



# Notice of Public Meeting

## The Board of Retirement of the San Mateo County Employees' Retirement Association will meet on **Tuesday, December 6, 2016, 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**

1.1 Election of Board Secretary

**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 October 25, 2016

**4. Approval of the Consent Agenda\***

4.1 Disability Retirements

- Louann Henry
- Byron Hudson
- Rebecca Nassarre
- Alfredo Rodriguez
- Leslie Talavera

4.5 Deferred Retirements

4.6 Member Account Refunds

4.7 Member Account Rollovers

4.8 Member Account Redeposit

4.9 Approval of Extended Service Purchase Contract

4.10 Approval of Resolutions Amending  
Definitions of Compensation Earnable  
and Pensionable Compensation

4.2 Survivor Death Benefits

4.3 Service Retirements

4.4 Continuances

4.11 Approval of Questions for Annual Review of  
Brown Armstrong Accountancy Corporation

**5. Benefit & Actuarial Services**

5.1 Consideration of Agenda Items, if any, removed from the Consent Agenda

**6. Investment Services**

6.1 Report on Preliminary Monthly Portfolio Performance for the Period Ending October 31, 2016

6.2 Report on Quarterly Investment Performance Report Ended September 30, 2016

6.3 Report on Hedge Fund Absolute Return and Risk Parity Manager Annual Reviews

6.4 Approval of Implementation Plan for the Revised Asset Allocation Policy

6.5 Approval of Risk Parity Policy Benchmark Change

6.6 Approval of Issuance of Request for Proposal for Investment Consultant Services

6.7 Approval of Proposed Alternative Investments *(to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C4)*

**7. Board & Management Support**

7.1 Workshop on Delegation of Investment Activities and Direction to Staff (part 2)

7.2 Approval of Resolution Amending Board's Education Policy

# Notice of Public Meeting

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- 7.3 Approval of Special Election to Fill Vacancy on the Board of Retirement
- 7.4 Discussion of Board/ Staff Retreat Topics
- 7.5 Approval of Resolution Amending Agreement for Services of Chief Executive Officer  
(To be heard after item C3)

### 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

**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 Public Employee Performance Evaluation, in accordance with Gov. Code § 54957, Title: Chief Executive Officer
- C3 Conference with Labor Negotiator, in Accordance with Gov. Code §54957.6  
Designated Representative: Brenda B. Carlson. Employee Position: Chief Executive Officer
- C4 Approval of Proposed Alternative Investments (*Confidential Under Gov. Code §54956.81 and §6254.26 – see also item 6.7*)

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

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

Barberis, Mary	September 24, 2016	Chope Hospital
Forsythe, Robert	September 29, 2016	Sheriff's
Tolden, William	September 29, 2016	Aging & Adult Services
Ott, Gareth	October 1, 2016	Health Services
Jensen, Robert	October 7, 2016	Assessor's
Davies, Priscilla	October 9, 2016	Mental Health
Smith, Viola	October 9, 2016	Correctional Health
Souza, Irene	October 10, 2016	Chope Hospital
Lieb, Darrell	October 24, 2016	Public Works
Duwick, Joanne	October 30, 2016	Public Health
Hanners, Linda	November 4, 2016	Health & Welfare
Woodhams, Gary	November 6, 2016	Parks & Recreation
Myers, Judith	November 7, 2016	Courts
Cross, Frederick	November 19, 2016	Probation



Scott Hood, Chief Executive Officer

Posted: November 30, 2016

(\* 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.*

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SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 6, 2016

Agenda Item 1.1

**TO:** Board of Retirement



**FROM:** Scott Hood, Chief Executive Officer

**SUBJECT:** Election of Board of Retirement member to the office of Secretary.

**Staff Recommendation**

Elect a member of the Board of Retirement to fill the vacant position of Secretary.

**Background**

On September 27, 2016, the Board elected Natalie Kwan Lloyd as Secretary for the term ending June 30, 2017. The Secretary attest's the Board's resolutions and other such documents for the Board. In addition, in the Chair's and Vice Chair's absence or inability to act, the Secretary shall take the place and perform the duties of the Chair.

Natalie left her employment with the County of San Mateo on November 28, 2016, which has created a vacancy in the position of Secretary.

**Discussion**

Board regulation 2.4 provides that if a Board office becomes vacant, "the Board of Retirement shall, at its next regular meeting, elect one of its members to fill such vacancy for the remainder of the term."

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**OCTOBER 25, 2016 – REGULAR BOARD MEETING MINUTES**

1610.1 **Call to Order, Roll Call and Miscellaneous Business**

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

**Roll Call:**

*Present:* Mark Battey, Ben Bowler, Paul Hackleman, Kurt Hoefer, Natalie Kwan Lloyd, Susan Lee (for David Spinello) Eric Tashman and Shirley Tourel.

*Excused:* Sandie Arnott and David Spinello.

*Alternates present:* Alma Salas.

*Staff:* Scott Hood, Michael Coultrip, Brenda Carlson, Gladys Smith, Doris Ng, and Kristina Perez.

*Consultants:* Margaret Jadallah, and Stephen Quirk (*Verus*); Ashley Casey (*Brown Armstrong*).

1610.1.1 **Administration of Oath of Office to Ben Bowler:** Shirley Tourel, Assistant Controller, administered the oath of office to Ben Bowler (Fifth Member) who was appointed on June 6, 2016, by the San Mateo County Board of Supervisors to serve on the Board of Retirement.

1610.1.2 **Announcement of Appointment of Board Committees:** Mr. Hackleman announced the following appointments to Board committees:

Audit Committee: Susan Lee, Kurt Hoefer, Sandie Arnott and Shirley Tourel, Chair.

Investment Committee: Natalie Kwan-Lloyd, Alma Salas, Eric Tashman and Ben Bowler, Chair.

Ad Hoc Education Committee: David Spinello, Shirley Tourel, Ben Bowler and Mark Battey, Chair.

Ad Hoc CEO Review Committee: Mark Battey, Alma Salas and Sandie Arnott, Chair.

1610.2.1 **Oral Communications from the Board:** None.

1610.2.2 **Oral Communications from the Public:** None.

1610.3.1 **Approval of Board Meeting Minutes from September 27, 2016:** Mr. Hackleman asked if there were any changes or corrections to the minutes from September 27, 2016 and none were noted.

**Action:** Ms. Kwan Lloyd moved to approve the minutes from September 27, 2016; the motion was seconded by Mr. Hoefer and the motion carried with a vote of 8-0, with trustees Battey, Bowler, Hackleman, Hoefer, Kwan Lloyd, Lee (for Spinello), Tashman, and Tourel, all in favor; none opposed.

1610.4.0 **Approval of the Consent Agenda:** Mr. Hackleman asked if there were any items to be removed from the Consent Agenda, and none were requested to be removed.

**Action:** Mr. Bowler 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 Battey, Bowler, Hackleman, Hoefer, Kwan Lloyd, Lee (for Spinello), Tashman, and Tourel, all in favor; none opposed.

1610.4.1 **Disability Retirements**

- a) The Board found that Elizabeth Garcia is (1) permanently incapacitated from the performance of her usual and customary duties as Patient Services Supervisor, (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.
- b) The Board found that Araceli Terreforte is (1) permanently incapacitated from the performance of her usual and customary duties as a Physical Therapy Aide, (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.

1610.4.2 **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>
Boersig, Laura	August 4, 2016	Deferred from Sheriff's
Burke, Joy	August 27, 2016	Information Services
Burns, Dianne	August 2, 2016	Deferred from Sheriff's
Clarno, Candi	August 27, 2016	Information Services
Galay, Delia	August 13, 2016	Behavioral Health
Mattmann, Lon	September 1, 2016	Deferred from Sheriff's
Nunez, Pamela	September 1, 2016	Deferred from Tax Collector's
Quadt, Leisa	September 1, 2016	Public Safety Comm.
Reed, Mary Ellen	September 1, 2016	Deferred from Information Services
Sami, Benjamin	August 3, 2016	Correctional/Food Services
Torres, Estrellita	August 31, 2016	Superior Court
Villamor, Sixta	July 2, 2016	Deferred from Medical Center
Watson, Marian	August 27, 2016	County Counsel's Office

1610.4.3 **Continuances:**

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

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Hernandez, Aurelio	Hernandez, Ramona
Kierig, Delores Ann	Kierig, Leslie
Ramseur, Walter	Griffin, Mary
Sarzotti, Sharon	Sarzotti, James

1610.4.4 **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>
Cochran, Jessica S.	G4, Vested
McMillan-Rea, Karina	G4, Vested - Reciprocity

1610.4.5 **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>
Baldrige, Vanessa	G4, Vested
Barajas-Mejia, Blanca	G7, Non-vested
Franco, Lara	G7, Non-vested
Lambert, Charlotte	G4, QDRO Vested
Nichols, Wyndee	G7, Non-vested
Peacock, Nakeisha	P4, Non-vested
Prudente, Ana	G5, Non-vested
Valera-Clemena, Valerie	G4, Vested

1610.4.6 **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>
Asch, Rebecca	G7, Non-vested
Hernandez, Mary L.	G4, Vested
Hitchcock, Clarence	G4, Non-vested
Michaud, Jerrold	G4, Non-vested
Morrison, Lucas	G7, Non-vested
Shitanishi, Dustin	G7, Non-vested
Simpson, Nathaniel	G4, Vested

- 1610.4.7 **Member Account Redeposit:** None
- 1610.4.8 **Approval of Resolutions Amending Definitions of Compensation Earnable and Pensionable Compensation:** The Board approved a new earnings code to be effective October 9, 2016 and adopted the following resolutions: (1) a resolution defining compensation earnable, pursuant to Government Code §31461 for members who are not subject to Government Code §7522.34 and (2) a resolution defining Pensionable Compensation for members who are subject to Government Code §7522.34.
- 1610.6.1 **Preliminary Monthly Portfolio Performance Report for the Period Ended September 30, 2016:** Mr. Coultrip discussed the preliminary monthly performance report with the Board. He reported that SamCERA's net preliminary return for September 2016 was 0.7%, while the preliminary trailing twelve-month return ending September 2016 was 10.5% net. This item was informational and for discussion only, no action was taken.
- 1610.6.2 **Report on Opportunistic Credit Manager Annual Review (Brigade):** Ms. Ng reported that staff met with representatives from Brigade Capital Management on September 7, 2016, and reviewed the meeting notes with the Board. She reported there were no significant concerns identified during the annual review. This item was informational and for discussion only, no action was taken.
- 1610.6.3 **Report on Alternative Manager Annual Review (Standard Life GARS):** Mr. Coultrip reported that staff met with representatives from Standard Life on October 6, 2016, and reviewed the meeting notes with the Board. Additionally, staff met with SamCERA's other Hedge Fund /Absolute Return strategy, AQR Delta, on October 13, 2016 and that report will be presented to the Board at the December meeting. This item was informational and for discussion only, no action was taken.
- 1610.6.4 **Approval of New Asset Allocation Policy Portfolio:** Mr. Coultrip and Ms. Jadallah reviewed the 50/20/20 asset allocation recommendation from Verus with the Board. The recommendation incorporated previous discussions with the Board, and the direction given to staff and Verus over the past few months.  
**Action:** Mr. Battey moved to approve the 50/20/20 asset allocation policy as recommended, and the motion was seconded by Mr. Bowler. The motion carried with a vote of 8-0, with trustees Battey, Bowler, Hackleman, Hoefer, Kwan Lloyd, Lee (for Spinello), Tashman and Tourel all in favor; none opposed.
- 1610.6.5 **Approval of Resolution Amending the Investment Policy:** Mr. Coultrip summarized the proposed changes to SamCERA's Investment Policy Statement, which will memorialize the Board's actions implemented since the Investment Policy was last revised in January 2016.  
**Action:** Mr. Hoefer moved to adopt a resolution amending the SamCERA Investment Policy as proposed, and the motion was seconded by Mr. Battey. The motion carried with a vote of 8-0, with trustees Battey, Bowler, Hackleman, Hoefer, Kwan Lloyd, Lee (for Spinello), Tashman and Tourel all in favor; none opposed.
- The meeting was adjourned for a break from 11:04 a.m. until 11:13 a.m.
- 1610.7.1 **Acceptance of Financial Audit Management Reports and Findings:** Ms. Chow introduced Ashley Casey, from Brown Armstrong, who reviewed the independent financial audit performed by Brown Armstrong for the fiscal year ending June 30, 2016. She outlined the process and outcome of the audit and stated that SamCERA's audit has received an unqualified (clean) opinion and there were no instances of non-compliance. Mr. Andrew Paulden joined the meeting by phone, and concurred with Ms. Casey's report. With no objections, the audit report and findings were accepted by the Board.

- 1610.7.2 **Approval of SamCERA's 2016 Comprehensive Annual Financial Report (CAFR):** Ms. Chow provided an oral report on the highlights of the CAFR, noting that SamCERA's funded status increased to 83.1%.  
**Action:** Mr. Tashman moved to approve SamCERA's Comprehensive Annual Financial Report (CAFR) for the fiscal year that ended June 30, 2016. The motion was seconded by Ms. Tourel and carried with a vote of 8-0, with trustees Battey, Bowler, Hackleman, Hoefer, Kwan Lloyd, Lee (for Spinello), Tashman and Tourel all in favor; none opposed.
- 1610.7.3 **Workshop on Delegation of Investment Activities and Direction to Staff:** Mr. Hood and Mr. Coultrip followed up on last month's agenda item on governance, with an additional discussion on the delegation of investment activities, including manager selection. The discussion between staff, Verus and Board members was comprehensive and the topics included: the past and future role of the investment committee; manager selection criteria; different levels of delegation for different asset classes; transparency; monitoring and annual reviews; and delegating implementation. This item was informational and for discussion only, no action was taken.
- The meeting was adjourned for lunch at 12:29 p.m. and the meeting was reconvened at 1:04 p.m.
- 1610.7.4 **Discussion of SACRS Business Meeting Topics:** Mr. Hood discussed the topics of the upcoming SACRS business meeting to be held during the SACRS Fall Conference, on November 11, 2016, in Indian Wells. The Board previously designated Trustee David Spinello as the Voting Delegate, with Scott Hood as the Alternate Voting Delegate. This item was informational and for discussion only, no action was taken.
- 1610.7.5 **Approval of Board of Retirement Meeting Schedule for 2017:** Ms. Smith reviewed the proposed calendar for the 2017 Board meetings. She noted the schedule was similar to the 2016 schedule, with the exception of October, when the meeting would be held on the fifth Tuesday, to accommodate time needed to finalize the CAFR.  
**Action:** Ms. Tourel moved to approve the 2017 schedule of meetings for the Board of Retirement. The motion was seconded by Mr. Battey and carried with a vote of 8-0, with trustees Battey, Bowler, Hackleman, Hoefer, Kwan Lloyd, Lee (for Spinello), Tashman and Tourel all in favor; none opposed.
- 1610.8.1 **Chief Executive Officer's Report:** Mr. Hood reported staff has been busy with the PASS project, the CAFR, and the audit, and thanked all the staff involved in those endeavors. He reported that the contribution rates had been forwarded to the Board of Supervisors; and announced staff training scheduled in early November. He also previewed items that would appear on next month's meeting agenda including the annual review of the auditor, the CEO review, and a discussion of topics for the retreat.
- 1610.8.2 **Assistant Executive Officer's Report:** Ms. Smith reported SamCERA's benefits staff participated in the County Benefits Fair; and she stated that the internal control audit of the PASS program is ongoing. She noted there was a spike in attendance for Financial Knowledge Network classes due to an improvement in the way class offerings were listed for County employees, on the County's Learning Management System (LMS). Ms. Smith let the Board know staff has been busy with user acceptance testing on the PASS project, and staff training is expected to begin at the end of November.
- 1610.8.3 **Chief Investment Officer's Report:** Mr. Coultrip reported the investment in State Street had been implemented as of October 7, 2016, and thanked staff that assisted. He notified the Board of the annual review of private equity and private real assets that is scheduled for November 17, 2016.
- 1610.8.4 **Chief Legal Counsel's Report:** None.



**CLOSED SESSION**

C1 **Consideration of Disability Items, if any, Removed from the Consent Agenda:** None.

1610.9 **Report on Actions Taken in Closed Session:** None.

1610.10 **Adjournment:** Mr. Hackleman adjourned the meeting at 1:14 p.m. in memory of the deceased members listed below.

Artigues, Raymond	September 8, 2016	Chope Hospital
Hansen, Jay	September 11, 2016	Engineer & Road Dept.
Holl, Theodore	September 14, 2016	Public Works
Alota, Richard	September 24, 2016	Hospital
Benson, Harold	September 27, 2016	General Services

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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**

December 6, 2016

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 **LouAnn Henry** is (1) permanently incapacitated for the performance of her usual and customary duties as a Rehabilitation Production Supervisor I, (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 **Byron Hudson** is (1) permanently incapacitated for the performance of his usual and customary duties as a Case Management/Assessment Specialist II, (2) find that his disability was the not the result of an injury arising out of and in the course of his employment and (3) grant his application for a non-service-connected disability retirement.
- c) The Board find that **Rebecca Nassarre** is (1) permanently incapacitated for the performance of her usual and customary duties as a Social Worker III and (2) find that her disability was not a result of an injury/illness arising out of and in the course of her employment, (3) deny her application for a service-connected disability and (4) grant her a non-service-connected disability retirement.
- d) The Board find that **Alfredo Rodriguez** is (1) permanently incapacitated for the performance of his usual and customary duties as a Deputy Sherriff, (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.
- e) The Board (1) accept the proposed findings and recommendations of the Hearing Officer, John Rosenthal, (2) find that **Leslie Talavera** is permanently incapacitated for the performance of her usual and customary duties as a Health Benefits Analyst II, (3) find that her disability was not a result of an injury arising out of and in the course of her employment, (4) deny her application for a service-connected disability retirement and (5) grant her a non-service-connected disability retirement.

#### **4.2 Survivor Death Benefits**

- a) The Board find that **Richard Alota**, would have been entitled to a non-service connected disability but has died and Claire Alota, the surviving spouse, has elected to receive an optional death allowance pursuant to Government Code § 31781.1.

#### **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>
Borg, Abigail	September 7, 2016	Deferred from Probation
Boscono, Linda	September 13, 2016	Deferred from Assessor's
Burns, Candy	October 22, 2016	Human Resources
Bushwalter, Eliana	October 1, 2016	Family Health Services
De Leon, Florinda	October 1, 2016	Human Resources
Espinoza, Eileen	October 29, 2016	Probation
Gibson, Pamela	October 1, 2016	Human Resources
Gludemans, Paulette	September 7, 2016	Human Services Agency
Gostisha, Sheila	October 20, 2016	Parks
Holland, Philip	September 12, 2016	Deferred from Medical Center
Humphrey, Freeman	October 1, 2016	Behavioral Health
Lake, Eufemia	October 1, 2016	Behavioral Health
Magsino, Editha	October 1, 2016	Medical Center
Magura, Melody	October 1, 2016	Sheriff's
Mar, Andy	November 1, 2016	Sheriff's
Maynard, Donald	September 30, 2016	County Manager's Office
McClain, Helen	September 24, 2016	Human Services Agency
Meyers, Beverley	September 16, 2016	Deferred from District Attorney
Noah-Bear, Nancy	September 9, 2016	Human Services Agency
Rivera, Robert	September 4, 2016	Deferred from Probation
Ruiz, Milton	September 9, 2016	Deferred from Medical Center
Simonsen, Linda	September 30, 2016	Behavioral Health

#### **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>
Alota, Claire	Alota, Richard
Artigues, Irene	Artigues, Raymond
Holl, Carolyn	Holl, Theodore
Kinsey, Janae	Lawrence, Tonya
Ott, Emily	Ott, Gareth

#### **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>
Bixler, Jonathan D.	G4, Vested - Reciprocity
Bols, Johannes H.	G4, Vested
Clark, Ellen Myra	G4, Vested
Colston, Charles	G7, Non-vested – Reciprocity
Espera, Annie A.	G4, Vested
Goyal, Dolly E.	G4, Vested - Reciprocity
Martinez, Jessica S.	G4, Vested - Reciprocity
Miranda, Robert G.	G3, Non-vested - Reciprocity
Moorer, Jessica	G7, Non-vested - Reciprocity
Rose, Robyn B.	G3/G4, Vested - Reciprocity
Tan, Lay-Ting	G4, Vested

#### **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>
Caba, Edwin	G7, Non-vested

Contreras, Jesenia	G7, Non-vested
Ellis, Joe	G5, Non-vested
Espinoza, Francoise	G4, Vested
Flowers-Ned, Traci	G7, Non-vested
Grinner, Aisha	G4, Non-vested
Molina, Samantha	G4, Non-vested
Nunn, Lolita	G7, Non-vested
Piol, Divina	G4, 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>
Hyman, Elizabeth	S7, Non-vested
Ree, Sarah	G7, Non-vested
Stafford, Karrie	G4, Non-vested
Vasquez, Kristy	G4, Vested

#### **4.8 Member Account Redeposit**

None

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

December 6, 2016

Agenda Item 4.9

**TO:** Board of Retirement

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



**SUBJECT:** Approval of Extended Service Purchase Contract for a Redeposit Pursuant to Government Code Section 31652

**Staff Recommendation**

Approve a two-year payment period for a redeposit of retirement funds by David Sisneros pursuant to Government Code Section 31652.

**Background**

Members who leave employment may terminate their membership and withdraw their contributions and interest. Upon being rehired and returning to active SamCERA membership, the member may at any time prior to retirement, enter into a payment agreement for a period of one year to redeposit the previously withdrawn contributions and interest, along with interest that would have accrued to the account if the funds had remained on deposit.

**Discussion**

Government Code Section 31652 provides that if the repayment period is to be for a period of more than one year, it needs Board approval. David Sisneros withdrew his funds and has requested a repayment period of two years because of other pre-existing financial obligations and to avoid a financial hardship.

As the interest continues to accrue until the redeposit is complete, there is no cost to the system to extend his payment period for the additional year.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 6, 2016

Agenda Item 4.10

**TO:** Board of Retirement

**FROM:** Gladys Smith, Assistant Executive Officer 

**SUBJECT:** Resolutions Defining Compensation Earnable and Pensionable Compensation.

**Staff Recommendation**

Approve adding a new non-pensionable earnings code (089) for Relocation Allowance to be effective October 23, 2016 to: (1) Resolution defining compensation earnable, pursuant to Government Code §31461 for members who are not subject to Government Code §7522.34 and (2) Resolution defining Pensionable Compensation for members who are subject to Government Code §7522.34.

**Background**

Depending upon a member's date of hire and other factors, a member is either subject to County Employees Retirement Law ("CERL") or the Public Employees' Pension Reform Act (PEPRA). Under CERL, compensation earnable is used: (1) to calculate final compensation in order to determine a member's pension benefit and (2) to calculate the ongoing contributions to be paid by the member and the employer. For the PEPRA members, "pensionable compensation" is used for the same purposes. The Board determines which elements of compensation are to be included and which elements are not for both compensation earnable and pensionable compensation.

**Discussion**

The Controller's Office recently notified staff that it implemented a new earnings code for County employees who receive a "Relocation Allowance" commencing with the October 23, 2016 pay period. This payment consists of a one-time lump sum payment to offset expenses incurred while relocating for commencement of County employment. This one-time payment is not received by all members within the same grade or class and is not "compensation earnable" nor "pensionable compensation." This determination is reflected in the proposed resolutions.

Staff will address any specific questions that the Board may have. The attached resolutions each rescind the previous resolution and add the new earnings code to the updated resolution.

**Attachments**

Resolution Defining Compensation earnable pursuant to Government Code §31461  
Resolution Defining Pensionable Compensation pursuant to Government Code §7522.34

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**RESOLUTION 2016-\_\_**

***RESOLUTION DEFINING COMPENSATION EARNABLE  
PURSUANT TO GOVERNMENT CODE §31461 FOR MEMBERS  
WHO ARE NOT SUBJECT TO GOVERNMENT CODE §7522.34.***

**WHEREAS**, for those current members who became active members prior to January 1, 2013, and those members who became active members on or after January 1, 2013, but who are not subject to Government Code §7522.34 of the California Public Employees' Pension Reform Act, the determination of compensation earnable for remuneration earned by those members is governed by Government Code §31461; and

**WHEREAS**, Government Code §31461 provides that compensation earnable by a member means the average compensation as determined by the Board, for the period under consideration upon the basis of the average number of days ordinarily worked by persons in the same grade or class of positions during the period, and at the same rate of pay; and

**WHEREAS**, Government Code §31461 provides that this Board determine which items of remuneration earned by members shall constitute "compensation earnable"; and

**WHEREAS**, the Board has reviewed the current pay items and has determined which of those items are to be included in "compensation earnable" and which items are not to be included; and

**WHEREAS**, it is necessary for this Board from time to time to amend its determinations of compensation earnable due to changes in the compensation schedules of SamCERA employers or changes in the law and the County of San Mateo just notified this Board that when it upgraded its payroll system to Workday, some of the pay codes designations were changed; Therefore, be it

**RESOLVED**, that effective October 23, 2016, Resolution number 2016-18 is rescinded, and pursuant to Government Code §31461 as interpreted by the courts, the Board hereby makes the following determinations to be effective October 23, 2016, as to what is included in "compensation earnable" and items of remuneration that are not included:

1. Compensation earnable shall include:

Pay Code	Description
(001)	Regular hours worked
(00680)	84/12 Plan (Sheriff)
(010)	Release time with pay
(011)	Night shift differential-com dispatch
(013)	Night shift differential
(014)	Special night shift differential
(015)	Special duty hours
(019)	Charge nurse shift differential
(020)	Split shift
(021-L1)	Bilingual pay
(021-L2)	Bilingual pay



Pay Code	Description
(022)	Staffing differential
(023)	Weekend pay
(027)	On-call hours
(033)	Bomb squad [flight/observer/pilot]
(035)	Sick leave with pay
(041)	Vacation hours with pay
(043)	Holiday hours regular pay
(044)	Holiday worked at 1.5
(045)	Holiday hours worked at straight time
(045O)	Holiday hours worked at straight time-overflow
(048)	Accumulated holiday hours taken
(052)	Comp time hours used
(054)	Administrative leave
(055)	Jury duty with pay
(056)	Military-leave with pay
(057)	Education leave with pay
(058)	Other leave with pay
(059)	Disability leave with pay
(064)	Management overtime used
(080)	Uniform/tool allowance
(080A)	Uniform/tool allowance annual
(081)	Transportation allowance
(087)	Bi-weekly special pay
(088)	Miscellaneous special pay
(090)	Voluntary time off used
(093)	Furlough w/o pay used with payment of contributions
(102)	Annual in-service management administrative leave cash-outs
(104)	LTC shift differential
(104B)	LTC shift differential adjustment
(110)	Compulsory time off
(112)	Bereavement leave
(313)	LC4850 night shift differential
(315)	LC4850 special duty
(359)	LC4850 disability with pay
(502)	Admin leave cash out w/1-time deferred comp
(557)	Educational lv with pay
(827)	Special on call
(30680)	LC4850WC 84/12 plan shf

2. Compensation earnable, at a minimum, shall not include, in any case, the following pay items.

A. The following pay codes are not included:

Pay Code	Description
(007)	EH. relief nurse shift differential
(009)	E.H. relief nurse shift differential
(025)	Call back pay
(025S)	Call back pay SART nurses
(026)	Part-time double shift differential
(028)	On call EH. relief nurse
(029)	Part-time double shift differential
(037)	Layoff sick leave
(040)	Terminal vacation
(046)	Holiday hours accrued
(047)	Holiday hours accrued at 1.5
(049)	Terminal holiday pay
(050)	Terminal compensatory pay
(051)	Comp Time Earned at 1.5
(053)	Comp time earned at straight time
(060)	Absent without leave
(061)	Leave without pay
(062)	Disability leave without pay
(063)	Terminal MOT Pay
(065)	Overtime training hours
(066)	Overtime at time and one-half
(069)	Overtime special duty desk officer
(070)	Overtime special duty
(073)	Overtime special duty night shift
(075)	Overtime night shift premium hours
(076)	Rest period differential
(079)	Overtime special shift differential
(083)	Worker's compensation payment
(084)	Employee incentives
(085)	Disability payment
(086)	Taxable benefits-DP
(089)	Relocation Allowance
(091)	Terminal VTO pay
(096)	County Deferred Comp Contribution
(097)	Miscellaneous terminal pay
(098)	Miscellaneous benefit refund
(101)	LTD payments
(103)	FMLA earnings
(105)	Miscellaneous subsidies

(106)	FSLA adjustments
(106 80)	FSLA adjustment for 84/12
Pay Code	Description
(106 980-P1)	FSLA adjustment 9/80 period 1
(106 980-P2)	FSLA adjustment 9/80 period 2
(107)	Overtime at straight time
(108)	Comp hours earned at straight time (OT)
(111)	Terminal compulsory time off
(125)	Call back pay st.
(203)	Wellness Dividend
(225)	Call back pay flat rate
(383)	LC4850 worker's compensation payment
(803)	SART nurses meeting/service
(804)	SART nurses training and education

B. Payments associated with the provision of insurance benefits, or other third party payments such as professional membership dues, that are not received in cash by a member.

C. Payments by a SamCERA employer of member-required contributions to the retirement system under Government Code sections 31581.1, 31630, 31639.85 or under a memorandum of understanding (MOU) between members (or their representatives) and the SamCERA employer.

3. Pursuant to Government Code §31461(b) compensation earnable, shall not include in any case the following:

A. Any compensation determined by the Board to have been paid to enhance a member's retirement benefit under that system. That compensation may include:

(1) Compensation that had previously been provided in kind to the member by the employer or paid directly by the employer to a third party other than the retirement system for the benefit of the member, and which was converted to and received by the member in the form of a cash payment in the final average salary period.

(2) Any one-time or ad hoc payment made to a member, but not to all similarly situated members in the member's grade or class.

(3) Any payment that is made solely due to the termination of the member's employment, but is received by the member while employed, except those payments that do not exceed what is earned and payable in each 12-month period during the final average salary period regardless of when reported or paid.

B. Payments for unused vacation, annual leave, personal leave, sick leave, or compensatory time off, however denominated, whether paid in a lump sum or otherwise, in an amount that exceeds that which may be earned and payable in each 12-month period during the final average salary period, regardless of when reported or paid.

C. Payments for additional services rendered outside of normal working hours, whether paid in a lump sum or otherwise.

D. Payments made at the termination of employment, except those payments that do not exceed what is earned and payable in each 12-month period during the final average salary period, regardless of when reported or paid.

4. Pursuant to Government Code §31641(c), the terms listed above in paragraph 3 are intended to be consistent with and not in conflict with the holdings in *Salus v. San Diego County Employees Retirement Association* (2004) 117 Cal.App.4th 734 and *In re Retirement Cases* (2003)110 Cal.App.4th 426.

**BE IT FURTHER RESOLVED**, that the above listed determinations by the Board of what is included or not included in compensation earnable, shall be in effect until such time as action taken by the Board or action by the Legislature or the Courts as a matter of law requires a different determination.

\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on December 6, 2016.*

*Ayes, Trustees:*

*Noes, Trustees:*

*Absent, Trustees:*

*Abstain, Trustees:*

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*Paul Hackleman, Board Chair*  
SamCERA

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**RESOLUTION 2016-\_\_**

**RESOLUTION DEFINING PENSIONABLE COMPENSATION  
PURSUANT TO GOVERNMENT CODE §7522.34 FOR MEMBERS  
WHO ARE NOT SUBJECT TO GOVERNMENT CODE §31461**

**WHEREAS**, for those members who became active members on or after January 1, 2013, and who are subject to the California Public Employees' Pension Reform Act contained in Government Code §7522 et seq., the determination of their pensionable compensation is governed by Government Code §7522.34; and

**WHEREAS**, the pensionable compensation for those employee members who are subject to Government Code §7522.34 shall be the normal monthly rate of pay or base pay of the member paid in cash to similarly situated members of the same group or class of employment for services rendered on a full-time basis during normal working hours, pursuant to publicly available pay schedules; and

**WHEREAS**, the Board has reviewed the current pay items and has determined which of those items are to be included in "pensionable compensation" and which items are not to be included; and

**WHEREAS**, it will be necessary for this Board, from time to time, to amend its determinations of pensionable compensation due to changes made by SamCERA employers in their compensation schedules as well as changes in the law; Therefore, be it;

**RESOLVED**, that effective October 23, 2016, Resolution number 2016-19 is rescinded, and pursuant to Government Code §7522.34 as interpreted by the courts, the Board hereby makes the following determinations to be effective October 23, 2016, as to what is included in "pensionable compensation" and items of remuneration that are not included:

1. Pensionable compensation shall include:

Pay Code	Description
(001)	Regular hours worked
(00680)	84/12 Plan (Sheriff)
(010)	Release time with pay
(011)	Night shift differential-com dispatch
(013)	Night shift differential
(014)	Special night shift differential
(015)	Special duty hours
(019)	Charge nurse shift differential
(020)	Split shift

Pay Code	Description
(021-L1)	Bilingual pay
(021-L2)	Bilingual pay
(022)	Staffing differential
(023)	Weekend pay
(033)	Bomb squad [flight/observer/pilot]
(035)	Sick leave with pay
(041)	Vacation hours with pay
(043)	Holiday hours regular pay
(044)	Holiday worked at 1.5
(045)	Holiday hours worked at straight time
(048)	Accumulated holiday hours taken
(052)	Comp time hours used
(054)	Administrative leave
(055)	Jury duty with pay
(056)	Military leave with pay
(057)	Educational leave with pay
(058)	Other leave with pay
(059)	Disability leave with pay
(064)	Management overtime used
(087)	Bi-weekly special pay
(090)	Voluntary time off used
(093)	Furlough w/o pay used with payment of contributions
(104)	LTC shift differential
(104B)	LTC shift differential adjustment
(110)	Compulsory time off
(112)	Bereavement leave
(313)	LC4850 night shift differential
(315)	LC4850 special duty
(359)	LC4850 disability with pay
(557)	Educational lv with pay
(30680)	LC4850WC 84/12 plan shf

2. Pensionable compensation, at a minimum, shall not include, in any case, the following pay items.

A. The following pay codes are not included:

Pay Code	Description
(007)	E.H. relief nurse shift differential
(009)	E.H. relief nurse shift differential
(025)	Call back pay
(025S)	Call back pay SART nurses
(026)	Part-time double shift differential

Pay Code	Description
(027)	On-call hours
(028)	On call E.H. relief nurse
(029)	Part-time double shift differential
(037)	Layoff sick leave
(040)	Terminal vacation
(0450)	Holiday hours worked at straight time-overflow
(046)	Holiday Hours accrued
(047)	Holiday hours accrued at 1.5
(049)	Terminal holiday pay
(050)	Terminal compensatory pay
(051)	Comp Time Earned at 1.5
(053)	Comp time earned at straight time
(060)	Absent without leave
(061)	Leave without pay
(062)	Disability leave without pay
(063)	Terminal MOT Pay
(065)	Overtime training hours
(066)	Overtime at time and one-half
(069)	Overtime special duty desk officer
(070)	Overtime special duty
(073)	Overtime special duty night shift
(075)	Overtime night shift premium hours
(076)	Rest period differential
(079)	Overtime special shift differential
(080)	Uniform/tool allowance
(080A)	Uniform/tool allowance annual
(081)	Transportation allowance
(083)	Worker's compensation payment
(084)	Employee incentives
(085)	Disability payment
(086)	Taxable benefits-DP
(088)	Miscellaneous special pay
(089)	Relocation Allowance
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(096)	County Deferred Comp Contribution
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(225)	Call back pay flat rate
(383)	LC4850 worker's compensation payment
(502)	Admin leave cash out w/1-time deferred comp
(803)	SART nurses meeting/service
(804)	SART nurses training and education
(827)	Special on call

B. Pursuant to Government Code §7522.34, pensionable compensation does not include the following:

- 1) Any compensation determined by the Board to have been paid to increase a member's retirement benefit.
- 2) Compensation that had previously been provided in kind to the member by the employer or paid directly by the employer to a third party other than the retirement system for the benefit of the member and which was converted to and received by the member in the form of a cash payment.
- 3) Any one-time or ad hoc payments made to a member.
- 4) Severance or any other payment that is granted or awarded to a member in connection with or in anticipation of a separation from employment, but is received by the member while employed.
- 5) Payments for unused vacation, annual leave, personal leave, sick leave, or compensatory time off, however denominated, whether paid in a lump sum or otherwise, regardless of when reported or paid.
- 6) Payments for additional services rendered outside of normal working hours, whether paid in a lump sum or otherwise.
- 7) Any employer-provided allowance, reimbursement, or payment, including, but not limited to, one made for housing, vehicle, or uniforms.
- 8) Compensation for overtime work, other than as defined in Section 207(k) of Title 29 of the United States Code.



- 9) Employer contributions to deferred compensation or defined contribution plans.
  - 10) Any bonus paid in addition to the compensation described in subdivision (a) of Government Code §7522.34 .
  - 11) Any other form of compensation the Board determines is inconsistent with the requirements of subdivision §7522.34 (a).
  - 12) Any other form of compensation that this Board determines should not be pensionable compensation.
3. Pursuant to Government Code §7522.10, whenever pensionable compensation, as defined in §7522.34, is used in the calculation of a benefit, the pensionable compensation shall be subject to the monetary limitations set forth in subdivision §7522.10.

