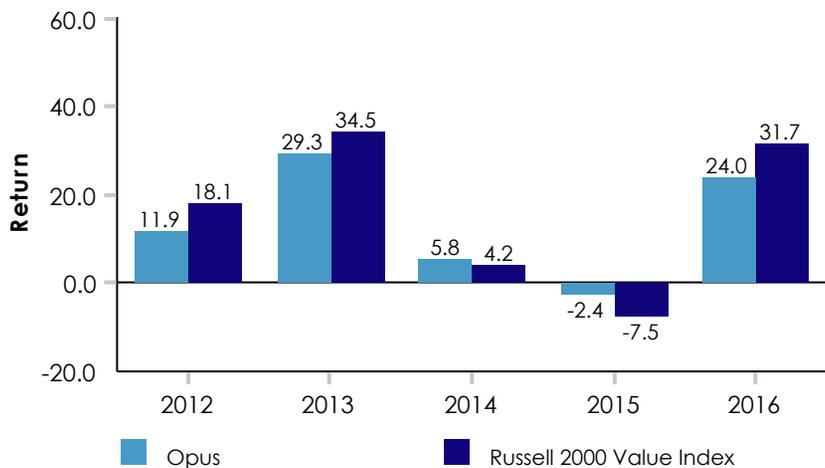
Trailing Period Performance



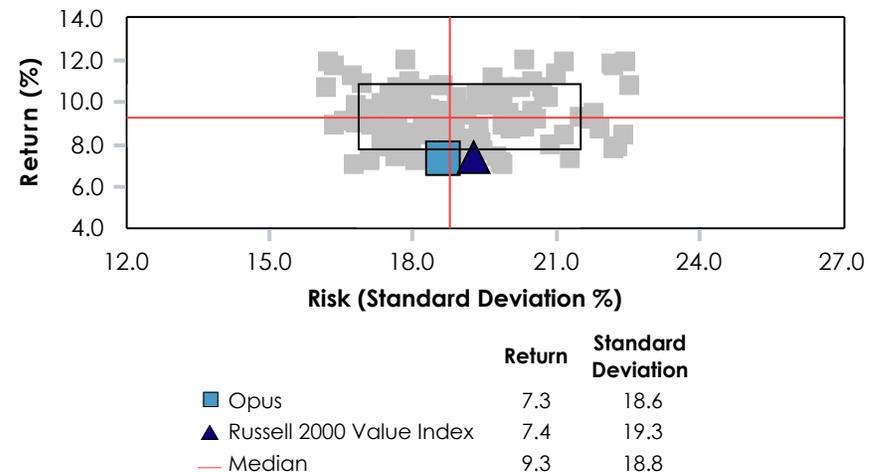
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

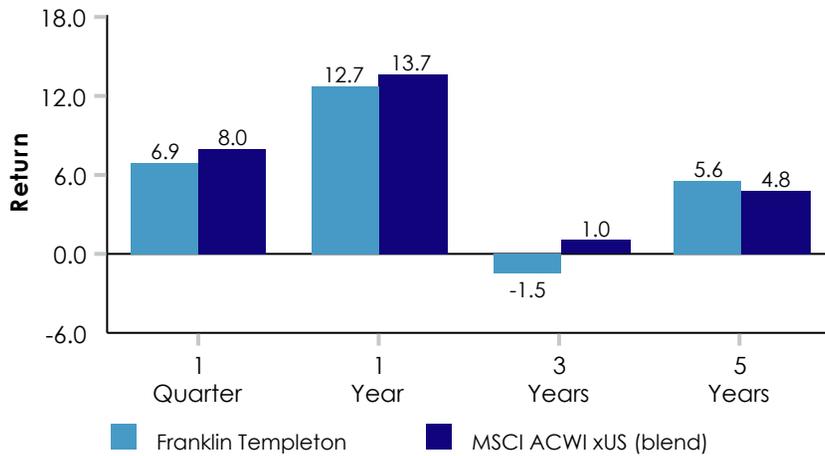


Franklin Templeton - gross of fees

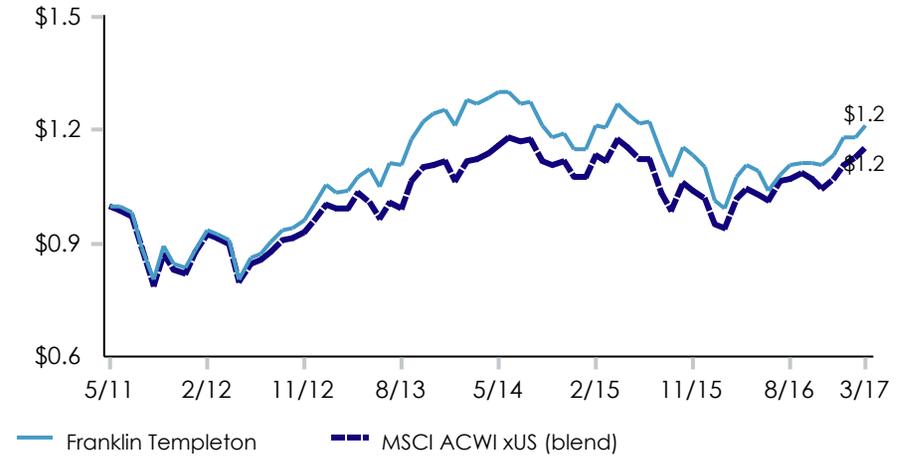
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Franklin Templeton	0.89	1.00	0.24	0.29	3.76	0.94	102.66	98.21	06/01/2011
MSCI ACWI xUS (blend)	0.00	1.00	-	0.24	0.00	1.00	100.00	100.00	06/01/2011

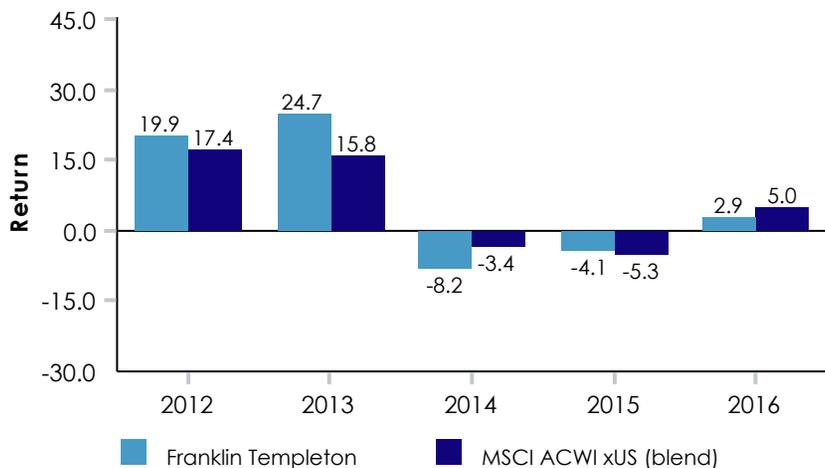
Trailing Period Performance



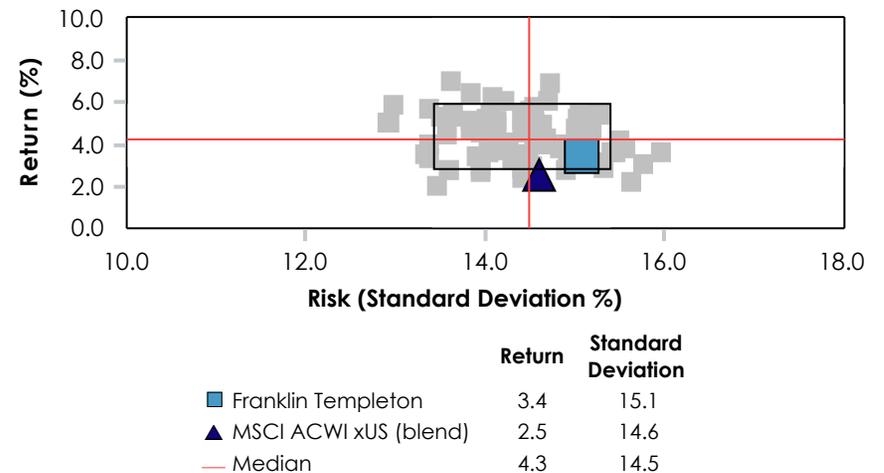
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

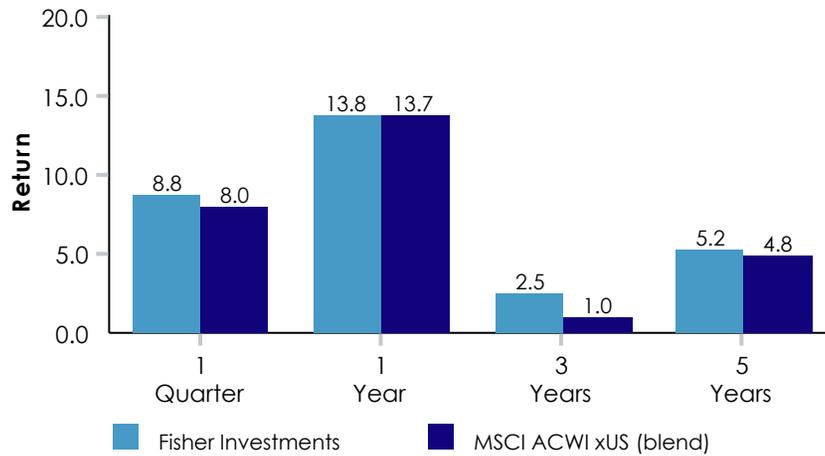


Fisher Investments - gross of fees

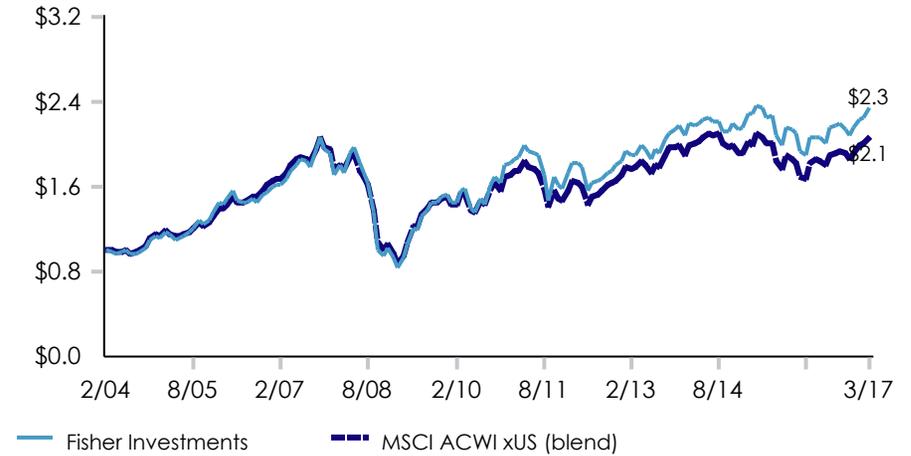
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Fisher Investments	0.54	1.13	0.35	0.37	4.11	0.97	112.77	109.92	03/01/2004
MSCI ACWI xUS (blend)	0.00	1.00	-	0.34	0.00	1.00	100.00	100.00	03/01/2004

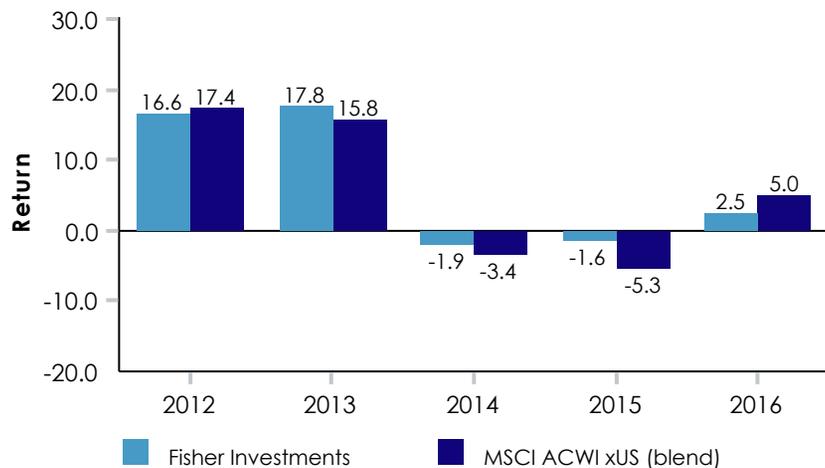
Trailing Period Performance



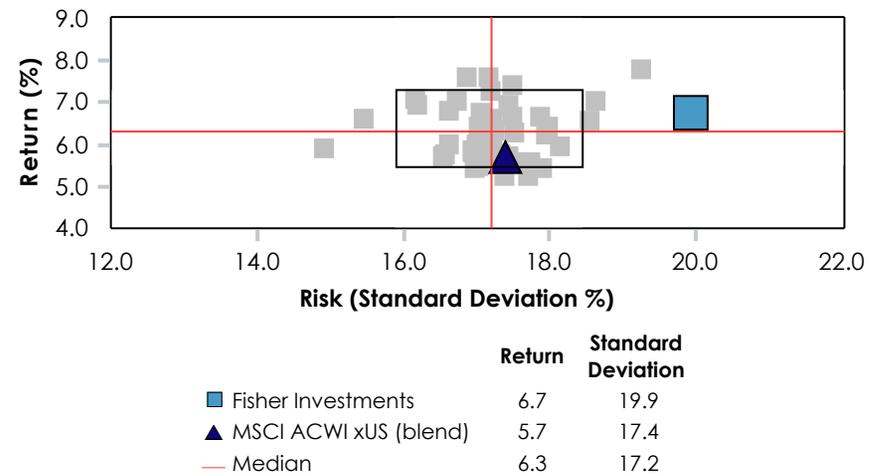
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

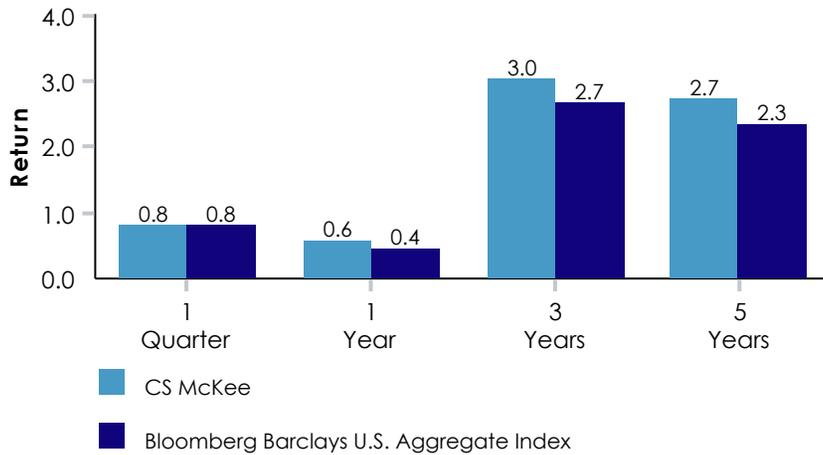


CS McKee - gross of fees

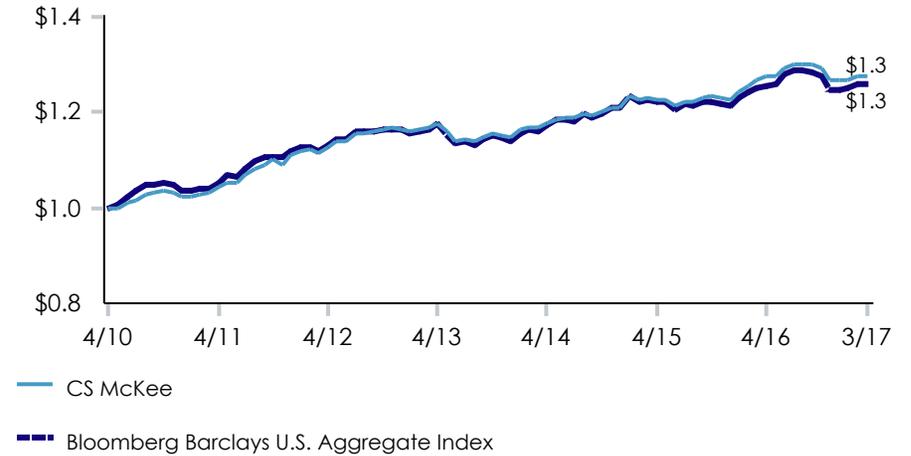
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
CS McKee	0.62	0.88	0.24	1.32	0.88	0.90	98.29	86.77	05/01/2010
Bloomberg Barclays U.S. Aggregate Index	0.00	1.00	-	1.15	0.00	1.00	100.00	100.00	05/01/2010

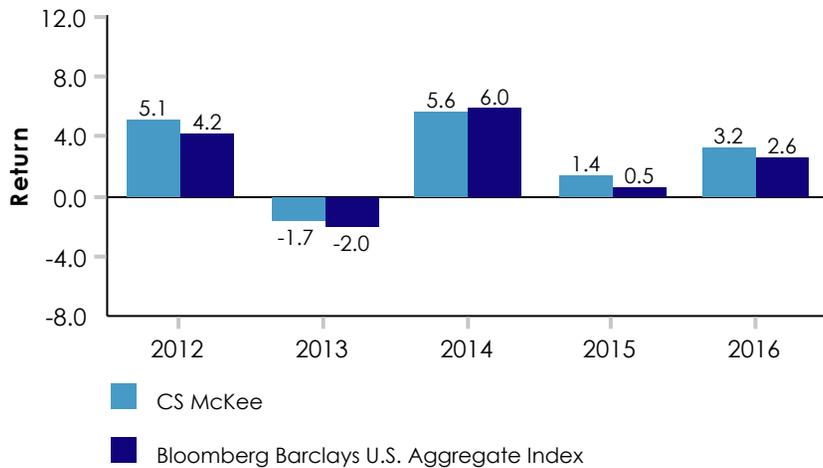
Trailing Period Performance



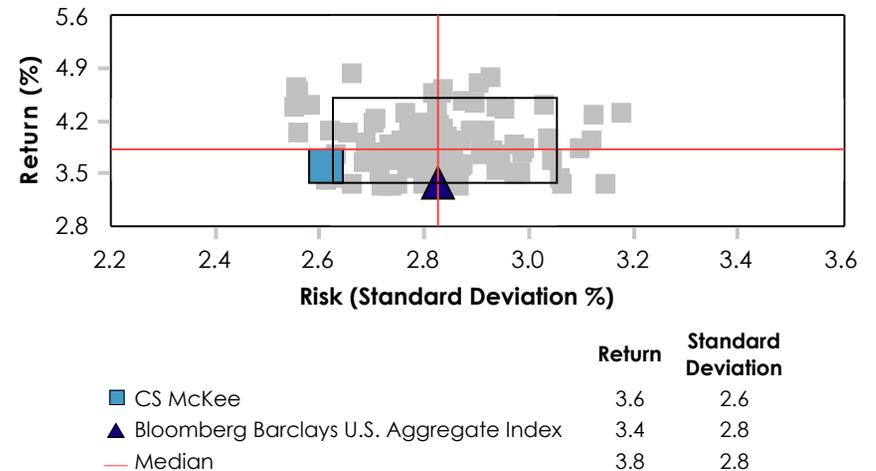
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

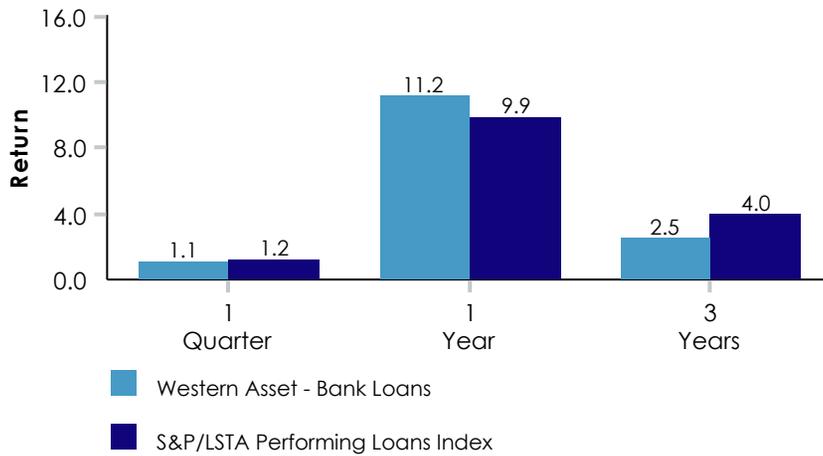


Western Asset - Bank Loans - gross of fees

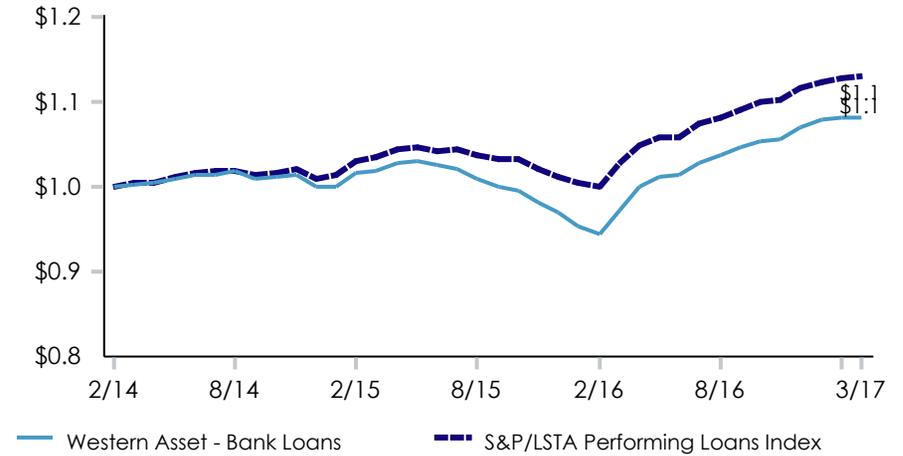
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Western Asset - Bank Loans	-2.20	1.20	-1.28	0.69	1.09	0.93	96.66	157.09	03/01/2014
S&P/LSTA Performing Loans Index	0.00	1.00	-	0.51	0.00	1.00	100.00	100.00	01/01/1999

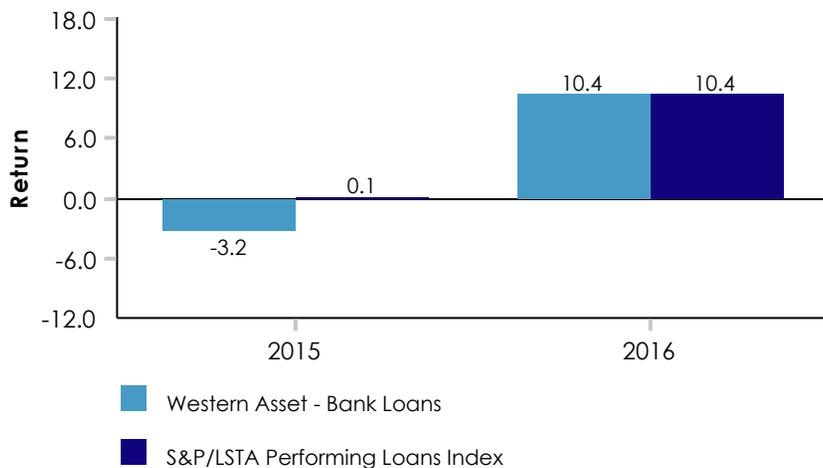
Trailing Period Performance



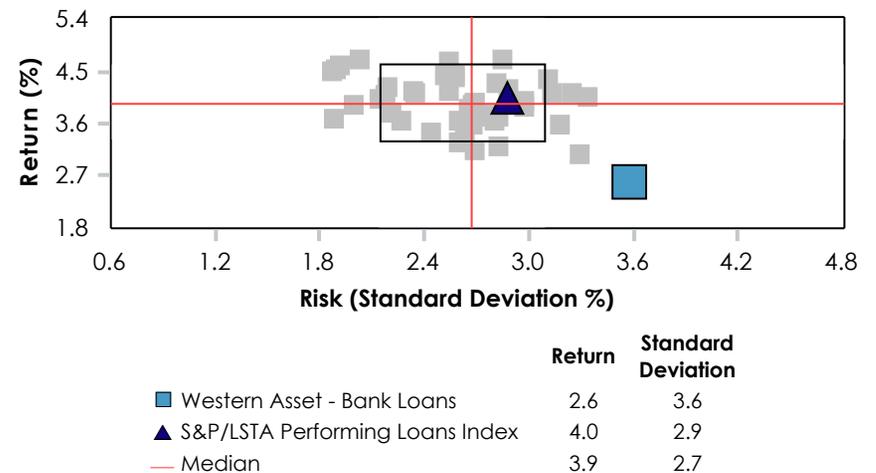
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



Western Asset - Short-Term HY - gross of fees

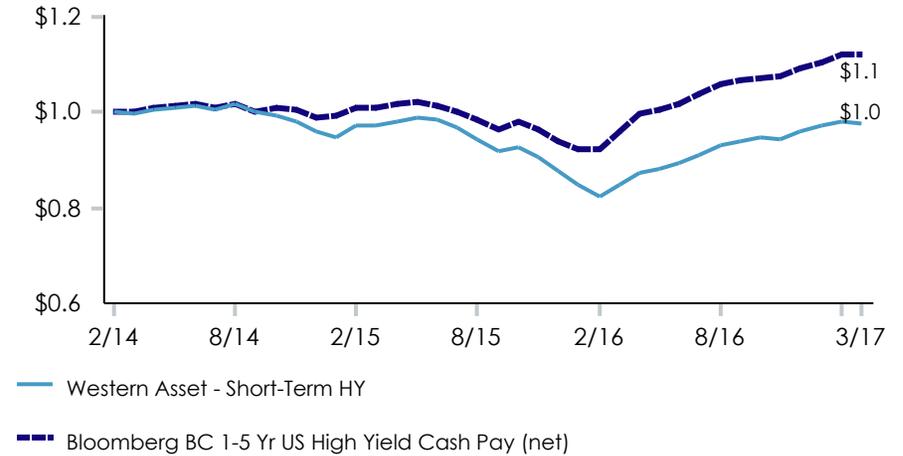
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Western Asset - Short-Term HY	-4.43	1.04	-1.89	-0.12	2.31	0.84	72.69	134.57	03/01/2014
Bloomberg BC 1-5 Yr US High Yield Cash Pay (net)	0.00	1.00	-	0.71	0.00	1.00	100.00	100.00	03/01/2014

Trailing Period Performance



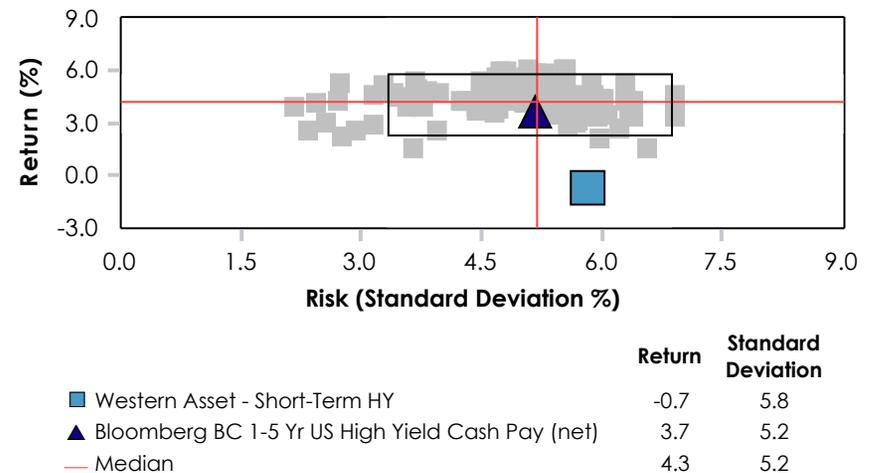
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

