



# Notice of Public Meeting

## The Board of Retirement of the San Mateo County Employees' Retirement Association will meet on **Tuesday, February 28, 2017, at 10:00 A.M.**

**PUBLIC SESSION** – The Board will meet in Public Session at 10:00 a.m.

- 1. Call to Order, Roll Call and Miscellaneous Business**
- 2. Oral Communications**
  - 2.1 Oral Communications from the Board
  - 2.2 Oral Communications from the Public
- 3. Approval of the Minutes**
  - 3.1 Approval of Regular Board Meeting Minutes from January 24, 2017
- 4. Approval of the Consent Agenda\***

4.1 Disability Retirements (2) <ul style="list-style-type: none"><li>• Sandra Peralta</li><li>• Susendra Singh</li><li>• Dawn Spray</li><li>• Maria Vallero</li></ul>	4.6 Member Account Refunds
	4.7 Member Account Rollovers
	4.8 Member Account Redeposits
	4.9 Acceptance of Semi-Annual Compliance Certification Statements for Period Ended December 31, 2016
4.2 Survivor Death Benefits	4.10 Reaffirm SamCERA's Existing Mission and Goals
4.3 Service Retirements	4.11 Approval of Resolution amending SamCERA's Portable Electronic Device Policy
4.4 Continuances	
4.5 Deferred Retirements	4.12 Reaffirm SamCERA's Securities Litigation Policy
- 5. Benefit & Actuarial Services**
  - 5.1 Consideration of Agenda Items, if any, Removed from the Consent Agenda
- 6. Investment Services**
  - 6.1 Preliminary Monthly Portfolio Performance Report for the Period Ended January 31, 2017
  - 6.2 Quarterly Investment Performance Report for the Period Ended December 31, 2016
  - 6.3 Approval of Proposed Alternative Investments (*to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2*)
  - 6.4 Report on Proxy Voting Summary Ended December 31, 2016
- 7. Board & Management Support**
  - 7.1 Acceptance of Preliminary Semi-Annual Financial Report for Period Ended December 31, 2016
  - 7.2 Acceptance of Preliminary Semi-Annual Budget Report for Period Ended December 31, 2016
  - 7.3 Report on April 25 and 26, 2017 Board-Staff Retreat Planning
- 8. Management Reports**
  - 8.1 Chief Executive Officer's Report
  - 8.2 Assistant Executive Officer's Report
  - 8.3 Chief Investment Officer's Report
  - 8.4 Chief Legal Counsel's Report

# Notice of Public Meeting

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**CLOSED SESSION** – The Board may meet in closed session prior to adjournment

- C1 Consideration of Disability Items, if any, removed from the Consent Agenda
- C2 Approval of Proposed Alternative Investments (*Confidential Under Gov. Code §54956.81 and §6254.26 – see also item 6.3*)
- C3 Conference with Legal Counsel-Existing Litigation (*Confidential Under Gov. Code §54956.9*) *CalPERS v. ANZ Securities, Inc.*, U.S. Supreme Court case: No. 16-373

**9. Report on Actions Taken in Closed Session**

**10. Adjournment in Memory of the Following Deceased Members:**

Hollins, Carolyn	January 1, 2017	Courts
Hutchin, Maxine	January 8, 2017	Coroner's Office
Lowe, Edith	January 8, 2017	Sheriff's
Abaya, Teresita	January 12, 2017	Controller's Office
Perry, Robert	January 14, 2017	Information Systems Dept
Kendrick, George	January 18, 2017	Housekeeping
Montes, Rosa	January 19, 2017	Health Dept
Dutrieuille, William	January 20, 2017	Health & Welfare
Haslinger, Brian	January 23, 2017	Sheriff's
Rhein, Thomas	January 23, 2017	Hospital
Pestanta, Dorothy	January 24, 2017	Public Health
Jensen, Anne	January 28, 2017	Environmental Health
Calderon, Cesar	February 1, 2017	Medical Center
Ward, Margaret	February 2, 2017	Chope Hospital
Bullert, Marilyn	February 10, 2017	Health Dept



Scott Hood, Chief Executive Officer

Posted: February 22, 2017

(\* ALL ITEMS ON THE CONSENT AGENDA ARE APPROVED BY ONE ROLL CALL MOTION UNLESS A REQUEST IS MADE BY A BOARD MEMBER THAT AN ITEM BE WITHDRAWN OR TRANSFERRED TO THE REGULAR AGENDA. ANY ITEM ON THE REGULAR AGENDA MAY BE TRANSFERRED TO THE CONSENT AGENDA. ANY 4.1 ITEMS REMOVED FROM THE CONSENT AGENDA WILL BE TAKEN UP UNDER CLOSED SESSION; ALL OTHER ITEMS REMOVED FROM THE CONSENT AGENDA WILL BE TAKEN UP UNDER ITEM 5.1.)

**THE BOARD MEETS AT 100 MARINE PARKWAY, SUITE 160**, WHICH IS LOCATED ON THE SE CORNER OF TWIN DOLPHIN & MARINE PARKWAY IN REDWOOD CITY. Detailed directions are available on the "Contact Us" page of the website [www.samcera.org](http://www.samcera.org). Free Parking is available in all lots in the vicinity of the building. A copy of the Board of Retirement's open session agenda packet is available for review at the SamCERA offices and on our website unless the writings are privileged or otherwise exempt from disclosure under the provisions of the California Public Records Act. Office hours are Monday through Thursday 7 a.m. – 6 p.m.

IN COMPLIANCE WITH THE CALIFORNIA GOVERNMENT CODE AND THE AMERICANS WITH DISABILITIES ACT: SamCERA's facilities and board and committee meetings are accessible to individuals with disabilities. Contact SamCERA at (650) 599-1234 at least three business days prior to the meeting if (1) you need special assistance or a disability-related modification or accommodation, including auxiliary aids or services, in order to participate in this meeting; or (2) you have a disability and wish to receive the agenda, meeting notice, agenda packet or other writings that may be distributed at the meeting in an alternative format. Notification in advance of the meeting will enable SamCERA to make reasonable arrangements to ensure full accessibility to this meeting and the materials related to it.



**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**JANUARY 24, 2017 – REGULAR BOARD MEETING MINUTES**

1701.1 **Call to Order, Roll Call and Miscellaneous Business**

**Call to Order:** Mr. Mark Battey, Vice Chair, called the Regular Meeting of the Board of Retirement to order at 10:00 a.m.

**Roll Call:**

*Present:* Sandie Arnott, Mark Battey, Kurt Hoefler, Susan Lee (for the vacant Third Seat), Alma Salas (for Mr. Hackleman), David Spinello, Eric Tashman and Shirley Tourel.

*Excused:* Ben Bowler and Paul Hackleman.

*Alternates present:* Alma Salas, Susan Lee.

*Staff:* Scott Hood, Michael Coultrip, Brenda Carlson, Gladys Smith, Tariq Ali, Elizabeth LeNguyen, Barbara Edwards, Doris Ng and Kristina Perez.

*Consultants:* Margaret Jadallah, John Nicolini, Ping Zhu and Faraz Shooshani (*Verus*); Nick Collier (*Milliman, Inc.*); Will Morrow (*LRWL*); and Andy Paulden (*Brown Armstrong, via phone*).

1701.2.1 **Oral Communications from the Board:** None.

1701.2.2 **Oral Communications from the Public:** Mr. Gabriel Rodrigues, Vice President of SACRS, appeared before the Board and asked for feedback from the Board regarding SACRS conferences. Board members offered suggestions and their opinions to Mr. Rodrigues. A retiree member, James Counts asked questions about the method used to calculate COLAs, and staff replied to his inquiries.

1701.3.1 **Approval of Board Meeting Minutes from December 6, 2016:** Mr. Battey asked if there were any changes or corrections to the minutes from December 6, 2016. A correction was made to item 1.1 which incorrectly stated that Mr. Battey was the Chair of the Ad-Hoc Nominating Committee, the Chair is Ms. Arnott; additional corrections to the numbering were noted.

**Action:** Ms. Arnott moved to approve the minutes, as corrected, from December 6, 2016; the motion was seconded by Ms. Salas and the motion carried with a vote of 8-0, with trustees Arnott, Battey, Hoefler, Lee (for vacant Third Seat), Salas (for Hackleman), Spinello, Tashman, and Tourel in favor; none opposed.

1710.4.0 **Approval of the Consent Agenda:** Mr. Battey asked if there were any items to be removed from the Consent Agenda, and none were removed.

**Action:** Ms. Salas moved to approve the Consent Agenda, and the motion was seconded by Ms. Tourel. The motion carried with a vote of 8-0, with trustees Arnott, Battey, Hoefler, Lee (for vacant Third Seat), Salas (for Hackleman), Spinello, Tashman, and Tourel in favor; none opposed.

1701.4.1 **Disability Retirements:**

- a) The Board found that Cherlene Wright is (1) permanently incapacitated for the performance of her usual and customary duties as a Probation Officer III, (2) found that her disability was the result of an injury arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.

1701.4.2 **Survivor Death Benefits:** None.

1701.4.3 **Service Retirements:**

The Board ratified the actions as listed below for the following members regarding service retirements:

<b>Member Name</b>	<b>Effective Retirement Date</b>	<b>Department</b>
Alexander, David	November 12, 2016	Public Health
Baw, Terrance	November 17, 2016	Deferred from Medical Center

Charton, Bonnie	December 1, 2016	Aging & Adult Services
Jones-Dulin, Donna	November 5, 2016	Deferred from Human Resources
Nelson, Gerard	November 16, 2016	Information Services Dept.
Stiavetti, Robert	November 19, 2016	Public Works
Wong, Yim	December 1, 2016	Human Services Agency

1701.4.4 **Continuances:**

The Board ratified the actions as listed below for the following members regarding continuances:

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Cross, Alice	Cross, Frederick
Lieb, Margie	Lieb, Darrell

1701.4.5 **Deferred Retirements:**

The Board ratified the actions as listed below for the following members regarding deferred retirements:

<b>Member Name</b>	<b>Retirement Plan Type</b>
Anderson, Elinor M.	G4, Vested
Arteaga, Lorenzo	G2/3, Vested
Bains, Himmat S.	G4, Deferred
Banuelos, Regina M.	G4, Non-Vested - Reciprocity
Davenport, Donald W.	S4, Vested
Dones, Mary Ann S.	G4, Vested
Duran, Lanelle L.	G4, Vested
De La Rocha, Dana R.	S4, Vested
Flores, Amy B.	P4, Vested - Reciprocity
Garcia, Edelzar V.	G2, Vested - Reciprocity
Green, Quimani	G4, Vested - Reciprocity
He, Xin	G7, Non-Vested - Reciprocity
Luporini, Nicole R.	P4, Vested - Reciprocity
Morales-Cruz, Erica P.	G4, Vested
Murphy, Cynthia	G2, Deferred - Reciprocity
Vite, Emie F.	G4, Vested

1701.4.6 **Member Account Refunds:**

The Board ratified the actions as listed below for the following members regarding refunds:

<b>Member Name</b>	<b>Retirement Plan Type</b>
Capitola-Duran, Jodi	G7, Non-vested
Castaneda, Dalia	G7, Non-vested
Fleming, Teasha	G7, Non-vested
Mahafutau, Rossana	G4, Vested
Nyakudya, Paula	G7, Non-vested
Rillera, Clarence	G7, Non-vested
Vargas, Lauren	S7, Non-vested

1701.4.7 **Member Account Rollovers:**

The Board ratified the actions as listed below for the following members regarding rollovers:

<b>Member Name</b>	<b>Retirement Plan Type</b>
Edsal, Sidney	G7, Non-vested
Moghis, Irene	G7, Non-vested
Radoc, Yolanda	G4, Non-vested

1701.4.8 **Member Account Redeposit:** None.



- 1701.4.9 **Acceptance of Semi-Annual Compliance Certification:** The Board accepted the semi-annual Compliance Certification Statements for SamCERA's non-alternative managers, as of December 31, 2016.
- 1701.4.10 **Approval of Resolution to Execute Contract with Segal Co. for Audit of Actuarial Services:** The Board adopted a resolution authorizing the Chief Executive Officer to execute an agreement with Segal Consulting for actuarial audit services.
- 1701.4.11 **Approval of Resolution Amending Contract with Joanne Bond Coaching, LLC:** The Board adopted a resolution authorizing the Chief Executive Officer to execute an amendment to the agreement with Joanne Bond Coaching, LLC, for leadership coaching services.

1701.5.1 **Consideration of Agenda Items, if any, removed from the Consent Agenda:** None.

1701.5.2 **Approval of a Resolution Adopting Cost of Living Adjustments (COLAs) for 2017:** Nick Collier, from Milliman, Inc. presented Milliman's recommendation for cost of living adjustments (COLAs) for 2017. COLAs were recommended for each retiree and beneficiary recipient, who retired on or before April 1, 2017, as follows: 3% for Plan 1 and Plan 2; no COLA for Plan 3; and a 2% COLA for all other Plans.

**Action:** Mr. Tashman moved to approve the resolution adopting the 2017 cost of living adjustments as recommended. The motion was seconded by Ms. Arnott and carried with a vote of 8-0, with trustees Arnott, Battey, Hoefler, Lee (for vacant Third Seat), Salas (for Hackleman), Spinello, Tashman, and Tourel in favor; none opposed.

1701.5.3 **Educational Presentation on Generational Mortality:** Mr. Collier gave an educational presentation, defining and explaining generational mortality and its use in actuarial assumptions. This presentation lasted approximately 45 minutes. This item was informational and for discussion only, no action was taken.

Item #7.1 was taken next, out of order, and the remainder of the agenda was heard in the order below.

1701.7.1 **Annual Review of SamCERA's Auditor, Brown Armstrong:** Ms. Smith went over the annual review of SamCERA's auditor with the Board. Andy Paulsen, from Brown Armstrong, joined the conversation via speaker phone and expounded on the answers he had included in the annual questionnaire. With no objections, the Board accepted the review.

The Board adjourned for a break at 11:10 a.m. and reconvened at 11:25 a.m.

1701.6.1 **Preliminary Monthly Portfolio Performance Report for the Period Ended December 31, 2016:** Mr. Coultrip discussed the preliminary monthly performance report with the Board. He reported that SamCERA's net preliminary return for December 2016 was 1.70 %, while the preliminary trailing twelve-month return ending December 2016 was 8.40 % net. This item was informational and for discussion only, no action was taken.

1701.6.2 **Presentation of Private Asset Semi-Annual Performance Reports as of June 30, 2016:** Mr. Shooshani, Mr. Nicolini, and Mr. Zhu reviewed the private equity and real asset reports with the Board. Discussion topics included market trends, volatility, and effects of the new Trump administration; as well as a discussion of individual fund performance. This item was informational and for discussion only, no action was taken.

The Board adjourned into closed session from 12:15 p.m. to 12:35 p.m. to hear Item # 6.5. The Board then took a lunch break from 12:35 p.m. The meeting was reconvened into open session at 1:03 p.m.

- 1701.6.5 **Approval of Proposed Alternative Investments** (*to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26*): Ms. Carlson reported that there was no reportable action taken by the Board in closed session on this matter.
- 1701.6.3 **Approval of Resolution Amending the Investment Policy:** Mr. Coultrip presented proposed revisions to the Investment Policy Statement that memorialize previous decisions and directions from the Board. Additional changes in the Investment Policy Statement were introduced and discussed. The Board declined to include Section B, Paragraph 3 of the revisions at this time, tabling that portion for future discussion; the remaining changes were approved.
- Action:** Mr. Tashman moved to adopt a resolution approving the proposed revisions to SamCERA's Investment Policy Statement, as presented, but omitting Section B, Paragraph 3; the motion was seconded by Mr. Hoefler and carried with a vote of 7-1, with trustees Arnott, Battey, Hoefler, Lee (for vacant Third Seat), Salas (for Hackleman), Tashman, and Tourel in favor; Spinello opposed.
- 1701.6.4 **Report on Opportunistic Credit Short List Managers:** Ms. Jadallah updated the Board on the search for an opportunistic credit strategy within the fixed income asset class. This item was informational and for discussion only, no action was taken.
- 1701.7.2 **Report on Implementation of Status of SamCERA's PASS:** Mr. Ali and Mr. Morrow provided an update to the Board on SamCERA's PASS project, which went "live" on December 29, 2016, and continues to be within budget and on schedule. Mr. Ali thanked all staff involved in the implementation. This item was informational and for discussion only, no action was taken.
- 1701.7.3 **Report on April 25 and 26, 2017 Board-Staff Retreat Planning:** Mr. Hood reviewed the proposed agenda for the Board/Staff retreat, and received feedback from Board members. This item was informational and for discussion only, no action was taken.
- 1701.7.4 **Report on Strategic Plan Implementation:** Mr. Hood updated the Board on the implementation of the two-year Strategic Plan for FY 2016-17 and FY 2017-18, and highlighted key objectives. This item was informational and for discussion only, no action was taken.
- 1701.8.1 **Chief Executive Officer's Report:** Mr. Hood complimented the staff, consultants and vendor on the launch of the PASS. Mr. Hood commented on items that would appear on next month's meeting agenda including the review of Board policies, and the budget report.
- 1701.8.2 **Assistant Executive Officer's Report:** Ms. Smith reported that the winter edition of SamCERA's newsletter had been circulated. She stated that beginning in May, retirees with direct deposit would no longer receive a paper remittance advice by mail. She updated the Board on the upcoming election for the Third Member seat, and noted that an RFP would be forthcoming to select a financial education provider. Ms. Perez reminded Board members of upcoming educational events.
- 1701.8.3 **Chief Investment Officer's Report:** Mr. Coultrip reported that two managers were recently terminated as approved by the Board at its December meeting, as part of the implementation of the revised asset allocation. He reported that the RFP for general investment consulting services was issued, posted on SamCERA's website and advertised in Pensions & Investments.
- 1701.8.4 **Chief Legal Counsel's Report:** Ms. Carlson updated the Board on PEPRA-related court decisions and new legislation.
- C1 **Consideration of Disability Items, if any, removed from the Consent Agenda:** See report on Item 5.1 above.



C4 **Approval of Proposed Alternative Investments** (Confidential Under Gov. Code §54956.81 and §6254.26):  
See report on Item 6.7.

1701.9 **Report on Actions Taken in Closed Session:** See above.

1701.10 **Adjournment:** Mr. Battey adjourned the meeting at 2:30 p.m. in memory of the deceased members listed below.

Gober, Charlotte	November 7, 2016	Hospital
Schaff, Arlene	November 16, 2016	Probation
Green, Kathleen	November 17, 2016	Information Services
Druhan, Lois	November 20, 2016	Probation
Heymann, Gary	November 22, 2016	Mental Health
Volk, Rosemarie	November 22, 2016	Assessor/Clerk/Recorder
Hood, Mildred	November 23, 2016	Social Services
Theiss, Leonard	November 28, 2016	Planning
Reed, Emily	November 30, 2016	Human Services
Economon, Philip	December 1, 2016	Agriculture
Lewis, Sylvia	December 6, 2016	Human Services Agency
Miller, V H	December 6, 2016	Institutional Clinical Services
Leimer, Judith	December 15, 2016	Public Health
Petretto, Susan	December 24, 2016	Human Services Agency
Okita, Martha	January 5, 2017	Courts
Kennedy, Lorraine	January 6, 2017	Chope Hospital

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Scott Hood  
Chief Executive Officer

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Kristina Perez  
Retirement Executive Secretary

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
**Board of Retirement**

February 28, 2017

Agenda Items 4.1- 4.8

**TO:** Board of Retirement

**FROM:** Elizabeth LeNguyen, Retirement Benefits Manager



**SUBJECT:** Approval of Consent Agenda Items 4.1 – 4.8

**4.1 Disability Retirements**

- a) The Board find that **Sandra Peralta** is (1) permanently incapacitated for the performance of her usual and customary duties as a Medical Office Assistant, (2) find that her disability was the result of an injury arising out of and in the course of her employment and (3) grant her application for a service-connected disability retirement.
  
- b) The Board find that **Susendra Singh** is (1) permanently incapacitated for the performance of his usual and customary duties as a Food Service Worker, (2) find that his disability was the result of an injury arising out of and in the course of his employment and (3) grant his application for a service-connected disability retirement.
  
- c) The Board find that **Dawn Spray** is (1) permanently incapacitated for the performance of her usual and customary duties as a Communications Dispatcher II, (2) find that her disability was the result of an injury arising out of and in the course of her employment and (3) grant her application for a service-connected disability retirement.
  
- d) The Board finds that **Maria Vallero** is (1) permanently incapacitated for the performance of her usual and customary duties as a Lead Fiscal Office Assistant, (2) find that her disability was the result of an injury arising out of and in the course of her employment and (3) grant her application for a service-connected disability retirement.

**4.2 Survivor Death Benefits**

None

**4.3 Service Retirements**

The Board ratifies the actions as listed below for the following members regarding service retirements:

<b>Member Name</b>	<b>Effective Retirement Date</b>	<b>Department</b>
Alvarez, Miriam M	December 30, 2016	Superior Court
Benitez, Lucy A	December 31, 2016	Medical Center
Finepolo, Sulieti	December 31, 2016	Superior Court



Flavetta, Elaine A	December 31, 2016	Deferred Public Works
Grossman, Aaron	December 31, 2016	Deferred from Sheriff's
Munoz, Esther M	December 9, 2016	Human Services Agency
Newkirk, Ruth D	January 2, 2017	Deferred from Information Services
Smith, Robin	December 15, 2016	Sheriff's
Theisen, Linda Ruth	January 1, 2017	Deferred from Medical Center
Vite, Emie Fernandez	December 12, 2016	Deferred from Medical Center
Williams, Nihcole C	December 20, 2016	Deferred from VRS
Zigabarra, Mary P	December 31, 2016	Child Support Services

#### **4.4 Continuances**

The Board ratifies the actions as listed below for the following members regarding continuances:

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Lewis, Robert	Lewis, Sylvia

#### **4.5 Deferred Retirements**

The Board ratifies the actions as listed below for the following members regarding deferred retirements:

<b>Member Name</b>	<b>Retirement Plan Type</b>
Gonzalez, Amada	S4, Vested
Guerrero, Gesel	G4, Vested
Jackson, Louvenia C.	G4, Vested
Lewis, Vernon	G4, Vested
Perez, Emma L.	G4, Vested – Reciprocity
Yen, Stephen	G5, Non-vested – Reciprocity

#### **4.6 Member Account Refunds**

The Board ratifies the actions as listed below for the following members regarding refunds:

<b>Member Name</b>	<b>Retirement Plan Type</b>
Cross, Christina	G7, Non-vested
Hicks, Schynell	P5, Non-vested

Lau, Brandon	G4, Vested
Poyatos, Marguerite	G7, Non-vested

**4.7 Member Account Rollovers**

The Board ratifies the actions as listed below for the following members regarding rollovers:

<b>Member Name</b>	<b>Retirement Plan Type</b>
Manning, Amani	G7, Non-vested
Seder, Derek	G7, Non-vested

**4.8 Member Account Redeposits**

None



**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

February 28, 2017

Consent Agenda Item 4.9

**TO:** Board of Retirement

**FROM:** Doris Ng, Retirement Investment Analyst 

**SUBJECT:** Semi-Annual Compliance Certification Statements for Period Ended December 31, 2016

**Staff Recommendation**

Accept the semi-annual Compliance Certification Statements for SamCERA's non-alternative investment managers, as of December 31, 2016.

**Background**

As part of SamCERA's ongoing due diligence process, the Compliance Certification Statement is completed by each of the association's public equity, fixed income, real estate, risk parity and cash overlay investment managers on a semi-annual basis. These statements are used to update SamCERA on any firm-wide compliance issues and to provide strategic-level information regarding such things as derivatives and portfolio positioning. For investment managers whose investments are considered "alternative investment vehicles" per the California Government Section Code §6254.26, the Compliance Certification Statements are not provided in the public board packet and will be sent separately to the Board.

**Discussion**

The attached Compliance Certification Statements report that BlackRock and Franklin Templeton are in compliance with SamCERA's Investment Policy as of December 31, 2016. There were no reported significant developments in portfolio construction, investment approach, firm ownership or organizational structure. There were no notable issues regarding industry or regulatory actions that impact SamCERA. The managers were also requested to provide data regarding the characteristics and composition of their portfolios. No prominent issues were identified during the review. Any items that raise concern will be brought to the manager's attention and will be thoroughly vetted by staff.

**Attachments**

Compliance Certification Statement Matrix 12-2016

Compliance Certification Statements (3)

- A. Domestic Equity: BlackRock S&P 500
- B. International Equity - Developed: BlackRock EAFE
- C. Global Equity: Franklin Templeton

## Compliance Certification Statement Matrix – December 31, 2016

Investment Manager	Mandate	General Compliance Issues	Derivative Instruments	Investment Manager Guidelines	Mandate Specific
<b>Domestic Equity</b>					
<b>BlackRock S&amp;P</b>		<ul style="list-style-type: none"> <li>• Amy Schioldager, Gbl Hd of Beta Strategies transition to Sr Advisor and retirement in 2017.</li> <li>• Combine iShares, ETF &amp; Beta Strategies Grp into EII Grp to be led by Mark Wiedman 4Q16</li> </ul>	No Concerns	No Concerns	<ul style="list-style-type: none"> <li>• Largest single security: 3.21% Apple</li> <li>• Largest single industry: 20.77% Information Technology (bmk: 20.77%)</li> </ul>
<b>International Equity - Developed</b>					
<b>BlackRock EAFE</b>		<ul style="list-style-type: none"> <li>• Amy Schioldager, Gbl Hd of Beta Strategies transition to Sr Advisor and retirement in 2017.</li> <li>• Combine iShares, ETF &amp; Beta Strategies Grp into EII Grp to be led by Mark Wiedman 4Q16</li> </ul>	No Concerns	No Concerns	<ul style="list-style-type: none"> <li>• 0.01% ADR</li> </ul>

## Compliance Certification Statement Matrix – December 31, 2016

Investment Manager	Mandate	General Compliance Issues	Derivative Instruments	Investment Manager Guidelines	Mandate Specific
<b>Global Fixed Income</b>					
<b>Franklin Templeton</b>		<ul style="list-style-type: none"> <li>• Dec 2016-Co-Presid Vijay C. Advani left. Co-Presid. Jennifer M. Johnson promoted to Presid. No impact to oversight of Global Macro Fund.</li> <li>• Aug 2016-new research analyst Mara R. Finkelstein</li> </ul>	No Concerns	No Concerns	<ul style="list-style-type: none"> <li>• 0.05% ADR</li> </ul>

## ***BlackRock S&P 500 Index – December 31, 2016***

### ***Compliance Certification Statement***

#### ***San Mateo County***

#### ***Employees' Retirement Association***

In accordance with SamCERA's Investment Policy Statement, the following compliance worksheet will be completed by each of *SamCERA's* investment managers on a semi-annual basis. These statements must be e-mailed to *SamCERA's* office ([Investments@samcera.org](mailto:Investments@samcera.org)) by **Monday, January 9, 2017**.

### **General Compliance Issues**

1. Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?

**Yes: Please explain.** /  **No**

BlackRock, Inc. is independent in ownership and governance, with no single majority stockholder and a majority of independent directors. As of 30 September 2016, the PNC Financial Services Group, Inc. ("PNC") owned 22.0% of BlackRock and institutional investors, employees and the public held economic interest of 78.0%. With regard to voting stock, PNC owned 21.3% and institutional investors, employees and the public owned 78.7% of voting shares.

### **Changes to the Global Executive Committee**

In 2010, BlackRock created the Global Executive Committee to provide oversight of operations and business performance, strategy and planning, talent development and retention, risk management, and external affairs.

Effective 10 November 2016, Christopher Meade, Senior Managing Director and General Counsel, assumed the role of Chief Legal Officer. This role was previously held by Matthew Mallow, Senior Managing Director, who left the department to assume the role of Vice Chairman, overseeing the firm's Investment Stewardship team. As a result, Christopher has replaced Matthew on the GEC.

### **Changes in Index Equities**

After 26 years of delivering for our clients and building our index business, Amy Schioldager informed us of her intention to retire from BlackRock in the first quarter of 2017. Amy will transition in 2017 to a senior advisor to the business so we can continue to benefit from her deep experience.

Additionally, to help us realize a "one firm, one beta" vision, we are combining our iShares, BlackRock's ETF business, and Beta Strategies groups into a new team called ETF & Index Investments (EII).

In 4Q 2016, Mark Wiedman was named to lead the ETF & Index Investments group. Mark will drive scale in our index capabilities by delivering efficient market exposures and portfolio construction solutions for clients. Manish Mehta reports to Mark and leads the Investments, Products and Markets pillar of EII. Within the Investments group led by Manish, Alan Mason will continue to lead Americas portfolio management. None of the portfolio managers running the index equity portfolios on a day-to-day basis are changing. Our top priority as we integrate the teams is to ensure we maintain world-class investment performance, operational

2. Have there been any changes in the firm's investment approach?

Yes: Please explain. /  No

3. Have there have been any industry or regulatory disciplinary actions taken against the firm?

Yes: Please explain. /  No

As a global investment manager, BlackRock Inc., and its various subsidiaries including the BlackRock Institutional trust Company, N.A. ("BTC") may be subject to regulatory oversight in numerous jurisdictions including examinations and various requests for information. BTC's regulators routinely provide it with comment letters at the conclusion of these examinations in which they request that BTC correct or modify certain of its practices. In all such instances, BTC has addressed, or is working to address, these requests to ensure that it continues to operate in compliance with applicable laws, statutes and regulations.

BTC also receives subpoenas or requests for information in connection with regulatory inquiries and/or investigations by its various regulators, some of which are ongoing. None of these matters has had or is expected to have any adverse impact on BTC's ability to manage its clients' assets. Please refer to BlackRock's Form ADV and SEC disclosures for additional information on regulatory matters concerning BTC or BlackRock as a whole. The recent fines related to BlackRock Inc. or BTC's investment advisory responsibilities include the following:

On 8 March 2012, BlackRock Institutional Trust Company, N.A. ("BTC") entered into an Offer of Settlement (the "Agreement") with the CFTC and consented to the entry of an Order, which makes findings and imposes remedial sanctions against BTC. Without admitting or denying wrongdoing, BTC agreed to the imposition of a \$250,000 penalty and the entry of the Order to resolve allegations by the CFTC that two trades by BTC violated Section 4c(a)(1) of the Commodity Exchange Act and CFTC Regulation 1.38(a). BTC also agreed to refrain from any further violations of the above-mentioned statutory provisions. The CFTC did not allege that any clients of BTC, BlackRock or any related affiliate were harmed in any way in the execution of these two trades.

On 11 September 2012, the UK Financial Services Authority ("FSA") issued a Final Notice against BlackRock Investment Management (UK) Limited ("BIMUK"), following a settlement agreement reached between the FSA and BIMUK. The FSA found that BIMUK had breached certain provisions of the FSA's Client Money Rules and Principles, during the period 1 October 2006 to 31 March 2010, by not having trust letters in place for client money placed on money market deposit and not having adequate systems and controls for the identification and protection of client money in this respect. BIMUK agreed to a settlement payment of GBP 9,533,100 for the breach,



which it had self-reported to the FSA in April 2010. The FSA final order acknowledged that no client of BIMUK (or BlackRock or any related affiliate) suffered any harm and that BIMUK had remedied the situation and put in place robust systems and controls relating to client money protection.

On 3 October 2012, BlackRock Inc. reached an agreement with the U.S. Department of Labor (“DOL”) to reimburse clients \$2,661,513 in connection with certain trades the DOL alleged violated Title I of the Employee Retirement Income Security Act (“ERISA”). BlackRock also agreed to pay to the DOL a \$266,151 penalty.

On 8 January 2014, BlackRock Inc. reached a settlement with the New York Attorney General's office (“AG”) pursuant to which the AG found BlackRock's use of analyst surveys violated New York's Martin Act and Executive Law. The settlement did not involve the payment of any fine or other penalty although BlackRock paid \$400,000 to cover the AG's costs of investigation. BlackRock neither admitted nor denied the allegations, but agreed to stop using analyst surveys.

On 8 May 2014, the primary Italian securities regulator (“CONSOB”) fined BlackRock Investment Management (UK) Limited (“BIMUK”) 150,000 EURO (approximately \$205,826 USD) for negligent market manipulation. The fine was based on BIMUK's filing, on behalf of the BlackRock group of companies, a large shareholder report regarding its holdings in Unicredit S.p.A. to CONSOB in December 2011, that turned out to be incorrect.

On 16 September 2014, BlackRock Institutional Trust Company, N.A. (“BTC”) entered into an agreement with the SEC to resolve allegations relating to three alleged violations of an SEC regulation prohibiting short sales of an equity security during the restricted period preceding a public offering. The three trades at issue occurred in 2010 and 2011. As part of the approximately \$1.7 million settlement, BTC agreed to disgorge profits from each of the violations and to pay interest and a civil penalty. BTC also agreed to cease and desist from any future violations of the rule in question.

On 20 April 2015, BlackRock Advisors, LLC (“BAL”) reached a settlement with the Securities and Exchange Commission (“SEC”) regarding BlackRock's handling of a former portfolio manager's personal investments and involvement in a family business, Rice Energy LP and related entities. As part of the settlement, BAL agreed to pay a \$12 million penalty and retained an independent compliance consultant to review BlackRock's policies and procedures regarding the outside activities of BlackRock's employees. There was neither an allegation by the SEC of any loss to any BlackRock investors, nor did this settlement have any adverse impact on BlackRock's ability to manage its clients' funds.

In past years, BlackRock has acquired organizations that provide investment-related services, including, but not limited to, State Street Research & Management Company, Merrill Lynch Investment Managers, the fund of funds business of Quellos Group, LLC, and Barclays Global Investors. This response does not address any regulatory matters that arose out of conduct within the acquired organizations prior to their acquisition by BlackRock. It also does not address regulatory matters unrelated to BlackRock or BTC's investment management responsibilities.

4. Have proxy ballots been voted in accordance with the best economic interest of *SamCERA*?  
 **Yes** /  **No: Please explain.**

Voting is carried out in accordance with our market-specific voting guidelines, which are available on our at <http://www.blackrock.com/corporate/en-gb/about-us/responsible-investment>

In all situations the economic interests of our clients will be paramount.

5. Has the firm's insurance coverage been sustained?  
 **Yes** /  **No: Please explain.**

### **Investment Management Fees**

1. Is *SamCERA*'s investment management fee schedule less favorable than those charged other institutional clients who hold an account investment substantially similar to ours?  
 **Yes: Please explain.** /  **No**

We are in compliance with the terms of the SamCERA agreement.

### **Derivative Investments**

1. Are derivatives used in the management of the investment strategy?  
 **Yes: Please ANSWER the remaining questions in this section.**  
 **No: Please SKIP the remaining questions in this section.**

Yes, the Fund holds futures contracts only. The Fund is managed on a fully replicated basis, where a portfolio's exposure to each security in the index is in line with its weight in the underlying index. Futures contracts may be employed to equitize cash flows. These flows are generated from client activity, dividends, interest received and other cash flows associated with securities in the portfolio. Futures contracts are purchased to provide immediate market exposure proportionate to cash accruals and investable cash within the portfolio. The goal is to reduce cash drag that would result from any uninvested cash or accruals in the portfolio. Derivatives are not used in any speculative or arbitrage capacity, but only for cash equitization.

2. If the firm entered into a non-exchange traded derivative, was the general nature and associated risks of the counter-party fully evaluated?  
 **Yes** /  **No: Please explain.**

N/A

3. For non-exchange traded derivative transactions, were the counter-parties broker/dealers?  
 **Yes** /  **No**

N/A

**If Yes:**

- a) Do the counter-parties have investment grade debt?  Yes/  No
  - b) Are the counter-parties registered with the SEC and do they have net capital to protect against potential adverse market circumstances?  Yes/  No: **Please explain.**
4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?  
 Yes /  No

N/A

**If Yes:**

- a) Do the counter-parties have investment grade debt?  Yes/  No
  - b) Do the counter-parties have total assets in excess of \$1 billion, and significant net capital to protect against potential adverse market circumstances?  
 Yes/  No: **Please explain.**
5. Is individual counter-party exposure well diversified?  Yes/  No: **Please explain.**
- a) What is the largest exposure to a single counter-party within the portfolio?
  - b) Please specify the name of the counter-party and the amount of exposure.
  - c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?

While we are not currently holding any non-exchange traded derivative positions in the portfolio, BlackRock has explicit policies and procedures in place around the usage of these instruments. As a fiduciary, BlackRock's philosophy is to manage counterparty credit risk conservatively. As such, the firm actively monitors counterparty credit risk exposures globally and evaluates counterparty credit quality on a continuous basis. The Counterparty and Concentration Risk Group ("CCR Group"), which forms part of RQA, comprises a dedicated team of professionals that leads the global process for managing counterparty risk.

Please see comprehensive, in-depth details about counterparty monitoring processes on pages 24-30 of "16 Things to know about BTC"

6. Specify the security pricing sources used when developing portfolio market value exposures for non-exchange traded derivative positions.

BlackRock's Global Valuation Methodologies Committee provides oversight of the valuation of investments for the Funds and certain Accounts. The Global Assets of Funds and Accounts are valued in accordance with Financial Accounting Standards Board Accounting Standards Codification ("ASC") 820-10, Fair Value Measurements and Disclosures. ASC 820-10 establishes a fair valuation hierarchy to increase consistency and comparability in fair value measurements and related disclosures. The fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value into three broad levels: Level I, Level II, and Level III. Inputs may be based on independent market data ("observable inputs") or they may be internally developed ("unobservable



inputs”). See additional details about valuation procedures and external pricing agents/sources on pages 9-11 in “16 Things You Should Know,” attached.

7. Provide a statement regarding the liquidity of the derivative investments. Provide a general statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.

E-mini S&P 500 futures are the preferred contracts used to equitize cash flows generated from daily participant activity, dividends, interest received and other cash flows associated with securities in the portfolio because of their volume, liquidity, flexibility and risk control.

The mini S&P 500 futures are very liquid, with approximately 1 million to 3 million contracts changing hands on the market each day.

Transactions in futures contracts involve certain risks and transaction costs, including: investment risk, imperfect correlation between the price of the futures contract and movements in the price of the underlying index, the possible absence of a liquid secondary market for any particular instrument, the risk of default of the counterparty, the clearing member, the guaranteeing agent, or fellow customers of a clearing member, and restrictions on trading imposed by futures exchanges due to price volatility. Futures contracts involve the posting of margin deposits, and movement in the underlying index or asset may result in calls for additional payments of cash. The need to make such additional payments could require a Fund or Account to liquidate securities at a disadvantageous time.

8. State if the legal and regulatory risk associated with portfolio derivative investments have changed over the past six months.  **Yes: Please explain.** /  **No**

**Domestic Equity Portfolios (Large, Mid & Small)**

1. Please state the percentage of the portfolio held in each of the following types of securities

<i>Common Stock</i>	<i>99%</i>
<i>Preferred Stock</i>	<i>0%</i>
<i>Convertible Securities</i>	<i>0%</i>
<i>Cash &amp; Equivalents</i>	<i>1%</i>

2. Specify the large, mid and small capitalization exposure of the portfolios? Please specify percentages.

<i>Large-Cap*</i>	<i>100%</i>
<i>Mid-Cap</i>	<i>0%</i>
<i>Small-Cap</i>	<i>0%</i>

\* Unadjusted company market capitalization.

3. Specify the percentage of the portfolio that is invested in American Depositary Receipts (ADR's). Also, specify the percentage of the portfolio invested in ADR securities that are 144A securities. If greater than 10%, explain why.

0%

4. Does the portfolio invest in emerging and/or frontier markets?  Yes /  No

a) If Yes, please specify the percentage(s) of the portfolio invested in emerging and/or frontier markets.

5. What is the largest percentage of the portfolio represented by a single security? Please specify the security and percentage amount. If any securities were above 5% at the time of purchase, please list and explain why.

3.21% in Apple.

6. What is the largest percentage of the portfolio represented by a single industry? Specify the name of the industry, percentage amount and size relative to benchmark. Please specify all industries above 15%.

20.77% in Information Technology (benchmark is also at 20.77%)

Signed by:



Anthony R. Freitas, CFA

Dated:

1/19/2017

Name of Firm:

BlackRock, Inc.

## ***BlackRock EAFE Index – December 31, 2016***

### ***Compliance Certification Statement***

#### ***San Mateo County***

#### ***Employees' Retirement Association***

In accordance with SamCERA's Investment Policy Statement, the following compliance worksheet will be completed by each of *SamCERA's* investment managers on a semi-annual basis. These statements must be e-mailed to *SamCERA's* office ([Investments@samcera.org](mailto:Investments@samcera.org)) by **Monday, January 9, 2017**.

### **General Compliance Issues**

1. Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?

**Yes: Please explain.** /  **No**

BlackRock, Inc. is independent in ownership and governance, with no single majority stockholder and a majority of independent directors. As of 30 September 2016, the PNC Financial Services Group, Inc. ("PNC") owned 22.0% of BlackRock and institutional investors, employees and the public held economic interest of 78.0%. With regard to voting stock, PNC owned 21.3% and institutional investors, employees and the public owned 78.7% of voting shares.

### **Changes to the Global Executive Committee**

In 2010, BlackRock created the Global Executive Committee to provide oversight of operations and business performance, strategy and planning, talent development and retention, risk management, and external affairs.

Effective 10 November 2016, Christopher Meade, Senior Managing Director and General Counsel, assumed the role of Chief Legal Officer. This role was previously held by Matthew Mallow, Senior Managing Director, who left the department to assume the role of Vice Chairman, overseeing the firm's Investment Stewardship team. As a result, Christopher has replaced Matthew on the GEC.

### **Changes in Index Equities**

After 26 years of delivering for our clients and building our index business, Amy Schioldager informed us of her intention to retire from BlackRock in the first quarter of 2017. Amy will transition in 2017 to a senior advisor to the business so we can continue to benefit from her deep experience.

Additionally, to help us realize a "one firm, one beta" vision, we are combining our iShares, BlackRock's ETF business, and Beta Strategies groups into a new team called ETF & Index Investments (EII).

In 4Q 2016, Mark Wiedman was named to lead the ETF & Index Investments group. Mark will drive scale in our index capabilities by delivering efficient market exposures and portfolio construction solutions for clients. Manish Mehta reports to Mark and leads the Investments, Products and Markets pillar of EII. Within the Investments group led by Manish, Alan Mason will continue to lead Americas portfolio management. None of the portfolio managers running the index equity portfolios on a day-to-day basis are changing. Our top priority as we integrate the teams is to ensure we maintain world-class investment performance, operational

2. Have there been any changes in the firm's investment approach?

Yes: Please explain. /  No

3. Have there have been any industry or regulatory disciplinary actions taken against the firm?

Yes: Please explain. /  No

As a global investment manager, BlackRock Inc., and its various subsidiaries including the BlackRock Institutional trust Company, N.A. ("BTC") may be subject to regulatory oversight in numerous jurisdictions including examinations and various requests for information. BTC's regulators routinely provide it with comment letters at the conclusion of these examinations in which they request that BTC correct or modify certain of its practices. In all such instances, BTC has addressed, or is working to address, these requests to ensure that it continues to operate in compliance with applicable laws, statutes and regulations.

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which it had self-reported to the FSA in April 2010. The FSA final order acknowledged that no client of BIMUK (or BlackRock or any related affiliate) suffered any harm and that BIMUK had remedied the situation and put in place robust systems and controls relating to client money protection.

On 3 October 2012, BlackRock Inc. reached an agreement with the U.S. Department of Labor (“DOL”) to reimburse clients \$2,661,513 in connection with certain trades the DOL alleged violated Title I of the Employee Retirement Income Security Act (“ERISA”). BlackRock also agreed to pay to the DOL a \$266,151 penalty.

On 8 January 2014, BlackRock Inc. reached a settlement with the New York Attorney General's office (“AG”) pursuant to which the AG found BlackRock's use of analyst surveys violated New York's Martin Act and Executive Law. The settlement did not involve the payment of any fine or other penalty although BlackRock paid \$400,000 to cover the AG's costs of investigation. BlackRock neither admitted nor denied the allegations, but agreed to stop using analyst surveys.

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On 20 April 2015, BlackRock Advisors, LLC (“BAL”) reached a settlement with the Securities and Exchange Commission (“SEC”) regarding BlackRock's handling of a former portfolio manager's personal investments and involvement in a family business, Rice Energy LP and related entities. As part of the settlement, BAL agreed to pay a \$12 million penalty and retained an independent compliance consultant to review BlackRock's policies and procedures regarding the outside activities of BlackRock's employees. There was neither an allegation by the SEC of any loss to any BlackRock investors, nor did this settlement have any adverse impact on BlackRock's ability to manage its clients' funds.

In past years, BlackRock has acquired organizations that provide investment-related services, including, but not limited to, State Street Research & Management Company, Merrill Lynch Investment Managers, the fund of funds business of Quellos Group, LLC, and Barclays Global Investors. This response does not address any regulatory matters that arose out of conduct within the acquired organizations prior to their acquisition by BlackRock. It also does not address regulatory matters unrelated to BlackRock or BTC's investment management responsibilities.



4. Have proxy ballots been voted in accordance with the best economic interest of *SamCERA*?  
 **Yes** /  **No: Please explain.**

Voting is carried out in accordance with our market-specific voting guidelines, which are available on our at <http://www.blackrock.com/corporate/en-gb/about-us/responsible-investment>

In all situations the economic interests of our clients will be paramount.

5. Has the firm's insurance coverage been sustained?  
 **Yes** /  **No: Please explain.**

### **Investment Management Fees**

1. Is *SamCERA*'s investment management fee schedule less favorable than those charged other institutional clients who hold an account investment substantially similar to ours?  
 **Yes: Please explain.** /  **No**

We are in compliance with the terms of the *SamCERA* agreement.

### **Derivative Investments**

1. Are derivatives used in the management of the investment strategy?  
 **Yes: Please ANSWER the remaining questions in this section.**  
 **No: Please SKIP the remaining questions in this section.**

Yes, the Fund holds futures contracts only. The Fund is managed on a fully replicated basis, where a portfolio's exposure to each security in the index is in line with its weight in the underlying index. Futures contracts may be employed to equitize cash flows. These flows are generated from client activity, dividends, interest received and other cash flows associated with securities in the portfolio. Futures contracts are purchased to provide immediate market exposure proportionate to cash accruals and investable cash within the portfolio. The goal is to reduce cash drag that would result from any uninvested cash or accruals in the portfolio. Derivatives are not used in any speculative or arbitrage capacity, but only for cash equitization.

2. If the firm entered into a non-exchange traded derivative, was the general nature and associated risks of the counter-party fully evaluated?  
 **Yes** /  **No: Please explain.**

N/A

3. For non-exchange traded derivative transactions, were the counter-parties broker/dealers?  
 **Yes** /  **No**

N/A

If **Yes**:

- a) Do the counter-parties have investment grade debt?  **Yes**/ **No**
- b) Are the counter-parties registered with the SEC and do they have net capital to protect against potential adverse market circumstances?  **Yes**/ **No: Please explain.**

4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?

**Yes** /  **No**

N/A

If **Yes**:

- a) Do the counter-parties have investment grade debt?  **Yes**/ **No**
- b) Do the counter-parties have total assets in excess of \$1 billion, and significant net capital to protect against potential adverse market circumstances?  
 **Yes**/ **No: Please explain.**

5. Is individual counter-party exposure well diversified?  **Yes**/ **No: Please explain.**

- a) What is the largest exposure to a single counter-party within the portfolio?
- b) Please specify the name of the counter-party and the amount of exposure.
- c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?

While we are not currently holding any non-exchange traded derivative positions in the portfolio, BlackRock has explicit policies and procedures in place around the usage of these instruments. As a fiduciary, BlackRock's philosophy is to manage counterparty credit risk conservatively. As such, the firm actively monitors counterparty credit risk exposures globally and evaluates counterparty credit quality on a continuous basis. The Counterparty and Concentration Risk Group ("CCR Group"), which forms part of RQA, comprises a dedicated team of professionals that leads the global process for managing counterparty risk.

Please see comprehensive, in-depth details about counterparty monitoring processes on pages 24-30 of "16 Things to know about BTC"

6. Specify the security pricing sources used when developing portfolio market value exposures for non-exchange traded derivative positions.

BlackRock's Global Valuation Methodologies Committee provides oversight of the valuation of investments for the Funds and certain Accounts. The Global Assets of Funds and Accounts are valued in accordance with Financial Accounting Standards Board Accounting Standards Codification ("ASC") 820-10, Fair Value Measurements and Disclosures. ASC 820-10 establishes a fair valuation hierarchy to increase consistency and comparability in fair value measurements and related disclosures. The fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value into three broad levels: Level I, Level II, and Level III. Inputs may be based on independent market data ("observable inputs") or they may be internally developed ("unobservable

inputs”). See additional details about valuation procedures and external pricing agents/sources on pages 9-11 in “16 Things You Should Know,” attached.

7. Provide a statement regarding the liquidity of the derivative investments. Provide a general statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.

Liquidity purposes are among one reason that such index funds hold long positions in futures to invest the dividends or other cash to be received by a Fund or cash positions held by a Fund, in lieu of holding long positions in securities or other assets, or to increase or decrease exposure to a particular commodity or asset class.

Transactions in futures contracts involve certain risks and transaction costs, including: investment risk, imperfect correlation between the price of the futures contract and movements in the price of the underlying index, the possible absence of a liquid secondary market for any particular instrument, the risk of default of the counterparty, the clearing member, the guaranteeing agent, or fellow customers of a clearing member, and restrictions on trading imposed by futures exchanges due to price volatility. Non-U.S. futures may involve certain risks not applicable to trading U.S. futures, including risks of expropriation, burdensome taxation, moratoriums, and exchange and investment controls. Futures contracts involve the posting of margin deposits, and movement in the underlying index or asset may result in calls for additional payments of cash. The need to make such additional payments could require a Fund or Account to liquidate securities at a disadvantageous time.

8. State if the legal and regulatory risk associated with portfolio derivative investments have changed over the past six months.  **Yes: Please explain.** /  **No**

### **International Equity Portfolios - Developed**

1. Specify the percentage of the portfolio held in each of the following types of securities:

<i>Foreign Ordinary Shares</i>	<i>99.98%</i>
<i>ADR's</i>	<i>0.01%</i>
<i>Cash &amp; Equivalents (Foreign)</i>	<i>0.00%</i>
<i>Cash &amp; Equivalents (Domestic)</i>	<i>0.01%</i>

2. Specify the large, mid and small capitalization exposure of the portfolios.

<i>Large-Cap*</i>	<i>93.92%</i>
<i>Mid-Cap</i>	<i>6.08%</i>
<i>Small-Cap</i>	<i>0%</i>

\*defining large cap as float-adjusted market cap of at least \$4 billion and mid-cap as \$1 billion to \$4 billion



3. Is the firm monitoring the country, currency, sector and security selection risks associated with its portfolio?  **Yes** /  **No: Please explain.**

Yes. The importance of risk control at BlackRock is one of our greatest competitive advantages. All BlackRock's index strategies utilize risk control at every stage of the investment process, from the creation of expected return forecasts through the portfolio construction and trade execution processes. We pursue the risk control objective by minimizing all investment (and operational) risks that are not associated with added returns.

BlackRock's research and portfolio management teams have extensive background in the development and use of risk models, their construction, behavior, limitations, and appropriate uses, and utilize risk models from Barra. We also use proprietary risk controls in the portfolios when we have identified a source of incidental risk that is not fully addressed by the Barra risk models.

The portfolio managers review exception-based reports for compliance with internal and client guidelines on a daily basis. We use an automated screen, whereby portfolio managers' final trade lists are cross-checked against a database containing fund guidelines and client restrictions on separate accounts prior to being released to the trading room. Duties are segregated and supervision is appropriate to each type of activity. Through these efforts, BlackRock is able to ensure that the portfolio remains risk-controlled, fully invested and positioned at all times to achieve optimal performance.

In addition, all Index portfolios are monitored monthly by an Investment Review Committee ("IRC"). This committee formally reviews portfolio performance and its attribution. The IRC is an internal committee composed of senior management, portfolio managers, performance analysts and risk specialists, who meet monthly to discuss investment policy and other operational issues that relate to the management of our funds. The IRC is responsible for reviewing all BlackRock funds to ensure that they are operating according to their fund mandates. All fund exceptions are reported to the IRC.

Beta Strategies team works closely with RQA to ensure portfolio risks are consistent across mandates and each client's formal risk guidelines. RQA provides independent risk oversight leveraging BlackRock's enterprise risk and investment system, Aladdin®. Aladdin integrates fixed income and equity risk analytics with a sophisticated trading platform that supports straight-through processing of investments from trade entry to compliance to operations to administration to reporting.

A team of RQA professionals has specialized knowledge of index equity strategies and works side-by-side with portfolio managers to ensure that all portfolio risks are well understood and appropriately managed. RQA works with portfolio managers on both day-to-day activities and special projects designed to improve our models and practices.

4. Does the portfolio invest in emerging and/or frontier markets?  **Yes** /  **No**

a) If **Yes**, please specify the percentage(s) of the portfolio invested in emerging and/or frontier markets.

Signed by:



Anthony R. Freitas, CFA

Dated:

1/19/2017

Name of Firm:

BlackRock, Inc.



FRANKLIN TEMPLETON  
INSTITUTIONAL

January 26, 2017

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**RESPONSE TO COMPLIANCE CERTIFICATION STATEMENT FROM**  
**San Mateo County Employees' Retirement Association**

Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. (3c7)  
*Review Period: July 1, 2016 – December 31, 2016*

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**Bill Deakyne, CFA**

Senior Vice President – Director of Institutional Client Relations  
Franklin Templeton Institutional

tel: (650) 312-2270

email: [bill.deakyne@franklintempleton.com](mailto:bill.deakyne@franklintempleton.com)

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**APPENDIX 1**

**FRANKLIN ADVISERS, INC. REGULATORY HISTORY**

Please note that the San Mateo Employees' Retirement account is in a 3c7 fund and is no longer managed in a separately managed account within the guidelines of an investment management agreement (IMA).

As such, any references to the terms, guideline(s) and policy statement(s) within this questionnaire refer to the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd.'s offering documents and/or private placement memorandum.

## GENERAL COMPLIANCE ISSUES

1. **Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?**

Yes       No

**If yes, please explain.**

### Portfolio Developments

There have been no significant developments to the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. over the last six months ended December 31, 2016.

### Firm Ownership

There have been no material changes to the ownership structure of Franklin Resources, Inc. (Parent Company) during the past six months ended December 31, 2016.

### Organizational Structure

Co-President Vijay C. Advani departed the firm on December 31, 2016. Co-President Jennifer M. Johnson became president as of this date. As president, Ms. Johnson oversees all divisions of the business with the exception of Finance, Human Resources, Legal, Corporate Communications and Templeton Global Macro, which report directly into the CEO.

There have been no significant developments to the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. over the last six months ended December 31, 2016.

### Personnel

The investment team responsible for managing the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd., the Templeton Global Macro group, has experienced limited turnover during the past six months ending December 31, 2016. In August 2016, Mara Rachel Finkelstein joined the team as a research analyst.

2. **Have there been any changes in the firm's investment approach?**

Yes       No

**If yes, please explain.**

3. **Have there have been any industry or regulatory disciplinary actions taken against the firm?**

Yes       No

**If yes, please explain.**

During the period of July 1, 2016 through December 31, 2016, Franklin Advisers Inc. (FAV) was not the subject of any *investment-related proceedings, findings or orders* brought or made by any U.S. federal or state regulatory agency, *foreign financial regulatory authority or self-regulatory organization*.

For a summary of *investment-related proceedings, findings or orders* brought or made by any U.S. federal or state regulatory agency, *foreign financial regulatory authority* or *self-regulatory organization* against FAV and/or certain of its *advisory affiliates* in the past 10 years ended September 30, 2016, as well as certain other regulatory matters, please see Appendix 1: Franklin Advisers, Inc. Regulatory History.

From time to time, FAV and its *advisory affiliates* receive subpoenas and inquiries from regulators, including requests for documents or information, and also may become the subject of governmental or regulatory examinations or investigations. *Findings or orders* resulting from such subpoenas, inquiries, examinations or investigations if any, will be reported, to the extent required and permitted by law, on FAV's Form ADV filed with the U.S. Securities and Exchange Commission. (Italicized terms are as defined on Form ADV.)

**4. Has the firm's insurance coverage been sustained?**

**Yes**       **No**

**If no, please explain.**



**INVESTMENT MANAGEMENT FEES**

1. Is *SamCERA's* investment management fee schedule higher than those charged other institutional clients who hold an account investment substantially similar to ours?

Yes       No

If yes, please explain.

## DERIVATIVE INVESTMENTS

1. Are derivatives used in the management of the investment strategy?

Yes       No

If Yes, please answer the remaining questions in this section. If No, please skip the remaining questions in this section.

2. If the firm entered into a non-exchange traded derivative, was the general nature and associated risks of the counter-party fully evaluated?

Yes       No

If no, please explain.

3. For non-exchange traded derivative transactions, were the counter-parties broker/dealers?

Yes       No

If yes:

a) Do the counter-parties have investment grade debt?

Yes       No

b) Are the counter-parties registered with the SEC and do they have net capital to protect against potential adverse market circumstances?

Yes       No

If no, please explain.

4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?

Yes       No

If yes:

a) Do the counter-parties have investment grade debt?

Yes       No

b) Do the counter-parties have total assets in excess of \$1 billion, and significant net capital to protect against potential adverse market circumstances?

Yes       No



If no, please explain.

**5. Is individual counter-party exposure well diversified?**

**Yes**       **No**

The risk exposure to a single counterparty in an OTC derivative transaction may not exceed 10%.

All proposed counterparties are subject to review and initial approval by the Counterparty Credit Committee satisfying certain credit and other standards. The Counterparty Credit Committee and Portfolio Analysis and Investment Risk (PAIR) team provide ongoing monitoring of counterparties creditworthiness and FTI-wide exposure. Counterparty risk is an issue addressed at a firm-wide level by Franklin Templeton. Franklin Templeton requires all OTC counterparties to maintain a credit rating of BBB- or better. Additionally, Funds are only permitted to enter into derivative instruments with counterparties included on the "approved list" maintained by the investment manager in conjunction with the counterparty credit risk policy. PAIR calculates Account and FTI-wide exposure to each counterparty on a weekly basis, and on an as needed basis based on market conditions. Total exposure is compared to monetary limits that vary based on the size and creditworthiness of the counterparty.

Finally, the majority of our counterparty relationships are collateralized. This means that an account is set up in between FTI and the counterparty and every night the side that "lost" on the trade that day transfers the equivalent amount of cash or T-bills into the account to reflect the mark-to-market of the derivative's value. The account itself is ring-fenced and protected from the balance sheet of either firm. Therefore, should one of our counterparties go out of business overnight it would not affect the value of the trade we have on, given that the trade's cash value would be in the collateral account and protected from creditors.

If no, please explain.

- a) **What is the largest exposure to a single counter-party within the portfolio?**
- b) **Please specify the name of the counter-party and the amount of exposure.**
- c) **Have there been any changes to the investment manager's list of approved counter-parties over the past six month?**

Counter-party exposure cannot be released under fair disclosure rules.

Changes to our approved list of counter-parties routinely occur nearly every month.

**6. Specify the security pricing sources used when developing portfolio market value exposures for limited allocation derivatives.**

Not applicable. No limited allocation derivative investments are held in the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd.

**7. Provide a statement regarding the liquidity of the derivative investments. Provide a general statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.**

It is the policy of the Franklin Templeton Fixed Income Group, the investment platform of the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd., to use derivatives only when client guidelines permit. Derivatives may be an efficient way to implement fixed income investment views on a particular sector in one transaction and also as a

tool to help isolate risk exposures. Compared with cash bonds, derivatives can be more flexible and more liquid, and may have lower transaction costs. In those strategies that employ derivative instruments, or when clients request the use of derivatives to achieve certain investment objectives, we may also seek to gain exposure through the use of exchange-traded and/or over-the-counter derivatives.

As an opportunistic strategy, the Templeton Global Multisector Plus Strategy (the investment strategy of the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd.) utilizes a wide variety of instruments to gain exposure to various fixed income sectors and achieve strategy objectives. For example, foreign exchange forward contracts are frequently used for hedging purposes and to express currency views. We may also engage in cross hedging as an efficient method of implementing the portfolio's optimal currency structure. Interest rate futures and swaps may be used to implement views on interest rates, quickly adjust portfolio duration, or efficiently handle cash flows. Total return swaps can quickly add or reduce bond market exposure.

Franklin Templeton's proprietary risk management systems enable us to properly model derivative instruments and fully understand portfolio risk. Derivatives are used only when portfolio guidelines permit and are not used to generate alpha.

**8. State if the legal and regulatory risk associated with portfolio derivative investments have changed over the past six months.**

Yes       No

**If yes, please explain.**

## INVESTMENT MANAGER GUIDELINES

### 1. Are portfolio holdings well-diversified, and made in liquid securities?

Yes       No

As an essential part of the investment process, liquidity risk is researched in the security selection stage. Our research analysts and traders partner to ensure that any required liquidity provisions can be met given the risk parameters of the underlying mandate. In the event that, within the confines of the account structure, we invest in securities that have limited liquidity, we seek to ensure that investors are being adequately compensated for any liquidity risk. On an ongoing basis, analysts are required to ensure that current market prices reflect attractive valuations. Liquidity risk is further controlled by monitoring aggregate ownership levels to help ensure that they remain prudent.

The global government bond and foreign currency markets in which the fund invests are among the largest and most liquid markets in the world. We generally seek to avoid holding assets in which we believe forced selling could occur at stressed levels due to liquidity constraints. Historically, the fund has never experienced any significant issues with liquidity, and we do not believe that liquidity issues going forward are likely to be of great concern, regardless of the economic environment.

It is also important to note that at a firm level, we have our Global Credit Facility, an unsecured, senior committed line of credit, if required as a source of funds for temporary and emergency purposes to meet unanticipated or unusually large redemption requests by shareholders. In the case that this facility would be needed, this would provide the portfolio managers with added flexibility in managing redemptions without disrupting our ability to meet our investment objectives and serve the long-term interests of our shareholders. Currently, it is undrawn.

**If no, please explain.**

### 2. Has the firm engaged in short selling, use of leverage or margin and/or investments in commodities?

Yes       No

The Templeton Global Multisector Plus Strategy does not engage in short selling, employ leverage, margins or investments in commodities.

**If yes, please explain.**



**GLOBAL FIXED INCOME PORTFOLIOS**

**1. State the percentage of the portfolio held in each of the following types of securities (please sub-total each by region):**

The following table represents the sector versus region breakdown as of December 31, 2016.

Sector	Region	MV%
<b>Certificates of Deposit (by region)</b>		
Cash & Cash Equivalents		15.54
Preferred Stock <sup>[1]</sup>		0.56
<b>Commercial Paper (by region)</b>		
<b>Other high grade short-term securities (by region)</b>		
Government securities (by region)	US	
	Non-US	77.51
Agency Securities (by region)	US	
	Non-US	
Investment Grade Corporate Bonds (by region)	US	0.04
	Non-US	0.14
High Yield Corporate Bonds (by region)	US	0.08
	Non-US	0.14
<b>Mortgage and asset-backed securities (by region)</b>		
<b>Certificates of Deposit (by region)</b>		
<b>Commercial Paper (by region)</b>		
Supranational		0.06
Derivatives		-0.58
<b>Bank Loans</b>		
Other <sup>[2]</sup>		6.51

<sup>[1]</sup> Includes Convertibles.

<sup>[2]</sup> Other includes Quasi Sovereign and Sovereign.

## San Mateo County Employees' Retirement Association

The following table represents the sector breakdown for the portfolio as of December 31, 2016.

Types of Securities	Investment Objective	Percentage of Portfolio (%)
Cash & Cash Equivalents		15.54
Convertibles		0.56
Corporate Bonds	Investment Grade	0.17
	Non-Investment Grade	0.23
Derivatives		-0.58
International Government/Agency Bonds	Investment Grade	53.94
	Non-Investment Grade	23.57
Others <sup>[1]</sup>		
Sovereign Bonds	Investment Grade	0.00
	Non-Investment Grade	6.51
Supranational		0.06
<b>Total</b>		

The following table represents the regional breakdown for the portfolio as of December 31, 2016.

Region	Percentage (%)
Americas	43.00
Asia	29.31
Europe/Africa	12.09
Cash and Cash Equivalents	15.54
Other	0.00
Supranational	0.06
<b>Total</b>	<b>100.00</b>

## 2. Please list any holdings that are below investment grade or not-rated

The table below represents the allocation ratings data, as of December 31, 2016. During that quarter, 30.66% of the portfolios fall below investment grade or are not rated.

Range	IG/Non-IG	Percentage
AAA	IG	0.06
AA+	IG	0.00
AA	IG	7.41
AA-	IG	0.14
A+	IG	0.00
A	IG	0.00

Range	IG/Non-IG	Percentage
A-	IG	25.85
BBB+	IG	0.00
BBB	IG	10.35
BBB-	IG	10.00
BB+	Non-IG	2.36
BB	Non-IG	13.94
BB-	Non-IG	2.17
B+	Non-IG	0.51
B	Non-IG	0.00
B-	Non-IG	7.47
CCC+	Non-IG	0.00
CCC	Non-IG	3.44
CCC-	Non-IG	0.00
CC+	Non-IG	0.00
CC	Non-IG	0.08
C	Non-IG	0.02
D	Non-IG	0.11
NR	Non-IG	0.56
N/A	Non-IG	0.00
Cash & Cash Equivalents	Non-IG	15.54

3. Excluding U. S. Government and Agency bond holdings, did any individual bond issue represent more than 5% of the market value of the portfolio?

Yes       No

If yes, please specify the bond issue and percentage amount.

4. What percentage of the portfolio is held in Rule 144A securities?

0.05% of the portfolio is held under Rule 144A securities, as of December 31, 2016.

5. At the time of purchase, was there any single industry which represented more than 15% of the market value of the account.

Yes       No

If yes, please specify the name of the industry and percentage amount.


6. What proportion of total AUM do the assets in this product make-up of the firm? What size does the SamCERA's account comprise of total product assets?

The table below provides assets under management figures requested regarding the Templeton Global Multisector Plus strategy and the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. (3c7), as of December 31, 2016.

	Assets Under Management (in Millions \$)	% of Total Firm Assets
Templeton Global Multisector Plus Strategy	38,535.34	5.35
Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. (3c7)	1,187.00	0.16

The table below provides the requested figures regarding the SamCERA account assets compared to Templeton Global Multisector Plus strategy and the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. (3c7), as of December 31, 2016.

SamCERA Assets Under Management (in Millions \$)	% of Strategy Assets	% of Product Assets
106.36	0.28	8.96

**Signed By:**   
**Name:** Breda Beckerle  
**Title:** Chief Compliance Officer  
**Dated:** Thursday, January 26, 2017  
**Name of Firm:** Franklin Advisers, Inc. (FAV)



### IMPORTANT NOTES

This response (the Response) is based on the information provided in the Due Diligence Questionnaire (the Questionnaire). To the extent any such information in the Questionnaire is incomplete or inaccurate, Franklin Templeton reserves the right to alter, amend or delete any information it has provided in the Response. Franklin Templeton has prepared the Response in good faith and, to the best of its knowledge; all information provided in the Response is accurate as of the date submitted. Information, including all data, provided in the Response is unaudited, unless otherwise indicated. Additionally, any information relating to assets under management (AUM) is being provided in response to the particular request contained in the Questionnaire and the figures provided may, therefore, be categorized differently than those reported for regulatory or other disclosure purposes. AUM includes assets for which the firm provides various investment management services as described in Franklin Resources, Inc.'s current Form 10K (See Item I, "Business". A copy of the current Form 10K as well as the most recent Annual Report can be located at [www.franklintempleton.com](http://www.franklintempleton.com)). The way we calculate our AUM may change from time to time based on such factors as changes in industry standards, regulatory requirements or specific requests. Any information from third-party sources is believed to be reliable, but Franklin Templeton cannot guarantee its accuracy or completeness. Information set forth in the Response is subject to change and Franklin Templeton does not undertake any duty to update the Response after its issuance nor does it accept responsibility for any modifications made to the Response after its date of issue. Responses may include a general description of the types of services Franklin Templeton may provide to its clients and may not be applicable or tailored to the Questionnaire. Data shown for currency exposure, country exposure, maturity, duration, coupon allocation, sector allocation and asset allocation may reflect certain derivatives held in the portfolio (or their underlying reference assets). Breakdowns may not total 100% or may be negative due to rounding, use of derivatives, unsettled trades or other factors.

The information contained in the Response is solely for the purpose of responding to the Questionnaire, shall be treated as confidential, and shall be distributed internally on an as-needed basis only. Subject to applicable regulatory requirements, it shall not be distributed or otherwise communicated to third parties (other than any consultant engaged by the issuer of the Questionnaire to assist in connection therewith) without the prior written consent of Franklin Templeton. Any such consultant shall likewise be obligated to treat the Response as confidential.

Investing may involve a high degree of risk. The issuer of the Questionnaire is deemed to be an experienced institutional investor or consultant and is expected to make its own independent assessment of the appropriateness and the associated risks of investing. Franklin Templeton shall not be held liable for any losses or damages arising out of any person's reliance upon the information contained in the Response. Except as expressly provided in the Response, no person, firm, or corporation has been authorized to give any information or to make any representation other than those contained in the Response.

All investors should inform themselves as to the legal and other requirements applicable to them with respect to any investments, holdings, and/or disposition of any investments. Franklin Templeton takes no responsibility for informing or advising investors of any applicable laws or regulations.

Views or opinions expressed in the Response do not constitute investment, legal, tax, financial or other advice. The Response is neither an offer for a particular security nor a recommendation to purchase any investments. The way Franklin Templeton implements its investment strategies and the resulting portfolio holdings may change depending on a variety of factors such as market and economic conditions, as well as client account guidelines and restrictions, if applicable. The information provided in the Response is not a complete analysis of every aspect of any market, country, industry, security, strategy or portfolio. Past performance does not guarantee future results and results may differ over future time periods.

By accepting these materials, you confirm your acceptance of the above terms.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

February 28, 2017

Agenda Item 4.10

To: Board of Retirement

From: Scott Hood, Chief Executive Officer



Subject: Reaffirmation of SamCERA's Mission and Goals Statements

**Staff Recommendation**

Reaffirm the current SamCERA's Mission and Goals Statements.

**Background**

SamCERA's Mission and Goals Statements, as amended, incorporates the language which was submitted to the Board on April 14, 1994, as part of SamCERA's first independent budget. This statement is an integral part of SamCERA's Policies and Procedures Manual, Trustee's Manual, Budget Report, and SamCERA's Strategic Plan.

Statements of mission and goals should, at a minimum, capture the purpose of SamCERA as defined in the California State Constitution and the County Employees Retirement Law of 1937. The statements should also express the Board's vision of the fundamental principles guiding Board and staff actions.

It was amended on February 27, 2007, to reflect minor grammar changes. It was amended on February 26, 2008, for clarity and to reorder the phrases. It was amended on January 27, 2009, to remove redundancies and to define all categories of SamCERA membership as members. It was further amended on May 28, 2013, to more accurately state the intent of the first two goals. This year there are no recommended changes or amendments.

SamCERA's Mission and Goals would remain:

**Mission**

*SamCERA exists to serve as loyal fiduciary for its members and as prudent administrator of the retirement system.*

**GOALS**

*Provide caring, fair, accurate, timely and knowledgeable professional services and information to members and other stakeholders.*

*Prudently manage the assets in order to appropriately fund the actuarial liabilities of the retirement system to ensure the ability to pay all earned benefits while minimizing the costs to employers.*


*Constantly improve the effectiveness of SamCERA's services and the efficiency of its operations.*



SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

February 28, 2017

Agenda Item 4.11

**TO:** Board of Retirement   
**FROM:** Scott Hood, Chief Executive Officer  
**SUBJECT:** Amendment of SamCERA's Portable Electronic Device Policy

**Staff Recommendation**

Adopt a resolution amending SamCERA's Portable Electronic Device Policy.

**Background**

In 2010, in order to reduce the amount of paper used in preparing Board packet materials, SamCERA commenced making all the materials available to the Board and public on line. Initially Board members continued to receive paper packets to prepare for and refer to at Board meetings. It was later determined that Board members should have the use of certain electronic devices, such as iPads, to download and retain the materials. Later that year, the Board approved a Portable Electronic Device Policy to facilitate the use of these devices.

**Discussion**

Staff has reviewed the policy and determined that it should be updated to reflect the changes in technology over the past 7 years. For example, the definition of "Portable Electronic Device" has been changed to include cellular phones, tablets, laptops, or any other electronic device capable of displaying data or images" and references to notebooks and e-readers etc., have been deleted.

The heart of the policy remains essentially unchanged; with only stylistic changes. It provides that:

- The equipment and software is for SamCERA business only, not personal use.
- The equipment is not solely assigned to individuals and is used on an as needed basis.
- No downloading or installing of any unapproved application or software onto the equipment.
- Persons who have SamCERA equipment are responsible for the security of the equipment and data. Any lost or stolen equipment or data must be reported immediately.

**Attachments**

Proposed Amendments to the Portable Electronic Device Policy (Redlined Version)  
Proposed Amendments to the Portable Electronic Device Policy (Clean Version)  
Resolution Amending the Portable Electronic Device Policy

## **SAMCERA PORTABLE ELECTRONIC DEVICE POLICY**

~~For purposes of this policy, “portable electronic devices” are defined to include cellular phones, personal digital assistants, laptops, e-readers, netbooks, notebooks or any other electronic device capable of displaying data or images.~~

### **Purpose:**

This policy is intended to set forth the authorization and limitations of use of SamCERA portable electronic devices. “Portable electronic devices” are defined to include cellular phones, tablets, laptops, or any other electronic device capable of displaying data or images, provided by SamCERA to Board of Retirement members and staff to communicate, download information from or upload information to in regards to SamCERA official business.

### **Scope:**

~~These guidelines apply to all SamCERA board members and staff.~~

### **Background:**

~~SamCERA board Board of Retirement agenda packet material is extensive. The copying, delivering voluminous and producing of the packet material is expensive created and not in line with environmental policies distributed electronically. In order to prepare for and practices of SamCERA. SamCERA now makes available an electronic PDF version of the monthly board packet. SamCERA would like to facilitate the offsite access and usage of the electronic version by allowing board participate fully in Board meetings, Board and staff members must use SamCERA portable electronic devices to retrieve, store, edit and read the electronic board packet. Portable have the materials available at the meetings. Upon request, Board members and certain staff members will be provided with SamCERA electronic devices.~~

While their use is necessary, portable electronic devices are a security risk because they may contain private, confidential or sensitive SamCERA member information, and being portable, are at risk for loss, theft, or other unauthorized access.

Portable electronic devices may be more vulnerable to viruses and other such threats because the user may not regularly use virus protection software and other safeguards available to SamCERA’s desktop computers.

### **Policy:**

1. Board members and staff understand that their authorization to ~~periodically~~ use SamCERA portable electronic devices, associated SamCERA equipment and software ~~(“SamCERA portable electronic devices”)~~ is limited to and for the sole purpose of conducting SamCERA business. Board members and staff further understand that they have no expectation of privacy with regard to their use of such devices.
2. SamCERA portable electronic devices are not solely assigned to individual Board Members and staff but are resources to be used on an as needed basis and will be rotated amongst Board Members and staff in accordance with SamCERA’s business needs. SamCERA is entitled to and will require such devices to be returned to SamCERA for routine maintenance and to ensure that they are being used only in a manner that is consistent with these policies.

3. -SamCERA portable electronic devices are not for the personal use of the Board member or staff employee or any other person or entity. Board members and staff will not permit anyone else including, but not limited to, the Board member or staff's family and/or associates, to use this SamCERA property.
4. Board members and staff may not download or install any application or software onto any SamCERA portable electronic devices without prior authorization by ~~the SamCERA CEO~~Chief Executive Officer or Chief Technology Officer ~~(CTO)~~.
5. Board members and staff who have an assigned portable electronic devices are responsible for the security of the device, all associated equipment and all data. Board members and staff must report any lost or stolen portable electronic equipment or data to the ~~CEO or CTO of SamCERA~~Chief Executive Officer or Chief Technology Officer as soon as discovered.
6. Portable electronic devices may remotely access the SamCERA network only through remote access systems maintained by SamCERA.

*RESOLUTION 2017-05*

**RESOLUTION AMENDING SAMCERA'S  
PORTABLE ELECTRONIC DEVICE POLICY**

**WHEREAS**, pursuant to Article XVI, Section 17, of the California Constitution, the Board of Retirement "Board"), has the exclusive authority and exclusive fiduciary responsibility for the investment and administration of the assets of the retirement system (the "Fund"); and

**WHEREAS**, Board agenda packet material is voluminous and is created and distributed electronically and in order to prepare for and participate fully in Board meetings, Board and certain staff members must use portable electronic devices to retrieve, store, edit and have the materials available at the meetings; and

**WHEREAS**, SamCERA's Portable Electronic Device Policy adopted in September 2010, is intended to set forth the authorization and limitations of use of SamCERA portable electronic devices; and

**WHEREAS**, the Board periodically reviews its policies and amends them as necessary so as to remain up to date; and

**WHEREAS**, the Board has reviewed the proposed amendments to the policy and also now desires to make such changes; Now, therefore, be it

**RESOLVED**, that the SamCERA "Portable Electronic Device Policy" be revised to read as set forth in the attached document.

\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on February 28, 2017.*

*Ayes, Trustees*

*Noes, Trustees:*

*Absent, Trustees:*

*Abstain, Trustees:*

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*Shirley Tourel, Board Secretary  
SamCERA*

## **PORTABLE ELECTRONIC DEVICE POLICY**

### **Purpose:**

This policy is intended to set forth the authorization and limitations of use of SamCERA portable electronic devices. "Portable electronic devices" are defined to include cellular phones, tablets, laptops, or any other electronic device capable of displaying data or images, provided by SamCERA to Board of Retirement members and staff to communicate, download information from or upload information to in regards to SamCERA official business.

### **Background:**

Board of Retirement agenda packet material is voluminous and is created and distributed electronically. In order to prepare for and participate fully in Board meetings, Board and staff members must use portable electronic devices to retrieve, store, edit and have the materials available at the meetings. Upon request, Board members and certain staff members will be provided with SamCERA electronic devices.

While their use is necessary, portable electronic devices are a security risk because they may contain private, confidential or sensitive SamCERA member information, and being portable, are at risk for loss, theft, or other unauthorized access. Portable electronic devices may be more vulnerable to viruses and other such threats because the user may not regularly use virus protection software and other safeguards available to SamCERA's desktop computers.

### **Policy:**

1. Board members and staff understand that their authorization to use SamCERA portable electronic devices, associated SamCERA equipment and software is limited to and for the sole purpose of conducting SamCERA business. Board members and staff further understand that they have no expectation of privacy with regard to their use of such devices.
2. SamCERA portable electronic devices are not solely assigned to individual Board Members and staff but are resources to be used on an as needed basis and will be rotated amongst Board Members and staff in accordance with SamCERA's business needs. SamCERA is entitled to and will require such devices to be returned to SamCERA for routine maintenance and to ensure that they are being used only in a manner that is consistent with these policies.
3. SamCERA portable electronic devices are not for the personal use of the Board member or staff employee or any other person or entity. Board members and staff will not permit anyone else including, but not limited to, the Board member or staff's family and/or associates, to use this SamCERA property.
4. Board members and staff may not download or install any application or software onto any SamCERA portable electronic devices without prior authorization by Chief Executive Officer or Chief Technology Officer.




5. Board members and staff who have an assigned portable electronic device are responsible for the security of the device, all associated equipment and all data. Board members and staff must report any lost or stolen portable electronic equipment or data to the Chief Executive Officer or Chief Technology Officer as soon as discovered.
  
6. Portable electronic devices may remotely access the SamCERA network only through remote access systems maintained by SamCERA.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

February 28, 2017

Agenda Item 4.12

**TO:** Board of Retirement  
**FROM:** Scott Hood, Chief Executive Officer   
**SUBJECT:** SamCERA's Securities Litigation Policy

**Staff Recommendation**

Reaffirm SamCERA's Securities Litigation Policy.

**Background**

SamCERA's custodial bank is responsible for filing claims in routine asset recovery matters such as class actions. In January of 2011, the Board adopted its Security Litigation Policy, to address actions in which SamCERA may decide to act as lead plaintiff. To that end, SamCERA retained three firms to monitor the investment portfolio and make recommendations regarding when SamCERA should pursue lead or named plaintiff status in securities litigation.

SamCERA's custodial bank is not responsible for filing claims in certain asset recovery matters such as, but not limited to, class action type claims filed in courts not located in the United States or claims filed in bankruptcy matters. Due to timing issues and the routine nature of these claims, the Securities Litigation Policy was amended in 2012 to authorize the Chief Executive Officer, in consultation with the Chief Legal Counsel, to have the authority to file such a claim or action without seeking Board approval or ratification.

**Discussion**

The Policy requires that: (1) the retained firms only recommend active participation to SamCERA when they believe that without such participation SamCERA's rights and interests will not be represented in a case; (2) any estimated likely recovery amount far outweigh any estimated participation costs (mainly staff time) so as to eliminate any likelihood of a net loss due to actively participating; and (3) only decisions by the CEO to actively participate will be reported to the Board. Cases that are not considered worthy of pursuing will not be reported.

To date, staff has only requested that the Board authorize a lead plaintiff status in one matter. As for non-U.S. cases, SamCERA has participated in several such matters. Staff has no recommended revisions to the policy.

**Attachment**

Securities Litigation Policy



***SamCERA***  
***Securities Litigation Policy***  
***Adopted by the Board of Retirement***  
***January 25, 2011***  
***Amended September 25, 2012***

**PURPOSE**

In order to protect the assets of the fund, the Board of Retirement adopts this policy to establish procedures and guidelines for SamCERA's active participation (as a lead or named plaintiff) in securities class actions. Such participation will be in addition to, or in lieu of, SamCERA's participation as a passive member in such actions.

**STATEMENT OF FUNCTIONS AND RESPONSIBILITIES**

1. *Review of Class Action Filings*

The Board of Retirement shall select and retain one or more private law firms to identify and evaluate potential securities class action filings in which SamCERA would be a member of the class. Firms will only recommend active participation to SamCERA when they believe that without such participation SamCERA's rights and interests will not be represented in a case.

2. *Determination of Active Participation By SamCERA*

If SamCERA is asked to actively participate in a case, the Chief Executive Officer, after considering the factors listed below, and in consultation with the Chief Legal Counsel, shall make an initial determination of whether SamCERA will take an active role in a securities class action, or decline to do so.

The following factors will be considered:

- a.) the likelihood of achieving a recovery
- b.) the probable net amount of recovery (the probable amount of recovery less the estimated costs of staff and Chief Legal Counsel time and any other costs)\*
- c.) the impact on the amount of recovery that would likely result from *SamCERA* participation as lead or named plaintiff
- d.) whether SamCERA's rights and/or interests may in fact be preserved by active participation
- e.) staff's and Chief Legal Counsel's potential workload
- f.) any other relevant factors

\* Any estimated likely recovery amount must far outweigh any estimated participation costs (mainly staff and Chief Legal Counsel time) so as to eliminate any likelihood of a net loss due to active participation.

For only those matters in which the Chief Executive Officer and Chief Legal Counsel will recommend to the Board that SamCERA should play an active role, a written report shall be presented to the Board. The report shall reflect the Chief Executive Officer's recommendation based upon the factors listed above. The report shall be placed on the Consent Agenda under Anticipated Litigation for the Board's approval. Any Board member has the authority to remove the report item for discussion and determination in closed session.

### *3. Asset Recovery*

This policy shall not relieve SamCERA's custodial bank from its responsibility for filing all proofs of claim, including the necessary supporting documents and information, necessary to recover assets in every securities class action proceeding in which SamCERA has potentially suffered losses. If SamCERA's custodial bank is not responsible for filing claims in certain routine asset recovery matters such as, but not limited to, class action type claims filed in courts not located in the United States or claims filed in bankruptcy matters, and the Chief Executive Officer, in consultation with the Chief Legal Counsel, determines that it is in the best interest of SamCERA to file such a claim or action, the Chief Executive Officer is authorized to take all necessary steps to recover assets in these matters without seeking Board approval or ratification.

### *4. Reports to the Board on Active Litigation*

The Chief Legal Counsel shall provide the Board with status reports as needed to keep the Board apprised of major developments in cases in which SamCERA is an active participant. Staff will present to the Board an annual report on the time spent by staff, if any, on active litigation matters.

### *5. Retention of Outside Counsel*

For cases in which SamCERA becomes an active participant, all retainer agreements shall be negotiated and submitted for approval, in advance, to the Board of Retirement. However, where it is determined that immediate approval is required in order to preserve SamCERA's rights and/or interests by retaining such counsel, the Chief Executive Officer in consultation with the Chief Legal Counsel is authorized to make the decision, subject to ratification by the Board.

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

February 28, 2017

Agenda Item 6.1

**TO:** Board of Retirement



**FROM:** Michael Coultrip, Chief Investment Officer

**SUBJECT:** Report on Preliminary Monthly Portfolio Performance Report for the Period Ended January 31, 2017

**Staff Recommendation**

Accept the preliminary performance report dated January 31, 2017..

**Background**

This preliminary report is intended to provide a high-level view of the portfolio and its trends. It is not intended to provide short-term performance upon which the Board would act. As discussed previously, preliminary performance estimates are now included for AQR Risk Parity, AQR Delta, PanAgora Risk Parity, and Beach Point Select. The quarterly performance metrics are not yet available for our private equity, private real asset, and real estate portfolios. The performance for these portfolios will be reflected in the quarterly performance report generated by Verus.

The attached performance report shows both net and gross of fee returns for the total plan on page one, with net composite returns (pages 2-3) and net manager returns (pages 4-9) also shown.

**Discussion**

The fund's net preliminary return for January was 1.7%, while the preliminary trailing twelve-month return ending January 2017 was 13.4% net. The twelve-month return trails SamCERA's Total Plan Policy Benchmark return of 14.6% but is higher than the Actuarial Assumed Earnings Rate of 7.0%.

Most broad-based equity indices were positive on the month. The broad U.S. equity market (as measured by the S&P 500 Index) was up 1.9% on the month (and hit another record high in January), while developed international equity (as measured by MSCI EAFE) was up 2.9%. Emerging markets were also higher and returned 5.5%.

Economic data were mixed in January. Preliminary real GDP increased at an annual rate of 1.9 percent in the fourth quarter, less than the 3.5% growth in the third quarter. Manufacturing continued to show strength, while job growth was above expectations.

The general U.S. fixed income market was up 0.2% during the month, as interest rates were effectively unchanged during the month (although there was plenty of interest rate movements during the month). The 10-year U.S. Treasury yield increased by 1 basis point during the month

with the yield ending at 2.45% by month-end. Credit spreads tightened again during the month, leading the high yield market higher by 1.5%, while emerging debt returned 1.4%.

**Attachment**

Verus January 2017 Capital Markets Update

Northern Trust January 2017 Performance Report





**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

JANUARY 2017  
Capital Markets Update



# Market commentary

## ECONOMIC CLIMATE

- Real GDP grew at a 1.9% annualized rate in the fourth quarter (1.9% year-over-year). The lower real GDP growth rate relative to the third quarter (3.5% annualized) was partially attributed to a downturn in exports and an acceleration in imports.
- The U.S. dollar changed course in January after three months of consecutive gains and fell 2.7% against a trade weighted basket of major currencies.
- Headline CPI increased by 2.1% year-over-year in December, up 40 bps from the prior month. Core CPI increased by 2.2% over the previous year, up 8 bps from the prior month.
- The University of Michigan's consumer sentiment index increased modestly from 98.2 to 98.5 in January. Respondents cited optimistic outlooks on the economy and job growth.
- Nonfarm payrolls added 227,000 jobs in January, above the consensus estimate of 175,000. The unemployment rate rose from 4.7% to 4.8%, partially influenced by an increase in the participation rate from 62.7% to 62.9%.

## DOMESTIC EQUITIES

- On January 26<sup>th</sup> the Dow Jones Industrial Average (DJIA) and S&P 500 indices reached all-time highs. The DJIA and S&P 500 returned 0.6% and 1.9% in the month, respectively.
- According to FactSet, 71% of S&P 500 companies had reported Q4 earnings as of February 10<sup>th</sup>, and the blended year-over-year earnings growth rate was 5.0%. The index benefited from higher than expected growth rates in 8 of 11 sectors.

## DOMESTIC FIXED INCOME

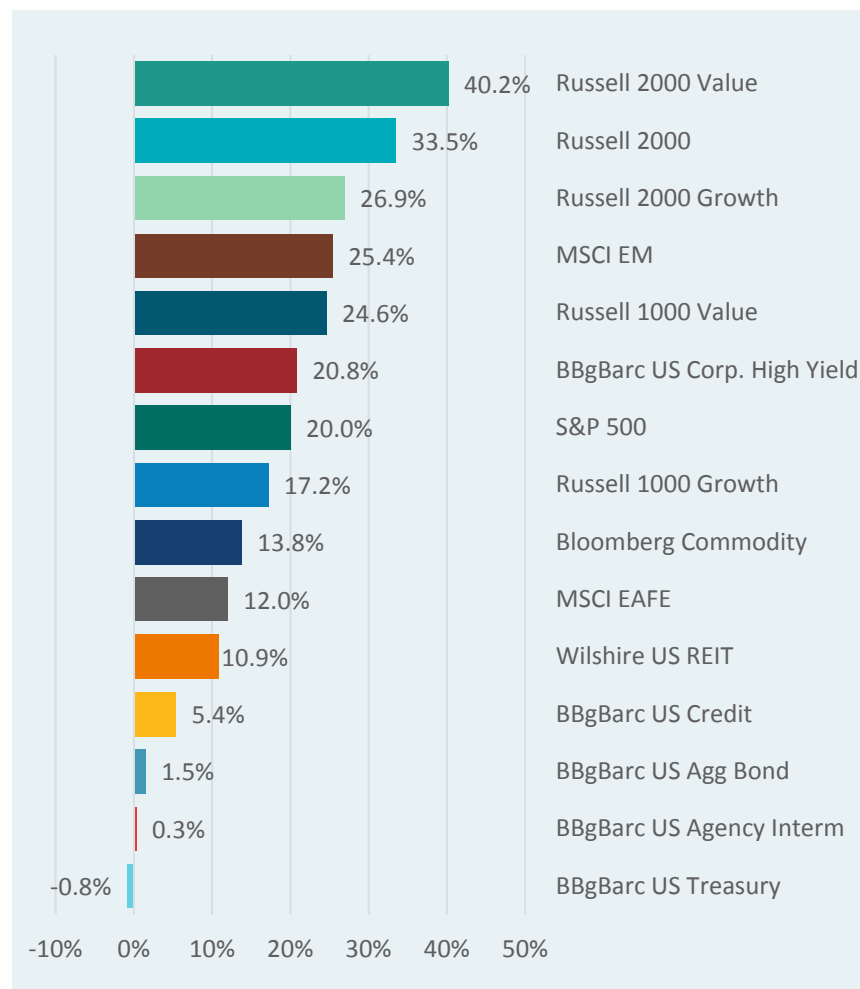
- Domestic fixed income returns were positive, as the Bloomberg Barclays U.S. Aggregate returned 0.2% in January.
- U.S. interest rates held steady, as the 10-year Treasury yield remained at 2.45%.
- U.S. high yield option-adjusted spreads continued a year long downward trend, as they decreased by 22 bps and ended the month at 4.0%.