**BE IT FURTHER RESOLVED**, that the above listed determinations by the Board of what is included or not included in pensionable compensation, shall be in effect until such time as this Board, the Legislature, or the Courts take action that as a matter of law requires a different determination.

\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on December 6, 2016.*

*Ayes, Trustees:*

*Noes, Trustees:*

*Absent, Trustees:*

*Abstain, Trustees:*

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*Paul Hackleman, Board Chair*  
*SamCERA*

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

December 6, 2016

Agenda Item 4.11

**TO:** Board of Retirement

**FROM:** Gladys Smith, Assistant Executive Officer



**SUBJECT:** Annual Review of Brown Armstrong Accountancy Corporation

**Staff Recommendation**

Staff recommends the Board review, suggest changes and then approve the questions in the attached document entitled, "Questions for Annual Audit Consultant Evaluation."

**Discussion**

The questions in the attached document will be submitted to SamCERA's auditor, Brown Armstrong, prior to the annual review, which will be scheduled for the January 24, 2017 Board meeting. In addition, there will be a survey of trustees and staff regarding Brown Armstrong's performance.

Staff will provide Brown Armstrong's responses to the questionnaire as well as the survey results at the January meeting.

**Attachment**

Staff's proposed "Questions for Annual Audit Consultant Evaluation"

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

**Questions for Annual Actuarial Consultant Evaluation**

**Fiscal Year 2016-17**

**Organizational Update**

- 1) Provide an update on your firm's organization, with particular emphasis on changes to your management structure over the past twelve months. All significant changes should be accompanied by an explanation. An updated organizational chart should accompany this response.
- 2) Update all significant personnel changes or expected changes to the "SamCERA Team."
- 3) Has your firm or any of its employees been involved in regulatory or litigation actions related to your business in the past twelve months?
- 4) Has a peer review been performed on any of your firm's audit products? If yes, discuss the review and the findings. Any material findings or recommendations must be accompanied by an explanation.
- 5) Are any of your operations outsourced? If the answer is yes, provide details regarding the firm(s) with which your firm has contracted.

**Client Update**

- 6) What is your firm's philosophy and current policy regarding new business?
- 7) Please list all clients gained or lost in the past eighteen months.

**Outlook**

- 8) What issues are other clients concerned with in regards to products, services, education and governance that your staff has not addressed with SamCERA?
- 9) Are your clients making significant changes that SamCERA should be made aware?
- 10) Relative to your expertise, what trends are occurring in the retirement industry that SamCERA should be tracking?

**Conclusion**

- 11) How can SamCERA better assist you in accomplishing the goals it has established for your firm?

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

- 12) How can we better utilize your firm's capabilities?
- 13) Is there any information that would be timely pursuant to SamCERA's contract and this annual review?
- 14) What audit related changes should SamCERA consider that were not mentioned in your audit or audit presentation?

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

December 6, 2016

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 October 31, 2016

**Staff Recommendation**

Accept the preliminary performance report dated October 31, 2016.

**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 October was -1.0%, while the preliminary trailing twelve-month return ending October 2016 was 4.5% net. The twelve-month net return leads SamCERA's Total Plan Policy Benchmark return of 4.4% but is below the Actuarial Assumed Earnings Rate of 7.0%.

Most broad-based equity indices were negative on the month. The broad U.S. equity market (as measured by the S&P 500 Index) was down 1.8% on the month, while developed international equity (as measured by MSCI EAFE) was down 2.0%. Emerging markets were up slightly and returned 0.2%.

Interest rates rose higher on the month with increased market expectation of a 25 basis point rate increase by the U.S. Federal Reserve in December. Also causing higher rates were higher market-based inflation expectations. The 10-year U.S. Treasury yield increased by 24 basis points during the month with the yield ending at 1.84% by month-end.

Economic data was mostly higher on the month. The initial estimate of 3<sup>rd</sup> quarter real GDP growth was 2.9%, faster than expected and the highest level in two years. Although most of the increase is

attributed to a build-up of inventories. Manufacturing activity again improved in October, and jobs growth and unemployment continued to show modest strength.

The general U.S. fixed income market was down 0.8% during the month due to the higher rates. Credit spreads tightened again during the month, leading the high yield market higher by 0.4%, while emerging debt returned -1.2%. Commodities were lower by -0.5% during the month.

**Attachments**

- A. Verus October 2016 Capital Markets Update
- B. Northern Trust Performance Report



Verus



**PERSPECTIVES**  
**THAT DRIVE**  
**ENTERPRISE**  
**SUCCESS**

OCTOBER 2016  
Capital Markets Update

# Market commentary

## ECONOMIC CLIMATE

- The Fed chose not to raise interest rates at its October meeting, citing the need for more evidence of inflation pressure.
- Headline CPI increased 1.5% year-over-year in September, up from a 1.1% increase in August. Core CPI increased 2.2% over the previous year.
- Third quarter GDP grew by a 2.9% annualized rate over last quarter, exceeding the consensus estimate of 2.5%. Year-over-year real GDP growth was 1.5%. Personal consumption and exports were cited as the largest contributors. Private investment also contributed to growth for the first time in three quarters.
- As of November 9th, the Atlanta Fed GDPNow forecast 3.1% annualized growth for the fourth quarter.
- Nonfarm payrolls added 161,000 jobs in October, slightly below the consensus estimate of 178,000. Average hourly earnings increased 0.4% on the month, with the year-on-year rate at 2.8%.

## DOMESTIC EQUITIES

- Domestic equities provided a negative monthly return for the first time since February. The S&P 500 returned -1.8% in October.
- As of November 4<sup>th</sup>, 85% of S&P 500 companies had reported Q3 earnings, and the blended year-over-year earnings growth rate was 2.7%. If the index reports positive earnings growth, it would mark the first year-over-year earnings growth since Q1 2015.
- M&A activity picked up in October. The largest announcements included AT&T to acquire Time Warner (\$86B), Qualcomm to acquire NXP Semiconductors (\$47B) and Century Link to acquire Level 3 Communications (\$34B).

## DOMESTIC FIXED INCOME

- The Barclays U.S. Aggregate returned -0.8% in October, marking the third consecutive month of negative performance.
- The U.S. Treasury curve steepened during the month, with the 10-year minus the 2 year Treasury yield expanding from 0.83% to 0.98%. The 10-year yield ended the month at 1.84%.
- U.S. High Yield option-adjusted spreads continued their downward trend, hitting a 2016 low of 4.6% on October 25<sup>th</sup>, before rebounding slightly to end the month at 4.9%.

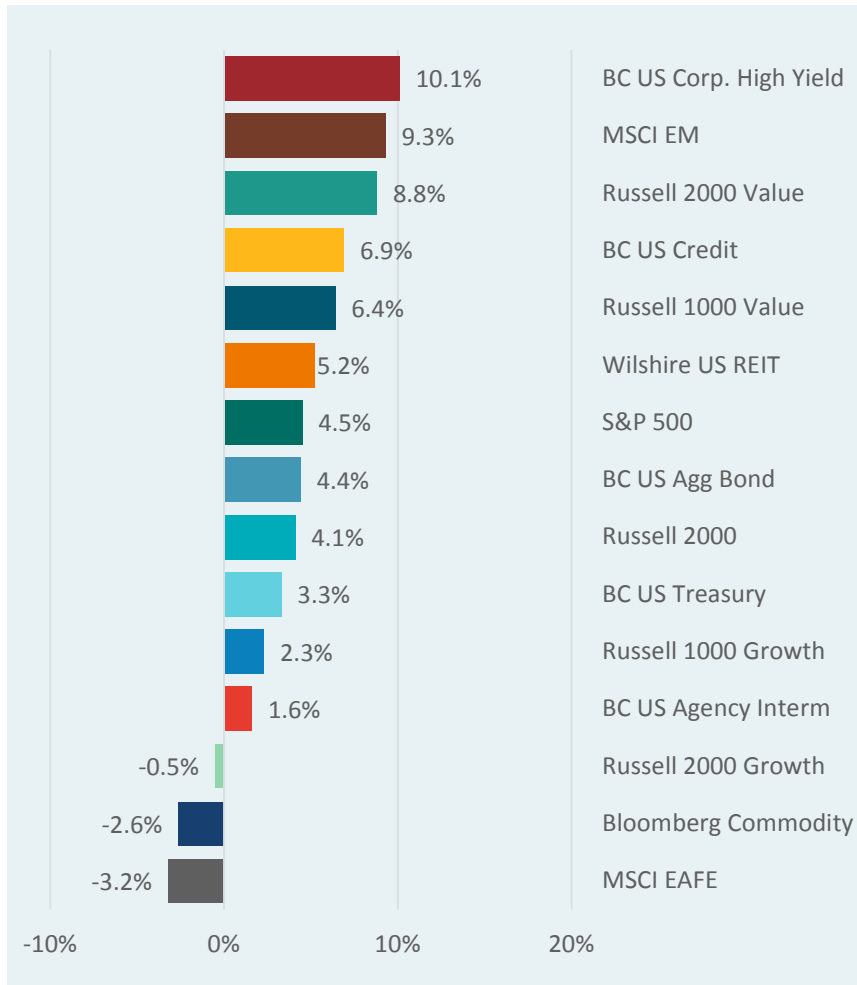
## INTERNATIONAL MARKETS

- International equity markets narrowly outperformed domestic equities (S&P 500 -1.8%) as the MSCI ACWI ex US returned -1.4%.
- The ECB left monetary policy unchanged at its October meeting, and confirmed that current monthly asset purchases of €80B will run at least through the scheduled end date of March 2017.
- The Bank of England's Monetary Policy Committee agreed to maintain its current interest rate and asset purchase programs, highlighting the growing challenge of balancing growth and rising inflation concerns.
- Chinese exports and imports for September fell -10% and -1.9%, respectively in U.S. dollar terms, well below consensus expectations. China's FX reserves dropped by \$45.7 billion to \$3.12 trillion in October as the PBOC attempted to slow the devaluation of the yuan relative to the U.S. dollar.

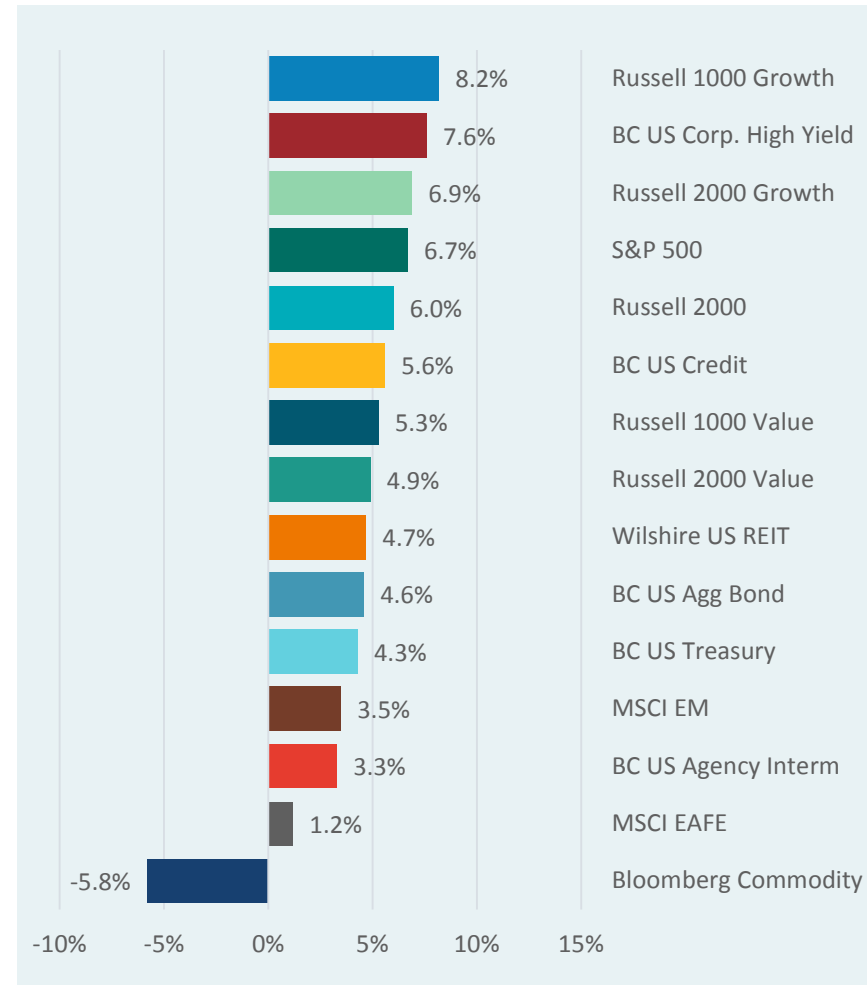


# Major asset class returns

ONE YEAR ENDING OCTOBER



TEN YEARS ENDING OCTOBER



Source: Morningstar, as of 10/31/16

Source: Morningstar, as of 10/31/16

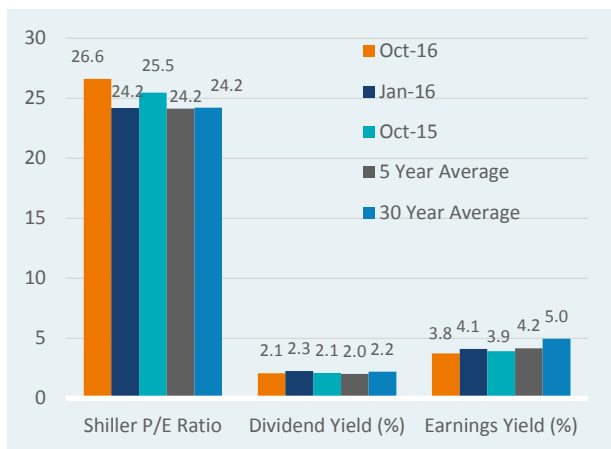
# U.S. large cap equities

- The S&P 500 returned -1.8% in October, the first negative monthly return since February.
- According to FactSet, the energy sector was the largest detractor from earnings growth for the S&P 500 in Q3. If energy was excluded, the blended earnings growth rate for the index would have increased from 2.7% to 6.0%.
- Financial stocks were the best performing sector in the

S&P 500, returning 2.3% during the month, possibly impacted by increasing expectations of a steeper yield curve. The worst performing sectors were Healthcare and Telecommunications, each returning -6.5%.

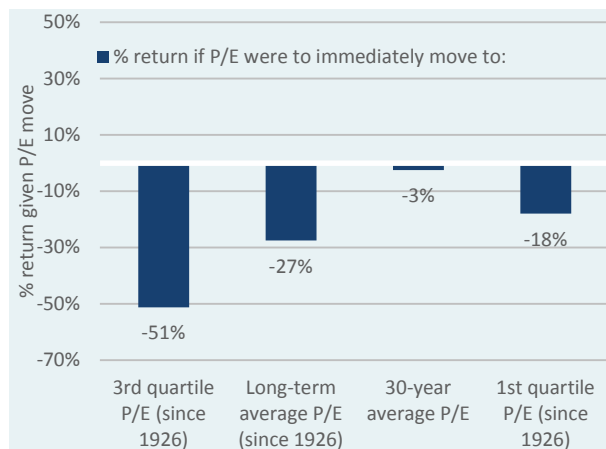
- Domestic equity valuations remain above average. The Shiller P/E ratio finished the month at 26.6, above its 30-year average of 24.2. Historically, valuations have been higher in low real rate and inflation environments, making it difficult to tell if equities are truly overvalued.

US LARGE CAP (S&P 500) VALUATION SNAPSHOT



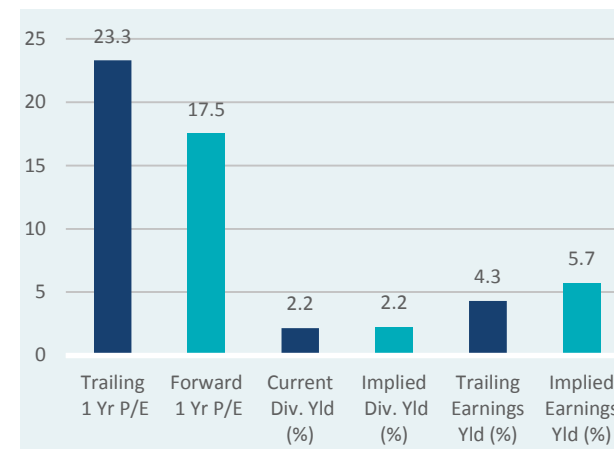
Source: Yale/Shiller, as of 10/31/16

RETURNS IF P/E MOVED TO HISTORIC LEVEL



Source: Yale/Shiller, Verus, as of 10/31/16

S&P 500 VALUATION SNAPSHOT

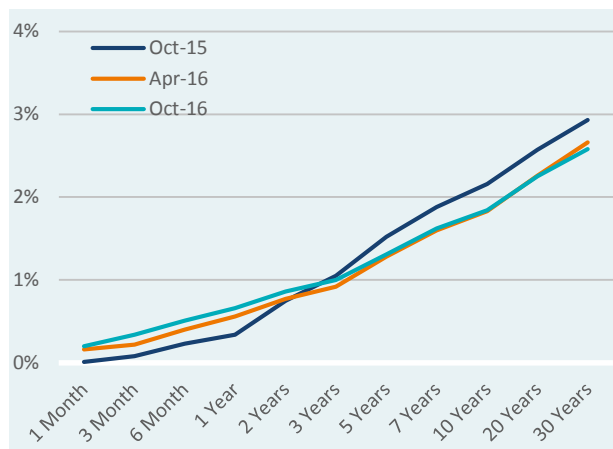


Source: Standard & Poor's, as of 10/31/16

# Fixed income

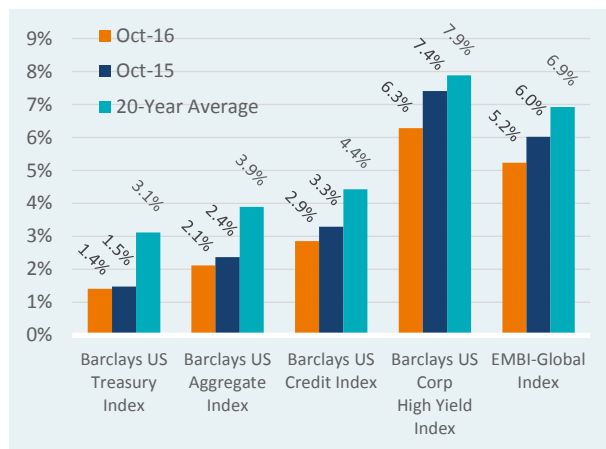
- The Barclays U.S. Aggregate returned -0.8% in October as yields moved higher throughout the fixed income market.
- Long duration strategies underperformed relative to the overall U.S. fixed income market as the yield curve steepened. The Barclays U.S. Treasury Long Index returned -4.1% in October, compared to -1.1% for the overall index .
- Market-based measures of inflation expectations increased during the month as the 5 and 10-year TIPS breakeven rates increased 14 bps and 13 bps, respectively.
- At month-end, total U.S. bond market issuance exceeded \$5.9 trillion year-to-date. That figure exceeds issuance during the same time period last year by 7.7%, as companies, federal agencies and municipalities continue to take advantage of low borrowing costs.

**U.S. TREASURY YIELD CURVE**



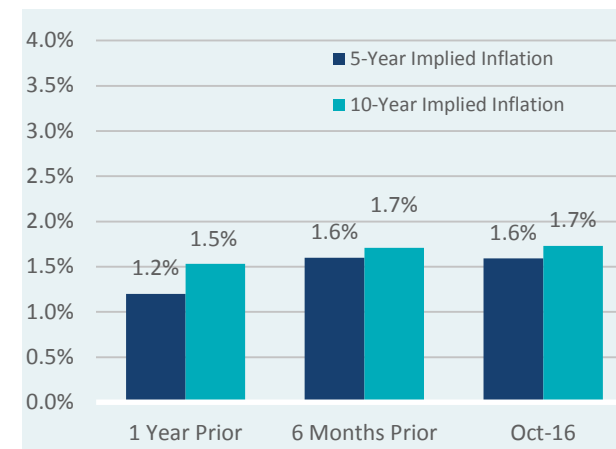
Source: Federal Reserve, as of 10/31/16

**NOMINAL FIXED INCOME YIELDS**



Source: Morningstar, as of 10/31/16

**IMPLIED INFLATION (TIPS BREAKEVEN)**

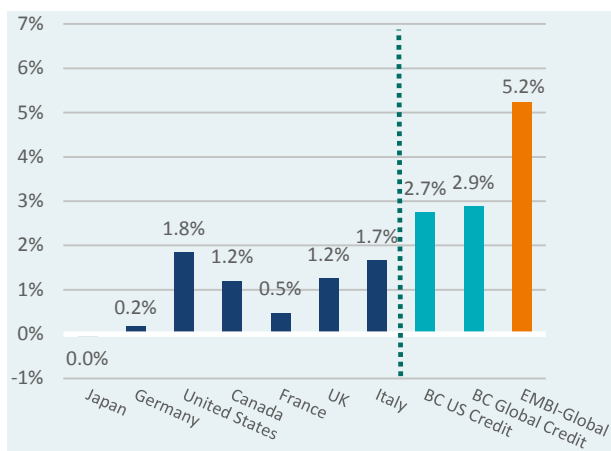


Source: Federal Reserve, as of 10/31/16

# Global markets

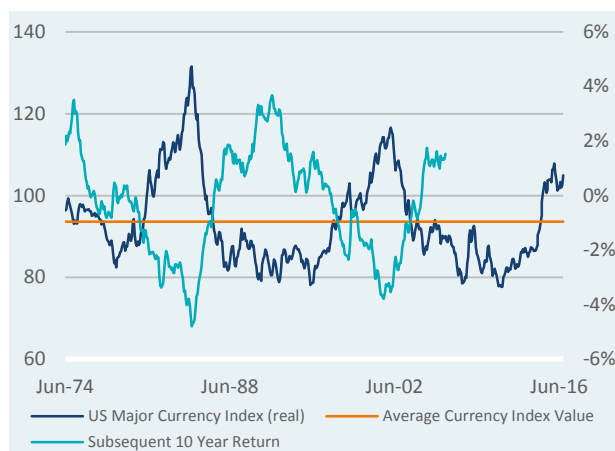
- International developed equity markets (MSCI EAFE -2.0%) underperformed both domestic equity markets (S&P 500 -1.8%) and emerging markets equity (MSCI EM +0.2%).
- Emerging market equity continued its outperformance relative to developed equities as the MSCI EM Equity Index returned 9.3% for one year ending October 31<sup>st</sup> and 16.3% year-to-date.
- Global sovereign yields rose in October, with European countries experiencing the biggest increase. The German 10-year bund yield increased by 28 bps to end the month at 0.16%, its highest rate since May of this year.
- The U.S. Dollar Major Currency Index rose 2.3% in October, finishing the month at its highest level in eight months.

**GLOBAL SOVEREIGN 10 YEAR INDEX YIELDS**



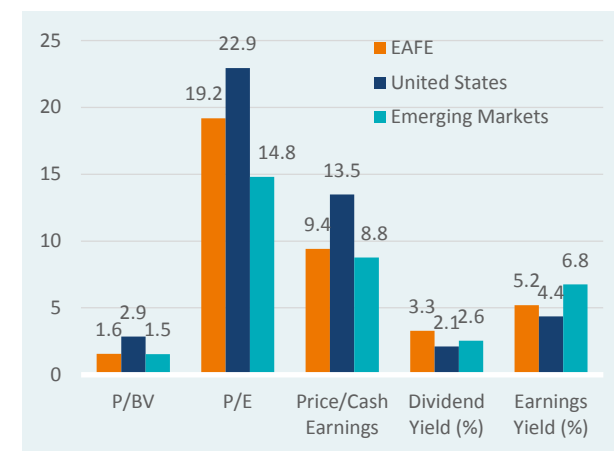
Source: Morningstar, as of 10/31/16

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



Source: Federal Reserve, as of 10/31/16

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

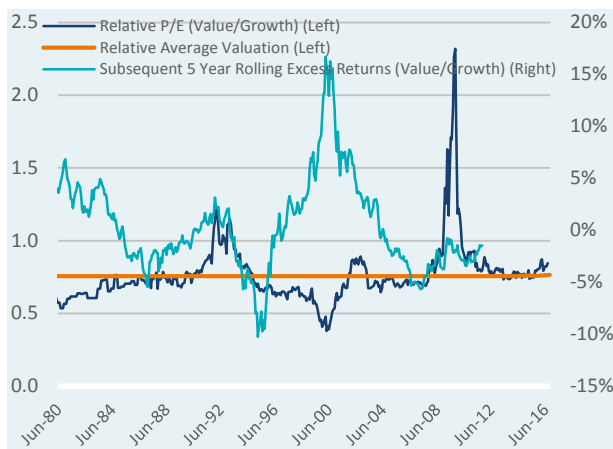


Source: MSCI, as of 10/31/16

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

- Value stocks outperformed growth stocks in October as the Russell 1000 Value Index and Russell 1000 Growth Index returned -1.5% and -2.3%, respectively. Year-to-date value stocks have outperformed by 4.8%.
- While growth equities have outperformed in the medium-term (10 years), they have underperformed value equities in both the short-term (1 year) and long-term (20 years).

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



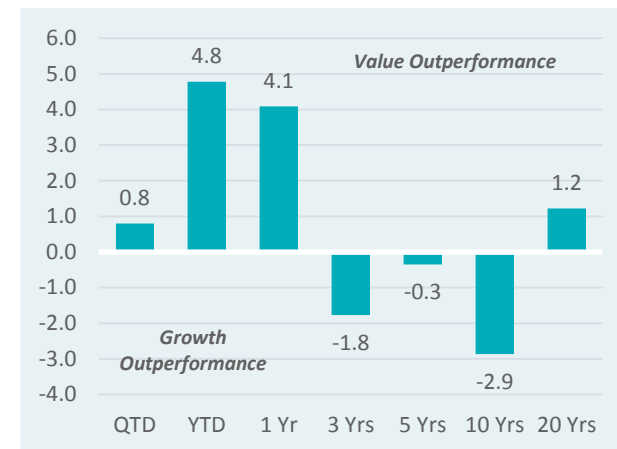
Source: Russell, Bloomberg, as of 10/31/16

U.S. VALUE VS. GROWTH ABSOLUTE PERFORMANCE

	RUSSELL 1000 GROWTH ANNUALIZED RETURN TO DATE %	RUSSELL 1000 VALUE ANNUALIZED RETURN TO DATE %
QTD	(2.3)	(1.5)
YTD	3.5	8.3
1 YEAR	2.3	6.4
3 YEARS	9.4	7.6
5 YEARS	13.7	13.3
10 YEARS	8.2	5.3
20 YEARS	7.0	8.2
	SHARPE RATIO	SHARPE RATIO
3 YEARS	0.83	0.73
5 YEARS	1.22	1.25
10 YEARS	0.54	0.36
20 YEARS	0.35	0.45

Source: Morningstar, as of 10/31/16

U.S. VALUE VS GROWTH RELATIVE PERFORMANCE

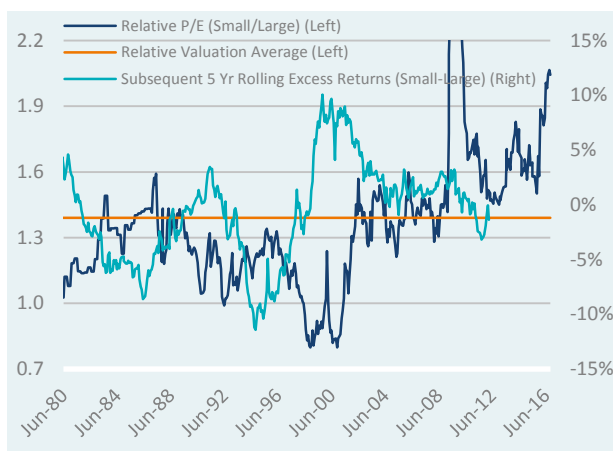


Source: Morningstar, as of 10/31/16

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

- Large cap equities outperformed small cap equities in October as the Russell 1000 and Russell 2000 returned -2.0% and -4.8%, respectively. Year-to-date small caps have outperformed by 0.3%.
- The relative valuation between large and small cap equities of 2.04 remained well above the long-term historical average of 1.39, suggesting that smaller companies are relatively overvalued.
- A stronger U.S. dollar may have influenced the outperformance of small cap equities during the month, as smaller companies are typically more isolated from foreign exchange movements.

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



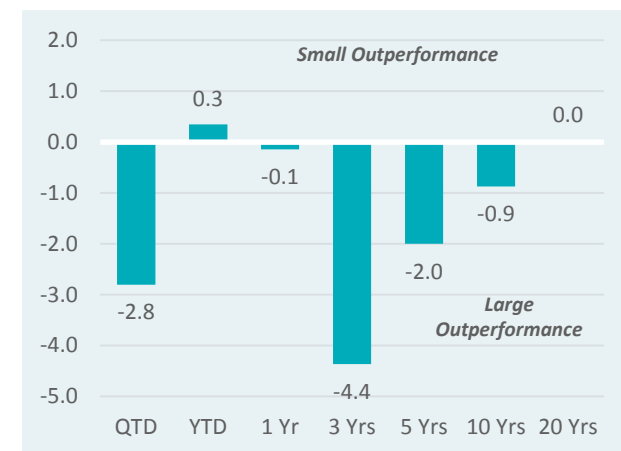
Source: Russell, Bloomberg, as of 10/31/16

U.S. LARGE VS. SMALL ABSOLUTE PERFORMANCE

	RUSSELL 1000 INDEX ANNUALIZED RETURN TO DATE %	RUSSELL 2000 INDEX ANNUALIZED RETURN TO DATE %
QTD	(2.0)	(4.8)
YTD	5.8	6.2
1 YEAR	4.3	4.1
3 YEARS	8.5	4.1
5 YEARS	13.5	11.5
10 YEARS	6.8	6.0
20 YEARS	7.8	7.9
	SHARPE RATIO	SHARPE RATIO
3 YEARS	0.80	0.34
5 YEARS	1.26	0.85
10 YEARS	0.45	0.35
20 YEARS	0.42	0.37

Source: Morningstar, as of 10/31/16

U.S. SMALL VS. LARGE RELATIVE PERFORMANCE



Source: Morningstar, as of 10/31/16

# Commodities

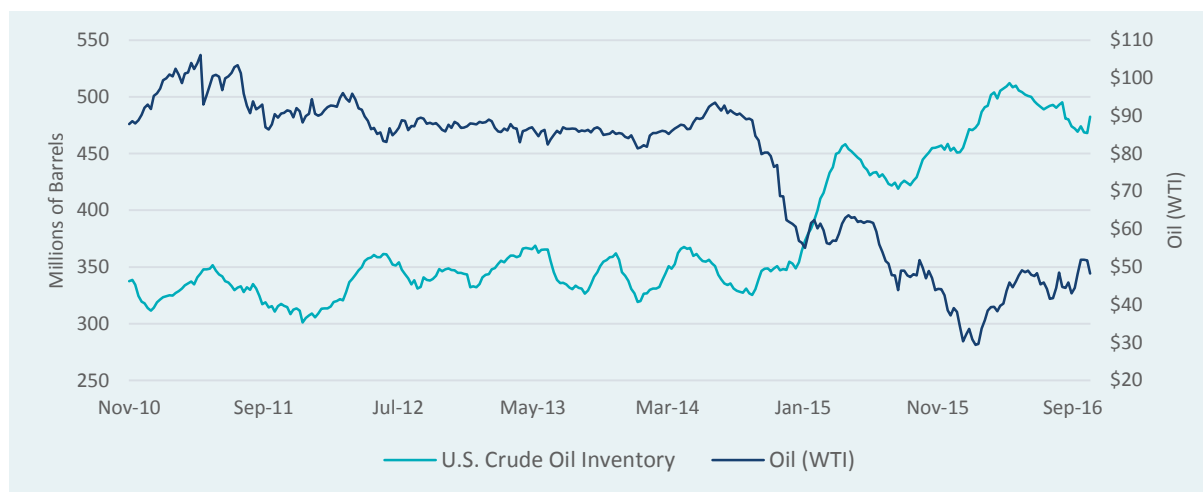
- The Bloomberg Commodity Index returned -0.5% in October.
- Precious Metals (-4.5%) and Petroleum (-3.7%) were the main detractors from the Bloomberg Commodity Index in October. Livestock (5.3%) and Grains (4.7%) were the best performing sub-sectors during the month.
- WTI Crude Oil finished the month at \$46.83 per barrel, down from a 12-month high of \$51.59 on October 19th. U.S. Crude Oil Inventory rose by 14.4 million barrels in the last week of October.
- Gold prices hit a four month low on October 7<sup>th</sup>, amid concerns over higher interest rate expectations and finished the month down -3.3% at \$1,273.10 per ounce.

## INDEX AND SECTOR PERFORMANCE

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(0.5)	8.3	(2.6)	(12.0)	(10.6)	(5.8)
Bloomberg Agriculture	3.1	7.5	3.6	(7.1)	(6.4)	0.1
Bloomberg Energy	(2.7)	2.3	(18.2)	(25.9)	(19.4)	(17.1)
Bloomberg Grains	4.7	(2.8)	(9.6)	(11.9)	(7.2)	(1.4)
Bloomberg Industrial Metals	1.3	14.5	8.1	(8.0)	(8.8)	(6.9)
Bloomberg Livestock	5.3	(17.7)	(21.2)	(10.3)	(7.4)	(9.0)
Bloomberg Petroleum	(3.7)	4.2	(20.5)	(28.3)	(17.2)	(10.3)
Bloomberg Precious Metals	(4.5)	21.7	11.5	(3.2)	(8.1)	6.1
Bloomberg Softs	(0.9)	26.3	30.2	(0.2)	(9.3)	(0.3)

Source: Morningstar, as of 10/31/16

## WTI CRUDE OIL VS. U.S. TOTAL CRUDE OIL INVENTORY



Source: Bloomberg, as of 10/31/16

# Appendix



# Periodic table of returns

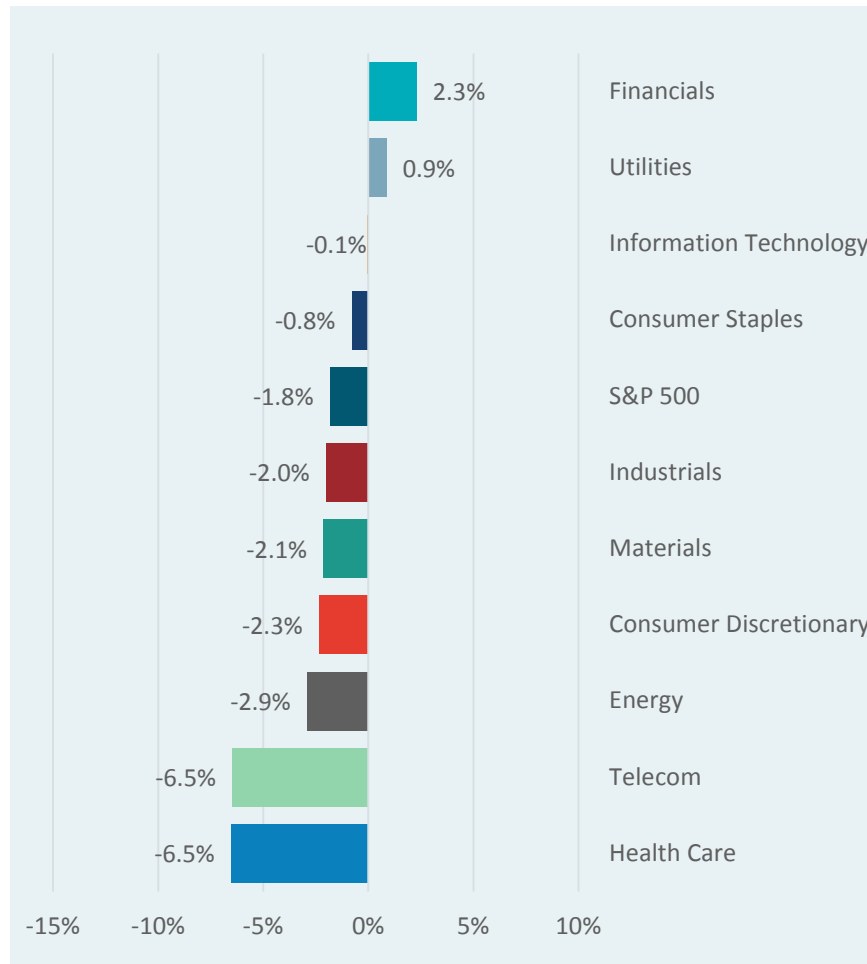
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	YTD	5-Year	10-Year
Emerging Markets Equity	74.8	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	10.1	16.3	13.7	8.2
Small Cap Value	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	11.7	13.5	7.2
Commodities	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	8.3	13.3	6.9
Large Cap Value	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	8.3	11.6	6.8
Small Cap Equity	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	6.2	11.5	6.0
Real Estate	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	6.1	11.3	5.3
Large Cap 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	5.8	11.2	4.9
60/40 Global Portfolio	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	5.7	5.3	4.6
US Bonds	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	5.0	5.0	4.1
Large Cap Growth	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	3.5	3.0	3.5
Small Cap Growth	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	0.8	2.9	1.6
Cash	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	0.2	0.5	1.2
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	-0.1	0.1	0.7
International Equity	-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	-0.4	-10.6	-5.8

- Large Cap Equity
- Small Cap Growth
- Commodities
- Large Cap Value
- International Equity
- Real Estate
- Large Cap Growth
- Emerging Markets Equity
- Hedge Funds of Funds
- US Bonds
- 60% MSCI ACWI/40% BC 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, BC Agg, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BC Global Bond. NCREIF Property Index performance data as of 9/30/16.