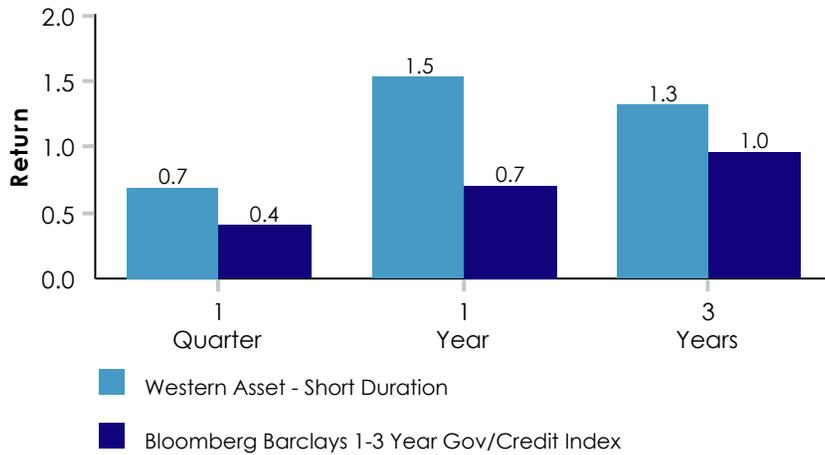


Western Asset - Short Duration - gross of fees

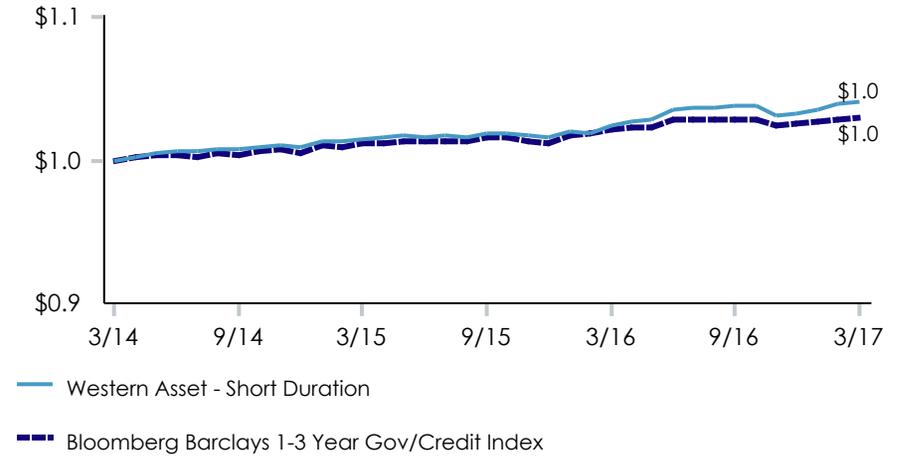
As of March 31, 2017

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Western Asset - Short Duration	0.42	0.94	1.13	1.55	0.31	0.83	111.10	67.48	04/01/2014
Bloomberg Barclays 1-3 Year Gov/Credit Index	0.00	1.00	-	1.10	0.00	1.00	100.00	100.00	04/01/2014

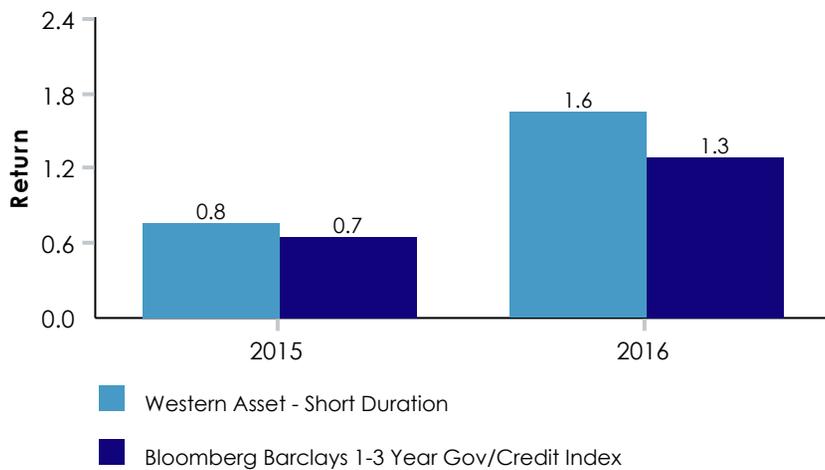
Trailing Period Performance



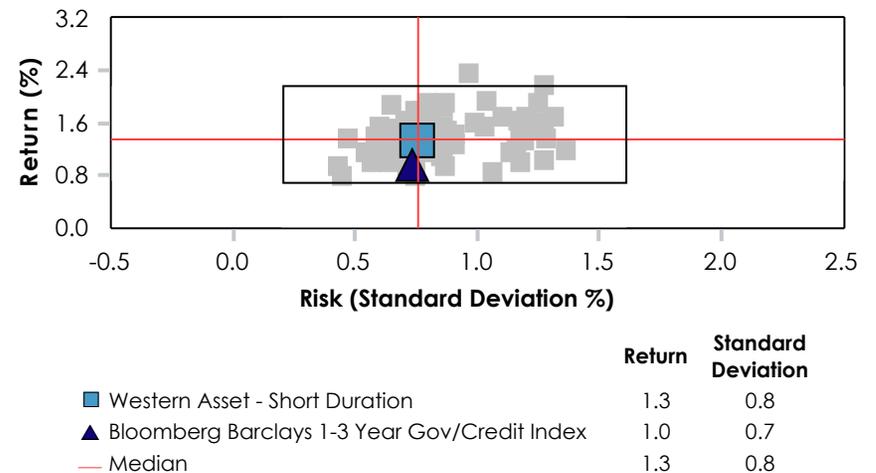
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception



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	12	15.3
<i>BC 1-5Yr US HY Cash Pay</i>							16.4
WAMCO-Bank Loans	N/A	N/A	Placed on Watch (Mar-16)	Watch	04/01/2016	12	11.2
<i>S&P/LSTA Perf. Loans</i>							9.9
Intech	Long-Term	9/30/2014	Placed on Watch (Nov-14)	Watch	12/01/2014	28	9.3
<i>Russell 1000 Growth</i>				---			8.9
Opus	Short-Term	9/30/2012	Placed on Watch (Nov-12), (Mar-14)	Watch	12/01/2012	52	13.3
<i>Russell 1000 Value</i>				---			14.2

*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 15.3% 12-month return, which underperformed the benchmark by (1.1%).
 - Since its Watch period began, the WAMCO Bank Loans account produced an 11.2% return, which outperformed the benchmark by 1.3%.
- The Board placed Intech on Watch as of December 2014 due to performance concerns. Since its Watch period began, Intech produced a 9.3% 28-month return, which outperformed the benchmark by 40 basis points.
- The Board placed Opus on Watch as of December 2012 due to performance concerns. Since its Watch period began, Opus produced an 13.3% 52-month return, which underperformed the benchmark by (90) basis points.
- 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	Caution
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	Acceptable
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

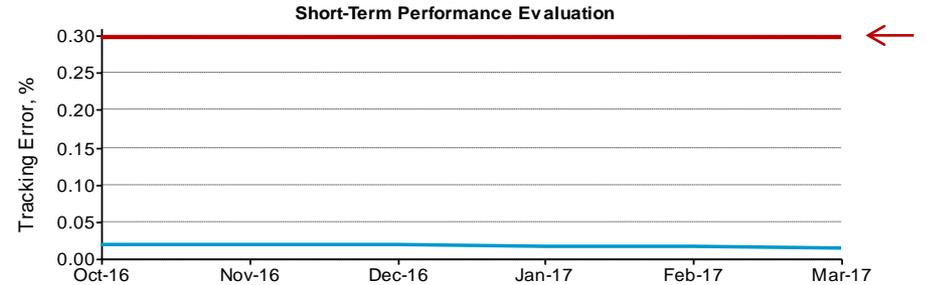
	Quarter	1 Year	3 Year	5 Year
Northern R1000	6.0	17.5	10.0	13.3
Russell 1000	6.0	17.4	10.0	13.3

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

Tracking error > 0.30% for 6 consecutive months

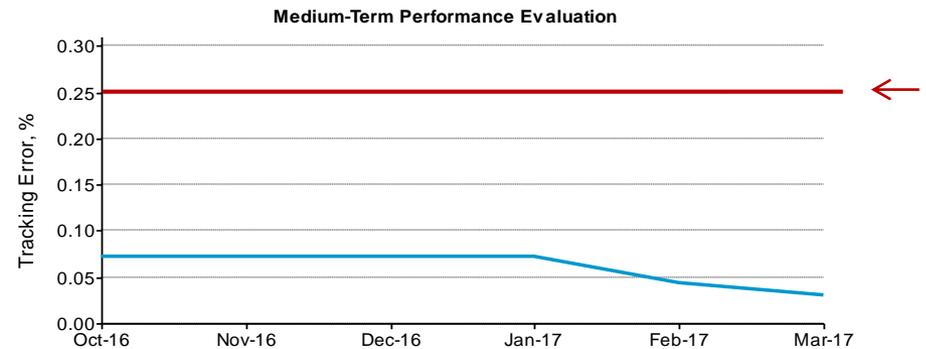
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

Tracking error > 0.25% for 6 consecutive months

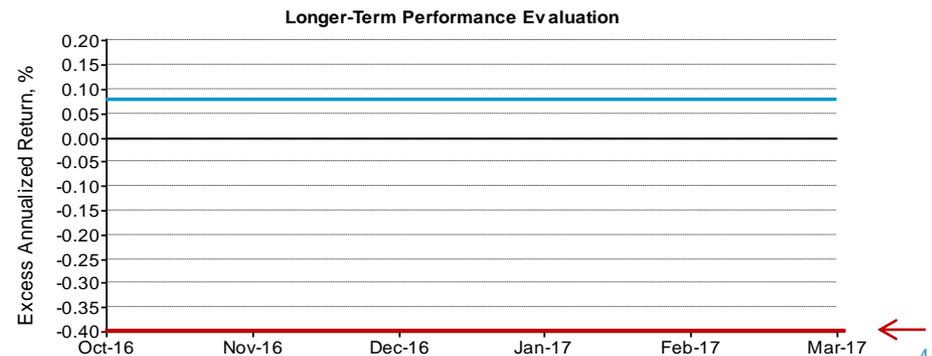
Current Status: Acceptable



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

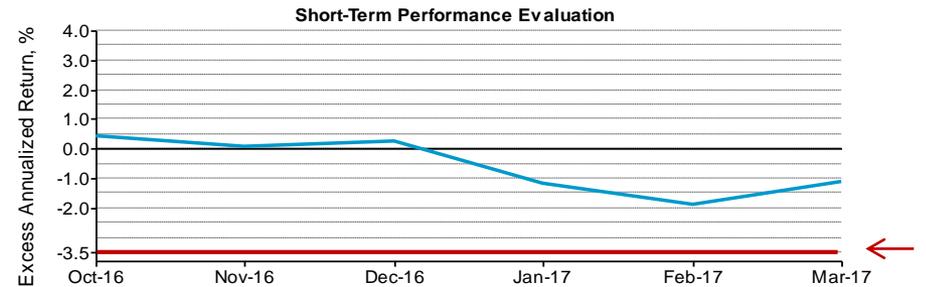
	3 Months	1 Year	3 Years	5 Years	Watch-28 Months
Intech	9.4	14.7	11.3	13.8	9.3
Russell 1000 Growth	8.9	15.8	11.3	13.3	8.9

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

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

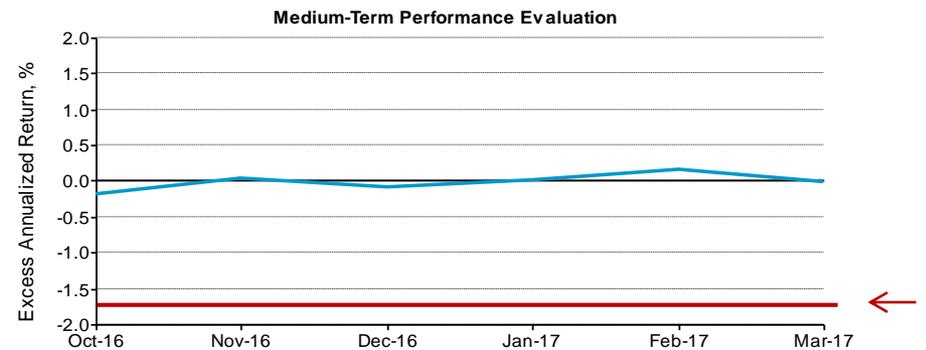
Current Status: **Acceptable**



Medium-Term Criteria (rolling 36-month periods)

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

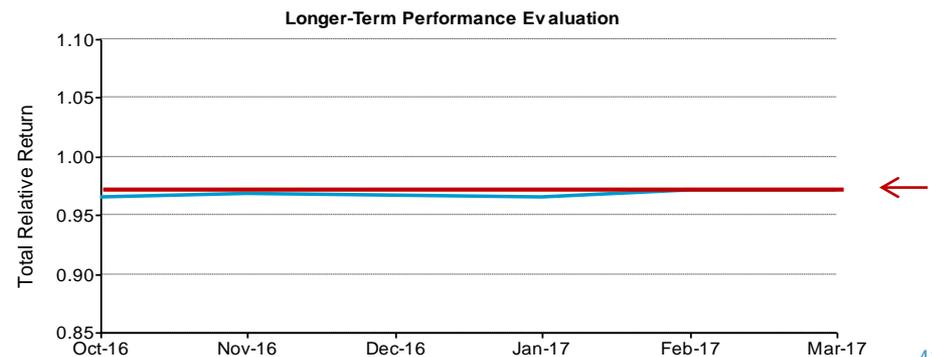
Current Status: **Acceptable**



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

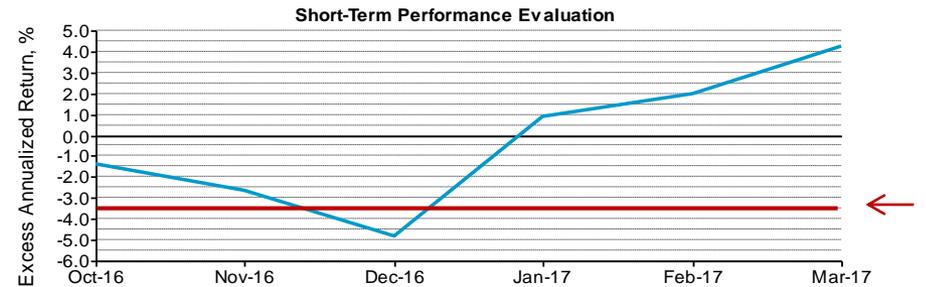
	Quarter	1 Year	3 Year	5 Year
T Rowe Price	11.3	20.0	12.0	14.3
Russell 1000 Growth	8.9	15.8	11.3	13.3

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

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

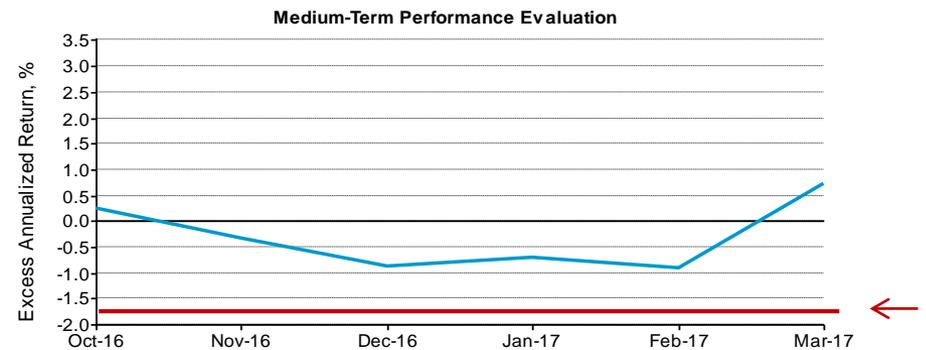
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

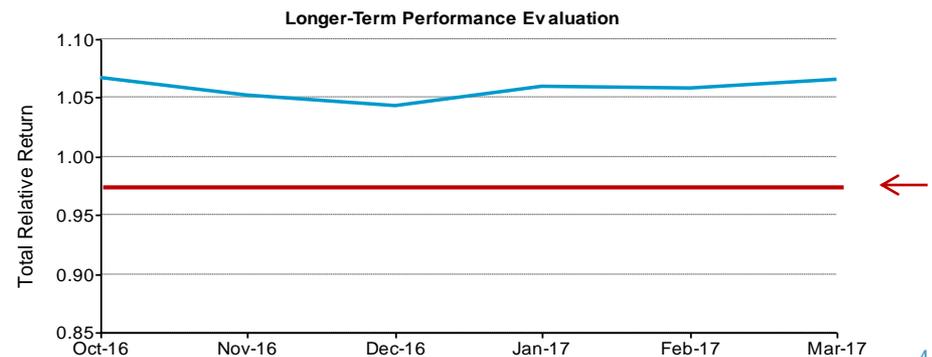
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



Barrow Hanley - Domestic Equity: Large Cap Value

Manager Performance

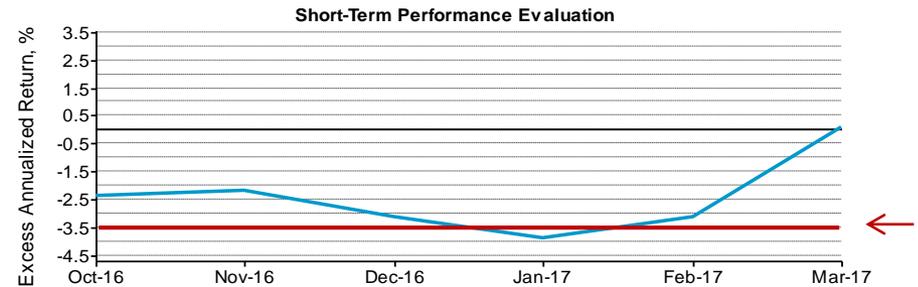
	Quarter	1 Year	3 Year	5 Year
Barrow	3.6	19.3	8.2	12.3
Russell 1000 Value	3.3	19.2	8.7	13.1

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

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

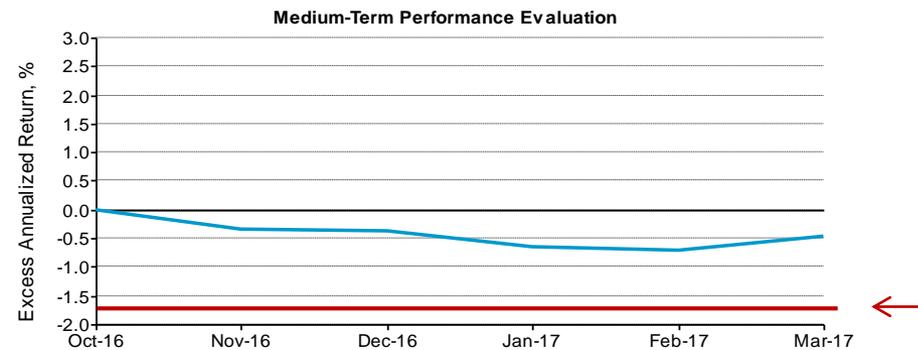
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

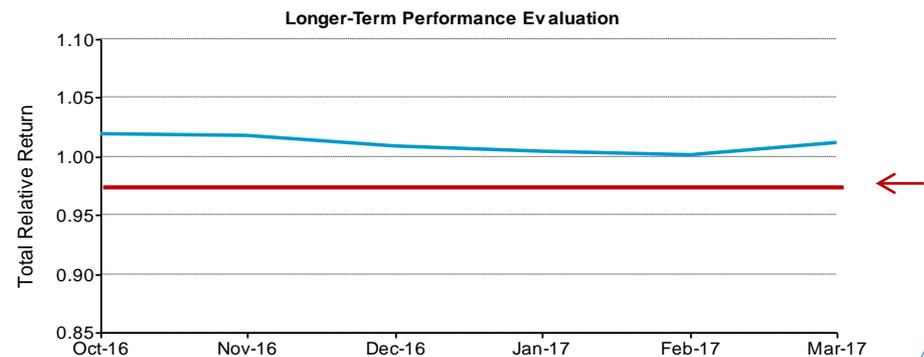
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



Northern R2000 - Domestic Equity: Small Cap Growth

Manager Performance

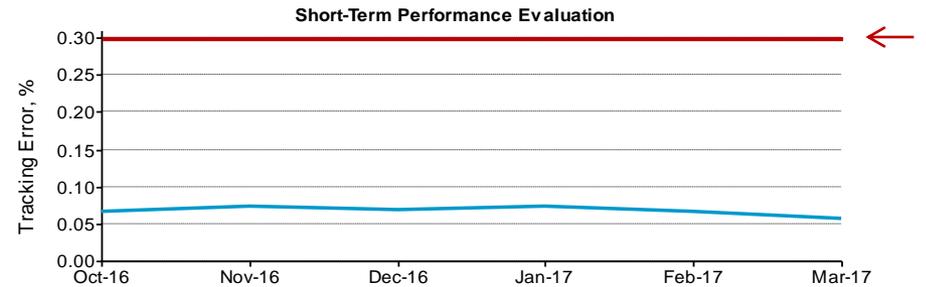
	Quarter	1 Year	3 Year	5 Year
Northern R2000	5.4	23.6	7.1	12.5
Russell 2000 Growth	5.3	23.0	6.7	12.1

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

Tracking error > 0.30% for 6 consecutive months

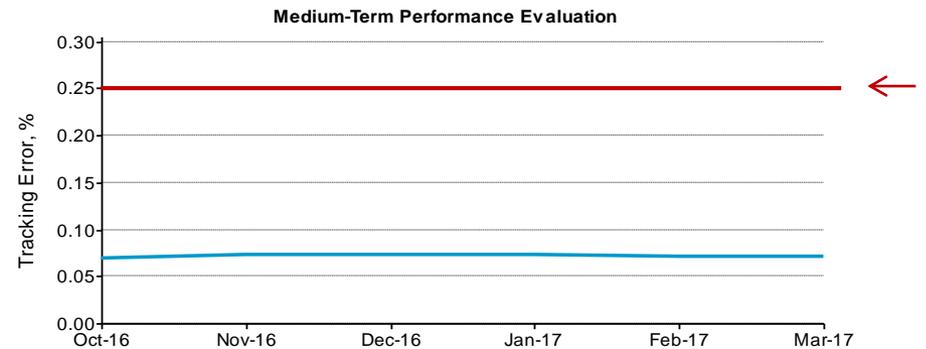
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

Tracking error > 0.25% for 6 consecutive months

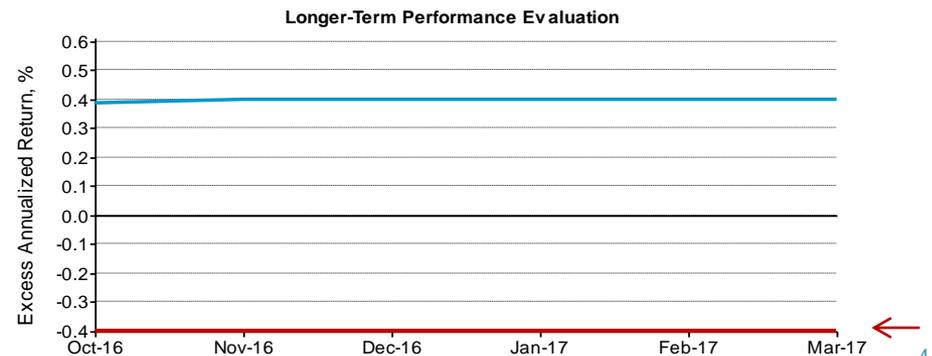
Current Status: Acceptable



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

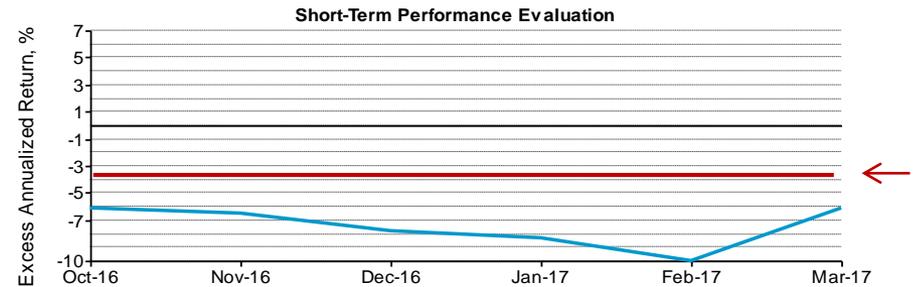
	3 Months	1 Year	3 Years	5 Years	52 Months
Opus	0.0	23.2	8.3	11.0	13.3
Russell 2000 Value	-0.1	29.4	7.6	12.5	14.2

Overall Status: **Caution**

Short-Term Criteria (rolling 12-month periods)

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

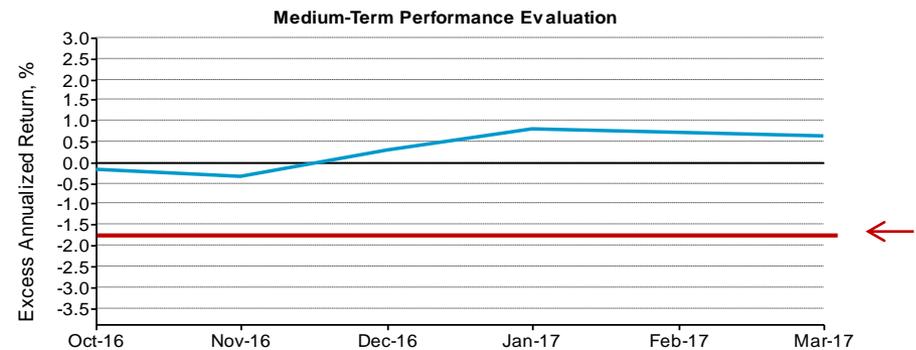
Current Status: **Caution**



Medium-Term Criteria (rolling 36-month periods)

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

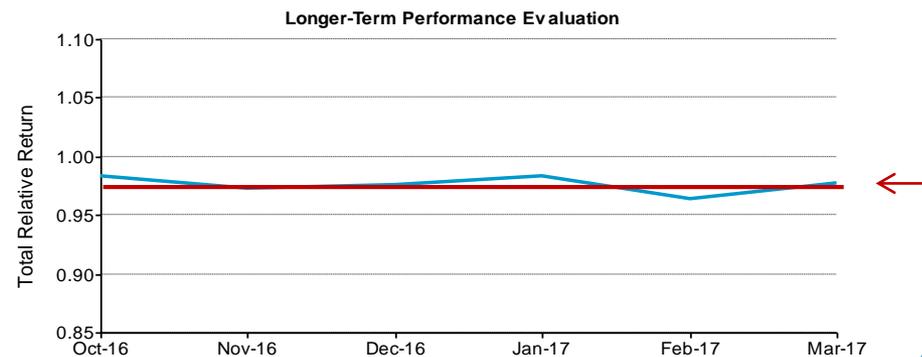
Current Status: **Acceptable**



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: **Acceptable**



Franklin Templeton - International Equity

Manager Performance

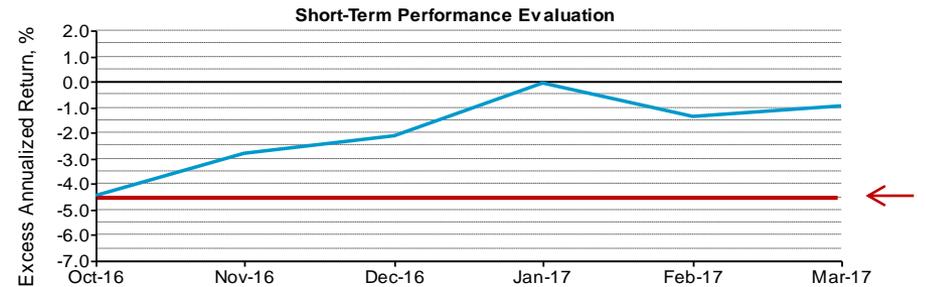
	Quarter	1 Year	3 Year	5 Year
Franklin Aggregate	6.9	12.7	-1.5	5.6
EBM UD MSCI ACWI ex US Blend	8.0	13.7	1.0	4.8