## INTERNATIONAL MARKETS

- International equities outperformed domestic markets in January (S&P 500, 1.9%), as the MSCI ACWI ex US returned 3.5%.
- On January 23<sup>rd</sup>, U.S. President Trump signed an executive order to withdraw the country from the Trans-Pacific Partnership (TPP), a proposed 12-nation trade agreement.
- International inflation picked up in December. U.K. headline CPI rose 1.6% year-over-year, up from 1.2% in November. Inflation also rose in the Eurozone in December, as headline CPI rose 1.1% year-over-year, up from 0.6% in the prior month.
- On January 31<sup>st</sup>, the Bank of Japan agreed to maintain the current 10-year government bond yield target of 0.0% and asset purchase program of approximately 80 trillion yen annually.
- China's GDP grew at 6.8% annualized in the fourth quarter (6.7% year-over-year), above the consensus estimate of 6.7%. Growth was influenced by increased government spending, financial sector lending and consumer spending.

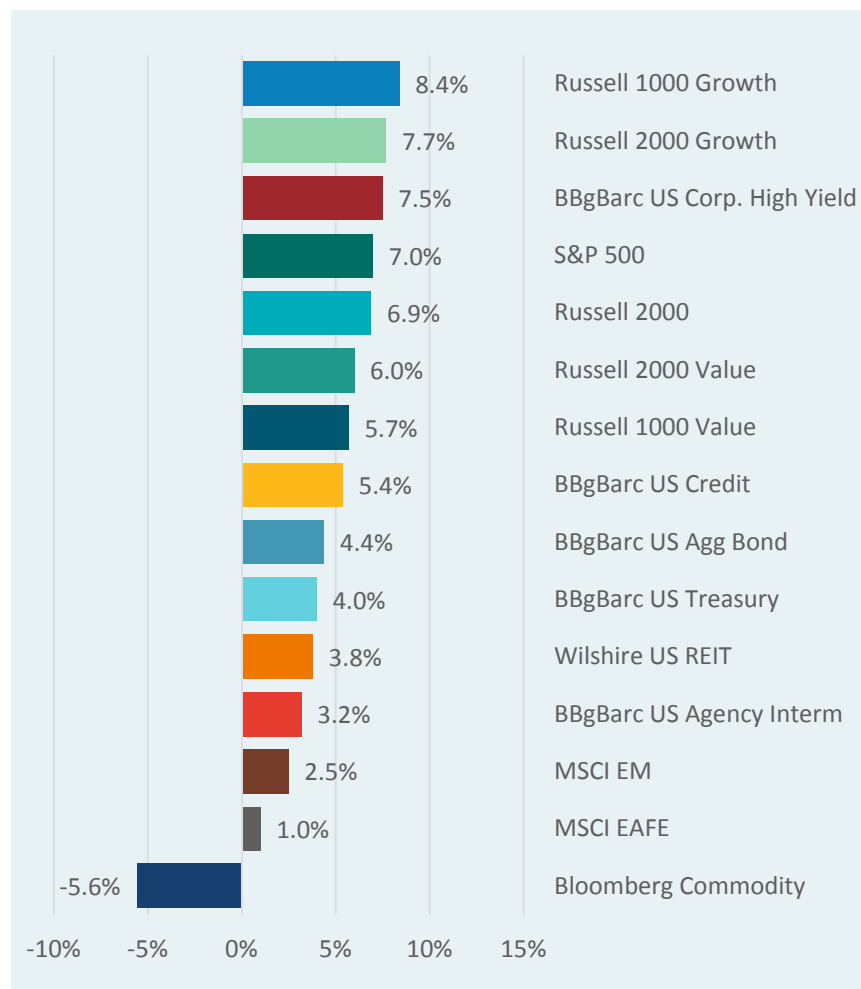
# Major asset class returns

ONE YEAR ENDING JANUARY



Source: Morningstar, as of 1/31/17

TEN YEARS ENDING JANUARY

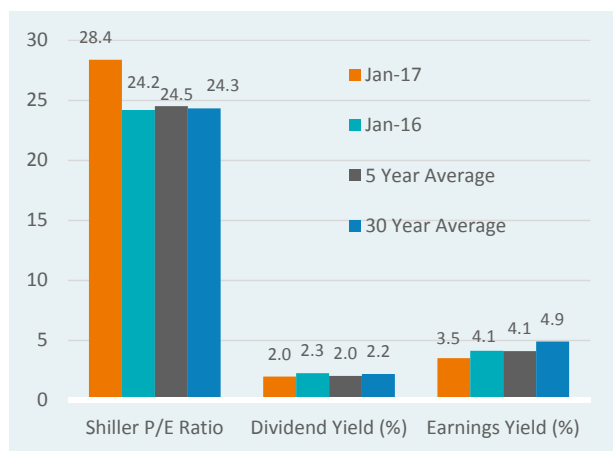


Source: Morningstar, as of 1/31/17

# U.S. large cap equities

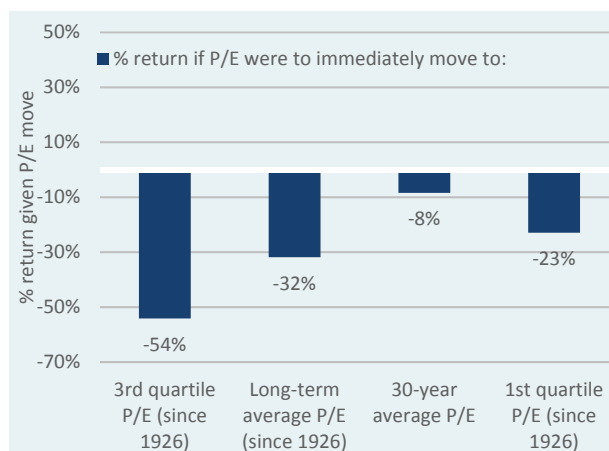
- The S&P 500 returned 1.9% in January and reached a new intra-day high on January 26<sup>th</sup> of 2,301.
- Realized volatility of U.S. equities remained low, as the annualized standard deviation of the S&P 500 in January was 6.5%, down from 8.0% in the prior month and well below the 10-year average of 15.3%.
- The 1-year trailing P/E ratio of the S&P 500 fell to 23.2 in January, due to an increase in earnings.
- The Materials sector outperformed the S&P 500 index (1.9%) in January, as the sub-index returned 4.6%. The trailing 1-year earnings for the sector was \$13.49 per share, up 59% from prior year.
- The two worst performing sectors in the S&P 500 were Energy and Telecom, returning -3.6% and -2.5%, respectively.

## US LARGE CAP (S&P 500) VALUATION SNAPSHOT



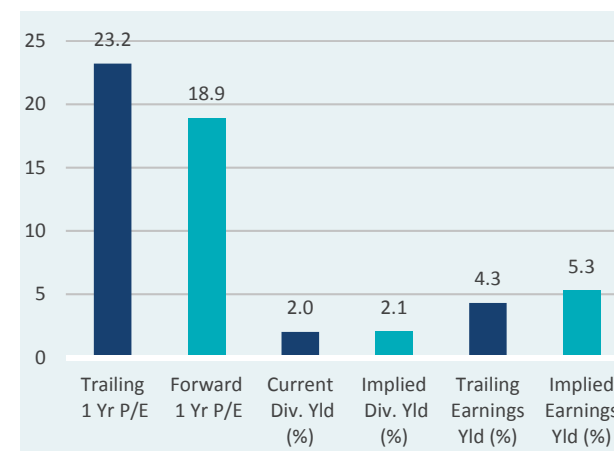
Source: Yale/Shiller, as of 1/31/17

## RETURNS IF P/E MOVED TO HISTORIC LEVEL



Source: Yale/Shiller, Verus, as of 1/31/17

## S&P 500 VALUATION SNAPSHOT

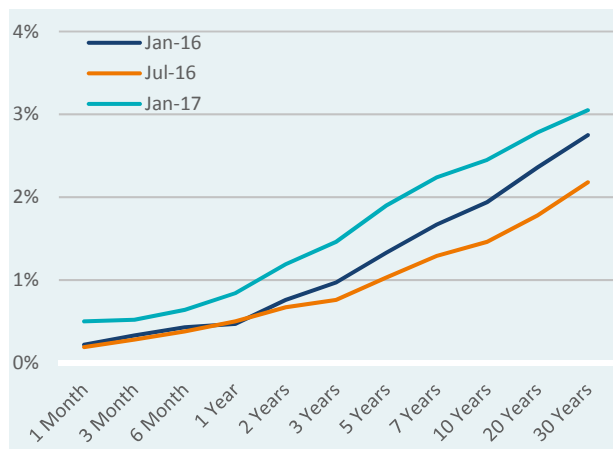


Source: Standard & Poor's, as of 1/31/17

# Fixed income

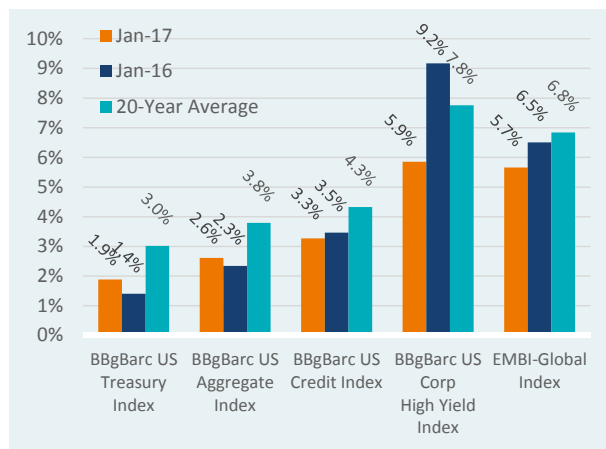
- U.S. interest rates were flat in January, as the 10-year Treasury yield remained unchanged at 2.45%. The short-term 1-month Treasury yield showed the largest increase among listed maturities of 6 bps and ended at the month at 0.50%.
- U.S. high yield option-adjusted spreads continued a downward trend, as they decreased by 22 bps and ended the month at 4.0%.
- Market-based implied inflation rose slightly during the month. The 10-year TIPS breakeven rate increased to 2.1% from 2.0% in the prior month. Despite the recent rise in breakeven rates, the market is pricing in no further increases in inflation over the next 10 years.

## U.S. TREASURY YIELD CURVE



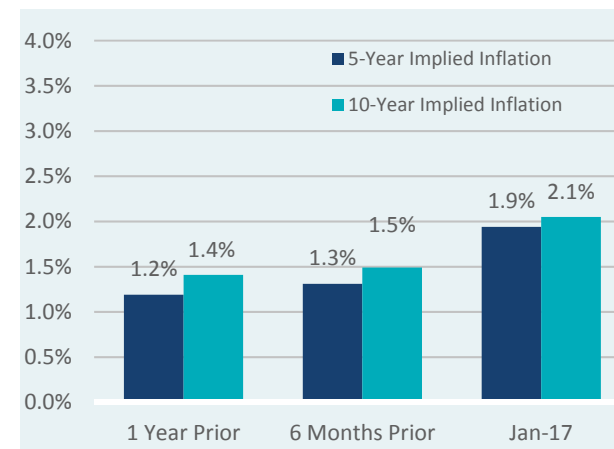
Source: Federal Reserve, as of 1/31/17

## NOMINAL FIXED INCOME YIELDS



Source: Morningstar, as of 1/31/17

## IMPLIED INFLATION (TIPS BREAKEVEN)

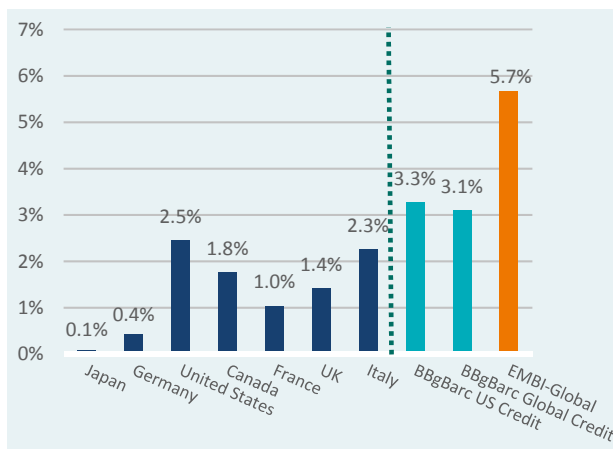


Source: Federal Reserve, as of 1/31/17

# Global markets

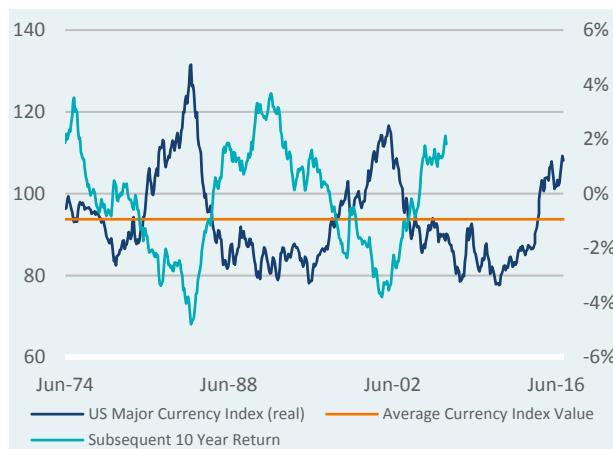
- Sovereign yields generally increased in the month of January. Notable increases were seen in the French and Italian sovereign 10-year bond yields, which increased by 35 and 45 bps, respectively.
- International inflation picked up in December. Headline CPI rose in the Eurozone by 1.6% year-over-year, up from 1.2% in November. U.K. inflation increased by 1.1% year-over-year, up from 0.6% in November.
- Emerging market equities outperformed developed international equities on an unhedged basis in January as the MSCI EM and MSCI EAFE indices returned 5.5% and 2.9%, respectively. This was partially influenced by the appreciation of emerging market currencies – the MSCI EM Currency index returned 2.1% during the month.

**GLOBAL SOVEREIGN 10 YEAR INDEX YIELDS**



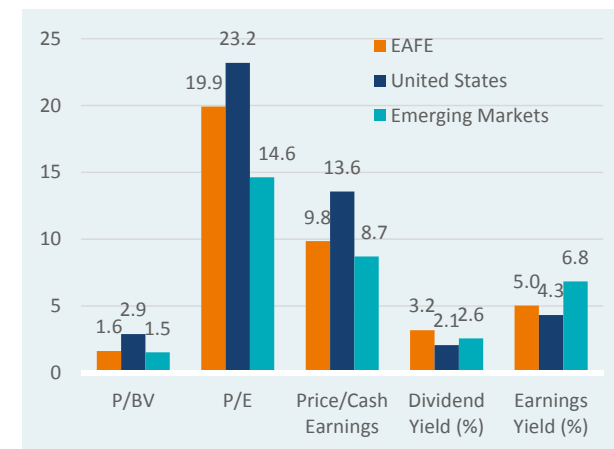
Source: Morningstar, as of 1/31/17

**U.S. DOLLAR MAJOR CURRENCY INDEX**



Source: Federal Reserve, as of 1/31/17

**MSCI VALUATION METRICS (3 MONTH AVERAGE)**



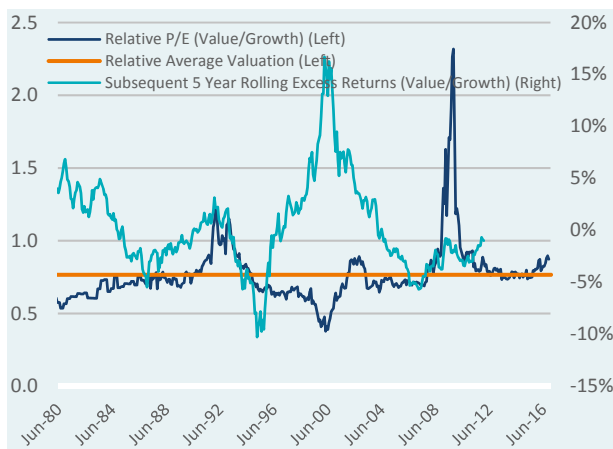
Source: MSCI, as of 1/31/17



# Style tilts: U.S. large value vs. growth

- Growth equities outperformed value equities for the first time since September 2016, as the Russell 1000 Growth index and Russell 1000 Value index returned 3.4% and 0.7%, respectively.
- Recently the relative P/E ratio of value to growth stocks has shown little deviation and ended the month down from 0.90 to 0.87. This metric remained slightly above its long-term average of 0.77.
- The outperformance of growth equities in January was attributable to the higher concentration of Technology and Consumer Discretionary companies in the Russell 1000 Growth relative to the Russell 1000 Value.

**RELATIVE PE RATIO OF U.S. VALUE VS. GROWTH**



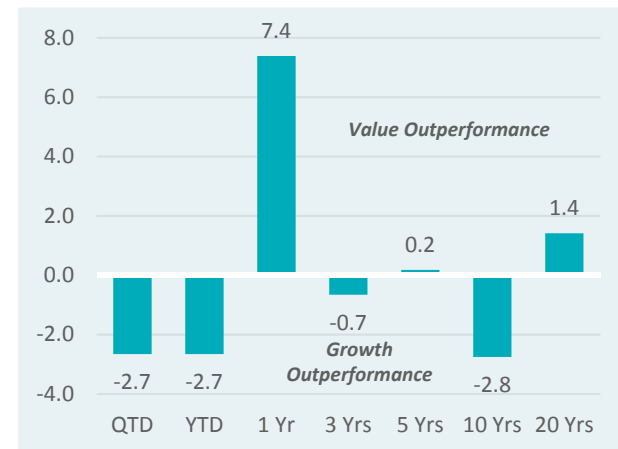
Source: Russell, Bloomberg, as of 1/31/17

**U.S. VALUE VS. GROWTH ABSOLUTE PERFORMANCE**

	RUSSELL 1000 GROWTH	RUSSELL 1000 VALUE
	<b>ANNUALIZED RETURN TO DATE %</b>	<b>ANNUALIZED RETURN TO DATE %</b>
QTD	3.4	0.7
YTD	3.4	0.7
1 YEAR	17.2	24.6
3 YEARS	10.8	10.2
5 YEARS	13.9	14.1
10 YEARS	8.4	5.7
20 YEARS	6.7	8.1
	<b>SHARPE RATIO</b>	<b>SHARPE RATIO</b>
3 YEARS	0.96	0.95
5 YEARS	1.26	1.30
10 YEARS	0.56	0.38
20 YEARS	0.34	0.45

Source: Morningstar, as of 1/31/17

**U.S. VALUE VS. GROWTH RELATIVE PERFORMANCE**

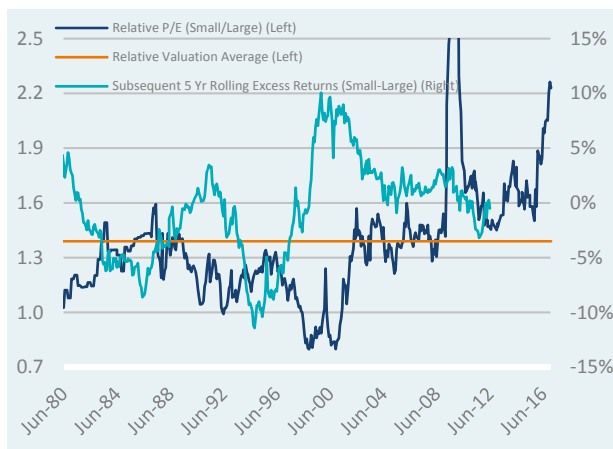


Source: Morningstar, as of 1/31/17

# Style tilts: U.S. large vs. small

- U.S. large cap equities outperformed small cap equities in January, as the Russell 1000 index and Russell 2000 index returned 2.0% and 0.4%, respectively.
- As a product of the ongoing domestic equity bull market, the trailing P/E ratio of small cap equities (48.0) extended well above its 20-year average of 31.7. The P/E of large cap equities (21.5) was also above its 20-year average of 20.9.
- As measured by the Sharpe ratio, large cap stocks provided superior risk adjusted returns over all the time periods examined below.
- The relative P/E ratio of small to large cap equities was 2.23, well above the long term average of 1.39.

**RELATIVE PE RATIO OF U.S. SMALL VS. LARGE**



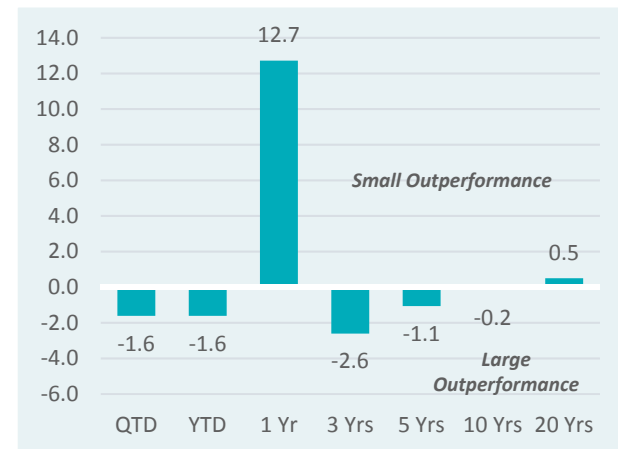
Source: Russell, Bloomberg, as of 1/31/17

**U.S. LARGE VS. SMALL ABSOLUTE PERFORMANCE**

	RUSSELL 1000 INDEX	RUSSELL 2000 INDEX
	ANNUALIZED RETURN TO DATE %	ANNUALIZED RETURN TO DATE %
QTD	2.0	0.4
YTD	2.0	0.4
1 YEAR	20.8	33.5
3 YEARS	10.5	7.9
5 YEARS	14.1	13.0
10 YEARS	7.1	6.9
20 YEARS	7.7	8.2
	SHARPE RATIO	SHARPE RATIO
3 YEARS	0.98	0.55
5 YEARS	1.32	0.92
10 YEARS	0.48	0.40
20 YEARS	0.42	0.38

Source: Morningstar, as of 1/31/17

**U.S. SMALL VS. LARGE RELATIVE PERFORMANCE**



Source: Morningstar, as of 1/31/17

# Commodities

- The Industrial Metals and Softs Bloomberg sub-indices outperformed in January, returning 7.5% and 6.5%, respectively. The overall Bloomberg Commodity Index returned 0.1%.
- The Bloomberg Energy sub-index returned -7.6% in January, underperforming the rest of the index. The fall in natural gas prices was the largest detractor.

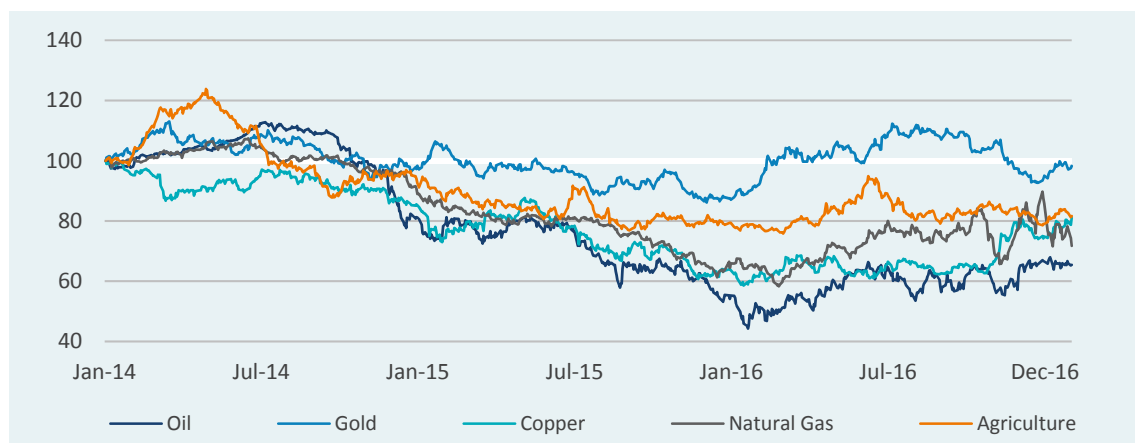
- WTI crude oil fell by -1.7% and ended the month at \$52.81 per barrel. Spot prices remained within a narrow \$4.00 band in January.
- Gold Bullion increased for the first time in three months, as it rose 3.4% in January and ended the month at \$1,199 per ounce.

## INDEX AND SECTOR PERFORMANCE

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	0.1	0.1	13.8	(11.3)	(9.4)	(5.6)
Bloomberg Agriculture	3.3	3.3	6.4	(6.7)	(6.2)	(0.8)
Bloomberg Energy	(7.6)	(7.6)	15.9	(27.2)	(17.0)	(16.3)
Bloomberg Grains	2.3	2.3	(6.2)	(10.7)	(7.1)	(2.4)
Bloomberg Industrial Metals	7.5	7.5	30.7	(2.6)	(7.2)	(5.2)
Bloomberg Livestock	(1.3)	(1.3)	(8.1)	(6.8)	(5.2)	(7.7)
Bloomberg Petroleum	(4.6)	(4.6)	23.6	(26.6)	(16.9)	(9.2)
Bloomberg Precious Metals	6.3	6.3	11.1	(1.9)	(8.9)	4.8
Bloomberg Softs	6.5	6.5	33.3	(1.2)	(8.7)	(0.8)

Source: Morningstar, as of 1/31/17

## COMMODITY PERFORMANCE



Source: Bloomberg, as of 1/31/17

# Appendix

# Periodic table of returns

BEST

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	YTD	5-Year	10-Year
Emerging Markets Equity	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	5.5	14.1	8.4
Large Cap Growth	8.1	37.8	23.1	32.9	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	3.4	14.1	7.7
International Equity	6.4	37.2	22.4	31.8	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	2.9	13.9	7.1
60/40 Global Portfolio	4.4	31.0	21.6	30.5	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	2.1	13.4	6.9
Large Cap Equity	3.2	28.5	21.4	22.4	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	2.0	13.0	6.9
Small Cap Growth	2.6	25.7	16.5	16.2	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	1.6	12.5	6.0
Large Cap Value	0.4	19.6	14.4	13.9	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	0.7	10.9	5.7
Hedge Funds of Funds	-1.5	18.5	11.3	12.9	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	0.7	6.0	4.4
Small Cap Equity	-1.8	15.2	10.3	10.6	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	0.4	5.3	4.0
US Bonds	-2.0	11.6	9.9	9.7	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	0.2	3.2	2.5
Commodities	-2.4	11.1	6.4	5.2	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	0.1	2.1	1.3
Cash	-2.9	7.5	6.0	2.1	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	0.0	0.2	1.0
Small Cap Value	-3.5	5.7	5.1	-3.4	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	-0.7	0.1	0.6
Real Estate	-7.3	-5.2	3.6	-11.6	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	N/A	-9.4	-5.6

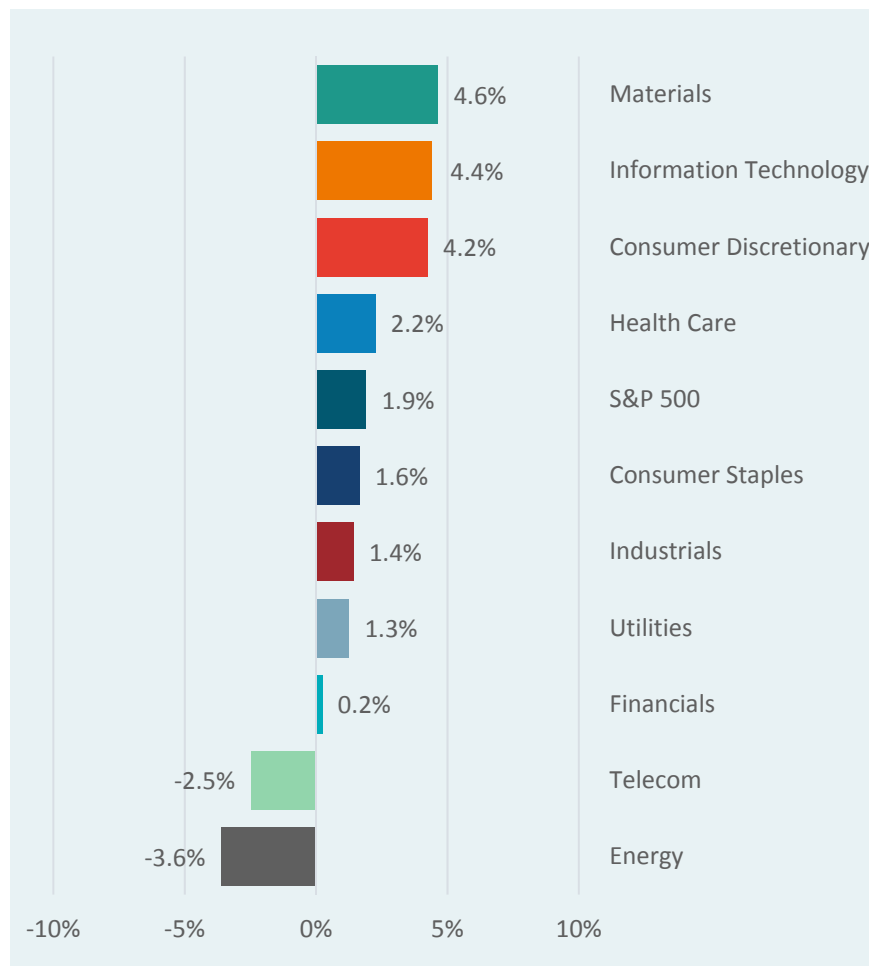
WORST

- Large Cap Equity
- Small Cap Growth
- Commodities
- Large Cap Value
- International Equity
- Real Estate
- Small Cap Value
- Emerging Markets Equity
- US Bonds
- Hedge Funds of Funds
- 60% MSCI ACWI/40% BBgBarc Global Bond
- Cash

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 12/31/16.

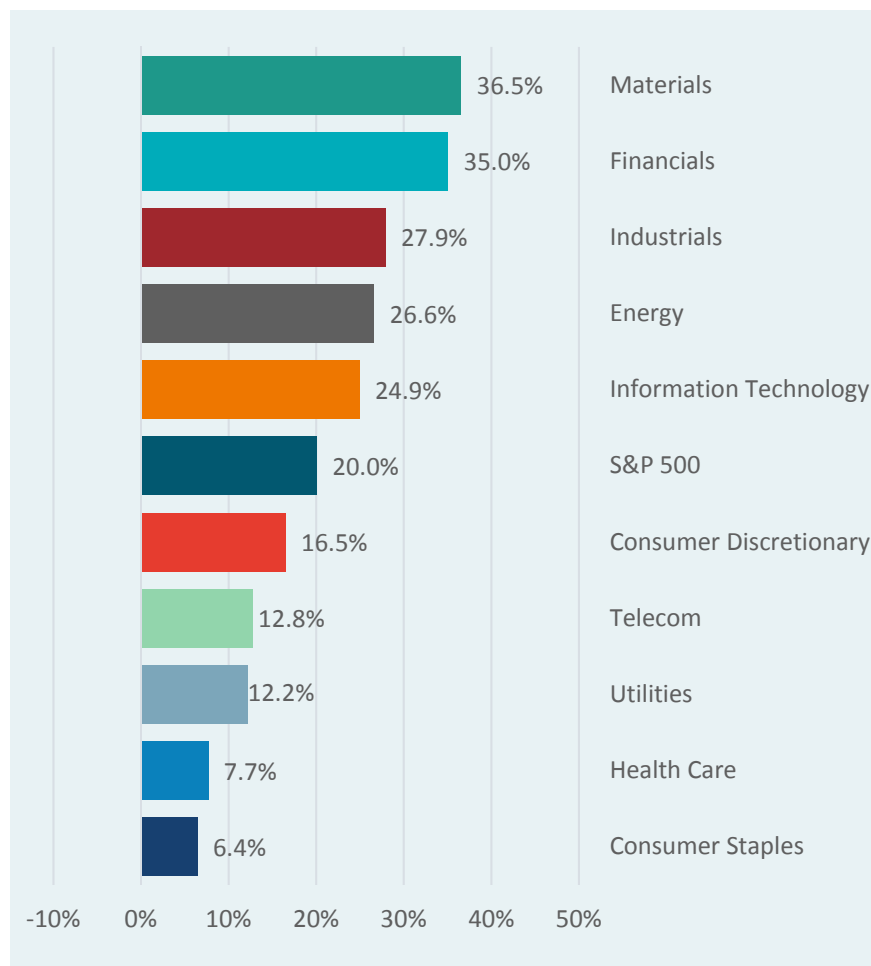
# S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 1/31/17

ONE YEAR ENDING DECEMBER



Source: Morningstar, as of 1/31/17



# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	1.9	1.9	1.9	20.0	10.8	14.1	7.0
S&P 500 Equal Weighted	2.1	2.1	2.1	24.2	10.6	14.8	8.4
DJ Industrial Average	0.6	0.6	0.6	23.9	10.9	12.3	7.4
Russell Top 200	1.8	1.8	1.8	19.2	10.9	14.1	6.8
Russell 1000	2.0	2.0	2.0	20.8	10.5	14.1	7.1
Russell 2000	0.4	0.4	0.4	33.5	7.9	13.0	6.9
Russell 3000	1.9	1.9	1.9	21.7	10.3	14.0	7.1
Russell Mid Cap	2.4	2.4	2.4	24.7	9.5	13.9	7.8
<b>Style Index</b>							
Russell 1000 Growth	3.4	3.4	3.4	17.2	10.8	13.9	8.4
Russell 1000 Value	0.7	0.7	0.7	24.6	10.2	14.1	5.7
Russell 2000 Growth	1.6	1.6	1.6	26.9	6.2	12.5	7.7
Russell 2000 Value	(0.7)	(0.7)	(0.7)	40.2	9.5	13.4	6.0

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	2.7	2.7	2.7	17.9	5.5	8.7	3.7
MSCI ACWI ex US	3.5	3.5	3.5	16.1	0.9	4.4	1.3
MSCI EAFE	2.9	2.9	2.9	12.0	0.7	6.0	1.0
MSCI EM	5.5	5.5	5.5	25.4	1.4	0.2	2.5
MSCI EAFE Small Cap	3.5	3.5	3.5	14.8	3.8	9.6	3.1
<b>Style Index</b>							
MSCI EAFE Growth	3.4	3.4	3.4	7.0	1.4	6.2	1.9
MSCI EAFE Value	2.5	2.5	2.5	17.1	(0.1)	5.7	(0.0)
<b>Regional Index</b>							
MSCI UK	1.3	1.3	1.3	7.7	(2.6)	3.5	0.5
MSCI Japan	3.7	3.7	3.7	15.7	5.1	8.0	0.8
MSCI Euro	1.2	1.2	1.2	9.9	(1.4)	6.1	(0.6)
MSCI EM Asia	5.9	5.9	5.9	21.2	3.7	3.4	4.2
MSCI EM Latin American	7.6	7.6	7.6	47.8	(2.0)	(6.5)	0.8

Source: Morningstar, as of 1/31/17

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US Treasury USTIPS	0.8	0.8	0.8	4.0	1.9	0.6	4.4
BBgBarc US Treasury Bills	0.1	0.1	0.1	0.4	0.2	0.2	0.8
BBgBarc US Agg Bond	0.2	0.2	0.2	1.5	2.6	2.1	4.4
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	0.1	0.1	0.1	0.4	0.7	0.6	2.1
BBgBarc US Treasury Long	0.4	0.4	0.4	(3.1)	6.0	2.6	6.8
BBgBarc US Treasury	0.2	0.2	0.2	(0.8)	1.9	1.2	4.0
<b>Issuer</b>							
BBgBarc US MBS	(0.0)	(0.0)	(0.0)	0.3	2.5	2.0	4.3
BBgBarc US Corp. High Yield	1.5	1.5	1.5	20.8	4.9	7.0	7.5
BBgBarc US Agency Interm	0.3	0.3	0.3	0.3	1.4	1.1	3.2
BBgBarc US Credit	0.3	0.3	0.3	5.4	3.6	3.5	5.4

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	0.1	0.1	0.1	13.8	(11.3)	(9.4)	(5.6)
Wilshire US REIT	(0.7)	(0.7)	(0.7)	10.9	12.1	10.5	3.8
<b>Regional Index</b>							
JPM EMBI Global Div	1.4	1.4	1.4	11.9	6.9	5.9	7.1
JPM GBI-EM Global Div	2.3	2.3	2.3	12.0	(1.8)	(2.3)	4.1
<b>Hedge Funds</b>							
HFRI Composite	1.2	1.2	1.2	9.6	3.0	4.2	3.4
HFRI FOF Composite	0.7	0.7	0.7	4.0	1.6	3.2	1.3
<b>Currency (Spot)</b>							
Euro	2.5	2.5	2.5	(0.1)	(7.1)	(3.8)	(1.8)
Pound	1.8	1.8	1.8	(11.3)	(8.5)	(4.4)	(4.3)
Yen	3.6	3.6	3.6	7.5	(3.2)	(7.5)	0.7

# Notices & disclosures

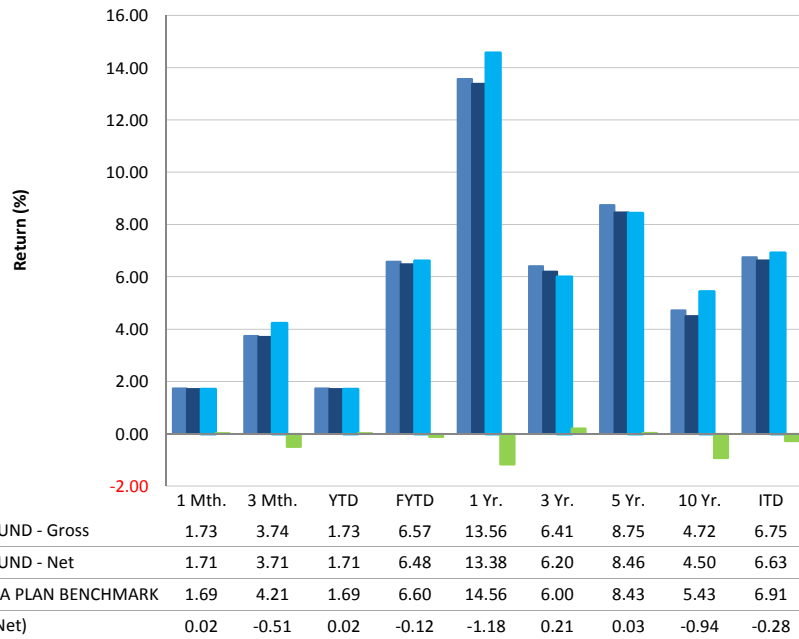
***Past performance is no guarantee of future results.** This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus Advisory Inc. and Verus Investors, LLC (“Verus”) file a single form ADV under the United States Investment Advisors Act of 1940, as amended. Additional information about Verus Advisory, Inc. and Verus Investors, LLC is available on the SEC’s website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov).*

# San Mateo County Total Fund Characteristics

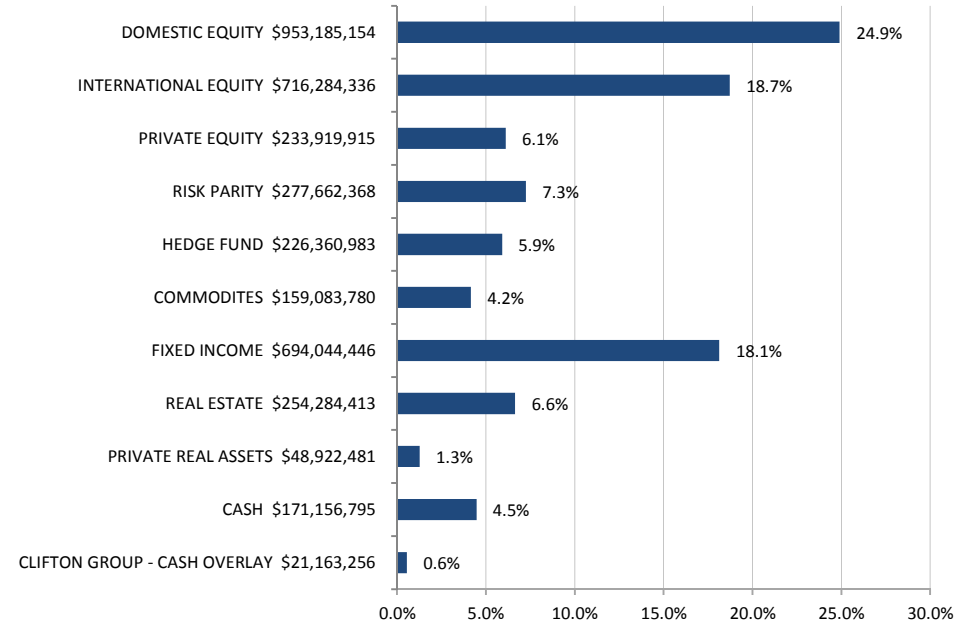


January 31, 2017

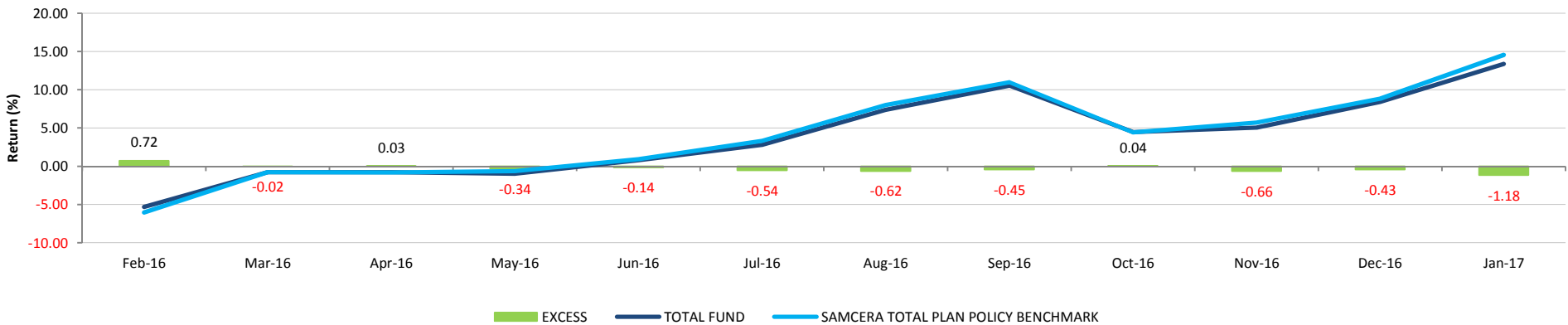
### Total Fund Performance



### Asset Allocation



### Rolling Month End Annual Returns

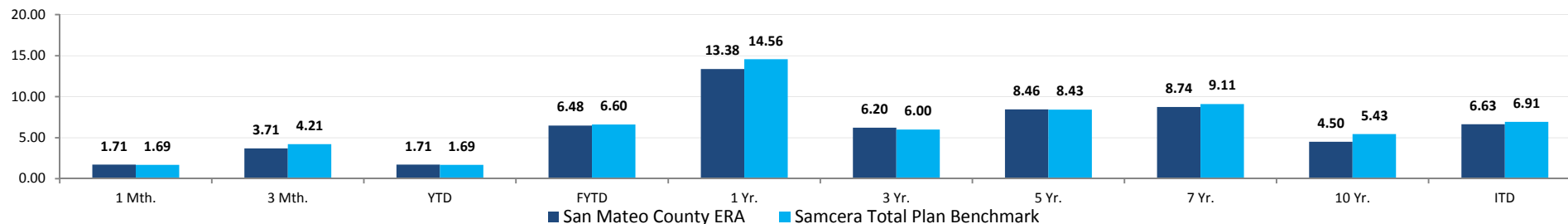


# San Mateo County Composite Return Summary



January 31, 2017

Return Comparison



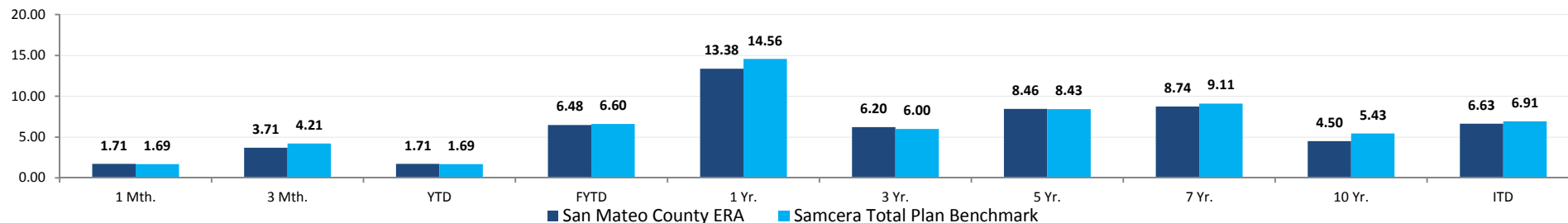
Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
San Mateo County ERA	3,827,216,901	1.71	3.71	1.71	6.48	13.38	6.20	8.46	8.74	4.50	6.63
Samcera Total Plan Benchmark		1.69	4.21	1.69	6.60	14.56	6.00	8.43	9.11	5.43	6.91
Excess		0.02	-0.51	0.02	-0.12	-1.18	0.21	0.03	-0.37	-0.94	-0.28
San Mateo Ex-Clifton Overlay	3,806,053,646	1.69	3.71	1.69	6.65	13.37	6.06	8.41	8.70	4.39	6.56
Samcera Total Plan Benchmark		1.69	4.21	1.69	6.60	14.56	6.00	8.43	9.11	5.43	6.91
Excess		-0.00	-0.50	-0.00	0.05	-1.19	0.06	-0.01	-0.41	-1.05	-0.36
Total Equity	1,669,469,490	3.37	6.54	3.37	9.65	18.63	6.58	10.42	10.11	3.98	7.47
Samcera Total Equity Benchmark		2.26	8.23	2.26	11.30	21.69	8.31	11.58	11.29	5.65	8.09
Excess		1.11	-1.69	1.11	-1.65	-3.05	-1.73	-1.16	-1.19	-1.67	-0.62
Total Fixed Income	694,044,446	1.07	1.17	1.07	3.93	9.11	4.02	4.58	5.55	5.25	5.66
Samcera Fixed Income Benchmark		0.54	-1.27	0.54	-0.57	5.07	2.86	2.22	3.72	4.57	5.11
Excess		0.53	2.44	0.53	4.50	4.04	1.16	2.35	1.83	0.67	0.55
Total Risk Parity	277,662,368	0.84	0.06	0.84	-0.87	11.63	5.67	4.97	--	--	5.61
Samcera Risk Parity Benchmark		1.53	4.56	1.53	5.78	13.67	7.42	9.30	--	--	8.48
Excess		-0.69	-4.50	-0.69	-6.65	-2.04	-1.75	-4.33	--	--	-2.87

# San Mateo County Composite Return Summary



January 31, 2017

Return Comparison



Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Hedge Fund Composite	226,360,983	0.17	1.07	0.17	4.06	1.17	7.41	6.12	--	--	5.19
Samcera LIBOR + 4%		0.39	1.14	0.39	2.63	4.51	4.29	4.26	--	--	4.26
Excess		-0.22	-0.07	-0.22	1.43	-3.34	3.11	1.86	--	--	0.93
Total Private Real Assets	48,922,481	0.38	3.15	0.38	26.71	--	--	--	--	--	45.43
SamCera Custom Real Asset Inde		2.42	4.92	2.42	--	--	--	--	--	--	--
Excess		-2.04	-1.77	-2.04	--	--	--	--	--	--	--
Total Real Estate	254,284,413	0.05	2.02	0.05	3.77	--	--	--	--	--	8.73
Samcera NCREIF ODCE EW (gross)		0.00	2.16	0.00	4.39	--	--	--	--	--	6.66
Excess		0.05	-0.14	0.05	-0.62	--	--	--	--	--	2.07
Total Cash	171,156,795	-0.25	-0.13	-0.25	0.53	0.69	0.47	0.54	0.64	0.80	2.04
Samcera Cash Benchmark		0.04	0.10	0.04	0.23	0.37	0.15	0.13	0.12	0.76	1.88
Excess		-0.29	-0.23	-0.29	0.30	0.32	0.32	0.41	0.52	0.04	0.16

# San Mateo County Manager Return Summary



January 31, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Equity	1,669,469,490	3.37	6.54	3.37	9.65	18.63	6.58	10.42	10.11	3.98	7.47
Samcera Total Equity Benchmark		2.26	8.23	2.26	11.30	21.69	8.31	11.58	11.29	5.65	8.09
Excess		1.11	-1.69	1.11	-1.65	-3.05	-1.73	-1.16	-1.19	-1.67	-0.62
Total Domestic Equity	953,185,154	3.11	9.20	3.11	11.87	21.79	9.49	13.26	13.17	5.75	8.34
Samcera Dom. Equity Benchmark		1.88	8.52	1.88	11.12	22.22	9.80	13.74	13.78	7.04	8.69
Excess		1.22	0.68	1.22	0.74	-0.43	-0.31	-0.48	-0.61	-1.29	-0.35
Total Large Cap Equity	828,280,991	3.60	8.63	3.60	11.50	21.39	10.71	13.98	13.26	6.11	9.09
Russell 1000		2.01	8.02	2.01	10.19	20.81	10.50	14.06	13.82	7.09	9.42
Excess		1.59	0.60	1.59	1.31	0.59	0.21	-0.08	-0.56	-0.98	-0.33
Barrow Hanley	145,508	4.52	14.50	4.52	19.75	27.87	10.84	15.03	13.88	--	14.48
Russell 1000 Value		0.71	9.13	0.71	11.18	24.62	10.16	14.11	13.29	--	13.89
Excess		3.80	5.38	3.80	8.58	3.25	0.68	0.92	0.59	--	0.59
Blackrock S&P 500 Index Fund	0	1.76	7.61	1.76	9.73	19.89	10.86	--	--	--	13.43
S&P 500		1.90	7.76	1.90	9.87	20.04	10.85	--	--	--	13.42
Excess		-0.14	-0.14	-0.14	-0.14	-0.15	0.01	--	--	--	0.01
Brown Advisory	27,193	11.17	7.77	11.17	9.87	16.34	8.05	--	--	--	10.84
Russell 1000 Growth		3.37	6.93	3.37	9.20	17.23	10.82	--	--	--	12.93
Excess		7.80	0.84	7.80	0.67	-0.89	-2.77	--	--	--	-2.08
Blackrock Russell 1000	695,679,973	--	--	--	--	--	--	--	--	--	--
Russell 1000		--	--	--	--	--	--	--	--	--	--
Excess		--	--	--	--	--	--	--	--	--	--
DE Shaw Commingled Fund	132,428,316	2.35	6.00	2.35	11.43	24.61	--	--	--	--	9.05
Russell 1000		2.01	8.02	2.01	10.19	20.81	--	--	--	--	7.10
Excess		0.33	-2.03	0.33	1.24	3.80	--	--	--	--	1.96
Total Small Cap Equity	124,904,163	0.46	15.56	0.46	14.85	24.98	4.54	10.77	12.99	4.31	6.38
Russell 2000		0.39	14.72	0.39	19.15	33.53	7.89	13.00	13.91	6.93	7.82
Excess		0.06	0.84	0.06	-4.29	-8.55	-3.35	-2.23	-0.92	-2.62	-1.44



# San Mateo County Manager Return Summary



January 31, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
QMA US Small Cap	124,904,163	0.46	15.56	0.46	--	--	--	--	--	--	13.55
Russell 2000		0.39	14.72	0.39	--	--	--	--	--	--	10.80
Excess		0.06	0.84	0.06	--	--	--	--	--	--	2.75
Total International Equity	716,284,336	3.67	2.46	3.67	6.21	13.79	1.79	5.13	4.12	0.49	5.11
MSCI ACW ex US-IMI		3.58	3.62	3.58	9.14	16.19	1.16	4.66	4.49	1.53	4.66
Excess		0.08	-1.16	0.08	-2.93	-2.40	0.63	0.47	-0.37	-1.04	0.45
Total Developed Markets Equity	637,657,645	3.47	2.51	3.47	6.01	12.67	1.98	5.64	4.52	0.93	3.87
MSCI ACW ex US-IMI		3.58	3.62	3.58	9.14	16.19	1.16	4.66	4.49	1.53	4.40
Excess		-0.11	-1.11	-0.11	-3.13	-3.52	0.81	0.98	0.02	-0.60	-0.52
Baillie Gifford	216,157,496	5.27	1.50	5.27	5.97	14.08	3.22	--	--	--	6.64
MSCI ACWI ex US Growth		4.03	1.57	4.03	4.13	11.42	2.05	--	--	--	4.53
Excess		1.24	-0.07	1.24	1.84	2.66	1.16	--	--	--	2.11
Blackrock EAFE Index Fund	135,403,835	2.90	4.32	2.90	8.84	12.47	0.99	--	--	--	-0.37
MSCI EAFE ND		2.90	4.30	2.90	8.74	12.03	0.71	--	--	--	-0.64
Excess		-0.00	0.02	-0.00	0.10	0.44	0.28	--	--	--	0.27
Mondrian Investment Partners	213,195,477	1.85	2.85	1.85	4.66	11.33	1.20	4.44	4.36	1.35	4.88
MSCI ACWI ex US Value		3.10	5.97	3.10	15.01	22.07	0.61	4.36	4.03	1.06	4.84
Excess		-1.26	-3.12	-1.26	-10.35	-10.74	0.59	0.08	0.33	0.29	0.04
FIAM Intl Small Cap	72,900,837	4.16	1.22	4.16	5.01	12.98	2.69	--	--	--	5.37
MSCI ACWI Small Cap ex US Net		3.83	2.89	3.83	8.10	16.85	2.70	--	--	--	5.90
Excess		0.33	-1.67	0.33	-3.09	-3.87	-0.01	--	--	--	-0.53

# San Mateo County Manager Return Summary



January 31, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Emerging Markets Equity	78,626,691	5.25	2.08	5.25	7.90	23.94	0.11	--	--	--	0.06
MSCI Emerging Markets ND		5.47	0.84	5.47	10.20	25.41	1.44	--	--	--	-0.31
Excess		-0.22	1.24	-0.22	-2.31	-1.46	-1.33	--	--	--	0.37
EV Parametric EM	78,626,691	5.25	2.08	5.25	7.90	23.94	--	--	--	--	3.84
MSCI Emerging Markets GD		5.48	0.92	5.48	10.43	25.88	--	--	--	--	3.10
Excess		-0.23	1.16	-0.23	-2.53	-1.93	--	--	--	--	0.74
Total Fixed Income	694,044,446	1.07	1.17	1.07	3.93	9.11	4.02	4.58	5.55	5.25	5.66
Samcera Fixed Income Benchmark		0.54	-1.27	0.54	-0.57	5.07	2.86	2.22	3.72	4.57	5.11
Excess		0.53	2.44	0.53	4.50	4.04	1.16	2.35	1.83	0.67	0.55
Total Domestic Fixed Income	587,556,706	1.26	0.82	1.26	3.40	9.06	4.20	4.48	5.60	5.31	5.79
Samcera US Fixed Inc Benchmark		0.49	-0.86	0.49	0.31	5.51	3.34	2.54	4.04	4.80	5.32
Excess		0.77	1.69	0.77	3.09	3.55	0.86	1.94	1.56	0.51	0.47
Total Core Fixed Income	423,572,635	0.58	-0.88	0.58	0.65	5.72	3.71	3.69	4.83	4.79	5.49
Bloomberg Barclays US Aggregate		0.20	-2.04	0.20	-2.34	1.45	2.59	2.09	3.43	4.37	5.08
Excess		0.38	1.16	0.38	2.99	4.27	1.12	1.59	1.40	0.42	0.41
FIAM Core Bond	244,808,682	0.45	-1.69	0.45	-1.04	4.05	3.21	2.96	4.36	4.88	4.85
Bloomberg Barclays US Aggregate		0.20	-2.04	0.20	-2.34	1.45	2.59	2.09	3.43	4.37	4.36
Excess		0.26	0.35	0.26	1.29	2.60	0.61	0.87	0.93	0.51	0.48
Western Total Return	108,777,660	1.01	1.12	1.01	4.84	9.82	--	--	--	--	4.03
Bloomberg Barclays US Aggregate		0.20	-2.04	0.20	-2.34	1.45	--	--	--	--	1.86
Excess		0.82	3.16	0.82	7.18	8.36	--	--	--	--	2.17
Blackrock Inter Gov	69,986,294	--	--	--	--	--	--	--	--	--	--
Bloomberg Barclays US Aggregate		--	--	--	--	--	--	--	--	--	--
Excess		--	--	--	--	--	--	--	--	--	--
Total Opportunistic Credit	163,984,071	2.89	4.83	2.89	9.91	16.87	6.27	9.58	10.52	--	9.94
BB Barc BA Intermediate HY Ind		0.89	1.40	0.89	5.62	13.80	5.19	6.46	7.65	--	7.95
Excess		2.00	3.43	2.00	4.28	3.07	1.08	3.11	2.88	--	2.00

# San Mateo County Manager Return Summary



January 31, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
AG Opportunistic Whole Loan	17,572,463	0.00	6.19	0.00	6.57	5.52	--	--	--	--	2.09
BB Barc BA Intermediate HY Ind		0.89	1.40	0.89	5.62	13.80	--	--	--	--	4.57
Excess		-0.89	4.80	-0.89	0.95	-8.27	--	--	--	--	-2.48
Angelo Gordon	21,517,453	0.00	5.43	0.00	7.76	4.24	7.79	--	--	--	8.79
BB Barc BA Intermediate HY Ind		0.89	1.40	0.89	5.62	13.80	5.19	--	--	--	5.37
Excess		-0.89	4.03	-0.89	2.13	-9.55	2.60	--	--	--	3.41
Beach Point Select Fund	45,382,813	3.86	6.37	3.86	10.85	19.87	--	--	--	--	10.39
BB Barc BA Intermediate HY Ind		0.89	1.40	0.89	5.62	13.80	--	--	--	--	5.24
Excess		2.96	4.97	2.96	5.23	6.08	--	--	--	--	5.15
Brigade Cap Mngmt	71,496,362	4.26	3.78	4.26	12.07	28.02	4.36	6.77	--	--	7.21
BB Barc BA Intermediate HY Ind		0.89	1.40	0.89	5.62	13.80	5.19	6.46	--	--	7.14
Excess		3.37	2.39	3.37	6.45	14.23	-0.83	0.31	--	--	0.07
TCP Direct Lending VIII	8,014,980	0.00	0.00	0.00	--	--	--	--	--	--	--
BB Barc BA Intermediate HY Ind		0.89	1.40	0.89	--	--	--	--	--	--	--
Excess		-0.89	-1.40	-0.89	--	--	--	--	--	--	--
Total Global Fixed Income	106,487,740	0.12	2.83	0.12	6.48	9.12	2.78	4.68	--	--	4.54
Samcera Global Fixed Benchmark		1.20	-3.02	1.20	-4.57	3.31	0.04	0.38	--	--	1.50
Excess		-1.08	5.85	-1.08	11.05	5.81	2.74	4.30	--	--	3.04
Franklin Templeton	106,487,740	0.12	2.83	0.12	6.48	9.12	2.32	4.40	--	--	4.30
BB Barclays Multiverse Index		1.20	-3.02	1.20	-4.57	3.31	0.04	0.38	--	--	1.50
Excess		-1.08	5.85	-1.08	11.05	5.81	2.28	4.01	--	--	2.81
Total Risk Parity	277,662,368	0.84	0.06	0.84	-0.87	11.63	5.67	4.97	--	--	5.61
Samcera Risk Parity Benchmark		1.53	4.56	1.53	5.78	13.67	7.42	9.30	--	--	8.48
Excess		-0.69	-4.50	-0.69	-6.65	-2.04	-1.75	-4.33	--	--	-2.87
AQR Global Risk III	129,474,230	0.86	0.70	0.86	0.83	11.06	2.85	3.28	--	--	4.17
Samcera Risk Parity Benchmark		1.53	4.56	1.53	5.78	13.67	7.42	9.30	--	--	8.48
Excess		-0.67	-3.86	-0.67	-4.95	-2.61	-4.57	-6.02	--	--	-4.31

# San Mateo County Manager Return Summary



January 31, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Panagora	148,188,138	0.82	-0.50	0.82	-2.31	12.13	--	--	--	--	5.16
Samcera Risk Parity Benchmark		1.53	4.56	1.53	5.78	13.67	--	--	--	--	5.79
Excess		-0.71	-5.06	-0.71	-8.09	-1.54	--	--	--	--	-0.62
Total Alternatives	460,280,898	0.67	3.57	0.67	8.55	6.97	5.76	5.16	-6.61	-7.70	-3.34
Samcera Alternatives Benchmark		1.19	5.63	1.19	8.24	14.24	5.68	8.28	9.28	6.04	7.26
Excess		-0.52	-2.06	-0.52	0.31	-7.28	0.09	-3.12	-15.89	-13.74	-10.61
Total Private Equity	233,919,915	1.09	5.71	1.09	12.50	12.01	13.84	13.32	--	--	-25.78
Samcera PE Benchmark		2.13	9.30	2.13	12.74	25.32	13.48	17.29	--	--	16.70
Excess		-1.04	-3.59	-1.04	-0.24	-13.31	0.36	-3.97	--	--	-42.47
Total Hedge Fund Composite	226,360,983	0.17	1.07	0.17	4.06	1.17	7.41	6.12	--	--	5.19
Samcera LIBOR + 4%		0.39	1.14	0.39	2.63	4.51	4.29	4.26	--	--	4.26
Excess		-0.22	-0.07	-0.22	1.43	-3.34	3.11	1.86	--	--	0.93
AQR Delta XN	157,337,192	0.32	1.08	0.32	4.58	1.55	7.81	6.36	--	--	5.40
Samcera LIBOR + 4%		0.39	1.14	0.39	2.63	4.51	4.29	4.26	--	--	4.26
Excess		-0.07	-0.06	-0.07	1.95	-2.96	3.52	2.09	--	--	1.13
Standard Life GARS	69,023,791	-0.41	1.10	-0.41	1.81	-0.48	--	--	--	--	-2.06
Samcera LIBOR + 4%		0.39	1.14	0.39	2.63	4.51	--	--	--	--	4.44
Excess		-0.81	-0.03	-0.81	-0.83	-4.99	--	--	--	--	-6.51
Total Inflation Hedge	533,439,649	0.61	2.33	0.61	6.34	--	--	--	--	--	12.13
SamCERA Inflation Hedge Index		1.16	2.84	1.16	3.37	--	--	--	--	--	7.91
Excess		-0.55	-0.51	-0.55	2.97	--	--	--	--	--	4.23
Total TIPS	71,148,976	0.88	0.10	0.88	1.49	--	--	--	--	--	2.36
BBG Barclays US TIPS		0.84	-1.19	0.84	-0.64	--	--	--	--	--	1.06
Excess		0.04	1.29	0.04	2.13	--	--	--	--	--	1.30

# San Mateo County Manager Return Summary



January 31, 2017

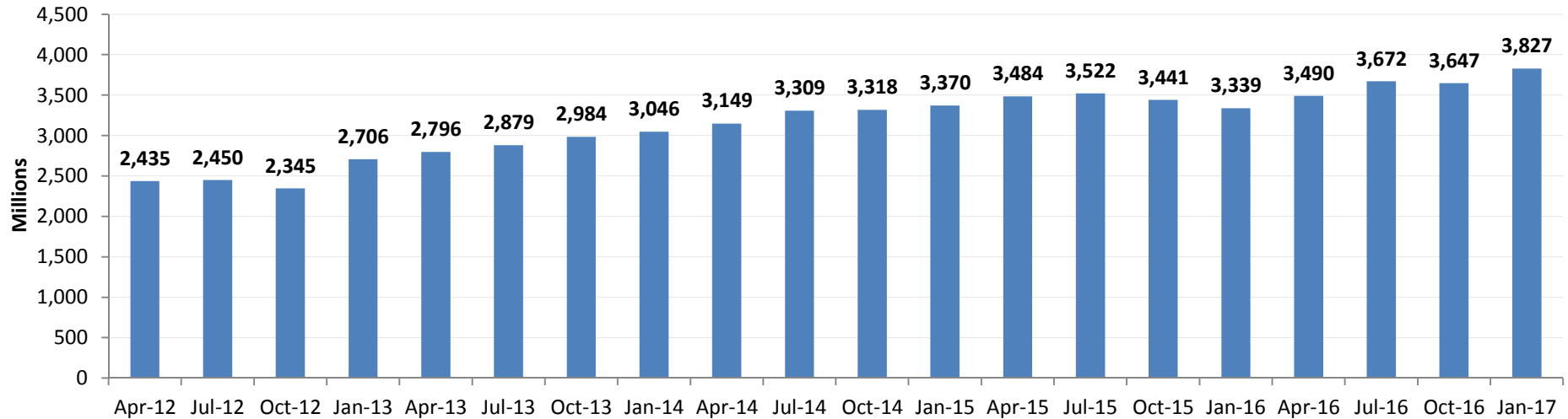
Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Brown Brothers Harriman	71,148,976	0.88	0.10	0.88	1.49	4.97	1.15	0.20	--	--	2.75
BBG Barclays US TIPS		0.84	-1.19	0.84	-0.64	4.02	1.88	0.61	--	--	3.07
Excess		0.04	1.29	0.04	2.13	0.95	-0.73	-0.41	--	--	-0.32
Total Real Estate	254,284,413	0.05	2.02	0.05	3.77	--	--	--	--	--	8.73
Samcera NCREIF ODCE EW (gross)		0.00	2.16	0.00	4.39	--	--	--	--	--	6.66
Excess		0.05	-0.14	0.05	-0.62	--	--	--	--	--	2.07
Invesco Core Real Estate	241,433,033	0.00	2.08	0.00	3.71	8.86	11.99	11.59	12.90	5.41	7.86
Samcera NCREIF ODCE EW (gross)		0.00	2.16	0.00	4.39	9.27	12.25	12.22	13.30	5.63	7.74
Excess		0.00	-0.08	0.00	-0.67	-0.40	-0.26	-0.63	-0.41	-0.22	0.13
Invesco US Val IV	12,851,380	1.05	1.05	1.05	5.81	22.66	--	--	--	--	14.55
Samcera NCREIF ODCE EW (gross)		0.00	2.16	0.00	4.39	9.27	--	--	--	--	11.06
Excess		1.05	-1.11	1.05	1.43	13.40	--	--	--	--	3.49
Liquid Real Assets	159,083,780	1.83	4.20	1.83	--	--	--	--	--	--	--
SamCera Custom Real Asset Index		2.42	4.92	2.42	--	--	--	--	--	--	--
Excess		-0.59	-0.71	-0.59	--	--	--	--	--	--	--
SSGA CST REAL ASSET NL	159,083,780	1.83	4.20	1.83	--	--	--	--	--	--	--
SamCera Custom Real Asset Index		2.42	4.92	2.42	--	--	--	--	--	--	--
Excess		-0.59	-0.71	-0.59	--	--	--	--	--	--	--
Total Private Real Assets	48,922,481	0.38	3.15	0.38	26.71	--	--	--	--	--	45.43
SamCera Custom Real Asset Inde		2.42	4.92	2.42	--	--	--	--	--	--	--
Excess		-2.04	-1.77	-2.04	--	--	--	--	--	--	--
Total Cash	171,156,795	-0.25	-0.13	-0.25	0.53	0.69	0.47	0.54	0.64	0.80	2.04
Samcera Cash Benchmark		0.04	0.10	0.04	0.23	0.37	0.15	0.13	0.12	0.76	1.88
Excess		-0.29	-0.23	-0.29	0.30	0.32	0.32	0.41	0.52	0.04	0.16
SamCera General Account	43,997,144	0.07	0.19	0.07	0.38	0.58	0.35	0.26	0.27	0.97	2.03
County Treasury Pool	22,020,688	0.00	0.00	0.00	0.00	0.00	0.10	0.37	0.57	0.68	2.72
San Mateo County ERA	3,827,216,901	1.71	3.71	1.71	6.48	13.38	6.20	8.46	8.74	4.50	6.63
Samcera Total Plan Benchmark		1.69	4.21	1.69	6.60	14.56	6.00	8.43	9.11	5.43	6.91
Excess		0.02	-0.51	0.02	-0.12	-1.18	0.21	0.03	-0.37	-0.94	-0.28

January 31, 2017

**Record of Asset Growth**

	Three Months	One Year
<b>TOTAL FUND</b>		
Beginning Market Value	3,646,643,276	3,338,666,091
Contributions	1,406,804,723	1,654,444,507
Withdrawals	-1,363,965,265	-1,620,664,461
Income Received	7,791,925	39,124,474
Gain/Loss	129,822,645	414,250,357
Ending Market Value	3,827,216,901	3,827,216,901

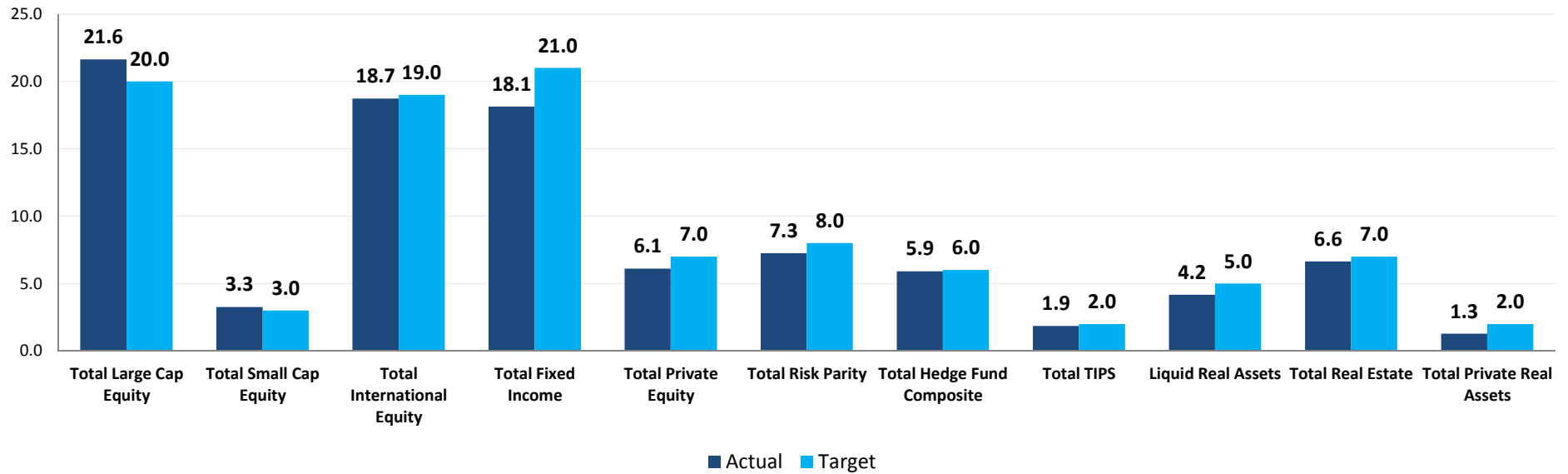
**Net Asset Values Over Time (\$000)**





January 31, 2017

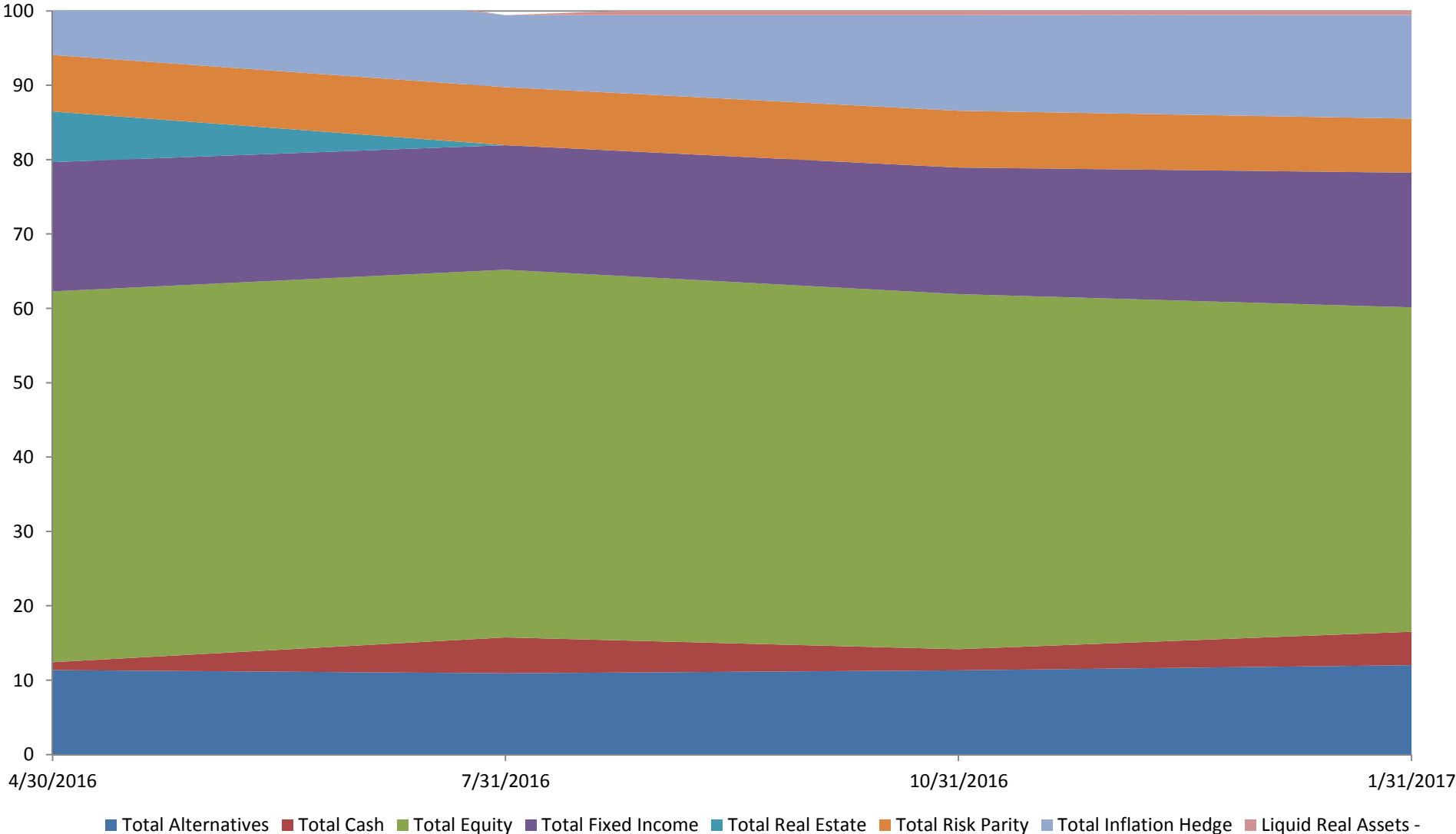
Actual vs Target Weights



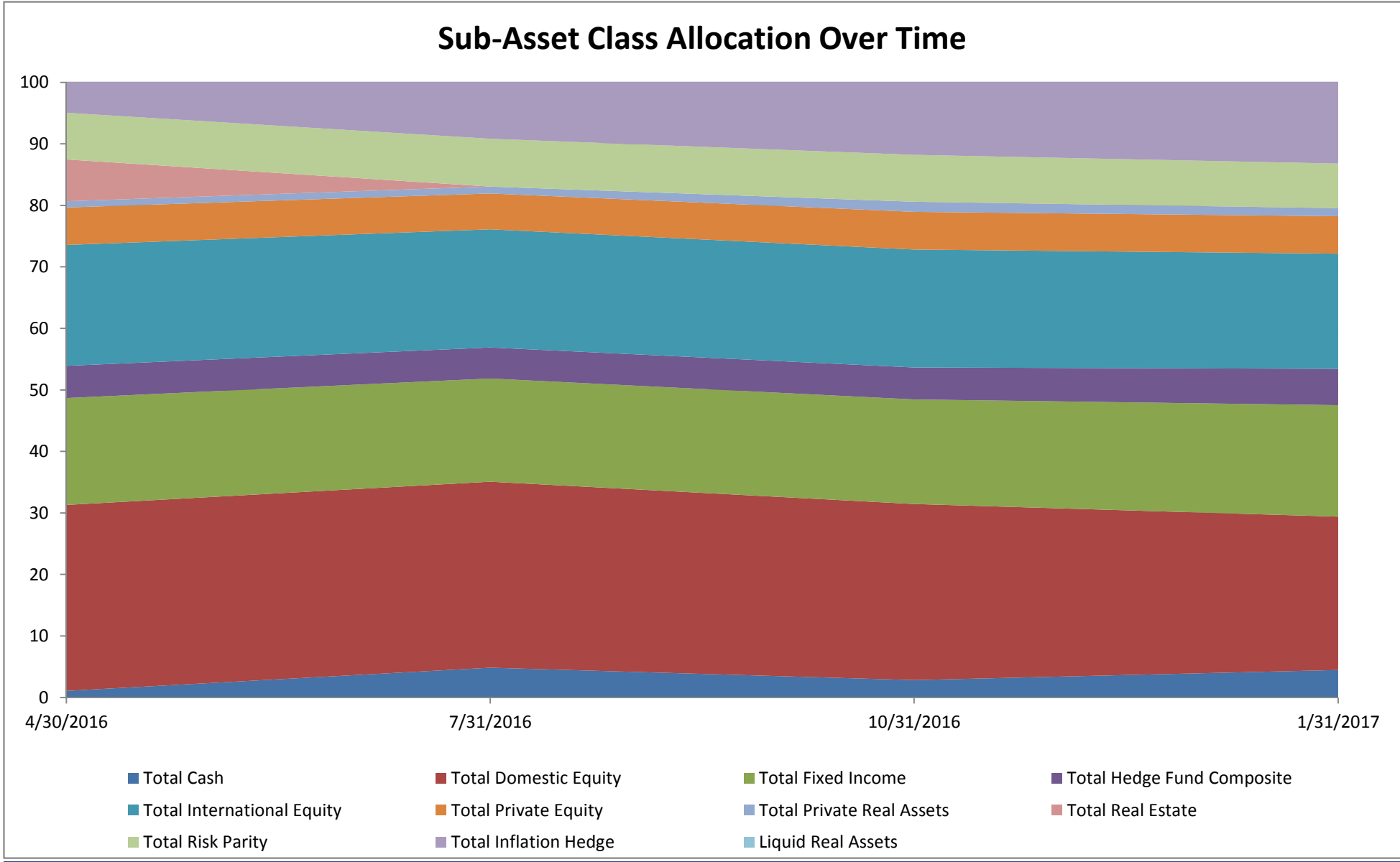
	Min	Actual	Target	Deviation	Max
Total Large Cap Equity	18.0	21.6	20.0	1.6	22.0
Total Small Cap Equity	1.0	3.3	3.0	0.3	5.0
Total International Equity	17.0	18.7	19.0	-0.3	21.0
Total Fixed Income	19.0	18.1	21.0	-2.9	23.0
Total Private Equity	5.0	6.1	7.0	-0.9	9.0
Total Risk Parity	6.0	7.3	8.0	-0.7	10.0
Total Hedge Fund Composite	4.0	5.9	6.0	-0.1	8.0
Total TIPS	0.0	1.9	2.0	-0.1	4.0
Liquid Real Assets	3.0	4.2	5.0	-0.8	7.0
Total Real Estate	5.0	6.6	7.0	-0.4	9.0
Total Private Real Assets	0.0	1.3	2.0	-0.7	4.0

January 31, 2017

Asset Allocation over Time



January 31, 2017



**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

February 28, 2017

Agenda Item 6.2

**TO:** Board of Retirement



**FROM:** Michael Coultrip, Chief Investment Officer

**SUBJECT:** Report on Quarterly Investment Performance Report for the Period Ended December 31, 2016

**Staff Recommendation**

Accept Verus Advisory's quarterly performance report for the period ended December 31, 2016.

**Discussion**

The 4th quarter net total return for the SamCERA portfolio was 0.9%, which was 20 bps lower than the 1.1% policy benchmark return. As can be seen on Pages 20 and 21, Risk Parity and Public Equity detracted, while Fixed Income contributed to performance.

Margaret Jadallah will present the report to the Board and will be available for questions.

**Attachment**

Verus Quarterly Performance Report Ending 12/31/2016



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: DECEMBER 31, 2016**

Investment Performance Review for

**San Mateo County Employees' Retirement Association**

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[VERUSINVESTMENTS.COM](http://VERUSINVESTMENTS.COM)

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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Market Environment

TAB I

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Alternatives

TAB VI

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Total Fund

TAB II

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Inflation Hedge

TAB VII

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US Equity

TAB III

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Risk Parity

TAB VIII

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International Equity

TAB IV

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Appendix

TAB IX

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Fixed Income

TAB V



# 4<sup>th</sup> quarter summary

## THE ECONOMIC CLIMATE

- Economies around the globe experienced higher inflation as the effects of lower energy prices fall out of year-over-year inflation figures. U.S. headline inflation rose to 1.7% YoY and the market's inflation expectations increased sharply, as indicated by TIPS breakeven rates.
- U.S. consumer and business sentiment indicators improved markedly in the fourth quarter based on positive expectations of future economic growth.

## MARKET PORTFOLIO IMPACTS

- U.S. interest rates moved higher in Q4, returning the yield curve to levels experienced one year ago. The Federal Reserve is not likely to increase rates drastically because of lower yields and economic growth around the globe, and due to an already strong U.S. dollar.
- The U.S. dollar rose 6.4% in Q4 on a trade-weighted basis. Currency movement continues to contribute to higher volatility for investors with unhedged currency exposure.

## THE INVESTMENT CLIMATE

- The U.S. presidential election results took many investors by surprise. After an initial overnight plunge in the futures market, U.S. equities rallied on expectations of a more pro-business regulatory environment and the possibility of large-scale fiscal stimulus. U.S. equities may possess greater upside potential post-election.
- Fourth quarter earnings for the S&P 500 are estimated to grow 3.2% YoY, according to FactSet. If this positive growth comes to fruition it will mark the second quarter of positive growth and may indicate that the recent oil-driven earnings slump is behind us.

## ASSET ALLOCATION ISSUES

- Global inflation rises in Q4 may mark a change in trend from disinflation seen in recent years. Investors should work to understand the degree of inflation protection in their portfolio.

A neutral risk stance seems warranted

Global reflation trends should be watched, and investors should understand the degree of inflation protection in their portfolio

# U.S. economics summary

- U.S. real GDP grew 1.7% YoY in Q3, up from 1.3% in Q2. Consumer spending continued to account for the majority of economic growth, and rising sentiment may act as a boon for future growth. Net exports helped boost production, as well as private investment.
- Inflation moved higher during the quarter as headline CPI rose to 1.7% YoY, as of November, while core CPI rose to 2.1%. Increases in energy prices have resulted in a convergence between headline and core inflation figures. If oil prices remain stable, this will act as a tailwind for headline inflation in the future.
- The Fed raised its target federal funds rate to 0.50%-0.75% and forecast three rate hikes in 2017 at its December meeting, citing

continued modest economic growth and a tightening labor market, in addition to firming consumer prices.

- The labor market added 165,000 jobs per month on average during the fourth quarter. This is slightly below the expansion average of 199,000, but still a solid pace of hiring given where we are at in the labor cycle. The unemployment rate fell 0.2% to 4.7% at the end of December.
- While the economy continued to steadily add jobs, wage growth has lagged behind. Real average hourly earnings only increased 0.7% YoY in November. Softer wage growth may be due in part to workers taking on part-time roles who could not find full time work.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	1.7% 9/30/16	2.2% 9/30/15
Inflation ( <i>CPI YoY, Headline</i> )	1.7% 11/30/16	0.4% 11/30/15
Expected Inflation ( <i>5yr-5yr forward</i> )	2.1% 12/31/16	1.8% 12/31/15
Fed Funds Rate	0.50% 12/31/16	0.25% 12/31/15
10 Year Rate	2.5% 12/31/16	2.3% 12/31/15
U-3 Unemployment	4.7% 12/31/16	5.0% 12/31/15
U-6 Unemployment	9.2% 12/31/16	9.9% 12/31/15

# International economics summary

- The central theme of slow, but positive growth in countries across the globe continued in the third quarter. The U.S., western Europe, and Japan all experienced year-over-year growth rates between 1-2%.
  - The tapering of ECB purchases is likely more a result of mechanical and political obstacles than due to a need for tightening. If the central bank is forced to tighten quicker than desired, it could have an adverse impact on the current economic recovery.
- Developed countries experienced a coordinated pick up in inflation in recent months, suggesting we may be moving into a reflationary environment. Headline CPI was up 1.1% in the Eurozone in December, its highest rate in more than three years.
  - Italy voted against a referendum on constitutional reform on December 4<sup>th</sup> that would have weakened the power of the Senate in an attempt to make the country easier to govern. The Italian Prime Minister, Matteo Renzi, resigned shortly thereafter. Although Renzi's Democratic party will remain in power, the country's anti-establishment Five Star party has recently gained popularity.
- The ECB announced it would continue its asset purchase program through the initially scheduled end date of March 2017, but at a reduced rate. The program will extend until at least the end of 2017, and monthly bond purchases will fall to €60 billion from €80 billion in April.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.7% <i>9/30/16</i>	1.7% <i>11/30/16</i>	4.7% <i>12/31/16</i>
Western Europe	1.8% <i>9/30/16</i>	0.9% <i>12/31/16</i>	8.4% <i>9/30/16</i>
Japan	1.1% <i>9/30/16</i>	0.5% <i>11/30/16</i>	3.1% <i>11/30/16</i>
BRIC Nations	5.1% <i>9/30/16</i>	3.4% <i>6/30/16</i>	5.5% <i>9/30/16</i>
Brazil	(2.9%) <i>9/30/16</i>	6.3% <i>12/31/16</i>	11.9% <i>12/31/16</i>
Russia	(0.4%) <i>9/30/16</i>	5.4% <i>12/31/16</i>	5.2% <i>9/30/16</i>
India	7.3% <i>9/30/16</i>	3.6% <i>11/30/16</i>	7.1% <i>12/31/15</i>
China	6.7% <i>9/30/16</i>	2.1% <i>12/31/16</i>	4.0% <i>12/30/16</i>

# Equity environment

- We believe the U.S. election results have had a material impact on possible future equity return outcomes. There is likely greater upside potential for U.S. equities, though some of this has already been priced in with higher prices post-election.
- Both consumer and private sector sentiment have risen robustly. This positive shift may provide a tailwind to U.S. economic growth through spending and investment.
- Fourth quarter earnings for the S&P 500 are estimated to grow 3.2% year-over-year, according to FactSet. If this positive growth comes to fruition it will mark the second quarter of positive growth and may mean the recent earnings slump is now behind us.
- Value equities outperformed growth equities in the fourth quarter. The Russell 1000 Value index and Russell 1000 Growth index returned 6.7% and 1.0%, respectively. Energy and financial service companies have contributed to the performance rebound.
- The U.S. dollar rose 6.4% in Q4 on a trade-weighted basis which directly detracts from investment returns of U.S. investors with unhedged currency exposure.
- Japanese equities (Nikkei 225) delivered a 16.1% return on a hedged basis, but 1.2% on an unhedged basis – a 15% swing caused by currency movement.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	3.8%		12.1%		12.1%	
US Small Cap (Russell 2000)	8.8%		21.3%		21.3%	
US Large Value (Russell 1000 Value)	6.7%		17.3%		17.3%	
US Large Growth (Russell 1000 Growth)	1.0%		7.1%		7.1%	
International Large (MSCI EAFE)	(-0.7%)	7.3%	1.5%	6.2%	1.5%	6.2%
Eurozone (Euro Stoxx 50)	3.2%	10.3%	0.7%	5.1%	0.7%	5.1%
U.K. (FTSE 100)	(0.8%)	4.4%	(0.2%)	19.0%	(0.2%)	19.0%
Japan (NIKKEI 225)	1.2%	16.1%	5.8%	1.3%	5.8%	1.3%
Emerging Markets (MSCI Emerging Markets)	(4.1%)	(2.0%)	11.6%	7.5%	11.6%	7.5%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 12/31/16

# Domestic equity

U.S. equity markets fell sharply in futures markets on the night of the election, but then recovered before market open the next morning. After this initial stumble, equities rallied higher to finish the quarter.

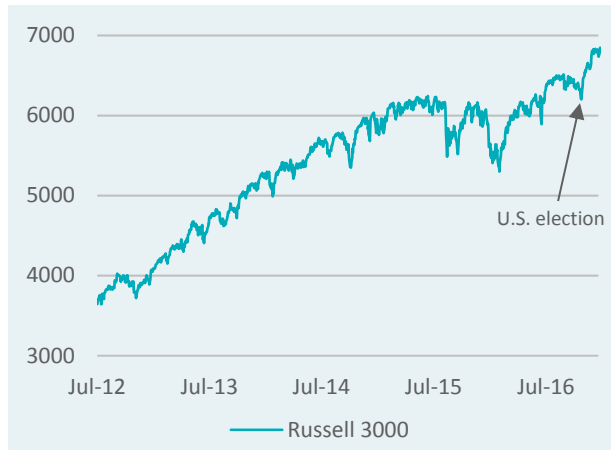
Post-election equity movement was likely driven by an improved economic outlook as well as several proposed policy changes that would benefit corporations, including lower tax rates and deregulation.

The financials sector was responsible for much of the gain in equity prices, likely due to the prospects of higher rates and a steeper curve. The S&P 500 Financials sector was up 16.5% after the election, compared to a 2.8% gain across the rest of the index.

As of December 30<sup>th</sup>, estimated earnings growth for the fourth quarter was 3.2% from the previous year, according to FactSet. Looking ahead, bottom-up analyst EPS forecasts point toward improving corporate earnings growth.

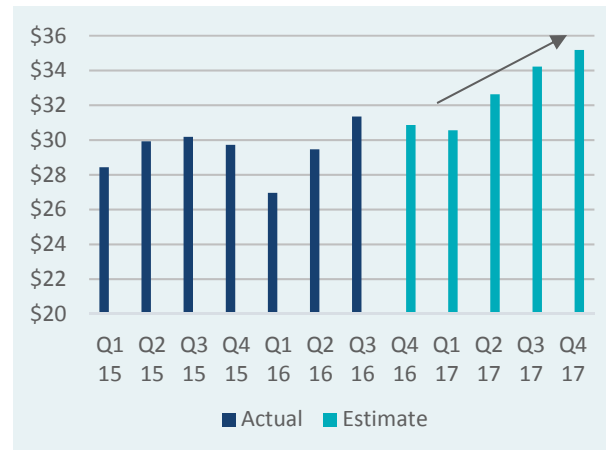
Proposed tax reform and deregulation have helped improve the U.S. earnings outlook

## U.S. EQUITIES



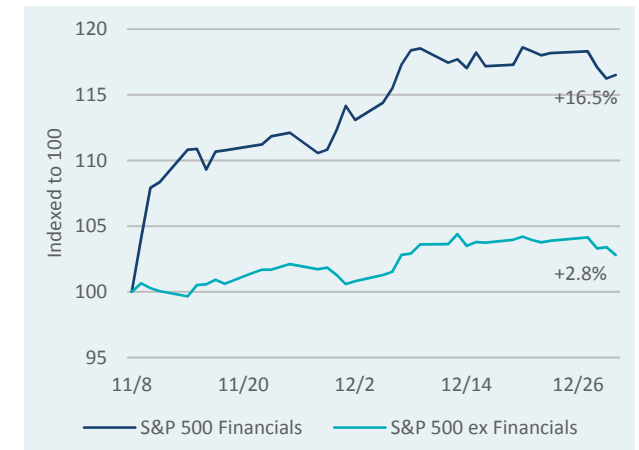
Source: Russell Investments, as of 12/30/16

## S&P 500 EPS



Source: FactSet, as of 12/30/16

## S&P 500 FINANCIALS



Source: Bloomberg, as of 12/30/16

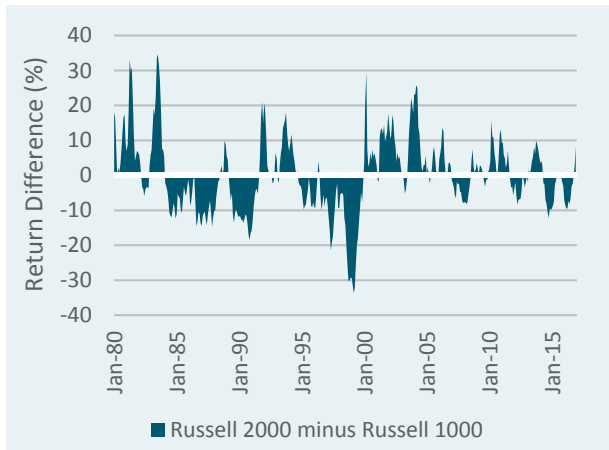


# Domestic equity size and style

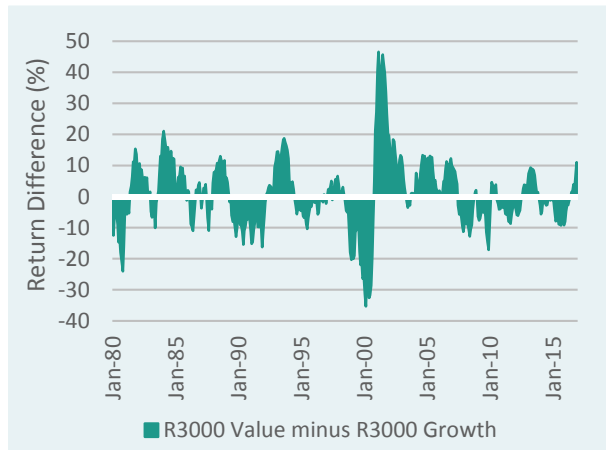
Small cap equities outperformed large cap equities in the fourth quarter as the Russell 2000 Index and Russell 1000 Index returned 8.8% and 3.8%, respectively. Much of this outperformance came after the U.S. presidential election as smaller companies could receive greater marginal benefit from deregulation proposed by Donald Trump. Renewed U.S. dollar strength also benefits smaller companies relative to larger companies due to greater insulation from foreign currency movements.