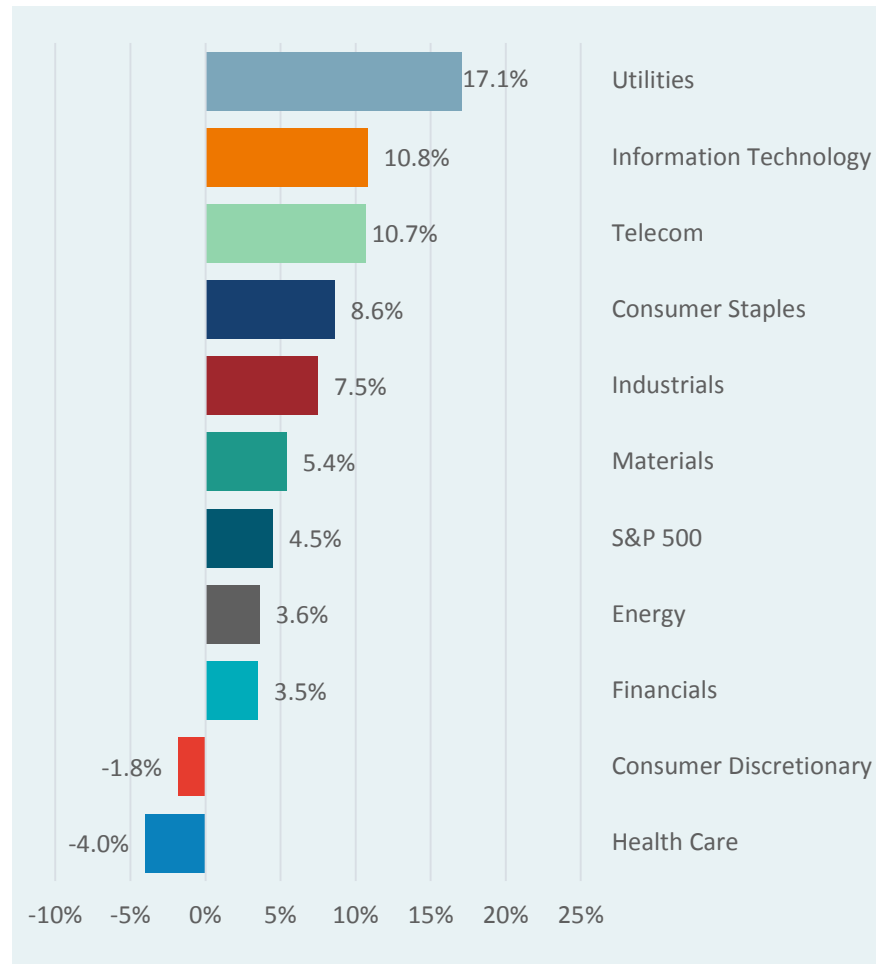
# S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 10/31/16

ONE YEAR ENDING OCTOBER



Source: Morningstar, as of 10/31/16

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	(1.8)	(1.8)	5.9	4.5	8.8	13.6	6.7
S&P 500 Equal Weighted	(2.4)	(2.4)	7.9	5.7	8.4	14.0	8.1
DJ Industrial Average	(0.8)	(0.8)	6.4	5.5	7.9	11.5	6.9
Russell Top 200	(1.5)	(1.5)	5.4	4.3	9.0	13.7	6.6
Russell 1000	(2.0)	(2.0)	5.8	4.3	8.5	13.5	6.8
Russell 2000	(4.8)	(4.8)	6.2	4.1	4.1	11.5	6.0
Russell 3000	(2.2)	(2.2)	5.8	4.2	8.1	13.4	6.8
Russell Mid Cap	(3.2)	(3.2)	6.8	4.2	7.3	13.1	7.6
<b>Style Index</b>							
Russell 1000 Growth	(2.3)	(2.3)	3.5	2.3	9.4	13.7	8.2
Russell 1000 Value	(1.5)	(1.5)	8.3	6.4	7.6	13.3	5.3
Russell 2000 Growth	(6.2)	(6.2)	0.8	(0.5)	3.7	11.3	6.9
Russell 2000 Value	(3.3)	(3.3)	11.7	8.8	4.5	11.6	4.9

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	(1.7)	(1.7)	4.8	2.0	3.2	8.0	3.8
MSCI ACWI ex US	(1.4)	(1.4)	4.3	0.2	(1.5)	3.6	1.6
MSCI EAFE	(2.0)	(2.0)	(0.4)	(3.2)	(1.3)	5.0	1.2
MSCI EM	0.2	0.2	16.3	9.3	(2.0)	0.5	3.5
MSCI EAFE Small Cap	(2.8)	(2.8)	2.2	3.0	3.0	8.9	3.7
<b>Style Index</b>							
MSCI EAFE Growth	(4.3)	(4.3)	(1.8)	(3.2)	0.1	5.7	2.3
MSCI EAFE Value	0.2	0.2	1.1	(3.4)	(2.7)	4.2	0.0
<b>Regional Index</b>							
MSCI UK	(5.2)	(5.2)	(4.4)	(10.2)	(4.6)	2.5	0.4
MSCI Japan	1.3	1.3	3.9	3.2	3.8	7.7	1.0
MSCI Euro	(0.9)	(0.9)	(1.5)	(6.5)	(3.1)	4.4	(0.2)
MSCI EM Asia	(1.4)	(1.4)	11.4	6.9	1.4	3.7	5.1
MSCI EM Latin American	9.9	9.9	45.3	33.3	(6.4)	(5.2)	2.6

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BC US Treasury US TIPS	(0.4)	(0.4)	6.8	5.9	2.1	1.5	4.5
BC US Treasury Bills	0.0	0.0	0.3	0.3	0.2	0.1	1.0
BC US Agg Bond	(0.8)	(0.8)	5.0	4.4	3.5	2.9	4.6
<b>Duration</b>							
BC US Treasury 1-3 Yr	(0.1)	(0.1)	1.3	0.9	0.8	0.7	2.2
BC US Treasury Long	(4.1)	(4.1)	10.0	9.1	9.1	5.4	7.5
BC US Treasury	(1.1)	(1.1)	3.9	3.3	2.8	2.1	4.3
<b>Issuer</b>							
BC US MBS	(0.3)	(0.3)	3.4	3.3	3.3	2.6	4.5
BC US Corp. High Yield	0.4	0.4	15.6	10.1	4.6	7.2	7.6
BC US Agency Interm	(0.2)	(0.2)	2.1	1.6	1.6	1.4	3.3
BC US Credit	(0.9)	(0.9)	7.9	6.9	4.6	4.3	5.6

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	(0.5)	(0.5)	8.3	(2.6)	(12.0)	(10.6)	(5.8)
Wilshire US REIT	(5.6)	(5.6)	3.6	5.2	10.7	11.4	4.7
<b>Regional Index</b>							
JPM EMBI Global Div	(1.2)	(1.2)	13.3	11.7	6.8	6.6	7.4
JPM GBI-EM Global Div	(0.8)	(0.8)	16.1	11.0	(3.7)	(1.2)	4.9
<b>Currency (Spot)</b>							
Euro	(2.5)	(2.5)	0.9	(0.8)	(6.9)	(4.7)	(1.5)
Pound	(6.0)	(6.0)	(17.2)	(20.9)	(8.7)	(5.4)	(4.4)
Yen	(3.6)	(3.6)	14.5	14.8	(2.3)	(5.8)	1.1

Source: Morningstar, as of 10/31/16

# Notices & disclosures

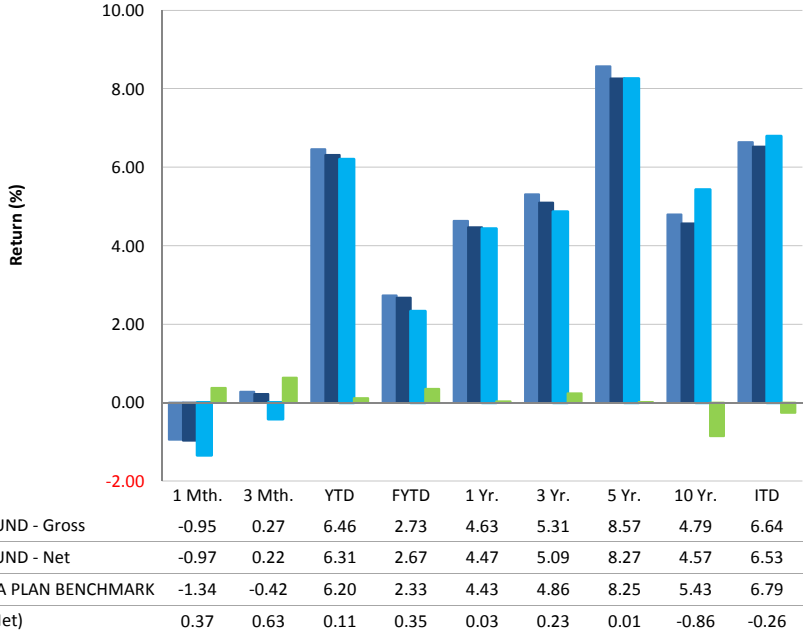
***Past performance is no guarantee of future results.** This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting 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

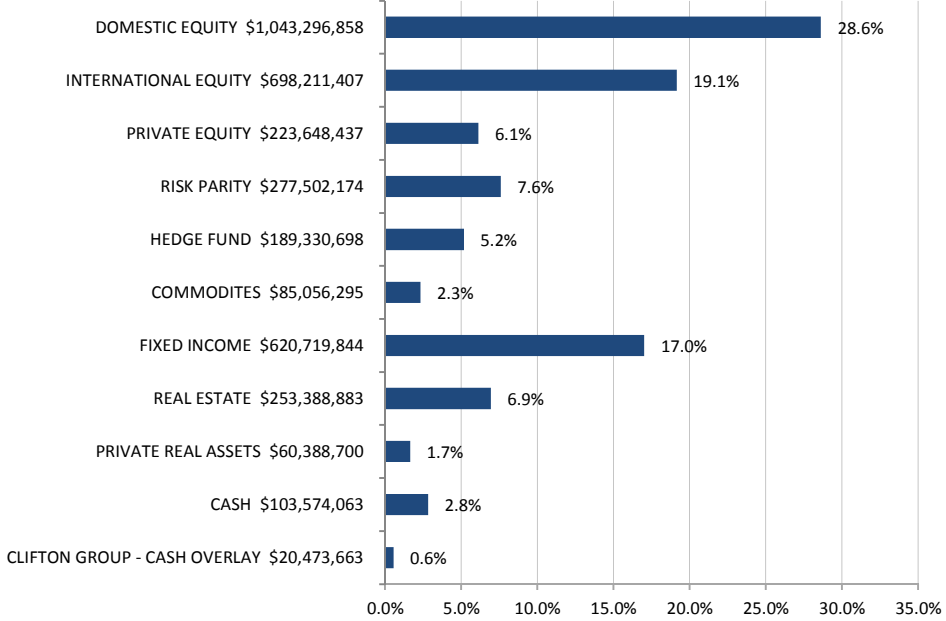


October 31, 2016

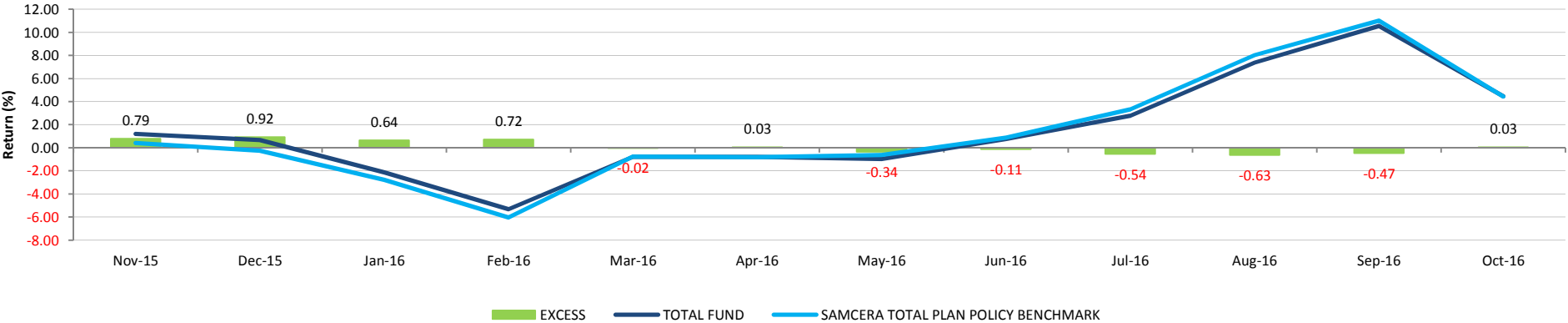
**Total Fund Performance**



**Asset Allocation**



**Rolling Month End Annual Returns**

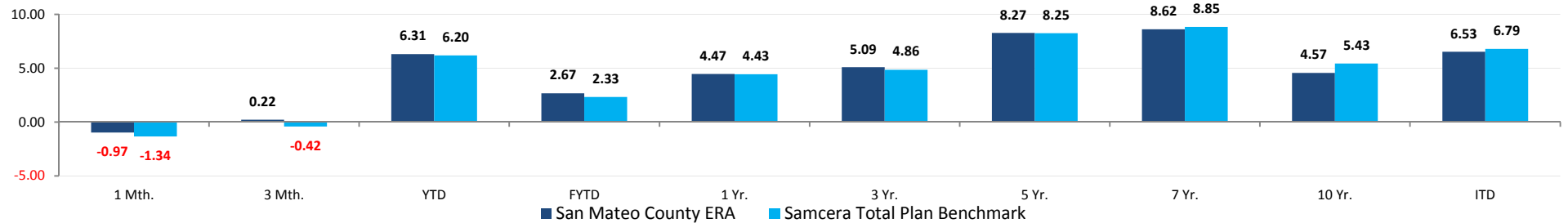


# San Mateo County Composite Return Summary



October 31, 2016

Return Comparison



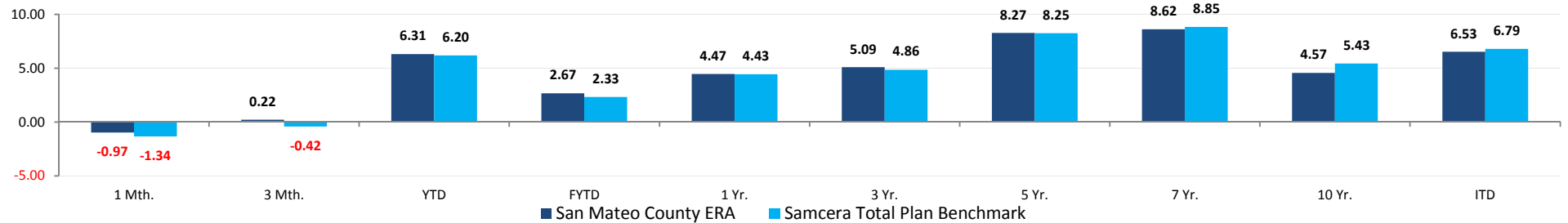
Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
San Mateo County ERA	3,646,643,276	-0.97	0.22	6.31	2.67	4.47	5.09	8.27	8.62	4.57	6.53
Samcera Total Plan Benchmark		-1.34	-0.42	6.20	2.33	4.43	4.86	8.25	8.85	5.43	6.79
Excess		0.37	0.63	0.11	0.35	0.03	0.23	0.01	-0.23	-0.86	-0.26
San Mateo Ex-Clifton Overlay	3,626,169,613	-0.93	0.24	6.14	2.84	4.31	4.92	8.24	8.56	4.45	6.45
Samcera Total Plan Benchmark		-1.34	-0.42	6.20	2.33	4.43	4.86	8.25	8.85	5.43	6.79
Excess		0.41	0.66	-0.06	0.51	-0.12	0.06	-0.02	-0.28	-0.98	-0.34
Total Equity	1,741,508,264	-2.06	-1.27	4.76	2.92	2.49	4.48	9.77	9.66	3.94	7.25
Samcera Total Equity Benchmark		-2.28	-1.43	5.53	2.84	3.50	5.63	10.69	10.59	5.41	7.79
Excess		0.22	0.15	-0.77	0.08	-1.02	-1.15	-0.92	-0.93	-1.47	-0.55
Total Fixed Income	620,719,844	0.65	1.66	7.38	2.72	5.86	3.71	4.75	5.77	5.19	5.67
Samcera Fixed Income Benchmark		-0.83	-0.41	7.21	0.71	5.72	3.40	2.88	4.09	4.76	5.24
Excess		1.47	2.08	0.17	2.02	0.14	0.31	1.87	1.68	0.43	0.43
Total Risk Parity	277,502,174	-3.12	-2.85	12.36	-0.93	8.18	5.16	5.98	--	--	5.86
Samcera Risk Parity Benchmark		-1.60	-1.43	5.63	1.17	4.43	6.41	9.22	--	--	8.02
Excess		-1.52	-1.42	6.73	-2.10	3.75	-1.25	-3.23	--	--	-2.17

# San Mateo County Composite Return Summary



October 31, 2016

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	189,330,698	1.48	2.25	-0.10	2.96	1.09	7.52	6.42	--	--	5.23
Samcera LIBOR + 4%		0.37	1.11	3.71	1.48	4.42	4.26	4.25	--	--	4.25
Excess		1.11	1.13	-3.81	1.48	-3.33	3.26	2.17	--	--	0.98
Total Private Real Assets	60,388,700	0.90	19.05	--	22.85	--	--	--	--	--	40.99
Samcera CPI + 5%		0.00	1.14	--	1.39	--	--	--	--	--	3.83
Excess		0.90	17.91	--	21.46	--	--	--	--	--	37.16
Total Real Estate	253,388,883	1.65	1.65	--	1.72	--	--	--	--	--	6.58
Samcera NCREIF ODCE EW (gross)		0.00	2.18	--	2.18	--	--	--	--	--	4.41
Excess		1.65	-0.53	--	-0.46	--	--	--	--	--	2.17
Total Cash	103,574,063	0.05	0.61	0.84	0.66	0.86	0.62	0.60	0.69	0.93	2.08
Samcera Cash Benchmark		0.03	0.09	0.27	0.12	0.31	0.12	0.11	0.11	0.88	1.91
Excess		0.02	0.51	0.57	0.54	0.55	0.50	0.49	0.58	0.05	0.17

# San Mateo County Manager Return Summary



October 31, 2016

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Equity	1,741,508,264	-2.06	-1.27	4.76	2.92	2.49	4.48	9.77	9.66	3.94	7.25
Samcera Total Equity Benchmark		-2.28	-1.43	5.53	2.84	3.50	5.63	10.69	10.59	5.41	7.79
Excess		0.22	0.15	-0.77	0.08	-1.02	-1.15	-0.92	-0.93	-1.47	-0.55
Total Domestic Equity	1,043,296,858	-1.68	-1.40	4.93	2.44	3.40	7.03	12.49	12.62	5.38	7.99
Samcera Dom. Equity Benchmark		-2.16	-1.65	6.02	2.40	4.37	7.69	13.18	13.27	6.72	8.38
Excess		0.49	0.25	-1.08	0.04	-0.97	-0.66	-0.69	-0.65	-1.34	-0.39
Total Large Cap Equity	935,209,278	-1.42	-1.12	5.55	2.64	4.07	8.41	13.17	12.68	5.78	8.78
Russell 1000		-1.95	-1.74	5.82	2.00	4.26	8.48	13.51	13.29	6.83	9.14
Excess		0.53	0.62	-0.27	0.64	-0.19	-0.07	-0.34	-0.61	-1.05	-0.36
Barrow Hanley	111,045,892	-0.36	1.07	4.75	4.59	2.82	6.44	13.02	12.75	--	12.89
Russell 1000 Value		-1.55	-1.00	8.29	1.88	6.37	7.59	13.31	12.59	--	13.03
Excess		1.19	2.06	-3.54	2.71	-3.55	-1.15	-0.29	0.16	--	-0.14
Blackrock S&P 500 Index Fund	587,051,467	-1.82	-1.67	5.88	1.96	4.46	8.89	--	--	--	12.17
S&P 500		-1.82	-1.67	5.87	1.96	4.51	8.84	--	--	--	12.12
Excess		0.00	-0.00	0.02	0.00	-0.04	0.05	--	--	--	0.05
Brown Advisory	112,178,181	-1.61	-1.99	0.39	1.95	0.21	6.24	--	--	--	9.30
Russell 1000 Growth		-2.35	-2.48	3.51	2.13	2.28	9.36	--	--	--	11.75
Excess		0.74	0.48	-3.13	-0.17	-2.08	-3.11	--	--	--	-2.45
DE Shaw Commingled Fund	124,933,739	0.00	0.68	10.01	5.12	7.34	--	--	--	--	6.90
Russell 1000		-1.95	-1.74	5.82	2.00	4.26	--	--	--	--	3.65
Excess		1.95	2.42	4.20	3.12	3.08	--	--	--	--	3.25
Total Small Cap Equity	108,087,579	-3.82	-4.84	-0.44	-0.61	-2.28	0.26	9.25	11.96	3.42	5.59
Russell 2000		-4.75	-1.99	6.16	3.86	4.11	4.12	11.51	12.84	5.96	7.08
Excess		0.93	-2.85	-6.61	-4.47	-6.39	-3.86	-2.26	-0.88	-2.54	-1.50



# San Mateo County Manager Return Summary



October 31, 2016

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	108,087,579	-3.82	--	--	--	--	--	--	--	--	-1.74
Russell 2000		-4.75	--	--	--	--	--	--	--	--	7.08
Excess		0.93	--	--	--	--	--	--	--	--	-8.82
Total International Equity	698,211,407	-2.62	-1.09	4.47	3.66	1.00	-0.13	4.37	3.70	1.04	5.04
MSCI ACW ex US-IMI		-1.61	0.29	4.37	5.33	0.75	-1.09	3.98	3.99	1.90	4.53
Excess		-1.02	-1.37	0.10	-1.67	0.25	0.97	0.39	-0.29	-0.86	0.51
Total Developed Markets Equity	621,253,646	-2.98	-1.37	3.21	3.42	0.17	0.16	4.87	4.10	1.48	3.78
MSCI ACW ex US-IMI		-1.61	0.29	4.37	5.33	0.75	-1.09	3.98	3.99	1.90	4.25
Excess		-1.37	-1.66	-1.16	-1.92	-0.59	1.25	0.89	0.11	-0.42	-0.47
Baillie Gifford	212,723,184	-3.67	-2.21	4.40	4.41	2.21	1.70	--	--	--	6.67
MSCI ACWI ex US Growth		-3.39	-2.20	2.93	2.52	0.50	0.35	--	--	--	4.42
Excess		-0.28	-0.01	1.47	1.89	1.70	1.35	--	--	--	2.24
Blackrock EAFE Index Fund	129,778,205	-2.02	-0.72	0.02	4.33	-2.87	--	--	--	--	-1.88
MSCI EAFE ND		-2.05	-0.77	-0.35	4.26	-3.23	--	--	--	--	-2.16
Excess		0.02	0.06	0.38	0.07	0.36	--	--	--	--	0.29
Mondrian Investment Partners	206,896,002	-2.91	-1.12	3.82	1.76	-1.05	-1.01	3.62	3.94	1.68	4.74
MSCI ACWI ex US Value		0.57	3.25	6.63	8.53	0.85	-2.50	3.31	3.08	1.19	4.43
Excess		-3.48	-4.37	-2.82	-6.78	-1.90	1.48	0.31	0.86	0.48	0.31
FIAM Intl Small Cap	71,856,255	-2.83	-0.75	4.29	3.75	3.89	1.46	--	--	--	5.39
MSCI ACWI Small Cap ex US Net		-2.63	-0.47	4.86	5.07	4.22	1.57	--	--	--	5.57
Excess		-0.19	-0.28	-0.57	-1.32	-0.32	-0.11	--	--	--	-0.18

# San Mateo County Manager Return Summary



October 31, 2016

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	76,957,761	0.35	1.27	16.14	5.70	8.35	-2.80	--	--	--	-0.38
MSCI Emerging Markets ND		0.24	4.05	16.30	9.29	9.27	-2.05	--	--	--	-0.51
Excess		0.11	-2.78	-0.15	-3.59	-0.91	-0.75	--	--	--	0.13
EV Parametric EM	76,957,761	0.35	1.27	16.14	5.70	8.35	--	--	--	--	2.91
MSCI Emerging Markets GD		0.25	4.12	16.64	9.42	9.67	--	--	--	--	2.97
Excess		0.11	-2.85	-0.50	-3.73	-1.31	--	--	--	--	-0.06
Total Fixed Income	620,719,844	0.65	1.66	7.38	2.72	5.86	3.71	4.75	5.77	5.19	5.67
Samcera Fixed Income Benchmark		-0.83	-0.41	7.21	0.71	5.72	3.40	2.88	4.09	4.76	5.24
Excess		1.47	2.08	0.17	2.02	0.14	0.31	1.87	1.68	0.43	0.43
Total Domestic Fixed Income	517,165,221	0.06	1.17	7.84	2.56	6.29	4.18	4.77	5.85	5.30	5.83
Samcera US Fixed Inc Benchmark		-0.44	0.01	7.17	1.18	5.60	3.79	3.18	4.35	4.95	5.45
Excess		0.50	1.16	0.67	1.37	0.69	0.39	1.59	1.50	0.35	0.37
Total Core Fixed Income	356,502,554	-0.11	0.36	6.45	1.55	5.65	4.24	4.13	5.35	4.95	5.63
BC U.S. Aggregate		-0.76	-0.94	4.99	-0.31	4.37	3.48	2.90	3.92	4.64	5.28
Excess		0.66	1.30	1.46	1.86	1.28	0.76	1.23	1.44	0.31	0.35
FIAM Core Bond	248,934,671	-0.57	-0.34	6.77	0.66	5.89	4.07	3.77	4.95	5.11	5.13
BC U.S. Aggregate		-0.76	-0.94	4.99	-0.31	4.37	3.48	2.90	3.92	4.64	4.67
Excess		0.19	0.60	1.78	0.97	1.52	0.59	0.87	1.04	0.47	0.46
Western Total Return	107,567,883	0.98	2.02	5.71	3.67	5.09	--	--	--	--	3.93
BC U.S. Aggregate		-0.76	-0.94	4.99	-0.31	4.37	--	--	--	--	3.94
Excess		1.74	2.96	0.72	3.98	0.72	--	--	--	--	-0.01
Total Opportunistic Credit	160,662,667	0.44	3.00	10.41	4.85	6.90	5.34	9.68	--	--	9.57
BC BA Intermediate HY Index		0.13	1.85	11.29	4.17	7.64	5.10	6.83	--	--	8.03
Excess		0.31	1.15	-0.88	0.68	-0.75	0.24	2.85	--	--	1.55

# San Mateo County Manager Return Summary



October 31, 2016

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	19,088,598	0.00	0.35	0.38	0.35	0.72	--	--	--	--	-0.13
BC BA Intermediate HY Index		0.13	1.85	11.29	4.17	7.64	--	--	--	--	4.46
Excess		-0.13	-1.50	-10.90	-3.81	-6.92	--	--	--	--	-4.59
Angelo Gordon	24,498,665	0.00	2.21	-1.12	2.21	-1.12	6.97	--	--	--	7.91
BC BA Intermediate HY Index		0.13	1.85	11.29	4.17	7.64	5.10	--	--	--	5.35
Excess		-0.13	0.36	-12.41	-1.96	-8.77	1.87	--	--	--	2.55
Beach Point Select Fund	42,666,232	0.00	2.13	10.54	4.22	7.38	--	--	--	--	8.08
BC BA Intermediate HY Index		0.13	1.85	11.29	4.17	7.64	--	--	--	--	5.17
Excess		-0.13	0.28	-0.75	0.05	-0.26	--	--	--	--	2.91
Brigade Cap Mngmt	68,889,690	1.02	4.71	21.06	7.98	12.68	3.61	6.58	--	--	6.87
BC BA Intermediate HY Index		0.13	1.85	11.29	4.17	7.64	5.10	6.83	--	--	7.20
Excess		0.90	2.86	9.77	3.82	5.04	-1.48	-0.25	--	--	-0.33
Total Global Fixed Income	103,554,623	3.68	4.20	4.83	3.55	3.50	1.39	4.31	--	--	4.24
Samcera Global Fixed Benchmark		-2.62	-2.42	7.32	-1.60	5.96	0.97	1.13	--	--	2.10
Excess		6.30	6.62	-2.49	5.15	-2.46	0.42	3.18	--	--	2.14
Franklin Templeton	103,554,623	3.68	4.20	4.83	3.55	3.50	0.93	4.02	--	--	3.99
BC Multiverse Index		-2.62	-2.42	7.32	-1.60	5.96	0.97	1.13	--	--	2.10
Excess		6.30	6.62	-2.49	5.15	-2.46	-0.04	2.89	--	--	1.90
Total Risk Parity	277,502,174	-3.12	-2.85	12.36	-0.93	8.18	5.16	5.98	--	--	5.86
Samcera Risk Parity Benchmark		-1.60	-1.43	5.63	1.17	4.43	6.41	9.22	--	--	8.02
Excess		-1.52	-1.42	6.73	-2.10	3.75	-1.25	-3.23	--	--	-2.17
AQR Global Risk III	128,574,575	-2.12	-1.00	9.75	0.13	5.54	2.13	4.14	--	--	4.23
Samcera Risk Parity Benchmark		-1.60	-1.43	5.63	1.17	4.43	6.41	9.22	--	--	8.02
Excess		-0.51	0.43	4.12	-1.04	1.11	-4.27	-5.07	--	--	-3.79

# San Mateo County Manager Return Summary



October 31, 2016

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Panagora	148,927,599	-3.98	-4.40	14.72	-1.82	10.56	--	--	--	--	5.96
Samcera Risk Parity Benchmark		-1.60	-1.43	5.63	1.17	4.43	--	--	--	--	4.41
Excess		-2.37	-2.97	9.09	-2.99	6.13	--	--	--	--	1.54
Total Alternatives	412,979,135	0.64	3.72	2.54	4.81	2.04	4.68	4.93	-7.63	-7.71	-3.69
Samcera Alternatives Benchmark		-0.96	-0.13	6.35	2.47	4.05	4.45	7.82	8.90	5.87	6.93
Excess		1.60	3.85	-3.81	2.34	-2.01	0.23	-2.90	-16.53	-13.58	-10.62
Total Private Equity	223,648,437	-0.06	5.00	5.36	6.43	5.57	14.52	9.76	--	--	-27.37
Samcera PE Benchmark		-1.92	-1.03	8.47	3.15	7.36	11.27	16.66	--	--	15.72
Excess		1.86	6.03	-3.11	3.28	-1.79	3.26	-6.90	--	--	-43.09
Total Hedge Fund Composite	189,330,698	1.48	2.25	-0.10	2.96	1.09	7.52	6.42	--	--	5.23
Samcera LIBOR + 4%		0.37	1.11	3.71	1.48	4.42	4.26	4.25	--	--	4.25
Excess		1.11	1.13	-3.81	1.48	-3.33	3.26	2.17	--	--	0.98
AQR Delta XN	155,662,333	1.74	2.67	0.65	3.46	2.22	7.92	6.65	--	--	5.44
Samcera LIBOR + 4%		0.37	1.11	3.71	1.48	4.42	4.26	4.25	--	--	4.25
Excess		1.37	1.56	-3.07	1.98	-2.20	3.66	2.40	--	--	1.20
Standard Life GARS	33,668,365	0.27	0.34	-3.39	0.69	-3.80	--	--	--	--	-3.52
Samcera LIBOR + 4%		0.37	1.11	3.71	1.48	4.42	--	--	--	--	4.40
Excess		-0.10	-0.77	-7.10	-0.79	-8.23	--	--	--	--	-7.92
Total Inflation Hedge	469,886,133	1.09	3.37	--	3.92	--	--	--	--	--	9.58
SamCERA Inflation Hedge Index		-0.16	1.39	--	0.44	--	--	--	--	--	4.85
Excess		1.25	1.98	--	3.47	--	--	--	--	--	4.73
Total TIPS	71,052,255	0.18	0.73	--	1.39	--	--	--	--	--	2.26
BC US Tips		-0.40	-0.30	--	0.56	--	--	--	--	--	2.28
Excess		0.59	1.03	--	0.83	--	--	--	--	--	-0.02

# San Mateo County Manager Return Summary



October 31, 2016

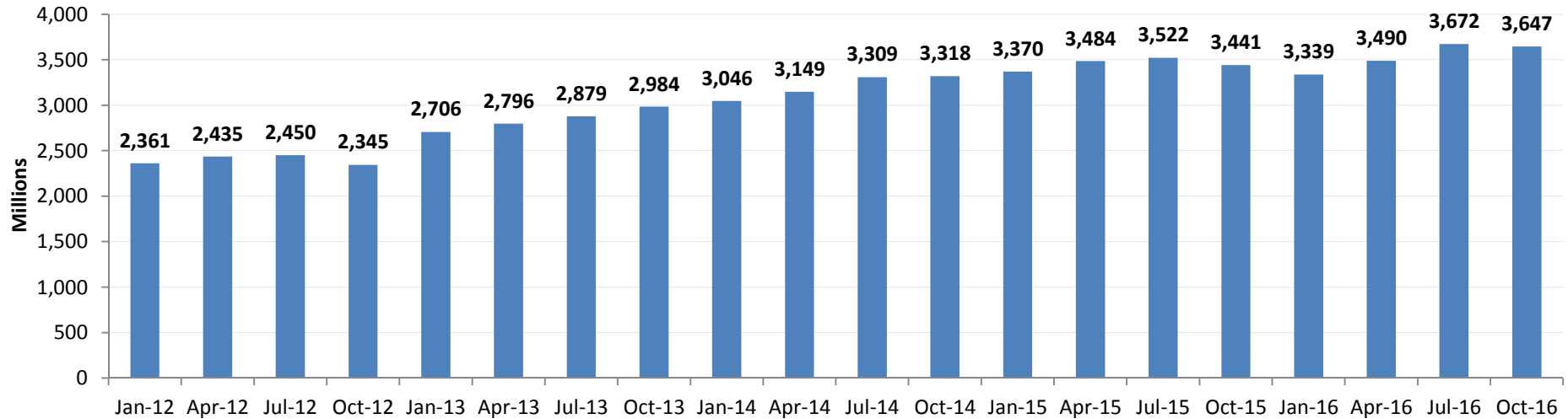
Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Brown Brothers Harriman	71,052,255	0.18	0.73	5.70	1.39	5.03	0.86	0.79	--	--	2.84
BC US Tips		-0.40	-0.30	6.84	0.56	5.89	2.08	1.47	--	--	3.39
Excess		0.59	1.03	-1.13	0.83	-0.86	-1.22	-0.68	--	--	-0.55
Total Real Estate	253,388,883	1.65	1.65	--	1.72	--	--	--	--	--	6.58
Samcera NCREIF ODCE EW (gross)		0.00	2.18	--	2.18	--	--	--	--	--	4.41
Excess		1.65	-0.53	--	-0.46	--	--	--	--	--	2.17
Invesco Core Real Estate	238,253,026	1.60	1.60	9.22	1.60	9.22	12.42	11.79	11.90	5.52	7.85
Samcera NCREIF ODCE EW (gross)		0.00	2.18	6.96	2.18	10.62	12.60	12.41	12.27	5.79	7.71
Excess		1.60	-0.58	2.27	-0.58	-1.40	-0.18	-0.61	-0.37	-0.27	0.14
Invesco US Val IV	15,135,857	2.62	2.62	21.39	4.71	--	--	--	--	--	15.95
Samcera NCREIF ODCE EW (gross)		0.00	2.18	6.96	2.18	--	--	--	--	--	10.62
Excess		2.62	0.44	14.43	2.53	--	--	--	--	--	5.33
Total Private Real Assets	60,388,700	0.90	19.05	--	22.85	--	--	--	--	--	40.99
Samcera CPI + 5%		0.00	1.14	--	1.39	--	--	--	--	--	3.83
Excess		0.90	17.91	--	21.46	--	--	--	--	--	37.16
Total Cash	103,574,063	0.05	0.61	0.84	0.66	0.86	0.62	0.60	0.69	0.93	2.08
Samcera Cash Benchmark		0.03	0.09	0.27	0.12	0.31	0.12	0.11	0.11	0.88	1.91
Excess		0.02	0.51	0.57	0.54	0.55	0.50	0.49	0.58	0.05	0.17
SamCera General Account	77,663,493	0.05	0.14	0.42	0.19	0.46	0.29	0.23	0.25	1.10	2.04
County Treasury Pool	25,356,287	0.00	0.00	0.00	0.00	0.00	0.22	0.42	0.61	0.79	2.75
San Mateo County ERA	3,646,643,276	-0.97	0.22	6.31	2.67	4.47	5.09	8.27	8.62	4.57	6.53
Samcera Total Plan Benchmark		-1.34	-0.42	6.20	2.33	4.43	4.86	8.25	8.85	5.43	6.79
Excess		0.37	0.63	0.11	0.35	0.03	0.23	0.01	-0.23	-0.86	-0.26