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

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

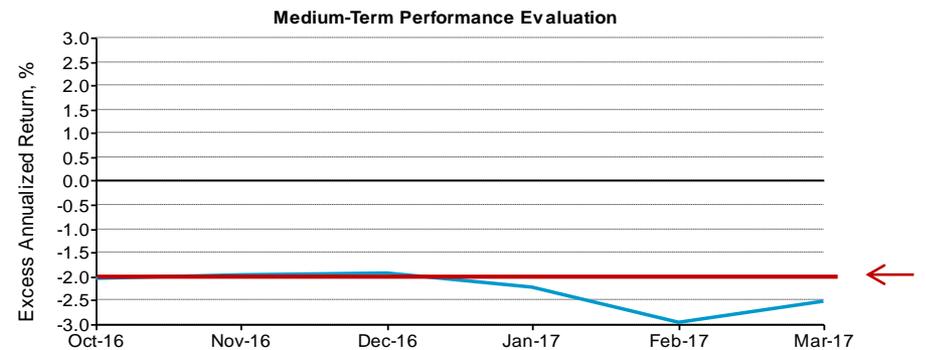
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

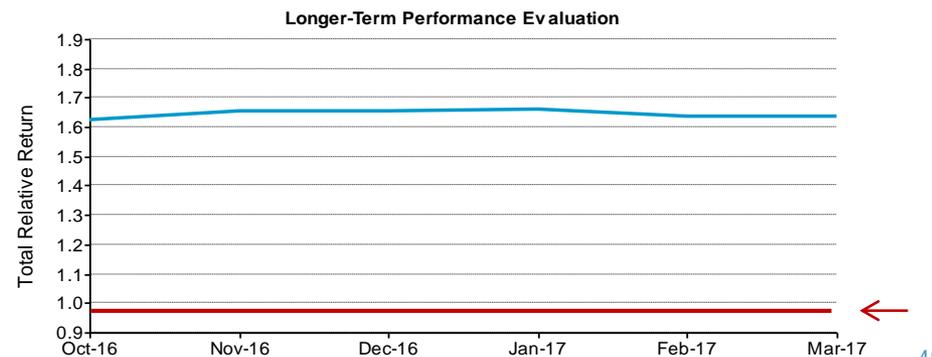
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



Fisher - International Equity

Manager Performance

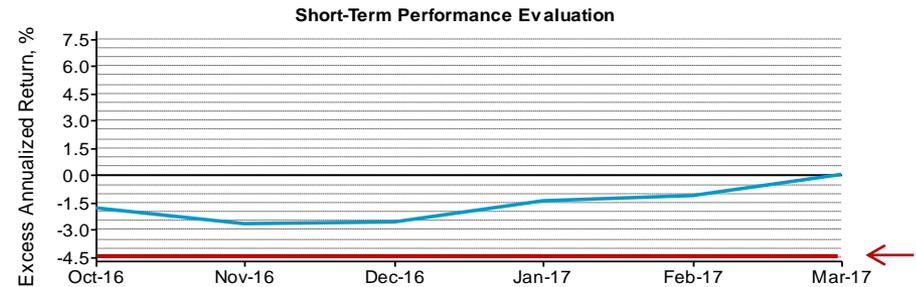
	Quarter	1 Year	3 Year	5 Year
Fisher	8.8	13.8	2.5	5.2
EBM UD MSCI ACWI ex US Blend	8.0	13.7	1.0	4.8

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

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

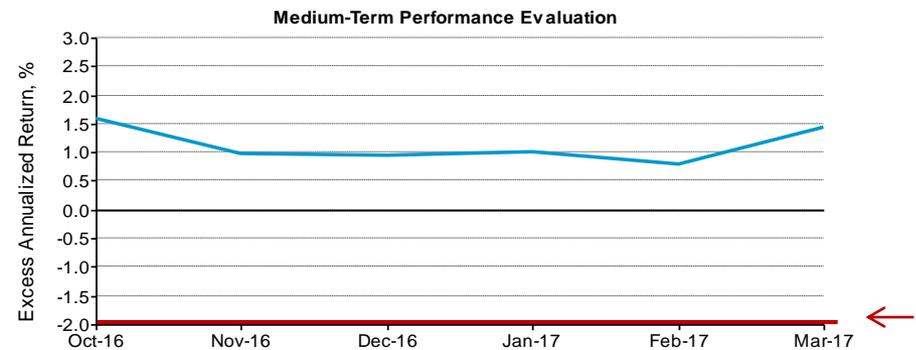
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

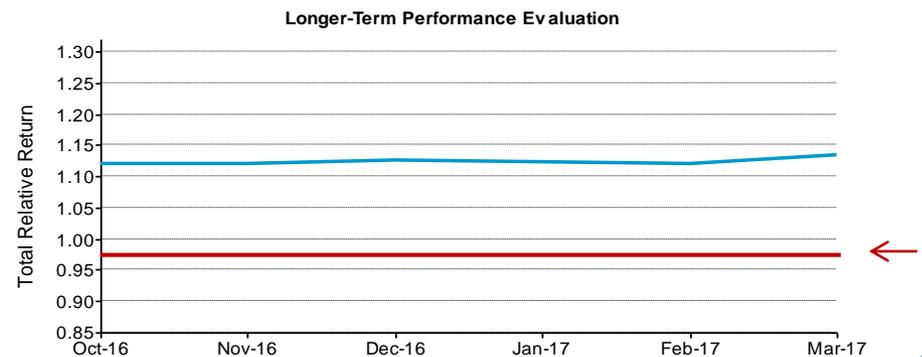
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



Parametric - BXM - Covered Calls: Replication

Manager Performance

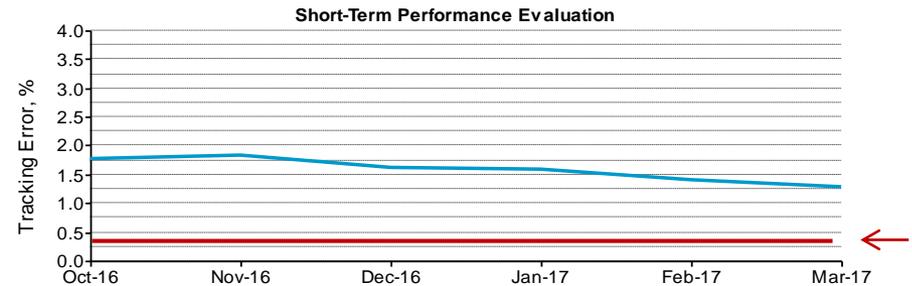
	Quarter	1 Year	3 Year	5 Year
Parametric BXM	4.0	13.3	8.9	NA
CBOE BXM Index	4.0	12.2	6.5	7.0

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

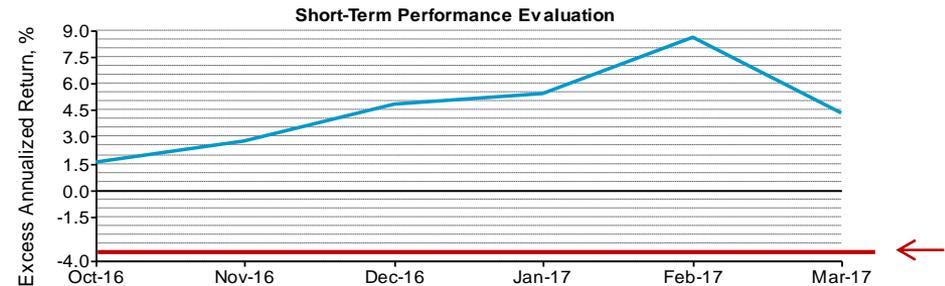
	Quarter	1 Year	3 Year	5 Year
Parametric Delta	4.9	16.5	10.5	NA
CBOE BXM Index	4.0	12.2	6.5	7.0

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: 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

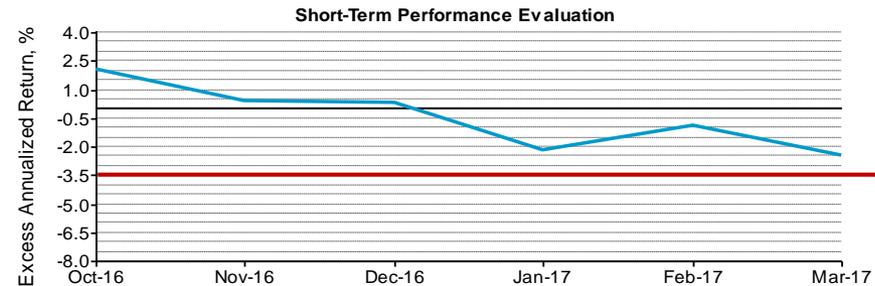
	Quarter	1 Year	3 Year	5 Year
Van Hulzen	3.6	9.8	6.1	NA
CBOE BXM Index	4.0	12.2	6.5	7.0

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: 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

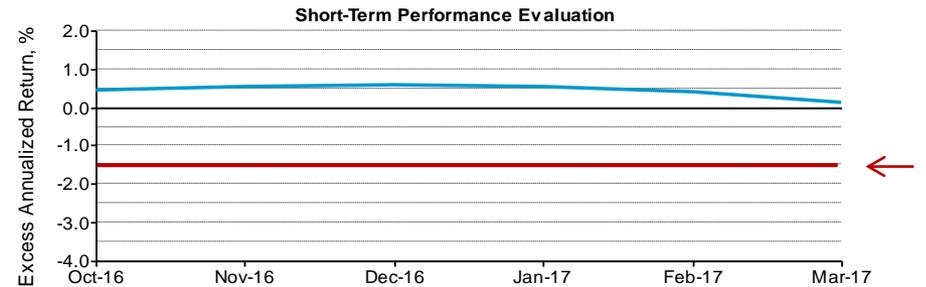
	Quarter	1 Year	3 Year	5 Year
CS McKEE	0.8	0.6	3.0	2.7
BC Aggregate Bond	0.8	0.4	2.7	2.3

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

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

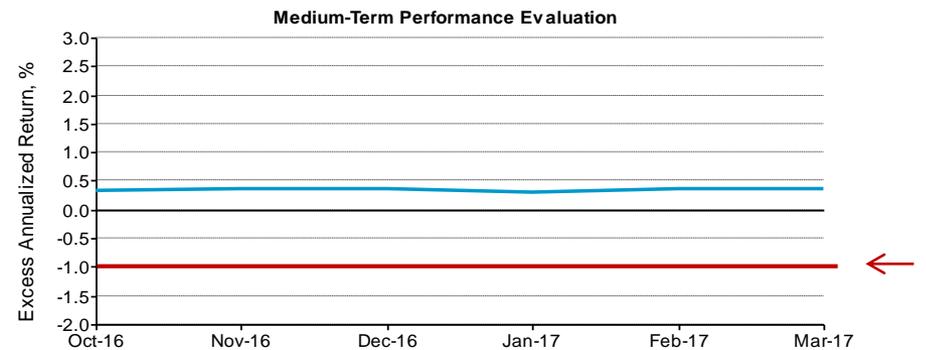
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

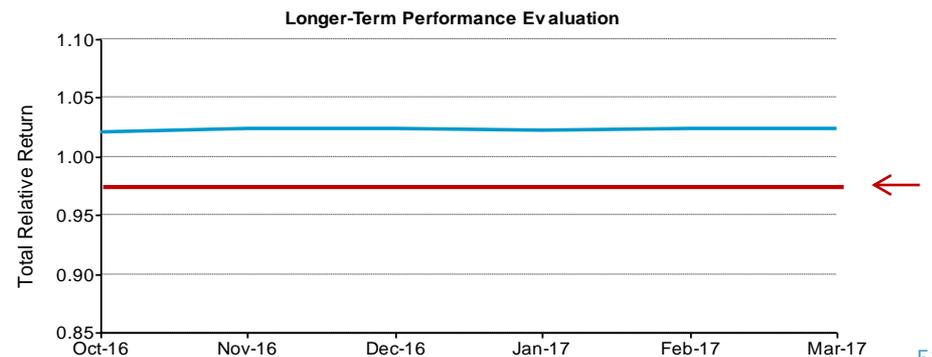
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.98 for 6 consecutive months

Current Status: Acceptable



WAMCO - Short Duration - Fixed Income: Non-Core

Manager Performance

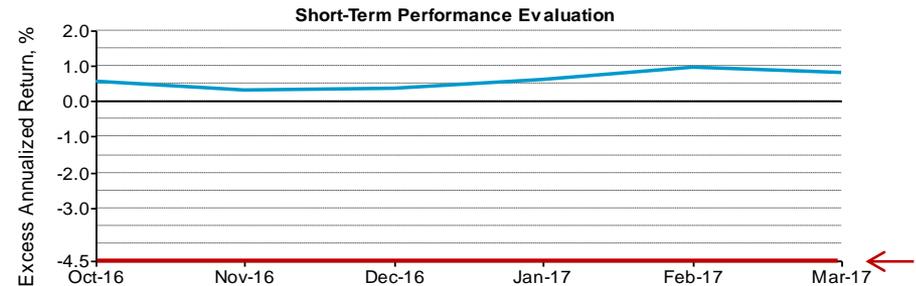
	Quarter	1 Year	3 Year	5 Year
WAMCO Short Dur	0.7	1.5	1.3	NA
Barclays 1-3 Yr Gov/Credit	0.4	0.7	1.0	0.9

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

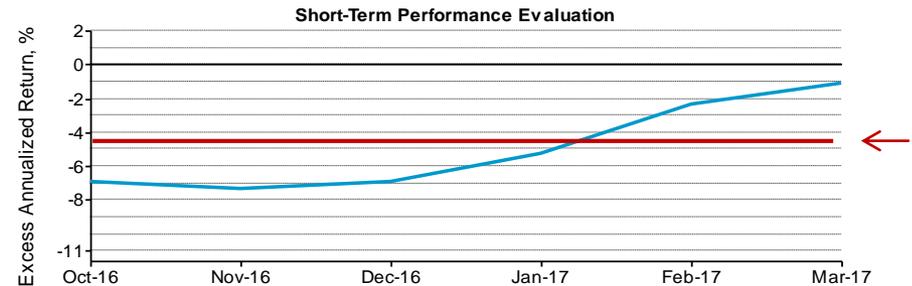
	Quarter	1 Year	3 Year	5 Year	Watch - 12 mon
WAMCO High Yield	2.0	15.3	-0.7	NA	15.3
Barclays US High Yield 1-5 Yr Cash Pay 2%	2.4	16.4	3.7	6.1	16.4

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 - Bank Loans - Fixed Income: Non-Core

Manager Performance

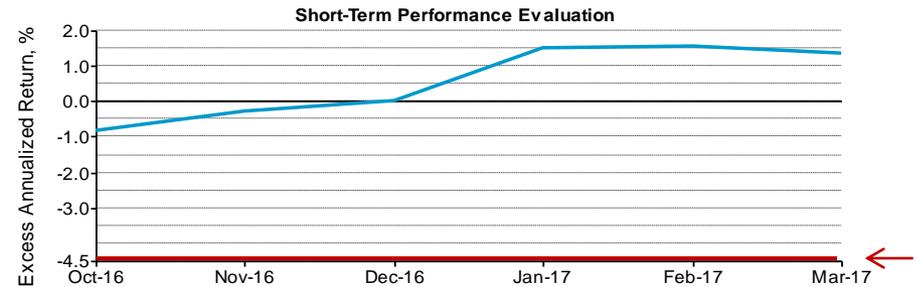
	Quarter	1 Year	3 Year	5 Year	Watch - 12 mon
WAMCO Bank Loans	1.1	11.2	2.5	NA	11.2
S&P/LSTA Performing Loans Index	1.2	9.9	4.0	4.9	9.9

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)

CenterSquare - Real Estate: Public REITs

Manager Performance

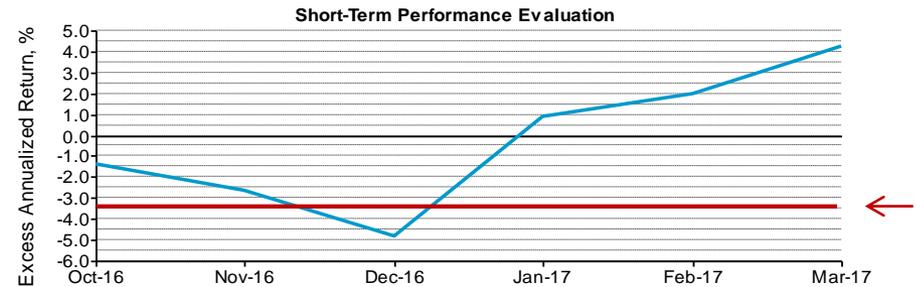
	Quarter	1 Year	3 Year	5 Year
CenterSquare	1.1	3.9	11.8	11.1
FTSE NAREIT Equity REITS	1.2	3.6	10.3	10.0

Overall Status: **Acceptable**

Short-Term Criteria (rolling 12-month periods)

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

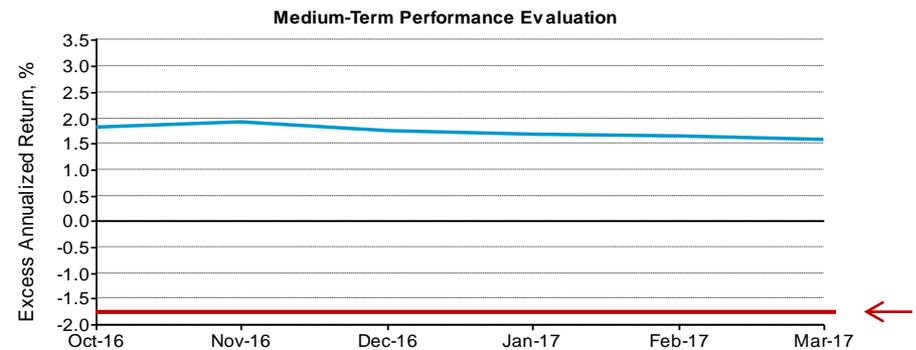
Current Status: Acceptable



Medium-Term Criteria (rolling 36-month periods)

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

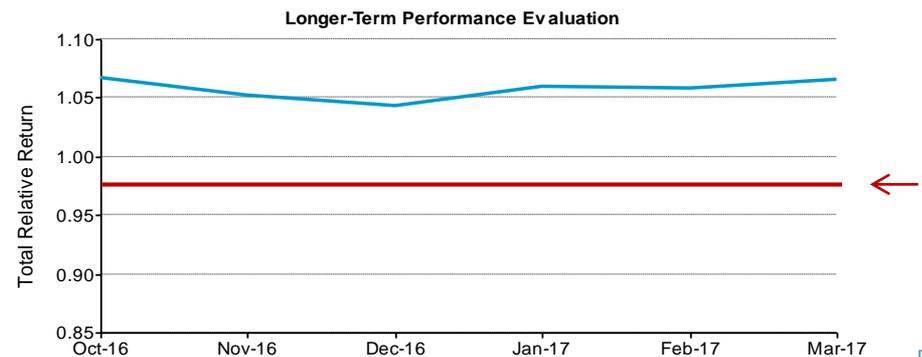
Current Status: Acceptable



Long-Term Criteria (60+ months)

VRR < 0.97 for 6 consecutive months

Current Status: Acceptable



MANAGER COMPLIANCE CERTIFICATION RESPONSES – Qualitative Compliance Monitoring per EBMUD Investment Policy

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

These indicators include:

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

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

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

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

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

MANAGER COMPLIANCE CERTIFICATION RESPONSES

		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*	No	No	Yes	
Inftech	Domestic Equity – LCG	Yes	Yes	Yes*	No	No	No	Yes*	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	No	No	No	Yes	
Northern R2000G	Domestic Equity – SCG	Yes	Yes	Yes*	No	Yes*	No	No	Yes	
Opus	Domestic Equity – SCV	Yes	Yes	No	No	No	No	Yes*	Yes	
Franklin Templeton	International Equity	Yes	Yes	Yes*	No	Yes*	No	No	Yes	
Fisher	International Equity	Yes	Yes	No	No	No	No	No	Yes	
Parametric	Covered Calls	Yes	Yes	No*	No	No	No	No	Yes	
Van Hulzen	Covered Calls	Yes	Yes	No	No	No	No	No	Yes	
CS McKee	Fixed Income – Core	Yes	Yes	No	No	No	No	No	Yes	
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	Yes*	No	No	Yes	
CenterSquare	Real Estate	Yes	Yes	No	No	No	No	Yes*	Yes	

*see detailed manager response below

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

Northern Trust – R1000 and R2000 Growth

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

As one of the world's largest asset managers, Northern Trust Investments, Inc. (NTI) is occasionally named as a defendant in asset management-related litigation. NTI is not currently party to any litigation that has had (or will have) a material effect on its ability to perform services for its clients. At this time, there are no significant pending cases.

Routine regulatory exams of Northern Trust Investments, Inc. (NTI) occur regularly. Regulatory enforcement investigations or proceedings concerning NTI are far more rare but have occurred. The following matter falls into that category:

PENDING REGULATORY INVESTIGATION RELATED TO NTI

In February and June 2015, the Chicago Regional Office of the SEC Division of Enforcement sent document subpoenas to a number of investment advisors, including NTI or its affiliates, seeking information on the firms' policies for complying with SEC Rule 206(4)-5, the so-called "pay-to-play" rule concerning political donations by "covered associates" employed by investment advisors. In addition to general policy information, the requests sought information about the amount of business, if any, that the investment advisors did with various Illinois state pension funds and City of Chicago pension funds. They also inquired about campaign donations, if any, made by such covered associates to Illinois Governor Bruce Rauner or Chicago Mayor Rahm Emanuel. NTI responded to the subpoenas in 2015. It did not identify any prohibited contributions by its covered associates to Gov. Rauner or Mayor Emanuel.

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

There was one PM addition over the quarter: Alan Aung, CFA. While staff turnover is generally regrettable, we minimize the impact of such turnover on the equity index management strategies due to our team approach. All decisions are made in a systematic manner and are not dependent on a specific individual, as all accounts are assigned to teams, not to individuals. We feel our integrated team-based approach ensures our ongoing portfolio management is not affected should a member of the team leave. In addition, due to our global team approach, should a key member leave the Index Equity team, we have the capability to temporarily reshuffle portfolio managers, until appropriate coverage has been re-established.

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.

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.**

During the month of February 2017, approximately \$633 million cumulative client assets (representing approximately 1.32% of INTECH's total AUM as of February 1st) terminated from INTECH's Growth and Enhanced Products. The terminations were primarily related to performance.

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 filed 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. The Supreme Court removed the petition from its December 9, 2016, calendar, and the matter has not yet been rescheduled. On January 9, 2017, the district court granted the motion to dismiss the intentional fraudulent transfer case brought by the bankruptcy trustee.

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. The Court denied our motion to dismiss on March 31, 2017.

David G. Feinberg v. T Rowe Price Group, Inc., et al. T. Rowe Price Group, Inc., two of its subsidiaries, current and former members of its management committee, and trustees of the T. Rowe Price U.S. Retirement Program are named as defendants in a lawsuit filed on February 14, 2017 in the United States District Court for the District of Maryland. The T. Rowe Price U.S. Retirement Program is a retirement plan offered to T. Rowe Price employees. The plaintiff is a former employee who alleges breaches of fiduciary duty under ERISA with regard to the retirement plan. The plaintiff is seeking certification of the complaint as a class action. We believe the complaint is without merit and intend to vigorously defend the case.

Additional Disclosure: As previously disclosed, in November 2016 T. Rowe Price Associates, Inc. received an inquiry from the SEC seeking information relating to fund holdings of Pre-IPO securities. We have provided all information that has been requested to date.

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

Additions to the Management Committee

At the beginning of 2016, we added Deanna Fidler, Scott David, and Robert Higginbotham to the Management Committee, and their perspectives have enhanced the rigor of our discussions and increased the pace and quality of our decision making. To further strengthen our deliberations and governance, the following individuals joined the Management Committee, effective January 2017:

Rob Sharps, co-head of Global Equity - 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.

Nigel Faulkner, Head of Technology - Nigel, who joined us in August 2015, is a recognized leader in the industry. With his financial and technology experiences at Goldman Sachs and Credit Suisse, Nigel has quickly proven to be an asset to our clients and to our firm, and particularly so in support of our integrated strategy. In addition to leading all aspects of Technology, Nigel recently assumed responsibility for overseeing our Enterprise Program Management and Business Process Improvement teams, which are critical to strengthening the firm's change capabilities. A proven change leader himself, Nigel is well situated to help the company adapt to a rapidly evolving industry landscape.

Sebastien Page, Head of Asset Allocation—Sebastien also joined the firm in August of 2015, and he oversees all aspects of our Asset Allocation investment platform. Like Nigel, he has been a key contributor to the formation and early implementation of our integrated strategy. With knowledge from previous roles at State Street and PIMCO, Sebastien is leading the development of our multi-asset solutions capabilities and adapting them to the global marketplace. He is well placed to lead the next phase of growth and diversification of our already very successful Asset Allocation business.

Brian Rogers' Retirement

As previously announced, Brian Rogers, chairman and chief investment officer (CIO), retired from the firm on March 31, 2017, following nearly 35 years at T. Rowe Price. He also stepped 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 named several senior investment leaders as CIOs of the firm. These appointments took effect with Brian's retirement date in March:

Rob Sharps—CIO, T. Rowe Price Group

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 have not changed, 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.

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.

Opus

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.**

Yes; Opus has a relationship with a manager-of-managers who was terminated by 2 plans in March. As a result, Opus lost 4 accounts in the Small Cap Value strategy, totaling 11% of the strategy.

Franklin Templeton

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 December 31, 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.)

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 March 31, 2017. However, the following changes took place within the Templeton Global Equity Group.

-Don Reed, CPA – Portfolio Manager/Research Analyst retired in January 2017.

Parametric

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.

WAMCO

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

Yes. During the first quarter of 2017, Western Asset hired two investment professionals, Mr. Michael Kim, a Research Analyst in the Pasadena office, and Anthony Francis, a Trader in the Melbourne office. Due to Western Asset's traditional team orientation to investment management, none of the changes have materially adversely impacted the team or its process.

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?

There were no personnel changes from the RREEF America REIT II's management team during first quarter 2017. Subsequent to quarter end, Norton O'Meara, one of our longest tenured portfolio managers with more than 20 years of experience on the Americas Real Estate Team, replaced Charles (Chip) George as a regional portfolio manager on the Fund's management team. Norton has been with the firm since 1994 and is based in Chicago. Chip will be leaving the firm for a unique opportunity, but staying on until May to ensure a smooth transition.

CenterSquare

- Question 7: Have there been any material changes in your firm's business during the quarter, including but not limited to:**
- a. any client(s) that terminated its relationship whose terminated portfolio account represents > 1% of the Manager's aggregate portfolio on the day of notice of termination, and/or**
 - b. any client(s) that terminates its relationship when the cumulative terminations for a calendar month is > 1% of the Manager's aggregate portfolio as of the first business day of the month.**

A large institutional investor, with an AUM at February 6, 2017 of approximately \$404 million or 4.80% of total public securities AUM, provided a notice of termination as a result of a new asset allocation plan implemented by the mentioned client.