Value equities outperformed growth equities during the quarter. The Russell 1000 Value Index and Russell 1000 Growth Index returned 6.7% and 1.0%, respectively. This relative outperformance was driven by the Financials and Energy sectors, which are the two largest sectors in the value index. The magnitude of this recent value bounce back has brought the value premium back into positive territory for most trailing windows.

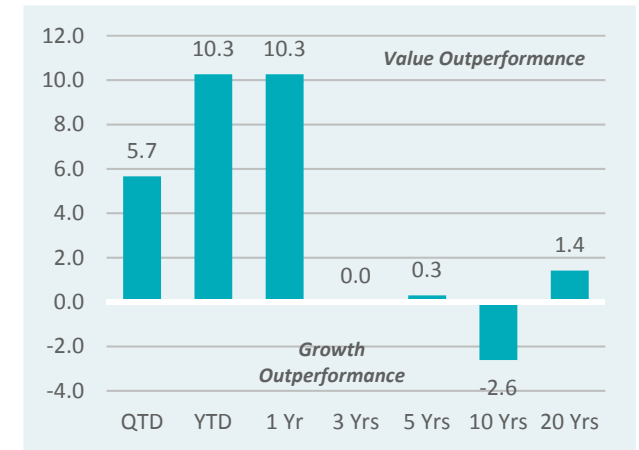
**SMALL CAP VS LARGE CAP (YOY)**



**VALUE VS GROWTH (YOY)**



**U.S. VALUE VS. GROWTH RELATIVE PERFORMANCE**



Source: Russell Investments, as of 12/31/16

Source: Russell Investments, as of 12/31/16

Source: Morningstar, as of 12/31/16

# International equity

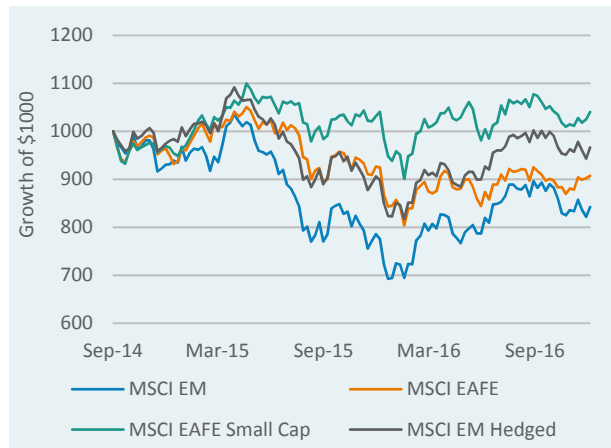
International equity markets narrowly outperformed domestic equities in December (S&P 500 2.0%) as the MSCI ACWI ex U.S. returned 2.2%.

European equity markets remained calm on the back of the announcement that the ECB would continue its asset purchase program through the initially scheduled end date of March 2017, but at a reduced rate. Adjustments to program constraints will be likely, given the mandated rule that the ECB cannot purchase more than 33% of any one country's national debt.

International developed equities delivered a 7.3% total return on a hedged basis over the quarter, but delivered -0.7% on an unhedged basis. Unhedged currency exposure continues to cause higher volatility for investors who choose not to hedge.

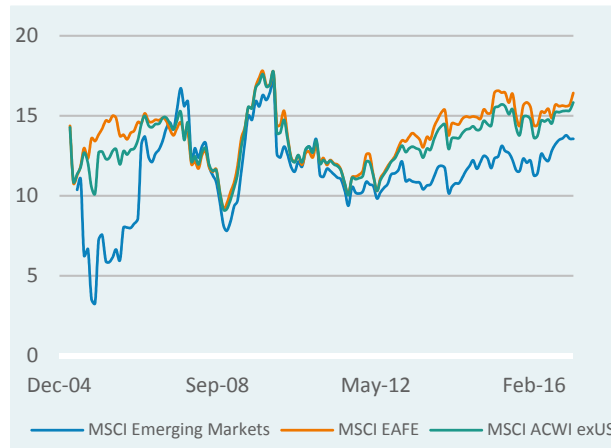
Japanese equities delivered a 16.1% return on a hedged basis, but 1.2% on an unhedged basis – a 15% swing caused by currency movement. Expectations of continued loose monetary policy and low interest rates in Japan contributed to yen weakness.

## GLOBAL EQUITY PERFORMANCE



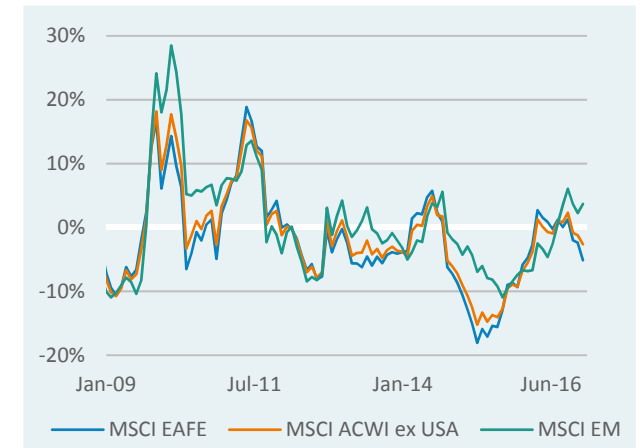
Source: Bloomberg, as of 12/31/16

## INTERNATIONAL FORWARD P/E RATIOS



Source: Bloomberg, as of 12/31/16

## EFFECT OF CURRENCY (1 YEAR ROLLING)



Source: MSCI, as of 12/31/16

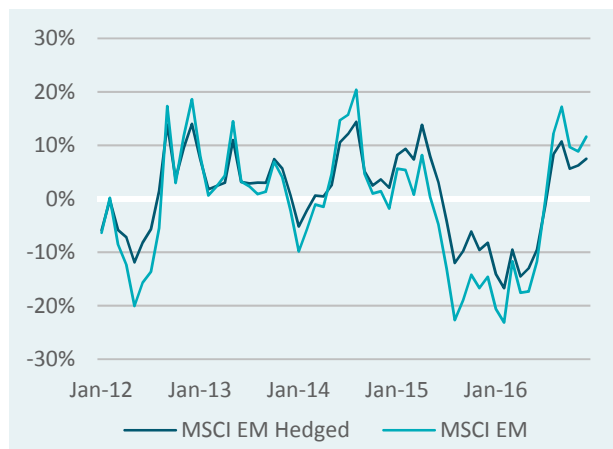
# Emerging market equity

Emerging market economic growth has shown recovery as Russia and Brazil begin moving out of severe depressions and as commodity prices improve. Economic growth of the “BRIC” nations continues at a pace materially higher than that of developed nations, consistent with recent decades.

Some renewed investor optimism can be seen as equity valuations move higher. Emerging market equities

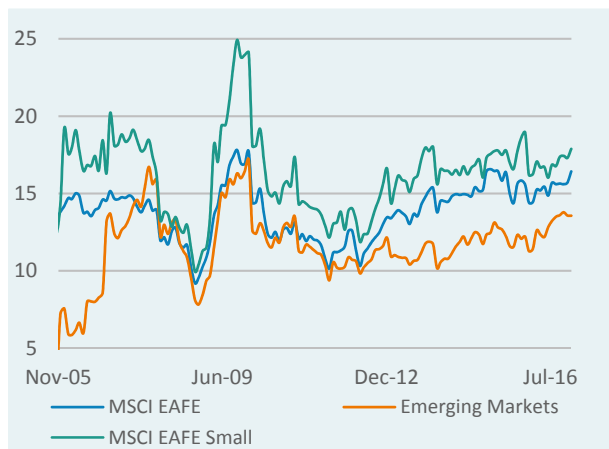
provided a muted quarter with a -2.0% return on a hedged basis, but delivered a positive 7.5% return for the year (MSCI Emerging Markets). Much of the recent performance stability can be attributed to a reversal or flattening of emerging market currency depreciation trends occurring since 2012. Earnings across the broader emerging markets have also reversed their downward trend, though not as quickly as the pace of price improvement as demonstrated in higher equity valuations.

**12-MONTH ROLLING PERFORMANCE**



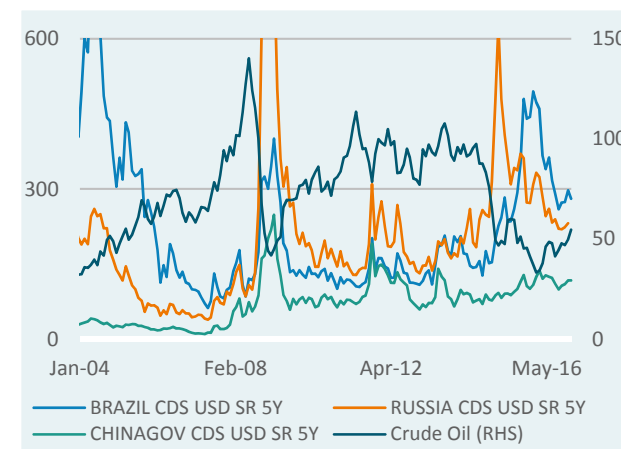
Source: MPI, as of 12/31/16

**FORWARD P/E RATIOS**



Source: Bloomberg, as of 12/31/16

**CDS SPREADS**



Source: MSCI, as of 12/31/16

# Interest rate environment

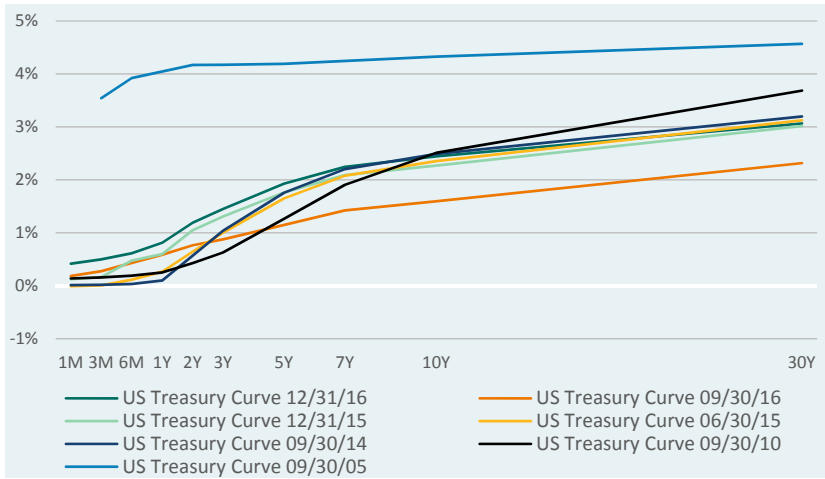
- The Federal Reserve raised interest rates at its December meeting, increasing the federal funds target rate by 0.25%, to a range of 0.50% to 0.75%. The Fed also increased its outlook for the number of 2017 rate hikes from two to three. Lower yields and economic growth outside of the U.S., along with an already strong dollar, reduce the probability of drastic rate rises.
- U.S. Treasury yields moved higher and the curve steepened on the prospects of higher inflation and economic growth. The spread between the 10 and 2-year yields was 1.25% at the end of December, its highest level in more than a year.
- Developed sovereign yields increased along with U.S. rates following the presidential election. The Japanese 10-year bond yield moved out of negative territory to 0.46% at the end of December, while the German 10-year bund yield hit an 11-month high of 0.37% before falling to finish the month at 0.20%.
- The U.S. is much further ahead in the monetary policy cycle than other developed countries, which has led to a widening yield differential between Treasuries and global sovereign bonds. While Treasuries remain expensive compared to history, the higher yield makes them relatively attractive.

Area	Short Term (3M)	10 Year
United States	0.50%	2.45%
Germany	(0.99%)	0.20%
France	(0.90%)	0.68%
Spain	(0.49%)	1.38%
Italy	(0.50%)	1.81%
Greece	1.37%	7.02%
U.K.	0.51%	1.24%
Japan	(0.42%)	0.04%
Australia	1.70%	2.77%
China	2.35%	3.06%
Brazil	12.91%	10.55%
Russia	8.78%	8.29%

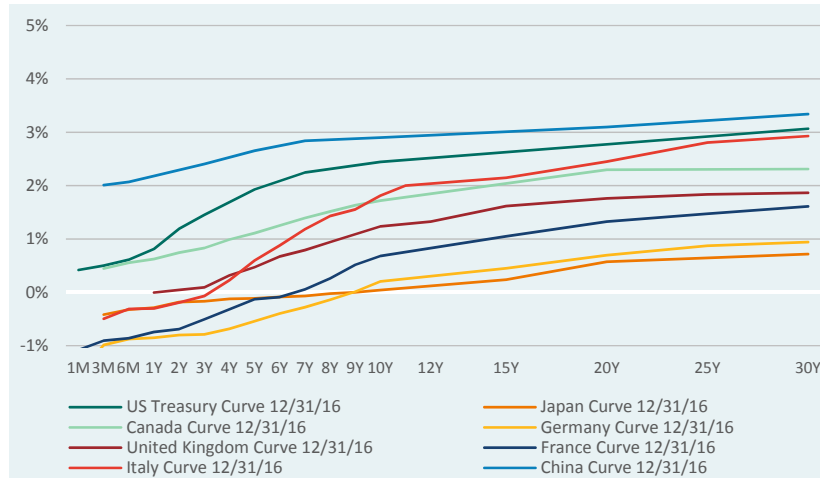
Source: Bloomberg, as of 12/31/16

# Yield environment

**U.S. YIELD CURVE**

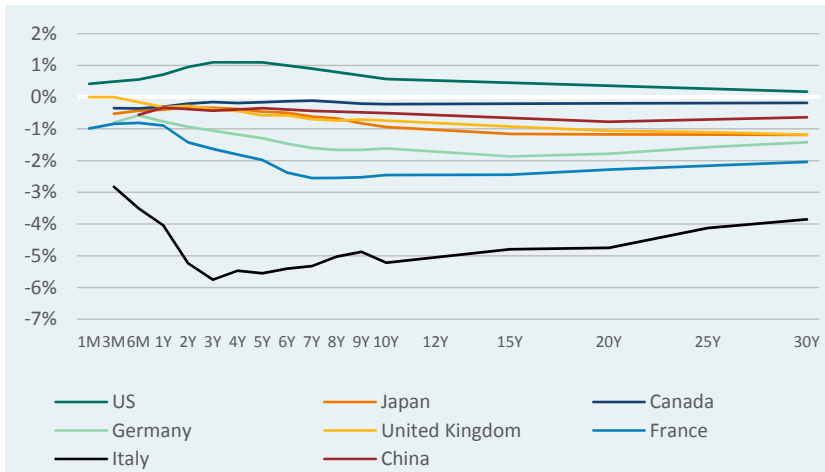


**GLOBAL GOVERNMENT YIELD CURVES**

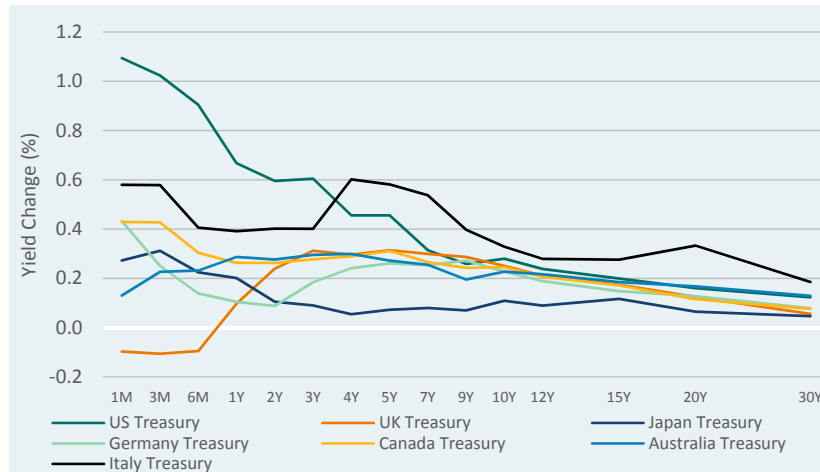


Global investors continue to prefer U.S. Treasuries due to higher relative yields

**YIELD CURVE CHANGES OVER LAST FIVE YEARS**



**IMPLIED CHANGES OVER NEXT YEAR**



Source: Bloomberg, as of 12/31/16

# Currency

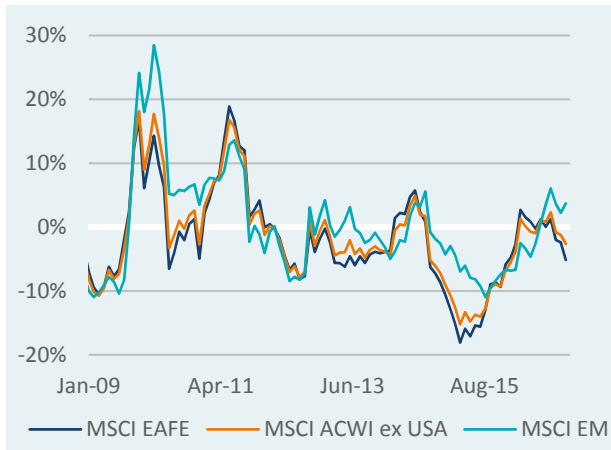
The U.S. dollar rose considerably in the fourth quarter, up 6.4% against a basket of major currencies. The strong dollar created a large gap between hedged and unhedged international exposures, as foreign currency losses eroded unhedged returns.

Renewed dollar strength occurred after the presidential election likely due to increased expectations of U.S. economic growth and higher interest rates. A widening gap between Treasury yields and other developed sovereign bonds could cause greater demand for

Treasuries and provide a tailwind for further dollar appreciation. However, higher inflation at the same time could offset some of the potential strength.

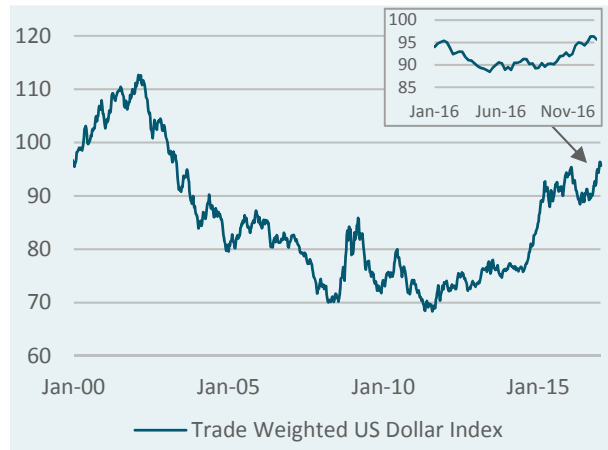
Emerging market currencies were hit hard by the strength in the U.S. dollar, influenced by the Fed pointing towards faster than anticipated interest rates increases and possible protectionist trade policies from the Trump administration. The JPM EM Currency Index was down 4.0% in the fourth quarter.

**EFFECT OF CURRENCY (1YR ROLLING)**



Source: MPI, as of 12/31/16

**LONG-TERM TRADE WEIGHTED DOLLAR**



Source: FRED, as of 12/31/16

**JPM EM CURRENCY INDEX**



Source: Bloomberg, as of 12/31/16



- The Total Fund, net of manager fees, returned 0.9% in the fourth quarter of 2016 and ranked 48<sup>th</sup> among other public plans greater than \$1 billion (median of 0.8%). It lagged the policy index return of 1.1%. The Total Fund w/o Overlay was 0.9% for the quarter. The Total Fund one year return of 8.3% was behind its policy index return of 8.9% and ranked in 33<sup>rd</sup> percentile of its peer universe. The three-year return of 4.9% (28<sup>th</sup> percentile) was above median among large public plans (4.1%).
  
- Fourth quarter results were enhanced by the following factors:
  1. Franklin Templeton gained 6.5% beating the BBgBarc Multiverse (-6.7%) and ranked in the 1<sup>st</sup> percentile of its peers. The portfolio benefited from underweight positions in the Japanese yen, Euro, and Australian dollar. The portfolio's conservative underweighted duration position in the US also contributed to performance.
  2. Barrow Hanley was up 8.7% while the Russell 1000 Value index rose 6.7%. Performance was enhanced by underweight to REITs and utilities and stock selection within energy, technology, and consumer staples.
  2. QMA US Small Cap ranked in the 26<sup>th</sup> percentile of small cap managers, gaining 10.6% versus the Russell 2000 (8.8%). Valuation was the main driver of return for the fourth quarter. Valuation worked well in most sectors, but particularly well in the healthcare sector.

— Fourth quarter results were hindered by the following factors:

1. Mondrian lost 1.1% % while the MSCI ACWI ex US Value gained 3.4%. Most International Large Value managers underperformed the index as the index ranked in the 6<sup>th</sup> percentile of the peer group. Stock selection in Switzerland and the UK, along with an underweight position to Japan and an overweight positions to India contributed to the underperformance.
2. Brown Advisory lost 4.6% underperforming the Russell 1000 Growth (1.0%), and ranked in the bottom decile of managers. Consumer discretionary stock selection was the biggest detractor from performance. This portfolio will close in January 2017.
3. QMA Baillie Gifford underperformed the MSCI ACWI ex US Growth (-7.1% vs -5.7%). Limited exposure to bank and energy producers contributed to the underperformance.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	Rank	6 Mo (%)	Rank*	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Total Fund **</b>	<b>0.9</b>	<b>48</b>	<b>4.7</b>	<b>50</b>	<b>8.3</b>	<b>33</b>	<b>4.5</b>	<b>22</b>	<b>4.9</b>	<b>28</b>	<b>8.9</b>	<b>19</b>	<b>4.4</b>	<b>67</b>
<i>Policy Index<sup>1</sup></i>	1.1	39	4.9	43	8.9	13	4.3	25	4.8	29	9.0	15	5.4	16
<i>Allocation Index</i>	1.1	39	4.6	52	8.7	15	4.1	37	4.7	34	--	--	--	--
<i>InvestorForce Public DB &gt; \$1B Net Median</i>	0.8		4.6		7.7		3.5		4.1		8.1		4.8	
<b>Total Fund ex Overlay</b>	<b>0.9</b>	<b>45</b>	<b>4.8</b>	<b>44</b>	<b>8.2</b>	<b>34</b>	<b>4.4</b>	<b>23</b>	<b>4.8</b>	<b>30</b>	<b>8.9</b>	<b>21</b>	<b>4.3</b>	<b>71</b>
<i>Policy Index<sup>1</sup></i>	1.1	39	4.9	43	8.9	13	4.3	25	4.8	29	9.0	15	5.4	16
<i>Allocation Index</i>	1.1	39	4.6	52	8.7	15	4.1	37	4.7	34	--	--	--	--
<i>InvestorForce Public DB &gt; \$1B Net Median</i>	0.8		4.6		7.7		3.5		4.1		8.1		4.8	
<b>Public Equity</b>	<b>1.0</b>	<b>70</b>	<b>6.1</b>	<b>74</b>	<b>8.0</b>	<b>68</b>	<b>3.7</b>	<b>45</b>	<b>4.1</b>	<b>46</b>	<b>10.9</b>	<b>46</b>	<b>3.9</b>	<b>81</b>
<i>Blended Public Equity Index<sup>2</sup></i>	1.9	46	7.7	40	9.7	41	3.8	43	4.4	42	11.1	42	5.0	39
<i>InvestorForce All DB Total Eq Net Median</i>	1.8		7.3		8.9		3.6		3.9		10.7		4.6	
<b>US Equity</b>	<b>4.1</b>	<b>58</b>	<b>8.6</b>	<b>68</b>	<b>11.2</b>	<b>72</b>	<b>6.0</b>	<b>54</b>	<b>7.2</b>	<b>58</b>	<b>14.0</b>	<b>56</b>	<b>5.8</b>	<b>91</b>
<i>Blended US Equity Index<sup>2</sup></i>	4.2	54	9.1	52	12.9	40	6.2	47	8.0	39	14.5	30	7.0	30
<i>Russell 3000</i>	4.2	54	8.8	61	12.7	43	6.4	38	8.4	20	14.7	20	7.1	28
<i>InvestorForce All DB US Eq Net Median</i>	4.2		9.1		12.5		6.1		7.6		14.1		6.8	
<b>Large Cap Equity</b>	<b>3.3</b>	<b>--</b>	<b>7.6</b>	<b>--</b>	<b>10.6</b>	<b>--</b>	<b>6.5</b>	<b>--</b>	<b>8.2</b>	<b>--</b>	<b>14.4</b>	<b>--</b>	<b>6.0</b>	<b>--</b>
<i>Russell 1000</i>	3.8	--	8.0	--	12.1	--	6.3	--	8.6	--	14.7	--	7.1	--
<i>Barrow Hanley</i>	8.7	14	13.9	17	13.8	50	6.6	22	7.3	47	14.6	29	--	--
<i>Russell 1000 Value</i>	6.7	42	10.4	49	17.3	19	6.2	28	8.6	19	14.8	25	5.7	66
<i>eA US Large Cap Value Equity Net Median</i>	5.9		10.2		13.8		4.9		7.2		13.4		6.1	
<i>BlackRock S&amp;P 500 Index</i>	3.8	42	7.8	39	12.0	20	6.6	18	8.9	14	--	--	--	--
<i>S&amp;P 500</i>	3.8	42	7.8	39	12.0	21	6.5	18	8.9	15	14.7	20	6.9	41
<i>eA US Large Cap Core Equity Net Median</i>	3.4		7.1		9.3		4.7		7.3		13.3		6.8	

\* Total Fund and asset class aggregates are ranked in InvestorForce universes. Managers are ranked in eVest (eA) manager universes.

\*\* Includes Parametric Minneapolis manager funded in August 2013.

1. Effective 10/1/16, Policy Index is 28% Russell 3000/19% MSCI ACWI ex US IMI/ 10% BBgBarc Aggregate/ 2% BBgBarc TIPS/ 6% BBgBarc BA Intermediate HY / 3% BBgBarc Multi-verse/ 7% NCREIF NFI ODCE/ 7% Russell 3000 + 3% 8% (60% Russell 3000/40% BBgBarc Aggregate)/ 5% Libor +4%/ 3% Bloomberg Commodity/ 5% (34% Bloomberg Roll Select Commodity/ 33% S&P Global Large-MidCap Commodity and Resources/ 33% S&P Global Infrastructure)

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Brown Advisory	-4.6	95	-1.2	99	-2.7	92	1.9	82	3.5	92	--	--	--	--
<i>Russell 1000 Growth</i>	1.0	33	5.6	39	7.1	20	6.4	13	8.6	12	14.5	19	8.3	21
<i>eA US Large Cap Growth Equity Net Median</i>	-0.3		4.9		3.4		3.7		6.3		13.0		7.5	
DE Shaw	3.6	47	8.9	26	13.9	9	8.7	4	9.7	5	16.0	2	--	--
<i>Russell 1000</i>	3.8	42	8.0	38	12.1	20	6.3	21	8.6	18	14.7	19	7.1	36
<i>eA US Large Cap Core Equity Net Median</i>	3.4		7.1		9.3		4.7		7.3		13.3		6.8	
<b>Small Cap Equity</b>	<b>10.6</b>	<b>36</b>	<b>17.0</b>	<b>46</b>	<b>17.2</b>	<b>62</b>	<b>4.9</b>	<b>73</b>	<b>4.3</b>	<b>71</b>	<b>12.8</b>	<b>70</b>	<b>4.9</b>	<b>95</b>
<i>Russell 2000</i>	8.8	50	18.7	38	21.3	42	7.7	50	6.7	49	14.5	49	7.1	66
<i>eA US Small Cap Equity Net Median</i>	8.8		16.6		19.7		7.7		6.5		14.3		7.6	
QMA US Small Cap*	10.6	26	--	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 2000</i>	8.8	54	18.7	32	21.3	34	7.7	57	6.7	53	14.5	54	7.1	70
<i>eA US Small Cap Core Equity Net Median</i>	9.0		16.5		19.5		8.0		7.2		14.8		7.8	
<b>International Equity</b>	<b>-3.5</b>	<b>79</b>	<b>2.5</b>	<b>84</b>	<b>3.2</b>	<b>61</b>	<b>0.2</b>	<b>33</b>	<b>-0.8</b>	<b>24</b>	<b>5.4</b>	<b>65</b>	<b>0.2</b>	<b>72</b>
<i>MSCI ACWI ex US IMI<sup>2</sup></i>	-1.5	35	5.5	34	4.9	28	0.3	32	-1.0	32	5.7	56	1.5	34
<i>MSCI EAFE Gross</i>	-0.7	21	5.8	30	1.5	78	0.6	25	-1.2	38	7.0	21	1.2	44
<i>InvestorForce All DB ex-US Eq Net Median</i>	-2.2		4.6		3.8		-0.4		-1.4		5.9		1.1	
<b>Developed Markets</b>	<b>-3.6</b>	<b>74</b>	<b>2.4</b>	<b>75</b>	<b>2.2</b>	<b>42</b>	<b>0.5</b>	<b>35</b>	<b>-0.6</b>	<b>29</b>	<b>6.0</b>	<b>56</b>	<b>0.5</b>	<b>75</b>
<i>MSCI ACWI ex USA Gross</i>	-1.2	31	5.7	30	5.0	15	-0.3	55	-1.3	48	5.5	69	1.4	38
<i>InvestorForce All DB Dev Mkt ex-US Eq Net Median</i>	-2.1		4.1		1.8		0.2		-1.4		6.3		0.9	
Baillie Gifford	-7.1	68	0.7	51	0.7	33	1.0	56	-0.1	43	--	--	--	--
<i>MSCI ACWI ex US<sup>2</sup></i>	-1.2	4	5.7	7	5.0	7	-0.3	68	-1.3	60	--	--	--	--
<i>MSCI ACWI ex US Growth<sup>2</sup></i>	-5.7	52	0.1	59	0.5	36	-0.2	68	-0.9	54	--	--	--	--
<i>eA ACWI ex-US Growth Equity Net Median</i>	-5.5		0.7		-1.7		1.2		-0.6		6.7		3.1	

\* Funded August 2016.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
BlackRock EAFE Index	-0.7	23	5.8	28	1.4	28	0.4	55	-1.3	60	--	--	--	--
MSCI EAFE	-0.7	24	5.7	30	1.0	31	0.1	59	-1.6	61	6.5	71	0.7	72
MSCI EAFE Gross	-0.7	23	5.8	27	1.5	26	0.6	52	-1.2	59	7.0	67	1.2	57
eA EAFE Core Equity Net Median	-2.4		4.4		-0.4		0.7		-0.7		7.7		1.6	
FIAM Equity	-5.6	59	0.8	58	1.3	35	2.3	68	0.2	68	--	--	--	--
MSCI ACWI ex US Small Cap Gross	-3.5	27	4.2	32	4.3	28	3.6	54	1.1	52	8.1	86	3.3	84
eA ACWI ex-US Small Cap Equity Net Median	-5.1		1.1		0.4		4.2		1.1		9.9		5.3	
Mondrian	-1.1	69	2.7	81	4.8	52	-0.4	79	-0.8	58	4.8	92	1.2	53
MSCI ACWI ex USA Value Gross	3.4	6	11.5	9	9.6	14	-0.5	79	-1.9	78	5.2	85	0.9	68
MSCI ACWI ex USA Gross	-1.2	70	5.7	66	5.0	51	-0.3	78	-1.3	62	5.5	82	1.4	45
eA ACWI ex-US Value Equity Net Median	-0.2		7.8		5.3		2.0		-0.3		7.3		1.3	
<b>Emerging Markets</b>	<b>-2.7</b>	<b>19</b>	<b>2.5</b>	<b>62</b>	<b>13.0</b>	<b>24</b>	<b>-2.5</b>	<b>53</b>	<b>-3.0</b>	<b>71</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets Gross	-4.1	38	4.7	22	11.6	44	-2.4	52	-2.2	44	1.6	50	2.2	36
InvestorForce All DB Emg Mkt Eq Net Median	-4.5		3.2		10.7		-2.4		-2.4		1.6		1.7	
Parametric Core	-2.7	16	2.5	51	13.1	22	--	--	--	--	--	--	--	--
MSCI Emerging Markets Gross	-4.1	34	4.7	31	11.6	33	-2.4	46	-2.2	56	1.6	72	2.2	62
eA Emg Mkts Equity Net Median	-5.2		2.5		8.2		-2.7		-2.0		2.5		2.6	
<b>Fixed Income</b>	<b>0.8</b>	<b>6</b>	<b>3.2</b>	<b>6</b>	<b>8.1</b>	<b>12</b>	<b>3.4</b>	<b>9</b>	<b>3.8</b>	<b>30</b>	<b>4.8</b>	<b>16</b>	<b>5.1</b>	<b>47</b>
Blended Fixed Income Index <sup>2</sup>	-2.4	60	-0.9	44	5.5	46	2.4	27	3.1	41	2.4	79	4.5	68
InvestorForce All DB Total Fix Inc Net Median	-2.2		-1.3		5.1		1.9		2.9		3.2		5.0	
<b>US Fixed Income</b>	<b>-0.3</b>	<b>12</b>	<b>2.6</b>	<b>7</b>	<b>8.1</b>	<b>15</b>	<b>3.6</b>	<b>7</b>	<b>4.2</b>	<b>30</b>	<b>4.5</b>	<b>23</b>	<b>5.2</b>	<b>40</b>
Blended US Fixed Index <sup>2</sup>	-1.6	31	0.0	26	6.0	36	2.9	17	3.7	36	2.7	68	4.8	53
InvestorForce All DB US Fix Inc Net Median	-2.1		-1.6		4.7		2.0		3.3		3.4		4.8	

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Core Fixed</b>	<b>-1.6</b>	<b>--</b>	<b>0.0</b>	<b>--</b>	<b>4.7</b>	<b>--</b>	<b>2.4</b>	<b>--</b>	<b>3.7</b>	<b>--</b>	<b>3.4</b>	<b>--</b>	<b>4.6</b>	<b>--</b>
<i>BBgBarc US Aggregate TR</i>	-3.0	--	-2.5	--	2.6	--	1.6	--	3.0	--	2.2	--	4.3	--
FIAM Bond	-2.7	41	-1.5	19	4.5	8	2.3	20	3.6	20	3.1	25	4.8	37
Western TRU	0.8	1	3.4	1	5.3	5	--	--	--	--	--	--	--	--
<i>3-Month Libor Total Return USD</i>	0.2	1	0.4	2	0.7	99	0.5	99	0.4	99	0.4	99	1.2	99
<i>BBgBarc US Aggregate TR</i>	-3.0	71	-2.5	74	2.6	71	1.6	72	3.0	60	2.2	79	4.3	78
<i>eA US Core Fixed Inc Net Median</i>	-2.8		-2.1		3.1		1.8		3.1		2.7		4.6	
<b>Opportunistic Credit</b>	<b>2.6</b>	<b>--</b>	<b>8.5</b>	<b>--</b>	<b>15.1</b>	<b>--</b>	<b>6.3</b>	<b>--</b>	<b>6.0</b>	<b>--</b>	<b>10.6</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>BBgBarc BA Intermediate HY</i>	0.6	--	4.7	--	11.8	--	5.4	--	5.1	--	4.8	--	--	--
Angelo Gordon Opportunistic*	2.5	--	7.4	--	7.3	--	4.1	--	--	--	--	--	--	--
Angelo Gordon STAR*	2.0	--	6.2	--	6.2	--	5.6	--	8.6	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	-3.0	--	-2.5	--	2.6	--	1.6	--	3.0	--	2.2	--	4.3	--
Beach Point Select	3.6	8	9.0	11	16.1	21	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY<sup>2</sup></i>	0.6	91	4.7	79	11.8	69	5.4	32	5.1	15	4.8	93	--	--
<i>eA US High Yield Fixed Inc Net Median</i>	1.6		6.6		13.5		4.8		4.0		6.6		6.7	
Brigade Capital	2.5	20	9.8	8	22.8	1	4.9	47	3.2	77	6.4	64	--	--
<i>BBgBarc BA Intermediate HY<sup>2</sup></i>	0.6	91	4.7	79	11.8	69	5.4	32	5.1	15	4.8	93	--	--
<i>50% Barclays HY/ 50% Bank Loan</i>	2.0	36	6.4	55	13.5	51	5.2	38	4.2	41	6.4	65	--	--
<i>eA US High Yield Fixed Inc Net Median</i>	1.6		6.6		13.5		4.8		4.0		6.6		6.7	
TCP Direct Lending VIII***	0.2	99	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	0.6	91	4.7	79	11.8	69	5.4	32	5.1	15	4.8	93	--	--
<i>eA US High Yield Fixed Inc Net Median</i>	1.6		6.6		13.5		4.8		4.0		6.6		6.7	
<b>Global Fixed Income</b>	<b>6.5</b>	<b>1</b>	<b>6.4</b>	<b>9</b>	<b>7.7</b>	<b>45</b>	<b>1.7</b>	<b>55</b>	<b>1.2</b>	<b>75</b>	<b>5.4</b>	<b>16</b>	<b>--</b>	<b>--</b>
<i>BBgBarc Multiverse TR</i>	-6.7	97	-5.7	97	2.8	96	-0.3	74	0.0	87	0.5	91	3.4	99
<i>InvestorForce All DB Gbl Fix Inc Net Median</i>	-1.7		1.0		7.3		1.8		2.0		3.4		5.2	

\* Preliminary return as of 12/31/2016.

\*\* Funded September 2016.

2. See Appendix for Benchmark History.



Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Franklin Templeton	6.5	1	6.4	10	7.7	27	1.7	50	1.2	59	5.4	23	--	--
BBgBarc Multiverse TR	-6.7	82	-5.7	84	2.8	72	-0.3	66	0.0	72	0.5	80	3.4	76
eA All Global Fixed Inc Net Median	-2.0		0.3		5.0		1.4		2.0		3.5		4.4	
<b>Risk Parity</b>	<b>-3.9</b>	<b>--</b>	<b>-1.8</b>	<b>--</b>	<b>12.0</b>	<b>--</b>	<b>2.3</b>	<b>--</b>	<b>5.3</b>	<b>--</b>	<b>5.6</b>	<b>--</b>	<b>--</b>	<b>--</b>
60/40 Russell 3000/BBgBarc US Aggregate	1.3	--	4.2	--	8.8	--	4.7	--	6.4	--	9.7	--	6.3	--
AQR GRP, 10% Volatility	-2.4	--	-0.2	--	10.5	--	0.1	--	2.6	--	4.0	--	--	--
PanAgora	-5.2	--	-3.1	--	13.2	--	4.4	--	--	--	--	--	--	--
60/40 Russell 3000/BBgBarc US Aggregate	1.3	--	4.2	--	8.8	--	4.7	--	6.4	--	9.7	--	6.3	--
60/40 MSCI World/BBgBarc Global Aggregate	0.2	--	3.3	--	6.2	--	3.1	--	4.1	--	7.8	--	--	--
<b>Alternatives</b>	<b>3.8</b>	<b>--</b>	<b>10.2</b>	<b>--</b>	<b>9.2</b>	<b>--</b>	<b>7.6</b>	<b>--</b>	<b>6.9</b>	<b>--</b>	<b>6.9</b>	<b>--</b>	<b>--</b>	<b>--</b>
Alternatives Allocation Index <sup>2</sup>	3.3	--	6.9	--	10.5	--	4.0	--	3.6	--	6.1	--	--	--
Blended Alternatives Index	3.4	--	7.2	--	10.8	--	4.3	--	4.5	--	8.5	--	--	--
<b>Private Equity**</b>	<b>5.0</b>	<b>9</b>	<b>16.0</b>	<b>1</b>	<b>14.7</b>	<b>5</b>	<b>17.6</b>	<b>1</b>	<b>16.9</b>	<b>4</b>	<b>16.4</b>	<b>5</b>	<b>--</b>	<b>--</b>
Russell 3000 +3%	5.0	9	10.7	4	15.7	2	9.4	31	11.4	33	17.7	1	10.1	11
InvestorForce All DB Private Eq Net Median	2.4		4.8		7.4		7.6		9.4		10.0		7.7	
<b>Hedge Fund/Absolute Return</b>	<b>2.3</b>	<b>27</b>	<b>3.8</b>	<b>62</b>	<b>0.9</b>	<b>68</b>	<b>5.4</b>	<b>5</b>	<b>6.8</b>	<b>2</b>	<b>6.4</b>	<b>10</b>	<b>--</b>	<b>--</b>
Libor 1 month +4%	1.2	67	2.3	85	4.5	23	4.4	7	4.3	10	4.3	61	--	--
InvestorForce All DB Hedge Funds Net Median	1.6		4.4		2.2		0.7		1.7		4.8		2.8	
AQR DELTA XN	2.4	34	4.1	42	1.6	69	6.0	28	7.2	26	6.7	44	--	--
Libor 1 month +4%	1.2	48	2.3	60	4.5	52	4.4	38	4.3	47	4.3	64	--	--
eV Alt All Multi-Strategy Median	0.9		3.2		4.8		2.6		3.7		5.7		6.1	
Standard Life GARS*	1.8	39	2.2	60	-1.9	80	--	--	--	--	--	--	--	--
Libor 1 month +4%	1.2	48	2.3	60	4.5	52	4.4	38	4.3	47	4.3	64	--	--
eV Alt All Multi-Strategy Median	0.9		3.2		4.8		2.6		3.7		5.7		6.1	
<b>Inflation Hedge</b>	<b>1.4</b>	<b>--</b>	<b>2.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Blended Inflation Pool Index <sup>2</sup>	1.0	--	1.6	--	--	--	--	--	--	--	--	--	--	--

\* Funded October 2015.

\*\* Returns are one-quarter lag.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Real Estate</b>	<b>2.0</b>	<b>21</b>	<b>3.7</b>	<b>33</b>	<b>8.8</b>	<b>17</b>	<b>11.8</b>	<b>8</b>	<b>11.9</b>	<b>18</b>	<b>11.5</b>	<b>22</b>	<b>5.4</b>	<b>16</b>
NCREIF ODCE	2.1	20	4.2	22	8.8	17	11.8	8	12.1	15	12.2	9	6.2	1
InvestorForce All DB Real Estate Pub Net Median	1.3		2.9		7.1		10.0		10.9		10.7		4.7	
Invesco	2.1	--	3.7	--	8.9	--	11.6	--	11.7	--	11.4	--	5.3	--
NCREIF ODCE	2.1	--	4.2	--	8.8	--	11.8	--	12.1	--	12.2	--	6.2	--
Invesco US Val IV*	1.0	--	4.6	--	6.5	--	--	--	--	--	--	--	--	--
NCREIF ODCE	2.1	--	4.2	--	8.8	--	11.8	--	12.1	--	12.2	--	6.2	--
NCREIF CEVA 1Q Lag - NET	2.5	--	4.8	--	13.1	--	15.0	--	15.1	--	--	--	--	--
<b>Private Real Asset**</b>	<b>0.0</b>	<b>--</b>	<b>0.0</b>	<b>--</b>	<b>44.6</b>	<b>--</b>	<b>17.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Blended Real Asset Index	1.0	--	2.4	--	6.4	--	5.6	--	5.6	--	--	--	--	--
<b>Liquid Pool</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Blended Real Asset Index	1.0	--	2.4	--	6.4	--	5.6	--	5.6	--	--	--	--	--
SSgA Custom Real Asset***	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Blended Real Asset Index <sup>2</sup>	1.0	--	2.4	--	6.4	--	5.6	--	5.6	--	--	--	--	--
<b>TIPS</b>	<b>-0.6</b>	<b>--</b>	<b>0.6</b>	<b>--</b>	<b>4.9</b>	<b>--</b>	<b>1.8</b>	<b>--</b>	<b>1.6</b>	<b>--</b>	<b>0.6</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc US TIPS TR	-2.4	--	-1.5	--	4.7	--	1.6	--	2.3	--	0.9	--	4.4	--
Brown Brothers Harriman	-0.6	16	0.6	17	4.9	34	1.8	12	1.6	66	0.6	72	--	--
BBgBarc US TIPS TR	-2.4	57	-1.5	67	4.7	49	1.6	25	2.3	30	0.9	45	4.4	51
eA TIPS / Infl Indexed Fixed Inc Net Median	-2.3		-1.4		4.6		1.4		1.9		0.8		4.4	
<b>Cash</b>	<b>0.2</b>	<b>--</b>	<b>0.4</b>	<b>--</b>	<b>0.8</b>	<b>--</b>	<b>1.0</b>	<b>--</b>	<b>0.8</b>	<b>--</b>	<b>0.7</b>	<b>--</b>	<b>0.9</b>	<b>--</b>
91 Day T-Bills	0.1	--	0.2	--	0.3	--	0.2	--	0.1	--	0.1	--	0.7	--
General Account	0.2	--	0.5	--	1.0	--	1.5	--	1.2	--	0.7	--	1.3	--
Treasury & LAIF	-0.2	--	-0.1	--	0.9	--	0.8	--	0.8	--	0.8	--	0.9	--
91 Day T-Bills	0.1	--	0.2	--	0.3	--	0.2	--	0.1	--	0.1	--	0.7	--

\* Funded December 2015.

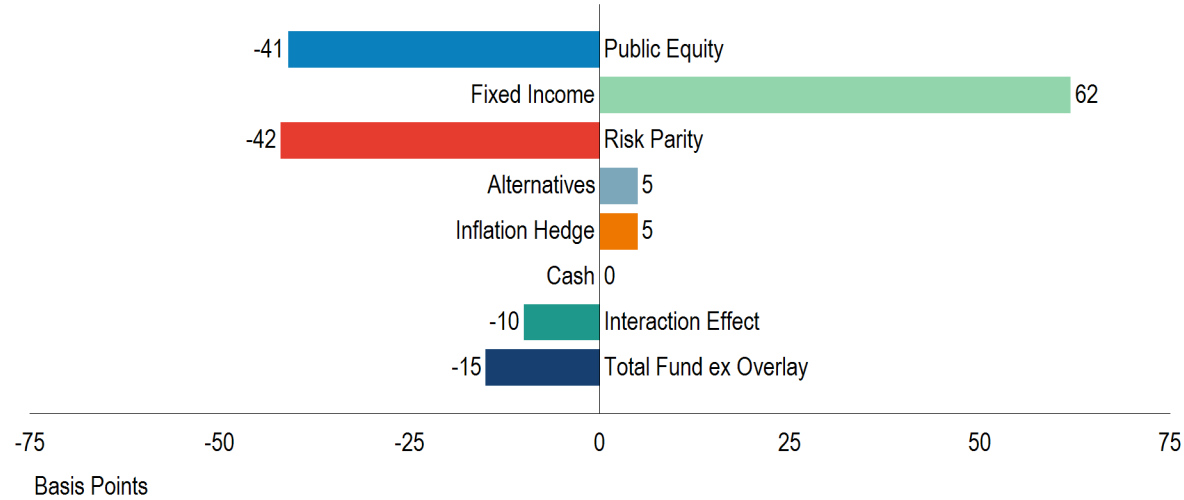
\*\* Returns are one-quarter lag.

\*\*\* Funded October 2016.

2. See Appendix for Benchmark History.

Total Fund ex Overlay  
Performance Attribution

Period Ending: December 31, 2016

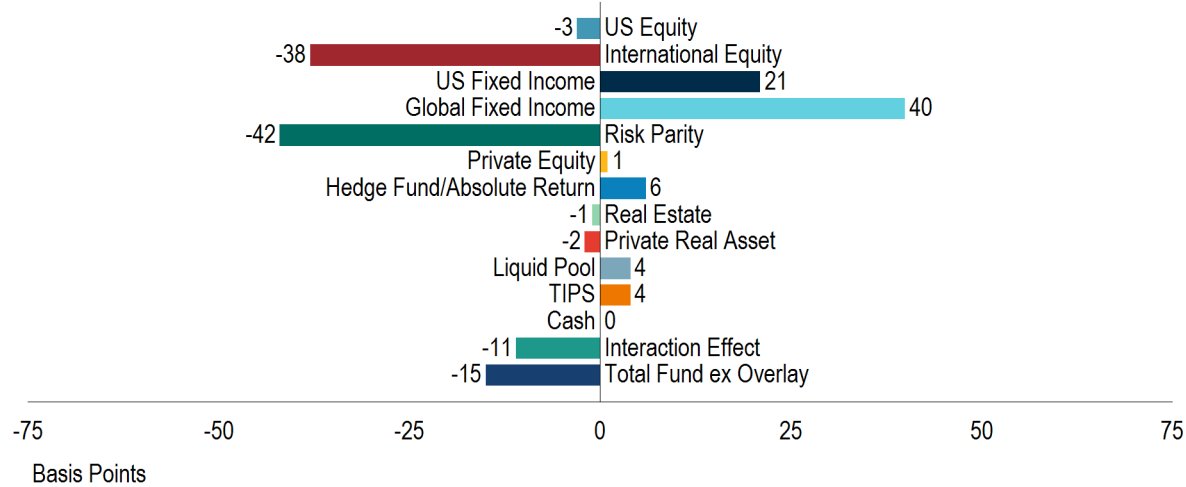


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction*	Total Effects
Public Equity	1.05%	1.91%	-0.87%	-0.41%	0.01%	-0.01%	-0.41%
Fixed Income	0.78%	-2.44%	3.22%	0.62%	0.07%	-0.07%	0.62%
Risk Parity	-3.90%	1.34%	-5.24%	-0.42%	0.00%	0.01%	-0.40%
Alternatives	3.75%	3.40%	0.35%	0.05%	-0.01%	-0.02%	0.01%
Inflation Hedge	1.45%	1.05%	0.40%	0.05%	-0.02%	-0.02%	0.01%
Cash	0.19%	0.10%	0.09%	0.00%	0.02%	0.00%	0.02%
<b>Total</b>	<b>0.95%</b>	<b>1.10%</b>	<b>-0.15%</b>	<b>-0.10%</b>	<b>0.06%</b>	<b>-0.10%</b>	<b>-0.15%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

Total Fund ex Overlay  
Performance Attribution

Period Ending: December 31, 2016



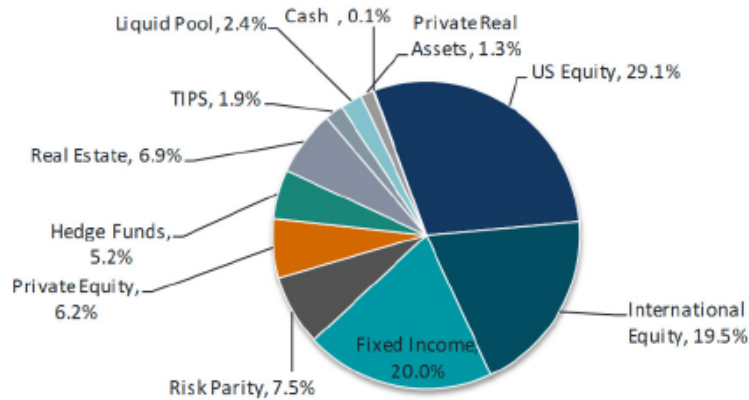
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction* Effects	Total Effects
US Equity	4.12%	4.21%	-0.09%	-0.03%	0.02%	0.00%	-0.01%
International Equity	-3.51%	-1.52%	-1.99%	-0.38%	-0.01%	0.00%	-0.40%
US Fixed Income	-0.33%	-1.63%	1.31%	0.21%	0.05%	-0.02%	0.23%
Global Fixed Income	6.49%	-6.68%	13.17%	0.40%	0.01%	-0.03%	0.38%
Risk Parity	-3.90%	1.34%	-5.24%	-0.42%	0.00%	0.01%	-0.40%
Private Equity	5.00%	4.97%	0.03%	0.01%	-0.02%	-0.03%	-0.04%
Hedge Fund/Absolute Return	2.28%	1.17%	1.11%	0.06%	0.00%	0.00%	0.06%
Real Estate	2.04%	2.11%	-0.07%	-0.01%	0.00%	0.00%	-0.01%
Private Real Asset	0.00%	0.96%	-0.96%	-0.02%	0.00%	0.00%	-0.02%
Liquid Pool	2.41%	0.96%	1.46%	0.04%	0.00%	-0.04%	0.00%
TIPS	-0.59%	-2.41%	1.82%	0.04%	0.00%	0.00%	0.04%
Cash	0.19%	0.10%	0.09%	0.00%	0.02%	0.00%	0.02%
<b>Total</b>	<b>0.95%</b>	<b>1.10%</b>	<b>-0.15%</b>	<b>-0.10%</b>	<b>0.06%</b>	<b>-0.11%</b>	<b>-0.15%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

Total Fund  
Asset Allocation Analysis

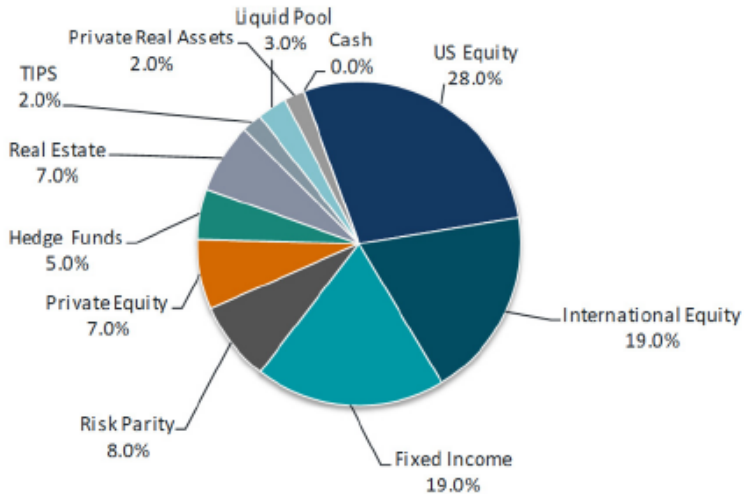
Period Ending: December 31, 2016

Current w/Overlay



ASSET ALLOCATION	MARKET VALUE	W/OVERLAY	W/O OVERLAY
US Equity	1,076,604,752	29.1%	29.9%
International Equity	720,330,505	19.5%	18.7%
Fixed Income	737,833,919	20.0%	16.8%
Risk Parity	275,358,758	7.5%	7.5%
Private Equity	228,518,673	6.2%	6.2%
Hedge Funds	190,830,665	5.2%	5.2%
Real Estate	254,284,737	6.9%	6.9%
TIPS	70,531,255	1.9%	1.9%
Liquid Pool	87037479	2.4%	2.4%
Private Real Assets	49,679,381	1.3%	1.3%
Cash	2,850,847	0.1%	3.3%
<b>TOTAL</b>	<b>3,693,860,970</b>	<b>100.0%</b>	<b>100.0%</b>

Target



ASSET ALLOCATION	W/OVERLAY	TARGET	DIFF
US Equity	29.1%	28.0%	1.1%
International Equity	19.5%	19.0%	0.5%
Fixed Income	20.0%	19.0%	1.0%
Risk Parity	7.5%	8.0%	-0.5%
Private Equity	6.2%	7.0%	-0.8%
Hedge Funds	5.2%	5.0%	0.2%
Real Estate	6.9%	7.0%	-0.1%
TIPS	1.9%	2.0%	-0.1%
Liquid Pool	2.4%	3.0%	-0.6%
Private Real Assets	1.3%	2.0%	-0.7%
Cash	0.1%	0.0%	0.1%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.0%</b>





**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	4.9%	28	6.6%	67	0.7	34	0.0	36	1.1%	46
Policy Index	4.8%	29	7.1%	83	0.7	43	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	4.1%	--	6.2%	--	0.6	--	-0.1	--	1.2%	--

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	8.9%	19	6.9%	74	1.3	41	0.0	68	1.0%	22
Policy Index	9.0%	15	7.2%	82	1.2	47	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	8.1%	--	6.3%	--	1.2	--	0.1	--	1.2%	--

**Statistics Summary**

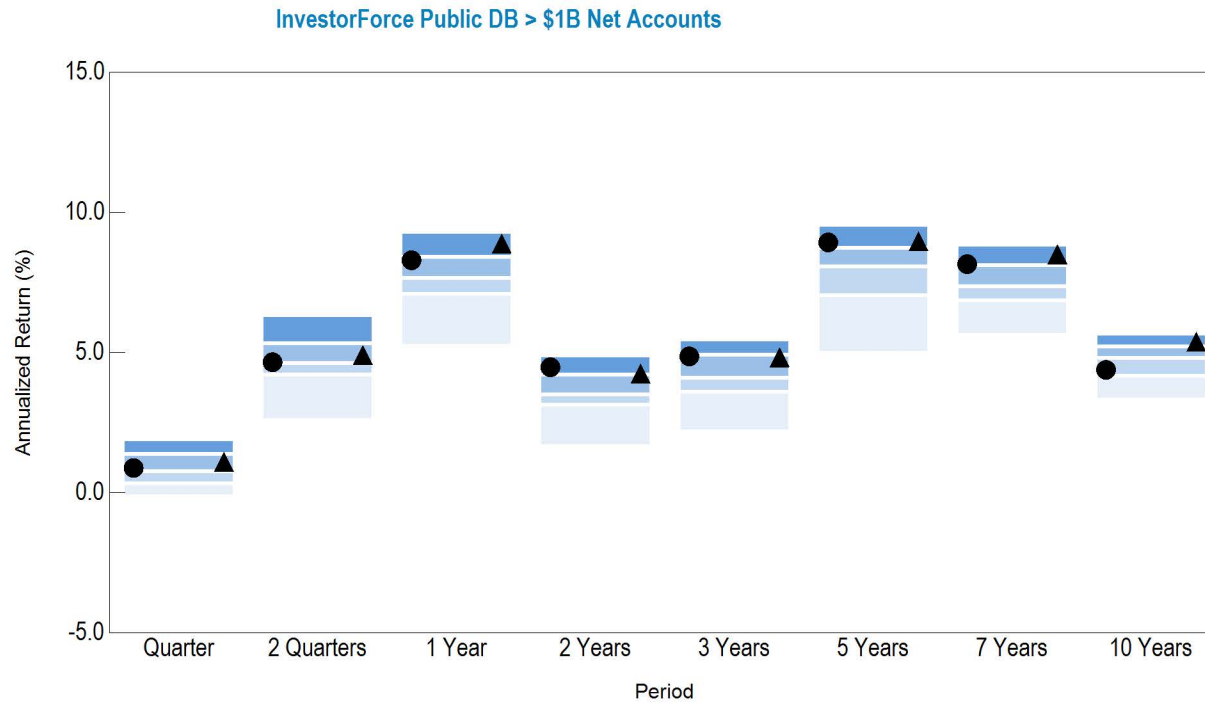
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	0.8%	0.4%	1.8	1.9	0.4%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%
General Account	1.2%	0.6%	1.8	1.8	0.6%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%
Treasury & LAIF	0.8%	0.6%	1.3	1.3	0.6%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%

**Statistics Summary**

**5 Years**

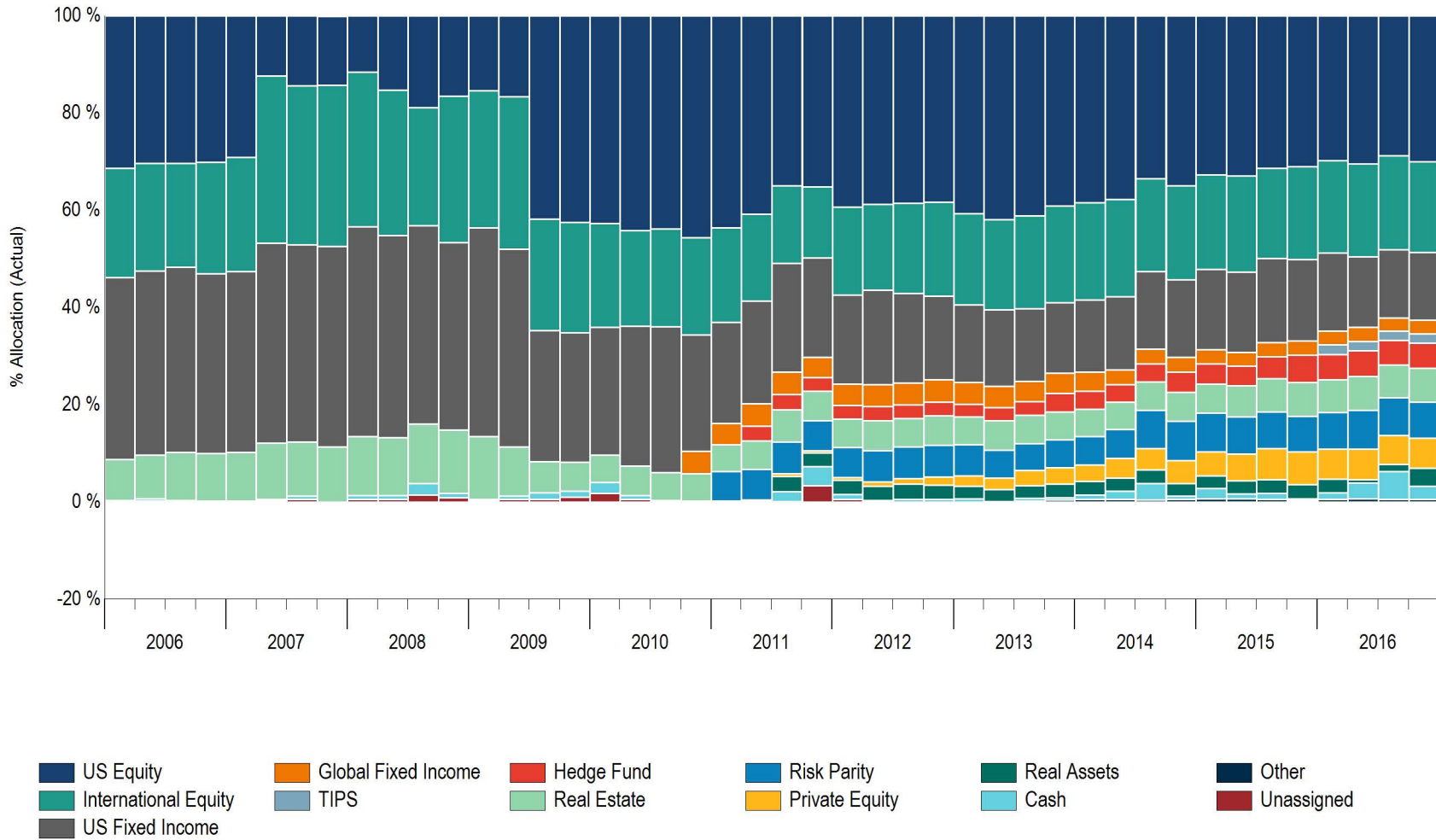
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	0.7%	0.3%	2.1	2.1	0.3%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%
General Account	0.7%	0.5%	1.4	1.4	0.5%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%
Treasury & LAIF	0.8%	0.4%	1.6	1.6	0.4%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%

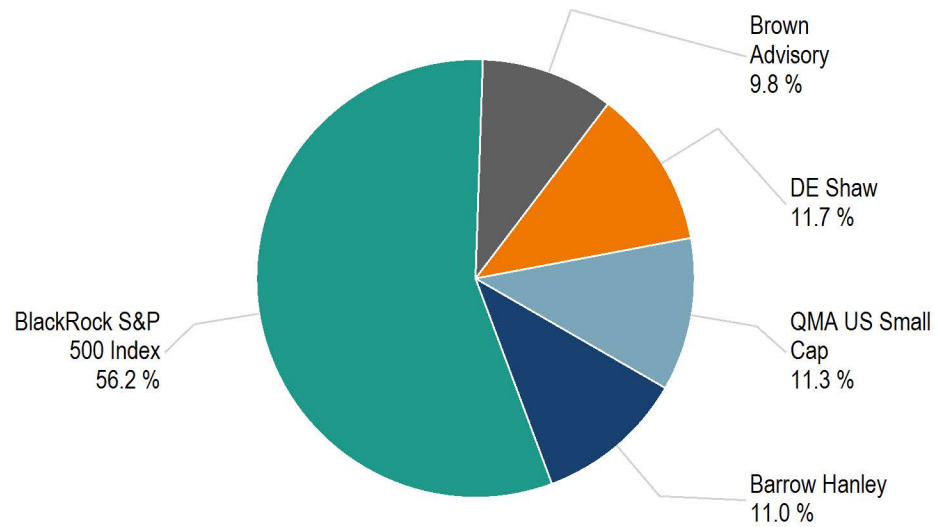


	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.9	6.3	9.3	4.9	5.4	9.5	8.8	5.7
25th Percentile	1.4	5.4	8.4	4.2	4.9	8.8	8.1	5.2
Median	0.8	4.6	7.7	3.5	4.1	8.1	7.4	4.8
75th Percentile	0.3	4.2	7.1	3.2	3.6	7.1	6.9	4.2
95th Percentile	-0.1	2.6	5.3	1.7	2.2	5.0	5.6	3.3
# of Portfolios	62	62	62	61	60	60	59	55
● Total Fund	0.9 (48)	4.7 (50)	8.3 (33)	4.5 (22)	4.9 (28)	8.9 (19)	8.2 (25)	4.4 (67)
▲ Policy Index	1.1 (39)	4.9 (43)	8.9 (13)	4.3 (25)	4.8 (29)	9.0 (15)	8.5 (13)	5.4 (16)

Total Fund  
Asset Allocation History

Period Ending: December 31, 2016





	Actual \$	Actual %	Manager Contribution to Excess Return %
Barrow Hanley	\$121,655,270	11.0%	0.2%
BlackRock S&P 500 Index	\$620,849,247	56.2%	0.0%
Brown Advisory	\$108,744,142	9.8%	-0.6%
DE Shaw	\$129,387,705	11.7%	-0.0%
QMA US Small Cap	\$124,333,868	11.3%	0.2%
Transition Account	\$4,707	0.0%	0.0%
Actual vs. Policy Weight Difference			0.1%
<b>Total</b>	<b>\$1,104,974,940</b>	<b>100.0%</b>	<b>-0.1%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	7.2%	11.1%	0.6	-0.9	0.8%
Blended US Equity Index	8.0%	11.2%	0.7	--	0.0%
Russell 3000	8.4%	11.0%	0.8	0.5	0.9%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	8.2%	10.7%	0.8	-0.5	0.8%
Russell 1000	8.6%	10.8%	0.8	--	0.0%
Barrow Hanley	7.3%	11.7%	0.6	-0.4	3.3%
Russell 1000 Value	8.6%	10.9%	0.8	--	0.0%
BlackRock S&P 500 Index	8.9%	10.7%	0.8	0.7	0.0%
S&P 500	8.9%	10.7%	0.8	--	0.0%
Brown Advisory	3.5%	11.2%	0.3	-1.2	4.3%
Russell 1000 Growth	8.6%	11.3%	0.7	--	0.0%
DE Shaw	9.7%	11.2%	0.9	0.5	2.2%
Russell 1000	8.6%	10.8%	0.8	--	0.0%
Small Cap Equity	4.3%	15.2%	0.3	-0.9	2.9%
Russell 2000	6.7%	16.0%	0.4	--	0.0%



**Statistics Summary**

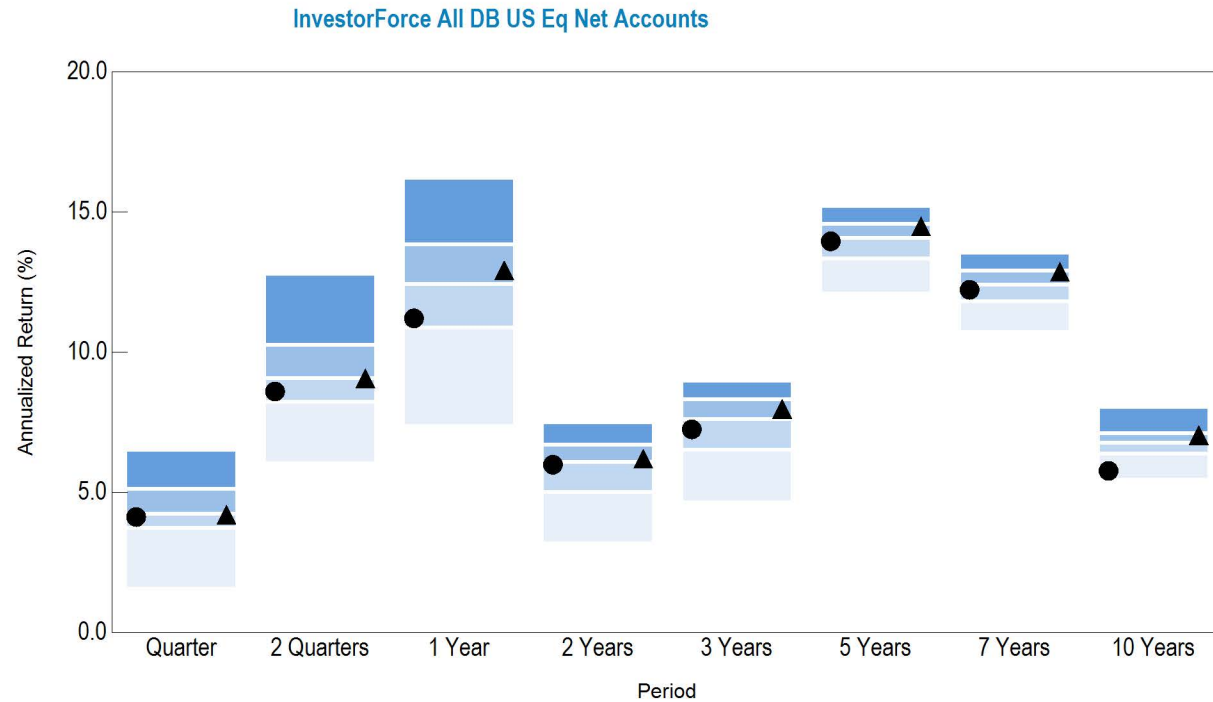
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	14.0%	10.8%	1.3	-0.6	0.9%
Blended US Equity Index	14.5%	10.9%	1.3	--	0.0%
Russell 3000	14.7%	10.6%	1.4	0.2	0.8%

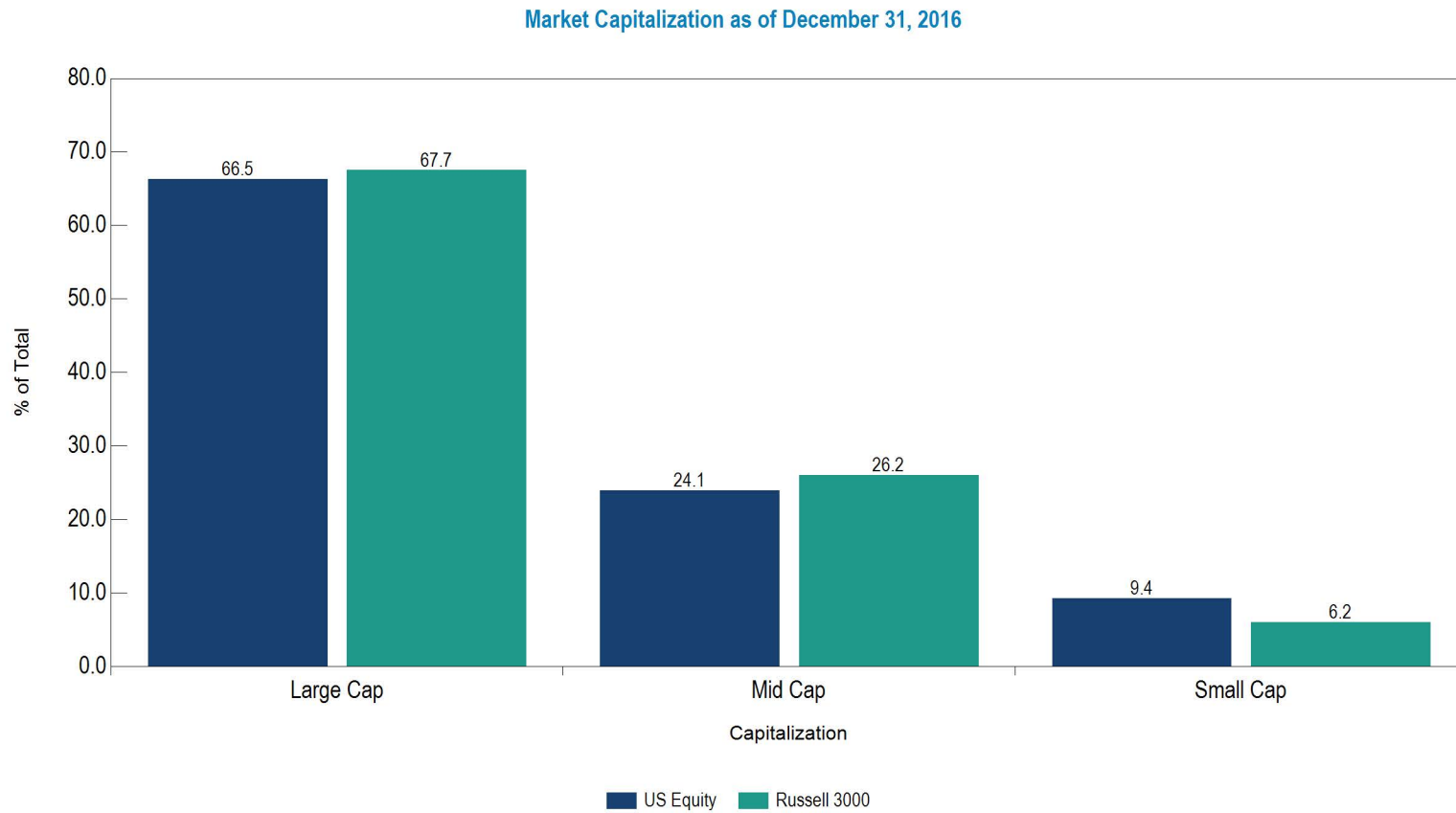
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	14.4%	10.5%	1.4	-0.3	0.9%
Russell 1000	14.7%	10.5%	1.4	--	0.0%
Barrow Hanley	14.6%	11.1%	1.3	-0.1	3.0%
Russell 1000 Value	14.8%	10.6%	1.4	--	0.0%
DE Shaw	16.0%	11.0%	1.4	0.7	2.0%
Russell 1000	14.7%	10.5%	1.4	--	0.0%
Small Cap Equity	12.8%	14.1%	0.9	-0.6	2.9%
Russell 2000	14.5%	14.6%	1.0	--	0.0%



	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	6.5	12.8	16.2	7.5	9.0	15.2	13.5	8.0
25th Percentile	5.1	10.3	13.9	6.7	8.3	14.6	12.9	7.1
Median	4.2	9.1	12.5	6.1	7.6	14.1	12.4	6.8
75th Percentile	3.8	8.2	10.9	5.0	6.5	13.4	11.8	6.4
95th Percentile	1.6	6.0	7.4	3.2	4.7	12.1	10.7	5.5
# of Portfolios	683	679	678	663	638	540	458	360
● US Equity	4.1 (58)	8.6 (68)	11.2 (72)	6.0 (54)	7.2 (58)	14.0 (56)	12.2 (62)	5.8 (91)
▲ Blended US Equity Index	4.2 (54)	9.1 (52)	12.9 (40)	6.2 (47)	8.0 (39)	14.5 (30)	12.9 (28)	7.0 (30)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,346	2,976
Weighted Avg. Market Cap. (\$B)	108.7	115.4
Median Market Cap. (\$B)	2.2	1.5
Price To Earnings	23.1	22.7
Price To Book	4.3	3.7
Price To Sales	3.5	3.2
Return on Equity (%)	19.4	16.4
Yield (%)	1.8	2.0
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	2.6%
MICROSOFT	1.6%
AMAZON.COM	1.6%
JOHNSON & JOHNSON	1.2%
ALPHABET 'C'	1.2%
FACEBOOK CLASS A	1.2%
JP MORGAN CHASE & CO.	1.2%
EXXON MOBIL	1.1%
BERKSHIRE HATHAWAY 'B'	1.1%
VISA 'A'	1.0%

Best Performers

	Return %
ALTISOURCE ASSET MAN. (AAMC)	189.2%
AK STEEL HLDG.	111.4%
ERA GROUP (ERA)	110.8%
FRED'S 'A'	106.1%
PIER 1 IMPORTS (PIR)	104.8%
REP.FIRST BANC.	103.2%
WESTMORELAND COAL	99.4%
CIVEO	93.0%
KEMET	85.7%
INTREPID POTASH	84.1%

Worst Performers

	Return %
OPHTHOTECH (OPHT)	-89.5%
ADEPTUS HEALTH CL.A	-82.3%
PROTEON THERAPEUTICS	-79.6%
ANTHERA PHARMACEUTICALS	-79.4%
OVASCIENCE	-78.6%
SENOMYX	-77.5%
TANDEM DIABETES CARE	-71.9%
BIOSCRIP (BIOS)	-64.0%
DYNAVAX TECHNOLOGIES	-62.3%
INVUITY	-58.1%

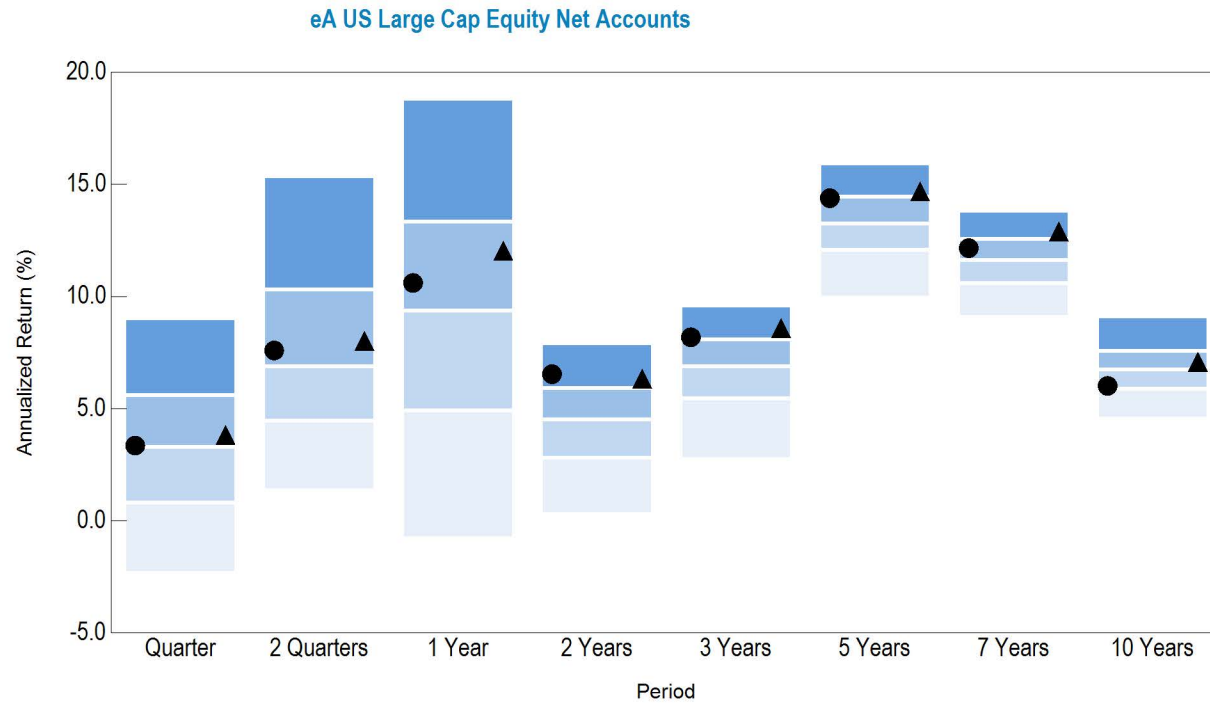
US Equity Performance Attribution vs. Russell 3000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	0.0%	0.0%	8.7%	7.4%	6.2%	6.8%			
Materials	0.0%	0.0%	0.0%	0.0%	4.4%	5.2%	4.0%	3.3%			
Industrials	0.0%	0.0%	0.0%	0.0%	7.9%	8.2%	10.8%	10.5%			
Consumer Discretionary	-0.2%	-0.2%	0.0%	0.0%	1.4%	3.0%	12.4%	12.6%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	-1.8%	-1.6%	9.2%	8.8%			
Health Care	0.1%	0.1%	0.0%	0.0%	-3.6%	-4.2%	14.3%	14.1%			
Financials	0.0%	0.0%	0.0%	0.0%	20.9%	20.6%	13.2%	13.4%			
Information Technology	-0.1%	0.0%	0.0%	0.0%	1.0%	1.2%	21.7%	20.5%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	3.4%	5.3%	2.1%	2.4%			
Utilities	0.0%	0.0%	0.0%	0.0%	1.1%	0.8%	2.5%	3.3%			
Real Estate	0.2%	0.2%	0.1%	-0.1%	0.7%	-3.0%	2.9%	4.3%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.6%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	4.0%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>-0.1%</b>	<b>=</b>	<b>0.0%</b>	<b>+</b>	<b>0.0%</b>	<b>+</b>	<b>-0.1%</b>	<b>4.2%</b>	<b>4.2%</b>	<b>100.0%</b>	<b>100.0%</b>

U.S. Effective Style Map







	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	9.0	15.4	18.8	7.9	9.6	15.9	13.8	9.1
25th Percentile	5.6	10.3	13.4	5.9	8.1	14.5	12.6	7.6
Median	3.3	6.9	9.4	4.5	6.9	13.3	11.7	6.8
75th Percentile	0.8	4.5	4.9	2.8	5.5	12.1	10.6	5.9
95th Percentile	-2.3	1.4	-0.8	0.3	2.8	10.0	9.1	4.6
# of Portfolios	586	586	584	569	558	502	468	400
● Large Cap Equity	3.3 (50)	7.6 (45)	10.6 (40)	6.5 (18)	8.2 (24)	14.4 (27)	12.2 (37)	6.0 (74)
▲ Russell 1000	3.8 (43)	8.0 (41)	12.1 (32)	6.3 (20)	8.6 (16)	14.7 (21)	12.9 (18)	7.1 (40)

Characteristics

	Portfolio	Russell 1000
Number of Holdings	2,238	999
Weighted Avg. Market Cap. (\$B)	122.5	125.2
Median Market Cap. (\$B)	2.7	8.3
Price To Earnings	22.9	22.4
Price To Book	4.5	4.1
Price To Sales	3.6	3.3
Return on Equity (%)	19.9	18.0
Yield (%)	1.9	2.0
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	3.0%
MICROSOFT	1.8%
AMAZON.COM	1.8%
JOHNSON & JOHNSON	1.4%
ALPHABET 'C'	1.4%
FACEBOOK CLASS A	1.4%
JP MORGAN CHASE & CO.	1.3%
EXXON MOBIL	1.2%
BERKSHIRE HATHAWAY 'B'	1.2%
VISA 'A'	1.2%

Best Performers

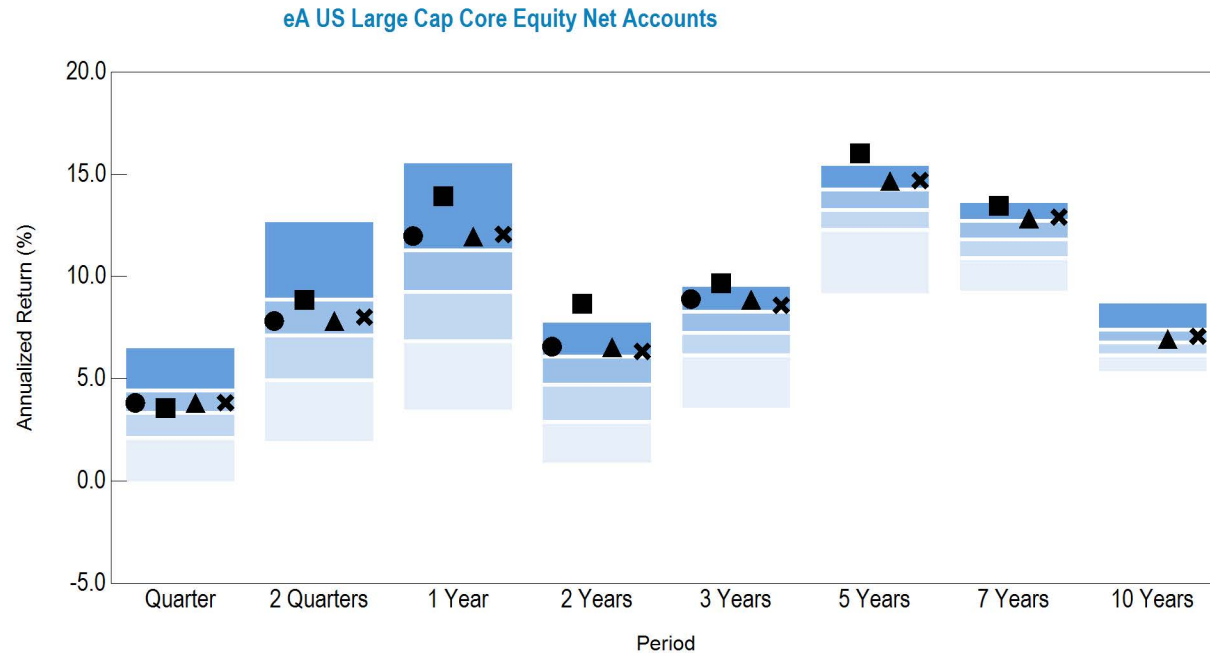
	Return %
ALTISOURCE ASSET MAN.	189.2%
AK STEEL HLDG.	111.4%
ERA GROUP (ERA)	110.8%
FRED'S 'A' (FRED)	106.1%
PIER 1 IMPORTS	104.8%
REP.FIRST BANC. (FRBK)	103.2%
WESTMORELAND COAL	99.4%
CIVEO	93.0%
KEMET (KEM)	85.7%
INTREPID POTASH (IPI)	84.1%

Worst Performers

	Return %
OPHTHOTECH	-89.5%
ADEPTUS HEALTH CL.A	-82.3%
PROTEON THERAPEUTICS	-79.6%
ANTHERA PHARMACEUTICALS (ANTH)	-79.4%
OVASCIENCE	-78.6%
SENOMYX	-77.5%
TANDEM DIABETES CARE	-71.9%
BIOSCRIP (BIOS)	-64.0%
DYNAVAX TECHNOLOGIES (DVAX)	-62.3%
INVUITY (IVTY)	-58.1%

Large Cap Equity Performance Attribution vs. Russell 1000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.1%	0.0%	0.0%	8.0%	7.0%	6.6%	7.0%			
Materials	0.0%	0.0%	0.0%	0.0%	4.2%	4.5%	3.8%	3.2%			
Industrials	-0.1%	-0.1%	0.0%	0.0%	7.0%	7.7%	10.4%	10.2%			
Consumer Discretionary	-0.2%	-0.2%	0.0%	0.0%	0.6%	2.5%	12.3%	12.6%			
Consumer Staples	-0.1%	0.0%	0.0%	0.0%	-2.0%	-1.8%	9.9%	9.3%			
Health Care	0.0%	0.0%	0.0%	0.0%	-4.1%	-4.1%	14.4%	14.1%			
Financials	0.0%	0.0%	0.0%	0.0%	20.6%	20.4%	12.8%	13.1%			
Information Technology	-0.1%	-0.1%	0.0%	0.0%	0.6%	1.0%	22.0%	20.7%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	3.3%	5.2%	2.3%	2.6%			
Utilities	0.0%	0.0%	0.0%	0.0%	0.2%	0.3%	2.4%	3.2%			
Real Estate	0.1%	0.0%	0.1%	0.0%	-4.1%	-4.2%	2.3%	4.0%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.7%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	4.0%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>-0.4%</b>	<b>=</b>	<b>-0.4%</b>	<b>+</b>	<b>0.0%</b>	<b>+</b>	<b>0.0%</b>	<b>3.4%</b>	<b>3.8%</b>	<b>100.0%</b>	<b>100.0%</b>



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	6.6	12.7	15.6	7.8	9.6	15.5	13.7	8.8
25th Percentile	4.4	8.9	11.3	6.1	8.3	14.3	12.7	7.4
Median	3.4	7.1	9.3	4.7	7.3	13.3	11.8	6.8
75th Percentile	2.1	5.0	6.9	2.9	6.2	12.3	10.9	6.2
95th Percentile	-0.1	1.9	3.4	0.8	3.5	9.1	9.2	5.3
# of Portfolios	177	177	177	172	169	150	135	120
● BlackRock S&P 500 Index	3.8 (42)	7.8 (39)	12.0 (20)	6.6 (18)	8.9 (14)	-- (--)	-- (--)	-- (--)
■ DE Shaw	3.6 (47)	8.9 (26)	13.9 (9)	8.7 (4)	9.7 (5)	16.0 (2)	13.4 (8)	-- (--)
▲ S&P 500	3.8 (42)	7.8 (39)	12.0 (21)	6.5 (18)	8.9 (15)	14.7 (20)	12.8 (21)	6.9 (41)
✕ Russell 1000	3.8 (42)	8.0 (38)	12.1 (20)	6.3 (21)	8.6 (18)	14.7 (19)	12.9 (18)	7.1 (36)

**Characteristics**

	Portfolio	S&P 500
Number of Holdings	506	505
Weighted Avg. Market Cap. (\$B)	138.5	138.5
Median Market Cap. (\$B)	18.8	18.8
Price To Earnings	23.1	22.3
Price To Book	4.7	4.4
Price To Sales	3.5	3.3
Return on Equity (%)	20.8	18.5
Yield (%)	2.1	2.1
Beta (holdings; domestic)	1.0	1.0

**Top Holdings**

APPLE	3.2%
MICROSOFT	2.5%
EXXON MOBIL	1.9%
JOHNSON & JOHNSON	1.6%
BERKSHIRE HATHAWAY 'B'	1.6%
JP MORGAN CHASE & CO.	1.6%
AMAZON.COM	1.5%
GENERAL ELECTRIC	1.5%
FACEBOOK CLASS A	1.4%
AT&T	1.4%