October 31, 2016

**Record of Asset Growth**

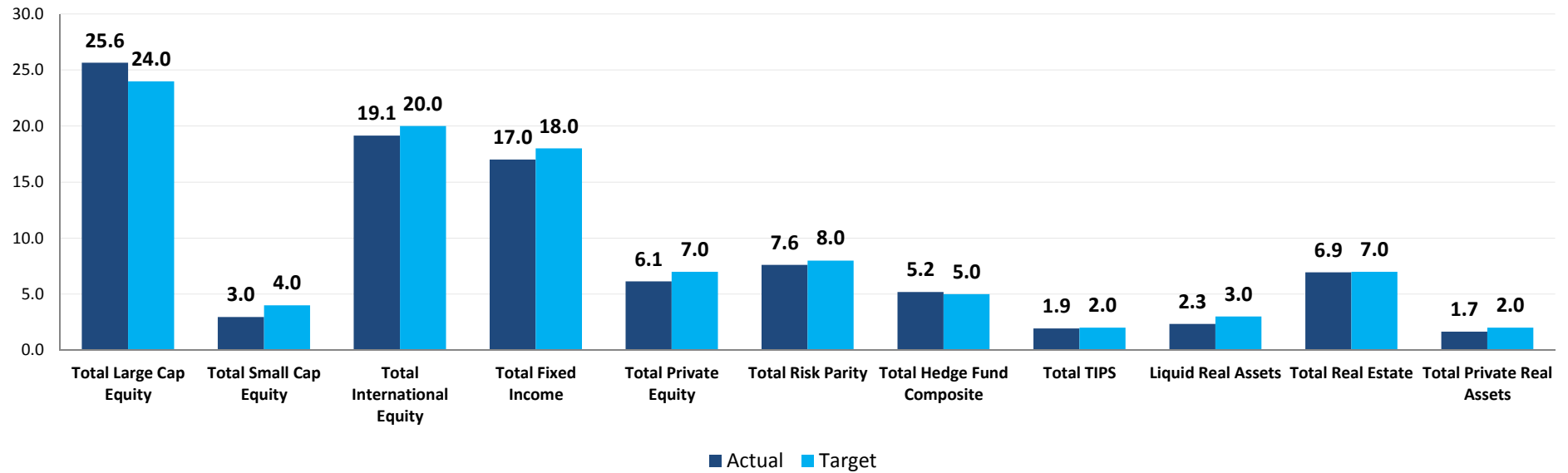
	Three Months	One Year
<b>TOTAL FUND</b>		
Beginning Market Value	3,671,874,188	3,441,307,955
Contributions	122,772,443	343,316,245
Withdrawals	-159,733,711	-303,614,902
Income Received	10,074,077	39,643,427
Gain/Loss	-2,218	123,123,481
Ending Market Value	3,646,643,276	3,646,643,276

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



October 31, 2016

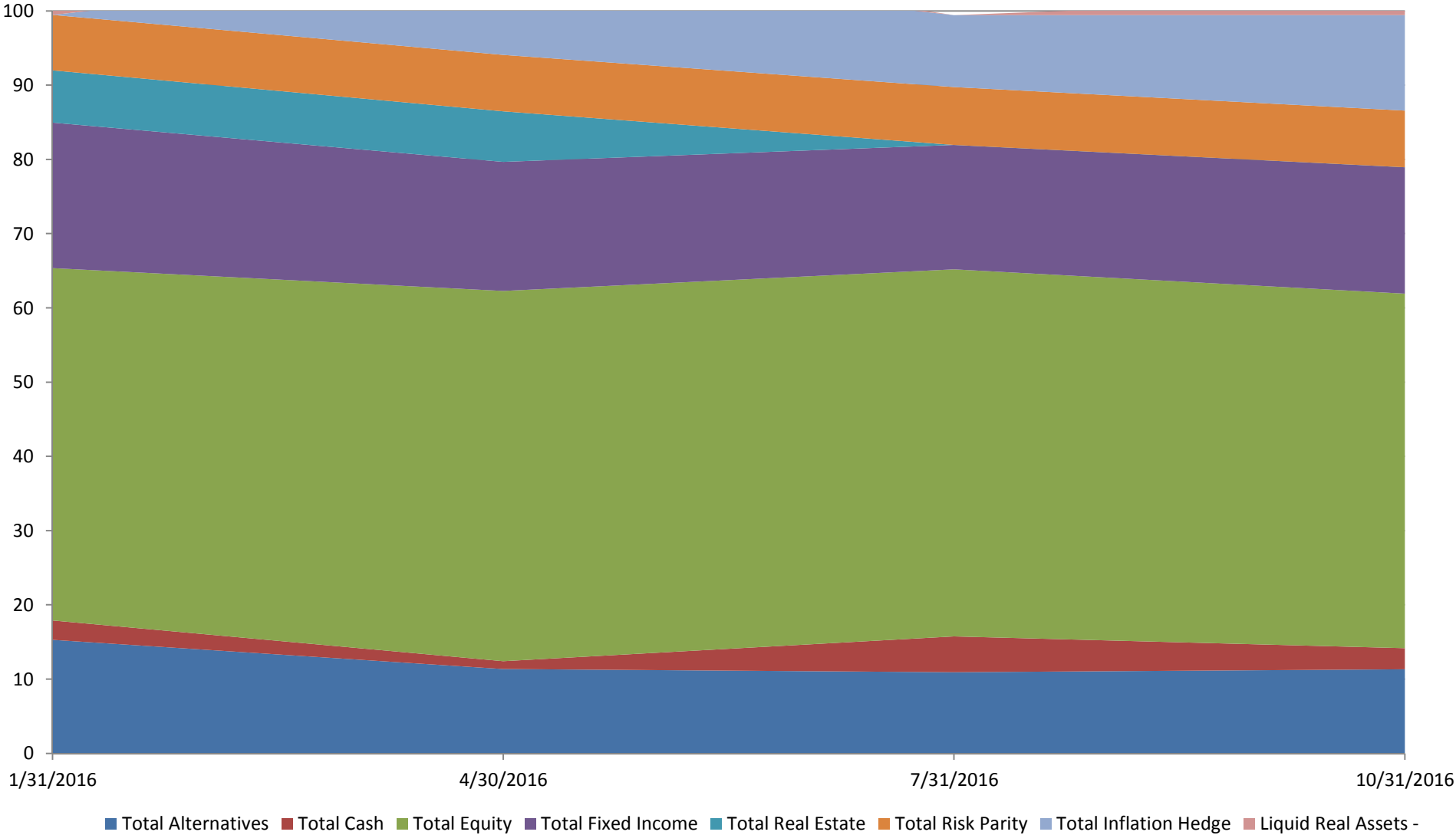
Actual vs Target Weights



	Min	Actual	Target	Deviation	Max
Total Large Cap Equity	22.0	25.6	24.0	1.6	26.0
Total Small Cap Equity	2.0	3.0	4.0	-1.0	6.0
Total International Equity	18.0	19.1	20.0	-0.9	22.0
Total Fixed Income	16.0	17.0	18.0	-1.0	20.0
Total Private Equity	5.0	6.1	7.0	-0.9	9.0
Total Risk Parity	6.0	7.6	8.0	-0.4	10.0
Total Hedge Fund Composite	3.0	5.2	5.0	0.2	7.0
Total TIPS	0.0	1.9	2.0	-0.1	4.0
Liquid Real Assets	1.0	2.3	3.0	-0.7	5.0
Total Real Estate	5.0	6.9	7.0	-0.1	9.0
Total Private Real Assets	0.0	1.7	2.0	-0.3	4.0

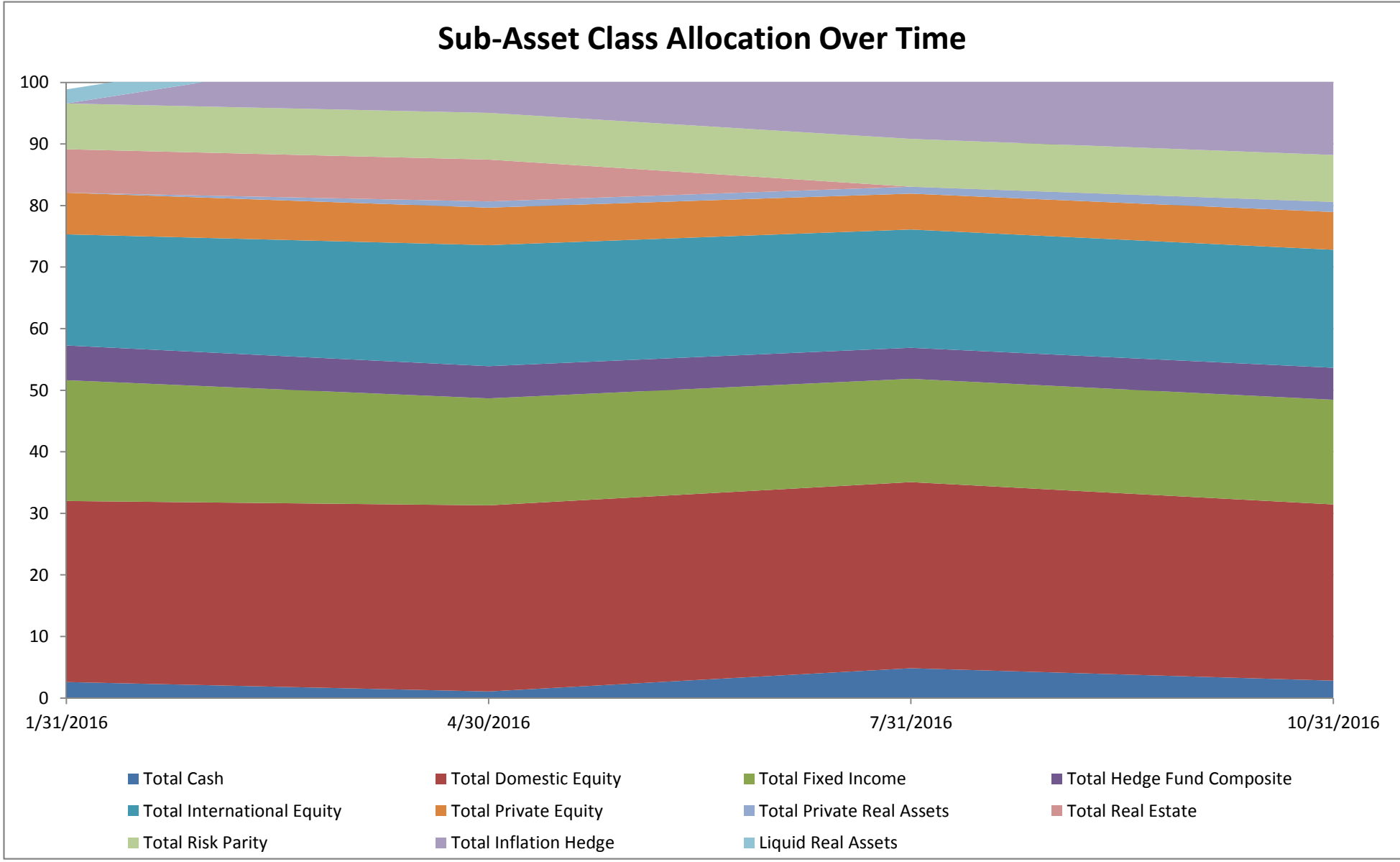
October 31, 2016

Asset Allocation over Time





October 31, 2016



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

December 6, 2016

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 September 30, 2016

**Staff Recommendation**

Accept Verus Advisory's quarterly performance report for the period ended September 30, 2016.

**Discussion**

The 3rd quarter net total return for the SamCERA portfolio was 3.7%, which was 10 bps lower than the 3.8% policy benchmark return. As can be seen on Pages 20 and 21, Private Equity and Fixed Income generally contributed to performance while Public Equity generally detracted.

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

**Attachment**

Verus Quarterly Performance Report Ending 9/30/2016



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: SEPTEMBER 30, 2016**

Investment Performance Review for

**San Mateo County Employees' Retirement Association**

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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 Pool

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

# 3<sup>rd</sup> quarter summary

## THE ECONOMIC CLIMATE

- The U.S. labor market continues to improve but at a slower pace. Real wage growth has risen but not as quickly as other periods of similar labor market tightness. Consumer expenditures remain the primary positive contributor to GDP growth.
- U.S. inflation has risen steadily with Core CPI at 2.3% YoY as of August. Energy and gasoline prices continue to weigh on the Headline CPI figure of 1.1% YoY.
- The presidential election approaches. There has historically been a weak relationship between election outcomes and market performance. This election appears to have unique characteristics and may cause more unpredictable effects.

## MARKET PORTFOLIO IMPACTS

- Central bank discussions indicate we may be nearing fiscal expansion as a next form of policy accommodation. As fiscal policies are typically less analyzed and less understood by investors, markets may be more prone to surprise in this environment.

## THE INVESTMENT CLIMATE

- U.S. corporate earnings are expected to decline by -2.1%, which would be the sixth consecutive quarter of YoY decline. Almost all of this decline is attributable to energy sector weakness.
- Low inflation and low bond yields may help to explain higher than usual equity valuations. However, this does not negate the fact that higher equity valuations historically have materially reduced subsequent returns.

## ASSET ALLOCATION ISSUES

- We continue to remain underweight risk and believe that downside market potential outweighs upside market potential.
- Emerging market earnings per share growth turned positive in 2016, reversing a 5-year downward trend. Valuations remain below average on a relative basis and upside potential seems attractive. Investors may consider moving to an overweight in emerging market equities, though risks should be carefully considered.

We remain underweight to risk

Investors should be watchful of corporate earnings, and U.S. inflation trends

# U.S. economics summary

- U.S. real GDP grew 1.4% YoY in Q2, up from 0.8% in Q1. This positive growth reflects contributions from greater consumer expenditures, exports, and non-residential fixed investments. These were partially offset by a decrease in private inventory investment.
- Headline inflation (CPI) rose 1.1% as of August YoY while core CPI rose 2.3%. Lower energy prices, and gasoline in particular (-17.8%), have weighed heavily on the headline inflation figure. Medical care services (+4.9%) and shelter (+3.4%) contributed to higher prices.
- If the U.S. economy continues to move closer to full employment and higher inflation, the market has expected the Fed to want to push harder for rate

“normalization”. However, the fear of disrupting financial markets and raising rates too early, too quickly, remains.

- Over the last few quarters we have continued to see the slow and steady return to the workforce of discouraged workers. This may help explain why productivity growth and wage inflation are lower than might be expected at this level of unemployment.
- Additions to nonfarm payrolls averaged slightly under 200,000 in the third quarter as the overall labor market continued to show strength. The unemployment rate increased slightly to 5.0% as more people entered the labor force.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	1.4% 6/30/16	3.9% 6/30/15
Inflation ( <i>CPI YoY, Headline</i> )	1.1% 8/31/16	0.2% 8/31/15
Expected Inflation ( <i>5yr-5yr forward</i> )	1.8% 9/30/16	1.8% 9/30/15
Fed Funds Rate	0.25% 9/30/16	0.12% 9/30/15
10 Year Rate	1.6% 9/30/16	2.0% 9/30/15
U-3 Unemployment	5.0% 9/30/16	5.1% 9/30/15
U-6 Unemployment	9.7% 9/30/16	10.0% 9/30/15

# International economics summary

- Developed economies continued to experience slow growth and low inflation. While inflation ticked up slightly in the Eurozone to 0.4%, it remains materially under the ECB’s target of “below, but close to, 2%”.
- The ECB left monetary policy unchanged at its September meeting, and cut economic growth expectations for the next three years.
- The BOJ shook up its monetary policy after completing a “comprehensive assessment of its current easing programs”. The central bank stated it will intentionally overshoot its inflation target of 2% and introduced a 0% target for the 10-year yield.
- Britain elected new prime minister Theresa May, who will be responsible for implementing Brexit. Increased uncertainty surrounding the timing and nature of the political change will continue. The potential impact of this uncertainty led to the first rate cut by the BOE since 2009.
- The IMF once again downgraded global growth forecasts for 2016 and 2017, this time to just above 3%. It now warns against economic stagnation and states that countries have found themselves in the position of relying on monetary and fiscal policy to lift growth prospects, and that this may be unsustainable.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.4% <i>6/30/16</i>	1.1% <i>8/31/16</i>	5.0% <i>9/30/16</i>
Western Europe	1.8% <i>6/30/16</i>	0.4% <i>9/30/16</i>	8.5% <i>6/30/16</i>
Japan	0.8% <i>6/30/16</i>	(0.5%) <i>8/31/16</i>	3.2% <i>6/30/16</i>
BRIC Nations	5.1% <i>6/30/16</i>	3.8% <i>6/30/16</i>	5.5% <i>6/30/16</i>
Brazil	(3.8%) <i>6/30/16</i>	9.0% <i>8/31/16</i>	11.7% <i>9/30/16</i>
Russia	(0.6%) <i>6/30/16</i>	6.9% <i>8/31/16</i>	5.6% <i>6/30/16</i>
India	7.1% <i>6/30/16</i>	5.1% <i>8/31/16</i>	7.1% <i>12/31/15</i>
China	6.7% <i>6/30/16</i>	1.3% <i>8/31/16</i>	4.1% <i>6/30/16</i>

# Equity environment

- Equity market risks continue to appear asymmetrical to the downside - the U.S. equity market in particular.
- U.S. equities rallied to start the quarter as central banks communicated to the markets that further monetary easing would be available if necessary, in response to the Brexit vote. In the final two months of the quarter, the U.S. equity markets stayed relatively flat and volatility was below average.
- A sixth consecutive quarter of year-over-year earnings decline is expected for the S&P. FactSet has forecast a -2.1% earnings decline for Q3.
- Information technology (12.9%) was the best performing sector in the S&P 500 by a large margin on the back of higher earnings expectations. Utilities (-5.9%) and telecom services (-5.6%) were the worst performing sectors in the index.
- The FTSE 100 (hedged) returned 7.1% over the third quarter after concerns over the impact of Brexit somewhat subsided.
- The U.S. dollar fell 0.7% in Q3 on a trade-weighted basis. Recent dollar stabilization may be disrupted if the Fed goes ahead with further rate hikes. As most developed economies remain in easing mode, further U.S. hikes would likely add to dollar strength.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	4.0%		7.9%		14.9%	
US Small Cap (Russell 2000)	9.0%		11.5%		15.5%	
US Large Value (Russell 1000 Value)	3.5%		10.0%		16.2%	
US Large Growth (Russell 1000 Growth)	4.6%		6.0%		13.8%	
International Large (MSCI EAFE)	6.4%	6.3%	1.7%	(1.0%)	6.5%	5.3%
Eurozone (Euro Stoxx 50)	6.3%	4.8%	(2.4%)	(4.1%)	0.4%	0.5%
U.K. (FTSE 100)	4.0%	7.1%	0.6%	14.1%	1.5%	18.4%
Japan (NIKKEI 225)	8.2%	5.9%	4.4%	(14.3%)	13.6%	(6.2%)
Emerging Markets (MSCI Emerging Markets)	9.0%	6.3%	16.0%	9.7%	16.8%	10.7%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/16



# Domestic equity

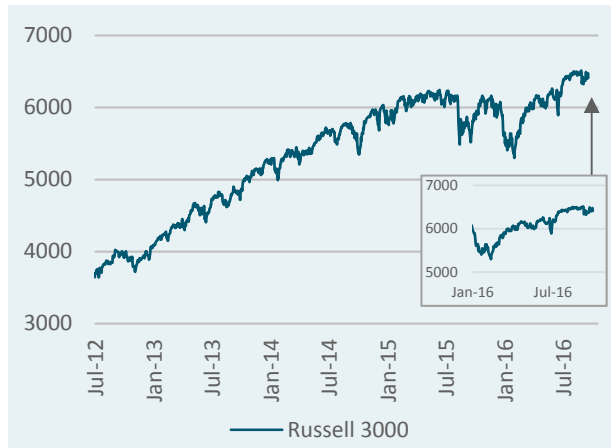
After minimal reaction to Brexit, domestic equities continued higher in July, then delivered two quiet months to finish the quarter. The S&P 500 returned 3.9% in Q3. The market appears to be taking a wait-and-see approach with important oncoming events such as elections and Federal Reserve meetings.

With higher equity prices and lower overall earnings, valuations have expanded. The forward earnings multiple for the S&P 500 was 18.5 at quarter end,

relative to its 25-year average of 16.6 (in the 81<sup>st</sup> percentile). Year-over-year earnings growth is expected to be negative for the sixth consecutive quarter, heavily influenced by the energy sector and lower oil prices. As the effects of monetary stimulus on U.S. financial markets wanes, earnings will play an important role for future equity returns.

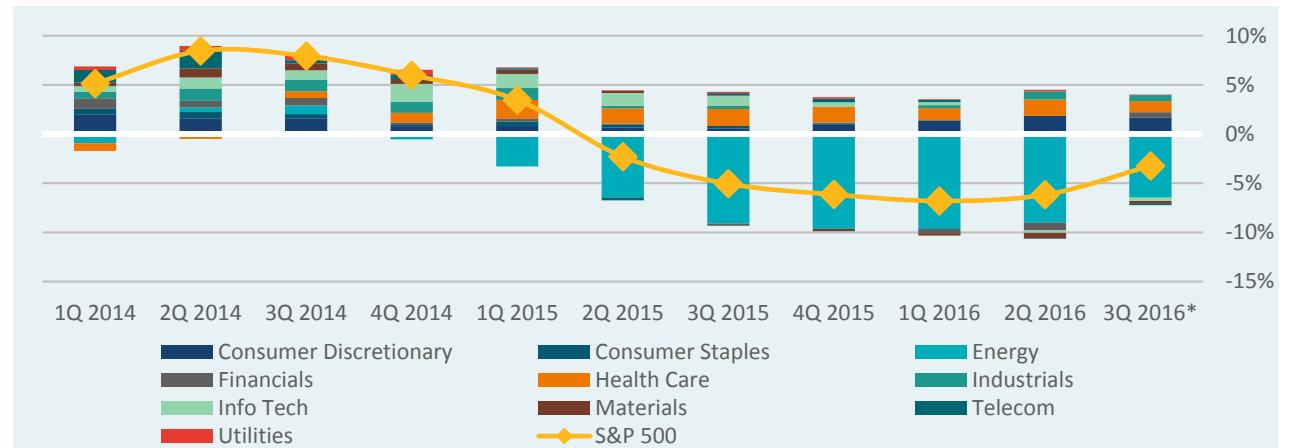
U.S. earnings results will likely dictate the path of equities

## U.S. EQUITIES



Source: Russell Investments, as of 9/26/16

## SECTOR IMPACT ON S&P 500 EARNINGS GROWTH



Source: Bloomberg, as of 9/30/16

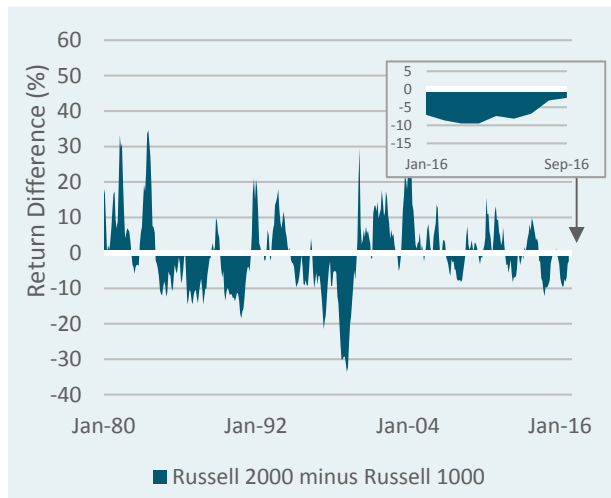
# Domestic equity size and style

Growth stocks outperformed value during the third quarter as the Russell 1000 Growth Index and Russell 1000 Value Index returned 4.6% and 3.5%, respectively. However, value has outperformed growth by 4.0% year-to-date.

3.5% year-to-date, reversing a recent trend of large cap outperformance. The relative P/E ratio of small to large cap equities at the end of September was 2.07 - well above its long-term average of 1.39 - suggesting that small cap stocks may be relatively overvalued.

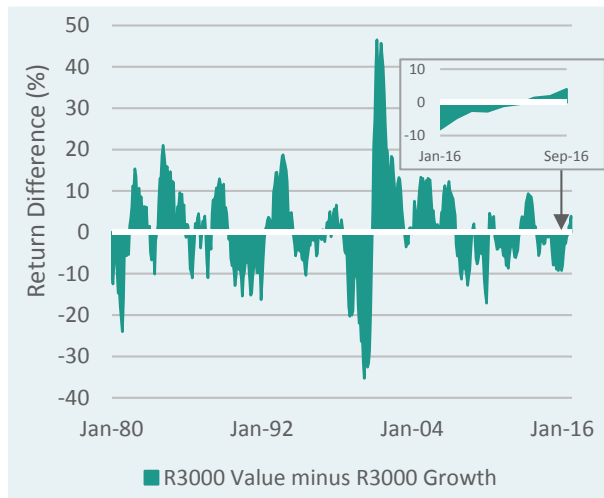
In the third quarter, the Russell 2000 Index returned 9.0% and the Russell 1000 Index returned 4.0%. Small cap equities have also beaten large cap equities by

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



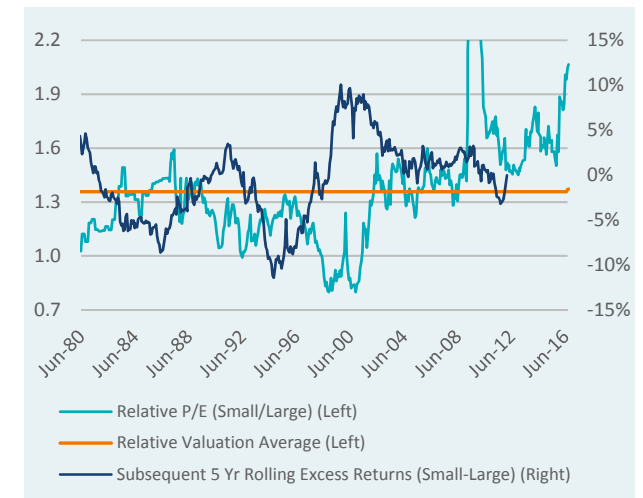
Source: Russell Investments, as of 9/30/16

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 9/30/16

**RELATIVE P/E RATIO (SMALL VS LARGE)**



Source: Russell, Bloomberg, as of 9/30/16

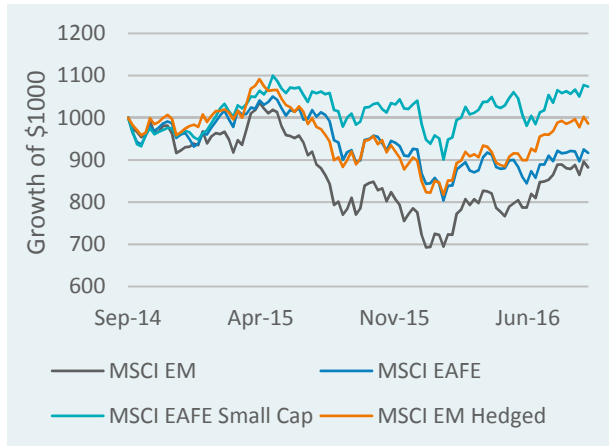
# International equity

Central banks remained accommodative in Q3, helping to generate a rally in international equities. Low and negative yields in Japan and the Eurozone helped maintain the relative attractiveness of equities in these markets.

On a hedged basis, international developed equities outperformed domestic equities with the MSCI EAFE returning 6.3%, and the S&P 500 returning only 3.9% during the quarter.

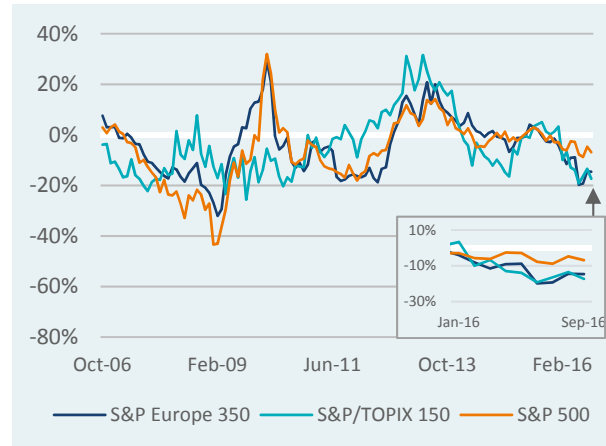
Financial stocks continue to lag, though the third quarter saw more healthy returns. Banks in Japan and the Eurozone were given a boost when the BOJ and ECB chose not to increase stimulus measures. Significant headwinds remain, however, as negative interest rates continue to hurt bank profitability.

**GLOBAL EQUITY PERFORMANCE**



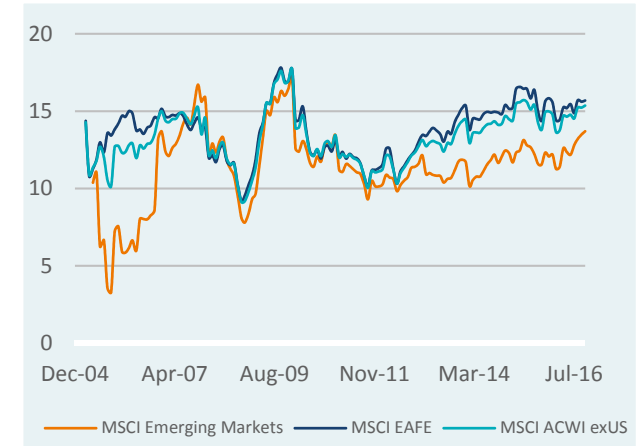
Source: Bloomberg, as of 9/30/16

**12-MONTH ROLLING RELATIVE FINANCIAL SECTOR RETURNS**



Source: MPI, as of 9/30/16, in local currency terms

**INTERNATIONAL FORWARD P/E RATIOS**



Source: MSCI, as of 9/30/16

# Emerging market equity

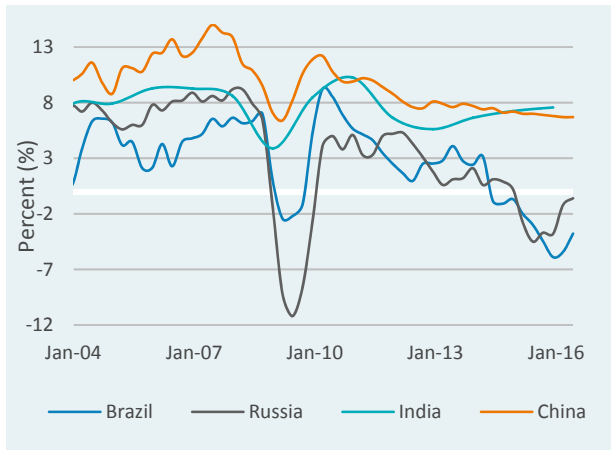
Emerging market equities experienced a rebound during Q3, returning 6.3% on a hedged basis and 9% unhedged. Emerging market earnings per share growth turned positive in 2016, reversing a 5-year downward trend. Valuations remain below average and materially more attractive than those of developed markets.

Moderating commodity prices, continued developed central bank accommodation, less U.S. dollar strengthening, and stability in China, have helped to bolster investor risk appetites and the emerging market

outlook, fueling fund flows into these markets.

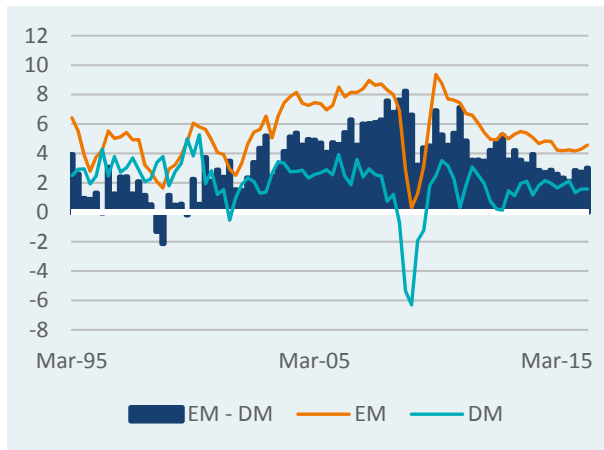
Many emerging market economies experienced a rough readjustment period following the commodity supercycle reversal and saw severe currency depreciation. However, many economies such as Russia have allowed currency devaluation to work as an effective economic shock absorber to mitigate current account problems which these economies often experience during commodity (export) price choppiness.

**ECONOMIC GROWTH (REAL GDP YOY)**



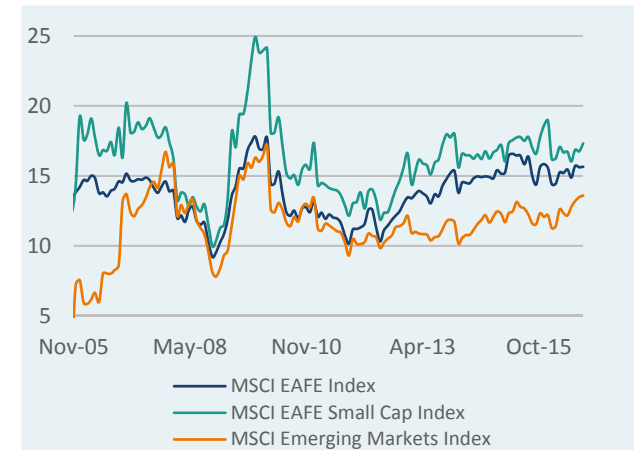
Source: Bloomberg, as of 6/30/16

**EM VS. DM REAL GDP GROWTH**



Source: Bloomberg, as of 6/30/16

**FORWARD P/E**



Source: MSCI, as of 9/30/16

# Interest rate environment

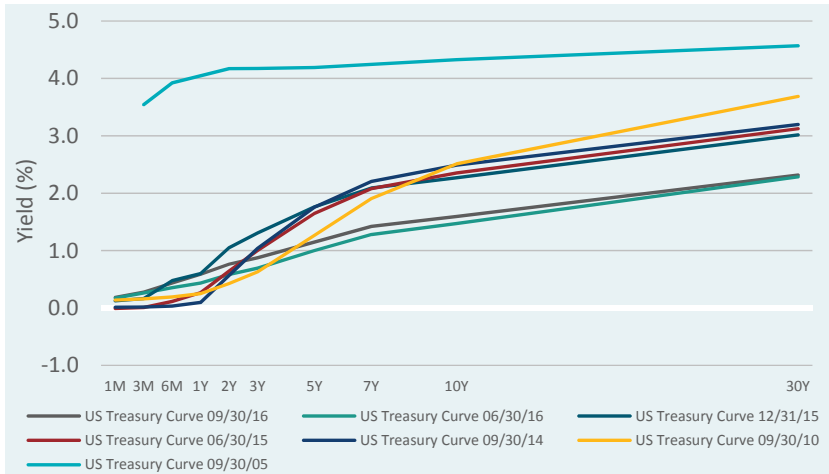
- The U.S. Treasury curve continued to flatten, influenced by increased expectations of an interest rate hike by the end of the year.
- Global interest rates remain near all time lows, although volatility picked up. Continued easing by central banks in addition to low inflation and expectations for slowing growth contribute to an environment of secularly low yields.
- When thinking about bond yields today, it may be useful not only to consider nominal yields, which are at historic lows, but also *real* yields, which paint a much more reasonable picture. Current levels of inflation and future expectations may help put things into context. Furthermore, investors may see markets drive yields higher if inflation expectations were to rise.
- Negative yielding sovereign and corporate debt was \$11.6 trillion at quarter end, mostly from Japan and the Eurozone. We remain concerned about Japanese and European rates as negative yields and low liquidity detract from the attractiveness of these assets.
- Yields on Japanese Treasuries increased sharply in late July after the BOJ chose to keep stimulus measures on hold. The 10-year JGB yield briefly traded around 0% before falling back into negative territory at the end of September.
- European sovereign bonds sold off during the beginning of September over concerns that central banks may begin cutting back on monetary easing measures.