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 March 31, 2017

Asset Class	Quarter	1 Year	3 Years	5 Years
EBMUD Total Plan	4.6	12.8	6.5	9.2
<i>Policy Benchmark^{^^}</i>	<i>4.6</i>	<i>12.7</i>	<i>6.5</i>	<i>8.9</i>
Domestic Equity	5.9	18.2	9.5	12.8
<i>Russell 3000*</i>	<i>5.7</i>	<i>18.1</i>	<i>9.8</i>	<i>13.2</i>
International Equity	7.7	12.6	-0.1	4.7
<i>MSCI ACWI x US (blend)**</i>	<i>8.0</i>	<i>13.7</i>	<i>1.0</i>	<i>4.8</i>
Covered Calls	4.1	13.0	8.2	-
<i>CBOE BXM</i>	<i>4.0</i>	<i>12.2</i>	<i>6.5</i>	<i>-</i>
Fixed Income	0.9	3.3	1.8	2.4
<i>Fixed Income benchmark (blend)***</i>	<i>1.0</i>	<i>3.6</i>	<i>2.6</i>	<i>2.6</i>
Real Estate	1.6	5.2	11.4	11.2
<i>NCREIF/NAREIT (blend)****</i>	<i>1.5</i>	<i>6.0</i>	<i>10.9</i>	<i>10.7</i>
Cash	0.2	0.5	-	-
<i>Citigroup 3 Month T-Bill Index</i>	<i>0.1</i>	<i>0.3</i>	<i>-</i>	<i>-</i>

[^]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 March 31, 2017

Manager - Style	Mkt Value (\$000)	1 Quarter	1 Year	3 Years	5 Years
Domestic Equity					
Large Cap Core					
Northern Trust Co. - Passive	272,305	6.0	17.4	10.0	13.2
<i>Russell 1000 Index</i>		6.0	17.4	10.0	13.3
Large Cap Growth					
Intech - Active*	78,515	9.4	14.5	11.1	13.5
T.Rowe Price - Active	78,673	11.2	19.4	11.5	13.7
<i>Russell 1000 Growth Index</i>		8.9	15.8	11.3	13.3
Large Cap Value					
Barrow Hanley - Active	179,332	3.5	18.9	7.9	11.9
<i>Russell 1000 Value Index</i>		3.3	19.2	8.7	13.1
Small Cap Growth					
Northern Trust Co. - Passive	28,329	5.4	23.5	7.0	12.4
<i>Russell 2000 Growth Index</i>		5.3	23.0	6.7	12.1
Small Cap Value					
Opus - Active**	36,288	0.0	23.2	8.2	10.7
<i>Russell 2000 Value Index</i>		-0.1	29.4	7.6	12.5
International Equity					
Fisher Investments - Active	103,879	8.6	13.0	1.8	4.6
Franklin Templeton - Active***	95,888	6.7	12.1	-2.1	5.0
<i>MSCI ACWI xUS (blend)****</i>		8.0	13.7	1.0	4.8

*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 March 31, 2017

Manager - Style	Mkt Value (\$000)	1 Quarter	1 Year	3 Years	5 Years
Covered Calls					
Parametric BXM - Replication	110,679	4.0	13.1	8.7	-
Parametric Delta Shift - Semi-active	115,090	4.8	16.1	10.1	-
Van Hulzen	102,659	3.5	9.5	5.8	-
<i>CBOE BXM</i>		-	-	-	-
Real Estate					
RREEF America II (Lag)*	33,959	2.4	8.2	11.9	12.1
<i>NCREIF NPI (Lag)*</i>		1.7	8.0	11.0	10.9
CenterSquare	49,119	1.1	3.5	11.4	-
<i>FTSE NAREIT Equity REIT Index</i>		1.2	3.6	10.3	-
Total Fixed Income					
Core Fixed Income					
CS McKee - Active	138,244	0.8	0.4	2.8	2.5
<i>Bloomberg BC U.S. Aggregate Index</i>		0.8	0.4	2.7	2.3
Non-Core Fixed Income					
Western Asset - Bank Loans** - Active	33,811	1.0	10.7	2.0	-
<i>S&P/LSTA Performing Loans Index</i>		1.2	9.9	4.0	-
Western Asset - Short-Term HY*** - Active	30,746	1.9	14.9	-1.2	-
<i>Bloomberg BC 1-5 Yr US High Yield Cash Pay (net)</i>		2.4	16.4	3.7	-
Western Asset - Short Duration - Active	66,311	0.6	1.4	1.2	-
<i>Bloomberg BC 1-3 Year Gov/Credit Index</i>		0.4	0.7	1.0	-

*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 countries classified as developed markets and 25 classified as emerging markets. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

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

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

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

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

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

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

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

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

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

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

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

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

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

RISK METRIC DESCRIPTION – Rationale for selection and calculation methodology

US Equity Markets

Metric: P/E ratio = Price / “Normalized” earnings for the S&P 500 Index

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

Developed Equity Markets Excluding the US

Metric: P/E ratio = Price / “Normalized” earnings for the MSCI EAFE Index

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

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

Emerging Market Equity Markets

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

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

US Private Equity Markets

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

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

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

US Private Real Estate Markets

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

Real estate cap rates are a measure of the price paid in the market to acquire properties versus their annualized income generation before financing costs (NOI=net operating income). The data, published by NCREIF, describes completed and leased properties (core) on an unleveraged basis. We chose to use current value cap rates. These are capitalization rates from properties that were revalued during the quarter. This data relies on estimates of value and therefore tends to be lagging (estimated prices are slower to rise and slower to fall than transaction prices). The data is published quarterly.

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

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

Credit Markets Fixed Income

Metric: Spreads

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

Measure of Equity Market Fear / Uncertainty

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

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

Measure of Monetary Policy

Metric: Yield Curve Slope

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

Measures of US Inflation Expectations

Metrics: Breakeven Inflation and Inflation Adjusted Commodity Prices

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

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

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

Measures of US Treasury Bond Interest Rate Risk

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

The expected annualized real yield of the 10 year US Treasury Bond is a measure of valuation risk for US Treasuries. A low real yield means investors will accept a low rate of expected return for the certainty of receiving their nominal cash flows. 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.

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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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 11, 2017

MEMO TO: Members of the Retirement Board

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

SUBJECT: Asset-Liability Study Schedule

Consistent with the Employee Retirement System (ERS) *Statement of Investment Policy and Procedures*, the Retirement Board adopts and implements an asset allocation policy no less frequently than every five years. The policy is informed by an Asset-Liability study. The last such study was prepared in 2013 by Pension Consultant Alliance (PCA). The next Asset-Liability study is currently expected to be completed around the end of this calendar year. Below is a schedule of events which are anticipated as the Board and PCA move towards this objective. The specific dates are subject to change as the process evolves.

- **Capital Markets Assumptions** – PCA will present its 2017 Ten-Year Capital Market Assumptions and the corresponding impact on EBMUD's portfolio given the changes in assumptions. (May 2017)
- **Strategic vs Traditional Asset Class Methodology** – PCA will present a new conceptual framework for classifying assets not into "Traditional" sectors but into "Strategic Asset Classes" which group assets based upon their objectives. (May 2017)
- **Application of Strategic Asset Classes** – Following up on the Strategic Asset Class discussion, PCA will discuss the System's implementation of that methodology using as an example the question of how the ERS portfolio might be changed to generate more cash flow. (July 2017)
- **Asset-Liability Study Assumptions** – PCA will propose for Board approval Strategic Asset Classes and assumptions for those asset classes. These will be used in the live modeling that will take place in November. (July 2017)
- **Vulnerability of the ERS Unfunded Liability to Another Recession** – ERS' actuary, Segal Consulting, will discuss the potential impact of a recession on system's funding ratio, unfunded liability and contribution requirements. (September 2017)
- **Live modeling of Asset-Liability options** – PCA will propose an asset allocation strategy and, using live modeling software, PCA will enable the Board to see in real-time the theoretical impacts of the proposed strategy. (November 2017)
- **Present Asset-Liability Study for Board Adoption** – PCA will formally present its proposed Asset-Liability Study to the Board for adoption. (November 2017)

SDS:DB

Date: May 9, 2017

To: East Bay Municipal Utility District Employees Retirement System (EBMUDERS)

From: Pension Consulting Alliance, LLC (PCA)

CC: Eric White, CFA; Neil Rue, CFA

RE: 2017 Capital Market Assumptions Review Memo

Summary

PCA has conducted a review of EBMUDERS' current strategic investment allocation, applying PCA's latest 2017 capital market assumptions (see below). The following is a synopsis of changes in PCA's capital market assumptions over the last year.

Comparison of PCA 10-Year Capital Market Assumptions

Investment Class	2016 Assumptions		2017 Assumptions		Return Change	Volatility Change
	Compound Exp. Return	Expected Std. Dev.	Compound Exp. Return	Expected Std. Dev.		
Cash	2.00%	1.00%	2.25%	1.50%	+0.25%	+0.50%
Fixed Income	2.90%	4.00%	2.90%	5.50%	0.00%	+1.50%
Real Estate	5.10%	9.00%	5.00%	10.00%	-0.10%	+1.00%
U.S. Equity	6.90%	18.50%	6.25%	19.50%	-0.65%	+1.00%
International Equity	7.45%	21.00%	7.25%	22.00%	-0.20%	+1.00%
Covered Calls	6.21%	12.33%	5.63%	13.00%	-0.58%	+0.67%

As the table above highlights, PCA increased our volatility expectations across all classes, indicating increased uncertainty in inflation, interest rates and growth expectations globally. PCA has reduced the 10-year expected returns on the U.S. equity class given higher valuations and potential Fed rate hikes. Fixed income yields (the primary driver of fixed income returns) remain low, despite the Federal Reserve initiating a rate hiking cycle. PCA's international equity return expectations remained similar to last year, but with increased volatility.

Applying PCA's 2017 capital market assumptions to the EBMUDERS policy portfolio, PCA estimates that EBMUDERS' expected long-term compound return to be close to 6.1% over the next 10 years.

EBMUDERS' Current Policy Portfolio Expectations Based on 2017 PCA Capital Market Assumptions

EBMUDERS' Investment Allocation	Target*
Cash	0%
Fixed Income	20%
Real Estate	5%
U.S. Equity	40%
International Equity	15%
Covered Calls	20%

*Reflects EBMUDERS' Long-term Target Allocation

Expected 10-Year Mean-Variance Outcomes

Expected Portfolio Arith. Annual Return	6.95%
Expected Portfolio Annual Risk	13.60%
Expected Portfolio Compound Return	6.19%

The long-term 10-year expected compound return assumes net-of-fee costs, but with no attempt to seek added value through active management. Based on this analysis, PCA is able to compute basic probabilistic outcomes versus certain levels of long-term required returns (see table below).

Probability of EBMUD Policy Portfolio Outperforming Threshold Return Level, by Horizon

Threshold Level	1 Year	5 Years	10 Years
7.25%	49%	42%	39%
7.00%	50%	44%	42%
6.75%	51%	46%	44%
6.50%	51%	47%	46%

We note that these assumptions can vary from actuarial assumptions utilized by decision makers to determine overall plan contributions. Typically, the horizon utilized for such decisions is significantly longer (typically 20+ years). As a result, reasonable actuarial assumptions may differ from the 10-year figures discussed above. In addition, there may be a difference between other actuary/investment consultant economic assumptions (such as inflation) due to the unique environment faced by a specific retirement system or plan.

Background

The asset allocation process is built on a foundation of assumptions about future investment returns, volatility, and correlations among asset classes. Since no one can perfectly foretell future returns, we must look to history of financial markets and to the expectations of experts in order to build reasonable expectations about the future.

Historical Perspective

Often the first step in developing strategic asset allocation and capital market expectations is to look at how different asset classes have performed over time. While returns can vary widely and unpredictably year to year, longer term average returns tend to wash out the short term noise created by the business cycle and revert to a mean level of average return. Complicating this is the fact that capital market cycles can last much longer than typical business cycles. For example, the 30 year bull market for bonds and the two decade long bull market for equities of the 80s and 90s followed by the stagnant returns of the 2000s. Despite this, long term returns still tend to coalesce around a central tendency of historical average returns.

The following table highlights major studies of the long term returns of different asset classes over extended time periods. From this table, we can see confirmation of the risk/return tradeoff as higher risk asset classes have outperformed less risky asset classes. We can also see that over the combined study period equities have returned approximately 8% while bonds have produced a 5% annual rate of return. Return assumptions between 7-10% for equities and 4-6% for bonds should represent a good starting place for the development of capital market assumptions.

Major Capital Market Return Studies

	I	II	III	IV	
	Emerging	Industrial	Post-Industrial	Post-2000	Combined Studies
	Schwert & Siegel	Clowes & Siegel	Ibbotson & Sinquefeld	PCA	
	1802-1870	1871-1925	1926-1999	2000-2016	1802-2016
Total Returns*					
Stocks	7.1%	7.2%	11.3%	4.5%	8.2%
Bonds	4.9%	4.3%	5.6%	5.2%	4.9%
T-bills	5.2%	3.8%	3.9%	1.7%	4.1%
Inflation	0.1%	0.6%	3.1%	2.2%	1.4%

*Figures are arithmetic averages of annual returns.

Consulting/Investment Management Industry Expectations

Since there is no consensus on the future of global capital market returns it is important to cross-reference assumptions with those of other experts in the field. Since economic forecasting (and subsequently capital market forecasting) is as much art as science, different perspectives and biases play a large part in the analysis. As the following chart highlights, PCA's assumptions are in line with the average consultant/investment manager assumption. Using the group's average estimate, EBMUDERS' expected arithmetic return is 6.73% with an expected standard deviation of 11.55% resulting in an expected geometric return of 6.17%. PCA's assumptions result in a slightly higher expected arithmetic return coupled with a higher expected standard deviation than the group's average. This results in a near identical expected geometric return assumption; 6.19% using PCA's assumptions versus 6.17% using the group's average.

Comparison of Consultants' Expected Returns
(Annualized compound geometric returns)

	Average*		PCA		Callan		Aon Hewitt		J.P. Morgan		BlackRock	
	Return	Risk	Return	Risk	Return	Risk	Return	Risk	Return	Risk	Return	Risk
US Equity	6.35	16.38	6.25	19.50	6.85	18.25	6.40	17.00	6.25	14.75	5.90	15.50
Intl Equity	7.09	18.63	7.25	22.00	7.80	21.25	7.30	18.50	6.75	16.25	6.50	18.50
Fixed Income	2.93	3.71	2.90	5.50	3.00	3.75	2.60	3.00	3.00	3.50	3.10	4.60
Real Estate	5.86	15.86	5.00	10.00	5.75	16.25	7.50	15.00	6.00	17.00	4.20	15.20

* excludes PCA estimates

Additional Considerations

To conduct any forward-looking analysis, decision makers must rely upon expectations for the future. For investment practitioners, one very important set of expectations are capital market assumptions that attempt to provide a reasonable estimate of (i) the future investment return, (ii) the volatility for each major type of investment category (or "class"), as well as (iii) how each investment class interrelates with the other investment classes. Utilizing these three inputs, investors can quantify (to some degree) the return-and-risk tradeoffs of a wide array of investment portfolios. Investors then assess these tradeoffs to select an investment portfolio that most appropriately meets their preferences and addresses their concerns.

Analytical Framework

To determine how these capital market assumptions would impact EBMUD's investment portfolio, PCA conducted traditional mean-variance analysis. Underpinning the traditional mean-variance analytics are several simplifying assumptions:

- Investment returns behave in a stable, random fashion (i.e., no mean-reversion, no herding behavior, no trending behavior, etc.);
- All investments' returns exhibit a normal bell curve shape (i.e., no overly erratic return behavior, outlying events should occur only rarely); and
- The interrelationships among investments never change (i.e., at best, there is limited recognition that many investments behave similarly during significant market events).

While these assumptions are not terribly realistic, the mean-variance analytical model is a useful beginning point for discussion because it requires only a minimal amount of data, is relatively intuitive and straightforward to calculate, and is useful for coming to relatively rapid and understandable conclusions about important tradeoffs associated with undertaking a certain investment strategy. Therefore, practitioners and decision-makers should view mean-variance analytics as a reasonable *initial indication* of potential outcomes.

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STRATEGIC VS TRADITIONAL ASSET CLASS DISCUSSION

EBMUD Employees' Retirement System

May 2017



Strategic Class Framework

Global investment markets have become more volatile over the last 20 years, causing plan sponsors to focus on better understanding and managing risk.

Pre-2008

- Institutional investors had largely been Relative Return investors
- Managed portfolios to outperform a policy benchmark
- Individual asset classes and investment managers are evaluated on relative return criteria (return vs. market proxy benchmark)

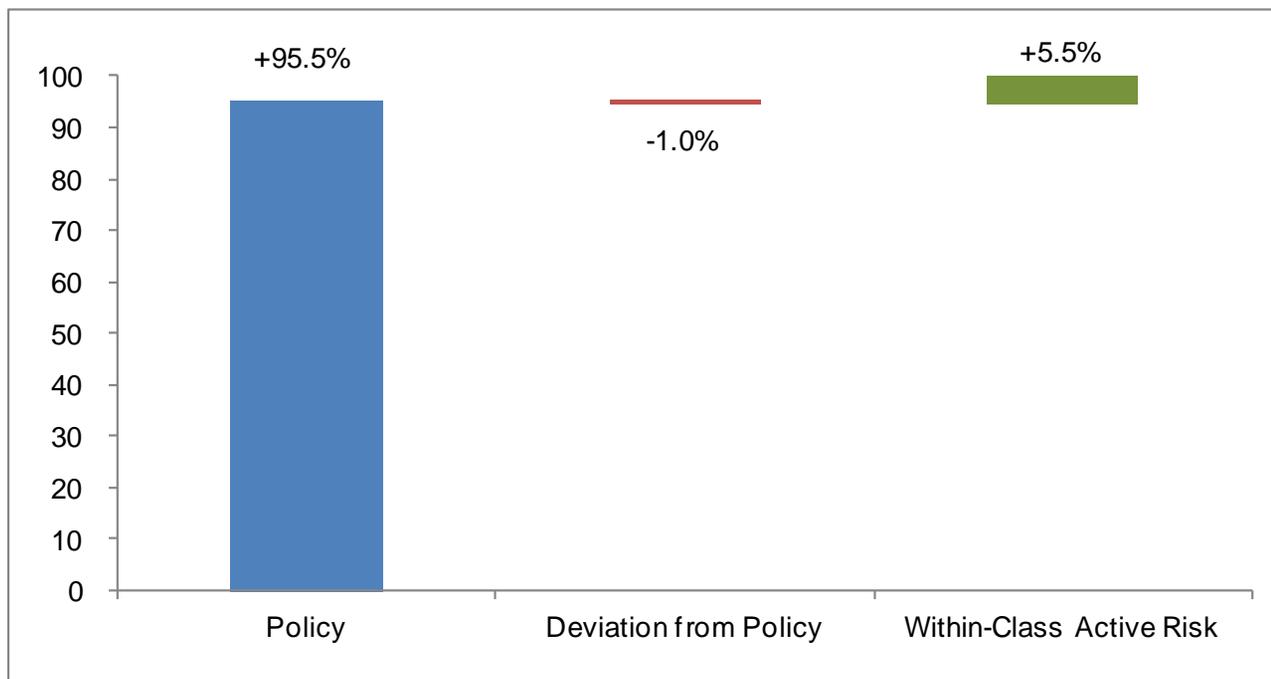
Post-2008

- More complex, interrelated global markets, higher exposure to major market moves
- Understanding that $\approx 90\%$ of portfolio's return is driven by the policy portfolio
- Recognize that macro risks drive a policy portfolio's returns – Absolute Return oriented
- Result: Seeking to diversify by sources of risk, rather than asset allocation

Strategic Class Framework

Policy risk drives overall portfolio risk

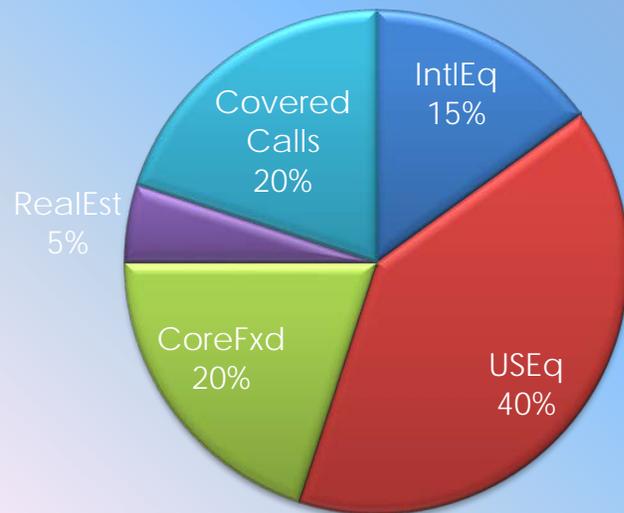
Typical Plan Risk Contribution



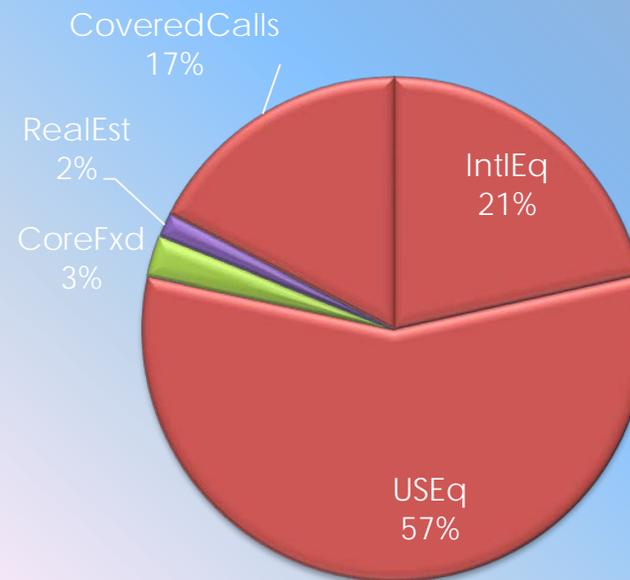
Strategic Class Framework

Despite a balanced Asset Allocation EBMUDERS' risk allocation is overwhelmingly (~95%) allocated towards Growth

Porfolio Dollar Allocation



Porfolio Risk Allocation



- Similar to most plan sponsors, despite having numerous asset classes and thousands of securities, EBMUDERS' portfolio lacks diversification as roughly 95% of the portfolio is geared towards one risk factor: growth risk

Strategic Class Framework

Absolute return orientation leads to a Strategic class (risk/objective) orientation versus Traditional asset orientation

- Portfolios are organized around certain risk/objectives
- Recognizing the need for an *absolute return* orientation lends itself to a more risk-centric management process
 - Focus on total risk rather than relative risk
 - Seek to diversify by risk rather than necessarily by asset
 - Regardless of varying asset allocations, most plan sponsors' portfolios are currently dominated by one risk; Economic Growth Risk
- **Primary Goal:** Improved transparency into the broad risk exposures
 - Better insight into the portfolio's likely response(s) to major macro events
 - Incorporate increased complexity into the portfolio

Strategic Class Framework

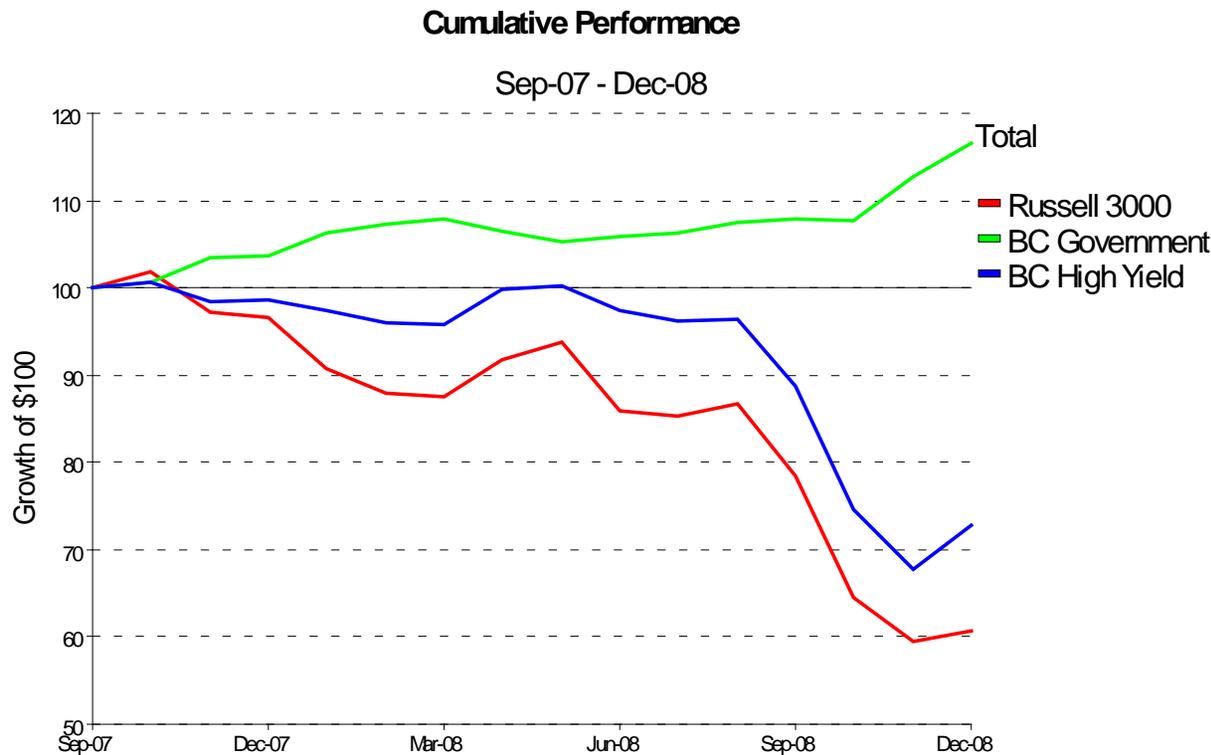
- Instead of “asset classes” consider “risk classes” or “risk bundles” or “strategic classes”
- Under such a framework shift, the investor considers organizing a portfolio to meet certain risk management criteria or portfolio objectives
- Many plan sponsors are adapting the new framework incrementally; carving out portions of the portfolio not tied to a specific asset class
- Policies and guidelines become less holdings-based or benchmark-centric and more absolute return/total risk-oriented
- A Strategic allocation framework implicitly recognizes the fact that all sub-asset classes within a larger asset class do not all respond to the same economic forces
 - This became abundantly clear during the 2008 financial crisis

Strategic Class Framework

- The fixed income asset class is a hallmark example of the shortcomings of traditional asset allocation and the relative strength of a Strategic class methodology
- Fixed income as an asset class encompasses a wide range of security types and borrower characteristics (any security that represents a loan to another entity)
- Because of this, different fixed income segments of the market performed strikingly differently during the financial crisis
- Securities backed by the full faith and credit of the government benefit from their prices being bid up in a flight to safety while at the same time securities backed by questionable assets/companies fell dramatically
- This led to a striking dichotomy in investor's returns dependant on what they actually owned within their fixed income portfolios
- For many plan sponsors their fixed income allocation did not "act" the way the expected/ modeled when determining their policy portfolios

Strategic Class Framework

- Which segment of the fixed income universe an investor was allocated to had an enormous impact on their performance during the financial crisis
- Many higher risk segments of the fixed income universe behaved much more like equities than government backed securities