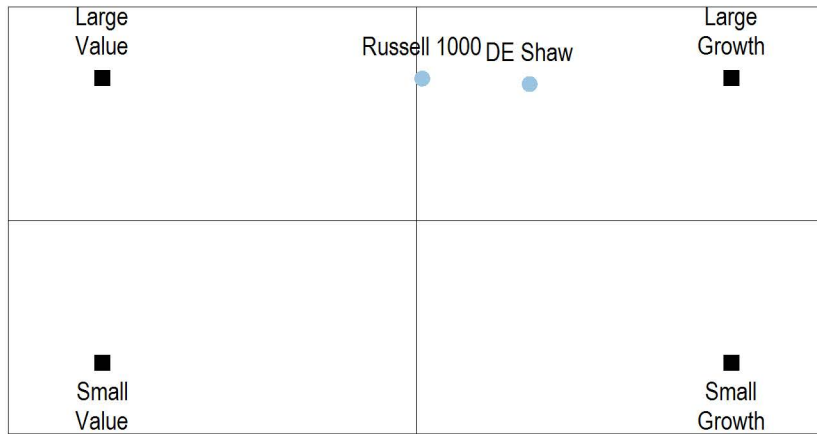
**Best Performers**

	Return %
NVIDIA (NVDA)	56.0%
KEYCORP	50.9%
GOLDMAN SACHS GP. (GS)	48.9%
REGIONS FINL.NEW (RF)	46.1%
CITIZENS FINANCIAL GROUP	44.8%
COMERICA (CMA)	44.4%
LINCOLN NATIONAL	41.8%
BANK OF AMERICA	41.7%
ZIONS BANCORP.	39.0%
UNITED CONTINENTAL HDG.	38.9%

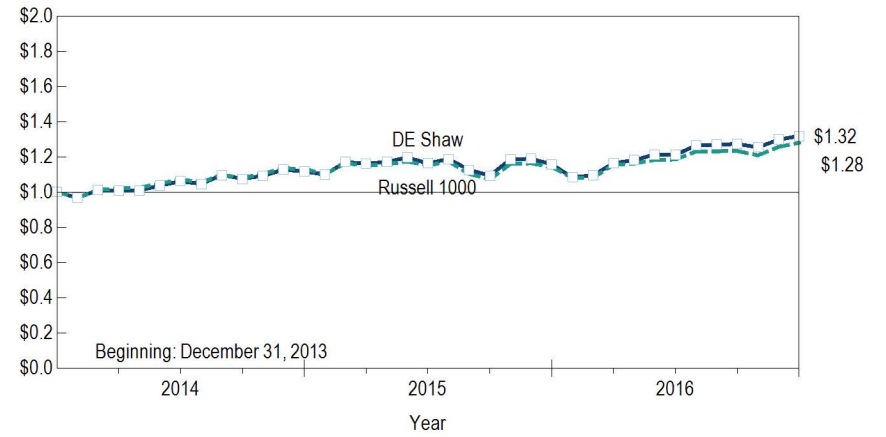
**Worst Performers**

	Return %
ILLUMINA	-29.5%
MALLINCKRODT	-28.6%
TRIPADVISOR 'A' (TRIP)	-26.6%
UNDER ARMOUR CL C ORD (UA)	-25.7%
UNDER ARMOUR 'A' (UAA)	-24.9%
CERNER	-23.3%
EDWARDS LIFESCIENCES (EW)	-22.3%
SOUTHWESTERN ENERGY	-21.8%
COTY CL.A	-21.6%
NIELSEN	-21.1%

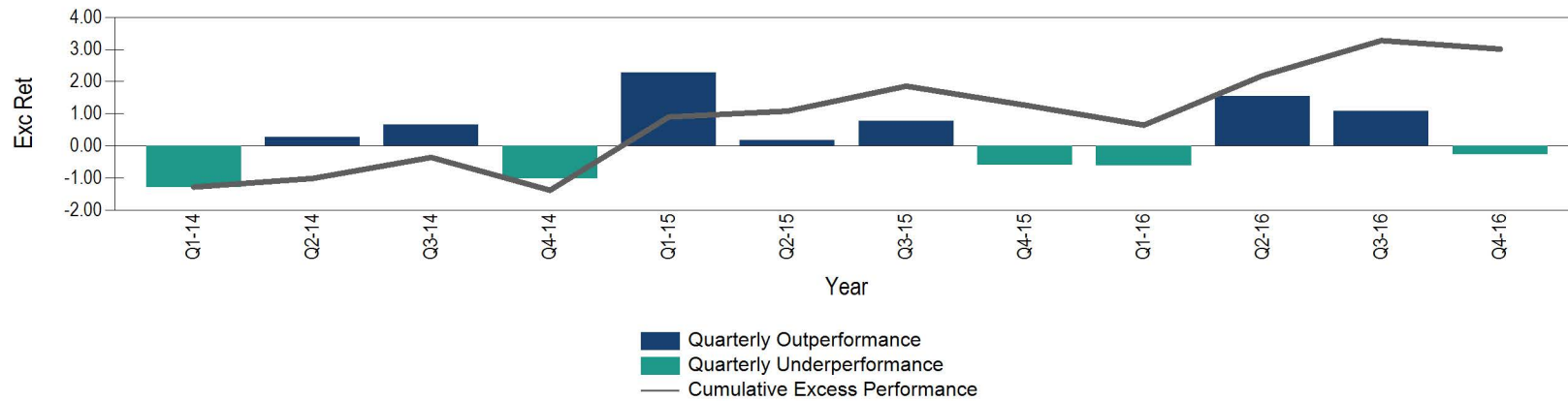
U.S. Effective Style Map

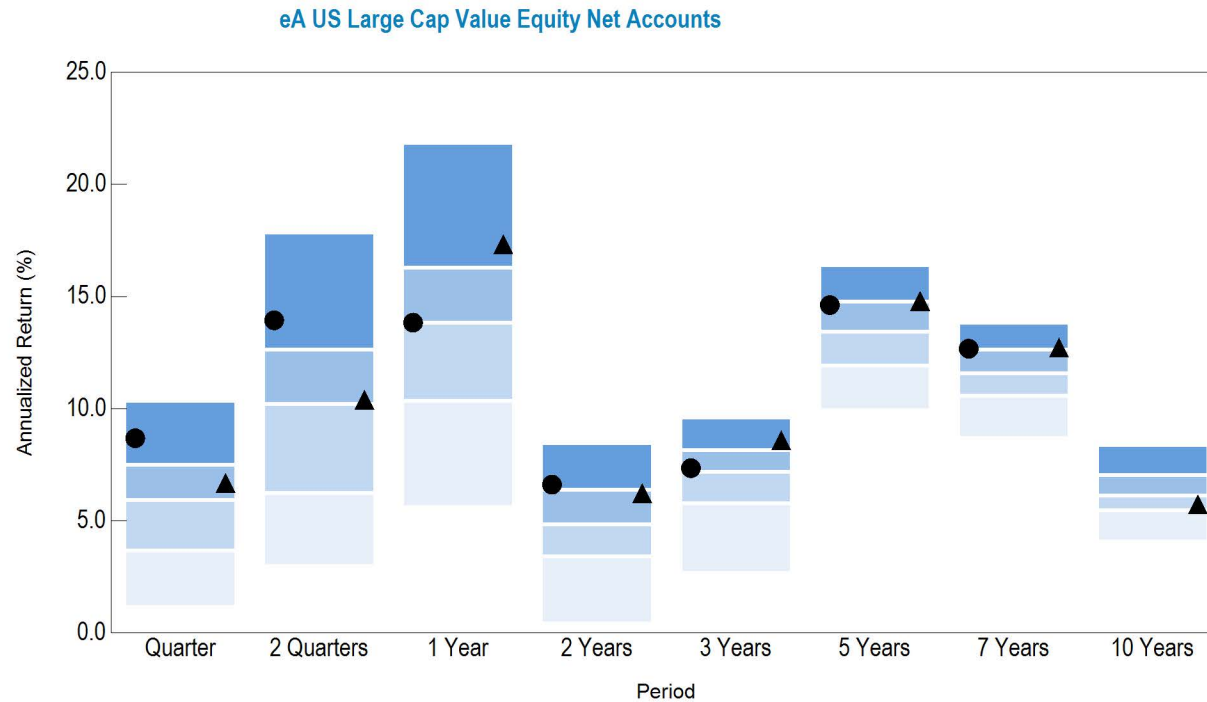


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	10.3	17.8	21.8	8.4	9.6	16.4	13.8	8.4
25th Percentile	7.5	12.6	16.3	6.4	8.2	14.8	12.7	7.0
Median	5.9	10.2	13.8	4.9	7.2	13.4	11.6	6.1
75th Percentile	3.7	6.3	10.4	3.4	5.8	11.9	10.6	5.5
95th Percentile	1.2	3.0	5.6	0.4	2.7	9.9	8.7	4.1
# of Portfolios	225	225	225	219	212	190	179	150
● Barrow Hanley	8.7 (14)	13.9 (17)	13.8 (50)	6.6 (22)	7.3 (47)	14.6 (29)	12.7 (25)	-- (--)
▲ Russell 1000 Value	6.7 (42)	10.4 (49)	17.3 (19)	6.2 (28)	8.6 (19)	14.8 (25)	12.7 (24)	5.7 (66)



Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	76	696
Weighted Avg. Market Cap. (\$B)	90.5	114.0
Median Market Cap. (\$B)	36.8	8.0
Price To Earnings	17.3	19.8
Price To Book	2.9	2.4
Price To Sales	2.3	2.8
Return on Equity (%)	16.0	11.6
Yield (%)	2.3	2.4
Beta (holdings; domestic)	1.1	1.0

Top Holdings

CITIGROUP	2.6%
JP MORGAN CHASE & CO.	2.4%
BANK OF AMERICA	2.2%
CAPITAL ONE FINL.	2.0%
WELLS FARGO & CO	1.9%
UNITEDHEALTH GROUP	1.8%
PNC FINL.SVS.GP.	1.7%
HESS	1.7%
CHEVRON	1.7%
CONOCOPHILLIPS	1.7%

Best Performers

	Return %
KEYCORP (KEY)	50.9%
SLM (SLM)	47.5%
BANK OF AMERICA (BAC)	41.7%
SEAWORLD ENTERTAINMENT (SEAS)	40.4%
FAIRMONT SANTROL HDG. (FMSA)	39.0%
FIFTH THIRD BANCORP (FITB)	32.5%
SPIRIT AEROSYSTEMS CL.A (SPR)	31.2%
PNC FINL.SVS.GP. (PNC)	30.6%
JP MORGAN CHASE & CO. (JPM)	30.5%
DISCOVER FINANCIAL SVS. (DFS)	28.2%

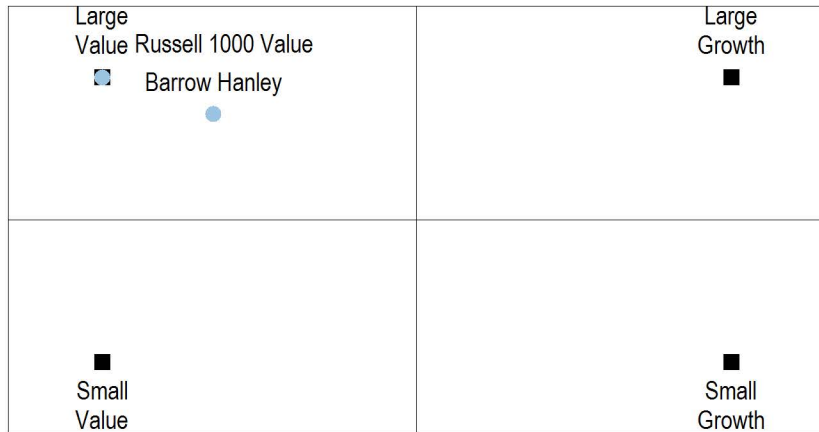
Worst Performers

	Return %
NIELSEN (NLSN)	-21.1%
COCA COLA ENTS. (CCE)	-20.9%
TEVA PHARM.INDS.ADR 1:1 (TEVA)	-20.5%
MEDTRONIC (MDT)	-17.1%
HANESBRANDS (HBI)	-14.2%
CVS HEALTH (CVS)	-10.9%
WILLIS GROUP HOLDINGS (WLTW)	-7.5%
FIDELITY NAT.FINANCIAL (FNF)	-7.3%
CARDINAL HEALTH (CAH)	-6.8%
STANLEY BLACK & DECKER (SWK)	-6.3%

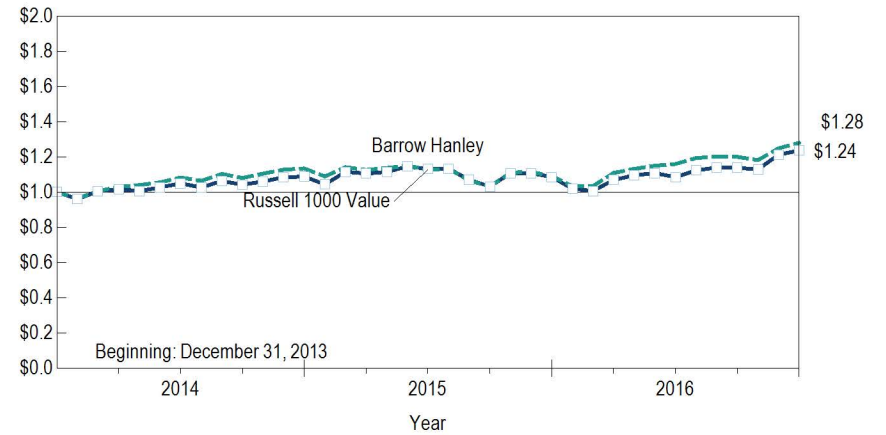
**Barrow Hanley Performance Attribution vs. Russell 1000 Value**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.6%	0.8%	0.0%	-0.2%	13.3%	7.4%	10.8%	13.5%			
Materials	0.1%	0.0%	0.1%	0.0%	7.3%	7.5%	6.5%	2.9%			
Industrials	-0.4%	-0.4%	0.1%	-0.1%	4.4%	8.7%	13.9%	9.8%			
Consumer Discretionary	0.1%	0.1%	-0.1%	0.1%	7.4%	4.8%	7.7%	4.6%			
Consumer Staples	0.3%	0.2%	0.2%	0.0%	-1.5%	-3.4%	6.7%	8.9%			
Health Care	0.0%	0.4%	-0.4%	0.1%	-2.0%	-4.9%	15.0%	11.5%			
Financials	0.5%	-0.1%	0.6%	0.0%	21.4%	22.0%	28.3%	23.4%			
Information Technology	0.3%	0.3%	0.1%	0.0%	3.1%	0.6%	8.6%	10.0%			
Telecommunication Services	0.0%	-0.1%	0.0%	0.0%	3.9%	5.4%	1.5%	3.9%			
Utilities	0.4%	--	0.4%	--	--	0.3%	0.0%	6.5%			
Real Estate	0.5%	--	0.5%	--	--	-3.6%	0.0%	5.1%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	0.9%	0.0%			
<b>Portfolio</b>	<b>2.4%</b>	<b>=</b>	<b>1.1%</b>	<b>+</b>	<b>1.5%</b>	<b>+</b>	<b>-0.2%</b>	<b>9.1%</b>	<b>6.7%</b>	<b>100.0%</b>	<b>100.0%</b>

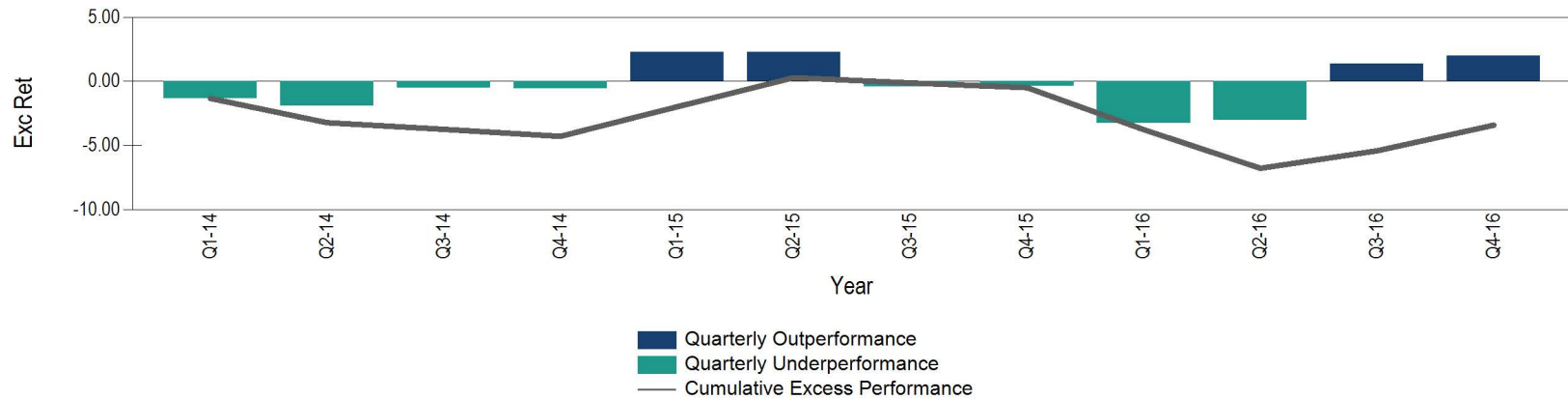
U.S. Effective Style Map

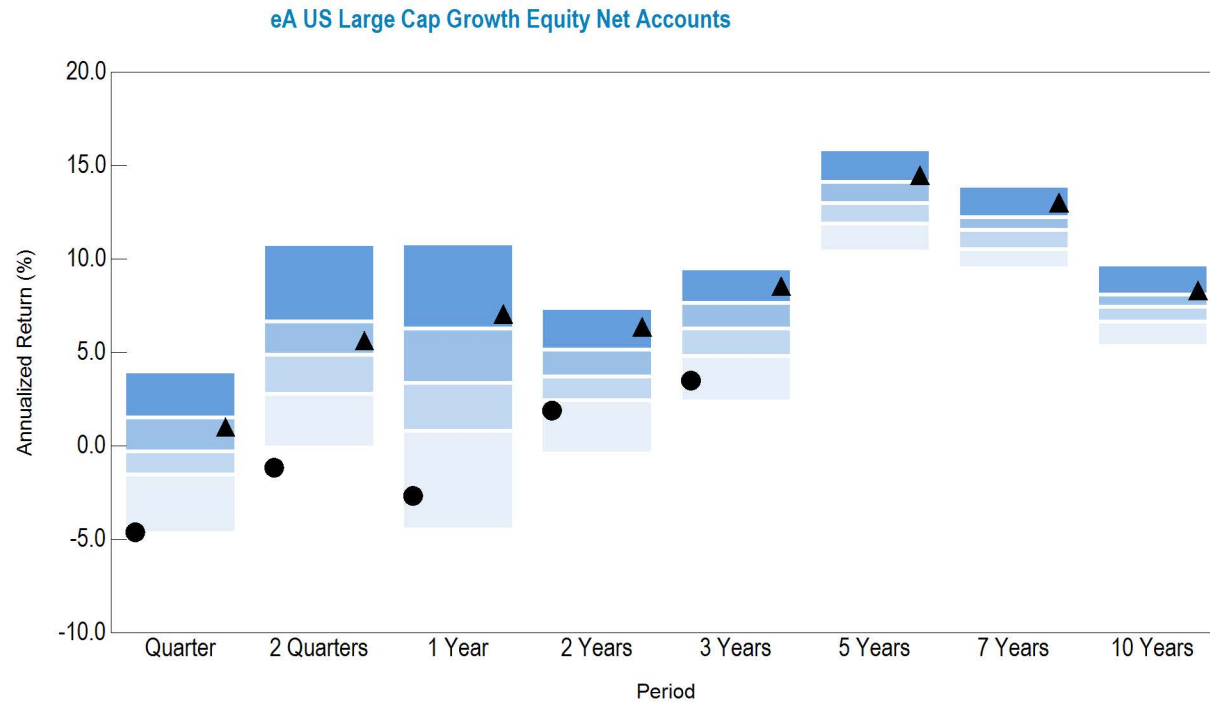


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	4.0	10.8	10.8	7.4	9.5	15.9	13.9	9.7
25th Percentile	1.5	6.7	6.3	5.2	7.7	14.2	12.3	8.1
Median	-0.3	4.9	3.4	3.7	6.3	13.0	11.6	7.5
75th Percentile	-1.5	2.8	0.8	2.5	4.8	11.9	10.6	6.7
95th Percentile	-4.7	-0.1	-4.5	-0.4	2.4	10.4	9.5	5.4
# of Portfolios	184	184	182	178	177	162	154	130
● Brown Advisory	-4.6 (95)	-1.2 (99)	-2.7 (92)	1.9 (82)	3.5 (92)	-- (--)	-- (--)	-- (--)
▲ Russell 1000 Growth	1.0 (33)	5.6 (39)	7.1 (20)	6.4 (13)	8.6 (12)	14.5 (19)	13.0 (15)	8.3 (21)

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	35	606
Weighted Avg. Market Cap. (\$B)	71.0	136.9
Median Market Cap. (\$B)	20.7	8.8
Price To Earnings	33.3	25.2
Price To Book	5.6	6.6
Price To Sales	6.4	3.5
Return on Equity (%)	17.0	25.8
Yield (%)	0.5	1.6
Beta (holdings; domestic)	1.0	1.0

Top Holdings

VISA 'A'	4.7%
AMAZON.COM	4.6%
STARBUCKS	4.4%
FACEBOOK CLASS A	4.4%
COSTCO WHOLESALE	4.1%
DANAHER	4.0%
AMPHENOL 'A'	3.9%
ECOLAB	3.9%
INTUITIVE SURGICAL	3.6%
NXP SEMICONDUCTORS	3.6%

Best Performers

	Return %
AKAMAI TECHS. (AKAM)	25.8%
COGNIZANT TECH.SLTN.'A' (CTSH)	17.4%
FORTIVE WHEN ISSUED (FTV)	5.5%
COSTCO WHOLESALE (COST)	5.3%
AMPHENOL 'A' (APH)	3.8%
STARBUCKS (SBUX)	3.0%
WABTEC (WAB)	1.8%
GENPACT (G)	1.6%
ROPER TECHNOLOGIES (ROP)	0.5%
ANSYS (ANSS)	-0.1%

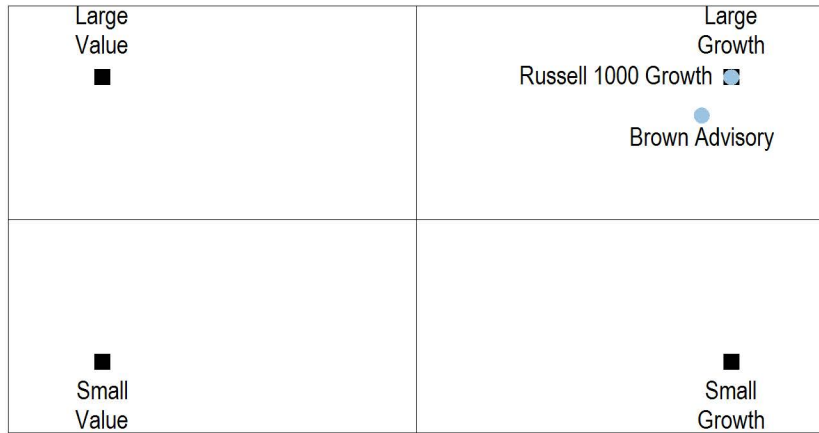
Worst Performers

	Return %
DEXCOM (DXCM)	-31.9%
TRIPADVISOR 'A' (TRIP)	-26.6%
UNDER ARMOUR CL C ORD (UA)	-25.7%
UNDER ARMOUR 'A' (UAA)	-24.9%
FLEETCOR TECHNOLOGIES (FLT)	-18.5%
ESTEE LAUDER COS.'A' (EL)	-13.3%
INTUITIVE SURGICAL (ISRG)	-12.5%
AMAZON.COM (AMZN)	-10.4%
FACEBOOK CLASS A (FB)	-10.3%
MEAD JOHNSON NUTRITION (MJN)	-9.9%

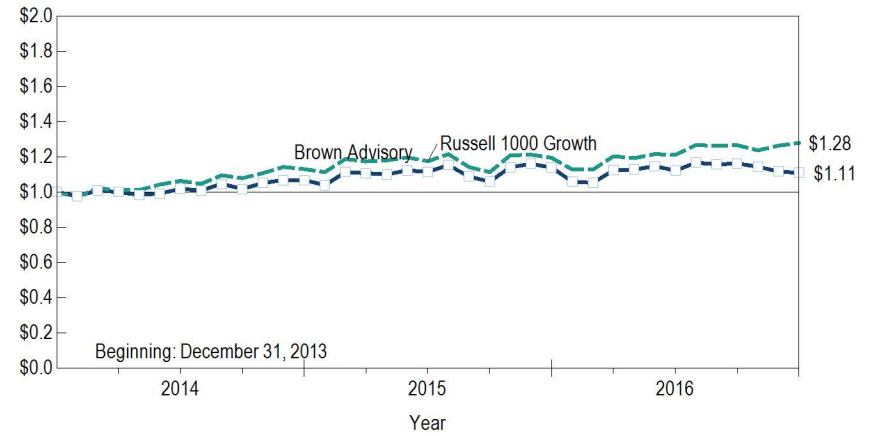
**Brown Advisory Performance Attribution vs. Russell 1000 Growth**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	--	0.0%	--	--	-0.9%	0.0%	0.6%			
Materials	-0.2%	-0.2%	0.0%	0.0%	-3.4%	2.1%	3.4%	3.6%			
Industrials	-0.5%	-0.4%	-0.2%	0.1%	2.7%	6.8%	7.1%	10.5%			
Consumer Discretionary	-2.1%	-3.1%	-0.1%	1.0%	-12.4%	2.1%	14.1%	20.5%			
Consumer Staples	-0.5%	-0.5%	0.0%	0.0%	-5.7%	-0.5%	9.9%	9.6%			
Health Care	-0.8%	-0.9%	0.1%	0.0%	-8.9%	-3.4%	15.0%	16.8%			
Financials	-0.2%	--	-0.2%	--	--	6.7%	0.0%	2.7%			
Information Technology	-1.6%	-1.2%	0.0%	-0.4%	-2.7%	1.1%	43.3%	31.5%			
Telecommunication Services	-0.3%	-0.1%	0.1%	-0.2%	-7.9%	4.5%	2.5%	1.2%			
Utilities	0.0%	--	0.0%	--	--	3.4%	0.0%	0.1%			
Real Estate	0.2%	--	0.2%	--	--	-5.3%	0.0%	2.8%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	4.6%	0.0%			
<b>Portfolio</b>	<b>-5.9%</b>	<b>=</b>	<b>-6.4%</b>	<b>+</b>	<b>-0.1%</b>	<b>+</b>	<b>0.6%</b>	<b>-4.9%</b>	<b>1.0%</b>	<b>100.0%</b>	<b>100.0%</b>

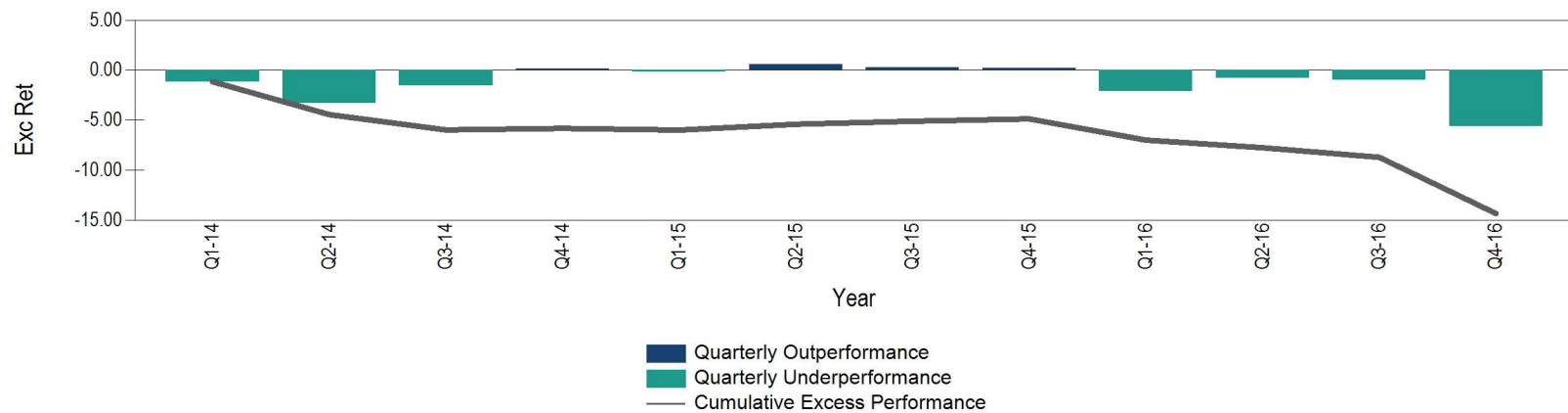
U.S. Effective Style Map



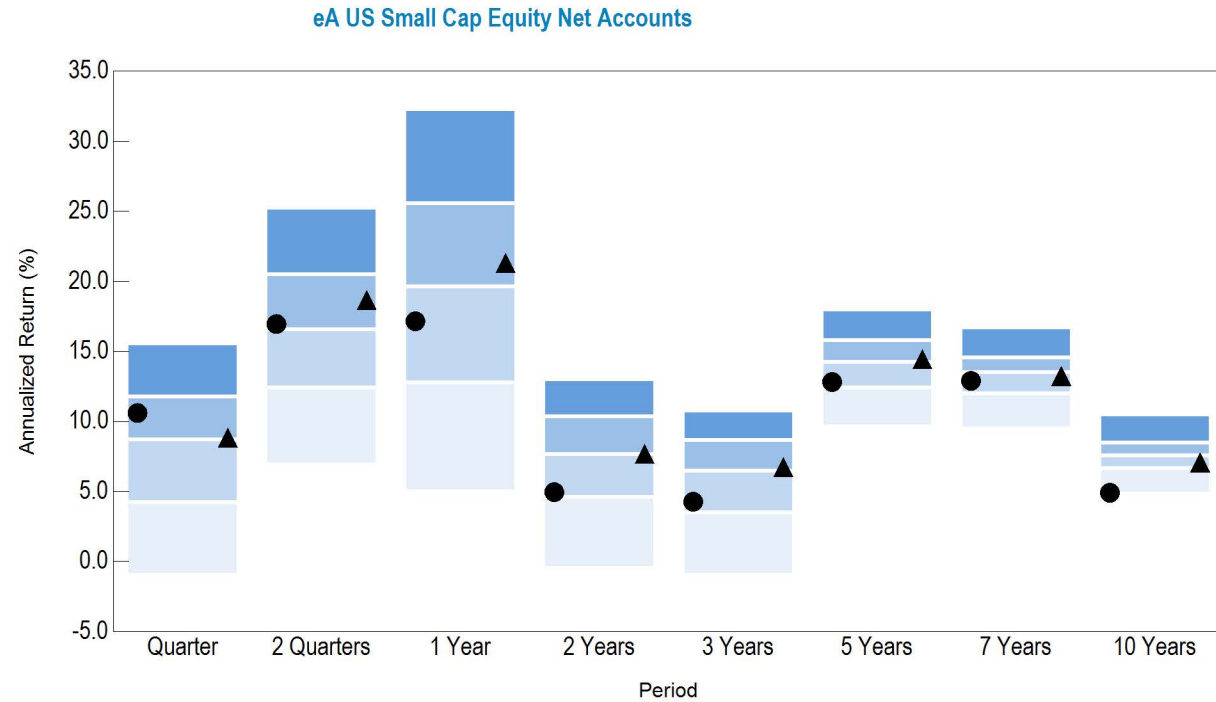
Growth of a Dollar



Quarterly and Cumulative Excess Performance







	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	15.5	25.2	32.3	13.0	10.8	18.0	16.7	10.5
25th Percentile	11.8	20.5	25.6	10.4	8.7	15.8	14.6	8.5
Median	8.8	16.6	19.7	7.7	6.5	14.3	13.5	7.6
75th Percentile	4.3	12.4	12.8	4.6	3.5	12.5	12.0	6.7
95th Percentile	-0.9	7.0	5.0	-0.5	-0.9	9.7	9.5	4.9
# of Portfolios	378	375	374	355	349	318	303	248
● Small Cap Equity	10.6 (36)	17.0 (46)	17.2 (62)	4.9 (73)	4.3 (71)	12.8 (70)	12.9 (61)	4.9 (95)
▲ Russell 2000	8.8 (50)	18.7 (38)	21.3 (42)	7.7 (50)	6.7 (49)	14.5 (49)	13.2 (54)	7.1 (66)

**Characteristics**

	Portfolio	Russell 2000
Number of Holdings	345	1,978
Weighted Avg. Market Cap. (\$B)	1.9	2.1
Median Market Cap. (\$B)	1.2	0.8
Price To Earnings	24.9	25.1
Price To Book	3.4	3.0
Price To Sales	2.2	2.1
Return on Equity (%)	15.2	10.1
Yield (%)	1.3	1.1
Beta (holdings; domestic)	1.2	1.3

**Top Holdings**

GEO GROUP	0.9%
WINTRUST FINANCIAL	0.8%
EMCOR GROUP	0.8%
UNITED COMMUNITY BANKS	0.8%
IROBOT	0.7%
MAGELLAN HEALTH	0.7%
GRAND CANYON EDUCATION	0.7%
RYMAN HOSPITALITY PROPS.	0.7%
SYNNEX	0.7%
TEXAS ROADHOUSE	0.7%

**Best Performers**

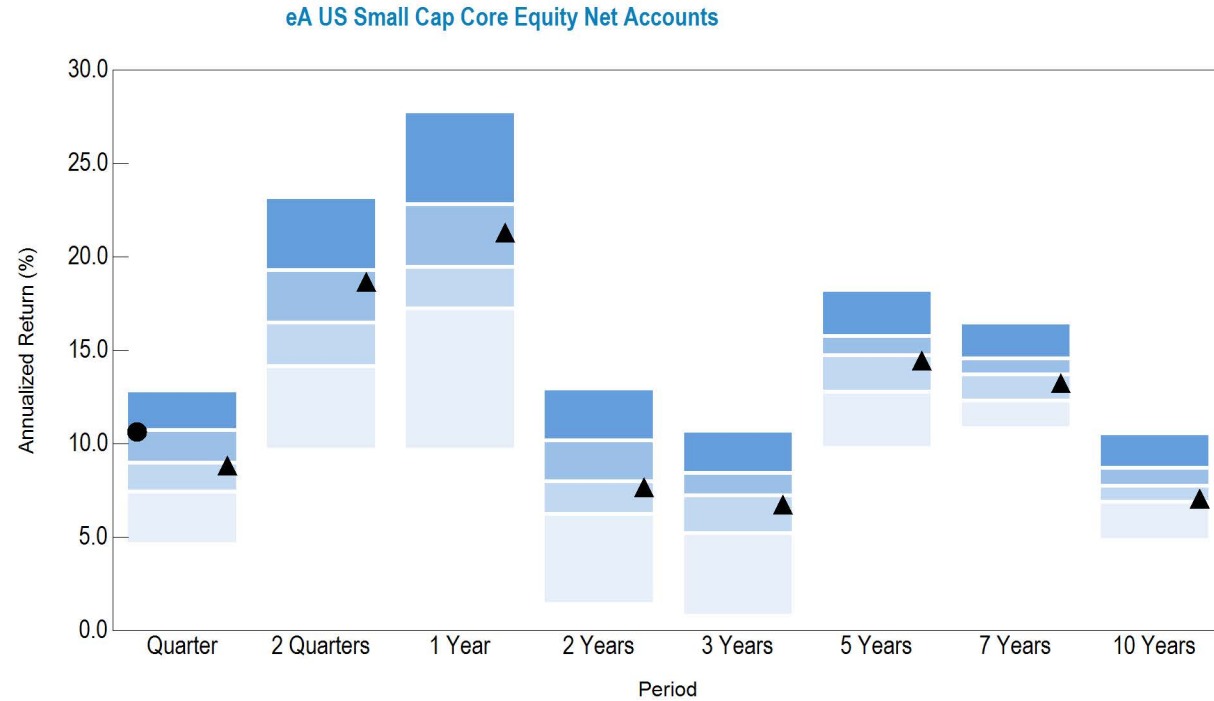
	Return %
WESTMORELAND COAL	99.4%
CORRECTIONS AMER NEW	79.4%
MERCHANTS BANCSHARES	68.4%
EVOLUTION PETROLEUM	60.4%
VECTRUS (VEC)	56.6%
GEO GROUP (GEO)	55.3%
SOUTHWEST BANC.OF OK.	53.4%
EXTERRAN WNI. (EXTN)	52.4%
CAPELLA EDUCATION	52.0%
MCDERMOTT INTL.	47.5%

**Worst Performers**

	Return %
AVID TECHNOLOGY	-44.6%
JAKKS PACIFIC (JAKK)	-40.4%
BRIGHTCOVE	-38.3%
PDL BIOPHARMA	-36.7%
RESOURCE CAPITAL	-34.6%
LIBERTY TRIP ADVI.HDG. SR.A (LTRPA)	-31.1%
MALLINCKRODT	-28.6%
TAHOE RESOURCES	-25.9%
COEUR MINING	-23.2%
FIRST NBC BANK HOLDING (FNBC)	-22.7%

**Small Cap Equity Performance Attribution vs. Russell 2000**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.3%	-0.1%	-0.1%	26.5%	17.7%	2.3%	3.2%			
Materials	-0.3%	-0.3%	0.0%	0.0%	5.5%	11.4%	5.2%	4.7%			
Industrials	0.2%	0.1%	0.0%	0.0%	13.5%	12.5%	14.7%	14.2%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	8.2%	7.9%	13.5%	12.7%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	3.6%	6.4%	3.1%	3.0%			
Health Care	1.0%	1.0%	0.0%	0.0%	0.8%	-6.3%	13.7%	14.0%			
Financials	-0.1%	0.0%	-0.2%	0.0%	23.2%	22.9%	16.7%	18.0%			
Information Technology	-0.1%	0.0%	-0.1%	0.0%	4.7%	4.7%	19.1%	17.7%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	8.0%	9.1%	0.3%	0.8%			
Utilities	0.1%	0.1%	0.0%	0.0%	7.0%	5.3%	3.1%	3.8%			
Real Estate	0.7%	0.7%	0.0%	0.0%	13.1%	4.1%	7.8%	7.9%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.4%	0.0%			
<b>Portfolio</b>	<b>1.5%</b>	<b>=</b>	<b>1.9%</b>	<b>+</b>	<b>-0.3%</b>	<b>+</b>	<b>-0.1%</b>	<b>10.2%</b>	<b>8.7%</b>	<b>100.0%</b>	<b>100.0%</b>



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	12.9	23.2	27.8	12.9	10.7	18.2	16.5	10.6
<b>25th Percentile</b>	10.8	19.3	22.8	10.2	8.5	15.8	14.6	8.7
<b>Median</b>	9.0	16.5	19.5	8.0	7.2	14.8	13.7	7.8
<b>75th Percentile</b>	7.5	14.2	17.3	6.2	5.2	12.8	12.3	6.9
<b>95th Percentile</b>	4.6	9.7	9.7	1.4	0.8	9.8	10.8	4.8
<b># of Portfolios</b>	99	99	99	97	96	88	78	59
<b>● QMA US Small Cap</b>	10.6 (26)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
<b>▲ Russell 2000</b>	8.8 (54)	18.7 (32)	21.3 (34)	7.7 (57)	6.7 (53)	14.5 (54)	13.2 (57)	7.1 (70)

Characteristics

	Portfolio	Russell 2000
Number of Holdings	344	1,978
Weighted Avg. Market Cap. (\$B)	1.9	2.1
Median Market Cap. (\$B)	1.2	0.8
Price To Earnings	24.9	25.1
Price To Book	3.4	3.0
Price To Sales	2.2	2.1
Return on Equity (%)	15.2	10.1
Yield (%)	1.3	1.1
Beta (holdings; domestic)	1.2	1.3

Top Holdings

GEO GROUP	0.9%
WINTRUST FINANCIAL	0.8%
EMCOR GROUP	0.8%
UNITED COMMUNITY BANKS	0.8%
IROBOT	0.7%
MAGELLAN HEALTH	0.7%
GRAND CANYON EDUCATION	0.7%
RYMAN HOSPITALITY PROPS.	0.7%
SYNNEX	0.7%
TEXAS ROADHOUSE	0.7%

Best Performers

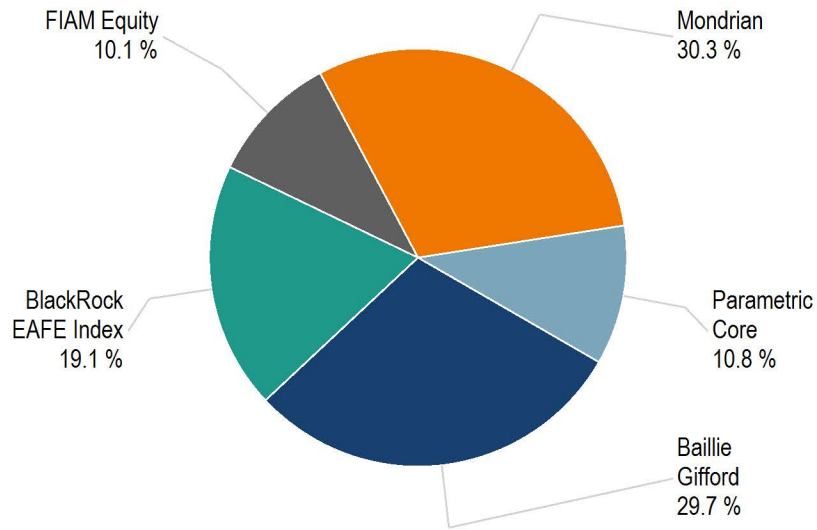
	Return %
WESTMORELAND COAL	99.4%
CORRECTIONS AMER NEW	79.4%
MERCHANTS BANCSHARES (MBVT)	68.4%
EVOLUTION PETROLEUM	60.4%
VECTRUS (VEC)	56.6%
GEO GROUP	55.3%
SOUTHWEST BANC.OF OK.	53.4%
EXTERRAN WNI.	52.4%
CAPELLA EDUCATION	52.0%
MCDERMOTT INTL.	47.5%

Worst Performers

	Return %
AVID TECHNOLOGY (AVID)	-44.6%
JAKKS PACIFIC (JAKK)	-40.4%
BRIGHTCOVE (BCOV)	-38.3%
PDL BIOPHARMA	-36.7%
RESOURCE CAPITAL (RSO)	-34.6%
LIBERTY TRIP ADVI.HDG. SR.A	-31.1%
MALLINCKRODT	-28.6%
TAHOE RESOURCES (C:THO)	-25.9%
COEUR MINING	-23.2%
FIRST NBC BANK HOLDING (FNBC)	-22.7%

**QMA US Small Cap Performance Attribution vs. Russell 2000**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.3%	-0.1%	-0.1%	26.5%	17.7%	2.4%	3.2%			
Materials	-0.3%	-0.3%	0.0%	0.0%	5.5%	11.4%	5.2%	4.7%			
Industrials	0.2%	0.1%	0.0%	0.0%	13.5%	12.5%	14.7%	14.2%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	8.2%	7.9%	13.6%	12.7%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	3.6%	6.4%	3.1%	3.0%			
Health Care	1.0%	1.0%	0.0%	0.0%	0.8%	-6.3%	13.8%	14.0%			
Financials	-0.1%	0.0%	-0.2%	0.0%	23.2%	22.9%	16.7%	18.0%			
Information Technology	-0.1%	0.0%	-0.1%	0.0%	4.7%	4.7%	19.2%	17.7%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	8.0%	9.1%	0.3%	0.8%			
Utilities	0.1%	0.1%	0.0%	0.0%	7.0%	5.3%	3.1%	3.8%			
Real Estate	0.7%	0.7%	0.0%	0.0%	13.1%	4.1%	7.8%	7.9%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>1.5%</b>	<b>=</b>	<b>1.9%</b>	<b>+</b>	<b>-0.2%</b>	<b>+</b>	<b>-0.1%</b>	<b>10.3%</b>	<b>8.7%</b>	<b>100.0%</b>	<b>100.0%</b>



	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$205,117,199	29.7%	-1.8%
BlackRock EAFE Index	\$131,587,491	19.1%	0.0%
FIAM Equity	\$69,987,002	10.1%	-0.2%
Mondrian	\$209,134,318	30.3%	-1.3%
Parametric Core	\$74,641,305	10.8%	0.2%
Actual vs. Policy Weight Difference			1.2%
<b>Total</b>	<b>\$690,467,316</b>	<b>100.0%</b>	<b>-2.0%</b>



Statistics Summary

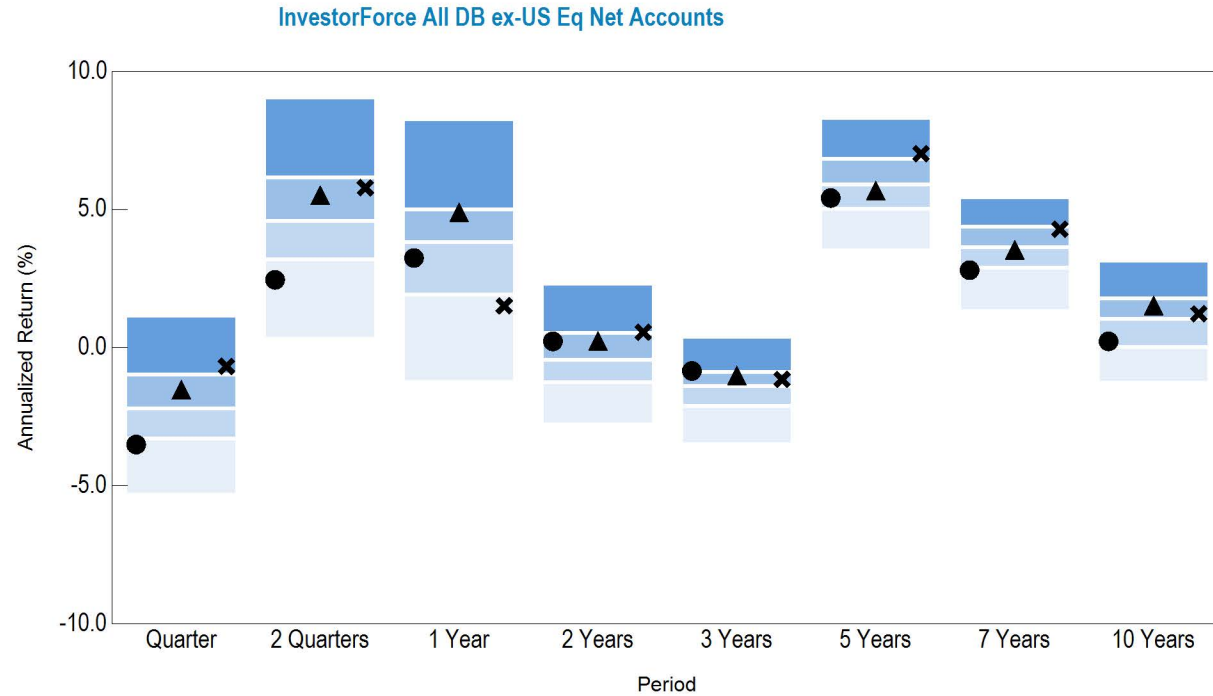
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	-0.8%	12.4%	-0.1	0.1	1.7%
MSCI ACWI ex US IMI	-1.0%	12.6%	-0.1	--	0.0%
Developed Markets	-0.6%	12.4%	-0.1	0.3	2.2%
MSCI ACWI ex USA Gross	-1.3%	12.7%	-0.1	--	0.0%
Baillie Gifford	-0.1%	13.8%	0.0	0.3	4.3%
MSCI ACWI ex US	-1.3%	12.7%	-0.1	--	0.0%
BlackRock EAFE Index	-1.3%	12.7%	-0.1	2.6	0.1%
MSCI EAFE	-1.6%	12.6%	-0.1	--	0.0%
FIAM Equity	0.2%	12.0%	0.0	-0.3	2.6%
MSCI ACWI ex US Small Cap Gross	1.1%	12.3%	0.1	--	0.0%
Mondrian	-0.8%	12.0%	-0.1	0.2	5.0%
MSCI ACWI ex USA Value Gross	-1.9%	13.7%	-0.1	--	0.0%

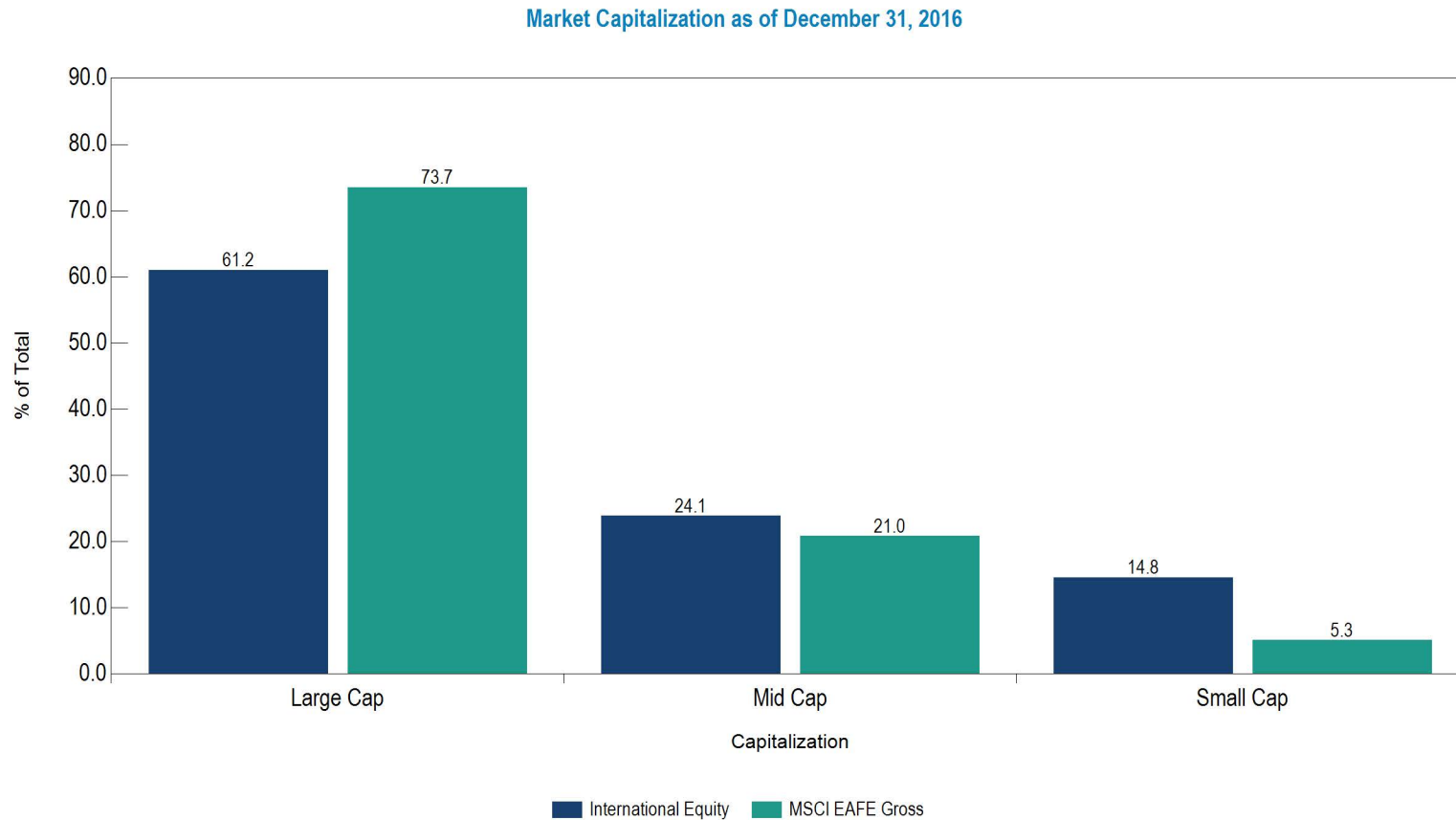
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	5.4%	12.6%	0.4	-0.1	2.0%
MSCI ACWI ex US IMI	5.7%	13.3%	0.4	--	0.0%
Developed Markets	6.0%	12.6%	0.5	0.2	2.3%
MSCI ACWI ex USA Gross	5.5%	13.3%	0.4	--	0.0%
Mondrian	4.8%	12.5%	0.4	-0.1	4.8%
MSCI ACWI ex USA Value Gross	5.2%	14.4%	0.4	--	0.0%



	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	1.1	9.0	8.3	2.3	0.4	8.3	5.4	3.1
25th Percentile	-1.0	6.2	5.0	0.5	-0.9	6.8	4.4	1.8
Median	-2.2	4.6	3.8	-0.4	-1.4	5.9	3.6	1.1
75th Percentile	-3.3	3.2	1.9	-1.2	-2.1	5.0	2.9	0.0
95th Percentile	-5.3	0.3	-1.2	-2.8	-3.5	3.5	1.3	-1.3
# of Portfolios	483	480	479	464	442	369	311	244
● International Equity	-3.5 (79)	2.5 (84)	3.2 (61)	0.2 (33)	-0.8 (24)	5.4 (65)	2.8 (78)	0.2 (72)
▲ MSCI ACWI ex US IMI	-1.5 (35)	5.5 (34)	4.9 (28)	0.3 (32)	-1.0 (32)	5.7 (56)	3.5 (54)	1.5 (34)
✕ MSCI EAFE Gross	-0.7 (21)	5.8 (30)	1.5 (78)	0.6 (25)	-1.2 (38)	7.0 (21)	4.3 (28)	1.2 (44)



Excludes FIAM Equity holdings.

See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	2,061	6,150
Weighted Avg. Market Cap. (\$B)	40.5	42.7
Median Market Cap. (\$B)	5.8	1.2
Price To Earnings	22.4	20.1
Price To Book	3.7	2.5
Price To Sales	2.8	1.8
Return on Equity (%)	15.9	13.2
Yield (%)	2.9	2.8
Beta (holdings; global)	1.0	1.0

Top Holdings

NESTLE 'R'	1.4%
UNITED OVERSEAS BANK	1.3%
UNILEVER (UK)	1.3%
SANOFI	1.1%
BP	1.0%
GLAXOSMITHKLINE	1.0%
COCHLEAR	1.0%
HONDA MOTOR	0.9%
ABB LTD N	0.9%
IBERDROLA	0.9%

Best Performers

	Return %
BUMI RESOURCES (ID:BMH)	296.0%
SHARP (J:SH@N)	73.6%
VIA VAREJO UNITS	68.5%
ASSORE (R:ASRJ)	60.5%
COMPANIA SUDAMERICANA DE VAPORES (CL:VPR)	58.1%
NVIDIA (NVDA)	56.0%
INDO TAMBANGRAYA MEGAH (ID:INM)	53.9%
SAMART FB (Q:SAAF)	52.8%
UNION PROPERTIES	51.7%
CHINA BLUE CHEMICAL 'H' (K:CHBC)	51.5%

Worst Performers

	Return %
SIGMAGOLD INTI PERKASA (ID:LAG)	-82.1%
SIBANYE GOLD	-48.4%
DRYSHIPS (DRYS)	-45.8%
HANMI PHARM (KO:HPM)	-45.2%
VOCUS COMMUNICATIONS (A:VOCX)	-41.2%
SWANCOR INDUSTRIES (TW:SWC)	-41.2%
DENA	-39.3%
FELDA GLOBAL VENT.HDG.	-38.9%
IMPALA PLATINUM	-38.2%
COSTAMARE	-37.9%

Excludes FIAM Equity holdings.

International Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.1%	-0.1%	0.0%	10.0%	8.4%	5.2%	6.2%			
Materials	-0.1%	-0.8%	-0.1%	0.8%	-5.3%	1.8%	4.8%	8.0%			
Industrials	-0.2%	-0.5%	0.0%	0.3%	-3.6%	-2.1%	12.9%	12.8%			
Consumer Discretionary	-0.8%	-0.6%	0.0%	-0.2%	-4.8%	-1.4%	14.5%	12.0%			
Consumer Staples	-0.6%	0.2%	-0.4%	-0.4%	-8.7%	-9.5%	13.7%	10.5%			
Health Care	-0.2%	0.1%	-0.1%	-0.1%	-7.1%	-8.3%	10.3%	8.5%			
Financials	-0.4%	-0.1%	-0.4%	0.0%	4.2%	6.5%	14.6%	20.0%			
Information Technology	0.1%	0.1%	-0.1%	0.1%	-2.7%	-5.0%	12.7%	9.9%			
Telecommunication Services	0.1%	0.0%	0.0%	0.1%	-3.9%	-6.7%	4.9%	4.4%			
Utilities	0.1%	0.0%	0.0%	0.0%	-5.0%	-6.6%	3.6%	3.2%			
Real Estate	0.4%	-0.1%	0.2%	0.3%	-7.6%	-7.8%	2.1%	4.4%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	0.7%	0.0%			
<b>Portfolio</b>	<b>-1.7%</b>	<b>=</b>	<b>-1.5%</b>	<b>+</b>	<b>-1.1%</b>	<b>+</b>	<b>0.9%</b>	<b>-3.3%</b>	<b>-1.5%</b>	<b>100.0%</b>	<b>100.0%</b>

Excludes FIAM Equity holdings.

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	-1.1%	2.3%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	-7.6%	-10.1%	0.1%	1.0%	0.0%	0.1%	0.1%	0.0%	0.1%
Czech Republic*	-2.9%	-2.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	-12.2%	-8.2%	1.8%	1.2%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Finland	-10.4%	-4.0%	0.6%	0.8%	-0.1%	0.0%	0.0%	0.0%	0.0%
France	5.9%	2.7%	3.0%	6.3%	0.2%	-0.2%	0.2%	-0.1%	0.2%
Germany	-1.5%	0.8%	4.6%	6.0%	-0.1%	0.0%	0.1%	0.0%	-0.1%
Greece*	8.3%	13.7%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	8.9%	9.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	-3.4%	-0.6%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	5.6%	9.1%	1.2%	1.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	-5.3%	-1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-0.6%	-2.0%	1.4%	2.2%	0.0%	0.0%	0.0%	0.0%	0.1%
Norway	9.7%	3.5%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	2.1%	3.2%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	-10.3%	-2.4%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	18.1%	19.1%	0.9%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	-6.1%	1.3%	2.5%	2.1%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Sweden	-3.7%	-2.1%	2.9%	2.2%	0.0%	0.0%	0.0%	0.0%	-0.1%
Switzerland	-3.8%	-3.7%	6.3%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%
United Kingdom	-4.1%	-1.1%	13.1%	12.8%	-0.4%	0.0%	0.0%	0.0%	-0.4%

Excludes FIAM Equity holdings.



Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	-5.5%	0.0%	3.5%	5.1%	-0.3%	0.0%	0.1%	0.1%	-0.1%
China*	-8.1%	-6.7%	2.7%	6.2%	-0.1%	0.4%	0.0%	0.0%	0.4%
Hong Kong	-5.2%	-8.4%	2.4%	2.4%	0.1%	0.0%	0.0%	0.0%	0.1%
India*	-9.2%	-7.9%	1.8%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Indonesia*	-5.4%	-6.8%	0.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	-2.6%	-0.4%	14.5%	17.6%	-0.5%	-0.3%	0.5%	0.1%	-0.2%
Korea*	-8.1%	-8.5%	2.8%	3.6%	-0.1%	0.0%	0.1%	0.0%	0.1%
Malaysia*	-7.2%	-8.7%	0.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	-10.9%	-11.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Pakistan**	15.6%	16.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines*	-13.4%	-12.3%	0.6%	0.3%	0.0%	0.0%	0.0%	0.0%	-0.1%
Singapore	-4.6%	-4.5%	2.8%	1.0%	0.0%	-0.1%	-0.1%	0.0%	-0.2%
Taiwan*	-4.4%	-2.7%	2.8%	3.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
Thailand*	-4.7%	0.4%	0.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	0.3%	2.1%	1.2%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Canada	-5.0%	2.7%	0.3%	6.8%	-0.5%	0.0%	0.1%	0.5%	0.1%
Chile*	2.7%	2.1%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	-0.9%	-1.5%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Mexico*	-10.4%	-8.0%	1.2%	0.8%	0.0%	0.0%	0.0%	0.0%	-0.1%
Peru*	1.8%	2.5%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	3.6%	3.4%	16.3%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%

Excludes FIAM Equity holdings.

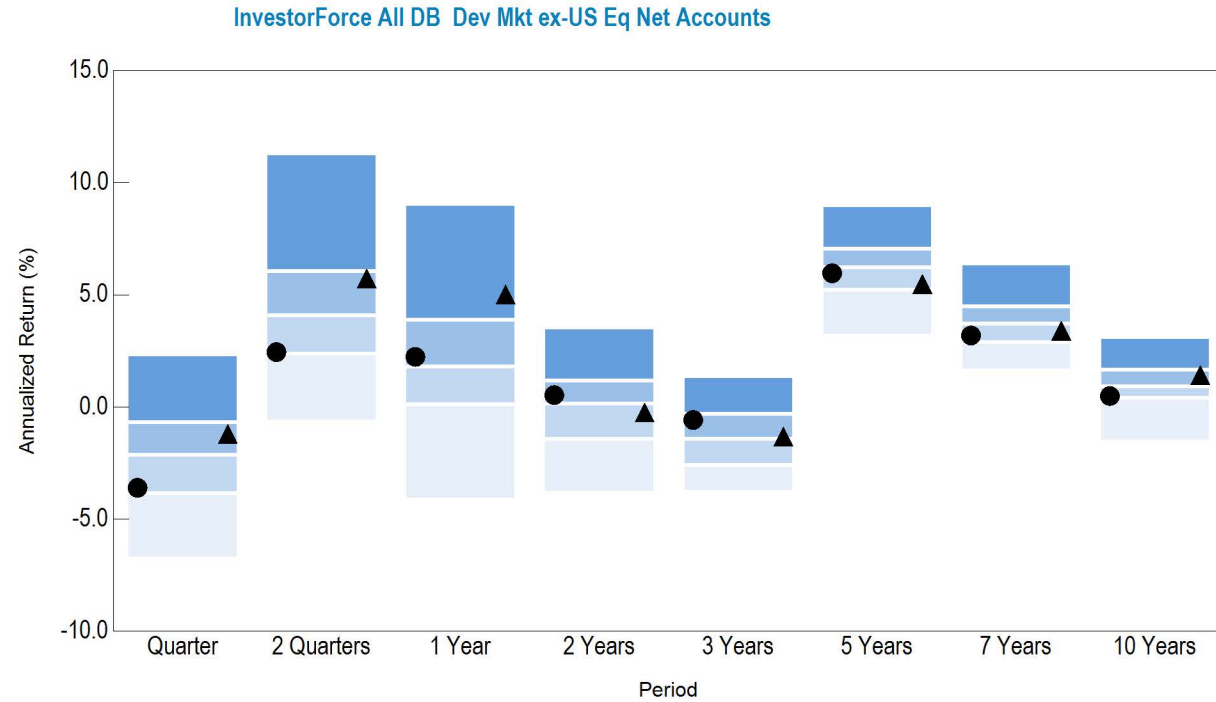
International Equity  
Equity Performance Attribution

Period Ending: December 31, 2016

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	-22.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Israel	-3.1%	-6.8%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%
Kazakhstan**	0.5%	-0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait**	9.0%	10.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	2.8%	0.9%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-2.2%	-4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-6.5%	-3.2%	2.2%	1.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Turkey*	-11.1%	-13.5%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	4.5%	-0.9%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	2.3%	1.6%	19.9%	9.7%	-0.1%	-0.1%	0.1%	-0.1%	-0.2%
Europe	-2.5%	-0.3%	39.8%	44.3%	-1.1%	0.0%	0.4%	0.1%	-0.7%
Asia/Pacific	-4.8%	-3.3%	36.1%	43.2%	-0.8%	0.0%	0.7%	0.1%	0.0%
Other	-4.5%	-4.8%	3.5%	2.9%	0.0%	0.0%	0.0%	0.0%	-0.1%
Cash	0.1%	--	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>-2.4%</b>	<b>-1.5%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-2.0%</b>	<b>-0.2%</b>	<b>1.2%</b>	<b>0.1%</b>	<b>-0.9%</b>
<b>Totals</b>									
Developed	-1.9%	-0.6%	78.1%	76.8%	-2.1%	0.0%	1.1%	0.0%	-1.0%
Emerging*	-4.9%	-4.5%	20.8%	23.2%	-0.2%	0.2%	0.1%	0.0%	0.2%
Frontier**	11.2%	--	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Excludes FIAM Equity holdings.



	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	2.3	11.3	9.0	3.5	1.4	9.0	6.4	3.1
25th Percentile	-0.7	6.1	3.9	1.2	-0.3	7.1	4.5	1.7
Median	-2.1	4.1	1.8	0.2	-1.4	6.3	3.7	0.9
75th Percentile	-3.8	2.4	0.1	-1.4	-2.6	5.2	2.9	0.4
95th Percentile	-6.7	-0.6	-4.1	-3.8	-3.8	3.2	1.6	-1.5
# of Portfolios	165	165	165	163	154	135	106	65
● Developed Markets	-3.6 (74)	2.4 (75)	2.2 (42)	0.5 (35)	-0.6 (29)	6.0 (56)	3.2 (71)	0.5 (75)
▲ MSCI ACWI ex USA Gross	-1.2 (31)	5.7 (30)	5.0 (15)	-0.3 (55)	-1.3 (48)	5.5 (69)	3.4 (66)	1.4 (38)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	1,055	1,856
Weighted Avg. Market Cap. (\$B)	43.6	49.2
Median Market Cap. (\$B)	9.2	6.7
Price To Earnings	22.9	20.2
Price To Book	3.8	2.5
Price To Sales	2.8	1.9
Return on Equity (%)	16.0	13.2
Yield (%)	3.0	2.9
Beta (holdings; global)	1.1	1.1

Top Holdings

NESTLE 'R'	1.5%
UNITED OVERSEAS BANK	1.5%
UNILEVER (UK)	1.4%
SANOFI	1.2%
BP	1.2%
GLAXOSMITHKLINE	1.1%
COCHLEAR	1.1%
HONDA MOTOR	1.0%
ABB LTD N	1.0%
IBERDROLA	1.0%

Best Performers

	Return %
SHARP (J:SH@N)	73.6%
NVIDIA (NVDA)	56.0%
CHINA BLUE CHEMICAL 'H'	51.5%
KEYCORP (KEY)	50.9%
GOLDMAN SACHS GP. (GS)	48.9%
REGIONS FINL.NEW (RF)	46.1%
CITIZENS FINANCIAL GROUP (CFG)	44.8%
COMERICA (CMA)	44.4%
FIAT CHRYSLER AUTOS. (I:FCA)	43.9%
AEGON	43.9%

Worst Performers

	Return %
VOCUS COMMUNICATIONS (A:VOCX)	-41.2%
DENA	-39.3%
FRESNILLO	-36.0%
ILLUMINA (ILMN)	-29.5%
HEALTHSCOPE	-29.4%
MALLINCKRODT (MNK)	-28.6%
LINE ORD	-28.4%
RWE (D:RWE)	-28.0%
ORION (KO:DGY)	-27.8%
SOHGO SECURITIES	-27.7%

Excludes FIAM Equity holdings.

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.1%	-0.1%	0.1%	8.7%	8.3%	4.7%	6.6%			
Materials	-0.2%	-0.8%	-0.2%	0.8%	-6.5%	2.7%	3.9%	7.5%			
Industrials	-0.3%	-0.5%	0.0%	0.1%	-4.0%	-2.1%	13.3%	11.7%			
Consumer Discretionary	-0.9%	-0.7%	0.1%	-0.3%	-4.9%	-0.9%	15.0%	11.4%			
Consumer Staples	-0.6%	0.2%	-0.4%	-0.4%	-8.9%	-9.8%	14.1%	11.1%			
Health Care	-0.2%	0.1%	-0.1%	-0.1%	-7.3%	-8.1%	10.8%	8.6%			
Financials	-0.5%	-0.1%	-0.5%	0.1%	4.1%	6.9%	14.5%	21.7%			
Information Technology	0.0%	0.1%	-0.1%	0.0%	-2.9%	-4.9%	13.2%	9.6%			
Telecommunication Services	0.1%	0.0%	0.0%	0.1%	-4.8%	-6.6%	4.5%	5.0%			
Utilities	0.1%	0.0%	0.0%	0.0%	-5.6%	-7.2%	3.2%	3.4%			
Real Estate	0.3%	-0.1%	0.1%	0.2%	-7.7%	-7.7%	2.1%	3.5%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	0.7%	0.0%			
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>-2.4%</b>	<b>=</b>	<b>-1.7%</b>	<b>+</b>	<b>-1.3%</b>	<b>+</b>	<b>0.6%</b>	<b>-3.6%</b>	<b>-1.2%</b>	<b>100.0%</b>	<b>100.0%</b>

Excludes FIAM Equity holdings.

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	-1.1%	6.5%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	-7.6%	-11.8%	0.1%	1.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Czech Republic*	--	-2.4%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-12.2%	-8.8%	2.0%	1.2%	0.0%	-0.1%	0.0%	0.0%	-0.2%
Finland	-10.4%	-4.4%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	5.9%	3.1%	3.4%	6.8%	0.2%	-0.2%	0.2%	-0.1%	0.2%
Germany	-1.5%	1.5%	5.2%	6.2%	-0.2%	0.0%	0.1%	0.0%	-0.1%
Greece*	--	15.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	9.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	-3.4%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	5.6%	10.8%	1.3%	1.3%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	-5.9%	-1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-0.7%	-2.0%	1.5%	2.3%	0.0%	0.0%	0.0%	0.0%	0.1%
Norway	9.7%	2.6%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	--	4.0%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Portugal	-10.3%	-3.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%
Russia*	19.1%	18.8%	0.2%	0.9%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Spain	-6.1%	2.2%	2.8%	2.1%	-0.2%	0.0%	0.0%	-0.1%	-0.3%
Sweden	-3.7%	-0.8%	3.3%	2.0%	-0.1%	0.0%	-0.1%	0.0%	-0.2%
Switzerland	-3.8%	-3.9%	7.0%	6.3%	0.0%	0.0%	0.0%	0.0%	-0.1%
United Kingdom	-4.0%	-0.8%	14.6%	12.9%	-0.4%	0.0%	-0.1%	-0.1%	-0.6%

Excludes FIAM Equity holdings.

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	-5.5%	0.8%	3.9%	5.2%	-0.3%	0.0%	0.1%	0.1%	-0.2%
China*	-9.4%	-6.9%	2.4%	6.3%	-0.2%	0.5%	0.0%	0.1%	0.4%
Hong Kong	-5.2%	-9.0%	2.0%	2.5%	0.1%	0.1%	0.0%	0.0%	0.1%
India*	-9.9%	-7.8%	1.3%	1.9%	-0.1%	0.1%	0.0%	0.0%	0.0%
Indonesia*	-4.3%	-7.4%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%
Japan	-2.6%	-0.1%	16.2%	16.9%	-0.5%	-0.1%	0.2%	0.0%	-0.4%
Korea*	-7.0%	-6.9%	2.2%	3.5%	-0.1%	0.0%	0.2%	0.0%	0.1%
Malaysia*	-6.2%	-8.4%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	-10.9%	-10.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines*	-15.9%	-12.8%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	-4.5%	-3.6%	3.1%	0.9%	0.0%	-0.1%	-0.1%	0.0%	-0.2%
Taiwan*	-4.6%	-2.2%	2.2%	2.8%	-0.1%	0.0%	0.1%	0.0%	0.0%
Thailand*	-8.2%	-1.6%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	2.4%	2.3%	0.4%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Canada	-5.0%	3.4%	0.3%	6.7%	-0.6%	0.0%	0.1%	0.6%	0.1%
Chile*	4.5%	2.4%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	--	-2.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-14.9%	-7.8%	0.6%	0.9%	-0.1%	0.0%	0.0%	0.0%	0.0%
Peru*	3.7%	2.5%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	3.6%	3.4%	18.1%	0.0%	0.0%	-0.3%	0.0%	0.0%	-0.3%

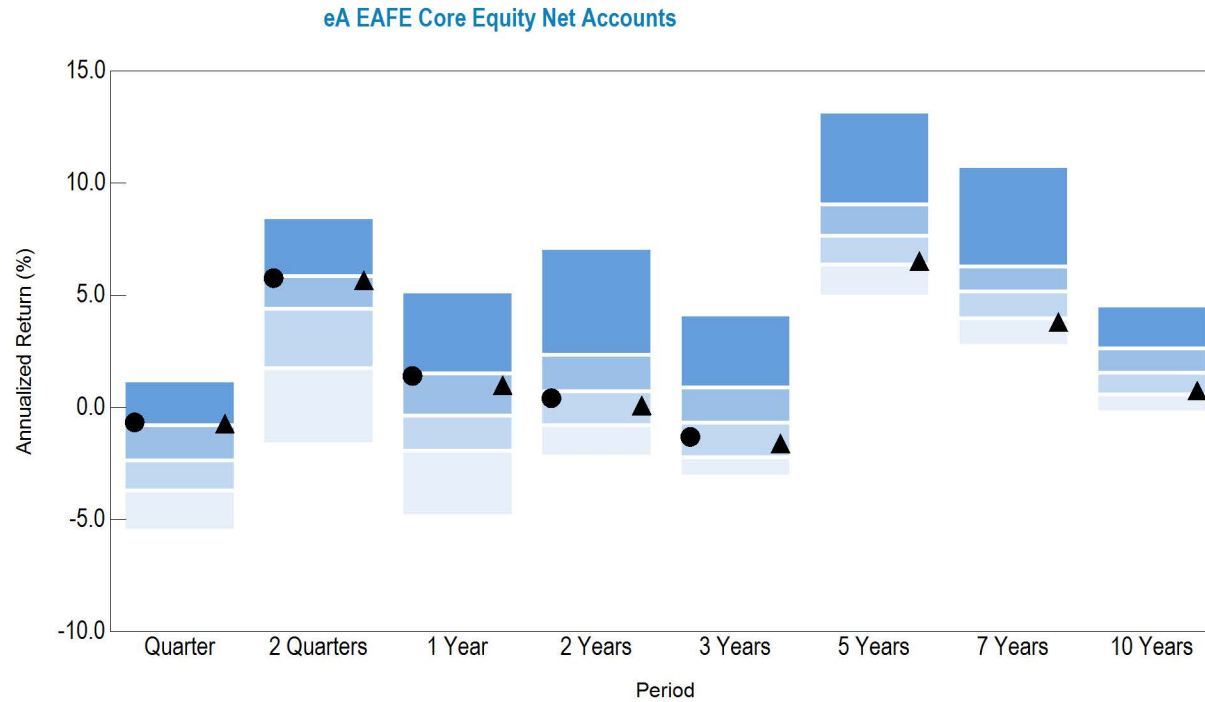
Excludes FIAM Equity holdings.

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	-23.3%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	-3.1%	-10.0%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.1%
Kazakhstan**	0.5%	-0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	4.6%	1.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-2.2%	-4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-9.4%	-3.8%	1.6%	1.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Turkey*	-10.1%	-13.7%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	8.9%	-0.9%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	2.9%	2.1%	19.6%	9.8%	-0.1%	-0.1%	0.2%	-0.1%	-0.1%
Europe	-3.0%	0.1%	42.8%	45.2%	-1.5%	0.0%	0.2%	0.1%	-1.2%
Asia/Pacific	-4.6%	-3.0%	34.7%	42.2%	-0.5%	0.0%	0.4%	0.1%	0.0%
Other	-6.9%	-5.5%	2.2%	2.9%	-0.1%	0.1%	0.1%	0.0%	0.0%
Cash	0.1%	--	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>-2.5%</b>	<b>-1.2%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-2.2%</b>	<b>-0.1%</b>	<b>0.9%</b>	<b>0.1%</b>	<b>-1.3%</b>
<b>Totals</b>									
Developed	-1.8%	-0.3%	86.5%	76.7%	-2.3%	0.2%	0.5%	-0.3%	-1.9%
Emerging*	-7.0%	-4.2%	12.8%	23.3%	-0.8%	0.7%	0.4%	0.4%	0.6%
Frontier**	-0.8%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Excludes FIAM Equity holdings.





	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.2	8.5	5.2	7.1	4.1	13.2	10.8	4.5
25th Percentile	-0.8	5.9	1.5	2.4	0.9	9.1	6.3	2.6
Median	-2.4	4.4	-0.4	0.7	-0.7	7.7	5.2	1.6
75th Percentile	-3.7	1.8	-1.9	-0.8	-2.2	6.4	4.0	0.6
95th Percentile	-5.5	-1.6	-4.8	-2.2	-3.1	5.0	2.8	-0.2
# of Portfolios	113	113	113	107	104	87	75	55
● BlackRock EAFE Index	-0.7 (23)	5.8 (28)	1.4 (28)	0.4 (55)	-1.3 (60)	-- (--)	-- (--)	-- (--)
▲ MSCI EAFE	-0.7 (24)	5.7 (30)	1.0 (31)	0.1 (59)	-1.6 (61)	6.5 (71)	3.8 (80)	0.7 (72)

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	934	930
Weighted Avg. Market Cap. (\$B)	50.5	50.6
Median Market Cap. (\$B)	8.6	8.6
Price To Earnings	21.8	21.3
Price To Book	3.1	2.4
Price To Sales	2.3	1.7
Return on Equity (%)	13.8	11.8
Yield (%)	3.1	3.1
Beta (holdings; global)	1.1	1.1

Top Holdings

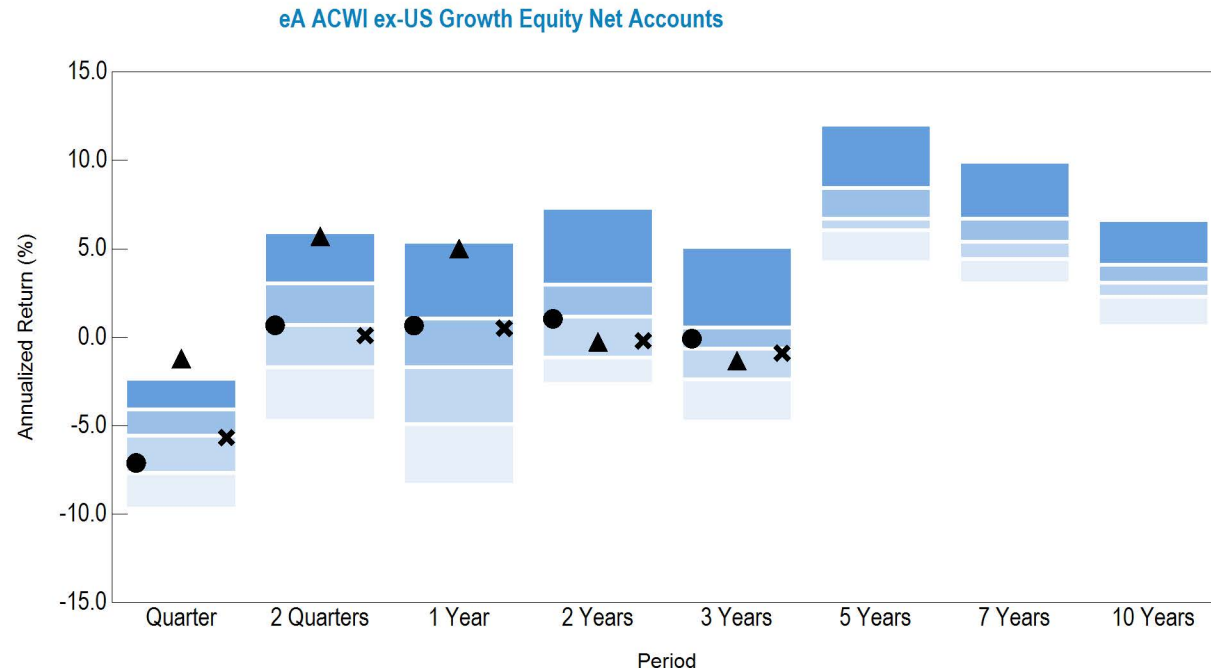
NESTLE 'R'	1.8%
HSBC HOLDINGS	1.3%
NOVARTIS 'R'	1.3%
ROCHE HOLDING	1.3%
TOYOTA MOTOR	1.3%
ROYAL DUTCH SHELL A	1.0%
BP	1.0%
TOTAL	1.0%
ROYAL DUTCH SHELL B	0.9%
BRITISH AMERICAN TOBACCO	0.9%

Best Performers

	Return %
SHARP	73.6%
NVIDIA (NVDA)	56.0%
KEYCORP (KEY)	50.9%
GOLDMAN SACHS GP. (GS)	48.9%
REGIONS FINL.NEW (RF)	46.1%
CITIZENS FINANCIAL GROUP (CFG)	44.8%
COMERICA (CMA)	44.4%
FIAT CHRYSLER AUTOS. (I:FCA)	43.9%
AEGON (H:AGN)	43.9%
SOCIETE GENERALE	42.5%

Worst Performers

	Return %
VOCUS COMMUNICATIONS	-41.2%
DENA	-39.3%
FRESNILLO	-36.0%
ILLUMINA (ILMN)	-29.5%
HEALTHSCOPE (A:HSOX)	-29.4%
MALLINCKRODT (MNK)	-28.6%
LINE ORD	-28.4%
RWE (D:RWE)	-28.0%
SOHGO SECURITIES	-27.7%
GEA GROUP	-27.7%



	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	-2.4	5.9	5.4	7.3	5.1	12.0	9.9	6.6
25th Percentile	-4.1	3.1	1.1	3.0	0.6	8.5	6.7	4.1
Median	-5.5	0.7	-1.7	1.2	-0.6	6.7	5.4	3.1
75th Percentile	-7.7	-1.7	-4.9	-1.1	-2.4	6.1	4.4	2.3
95th Percentile	-9.7	-4.7	-8.4	-2.6	-4.8	4.3	3.1	0.6
# of Portfolios	68	68	68	62	58	51	45	37
● Baillie Gifford	-7.1 (68)	0.7 (51)	0.7 (33)	1.0 (56)	-0.1 (43)	-- (--)	-- (--)	-- (--)
▲ MSCI ACWI ex US	-1.2 (4)	5.7 (7)	5.0 (7)	-0.3 (68)	-1.3 (60)	-- (--)	-- (--)	-- (--)
✕ MSCI ACWI ex US Growth	-5.7 (52)	0.1 (59)	0.5 (36)	-0.2 (68)	-0.9 (54)	-- (--)	-- (--)	-- (--)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	79	1,856
Weighted Avg. Market Cap. (\$B)	32.5	49.2
Median Market Cap. (\$B)	10.9	6.7
Price To Earnings	25.3	20.2
Price To Book	5.9	2.5
Price To Sales	4.1	1.9
Return on Equity (%)	23.8	13.2
Yield (%)	1.8	2.9
Beta (holdings; global)	1.1	1.1

Top Holdings

COCHLEAR	2.9%
TAIWAN SEMICON.SPN.ADR 1:5	2.5%
MS&AD INSURANCE GP.HDG.	2.3%
NASPERS	2.2%
ATLAS COPCO 'B'	2.1%
HARGREAVES LANSDOWN	2.1%
SHIMANO	2.1%
SVENSKA HANDBKN.'A'	2.0%
KAO	2.0%
JAPAN EXCHANGE GROUP	1.9%

Best Performers

	Return %
MESOBLAST (A:MSBX)	20.8%
THK (J:THAK)	13.9%
MS&AD INSURANCE GP.HDG. (J:MSAD)	12.8%
THE SWATCH GROUP 'B' (S:UHR)	10.0%
DENSO (J:DE@N)	9.9%
WOOD GROUP (JOHN) (UKIR:WG.)	9.7%
RICHEMONT N (S:CFR)	8.7%
SHIMANO (J:SHMO)	7.2%
WEIR GROUP (UKIR:WEIR)	5.8%
ITAU UNIBANCO BANCO HLDG.ADR 1:1 (ITUB)	5.0%

Worst Performers

	Return %
RAKUTEN (J:RAKT)	-24.1%
CAPITA (UKIR:CPI)	-23.2%
PROTALIX BIOTH. (PLX)	-21.9%
NOVOZYMES (DK:NZY)	-21.5%
DISTRIBUIDORA INTNAC.DE ALIMENTACION (E:DIA)	-20.5%
COCHLEAR (A:COHX)	-17.8%
THAI BEVERAGE PUBLIC (T:THBE)	-17.3%
ALIBABA GROUP HLDG.SPN. ADR 1:1 (BABA)	-17.0%
MAHINDRA & MAHINDRA GDR REG 'S' (UKIR:MHID)	-17.0%
WALMART DE MEXICO 'V' (MX:WAV)	-16.9%

**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.2%	0.2%	-0.4%	0.0%	9.7%	8.3%	0.7%	6.6%			
Materials	-0.2%	-1.2%	-0.2%	1.1%	-12.5%	2.7%	2.3%	7.5%			
Industrials	-0.8%	-0.8%	0.0%	-0.1%	-6.5%	-2.1%	14.8%	11.7%			
Consumer Discretionary	-1.6%	-0.8%	0.2%	-1.0%	-6.0%	-0.9%	21.0%	11.4%			
Consumer Staples	-1.6%	0.0%	-0.8%	-0.8%	-11.2%	-9.8%	19.8%	11.1%			
Health Care	-0.3%	-0.2%	-0.1%	0.0%	-9.6%	-8.1%	9.9%	8.6%			
Financials	-1.5%	-1.1%	-0.5%	0.1%	-2.3%	6.9%	15.1%	21.7%			
Information Technology	-0.6%	-0.4%	-0.2%	0.0%	-6.0%	-4.9%	13.9%	9.6%			
Telecommunication Services	0.5%	--	0.2%	--	--	-6.6%	0.0%	5.0%			
Utilities	0.4%	--	0.2%	--	--	-7.2%	0.0%	3.4%			
Real Estate	0.4%	--	0.2%	--	--	-7.7%	0.0%	3.5%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	2.5%	0.0%			
<b>Portfolio</b>	<b>-5.6%</b>	<b>=</b>	<b>-4.3%</b>	<b>+</b>	<b>-1.3%</b>	<b>+</b>	<b>0.0%</b>	<b>-6.8%</b>	<b>-1.2%</b>	<b>100.0%</b>	<b>100.0%</b>

**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	--	6.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Belgium	--	-11.8%	0.0%	1.0%	--	0.1%	0.1%	--	0.2%
Czech Republic*	--	-2.4%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-13.5%	-8.9%	4.4%	1.2%	-0.1%	-0.2%	-0.2%	-0.2%	-0.6%
Finland	-11.5%	-4.4%	1.3%	0.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
France	-3.5%	3.1%	0.9%	6.8%	-0.4%	-0.3%	0.4%	0.4%	0.0%
Germany	-8.2%	1.5%	3.6%	6.2%	-0.6%	-0.1%	0.2%	0.2%	-0.3%
Greece*	--	15.5%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	9.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	0.1%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Italy	--	10.8%	0.0%	1.3%	--	-0.2%	0.1%	--	-0.1%
Netherlands	--	-2.0%	0.0%	2.3%	--	0.0%	0.1%	--	0.2%
Norway	--	2.7%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Poland*	--	4.1%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Portugal	-10.4%	-3.1%	1.1%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%
Russia*	--	18.8%	0.0%	0.9%	--	-0.1%	0.0%	--	-0.1%
Spain	-12.2%	2.2%	2.5%	2.1%	-0.3%	0.0%	0.0%	-0.1%	-0.4%
Sweden	1.6%	-0.7%	4.9%	2.0%	0.0%	0.0%	-0.2%	0.1%	-0.1%
Switzerland	-2.8%	-3.9%	5.9%	6.3%	0.1%	0.0%	0.0%	0.0%	0.1%
United Kingdom	-6.7%	-0.9%	16.4%	13.2%	-0.7%	0.0%	-0.1%	-0.2%	-1.1%

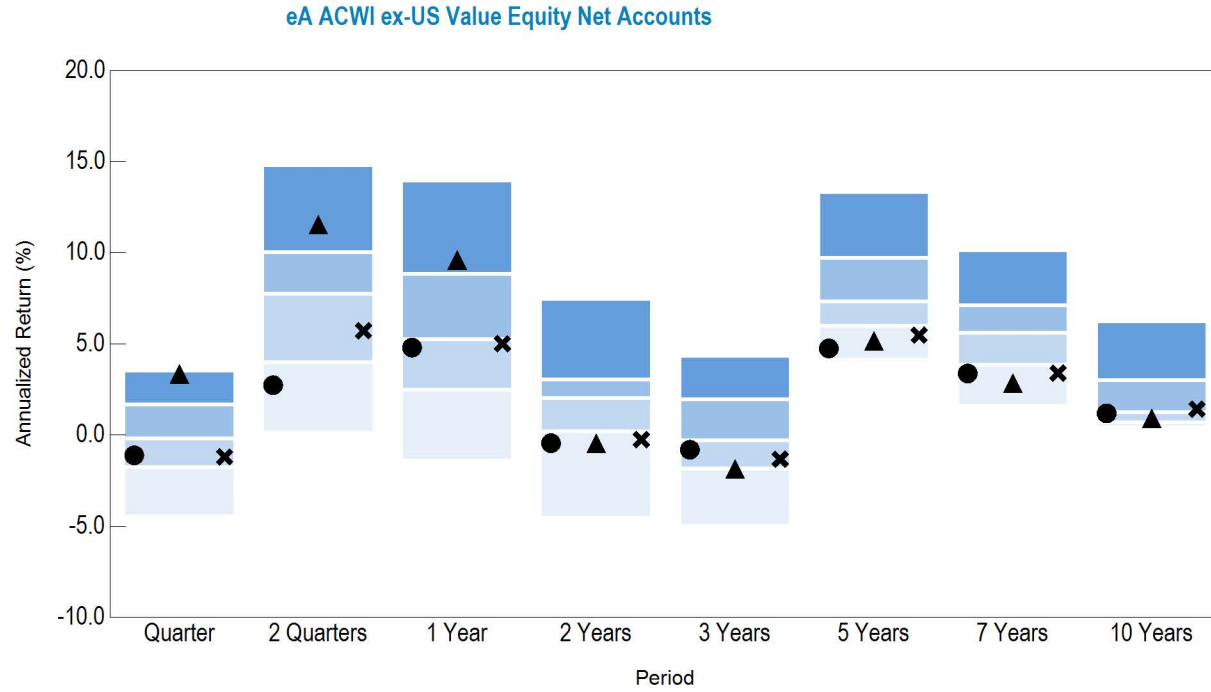
**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	-11.2%	0.8%	7.2%	5.1%	-0.6%	0.0%	-0.1%	-0.2%	-0.9%
China*	-10.0%	-7.0%	6.6%	6.3%	-0.2%	-0.1%	0.0%	0.0%	-0.3%
Hong Kong	-4.3%	-9.0%	1.3%	2.5%	0.1%	0.1%	0.0%	-0.1%	0.2%
India*	-17.0%	-7.8%	1.5%	1.9%	-0.2%	0.1%	0.0%	0.1%	-0.1%
Indonesia*	--	-7.4%	0.0%	0.6%	--	0.1%	0.0%	--	0.1%
Japan	-5.9%	-0.1%	21.7%	16.8%	-1.0%	0.4%	-0.6%	-0.3%	-1.4%
Korea*	-4.3%	-6.9%	3.3%	3.5%	-0.1%	0.0%	0.2%	0.0%	0.1%
Malaysia*	-8.3%	-8.4%	0.7%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	-10.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	-10.5%	-12.8%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	-4.1%	-3.6%	4.2%	0.9%	0.0%	-0.1%	-0.1%	-0.1%	-0.3%
Taiwan*	-3.9%	-2.1%	3.5%	2.8%	-0.1%	0.0%	0.1%	0.0%	-0.1%
Thailand*	--	-1.6%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
<b>Americas</b>									
Brazil*	20.0%	2.4%	0.0%	1.7%	0.1%	0.0%	0.0%	-0.1%	0.0%
Canada	--	3.5%	0.0%	6.7%	--	0.0%	0.1%	--	0.1%
Chile*	--	2.5%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	-2.2%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-16.9%	-7.8%	0.6%	0.9%	-0.1%	0.0%	0.0%	0.0%	0.0%
Peru*	--	2.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United States	-0.9%	3.4%	1.8%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%