Area	Short Term (3M)	10 Year
United States	0.27%	1.59%
Germany	(0.76%)	(0.12%)
France	(0.67%)	0.19%
Spain	(0.60%)	0.88%
Italy	(0.39%)	1.19%
Greece	3.34%	8.28%
U.K.	0.32%	0.75%
Japan	(0.33%)	(0.09%)
Australia	1.75%	1.91%
China	2.23%	2.74%
Brazil	13.73%	11.60%
Russia	9.80%	8.17%

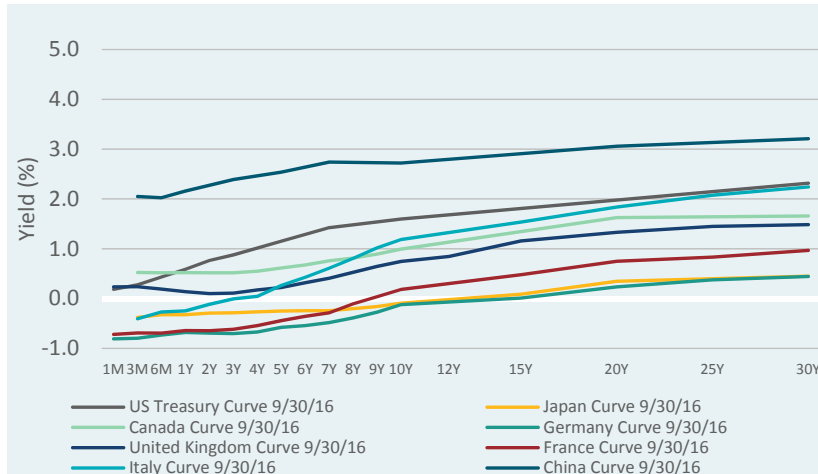
Source: Bloomberg, as of 9/30/16

# Yield environment

**U.S. YIELD CURVE**

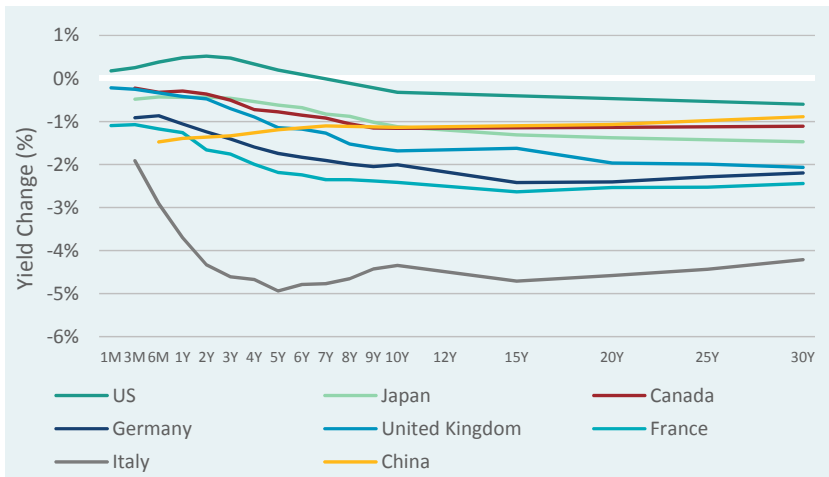


**GLOBAL GOVERNMENT YIELD CURVES**

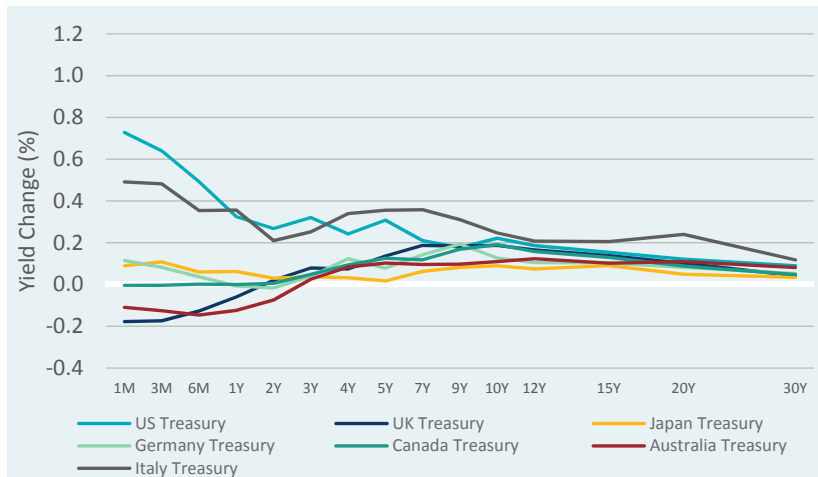


Global investors continue to prefer U.S. Treasuries due to higher relative yields

**YIELD CURVE CHANGES OVER LAST FIVE YEARS**



**IMPLIED CHANGES OVER NEXT YEAR**



Source: Bloomberg, as of 9/30/16

# Currency

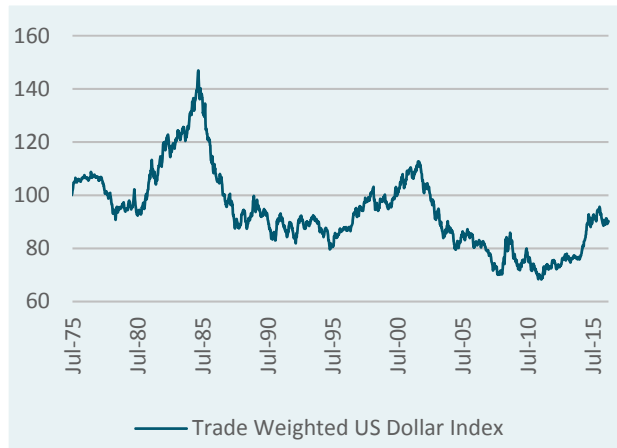
The U.S. dollar, weighted by major trading partners, fell 0.7% in the third quarter, benefitting investors with unhedged equity exposure. The pound sterling has had the opposite effect for U.S. investors, as new multi-decade lows were reached during the quarter, following a significant market flash crash (but recovery).

After a recent period of appreciation, the dollar has stabilized so far this year. Moderation of the USD would have a positive impact on earnings of U.S. companies with significant international exposure.

However, with the Fed expected to continue increasing interest rates while other central banks are still in easing mode, there may be upward pressure on the dollar as interest rate differentials increase.

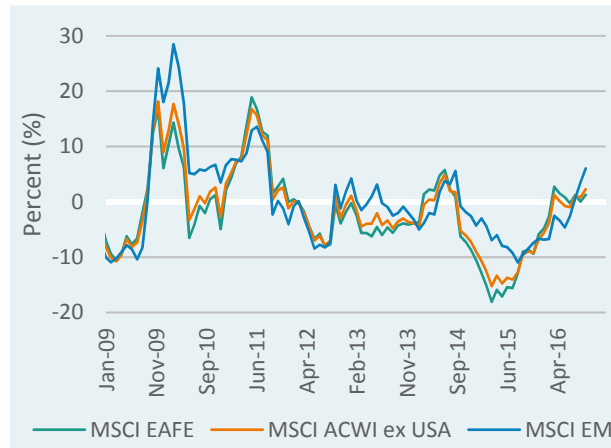
The pound sterling fell to a 31-year low against the U.S. dollar, influenced by uncertainty surrounding the details of the U.K.'s exit from the European Union. Theresa May announced that she would invoke Article 50 by March 2017.

**LONG-TERM TRADE WEIGHTED USD**



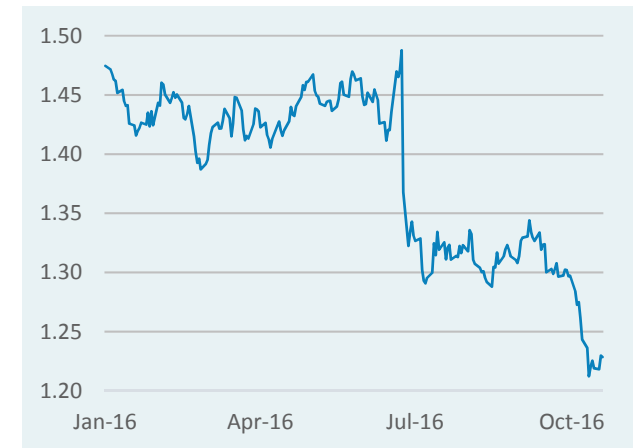
Source: FRED, as of 9/30/16

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



Source: MSCI, as of 9/30/16

**GBP/USD**



Source: FRED, as of 10/19/16

- The Total Fund, net of manager fees, returned 3.7% in the third quarter of 2016 and ranked 54<sup>th</sup> among other public plans greater than \$1 billion (median of 3.8%). It lagged the policy index return of 3.8%. The Total Fund w/o Overlay was 3.9% for the quarter. The Total Fund one year return of 10.3% was behind its policy index return of 11.1% and ranked in 17<sup>th</sup> percentile of its peer universe. The three-year return of 6.5% (14<sup>th</sup> percentile) was above median among large public plans (5.5%).
  
- Third quarter results were enhanced by the following factors:
  1. Brigade Capital lead the Barclays Intermediate High Yield by 3.1% gaining 7.1% for the quarter. Leverage loans rallied and high yield spreads tightened by 52bps in July leading to an outperformance for July. In September high yield was the main driver of performance.
  2. Western TRU gained 2.6% beating the Barclays Aggregate (2.6% vs 0.5%) and ranked 2<sup>nd</sup> percentile among its peers. Investment-grade credit exposure was a significant contributor to relative performance as spreads tightened by 17 bps while generating 155bps of excess return.
  2. Baillie Gifford was up 8.4% while the MSCI ACWI ex US returned 7.0%. Third quarter performance was enhanced by Tsingtao due to market stabilization in China and improvements in margins. Zalando was the top contributor posting strong earnings for 2016.
  3. Barrow Hanley returned 4.8% beating its benchmark by 1.3%, and ranked in the top third of large cap value managers. Stock selection within Financials was the main driver of performance for the quarter.
  4. For a second quarter in a row, DE Shaw led its benchmark, the Russell 1000 Index (5.1% vs. 4.0%). The outperformance was a result of an overweight exposure to small cap stocks and underweight exposure to momentum positions.
  5. The FIAM Bond portfolio ranked in the top decile of US Core Fixed Income managers with a 1.2% return (vs 0.5 for the Barclays Aggregate). The portfolio tilt towards financials and corporate outperformed treasuries this quarter which contributed to relative performance. Within the securitized allocation an overweight to CMBS was also beneficial during the quarter.



— Third quarter results were hindered by the following factors:

1. Mondrian rose 3.9% while the MSCI ACWI ex US gained 7.9%. Most US Large Value managers underperformed the index. Overweight positions in Singapore and Switzerland, stock selection in the UK and Sweden, and an overweight position in the British pound were the main reasons for underperforming.
2. Parametric Core Emerging lagged the MSCI Emerging Markets (5.3% vs 9.2%) ranking in the bottom decile of its peers. An underweight to China and Taiwan and an overweight to the Philippines were detractors from performance. Chinese stocks rose on signs of continued economic growth. Taiwan experienced a rally from Taiwan-based iPhone 7 component suppliers.
1. FIAM Equity gained 6.8% compared to the 8.0% return for the MSCI ACWI ex US Small Cap Index. The portfolio Holdings in Hong Kong and Australia Lagged. Positions within Consumer Discretionary and IT also detracted from relative performance.

# Total Fund Performance Summary (Net of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank*	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Total Fund**</b>	<b>3.7</b>	<b>54</b>	<b>7.3</b>	<b>26</b>	<b>10.3</b>	<b>17</b>	<b>4.9</b>	<b>17</b>	<b>6.5</b>	<b>14</b>	<b>10.0</b>	<b>21</b>	<b>4.9</b>	<b>79</b>
<i>Policy Index</i> <sup>1</sup>	3.8	51	7.7	11	11.1	1	4.6	22	6.4	22	10.2	12	5.9	17
<i>Allocation Index</i>	3.5	69	7.5	21	10.9	2	4.5	25	6.3	26	--	--	--	--
<i>InvestorForce Public DB &gt; \$1B Net Median</i>	3.8		6.8		9.3		3.8		5.5		8.8		5.4	
<b>Total Fund ex Overlay</b>	<b>3.9</b>	<b>36</b>	<b>7.1</b>	<b>38</b>	<b>9.9</b>	<b>28</b>	<b>4.7</b>	<b>21</b>	<b>6.4</b>	<b>22</b>	<b>9.9</b>	<b>22</b>	<b>4.9</b>	<b>80</b>
<i>Policy Index</i> <sup>1</sup>	3.8	51	7.7	11	11.1	1	4.6	22	6.4	22	10.2	12	5.9	17
<i>Allocation Index</i>	3.5	69	7.5	21	10.9	2	4.5	25	6.3	26	--	--	--	--
<i>InvestorForce Public DB &gt; \$1B Net Median</i>	3.8		6.8		9.3		3.8		5.5		8.8		5.4	
<b>Public Equity</b>	<b>5.0</b>	<b>68</b>	<b>6.9</b>	<b>55</b>	<b>12.8</b>	<b>39</b>	<b>4.2</b>	<b>38</b>	<b>6.5</b>	<b>46</b>	<b>12.7</b>	<b>47</b>	<b>4.6</b>	<b>76</b>
<i>Blended Public Equity Index</i> <sup>2</sup>	5.7	38	7.6	38	13.0	34	3.8	47	6.4	47	12.8	46	5.6	40
<i>InvestorForce All DB Total Eq Net Median</i>	5.4		7.1		12.5		3.7		6.3		12.4		5.3	
<b>US Equity</b>	<b>4.3</b>	<b>71</b>	<b>6.8</b>	<b>72</b>	<b>13.5</b>	<b>58</b>	<b>6.5</b>	<b>52</b>	<b>9.1</b>	<b>59</b>	<b>15.7</b>	<b>49</b>	<b>6.1</b>	<b>90</b>
<i>Blended US Equity Index</i> <sup>2</sup>	4.7	50	8.4	31	14.8	33	7.0	29	9.9	32	16.3	24	7.4	30
<i>Russell 3000</i>	4.4	65	8.2	37	15.0	29	7.0	33	10.4	16	16.4	19	7.4	29
<i>InvestorForce All DB US Eq Net Median</i>	4.6		7.8		14.0		6.6		9.4		15.7		7.0	
<b>Large Cap Equity</b>	<b>4.1</b>	<b>--</b>	<b>7.0</b>	<b>--</b>	<b>14.2</b>	<b>--</b>	<b>7.2</b>	<b>--</b>	<b>10.4</b>	<b>--</b>	<b>16.1</b>	<b>--</b>	<b>6.3</b>	<b>--</b>
<i>Russell 1000</i>	4.0	--	7.9	--	14.9	--	6.9	--	10.8	--	16.4	--	7.4	--
<i>Barrow Hanley</i>	4.8	33	4.7	75	10.3	72	4.5	40	7.7	68	15.6	35	--	--
<i>Russell 1000 Value</i>	3.5	61	10.0	23	16.2	22	5.4	25	9.7	20	16.2	25	5.9	66
<i>eA US Large Cap Value Equity Net Median</i>	4.0		7.7		12.8		4.0		8.5		14.6		6.3	
<i>BlackRock S&amp;P 500 Index</i>	3.9	47	7.9	18	15.4	12	7.2	25	11.2	16	--	--	--	--
<i>S&amp;P 500</i>	3.9	47	7.8	18	15.4	12	7.1	25	11.2	19	16.4	20	7.2	47
<i>eA US Large Cap Core Equity Net Median</i>	3.7		5.6		11.7		5.7		9.7		15.0		7.1	

\* 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 9/1/16, Policy Index is 28% Russell 3000/20% MSCI ACWI ex US IMI/ 10% Barclays Aggregate/ 2% Barclays TIPS

5% Barclays BA Intermediate HY / 3% Barclays Multi-verse/ 7% NCREIF NFI ODCE/ 7% Russell 3000 + 3%

8% (60% Russell 3000/40% Barclays Aggregate)/ 5% Libor +4%/ 3% Bloomberg Commodity/ 2% CPI +5%

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Brown Advisory	3.6	78	2.0	68	9.7	60	6.9	47	8.0	84	--	--	--	--
<i>Russell 1000 Growth</i>	4.6	57	6.0	21	13.8	17	8.3	20	11.8	14	16.6	22	8.8	26
<i>eA US Large Cap Growth Equity Net Median</i>	5.0		3.3		10.4		6.6		10.0		15.1		8.1	
DE Shaw	5.1	20	10.0	7	16.5	8	8.8	7	11.7	7	17.9	2	--	--
<i>Russell 1000</i>	4.0	42	7.9	18	14.9	17	6.9	29	10.8	26	16.4	19	7.4	38
<i>eA US Large Cap Core Equity Net Median</i>	3.7		5.6		11.7		5.7		9.7		15.0		7.1	
<b>Small Cap Equity</b>	<b>5.7</b>	<b>80</b>	<b>5.9</b>	<b>81</b>	<b>10.2</b>	<b>74</b>	<b>3.3</b>	<b>86</b>	<b>3.5</b>	<b>85</b>	<b>14.1</b>	<b>73</b>	<b>4.7</b>	<b>98</b>
<i>Russell 2000</i>	9.0	27	11.5	39	15.5	38	8.1	41	6.7	50	15.8	50	7.1	64
<i>eA US Small Cap Equity Net Median</i>	7.5		10.1		13.7		7.5		6.7		15.8		7.6	
QMA US Small Cap*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 2000</i>	9.0	23	11.5	36	15.5	32	8.1	49	6.7	56	15.8	56	7.1	67
<i>eA US Small Cap Core Equity Net Median</i>	7.0		9.8		13.8		8.1		7.1		16.0		7.7	
<b>International Equity</b>	<b>6.2</b>	<b>79</b>	<b>7.0</b>	<b>29</b>	<b>11.6</b>	<b>17</b>	<b>0.2</b>	<b>25</b>	<b>2.0</b>	<b>21</b>	<b>6.9</b>	<b>60</b>	<b>1.7</b>	<b>67</b>
<i>MSCI ACWI ex US IMI<sup>2</sup></i>	7.1	45	6.5	39	10.3	35	-0.9	47	1.1	45	6.8	63	2.8	33
<i>MSCI EAFE Gross</i>	6.5	71	2.2	92	7.1	81	-0.9	46	0.9	50	7.9	36	2.3	47
<i>InvestorForce All DB ex-US Eq Net Median</i>	7.0		5.8		9.4		-1.0		0.9		7.3		2.2	
<b>Developed Markets</b>	<b>6.3</b>	<b>57</b>	<b>6.1</b>	<b>26</b>	<b>11.2</b>	<b>23</b>	<b>0.9</b>	<b>26</b>	<b>2.4</b>	<b>24</b>	<b>7.5</b>	<b>50</b>	<b>2.0</b>	<b>61</b>
<i>MSCI ACWI ex USA Gross</i>	7.0	41	6.3	25	9.8	33	-1.6	66	0.6	62	6.5	77	2.6	37
<i>InvestorForce All DB Dev Mkt ex-US Eq Net Median</i>	6.6		3.9		7.2		-0.7		1.1		7.4		2.3	
Baillie Gifford	8.4	16	8.4	14	16.4	13	4.3	37	3.9	36	--	--	--	--
<i>MSCI ACWI ex US<sup>2</sup></i>	7.0	43	6.3	36	9.8	51	-1.6	97	0.9	89	--	--	--	--
<i>MSCI ACWI ex US Growth<sup>2</sup></i>	6.1	68	6.5	32	11.9	38	1.6	73	2.8	61	--	--	--	--
<i>eA ACWI ex-US Growth Equity Net Median</i>	6.7		4.0		9.9		3.5		3.4		9.2		4.9	

\* Funded August 2016.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
BlackRock EAFE Index	6.5	50	2.1	47	6.9	45	-1.1	79	--	--	--	--	--	--
<i>MSCI EAFE</i>	6.4	52	1.7	52	6.5	56	-1.4	82	0.5	76	7.4	74	1.8	76
<i>MSCI EAFE Gross</i>	6.5	49	2.2	46	7.1	44	-0.9	76	0.9	64	7.9	68	2.3	58
<i>eA EAFE Core Equity Net Median</i>	6.5		1.8		6.7		0.3		1.7		9.0		2.5	
FIAM Equity	6.8	60	7.3	31	13.0	39	4.1	58	3.7	64	--	--	--	--
<i>MSCI ACWI ex US Small Cap Gross</i>	8.0	31	8.0	22	13.8	34	3.4	63	3.9	55	9.0	83	5.0	79
<i>eA ACWI ex-US Small Cap Equity Net Median</i>	7.2		5.5		11.8		4.6		4.0		10.9		6.5	
Mondrian	3.9	81	6.0	37	8.4	48	-2.1	70	1.3	61	5.9	88	2.3	47
<i>MSCI ACWI ex USA Value Gross</i>	7.9	29	6.0	37	7.6	64	-4.8	91	-1.4	87	5.2	92	1.7	87
<i>MSCI ACWI ex USA Gross</i>	7.0	46	6.3	36	9.8	35	-1.6	68	0.6	72	6.5	74	2.6	41
<i>eA ACWI ex-US Value Equity Net Median</i>	6.5		5.1		8.1		0.1		1.5		7.7		2.3	
<b>Emerging Markets</b>	<b>5.3</b>	<b>92</b>	<b>16.1</b>	<b>50</b>	<b>14.9</b>	<b>81</b>	<b>-5.4</b>	<b>93</b>	<b>-1.3</b>	<b>75</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>MSCI Emerging Markets Gross</i>	9.2	26	16.4	47	17.2	50	-2.6	42	-0.2	47	3.4	46	4.3	30
<i>InvestorForce All DB Emg Mkt Eq Net Median</i>	8.2		16.0		17.1		-2.8		-0.3		3.2		3.7	
Parametric Core	5.3	91	16.1	37	15.0	60	--	--	--	--	--	--	--	--
<i>MSCI Emerging Markets Gross</i>	9.2	36	16.4	34	17.2	44	-2.6	58	-0.2	62	3.4	69	4.3	63
<i>eA Emg Mkts Equity Net Median</i>	8.5		14.5		16.1		-2.1		0.3		4.2		4.7	
<b>Fixed Income</b>	<b>2.4</b>	<b>12</b>	<b>7.2</b>	<b>42</b>	<b>6.7</b>	<b>42</b>	<b>3.0</b>	<b>64</b>	<b>3.9</b>	<b>44</b>	<b>5.0</b>	<b>28</b>	<b>5.2</b>	<b>57</b>
<i>Blended Fixed Income Index<sup>2</sup></i>	1.5	40	8.1	34	7.6	34	4.2	29	3.9	42	3.2	79	4.9	68
<i>InvestorForce All DB Total Fix Inc Net Median</i>	1.3		6.8		6.2		3.5		3.7		4.0		5.4	
<b>US Fixed Income</b>	<b>2.9</b>	<b>5</b>	<b>8.4</b>	<b>31</b>	<b>7.4</b>	<b>33</b>	<b>4.1</b>	<b>40</b>	<b>4.5</b>	<b>41</b>	<b>5.0</b>	<b>34</b>	<b>5.3</b>	<b>49</b>
<i>Blended US Fixed Index<sup>2</sup></i>	1.6	34	7.7	35	7.3	34	4.4	33	4.2	48	3.4	70	5.1	56
<i>InvestorForce All DB US Fix Inc Net Median</i>	1.2		6.6		6.0		3.8		4.1		4.2		5.2	

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	Rank	YTD (%)	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>6.5</b>	<b>--</b>	<b>6.4</b>	<b>--</b>	<b>4.0</b>	<b>--</b>	<b>4.4</b>	<b>--</b>	<b>4.1</b>	<b>--</b>	<b>4.9</b>	<b>--</b>
Barclays Aggregate	0.5	--	5.8	--	5.2	--	4.1	--	4.0	--	3.1	--	4.8	--
FIAM Bond	1.2	10	7.4	6	6.9	8	4.5	20	4.6	21	4.0	26	5.2	40
Western TRU	2.6	2	4.5	92	5.1	68	--	--	--	--	--	--	--	--
3-Month Libor Total Return USD	0.2	90	0.5	99	0.6	99	0.4	99	0.4	99	0.4	99	1.3	99
Barclays Aggregate	0.5	72	5.8	64	5.2	68	4.1	50	4.0	61	3.1	79	4.8	78
eA US Core Fixed Inc Net Median	0.7		6.1		5.5		4.1		4.1		3.5		5.1	
<b>Opportunistic Credit</b>	<b>5.8</b>	<b>--</b>	<b>12.2</b>	<b>--</b>	<b>8.8</b>	<b>--</b>	<b>4.4</b>	<b>--</b>	<b>6.1</b>	<b>--</b>	<b>10.6</b>	<b>--</b>	<b>--</b>	<b>--</b>
Barclays BA Intermediate HY	4.0	--	11.1	--	11.2	--	5.5	--	5.3	--	5.2	--	--	--
Angelo Gordon Opportunistic*	5.1	--	5.0	--	4.4	--	2.7	--	--	--	--	--	--	--
Angelo Gordon STAR*	4.7	--	4.6	--	3.6	--	5.9	--	9.5	--	--	--	--	--
Barclays Aggregate	0.5	--	5.8	--	5.2	--	4.1	--	4.0	--	3.1	--	4.8	--
Beach Point Select	5.2	32	12.1	50	10.3	47	--	--	--	--	--	--	--	--
Barclays BA Intermediate HY <sup>2</sup>	4.0	80	11.1	64	11.2	22	5.5	6	5.3	27	5.2	94	--	--
eA US High Yield Fixed Inc Net Median	4.8		11.9		10.1		3.4		4.6		7.6		7.0	
Brigade Capital	7.1	1	19.8	1	12.0	11	2.0	84	3.1	86	6.6	78	--	--
Barclays BA Intermediate HY <sup>2</sup>	4.0	80	11.1	64	11.2	22	5.5	6	5.3	27	5.2	94	--	--
50% Barclays HY/ 50% Bank Loan	4.3	75	11.2	63	9.0	67	3.8	44	4.5	54	6.9	76	--	--
eA US High Yield Fixed Inc Net Median	4.8		11.9		10.1		3.4		4.6		7.6		7.0	
TCP Direct Lending VIII**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barclays BA Intermediate HY	4.0	80	11.1	64	11.2	22	5.5	6	5.3	27	5.2	94	--	--
eA US High Yield Fixed Inc Net Median	4.8		11.9		10.1		3.4		4.6		7.6		7.0	
<b>Global Fixed Income</b>	<b>-0.1</b>	<b>95</b>	<b>1.1</b>	<b>95</b>	<b>3.4</b>	<b>95</b>	<b>-2.5</b>	<b>95</b>	<b>0.2</b>	<b>86</b>	<b>4.4</b>	<b>43</b>	<b>--</b>	<b>--</b>
Barclays Multi-verse	1.0	72	10.2	42	9.2	44	2.6	41	2.2	60	2.0	89	4.4	78
InvestorForce All DB Gbl Fix Inc Net Median	1.9		9.4		8.6		1.8		3.1		4.2		5.8	

\* Preliminary return as of 9/30/2016.

\*\* Funded September 2016.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Franklin Templeton	-0.1	98	1.1	97	3.4	93	-2.5	97	0.2	92	4.4	48	--	--
Barclays Multi-verse	1.0	79	10.2	34	9.2	39	2.6	44	2.2	66	2.0	77	4.4	73
eA All Global Fixed Inc Net Median	2.3		9.0		8.1		2.4		3.0		4.2		5.0	
<b>Risk Parity</b>	<b>2.2</b>	<b>--</b>	<b>16.5</b>	<b>--</b>	<b>14.6</b>	<b>--</b>	<b>4.9</b>	<b>--</b>	<b>7.3</b>	<b>--</b>	<b>7.4</b>	<b>--</b>	<b>--</b>	<b>--</b>
60/40 Russell 3000/Barclays Aggregate	2.8	--	7.4	--	11.2	--	6.0	--	8.0	--	11.1	--	6.7	--
AQR GRP, 10% Volatility	2.2	--	13.2	--	10.0	--	0.4	--	4.0	--	5.4	--	--	--
PanAgora	2.2	--	19.5	--	18.9	--	9.3	--	--	--	--	--	--	--
60/40 Russell 3000/Barclays Aggregate	2.8	--	7.4	--	11.2	--	6.0	--	8.0	--	11.1	--	6.7	--
60/40 MSCI World/Barclays Global Aggregate	3.1	--	6.1	--	9.6	--	3.8	--	5.7	--	8.8	--	--	--
<b>Alternatives</b>	<b>6.2</b>	<b>--</b>	<b>5.3</b>	<b>--</b>	<b>4.5</b>	<b>--</b>	<b>6.6</b>	<b>--</b>	<b>7.0</b>	<b>--</b>	<b>6.6</b>	<b>--</b>	<b>--</b>	<b>--</b>
Alternatives Allocation Index <sup>2</sup>	3.5	--	7.0	--	8.9	--	2.2	--	4.1	--	6.4	--	--	--
Blended Alternatives Index	3.7	--	7.2	--	8.7	--	2.9	--	5.4	--	9.4	--	--	--
<b>Private Equity <sup>**</sup></b>	<b>10.5</b>	<b>1</b>	<b>9.2</b>	<b>8</b>	<b>9.8</b>	<b>12</b>	<b>18.1</b>	<b>1</b>	<b>19.0</b>	<b>1</b>	<b>13.2</b>	<b>8</b>	<b>--</b>	<b>--</b>
Russell 3000 +3%	5.5	4	10.3	4	18.0	1	10.0	23	13.4	16	19.4	1	10.4	20
InvestorForce All DB Private Eq Net Median	1.5		3.9		4.2		6.4		9.5		8.9		8.1	
<b>Hedge Fund/Absolute Return</b>	<b>1.5</b>	<b>86</b>	<b>-1.3</b>	<b>83</b>	<b>0.7</b>	<b>40</b>	<b>7.3</b>	<b>1</b>	<b>7.7</b>	<b>1</b>	<b>6.4</b>	<b>8</b>	<b>--</b>	<b>--</b>
Libor 1 month +4%	1.1	89	3.3	13	4.4	12	4.3	5	4.2	12	4.2	55	--	--
InvestorForce All DB Hedge Funds Net Median	2.5		0.3		0.3		0.1		2.3		4.5		3.2	
AQR DELTA XN	1.7	59	-0.8	78	1.7	68	7.9	24	8.1	31	6.7	44	--	--
Libor 1 month +4%	1.1	68	3.3	55	4.4	53	4.3	44	4.2	56	4.2	62	--	--
eV Alt All Multi-Strategy Median	2.2		4.9		4.8		3.0		4.9		5.7		6.3	
Standard Life GARS <sup>*</sup>	0.4	77	-3.7	90	--	--	--	--	--	--	--	--	--	--
Libor 1 month +4%	1.1	68	3.3	55	4.4	53	4.3	44	4.2	56	4.2	62	--	--
eV Alt All Multi-Strategy Median	2.2		4.9		4.8		3.0		4.9		5.7		6.3	

\* Funded October 2015.

\*\* Returns are one-quarter lag.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Inflation Pool</b>	1.3	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Blended Inflation Pool Index<sup>2</sup></i>	0.6	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Real Estate</b>	1.7	47	6.6	30	9.7	40	12.5	18	12.3	15	11.7	35	5.5	27
<i>NCREIF ODCE</i>	2.1	12	6.5	32	10.1	34	12.5	18	12.4	15	12.4	17	6.5	6
<i>InvestorForce All DB Real Estate Pub Net Median</i>	1.6	--	5.7	--	9.4	--	11.2	--	11.4	--	11.4	--	4.8	--
<i>Invesco</i>	1.6	--	6.7	--	9.3	--	12.3	--	12.2	--	11.6	--	5.4	--
<i>NCREIF ODCE</i>	2.1	--	6.5	--	10.1	--	12.5	--	12.4	--	12.4	--	6.5	--
<i>Invesco US Val IV *</i>	3.5	--	5.4	--	--	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	2.1	--	6.5	--	10.1	--	12.5	--	12.4	--	12.4	--	6.5	--
<i>NCREIF CEVA 1Q Lag - NET</i>	2.2	--	10.3	--	13.6	--	15.5	--	--	--	--	--	--	--
<b>TIPS</b>	1.2	--	5.5	--	5.3	--	1.7	--	1.2	--	1.3	--	--	--
<i>Barclays US TIPS</i>	1.0	--	7.3	--	6.6	--	2.8	--	2.4	--	1.9	--	4.5	--
<b>Brown Brothers Harriman</b>	1.2	48	5.5	84	5.3	67	1.7	71	1.2	83	1.3	85	--	--
<i>Barclays US TIPS</i>	1.0	63	7.3	41	6.6	38	2.8	20	2.4	26	1.9	34	4.5	69
<i>eA TIPS / Infl Indexed Fixed Inc Net Median</i>	1.1	--	7.0	--	6.3	--	2.3	--	2.0	--	1.7	--	4.6	--
<b>Private Real Asset **</b>	0.0	--	44.6	--	36.9	--	18.1	--	--	--	--	--	--	--
<i>CPI +5%</i>	1.4	--	5.4	--	6.8	--	5.4	--	--	--	--	--	--	--
<b>Cash</b>	0.2	--	0.6	--	1.4	--	1.0	--	0.8	--	0.7	--	1.0	--
<i>91 Day T-Bills</i>	0.1	--	0.2	--	0.2	--	0.1	--	0.1	--	0.1	--	0.8	--
<b>General Account</b>	0.2	--	0.8	--	2.1	--	1.5	--	1.1	--	0.7	--	1.4	--
<b>Treasury &amp; LAIF</b>	0.1	--	1.1	--	0.9	--	1.1	--	1.0	--	0.9	--	1.0	--
<i>91 Day T-Bills</i>	0.1	--	0.2	--	0.2	--	0.1	--	0.1	--	0.1	--	0.8	--

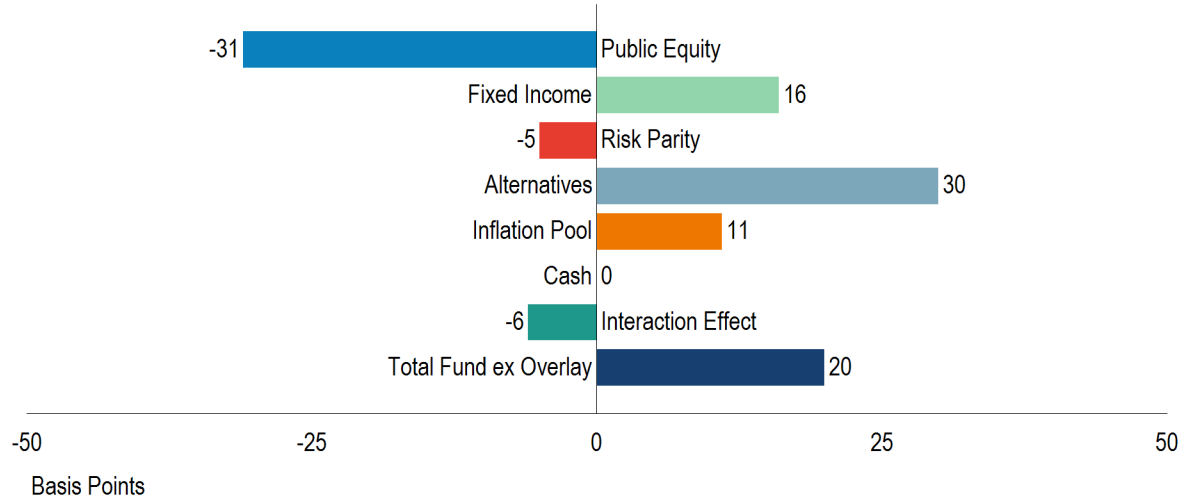
\* Funded December 2015.

\*\* Returns are one-quarter lag.