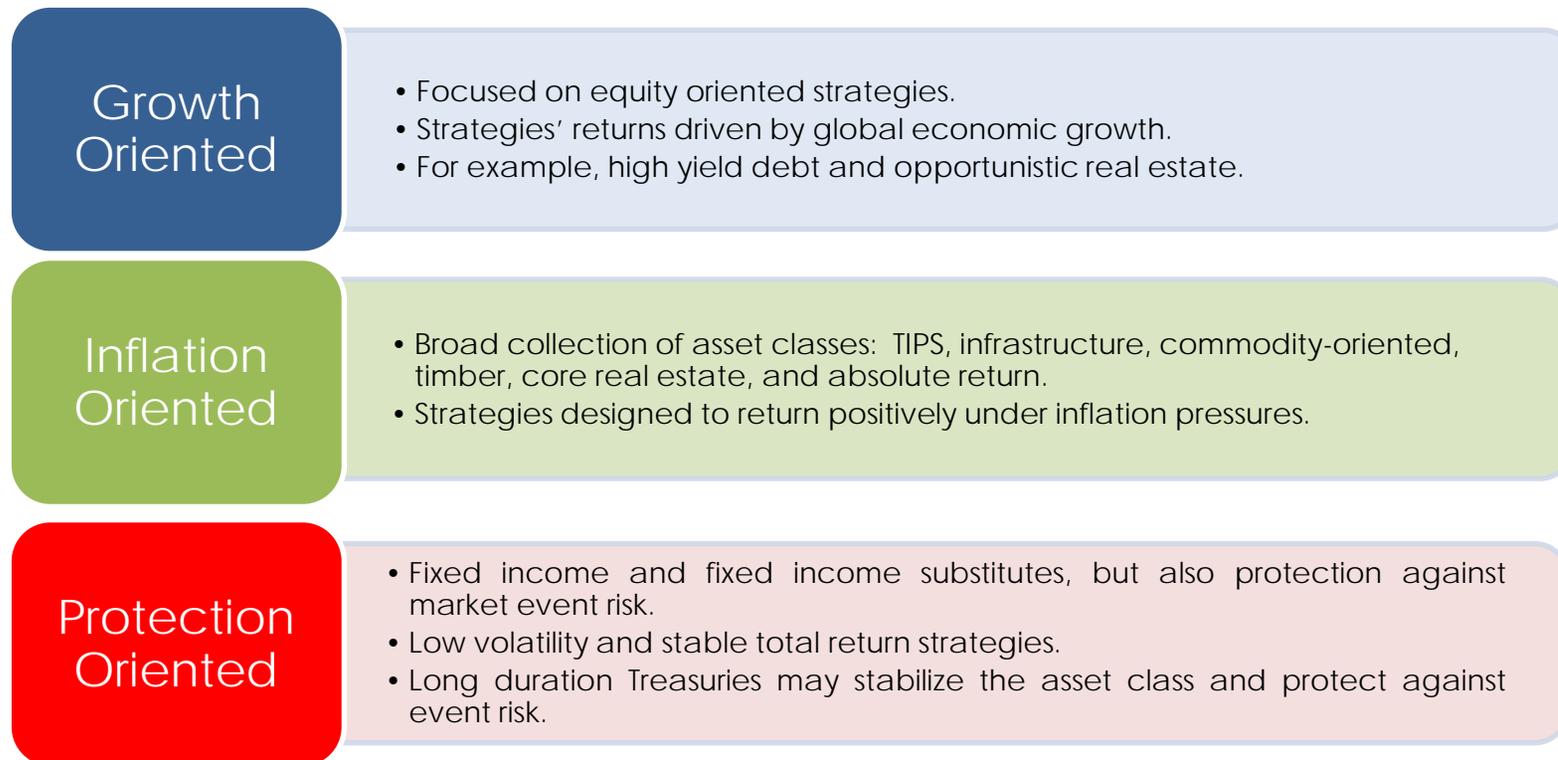


Strategic Class Framework

- Using a Strategic allocation framework improves the transparency of the overall allocation process allowing for better insight into the portfolio's likely response(s) to major macro events
- Instead of grouping assets purely on what type of security they are (traditional asset classes) a Strategic allocation framework groups assets based on the underlying economic drivers of the securities
- For example, many segments of the fixed income universe respond much more to factors that influence the performance of equities (GDP growth, business cycle) than they do to factors that influence the performance of government-backed fixed income securities (interest rate level and movement, changes in yield curve)
- As such, a Strategic framework groups assets by the economic factors that drive their risk/return profiles
 - For example, high yield debt, bank loans, opportunistic real estate would fall under the same umbrella as global equities because their returns and risk are driven by similar factors: Growth

Strategic Class Framework

- Conceptually, a portfolio can be organized by investment objective and risk tolerance with asset classes and segments becoming “feeders”



- Such a structure is expected to be more complex, but also more flexible
- Many plan sponsors are beginning to move in this direction structuring functional classes and reorganizing assets under these functional definitions

Strategic Class Framework

FRAMEWORK COMPARISON

Traditional Asset Class Framework



or

Strategic Framework



- A Strategic framework allows for a more streamlined portfolio structure at the risk level

Strategic Class Framework

A number of large Plan Sponsors have transitioned to a Strategic class structure

CALPERS STRATEGIC FRAMEWORK

Strategic Risk Classes	Supporting Asset Classes	Policy Target
Growth	Public Equities Private Equity	61%
Income	US Fixed Income International Fixed Income	20%
Real Assets	Real Estate Infrastructure Forestland	12%
Inflation Assets	Inflation-Linked Bonds Commodities	6%
Liquidity	Short-term high-quality fixed income securities	1%

Source: CalPERS Interim Strategic Targets. CalPERS.ca.gov

Strategic Class Framework

Conclusions

- Like most institutional portfolios, the EBMUDERS' portfolio is heavily allocated to growth risk
- Growth risk may show up where you don't expect it (think: fixed income)
- A strategic framework may clarify exposures and expectations, but... achieving a more risk-balanced portfolio may require portfolio restructuring, not tinkering
- Diversification only works well if the offsetting risks are IDENTIFIED & MEANINGFUL
- The benefit of a more risk-balanced investment approach is potentially a more risk-efficient portfolio (higher return per unit of risk borne)
- Strategic allocation framework is a paradigm, not a product. It is a trustee level decision, requiring some heavy lifting to get up the curve

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Date: May 19, 2017

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

From: Pension Consulting Alliance, LLC (PCA)

RE: Update: Proxy Service Provider

The Request for Proposals ("RFP") for a proxy service provider was sent to the following firms:

- Broadridge Financial Solutions, Inc.
- Egan-Jones Proxy Services
- Glass Lewis & Co. LLC
- ISS
- Segal Marco Advisors

Three firms responded – Broadridge Financial Solutions, Glass Lewis and ISS. PCA confirmed that Egan-Jones and Segal Marco Advisors (formerly Marco Consulting Group) both intentionally declined to respond to the RFP.

PCA conducted an initial review of all responses. We narrowed the field to two candidates: Glass Lewis and ISS who are, in our opinion, the leading providers of proxy voting services to U.S. institutional investors, including specifically U.S. public pension funds. Broadridge offers core proxy delivery and vote recording services across the institutional market. The firm partners with firms, including Glass Lewis and ISS, to offer clients proxy voting guidelines, research and recommendations.

Background

Broadridge Financial Solutions, Inc., as an entity was founded in 1962. Broadridge was spun off from ADP in March, 2007. Through Proxy Edge, [Broadridge](#) provides the core proxy delivery services for the institutional market. EBMUDERS' custodian, Northern Trust uses Proxy Edge to receive and log all EBMUDERS proxy ballots. Broadridge partners with firms such as Glass Lewis to provide clients proxy voting guidelines, research and recommendations. In our opinion, Broadridge should not be selected as a finalist for EBMUDERS because to perform the core services that EBMUDERS seeks, Broadridge must partner with one of the other RFP respondents.

Glass Lewis & Co. LLC, founded in 2003, is now owned 80% by the Ontario Teachers' Pension Plan, and 20% by the Alberta Investment Management Co., which invests on behalf of 28 public pension plans. Glass Lewis provides clients with five guideline options, including their standard Glass Lewis, Glass Lewis ESG, Glass Lewis Taff-Hartley, Glass Lewis Public Pension, and Glass Lewis Catholic. For a higher fee, clients may develop custom proxy guidelines. Glass Lewis grew through internal development, acquisition, and strategic partnerships. Most recently, in February 2016, the firm announced a strategy partnership with Sustainalytics (a leading provider of ESG research, ratings and analysis). In February 2017, Glass Lewis began integrating Sustainalytics' ESG research and

ratings into Glass Lewis' Proxy Paper (research) and Viewpoint (Glass Lewis' vote management platform).

ISS, founded in 1985, is now owned by Vestar Capital Partners, a middle-market private equity firm specializing in management buyouts, recapitalizations and growth equity investment. ISS offers clients its general ISS guideline option, or, for an additional fee, one of five specialty guidelines, including ISS public funds, ISS sustainability, ISS SRI, ISS Labor Unions, ISS Mission and Faith Based. For a higher fee ISS provides the ability to develop custom proxy voting guidelines. ISS has grown through internal development and acquisition. Since its acquisition by Vestar in April 2014, ISS expanded its offerings to include a suite of socially responsible investing solutions and services through the acquisitions of Ethix SRI Advisors and IW Financial, and augmented its compensation-related offerings through the purchase of Incentive Lab.



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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.



CenterSquare

INVESTMENT MANAGEMENT

Entrepreneurial Culture, Institutional Strength.



East Bay Municipal Utility District

U.S. Real Estate Securities Account Review

May 18, 2017



www.centersquare.com

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I. CenterSquare Firm Update

Firm Overview

- Founded in 1987, focused exclusively on real assets
- \$8.6 billion in assets under management¹
- Multiple strategies and customized solutions
- Headquartered in Philadelphia with an office in Newport Beach, CA and a local presence in London and Singapore²
- 41 investment professionals

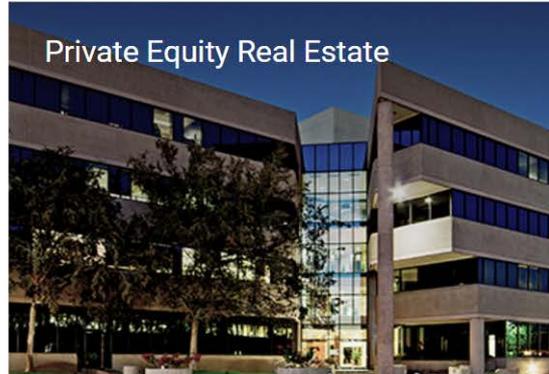
Listed Real Estate



U.S. and Global REIT strategies with a focus on relative value



Private Equity Real Estate



Core-plus and value-add opportunities in the U.S.



Listed Infrastructure



A real asset approach to capturing value in an emerging asset class

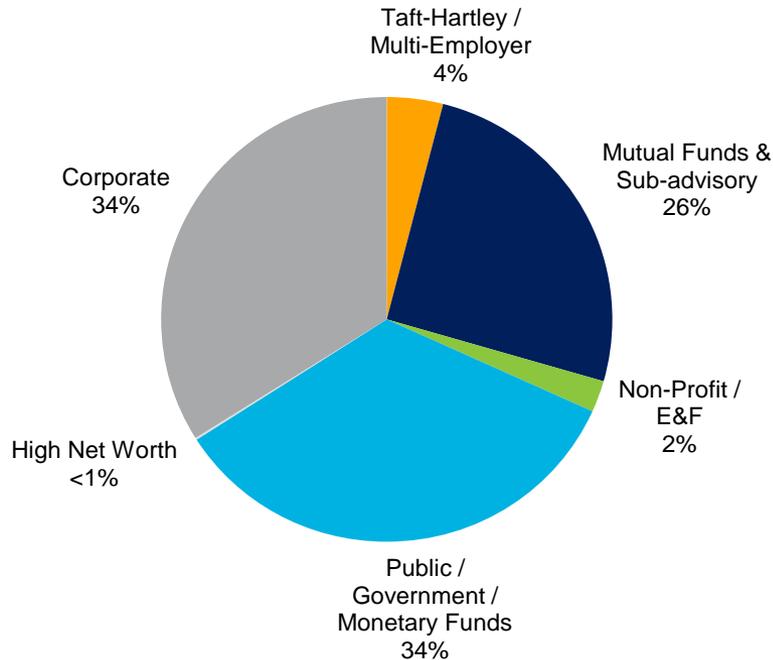


¹ Source: CenterSquare, AUM based on fair value as of March 31, 2017 of client investments determined in accordance with generally accepted accounting principles. Fair value of public real estate and infrastructure securities are based on last sale prices listed on world wide established exchanges. Private equity AUM represents net equity investment values. Private equity values are generally derived based on discounted cash flows of underlying property investments. Debt AUM is equal to the fair value of commercial mortgage loans in a CDO structure for which CenterSquare is the collateral manager.

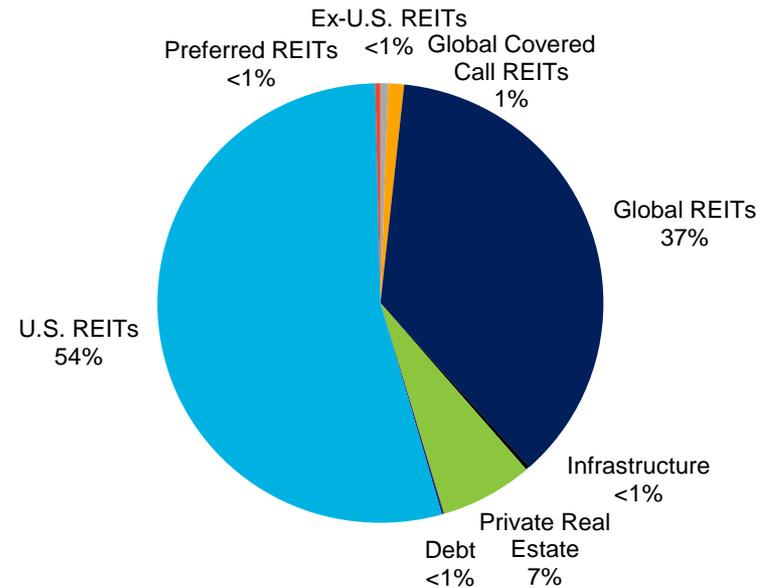
² CenterSquare is represented in London and Singapore by BNY Mellon Investment Management EMEA Limited and BNY Mellon Investment Management Singapore Pte. Limited, respectively.

Assets Under Management

**Firm AUM by Client Type
as of 03/31/17**



**Firm AUM by Strategy
as of 03/31/17**



Source: CenterSquare, AUM based on fair value as of 03/31/17 of client investments determined in accordance with generally accepted accounting principles. Private equity AUM represents net equity investment values. Fair value of public real estate securities are based on last sale prices on nationally established exchanges. Private equity values are generally derived based on discounted cash flows of underlying property investments. Debt AUM is equal to the fair value (based on estimated recovery values) of commercial real estate loans in a CDO structure for which CenterSquare is the collateral manager.

Representative Client List

Public Funds

Massachusetts Pension Reserves Investment Management
 Pennsylvania State Employees' Retirement System
 Iowa Public Employees' Retirement System
 Kansas Public Employees Retirement System
 South Carolina Retirement System Investment Commission
 Mississippi Government Employees' Deferred Compensation Plan
 Missouri DOT & Patrol Retirement System
 Commissioners of the Land Office of the State of Oklahoma
 New York City Teachers' Retirement System
 New York Power Authority
 Miami Fire Fighters' & Police Officers' Retirement Trust
 Sacramento County Employees Retirement System
 Los Angeles City Employees' Retirement System
 Los Angeles Fire & Police Pensions
 The Police Retirement System of St. Louis
 Richmond Retirement System (VA)
 Norfolk County Retirement System (MA)
 Port Authority of Allegheny County (PA)
 Prince George's County Police and Fire Pension Funds (MD)
 The Educational Employees' Supplementary Retirement System of Fairfax County (VA)
 East Bay Municipal Utility District (CA)
 Bucks County Employees' Retirement Fund (PA)
 Delaware County Employee Retirement System
 Commander, Navy Installations Command Retirement Trust

Corporate Clients

Honeywell International, Inc.
 Bayer Corporation
 DuPont and Related Companies Defined Contribution Plan Master Trust
 Delta Master Trust
 Advocate Health
 Unisys Corporation
 Southern Company
 Aon Corporation
 PNC Financial Services
 Total Fina Elf Finance USA, Inc Master Trust
 Eaton Corporation Master Retirement Trust
 Dominion Resources, Inc.

Endowments/Foundations

Florida International University
 Friends Fiduciary Corporation
 Siemens Foundation
 The Diocese of Buffalo
 Wespeth Investment Management

Sub-Advisory

AMP Capital Investors Limited
 Dreyfus⁽¹⁾
 Columbia Threadneedle
 PineBridge Investments Japan
 SEI Investments Management Corporation
 AMG Funds LLC
 Griffin Capital
 Mercer Investments (Australia) Limited

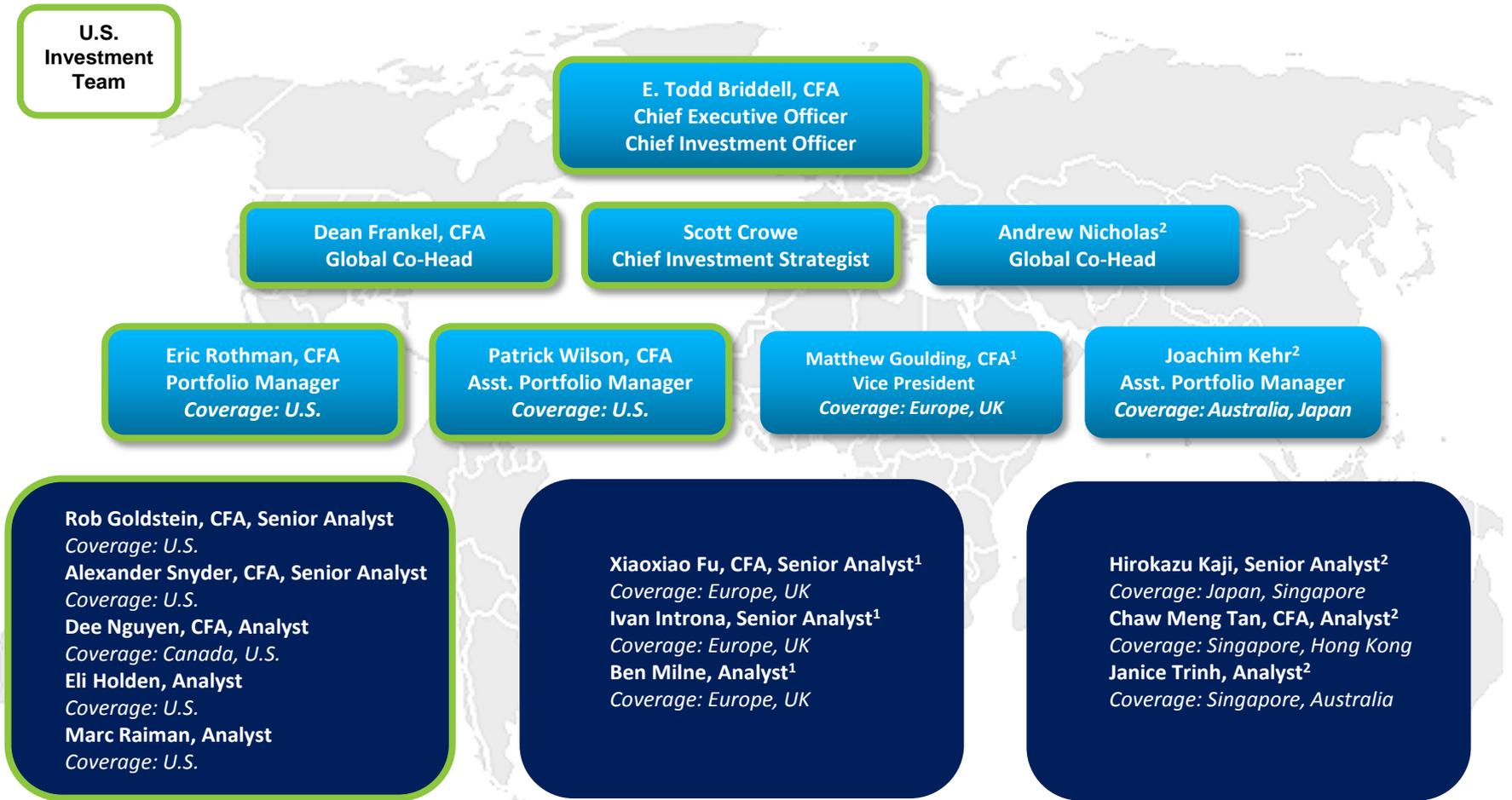
Taft-Hartley

Directors Guild of America
 Motion Picture Industry Pension & Health Plans
 United Food and Commercial Workers-Northern California
 Teamsters Negotiated Pension Plan
 Sheet Metal Workers' Local Union No. 80 Pension Trust Fund
 Michigan Electrical Employees' Pension Fund

As of March 2017. Disclosure: This representative client list includes all current institutional CenterSquare Public Securities and Private Equity clients or investors that have provided approval for disclosure. It is not known whether the listed clients or investors approve or disapprove of CenterSquare or the advisory services provided. This representative list is considered confidential proprietary information of CenterSquare and cannot be used for unauthorized purposes.

⁽¹⁾ Dreyfus is an affiliated company of BNY Mellon. The representative client list excludes off-shore BNY Mellon affiliated sub-advisory agreements.

Listed Real Estate Investment Team Coverage

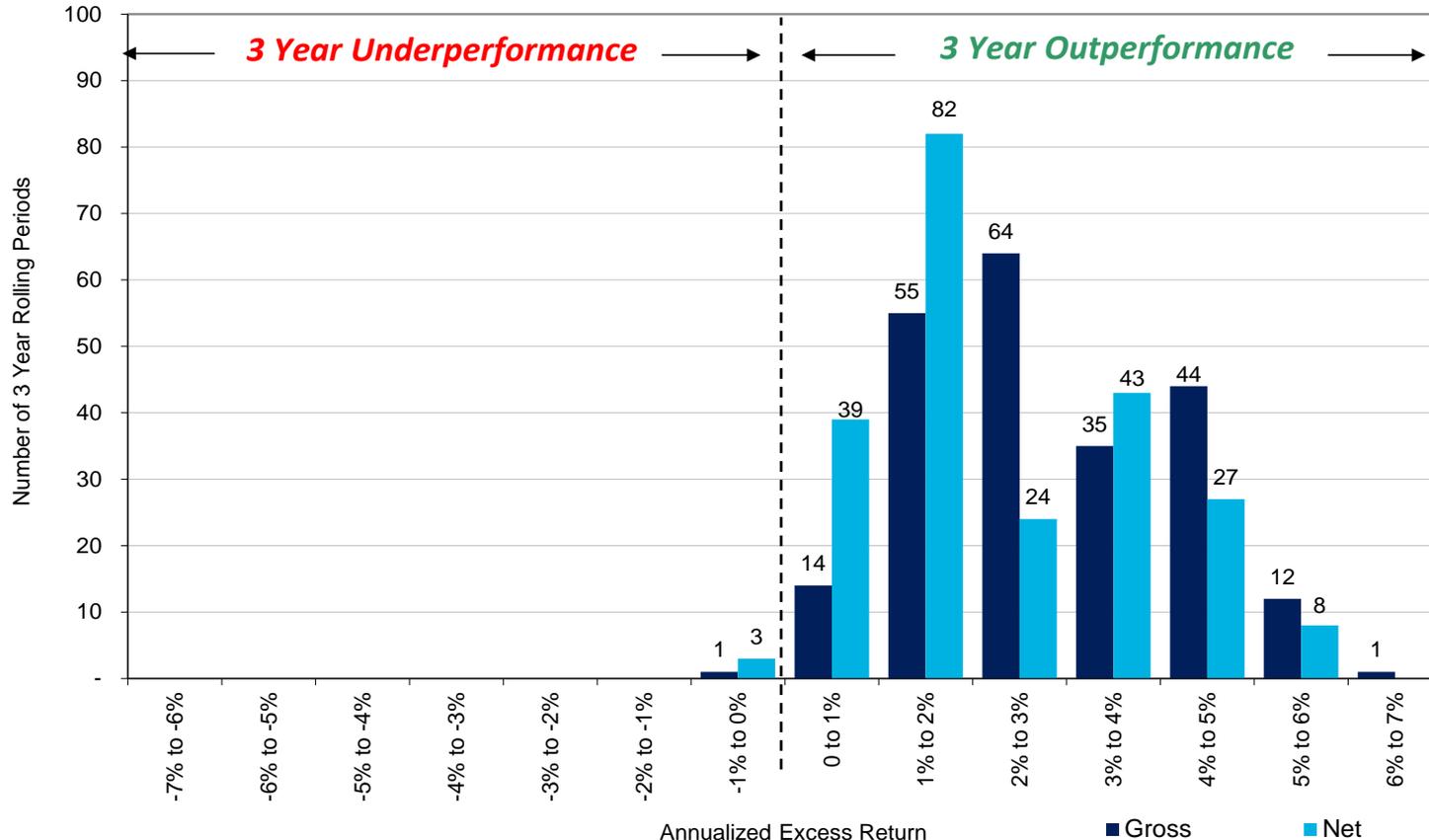


⁽¹⁾ CenterSquare is represented in London by BNY Mellon Investment Management EMEA Limited

⁽²⁾ CenterSquare is represented in Singapore by BNY Mellon Investment Management Singapore Pte. Limited

CenterSquare U.S. Listed Real Estate Strategy Relative Performance

Frequency Distribution of 3-Year Rolling Annualized Gross and Net Excess Returns*
 over the FTSE NAREIT Equity REITs Index
 June 30, 1995 - March 31, 2017
 (226 3-year Time Periods)



This graphical illustration presents the number of 3 year rolling periods from June 30, 1995 – March 31, 2017 based on annualized excess returns, reflected on a gross and net of fee basis. *Gross and Net annualized CenterSquare Total Return Diversified (FTSE) Composite returns in excess of FTSE NAREIT Equity REITs Index. Note that 1Q 2017 returns are preliminary. CenterSquare Investment Management, Inc. claims compliance with the Global Investment Performance Standards (GIPS). See additional performance disclosures and the most recent available GIPS compliant presentation in Section VI. Also refer to Definition of Indices at the end of this presentation. Past performance is not indicative of future returns.