**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	-23.3%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-10.9%	0.0%	0.5%	--	0.1%	0.0%	--	0.1%
Qatar*	--	1.0%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
South Africa*	-12.8%	-3.9%	3.5%	1.7%	-0.1%	-0.2%	0.0%	-0.2%	-0.5%
Turkey*	--	-13.7%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	--	-2.2%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
<b>Totals</b>									
Americas	-5.2%	2.3%	2.4%	9.7%	-0.8%	0.1%	0.2%	0.6%	0.0%
Europe	-6.5%	0.0%	41.0%	45.3%	-3.0%	0.0%	0.3%	0.2%	-2.4%
Asia/Pacific	-7.1%	-3.0%	50.5%	42.1%	-1.9%	0.0%	-0.4%	-0.4%	-2.7%
Other	-12.8%	-5.8%	3.5%	2.9%	-0.3%	-0.1%	0.1%	-0.1%	-0.3%
Cash	0.1%	--	2.5%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
<b>Total</b>	<b>-6.8%</b>	<b>-1.2%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-5.9%</b>	<b>-0.1%</b>	<b>0.1%</b>	<b>0.4%</b>	<b>-5.6%</b>
<b>Totals</b>									
Developed	-6.4%	-0.3%	77.2%	76.7%	-4.4%	0.0%	-0.3%	0.0%	-4.7%
Emerging*	-9.2%	-4.2%	20.3%	23.3%	-1.5%	0.2%	0.4%	0.2%	-0.8%
Cash	0.1%	--	2.5%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%





	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	3.5	14.8	14.0	7.5	4.3	13.3	10.1	6.2
25th Percentile	1.7	10.0	8.8	3.1	2.0	9.7	7.1	3.0
Median	-0.2	7.8	5.3	2.0	-0.3	7.3	5.6	1.3
75th Percentile	-1.8	4.0	2.5	0.2	-1.8	6.0	3.9	0.7
95th Percentile	-4.4	0.2	-1.4	-4.5	-5.0	4.1	1.6	0.4
# of Portfolios	38	37	35	33	29	25	21	18
● Mondrian	-1.1 (69)	2.7 (81)	4.8 (52)	-0.4 (79)	-0.8 (58)	4.8 (92)	3.4 (86)	1.2 (53)
▲ MSCI ACWI ex USA Value Gross	3.4 (6)	11.5 (9)	9.6 (14)	-0.5 (79)	-1.9 (78)	5.2 (85)	2.9 (92)	0.9 (68)
✕ MSCI ACWI ex USA Gross	-1.2 (70)	5.7 (66)	5.0 (51)	-0.3 (78)	-1.3 (62)	5.5 (82)	3.4 (86)	1.4 (45)

Characteristics

	Portfolio	MSCI ACWI ex USA Value Gross
Number of Holdings	136	1,061
Weighted Avg. Market Cap. (\$B)	50.0	47.9
Median Market Cap. (\$B)	15.9	6.5
Price To Earnings	21.3	15.3
Price To Book	2.5	1.5
Price To Sales	1.7	1.6
Return on Equity (%)	10.4	9.8
Yield (%)	4.0	3.7
Beta (holdings: global)	0.9	1.1

Top Holdings

SANOFI	2.7%
ABB LTD N	2.5%
GLAXOSMITHKLINE	2.5%
HONDA MOTOR	2.4%
IBERDROLA	2.4%
SYNGENTA	2.4%
BP	2.4%
KIRIN HOLDINGS	2.3%
TESCO	2.3%
TELIASONERA	2.2%

Best Performers

	Return %
CHINA BLUE CHEMICAL 'H' (K:CHBC)	51.5%
SOCIETE GENERALE (F:SGE)	42.5%
SUZANO BAHIA SUL PAPEL CELULOSE A PN (BR:BU5)	35.4%
QBE INSURANCE GROUP (A:QBEX)	26.5%
OAO GAZPROM SPN.ADR 1:2	20.3%
CAIRN INDIA	18.7%
LUKOIL OAO SPN.ADR 1:1 (LUKOY)	17.6%
ROYAL DUTCH SHELL B	14.1%
ROYAL DUTCH SHELL A(LON) (UKIR:RDSA)	13.6%
ENI (I:ENI)	13.3%

Worst Performers

	Return %
RWE (D:RWE)	-28.0%
PLDT.TEL.SPN.ADR 1:1	-22.8%
INDIABULLS HOUSING FIN	-22.1%
TURK TELEKOMUNIKASYON	-20.6%
AMEC FOSTER WHEELER (UKIR:AMFW)	-20.4%
ERICSSON 'B'	-18.6%
AXIS BANK	-18.5%
KIMBERLY-CLARK DE MEXICO 'A'	-18.5%
AMBEV SPONSORED ADR 1:1 (ABEV)	-17.5%
ISS AS (DK:ISS)	-17.2%

**Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross**

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	0.0%	-0.1%	0.0%	9.3%	10.0%	8.6%	10.7%			
Materials	-0.2%	-0.8%	-0.2%	0.8%	-1.4%	7.0%	3.5%	8.4%			
Industrials	-0.2%	-0.4%	0.0%	0.2%	-1.0%	0.7%	10.4%	9.9%			
Consumer Discretionary	-0.3%	-0.5%	0.0%	0.2%	-1.5%	1.2%	10.0%	9.6%			
Consumer Staples	-1.4%	0.1%	-1.3%	-0.2%	-4.8%	-8.2%	12.8%	2.4%			
Health Care	-0.6%	0.2%	-0.6%	-0.3%	-4.9%	-7.5%	10.2%	5.0%			
Financials	0.0%	-0.2%	-1.0%	1.2%	7.5%	8.7%	15.0%	34.3%			
Information Technology	-0.9%	-0.2%	-0.1%	-0.6%	-4.3%	-0.4%	9.9%	5.1%			
Telecommunication Services	-0.9%	0.0%	-0.7%	-0.2%	-6.3%	-7.0%	11.0%	5.3%			
Utilities	-0.3%	0.0%	-0.2%	-0.1%	-7.1%	-7.1%	6.8%	5.1%			
Real Estate	0.5%	-0.1%	0.3%	0.3%	-9.7%	-8.0%	1.4%	4.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.3%	0.0%			
<b>Portfolio</b>	<b>-4.4%</b>	<b>=</b>	<b>-1.9%</b>	<b>+</b>	<b>-3.7%</b>	<b>+</b>	<b>1.3%</b>	<b>-1.2%</b>	<b>3.2%</b>	<b>100.0%</b>	<b>100.0%</b>

Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

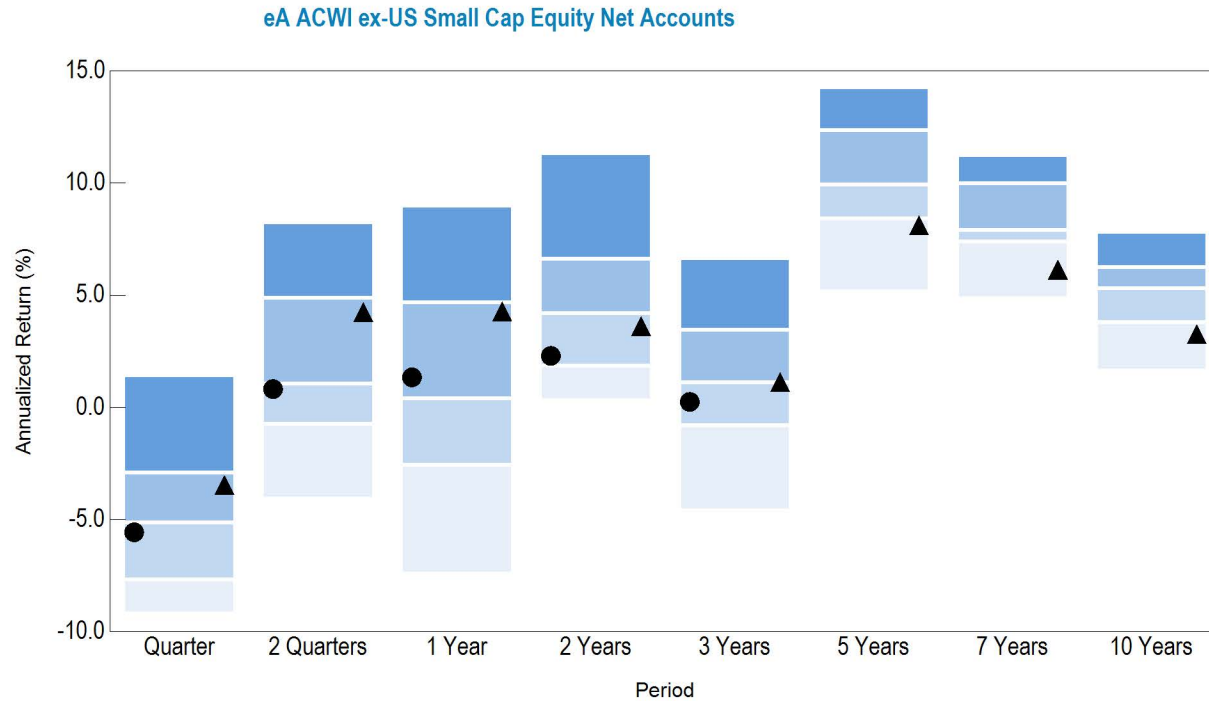
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	--	9.5%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Belgium	--	2.4%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	-5.8%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-17.2%	1.6%	0.7%	0.5%	-0.1%	0.0%	0.0%	0.0%	-0.2%
Finland	--	-3.2%	0.0%	1.1%	--	0.1%	0.1%	--	0.1%
France	13.3%	6.2%	5.0%	8.0%	0.6%	-0.1%	0.2%	-0.2%	0.5%
Germany	2.2%	6.3%	7.9%	5.8%	-0.3%	0.1%	-0.1%	-0.1%	-0.4%
Greece*	--	15.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	11.5%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	18.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Italy	7.2%	8.4%	3.0%	1.9%	0.0%	0.1%	-0.1%	0.0%	-0.1%
Netherlands	-0.3%	10.3%	3.5%	1.1%	-0.1%	0.2%	-0.2%	-0.3%	-0.4%
Norway	--	6.3%	0.0%	0.7%	--	0.0%	0.1%	--	0.0%
Poland*	--	9.7%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Portugal	--	-9.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Russia*	19.1%	19.5%	0.5%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	-3.8%	5.7%	4.4%	3.0%	-0.3%	0.0%	-0.1%	-0.1%	-0.5%
Sweden	-11.1%	1.5%	3.4%	2.0%	-0.3%	0.0%	-0.1%	-0.2%	-0.6%
Switzerland	-5.0%	3.5%	11.4%	3.2%	-0.3%	-0.1%	-0.3%	-0.7%	-1.5%
United Kingdom	-2.2%	2.5%	19.6%	15.9%	-0.8%	-0.1%	-0.1%	-0.2%	-1.2%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	26.5%	5.5%	0.8%	5.3%	1.2%	-0.1%	0.3%	-1.0%	0.4%
China*	1.2%	-2.9%	0.4%	6.1%	0.2%	0.7%	0.0%	-0.2%	0.7%
Hong Kong	-5.7%	-7.7%	3.0%	2.5%	0.0%	-0.1%	0.0%	0.0%	0.0%
India*	-5.6%	-6.3%	2.5%	2.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Indonesia*	-4.3%	-4.2%	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	1.5%	4.9%	14.5%	16.8%	-0.7%	-0.3%	0.5%	0.1%	-0.4%
Korea*	-6.2%	-5.2%	2.2%	3.6%	0.0%	0.1%	0.1%	0.0%	0.2%
Malaysia*	-4.7%	-7.8%	1.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	-6.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	-22.8%	-12.7%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	-4.3%	1.2%	4.5%	0.9%	0.0%	-0.1%	-0.2%	-0.2%	-0.6%
Taiwan*	-5.4%	-0.3%	3.0%	2.7%	-0.1%	0.0%	0.0%	0.0%	-0.2%
Thailand*	-8.2%	0.3%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	-0.1%
<b>Americas</b>									
Brazil*	2.4%	11.0%	1.2%	1.8%	-0.2%	0.0%	0.0%	0.0%	-0.1%
Canada	-5.0%	8.8%	1.1%	6.9%	-1.0%	-0.1%	0.1%	0.8%	-0.1%
Chile*	4.5%	3.3%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	--	-0.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-13.6%	-2.7%	1.1%	0.8%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Peru*	3.7%	0.6%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	-8.6%	3.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	-24.2%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-9.4%	0.0%	0.5%	--	0.1%	0.0%	--	0.1%
Kazakhstan**	0.5%	3.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	4.6%	3.3%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-2.2%	3.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	1.6%	2.2%	1.2%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Turkey*	-10.1%	-10.9%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	8.9%	3.8%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	-4.0%	7.9%	4.4%	9.9%	-1.2%	0.0%	0.1%	0.7%	-0.4%
Europe	-0.9%	4.6%	59.4%	45.2%	-2.7%	0.1%	-0.6%	-0.8%	-4.0%
Asia/Pacific	-1.7%	0.8%	33.3%	42.1%	-0.9%	0.0%	0.6%	0.2%	0.0%
Other	1.4%	-1.2%	2.5%	2.8%	0.1%	0.0%	0.0%	0.0%	0.1%
Cash	0.1%	--	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>-1.2%</b>	<b>3.2%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-4.7%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>0.0%</b>	<b>-4.4%</b>
<b>Totals</b>									
Developed	-0.8%	4.4%	83.0%	76.9%	-4.5%	0.1%	0.0%	-0.4%	-4.6%
Emerging*	-3.5%	-1.0%	16.5%	23.1%	-0.5%	0.5%	0.1%	0.1%	0.3%
Frontier**	-0.8%	--	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	1.4	8.2	9.0	11.3	6.6	14.3	11.2	7.8
25th Percentile	-2.9	4.9	4.7	6.6	3.5	12.4	10.0	6.3
Median	-5.1	1.1	0.4	4.2	1.1	9.9	7.9	5.3
75th Percentile	-7.7	-0.7	-2.6	1.9	-0.8	8.5	7.4	3.8
95th Percentile	-9.2	-4.1	-7.4	0.3	-4.6	5.2	4.9	1.6
# of Portfolios	44	43	42	36	30	22	17	12
● FIAM Equity	-5.6 (59)	0.8 (58)	1.3 (35)	2.3 (68)	0.2 (68)	-- (--)	-- (--)	-- (--)
▲ MSCI ACWI ex US Small Cap Gross	-3.5 (27)	4.2 (32)	4.3 (28)	3.6 (54)	1.1 (52)	8.1 (86)	6.1 (87)	3.3 (84)

Characteristics

	Portfolio	MSCI ACWI ex-US Small Cap
No. of Securities	228	4,284
Wgtd. Avg. Market Cap (000's)	2,671	1,986
Price to Book Ratio	1.8	1.6
Return on Equity	11.8%	10.0%

Ten Holdings

TECHTRONIC INDUSTRIES CO LTD	1.5
OBIC CO LTD	1.3
NIHON PARKERIZING CO LTD	1.3
FRUTAROM INDS LTD	1.2
JUNGHEINRICH AG NON-VTG PFD	1.2
DOWA HOLDINGS CO LTD	1.0
NITTO KOHKI CO LTD	1.0
SURUGA BANK LTD	1.0
QUEBECOR INC CL B SUB VTG	1.0
AAREAL BANK AG	1.0

Best Performers (Absolute Return %)

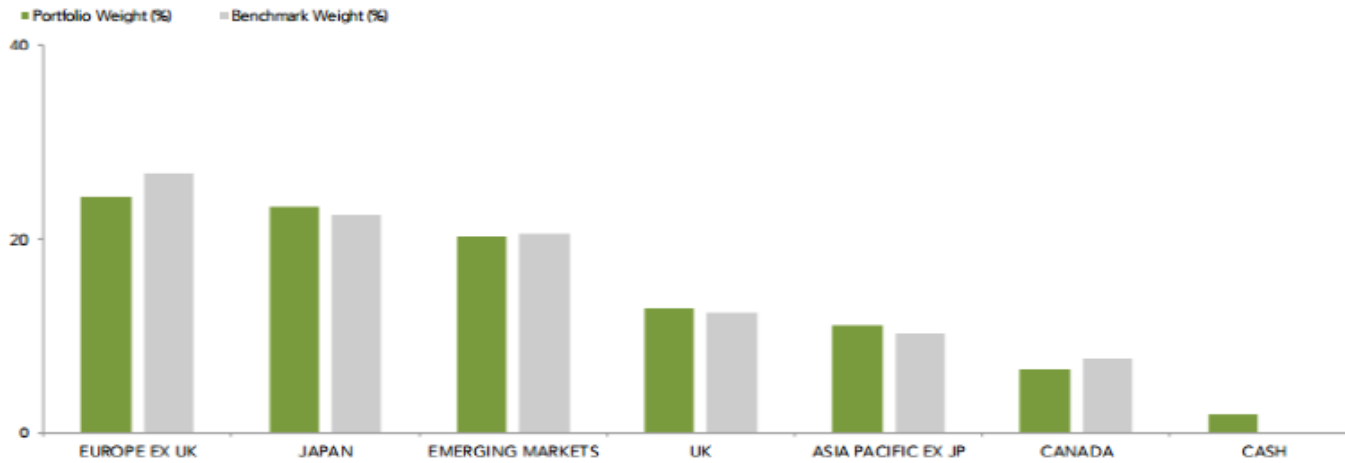
LIFESTYLE CHINA GROUP LTD	180.5
KINGBOARD LAMINAT HOLDINGS LTD	144.1
TRICAN WELL SERVICE LTD	141.7
MINERAL DEPOSITS LTD	137.9
T4F ENTRETENIMENTO SA	120.5
COPPER MOUNTAIN MINING CORP	118.8
TIMAH TBK PT	118.7
TRILOGY ENERGY CORP	113.7
ALAMOS GOLD INC A	111.4
TEGMA GESTAO LOGISTICA	98.9

Worst Performers (Absolute Return %)

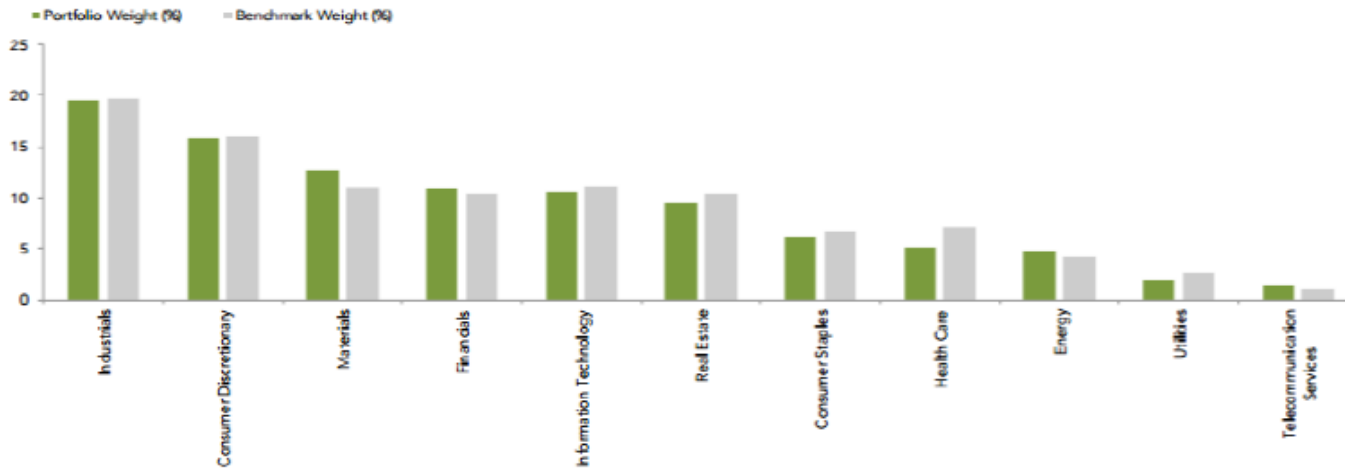
THE RESTAURANT GROUP PLC	(58.2)
ORION CORP	(44.8)
TRAMS PERKINS PLC	(41.0)
KEPCO PLANT SER & ENG CO LTD	(39.2)
REGUS PLC	(37.6)
PATRIZIA IMMOBILIEN AG	(37.6)
INGENICO GROUP	(35.9)
HYUNDAI WIA CORP	(35.5)
PAX GLOBAL TECHNOLOGY LTD	(35.1)
ABLYNX NV	(34.0)



**REGIONAL WEIGHTS**

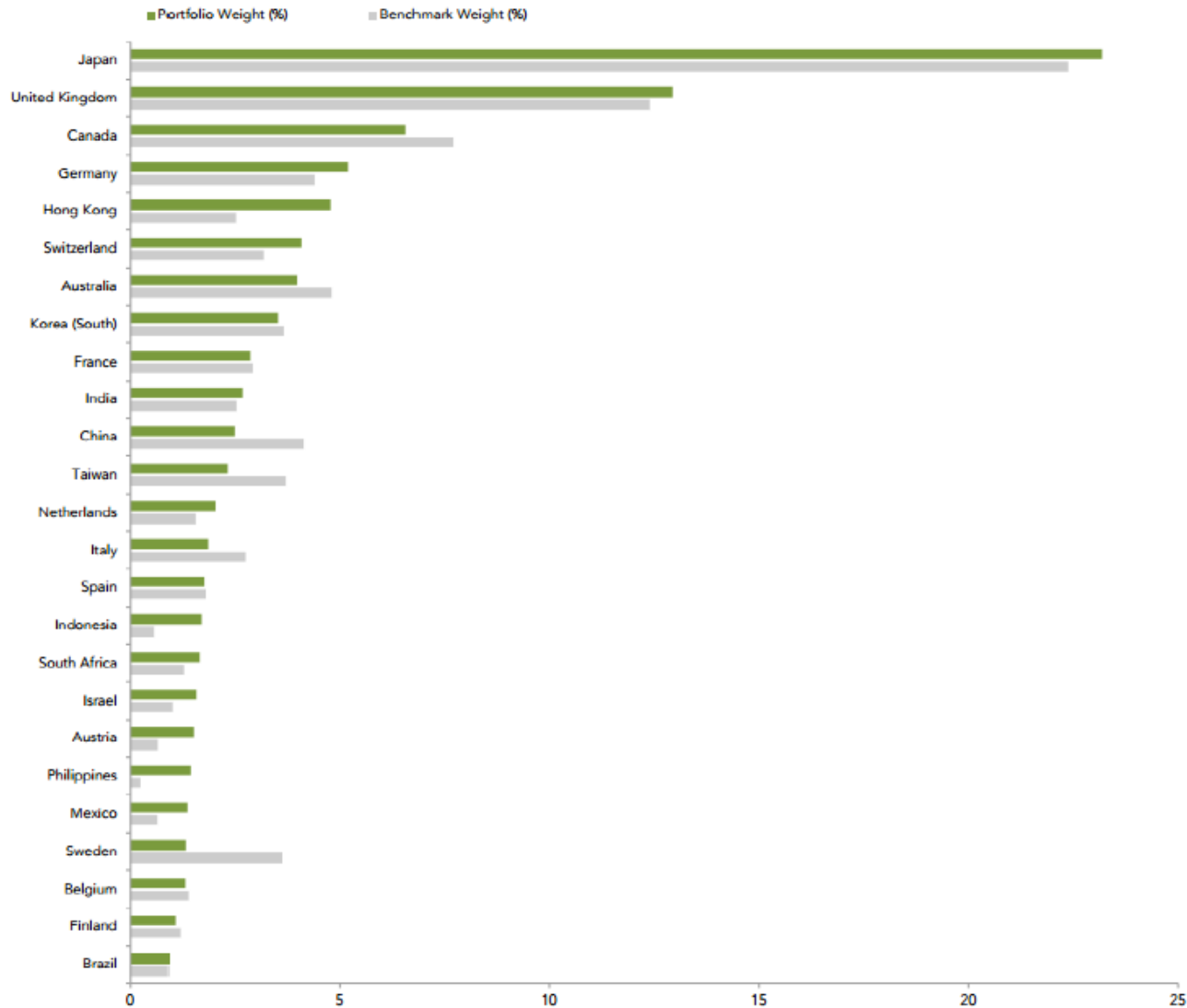


**SECTOR WEIGHTS**



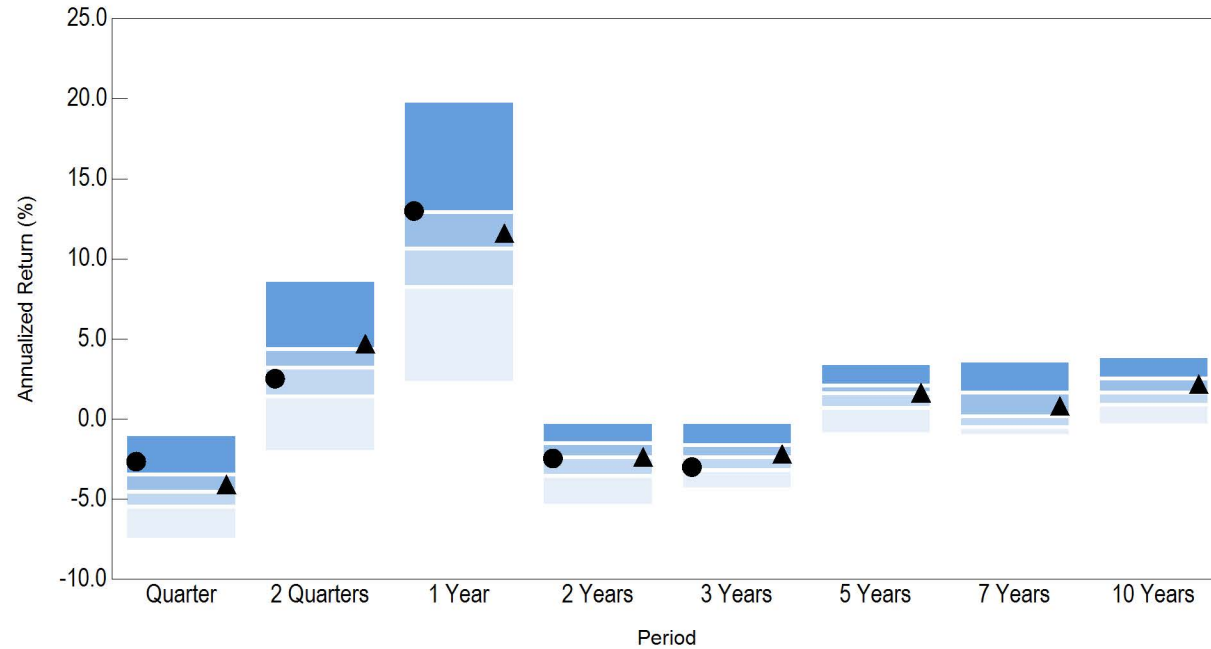
Sector breakdowns are only applied to equities and convertibles and the allocation percentages may not add to 100%.  
Benchmark: MSCI AC Wld Sm Cap xUS(N)

TOP 25 COUNTRY WEIGHTS

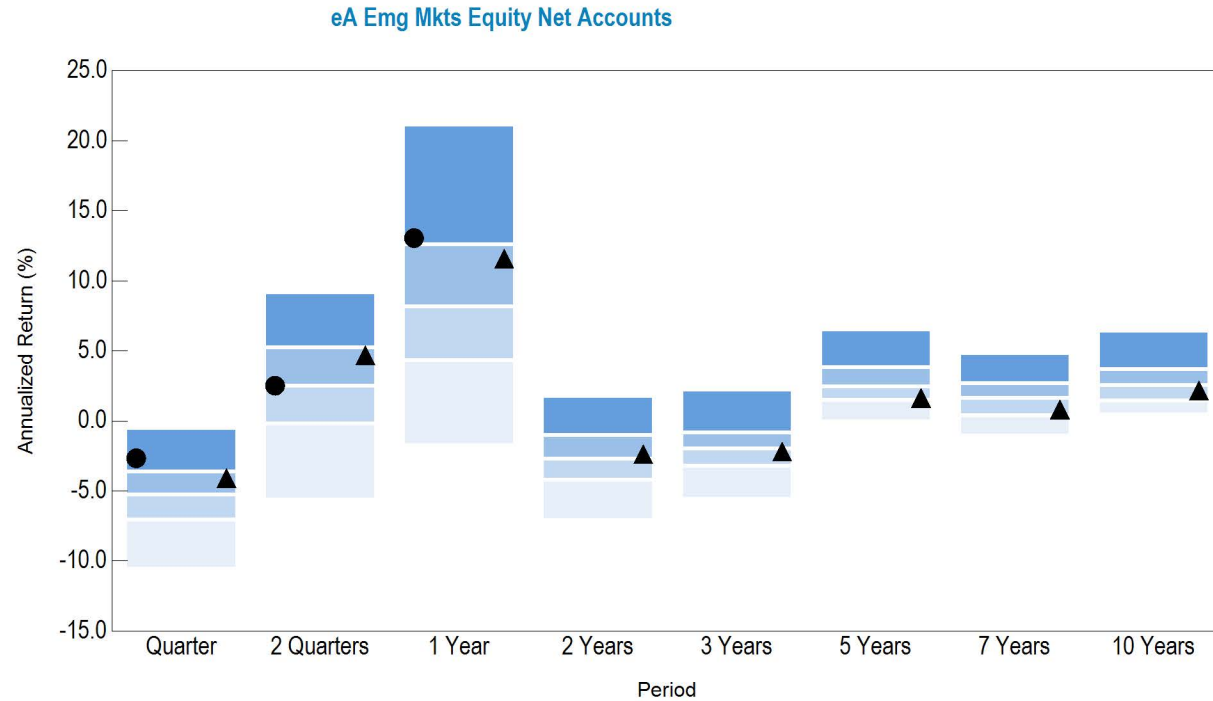


Benchmark: MSCI AC Wld Sm Cap xUS(N)

InvestorForce All DB Emg Mkt Eq Net Accounts



	Return (Rank)															
	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-1.0	8.7	19.8	-0.2	-0.2	3.4	3.6	3.9								
25th Percentile	-3.5	4.4	12.9	-1.5	-1.6	2.1	1.7	2.6								
Median	-4.5	3.2	10.7	-2.4	-2.4	1.6	0.2	1.7								
75th Percentile	-5.4	1.4	8.3	-3.5	-3.2	0.7	-0.5	0.9								
95th Percentile	-7.5	-2.0	2.3	-5.4	-4.4	-0.9	-1.1	-0.4								
# of Portfolios	107	105	105	98	90	63	26	19								
● Emerging Markets	-2.7 (19)	2.5 (62)	13.0 (24)	-2.5 (53)	-3.0 (71)	-- (--)	-- (--)	-- (--)								
▲ MSCI Emerging Markets Gross	-4.1 (38)	4.7 (22)	11.6 (44)	-2.4 (52)	-2.2 (44)	1.6 (50)	0.8 (34)	2.2 (36)								



	Return (Rank)															
	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-0.5	9.2	21.1	1.8	2.2	6.5	4.8	6.4								
25th Percentile	-3.6	5.3	12.7	-1.0	-0.8	3.9	2.7	3.7								
Median	-5.2	2.5	8.2	-2.7	-2.0	2.5	1.7	2.6								
75th Percentile	-7.0	-0.2	4.4	-4.2	-3.2	1.5	0.4	1.5								
95th Percentile	-10.5	-5.6	-1.7	-7.1	-5.5	0.0	-1.0	0.5								
# of Portfolios	182	182	181	174	162	121	85	52								
● Parametric Core	-2.7	(16)	2.5	(51)	13.1	(22)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ MSCI Emerging Markets Gross	-4.1	(34)	4.7	(31)	11.6	(33)	-2.4	(46)	-2.2	(56)	1.6	(72)	0.8	(71)	2.2	(62)

Characteristics

	Portfolio	MSCI Emerging Markets Gross
Number of Holdings	1,073	832
Weighted Avg. Market Cap. (\$B)	18.0	48.4
Median Market Cap. (\$B)	2.8	4.6
Price To Earnings	18.4	18.3
Price To Book	2.8	2.6
Price To Sales	2.4	5.2
Return on Equity (%)	15.4	16.3
Yield (%)	2.8	2.6
Beta (holdings; global)	0.9	1.0

Top Holdings

AMERICA MOVIL SAB DE CV SPN.ADR 'L' 1:20	1.0%
TAIWAN SEMICON.MNFG.	0.9%
SBERBANK OF RUSSIA	0.9%
DEUTSCHE XTRS.HARVST.CSI 300 CHINA A-SHS.ETF	0.8%
CHINA MOBILE	0.8%
SASOL	0.8%
OAO GAZPROM SPN.ADR 1:2	0.7%
SAMSUNG ELECTRONICS	0.7%
MAGNIT	0.7%
PTRO.BRAO.ADR 1:2	0.6%

Best Performers

	Return %
BUMI RESOURCES	296.0%
VIA VAREJO UNITS	68.5%
ASSORE	60.5%
COMPANIA SUDAMERICANA DE VAPORES (CL:VPR)	58.1%
INDO TAMBANGRAYA MEGAH (ID:INM)	53.9%
SAMART FB (Q:SAAF)	52.8%
UNION PROPERTIES (DU:UNP)	51.7%
CHINA BLUE CHEMICAL 'H'	51.5%
TRANSNEFT PREF.	51.3%
AVIANCA HOLDING PREF.	47.0%

Worst Performers

	Return %
SIGMAGOLD INTI PERKASA (ID:LAG)	-82.1%
SIBANYE GOLD (R:SGLJ)	-48.4%
DRYSHIPS (DRYS)	-45.8%
HANMI PHARM (KO:HPM)	-45.2%
SWANCOR INDUSTRIES (TW:SWC)	-41.2%
FELDA GLOBAL VENT.HDG.	-38.9%
IMPALA PLATINUM (R:IMPJ)	-38.2%
COSTAMARE	-37.9%
DOUBLEDRAGON PROPERTIES	-36.0%
TUNG THIH ELECTRONIC	-35.9%

**Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross**

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.3%	0.1%	0.3%	-0.1%	8.6%	8.4%	9.9%	6.9%			
Materials	0.2%	-0.1%	0.5%	-0.2%	3.4%	4.0%	12.1%	6.8%			
Industrials	0.2%	0.2%	0.0%	0.0%	-2.5%	-6.2%	9.4%	5.9%			
Consumer Discretionary	0.2%	0.2%	0.0%	0.0%	-8.5%	-9.7%	10.2%	10.6%			
Consumer Staples	0.2%	0.2%	-0.1%	0.1%	-6.8%	-10.6%	9.8%	7.8%			
Health Care	-0.2%	0.1%	-0.2%	0.0%	-7.9%	-10.0%	6.0%	2.6%			
Financials	0.3%	0.6%	-0.3%	0.0%	1.7%	-0.7%	15.6%	23.7%			
Information Technology	0.8%	0.0%	0.3%	0.6%	-5.8%	-6.4%	8.4%	23.8%			
Telecommunication Services	0.2%	0.2%	-0.1%	0.1%	-2.0%	-6.2%	8.7%	6.1%			
Utilities	-0.1%	0.1%	-0.1%	0.0%	-4.9%	-7.0%	7.2%	3.0%			
Real Estate	0.1%	0.1%	0.1%	0.0%	-6.5%	-10.0%	1.9%	2.7%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.7%	0.0%			
<b>Portfolio</b>	<b>2.3%</b>	<b>=</b>	<b>1.7%</b>	<b>+</b>	<b>0.3%</b>	<b>+</b>	<b>0.3%</b>	<b>-1.9%</b>	<b>-4.2%</b>	<b>100.0%</b>	<b>100.0%</b>

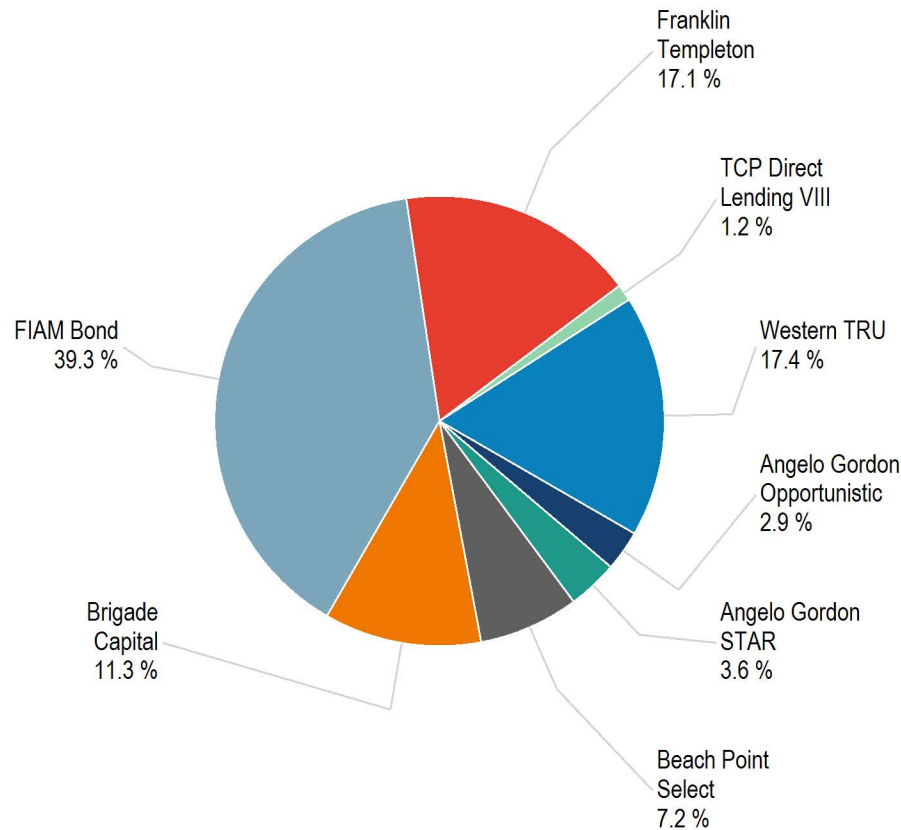
Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Czech Republic*	-2.9%	-2.4%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Greece*	8.3%	15.4%	1.6%	0.3%	0.0%	0.3%	-0.1%	-0.1%	0.1%
Hungary*	8.9%	9.3%	0.9%	0.3%	0.0%	0.1%	0.0%	0.0%	0.1%
Luxembourg	2.6%	-4.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	9.5%	-2.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	2.1%	4.0%	3.7%	1.1%	0.0%	0.4%	-0.2%	-0.1%	0.1%
Russia*	17.9%	18.8%	6.9%	3.7%	0.0%	0.6%	0.0%	0.0%	0.6%
United Kingdom	-15.4%	-0.9%	0.4%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
<b>AsiaPacific</b>									
China*	-3.1%	-6.9%	5.4%	27.2%	1.0%	1.2%	0.0%	-0.8%	1.4%
Hong Kong	-5.2%	-9.0%	5.6%	0.0%	0.0%	-0.4%	0.0%	0.2%	-0.2%
India*	-7.5%	-7.8%	5.4%	8.3%	-0.1%	0.1%	0.1%	0.0%	0.2%
Indonesia*	-5.9%	-7.4%	3.5%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Korea*	-10.7%	-6.9%	7.5%	14.9%	-0.6%	-0.3%	0.7%	0.3%	0.1%
Malaysia*	-8.8%	-8.4%	3.5%	2.7%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Pakistan**	15.6%	16.2%	1.9%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%
Philippines*	-11.9%	-12.8%	3.3%	1.3%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Singapore	-15.5%	-3.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	-4.0%	-2.2%	7.8%	12.1%	-0.2%	-0.1%	0.1%	0.1%	-0.1%
Thailand*	-3.1%	-1.6%	3.4%	2.2%	0.0%	0.0%	0.0%	0.0%	-0.1%
<b>Americas</b>									
Brazil*	-0.6%	2.3%	7.9%	7.4%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Chile*	2.3%	2.4%	3.6%	1.1%	0.0%	0.1%	0.0%	0.0%	0.1%
Colombia*	-0.9%	-2.3%	1.8%	0.5%	0.0%	0.0%	-0.1%	0.0%	0.0%
Mexico*	-6.9%	-7.8%	6.4%	3.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Peru*	0.4%	2.5%	1.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	2.8%	3.4%	1.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%

**Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross**

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	-23.3%	0.0%	0.2%	--	-0.1%	0.1%	--	0.0%
Kuwait**	9.0%	10.9%	1.6%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%
Qatar*	1.2%	1.0%	1.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-0.8%	-3.8%	6.8%	7.1%	0.2%	0.0%	0.0%	0.0%	0.2%
Turkey*	-11.4%	-13.7%	3.3%	1.2%	0.0%	0.1%	-0.3%	0.1%	-0.2%
United Arab Emirates*	2.0%	-0.9%	1.5%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	-1.7%	-0.7%	22.4%	13.0%	-0.2%	0.3%	-0.1%	-0.1%	-0.2%
Europe	10.3%	14.7%	14.3%	5.5%	-0.1%	1.5%	-0.4%	-0.2%	0.8%
Asia/Pacific	-5.7%	-6.2%	47.5%	71.4%	0.3%	0.4%	0.8%	-0.1%	1.4%
Other	-1.6%	-4.6%	15.0%	10.2%	0.4%	0.0%	-0.2%	0.2%	0.3%
Cash	0.1%	--	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>-1.9%</b>	<b>-4.2%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.3%</b>	<b>2.1%</b>	<b>0.1%</b>	<b>-0.2%</b>	<b>2.3%</b>
<b>Totals</b>									
Developed	-4.5%	--	7.5%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%
Emerging*	-2.3%	-4.2%	88.2%	100.0%	2.2%	0.0%	0.1%	-0.3%	2.0%
Frontier**	12.5%	--	3.5%	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%
Cash	0.1%	--	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%





	Actual \$	Actual %	Manager Contribution to Excess Return %
Angelo Gordon Opportunistic	\$18,019,000	2.9%	0.2%
Angelo Gordon STAR	\$22,602,000	3.6%	0.2%
Beach Point Select	\$44,619,814	7.2%	0.2%
Brigade Capital	\$70,052,952	11.3%	0.2%
FIAM Bond	\$243,708,418	39.3%	-1.2%
Franklin Templeton	\$106,360,730	17.1%	2.1%
TCP Direct Lending VIII	\$7,491,035	1.2%	-0.0%
Western Asset TRU	\$107,687,157	17.4%	0.1%
Actual vs. Policy Weight Difference			1.4%
<b>Total</b>	<b>\$620,541,106</b>	<b>100.0%</b>	<b>3.2%</b>

Statistics Summary

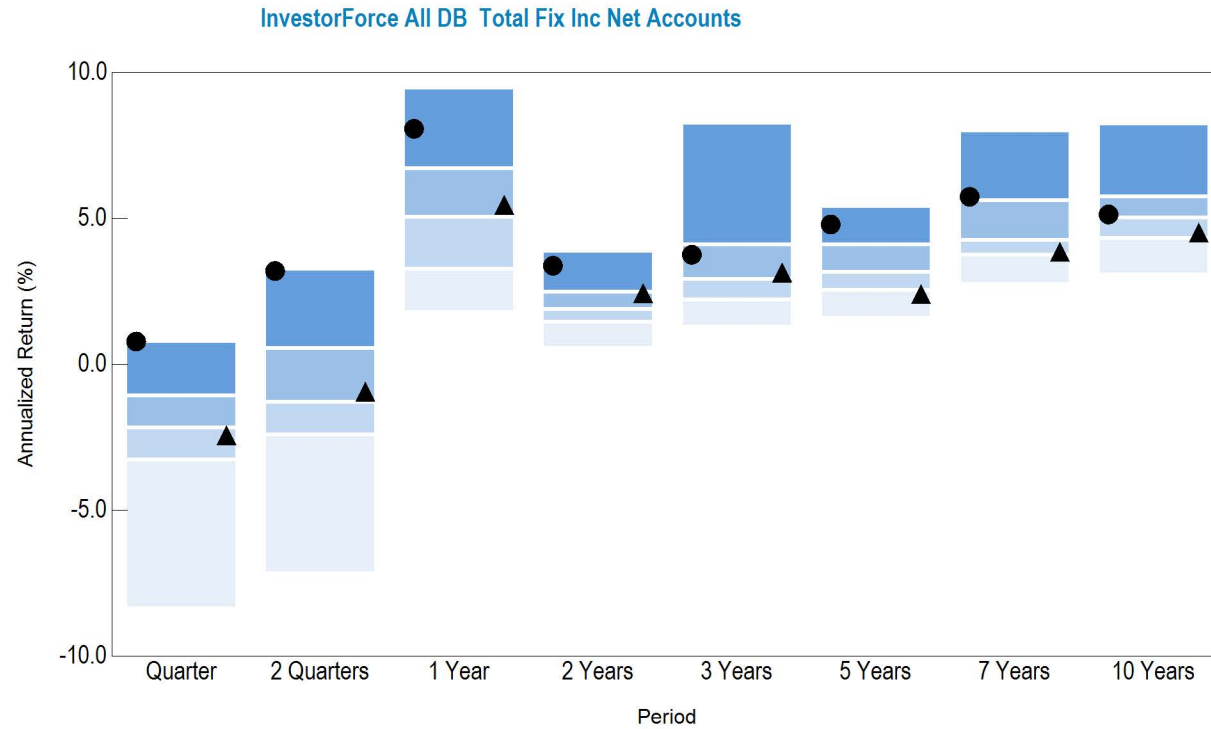
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	3.8%	3.0%	1.2	0.3	2.1%
Blended Fixed Income Index	3.1%	3.2%	1.0	--	0.0%
US Fixed Income	4.2%	2.9%	1.4	0.4	1.5%
Blended US Fixed Index	3.7%	3.0%	1.2	--	0.0%
FIAM Bond	3.6%	3.2%	1.1	0.7	0.9%
BBgBarc US Aggregate TR	3.0%	3.0%	1.0	--	0.0%
Angelo Gordon STAR	8.6%	5.4%	1.6	0.9	6.6%
BBgBarc US Aggregate TR	3.0%	3.0%	1.0	--	0.0%
Brigade Capital	3.2%	7.5%	0.4	-0.4	4.6%
BBgBarc BA Intermediate HY	5.1%	4.9%	1.0	--	0.0%
Global Fixed Income	1.2%	6.5%	0.2	0.2	8.0%
BBgBarc Multiverse TR	0.0%	5.0%	0.0	--	0.0%
Franklin Templeton	1.2%	6.5%	0.2	0.1	8.0%
BBgBarc Multiverse TR	0.0%	5.0%	0.0	--	0.0%

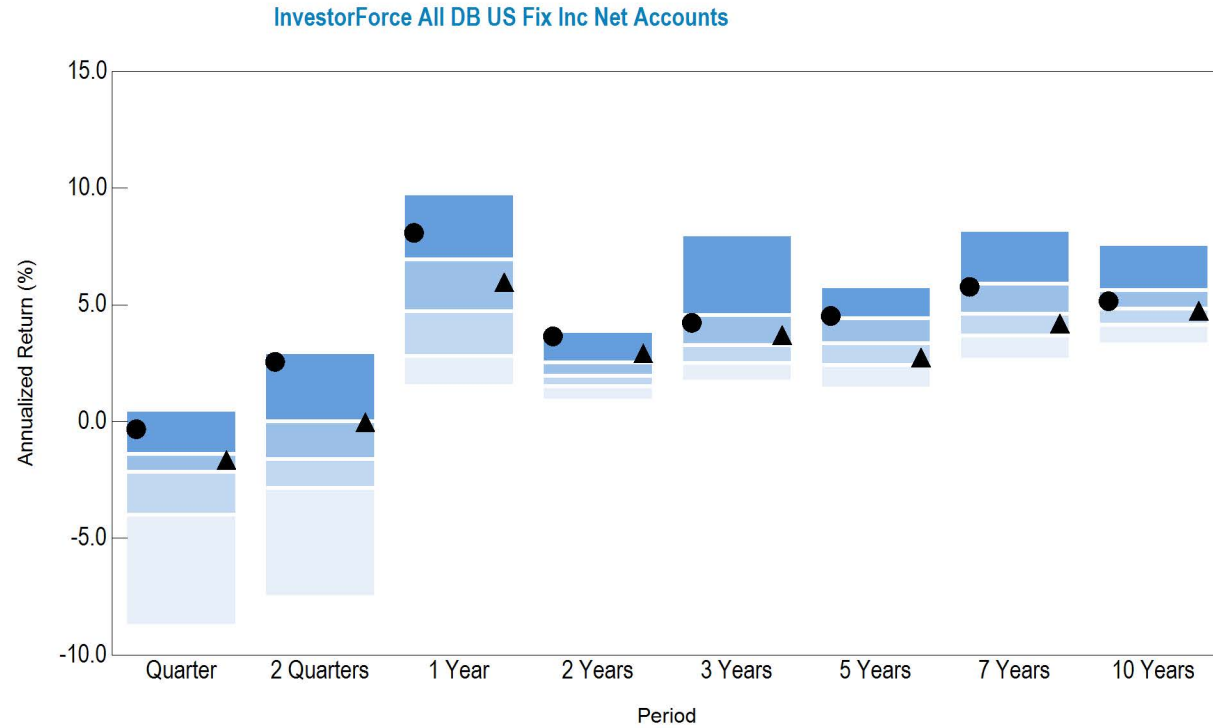
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.8%	3.5%	1.4	1.1	2.2%
Blended Fixed Income Index	2.4%	3.3%	0.7	--	0.0%
US Fixed Income	4.5%	3.1%	1.4	1.2	1.4%
Blended US Fixed Index	2.7%	3.3%	0.8	--	0.0%
FIAM Bond	3.1%	3.2%	1.0	1.2	0.8%
BBgBarc US Aggregate TR	2.2%	2.9%	0.7	--	0.0%
Brigade Capital	6.4%	6.3%	1.0	0.4	4.3%
BBgBarc BA Intermediate HY	4.8%	5.0%	1.0	--	0.0%
Global Fixed Income	5.4%	7.9%	0.7	0.6	7.8%
BBgBarc Multiverse TR	0.5%	4.6%	0.1	--	0.0%
Franklin Templeton	5.4%	7.9%	0.7	0.6	7.8%
BBgBarc Multiverse TR	0.5%	4.6%	0.1	--	0.0%



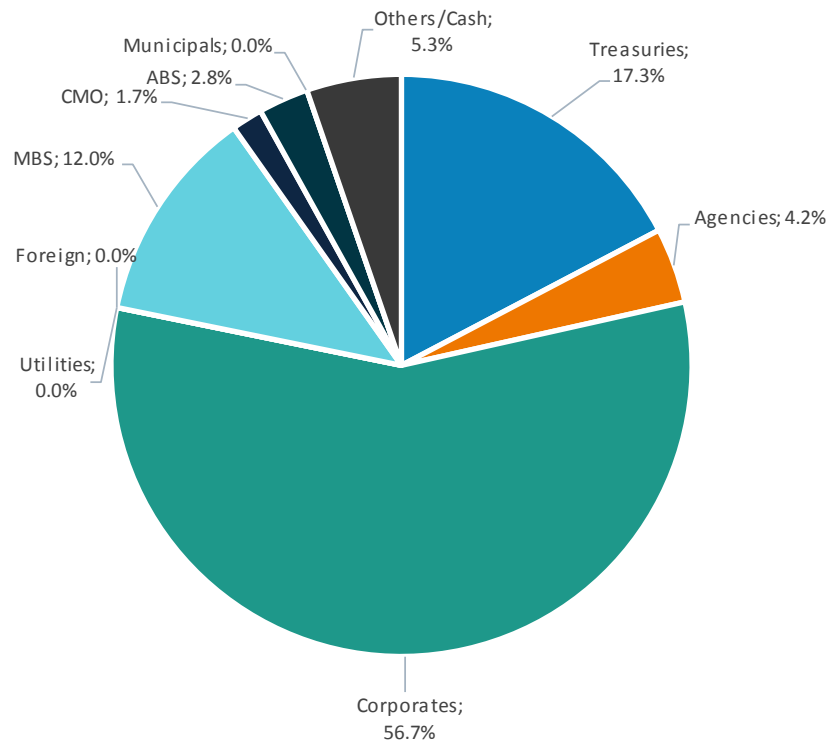
	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	0.8	3.3	9.5	3.9	8.3	5.4	8.0	8.2
25th Percentile	-1.1	0.6	6.7	2.5	4.1	4.1	5.6	5.8
Median	-2.2	-1.3	5.1	1.9	2.9	3.2	4.3	5.0
75th Percentile	-3.2	-2.4	3.3	1.5	2.2	2.6	3.8	4.3
95th Percentile	-8.4	-7.1	1.8	0.6	1.3	1.6	2.7	3.1
# of Portfolios	357	355	354	346	336	307	240	199
● Fixed Income	0.8 (6)	3.2 (6)	8.1 (12)	3.4 (9)	3.8 (30)	4.8 (16)	5.7 (23)	5.1 (47)
▲ Blended Fixed Income Index	-2.4 (60)	-0.9 (44)	5.5 (46)	2.4 (27)	3.1 (41)	2.4 (79)	3.9 (74)	4.5 (68)



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	0.5	3.0	9.8	3.9	8.0	5.8	8.2	7.6
25th Percentile	-1.4	0.0	7.0	2.6	4.6	4.4	5.9	5.6
Median	-2.1	-1.6	4.7	2.0	3.3	3.4	4.6	4.8
75th Percentile	-4.0	-2.8	2.8	1.5	2.5	2.4	3.7	4.2
95th Percentile	-8.7	-7.5	1.5	0.9	1.7	1.4	2.7	3.3
# of Portfolios	444	442	441	437	423	351	294	211
● US Fixed Income	-0.3 (12)	2.6 (7)	8.1 (15)	3.6 (7)	4.2 (30)	4.5 (23)	5.8 (27)	5.2 (40)
▲ Blended US Fixed Index	-1.6 (31)	0.0 (26)	6.0 (36)	2.9 (17)	3.7 (36)	2.7 (68)	4.2 (62)	4.8 (53)

US Fixed Income  
Bond Sector Allocation

Period Ending: December 31, 2016



Sector*	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	17.3%	36.1%	-18.8%
Agencies	4.2%	7.9%	-3.7%
Corporates	56.7%	25.9%	30.8%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	12.0%	28.0%	-16.0%
CMO	1.7%	0.0%	1.7%
ABS	2.8%	2.1%	0.7%
Municipals	0.0%	0.0%	0.0%
Others/Cash	5.3%	0.0%	5.3%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

\* Sector Allocation excludes Opportunistic Credit Managers.

US Fixed Income  
Bond Summary Statistics

Period Ending: December 31, 2016

Portfolio Characteristics*		Portfolio	BBgBarc Aggregate
Total Number of Securities			
Total Market Value	\$	351,395,575	
Current Coupon		2.32	3.16
Yield to Maturity		3.41	2.59
Average Life		8.97	7.95
Duration		4.92	5.85
Quality		AA-	AA

Yield to Maturity	
Range	% Held
0.0 - 5.0	n/a
5.0 - 7.0	n/a
7.0 - 9.0	n/a
9.0 - 11.0	n/a
11.0 - 13.0	n/a
13.0+	n/a
Unclassified	n/a

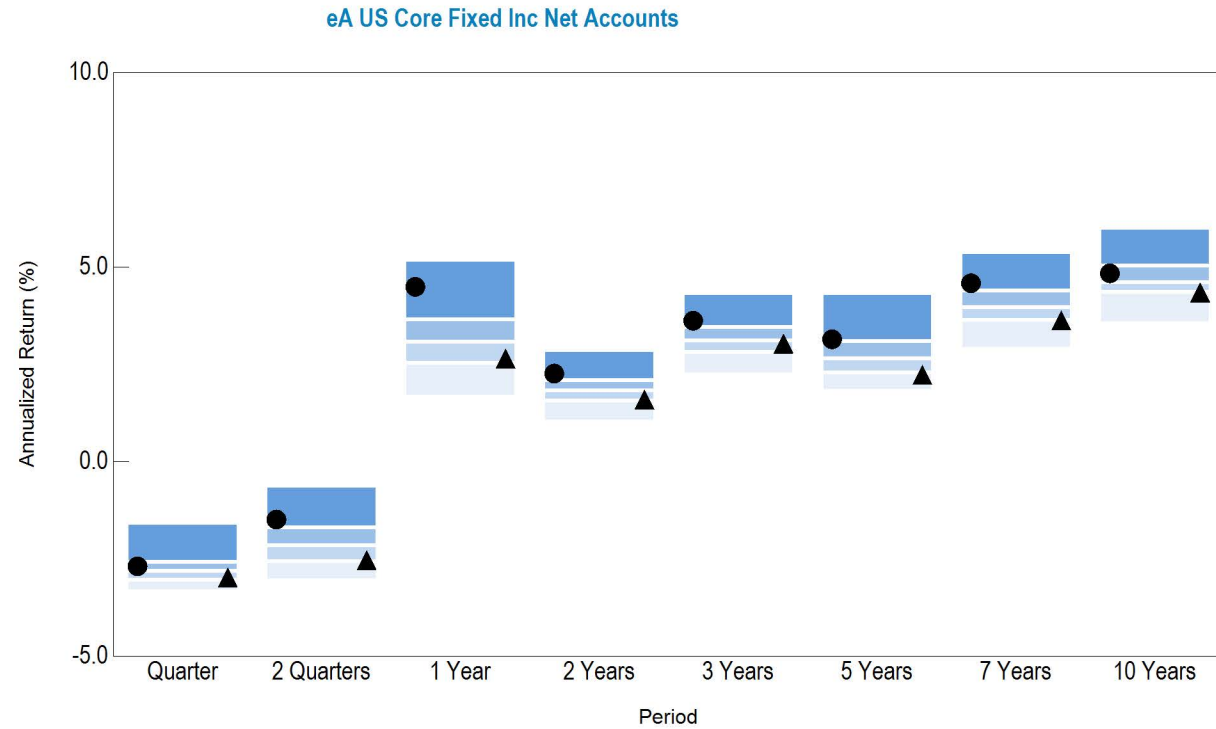
Average Life	
Range	% Held
0.0 - 1.0	1.6
1.0 - 3.0	6.4
3.0 - 5.0	20.2
5.0 - 10.0	59.0
10.0 - 20.0	2.0
20.0+	10.9
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	1.6
1.0 - 3.0	40.0
3.0 - 5.0	21.7
5.0 - 7.0	19.0
7.0 - 10.0	6.1
10.0+	11.7
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	35.4
Aaa (10)	0.9
Aa (9)	1.6
A (8)	11.2
Baa (7)	46.1
Below Baa (6-1)	2.0
Other	2.7

Coupon	
Range	% Held
0.0 - 5.0	84.0
5.0 - 7.0	10.7
7.0 - 9.0	2.1
9.0 - 11.0	0.1
11.0 - 13.0	0.0
13.0+	3.1
Unclassified	0.0

\* Characteristics excludes Opportunistic Credit Managers.

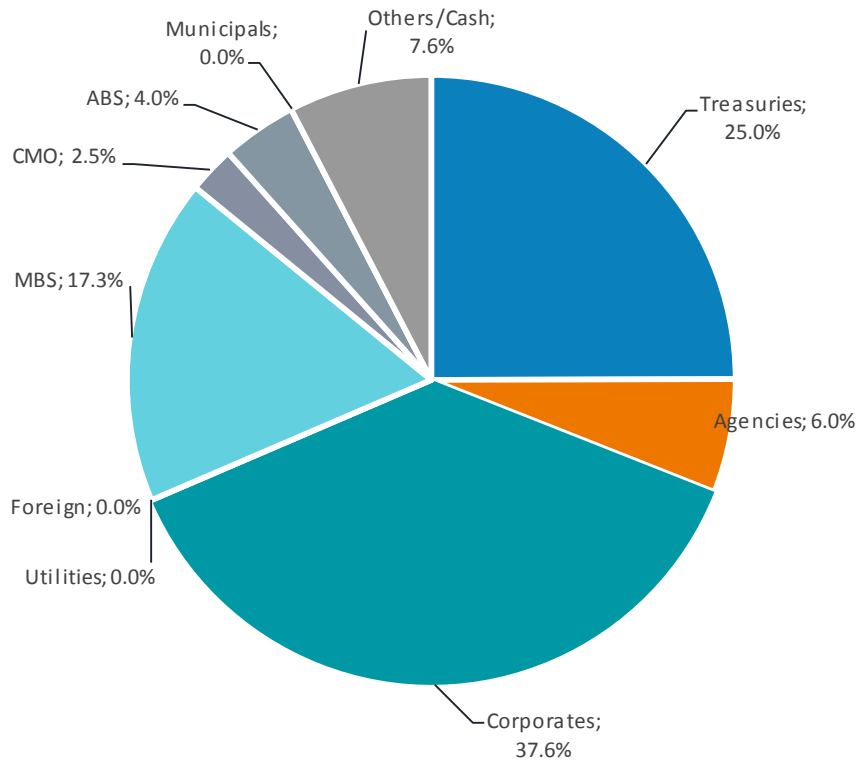


	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-1.6	-0.6	5.2	2.9	4.3	4.3	5.4	6.0
25th Percentile	-2.6	-1.7	3.7	2.1	3.5	3.1	4.4	5.0
Median	-2.8	-2.1	3.1	1.8	3.1	2.7	4.0	4.6
75th Percentile	-3.0	-2.5	2.5	1.6	2.8	2.3	3.6	4.4
95th Percentile	-3.3	-3.0	1.7	1.0	2.2	1.8	2.9	3.6
# of Portfolios	133	133	132	131	131	126	116	102
● FIAM Bond	-2.7 (41)	-1.5 (19)	4.5 (8)	2.3 (20)	3.6 (20)	3.1 (25)	4.6 (18)	4.8 (37)
▲ BBgBarc US Aggregate TR	-3.0 (71)	-2.5 (74)	2.6 (71)	1.6 (72)	3.0 (60)	2.2 (79)	3.6 (76)	4.3 (78)



FIAM Bond Market Duration Pool  
Bond Sector Allocation

Period Ending: December 31, 2016



Sector	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	25.0%	36.1%	-11.1%
Agencies	6.0%	7.9%	-1.9%
Corporates	37.6%	25.9%	11.7%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	17.3%	28.0%	-10.7%
CMO	2.5%	0.0%	2.5%
ABS	4.0%	2.1%	1.9%
Municipals	0.0%	0.0%	0.0%
Others/Cash	7.6%	0.0%	7.6%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

FIAM Bond Market Duration Pool  
Bond Summary Statistics

Period Ending: December 31, 2016

Portfolio Characteristics		Portfolio	BBgBarc Aggregate	
Total Number of Securities		908		
Total Market Value	\$	243,708,418		
Current Coupon		3.34	3.16	
Yield to Maturity		3.01	2.59	
Average Life		8.67	7.95	
Duration		5.99	5.85	
Quality		AA-	AA	

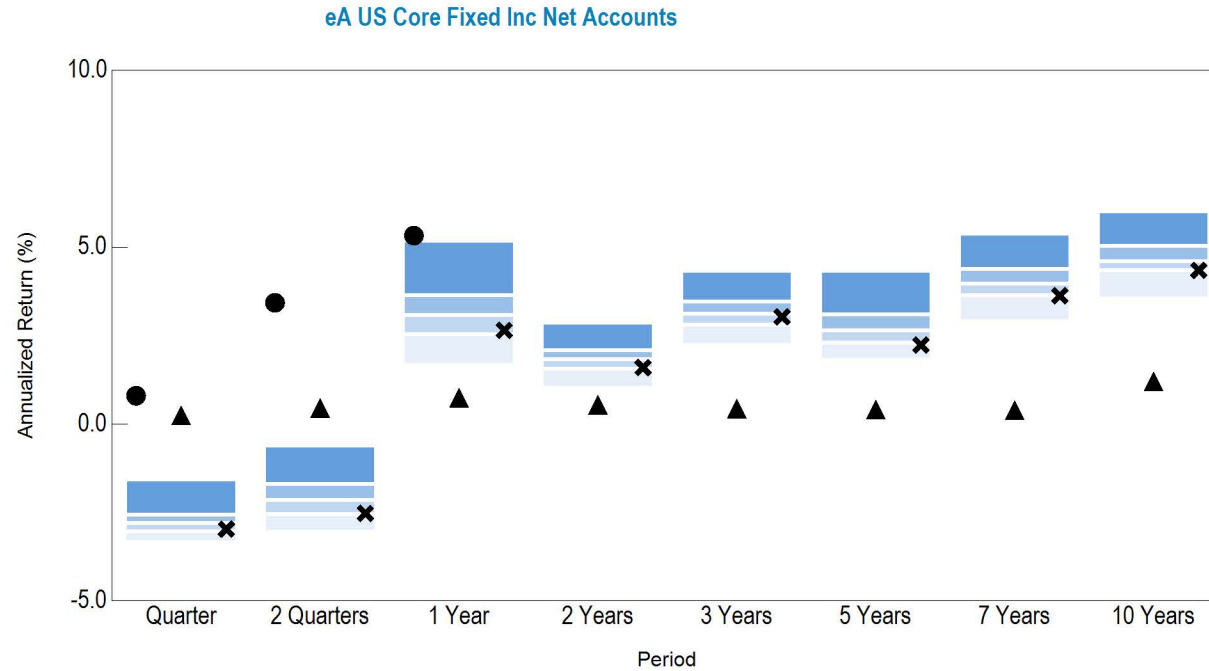
Yield to Maturity	
Range	% Held
0.0 - 5.0	94.2
5.0 - 7.0	6.4
7.0 - 9.0	1.3
9.0 - 11.0	0.1
11.0 - 13.0	0.0
13.0+	-2.0
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 1.0	2.3
1.0 - 3.0	9.2
3.0 - 5.0	29.1
5.0 - 10.0	40.8
10.0 - 20.0	2.9
20.0+	15.7
Unclassified	0.0

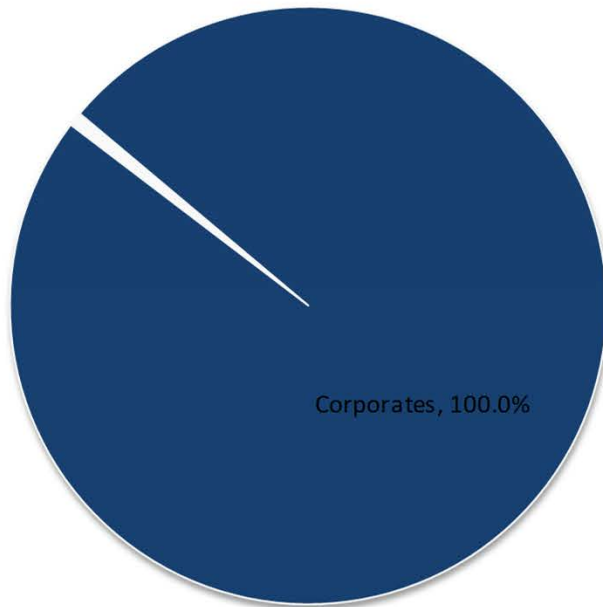
Duration	
Range	% Held
0.0 - 1.0	2.3
1.0 - 3.0	13.5
3.0 - 5.0	31.3
5.0 - 7.0	27.4
7.0 - 10.0	8.8
10.0+	16.8
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	51.1
Aaa (10)	1.3
Aa (9)	2.3
A (8)	16.1
Baa (7)	22.3
Below Baa (6-1)	2.9
Other	4.0

Coupon	
Range	% Held
0.0 - 5.0	76.9
5.0 - 7.0	15.4
7.0 - 9.0	3.0
9.0 - 11.0	0.1
11.0 - 13.0	0.0
13.0+	4.5
Unclassified	0.0



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
<b>5th Percentile</b>	-1.6	-0.6	5.2	2.9	4.3	4.3	5.4	6.0								
<b>25th Percentile</b>	-2.6	-1.7	3.7	2.1	3.5	3.1	4.4	5.0								
<b>Median</b>	-2.8	-2.1	3.1	1.8	3.1	2.7	4.0	4.6								
<b>75th Percentile</b>	-3.0	-2.5	2.5	1.6	2.8	2.3	3.6	4.4								
<b>95th Percentile</b>	-3.3	-3.0	1.7	1.0	2.2	1.8	2.9	3.6								
<b># of Portfolios</b>	133	133	132	131	131	126	116	102								
<b>● Western TRU</b>	0.8 (1)	3.4 (1)	5.3 (5)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)								
<b>▲ 3-Month Libor Total Return USD</b>	0.2 (1)	0.4 (2)	0.7 (99)	0.5 (99)	0.4 (99)	0.4 (99)	0.4 (99)	1.2 (99)								
<b>✕ BBgBarc US Aggregate TR</b>	-3.0 (71)	-2.5 (74)	2.6 (71)	1.6 (72)	3.0 (60)	2.2 (79)	3.6 (76)	4.3 (78)								



Sector	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	0.0%	36.1%	-36.1%
Agencies	0.0%	7.9%	-7.9%
Corporates	100.0%	25.9%	74.1%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	0.0%	28.0%	-28.0%
CMO	0.0%	0.0%	0.0%
ABS	0.0%	2.1%	-2.1%
Municipals	0.0%	0.0%	0.0%
Others/Cash	0.0%	0.0%	0.0%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

Portfolio Characteristics		
		Portfolio
Total Number of Securities		1
Total Market Value	\$	107,687,157
Current Coupon		0.00
Yield to Maturity		4.32
Average Life		9.66
Duration		2.49
Quality		A-

BBgBarc Aggregate	
	3.16
	2.59
	7.95
	5.85
	AA

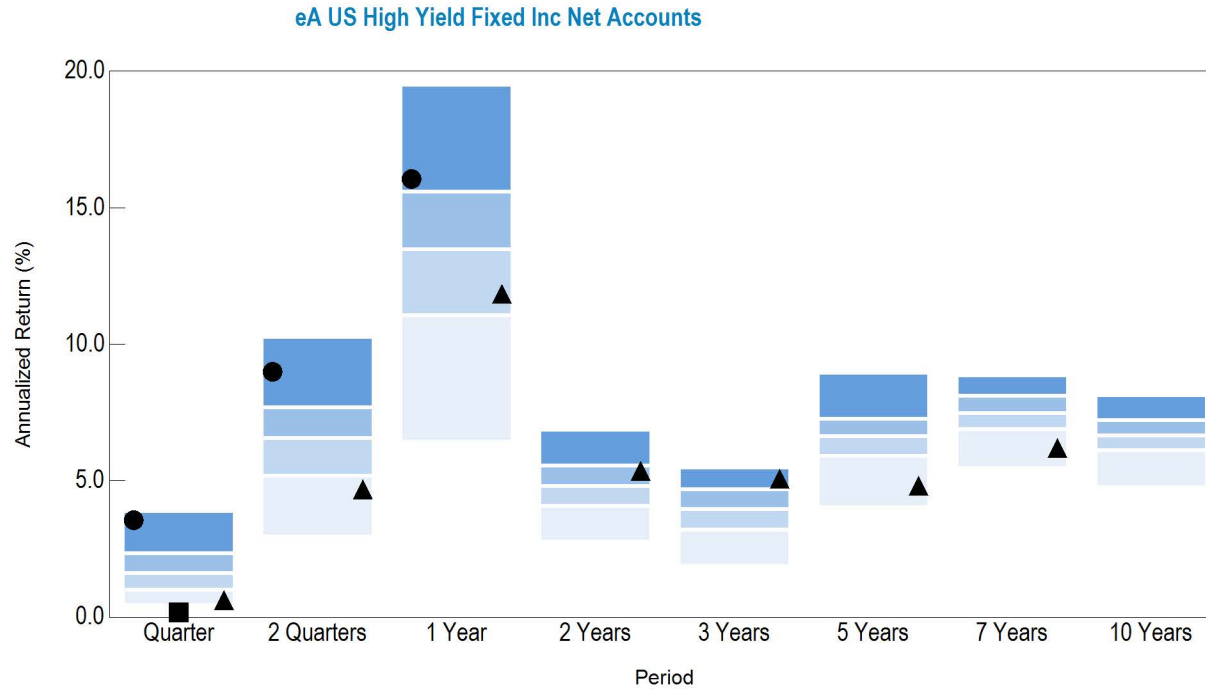
Yield to Maturity	
Range	% Held
0.0 - 5.0	n/a
5.0 - 7.0	n/a
7.0 - 9.0	n/a
9.0 - 11.0	n/a
11.0 - 13.0	n/a
13.0+	n/a
Unclassified	n/a

Average Life	
Range	% Held
0.0 - 1.0	0.0
1.0 - 3.0	0.0
3.0 - 5.0	0.0
5.0 - 10.0	100.0
10.0 - 20.0	0.0
20.0+	0.0
Unclassified	0.0

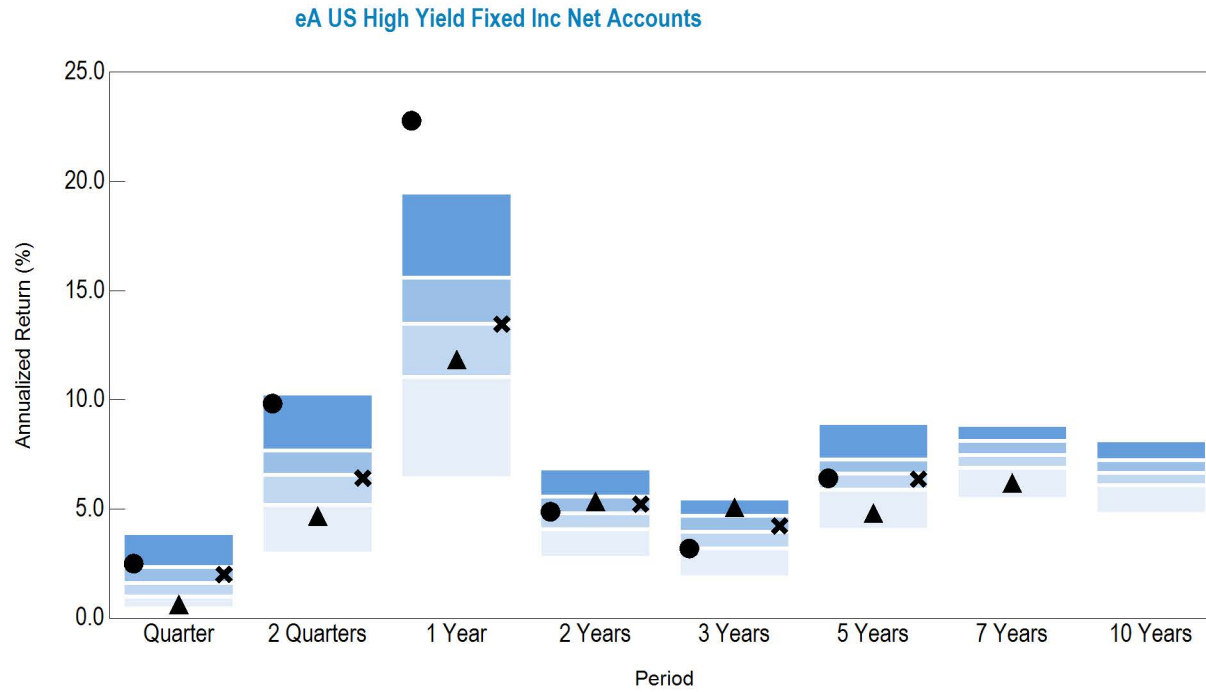
Duration	
Range	% Held
< 1.0	0.0
1.0 - 3.0	100.0
3.0 - 5.0	0.0
5.0 - 7.0	0.0
7.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	0.0
Aaa (10)	0.0
Aa (9)	0.0
A (8)	0.0
Baa (7)	100.0
Below Baa (6-1)	0.0
Other	0.0

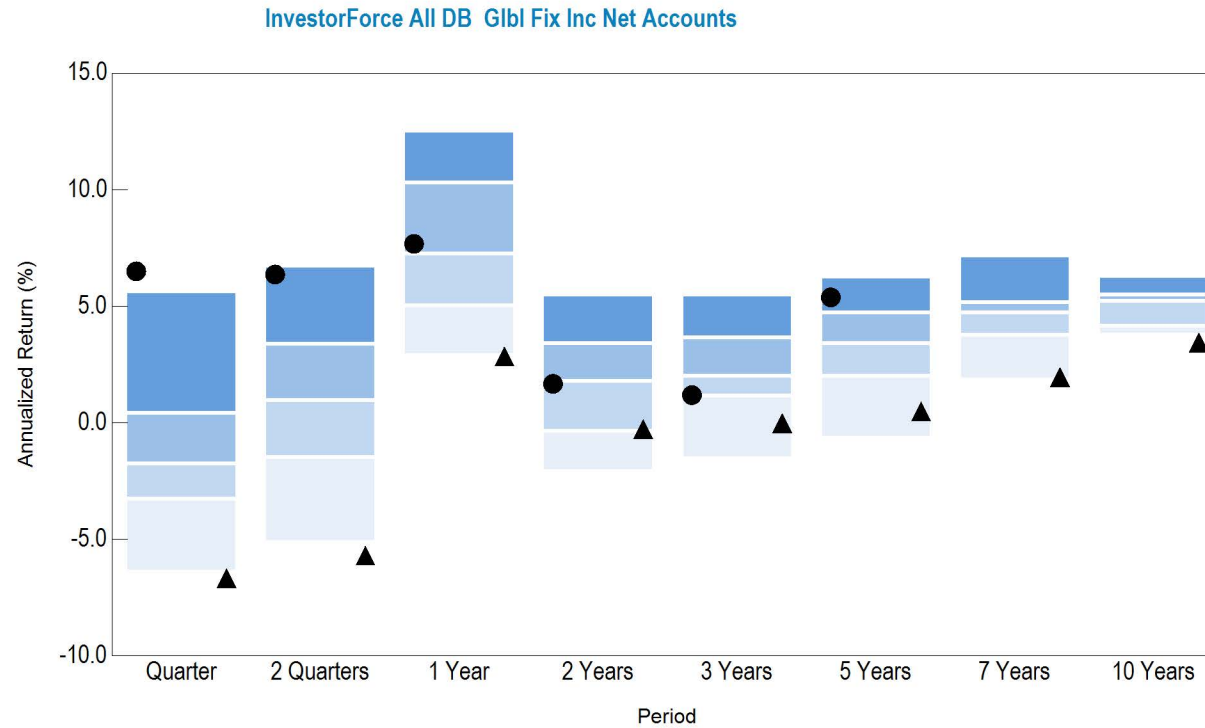
Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	3.9	10.3	19.5	6.9	5.5	8.9	8.8	8.1
25th Percentile	2.4	7.7	15.6	5.6	4.7	7.3	8.1	7.2
Median	1.6	6.6	13.5	4.8	4.0	6.6	7.5	6.7
75th Percentile	1.0	5.2	11.1	4.1	3.2	5.9	6.9	6.1
95th Percentile	0.4	3.0	6.4	2.8	1.9	4.1	5.5	4.8
# of Portfolios	115	115	114	107	102	92	78	62
● Beach Point Select	3.6 (8)	9.0 (11)	16.1 (21)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
■ TCP Direct Lending VIII	0.2 (99)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ BBgBarc BA Intermediate HY	0.6 (91)	4.7 (79)	11.8 (69)	5.4 (32)	5.1 (15)	4.8 (93)	6.2 (91)	-- (--)

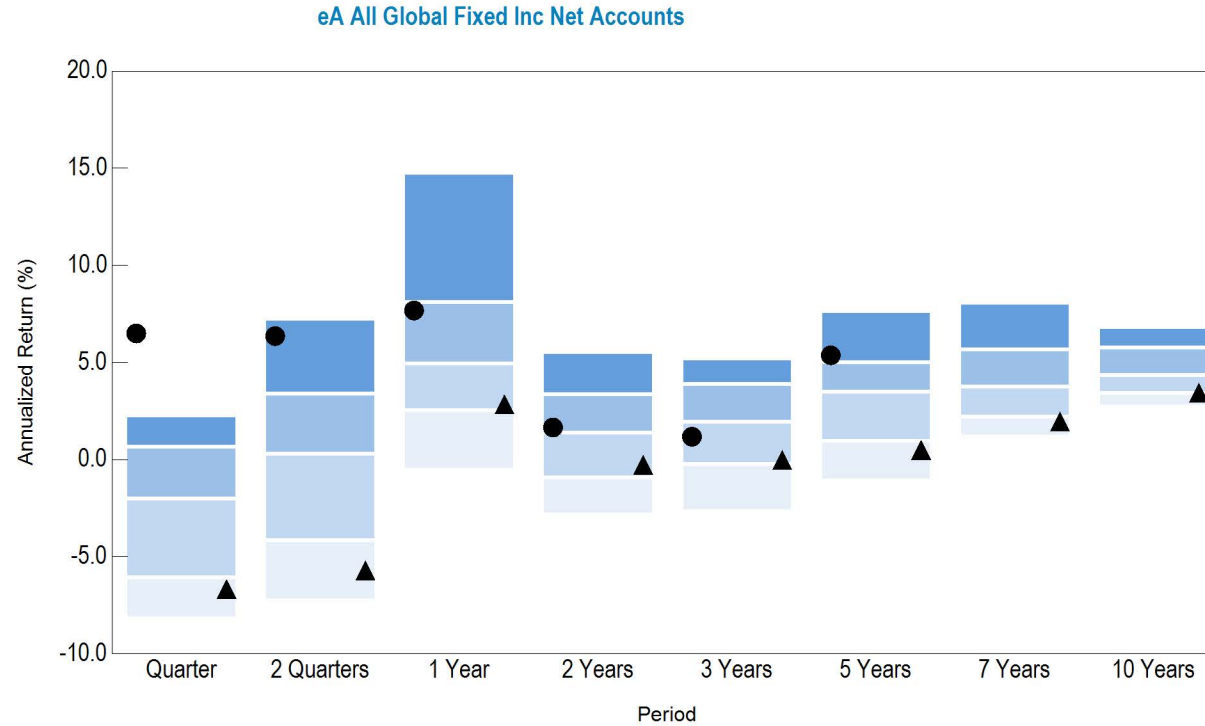


	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	3.9	10.3	19.5	6.9	5.5	8.9	8.8	8.1
25th Percentile	2.4	7.7	15.6	5.6	4.7	7.3	8.1	7.2
Median	1.6	6.6	13.5	4.8	4.0	6.6	7.5	6.7
75th Percentile	1.0	5.2	11.1	4.1	3.2	5.9	6.9	6.1
95th Percentile	0.4	3.0	6.4	2.8	1.9	4.1	5.5	4.8
# of Portfolios	115	115	114	107	102	92	78	62
● Brigade Capital	2.5 (20)	9.8 (8)	22.8 (1)	4.9 (47)	3.2 (77)	6.4 (64)	-- (--)	-- (--)
▲ BBgBarc BA Intermediate HY	0.6 (91)	4.7 (79)	11.8 (69)	5.4 (32)	5.1 (15)	4.8 (93)	6.2 (91)	-- (--)
✕ 50% Barclays HY/ 50% Bank Loan	2.0 (36)	6.4 (55)	13.5 (51)	5.2 (38)	4.2 (41)	6.4 (65)	-- (--)	-- (--)



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	5.6	6.7	12.5	5.5	5.5	6.3	7.2	6.3
25th Percentile	0.4	3.4	10.3	3.4	3.7	4.8	5.2	5.5
Median	-1.7	1.0	7.3	1.8	2.0	3.4	4.7	5.2
75th Percentile	-3.3	-1.4	5.1	-0.3	1.2	2.0	3.8	4.2
95th Percentile	-6.4	-5.1	2.9	-2.1	-1.5	-0.6	1.9	3.8
# of Portfolios	47	46	46	45	40	34	23	17
● Global Fixed Income	6.5 (1)	6.4 (9)	7.7 (45)	1.7 (55)	1.2 (75)	5.4 (16)	-- (--)	-- (--)
▲ BBgBarc Multiverse TR	-6.7 (97)	-5.7 (97)	2.8 (96)	-0.3 (74)	0.0 (87)	0.5 (91)	2.0 (94)	3.4 (99)

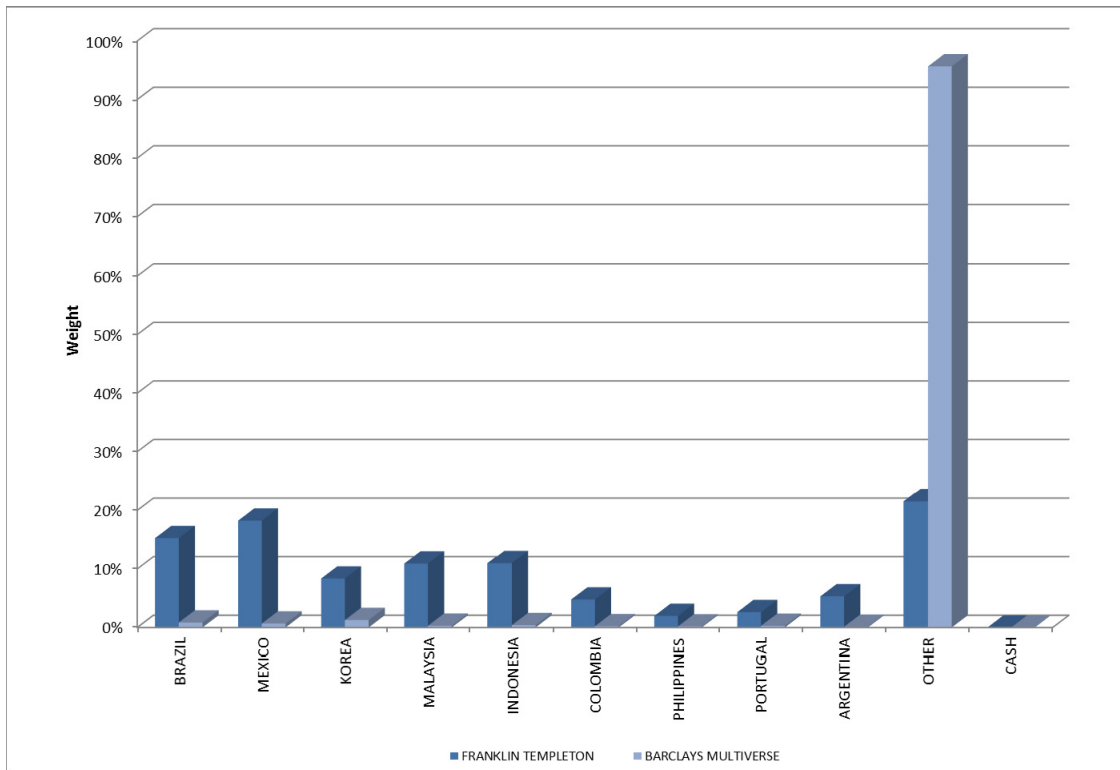




	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.3	7.2	14.7	5.5	5.2	7.6	8.1	6.8
25th Percentile	0.7	3.4	8.1	3.4	3.9	5.0	5.7	5.8
Median	-2.0	0.3	5.0	1.4	2.0	3.5	3.8	4.4
75th Percentile	-6.0	-4.1	2.6	-0.9	-0.2	1.0	2.2	3.5
95th Percentile	-8.2	-7.2	-0.5	-2.8	-2.7	-1.1	1.2	2.8
# of Portfolios	212	211	209	195	187	157	120	87
● Franklin Templeton	6.5 (1)	6.4 (10)	7.7 (27)	1.7 (50)	1.2 (59)	5.4 (23)	-- (--)	-- (--)
▲ BBgBarc Multiverse TR	-6.7 (82)	-5.7 (84)	2.8 (72)	-0.3 (66)	0.0 (72)	0.5 (80)	2.0 (80)	3.4 (76)

Franklin Templeton  
Portfolio Country Weights

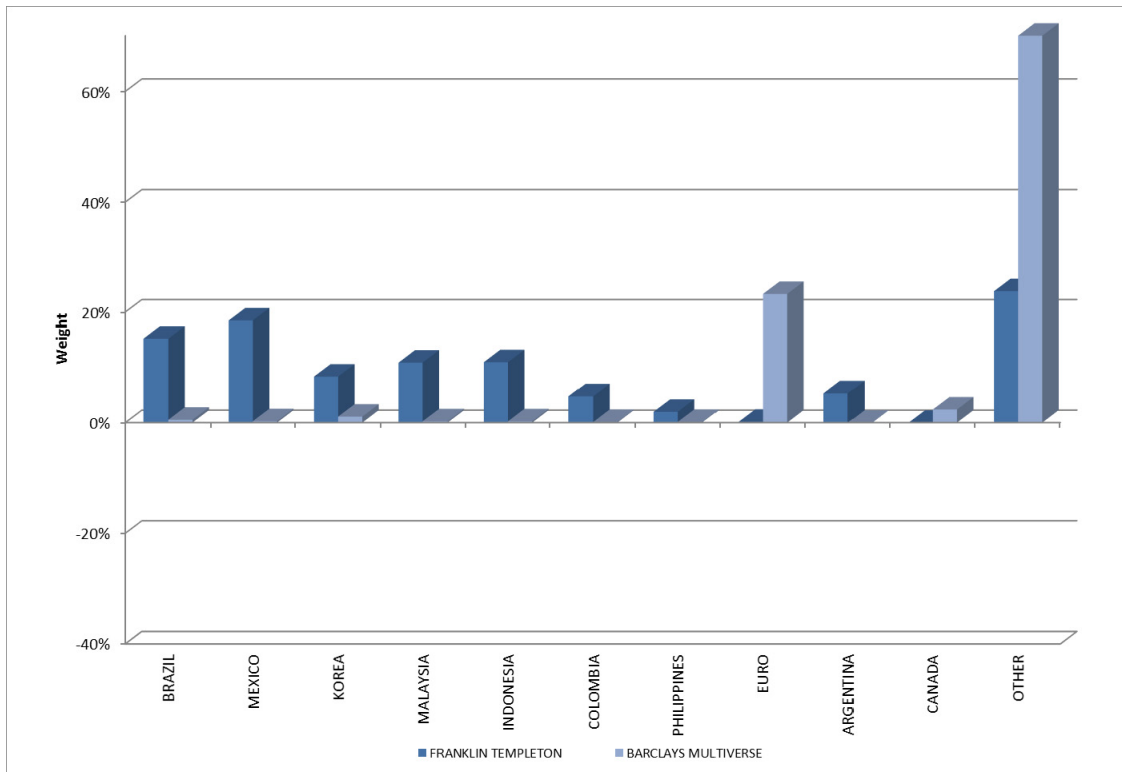
Period Ending: December 31, 2016



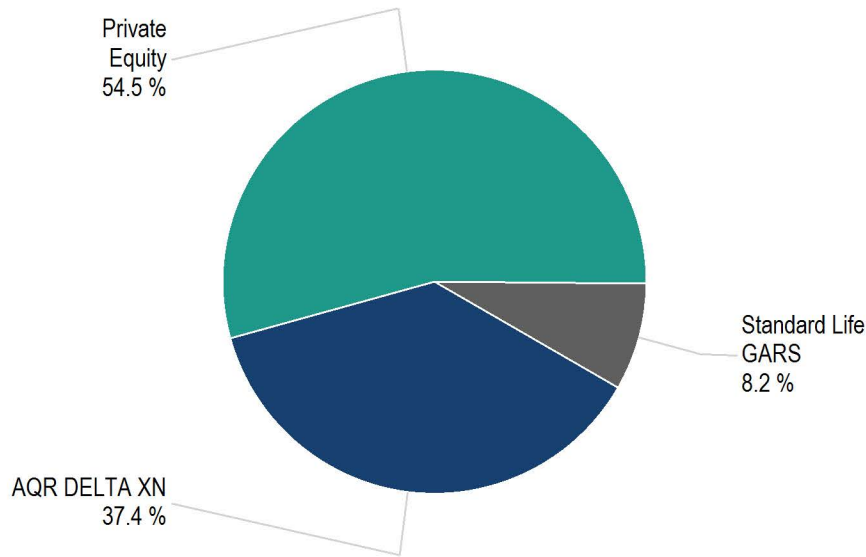
COUNTRY	MARKET VALUE	FRANKLIN TEMPLETON	BBgBarc MULTIVERSE	DIFF
BRAZIL	\$ 16,231	15.3%	0.9%	+14.4%
MEXICO	\$ 19,411	18.3%	0.7%	+17.6%
KOREA	\$ 8,892	8.4%	1.3%	+7.1%
MALAYSIA	\$ 11,604	10.9%	0.3%	+10.6%
INDONESIA	\$ 11,678	11.0%	0.4%	+10.6%
COLOMBIA	\$ 5,084	4.8%	0.2%	+4.6%
PHILIPPINES	\$ 2,095	2.0%	0.2%	+1.8%
PORTUGAL	\$ 2,797	2.6%	0.3%	+2.3%
ARGENTINA	\$ 5,658	5.3%	0.1%	+5.2%
OTHER	\$ 22,910	21.5%	95.7%	-74.1%
CASH	\$ -	0.0%	0.0%	0.0%
	\$ 106,361	100.0%	100.0%	0.0%