2. See Appendix for Benchmark History.

Total Fund ex Overlay  
Performance Attribution

Period Ending: September 30, 2016



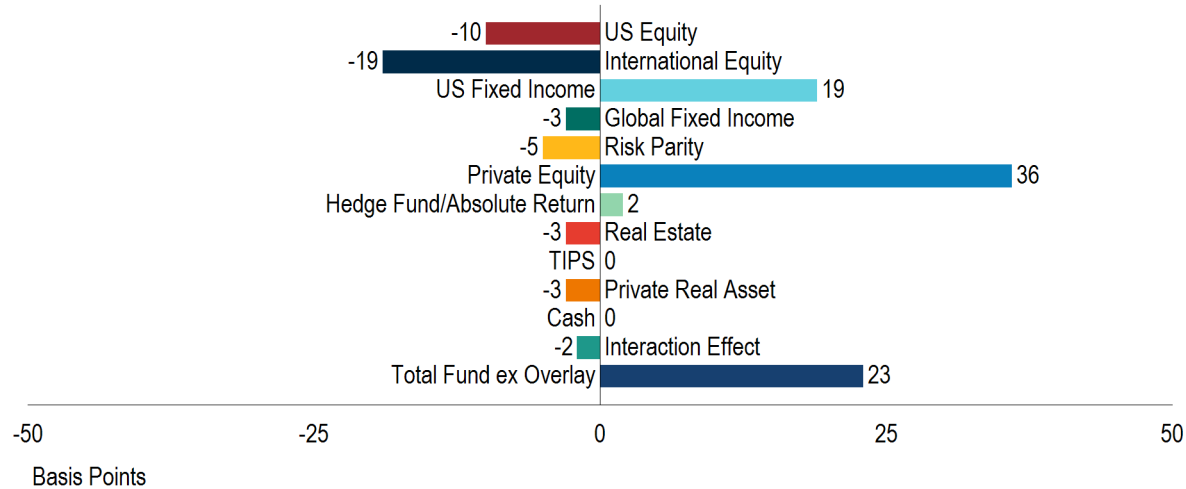
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Public Equity	5.04%	5.69%	-0.65%	-0.31%	0.04%	-0.01%	-0.28%
Fixed Income	2.40%	1.54%	0.86%	0.16%	0.01%	-0.01%	0.16%
Risk Parity	2.21%	2.82%	-0.60%	-0.05%	0.00%	0.00%	-0.05%
Alternatives	6.19%	3.66%	2.53%	0.30%	0.00%	-0.01%	0.30%
Inflation Pool	1.34%	0.55%	0.79%	0.11%	0.14%	-0.03%	0.21%
Cash	0.18%	0.07%	0.11%	0.00%	-0.14%	0.01%	-0.14%
<b>Total</b>	<b>3.96%</b>	<b>3.75%</b>	<b>0.20%</b>	<b>0.21%</b>	<b>0.05%</b>	<b>-0.06%</b>	<b>0.20%</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: September 30, 2016



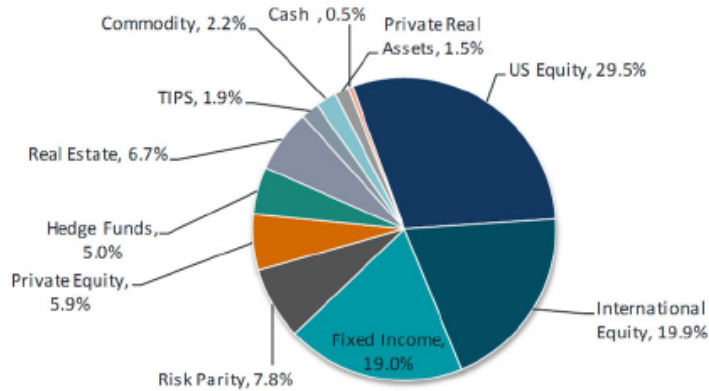
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	4.30%	4.66%	-0.36%	-0.10%	0.03%	-0.01%	-0.08%
International Equity	6.18%	7.14%	-0.96%	-0.19%	-0.02%	0.01%	-0.21%
US Fixed Income	2.90%	1.64%	1.25%	0.19%	0.01%	-0.01%	0.19%
Global Fixed Income	-0.13%	1.05%	-1.18%	-0.03%	0.00%	0.00%	-0.03%
Risk Parity	2.21%	2.82%	-0.60%	-0.05%	0.00%	0.00%	-0.05%
Private Equity	10.51%	5.46%	5.04%	0.36%	-0.01%	-0.03%	0.32%
Hedge Fund/Absolute Return	1.46%	1.14%	0.32%	0.02%	-0.01%	0.00%	0.01%
Real Estate	1.67%	2.07%	-0.40%	-0.03%	0.00%	0.00%	-0.03%
TIPS	1.20%	0.97%	0.24%	0.00%	0.00%	0.00%	0.01%
Commodity	--	--	--	--	0.23%	--	--
Private Real Asset	0.00%	1.40%	-1.40%	-0.03%	0.03%	0.01%	0.01%
Cash	0.18%	0.07%	0.11%	0.00%	-0.14%	0.01%	-0.14%
<b>Total</b>	<b>3.99%</b>	<b>3.75%</b>	<b>0.23%</b>	<b>0.14%</b>	<b>0.12%</b>	<b>-0.02%</b>	<b>0.23%</b>

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

Total Fund  
Asset Allocation Analysis

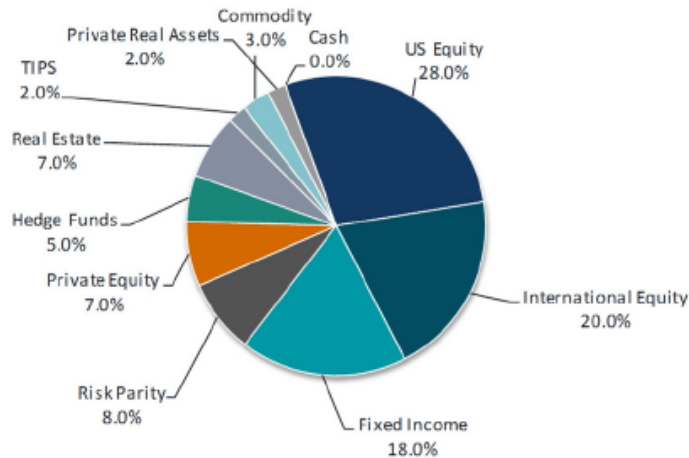
Period Ending: September 30, 2016

Current w/Overlay



ASSET ALLOCATION	MARKET VALUE W/OVERLAY	W/OVERLAY	W/O OVERLAY
US Equity	1,061,505,879	29.5%	28.7%
International Equity	714,868,234	19.9%	19.3%
Fixed Income	619,044,493	19.0%	16.7%
Risk Parity	286,545,641	7.8%	7.8%
Private Equity	219,858,478	5.9%	5.9%
Hedge Funds	186,577,425	5.0%	5.0%
Real Estate	248,251,221	6.7%	6.7%
TIPS	70,921,074	1.9%	1.9%
Commodity	0	2.2%	0.0%
Private Real Assets	54,691,244	1.5%	1.5%
Cash	234,541,860	0.5%	6.3%
<b>TOTAL</b>	<b>3,696,805,549</b>	<b>100.0%</b>	<b>100.0%</b>

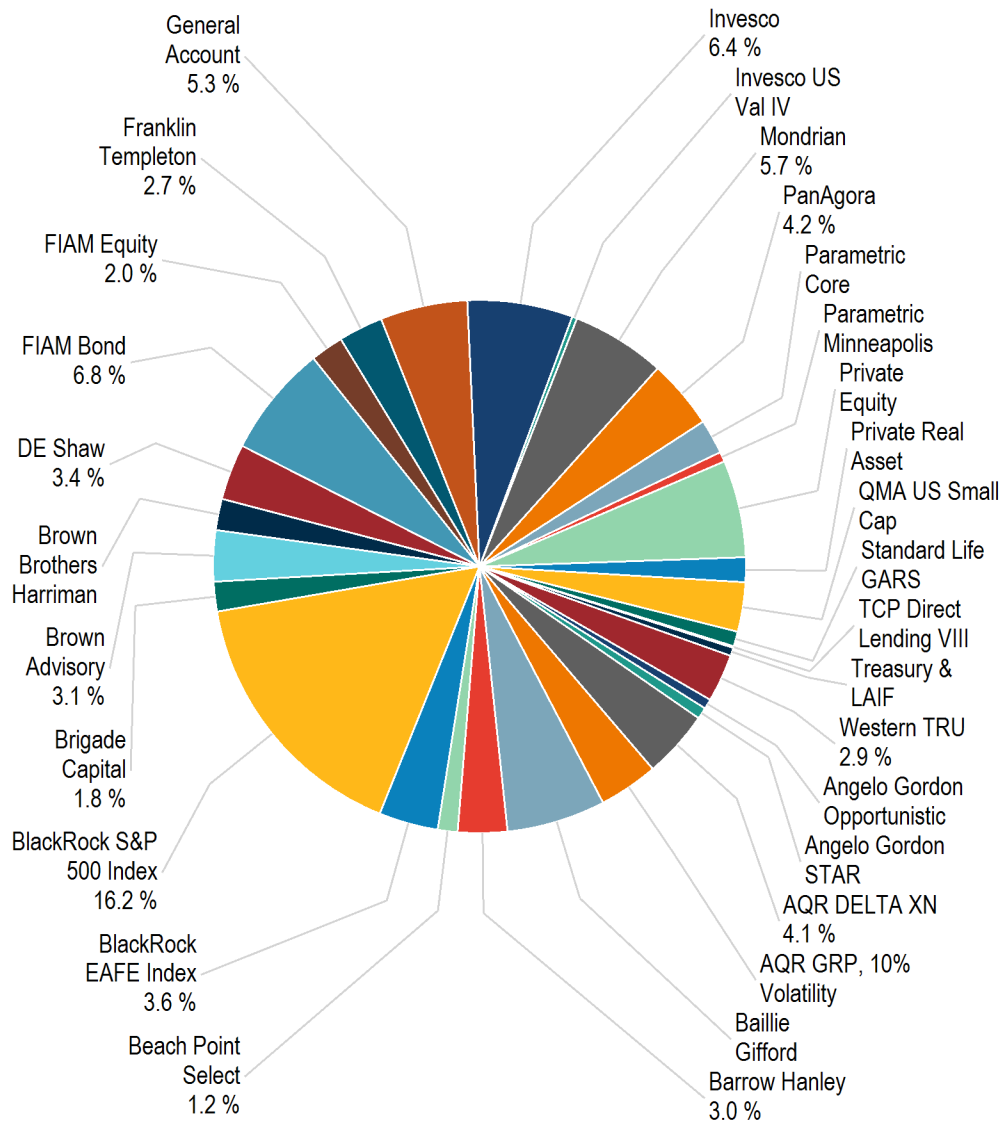
Target



ASSET ALLOCATION	W/OVERLAY	TARGET	DIFF
US Equity	29.5%	28.0%	1.5%
International Equity	19.9%	20.0%	-0.1%
Fixed Income	19.0%	18.0%	1.0%
Risk Parity	7.8%	8.0%	-0.2%
Private Equity	5.9%	7.0%	-1.1%
Hedge Funds	5.0%	5.0%	0.0%
Real Estate	6.7%	7.0%	-0.3%
TIPS	1.9%	2.0%	-0.1%
Commodity	2.2%	3.0%	-0.8%
Private Real Assets	1.5%	2.0%	-0.5%
Cash	0.5%	0.0%	0.5%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.0%</b>

# Total Fund Manager Allocation Analysis

Period Ending: September 30, 2016



	Actual (\$)	Actual %
Angelo Gordon Opportunistic	\$21,332,000	1%
Angelo Gordon STAR	\$27,375,000	1%
AQR DELTA XN	\$153,000,131	4%
AQR GRP, 10% Volatility	\$131,507,185	4%
Baillie Gifford	\$220,570,533	6%
Barrow Hanley	\$111,806,209	3%
Beach Point Select	\$43,087,939	1%
BlackRock EAFE Index	\$132,458,109	4%
BlackRock S&P 500 Index	\$597,948,728	16%
Brigade Capital	\$68,344,302	2%
Brown Advisory	\$113,885,228	3%
Brown Brothers Harriman	\$70,921,074	2%
DE Shaw	\$124,933,739	3%
FIAM Bond	\$250,365,014	7%
FIAM Equity	\$73,945,419	2%
Franklin Templeton	\$99,875,590	3%
General Account	\$194,219,670	5%
Invesco	\$238,253,364	6%
Invesco US Val IV	\$9,997,857	0%
Mondrian	\$211,274,136	6%
PanAgora	\$155,038,456	4%
Parametric Core	\$76,620,037	2%
Parametric Minneapolis Overlay	\$22,225,727	1%
Private Equity	\$219,858,478	6%
Private Real Asset	\$54,691,244	1%
QMA US Small Cap	\$112,380,830	3%
Standard Life GARS	\$33,577,294	1%
TCP Direct Lending VIII	\$2,136,150	0%
Transition Account	\$551,146	0%
Treasury & LAIF	\$18,096,463	0%
Western TRU	\$106,528,498	3%
<b>Total</b>	<b>\$3,696,805,549</b>	<b>100%</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	6.5%	14	6.8%	71	1.0	31	0.2	28	1.0%	28
Policy Index	6.4%	22	7.2%	85	0.9	44	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	5.5%	--	6.3%	--	0.9	--	-0.2	--	1.1%	--

**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	10.0%	21	7.4%	76	1.3	38	-0.2	73	1.0%	30
Policy Index	10.2%	12	7.9%	88	1.3	45	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	8.8%	--	6.8%	--	1.3	--	0.0	--	1.1%	--

**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	1.1%	0.6%	1.7	1.7	0.6%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%
Treasury & LAIF	1.0%	0.5%	1.7	1.7	0.5%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%

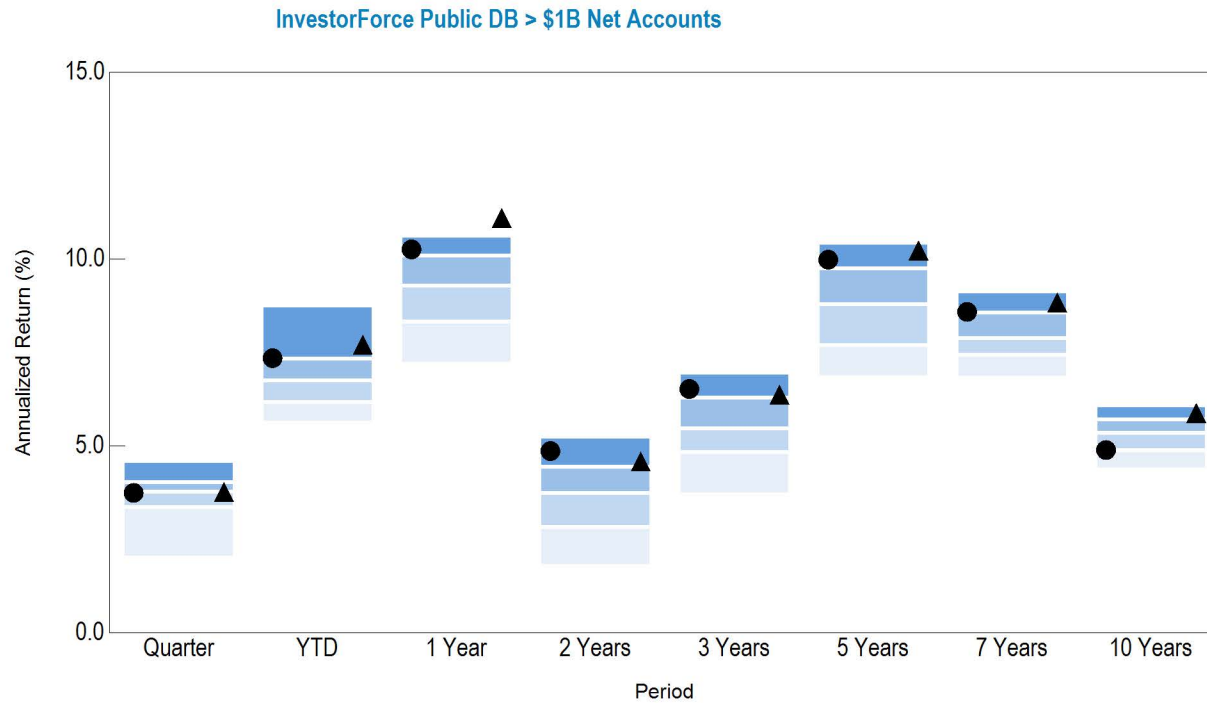
**Statistics Summary**

**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%	1.3	1.3	0.5%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%
Treasury & LAIF	0.9%	0.4%	2.0	2.0	0.4%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%

Total Fund  
Peer Universe Comparison

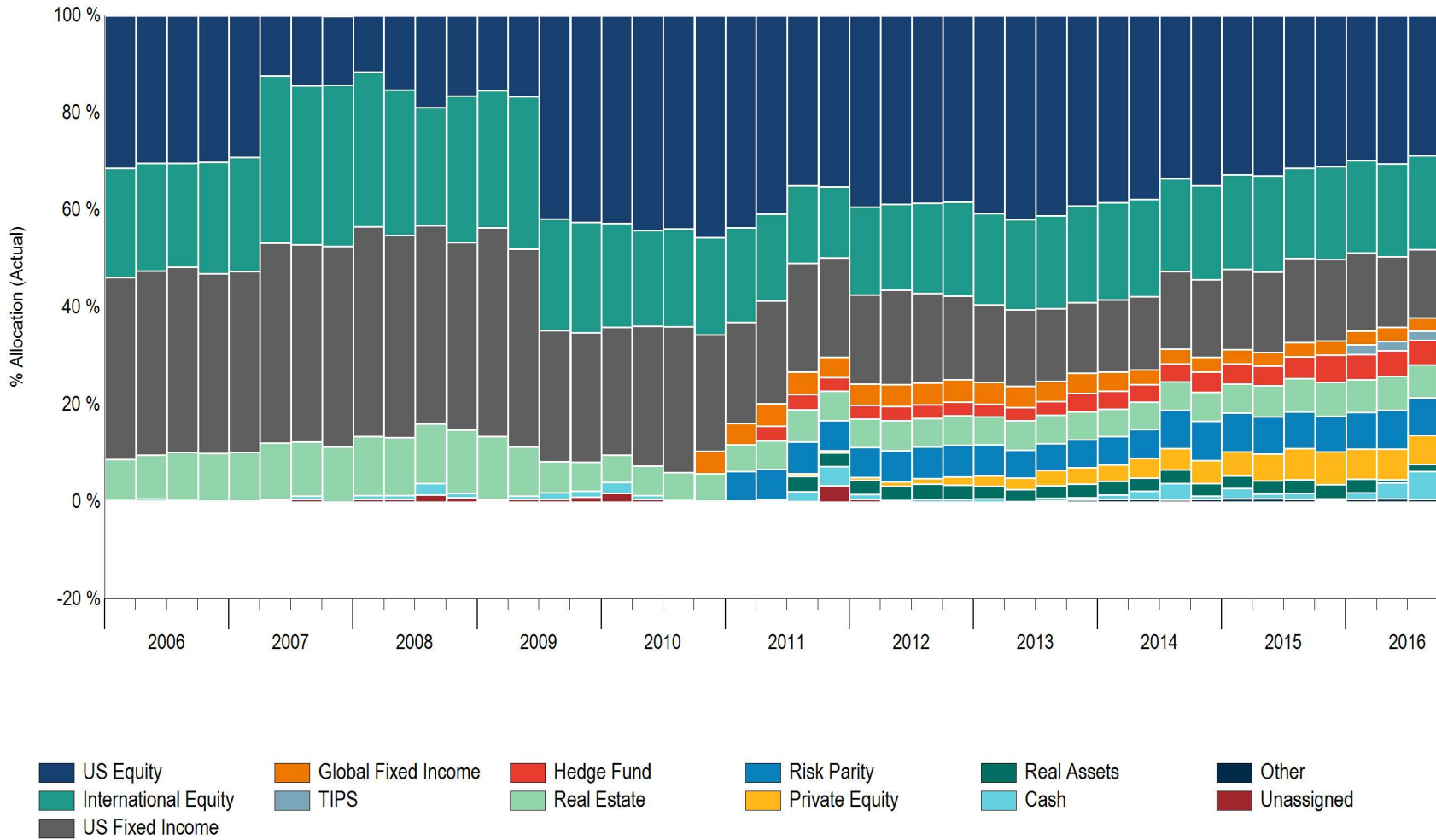
Period Ending: September 30, 2016

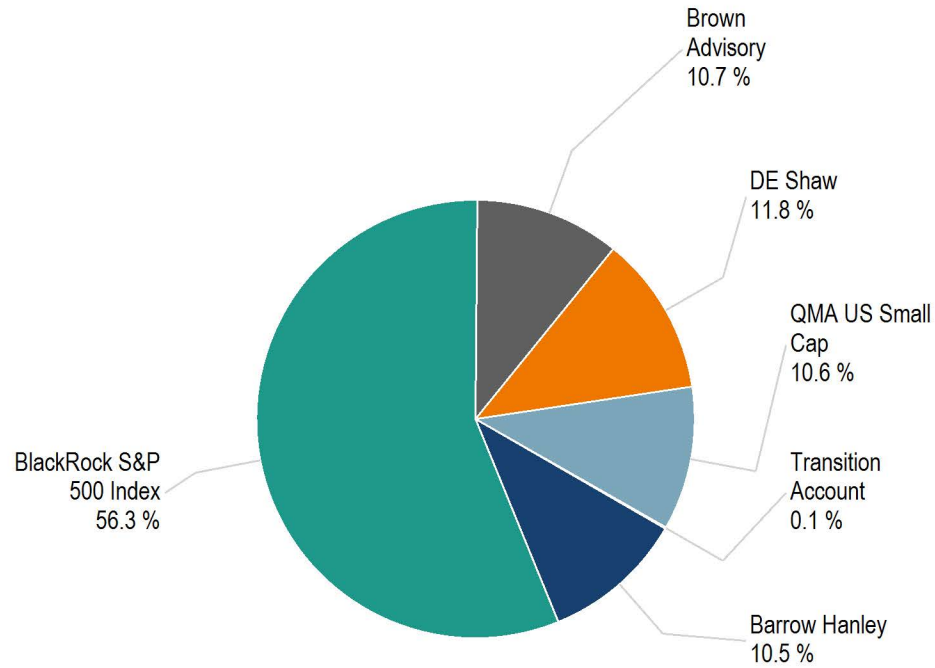


	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	4.6	8.7	10.6	5.2	7.0	10.4	9.1	6.1
25th Percentile	4.0	7.4	10.1	4.5	6.3	9.8	8.6	5.7
Median	3.8	6.8	9.3	3.8	5.5	8.8	7.9	5.4
75th Percentile	3.4	6.2	8.3	2.8	4.8	7.7	7.5	4.9
95th Percentile	2.0	5.6	7.2	1.8	3.7	6.9	6.8	4.4
# of Portfolios	57	57	57	56	54	54	52	47
● Total Fund	3.7 (54)	7.3 (26)	10.3 (17)	4.9 (17)	6.5 (14)	10.0 (21)	8.6 (26)	4.9 (79)
▲ Policy Index	3.8 (51)	7.7 (11)	11.1 (1)	4.6 (22)	6.4 (22)	10.2 (12)	8.8 (12)	5.9 (17)

Total Fund  
Asset Allocation History

Period Ending: September 30, 2016





	Actual \$	Actual %	Manager Contribution to Excess Return %
Barrow Hanley	\$111,806,209	10.5%	0.2%
BlackRock S&P 500 Index	\$597,948,728	56.3%	0.0%
Brown Advisory	\$113,885,228	10.7%	-0.1%
DE Shaw	\$124,933,739	11.8%	0.1%
QMA US Small Cap	\$112,380,830	10.6%	0.0%
Transition Account	\$551,146	0.1%	0.0%
Actual vs. Policy Weight Difference			-0.6%
<b>Total</b>	<b>\$1,061,505,879</b>	<b>100.0%</b>	<b>-0.4%</b>



**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	9.1%	11.0%	0.8	-1.1	0.8%
Blended US Equity Index	9.9%	11.2%	0.9	--	0.0%
Russell 3000	10.4%	11.0%	0.9	0.5	1.0%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	10.4%	10.8%	1.0	-0.5	0.8%
Russell 1000	10.8%	10.9%	1.0	--	0.0%
Barrow Hanley	7.7%	11.3%	0.7	-0.7	3.1%
Russell 1000 Value	9.7%	10.7%	0.9	--	0.0%
BlackRock S&P 500 Index	11.2%	10.8%	1.0	0.8	0.0%
S&P 500	11.2%	10.8%	1.0	--	0.0%
Brown Advisory	8.0%	11.3%	0.7	-1.1	3.4%
Russell 1000 Growth	11.8%	11.4%	1.0	--	0.0%
DE Shaw	11.7%	11.3%	1.0	0.4	2.3%
Russell 1000	10.8%	10.9%	1.0	--	0.0%
Small Cap Equity	3.5%	13.7%	0.3	-1.2	2.8%
Russell 2000	6.7%	14.6%	0.5	--	0.0%

**Statistics Summary**

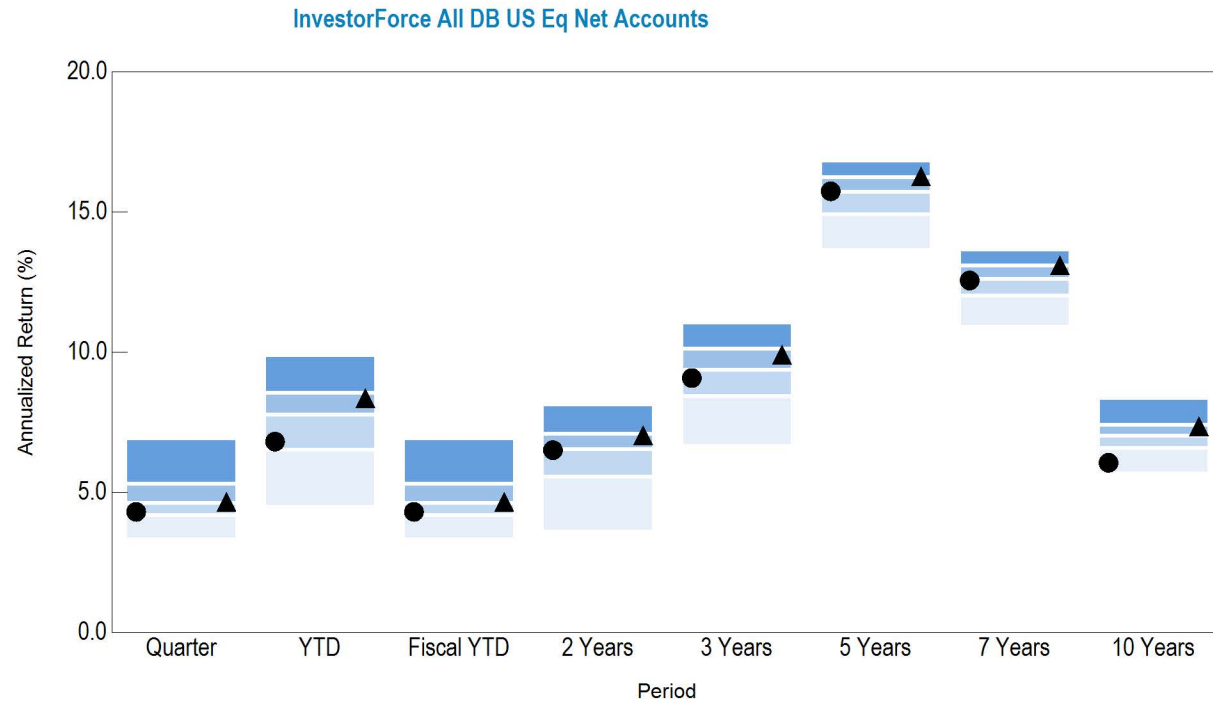
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	15.7%	11.8%	1.3	-0.5	1.0%
Blended US Equity Index	16.3%	11.7%	1.4	--	0.0%
Russell 3000	16.4%	11.4%	1.4	0.1	0.9%

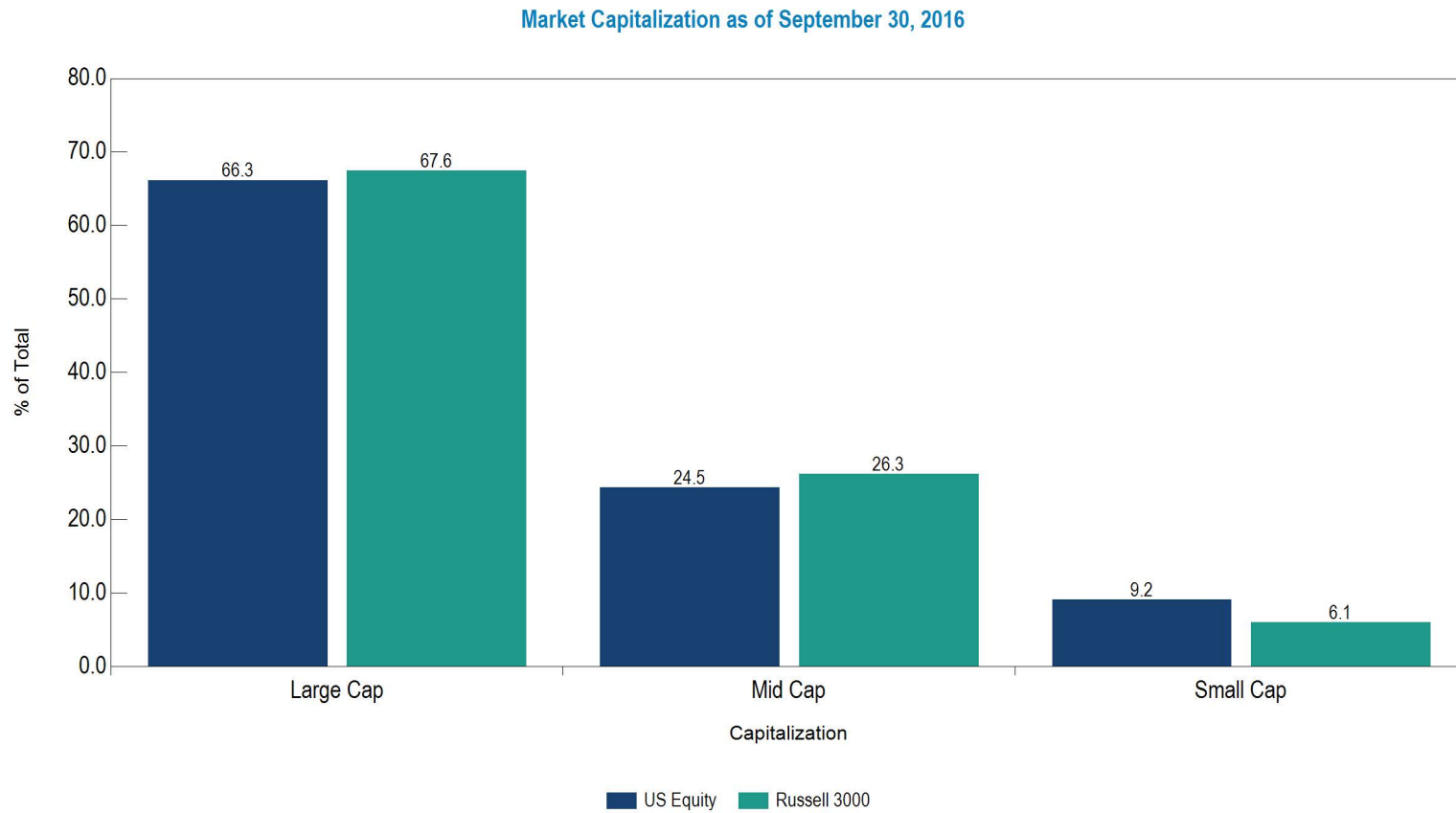
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	16.1%	11.4%	1.4	-0.4	0.9%
Russell 1000	16.4%	11.3%	1.5	--	0.0%
Barrow Hanley	15.6%	11.8%	1.3	-0.2	2.9%
Russell 1000 Value	16.2%	11.3%	1.4	--	0.0%
DE Shaw	17.9%	11.7%	1.5	0.8	2.0%
Russell 1000	16.4%	11.3%	1.5	--	0.0%
Small Cap Equity	14.1%	14.7%	1.0	-0.5	3.1%
Russell 2000	15.8%	15.0%	1.0	--	0.0%



	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	6.9	9.9	6.9	8.1	11.1	16.8	13.6	8.4
25th Percentile	5.3	8.6	5.3	7.1	10.1	16.3	13.1	7.4
Median	4.6	7.8	4.6	6.6	9.4	15.7	12.6	7.0
75th Percentile	4.2	6.5	4.2	5.6	8.4	14.9	12.0	6.6
95th Percentile	3.3	4.5	3.3	3.6	6.7	13.7	10.9	5.7
# of Portfolios	687	686	687	671	620	528	449	353
● US Equity	4.3 (71)	6.8 (72)	4.3 (71)	6.5 (52)	9.1 (59)	15.7 (49)	12.6 (56)	6.1 (90)
▲ Blended US Equity Index	4.7 (50)	8.4 (31)	4.7 (50)	7.0 (29)	9.9 (32)	16.3 (24)	13.1 (25)	7.4 (30)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,484	2,955
Weighted Avg. Market Cap. (\$B)	104.7	112.3
Median Market Cap. (\$B)	2.1	1.4
Price To Earnings	23.4	22.9
Price To Book	4.4	3.8
Price To Sales	3.6	3.1
Return on Equity (%)	17.8	16.7
Yield (%)	1.8	2.0
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	2.2%
AMAZON.COM	2.1%
FACEBOOK CLASS A	1.6%
MICROSOFT	1.5%
VISA 'A'	1.4%
JOHNSON & JOHNSON	1.2%
EXXON MOBIL	1.1%
ALPHABET 'C'	1.0%
ALPHABET 'A'	1.0%
BERKSHIRE HATHAWAY 'B'	1.0%

Best Performers

	Return %
CLOUD PEAK ENERGY (CLD)	164.1%
CLOVIS ONCOLOGY (CLVS)	162.8%
HEALTHWAYS	129.1%
LANTHEUS HOLDINGS (LNTH)	125.6%
PUMA BIOTECHNOLOGY	125.1%
EVERI HOLDINGS (EVRI)	114.8%
OCWEN FINANCIAL	114.6%
AERIE PHARMACEUTICALS	114.4%
TRONOX CLASS A	113.6%
HARMONIC (HLIT)	108.1%

Worst Performers

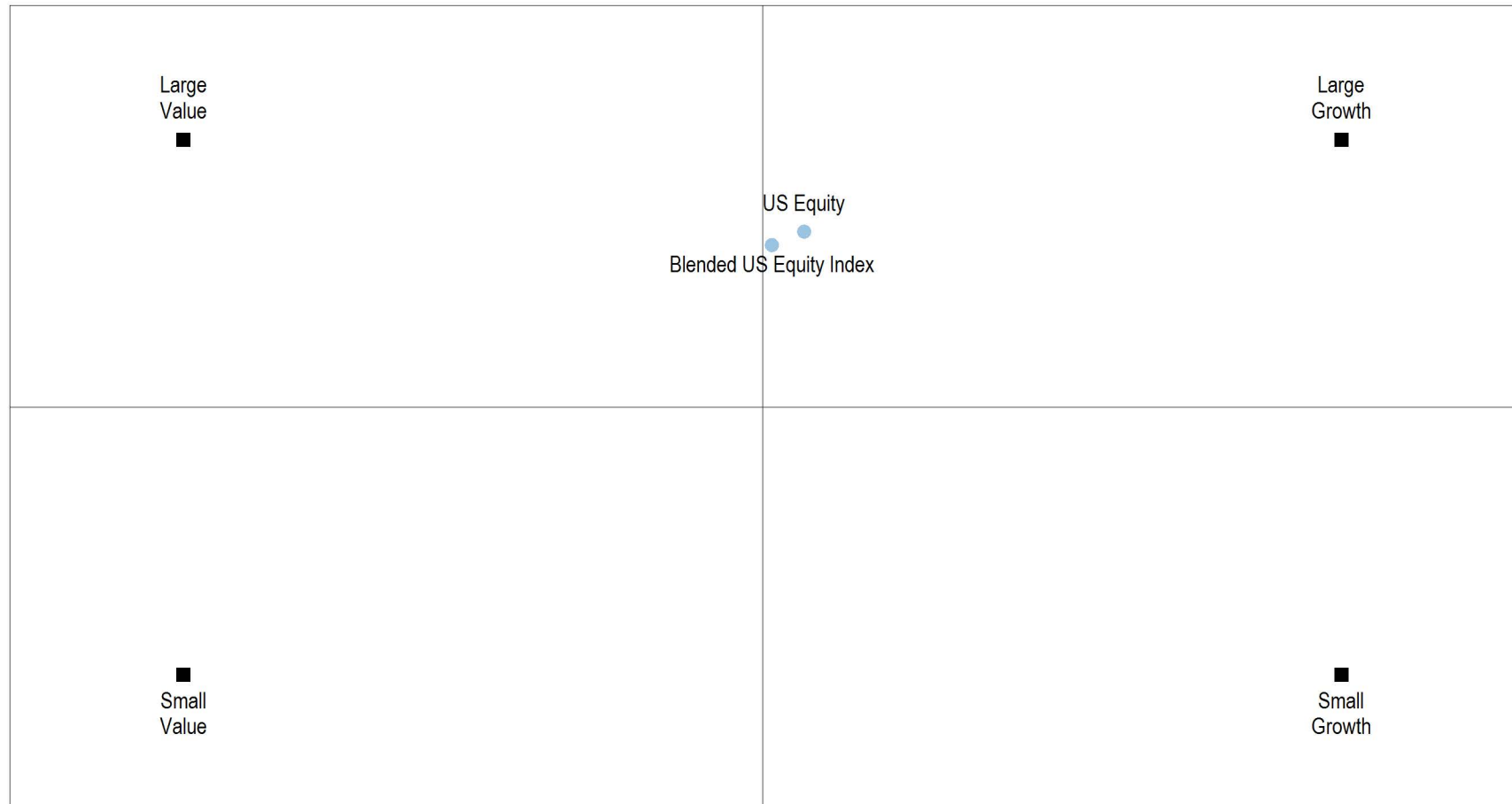
	Return %
KEY ENERGY SVS. (KEGXQ)	-82.1%
TOKAI PHARMACEUTICALS	-72.2%
NOVAVAX	-71.4%
INTRA CELLULAR THERAPIES	-60.7%
SERES THERAPEUTICS	-57.7%
PAIN THERAPEUTICS	-54.3%
MANNKIND	-46.6%
VECTRUS	-46.5%
ZAFGEN (ZFGN)	-44.7%
FIRST NBC BANK HOLDING	-43.8%