II. Account Review and Performance

Fund / Relationship Review

- **Inception date: October 2011**
 - Mandate funded with \$25 million
- **Current Portfolio Value (as of 3/31/2017):** \$49,079,656
- **Benchmark:** FTSE NAREIT Equity REITs Index
- **Significant Cash Flows:**

Date	Amount
10/26/2011	\$16.75 M
10/28/2011	\$8.25 M
03/07/2014	\$6.34 M
06/14/2016	(\$6.00 M)

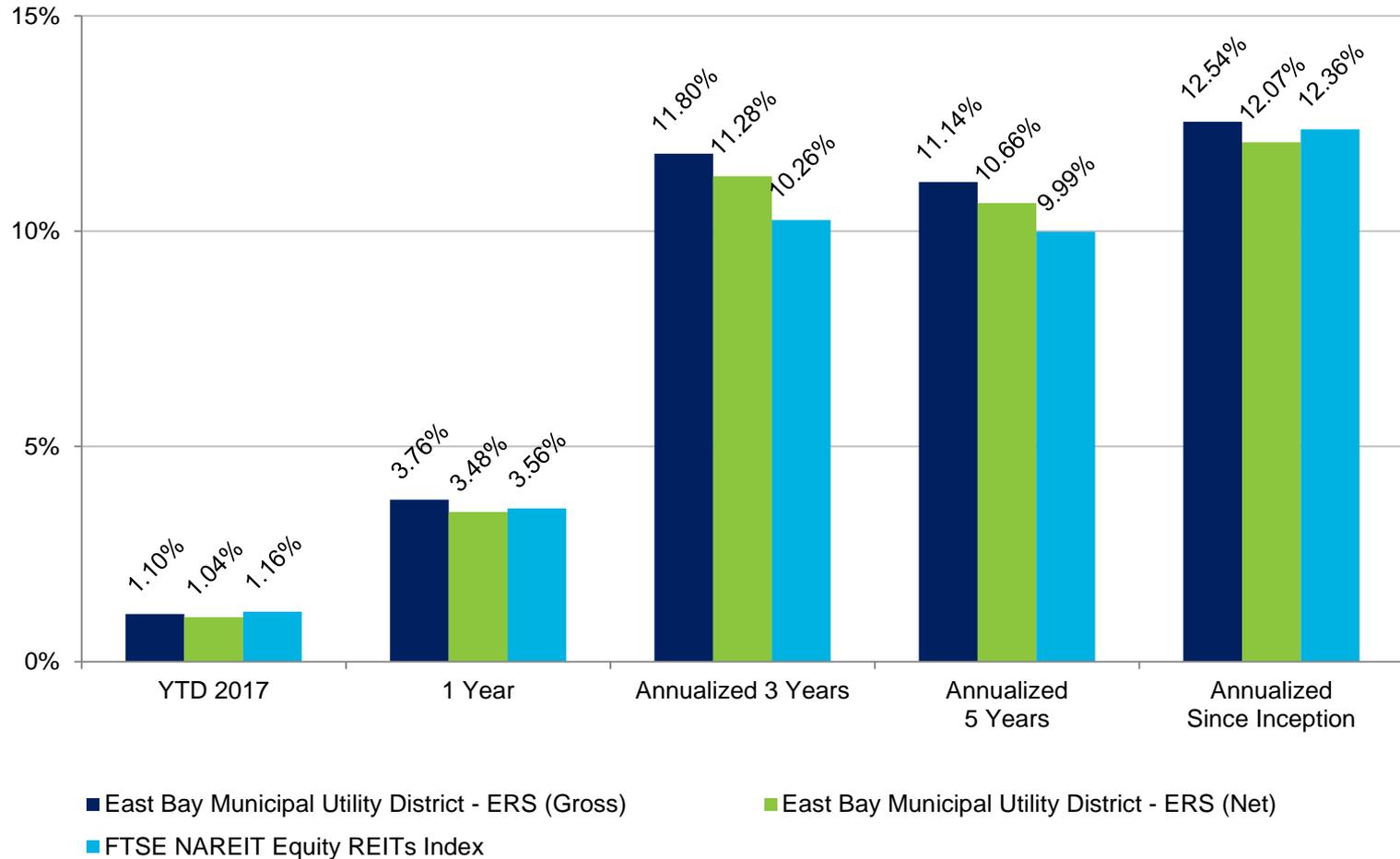
Sector Allocation (as of March 31, 2017)

Sector	Portfolio Weight	Benchmark Weight	Relative Weight
Office Infill	10.43%	7.83%	2.60%
Alt Housing	5.72%	3.49%	2.23%
Data Center	8.16%	7.19%	0.98%
Industrial	8.36%	7.40%	0.97%
Hotel	6.64%	5.91%	0.73%
Office Suburban	4.80%	4.19%	0.61%
Shopping Center	7.60%	7.17%	0.44%
Self Storage	6.20%	6.15%	0.04%
Apartment	12.26%	12.46%	(0.20%)
Regional Mall	10.40%	10.63%	(0.23%)
Freestanding	2.62%	4.10%	(1.48%)
Diversified	4.56%	6.23%	(1.67%)
Health Care	10.84%	12.67%	(1.82%)
Specialty	0.00%	4.58%	(4.58%)
Cash	1.39%	0.00%	1.39%

Top 25 Holdings in Portfolio (as of March 31, 2017)

Security	Portfolio Weight	Benchmark Weight	Relative Weight
SIMON PROPERTY GROUP INC	6.94%	6.66%	0.28%
EQUINIX INC	5.08%	3.50%	1.57%
AVALONBAY COMMUNITIES INC	4.64%	3.09%	1.54%
BOSTON PROPERTIES INC	4.29%	2.50%	1.79%
PROLOGIS INC	3.97%	3.35%	0.62%
HCP INC	3.74%	1.79%	1.95%
CUBESMART	3.44%	0.58%	2.86%
VORNADO REALTY TRUST	3.43%	2.09%	1.33%
PUBLIC STORAGE	2.76%	3.91%	(1.15%)
DOUGLAS EMMETT INC	2.67%	0.66%	2.00%
STORE CAPITAL CORP	2.62%	0.45%	2.16%
WELLTOWER INC	2.55%	3.16%	(0.61%)
UDR INC	2.51%	1.19%	1.32%
REGENCY CENTERS CORP	2.48%	1.20%	1.27%
COLONY STARWOOD HOMES	2.41%	0.20%	2.21%
HOST HOTELS & RESORTS INC	2.40%	1.72%	0.68%
CYRUSONE INC	2.30%	0.49%	1.82%
GGP INC	2.06%	1.44%	0.63%
DUKE REALTY CORP	2.05%	1.15%	0.90%
ESSEX PROPERTY TRUST INC	1.86%	1.87%	(0.01%)
KIMCO REALTY CORP	1.80%	1.16%	0.64%
EQUITY RESIDENTIAL	1.79%	2.76%	(0.98%)
EDUCATION REALTY TRUST INC	1.54%	0.37%	1.18%
WEINGARTEN REALTY INVESTORS	1.48%	0.47%	1.01%
APARTMENT INVT & MGMT CO -A	1.47%	0.85%	0.62%

Performance History (periods ending 03/31/2017)



Performance Attribution (YTD 2017)

Performance Attribution

East Bay Municipal Utility District

12/30/2016 - 3/31/2017

Sector Performance	East Bay Municipal Utility District			FTSE NAREIT Equity REITs Index			Attribution		
	Average Weight	Ending Weight	Total Return	Average Weight	Ending Weight	Total Return	Sector	Stock	Total
Alt Housing	4.09	5.72	11.01	3.45	3.49	4.67	(0.01)	0.25	0.24
Apartment	12.34	12.26	0.91	12.34	12.46	0.60	(0.00)	0.04	0.04
Data Center	8.32	8.16	12.41	6.92	7.19	11.44	0.11	0.07	0.18
Diversified	5.72	4.56	(2.06)	6.44	6.23	(0.22)	0.03	(0.09)	(0.06)
Freestanding	2.81	2.62	(1.08)	4.14	4.10	1.66	0.00	(0.11)	(0.11)
Health Care	11.33	10.84	6.47	12.13	12.67	6.88	(0.06)	(0.04)	(0.10)
Hotel	6.15	6.64	(0.05)	5.92	5.92	(1.91)	0.01	0.12	0.13
Industrial	8.63	8.36	(0.00)	7.29	7.40	(0.71)	(0.00)	0.06	0.06
Office Infill	9.47	10.43	4.05	7.78	7.83	2.25	(0.00)	0.16	0.16
Office Suburban	4.18	4.80	(2.76)	4.22	4.19	0.46	(0.01)	(0.13)	(0.14)
Regional Mall	10.64	10.40	(4.16)	11.10	10.63	(4.90)	0.03	0.09	0.12
Self Storage	6.24	6.20	(1.43)	6.23	6.16	(1.42)	0.00	0.00	0.00
Shopping Center	8.49	7.60	(9.06)	7.60	7.17	(7.88)	(0.09)	(0.11)	(0.20)
Specialty	0.00	0.00	0.00	4.46	4.58	13.23	(0.50)	0.00	(0.50)
Subtotal							(0.48)	0.31	(0.17)
Cash	1.60	1.39							0.04
Other*									0.07
Total	100.0	100.0	1.10	100.0	100.0	1.16			(0.06)

**Other* represents the difference between the account's actual return and that calculated by our attribution measurement system. The small variance relative to the actual return stems from calculation limitations of the attribution software that misses the effects of intraday trading profits and losses, withdrawals and capital inflows, rounding, and other factors.

Performance Attribution (2016)

Performance Attribution

East Bay Municipal Utility District

12/31/2015 - 12/30/2016

Sector Performance	East Bay Municipal Utility District			FTSE NAREIT Equity REITs Index			Attribution		
	Average Weight	Ending Weight	Total Return	Average Weight	Ending Weight	Total Return	Sector	Stock	Total
Alt Housing	2.14	5.72	31.06	3.13	3.36	19.16	(0.07)	0.09	0.02
Apartment	12.87	12.26	4.41	12.72	12.48	2.70	0.05	0.20	0.25
Data Center	7.96	8.16	24.89	6.16	6.50	26.40	0.36	(0.11)	0.25
Diversified	4.23	4.56	6.69	6.12	6.67	11.28	(0.07)	(0.14)	(0.21)
Freestanding	5.10	2.62	12.81	4.14	4.08	17.00	0.26	(0.14)	0.12
Health Care	12.62	10.84	4.64	12.26	11.97	7.06	(0.07)	(0.30)	(0.38)
Hotel	5.27	6.64	26.66	5.34	6.10	24.26	0.03	0.12	0.15
Industrial	8.53	8.36	32.89	6.90	7.51	30.70	0.26	0.15	0.41
Office Infill	7.59	10.43	12.92	7.24	7.61	8.50	(0.24)	0.37	0.13
Office Suburban	4.03	4.80	23.90	3.97	4.21	20.99	0.00	0.09	0.09
Regional Mall	11.30	10.40	(5.99)	12.95	11.28	(4.63)	0.10	(0.20)	(0.10)
Self Storage	7.09	6.20	(9.01)	6.94	6.31	(8.15)	(0.14)	(0.09)	(0.23)
Shopping Center	9.66	7.60	4.93	8.23	7.84	3.18	(0.11)	0.20	0.09
Specialty	0.06	0.00	7.53	3.89	4.10	19.95	(0.33)	(0.00)	(0.33)
Subtotal							0.01	0.24	0.25
Cash	1.54	1.39							(0.15)
Other*									0.32
Total	100.0	100.0	8.94	100.0	100.0	8.52			0.42

**Other* represents the difference between the account's actual return and that calculated by our attribution measurement system. The small variance relative to the actual return stems from calculation limitations of the attribution software that misses the effects of intraday trading profits and losses, withdrawals and capital inflows, rounding, and other factors.

Performance Attribution (3 Years, annualized)

Performance Attribution

East Bay Municipal Utility District

12/30/2013 - 12/30/2016

Sector Performance	East Bay Municipal Utility District			FTSE NAREIT Equity REITs Index			Attribution		
	Average Weight	Ending Weight	Total Return	Average Weight	Ending Weight	Total Return	Sector	Stock	Total
Alt Housing	1.22	5.72	21.69	2.75	3.36	19.94	(0.09)	0.06	(0.03)
Apartment	14.25	12.26	20.39	13.48	12.48	19.91	0.11	0.07	0.18
Data Center	4.51	8.16	43.08	3.93	6.50	39.38	0.16	0.01	0.17
Diversified	3.94	4.56	8.39	6.49	6.67	3.85	0.29	0.19	0.48
Freestanding	3.45	2.62	15.91	3.50	4.08	19.28	0.06	(0.10)	(0.05)
Health Care	11.19	10.84	11.02	12.83	11.97	9.27	0.05	0.17	0.22
Hotel	6.95	6.64	8.04	6.72	6.10	7.12	0.03	0.05	0.07
Industrial	9.62	8.36	18.60	6.78	7.51	18.43	(0.01)	0.02	0.01
Office Infill	10.27	10.43	15.51	7.95	7.61	13.88	(0.04)	0.14	0.10
Office Suburban	4.29	4.80	13.29	4.16	4.21	8.58	(0.05)	0.21	0.16
Regional Mall	12.98	10.40	9.03	14.02	11.28	8.73	0.03	0.06	0.09
Self Storage	6.42	6.20	19.55	6.41	6.31	20.08	0.04	(0.03)	0.01
Shopping Center	9.24	7.60	14.57	7.94	7.84	12.11	(0.02)	0.23	0.22
Specialty	0.24	0.00	6.27	3.04	4.10	7.46	0.15	(0.02)	0.13
Subtotal							0.70	1.06	1.76
Cash	1.43	1.39							(0.17)
Other*									0.20
Total	100.0	100.0	15.16	100.0	100.0	13.38			1.78

**Other" represents the difference between the account's actual return and that calculated by our attribution measurement system. The small variance relative to the actual return stems from calculation limitations of the attribution software that misses the effects of intraday trading profits and losses, withdrawals and capital inflows, rounding, and other factors.

III. Economic Conditions

State of the U.S. Economy

- **Economic Growth:** U.S. economic growth gained 2.1% in Q4, pushing the trailing 12-month figure to slightly below 2.0%. Expectations are for modestly higher growth as a result of expected tax cuts, regulatory reform and infrastructure spending.
- **Political Environment:** Uncertainties abound as to what policy changes should be expected. Lower tax rates, changing healthcare, immigration, taxes and tariffs, and infrastructure spending are all questions.
- **Monetary Policy:** The Fed remains cautious as it moves to raise rates; the first rate occurred in mid-March with two more expected in 2017, and the Fed is signaling another three in 2018.
- **Credit:** The lending environment remains favorable, all-in borrowing costs have dipped a little from last quarter. Capital is readily available but lenders have become more risk averse.
- **Jobs:** In 2016, the U.S. added 2.2M jobs, below the 2.7M and 3.1M added in 2015 and 2014. Unemployment continues to drift lower.
- **Consumer:** Retail sales growth has been healthy and consumer confidence has rebounded to levels not witnessed since 2000.
- **Housing:** The housing market has also improved with both new and existing home sale volumes and pricing trending higher.

Measure of the Economy's Health	Latest Reading	Reading from 1 Year Ago
Real GDP Growth (Quarter-over-quarter change)	2.1% (Dec-16)	0.9%
Consumer Price Index (Year-over-year change)	2.7% (Feb-17)	0.9%
Producer Price Index (Year-over-year change)	3.7% (Feb-17)	(2.3%)
Unemployment Rate	4.5% (Mar-17)	5.0%
Leading Economic Indicators (Year-over-year change)	3.1% (Feb-17)	1.4%
Consumer Confidence Index	125.6 (Mar-17)	96.1
Industrial Production (Year-over-year change)	0.5% (Feb-17)	(2.4%)
Durable Goods (Year-over-year change)	1.8% (Feb-17)	(1.3%)
Total Retail Sales (Year-over-year change)	5.7% (Feb-17)	1.7%
Total New Home Sales (seasonally adj. annual rate)	592K (Feb-17)	537K
Total Auto Sales, Units (MM) (seasonally adj. annual rate)	16.53M (Mar-17)	16.73M
Federal Funds Target Rate	1.00% (Mar-17)	0.50%
90-Day LIBOR	1.15% (Mar-17)	0.63%

Sources: Bloomberg, U.S. Bureau of Economic Analysis, Bureau of Labor Statistics, Conference Board

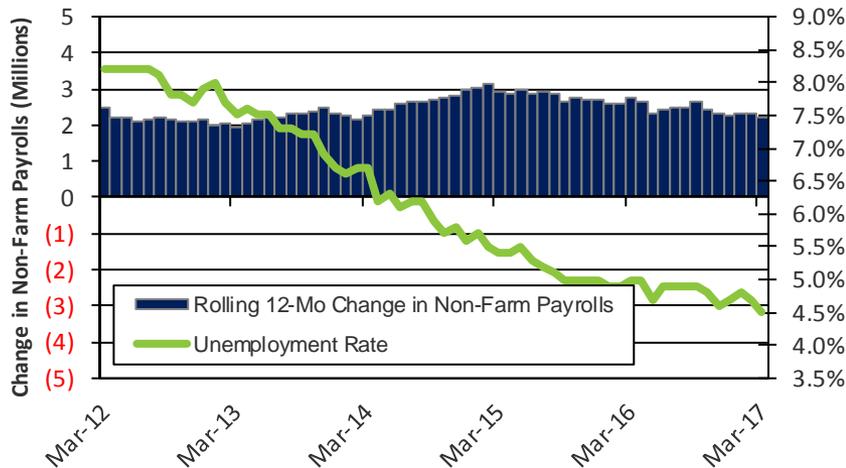
Households

- ❖ The inventory of unsold homes has normalized. The volume of new home sales recently picked up as new starts have tapered off. Prices continue to improve.
- ❖ Unemployment continues to drift lower.
- ❖ Retail sales growth has been led by internet retailing at the expense of “brick and mortar” stores. Goods are losing favor to experiences, and department store sales are weak.

Inventory of Unsold Homes

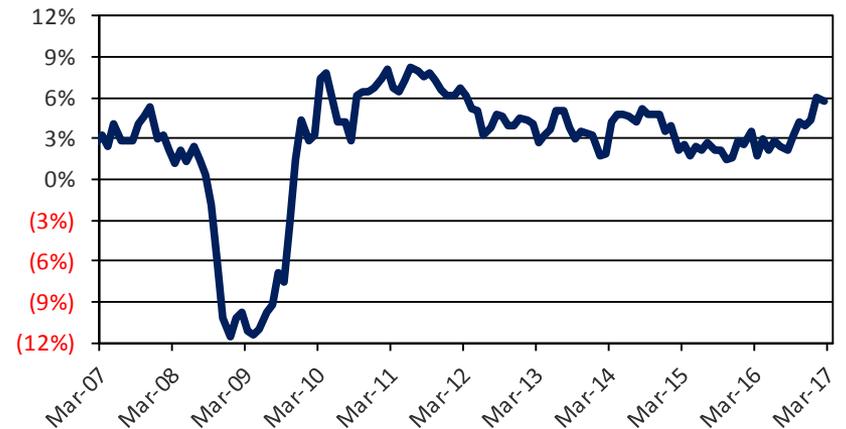


Employment Data



Retail & Food Service Sales

[Year-over-Year, Seasonally Adjusted]

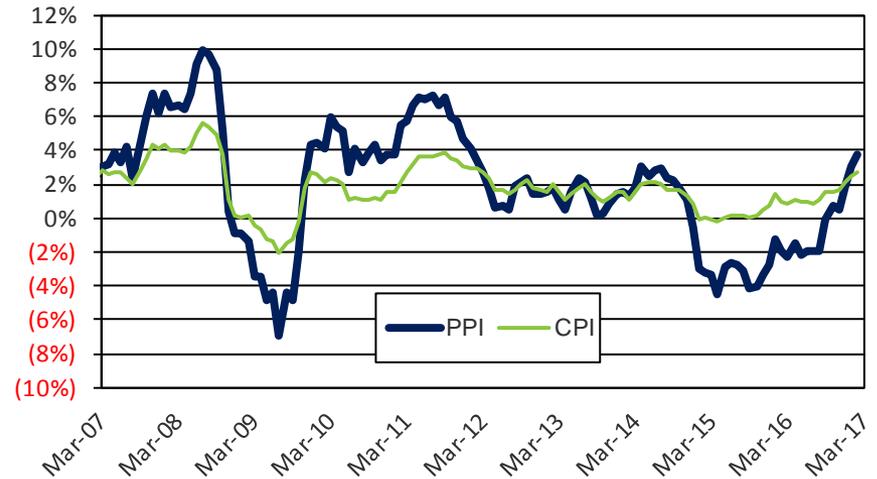


Sources: Bloomberg, National Assoc. of Realtors, U.S. Census Bureau
As of March 31, 2017

Businesses

- Inflation is slowly rising as low oil prices are no longer a headwind. Recent readings suggest inflation is closer to the Fed's 2% target and may continue to rise. PPI dipped considerably and has just recently recovered.
- Commodities bounced higher in early 2016 after a significant 18-month drop but have recently leveled off. Gold was strong all year but gave back almost all of its gain in Q4 2016.
- U.S. corporate profit growth has been anemic as the strong dollar and slowing global growth have been headwinds, but expectations are for a rebound in 2017.

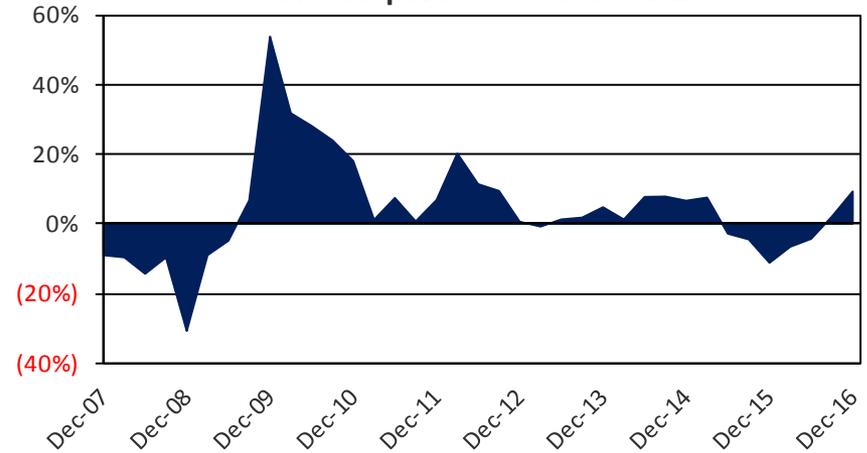
Year-over-Year Inflation



Commodity and Gold Price Levels



U.S. Corporate Profit Growth

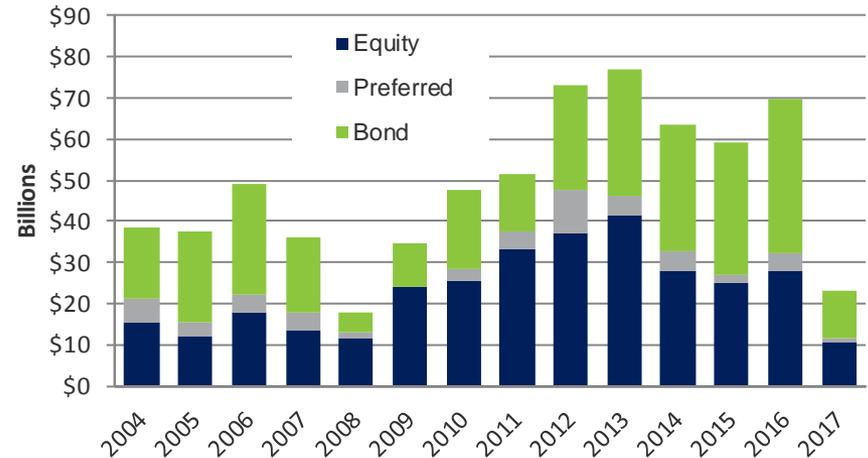


Sources: Bloomberg, Bureau of Labor Statistics, Bureau of Economic Analysis
As of March 31, 2017

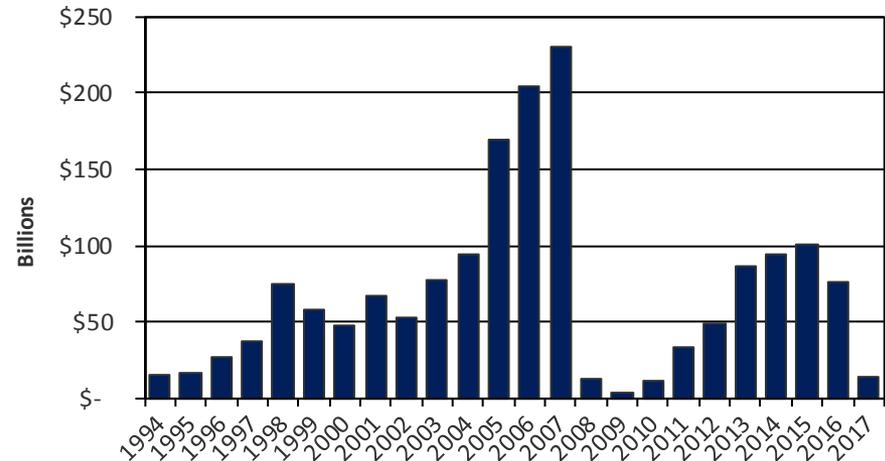
Credit Markets

- ❖ The U.S. 10-year treasury yield declined 10bps during the first quarter. Rates shot higher late last year after the election and in anticipation of the Fed's mid-December hike, and then bounced between 2.60% and 2.30% during the first quarter despite the earlier than anticipated second rate hike by the Fed in mid-March.
- ❖ Debt remains cheap and available, but lenders have grown more cautious and restrictive to less creditworthy borrowers. Banks have become more cautious on construction lending.
- ❖ For well-healed borrowers, all-in interest costs dipped a little during the quarter. Rates remain very attractive by historical comparison and are in the low-4% range.
- ❖ CMBS issuance got off to a slow start in 2017 but accelerated in late February and March with \$14.2B issued in Q1 2017 compared to \$17.4B during the same period last year.
- ❖ REITs issued \$11.2B of unsecured bonds in 35 offerings in Q1, in one of the most active quarters ever. The average option-adjusted unsecured spread for investment grade REIT bonds was roughly 129bps at quarter end, roughly 10bps tighter than at year end.
- ❖ Spreads on new fixed-rate mortgages for loans with 50-59% loan-to-value ratios were roughly 148 bps at quarter end, down approximately 10 bps from year end.

REIT Capital Raised



US CMBS Issuance



Sources: Bloomberg, NAREIT, Commercial Mortgage Alert, CenterSquare Investment Management, Evercore ISI, Wells Fargo Securities. As of March 31, 2017

IV. State of the REIT Market

Market and Sector Performance

U.S. REITs produced moderate returns in Q1

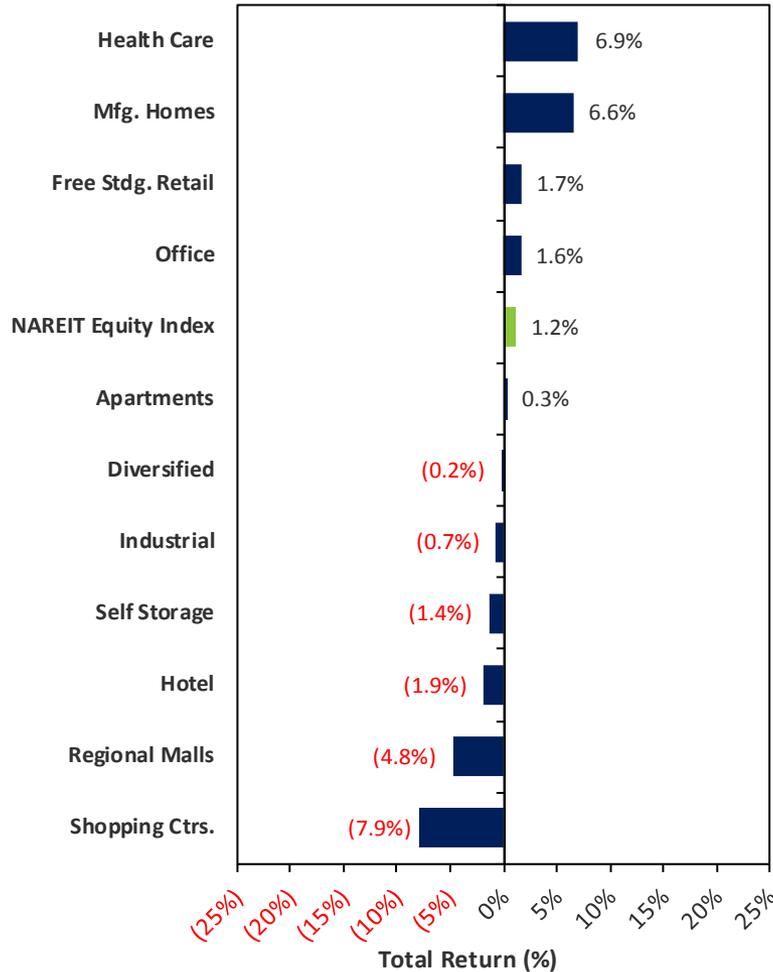
- The FTSE NAREIT Equity REITs Index generated a 1.2% total return in Q1, underperforming the Dow Jones Industrial Average and S&P 500, which produced positive total returns of 5.2% and 6.1%, respectively.
- International REITs outperformed U.S. REITs with a 4.9% total return in Q1.

Sector performance showed a wide dispersion

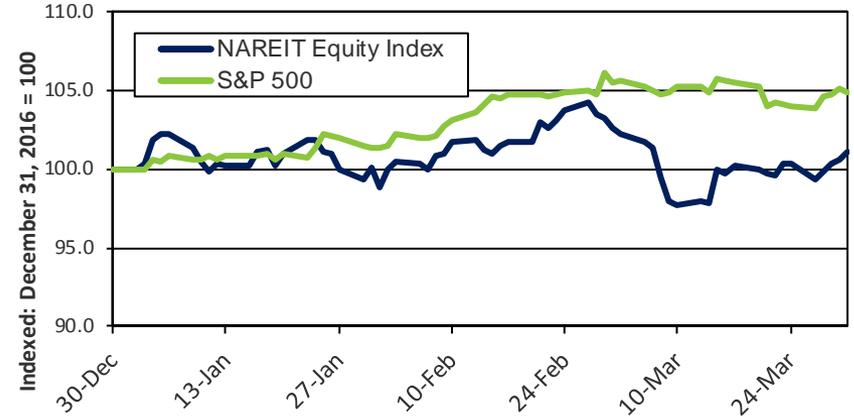
- Specialty (+12.1%) was by far the big winner in Q1. The specialty group includes a number of non-traditional commercial real estate focused REIT such as prisons (up over 30%), cell towers, data centers, document storage, and casino lessors (each of which produced returns between 10-15%).
- Health care REITs (+6.9%) was strong both when it appeared as if ObamaCare might be repealed and even after the vote was postponed.
- Alternate housing (+4.7%) was strong, especially single family residential, as demographics, operating fundamentals, a lack of new supply and affordable housing are all favorable for the group.
- Freestanding retail (+1.7%), office (+1.6%), and apartments (+0.3%) all produced moderate returns.
- Industrial (-0.7%), self storage (-1.4%), and hotels (-1.9%) all produced moderately negative returns.
- Retail performed the worst, as the news on store closings and retailer bankruptcies continues to be negative. Shopping centers (-7.9%) underperformed malls (-4.8%).