Franklin Templeton  
Portfolio Currency Exposures

Period Ending: December 31, 2016



CURRENCY	MARKET VALUE	FRANKLIN TEMPLETON	BBgBarc MULTIVERSE	DIFF
BRAZIL	\$ 16,231	15.3%	0.5%	+14.7%
MEXICO	\$ 19,645	18.5%	0.3%	+18.2%
KOREA	\$ 8,892	8.4%	1.1%	+7.3%
MALAYSIA	\$ 11,604	10.9%	0.2%	+10.7%
INDONESIA	\$ 11,678	11.0%	0.2%	+10.7%
COLOMBIA	\$ 5,084	4.8%	0.1%	+4.7%
PHILIPPINES	\$ 2,095	2.0%	0.1%	+1.9%
EURO	\$ 181	0.2%	23.3%	-23.1%
ARGENTINA	\$ 5,658	5.3%	0.0%	+5.3%
CANADA	\$ -	0.0%	2.4%	-2.4%
OTHER	\$ 25,293	23.8%	71.8%	-48.0%
	\$ 106,361	100.0%	100.0%	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR DELTA XN	\$156,647,941	37.4%	0.5%
Private Equity	\$228,518,673	54.5%	0.0%
Standard Life GARS	\$34,182,724	8.2%	0.1%
Actual vs. Policy Weight Difference			-0.1%
<b>Total</b>	<b>\$419,349,338</b>	<b>100.0%</b>	<b>0.5%</b>

**Statistics Summary**

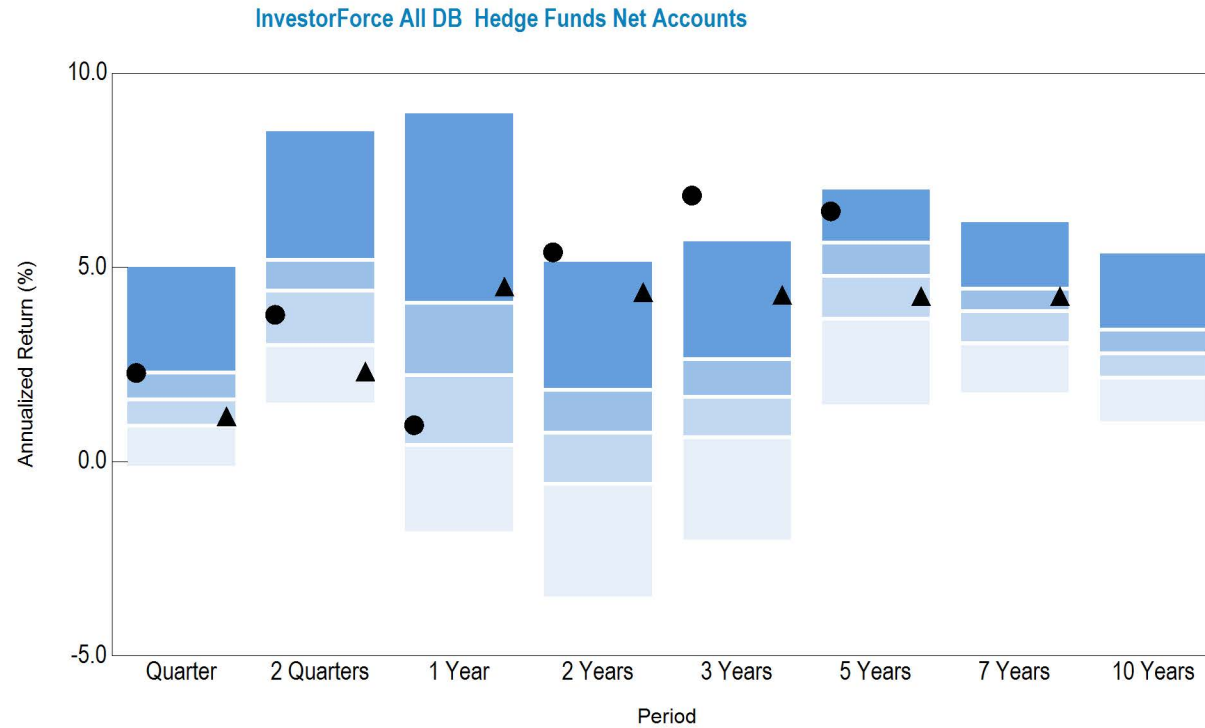
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	6.9%	5.0%	1.4	0.5	6.9%
Alternatives Allocation Index	3.6%	6.1%	0.6	--	0.0%
Private Equity	16.9%	9.5%	1.8	0.4	14.5%
Russell 3000 +3%	11.4%	10.8%	1.0	--	0.0%
Hedge Fund/Absolute Return	6.8%	5.0%	1.3	0.5	5.0%
Libor 1 month +4%	4.3%	0.1%	38.7	--	0.0%
AQR DELTA XN	7.2%	5.2%	1.4	0.6	5.2%
Libor 1 month +4%	4.3%	0.1%	38.7	--	0.0%

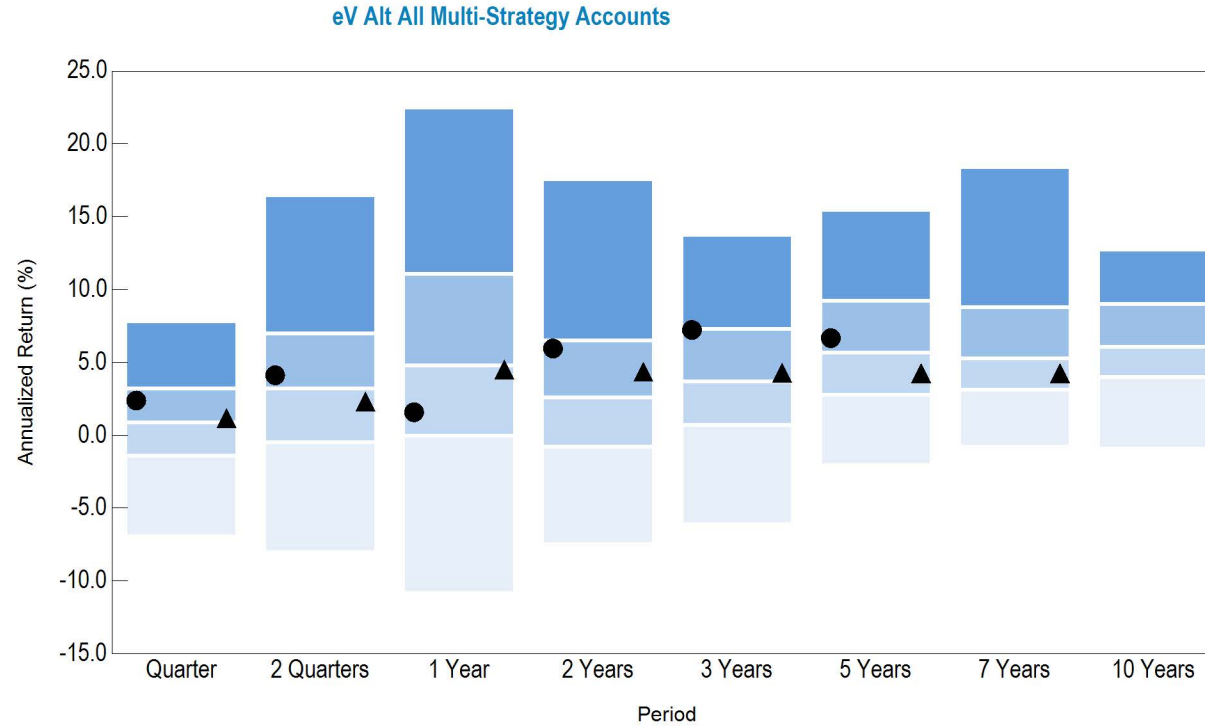
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	6.9%	5.8%	1.2	0.1	6.1%
Alternatives Allocation Index	6.1%	6.0%	1.0	--	0.0%
Private Equity	16.4%	9.9%	1.7	-0.1	13.9%
Russell 3000 +3%	17.7%	10.5%	1.7	--	0.0%
Hedge Fund/Absolute Return	6.4%	5.2%	1.2	0.4	5.2%
Libor 1 month +4%	4.3%	0.1%	42.2	--	0.0%
AQR DELTA XN	6.7%	5.2%	1.3	0.5	5.3%
Libor 1 month +4%	4.3%	0.1%	42.2	--	0.0%

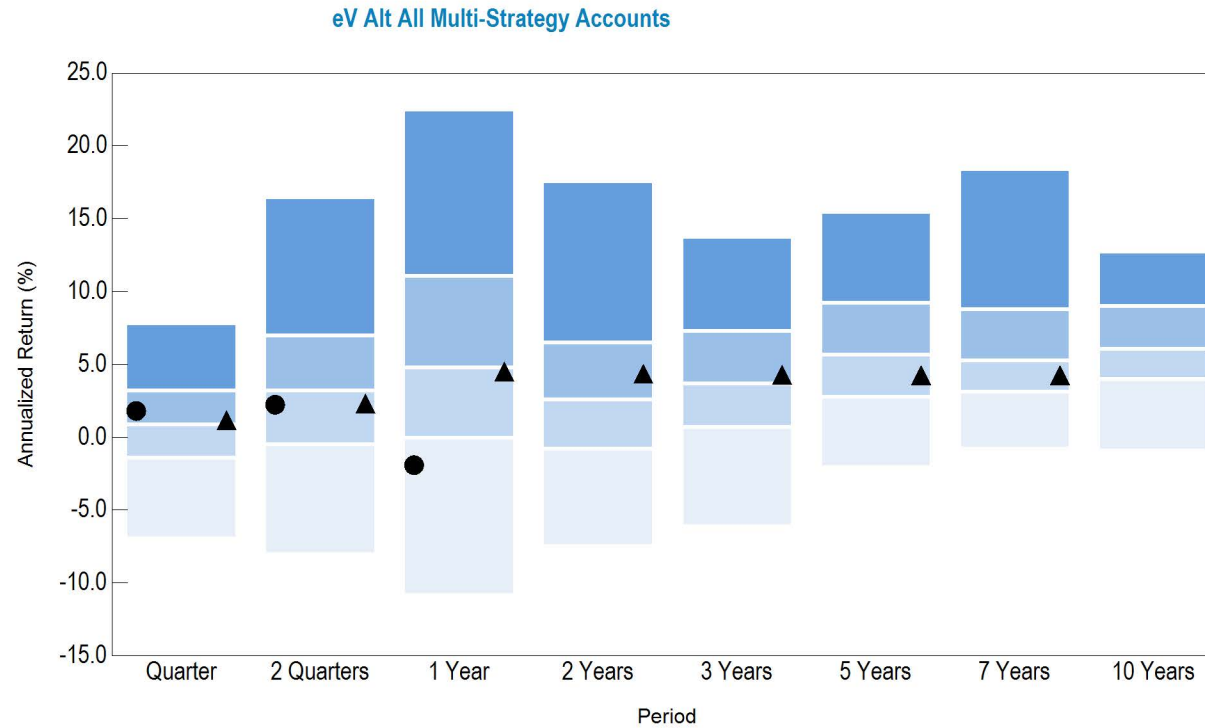


	Return (Rank)							
5th Percentile	5.1	8.5	9.0	5.2	5.7	7.1	6.2	5.4
25th Percentile	2.3	5.2	4.1	1.8	2.6	5.6	4.5	3.4
Median	1.6	4.4	2.2	0.7	1.7	4.8	3.9	2.8
75th Percentile	0.9	3.0	0.4	-0.6	0.6	3.7	3.1	2.2
95th Percentile	-0.2	1.5	-1.8	-3.5	-2.0	1.4	1.7	1.0
# of Portfolios	258	258	256	251	246	212	151	83
● Hedge Fund/Absolute Return	2.3 (27)	3.8 (62)	0.9 (68)	5.4 (5)	6.8 (2)	6.4 (10)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.2 (67)	2.3 (85)	4.5 (23)	4.4 (7)	4.3 (10)	4.3 (61)	4.3 (35)	-- (--)

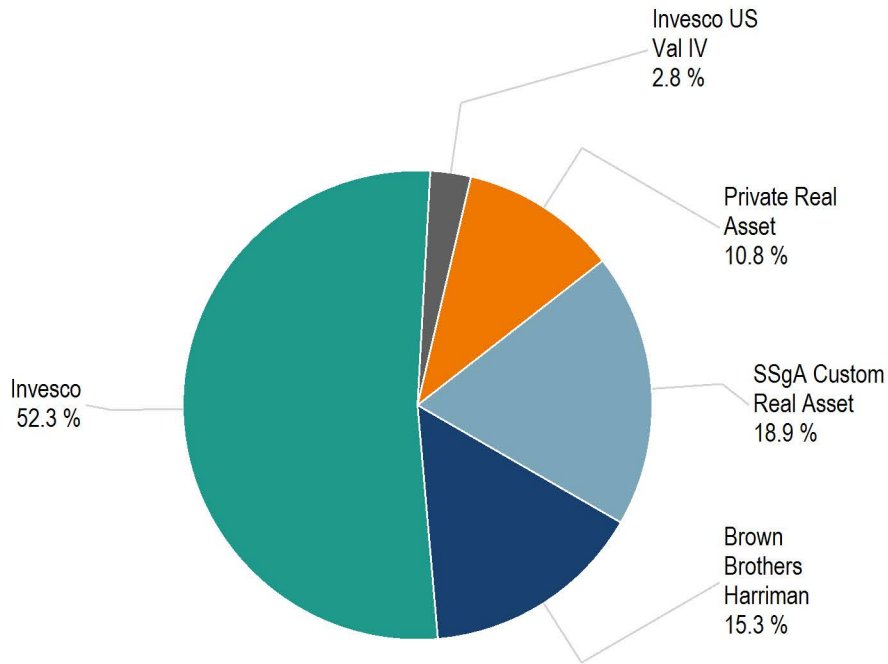


	Return (Rank)							
5th Percentile	7.8	16.5	22.5	17.6	13.7	15.5	18.4	12.7
25th Percentile	3.2	7.0	11.1	6.5	7.3	9.3	8.8	9.0
Median	0.9	3.2	4.8	2.6	3.7	5.7	5.3	6.1
75th Percentile	-1.4	-0.4	0.0	-0.8	0.7	2.8	3.1	4.0
95th Percentile	-6.9	-8.0	-10.8	-7.4	-6.1	-2.0	-0.8	-0.9
# of Portfolios	316	313	308	287	264	197	165	103
● AQR DELTA XN	2.4 (34)	4.1 (42)	1.6 (69)	6.0 (28)	7.2 (26)	6.7 (44)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.2 (48)	2.3 (60)	4.5 (52)	4.4 (38)	4.3 (47)	4.3 (64)	4.3 (64)	-- (--)





	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	7.8	16.5	22.5	17.6	13.7	15.5	18.4	12.7
25th Percentile	3.2	7.0	11.1	6.5	7.3	9.3	8.8	9.0
Median	0.9	3.2	4.8	2.6	3.7	5.7	5.3	6.1
75th Percentile	-1.4	-0.4	0.0	-0.8	0.7	2.8	3.1	4.0
95th Percentile	-6.9	-8.0	-10.8	-7.4	-6.1	-2.0	-0.8	-0.9
# of Portfolios	316	313	308	287	264	197	165	103
● Standard Life GARS	1.8 (39)	2.2 (60)	-1.9 (80)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.2 (48)	2.3 (60)	4.5 (52)	4.4 (38)	4.3 (47)	4.3 (64)	4.3 (64)	-- (--)



	Actual \$	Actual %	Manager Contribution to Excess Return %
Invesco	\$241,433,357	52.3%	-0.0%
Invesco US Val IV	\$12,851,380	2.8%	-0.0%
Brown Brother Harriman	\$70,531,255	15.3%	0.3%
Private Real Asset	\$49,679,381	10.8%	-0.1%
SSGA Custom Real Asset	\$87,037,479	18.9%	0.0%
Actual vs. Policy Weight Difference			0.2%
<b>Total</b>	<b>\$461,532,853</b>	<b>100.0%</b>	<b>0.4%</b>

**Statistics Summary**

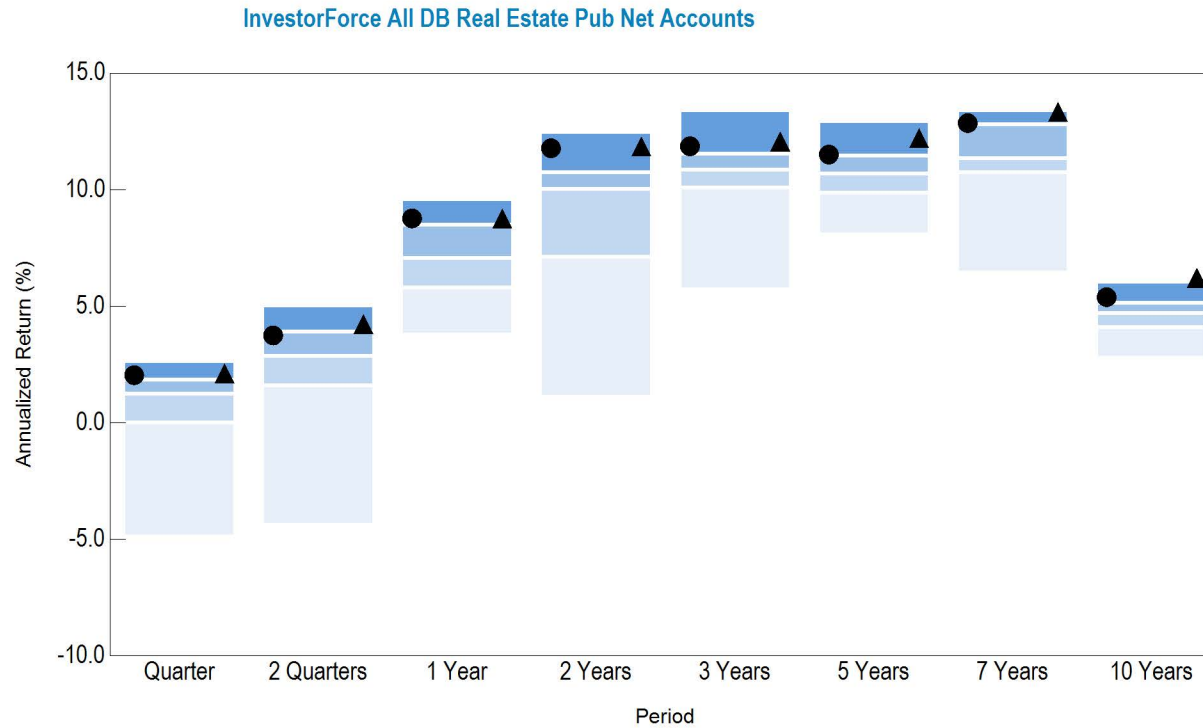
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Real Estate	11.86%	5.17%	2.27	-0.13	1.48%
NCREIF ODCE	12.06%	4.95%	2.41	--	0.00%
Invesco	11.74%	5.13%	2.27	-0.20	1.56%
NCREIF ODCE	12.06%	4.95%	2.41	--	0.00%
TIPS	1.60%	3.04%	0.49	-0.41	1.59%
BBgBarc US TIPS TR	2.26%	4.14%	0.52	--	0.00%
Brown Brothers Harriman	1.60%	3.04%	0.49	-0.41	1.59%
BBgBarc US TIPS TR	2.26%	4.14%	0.52	--	0.00%

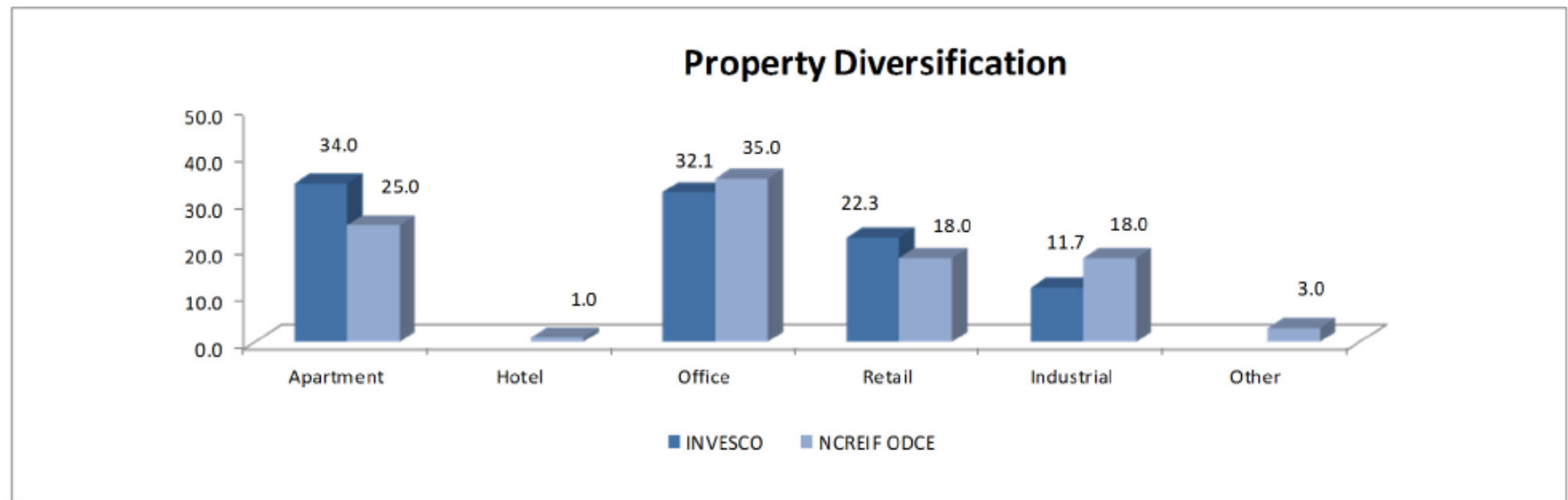
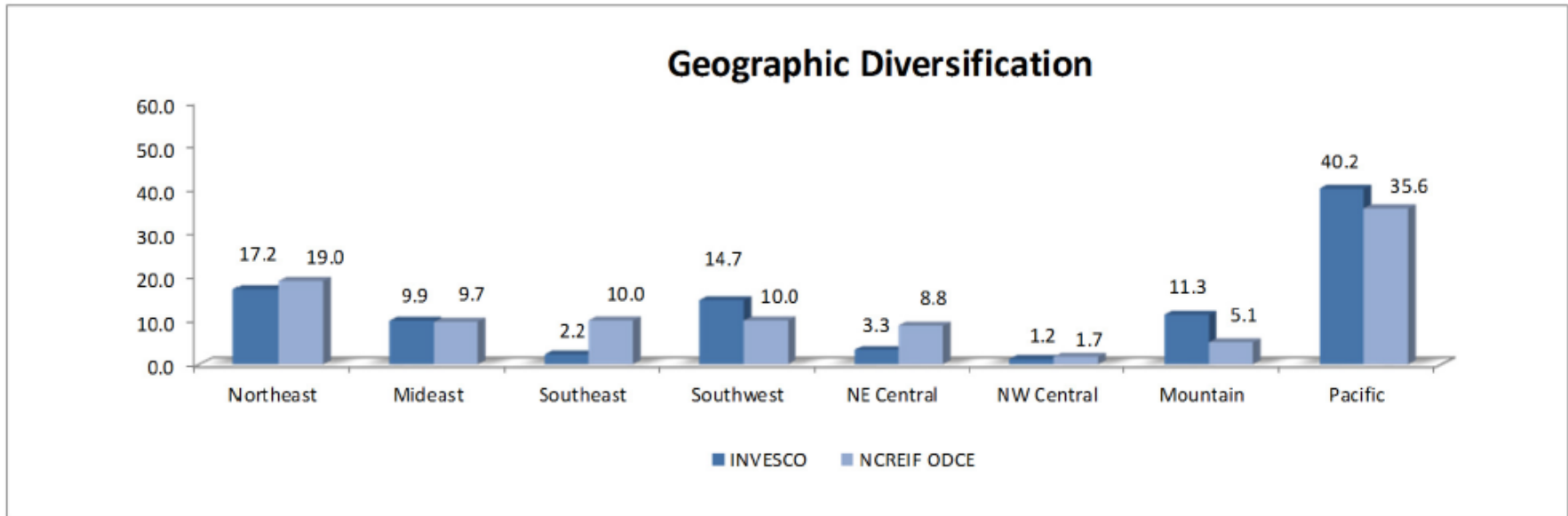
Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	11.50%	4.99%	2.29	-0.46	32
NCREIF ODCE	12.21%	4.95%	2.45	--	1
Invesco	11.43%	4.96%	2.28	-0.49	--
NCREIF ODCE	12.21%	4.95%	2.45	--	--
TIPS	0.64%	4.29%	0.13	-0.19	--
BBgBarc US TIPS TR	0.89%	4.76%	0.17	--	--
Brown Brothers Harriman	0.64%	4.29%	0.13	-0.19	55
BBgBarc US TIPS TR	0.89%	4.76%	0.17	--	1



	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	2.6	5.0	9.6	12.5	13.4	12.9	13.4	6.0
25th Percentile	1.9	3.9	8.5	10.8	11.6	11.5	12.8	5.2
Median	1.3	2.9	7.1	10.0	10.9	10.7	11.4	4.7
75th Percentile	0.0	1.6	5.8	7.1	10.1	9.9	10.8	4.1
95th Percentile	-4.9	-4.4	3.8	1.1	5.7	8.1	6.4	2.8
# of Portfolios	93	93	93	92	89	76	68	40
● Real Estate	2.0 (21)	3.7 (33)	8.8 (17)	11.8 (8)	11.9 (18)	11.5 (22)	12.9 (23)	5.4 (16)
▲ NCREIF ODCE	2.1 (20)	4.2 (22)	8.8 (17)	11.8 (8)	12.1 (15)	12.2 (9)	13.3 (6)	6.2 (1)



INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: December 31, 2016

Property Name	MSA	Prior Quarter Carry Value	Current Quarter Carry Value	Net Market Value	Date Added to Fund	Last Valuation Date	SamCERA ownership as of 12/31/2016 2.97%
<b>APARTMENTS</b>							
Stoneridge Apartments	Pleasanton, CA	\$228,000,000	\$232,000,000	\$232,000,000	4Q06	December-16	\$6,901,246
Instrata Pentagon City	Arlington, VA	\$148,000,000	\$148,000,000	\$87,997,107	3Q10	December-16	\$2,617,628
Ladd Tower	Portland, OR	\$135,000,000	\$136,000,000	\$78,978,523	4Q10	December-16	\$2,349,354
Legacy Fountain Plaza	San Jose, CA	\$151,956,119	\$157,955,192	\$157,955,192	1Q11	December-16	\$4,698,654
Instrata Gramercy (fka The Elektra)	New York, NY	\$173,000,000	\$173,000,000	\$100,258,388	1Q11	December-16	\$2,982,361
Instrata Brooklyn Heights (fka 75 Clinton Street)	Brooklyn, NY	\$70,800,000	\$66,100,000	\$66,100,000	1Q12	December-16	\$1,966,260
The Artisan Laguna Beach	Orange County, CA	\$159,000,000	\$162,000,000	\$100,290,976	3Q12	December-16	\$2,983,331
The GoodWynn	Atlanta, GA	\$100,000,000	\$100,000,000	\$63,000,000	4Q12	December-16	\$1,874,045
Instrata Hell's Kitchen	New York, NY	\$210,000,000	\$194,000,000	\$119,828,000	1Q13	December-16	\$3,564,494
Sunset Vine Tower	Los Angeles, CA	\$96,000,000	\$97,100,000	\$97,100,000	2Q13	December-16	\$2,888,409
The Ashton	Dallas, TX	\$119,000,000	\$124,000,000	\$66,676,586	4Q13	December-16	\$1,983,412
The Pointe at Westchester	West Chester, PA	\$62,700,000	\$58,500,000	\$58,500,000	4Q13	December-16	\$1,740,185
206 Bell	Seattle, WA	\$45,800,000	\$46,100,000	\$46,100,000	4Q13	December-16	\$1,371,325
Cadence Union Station	Denver, CO	\$86,700,000	\$87,300,000	\$50,082,992	1Q14	December-16	\$1,489,806
Joseph Arnold Lofts	Seattle, WA	\$70,100,000	\$70,100,000	\$35,770,955	2Q14	December-16	\$1,064,070
Verve	Denver, CO	\$113,000,000	\$114,000,000	\$114,000,000	3Q14	December-16	\$3,391,130
Broadstone Little Italy	San Diego CA	\$118,000,000	\$116,000,000	\$62,665,969	3Q14	December-16	\$1,864,109
33 Tehama	San Francisco, CA	\$154,801,246	\$189,004,305	\$157,863,806	3Q14	December-16	\$4,695,935
The Parker	Portland, OR	\$66,200,000	\$66,200,000	\$33,497,615	1Q15	December-16	\$996,445
Legacy West Apartments	Plano, TX	\$62,419,279	\$78,191,439	\$62,456,611	1Q15	December-16	\$1,857,881
Village at Park Place	Irvine, CA	\$89,020,025	\$103,205,383	\$84,079,097	2Q15	December-16	\$2,501,080
Wheaton 121	Wheaton, IL	\$93,100,000	\$88,800,000	\$88,800,000	2Q15	December-16	\$2,641,511
Jefferson Marketplace	Washington, DC	\$146,000,000	\$149,000,000	\$78,537,265	4Q15	December-16	\$2,336,228
Retreat at Park Meadows	Littleton, CO	\$127,000,000	\$129,000,000	\$129,000,000	4Q15	December-16	\$3,837,331
North Water	Chicago, IL	\$261,000,000	\$261,000,000	\$261,000,000	1Q16	December-16	\$7,763,902
2270 Broadway	Oakland, CA	\$18,940,464	\$20,091,330	\$20,091,330	1Q16	December-16	\$597,652
Runway at Playa Vista -Apartments	Playa Vista, CA	\$149,990,000	\$150,520,000	\$87,046,108	1Q16	December-16	\$2,589,339
Clayton Lane Apartments	Denver, CO	\$33,043,200	\$33,580,740	\$33,580,740	1Q16	December-16	\$998,918
Biscayne 27	Miami, FL	\$16,100,714	\$16,540,362	\$16,540,362	2Q16	December-16	\$492,022
Flats 8300	Washington DC	\$214,000,000	\$215,000,000	\$111,500,000	2Q16	December-16	\$3,316,763
407 1st Ave	New York, NY	\$0	\$190,000,000	\$190,000,000	4Q16	December-16	\$5,651,883
		<b>\$3,518,671,047</b>	<b>\$3,772,288,751</b>	<b>\$2,891,297,622</b>			<b>\$86,006,709</b>
<b>INDUSTRIAL</b>							
Arjons Industrial Park	San Diego CA	\$39,500,000	\$40,100,000	\$40,100,000	2Q04	December-16	\$1,192,845
Gateway Business Park	Dallas TX	\$13,100,000	\$13,300,000	\$13,300,000	2Q04	December-16	\$395,632
Hayward Industrial	Oakland CA	\$149,300,000	\$156,200,000	\$156,200,000	3Q04-3Q07	December-16	\$4,646,442
Lackman Park	Kansas City MO-KS	\$24,700,000	\$24,900,000	\$24,900,000	2Q04	December-16	\$740,694
Crossroads Industrial	Kansas City MO-KS	\$7,900,000	\$7,900,000	\$7,900,000	1Q06	December-16	\$234,999
Oakesdale Commerce Center	Seattle - Belle - Eve WA	\$49,900,000	\$52,300,000	\$52,300,000	1Q06	December-16	\$1,555,755
South Bay Industrial	Los Angeles, CA	\$45,800,000	\$45,800,000	\$45,800,000	4Q06	December-16	\$1,362,401
Steeplechase 95 International Business Park	Capitol Heights, MD	\$92,800,000	\$93,300,000	\$93,300,000	1Q11	December-16	\$2,775,372
Airport Trade Center Portfolio	Dallas, TX	\$120,700,000	\$121,400,000	\$121,400,000	1Q11	December-16	\$3,611,256
IE Logistics	San Bernardino, CA	\$129,900,000	\$133,400,000	\$133,400,000	3Q11	December-16	\$3,968,217
Railhead Drive Industrial	Dallas, TX	\$62,100,000	\$62,200,000	\$62,200,000	4Q11	December-16	\$1,850,248
Empire Gateway aka Chino South Logistics Center	Chino, CA	\$242,000,000	\$244,000,000	\$244,000,000	4Q12	December-16	\$7,258,207
SFO Logistics Center	San Francisco, CA	\$142,000,000	\$140,000,000	\$140,000,000	4Q13	December-16	\$4,164,545
Miami Industrial Portfolio	Various ,FL	\$92,388,194	\$92,683,687	\$61,502,725	1Q16	December-16	\$1,829,506
OMP Burbank	Los Angeles, CA	\$67,483,981	\$67,285,295	\$67,285,295	2Q16	December-16	\$2,001,519
		<b>\$1,279,572,175</b>	<b>\$1,294,768,982</b>	<b>\$1,263,588,020</b>			<b>\$37,587,638</b>

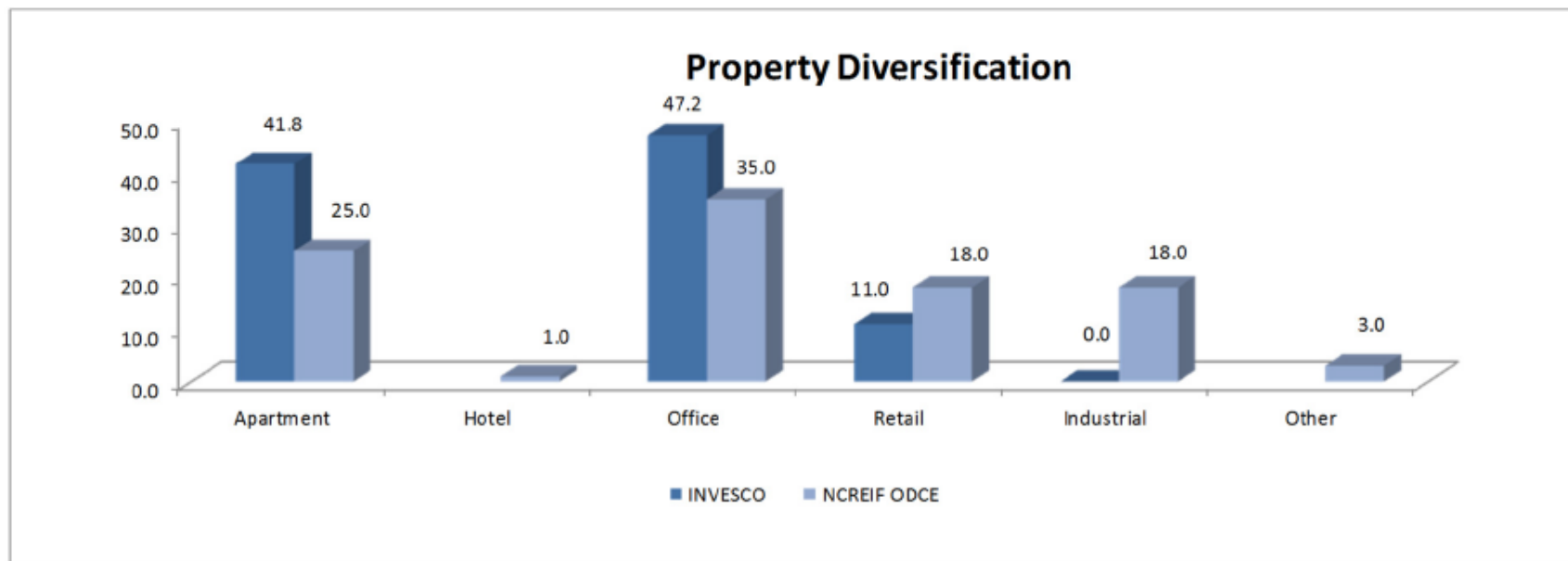
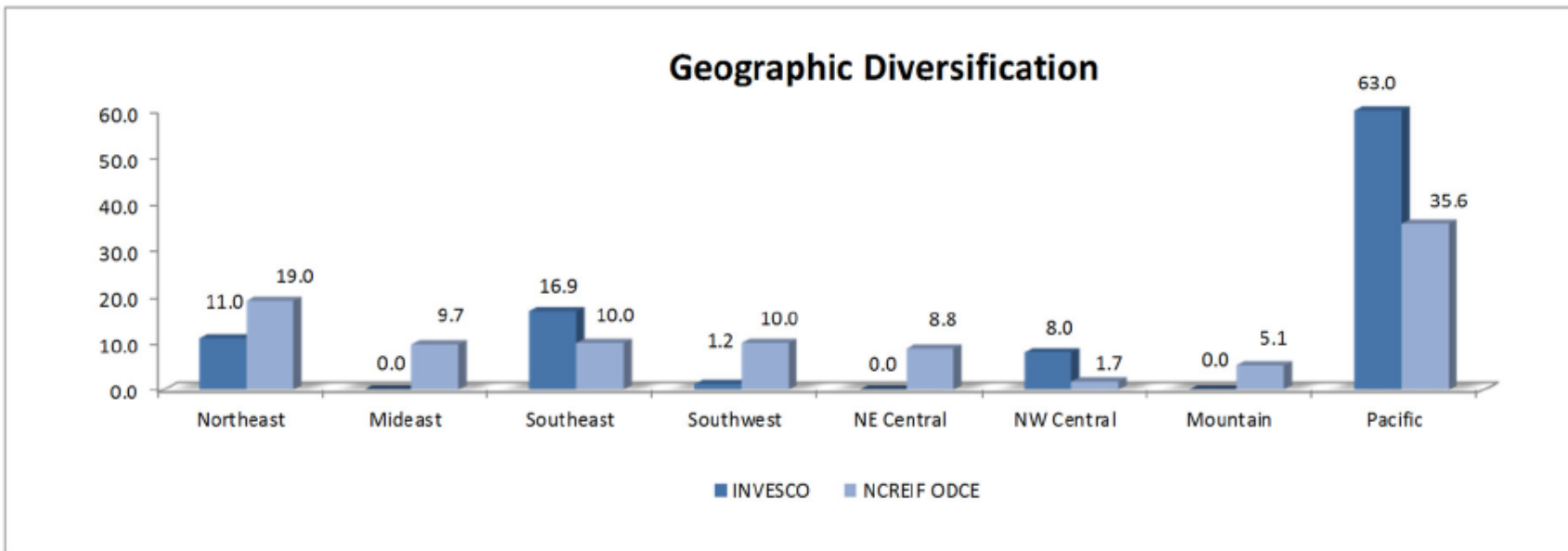


INVESCO Core Real Estate  
Real Estate Valuation Analysis

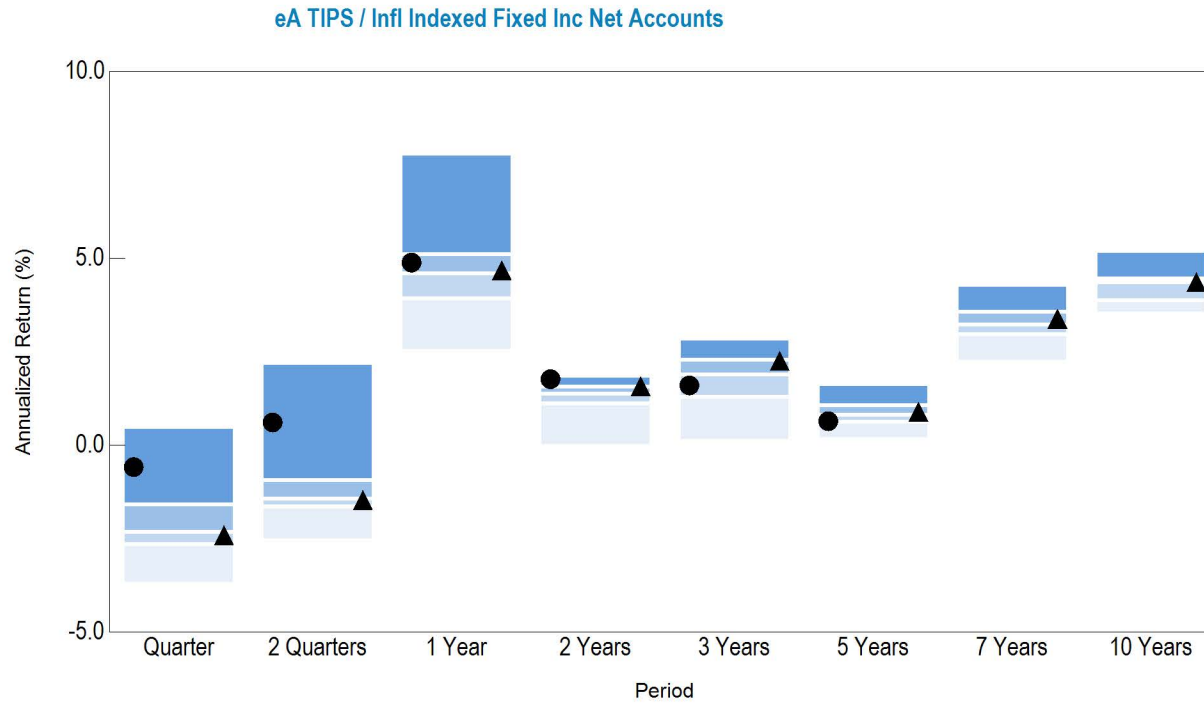
Period Ending: December 31, 2016

OFFICE							
55 Cambridge Parkway	Boston MA - NH	\$257,000,000	\$262,000,000	\$262,000,000	4Q06	December-16	\$7,793,649
The Executive Building	Washington, D.C.	\$228,000,000	\$0	\$0	2Q08	Sold 4Q16	\$0
1111 Pennsylvania Avenue	Washington, D.C.	\$313,000,000	\$316,000,000	\$316,000,000	4Q10	December-16	\$9,399,973
1800 Larimer	Denver, CO	\$314,000,000	\$314,000,000	\$314,000,000	1Q11	December-16	\$9,340,480
Hillview Office	San Jose, CA	\$77,300,000	\$78,300,000	\$78,300,000	3Q12	December-16	\$2,329,171
Williams Tower	Houston, TX	\$586,000,000	\$587,000,000	\$402,457,701	1Q13	December-16	\$11,971,809
Westlake Park Place	Westlake Village, CA	\$111,000,000	\$111,000,000	\$111,000,000	4Q13	December-16	\$3,301,889
101 Second	San Francisco, CA	\$373,000,000	\$376,000,000	\$376,000,000	1Q14	December-16	\$11,184,778
Energy Crossing II	Houston, TX	\$108,000,000	\$108,000,000	\$108,000,000	2Q14	December-16	\$3,212,649
1776 Wilson Blvd.	Arlington, VA	\$93,900,000	\$94,300,000	\$94,300,000	3Q14	December-16	\$2,805,119
631 Howard	San Francisco, CA	\$93,600,000	\$94,700,000	\$94,700,000	3Q14	December-16	\$2,817,017
Barton Oaks	Austin, TX	\$86,500,000	\$85,700,000	\$85,700,000	3Q14	December-16	\$2,549,297
Hercules East and South Campus	Los Angeles, CA	\$156,943,473	\$161,584,535	\$161,584,535	3Q14	December-16	\$4,806,615
The Reserve	Playa Vista, CA	\$354,240,239	\$354,587,594	\$354,587,594	1Q15	December-16	\$10,547,829
Fort Point Portfolio	Boston, MA	\$215,519,271	\$218,201,592	\$129,595,957	2Q15	December-16	\$3,855,059
Legacy West Office	Plano, TX	\$46,622,955	\$55,620,714	\$31,362,854	1Q15	December-16	\$932,943
Summit IV	Aliso Viejo, CA	\$120,000,000	\$122,000,000	\$83,546,446	2Q15	December-16	\$2,485,235
1101 Westlake	Seattle, WA	\$85,300,000	\$97,500,000	\$97,500,000	3Q15	December-16	\$2,900,308
PearlWest	Boulder, CO	\$0	\$122,312,425	\$122,312,425	4Q16	Acq 4Q16	\$3,638,397
		<b>\$3,619,925,938</b>	<b>\$3,558,806,860</b>	<b>\$3,222,947,512</b>			<b>\$95,872,216</b>
RETAIL							
Broadway at Surf	Chicago IL	\$33,100,000	\$0	\$0	2Q04	Sold 4Q16	\$0
Matthews Township	Charlotte - G - RH NC-SC	\$26,000,000	\$26,500,000	\$26,500,000	2Q04	December-16	\$788,289
Cityline at Tenley	Washington, D.C.	\$58,600,000	\$59,600,000	\$59,600,000	4Q05	December-16	\$1,772,906
Ridgehaven Shopping Center	Minnetonka, MN	\$41,500,000	\$42,500,000	\$42,500,000	4Q05	December-16	\$1,264,237
The Beacon Retail	San Francisco, CA	\$65,100,000	\$67,500,000	\$67,500,000	1Q06	December-16	\$2,007,906
The Beacon Garage (units)	San Francisco, CA	\$35,600,000	\$35,600,000	\$35,600,000	1Q06	December-16	\$1,058,984
The Beacon Office (210 King)	San Francisco, CA	\$22,400,000	\$23,900,000	\$23,900,000	1Q15	December-16	\$710,947
Hawthorne Plaza	Overland Park, KS	\$54,800,000	\$54,800,000	\$54,800,000	4Q07	December-16	\$1,630,122
The Loop	Boston MA - NH	\$96,900,000	\$96,900,000	\$96,900,000	1Q08	December-16	\$2,882,460
910 Lincoln Road	Miami, FL	\$37,100,000	\$33,000,000	\$33,000,000	4Q10	December-16	\$981,643
Lake Pointe Village	Houston, TX	\$76,850,000	\$78,850,000	\$78,850,000	4Q11	December-16	\$2,345,531
Safeway Kapahulu	Hawaii	\$86,200,000	\$91,400,000	\$55,097,862	4Q11	December-16	\$1,638,982
Safeway Burlingame	San Francisco, CA	\$56,700,000	\$58,500,000	\$35,708,906	4Q11	December-16	\$1,062,224
Shamrock Plaza	Oakland, CA	\$38,600,000	\$38,700,000	\$22,435,388	4Q11	December-16	\$667,380
Pavilions Marketplace	West Hollywood, CA	\$62,400,000	\$63,700,000	\$38,974,288	1Q12	December-16	\$1,159,358
130 Prince	New York, NY	\$203,700,000	\$204,000,000	\$204,000,000	2Q12	December-16	\$6,068,337
Safeway Pleasanton	Pleasanton, CA	\$81,800,000	\$81,800,000	\$81,800,000	4Q12	December-16	\$2,433,284
Liberty Wharf	Boston, MA	\$90,000,000	\$90,200,000	\$56,700,245	4Q12	December-16	\$1,686,648
Shops at Legacy	Plano, TX	\$109,710,916	\$109,710,916	\$109,710,916	3Q13	December-16	\$3,263,543
Pasadena Commons	Pasadena, CA	\$52,900,000	\$53,400,000	\$53,400,000	4Q14	December-16	\$1,588,476
Rush Street Retail	Chicago, IL	\$15,600,000	\$15,700,000	\$15,700,000	4Q14	December-16	\$467,024
Legacy West Retail	Plano, TX	\$135,408,223	\$141,651,344	\$116,082,249	1Q15	December-16	\$3,453,070
Legacy West Land	Plano, TX	\$8,535,453	\$8,541,584	\$8,541,584	2Q16	December-16	\$254,084
131-137 Spring Street	New York, NY	\$230,879,027	\$235,177,039	\$124,643,831	3Q15	December-16	\$3,707,749
Runway at Playa Vista - Retail	Playa Vista, CA	\$117,130,000	\$118,720,000	\$56,306,215	1Q16	December-16	\$1,674,927
139 Spring	New York, NY	\$117,008,800	\$118,992,000	\$118,992,000	1Q16	December-16	\$3,539,625
Clayton Lane	Denver, CO	\$143,003,528	\$142,966,879	\$96,178,691	1Q16	December-16	\$2,861,004
4th & Colorado	Santa Monica, CA	\$12,720,000	\$12,720,000	\$12,720,000	1Q16	December-16	\$378,379
Shops at Crystals	Las Vegas, NV	\$287,500,000	\$287,500,000	\$150,093,637	2Q16	December-16	\$4,464,798
		<b>\$2,479,845,947</b>	<b>\$2,477,629,762</b>	<b>\$1,961,335,812</b>			<b>\$58,343,367</b>
<b>Portfolio Total</b>		<b>\$10,898,015,107</b>	<b>\$11,103,494,355</b>	<b>\$9,339,168,966</b>			<b>\$277,809,929</b>

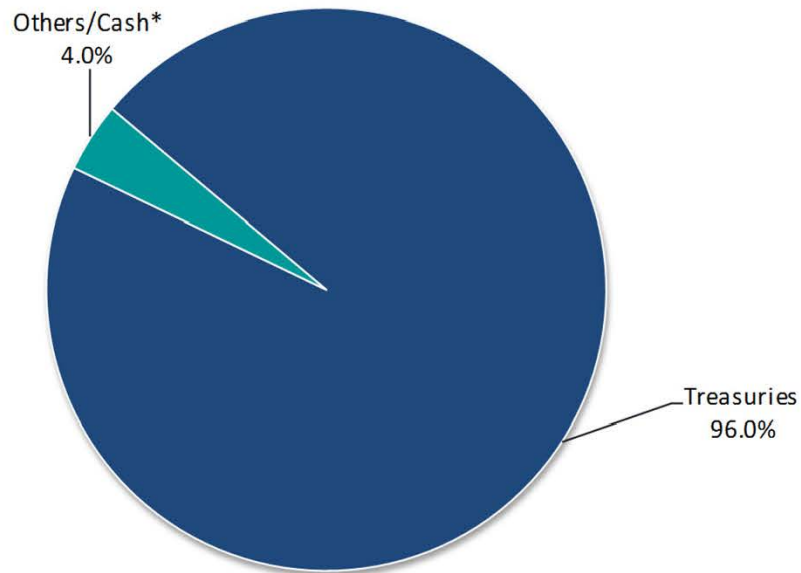




Property Name	Region Classification	Geographic Classification	MSA	Prior Quarter Carry Value	Current Quarter Carry Value	Net Market Value	Date Added to Fund	Last Valuation Date
<b>APARTMENTS</b>								
Brookwood	West	Southeast	Atlanta, GA	\$62,580,557	\$66,152,752	\$21,229,752	3Q14	December-16
Broadstone Harbor Beach	East	Southeast	Ft. Lauderdale, FL	\$75,441,690	\$85,217,025	\$36,968,385	1Q15	December-16
Downtown East	MidWest	West North Central	Minneapolis, MN	\$72,000,000	\$71,600,000	\$31,422,536	2Q15	December-16
Wyndham Park	West	Pacific	Portland, OR	\$88,000,000	\$0	\$0	2Q15	Sold - 4Q16
Legacy West Mid-Rise	MidWest	Southwest	Dallas, TX	\$8,210,036	\$10,698,179	\$10,149,221	2Q16	December-16
LaSalle Apartments	West	Pacific	Beaverton, OR	\$0	\$141,762,585	\$47,067,209	4Q16	December-16
				<b>\$306,232,284</b>	<b>\$375,430,542</b>	<b>\$146,837,104</b>		
<b>INDUSTRIAL</b>								
<b>OFFICE</b>								
55 Hawthorne	East	Pacific	San Francisco, CA	\$119,000,000	\$0	\$0	3Q14	Sold - 4Q16
Silicon Valley Towers	East	Pacific	San Jose, CA	\$98,000,000	\$110,000,000	\$62,675,968	2Q15	December-16
Post 3rd	West	Pacific	Los Angeles, CA	\$82,246,503	\$88,000,000	\$37,256,292	1Q16	December-16
LAM Campus	West	Pacific	San Jose, CA	\$82,204,986	\$83,000,000	\$32,179,201	2Q16	December-16
Fashion Island	West	Pacific	San Mateo, CA	\$140,669,073	\$143,200,000	\$58,372,723	3Q16	December-16
				<b>\$522,120,562</b>	<b>\$424,200,000</b>	<b>\$190,484,185</b>		
<b>RETAIL</b>								
Ledgewood Mall	East	Northeast	Roxbury, NJ	\$32,000,000	\$32,600,000	\$16,868,997	3Q15	December-16
Paramus Retail Portfolio	East	Northeast	Paramus, NJ	\$68,500,000	\$65,800,000	\$29,267,394	4Q15	December-16
				<b>\$100,500,000</b>	<b>\$98,400,000</b>	<b>\$46,136,391</b>		
<b>Portfolio Total</b>				<b>\$928,852,846</b>	<b>\$898,030,542</b>	<b>\$383,457,679</b>		



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	0.5	2.2	7.8	1.9	2.8	1.6	4.3	5.2
25th Percentile	-1.6	-0.9	5.1	1.6	2.3	1.1	3.6	4.5
Median	-2.3	-1.4	4.6	1.4	1.9	0.8	3.2	4.4
75th Percentile	-2.6	-1.6	3.9	1.1	1.3	0.6	3.0	3.9
95th Percentile	-3.7	-2.5	2.5	0.0	0.1	0.2	2.2	3.5
# of Portfolios	22	22	22	20	20	18	14	10
● Brown Brothers Harriman	-0.6 (16)	0.6 (17)	4.9 (34)	1.8 (12)	1.6 (66)	0.6 (72)	-- (--)	-- (--)
▲ BBgBarc US TIPS TR	-2.4 (57)	-1.5 (67)	4.7 (49)	1.6 (25)	2.3 (30)	0.9 (45)	3.4 (36)	4.4 (51)



Sector	Account Weight	BBgBarc TIPS	
		Index	Difference
Treasuries	96.0%	100.0%	-4.0%
Agencies	0.0%	0.0%	0.0%
Corporates	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	0.0%	0.0%	0.0%
CMO	0.0%	0.0%	0.0%
ABS	0.0%	0.0%	0.0%
Municipals	0.0%	0.0%	0.0%
Others/Cash*	4.0%	0.0%	4.0%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

\* May include Derivatives, Futures, Swaps, Credit Default Swaps, Total Return Swaps or Currency Contracts.

Portfolio Characteristics		
		Portfolio
Total Number of Securities		12
Total Market Value	\$	70,531,255
Current Coupon		1.03
Yield to Maturity		0.12
Average Life		
Duration		7.46
Quality		GOV

BBgBarc TIPS	
Total Number of Securities	37
Total Market Value	N/A
Current Coupon	0.82
Yield to Maturity	0.18
Average Life	
Duration	7.59
Quality	AAA

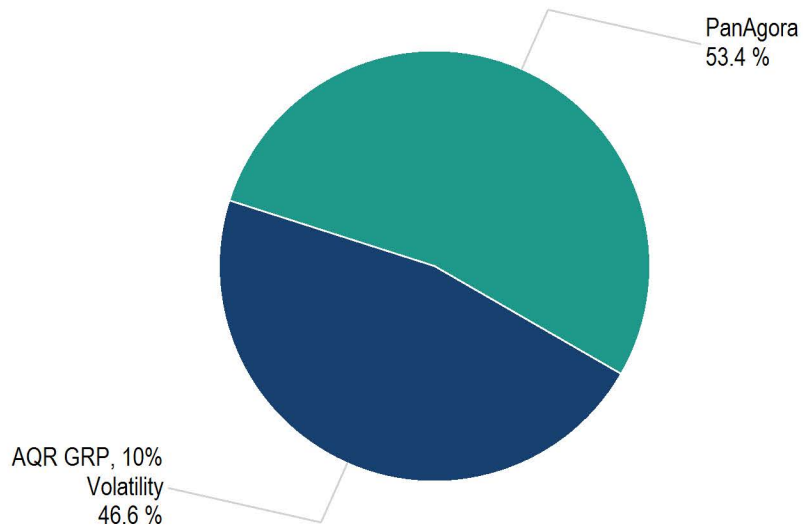
Yield to Maturity	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	n/a
7.0 - 9.0	n/a
9.0 - 11.0	n/a
11.0 - 13.0	n/a
13.0+	n/a
Unclassified	n/a

Average Life	
Range	% Held
0.0 - 3.0	19.1
3.0 - 5.0	10.6
5.0 - 10.0	44.6
10.0- 15.0	9.7
15.0+	16.0
Unclassified	0.0

Duration	
Range	% Held
0.0 - 3.0	15.5
3.0 - 5.0	16.5
5.0 - 10.0	44.8
10.0- 15.0	12.1
15.0+	11.0
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	96.0
Aaa (10)	0.0
Aa (9)	0.0
A (8)	0.0
Baa (7)	0.0
Below Baa (6-1)	0.0
Other	4.0

Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.0



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR GRP, 10% Volatility	\$128,374,183	46.6%	-1.7%
PanAgora	\$146,984,575	53.4%	-3.5%
Actual vs. Policy Weight Difference			0.0%
<b>Total</b>	<b>\$275,358,758</b>	<b>100.0%</b>	<b>-5.2%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	5.3%	8.9%	0.6	-0.2	6.8%
60/40 Russell 3000/BBgBarc US Aggregate	6.4%	6.6%	1.0	--	0.0%
AQR GRP, 10% Volatility	2.6%	8.8%	0.3	-0.6	6.7%
60/40 Russell 3000/BBgBarc US Aggregate	6.4%	6.6%	1.0	--	0.0%
PanAgora	--	--	--	--	--
60/40 Russell 3000/BBgBarc US Aggregate	6.4%	6.6%	1.0	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	5.6%	8.9%	0.6	-0.6	7.0%
60/40 Russell 3000/BBgBarc US Aggregate	9.7%	6.4%	1.5	--	0.0%
AQR GRP, 10% Volatility	4.0%	8.9%	0.4	-0.8	6.9%
60/40 Russell 3000/BBgBarc US Aggregate	9.7%	6.4%	1.5	--	0.0%
PanAgora	--	--	--	--	--
60/40 Russell 3000/BBgBarc US Aggregate	9.7%	6.4%	1.5	--	0.0%

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	6 Mo (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund</b>	<b>0.9</b>	<b>4.8</b>	<b>8.6</b>	<b>4.8</b>	<b>5.1</b>	<b>9.2</b>	<b>4.7</b>
<i>Policy Index</i>	1.1	4.9	8.9	4.3	4.8	9.0	5.4
<i>Allocation Index</i>	1.1	4.6	8.7	4.1	4.7	--	--
<b>Total Fund ex Overlay</b>	<b>1.0</b>	<b>5.0</b>	<b>8.4</b>	<b>4.6</b>	<b>5.1</b>	<b>9.2</b>	<b>4.7</b>
<i>Policy Index</i>	1.1	4.9	8.9	4.3	4.8	9.0	5.4
<i>Allocation Index</i>	1.1	4.6	8.7	4.1	4.7	--	--
<b>Public Equity</b>	<b>1.1</b>	<b>6.3</b>	<b>8.4</b>	<b>4.1</b>	<b>4.5</b>	<b>11.3</b>	<b>4.2</b>
<i>Blended Public Equity Index</i>	1.9	7.7	9.7	3.8	4.4	11.1	5.0
<b>US Equity</b>	<b>4.2</b>	<b>8.8</b>	<b>11.6</b>	<b>6.4</b>	<b>7.6</b>	<b>14.3</b>	<b>6.1</b>
<i>Blended US Equity Index</i>	4.2	9.1	12.9	6.2	8.0	14.5	7.0
<i>Russell 3000</i>	4.2	8.8	12.7	6.4	8.4	14.7	7.1
<b>Large Cap Equity</b>	<b>3.4</b>	<b>7.7</b>	<b>10.9</b>	<b>6.8</b>	<b>8.4</b>	<b>14.7</b>	<b>6.3</b>
<i>Russell 1000</i>	3.8	8.0	12.1	6.3	8.6	14.7	7.1
Barrow Hanley	8.8	14.2	14.4	7.2	7.8	15.1	--
<i>Russell 1000 Value</i>	6.7	10.4	17.3	6.2	8.6	14.8	5.7
BlackRock S&P 500 Index	3.8	7.8	12.0	6.6	8.9	--	--
<i>S&amp;P 500</i>	3.8	7.8	12.0	6.5	8.9	14.7	6.9
Brown Advisory	-4.5	-0.9	-2.2	2.4	4.0	--	--
<i>Russell 1000 Growth</i>	1.0	5.6	7.1	6.4	8.6	14.5	8.3
DE Shaw	3.8	9.3	14.8	9.5	10.3	16.7	--
<i>Russell 1000</i>	3.8	8.0	12.1	6.3	8.6	14.7	7.1
<b>Small Cap Equity</b>	<b>10.7</b>	<b>17.5</b>	<b>18.2</b>	<b>5.9</b>	<b>5.0</b>	<b>13.7</b>	<b>5.7</b>
<i>Russell 2000</i>	8.8	18.7	21.3	7.7	6.7	14.5	7.1
QMA US Small Cap	10.8	--	--	--	--	--	--
<i>Russell 2000</i>	8.8	18.7	21.3	7.7	6.7	14.5	7.1
<b>International Equity</b>	<b>-3.4</b>	<b>2.7</b>	<b>3.6</b>	<b>0.6</b>	<b>-0.5</b>	<b>5.8</b>	<b>0.6</b>
<i>MSCI ACWI ex US IMI</i>	-1.5	5.5	4.9	0.3	-1.0	5.7	1.5
<i>MSCI EAFE Gross</i>	-0.7	5.8	1.5	0.6	-1.2	7.0	1.2



Total Fund  
Performance Summary (Gross of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	6 Mo (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Developed Markets</b>	<b>-3.5</b>	<b>2.6</b>	<b>2.6</b>	<b>0.9</b>	<b>-0.2</b>	<b>6.3</b>	<b>0.8</b>
MSCI ACWI ex USA Gross	-1.2	5.7	5.0	-0.3	-1.3	5.5	1.4
Baillie Gifford	-7.0	0.9	1.1	1.5	0.3	--	--
MSCI ACWI ex US	-1.2	5.7	5.0	-0.3	-1.3	--	--
MSCI ACWI ex US Growth	-5.7	0.1	0.5	-0.2	-0.9	--	--
BlackRock EAFE Index	-0.7	5.8	1.5	0.5	-1.3	--	--
MSCI EAFE	-0.7	5.7	1.0	0.1	-1.6	6.5	0.7
MSCI EAFE Gross	-0.7	5.8	1.5	0.6	-1.2	7.0	1.2
FIAM Equity	-5.4	1.3	2.2	3.2	1.1	--	--
MSCI ACWI ex US Small Cap Gross	-3.5	4.2	4.3	3.6	1.1	8.1	3.3
Mondrian	-1.0	2.9	5.2	0.0	-0.5	5.0	1.5
MSCI ACWI ex USA Value Gross	3.4	11.5	9.6	-0.5	-1.9	5.2	0.9
MSCI ACWI ex USA Gross	-1.2	5.7	5.0	-0.3	-1.3	5.5	1.4
<b>Emerging Markets</b>	<b>-2.6</b>	<b>2.7</b>	<b>13.4</b>	<b>-1.9</b>	<b>-2.4</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets Gross	-4.1	4.7	11.6	-2.4	-2.2	1.6	2.2
Parametric Core	-2.6	2.7	13.4	--	--	--	--
MSCI Emerging Markets Gross	-4.1	4.7	11.6	-2.4	-2.2	1.6	2.2
<b>Fixed Income</b>	<b>0.9</b>	<b>3.3</b>	<b>8.4</b>	<b>3.7</b>	<b>4.1</b>	<b>5.1</b>	<b>5.4</b>
Blended Fixed Income Index	-2.4	-0.9	5.5	2.4	3.1	2.4	4.5
<b>US Fixed Income</b>	<b>-0.2</b>	<b>2.7</b>	<b>8.5</b>	<b>4.1</b>	<b>4.6</b>	<b>4.9</b>	<b>5.4</b>
Blended US Fixed Index	-1.6	0.0	6.0	2.9	3.7	2.7	4.8
<b>Core Fixed</b>	<b>-1.5</b>	<b>0.1</b>	<b>5.0</b>	<b>2.6</b>	<b>3.9</b>	<b>3.6</b>	<b>4.8</b>
BBgBarc US Aggregate TR	-3.0	-2.5	2.6	1.6	3.0	2.2	4.3
FIAM Bond	-2.7	-1.4	4.6	2.4	3.8	3.3	5.0
Western TRU	1.1	3.8	5.8	--	--	--	--
3-Month Libor Total Return USD	0.2	0.4	0.7	0.5	0.4	0.4	1.2
BBgBarc US Aggregate TR	-3.0	-2.5	2.6	1.6	3.0	2.2	4.3

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	6 Mo (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Opportunistic Credit</b>	<b>2.7</b>	<b>8.8</b>	<b>16.0</b>	<b>7.2</b>	<b>7.0</b>	<b>11.3</b>	<b>--</b>
<i>BBgBarc BA Intermediate HY</i>	0.6	4.7	11.8	5.4	5.1	4.8	--
Angelo Gordon Opportunistic	2.5	7.6	8.1	5.0	--	--	--
Angelo Gordon STAR	2.0	6.7	7.5	7.0	10.0	--	--
<i>BBgBarc US Aggregate TR</i>	-3.0	-2.5	2.6	1.6	3.0	2.2	4.3
Beach Point Select	3.8	9.5	17.2	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	0.6	4.7	11.8	5.4	5.1	4.8	--
Brigade Capital	2.5	9.8	23.1	5.4	3.8	6.9	--
<i>BBgBarc BA Intermediate HY</i>	0.6	4.7	11.8	5.4	5.1	4.8	--
50% Barclays HY/ 50% Bank Loan	2.0	6.4	13.5	5.2	4.2	6.4	--
TCP Direct Lending VIII	0.2	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	0.6	4.7	11.8	5.4	5.1	4.8	--
<b>Global Fixed Income</b>	<b>6.5</b>	<b>6.4</b>	<b>7.7</b>	<b>1.7</b>	<b>1.2</b>	<b>5.5</b>	<b>--</b>
<i>BBgBarc Multiverse TR</i>	-6.7	-5.7	2.8	-0.3	0.0	0.5	3.4
Franklin Templeton	6.5	6.4	7.7	1.7	1.2	5.5	--
<i>BBgBarc Multiverse TR</i>	-6.7	-5.7	2.8	-0.3	0.0	0.5	3.4
<b>Risk Parity</b>	<b>-3.9</b>	<b>-1.8</b>	<b>12.0</b>	<b>2.3</b>	<b>5.3</b>	<b>5.8</b>	<b>--</b>
60/40 Russell 3000/BBgBarc US Aggregate	1.3	4.2	8.8	4.7	6.4	9.7	6.3
AQR GRP, 10% Volatility	-2.4	-0.2	10.5	0.1	2.6	4.1	--
PanAgora	-5.2	-3.1	13.2	4.4	--	--	--
60/40 Russell 3000/BBgBarc US Aggregate	1.3	4.2	8.8	4.7	6.4	9.7	6.3
60/40 MSCI World/BBgBarc Global Aggregate	0.2	3.3	6.2	3.1	4.1	7.8	--
<b>Alternatives</b>	<b>3.8</b>	<b>10.2</b>	<b>9.2</b>	<b>7.7</b>	<b>7.0</b>	<b>7.1</b>	<b>--</b>
Alternatives Allocation Index	3.3	6.9	10.5	4.0	3.6	6.1	--
Blended Alternatives Index	3.4	7.2	10.8	4.3	4.5	8.5	--
<b>Private Equity</b>	<b>5.0</b>	<b>16.0</b>	<b>14.7</b>	<b>17.6</b>	<b>16.9</b>	<b>16.4</b>	<b>--</b>
Russell 3000 +3%	5.0	10.7	15.7	9.4	11.4	17.7	10.1

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: December 31, 2016

	3 Mo (%)	6 Mo (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Hedge Fund/Absolute Return</b>	<b>2.3</b>	<b>3.8</b>	<b>0.9</b>	<b>5.4</b>	<b>6.8</b>	<b>6.6</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.2	2.3	4.5	4.4	4.3	4.3	--
<b>AQR DELTA XN</b>	<b>2.4</b>	<b>4.1</b>	<b>1.6</b>	<b>6.0</b>	<b>7.2</b>	<b>6.8</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.2	2.3	4.5	4.4	4.3	4.3	--
<b>Standard Life GARS</b>	<b>1.8</b>	<b>2.2</b>	<b>-1.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.2	2.3	4.5	4.4	4.3	4.3	--
<b>Inflation Hedge</b>	<b>1.5</b>	<b>2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Inflation Pool Index</i>	1.0	1.6	--	--	--	--	--
<b>Real Estate</b>	<b>2.1</b>	<b>3.9</b>	<b>9.2</b>	<b>12.1</b>	<b>12.3</b>	<b>11.9</b>	<b>5.8</b>
<i>NCREIF ODCE</i>	2.1	4.2	8.8	11.8	12.1	12.2	6.2
<i>Invesco</i>	2.2	3.9	9.3	11.9	12.1	11.8	5.8
<i>NCREIF ODCE</i>	2.1	4.2	8.8	11.8	12.1	12.2	6.2
<i>Invesco US Val IV</i>	1.3	5.2	8.0	--	--	--	--
<i>NCREIF ODCE</i>	2.1	4.2	8.8	11.8	12.1	12.2	6.2
<i>NCREIF CEVA 1Q Lag - NET</i>	2.5	4.8	13.1	15.0	15.1	--	--
<b>Private Real Asset</b>	<b>0.0</b>	<b>0.0</b>	<b>44.6</b>	<b>21.1</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Real Asset Index</i>	1.0	2.4	6.4	5.6	5.6	--	--
<b>Liquid Pool</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Real Asset Index</i>	1.0	2.4	6.4	5.6	5.6	--	--
<i>SSgA Custom Real Asset</i>	--	--	--	--	--	--	--
<i>Blended Real Asset Index</i>	1.0	2.4	6.4	5.6	5.6	--	--
<b>TIPS</b>	<b>-0.5</b>	<b>0.7</b>	<b>5.0</b>	<b>1.9</b>	<b>1.8</b>	<b>0.8</b>	<b>--</b>
<i>BBgBarc US TIPS TR</i>	-2.4	-1.5	4.7	1.6	2.3	0.9	4.4
<i>Brown Brothers Harriman</i>	-0.5	0.7	5.0	1.9	1.8	0.8	--
<i>BBgBarc US TIPS TR</i>	-2.4	-1.5	4.7	1.6	2.3	0.9	4.4
<b>Cash</b>	<b>0.2</b>	<b>0.4</b>	<b>0.8</b>	<b>1.0</b>	<b>0.8</b>	<b>0.7</b>	<b>0.9</b>
<i>91 Day T-Bills</i>	0.1	0.2	0.3	0.2	0.1	0.1	0.7

## **Angelo, Gordon & Co. – AG STAR Fund**

The STAR Fund will focus on CMBS and non-Agency RMBS priced between 25-75% of par, which AG believes are even today mispriced due to their complex nature and a dearth of natural buyers capable of accurately valuing these assets. In addition, AG will target securities that are well-positioned to benefit from home and commercial property price stabilization and recovery, and/or borrower credit quality improvement. In this regard the STAR Fund will be more aggressive than the PPIP Fund since it will target securities that are more geared to a recovery of the commercial and residential real estate markets. The Fund will utilize a moderate amount of leverage (1x to 1.5x) and is targeting a base-case 15% net IRR with a downside return in the mid/high single digits and an upside projection of 25%+ returns.

## **Angelo, Gordon & Co. – AG Opportunistic Whole Loan Fund**

As bank balance sheets have strengthened since the crisis, Angelo Gordon expects approximately \$40 billion of re-performing loans and non-performing loans will trade hands each year in the near term. By acquiring these loans at a discounted price and replacing original servicers with better-focused special servicers, Angelo Gordon believes it can improve operational efficiency and generate attractive returns. To take advantage of this opportunity, Angelo Gordon established this Opportunistic Whole Loan Fund to make investments primarily in a portfolio of non-performing loans and re-performing, but will also include investments in new residential mortgage loans and excess mortgage servicing rights. Opportunistic investments in commercial mortgage loans and other mortgage related investments may also be included in the Fund's portfolio. Angelo Gordon has been an active participant in the residential and consumer debt market since 2008. The Partnership's investment approach to residential mortgage loans and securities is guided by an analytically based investment process anchored by distressed asset valuation and cash flow modeling. Angelo Gordon's analysis of re-performing and non-performing loans begins with its loan due diligence process. This process will include a review of substantially all of the properties in the pool, as well as a review of the loan files backing the loan pool. In addition, a macro overlay is embedded in the investment process which incorporates general economic trends, along with specific views on interest rates, unemployment, collateral appreciation or depreciation, governmental intervention in creditors' rights and liquidation timelines.

## **AQR Delta**

The AQR DELTA Fund aims to deliver efficient exposure to a well-diversified portfolio of hedge fund strategies, including Convertible Arbitrage, Event Driven, Fixed Income Relative Value, Equity Market Neutral, Long/Short Equity, Dedicated Short Bias, Global Macro, Managed Futures, and Emerging Markets. The Delta Fund's approach is to capture and deliver the "hedge fund risk premiums" that explain much of the returns of each of these strategies by building bottom-up positions in each strategy. AQR's research has demonstrated that many hedge funds use similar strategies to generate returns. These strategies are often well-known, widely understood and share common exposures. AQR's experience and research suggests much of the insight underlying these strategies - as well as a meaningful portion of their returns - can be captured using a dynamic, disciplined investment approach. Just as the equity risk premium can explain a large portion of the returns from equity investing, hedge fund risk premiums can explain the returns from hedge fund investing. Importantly, while compensation for equity risk is dependent on economic growth, hedge fund risk premiums are largely unrelated to economic activity, and thus provide attractive diversification properties.

## **AQR – Risk Parity**

The objective of Global Risk Parity (GRP) is to generate excess returns from a risk diversified portfolio of asset exposures. AQR believes that its approach maximizes the diversification benefit across a broad range of economic environments. For many institutional portfolios, equity risk has historically been the predominant risk and the source of most return expectations since equities offer higher expected returns to compensate for their high risk. Investor preference for and concentration in equities has been driven by their expected return needs, which cannot be satisfied in a well-diversified un-levered portfolio. GRP is a diversified portfolio that can be scaled to similar levels of risk as a portfolio concentrated in equities, but with a higher expected return resulting from diversification across asset class risk. The approach helps do away with the compromise of concentrating in high risk assets to meet high return needs. Consistent with portfolio theory, the GRP strategy is designed to maximize diversification across a broad spectrum of liquid global risk premia to create a portfolio with higher expected risk-adjusted returns. Research shows that risk-adjusted returns across asset classes are similar over the long-term. Since realized risk-adjusted returns across asset classes are similar, AQR expects a portfolio that is diversified equally by risk to perform better. The Global Risk Premium strategy aims to deliver efficient market exposure across four broad asset classes in a risk balanced fashion.

## **Baillie Gifford – ACWI ex US Focus Equities**

ACWI ex US Focus is a fundamental growth strategy. Research is organized primarily by regional teams, with each member of the ACWI ex US Focus Portfolio Construction Group representing a regional team. Four global sector groups also contribute research. Baillie Gifford conducts approximately 2000 company meetings annually both in Edinburgh and onsite. Companies are evaluated on their growth opportunity relative to the average company, their ability to execute on that opportunity, and the degree to which probability of future success is already valued by the market. Baillie Gifford's basic philosophy is that share prices ultimately follow earnings. They believe that the stock market has a recurring tendency to under-appreciate the value of long-term compound growth. The process seeks to add value through use of proprietary fundamental research to identify companies exhibiting some combination of sustained above average growth, and attractive financial characteristics. The portfolio generally holds 80-120 stocks, with country and sector weights +/-6% relative to the index and industry weights +/- 5% relative to the index.

## **Barrow Hanley – Diversified Large Cap Value**

Barrow Hanley takes a bottom up value approach to equity investing. They seek to buy stocks that exhibit all three of the following characteristics: price/earnings and price/book ratios below the market, and dividend yield above the market (with the S&P 500 representing the market). Their view is that a portfolio that emphasizes low price/book and high dividend yield stocks will provide some protection in down markets and participation in improving economic cycles. In addition to their basic valuation criteria, Barrow Hanley is also looking for profitable companies with earnings growth greater than the market. After the quantitative screening process, Barrow Hanley's equity research team conducts qualitative analysis of candidate investments. This involves forecasting ROE 5-years out and treating this forecast as the basis for earnings, book value and dividend yield projections for the same five year period. These projections are used as inputs into a dividend discount model and relative return model. Stocks that appear to be attractively valued according to both of these models comprise the firm's buy list. The portfolio managers construct the portfolio with 70-90 of the buy list names. Securities are weighted approximately equally, with core positions in the range of 1.5%. Sector weightings are limited to 35% (at cost) and industry weightings are limited to 15%. Stocks are generally held for three to four years, resulting in average turnover of 25% - 35%.

## **Beach Point Select Fund**

Beach Point Select Fund is a commingled fund vehicle within the firm's Opportunistic Credit strategy. This fund focuses on off-the-run, complex, and less-liquid securities. It is a best ideas portfolio of distressed debt, special situations, private/direct loans, catalyst-driven high yield bonds and bank loans, and credit-informed equities with a North American and European focus. The Select Fund differs from other funds and accounts in the Opportunistic Credit strategy by pursuing a more concentrated portfolio and emphasizing a higher percentage of less-liquid/private investments. Beach Point invests up and down the entire capital structure and it constructs portfolios with a bottom-up, research-driven approach that also takes into account top-down macro considerations. Its investment process includes idea generation, detailed credit analysis, relative value decision making and investment selection, portfolio construction and on-going monitoring. The ultimate goal of its investment process is to produce a well-diversified investment portfolio with limited downside risk and substantial upside potential.

## **BlackRock – EAFE Index**

The EAFE Index Fund seeks to replicate the return of the MSCI EAFE Index. This index represents the developed equity markets outside of North America: Europe, Austral, Asia and the Far East.

## **BlackRock – S&P 500 Index**

The Equity Index Fund seeks to capture the growth potential of large companies and achieve broad diversification with low costs by fully replicating the Standard & Poor's (S&P) 500 Index. Representing approximately 80% of the total US equity market capitalization, the S&P 500 Index is one of the most widely followed benchmarks of US stock market performance. Introduced in 1977, this fund was the investment management industry's first institutional S&P 500 Index fund.

## **Brigade – Opportunistic Credit**

Opportunistic Credit is a fundamental, bottom-up strategy focused on high yield corporate bonds and bank loans with tactical allocations to structured securities, convertibles and other sectors of the bond markets as they become attractive on a relative value basis. While performing credits represent the majority, Brigade will invest up to 35% of the portfolio in distressed securities and restructuring situations if these types of opportunities are attractive on a risk-adjusted basis and the timing is right with respect to the credit cycle. The portfolio is comprised of mostly North American issuers, but they are not restricted geographically and expect to have a moderate allocation to Europe over time. Although the portfolio is generally long-only, Brigade has the ability to implement a limited amount of tactical macro hedges.

## **Brown Advisory – Large Cap Growth Equity**

Brown Advisory's Large-Cap Growth Equity philosophy is based on the belief that concentrated portfolios of fundamentally strong businesses should generate returns in excess of the portfolio's index and the broad market, with an acceptable level of risk. The success of the philosophy is based on a talented, highly collaborative investment team with a long-term outlook, performing deep investment research on a broad universe of stocks. This culminates in bottom-up company selection that strives to identify drivers of growth in the large capitalization universe. With conviction in strict investment criteria and rigorous due diligence, Brown concentrate its portfolios in its best ideas, creating the potential for above-average returns. The objective is to exceed the returns of the strategy's benchmark, the Russell 1000 Growth Index, over a full market cycle (typically 3-5 years) on a risk-adjusted basis.

## **Brown Brothers Harriman – Inflation Indexed Securities**

BBH manages TIPS using three main types of strategies: Fundamental, Technical and Opportunistic. The Fundamental bucket has two sub-strategies, real yield duration and real yield curve slope vs. nominal yield curve slope. The Technical strategies consist of yield curve roll-down, auction cycle trading, seasonal vs. non-seasonal CPI and security selection/option value analysis. Finally, nominal Treasuries vs. TIPS, sector relative value (i.e., corporate or Agency inflation-linked bonds) and non-Dollar inflation-linked bonds make up the Opportunistic group. Real yield duration is held to +/- 1 year vs. the benchmark and the portfolio has a limited allocation to non-index securities, typically 5-10% with a maximum of 20% (including nominal Treasuries).

## **DE Shaw – DE Shaw US Broad Market Core Alpha Extension Fund**

The D. E. Shaw group believes that there exist some market inefficiencies that may be identified through quantitative analysis, advanced technology, and the insight of practitioners. Identifying these inefficiencies involves a process of hypothesis formulation, testing, and validation. Importantly, to avoid data-mining, the hypothesis formulation precedes the analysis of the historical data. D.E. Shaw's Structured Equity strategies rely largely on quantitative and computational investment techniques developed by the D. E. Shaw over the last 19 years in the course of research conducted for purposes of managing the firm's hedge funds. In addition to its beta one strategies, D.E. Shaw manages substantial assets in its hedge fund strategies. D.E. Shaw's investment process involves a suite of quantitative models, each designed to capitalize on a distinct and uncorrelated set of market inefficiencies. Some of these models are technical in nature and involve price and volume inputs. Other models rely on fundamental data, such as figures gleaned from corporate balance sheets or income statements. Still others, again quantitative, anticipate or react to a particular corporate event or set of events. These models typically operate with forecast horizons of a few weeks to many months. The ability to trade on shorter-term signals distinguishes D.E. Shaw from many of its long only and 130/30 peers. Portfolio construction involves the use of a proprietary optimizer which runs dynamically throughout the trading day. The portfolio is broadly diversified with several hundred long and short positions. Over- and under-weighting of sectors and industries relative to the benchmark will be quite modest, with the intention that most of the alpha be generated by security selection. The US Broad Market Core Alpha Extension Fund is a 130/30 strategy which maintains a beta that is approximately neutral to the Russell 1000 Index.

## **Eaton Vance/Parametric – Structured Emerging Markets Core Equity**

Parametric utilizes a structured, rules-based approach, which they believe is capable of generating enhanced returns with lower volatility compared to both traditional active management and passive capitalization weighted indices. The basic idea is to structure the portfolio with more balanced country weights than the market cap weighted indices, and also to capture a rebalancing premium. This provides more diversification and greater exposure to smaller countries than is provided by the market cap weighted indices. The approach is to divide emerging markets countries into three tiers, and to equally weight the countries within each tier. Tier 1 countries are the largest eight countries that dominate the cap weighted index. Each successive tier is comprised of smaller countries, each of which is given a smaller target weighting in the model portfolio. In aggregate, the eight Tier 1 countries are given a much lower weighting than in the capitalization weighted index, but they nevertheless comprise more than 50% of the portfolio. The Core SEM strategy targets excess return of 3% over a market cycle with 2.5%-4.5% tracking error. It is designed to generate a level of volatility 90%-100% of the MSCI EM index. The strategy invests in 44 countries and will typically hold 700-1,000 securities. Turnover is expected to be in the range of 5%-15%.

## **Franklin Templeton Investments – Global Fixed Income**

Franklin Templeton manages the global bond mandate in an unconstrained fashion using a top-down, fundamental framework. In the short term and on a country-by-country basis there are often inefficiencies in global bond and currency markets, however, over the longer term the market will generally price to fundamentals. Thus, FT focuses on fundamental research to identify long-term opportunities and uses short-term market inefficiencies to build positions in such investments. The investment and portfolio construction process begins with the determination of the Fund's or institutional client's investment objectives, resulting in a set of risk-return parameters and exposure limits within which the portfolio is managed. Next the firm's global economic outlook for the industrialized countries is developed, with a focus on interest rate and exchange rate forecasts. The portfolio's interest rate outlook is a function of global general equilibrium macroeconomic analysis as well as country-specific research. Macroeconomic conditions in the G-3 economies are analyzed first, primarily with respect to how current and projected growth and inflation dynamics are expected to influence monetary policy. This analysis is then extended out to the rest of the industrialized countries (G-13) as well as emerging markets, which results in broad targets for cash, duration, currencies and the developed/emerging market mix. Using the firm's interest rate and exchange rate outlook, probability-weighted horizon returns for bonds of various countries are then calculated. This analysis is used to establish specific country weights and duration targets based on risk-adjusted expected total return measured in the portfolio's base currency. Analysis of emerging markets includes sovereign credit analysis along with greater emphasis on capital flows, inter-market dynamics and trends in the level of risk aversion in the market.

## **INVESCO Realty Advisors – INVESCO Core Equity, LLC**

SamCERA is a founding member of INVESCO's open end Core Equity real estate fund and rolled its separate account properties into the fund. INVESCO Core Equity, LLC (the "Fund") is a perpetual life, open-end vehicle which invests in a diversified portfolio of institutional quality office, retail, industrial and multifamily residential real estate assets. The Fund buys core properties that are located within the United States, typically requiring an investment of \$10 million or more. The portfolio cannot be more than 30% leveraged.

## **INVESCO Realty Advisors – INVESCO US Val IV**

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund IV will look to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments will be limited to direct equity interests in office, multi-family, retail and industrial properties across the US. The Fund is expected to be geographically concentrated in U.S. gateway cities and top 25 Metropolitan Statistical Areas (MSA's). Invesco Value Fund IV will provide a nice compliment to the more conservative Invesco Core Fund and offer the potential of enhanced returns to the SamCERA Real Estate portfolio.



## **Mondrian Investment Partners – International Equity**

Mondrian is a value-oriented, defensive manager whose investment philosophy is based on the principle that investments must be evaluated for their fundamental long-term value. The firm's philosophy involves three stated investment objectives: 1) provide a rate of return meaningfully greater than the client's domestic rate of inflation, 2) structure client portfolios that preserve capital during protracted international market declines, and 3) provide portfolio performance that is less volatile than benchmark indices and other international managers. Mondrian applies typical value screening criteria to a universe of 1,500 stocks, from which 500 are selected for more detailed work. Through fundamental research, and the deliberations of the Investment Committee, the universe is further reduced to a list of 150 stocks. The investment team conducts detailed fundamental analysis on the remaining stocks, a process which includes applying the firm's dividend discount model consistently across all markets and industries. Mondrian also uses a purchasing power parity model to give an accurate currency comparison of the value of the stocks under consideration. The firm will only consider buying stocks in countries with good investor protection practices and relatively simple repatriation procedures. A computer based optimization program is employed in the portfolio construction process. Mondrian's portfolio holds 80-125 issues.

## **Panagora – Diversified Risk Multi Asset Fund**

The Multi Asset team is headed up by Edward Qian, CIO of the group, and the founder of Panagora's risk parity strategy. A staff of approximately thirteen works in this group on research and portfolio construction, with some people spending more time on the former and some more on the latter. Panagora implements risk parity by distinguishing between three categories of assets: equities, nominal fixed income, and inflation protection. Each of these categories corresponds to a respective economic environment: economic growth, economic contraction and inflation. Panagora's risk allocation targets 40% each from equities and nominal fixed income, and 20% from inflation protection. In addition to applying concept of risk parity between asset classes, Panagora also applies it within each asset class. The 40/40/20 allocation to equities/nominal fixed income/inflation protection is a long term strategic allocation. In 2009 Panagora introduced what they refer to as "Dynamic Risk Allocation" or "DRA," which involves tactically tilting the risk allocations away from the neutral targets in order to enhance returns and reduce risk.

## **Pyramis Global Advisors – Broad Market Duration Commingled Pool**

Pyramis' Broad Market Duration (BMD) investment strategy seeks to achieve absolute and risk-adjusted returns in excess of the BC U.S. Aggregate Index, focusing its investments in US Treasuries, agencies, investment grade corporate bonds, mortgage-backed and asset-backed securities. The BMD commingled pool can also hold small, opportunistic positions in out-of-benchmark securities, such as inflation-linked bonds. The investable universe includes all US dollar denominated, investment grade debt securities. The BMD investment approach emphasizes issuer and sector valuation and individual security selection. Through the integration of fundamental and quantitative research and trading, the BMD strategy is implemented in a team environment. Risk management technology is utilized to explicitly quantify benchmark exposures on a daily basis, and Pyramis uses the same analytical framework to assess both index and portfolio risk. Tracking error should range between 40 and 60 basis points per annum over the benchmark, and stringent portfolio construction risk control rules are strictly adhered to.

## **Pyramis Global Advisors – Select International Small Cap**

Pyramis Select International Small Cap is a core strategy. The approach is designed to leverage Pyramis/Fidelity's proprietary resources to add value exclusively via stock selection. To that end the portfolio is constructed to be regionally neutral, with only modest deviations from the benchmark's country and sector weights. The investment process involves three basic stages. The first stage is the security level research conducted by the analysts. The second stage is stock selection from within the pool of names that are highly ranked by the analysts. The third step is portfolio construction and risk management. The essential differentiating feature of this strategy is the breadth of coverage that is made possible by the large staff of analysts. Analysts actively conduct regular fundamental research on, and give a formal rating of 1-5, 1200-1300 international small cap companies. While there is no single firm-wide approach to security research, analysts are expected to establish an upside target for any given stock and assign a formal rating. The decision making structure is quite efficient, with portfolio manager Rob Feldman making all the buy and sell decisions. His role, as he puts it, is to be an intelligent user of the analysts' research. He selects the 1- and 2- rated stocks that he thinks are compelling and additive to his portfolio, and he sells names when they are downgraded by the analysts. There are approximately 200 holdings in the portfolio. Country and sector weights are within 3 percentage points of the benchmark and position sizes are within 2 percentage points of the benchmark. Turnover tends to be in the 60%-80% range.

## **Quantitative Management Associates – QMA Small-Cap Core**

Quantitative Management Associates (QMA) utilizes a bottom-up quantitative framework in order provide a diversified exposure to core U.S. small-cap stocks, while attempting to produce consistent outperformance versus the benchmark with moderate tracking error levels. QMA uses an adaptive, systematic investment process to exploit opportunities created by mispriced securities to consistently add value over long time periods. Bottom-up stock selection drives exposure to key sources of alpha (valuation, growth, and quality). The QMA stock selection model adapts to changes in company growth rates and market environments by putting more emphasis on valuation for slowly growing companies, and more emphasis on future growth projections for companies with higher projected growth rates.