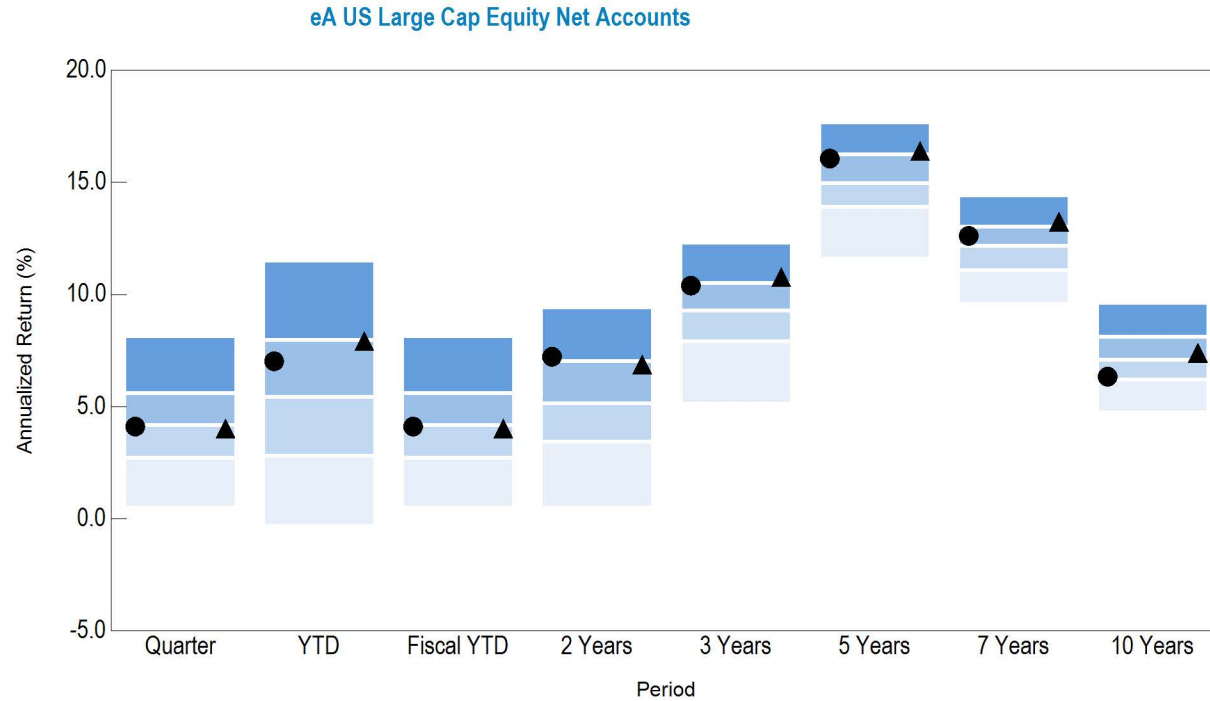
US Equity Performance Attribution vs. Russell 3000

	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%	4.0%	2.9%	6.3%	6.9%			
Materials	0.0%	0.0%	0.0%	0.0%	4.9%	4.9%	3.4%	3.4%			
Industrials	0.0%	0.0%	0.0%	0.0%	4.6%	4.6%	11.4%	10.6%			
Consumer Discretionary	0.1%	0.1%	0.0%	0.0%	4.3%	3.5%	13.1%	13.0%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	-3.5%	-2.5%	9.0%	9.5%			
Health Care	-0.3%	-0.3%	0.0%	0.0%	0.2%	2.4%	14.2%	14.4%			
Financials	0.4%	0.4%	0.0%	0.0%	7.3%	4.9%	15.9%	17.6%			
Information Technology	0.1%	-0.1%	0.2%	0.0%	12.4%	12.8%	20.7%	18.3%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-4.5%	-4.7%	2.2%	2.7%			
Utilities	0.1%	0.0%	0.1%	0.0%	-6.2%	-5.7%	2.6%	3.7%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	1.1%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	3.8%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>0.4%</b>	<b>=</b>	<b>0.1%</b>	<b>+</b>	<b>0.3%</b>	<b>+</b>	<b>0.0%</b>	<b>4.7%</b>	<b>4.3%</b>	<b>100.0%</b>	<b>100.0%</b>



U.S. Effective Style Map





	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	8.1	11.5	8.1	9.4	12.3	17.7	14.4	9.6
25th Percentile	5.6	8.0	5.6	7.1	10.5	16.3	13.1	8.1
Median	4.2	5.5	4.2	5.1	9.3	15.0	12.2	7.1
75th Percentile	2.7	2.8	2.7	3.5	7.9	13.9	11.1	6.2
95th Percentile	0.5	-0.3	0.5	0.5	5.1	11.6	9.6	4.8
# of Portfolios	538	535	538	516	504	449	423	356
● Large Cap Equity	4.1 (53)	7.0 (35)	4.1 (53)	7.2 (24)	10.4 (28)	16.1 (29)	12.6 (38)	6.3 (72)
▲ Russell 1000	4.0 (55)	7.9 (26)	4.0 (55)	6.9 (28)	10.8 (22)	16.4 (22)	13.2 (22)	7.4 (42)

Characteristics

	Portfolio	Russell 1000
Number of Holdings	2,406	994
Weighted Avg. Market Cap. (\$B)	117.2	121.4
Median Market Cap. (\$B)	2.4	8.1
Price To Earnings	23.5	22.9
Price To Book	4.5	4.4
Price To Sales	3.8	3.2
Return on Equity (%)	18.1	18.0
Yield (%)	1.9	2.0
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	2.5%
AMAZON.COM	2.3%
FACEBOOK CLASS A	1.8%
MICROSOFT	1.7%
VISA 'A'	1.5%
JOHNSON & JOHNSON	1.3%
EXXON MOBIL	1.2%
ALPHABET 'C'	1.1%
ALPHABET 'A'	1.1%
BERKSHIRE HATHAWAY 'B'	1.1%

Best Performers

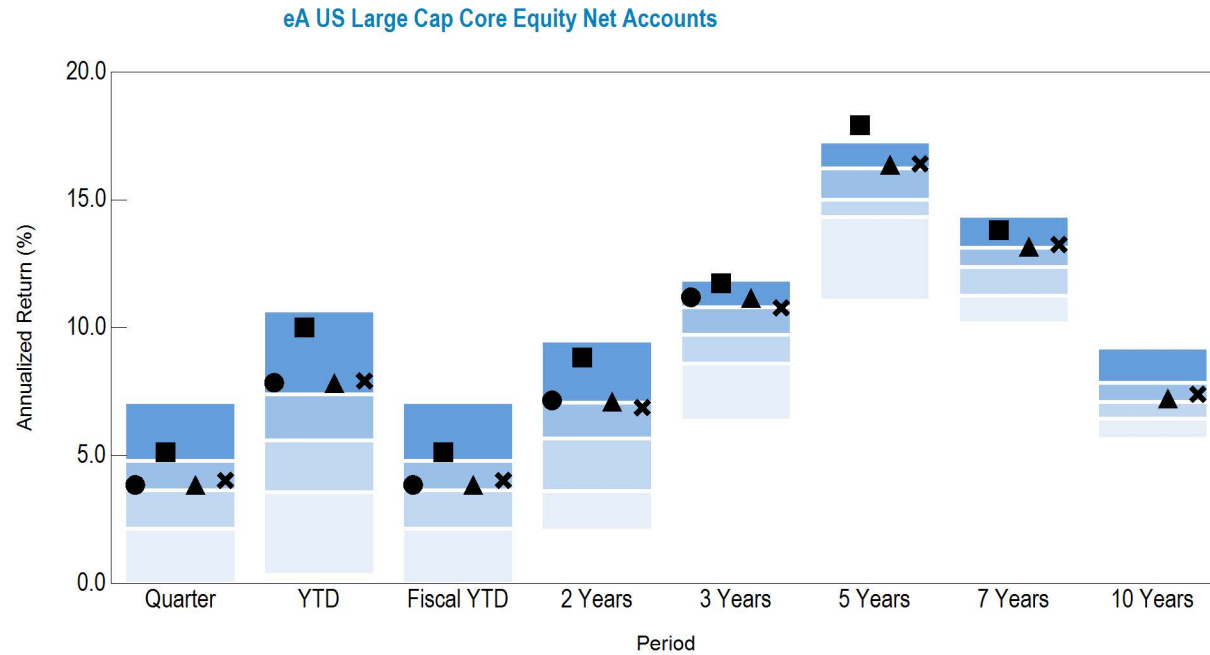
	Return %
CLOUD PEAK ENERGY	164.1%
CLOVIS ONCOLOGY (CLVS)	162.8%
HEALTHWAYS	129.1%
LANTHEUS HOLDINGS (LNTH)	125.6%
PUMA BIOTECHNOLOGY	125.1%
EVERI HOLDINGS	114.8%
OCWEN FINANCIAL	114.6%
AERIE PHARMACEUTICALS (AERI)	114.4%
TRONOX CLASS A	113.6%
HARMONIC	108.1%

Worst Performers

	Return %
KEY ENERGY SVS. (KEGXQ)	-82.1%
TOKAI PHARMACEUTICALS	-72.2%
NOVAVAX	-71.4%
INTRA CELLULAR THERAPIES	-60.7%
SERES THERAPEUTICS	-57.7%
PAIN THERAPEUTICS	-54.3%
MANNKIND	-46.6%
VECTRUS	-46.5%
ZAFGEN (ZFGN)	-44.7%
FIRST NBC BANK HOLDING	-43.8%

Large Cap Equity Performance Attribution vs. Russell 1000

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	0.0%	0.0%	3.5%	2.7%	6.6%	7.2%			
Materials	0.0%	0.0%	0.0%	0.0%	4.4%	4.0%	3.7%	3.3%			
Industrials	0.1%	0.1%	0.0%	0.0%	4.6%	4.1%	10.6%	10.3%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	3.5%	3.4%	12.5%	12.9%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	-3.4%	-2.6%	10.2%	10.0%			
Health Care	-0.3%	-0.2%	0.0%	0.0%	-0.2%	1.6%	15.0%	14.4%			
Financials	0.3%	0.3%	0.0%	0.0%	6.6%	4.6%	14.8%	17.0%			
Information Technology	0.2%	0.0%	0.2%	0.0%	12.4%	12.5%	20.5%	18.4%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-4.5%	-4.7%	2.6%	2.8%			
Utilities	0.1%	0.0%	0.1%	0.0%	-6.1%	-5.7%	2.5%	3.7%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.9%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	3.8%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>0.3%</b>	<b>=</b>	<b>0.1%</b>	<b>+</b>	<b>0.2%</b>	<b>+</b>	<b>-0.1%</b>	<b>4.2%</b>	<b>3.9%</b>	<b>100.0%</b>	<b>100.0%</b>



	Quarter		YTD		Fiscal YTD		2 Years		3 Years		5 Years		7 Years		10 Years	
<b>Return (Rank)</b>																
5th Percentile	7.1	10.7	7.1	9.5	11.9	17.3	14.4	9.2	4.8	7.4	4.8	7.1	10.8	16.2	13.1	7.9
25th Percentile	4.8	7.4	4.8	7.1	10.8	16.2	13.1	7.9	3.7	5.6	3.7	5.7	9.7	15.0	12.4	7.1
Median	3.7	5.6	3.7	5.7	9.7	15.0	12.4	7.1	2.2	3.6	2.2	3.6	8.6	14.3	11.2	6.4
75th Percentile	2.2	3.6	2.2	3.6	8.6	14.3	11.2	6.4	0.0	0.3	0.0	2.1	6.4	11.1	10.2	5.7
95th Percentile	0.0	0.3	0.0	2.1	6.4	11.1	10.2	5.7	147	146	147	140	135	119	108	95
# of Portfolios	147	146	147	140	135	119	108	95	3.9 (47)	7.9 (18)	3.9 (47)	7.2 (25)	11.2 (16)	-- (--)	-- (--)	-- (--)
● BlackRock S&P 500 Index	3.9 (47)	7.9 (18)	3.9 (47)	7.2 (25)	11.2 (16)	-- (--)	-- (--)	-- (--)	5.1 (20)	10.0 (7)	5.1 (20)	8.8 (7)	11.7 (7)	17.9 (2)	13.8 (10)	-- (--)
■ DE Shaw	5.1 (20)	10.0 (7)	5.1 (20)	8.8 (7)	11.7 (7)	17.9 (2)	13.8 (10)	-- (--)	3.9 (47)	7.8 (18)	3.9 (47)	7.1 (25)	11.2 (19)	16.4 (20)	13.2 (24)	7.2 (47)
▲ S&P 500	3.9 (47)	7.8 (18)	3.9 (47)	7.1 (25)	11.2 (19)	16.4 (20)	13.2 (24)	7.2 (47)	4.0 (42)	7.9 (18)	4.0 (42)	6.9 (29)	10.8 (26)	16.4 (19)	13.2 (23)	7.4 (38)
✕ Russell 1000	4.0 (42)	7.9 (18)	4.0 (42)	6.9 (29)	10.8 (26)	16.4 (19)	13.2 (23)	7.4 (38)								

**Characteristics**

	Portfolio	S&P 500
Number of Holdings	511	505
Weighted Avg. Market Cap. (\$B)	135.2	134.7
Median Market Cap. (\$B)	18.5	18.9
Price To Earnings	23.1	22.7
Price To Book	4.8	4.5
Price To Sales	3.6	3.1
Return on Equity (%)	18.9	18.8
Yield (%)	2.1	2.1
Beta (holdings; domestic)	1.0	1.0

**Top Holdings**

APPLE	3.3%
MICROSOFT	2.4%
EXXON MOBIL	1.9%
AMAZON.COM	1.8%
JOHNSON & JOHNSON	1.7%
FACEBOOK CLASS A	1.6%
BERKSHIRE HATHAWAY 'B'	1.5%
GENERAL ELECTRIC	1.4%
AT&T	1.3%
JP MORGAN CHASE & CO.	1.3%

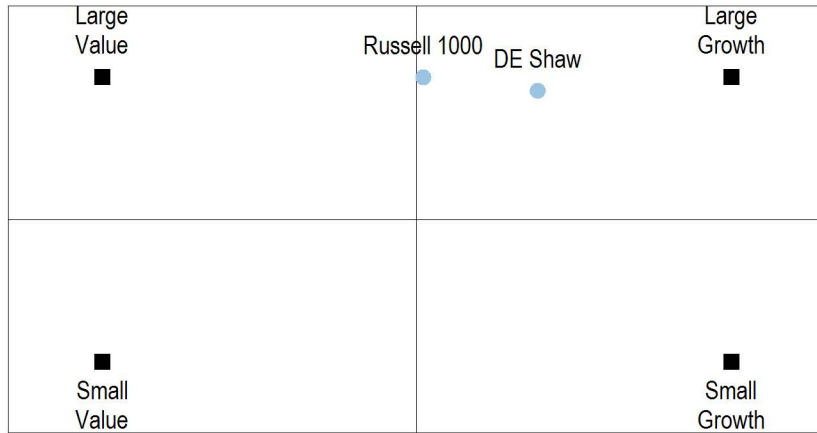
**Best Performers**

	Return %
SEAGATE TECH.	61.0%
NETAPP	46.8%
CHESAPEAKE ENERGY (CHK)	46.5%
NVIDIA (NVDA)	46.0%
WILLIAMS	43.0%
EBAY	40.5%
NORDSTROM	37.3%
INGEVITY ORD SHS (NGVT)	35.4%
AUTODESK	33.6%
STATE STREET	29.9%

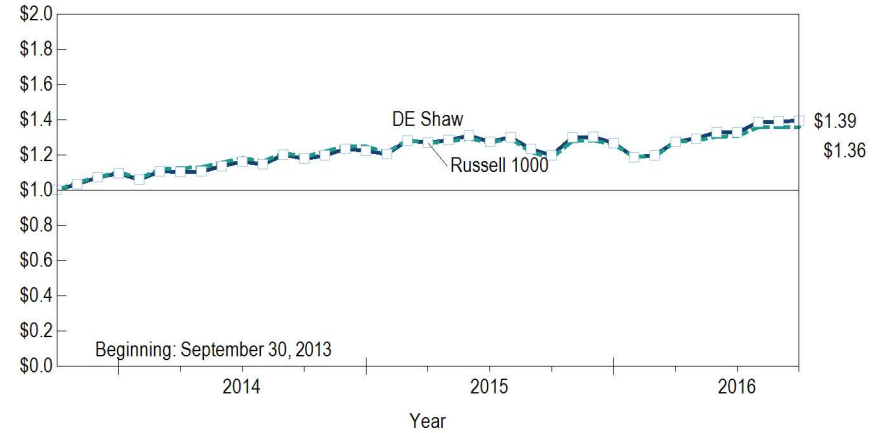
**Worst Performers**

	Return %
DIAMOND OFFS.DRL. (DO)	-27.6%
BRISTOL MYERS SQUIBB	-26.7%
TRACTOR SUPPLY (TSCO)	-25.9%
DOLLAR GENERAL	-25.3%
NRG ENERGY	-25.1%
STERICYCLE	-23.0%
KROGER (KR)	-19.0%
FIRST SOLAR	-18.5%
CAMPBELL SOUP	-17.4%
COGNIZANT TECH.SLTN.'A' (CTSH)	-16.6%

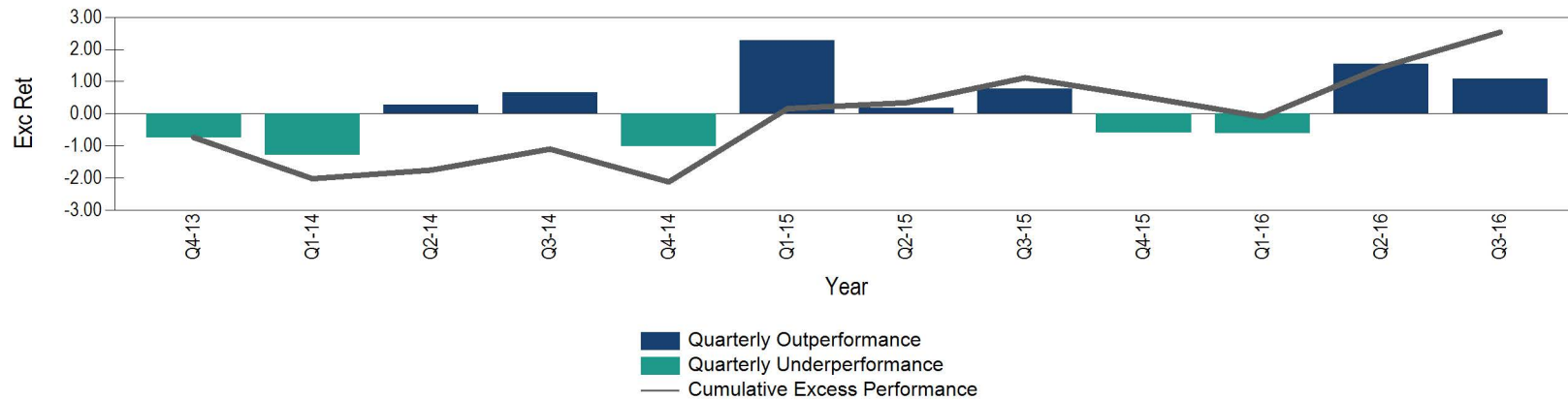
U.S. Effective Style Map

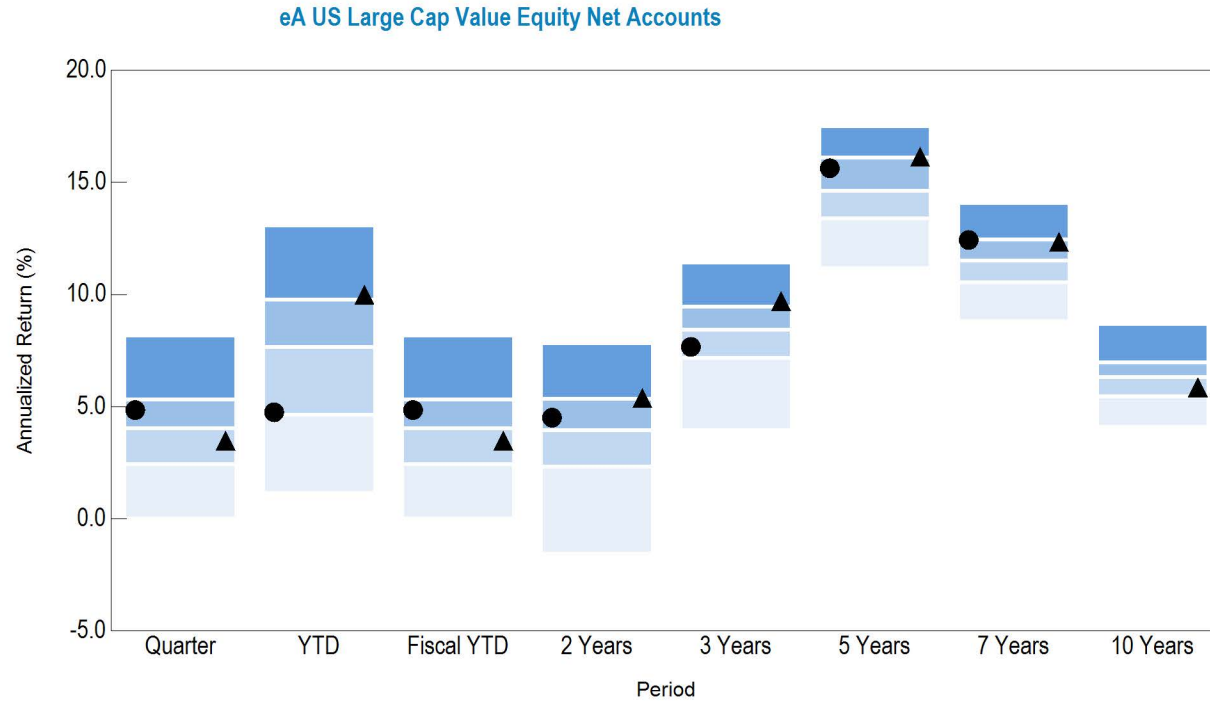


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	8.2	13.1	8.2	7.8	11.4	17.5	14.1	8.7
<b>25th Percentile</b>	5.3	9.8	5.3	5.4	9.5	16.1	12.5	7.0
<b>Median</b>	4.0	7.7	4.0	4.0	8.5	14.6	11.5	6.3
<b>75th Percentile</b>	2.4	4.6	2.4	2.3	7.2	13.4	10.5	5.5
<b>95th Percentile</b>	0.0	1.2	0.0	-1.5	4.0	11.2	8.8	4.1
<b># of Portfolios</b>	213	213	213	206	201	178	169	142
<b>● Barrow Hanley</b>	4.8 (33)	4.7 (75)	4.8 (33)	4.5 (40)	7.7 (68)	15.6 (35)	12.4 (27)	-- (--)
<b>▲ Russell 1000 Value</b>	3.5 (61)	10.0 (23)	3.5 (61)	5.4 (25)	9.7 (20)	16.2 (25)	12.3 (28)	5.9 (66)



Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	75	687
Weighted Avg. Market Cap. (\$B)	81.9	107.0
Median Market Cap. (\$B)	33.5	7.5
Price To Earnings	16.9	19.3
Price To Book	2.9	2.4
Price To Sales	2.3	2.6
Return on Equity (%)	15.7	12.0
Yield (%)	2.5	2.6
Beta (holdings; domestic)	1.1	1.0

Top Holdings

CAPITAL ONE FINL.	2.3%
CITIGROUP	2.2%
JP MORGAN CHASE & CO.	2.0%
CRH ADR 1:1	2.0%
MEDTRONIC	1.9%
STANLEY BLACK & DECKER	1.8%
ALTRIA GROUP	1.7%
BANK OF AMERICA	1.7%
UNITEDHEALTH GROUP	1.7%
AIR PRDS.& CHEMS.	1.7%

Best Performers

	Return %
STATE STREET (STT)	29.9%
QUALCOMM (QCOM)	28.9%
E*TRADE FINANCIAL (ETFC)	24.0%
MICROCHIP TECH. (MCHP)	23.1%
NAVIENT (NAVI)	22.4%
SLM (SLM)	20.9%
APPLE (AAPL)	18.9%
BANK OF AMERICA (BAC)	18.5%
FIFTH THIRD BANCORP (FITB)	17.1%
INTEL (INTC)	16.0%

Worst Performers

	Return %
REYNOLDS AMERICAN (RAI)	-11.8%
HESS	-10.3%
SANOFI ADR 2:1 (SNY)	-8.7%
NVR (NVR)	-7.9%
TEVA PHARM.INDS.ADR 1:1 (TEVA)	-7.8%
ALTRIA GROUP (MO)	-7.4%
EXPRESS SCRIPTS HOLDING (ESRX)	-7.0%
CVS HEALTH	-6.6%
VERIZON COMMUNICATIONS (VZ)	-6.0%
WELLS FARGO & CO (WFC)	-5.7%

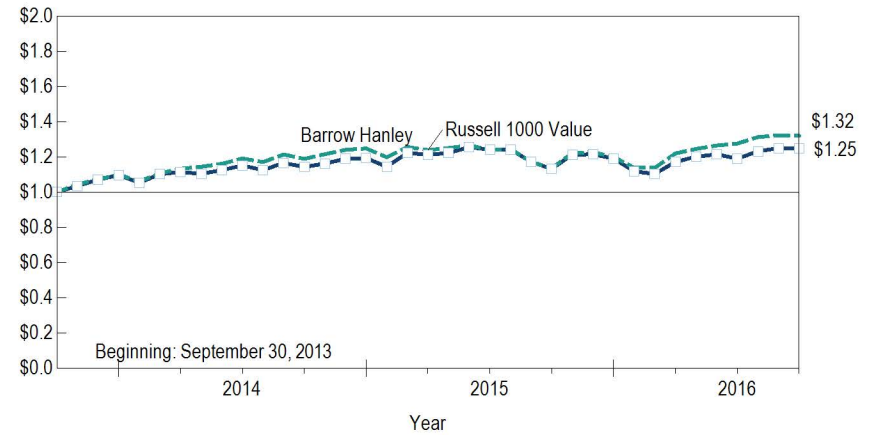
**Barrow Hanley Performance Attribution vs. Russell 1000 Value**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	-0.1%	0.1%	0.0%	1.5%	2.3%	9.1%	13.6%			
Materials	0.3%	0.1%	0.0%	0.1%	8.4%	4.6%	6.2%	2.8%			
Industrials	0.0%	-0.1%	0.1%	0.0%	5.4%	6.1%	13.9%	9.6%			
Consumer Discretionary	-0.3%	-0.2%	0.1%	-0.2%	2.0%	5.9%	10.7%	4.9%			
Consumer Staples	-0.2%	-0.5%	0.1%	0.2%	-5.3%	0.1%	5.2%	9.1%			
Health Care	-0.6%	-0.4%	-0.1%	-0.1%	-2.0%	1.1%	16.2%	11.3%			
Financials	1.3%	1.3%	0.0%	0.0%	10.2%	5.3%	26.8%	27.7%			
Information Technology	0.0%	0.2%	-0.1%	0.0%	14.7%	13.0%	8.2%	9.5%			
Telecommunication Services	0.2%	-0.1%	0.2%	0.0%	-6.0%	-4.9%	2.4%	4.2%			
Utilities	0.7%	--	0.7%	--	--	-5.7%	0.0%	7.3%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	1.4%	0.0%			
<b>Portfolio</b>	<b>1.3%</b>	<b>=</b>	<b>0.3%</b>	<b>+</b>	<b>1.1%</b>	<b>+</b>	<b>-0.1%</b>	<b>4.8%</b>	<b>3.5%</b>	<b>100.0%</b>	<b>100.0%</b>

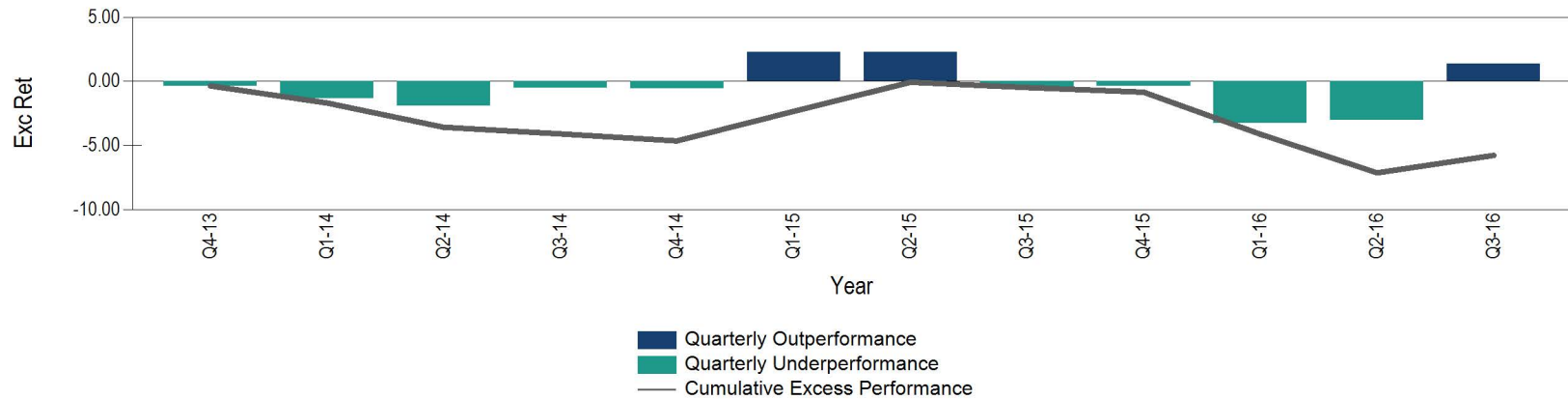
U.S. Effective Style Map

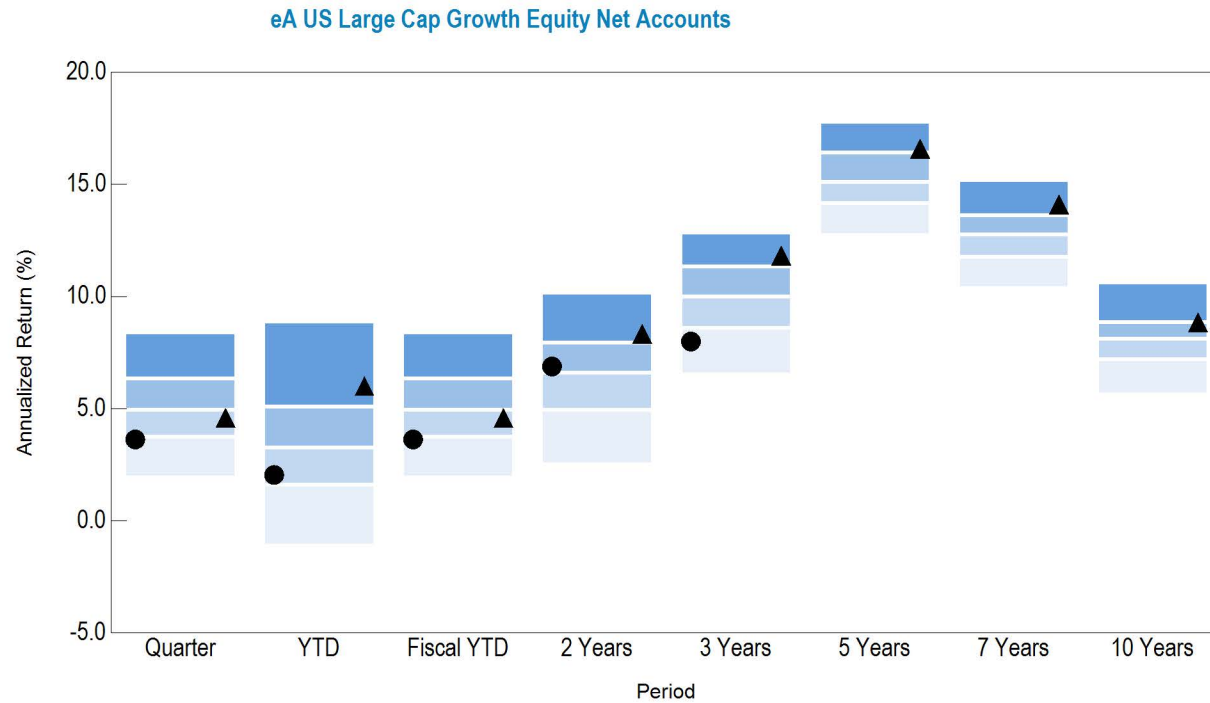


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	8.4	8.9	8.4	10.2	12.8	17.8	15.2	10.6
25th Percentile	6.4	5.1	6.4	8.0	11.4	16.4	13.7	8.9
Median	5.0	3.3	5.0	6.6	10.0	15.1	12.8	8.1
75th Percentile	3.8	1.6	3.8	5.0	8.6	14.2	11.8	7.2
95th Percentile	1.9	-1.1	1.9	2.5	6.5	12.8	10.4	5.6
# of Portfolios	178	176	178	170	168	152	146	119
● Brown Advisory	3.6 (78)	2.0 (68)	3.6 (78)	6.9 (47)	8.0 (84)	-- (--)	-- (--)	-- (--)
▲ Russell 1000 Growth	4.6 (57)	6.0 (21)	4.6 (57)	8.3 (20)	11.8 (14)	16.6 (22)	14.1 (17)	8.8 (26)

**Characteristics**

	Portfolio	Russell 1000 Growth
Number of Holdings	35	599
Weighted Avg. Market Cap. (\$B)	78.8	135.7
Median Market Cap. (\$B)	21.0	8.9
Price To Earnings	34.5	26.3
Price To Book	5.6	6.8
Price To Sales	6.7	4.0
Return on Equity (%)	17.2	24.5
Yield (%)	0.4	1.5
Beta (holdings; domestic)	1.1	1.0

**Top Holdings**

AMAZON.COM	5.2%
VISA 'A'	4.9%
FACEBOOK CLASS A	4.9%
STARBUCKS	4.1%
DANAHER	3.9%
INTUITIVE SURGICAL	3.8%
COSTCO WHOLESALE	3.7%
ESTEE LAUDER COS.'A'	3.7%
AMPHENOL 'A'	3.6%
ECOLAB	3.6%

**Best Performers**

	Return %
NETSUITE (N)	52.0%
NXP SEMICONDUCTORS (NXPI)	30.2%
CHARLES SCHWAB (SCHW)	25.0%
FLEETCOR TECHNOLOGIES (FLT)	21.4%
AMAZON.COM (AMZN)	17.0%
WABTEC (WAB)	16.4%
ALPHABET 'A' (GOOGL)	14.3%
AMPHENOL 'A' (APH)	13.5%
ADOBE SYSTEMS (ADBE)	13.3%
ALPHABET 'C' (GOOG)	12.3%

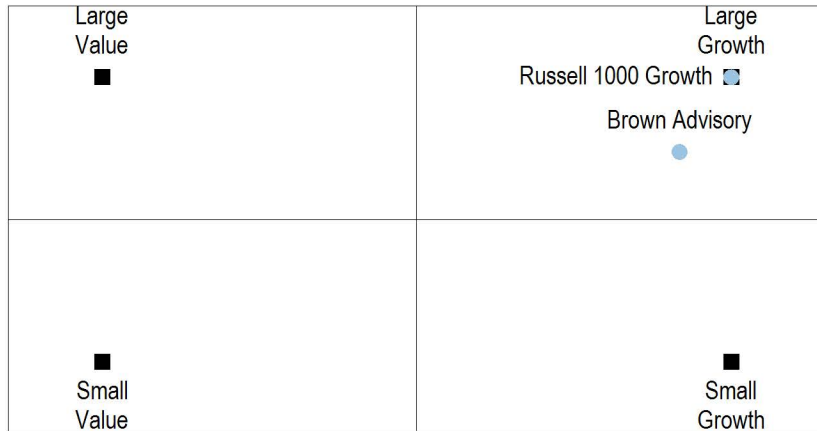
**Worst Performers**

	Return %
BRISTOL MYERS SQUIBB (BMY)	-26.7%
COGNIZANT TECH.SLTN.'A' (CTSH)	-16.6%
DAVITA HEALTHCARE PTNS. (DVA)	-14.5%
MEAD JOHNSON NUTRITION (MJN)	-12.5%
GENPACT (G)	-10.8%
SALESFORCE.COM (CRM)	-10.2%
UNDER ARMOUR CL C ORD (UA.C)	-7.0%
EXPRESS SCRIPTS HOLDING (ESRX)	-7.0%
AKAMAI TECHS. (AKAM)	-5.3%
FASTENAL (FAST)	-5.2%