Relative Performance of REITs vs. Major Indices

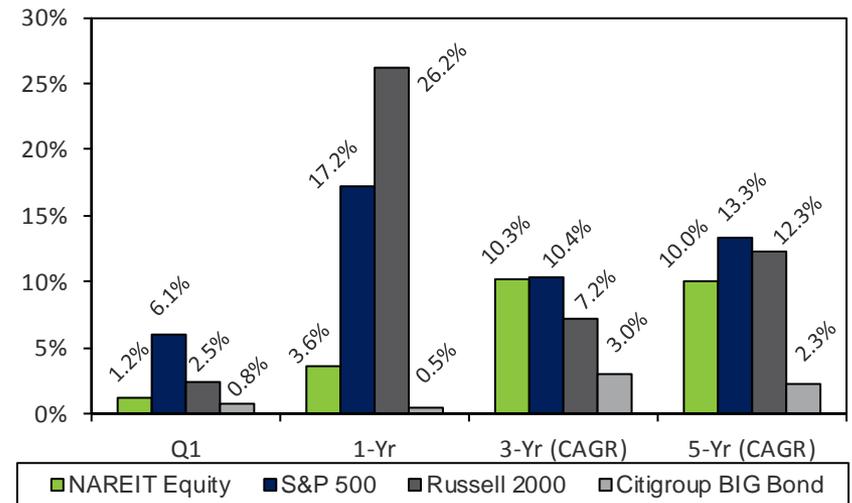
NAREIT Equity REITs Index First Quarter 2017
Total Return by Sector



NAREIT Equity Index vs S&P 500 Q1 2017 Returns



Index Total Returns for Periods Ending 03/31/17

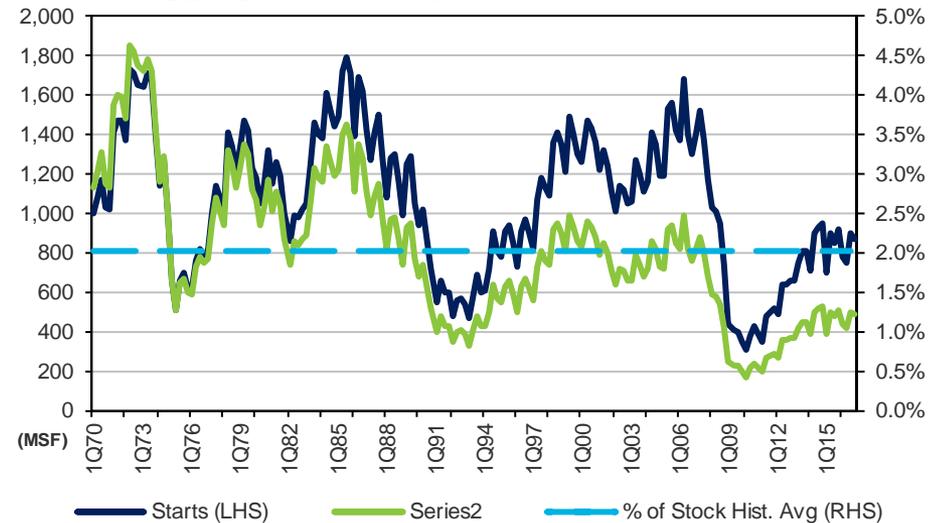


Sources: Bloomberg, NAREIT

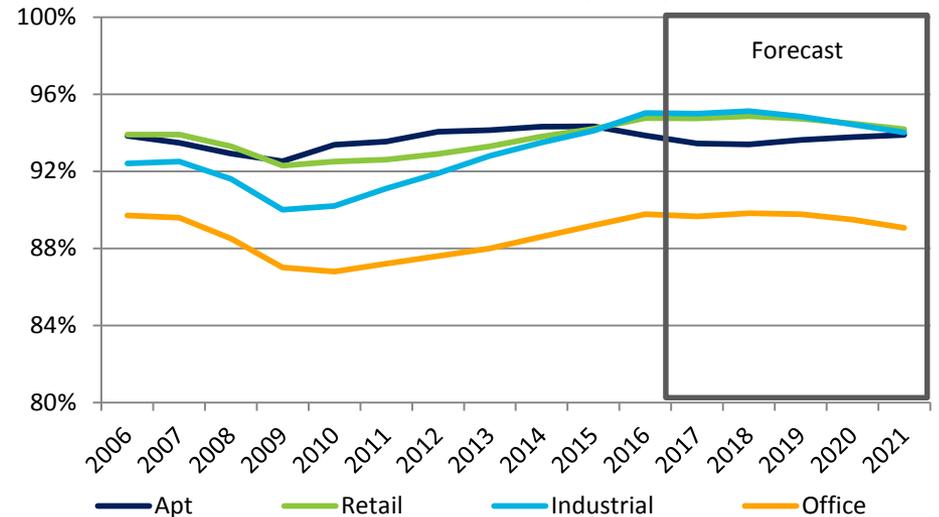
Real Estate Fundamentals

- ❖ Construction has increased, but construction costs—mainly labor and land—have risen. Construction lending has receded which may lead to fewer new starts.
- ❖ Supply is greatest for apartments and limited service hotels. Coastal, prime markets are seeing the most supply as investors continue to favor these gateway cities, causing fundamentals to wane the most. Industrial construction is rising, but retail and office remain at low levels.
- ❖ Demand for commercial space is good across all sectors. Occupancies are near prior cycle peak levels. The market expects retail demand to turn significantly negative.
- ❖ Rent growth has begun to slow in response to new supply, but market rents are above in-place rents across most sectors.
- ❖ After years of above-trend growth, operating cash flow is beginning to normalize.

Aggregate Quarterly Construction Starts



Historical National Occupancy Rates



Sources: Citi Investment Research & Analysis (Q1 2017), CoStar Realty Information, Inc. (March 2017)

REIT Outlook: Yields Solid, Cash Flow Growing

REITs should generate 5-7% annual total returns

➤ Three drivers of REIT returns:

- **Growing, but moderating real estate fundamentals** – Demand for commercial space is good across all sectors. Occupancies are high and rents are rising. Limited new construction has allowed for positive rent growth even in the current moderate-growth economy. Construction has begun to materially increase in a few sectors, but for now, is being met with pent-up demand. Inflation may start to accelerate, impacting construction costs and rents.
- **External growth** – Apartment and industrial REITs are active developers and can create a favorable spread to their cost of capital. Many of the REITs in non-traditional sectors trade at premiums to their asset values making spread investing accretive. Few of the traditional sector REITs can make accretive acquisitions today and are instead selling assets to fund development.
- **Thirst for yield** – While higher short-term and long-term interest rates are competitors for yield, the current high historical spread should be enough to attract investors to the space. REIT dividend yields continue to grow, albeit at a slower pace than the past few years. If economic growth were to accelerate domestically, fundamentals would likely follow.

REIT Valuations

REITs valuations look fair

- REITs currently trade at a small discount to net asset value.
- The yield spread between REITs' dividends and the 10-Year U.S. Treasury of 162 bps is above the historical average of 133 bps. REITs should grow dividends in-line with earnings growth in 2017.
- The ratio of the REIT FFO multiple to the S&P 500 earnings multiple is well below its historical relationship indicating a favorable relative valuation to broad equities. This includes the impact of significant expected earnings growth fueled by tax reduction for broader equities in 2017.
- Replacement cost analysis is muddled. Niche sectors trade at premiums to replacement cost, but core sectors trade much more fairly, as the discount appears appropriate given the age of the assets. Private market assets are often trading above replacement cost, generally indicating a green light for development. Development projects today require more equity and/or pre-leasing than in past cycles, as lenders want to avoid being caught late in the cycle.

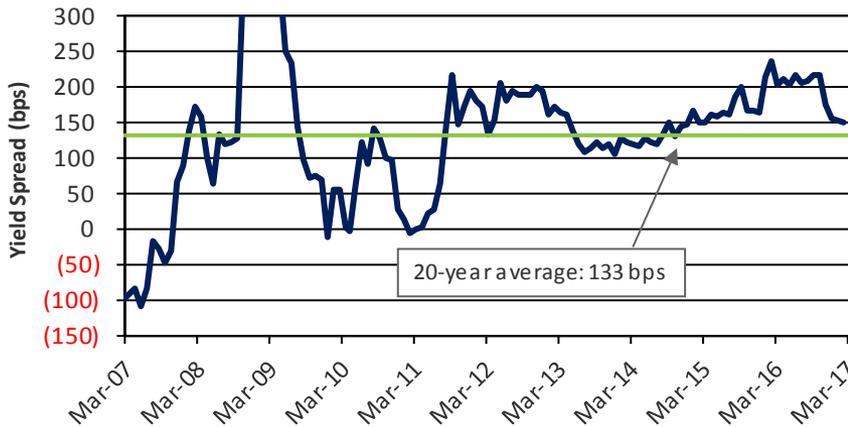
Valuation Metrics

- REITs trade at a small discount to net asset value.
- The ratio of the REIT P/AFFO multiple to the S&P 500 P/E is currently well below its 10-year average.
- The REIT dividend yield of 4.01% is 162 bps above the 10-year U.S. Treasury yield of 2.39%. The average spread over the past 20 years has been 133 bps.

Price to NAV



NAREIT Equity Yield Spread Over 10-Year U.S. Treasury Yield



12-Month Forward REIT P/AFFO vs S&P P/E



Sources: Bloomberg, Bank of America Merrill Lynch, NAREIT, CenterSquare Investment Management

Earnings Growth

- Consensus earnings for the S&P 500 suggest accelerating growth.
- REIT FFO/sh growth is expected to decelerate in 2017 after a strong 2016. REITs generally beat and raise guidance throughout the year, and we expect growth to ultimately be at least 5% this year.
- REITs carry a 204 bps yield premium to the S&P 500.

	U.S. Equity REITs	S&P 500 Index
2016E Multiple*	16.9x	18.3x
2017E Multiple*	15.9x	16.3x
2016E Earnings Growth	9.7%	18.5%
2017E Earnings Growth	4.0%	12.3%
Dividend Yield	4.0%	2.0%

Growth Rates by Property Type

	2008A	2009A	2010A	2011A	2012A	2013A	2014A	2015A	2016A	2017E
Apartment	0.2%	(13.3%)	(0.8%)	10.0%	15.4%	8.7%	8.1%	9.3%	3.0%	3.9%
Office	3.2%	(8.5%)	(13.2%)	7.5%	2.2%	3.2%	5.2%	4.7%	6.5%	1.3%
Industrial	(17.1%)	(52.0%)	39.3%	15.5%	10.5%	(1.5%)	9.2%	11.9%	9.6%	5.4%
Mall	10.0%	(13.7%)	(10.7%)	8.7%	13.9%	11.2%	2.0%	9.7%	6.8%	6.5%
Shopping Center	(11.3%)	(13.5%)	(23.6%)	6.0%	5.7%	8.8%	6.3%	6.0%	3.7%	4.5%
Hotel	(7.6%)	(61.1%)	17.6%	21.9%	18.5%	16.1%	20.9%	8.3%	9.5%	(2.2%)
Healthcare	1.9%	(1.0%)	2.3%	14.1%	7.5%	7.9%	7.1%	3.7%	1.7%	(4.3%)
Weighted Average**	1.8%	(15.9%)	(2.3%)	10.5%	10.2%	8.2%	7.6%	7.5%	5.4%	3.9%

Notes

Data as of March 31, 2017

*The S&P 500 multiple is based on EPS. The REIT multiple is based on FFO per share.

**Weighted average includes smaller sectors such as triple net, self storage, and manufactured housing in addition to those listed.

Sources: Bloomberg, SNL, Bank of America Merrill Lynch, NAREIT, CenterSquare Investment Management

V. Sector Commentary and Analysis

Office: Overweight

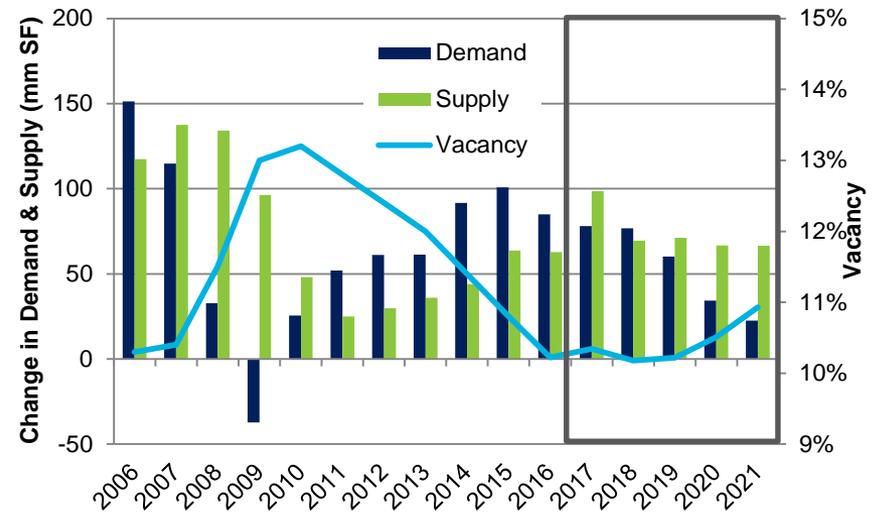
Generally Low Supply and Steady Jobs

- Tax reform is a priority of the new administration and should be a positive for a sector leveraged to an improving job market and better GDP.
- New York City, the country's largest office market, should benefit from deregulation of the financial industry.
- Supply growth remains below historical levels nationally.
- Concessions, which remained elevated even as fundamentals improved, are starting to creep even higher in many markets, eating into cash flow.

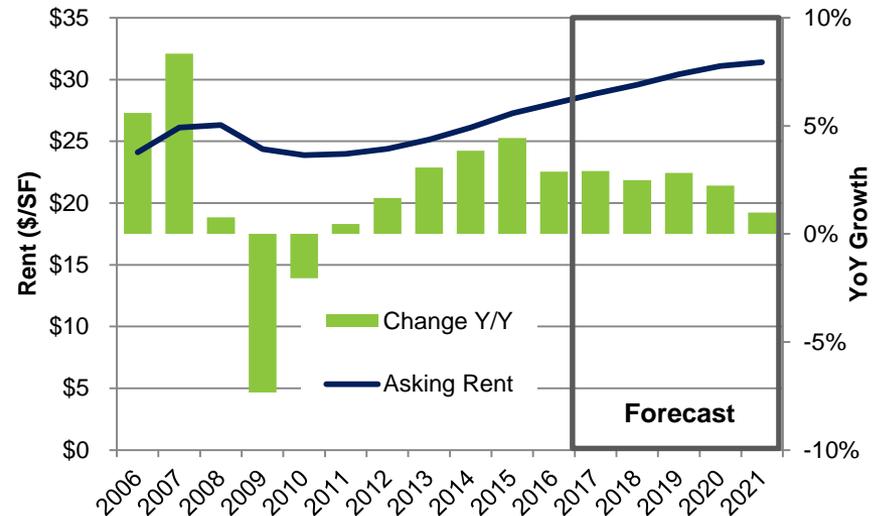
Rationale for Overweight

- The office sector screens as steady relative to many other REIT sectors.
- Continued job growth should benefit the office sector.
- Pockets of high supply exist in a few, specific submarkets but is broadly subdued.
- We expect REITs with embedded organic growth from below-market leases and highly pre-leased development, to outperform.

Office Market Supply, Demand, & Vacancy



National Office Market Rent Growth



Source: CoStar Realty Information, Inc. (March 2017)

Industrial: Overweight

Fundamentals Remain Healthy

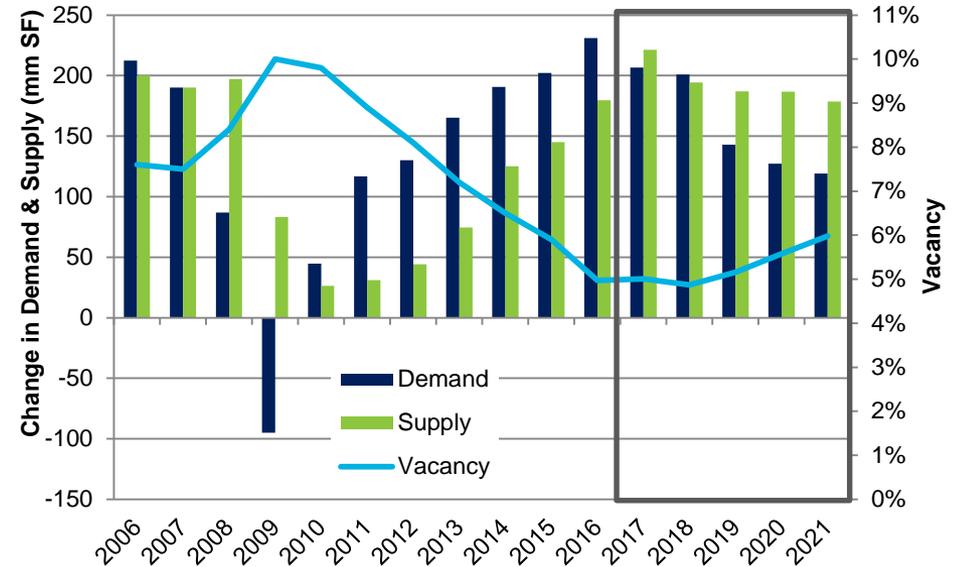
- Trump's supposed tax cuts may boost 2017 business and consumer spending.
- E-commerce is growing at 15% per annum and we are likely only in the early stages of the e-commerce impact.
- Improving wage growth and consumer confidence has yet to translate into heightened spending and therefore create a near term demand tailwind for the industrial sector.
- Supply is constrained with construction costs rising along with the difficulty to obtain land entitlements. This has driven down cap rates and made infill "last mile" locations more desirable.
- The leasing outlook is favorable with vacancies at historically low levels while rent spreads are strong.

Rationale for Overweight

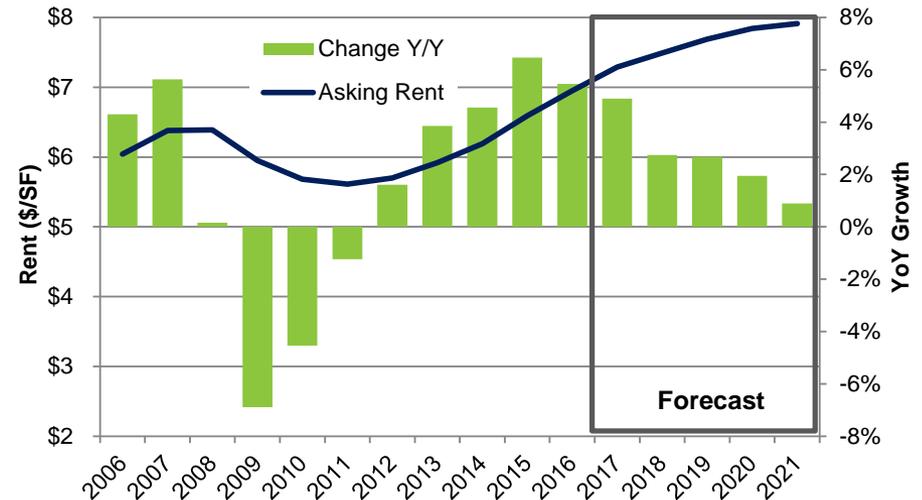
- Organic growth is stronger than most REIT sectors.
- Industrial REITs appear fairly valued but remain a good secular story, as growth in e-commerce will be a tailwind for demand.
- Development creates value relative to aggressive pricing for stabilized acquisitions.

Source: CoStar Realty Information, Inc. (March 2017)

Industrial Market Supply, Demand, & Vacancy



National Industrial Market Rent Growth



Multifamily: Neutral

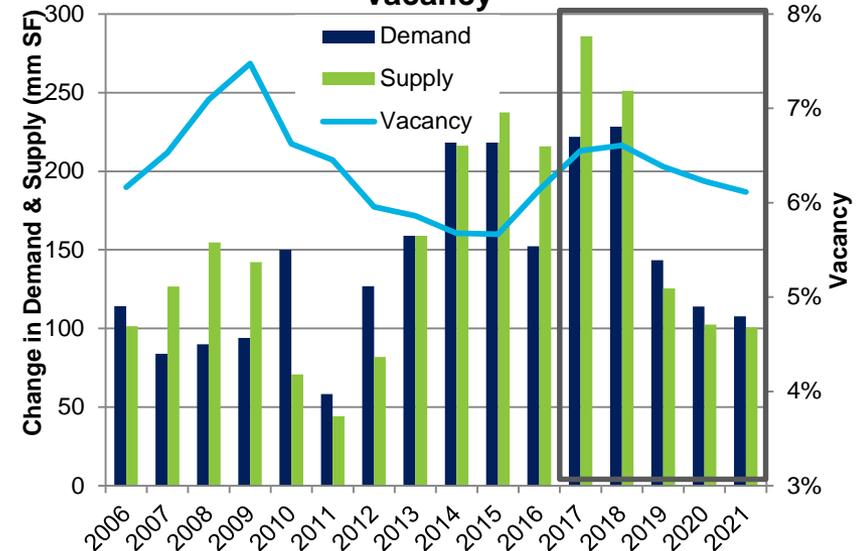
Demand OK, Supply Elevated

- Rent growth is slowing in most markets.
- Development makes the most economic sense where rents are the highest—luxury assets in core urban gateways.
- New supply is negatively impacting fundamentals, but this is partially reflected in valuations. National supply growth in 2017 should be higher than in 2016.
- Construction financing is becoming more difficult to obtain which may lead to fewer starts going forward but this will not help near-term fundamentals.
- New York City apartment rents remain pressured by heavy new supply.
- Private market asset valuations are healthy.

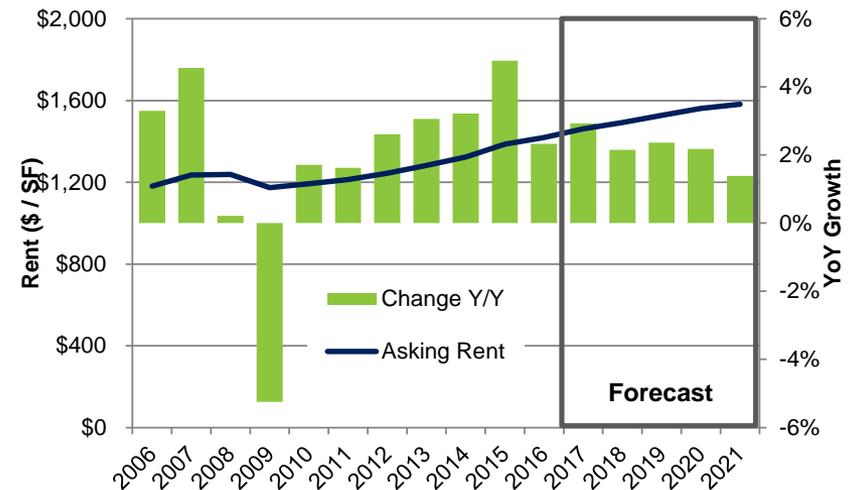
Rationale for Neutral

- Internal growth is slowing but external growth via development remains an attractive proposition.
- Private market pricing for multifamily assets is strong and many REITs trade at discounts to net asset value.
- Demographic tailwinds have mostly run their course for multifamily assets; demographics now favor single family rentals which should benefit as Millennials age, space requirements grow, and school districts become important.

Multifamily Market Supply, Demand, & Vacancy



National Multifamily Market Rent Growth



Source: CoStar Realty Information, Inc. (March 2017)

Retail: Neutral

Quality Assets Remain Most Attractive

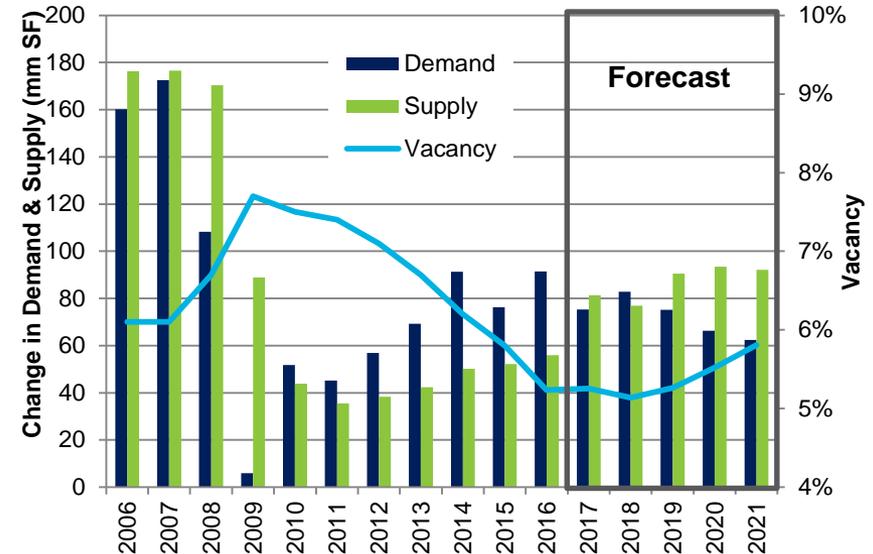
- Store closures and bankruptcies have been increasing YTD as a result of weakness from apparel retailers and department stores.
- High quality locations remain in reasonable demand as retailers look to consolidate stores and focus on their best locations while maintaining brand awareness.
- E-commerce continues to sap market share. Landlords are pursuing more experience-based variety across their tenancy by offering more restaurants, gyms, theatres and other service-oriented stores.
- An omni-channel strategy is integral to success. Even e-commerce-only retailers have begun opening physical locations in high quality centers.
- New supply is limited; however, greater shadow supply from failing retailers is on the rise. This may put pressure on rents.

Rationale for Neutral

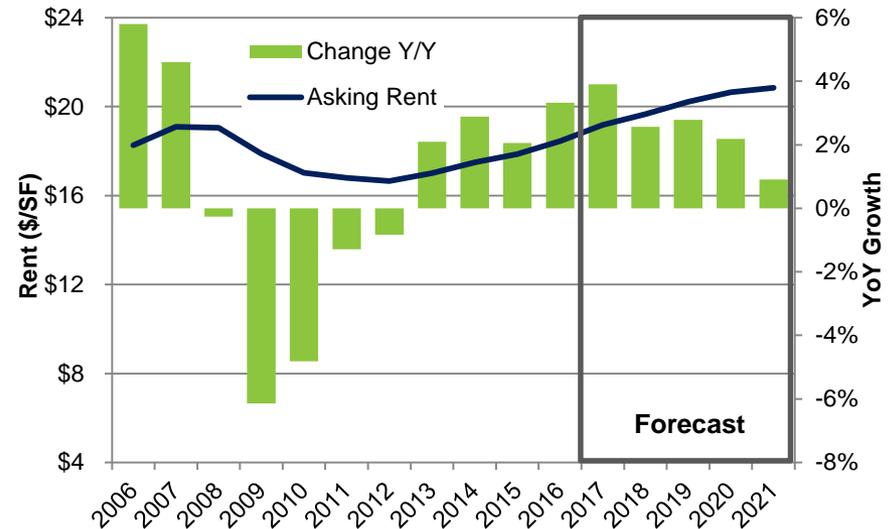
- **Malls:** Concern about recent department store closings and competition from the growth in e-commerce will continue to negatively impact lower quality malls. Our exposure is concentrated in owners of high-quality, fortress assets.
- **Strips:** Grocery anchored shopping centers are stable. We believe necessity-based retail is better insulated from e-commerce trends and offers better risk-adjusted returns.