## **Standard Life Global Absolute Return Strategy (GARS)**

The Standard Life Global Absolute Return Strategy (GARS) was initially launched in 2005 to help address Standard Life's own pension plan's deficit problem. GARS' primary investment objective is to deliver a positive absolute return over the medium to long term with lower volatility than equities, irrespective of market conditions. It seeks returns through dynamic allocation to investment opportunities in traditional and advanced asset classes, and also separately exploits the team's security selection expertise. In the search for attractive investment positions, the team follows a rigorous research process. This includes a variety of research techniques, including broad global macro-economic, fundamental analysis, quantitative research and valuation modeling. The GARS investment process is designed to capitalize on an array of research and investment techniques and draws together the team's three-year investment insights. The team then rigorously examines and review position proposals to approve a high conviction, short list of positions that work well together. Having a cash benchmark means that GARS has a potentially unrestricted investment universe and all portfolio holdings are at the Portfolio Manager's discretion. The GARS portfolio also routinely uses a variety of conventional derivatives for investment, liquidity, efficiency and hedging purposes. The GARS strategy has experienced significant growth in its asset under management since it becomes available to external investors in 2006.

### **State Street Global Advisors (SSgA) Custom Real Asset**

SSgA Custom Real Asset portfolio uses a portfolio of liquid real assets to proxy private real assets. The portfolio is comprised of equal weightings of the Bloomberg Commodity Index, S&P Global Natural Resources Index, and S&P Global Infrastructure Index. The portfolio is used to fund upcoming private real asset mandates.

### **Tennenbaum Capital Partners - TCP Direct Lending Fund VIII**

TCP Direct Lending Fund VIII is a private investment fund managed by Tennenbaum Capital Partners ("TCP"). The Fund is designed to continue TCP's successful strategy of investing in privately-originated, performing senior secured debt primarily in North America-based companies with target enterprise values between \$100 million and \$1.5 billion. The Fund will include positions in 1st lien, 2nd lien and unitranche debt, with a preference for floating-rate debt, which TCP believes provides better flexibility to adapt to market conditions. TCP's direct lending strategy has generated attractive investment opportunities across market cycles, as evidenced by the Firm's prior direct lending track record. Fund VIII targets an unlevered annual yield of approximately 9-12%, with its return primarily driven by current income.

### **Western Asset Management – Total Return Unconstrained (TRU)**

Western Asset's Total Return Unconstrained strategy (TRU) seeks to provide bond-like risk and return over the long term, but does not have a benchmark. This allows for asset allocation based on value rather than using the construction of a benchmark as baseline positioning. The investment approach is active with very broad latitude on duration (-3 to +8 years) and on asset allocation across all of the eligible sectors in a core plus mandate. The portfolio must have at least 50% of its holdings in investment-grade securities. The flexibility offered by this strategy allows for defensive positioning in rising rate environments and opportunistic deployment of capital when value opportunities arise. It also allows the portfolio managers to emphasize (or deemphasize) either credit or rates when one or the other appears to offer greater (or lesser) value. um non-US exposure.

# Policy Index and Benchmark History

Period Ending: December 31, 2016

Total Plan Policy Index	As of													
	10/1/16	9/1/16	1/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	1/1/09	5/1/07	6/1/00	3/1/99	9/1/98	7/1/96
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	10.0%	10.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 Russell 3000/BBgBarc US Aggregate (RP)	8.0%	8.0%	8.0%	8.0%	8.0%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	10.0%	10.0%	10.0%	10.0%	9.3%	11.0%	11.0%	12.9%	27.0%	27.0%	29.0%	25.0%	21.0%	21.0%
BBgBarc BA Intermediate HY	6.0%	5.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	3.0%	3.0%	3.0%	3.0%	3.8%	4.4%	4.4%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc TIPS	2.0%	2.0%	2.0%	2.0%	2.0%	3.1%	3.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Commodity	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	9.0%	9.0%
CPI + 5% (RA)	0.0%	2.0%	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Real Asset	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Libor +4% (HF)	5.0%	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	18.0%	18.0%	18.0%	21.0%	21.0%	15.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	19.0%	20.0%	20.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%
NCREIF ODCE	7.0%	7.0%	7.0%	6.0%	6.0%	5.0%	5.0%	5.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	24.0%	24.0%	24.0%	28.0%	28.0%	28.0%	37.0%	37.0%	40.0%	22.0%	20.0%	20.0%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	0.0%
Russell 2000	0.0%	0.0%	4.0%	6.0%	6.0%	7.0%	7.0%	7.0%	9.0%	9.0%	10.0%	15.0%	15.0%	15.0%
Russell 3000	28.0%	28.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% (PE)	7.0%	7.0%	7.0%	7.0%	7.0%	8.0%	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

# Policy Index and Benchmark History

Period Ending: December 31, 2016

Total Equity Benchmark	As of:					
	10/1/16	9/1/16	1/1/16	1/1/14	10/1/10	5/1/07
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	34.0%	31.3%
MSCI ACWI ex-US IMI	40.4%	41.7%	41.7%	40.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	50.0%	48.0%	52.8%	55.2%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 2000	0.0%	0.0%	8.3%	12.0%	13.2%	13.5%
Russell 3000	59.6%	58.3%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

US Equity Benchmark	As of:					
	9/1/16	1/1/16	6/1/00	3/1/99	9/1/98	7/1/96
Russell 1000	0.0%	85.7%	80.0%	52.0%	50.0%	50.0%
Russell 1000 Value	0.0%	0.0%	0.0%	12.0%	12.5%	0.0%
Russell 2000	0.0%	14.3%	20.0%	36.0%	37.5%	37.5%
Russell 3000	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S & P 500	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

International Equity Benchmark	As of:		
	1/1/14	6/1/00	1/1/96
MSCI ACWI ex US	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI	100.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Total Fixed Income Benchmark	As of:					
	10/1/16	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11
BBgBarc Aggregate	52.6%	55.5%	50.0%	46.3%	50.0%	50.0%
BBgBarc BA Intermediate HY	31.6%	27.8%	25.0%	25.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	16.0%	15.0%
BBgBarc Multiverse	15.8%	16.7%	15.0%	18.8%	20.0%	20.0%
BBgBarc TIPS	0.0%	0.0%	10.0%	10.0%	14.0%	15.0%
Citigroup non-US WGBl	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



US Fixed Income Benchmark	As of:					
	10/1/16	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11
BBgBarc Aggregate	62.5%	66.7%	58.8%	56.9%	62.5%	62.5%
BBgBarc BA Intermediate HY	37.5%	33.3%	29.4%	30.8%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	20.0%	18.8%
BBgBarc TIPS	0.0%	0.0%	11.8%	12.3%	17.5%	18.8%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Opportunistic Credit Benchmark	As of:	
	1/1/14	12/1/09
BBgBarc BA Intermediate HY	100.0%	0.0%
BBgBarc Credit BAA	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

Risk Parity Benchmark	As of:
	10/1/10
BBgBarc Aggregate	40.0%
BBgBarc Global Aggregate	0.0%
MSCI World	0.0%
Russell 3000	60.0%
	<b>100.0%</b>

Alternatives Benchmark	As of:			
	4/1/16	1/1/16	1/1/14	1/1/11
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	17.7%	18.8%	15.0%
CPI + 5% (RA)	0.0%	11.8%	12.5%	0.0%
Libor +4% (HF)	41.7%	29.4%	25.0%	15.0%
Russell 3000 +3% (PE)	58.3%	41.2%	43.8%	40.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Private Equity Benchmark	As of:
	10/1/10
Russell 3000 +3%	100.0%
	<b>100.0%</b>

Hedge Fund Benchmark	As of:
	10/1/10
Libor +4%	100.0%
	<b>100.0%</b>

Inflation Hedge	As of:	
	10/1/16	4/1/16
BBgBarc TIPS	14.3%	14.3%
Bloomberg Commodity	0.0%	21.4%
CPI + 5% (RA)	0.0%	14.3%
Bloomberg Roll Select Commodity	12.1%	0.0%
S&P Global Large-MidCap Commodity and Resource	11.8%	0.0%
S&P Global Infrastructure	11.8%	0.0%
NCREIF ODCE	50.0%	50.0%
	<b>100.0%</b>	<b>100.0%</b>

Real Asset Benchmark	As of:	
	10/1/16	1/1/14
Bloomberg Roll Select Commodity	34.00%	0.0%
S&P Global Large-MidCap Commodity and Resource	33.00%	0.0%
S&P Global Infrastructure	33.00%	0.0%
CPI + 5%	0.00%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

Real Estate Benchmark	As of:		
	1/1/09	6/1/00	7/1/96
10 Year Treasury +2%	0.0%	0.0%	100.0%
NCREIF ODCE	100.0%	0.0%	0.0%
NCREIF Property	0.0%	100.0%	0.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Baillie Gifford Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US	100.0%	0.0%
MSCI EAFE	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

Baillie Gifford Secondary Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US Growth	100.0%	0.0%
MSCI EAFE Growth	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

Brigade Secondary Benchmark	As of:	
	8/1/10	
BBgBarc High Yield	50.0%	
Credit Suisse Leveraged Loans	50.0%	
	<b>100.0%</b>	

**FEE SCHEDULES**

Baillie Gifford

First \$25 million:	0.60% per annum
Next \$75 million:	0.50% per annum
Next \$300 million:	0.40% per annum
Thereafter:	0.30% per annum

Barrow, Hanley, Mewhinney & Strauss

First \$15 million:	0.75% per annum
Next \$10 million:	0.55% per annum
Next \$75 million:	0.45% per annum
Next \$100 million:	0.35% per annum
Next \$800 million:	0.25% per annum
Thereafter:	0.15% per annum

BlackRock-Russell S&P 500 Fund

First \$250 million:	0.02% per annum
Thereafter:	0.015% per annum

BlackRock-EAFE Equity Index Fund

On All Assets:	0.05% per annum
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Brown Advisory

First \$50 million:	0.47% per annum
Next \$50 million:	0.45% per annum
Next \$200 million:	0.40% per annum
Thereafter:	0.35% per annum

Brown Brothers Harriman

On All Assets:	0.15% per annum
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Clifton Group

First \$50 million:	0.12% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.05% per annum
Plus monthly reporting fee of \$1500	

Franklin Templeton Investment

First \$50 million:	0.45% per annum
Next \$50 million:	0.35% per annum
Thereafter:	0.30% per annum

Mondrian Investment Partners

Assets Below \$190 million	
First \$20 million:	1.00% per annum
Thereafter:	0.33% per annum
Assets Above \$190 million	
First \$50 million:	1.00% per annum
Next \$150 million:	0.19% per annum
Thereafter:	0.33% per annum

Parametric

On All Assets:	0.30% per annum
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FIAM Bond

First \$50 million:	0.20% per annum
Next \$50 million:	0.175% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.085% per annum

FIAM Equity

On All Assets:	0.90% per annum
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Western Asset Management

On All Assets:	0.25% per annum
Performance Fee:	20%

QMA

First \$50 million:	0.55% per annum
Thereafter:	0.50% per annum



Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Barrow Hanley	Russell 1000 Value	R	✓	R
Brown Advisory	Russell 1000 Growth	--	--	--
DE Shaw	Russell 1000	✓	✓	✓
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	--	--	--
FIAM Equity	MSCI ACWI ex US Small Cap Gross	--	--	--
Mondrian	MSCI ACWI ex USA Value Gross	R	R	✓
Parametric Core	MSCI Emerging Markets Gross	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	--	--	--
Brigade Capital	BBgBarc BA Intermediate HY	✓	R	✓
TCP Direct Lending VIII	BBgBarc BA Intermediate HY	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	✓	✓	✓

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Barrow Hanley	Russell 1000 Value	✓	✓	✗
Brown Advisory	Russell 1000 Growth	--	--	--
DE Shaw	Russell 1000	✓	✓	✓
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	--	--	--
FIAM Equity	MSCI ACWI ex US Small Cap Gross	--	--	--
Mondrian	MSCI ACWI ex USA Value Gross	✗	✗	✓
Parametric Core	MSCI Emerging Markets Gross	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	--	--	--
Brigade Capital	BBgBarc BA Intermediate HY	✓	✓	✓
TCP Direct Lending VIII	BBgBarc BA Intermediate HY	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	✓	✓	✓

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive

Manager Performance Comparison (Gross of Fees)

Period Ending: December 31, 2016

	Oct	Nov	Dec	4th Qtr. 2016	Difference	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference
Verus	-0.68%	7.42%	1.99%	8.81%		4.97%		1.69%		-1.50%		5.41%	
Barrow Hanley	-0.68%	7.45%	1.96%	8.81%	-0.00%	4.98%	-0.01%	1.69%	0.00%	-1.51%	0.01%	5.40%	0.01%
Russell 1000 Value Index	-1.55%	5.71%	2.50%	6.68%		3.48%		4.58%		1.64%		5.64%	
Verus	-1.82%	3.71%	1.98%	3.83%		3.86%		2.46%		1.36%		7.05%	
BlackRock S&P 500 Fund	-1.82%	3.71%	1.98%	3.84%	-0.01%	3.86%	0.00%	2.46%	-0.00%	1.37%	-0.01%	7.05%	0.00%
S&P 500 Index	-1.82%	3.70%	1.98%	3.82%		3.85%		2.46%		1.34%		7.03%	
Verus	-1.50%	-2.35%	-0.72%	-4.51%		3.74%		-0.04%		-1.26%		7.68%	
BrownAdvisory	-1.46%	-2.40%	-0.72%	-4.52%	0.01%	3.75%	-0.01%	-0.05%	0.00%	-1.26%	0.00%	7.68%	0.01%
Russell 1000 Growth Index	-2.35%	2.18%	1.24%	1.01%		4.58%		0.61%		0.75%		7.33%	
Verus	-1.49%	3.56%	1.71%	3.76%		5.32%		4.28%		0.75%		6.11%	
D.E. Shaw	-1.49%	3.56%	1.71%	3.76%	0.00%	5.33%	-0.01%	4.29%	-0.01%	0.76%	-0.01%	6.10%	0.00%
Russell 1000 Index	-1.95%	3.94%	1.88%	3.83%		4.03%		2.54%		1.18%		6.51%	
Verus	-3.82%	11.21%	3.44%	10.64%									
QMA US Small Cap (Net)	-3.82%	11.21%	3.44%	10.64%	0.00%								
Russell 2000 Index	-4.75%	11.15%	2.80%	8.83%									
Verus	-3.56%	-3.73%	0.16%	-7.01%		8.50%		-0.20%		0.42%		7.59%	
Baillie Gifford	-3.59%	-3.71%	0.17%	-7.01%	0.00%	8.55%	-0.05%	-0.21%	0.01%	0.42%	0.00%	7.57%	0.02%
MSCI ACWI ex US	-1.43%	-2.30%	2.59%	-1.20%		7.00%		-0.40%		-0.26%		3.29%	
MSCI ACWI ex US Growth	-3.39%	-3.80%	1.49%	-5.68%		6.11%		0.64%		-0.24%		5.05%	
Verus	-2.02%	-1.97%	3.44%	-0.66%		6.49%		-1.24%		-2.90%		4.72%	
BlackRock EAFE Equity	-2.02%	-1.97%	3.44%	-0.65%	-0.01%	6.49%	0.00%	-1.24%	-0.00%	-2.90%	-0.00%	4.72%	0.00%
MSCI EAFE (Net)	-2.05%	-1.99%	3.42%	-0.71%		6.43%		-1.46%		-3.01%		4.71%	
MSCI EAFE (Gross)	-2.04%	-1.98%	3.44%	-0.68%		6.51%		-1.19%		-2.89%		4.75%	
Verus	-2.83%	-4.21%	1.68%	-5.35%		7.00%		-0.16%		1.12%		5.51%	
FIAM Equity	-2.83%	-4.21%	1.68%	-5.36%	-0.01%	6.99%	0.01%	-0.15%	-0.01%	1.11%	0.01%	5.51%	0.00%
MSCI ACWI -ex US Small Cap Index	-2.63%	-2.96%	2.15%	-3.47%		8.00%		-0.72%		0.76%		5.34%	
Verus	-2.08%	-2.62%	3.81%	-1.01%		3.99%		0.49%		1.70%		2.33%	
Mondrian	-2.07%	-2.60%	3.82%	-0.97%	-0.04%	4.00%	-0.01%	0.50%	-0.01%	1.70%	-0.00%	2.33%	0.00%
MSCI ACWI -ex US Value Index	0.57%	-0.84%	3.64%	3.36%		7.92%		-1.46%		-0.29%		1.50%	
MSCI ACWI -ex US	-1.43%	-2.30%	2.59%	-1.20%		7.00%		-0.40%		-0.26%		3.29%	

Manager Performance Comparison (Gross of Fees)

Period Ending: December 31, 2016

	Oct	Nov	Dec	4th Qtr. 2016	Difference	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference
Verus	0.44%	-4.73%	1.81%	-2.58%		5.41%		1.40%		8.88%		-0.97%	
Parametric Core	0.46%	-4.72%	1.82%	-2.54%	-0.04%	5.47%	-0.06%	1.42%	-0.02%	8.91%	-0.03%	-0.97%	0.00%
MSCI EM Market Index	0.25%	-4.60%	0.29%	-4.08%		9.15%		0.80%		5.74%		0.72%	
Verus	-0.57%	-2.45%	0.36%	-2.66%		1.27%		2.77%		3.28%		-0.39%	
FIAM Bond	-0.57%	-2.45%	0.36%	-2.66%	-0.00%	1.27%	-0.00%	2.77%	0.00%	3.28%	0.00%	-0.39%	0.00%
BBgBarc US Aggregate Index	-0.76%	-2.37%	0.14%	-2.98%		0.46%		2.21%		3.02%		-0.58%	
Verus	0.98%	-0.86%	0.98%	1.09%		2.67%		2.62%		-0.64%		0.63%	
Western TRU	0.98%	-0.86%	0.98%	1.09%	0.00%	2.67%	0.00%	2.62%	-0.01%	-0.63%	-0.01%	0.63%	0.00%
3-Month Libor Total Return USD Index	0.08%	0.08%	0.09%	0.24%		0.21%		0.17%		0.13%		0.13%	
BBgBarc US Aggregate Index	-0.76%	-2.37%	0.14%	-2.98%		0.46%		2.21%		3.04%		-0.58%	
Verus (Net)				2.54%		5.38%		0.31%		0.70%		-0.57%	
Angelo Gordon Opportunistic				2.54%	0.00%	5.38%	0.00%	0.31%	0.00%	0.70%	0.00%	-0.57%	0.00%
BBgBarc US Aggregate Index				-2.98%		-0.06%		2.21%		0.92%		-0.57%	
Verus (Net)				1.99%		5.17%		2.05%		-2.17%		-0.91%	
Angelo Gordon STAR Fund (Net)				1.99%	0.00%	5.17%	0.00%	2.05%	0.00%	-2.17%	0.00%	-0.91%	0.00%
BBgBarc US Aggregate Index				-2.98%		-0.06%		2.21%		0.92%		-0.57%	
Verus	0.97%	0.60%	1.95%	3.56%		5.50%		4.23%		2.67%		-1.35%	
Beach Point Select (Net)	0.97%	0.60%	1.95%	3.56%	-0.00%	5.25%	0.25%	3.98%	0.26%	2.41%	0.26%	-1.35%	0.00%
BBgBarc BA Intermediate HY	0.13%	-0.68%	1.19%	0.63%		4.04%		3.29%		3.43%		0.01%	
Verus	0.79%	-0.47%	2.17%	2.50%		7.15%		8.52%		3.29%		-6.30%	
Brigade Capital	0.79%	-0.45%	2.16%	2.50%	-0.00%	7.09%	0.06%	8.48%	0.05%	3.29%	0.00%	-6.30%	-0.01%
BBgBarc BA Intermediate HY	0.13%	-0.68%	1.19%	0.63%		4.04%		3.29%		3.43%		0.01%	
50% BBgBarc HY/ 50% Bank Loan	0.58%	-0.07%	1.50%	2.00%		4.32%		4.19%		2.34%		-2.00%	
Verus				0.17%									
TCP Direct Lending VIII				0.17%	-0.00%								
BBgBarc BA Intermediate HY				0.63%									
Verus	3.68%	-0.29%	3.01%	6.49%		-0.13%		1.11%		0.12%		2.22%	
Franklin Templeton Investments	3.68%	-0.29%	3.01%	6.49%	0.00%	-0.13%	-0.00%	1.11%	0.00%	0.12%	0.00%	2.22%	0.00%
BBgBarc Multiverse	-2.62%	-3.88%	-0.30%	-6.68%		1.05%		3.00%		5.88%		-0.87%	



Manager Performance Comparison (Gross of Fees)

Period Ending: December 31, 2016

	Oct	Nov	Dec	4th Qtr. 2016	Difference	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference
Verus	-1.98%	-2.54%	2.18%	-2.38%		2.23%		5.80%		4.65%		-2.87%	
AQR GRP, 10% Volatility (Net)	-1.98%	-2.54%	2.18%	-2.39%	-0.01%	2.24%	-0.01%	5.80%	-0.00%	4.65%	0.00%	-2.87%	0.00%
60% R3000/ 40% BBgBarc Agg	-1.60%	1.74%	1.23%	1.34%		2.82%		2.47%		1.89%		3.54%	
60% MSCI World/ 40% BBgBarc Glb	-1.55%	0.20%	1.54%	0.17%		3.13%		1.62%		1.21%		3.37%	
Verus	-3.94%	-3.41%	2.18%	-5.19%		2.20%		7.99%		8.22%		-0.50%	
PanAgora (Net)	-3.94%	-3.41%	2.18%	-5.19%	-0.00%	2.20%	-0.00%	7.99%	0.00%	8.23%	-0.01%	-0.50%	0.00%
60% R3000/ 40% BBgBarc Agg	-1.60%	1.74%	1.23%	1.34%		2.82%		2.47%		1.89%		3.54%	
60% MSCI World/ 40% BBgBarc Glb	-1.55%	0.20%	1.54%	0.17%		3.13%		1.62%		1.21%		3.37%	
Verus	1.63%	-0.22%	0.96%	2.38%		1.69%		-1.39%		-1.06%		2.54%	
AQR DELTA XN (Net)	1.63%	-0.22%	0.96%	2.38%	0.00%	1.70%	-0.01%	-1.39%	-0.00%	-1.07%	0.01%	2.54%	0.00%
Libor + 4%	0.38%	0.38%	0.40%	1.17%		1.14%		1.13%		0.99%		1.09%	
Verus	0.27%	-0.19%	1.72%	1.80%		0.42%		-0.85%		-3.24%		0.00%	
Standard Life GARS (Net)	0.27%	-0.19%	1.72%	1.80%	0.00%	0.42%	-0.00%	-0.85%	-0.01%	-3.25%	-0.01%	0.00%	0.00%
Libor + 4%	0.38%	0.38%	0.40%	1.17%		1.14%		1.13%		0.99%		0.00%	
Verus				2.19%		1.68%		3.64%		1.47%		2.44%	
INVESCO Real Estate				2.17%	0.02%	1.68%	0.00%	3.62%	0.02%	1.47%	0.00%	2.50%	-0.06%
NCREIF NFI ODCE Index				2.11%		2.07%		2.13%		2.18%		3.34%	
Verus				1.31%		3.82%		2.31%		-0.19%		0.00%	
Invesco US Val IV				1.31%	-0.00%	3.82%	0.00%	2.31%	0.00%	-0.19%	0.00%	0.00%	0.00%
NCREIF NFI ODCE Index				2.11%		2.07%		2.13%		2.18%		3.34%	
NCREIF CEVA 1Q Lag - NET				2.54%		2.17%		1.99%		5.84%		2.98%	
Verus	0.19%	-0.69%	-0.04%	-0.55%		1.24%		0.90%		3.41%		-0.18%	
Brown Brothers Harriman	0.19%	-0.68%	-0.04%	-0.53%	-0.02%	1.22%	0.02%	0.91%	-0.02%	3.52%	-0.11%	-0.18%	-0.00%
BBgBarc U.S Tips	-0.40%	-1.92%	-0.10%	-2.41%		0.97%		1.71%		4.46%		-0.64%	

**1 MSCI**

**1.1 MSCI US MARKET BREAKPOINTS**

Break Point*	Companies included
Large Cap	1-200
Medium-Large Cap	201-550
Medium Cap	551-750
Medium-Small Cap	751-2500
Small Cap	2501+

\*MSCI only categorizes equities per size into large, mid and small cap. For InvestorForce Report analytics coherence regarding domestic benchmarks the buffer zones of the mid-cap category are used to determine Medium-Large and Medium-Small Cap categories.

As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
12/31/2016	15.239	9.375	4.416	2.520	0
9/30/2016	15.239	9.375	4.416	2.520	0
6/30/2016	15.358	9.43	4.548	2.591	0
3/31/2016	15.358	9.43	4.548	2.591	0
12/31/2015	16.507	9.968	5.069	2.917	0
9/30/2015	16.507	9.968	5.069	2.917	0
6/30/2015	15.288	9.09	4.506	2.596	0
3/31/2015	15.356	9.083	4.491	2.577	0
12/31/2014	15.356	9.083	4.491	2.577	0

Number in billion USD

InvestorForce Report reflects changes in the MSCI breakpoints once MSCI publishes new breakpoints. For months when no new breakpoints are published always the last breakpoints are applied. Changes usually but always happen around re-balancing of the indexes. Some index reviews do not contain changes to the market-cap breakpoints.

1.2 MSCI DEVELOPED AND EMERGING MARKET BREAKPOINTS

In case of MSCI Indexes to define the Size - Segment Indexes for a market, the following free float - adjusted market capitalization Market Coverage Target Ranges are applied to the Market Investable Equity Universe:

Break Point	Companies included
Large Cap Index	70% ±5%
Standard Index*	85% ±5%
Investable Market Index**	99%+1% or -0.5%

\* Standard Index (Large+Mid)

\*\*Investable Market Index (Large+Mid+Small)

MSCI Country Classification can be found here: <https://www.msci.com/market-classification>

For Emerging Markets, the Global Minimum Size Reference is set at *one-half* the corresponding level of full market capitalization used for the Developed Markets for each size-segment.

As Of	Large Cap DM	Large Cap EM	Medium Cap DM	Medium Cap EM	Small Cap
12/31/2016	14.361	7.180	5.077	2.538	0
9/30/2016	14.180	7.090	5.076	2.538	0
6/30/2016	14.180	7.090	5.076	2.538	0
3/31/2016	14.077	7.0385	5.046	2.523	0
12/31/2015	14.077	7.0385	5.046	2.5230	0
9/30/2015	14.883	7.4415	5.359	2.6795	0
6/30/2015	14.883	7.4415	5.359	2.6795	0
3/31/2015	13.368	6.684	4.781	2.3905	0
12/31/2014	13.368	6.684	4.781	2.3905	0

Number in billion USD

InvestorForce Report shows changes in the MSCI breakpoints once MSCI publishes a new one. For months when no new breakpoints are published always the last breakpoint is applied. Changes usually happen around re-balancing of the indexes.

## 2 RUSSELL US BREAKPOINTS

The market capitalization breakpoints that appear in the Market Capitalization Chart are defined by the Russell 3000 Index and change for each period end. Russell calculated the total market capitalization of each security for the end of the period, based on the total shares and price, to determine whether it is large enough for inclusion in one or more of the Russell Breakpoints.

Once the market capitalization for each security is determined, each security is then placed in the appropriate market capitalization breakpoint. A market capitalization breakpoint is determined by the break between the companies below.

Break Point	Companies included
Large Cap	50 Largest US Companies
Medium Large Cap	Next largest 150 US Companies
Medium Cap	Next largest 300 US Companies
Medium Small Cap	Next largest 500 US Companies
Small Cap	All US Companies below 1,000 largest

After the breakpoints are determined by the ranges above, new members are assigned on the basis of the breakpoints and existing members are reviewed to determine if they fall within a cumulative 5% market cap range around the new market capitalization breakpoints. If an existing securities market cap falls within this 5%, it will remain in its current index rather than move into a new market capitalization based index.



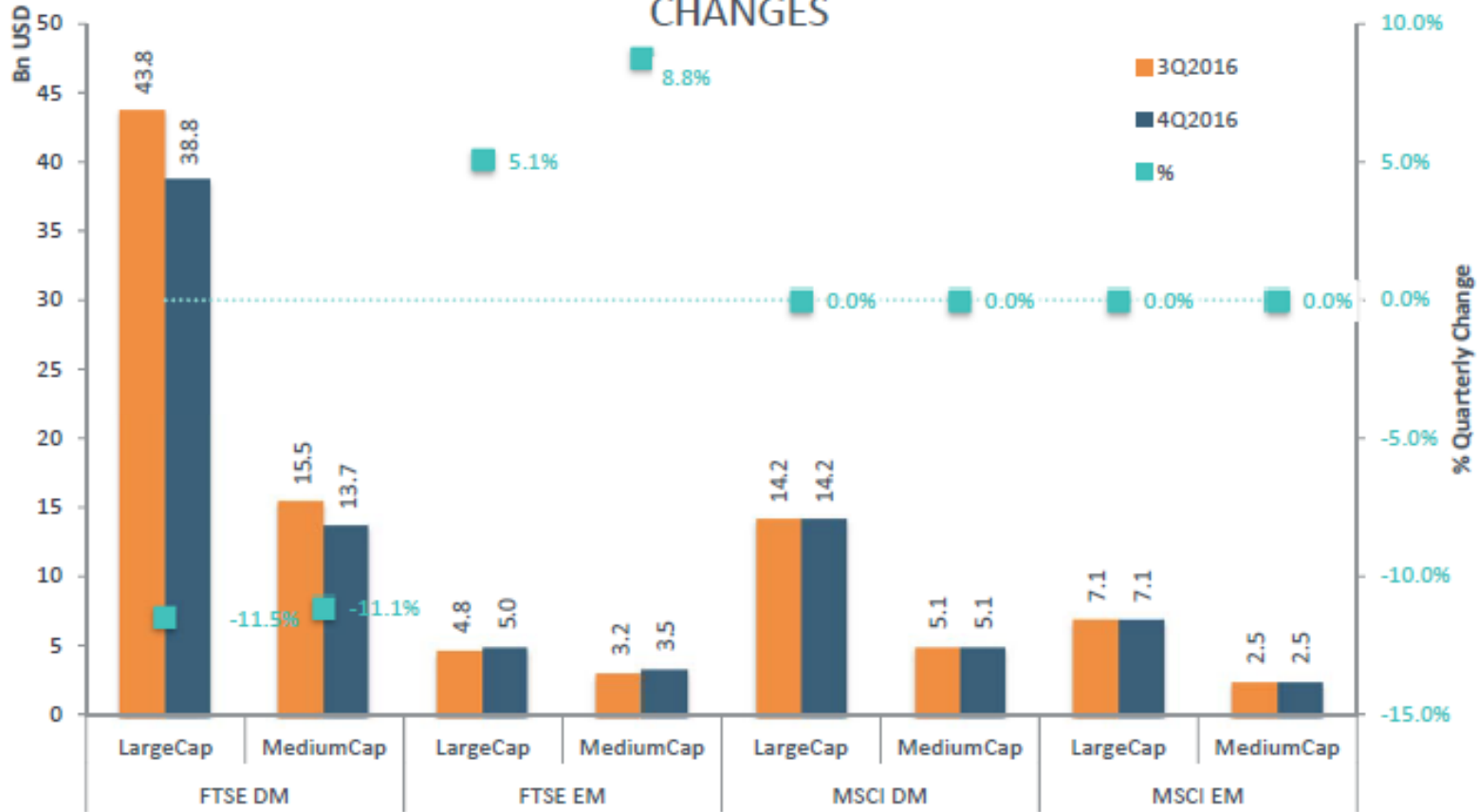
As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
12/31/2016	84.960	23.168	7.890	2.702	0
9/30/2016	78.745	23.385	7.394	2.533	0
6/30/2016	77.349	22.250	7.1432	2.444	0
3/31/2016	83.360	22.414	7.435	2.395	0
12/31/2015	90.075	24.308	8.141	2.936	0
9/30/2015	88.944	23.139	7.993	2.946	0
6/30/2015	92.87	25.07	8.797	3.352	0
3/31/2015	93.082	25.494	8.794	3.384	0
12/31/2014	89.92	25.19	8.51	3.29	0
9/30/2014	84.51	24.44	7.97	3.04	0
6/30/2014	80.39	23.62	8.07	3.24	0

As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
3/31/2014	76.77	23.15	7.83	3.06	0
12/31/2013	77.11	22.27	7.65	3.03	0
9/30/2013	72.4	19.93	7.15	2.71	0
6/30/2013	68.47	19.36	6.48	2.46	0
3/31/2013	64.31	18.64	6.39	2.39	0
12/31/2012	58.45	16.8	5.75	2.13	0
9/30/2012	57.06	16.48	5.49	2.08	0
6/30/2012	55.65	16.13	5.14	1.99	0
3/31/2012	57.58	16.43	5.55	2.13	0
12/31/2011	51.97	14.66	4.93	1.93	0
9/30/2011	45.35	13.88	4.38	1.66	0
6/30/2011	54.25	15.95	5.66	2.16	0
3/31/2011	52.22	15.69	5.7	2.16	0
12/31/2010	49.54	14.8	5.16	2.04	0
9/30/2010	42.83	13.13	4.64	1.8	0
6/30/2010	39.95	11.58	4.1	1.59	0
3/31/2010	42.43	12.61	4.3	1.68	0

Numbers are billions USD

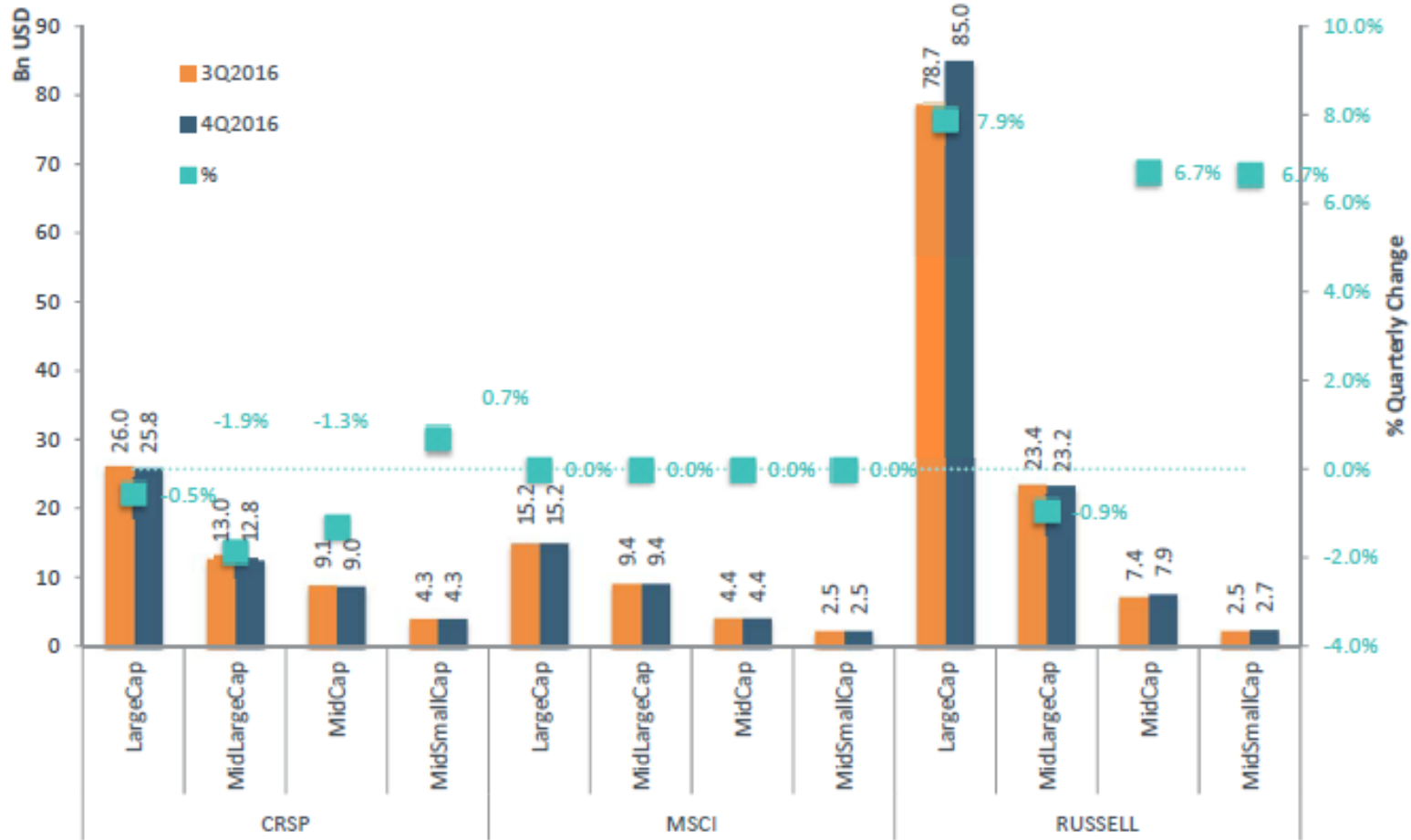
BREAKPOINT TRENDS

4Q2016 DEVELOPED AND EMERGING MARKET BREAKPOINT CHANGES



MSCI is releasing market capitalization breakpoints less frequently than FTSE, hence the market capitalization breakpoints are longer in effect, showing as no change.

### 4Q2016 US MARKET BREAKPOINT CHANGES



MSCI is releasing market capitalization breakpoints less frequently than others, hence the market capitalization breakpoints are longer in effect. This could result in no change.





**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

1<sup>ST</sup> QUARTER 2017  
Investment Landscape



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Appendix 38

# 4<sup>th</sup> quarter summary

## THE ECONOMIC CLIMATE

- Economies around the globe experienced higher inflation as the effects of lower energy prices fall out of year-over-year inflation figures. U.S. headline inflation rose to 1.7% YoY and the market's inflation expectations increased sharply, as indicated by TIPS breakeven rates. *p. 14*
- U.S. consumer and business sentiment indicators improved markedly in the fourth quarter based on positive expectations of future economic growth. *p. 12*

## MARKET PORTFOLIO IMPACTS

- U.S. interest rates moved higher in Q4, returning the yield curve to levels experienced one year ago. The Federal Reserve is not likely to increase rates drastically because of lower yields and economic growth around the globe, and due to an already strong U.S. dollar. *p. 22*
- The U.S. dollar rose 6.4% in Q4 on a trade-weighted basis. Currency movement continues to contribute to higher volatility for investors with unhedged currency exposure. *p. 37*

## THE INVESTMENT CLIMATE

- The U.S. presidential election results took many investors by surprise. After an initial overnight plunge in the futures market, U.S. equities rallied on expectations of a more pro-business regulatory environment and the possibility of large-scale fiscal stimulus. U.S. equities may possess greater upside potential post-election. *p. 16*
- Fourth quarter earnings for the S&P 500 are estimated to grow 3.2% YoY, according to FactSet. If this positive growth comes to fruition it will mark the second quarter of positive growth and may indicate that the recent oil-driven earnings slump is behind us. *p. 28*

## ASSET ALLOCATION ISSUES

- Global inflation rises in Q4 may mark a change in trend from disinflation seen in recent years. Investors should work to understand the degree of inflation protection in their portfolio. *p. 14 & 19*

A neutral risk stance seems warranted

Global reflation trends should be watched, and investors should understand the degree of inflation protection in their portfolio

# What drove the market in Q4?

## “World Markets Plunge, Then Steady, On Trump Victory”

### POST-ELECTION ASSET PRICE MOVEMENTS

S&P 500		10-Yr Treasury		Bloomberg USD Spot	
Nov 9 <sup>th</sup>	Dec 30 <sup>th</sup>	Nov 9 <sup>th</sup>	Dec 30 <sup>th</sup>	Nov 9 <sup>th</sup>	Dec 30 <sup>th</sup>
2163	2239	2.06%	2.44%	1237	1267

Source: Fortune, November 9<sup>th</sup> 2016

## “U.S. Consumer Sentiment Rises To Highest Level Since 2004”

### U OF MICHIGAN CONSUMER SENTIMENT SURVEY

Jul 31st	Aug 31st	Sep 30th	Oct 31st	Nov 30th	Dec 31st
90.0	89.8	91.2	87.2	93.8	98.2

Source: WSJ, December 23<sup>rd</sup> 2016

## “OPEC Reaches Deal To Limit Production, Sending Prices Soaring”

### WTI OIL (\$/BARREL)

Jul 29 <sup>th</sup>	Aug 31 <sup>st</sup>	Sep 30 <sup>th</sup>	Oct 31 <sup>st</sup>	Nov 30 <sup>th</sup>	Dec 30 <sup>th</sup>
\$41.60	\$44.70	\$48.24	\$46.86	\$49.44	\$53.72

Source: New York Times, November 30<sup>th</sup> 2016

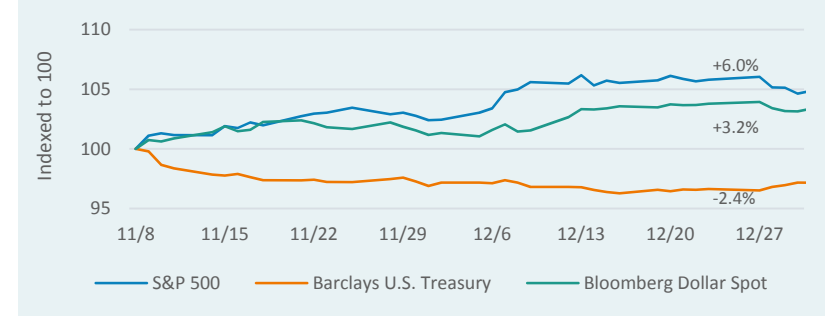
## “Inflation Expectations Hit Highest Level In More Than A Decade”

### 10-YEAR U.S. TIPS BREAK-EVEN RATE

Jul 29 <sup>th</sup>	Aug 31 <sup>st</sup>	Sep 30 <sup>th</sup>	Oct 31 <sup>st</sup>	Nov 30 <sup>th</sup>	Dec 30 <sup>th</sup>
1.49%	1.47%	1.60%	1.73%	1.94%	1.95%

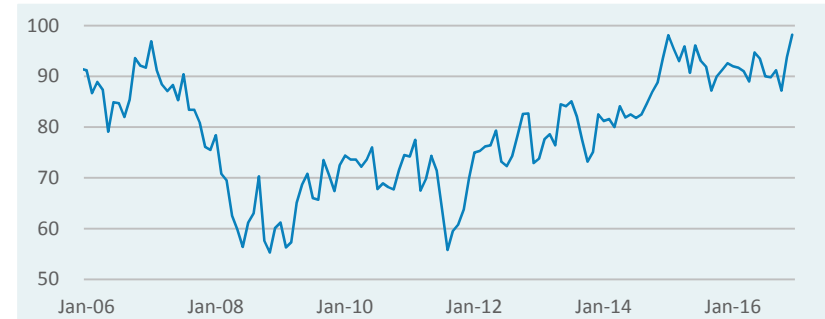
Source: Financial Times, November 16<sup>th</sup> 2016

### POST-ELECTION ASSET PRICE MOVEMENTS



Source: Bloomberg, 11/8/16-12/31/16

### U.S. CONSUMER SENTIMENT



Source: Bloomberg, as of 12/31/16

### WTI CRUDE OIL



Source: Bloomberg, as of 12/31/16

# Economic environment



# U.S. economics summary

— U.S. real GDP grew 1.7% YoY in Q3, up from 1.3% in Q2. Consumer spending continued to account for the majority of economic growth, and rising sentiment may act as a boon for future growth. Net exports helped boost production, as well as private investment.

— Inflation moved higher during the quarter as headline CPI rose to 1.7% YoY, as of November, while core CPI rose to 2.1%. Increases in energy prices have resulted in a convergence between headline and core inflation figures. If oil prices remain stable, this will act as a tailwind for headline inflation in the future.

— The Fed raised its target federal funds rate to 0.50%-0.75% and forecast three rate hikes in 2017 at its December meeting, citing

continued modest economic growth and a tightening labor market, in addition to firming consumer prices.

— The labor market added 165,000 jobs per month on average during the fourth quarter. This is slightly below the expansion average of 199,000, but still a solid pace of hiring given where we are at in the labor cycle. The unemployment rate fell 0.2% to 4.7% at the end of December.

— While the economy continued to steadily add jobs, wage growth has lagged behind. Real average hourly earnings only increased 0.7% YoY in November. Softer wage growth may be due in part to workers taking on part-time roles who could not find full time work.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	1.7% 9/30/16	2.2% 9/30/15
Inflation ( <i>CPI YoY, Headline</i> )	1.7% 11/30/16	0.4% 11/30/15
Expected Inflation ( <i>5yr-5yr forward</i> )	2.1% 12/31/16	1.8% 12/31/15
Fed Funds Rate	0.50% 12/31/16	0.25% 12/31/15
10 Year Rate	2.5% 12/31/16	2.3% 12/31/15
U-3 Unemployment	4.7% 12/31/16	5.0% 12/31/15
U-6 Unemployment	9.2% 12/31/16	9.9% 12/31/15

# U.S. economics – GDP growth

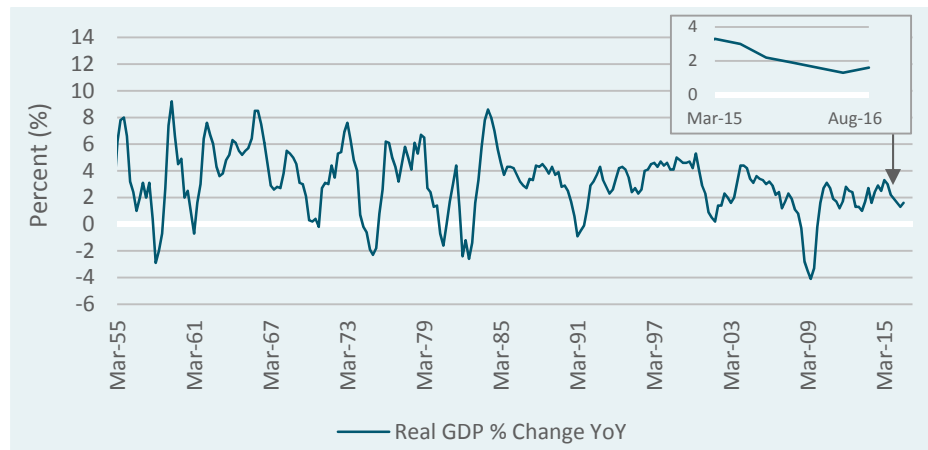
In the third quarter U.S. real GDP rose 1.7% YoY, and 3.5% (annualized) from the previous quarter. This marked the highest quarterly growth rate in two years.

Consumer spending continued to be the main driver of overall growth, contributing 2.0% to quarterly GDP growth. During this economic recovery, the American consumer has been aided by low interest rates that have decreased household debt burdens. The pace of interest rate increases will be an important factor in consumer spending moving forward.

Net exports and private domestic investment were the next two largest contributors to economic growth. Private domestic investment had been a drag on GDP over the past three quarters and was driven by a positive change in private inventories.

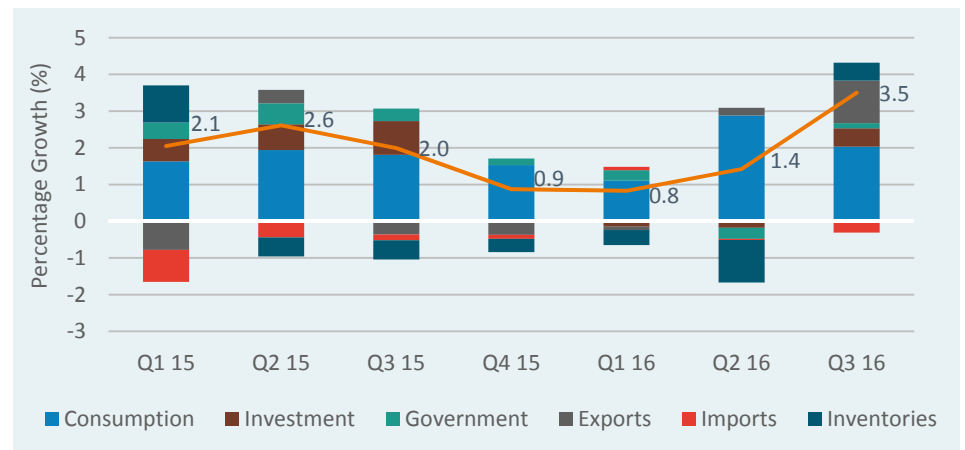
The Atlanta Fed GDP Now forecast as of January 10<sup>th</sup> for the fourth quarter stood at a 2.9% annualized rate, suggesting the economy is continuing to grow at a slow, but positive rate.

## U.S. REAL GDP GROWTH



Source: FRED, as of 9/30/16

## U.S. GDP COMPONENTS



Source: BEA, annualized quarterly rate, as of 9/30/16

# U.S. economics – Labor market

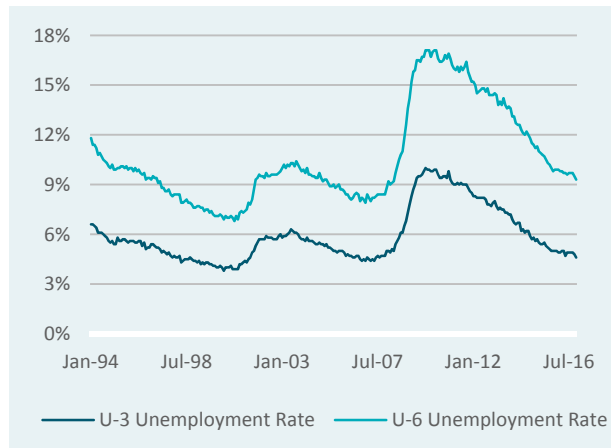
The U.S. labor market added 165,000 jobs on average in the third quarter, compared to an average of 199,000 during the current economic expansion. The unemployment rate fell to a recovery period low of 4.6% in November before rising to 4.7% in December. The participation rate continued its long-term downtrend to finish the quarter at 62.7%. Much of this effect can likely be explained by demographic changes.

While the overall labor market appears strong, some pockets of weakness may still exist. The broader U-6 unemployment rate that includes people who want a job but have stopped

looking and workers who are employed part-time but would like a full-time job currently sits at 9.2%, slightly above pre-recession levels. Another indicator of weakness is the lack of recovery in unemployment duration. It still takes job seekers 26 weeks to find a job after being unemployed, on average.

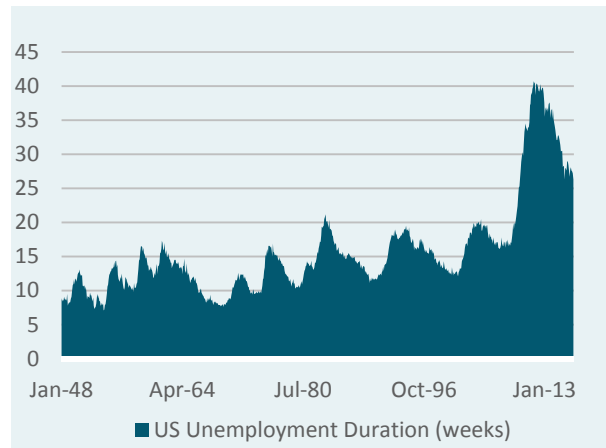
U.S. workers have yet to experience robust wage growth, which we would expect to see under current labor conditions. Real average hourly earnings only rose 0.7% in November.

## U.S. UNEMPLOYMENT



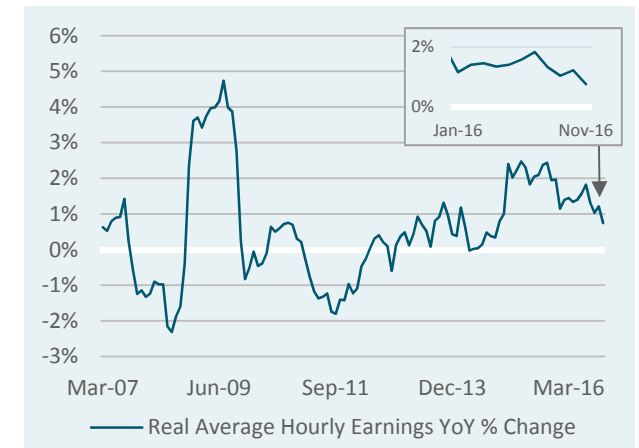
Source: FRED, as of 11/30/16

## UNEMPLOYMENT DURATION



Source: FRED, as of 11/30/16

## REAL AVERAGE HOURLY EARNINGS



Source: FRED, as of 11/30/16

# U.S. economics – The consumer

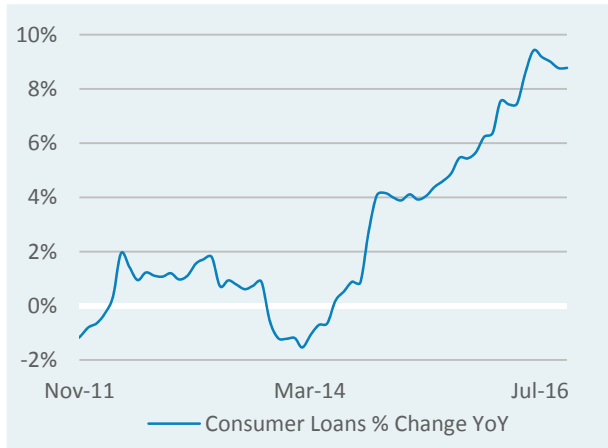
The U.S. consumer continued to buoy the overall economy as historically low interest rates have helped reduce debt burdens and provided a tailwind for consumer spending. While low interest rates have decreased consumer debt payments, they have not resulted in a credit boom. Tighter post-recession lending standards created a headwind to consumer loan growth.

Consumer spending grew 1.6% YoY in November, reiterating the trend of modest spending growth over the

past five years. Sales of durable goods, such as autos, however, have displayed relative strength.

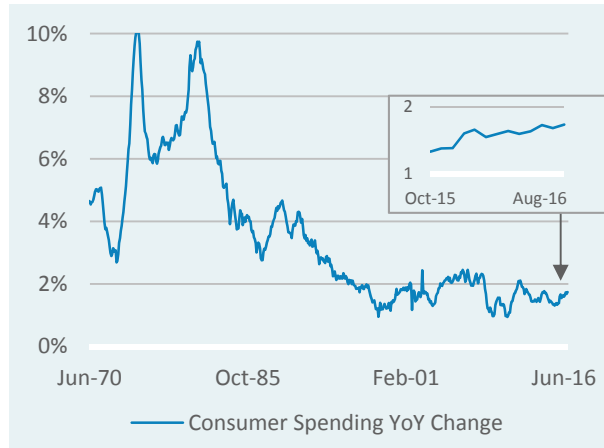
Consumer spending has been a relatively strong area of the economy despite only modest gains in wages and personal income. Higher wages could be an important factor for greater spending growth moving forward, especially if interest rates rise, resulting in greater household debt payments.

**CONSUMER LOAN GROWTH**



Source: FRED, as of 11/30/16

**CONSUMER SPENDING**



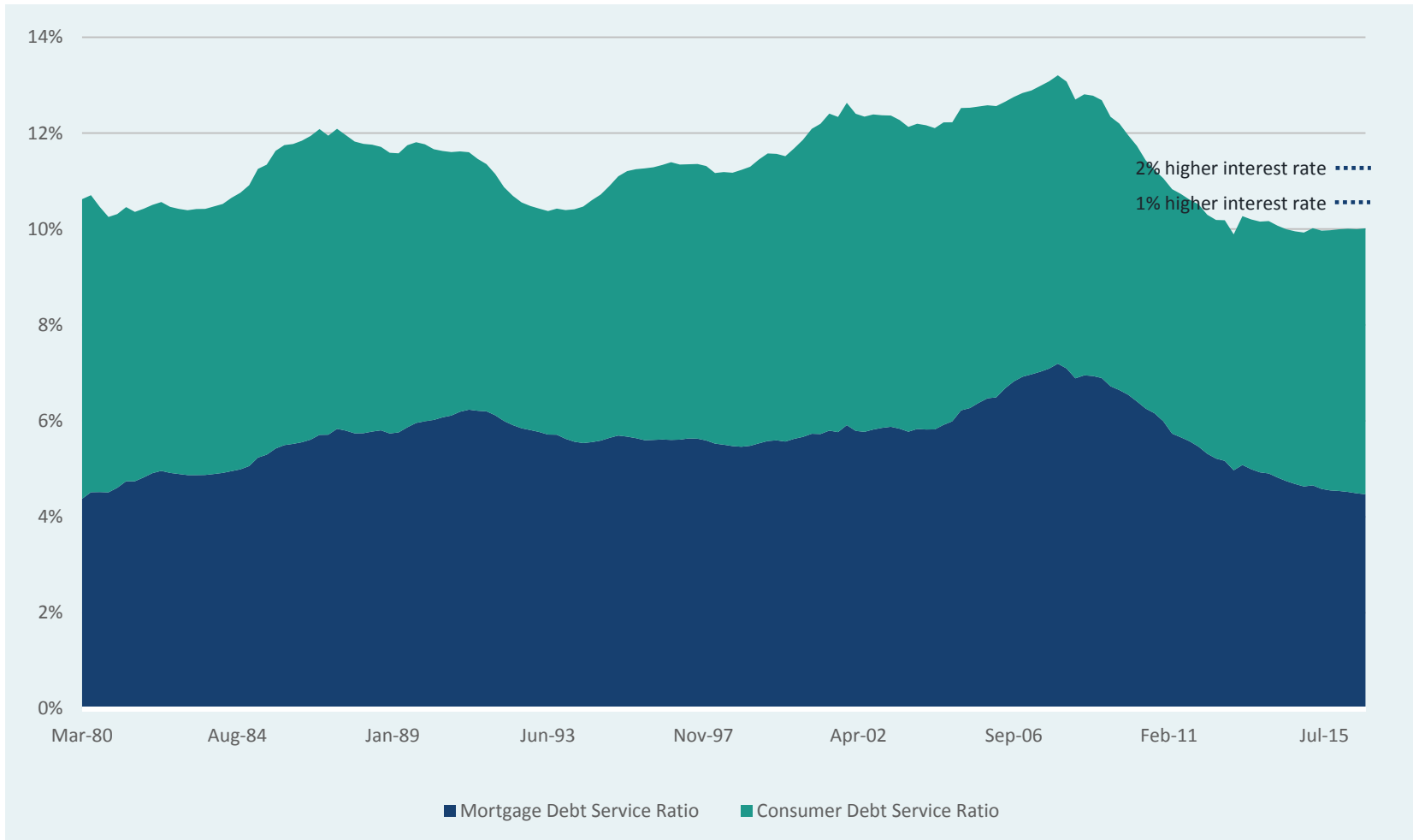
Source: Bloomberg, as of 10/31/16

**HOUSEHOLD DEBT SERVICE**



Source: FRED, as of 9/30/16

# A closer look at household debt burden



Low interest rates have helped decrease household debt burden

If interest rates continue to rise, concurrent gains in income will be important

Source: Federal Reserve Bank, as of 9/30/16. Household debt service payments are composed of mortgage payments and other consumer payments. This analysis assumes an equal weight of debt burden between mortgage and consumer debt. It is also assumed that interest rates on consumer debt move 1:1 with market rates and effective mortgage rates have only a 5% sensitivity to changes in market rates given the preference for fixed mortgages.

# U.S. economics – Sentiment

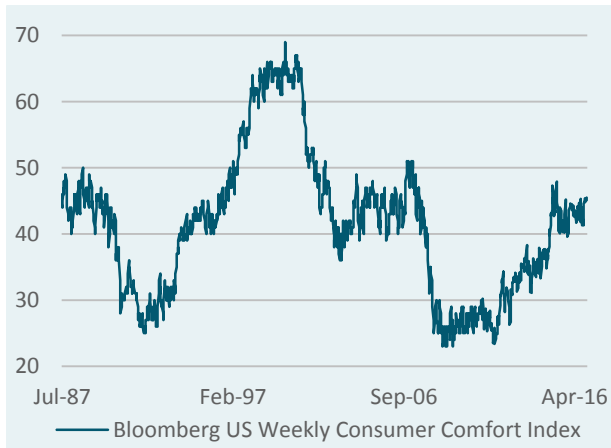
Consumer sentiment hit its highest level since January 2004 as the University of Michigan sentiment survey reached 98.2 in December. A record 18% of survey respondents spontaneously mentioned that they expected a favorable impact from Trump’s economic policies. Favorable expectations of policy changes was the main reason identified for the jump in sentiment.

The Bloomberg Consumer Comfort Index also moved higher during the period. The index rose 4.4 points to

46.0 for the week ending December 25<sup>th</sup>.

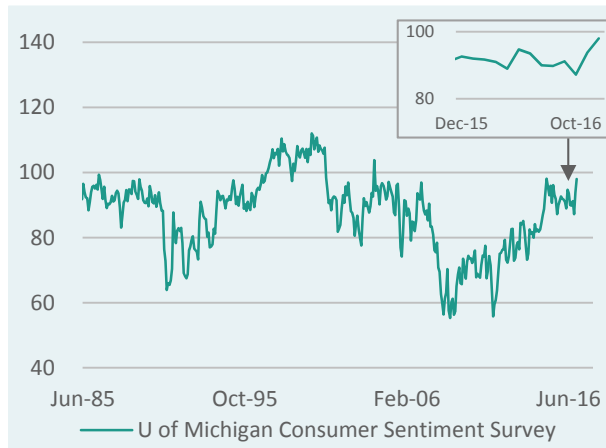
Higher consumer sentiment could have positive flow through effects on the economy if consumers base current spending decisions on expectations of future economic conditions. However, much of this positive sentiment is based on the uncertain economic policies of the new political administration and may only be temporary if these policies do not come to fruition.

**CONSUMER COMFORT INDEX**



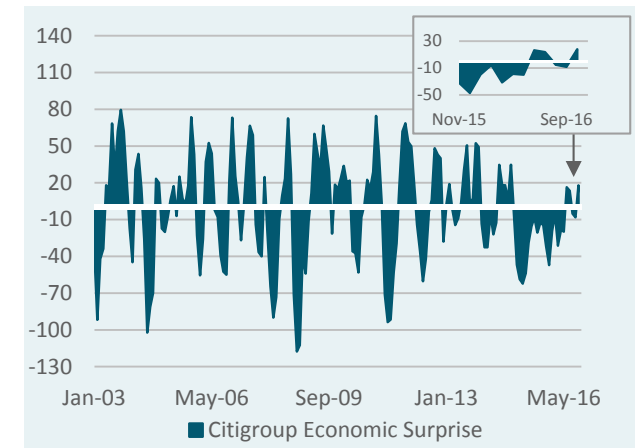
Source: Bloomberg, as of 12/4/16 (see Appendix)

**CONSUMER SENTIMENT**



Source: University of Michigan, as of 12/9/16 (see Appendix)

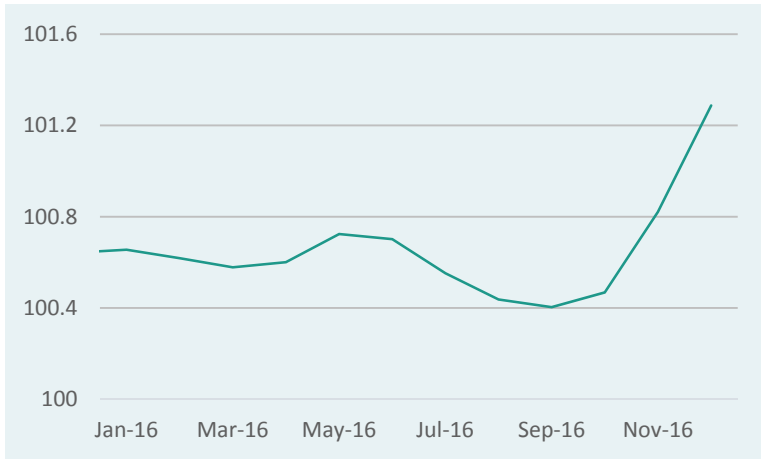
**ECONOMIC SURPRISE**



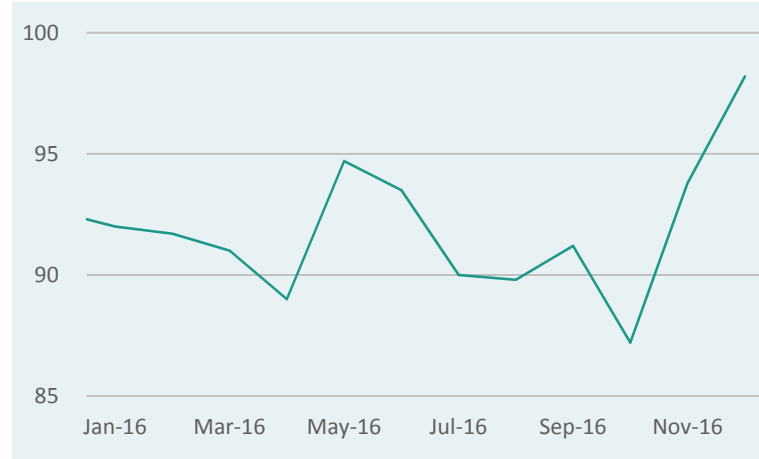
Source: Bloomberg, as of 11/30/16 (see Appendix)

# A broad rise in confidence

OECD U.S. CONSUMER CONFIDENCE

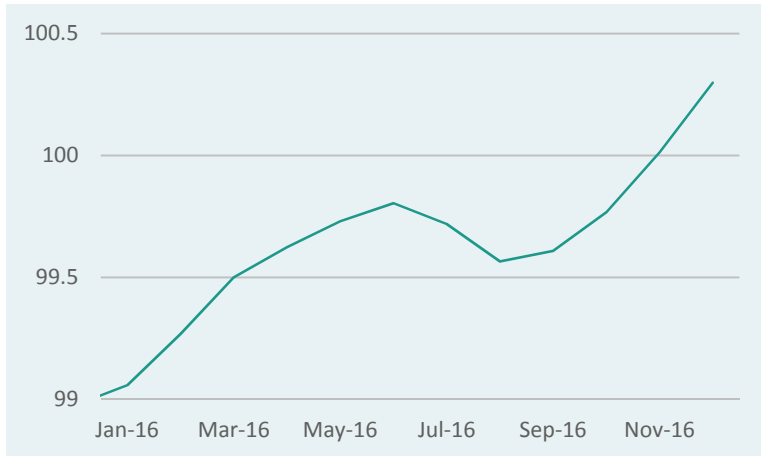


U OF MICHIGAN CONSUMER SENTIMENT

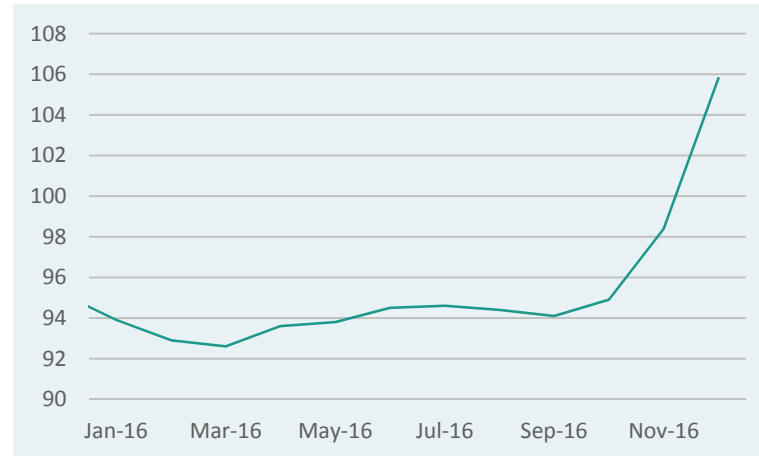


The U.S. has experienced a rise in confidence in nearly all areas of the economy

OECD U.S. BUSINESS CONFIDENCE



NFIB SMALL BUSINESS OUTLOOK



Sources: OECD, University of Michigan, NFIB, as of 12/31/16 See Appendix for details regarding the surveys shown above

# U.S. economics – Housing

U.S. mortgage rates moved sharply higher during the quarter. The 30-year fixed mortgage rate rose 90 bps to 4.3% to finish the year at its highest rate since April of 2014. If higher mortgage rates are sustained, it will put downward pressure on demand for single-family homes and in turn home prices. However, if mortgage rates rise in tandem with consumer exuberance and higher spending the net effects could in fact be positive.

There is still a large imbalance between supply and demand in the housing market. While the number of

single-family houses for sale has recently increased, the overall supply of houses is well below historical norms. At the end of October, there were only 239,000 homes on the market – very low by historical standards.

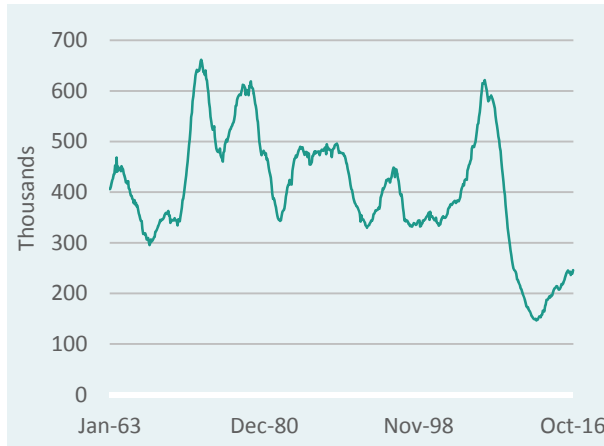
Low interest rates and a lack of supply have helped push median home prices well above pre-recession levels. Increasing interest rates and greater supply coming to market could provide a headwind for prices going forward.

**30-YEAR FIXED MORTGAGE RATE**



Source: FRED, as of 12/29/16

**SINGLE-FAMILY HOUSES FOR SALE**



Source: U.S. Census Bureau, as of 10/31/16, adj. for pop. growth

**MEDIAN HOUSE SALES PRICE**



Source: FRED, as of 9/30/16



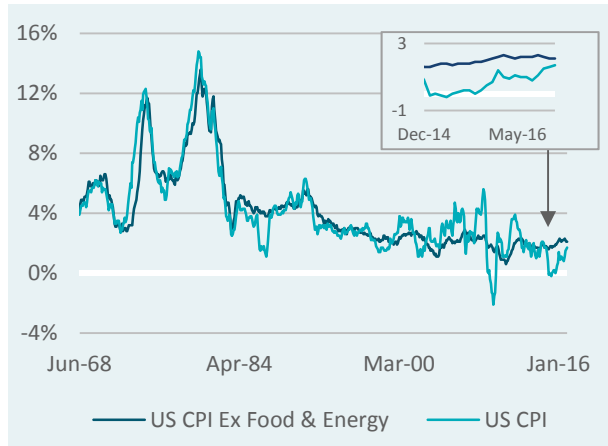
# U.S. economics – Inflation

Realized inflation and future inflation expectations both rose in recent months. Headline CPI was 1.7% YoY in November, up 0.2% from September, while core CPI fell 0.1% during the same time period to 2.1%. Higher rent and energy prices contributed to an increased headline CPI figure.

Market expectations for inflation rose after the U.S. presidential election on anticipation of increased fiscal stimulus from the new administration. The 10-year TIPS breakeven rate finished December at 1.95%, an increase of 35 bps during the quarter.

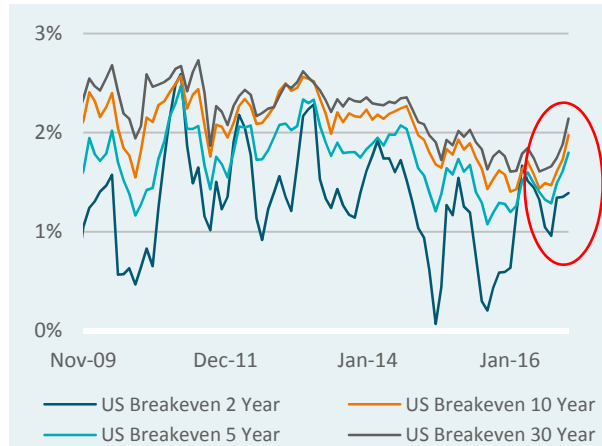
We believe the risk of inflation is skewed to the upside while the market is only discounting a small rise in prices over the next 10 years. Oil prices appear to have stabilized and may continue higher if global rebalancing occurs faster than anticipated. At the same time, the new political administration's proposed fiscal and trade policies suggest higher inflation. Investors may consider reexamining their inflation protecting portfolio and how their overall portfolio might behave in a rising inflation environment.

**U.S. CPI (YOY)**



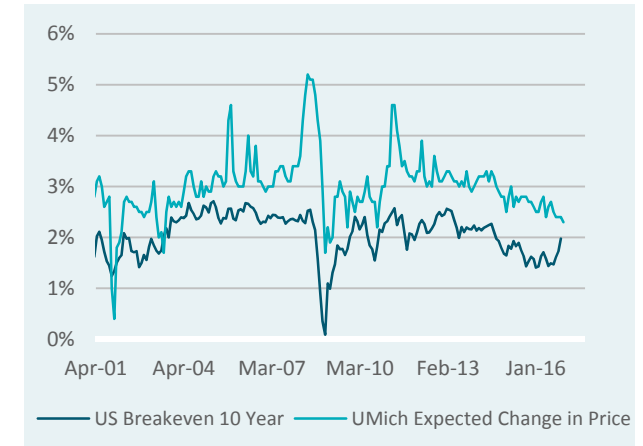
Source: FRED, as of 11/30/16

**U.S. TIPS BREAKEVEN RATES**



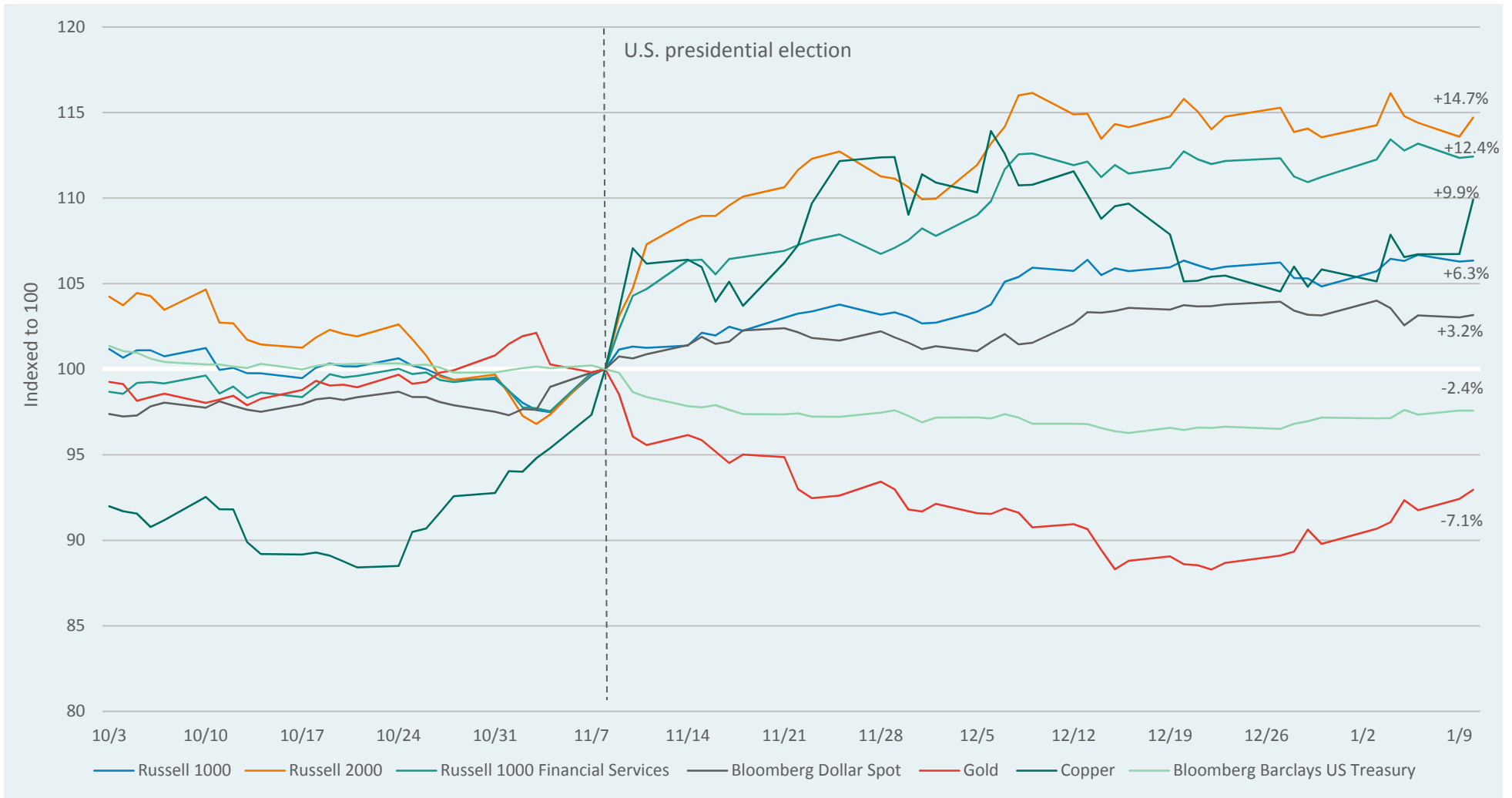
Source: FRED, as of 11/30/16

**INFLATION EXPECTATIONS**



Source: Bloomberg, as of 12/31/16

# Post-election price movements



Source: Bloomberg, 10/3/16-1/10/17

# Implications of the election

At first, financial markets reacted negatively to the news of Trump's victory as equity market futures fell sharply the night of the election. S&P 500 futures dropped 6% in a four hour span and then recovered before market open the next morning. Much like Brexit, this was another example where the market's initial response was incorrect and equity prices snapped back quickly.

Risk assets in the U.S. have moved higher while safe haven assets such as Treasuries have declined since the election results on the prospects of improved domestic economic growth.

While a Trump presidency has materially altered the confidence outlook for the U.S. economy, we believe that markets and consumers should avoid overreacting to policies that have yet to be determined in nature and scope.

Although much uncertainty surrounds Trump's actual policy changes, there has been an upswing in confidence in nearly every area of the U.S. economy. Higher confidence from consumers and businesses could have a self-enforcing effect on the economy. At the same time, expectations act as a double edged sword. Increased confidence in the Trump administration's economic policies could leave more room for disappointment.

Source: Bloomberg, 11/8/16-11/9/16

S&P 500 FUTURES THE NIGHT OF THE ELECTION



# Trump policies – Initial areas of focus

POLICY AREA	PROPOSED POLICY
Taxes	<ul style="list-style-type: none"> <li>— Trump has proposed tax cuts for both individuals and corporations that will cost \$4.5 trillion over the next 10 years according to the Center for a Responsible Fiscal Budget.</li> <li>— The CFRB has also estimated that more than half of the tax cuts for individuals will go to the richest 1% of Americans on a total dollar basis.</li> <li>— Corporate tax rates may be lowered to 15% from the current statutory rate of 35%, although the actual rate paid is estimated at only around 25%.</li> </ul>
Trade	<ul style="list-style-type: none"> <li>— The President has also promised to renegotiate trade deals, such as NAFTA, to better protect American businesses from foreign interests.</li> <li>— The details on how he will go about doing so remains unclear.</li> <li>— More protectionist policies could result in higher consumer prices as domestic businesses will face less competition.</li> </ul>
Deregulation	<ul style="list-style-type: none"> <li>— Perhaps the biggest unknown is how President Trump will work to lessen regulations on businesses.</li> <li>— This may also be the area that he can have the quickest impact through the use of executive orders.</li> <li>— Repealing parts of both the Affordable Care Act and the Dodd Frank Act are two of the more notable pieces of regulation Trump has said he will target.</li> </ul>
Infrastructure Spending	<ul style="list-style-type: none"> <li>— President Trump has proposed tax breaks on private infrastructure equity investment that he hopes will result in \$1 trillion of total spending on a levered basis.</li> <li>— While the private sector may be able to provide more efficiency, it may be difficult to incentivize them to complete projects that will benefit the public and overall economy.</li> </ul>

# International economics summary

- The central theme of slow, but positive growth in countries across the globe continued in the third quarter. The U.S., western Europe, and Japan all experienced year-over-year growth rates between 1-2%.
  - The tapering of ECB purchases is likely more a result of mechanical and political obstacles than due to a need for tightening. If the central bank is forced to tighten quicker than desired, it could have an adverse impact on the current economic recovery.
- Developed countries experienced a coordinated pick up in inflation in recent months, suggesting we may be moving into a reflationary environment. Headline CPI was up 1.1% in the Eurozone in December, its highest rate in more than three years.
  - Italy voted against a referendum on constitutional reform on December 4<sup>th</sup> that would have weakened the power of the Senate in an attempt to make the country easier to govern. The Italian Prime Minister, Matteo Renzi, resigned shortly thereafter. Although Renzi's Democratic party will remain in power, the country's anti-establishment Five Star party has recently gained popularity.
- The ECB announced it would continue its asset purchase program through the initially scheduled end date of March 2017, but at a reduced rate. The program will extend until at least the end of 2017, and monthly bond purchases will fall to €60 billion from €80 billion in April.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.7% <i>9/30/16</i>	1.7% <i>11/30/16</i>	4.7% <i>12/31/16</i>
Western Europe	1.8% <i>9/30/16</i>	0.9% <i>12/31/16</i>	8.4% <i>9/30/16</i>
Japan	1.1% <i>9/30/16</i>	0.5% <i>11/30/16</i>	3.1% <i>11/30/16</i>
BRIC Nations	5.1% <i>9/30/16</i>	3.4% <i>6/30/16</i>	5.5% <i>9/30/16</i>
Brazil	(2.9%) <i>9/30/16</i>	6.3% <i>12/31/16</i>	11.9% <i>12/31/16</i>
Russia	(0.4%) <i>9/30/16</i>	5.4% <i>12/31/16</i>	5.2% <i>9/30/16</i>
India	7.3% <i>9/30/16</i>	3.6% <i>11/30/16</i>	7.1% <i>12/31/15</i>
China	6.7% <i>9/30/16</i>	2.1% <i>12/31/16</i>	4.0% <i>12/30/16</i>

# International economics

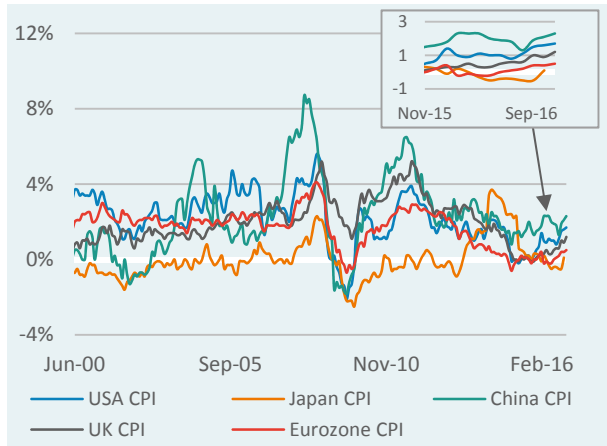
Outside of the U.S., developed market central banks have remained accommodative, which has helped inflation gradually increase and economic growth move forward slowly. Eurozone headline CPI was 1.1% YoY in December, its highest reading in more than three years. Unemployment rates have continued to trend downward, although the European rate is still elevated at 9.8%.

Both the Bank of Japan and European Central Bank have continued their negative rate policies and asset purchase programs, although the ECB announced a tapering of purchases that will begin in April.

Especially in Europe, there is a risk that the central bank may need to tighten more quickly than desired due to a lack of eligible bonds to purchase, and perhaps due to political opposition.

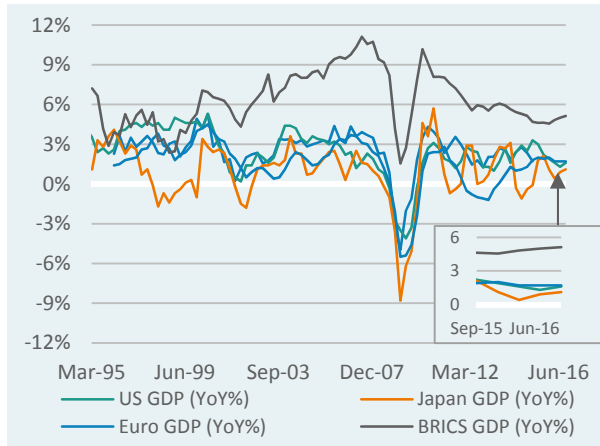
Emerging market economies grew at 5.1% in the third quarter based on the combined real GDP of the BRICS countries. Growth in these countries was driven by China and India, while Brazil and Russia remained in recession.

## INTERNATIONAL INFLATION



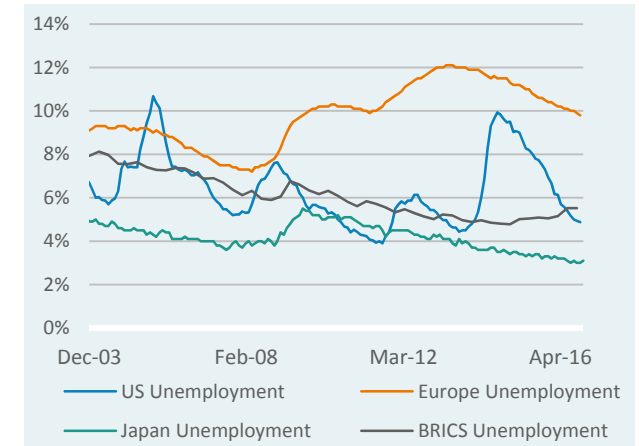
Source: Bloomberg, as of 11/30/16

## REAL GDP GROWTH



Source: Bloomberg, as of 9/30/16

## GLOBAL UNEMPLOYMENT



Source: Bloomberg, as of 11/30/16 or most recent release

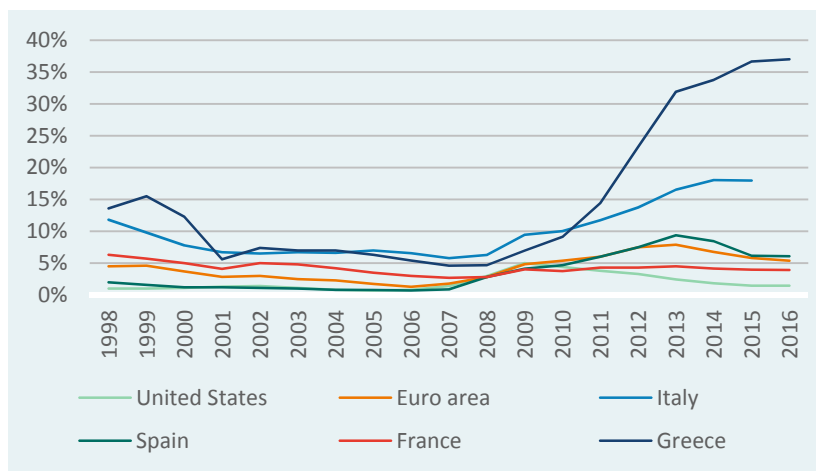
# European banking crisis

While the European economic recovery has continued at a modest pace, due in part to extremely accommodative monetary policy, a major systematic risk is still apparent in the financial system. In other areas, such as the United States, banks have worked through the pain of cleaning up their loan books after the financial crisis. Meanwhile, the loan quality in European banks, notably in Italy and Greece, has deteriorated.

Instead of writing off bad loans, many European banks have kept these loans as assets to avoid insolvency. Overall in the Euro Area, the percentage of non-performing loans (NPLs) to total gross loans was 5.4% as of year-end. This number has fallen only slightly since peaking at 7.9% in 2013. Comparatively, this figure in the U.S. was 1.5% at the end of December.

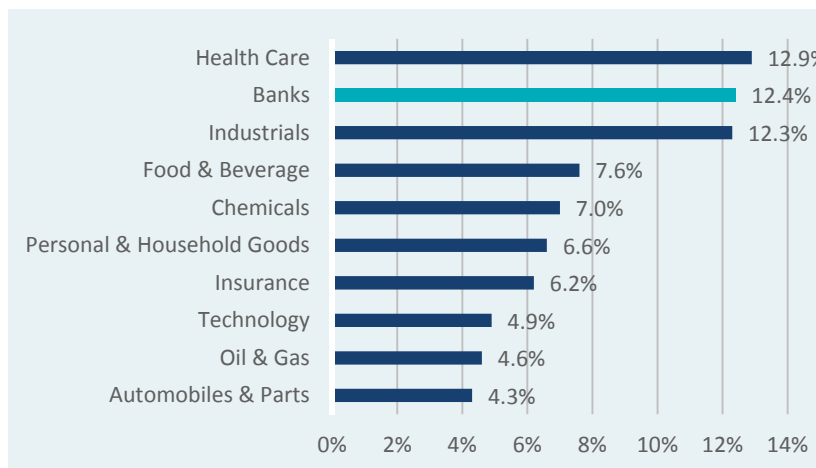
Risks stemming from the Italian financial system may be the most important to the overall health of Europe. As of the last data point, the ratio of NPLs to total gross loans was 18.0% at the end of 2015. In many circumstances, the banks have carried these loans at 50% of face value, when some analysts have suggested they would be more accurately valued at 20-30%. The adverse consequences from these NPLs cannot be avoided and only delayed. Given the risks and the large weight to financials, we believe exposure to European equities should be considered carefully.

**NON-PERFORMING LOANS TO TOTAL GROSS LOANS**



European equities should be considered carefully given the large exposure to banks

**EURO STOXX 600 EX U.K. SECTOR WEIGHTINGS (TOP 10)**



Top chart source: World Bank, as of 12/31/16. Data on Italy only available through 12/31/15. Bottom chart source: Stoxx, as of 11/30/16.

# Fixed income rates & credit



# Interest rate environment

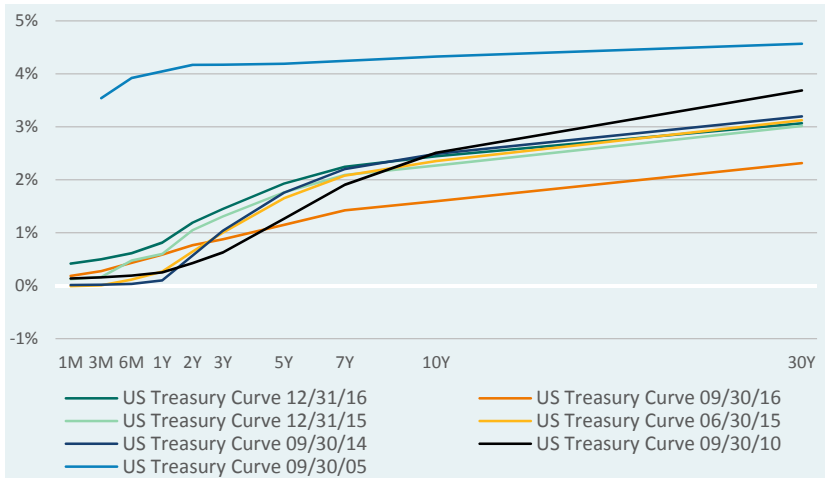
- The Federal Reserve raised interest rates at its December meeting, increasing the federal funds target rate by 0.25%, to a range of 0.50% to 0.75%. The Fed also increased its outlook for the number of 2017 rate hikes from two to three. Lower yields and economic growth outside of the U.S., along with an already strong dollar, reduce the probability of drastic rate rises.
- U.S. Treasury yields moved higher and the curve steepened on the prospects of higher inflation and economic growth. The spread between the 10 and 2-year yields was 1.25% at the end of December, its highest level in more than a year.
- Developed sovereign yields increased along with U.S. rates following the presidential election. The Japanese 10-year bond yield moved out of negative territory to 0.46% at the end of December, while the German 10-year bund yield hit an 11-month high of 0.37% before falling to finish the month at 0.20%.
- The U.S. is much further ahead in the monetary policy cycle than other developed countries, which has led to a widening yield differential between Treasuries and global sovereign bonds. While Treasuries remain expensive compared to history, the higher yield makes them relatively attractive.

Area	Short Term (3M)	10 Year
United States	0.50%	2.45%
Germany	(0.99%)	0.20%
France	(0.90%)	0.68%
Spain	(0.49%)	1.38%
Italy	(0.50%)	1.81%
Greece	1.37%	7.02%
U.K.	0.51%	1.24%
Japan	(0.42%)	0.04%
Australia	1.70%	2.77%
China	2.35%	3.06%
Brazil	12.91%	10.55%
Russia	8.78%	8.29%

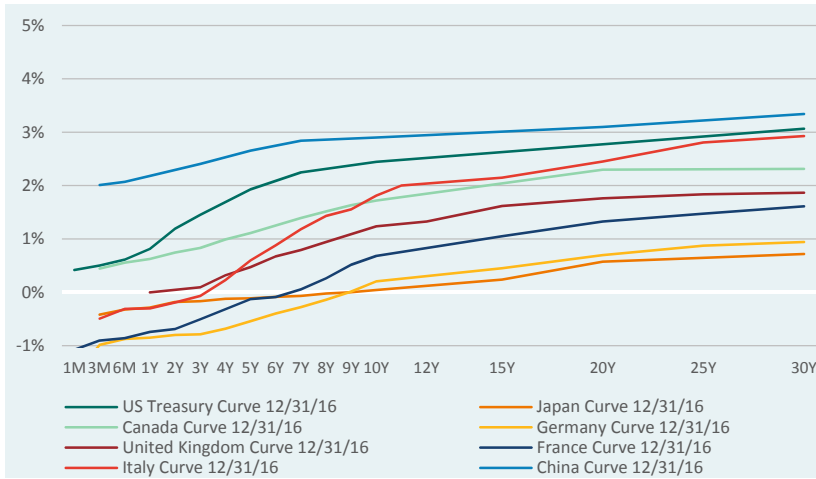
Source: Bloomberg, as of 12/31/16

# Yield environment

**U.S. YIELD CURVE**

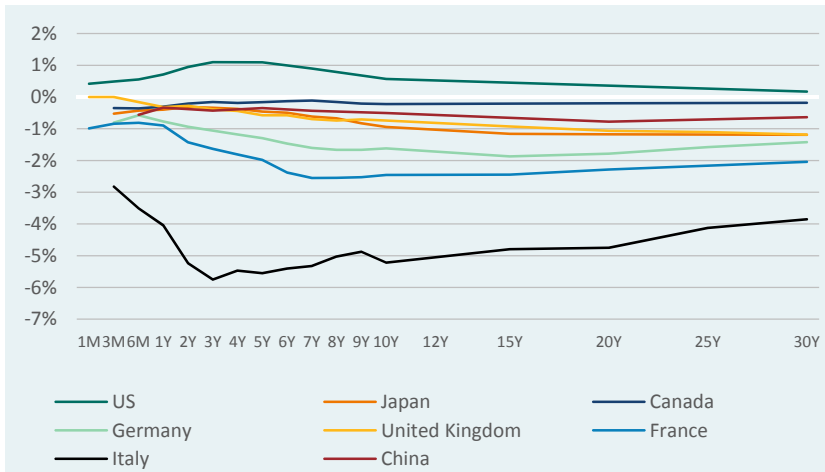


**GLOBAL GOVERNMENT YIELD CURVES**

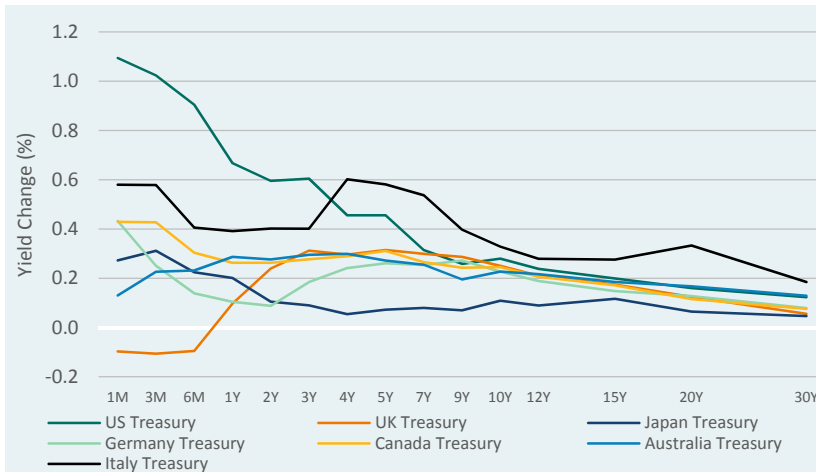


Global investors continue to prefer U.S. Treasuries due to higher relative yields

**YIELD CURVE CHANGES OVER LAST FIVE YEARS**



**IMPLIED CHANGES OVER NEXT YEAR**



Source: Bloomberg, as of 12/31/16

# Credit environment

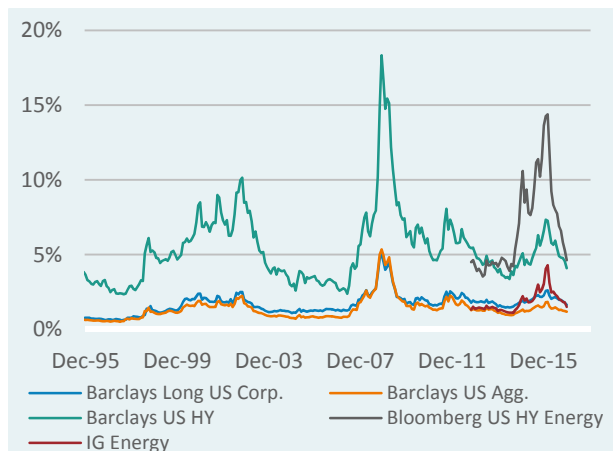
High yield returns across all sectors - energy and metals and mining in particular - have been strong since the trough in Q1. As evidence of this performance, high yield spreads have compressed to below 4.3% as of December from a high of 8.0% earlier in the year.

U.S. credit markets showed surprising strength following a brief period of increased volatility in Q1. While below the long-term trend, U.S. GDP growth has begun to show signs of improvement which has provided a tailwind to credit markets in general. Overall foreign demand for U.S. credit issuance has

remained positive as low developed market yields have been supportive of the “carry trade”, where investors buy relatively higher yielding assets.

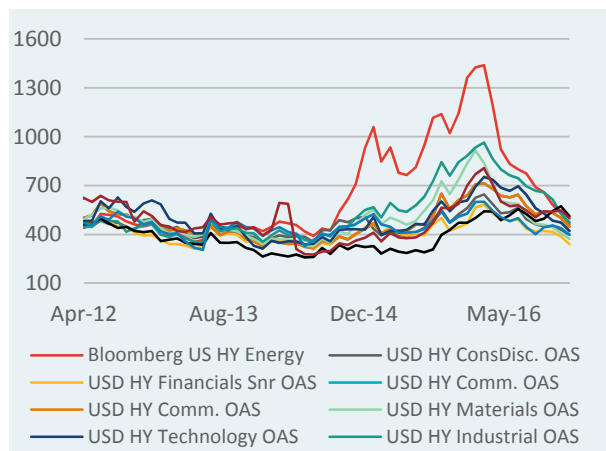
The Federal Reserve Bank moved to increase rates by 0.25% in December and hinted at higher rates in 2017. Continued growth in the job market and increasing inflation were key considerations for the increase. While rising rates may increase borrowing costs and put downward pressure on bond prices, the U.S. credit market remains attractive compared to other developed markets.

## CREDIT SPREADS



Source: Barclays Capital Indices, Bloomberg, as of 12/31/16

## HIGH YIELD SECTOR SPREADS



Source: Bloomberg, as of 12/31/16

## SPREADS

Market	Credit Spread (12/31/16)	Credit Spread (1 Year Ago)
Long US Corporate	1.5%	2.1%
US Aggregate	0.9%	1.1%
US High Yield	4.4%	7.1%
US High Yield Energy	4.6%	13.6%
US Bank Loans	3.9%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 12/31/16

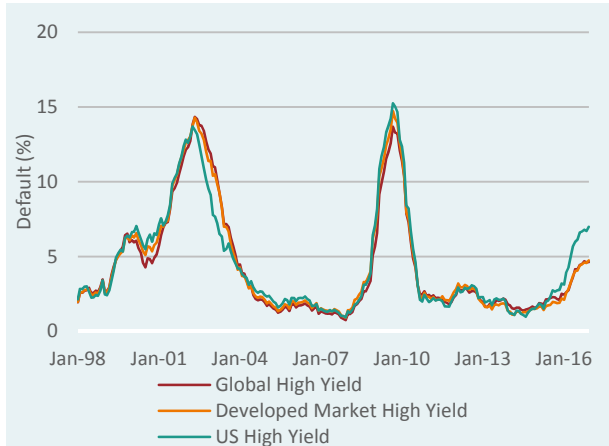
# Issuance and default

Defaults have been trending higher from their lows in 2014 due mostly to lower commodity prices. While the current level of default have risen above the trailing 20-year average, it remains below the peak in 2002 and 2009, respectively.

Corporate issuance in emerging markets has remained strong due mainly to perceived relative value compared to developed market corporates. Rising U.S. rates will most likely result in increased borrowing costs.

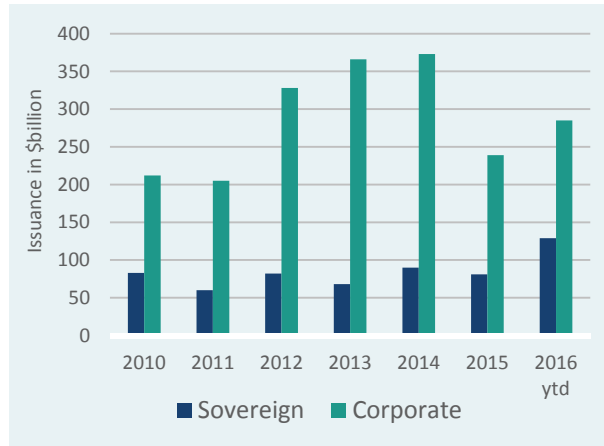
Issuance in both high yield bonds and bank loans has been trending lower. Some of the fall in issuance volume can be attributed to the recent sell off in the energy sector. Additionally, rising U.S. interest rates have resulted in increased borrowing costs which has acted as a headwind.

**HY DEFAULT TRENDS (ROLLING 1 YEAR)**



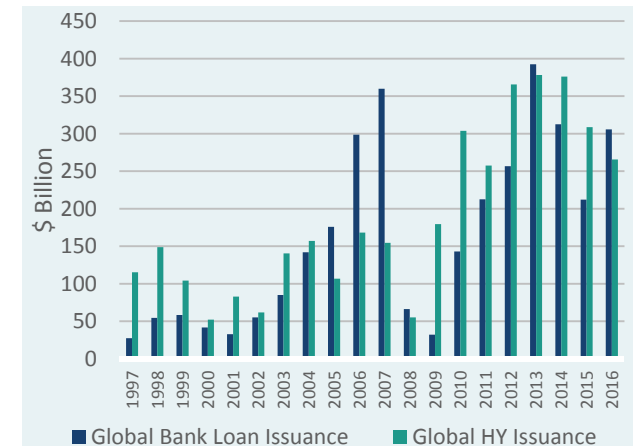
Source: Credit Suisse, BofA, as of 12/31/16

**EM DEBT ISSUANCE**



Source: JP Morgan, as of 11/30/16

**GLOBAL ISSUANCE**



Source: Bloomberg, BofA Merrill Lynch, as of 12/31/16

# Equity

# Equity environment

- We believe the U.S. election results have had a material impact on possible future equity return outcomes. There is likely greater upside potential for U.S. equities, though some of this has already been priced in with higher prices post-election.
- Both consumer and private sector sentiment have risen robustly. This positive shift may provide a tailwind to U.S. economic growth through spending and investment.
- Fourth quarter earnings for the S&P 500 are estimated to grow 3.2% year-over-year, according to FactSet. If this positive growth comes to fruition it will mark the second quarter of positive growth and may mean the recent earnings slump is now behind us.
- Value equities outperformed growth equities in the fourth quarter. The Russell 1000 Value index and Russell 1000 Growth index returned 6.7% and 1.0%, respectively. Energy and financial service companies have contributed to the performance rebound.
- The U.S. dollar rose 6.4% in Q4 on a trade-weighted basis which directly detracts from investment returns of U.S. investors with unhedged currency exposure.
- Japanese equities (Nikkei 225) delivered a 16.1% return on a hedged basis, but 1.2% on an unhedged basis – a 15% swing caused by currency movement.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	3.8%		12.1%		12.1%	
US Small Cap (Russell 2000)	8.8%		21.3%		21.3%	
US Large Value (Russell 1000 Value)	6.7%		17.3%		17.3%	
US Large Growth (Russell 1000 Growth)	1.0%		7.1%		7.1%	
International Large (MSCI EAFE)	(-0.7%)	7.3%	1.5%	6.2%	1.5%	6.2%
Eurozone (Euro Stoxx 50)	3.2%	10.3%	0.7%	5.1%	0.7%	5.1%
U.K. (FTSE 100)	(0.8%)	4.4%	(0.2%)	19.0%	(0.2%)	19.0%
Japan (NIKKEI 225)	1.2%	16.1%	5.8%	1.3%	5.8%	1.3%
Emerging Markets (MSCI Emerging Markets)	(4.1%)	(2.0%)	11.6%	7.5%	11.6%	7.5%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 12/31/16

# Domestic equity

U.S. equity markets fell sharply in futures markets on the night of the election, but then recovered before market open the next morning. After this initial stumble, equities rallied higher to finish the quarter.

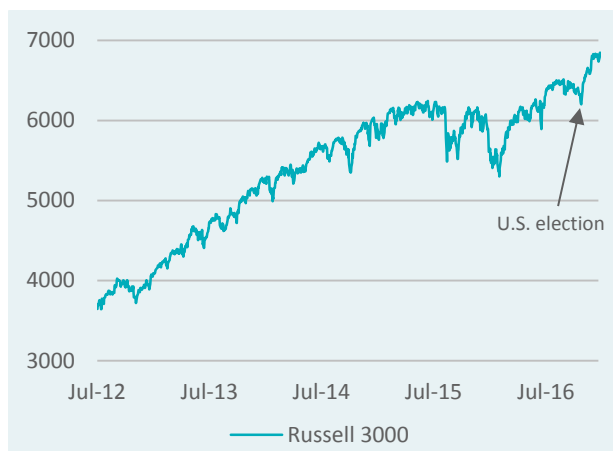
Post-election equity movement was likely driven by an improved economic outlook as well as several proposed policy changes that would benefit corporations, including lower tax rates and deregulation.

The financials sector was responsible for much of the gain in equity prices, likely due to the prospects of higher rates and a steeper curve. The S&P 500 Financials sector was up 16.5% after the election, compared to a 2.8% gain across the rest of the index.

As of December 30<sup>th</sup>, estimated earnings growth for the fourth quarter was 3.2% from the previous year, according to FactSet. Looking ahead, bottom-up analyst EPS forecasts point toward improving corporate earnings growth.

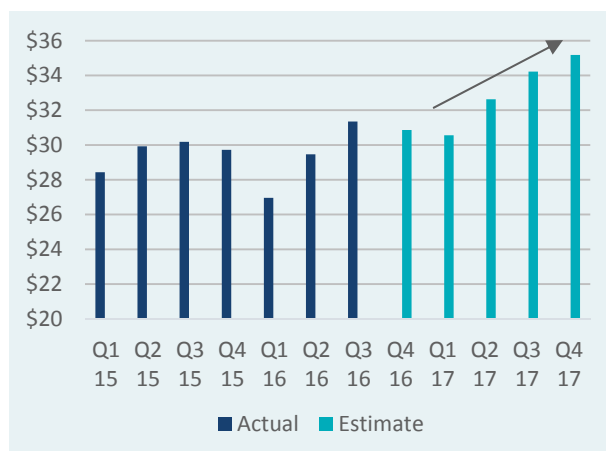
Proposed tax reform and deregulation have helped improve the U.S. earnings outlook

## U.S. EQUITIES



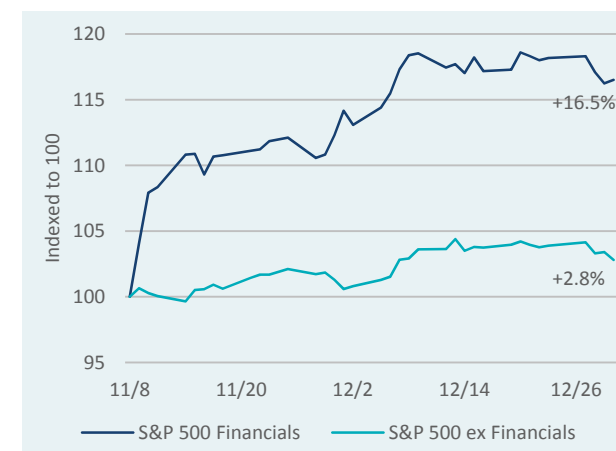
Source: Russell Investments, as of 12/30/16

## S&P 500 EPS



Source: FactSet, as of 12/30/16

## S&P 500 FINANCIALS



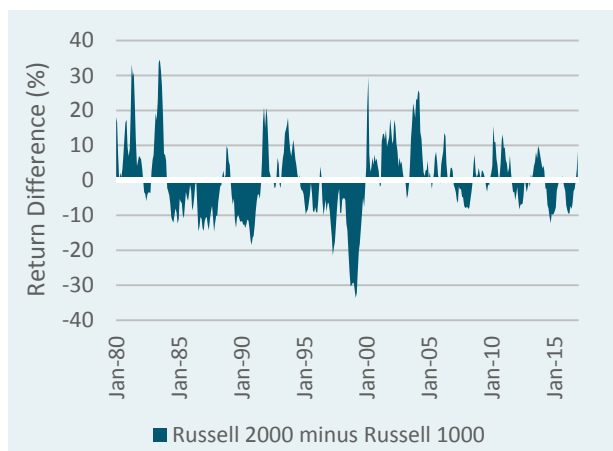
Source: Bloomberg, as of 12/30/16

# Domestic equity size and style

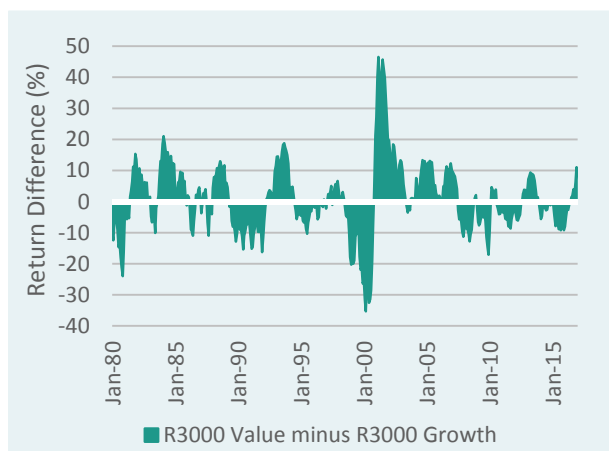
Small cap equities outperformed large cap equities in the fourth quarter as the Russell 2000 Index and Russell 1000 Index returned 8.8% and 3.8%, respectively. Much of this outperformance came after the U.S. presidential election as smaller companies could receive greater marginal benefit from deregulation proposed by Donald Trump. Renewed U.S. dollar strength also benefits smaller companies relative to larger companies due to greater insulation from foreign currency movements.

Value equities outperformed growth equities during the quarter. The Russell 1000 Value Index and Russell 1000 Growth Index returned 6.7% and 1.0%, respectively. This relative outperformance was driven by the Financials and Energy sectors, which are the two largest sectors in the value index. The magnitude of this recent value bounce back has brought the value premium back into positive territory for most trailing windows.

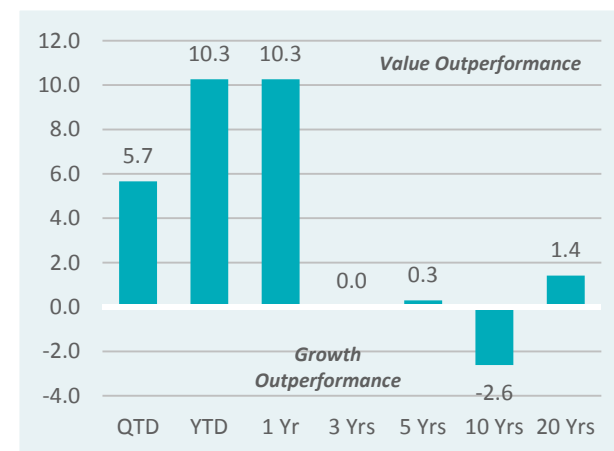
**SMALL CAP VS LARGE CAP (YOY)**



**VALUE VS GROWTH (YOY)**



**U.S. VALUE VS. GROWTH RELATIVE PERFORMANCE**



Source: Russell Investments, as of 12/31/16

Source: Russell Investments, as of 12/31/16

Source: Morningstar, as of 12/31/16



# International equity

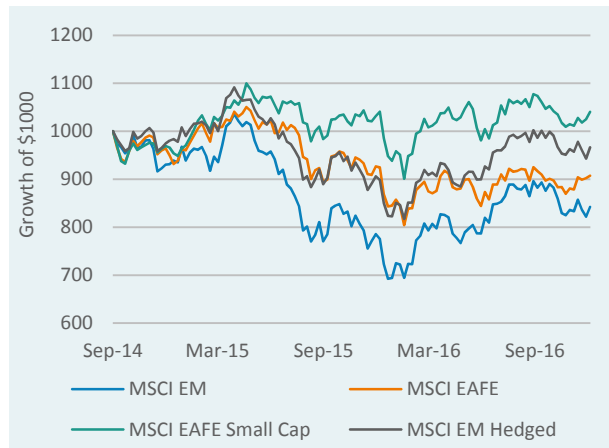
International equity markets narrowly outperformed domestic equities in December (S&P 500 2.0%) as the MSCI ACWI ex U.S. returned 2.2%.

European equity markets remained calm on the back of the announcement that the ECB would continue its asset purchase program through the initially scheduled end date of March 2017, but at a reduced rate. Adjustments to program constraints will be likely, given the mandated rule that the ECB cannot purchase more than 33% of any one country's national debt.

International developed equities delivered a 7.3% total return on a hedged basis over the quarter, but delivered -0.7% on an unhedged basis. Unhedged currency exposure continues to cause higher volatility for investors who choose not to hedge.

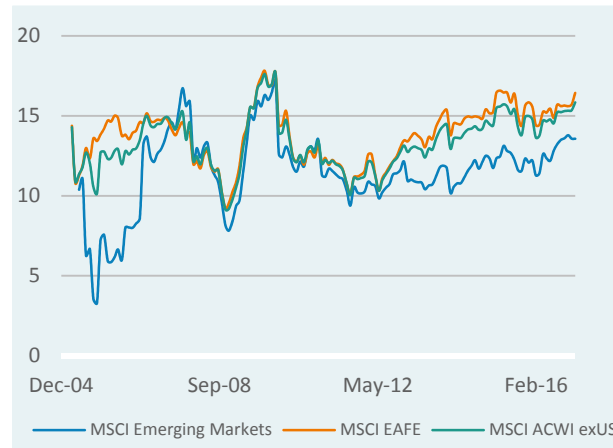
Japanese equities delivered a 16.1% return on a hedged basis, but 1.2% on an unhedged basis – a 15% swing caused by currency movement. Expectations of continued loose monetary policy and low interest rates in Japan contributed to yen weakness.

## GLOBAL EQUITY PERFORMANCE



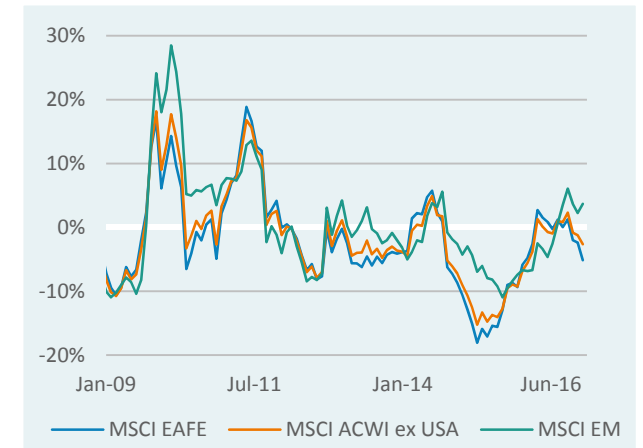
Source: Bloomberg, as of 12/31/16

## INTERNATIONAL FORWARD P/E RATIOS



Source: Bloomberg, as of 12/31/16

## EFFECT OF CURRENCY (1 YEAR ROLLING)



Source: MSCI, as of 12/31/16

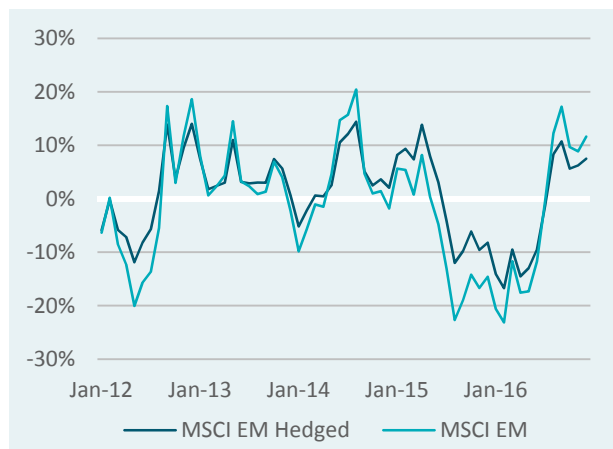
# Emerging market equity

Emerging market economic growth has shown recovery as Russia and Brazil begin moving out of severe depressions and as commodity prices improve. Economic growth of the “BRIC” nations continues at a pace materially higher than that of developed nations, consistent with recent decades.

Some renewed investor optimism can be seen as equity valuations move higher. Emerging market equities

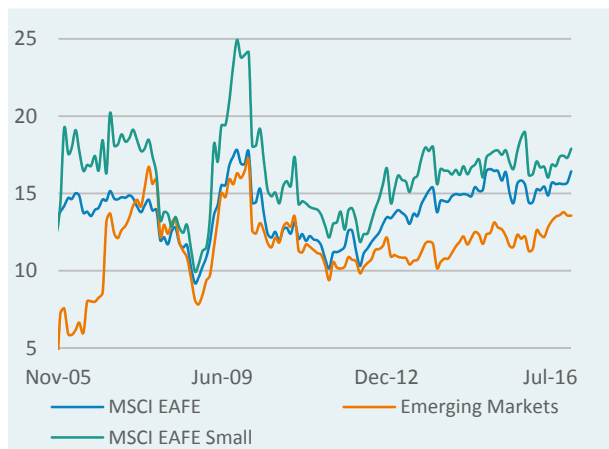
provided a muted quarter with a -2.0% return on a hedged basis, but delivered a positive 7.5% return for the year (MSCI Emerging Markets). Much of the recent performance stability can be attributed to a reversal or flattening of emerging market currency depreciation trends occurring since 2012. Earnings across the broader emerging markets have also reversed their downward trend, though not as quickly as the pace of price improvement as demonstrated in higher equity valuations.

## 12-MONTH ROLLING PERFORMANCE



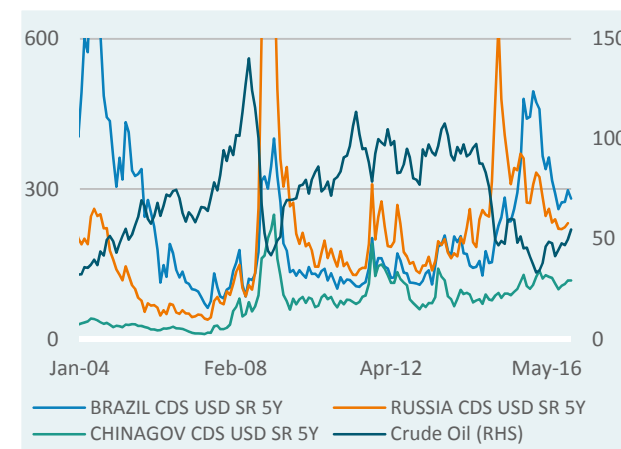
Source: MPI, as of 12/31/16

## FORWARD P/E RATIOS



Source: Bloomberg, as of 12/31/16

## CDS SPREADS



Source: MSCI, as of 12/31/16

# Equity valuations

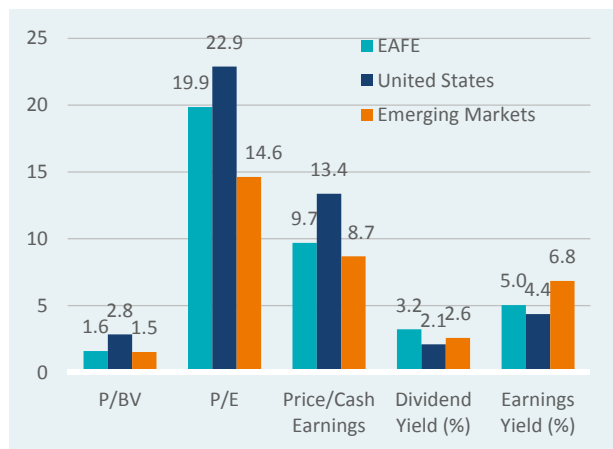
The forward P/E ratio for the S&P 500 was 18.8 at year-end and remains above the long-term average of 16.9 since 1995. The current P/E of 18.8 places it in the 79<sup>th</sup> percentile.

While elevated, valuations for U.S. large cap equities remain within one standard deviation of the average. The expected pick up in corporate earnings would help bring P/E ratios more in line with long-term averages, all else equal.

Low real interest rate and inflation environments have historically supported higher equity valuations, meaning current valuations may not be unusual given the conditions.

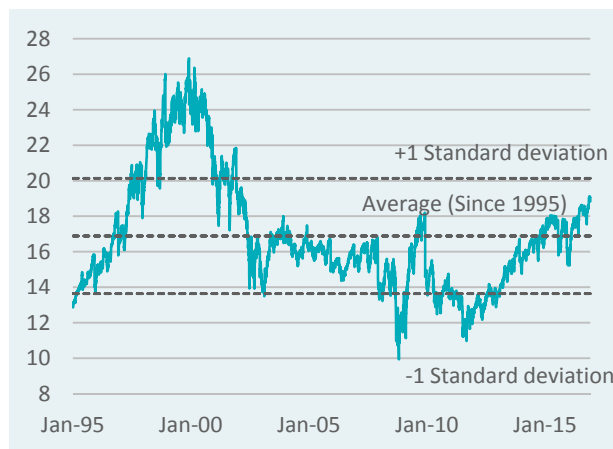
International developed valuations expanded during the quarter, especially in Europe, but are still relatively cheap compared to the U.S. Emerging market P/E ratios expanded off historic lows and emerging market equities remain relatively attractive from a valuation standpoint.

## MSCI VALUATION METRICS (3 MONTH AVERAGE)



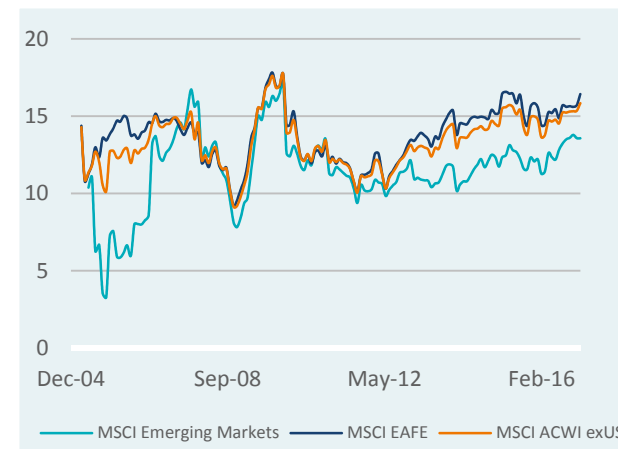
Source: MSCI, as of 12/31/16

## S&P 500 FORWARD P/E



Source: Bloomberg, as of 12/31/16

## INTERNATIONAL FORWARD P/E RATIOS



Source: Bloomberg, as of 12/31/16

# Equity volatility

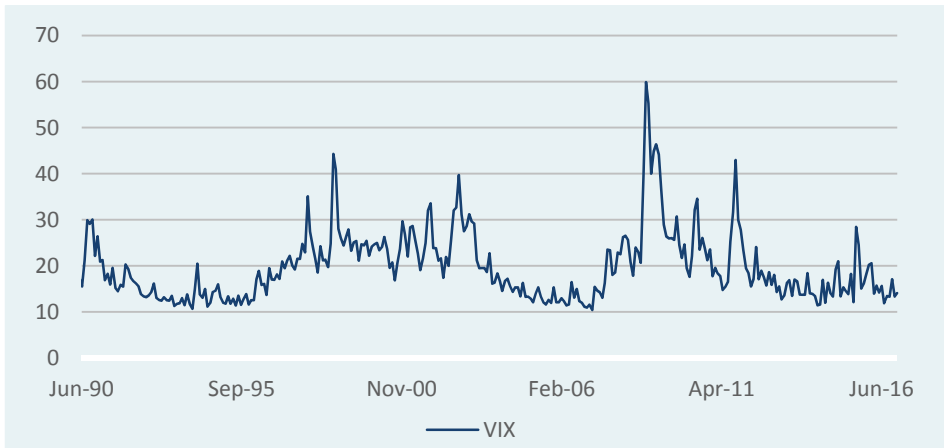
Equity volatility has remained subdued, despite the arguably surprising U.S. election results and uncertain future policy environment. However, uncertainty surrounding a set of policies with highly unclear ramifications for the markets is different from uncertainty in the traditional sense.

Low implied volatility, as shown by the VIX index, is consistent with the renewed bull market in U.S.

equities. Realized risk has also been low across international developed equity markets (MSCI EAFE).

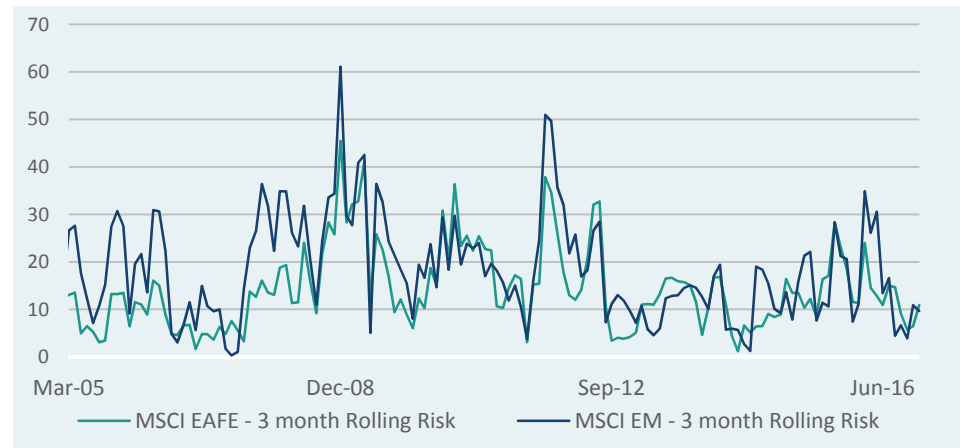
Unhedged currency exposure has resulted in materially higher volatility and often significant variation in equity portfolio performance.

U.S. IMPLIED EQUITY VOLATILITY



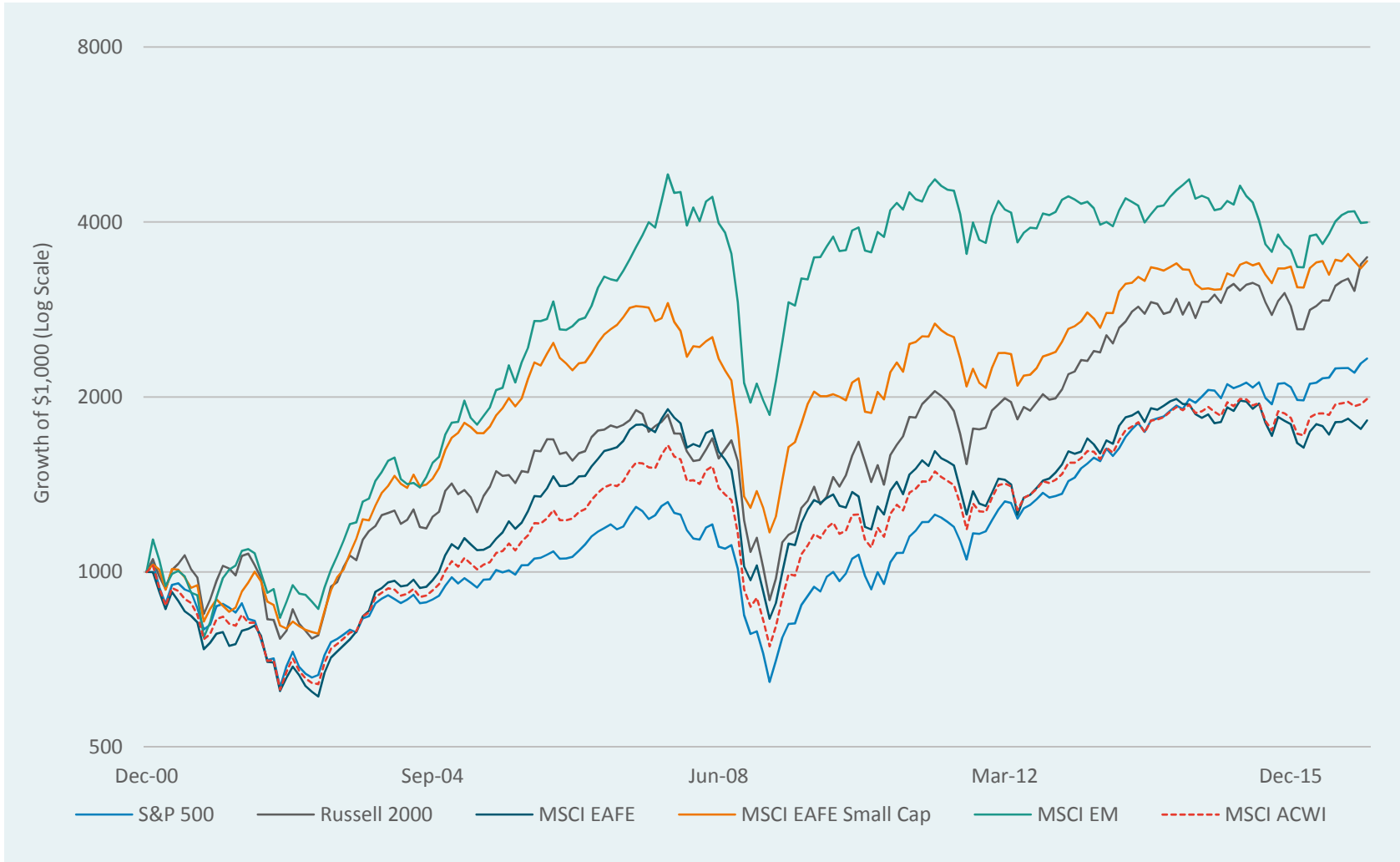
Source: CBOE, as of 12/30/16

INTERNATIONAL EQUITY VOLATILITY



Source: MSCI, as of 12/31/16

# Long-term equity performance



Source: MPI, as of 12/31/16

# Other assets

# Real estate & REITs

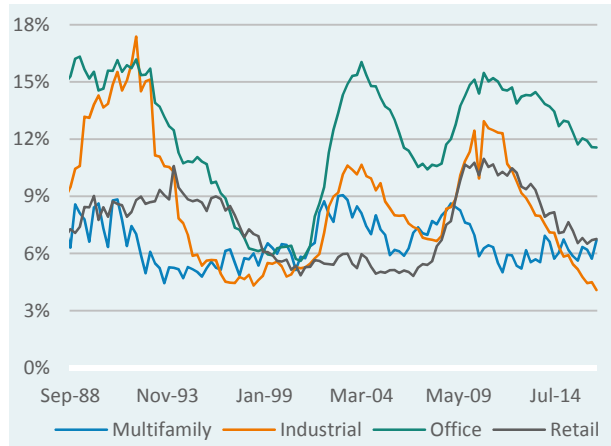
After six consecutive years of double digit returns in core real estate, 2016 is on pace to come in around 8-9% - still a very good return, but slightly down from the pace of recent history.

Fundamentals remain strong with generally declining vacancy rates. The exception is multifamily, where vacancies have come up slightly off historic lows. NOI growth rates are positive and strong for all property types, near or above 5% for all over the last year.

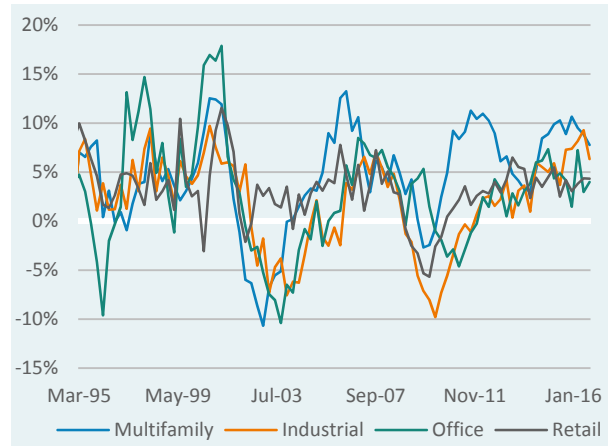
New supply remains below historical averages in all property types except multifamily. Continued tight lending standards have kept new construction, especially speculative construction, under control relative to previous cycles.

Pricing from a cap rate perspective looks historically high at 4.5%, however relative spreads to Treasuries remain healthy. Rising interest rates could put pressure on pricing, but the spread keeps a small cushion in place.

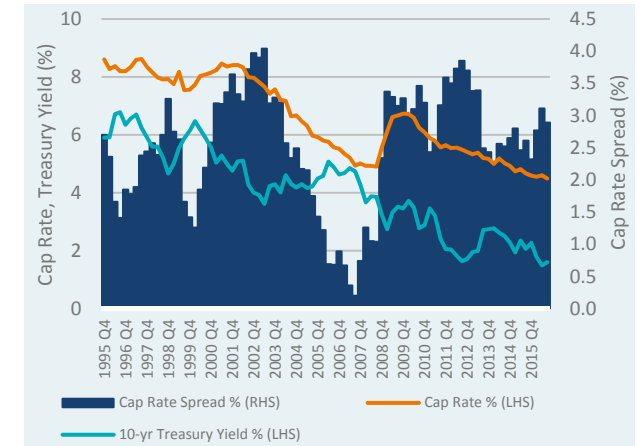
## VACANCY RATES



## NET OPERATING INCOME GROWTH



## CAP RATES AND SPREADS



Source: NCREIF, as of 9/30/16

Source: NCREIF, as of 9/30/16

Source: NCREIF, as of 9/30/16

# Currency

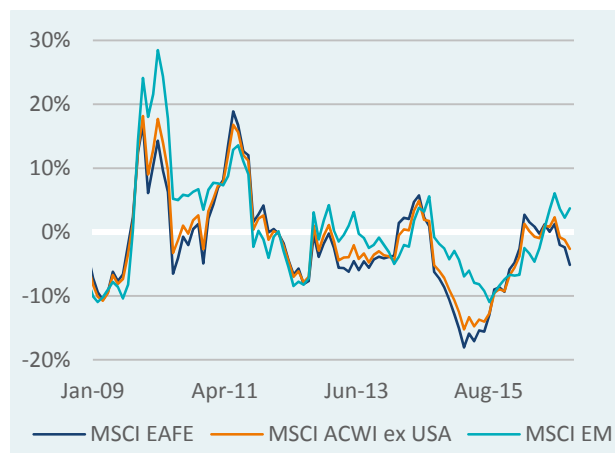
The U.S. dollar rose considerably in the fourth quarter, up 6.4% against a basket of major currencies. The strong dollar created a large gap between hedged and unhedged international exposures, as foreign currency losses eroded unhedged returns.

Renewed dollar strength occurred after the presidential election likely due to increased expectations of U.S. economic growth and higher interest rates. A widening gap between Treasury yields and other developed sovereign bonds could cause greater demand for

Treasuries and provide a tailwind for further dollar appreciation. However, higher inflation at the same time could offset some of the potential strength.

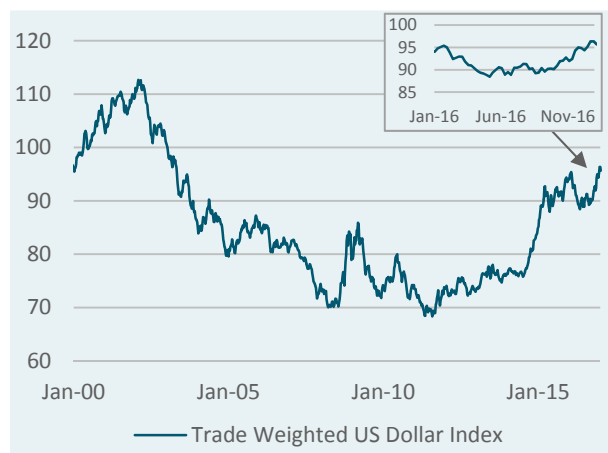
Emerging market currencies were hit hard by the strength in the U.S. dollar, influenced by the Fed pointing towards faster than anticipated interest rates increases and possible protectionist trade policies from the Trump administration. The JPM EM Currency Index was down 4.0% in the fourth quarter.

**EFFECT OF CURRENCY (1YR ROLLING)**



Source: MPI, as of 12/31/16

**LONG-TERM TRADE WEIGHTED DOLLAR**



Source: FRED, as of 12/31/16

**JPM EM CURRENCY INDEX**



Source: Bloomberg, as of 12/31/16



# Appendix

# Periodic table of returns – December 2016

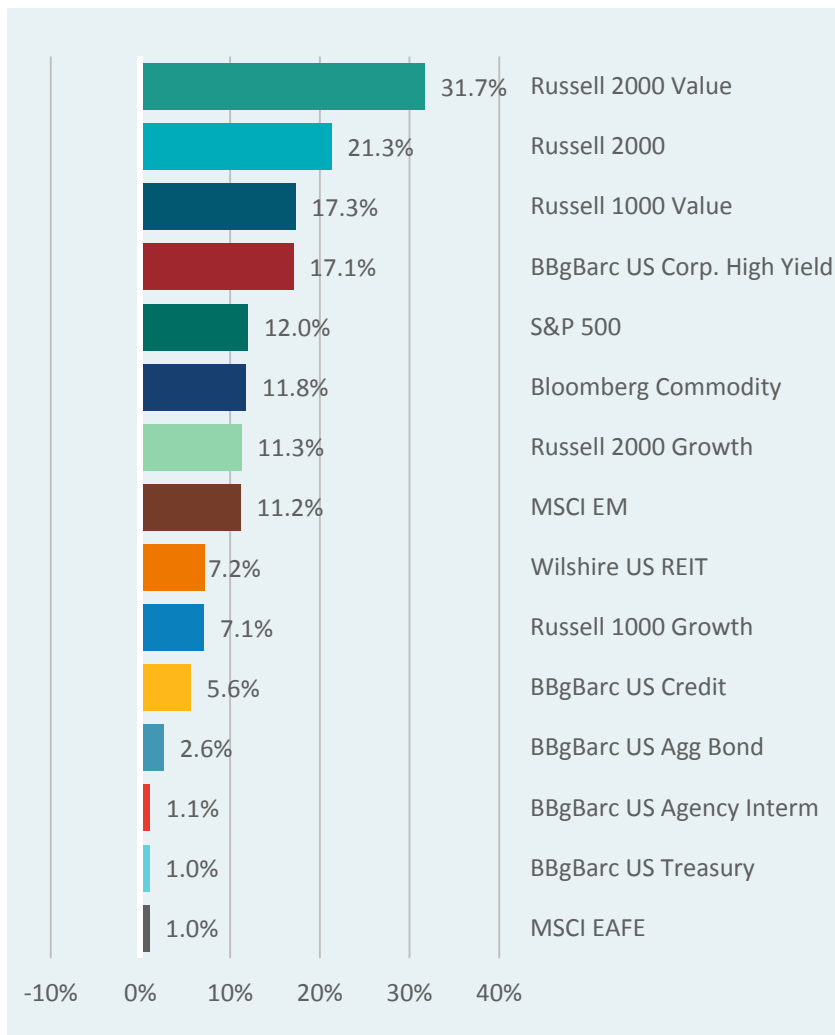
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	5-Year	10-Year
Small Cap Value	74.8	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	10.1	31.7	15.1	8.3
Small Cap Equity	32.9	8.1	37.8	23.1	32.9	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	14.8	7.8
Large Cap Value	26.3	6.4	37.2	22.4	31.8	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	14.7	7.2
Large Cap Equity	23.8	4.4	31.0	21.6	30.5	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	14.5	7.1
Commodities	19.3	3.2	28.5	21.4	22.4	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	14.5	7.1
Small Cap Growth	18.9	2.6	25.7	16.5	16.2	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	13.7	6.3
Emerging Markets Equity	18.1	0.4	19.6	14.4	13.9	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	11.2	5.7
Large Cap Growth	13.4	-1.5	18.5	11.3	12.9	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	7.1	6.5	4.3
Real Estate	10.2	-1.8	15.2	10.3	10.6	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	6.1	5.8	3.8
60/40 Global Portfolio	9.7	-2.0	11.6	9.9	9.7	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	3.4	1.8
US Bonds	3.1	-2.4	11.1	6.4	5.2	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	2.2	1.3
International Equity	2.9	-2.9	7.5	6.0	2.1	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	1.3	0.7
Hedge Funds of Funds	1.4	-3.5	5.7	5.1	-3.4	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	0.1	0.7
Cash	-1.1	-7.3	-5.2	3.6	-11.6	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	-9.0	-5.6

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash
- Commodities
- Real Estate
- Hedge Funds of Funds
- 60% MSCI ACWI/40% BC Global Bond

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BC Agg, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BC Global Bond. NCREIF Property performance data as of 9/30/16.

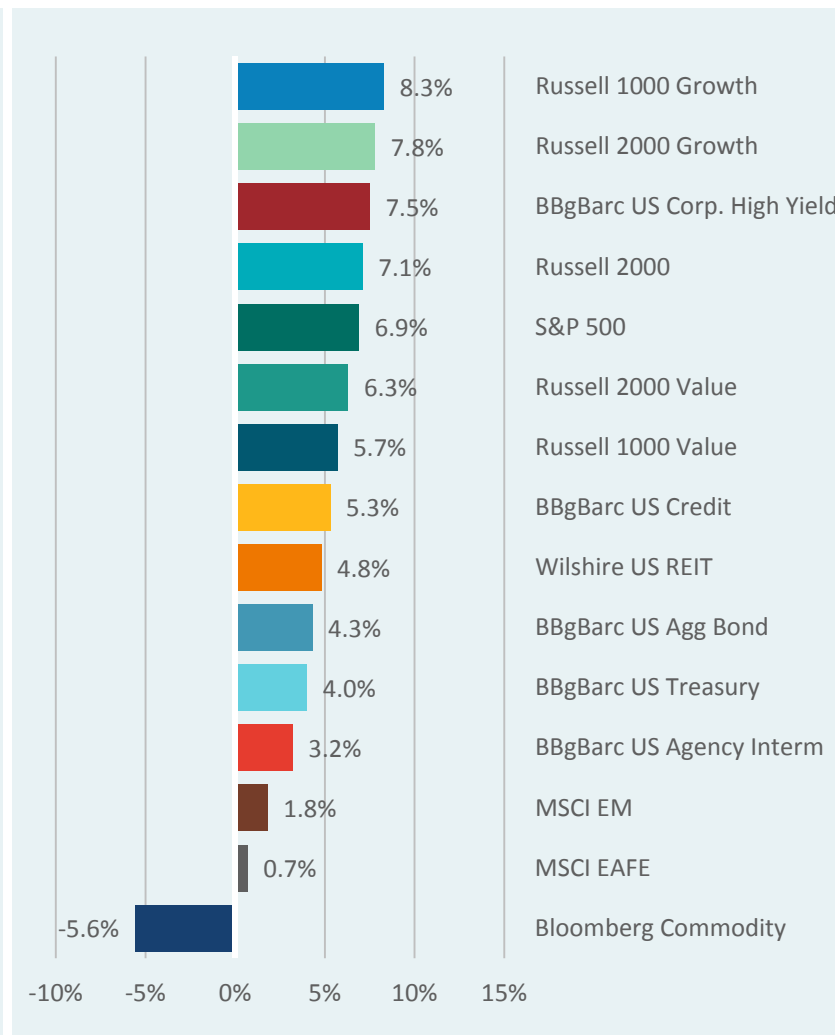
# Major asset class returns

ONE YEAR ENDING DECEMBER



Source: Morningstar, as of 12/31/16

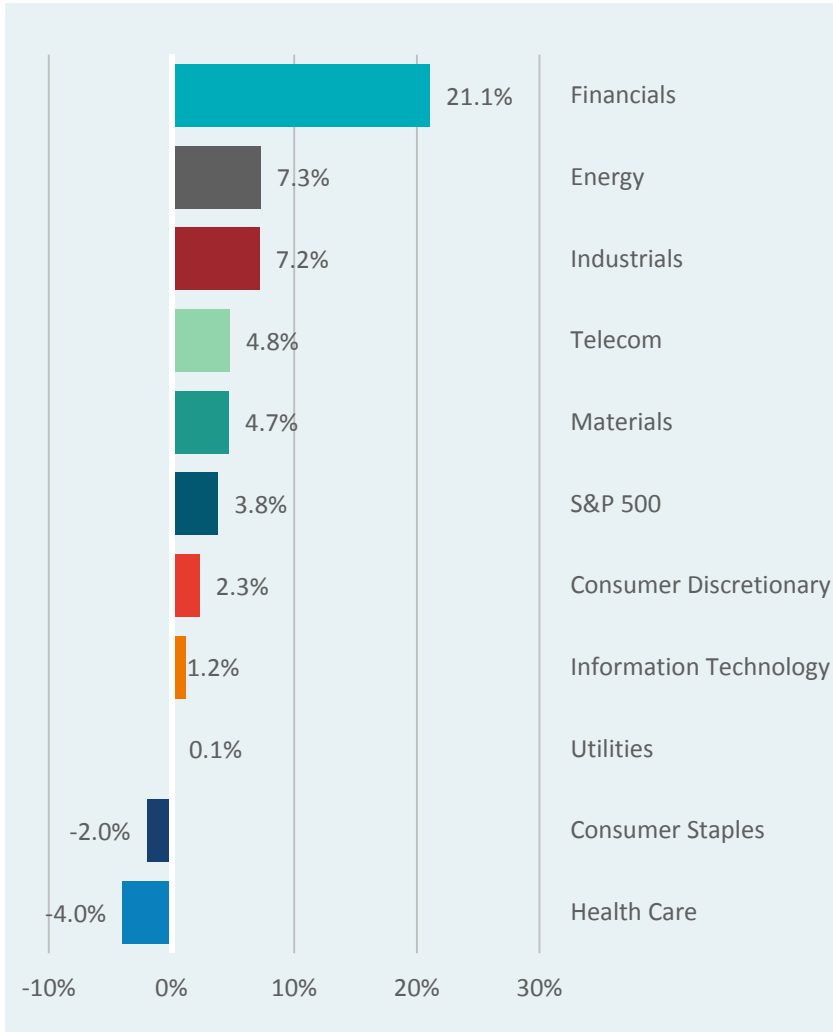
TEN YEARS ENDING DECEMBER



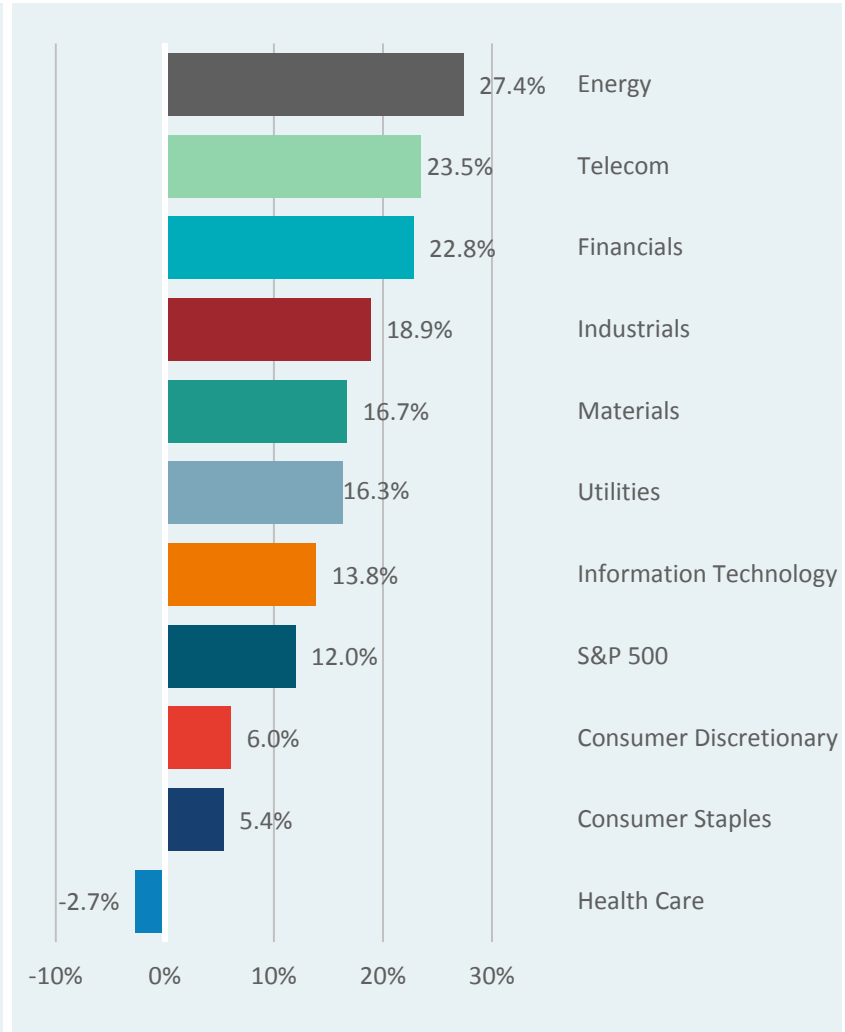
Source: Morningstar, as of 12/31/16

# S&P 500 and S&P 500 sector returns

4<sup>TH</sup> QUARTER



ONE YEAR ENDING DECEMBER



Source: Morningstar, as of 12/30/16

Source: Morningstar, as of 12/30/16

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	2.0	3.8	12.0	12.0	8.9	14.7	6.9
S&P 500 Equal Weighted	1.1	3.8	14.8	14.8	8.7	15.5	8.4
DJ Industrial Average	3.4	8.7	16.5	16.5	8.7	12.9	7.5
Russell Top 200	2.2	4.1	11.3	11.3	8.9	14.7	6.8
Russell 1000	1.9	3.8	12.1	12.1	8.6	14.7	7.1
Russell 2000	2.8	8.8	21.3	21.3	6.7	14.5	7.1
Russell 3000	2.0	4.2	12.7	12.7	8.4	14.7	7.1
Russell Mid Cap	1.1	3.2	13.8	13.8	7.9	14.7	7.9
<b>Style Index</b>							
Russell 1000 Growth	1.2	1.0	7.1	7.1	8.6	14.5	8.3
Russell 1000 Value	2.5	6.7	17.3	17.3	8.6	14.8	5.7
Russell 2000 Growth	1.4	3.6	11.3	11.3	5.1	13.7	7.8
Russell 2000 Value	4.1	14.1	31.7	31.7	8.3	15.1	6.3

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	2.2	1.2	7.9	7.9	3.1	9.4	3.6
MSCI ACWI ex US	2.6	(1.3)	4.5	4.5	(1.8)	5.0	1.0
MSCI EAFE	3.4	(0.7)	1.0	1.0	(1.6)	6.5	0.7
MSCI EM	0.2	(4.2)	11.2	11.2	(2.6)	1.3	1.8
MSCI EAFE Small Cap	2.9	(2.9)	2.2	2.2	2.1	10.6	2.9
<b>Style Index</b>							
MSCI EAFE Growth	2.2	(5.5)	(3.0)	(3.0)	(1.2)	6.7	1.6
MSCI EAFE Value	4.6	4.2	5.0	5.0	(2.1)	6.3	(0.2)
<b>Regional Index</b>							
MSCI UK	4.1	(0.9)	(0.1)	(0.1)	(4.4)	4.0	0.3
MSCI Japan	1.0	(0.2)	2.4	2.4	2.5	8.2	0.5
MSCI Euro	6.6	2.0	1.4	1.4	(3.3)	7.1	(0.6)
MSCI EM Asia	(1.4)	(6.1)	6.1	6.1	0.1	4.4	3.4
MSCI EM Latin American	0.9	(0.9)	31.0	31.0	(7.5)	(5.7)	0.3

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US Treasury US TIPS	(0.1)	(2.4)	4.7	4.7	2.3	0.9	4.4
BBgBarc US Treasury Bills	0.0	0.1	0.4	0.4	0.2	0.2	0.9
BBgBarc US Agg Bond	0.1	(3.0)	2.6	2.6	3.0	2.2	4.3
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	0.0	(0.5)	0.9	0.9	0.7	0.6	2.1
BBgBarc US Treasury Long	(0.5)	(11.7)	1.3	1.3	7.8	2.5	6.7
BBgBarc US Treasury	(0.1)	(3.8)	1.0	1.0	2.3	1.2	4.0
<b>Issuer</b>							
BBgBarc US MBS	(0.0)	(2.0)	1.7	1.7	3.1	2.1	4.3
BBgBarc US Corp. High Yield	1.8	1.8	17.1	17.1	4.7	7.4	7.5
BBgBarc US Agency Interm	(0.0)	(1.1)	1.1	1.1	1.5	1.1	3.2
BBgBarc US Credit	0.6	(3.0)	5.6	5.6	4.1	3.8	5.3

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	1.8	2.7	11.8	11.8	(11.3)	(9.0)	(5.6)
Wilshire US REIT	4.9	(2.3)	7.2	7.2	13.8	12.0	4.8
<b>Regional Index</b>							
JPM EMBI Global Div	1.3	(4.0)	10.2	10.2	6.2	5.9	6.9
JPM GBI-EM Global Div	1.9	(6.1)	9.9	9.9	(4.1)	(1.3)	3.8
<b>Hedge Funds</b>							
HFRI Composite	1.1	1.3	5.6	5.6	2.4	4.5	3.4
HFRI FOF Composite	0.9	0.8	0.5	0.5	1.2	3.4	1.3
<b>Currency (Spot)</b>							
Euro	(0.6)	(6.1)	(2.9)	(2.9)	(8.5)	(4.1)	(2.2)
Pound	(1.1)	(4.9)	(16.2)	(16.2)	(9.3)	(4.5)	(4.5)
Yen	(2.3)	(13.2)	3.1	3.1	(3.4)	(8.0)	0.2

Source: Morningstar, as of 12/31/16

# Definitions

**Bloomberg US Weekly Consumer Comfort Index** - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. ([www.lanqerresearch.com](http://www.lanqerresearch.com))

**University of Michigan Consumer Sentiment Index** - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. ([www.Bloomberg.com](http://www.Bloomberg.com))

**Citi Economic Surprise Index** - objective and quantitative measures of economic news. Defined as weighted historical standard deviations of data surprises (actual releases vs Bloomberg survey median). A positive reading of the Economic Surprise Index suggests that economic releases have on balance been beating consensus. The indices are calculated daily in a rolling three-month window. The weights of economic indicators are derived from relative high-frequency spot FX impacts of 1 standard deviation data surprises. The indices also employ a time decay function to replicate the limited memory of markets. ([www.Bloomberg.com](http://www.Bloomberg.com))

**Merrill Lynch Option Volatility Estimate (MOVE) Index** - a yield curve weighted index comprised of a weighted set of 1-month Treasury options, including 2.5.10 and 30 year tenor contracts. This index is an indicator of the expected (implied) future volatility in the rate markets. ([www.Bloomberg.com](http://www.Bloomberg.com))

**OECD Consumer Confidence Index** - based on households' plans for major purchases and their economic situation, both currently and their expectations for the immediate future. Opinions compared to a "normal" state are collected and the difference between positive and negative answers provides a qualitative index on economic conditions. (<https://data.oecd.org/>)

**OECD Business Confidence Index** - based on enterprises' assessment of production, orders and stocks, as well as its current position and expectations for the immediate future. Opinions compared to a "normal" state are collected and the difference between positive and negative answers provides a qualitative index on economic conditions. (<https://data.oecd.org/>)

**NFIB Small Business Outlook** - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (<http://www.nfib-sbet.org/about/>)

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# Glossary

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**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as:  $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$ .

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as:  $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$ .

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

February 28, 2017

Agenda Item 6.4

**TO:** Board of Retirement

**FROM:** Doris Ng, Investment Analyst 

**SUBJECT:** Report on Proxy Voting Summary for the Year Ended December 31, 2016

**Staff Recommendation**

Accept the Proxy Voting Summary Report for the year ended December 31, 2016.

**Background**

Consistent with SamCERA's Investment Policy, investment managers are delegated authority for the voting of proxies. Managers have been providing staff with quarterly reports on all proxies cast.

The summary report is a more streamlined and robust aggregation of the various reports and shows an overview of the proxy voting conducted by SamCERA's domestic and international equity managers on SamCERA's behalf for the period.

Future annual proxy voting reports will be placed on the consent agenda per the Board's direction at the June 2016 meeting.

On the summary page, the first table shows statistics of the proposals voted and how they were voted relative to management's or proxy advisor's recommendations. The majority of proposals are typically cast in favor of management's recommendations. In the second table, we drill into the proposals cast against management's or proxy advisor's recommendations by proposal type.

Details of the subset of proposals voted against management's or proxy advisor's recommendations will be provided in the day-of-folder.

**Discussion**

Staff will present the proxy voting summary report at the Board meeting.

**Attachment**

Proxy Voting Summary for Calendar Year Ended 12-31-2016

Year Ended 12/31/2016

Proxy Voting Summary Statistics

Investment Manager <sup>1</sup>	Strategy	Proposals		FOR Mgmt Rec	AGAINST Mgmt Rec	AGAINST Proxy Advisor Rec <sup>2</sup>
		Total Proposals	Not Voted			
Baillie Gifford	International Growth	1,067	22	963	82	0
Barrow Hanley	Large Cap Value	797	0	761	36	0
Passive Core	S&P 500, EAFE	18,473	254	17,494	725	0
Brown Advisory	Large Cap Growth	377	0	337	40	0
Chartwell	Small Cap Growth	427	11	390	26	1
Fidelity Institutional Asset Management	International Small Cap	2,950	286	2,499	165	0
Mondrian <sup>3</sup>	International Value	870	10	824	36	8
Mondrian <sup>3</sup>	Emerging Markets Equity Fund, L.P.	953	1	827	125	10
The Boston Company	Small Cap Value	887	0	791	96	7
Quantitative Management Associates	Small Cap Core	95	0	89	6	0
<b>Grand Total</b>		<b>26,896</b>	<b>584</b>	<b>24,975</b>	<b>1,337</b>	<b>26</b>

<sup>1</sup> Note: Information not available for investment managers, D.E. Shaw and Eaton Vance Parametric, as related to the Large Cap Core 130/30 and Emerging Markets Core Equity portfolios, respectively.

<sup>2</sup> Information not available or applicable for all managers.

<sup>3</sup> Voting rationale provided for only select proposals voted against management and/or proxy advisor due to manual process.

Votes Against Management or Proxy Advisor

Summary	Investment Manager										Grand Total
	Baillie Gifford	Barrow Hanley	Fidelity Institutional Asset Management	Mondrian	The Boston Company	Passive Core	Chartwell	Brown Advisory	Quantitative Management Associates		
Boards and Directors	3	23	107	4	42	394	15	18	1		607
Capital Structure, Mergers, Asset Sales and Other Special Transactions	30		8	14		120	1		1		174
General Corporate Governance Matters	36	3	9	4	6	74	1	11			144
Remuneration and Benefits	13	6	41	7	45	137	10	6	4		269
Social, Ethical and Environmental Issues		4						4			8
Auditors and Audit-Related Issues				1				1			2
<b>Grand Total</b>	<b>82</b>	<b>36</b>	<b>165</b>	<b>30</b>	<b>93</b>	<b>725</b>	<b>27</b>	<b>40</b>	<b>6</b>		<b>1,204</b>

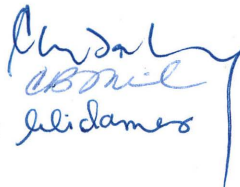
**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

February 28, 2017

Agenda Item 7.1

**TO:** Board of Retirement

**FROM:** Tat-Ling Chow, Finance Officer  
Chezelle Milan, Senior Accountant  
Lilibeth Dames, Investment Analyst



**SUBJECT:** Preliminary Financial Statements for the Six-Month Period Ended December 31, 2016.

**Staff Recommendation**

Accept the Preliminary Financial Statements for the Six-Month Period Ended December 31, 2016.

**Background**

The preliminary financial statements provide financial information on SamCERA's financial position as of December 31, 2016, and its operating results for the six-month period ended December 31, 2016.

The *Statement of Fiduciary Net Position* (balance sheet) provides a snapshot of the account balance as of December 31, 2016. This Statement indicates the amount of fiduciary net position (total assets minus total liabilities) available to pay future pension benefits. Over time, increases and decreases in net position may serve as a useful indicator of whether the financial health of SamCERA is improving or declining. Other factors, such as market conditions, should also be considered in measuring SamCERA's overall financial health.

The *Statement of Changes in Fiduciary Net Position* (income statement) reports additions to, and deductions from, SamCERA's fiduciary net position for the six-months ended December 31, 2016. "Additions" consist of contributions from plan sponsors and members, investment income net of investment expenses, securities lending income net of related expenses, and other additions. "Deductions" include member benefits, member refunds, administrative and other expenses.

**Summary**

SamCERA's financial position improved modestly over the six-months ended December 31, 2016. Its net position increased \$169 million, or 5%, to \$3.7 billion, fueled mainly by an appreciation of investments.

## Statement of Fiduciary Net Position

The table below shows SamCERA's preliminary Statement of Fiduciary Net Position as of December 31, 2016. Its assets and liabilities as of December 31, 2016, were compared to those as of July 1, 2016, to reflect changes over the first half of the fiscal year. Significant changes are discussed below.

	Preliminary	Actual	Increase (Decrease)	
	12/31/16	7/1/16	Amount	Percentage
<b>ASSETS:</b>				
Cash and Cash Equivalents	\$ 117,070,904	\$ 130,111,362	\$ (13,040,458)	-10%
Cash Management Overlay	20,015,809	26,249,148	(6,233,339)	-24%
Securities Lending Cash Collateral	2,568,634	88,363,269	(85,794,635)	-97%
Subtotal - Cash and Other Cash Related Activities	139,655,347	244,723,779	(105,068,432)	-43%
Receivables				
Contributions	-	7,812,557	(7,812,557)	-100%
Due from Broker for Investments Sold	1,439,113	9,809,813	(8,370,700)	-85%
Investment Income	4,370,555	4,886,171	(515,616)	-11%
Securities Lending Income	6,990	26,788	(19,798)	-74%
Other Receivable	99,875	100,028	(153)	0%
Subtotal - Receivables	5,916,533	22,635,357	(16,718,824)	-74%
Prepaid Expense	7,669	7,669	-	0%
Investments at Fair Value				
Fixed Income	619,627,685	610,607,729	9,019,956	1%
Equity	1,785,293,757	1,723,373,856	61,919,901	4%
Alternatives	426,181,231	404,376,940	21,804,291	5%
Risk Parity	275,358,759	280,336,352	(4,977,593)	-2%
Inflation Hedge	460,344,676	349,680,120	110,664,556	32%
Subtotal - Investment at Fair Value	3,566,806,108	3,368,374,997	198,431,111	6%
Fixed Assets	6,124,851	5,162,123	962,728	19%
<b>TOTAL ASSETS</b>	<b>3,718,510,508</b>	<b>3,640,903,925</b>	<b>77,606,583</b>	<b>2%</b>
<b>LIABILITIES:</b>				
Investment Management Fees	2,079,785	1,807,507	272,278	15%
Due to Broker for Investments Purchased	2,447,537	7,582,018	(5,134,481)	-68%
Securities Lending Cash Collateral - Due to Borrowers	2,568,634	88,363,269	(85,794,635)	-97%
Other	687,077	1,762,634	(1,075,557)	-61%
<b>TOTAL LIABILITIES</b>	<b>7,783,033</b>	<b>99,515,428</b>	<b>(91,732,395)</b>	<b>-92%</b>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<b>\$ 3,710,727,475</b>	<b>\$ 3,541,388,497</b>	<b>\$ 169,338,978</b>	<b>5%</b>

**Assets.** SamCERA's total assets increased \$78 million, or 2%, due primarily to the following:

- Cash and cash equivalents decreased \$13 million, or 10%. The decrease was primarily caused by capital calls in private equity and private real assets.
- Securities lending cash collateral decreased \$86 million, or 97%. With the planned change in SamCERA's small cap structure from two separate accounts into one commingled account with Quantitative Management Association, small cap securities (which constituted over 50% of SamCERA's securities on loan at December 31, 2015) were removed from the securities lending program. The average amount of securities on loan was \$5.5 million as of December 31, 2016, versus \$110 million as of December 31, 2015. This change resulted in a corresponding decrease in cash collateral held for securities on loan.



- Receivables overall decreased \$17 million, or 74%. Most of the receivables from the last year were either fully paid or reversed in July 2016.
- Investments overall increased \$198 million, or 6%. The increase was mainly from new investments and an appreciation of investments. In September 2016, SamCERA poured \$85 million into its new account with State Street Global Advisors. In November 2016, the investment climate after the U.S. presidential election flourished with expectations of a more pro-business regulatory environment and the possibility of a large-scale of fiscal stimulus.

**Liabilities.** SamCERA's total liabilities decreased \$92 million, or 92%, due mainly to the following:

- Monies due to broker for investments purchased decreased \$5 million, or 68%. Most of the payables from last fiscal year were fully settled in July 2016.
- Securities lending cash collateral due to borrowers decreased \$86 million, or 97%. A significant reduction in the amount of securities on loan triggered a corresponding decline in cash collateral and related liability due to the borrowers.

#### **Statement of Changes in Fiduciary Net Position**

SamCERA's preliminary Statement of Changes in Fiduciary Net Position (income statement) for the six-months ended December 30, 2016, is presented on page 4. Additions to and deductions from the Retirement Fund for the first half year were compared to those of the same period last year. Significant changes are discussed below.

**Additions.** Total additions to the Retirement Fund during the first half year was 268 million, which was \$268 million higher than the same period last year. Significant changes were discussed below.

- "Employer contributions – Cost of Living Adjustment (COLA)" were \$7 million, or 29%, lower than the same period last year. Under a memorandum of Understanding, a portion of the COLA contributions was shifted to employees. Most members of Plans 1, 2, and 4 are required to contribute 50% of the COLA in addition to other basic and cost sharing contributions effective July 2016.
- Employer Supplemental Contribution was \$1.4 million, or 81%, higher than the same period last year. To accelerate the payoff of unfunded liabilities, employers may make supplemental contributions to the Retirement Fund. For the six months through December 2016, SamCERA recorded a \$3.1 million prepayment from the County. For the same period last year, SamCERA recorded a \$0.2 million prepayment from the County and a 1.5 million one-time supplemental contribution from the Mosquito and Vector Control District.

- Investment income overall was \$267 million, or 253%, higher than the same period last year. Expectation of future economic growth soared after the U.S. presidential election in November 2016. Net investment return for the six months ended December 31, 2016, was 4.8% versus a net investment return of -2.6% for the same period last year.
- Securities lending income was about \$94,000, or 69%, lower than the same period last year. Income from securities lending was negatively impacted by the decrease in securities on loan and changes to SamCERA's cash collateral reinvestment pool due to the adoption of Securities and Exchange Commission regulations.

**Deductions.** Total deductions from the Retirement Fund during the first half year was approximately \$98 million, which was \$6 million, or 6%, higher than the same period prior year. The increase was mainly in service retirement benefits due to an increase in the number of retirees with a relatively higher final average compensation.

	Preliminary		Actual		Increase (Decrease)	
	7/1/16 - 12/31/16	7/1/15 - 12/31/15	Amount	Percentage		
<b>ADDITIONS:</b>						
Contributions						
Employee Contribution	\$ 28,238,075	\$ 25,829,308	\$ 2,408,767	9%		
Employer Contributions - Regular	57,083,288	52,960,985	4,122,303	8%		
Employer Contributions - COLA	17,426,363	24,635,558	(7,209,195)	-29%		
Employer Supplemental Contribution	3,141,682	1,740,501	1,401,181	81%		
Subtotal - Contributions	<u>105,889,408</u>	<u>105,166,352</u>	<u>723, 56</u>	1%		
Investment Income						
Interest and Dividends	16,816,993	13,219,141	3,597,852	27%		
Net Appreciation (Depreciation) in fair value of investments	161,090,539	(99,027,996)	260,118,535	263%		
Less: Investment Expense	(16,283,743)	(19,784,625)	3,500,882	18%		
Subtotal - Investment Income	<u>161,623,789</u>	<u>(105,593,480)</u>	<u>267,217,269</u>	253%		
Securities Lending Income						
Earnings	77,701	183,333	(105,632)	-58%		
Less: Securities Lending Expenses	(34,343)	(45,634)	11,291	-25%		
Subtotal - Securities Lending Income	<u>43,358</u>	<u>137,699</u>	<u>(94,341)</u>	-69%		
Other Additions						
	159,194	161,614	(2,420)	-1%		
<b>Total Additions</b>	<b>1</b> <u>267,715,749</u>	<u>( 27,815)</u>	<u>267,843,564</u>	<b>209556%</b>		
<b>DEDUCTIONS:</b>						
Benefits						
Service Retirement Allowance	81,860,764	77,382,377	4,478,387	6%		
Disability Retirement Allowance	11,372,777	10,357,764	1,015,013	10%		
Survivor, Death and Other Benefits	365,936	341,953	23,983	7%		
Subtotal - Benefits	<u>93,599,477</u>	<u>88,082,093</u>	<u>5,517,384</u>	6%		
Refund of Member Contributions	1,603,475	1,473,570	129,905	9%		
Administrative Expense	3,092,750	3,088,338	4,412	0%		
Other Expense	81,069	68,267	12,802	19%		
<b>Total Deductions</b>	<u>98,376,771</u>	<u>92,712,268</u>	<u>5,664,503</u>	6%		
<b>Net Income</b>	<u>\$ 169,338,978</u>	<u>\$ (92,840,083)</u>	<u>\$ 262,179,061</u>	<b>282%</b>		

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

February 28, 2017

Agenda Item 7.2

**TO:** Board of Retirement

**FROM:** Tat-Ling Chow, Finance Officer  
Chezelle Milan, Senior Accountant  
Lilibeth Dames, Investment Analyst

*Tat-Ling Chow*  
*Chezelle Milan*  
*Lilibeth Dames*

**SUBJECT:** Preliminary Report on Budget-to-Actual for the six-month period ended December 31, 2016

**Staff Recommendation**

Accept the Preliminary Report on Budget-to-Actual for the six-month period ended December 31, 2016.

**Background**

SamCERA's budget covers three different areas as follows:

1. Administrative Budget – covers personnel expenses (salaries and benefits) and administrative overhead (services and supplies). The administrative budget cannot exceed the mandated limit of 0.21% of the accrued actuarial liability of the retirement fund (Government Code §31580.2(a)).
2. Technology Budget – covers expenses for computer software, computer hardware, and computer technology consulting services in support of these computer products, and is not subject to the mandated limit of 0.21% discussed above (Government Code §31580.2(b)).
3. Professional Services Budget – covers costs for actuarial consulting services, custodial services, investment management, investment consulting services, and outside legal services. (Government Code §31596.1).

**Discussion**

The mid-year budget review indicates that SamCERA's overall budget is on track as of December 31, 2016.

**Administrative Budget.** About 42% of the budgeted expenses (or \$3 million) were made during the first six months of the fiscal year. This is a good indicator that the expenses were properly managed and under control. The following table summarizes all administrative expenses with explanations for why the actual results of certain events significantly differ from the expected outcomes.



	<u>Adopted Budget Through 6/30/17</u>	<u>Actual Expense Through 12/31/16</u>	<u>% of Budget Used</u>	<u>Under (Above) Budget</u>	<u>% of Budget Remaining</u>
<b>Salaries and Benefits</b>					
Salaries	\$ 3,352,710	\$ 1,339,135	40%	\$ 2,013,575	60%
Benefits	1,686,813	672,037	40%	1,014,776	60%
<b>Total Salaries and Benefits</b>	<b>5,039,523</b>	<b>2,011,172</b>	<b>40%</b>	<b>3,028,351</b>	<b>60%</b>
<b>Services and Supplies</b>					
Board Expense	10,500	3,300	31%	7,200	69%
Insurance	80,000	43,611	55%	36,389	45%
Medical record and hearing service	50,000	30,405	61%	19,595	39%
Member Education	60,000	36,072	60%	23,928	40%
Education and Conference	137,800	39,876	29%	97,924	71%
Transportation and Lodging	205,500	27,301	13%	178,199	87%
Property and Equipment	43,000	6,668	16%	36,332	84%
General Office Supplies	45,000	16,871	37%	28,129	63%
Postage and Printing	70,000	22,080	32%	47,920	68%
Leased Facilities	575,000	295,200	51%	279,800	49%
County Services	397,900	266,203	67%	131,697	33%
Audit Services	52,500	44,147	84%	8,353	16%
Other Administration	55,000	2,631	5%	52,369	95%
<b>Total Services and Supplies</b>	<b>1,782,200</b>	<b>834,365</b>	<b>47%</b>	<b>947,835</b>	<b>53%</b>
<b>Total</b>	<b>\$ 6,821,723</b>	<b>\$ 2,845,537</b>	<b>42%</b>	<b>\$ 3,976,186</b>	<b>58%</b>

*Salaries and Benefits* – Total expenses were \$2 million, which was in line with the mid-year expectation.

*Services and Supplies* – Total expenses were \$0.8 million, which is closely in sync with the mid-year expectation. For the six-months ended December 30, 2016, actual expenses for most items under Services and Supplies appeared reasonable. Significant variances are identified and explained in the following:

- “Education and Conference” and “Transportation and Lodging” expenses were significantly lower than anticipated. SamCERA was actively engaged in testing the new benefit system prior to its scheduled implementation in January 2017. Most staff refrained from signing up for training, attending conferences, or traveling to remain focused on getting the testing done timely.
- Property and Equipment expenses were substantially lower than expected. Staff concentrated on implementing the new system. Plans to purchase new or replace old equipment were deferred and will be carried out before the fiscal year-end.
- Postage and Printing expenses were much less than estimated. Most of these expenses will be incurred in the second half of the fiscal year such as mailing 1099-R to members.



- County Services expenses consist of fixed fees for basic services (such as human resources and risk management) and variable fees for non-basic services. Fees for basic services were fully paid, leaving about 30% of the budget for non-basic services.
- Audit Services expenses were fully paid before the mid-year, which used up about 84% of the budgeted amount.
- Other Administration expenses were substantially lower than expected. The budgeted amount was set aside mainly for the outside professional services such as hiring a tax attorney to assist with the tax determination process. In August 2016, the Internal Revenue Services issued a favorable tax determination letter to SamCERA. Thus, the tax determination process was complete without incurring additional charges.

**Technology Expenses.** About 20% of the budgeted expenses (or \$1.2 million) were made during the first six months of this fiscal year. Below is a summary of all technology expenses along with explanations for the significant variances.

	<u>Adopted Budget Through 6/30/17</u>	<u>Actual Expense Through 12/31/16</u>	<u>% of Budget Used</u>	<u>Under Budget</u>	<u>% of Budget Remaining</u>
Computer equipment and software	\$ 200,000	\$ 4,057	2%	\$ 195,943	98%
Software license maintenance - IT infrastructure	230,340	76,177	33%	154,163	67%
Electronic content management	500,000	3,680	1%	496,320	99%
Technology infrastructure	200,000	-	0%	200,000	100%
Contract IT Services - IT Infrastructure	503,000	163,298	32%	339,702	68%
Leasehold improvements	20,000	-	0%	20,000	100%
ISD budget	150,000	-	0%	150,000	100%
Pension administration software system	4,000,000	962,728	24%	3,037,272	76%
Technology research and development	104,000	-	0%	104,000	100%
<b>Total</b>	<b>\$ 5,907,340</b>	<b>\$ 1,209,940</b>	<b>20%</b>	<b>\$ 4,697,400</b>	<b>80%</b>

- “Computer equipment and software” expenses and “Electronic content management” expenses were significantly lower than anticipated. Staff gave priority to the system implementation over other IT projects. Plans on acquiring new equipment/software and managing documents electronically were deferred.
- Leasehold improvements did not take place as expected since the plan of taking new space was called off.
- ISD budget was initially setup for network connectivity, remote access, cell phones, network backup, and other IT related services offered by the County. Management subsequently decided to record these service charges as administrative expenses effective July 2016.
- Technology research and development (R&D) budget was initially set aside for staff to capitalize on new technologies. With priority given to the system implementation, all R&D projects were deferred to the next fiscal year.

- Capital expenses of \$1 million were lower than the mid-year expectation. Staff expected actual expenses towards year-end will be closely in line with the budget after the vendors submit all the invoices.

**Professional Services Expenses.** For the six-months ended December 31, 2016, the actual professional service expenses totaled \$10 million, or 27.2 basis points. Overall expenses were closely in sync with estimated. Below is a summary of professional services expenses incurred during the first half fiscal year.

Investment Management & Other Professional Services					
Service	Fee (bps)	Projected Fee		Percentage of	
		Fiscal Year 16-17	Professional Fee Through 12/31/16	Projected Fee	Used
Investment Management	25.9	\$ 22,193,414	\$ 9,563,498		43%
Other Professional Services	1.3	952,500	473,846		50%
<b>TOTAL</b>	<b>27.2</b>	<b>\$ 23,145,914</b>	<b>\$ 10,037,344</b>		<b>43%</b>

Investment management fees are driven by contractual agreements and based on assets under management, the amount of capital committed, and/or investment performance.

Investment Management Services					
Investment	Fee (bps)	Investment		Percentage of	
		Projected Fee Fiscal Year 16-17	Management Fee Through 12/31/16	Projected Fee	Used
Total Public Equity	15.4	\$ 6,150,324	\$ 2,769,295		45%
Total Fixed Income	30.1	3,969,190	1,847,705		47%
Total Risk Parity	19.0	967,483	523,681		54%
Total Alternative Assets	80.1	8,033,508	3,358,923		42%
Total Inflation Hedge	21.0	2,924,909	968,455		33%
Total Cash Overlay	N/A	148,000	95,438		64%
<b>TOTAL</b>	<b>25.9</b>	<b>\$ 22,193,414</b>	<b>\$ 9,563,498</b>		<b>43%</b>

Other professional service charges are primarily based on contractual agreements.

Other Professional Services						
Contractor	Service	Fee (bps)	Projected Fee		Percentage of	
			Fiscal Year 16-17	Professional Fee Through 12/31/16	Projected Fee	Used
Milliman Inc.	Actuarial Consulting	0.2	\$ 117,500	\$ 87,000		74%
Segal Consulting	Actuarial Audit	N/A	35,000	-		0%
Verus Investments	Investment Consulting	0.6	450,000	225,596		50%
Northern Trust	Custodian	0.4	350,000	161,250		46%
	<b>TOTAL</b>	<b>1.3</b>	<b>\$ 952,500</b>	<b>\$ 473,846</b>		<b>50%</b>

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

February 28, 2017

Agenda Item 7.3

**TO:** Board of Retirement   
**FROM:** Scott Hood, Chief Executive Officer  
**SUBJECT:** 2017 Board-Staff Retreat Topics

**Staff Recommendation**

Provide direction to staff regarding the topics and schedule for the April 25 and 26, 2017, Board-Staff Retreat.

**Background**

This item is to give trustees another opportunity to discuss retreat topics and the schedule. The annual Board retreat is scheduled for April 25 and 26, 2017. The Board assists on setting the topics to be addressed at the retreat and provides input regarding the proposed presenters. Following this meeting, staff and consultant will begin to schedule presenters.

**Discussion**

Attached is a draft agenda that includes topics from input from the Board and topics that staff recommends. Staff believes this is a well-balanced list of topics that fits in with the amount of time planned for the retreat. If you have additional topics to suggest, please mention them during this agenda item.

The 2017 SamCERA Board-Staff Retreat is scheduled along the same lines as the 2016 retreat:

Days: Two consecutive days  
Timing: Leaves time in between speakers for discussion  
Location: In the SamCERA Boardroom on Tuesday and potentially off-site on Wednesday  
Speakers: Draw speakers from outside professionals as well as SamCERA's consultants and staff  
Regular Business: Conduct the Board's regular monthly business during the afternoon on Tuesday of the retreat  
Dates: **Tuesday, April 25, and Wednesday, April 26.**

**Attachment**

Draft 2017 Board-Staff Retreat Agenda

*Agenda & Presenters*

# Board / Staff Retreat

April 25 & 26, 2017



San Mateo County Employees'  
Retirement Association

**BOARD / STAFF RETREAT AGENDA**  
**Day One—Tuesday, April 25, 2017**

<u>TIME</u>	<u>TOPIC AND PRESENTER</u>
9:00 a.m.	<b>Welcome</b> Presenter: Scott Hood, SamCERA Chief Executive Officer
9:05 a.m.	<b>High Level Look at the Global Economy</b> Presenter: Ian Toner, Managing Director, Verus Investments
10:05 a.m.	<b>Open Discussion</b>
10:30 a.m.	<b>Team Building Exercise</b> Lead by: Gladys Smith, SamCERA Assistant Executive Officer
10:45 a.m.	<b>Deep Dive</b> Led by Mike Coultrip. Assess longer-term drivers of fund returns and risks. Investigate longer-term manager performance and other characteristics vs indexes and peer groups. Review Risk Dashboard. Presenters: Michael Coultrip, SamCERA Chief Investment Officer and Margaret Jadallah, Verus
12:00 p.m.	<b>Lunch</b>
12:45 p.m.	<b>Actuarial Topic of Interest: Assumed Rate of Return, Assumptions</b> Presenters: Nick Collier, Milliman
1:45 p.m.	<b>Open Discussion</b>
2:15 p.m.	<b>Break</b>
2:30 p.m.	<b>Beginning of Regular Board Meeting Agenda</b>

**BOARD / STAFF RETREAT AGENDA**  
**Day Two—Wednesday, April 26, 2017**

<u>TIME</u>	<u>TOPIC AND PRESENTER</u>
<b>9:00 a.m.</b>	<b>Risk Parity</b> Discussion of the role of Risk Parity in a Portfolio. Presenters: TBD
<b>10:15 a.m.</b>	<b>Open Discussion</b>
<b>10:30 a.m.</b>	<b>Mandated Ethics Training</b> Presenter: Brenda Carlson, SamCERA Chief Legal Counsel
<b>11:30 a.m.</b>	<b>Lunch</b> Location: TBD
<b>12:15 p.m.</b>	<b>Walk</b> (Bring your walking shoes) Lead by: Doris and Lili
<b>1:00 p.m.</b>	<b>Trends of the Fund: Liabilities, Membership and Cash Flow</b> Presenter: TBD
<b>1:45 p.m.</b>	<b>Open Discussion</b>
<b>2:15 p.m.</b>	<b>Break</b>
<b>2:30 p.m.</b>	<b>Medical Education - Trends</b> Presenter: Dr Henry Brodtkin
<b>3:00 p.m.</b>	<b>Overview of V3 Member Self Service</b> Presenter: Elizabeth LeNguyen and Colin Bishop
<b>3:30 p.m.</b>	<b>Open Discussion</b>
<b>4:00 p.m.</b>	<b>End of Retreat</b>