Source: CoStar Realty Information, Inc. (March 2017)

Retail Market Supply, Demand, & Vacancy



National Retail Market Rent Growth



Hotel: Neutral

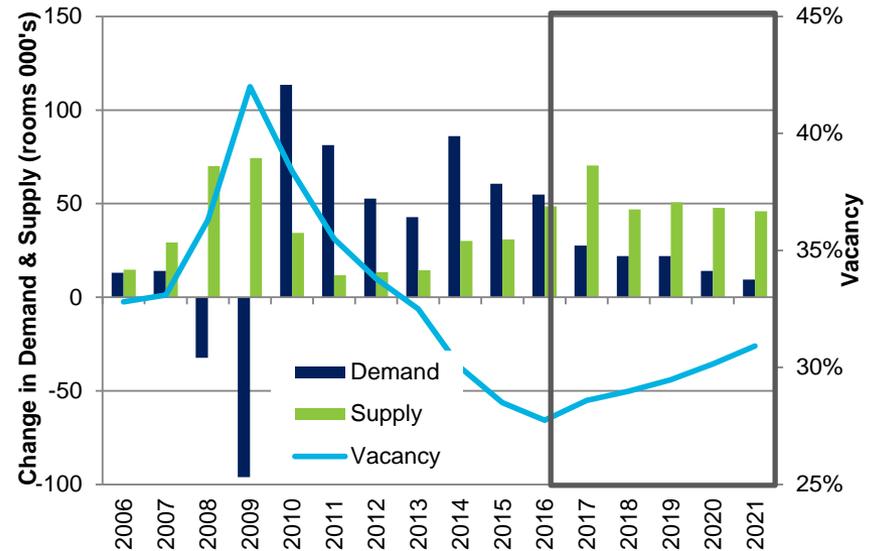
Supply Increasing, Demand Uncertain

- U.S. RevPAR growth has been decelerating since early 2015, primarily due to increased supply, weaker corporate transient demand and Airbnb.
- Construction is accelerating and is outsized in gateway markets where many REITs operate.
- The sector outperformed since the election on prospects for higher economic growth, interest rates, and inflation.
- Airbnb remains a threat to the industry but recent legislation may be the start of a wider regulatory push to limit its growth.
- A strong dollar negatively impacts travel demand in the gateway markets where the REITs have a large presence.
- Lower corporate taxes may benefit hotel C-corps relative to REITs.

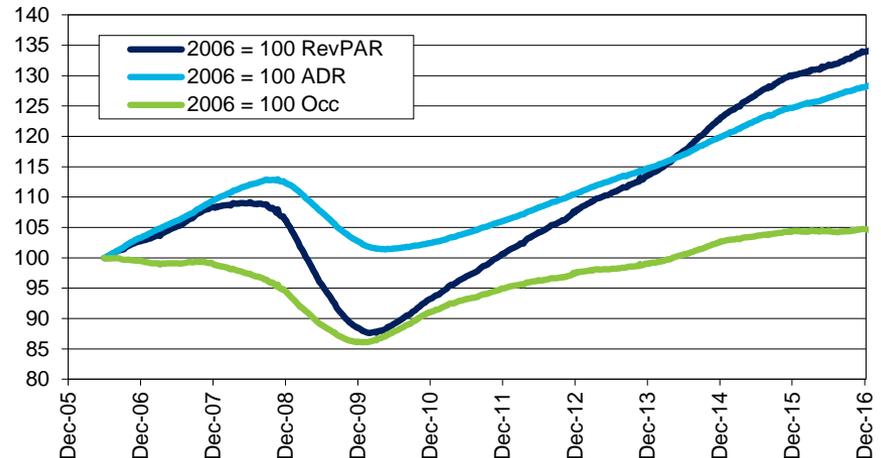
Rationale for Neutral

- Supply growth in urban markets, both in the traditional sense and from peer-to-peer rentals like Airbnb, is concerning.
- We believe that the hotel cycle is maturing and supply may keep the sector from experiencing its share of inflation.
- Timing and magnitude of economic lift from potential policy changes remains unclear despite improved sentiment.

Hotel Market Supply, Demand, & Vacancy



RevPAR, Occupancy and ADR Indexed to 100 at 12/30/2006



Sources: Smith Travel Research (March 2017), CoStar (March 2017)

Healthcare: Underweight

Questionable Fundamentals in an Uncertain Environment

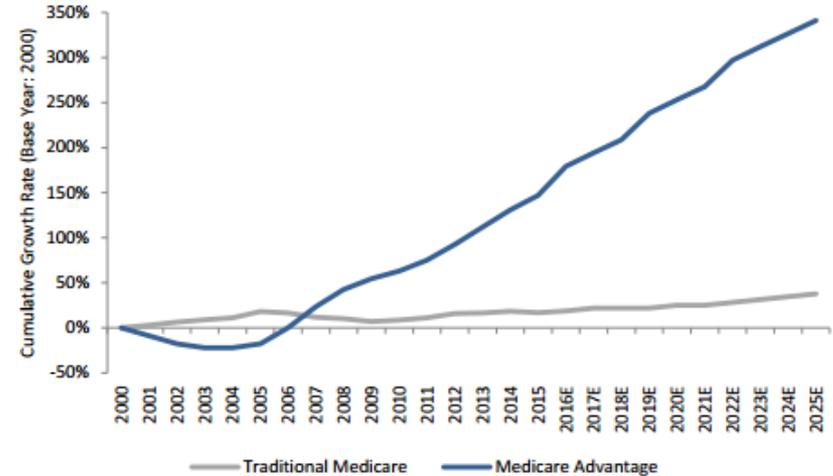
- Even after the failed repeal of the ACA, the new administration's contempt for Obamacare keeps regulatory uncertainty as an overhang.
- Robust construction in senior housing has plateaued at a high level. Significant completions will hit the market in mid-late 2017 causing a supply/ demand imbalance and poor rent growth.
- Expense and wage pressures are rising.
- Skilled nursing operators continue to face the secular headwinds of shortening lengths of stay, bundled payments, shrinking Medicare reimbursement rates, and recent investigations of operators by the Department of Justice.

Rationale for Underweight

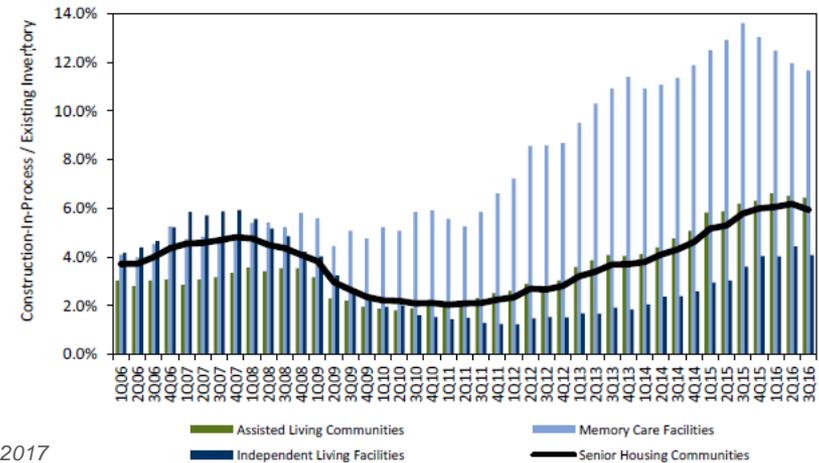
- Weak fundamentals in senior housing, skilled nursing, and hospitals, coupled with the risk of rising interest rates, screens badly for the sector.
- Healthcare REITs were the top performers YTD, primarily due to the failure of the attempt to repeal and replace the ACA. We remain underweight due to continued uncertainty.
- Medical office buildings remain a bright spot fundamentally, but have become quite expensive.

Sources: NIC MAP Data and Analysis Service, Stifel Nicholas, CMS, RBC Capital Markets, March 2017

Medicare Advantage Growth



Senior Housing Construction as a % of Stock



Net Lease: Underweight

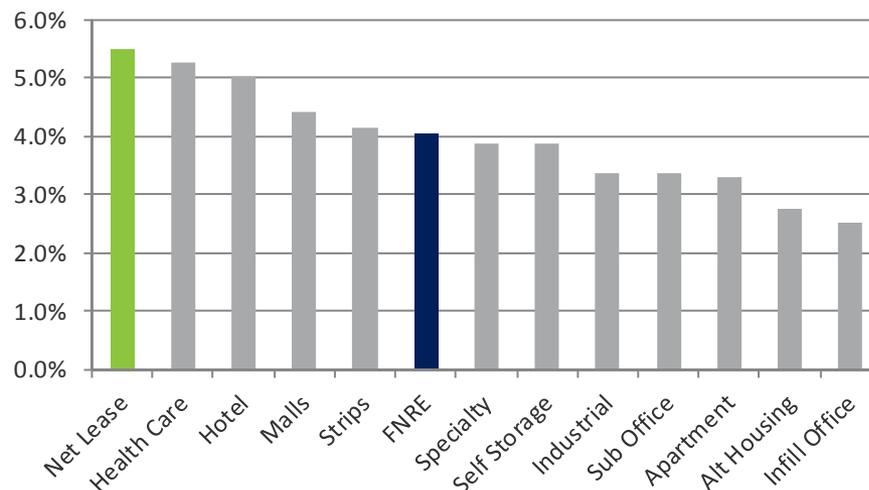
Low Growth Sector in a Higher Growth World

- Net lease is a low-growth, high-yield defensive sector with limited sensitivity to the economic cycle by virtue of long duration leases with small, fixed rent bumps.
- A rising interest rate environment could present a headwind for the group from a sentiment perspective.
- New fiscal policy creates the expectation for faster growth and higher inflation which is a negative backdrop for net lease REITs.

Rationale for Underweight

- Net lease REITs act defensively in a slowing economy, but tend to lag in an accelerating economy. Economic data suggest higher inflation and fiscal policy may stimulate economic growth making net lease unattractive.
- Within net lease, we favor freestanding retail and net lease industrial over net lease office given favorable retail locations and secular tailwinds for industrial assets.
- A rising 10-year treasury bond yield may disproportionately hurt the sector due to its long duration lease structure.

Net Lease Sector Dividend Yield



	U.S. Equity REITs	Net Lease Sector
2016E Multiple*	17.6x	14.9x
2017E Multiple*	16.7x	14.4x
2016E Earnings Growth	5.2%	3.5%
2017E Earnings Growth	5.3%	2.4%
Dividend Yield	4.0%	5.5%

*The REIT multiple is based on FFO per share.

Sources: Bloomberg, Bank of America Merrill Lynch, NAREIT, CenterSquare Investment Management, March 2017

VI. Disclosure Statements and Definition of Indices

Total Return Diversified (FTSE) Composite (as of December 31, 2016)

CenterSquare Total Return Diversified (FTSE) Composite

Performance Presentation
As of December 31, 2016



Year or YTD	Composite Return Gross of Fees (%)	Composite Return Net of Fees (%)	Composite Gross of Fees 3 Year Ex-Post Standard Deviation (%)	FTSE NAREIT Equity REITs Index (%)	FTSE NAREIT Equity REITs Index 3 Year Ex-Post Standard Deviation (%)	Number of Accts	Market Value (\$Millions)	Percentage of Firm Assets (%)	Composite Dispersion (%)
2015	5.41	4.86	14.49	3.20	14.37	32	1,738	23	0.16
2014	32.83	32.14	13.23	30.14	13.26	23	1,447	19	0.16
2013	3.70	3.17	16.41	2.47	16.74	23	1,153	19	0.18
2012	17.58	16.98	17.85	18.06	18.25	23	1,114	17	0.24
2011	10.96	10.38	30.45	8.29	31.73	22	1,002	36	0.52
2010	30.78	30.08	38.76	27.96	39.76	23	897	41	0.21
2009	37.77	37.03	38.90	27.99	39.69	24	1,026	64	1.15
2008	-35.15	-35.49	29.93	-37.73	30.06	32	943	69	0.31
2007	-13.60	-14.06	16.76	-15.69	16.90	40	1,452	70	0.41
2006	35.28	34.57	15.53	35.06	16.22	46	2,401	88	0.49
2005	14.47	13.83	14.54	12.16	15.38	42	1,589	89	0.51
2004	34.67	33.94	13.93	31.58	14.62	29	922	81	0.26
2003	38.08	37.36	11.07	37.13	10.91	12	555	89	0.29
2002	7.08	6.54	12.94	3.82	12.48	5	237	90	N/A
2001	10.76	10.37	14.06	13.93	12.93	4	228	91	N/A
2000	33.78	33.54	14.80	26.37	14.14	4	214	91	N/A
1999	2.95	2.74	13.62	-4.62	12.96	1	109	86	N/A
1998	-14.09	-14.42	12.91	-17.50	12.82	1	53	79	N/A
1997	22.17	21.60	N/A	20.26	N/A	1	19	99	N/A
1996	41.75	40.99	N/A	35.27	N/A	1	16	100	N/A
1995	10.39	10.00	N/A	9.05	N/A	1	11	100	N/A

Inception Date: July 1, 1995

Creation date: October 1, 2016

Time Period	Annualized Returns		
	Composite Return GROSS of Fees (%)	Composite Return NET of Fees (%)	FTSE NAREIT Equity REITs Index (%)
1 Year	8.87	8.35	8.52
2 Year	7.13	6.59	5.82
3 Year	15.09	14.50	13.38
4 Year	12.13	11.56	10.55
5 Year	13.20	12.62	12.01
6 Year	12.82	12.25	11.38
7 Year	15.23	14.64	13.61
8 Year	17.83	17.22	15.32
9 Year	10.27	9.69	7.69
10 Year	7.61	7.05	5.08
15 Year	13.20	12.60	10.80
20 Year	12.36	11.83	9.68
Since Inception	13.79	13.24	10.96

Organization

CenterSquare Investment Management, Inc. (the "Firm" or "CenterSquare"), formerly known as Urdang Securities Management, Inc. and Urdang Investment Management, Inc., is a registered investment advisor which focuses on opportunities in the real estate securities market, including publicly traded real estate investment trusts ("REITs"). CenterSquare is a wholly-owned subsidiary of CenterSquare Investment Management Holdings, Inc. which in turn is a wholly-owned subsidiary of The Bank of New York Mellon Corporation. CenterSquare claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. CenterSquare has been independently verified for the periods July 1, 1995 through December 31, 2014. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The U.S. Total Return Composite has been examined for the periods July 1, 1995 through December 31, 2014. The CenterSquare Total Return Diversified (FTSE) Composite is a sub-composite of the U.S. Total Return Composite. The verification and performance examination reports are available upon request. It is CenterSquare's policy to have the Firm verified and the composite examined on a biennial basis.

Total Return Diversified (FTSE) Composite (as of December 31, 2016)

Composite Description

The CenterSquare Total Return Diversified (FTSE) Composite (the "Composite") includes all discretionary, fee paying portfolios invested in the U.S Total Return Strategy (the "Strategy") that are using FTSE NAREIT Equity REITs Index as their primary benchmark. The Composite was created on October 1, 2016. The Strategy utilizes bottom-up real estate research and a proprietary securities valuation process to identify investment opportunities. The Strategy aims to maximize total returns from long term capital growth and income through investment primarily in a diversified portfolio of real estate related securities listed or traded on U.S. exchanges including listed Real Estate Investment Trusts ("REITs"), listed Real Estate Operating Companies ("REOCs") and equity securities of companies whose principal business is the ownership, management and/or development of income producing and for-sale real estate. The strategy does not actively utilize leverage, short positions or derivatives. Portfolios are included in the Composite beginning with the first full month of performance through the last full month of performance. There is no minimum portfolio size for inclusion in the Composite. A complete list describing all of the Firm's composites is available upon request. The returns of the Indices are provided to represent the investment environment existing during the time periods shown. These Indices are broad-based indices used for comparative purposes only. The Indices are unmanaged and may differ significantly from Composite holdings, weightings and asset allocation. Because of these differences, indices should not be relied upon as an accurate measure of comparison. FTSE NAREIT Equity REITs Index is a free float market capitalization-weighted index measuring equity tax-qualified real estate investments trusts, which meet minimum size and liquidity criteria and are traded on the New York Stock Exchange, the American Stock Exchange, and the NASDAQ National Market System. The FTSE NAREIT Equity REITs Index is part of the FTSE NAREIT U.S. Real Estate Index Series. The performance presented is based on total return calculation which adds the income a stock's dividend provides to the performance of the index, and is gross of investment management fees. FTSE Data disclosure: Source: FTSE International Limited ("FTSE") © FTSE 2016. FTSE® is a trade mark of the London Stock Exchange Group companies and is used by FTSE under licence. All rights in the FTSE indices and / or FTSE ratings vest in FTSE and/or its licensors. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE indices and / or FTSE ratings or underlying data. No further distribution of FTSE Data is permitted without FTSE's express written consent.

Portfolio Valuation

CenterSquare Investment Management, Inc. values client portfolios based on fair market value in accordance with the GIPS Standards. Securities are generally priced daily based on closing prices on national exchanges.

Performance Calculations

Performance results are calculated on a total return basis and include all realized and unrealized capital gains and losses as well as dividends and interest. Portfolios in the Composite record transactions based on trade dates. Portfolio performance calculations are computed monthly and are time-weighted to account for periodic contributions and withdrawals. Effective March 2007, sub-period returns are computed when contributions and withdrawals during the period are greater than 10% of the respective client portfolio. The Composite returns consist of size-weighted portfolio returns using beginning of period values to weight portfolio returns. Monthly linking of interim performance results is used to calculate annual returns. All of the Composite's valuations and returns are computed and stated in U.S. dollars. Additional information regarding the Firm's policies for valuing portfolios, calculating and reporting performance results is available upon request.

Gross returns reflect the deduction of transaction costs. Net of fee returns reflect the deduction of transaction costs, and actual investment management fees earned by the Firm (including performance fees).

The three-year annualized ex-post standard deviation measures the variability of the composite and index monthly returns over the preceding 36-month period.

Investment Management Fees

The Firm's published standard fee schedule for the Strategy is as follows: 0.85% on the first \$10 million; 0.65% on the next \$40 million; 0.50% on the next \$50 million; 0.45% on the portion of assets in excess of \$100 million.

Composite Dispersion

Composite dispersion measures the consistency of the Composite performance results with respect to the individual portfolio returns within the Composite. Composite dispersion is calculated using the equal-weighted standard deviation method for all portfolios that were in the Composite for the entire year or period presented. Composite dispersion is not presented for an entire year or periods with five or fewer portfolios.

Future Performance

Past performance should not be relied on as indicative of future performance. Many factors affect performance including changes in the market conditions and interest rates and in response to other economic, political, or financial developments.

To receive a complete list and description of the firm's composites, policies and procedures, and reports of independent accountant's relating to GIPS verification and composite examination, contact Marcia Glass at 610-818-4627 or by email at mglass@centersquare.com

Disclosure Statements

The information in this publication is provided for informational purposes and does not constitute an offer to sell, or solicitation of an offer to purchase, any securities, nor does it constitute an endorsement with respect to any investment area or vehicle. This material serves to provide general information to clients and is not meant to be legal or tax advice for any particular investor, which can only be provided by qualified tax and legal counsel. Any offer of securities may be made only by means of a formal confidential private offering memorandum. Certain information contained herein is based on outside sources believed to be reliable, but its accuracy is not guaranteed.

Investment products (other than deposit products) referenced in this material are not insured by the FDIC (or any other state or federal agency), are not deposits or guaranteed by BNY Mellon or any bank or non-subsidiary thereof, and are subject to investment risk, including the loss of principal amount invested.

Portfolios are subject to investment risks, including possible loss of the principal amount invested. In addition foreign investments may be less liquid, more volatile and less subject to governmental supervision than in the United States. The values of foreign securities can be affected by changes in currency rates, application of foreign tax laws, changes in governmental administration and economic and monetary policy.

This information is being provided to current CenterSquare Investment Management investors and should not be further distributed without CenterSquare Investment Management's approval. This presentation contains forward-looking statements and projections. Actual results may differ from current expectations based on a number of factors including but not limited to changing market conditions, leverage and underlying asset performance. CenterSquare Investment Management makes no representation or warranty, express or implied that this information shall be relied upon as a promise or representation regarding past or future performance.

The Bank of New York Mellon Corporation assumes no responsibility for the accuracy or completeness of the above data and disclaims all expressed or implied warranties in connection therewith.



Past performance is no guarantee of future results.

GENERAL REAL ESTATE RISKS

Because the investment strategies concentrate their assets in the real estate industry, an investment is closely linked to the performance of the real estate markets. Investing in the equity securities of real estate companies entails certain risks and uncertainties. These companies experience the risks of investing in real estate directly. Real estate is a cyclical business, highly sensitive to general and local economic developments and characterized by intense competition and periodic overbuilding. Real estate income and values may also be greatly affected by demographic trends, such as population shifts or changing tastes and values. Companies in the real estate industry may be adversely affected by environmental conditions. Government actions, such as tax increases, zoning law changes or environmental regulations, may also have a major impact on real estate. Changing interest rates and credit quality requirements will also affect the cash flow of real estate companies and their ability to meet capital needs.

QUARTERLY REVIEW OF CUSTODIAN STATEMENT

A client will generally receive from its bank or other qualified custodian, an account statement, at least quarterly, identifying the amount of funds and each security in the account we manage at the end of the applicable period and setting forth all transactions in the account during that period. Clients should review these statements carefully. Clients may also receive account statements separately from us. Clients are strongly urged to compare the account statements received from us with those that are received from qualified custodians.

The data and reports provide by CenterSquare Investment Management, Inc. are for the client's internal business purposes only and are not for commercial purposes. There is no guarantee on the completeness, reliability or timeliness over the data and information provided by third party data vendors. The data supplied by third parties is owned by those parties and considered to be its intellectual property and its use is subject to restrictions contained in the data licenses. For the avoidance of doubt, a client may not use the index data as a substitute for obtaining a data license when required by the third party data vendor.

Definition of Indices

S&P 500 INDEX

The S&P 500 is an index that is considered to be a gauge of the U.S. equities market. The index includes 500 leading companies spread across the major sectors of the U.S. economy. The index focuses on the larger cap segment of the U.S. market and represents approximately 75% of the market capitalization of U.S. securities. The index is the most notable of the many indices owned and maintained by Standard & Poor's, a division of McGraw-Hill Companies.

FTSE NAREIT EQUITY REITS INDEX

The FTSE NAREIT Equity REIT Index includes all tax qualified real estate investment trusts ("REITs") tax-(REITs) that are listed on the New York Stock Exchange, the American Stock Exchange and the NASDAQ National Market List. The index constituents span the commercial real estate space across the US economy and provides investors with exposure to all investment and property sectors. The performance presented is based on total return calculations which adds the income a stock's dividend provides to the performance of the index, and is gross of investment management fees. Effective December 20, 2010 the ticker for the FTSE NAREIT Equity REIT Index changed from FNERTR (total return) to FNRETR (total return). The old ticker (FNERTR) has been reassigned to a newly established FTSE NAREIT All Equity REIT Index which is similar to the existing benchmark in all regards except that timber REITS will be included in the new index and excluded in the FTSE NAREIT Equity REIT Index.

FTSE EPRA/NAREIT NORTH AMERICA INDEX

The FTSE EPRA/NAREIT North America Index is the regional index of the EPRA/NAREIT Global Index. The index contains publicly quoted real estate companies that meet the EPRA ground rules in the countries throughout North America and is designed to track the performance of listed real estate companies and REITs in North America. The performance presented is based on total return calculation which adds the income a stock's dividend provides to the performance of the index, and is gross of withholding taxes and investment management fees.

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MSCI U.S. REIT INDEX

The MSCI U.S. REIT Index, formerly known as the Morgan Stanley REIT Index, is a free float-

adjusted market capitalization weighted index that is comprised of equity REITs that are included in the MSCI U.S. Investable Market 2500 Index, with the exception of specialty equity REITs that do not generate a majority of their revenue and income from real estate rental and leasing operations.

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DOW JONES US SELECT REAL ESTATE SECURITIES INDEX AND DOW JONES US SELECT REIT INDEX

The Dow Jones US Select Real Estate Securities Total Return Index is a broad measure of the total return performance of U.S. publicly traded Real Estate Investment Trusts (REITs) and Real Estate Operating Companies (REOCs) with total market capitalizations in excess of \$200MM. Index members must be an equity owner and operator of commercial (or residential) real estate that derives at least 75% of its total revenue from the ownership and operation of real estate assets. The index is weighted by float-adjusted market capitalization and is quoted in U.S. dollars. It is rebalanced monthly and returns are calculated on a buy and hold basis. The Dow Jones US Select REIT Index is the subset of the Dow Jones US Select Real Estate Securities Index and include only REIT and REIT-like securities.

WILSHIRE U.S. REAL ESTATE SECURITIES INDEX AND WILSHIRE U.S. REIT INDEX

The Wilshire U.S. Real Estate Securities Index is a broad measure of the performance of publicly traded U.S. real estate securities, such as Real Estate Investment Trusts (REITs) and Real Estate Operating Companies (REOCs). The index is capitalization-weighted. The beginning date, January 1, 1978, was selected because it coincides with the Russell/NCREIF Property Index start date. The Index is rebalanced monthly, and returns are calculated on a buy and hold basis. The Wilshire U.S. REIT Index is a subset of the Wilshire U.S. Real Estate Securities Index and measures the U.S. publicly traded Real Estate Investment Trusts.



These benchmarks are broad-based indices which are used for illustrative purposes only and have been selected as they are well known and are easily recognizable by investors. However, the investment activities and performance of an actual portfolio may be considerably more volatile than and have material differences from the performance of any of the referenced indices. Unlike these benchmarks, the portfolios portrayed herein are actively managed. Furthermore, the portfolios invest in substantially fewer securities than the number of securities comprising each of these benchmarks. There is no guarantee that any of the securities invested in by the portfolios comprise these benchmarks. Also, performance results for benchmarks may not reflect payment of investment management/incentive fees and other expenses. Because of these differences, benchmarks should not be relied upon as an accurate measure of comparison.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 11, 2017

MEMO TO: Members of the Retirement Board

FROM: Sophia D. Skoda, Director of Finance *me for*

SUBJECT: Northern Trust Fees Update

Northern Trust has been custodian for the Employee Retirement System (ERS) since 1997. The original agreement was amended once, in 2001, and fees have been updated periodically since, per Section 15 of the original agreement which allows for “Northern Trust [to] be reimbursed for all expenses incurred in the management and protection of the Account, including accounting and legal fees and [to] receive such reasonable compensation for its services as agreed upon from time to time between it and the Board.”

Northern Trust is updating several of its fees. The net impact of the update, based on 2016 balances and transactions, should be to reduce the ERS fees as detailed in the table below:

	Estimated Amounts		
	Old	New	Difference
Account Fees	\$0	\$22,500	\$22,500
Transaction Fees	80	4,410	4,330
Other Custody Fees*	409,847	409,847	0
Asset Management Fees	157,194	124,623	(32,571)
Security Lending Fee	301,720	218,010	(83,710)
Net Overall Change	868,841	779,390	(89,451)

* Does not include derivative charges related to processing and maintenance

While Northern Trust generally charges additional fees and other costs, in the case of the ERS most have either been waived or the ERS has been grandfathered-in at no cost.

Staff plans to pursue the issuance of a Request for Proposal for Custody Services following conclusion of the Asset-Liability Study. Staff has been very happy with Northern Trust but consistent with best management practices to periodically review other service providers and costs, per conversations with PCA, this timing is appropriate, as proposers will be able to determine costs based on the actual composition of the portfolio going forward including the most up-to-date allocation between active and passive investments. This in turn would allow the ERS to receive more accurate pricing proposals. In the interim, Northern Trust’s new fee schedules will reduce costs for the ERS.

SDS:DB:DC