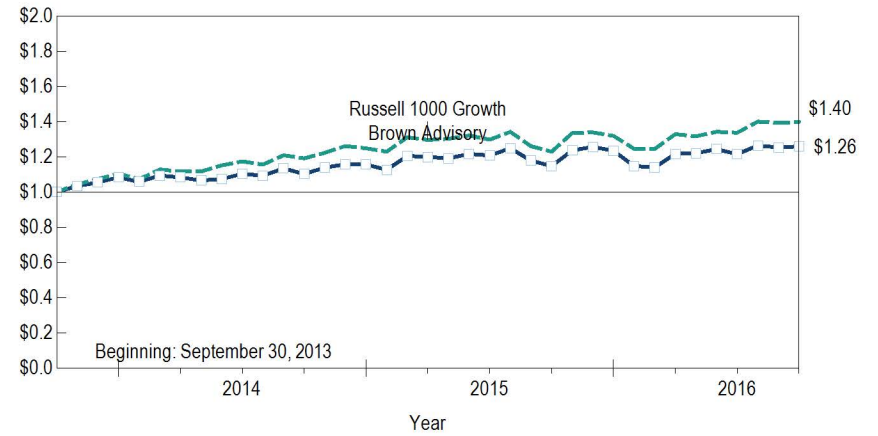
**Brown Advisory Performance Attribution vs. Russell 1000 Growth**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	--	0.0%	--	--	12.2%	0.0%	0.6%			
Materials	0.0%	0.0%	0.0%	0.0%	2.9%	3.6%	3.4%	3.6%			
Industrials	0.3%	0.4%	0.0%	-0.1%	7.1%	3.1%	8.2%	10.7%			
Consumer Discretionary	0.1%	0.0%	0.1%	0.0%	2.8%	2.8%	14.4%	20.9%			
Consumer Staples	-0.1%	0.0%	0.0%	0.0%	-5.6%	-4.9%	10.5%	10.6%			
Health Care	-1.2%	-1.4%	0.1%	0.2%	-5.8%	2.1%	14.8%	17.1%			
Financials	0.3%	0.6%	0.2%	-0.5%	12.3%	1.3%	1.0%	5.7%			
Information Technology	0.2%	-0.4%	0.7%	-0.2%	9.9%	11.3%	39.4%	29.3%			
Telecommunication Services	0.1%	0.1%	-0.1%	0.1%	3.9%	-4.1%	2.4%	1.3%			
Utilities	0.0%	--	0.0%	--	--	-1.8%	0.0%	0.1%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	-0.3%	0.0%	-0.3%	0.0%	0.1%	--	5.8%	0.0%			
<b>Portfolio</b>	<b>-0.6%</b>	<b>=</b>	<b>-0.7%</b>	<b>+</b>	<b>0.7%</b>	<b>+</b>	<b>-0.5%</b>	<b>3.7%</b>	<b>4.3%</b>	<b>100.0%</b>	<b>100.0%</b>

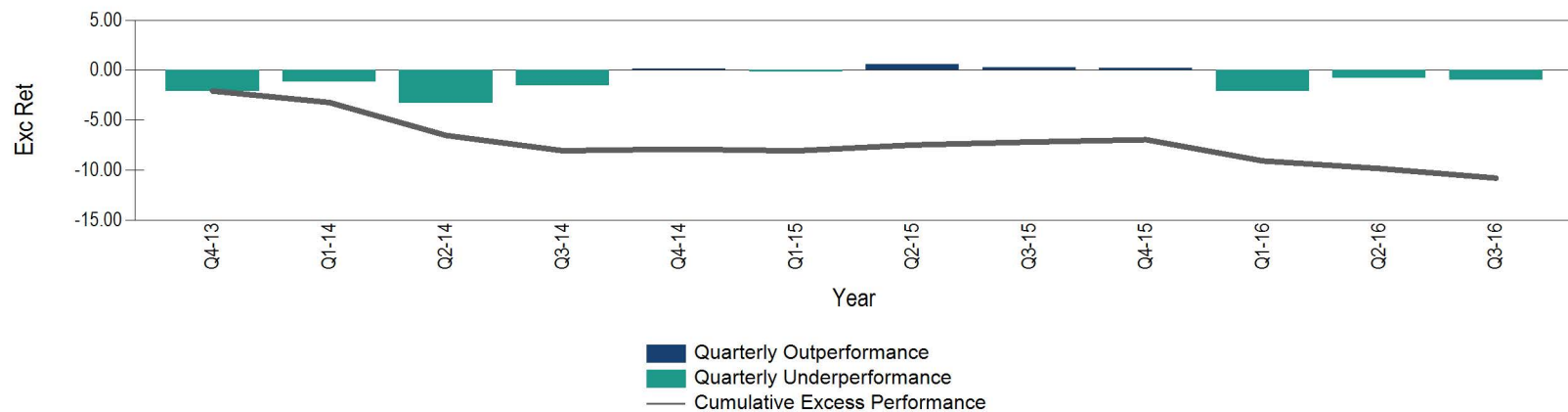
U.S. Effective Style Map

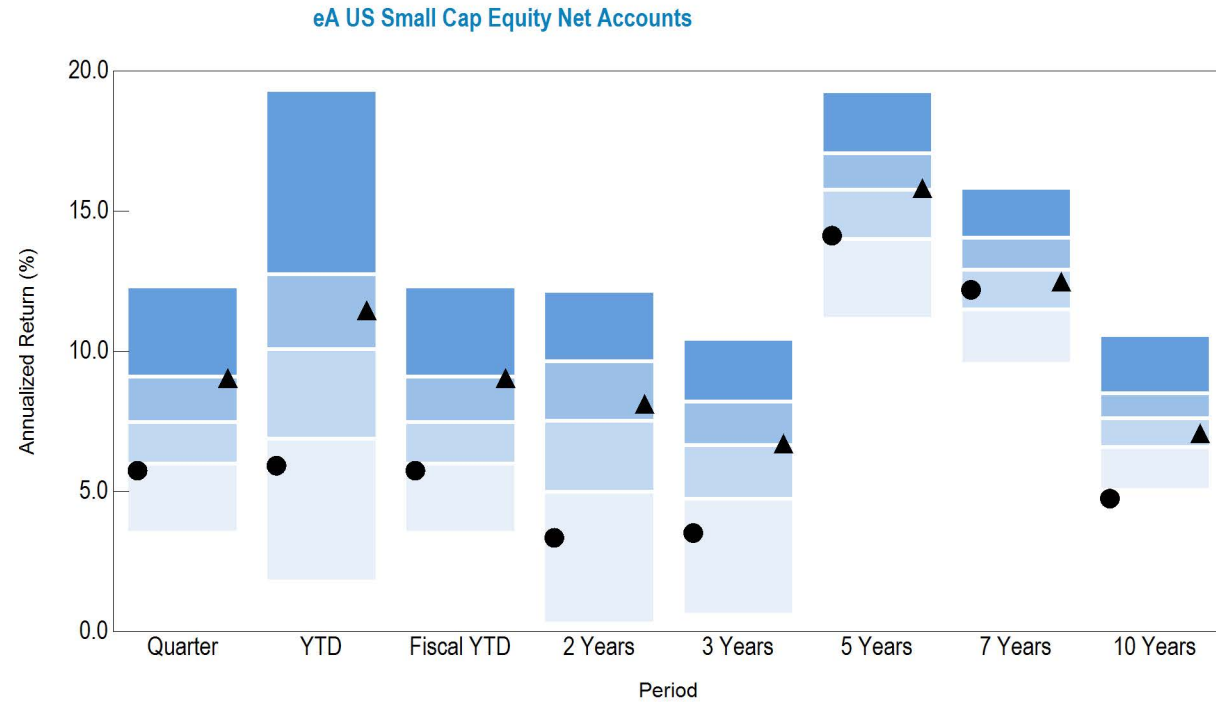


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	12.3	19.3	12.3	12.2	10.4	19.3	15.8	10.6
25th Percentile	9.1	12.8	9.1	9.7	8.2	17.1	14.1	8.5
Median	7.5	10.1	7.5	7.5	6.7	15.8	12.9	7.6
75th Percentile	6.0	6.9	6.0	5.0	4.7	14.0	11.5	6.6
95th Percentile	3.5	1.8	3.5	0.3	0.6	11.2	9.6	5.1
# of Portfolios	348	347	348	333	322	294	280	225
● Small Cap Equity	5.7 (80)	5.9 (81)	5.7 (80)	3.3 (86)	3.5 (85)	14.1 (73)	12.2 (66)	4.7 (98)
▲ Russell 2000	9.0 (27)	11.5 (39)	9.0 (27)	8.1 (41)	6.7 (50)	15.8 (50)	12.5 (60)	7.1 (64)



Characteristics

	Portfolio	Russell 2000
Number of Holdings	325	1,961
Weighted Avg. Market Cap. (\$B)	1.8	1.8
Median Market Cap. (\$B)	1.0	0.7
Price To Earnings	22.5	22.2
Price To Book	3.3	2.8
Price To Sales	2.4	2.7
Return on Equity (%)	15.2	10.2
Yield (%)	1.4	1.3
Beta (holdings; domestic)	1.2	1.2

Top Holdings

SYNNEX	0.7%
EMCOR GROUP	0.7%
CANTEL MED.	0.7%
TENNECO	0.7%
VANDA PHARMACEUTICALS	0.7%
NETGEAR	0.7%
GREIF 'A'	0.7%
WORTHINGTON INDS.	0.7%
AVON PRODUCTS	0.7%
ADVANCED ENERGY INDS.	0.7%

Best Performers

	Return %
EVERI HOLDINGS (EVRI)	114.8%
CEPHEID	71.3%
FINISAR (FNSR)	70.2%
AMKOR TECH.	69.0%
A10 NETWORKS	65.2%
EXELIXIS	63.8%
TILLY'S CLASS A	62.2%
STEMLINE THERAPEUTICS	60.0%
COTIVITI HOLDINGS ORD SHS	58.7%
ALPHA AND OMEGA SEMICON.	55.9%

Worst Performers

	Return %
VECTRUS	-46.5%
FIRST NBC BANK HOLDING	-43.8%
MYRIAD GENETICS	-32.7%
APPLIED GENETIC TECHS.	-30.8%
GEO GROUP	-29.1%
SPECTRUM PHARMS.	-28.9%
AMN HLTHCR.SVS. (AMN)	-20.3%
EXPRESS (EXPR)	-18.7%
MAGELLAN HEALTH	-18.3%
HSN	-18.0%

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

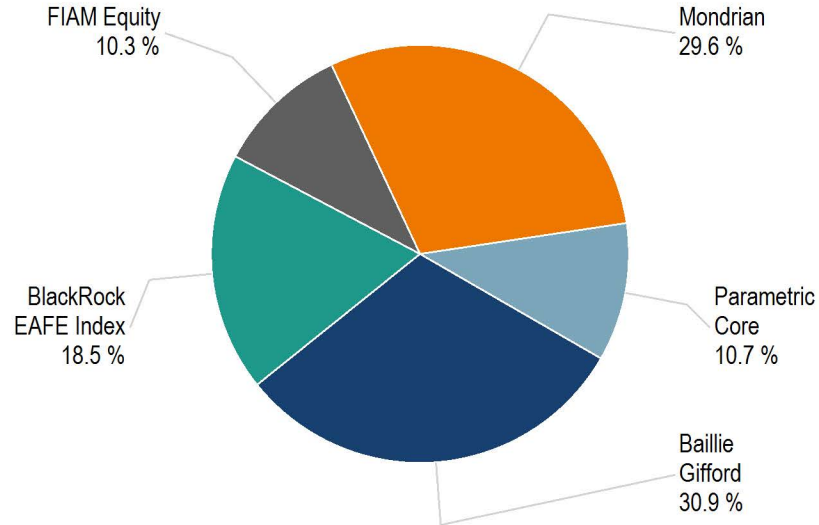
	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.2%	0.0%	-0.2%	0.0%	4.0%	10.4%	4.9%	3.1%			
Materials	-0.1%	0.0%	-0.1%	0.0%	10.0%	12.2%	1.6%	4.6%			
Industrials	-0.7%	-0.8%	0.2%	-0.1%	4.0%	9.3%	15.9%	13.8%			
Consumer Discretionary	0.6%	0.3%	0.3%	0.1%	7.6%	4.1%	16.8%	13.7%			
Consumer Staples	0.1%	0.1%	0.1%	-0.1%	5.0%	2.3%	1.9%	3.1%			
Health Care	-1.1%	-0.7%	-0.6%	0.2%	2.9%	13.6%	9.6%	13.6%			
Financials	1.0%	0.8%	0.6%	-0.3%	10.3%	7.3%	22.1%	25.8%			
Information Technology	-0.8%	-0.5%	-0.2%	-0.1%	9.5%	16.0%	22.0%	17.1%			
Telecommunication Services	0.1%	0.1%	0.1%	-0.1%	-3.5%	-5.0%	0.0%	1.0%			
Utilities	0.1%	-0.1%	0.2%	0.0%	-7.3%	-5.2%	3.1%	4.3%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	-1.3%	0.0%	-1.3%	0.0%	0.1%	--	2.2%	0.0%			
<b>Portfolio</b>	<b>-2.1%</b>	<b>=</b>	<b>-0.7%</b>	<b>+</b>	<b>-0.9%</b>	<b>+</b>	<b>-0.5%</b>	<b>6.9%</b>	<b>9.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Characteristics

	Portfolio	Russell 2000
Number of Holdings	324	1,961
Weighted Avg. Market Cap. (\$B)	1.8	1.8
Median Market Cap. (\$B)	1.0	0.7
Price To Earnings	22.5	22.2
Price To Book	3.3	2.8
Price To Sales	2.4	2.7
Return on Equity (%)	15.2	10.2
Yield (%)	1.4	1.3
Beta (holdings; domestic)	1.2	1.2

Top Holdings

SYNNEX	0.7%
EMCOR GROUP	0.7%
CANTEL MED.	0.7%
TENNECO	0.7%
VANDA PHARMACEUTICALS	0.7%
NETGEAR	0.7%
GREIF 'A'	0.7%
WORTHINGTON INDS.	0.7%
AVON PRODUCTS	0.7%
ADVANCED ENERGY INDS.	0.7%



	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$220,570,533	30.9%	0.4%
BlackRock EAFE Index	\$132,458,109	18.5%	0.0%
FIAM Equity	\$73,945,419	10.3%	-0.1%
Mondrian	\$211,274,136	29.6%	-1.2%
Parametric Core	\$76,620,037	10.7%	-0.4%
Actual vs. Policy Weight Difference			0.4%
<b>Total</b>	<b>\$714,868,234</b>	<b>100.0%</b>	<b>-1.0%</b>

**Statistics Summary**

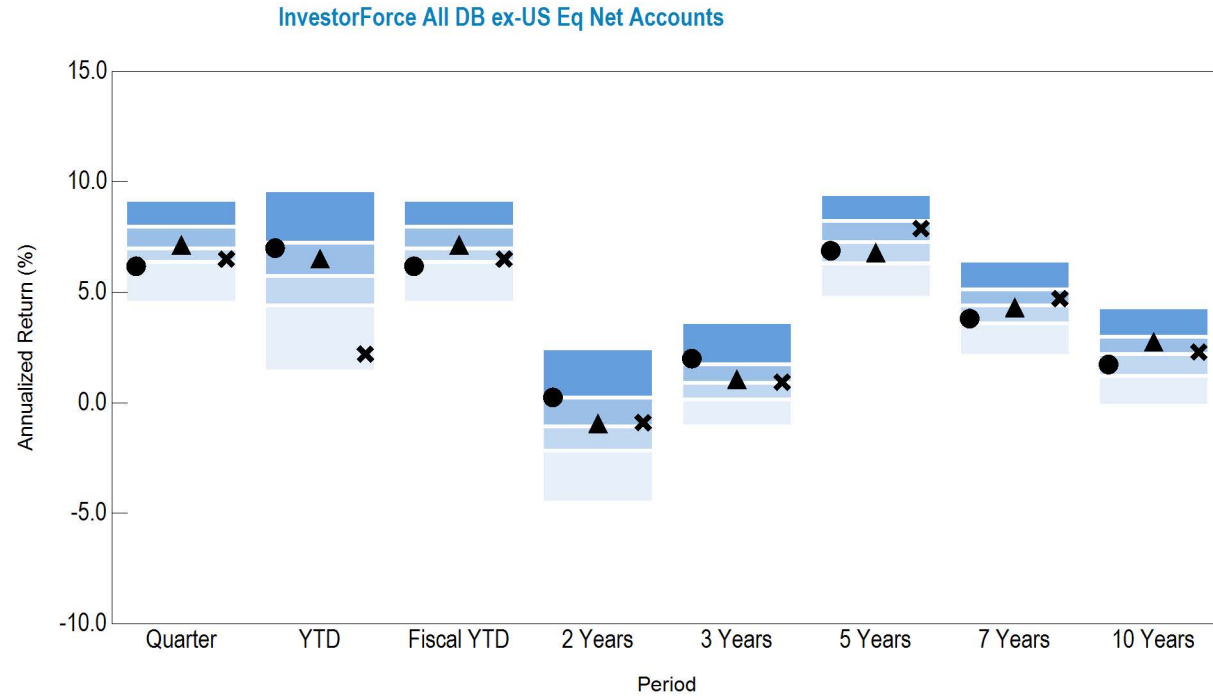
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	2.0%	12.3%	0.2	0.6	1.6%
MSCI ACWI ex US IMI	1.1%	12.6%	0.1	--	0.0%
Baillie Gifford	3.9%	13.5%	0.3	0.8	3.7%
MSCI ACWI ex US	0.9%	12.7%	0.1	--	0.0%
FIAM Equity	3.7%	11.7%	0.3	-0.1	2.5%
MSCI ACWI ex US Small Cap Gross	3.9%	12.2%	0.3	--	0.0%
Mondrian	1.3%	11.9%	0.1	0.6	4.6%
MSCI ACWI ex USA Value Gross	-1.4%	13.7%	-0.1	--	0.0%

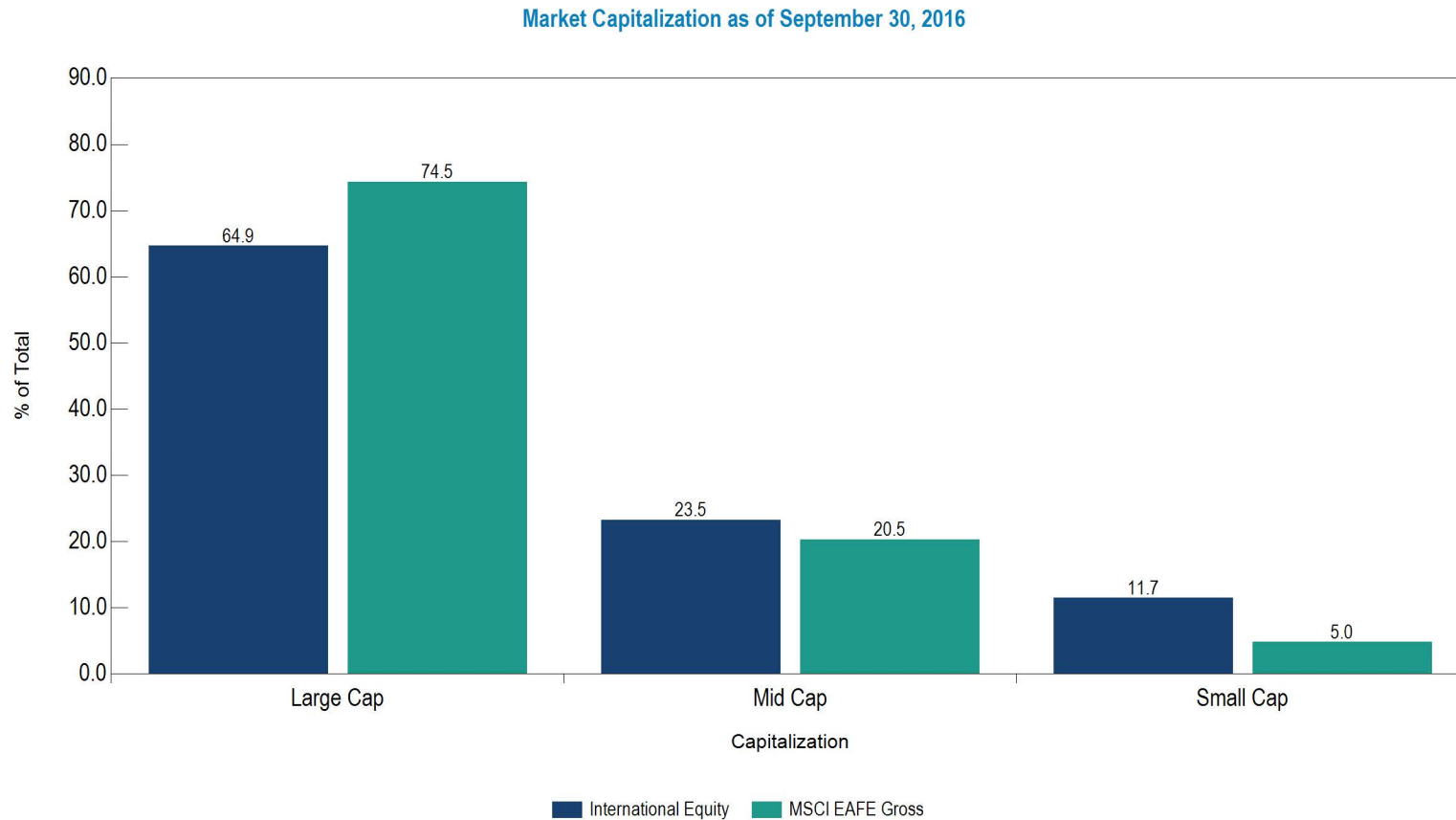
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	6.9%	13.3%	0.5	0.0	2.0%
MSCI ACWI ex US IMI	6.8%	14.1%	0.5	--	0.0%
Mondrian	5.9%	13.0%	0.4	0.1	4.7%
MSCI ACWI ex USA Value Gross	5.2%	15.2%	0.3	--	0.0%



	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	9.2	9.6	9.2	2.4	3.7	9.4	6.4	4.3
25th Percentile	8.0	7.3	8.0	0.2	1.8	8.2	5.1	3.0
Median	7.0	5.8	7.0	-1.0	0.9	7.3	4.4	2.2
75th Percentile	6.4	4.4	6.4	-2.2	0.2	6.3	3.6	1.2
95th Percentile	4.5	1.4	4.5	-4.5	-1.1	4.8	2.1	-0.1
# of Portfolios	495	495	495	478	433	370	311	237
● International Equity	6.2 (79)	7.0 (29)	6.2 (79)	0.2 (25)	2.0 (21)	6.9 (60)	3.8 (69)	1.7 (67)
▲ MSCI ACWI ex US IMI	7.1 (45)	6.5 (39)	7.1 (45)	-0.9 (47)	1.1 (45)	6.8 (63)	4.3 (53)	2.8 (33)
✕ MSCI EAFE Gross	6.5 (71)	2.2 (92)	6.5 (71)	-0.9 (46)	0.9 (50)	7.9 (36)	4.7 (41)	2.3 (47)



Excludes FIAM Equity holdings.

See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	2,572	6,183
Weighted Avg. Market Cap. (\$B)	56.8	44.3
Median Market Cap. (\$B)	7.5	1.2
Price To Earnings	23.3	19.9
Price To Book	4.2	2.5
Price To Sales	3.1	2.2
Return on Equity (%)	17.3	13.4
Yield (%)	2.8	2.9
Beta (holdings; global)	1.0	1.0

Top Holdings

UNILEVER (UK)	1.4%
NESTLE 'R'	1.2%
UNITED OVERSEAS BANK	1.1%
COCHLEAR	1.1%
ABB LTD N	1.0%
NASPERS	0.9%
GLAXOSMITHKLINE	0.9%
SYNGENTA	0.9%
TAIWAN SEMICON.SPN.ADR 1:5	0.9%
IBERDROLA	0.8%

Best Performers

	Return %
JSW	218.6%
MINERAL DEPOSITS (A:MDLX)	115.6%
OI PN	115.2%
BRAMMER (UKIR:BRAM)	94.3%
NINTENDO (J:NNDO)	84.8%
AEGEAN MARINE PTL.NET. (ANW)	82.2%
USINAS SIDERURGICAS DE MINAS GERAIS A PN	76.7%
WEIBO CLASS 'A' ADR	76.5%
FUFENG GROUP (K:FUFE)	69.6%
METALURGICA GERDAU PN (BR:GO4)	69.1%

Worst Performers

	Return %
TECH PRO TECHNOLOGY DEV. (K:TCPR)	-92.9%
DRYSHIPS	-79.9%
SUGIH ENERGY (ID:SUA)	-63.9%
ONO PHARM. (J:PS@N)	-35.4%
BLOOMBERRY RESORTS	-33.4%
SIGMAGOLD INTI PERKASA (ID:LAG)	-32.3%
CAPITA (UKIR:CPI)	-32.3%
AXTEL CPO	-32.2%
AES GENER	-31.9%
CYBERDYNE (J:DYNE)	-30.4%

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%	0.0%	0.0%	1.0%	2.6%	5.1%	6.4%			
Materials	-0.1%	0.0%	-0.1%	0.0%	12.0%	12.0%	5.1%	7.6%			
Industrials	0.0%	0.0%	0.0%	0.0%	8.6%	8.7%	12.8%	12.4%			
Consumer Discretionary	0.2%	0.1%	0.0%	0.0%	10.6%	10.0%	14.0%	12.1%			
Consumer Staples	-0.1%	0.0%	-0.2%	0.0%	2.7%	2.2%	14.8%	11.0%			
Health Care	0.1%	0.2%	-0.1%	0.0%	0.9%	-1.0%	10.2%	9.2%			
Financials	-0.4%	-0.2%	-0.1%	0.0%	7.9%	9.1%	17.8%	23.9%			
Information Technology	-0.4%	-0.3%	0.0%	-0.1%	10.3%	14.6%	9.2%	9.2%			
Telecommunication Services	-0.1%	-0.1%	-0.1%	0.0%	-0.4%	0.7%	5.7%	4.7%			
Utilities	0.0%	0.1%	0.0%	0.0%	2.4%	0.5%	3.8%	3.4%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	1.6%	0.0%			
<b>Portfolio</b>	<b>-0.9%</b>	<b>=</b>	<b>-0.3%</b>	<b>+</b>	<b>-0.6%</b>	<b>+</b>	<b>0.0%</b>	<b>6.2%</b>	<b>7.1%</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	32.5%	16.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	2.3%	4.7%	0.3%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	-1.4%	-0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	-7.7%	-4.0%	2.4%	1.3%	0.0%	-0.1%	0.0%	0.0%	-0.2%
Finland	9.7%	9.4%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	6.7%	6.8%	4.4%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Germany	12.6%	10.0%	5.7%	5.9%	0.2%	0.0%	0.0%	0.0%	0.1%
Greece*	6.1%	1.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	8.1%	10.5%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	0.3%	7.7%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	-1.6%	2.5%	1.2%	1.5%	-0.1%	0.0%	0.0%	0.0%	0.0%
Luxembourg	-1.7%	7.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	1.5%	9.6%	2.1%	2.1%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Norway	8.1%	7.3%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	7.5%	7.3%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	10.0%	4.9%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	10.0%	9.1%	0.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	8.6%	9.7%	3.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sweden	6.6%	8.4%	3.8%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Switzerland	5.2%	3.1%	7.8%	6.1%	0.1%	-0.1%	0.0%	0.0%	0.1%
United Kingdom	4.5%	4.2%	15.9%	13.5%	0.0%	0.0%	-0.1%	0.0%	0.0%

Excludes FIAM Equity holdings.

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

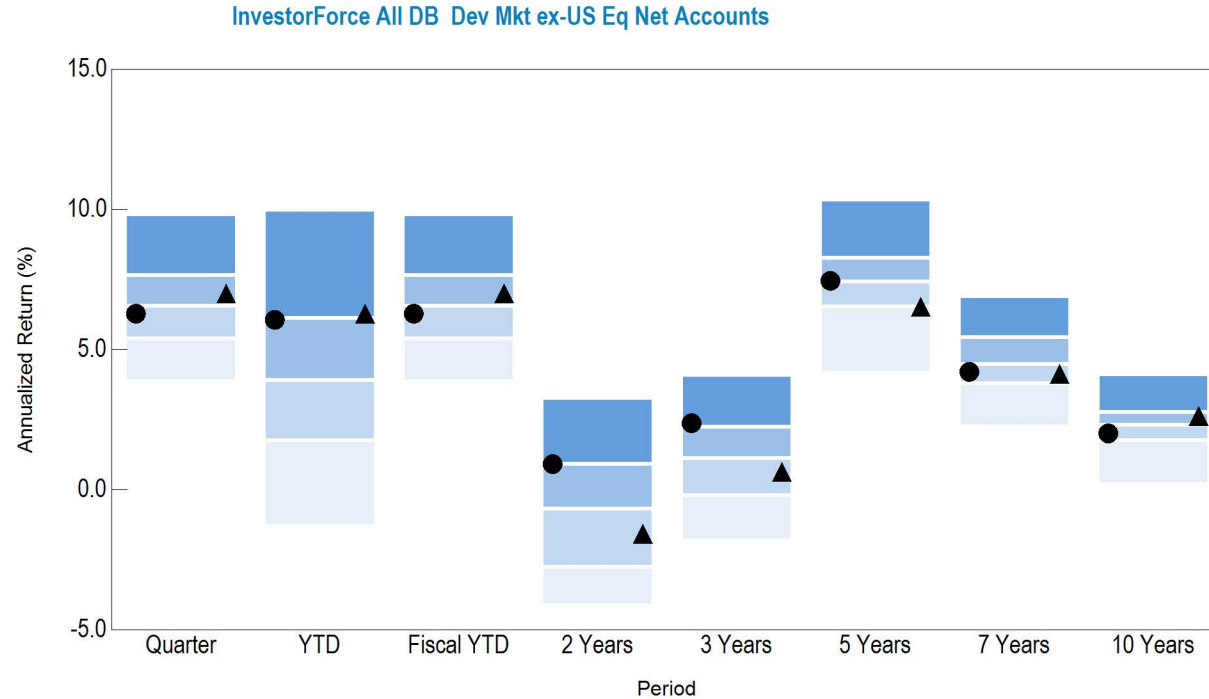
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	10.5%	8.4%	4.3%	5.0%	0.1%	0.0%	0.0%	0.0%	0.1%
China*	15.0%	13.4%	2.1%	5.6%	0.1%	-0.2%	0.0%	-0.1%	-0.2%
Hong Kong	6.0%	11.4%	2.9%	2.3%	-0.1%	0.0%	0.0%	0.0%	-0.1%
India*	7.4%	7.0%	1.7%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Indonesia*	10.9%	8.8%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	7.3%	8.3%	18.0%	17.5%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Korea*	8.5%	9.3%	2.8%	3.5%	0.0%	0.0%	-0.1%	0.0%	0.0%
Malaysia*	-1.4%	-0.4%	0.9%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	12.9%	9.3%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines*	-6.7%	-4.3%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	2.3%	0.9%	3.1%	1.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Taiwan*	11.1%	12.1%	2.7%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand*	4.9%	6.4%	0.4%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	6.6%	11.5%	1.4%	1.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Canada	-1.0%	4.6%	0.3%	7.0%	-0.4%	0.0%	0.1%	0.4%	0.1%
Chile*	1.5%	-0.5%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	2.8%	2.4%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Mexico*	-4.4%	-2.3%	1.3%	0.9%	0.0%	0.0%	0.0%	0.0%	-0.1%
Peru*	2.6%	1.1%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	11.6%	3.9%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%

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>Other</b>									
Egypt*	--	15.9%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	3.7%	0.8%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Kazakhstan**	6.4%	10.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait**	-2.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	6.9%	6.1%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	6.5%	13.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	8.7%	7.1%	2.2%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Turkey*	-6.4%	-4.6%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	-0.4%	5.5%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	3.2%	4.9%	4.9%	9.8%	-0.2%	0.0%	0.1%	0.1%	0.0%
Europe	5.6%	5.9%	49.8%	45.1%	0.0%	0.0%	-0.1%	0.0%	-0.2%
Asia/Pacific	7.5%	9.0%	40.3%	42.2%	-0.5%	0.0%	-0.2%	0.0%	-0.6%
Other	5.3%	4.6%	3.5%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	1.6%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
<b>Total</b>	<b>6.2%</b>	<b>7.1%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.7%</b>	<b>-0.2%</b>	<b>-0.2%</b>	<b>0.1%</b>	<b>-0.9%</b>
<b>Totals</b>									
Developed	6.1%	6.5%	78.0%	77.5%	-0.2%	0.0%	-0.1%	0.0%	-0.3%
Emerging*	6.7%	8.9%	20.4%	22.5%	-0.4%	0.0%	-0.1%	0.0%	-0.5%
Frontier**	2.6%	--	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	1.6%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%

Excludes FIAM Equity holdings.



	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	9.8	10.0	9.8	3.3	4.1	10.3	6.9	4.1
<b>25th Percentile</b>	7.7	6.1	7.7	0.9	2.3	8.3	5.4	2.8
<b>Median</b>	6.6	3.9	6.6	-0.7	1.1	7.4	4.5	2.3
<b>75th Percentile</b>	5.4	1.8	5.4	-2.7	-0.2	6.5	3.8	1.8
<b>95th Percentile</b>	3.9	-1.3	3.9	-4.1	-1.8	4.2	2.3	0.2
<b># of Portfolios</b>	153	153	153	149	141	119	100	61
<b>● Developed Markets</b>	6.3 (57)	6.1 (26)	6.3 (57)	0.9 (26)	2.4 (24)	7.5 (50)	4.2 (61)	2.0 (61)
<b>▲ MSCI ACWI ex USA Gross</b>	7.0 (41)	6.3 (25)	7.0 (41)	-1.6 (66)	0.6 (62)	6.5 (77)	4.1 (65)	2.6 (37)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	1,567	1,853
Weighted Avg. Market Cap. (\$B)	61.8	51.2
Median Market Cap. (\$B)	11.8	6.8
Price To Earnings	23.7	19.9
Price To Book	4.4	2.6
Price To Sales	3.1	2.2
Return on Equity (%)	17.5	13.5
Yield (%)	2.8	3.0
Beta (holdings; global)	1.0	1.0

Top Holdings

UNILEVER (UK)	1.6%
NESTLE 'R'	1.4%
UNITED OVERSEAS BANK	1.3%
COCHLEAR	1.3%
ABB LTD N	1.1%
GLAXOSMITHKLINE	1.0%
SYNGENTA	1.0%
TAIWAN SEMICON.SPN.ADR 1:5	1.0%
NASPERS	1.0%
IBERDROLA	0.9%

Best Performers

	Return %
MINERAL DEPOSITS (A:MDLX)	115.6%
BRAMMER (UKIR:BRAM)	94.3%
NINTENDO (J:NNDO)	84.8%
BROTHER INDUSTRIES (J:BI@N)	65.7%
ZUMTOBEL (O:ZUS)	62.0%
SOUTH32 (A:S32X)	61.8%
SEAGATE TECH.	61.0%
ZALANDO (D:ZAL)	55.0%
FORTESCUE METALS GP.	49.0%
HITACHI HIGH - TECHS. (J:NSSS)	47.4%

Worst Performers

	Return %
ONO PHARM.	-35.4%
CAPITA (UKIR:CPI)	-32.3%
CYBERDYNE	-30.4%
AGGREKO	-26.8%
BRISTOL MYERS SQUIBB	-26.7%
TRACTOR SUPPLY	-25.9%
TPG TELECOM (A:TPMX)	-25.6%
DOLLAR GENERAL	-25.3%
INGENICO GROUP (F:INGE)	-25.2%
NRG ENERGY	-25.1%

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%	0.0%	-0.4%	2.3%	4.5%	6.9%			
Materials	-0.2%	0.0%	-0.2%	0.0%	12.8%	12.7%	4.3%	7.1%			
Industrials	0.1%	0.1%	0.0%	0.0%	8.9%	8.4%	13.2%	11.2%			
Consumer Discretionary	0.2%	0.1%	0.1%	0.0%	11.0%	10.4%	14.4%	11.4%			
Consumer Staples	-0.1%	0.1%	-0.2%	0.1%	2.7%	2.0%	15.3%	11.6%			
Health Care	0.2%	0.2%	-0.1%	0.1%	0.7%	-1.9%	10.7%	9.4%			
Financials	-0.4%	-0.3%	-0.2%	0.0%	8.1%	9.4%	17.9%	24.5%			
Information Technology	-0.4%	-0.3%	0.0%	-0.1%	10.2%	14.9%	9.3%	8.9%			
Telecommunication Services	-0.1%	-0.1%	0.0%	0.0%	-0.6%	0.5%	5.3%	5.3%			
Utilities	0.1%	0.1%	0.0%	0.0%	1.9%	0.2%	3.5%	3.6%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	1.7%	0.0%			
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>-0.7%</b>	<b>=</b>	<b>-0.2%</b>	<b>+</b>	<b>-0.5%</b>	<b>+</b>	<b>0.0%</b>	<b>6.2%</b>	<b>6.9%</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	32.5%	16.9%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	2.3%	4.4%	0.4%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	--	-0.4%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-7.7%	-6.1%	2.6%	1.4%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Finland	9.7%	7.4%	0.8%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	6.7%	6.4%	4.9%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Germany	12.6%	9.9%	6.4%	6.1%	0.2%	0.0%	0.0%	0.0%	0.2%
Greece*	--	0.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	10.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	0.3%	7.5%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	-1.6%	2.3%	1.3%	1.4%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	-1.4%	6.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	1.6%	9.6%	2.4%	2.2%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Norway	8.1%	6.4%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	--	4.0%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	10.0%	6.5%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	3.2%	8.7%	0.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	8.6%	9.4%	3.4%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Sweden	6.6%	7.5%	4.3%	1.9%	0.0%	0.1%	0.0%	0.0%	0.0%
Switzerland	5.2%	2.7%	8.7%	6.6%	0.2%	-0.1%	0.0%	0.1%	0.1%
United Kingdom	4.6%	3.6%	17.7%	13.7%	0.1%	0.0%	-0.1%	0.0%	0.1%

Excludes FIAM Equity holdings.



Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

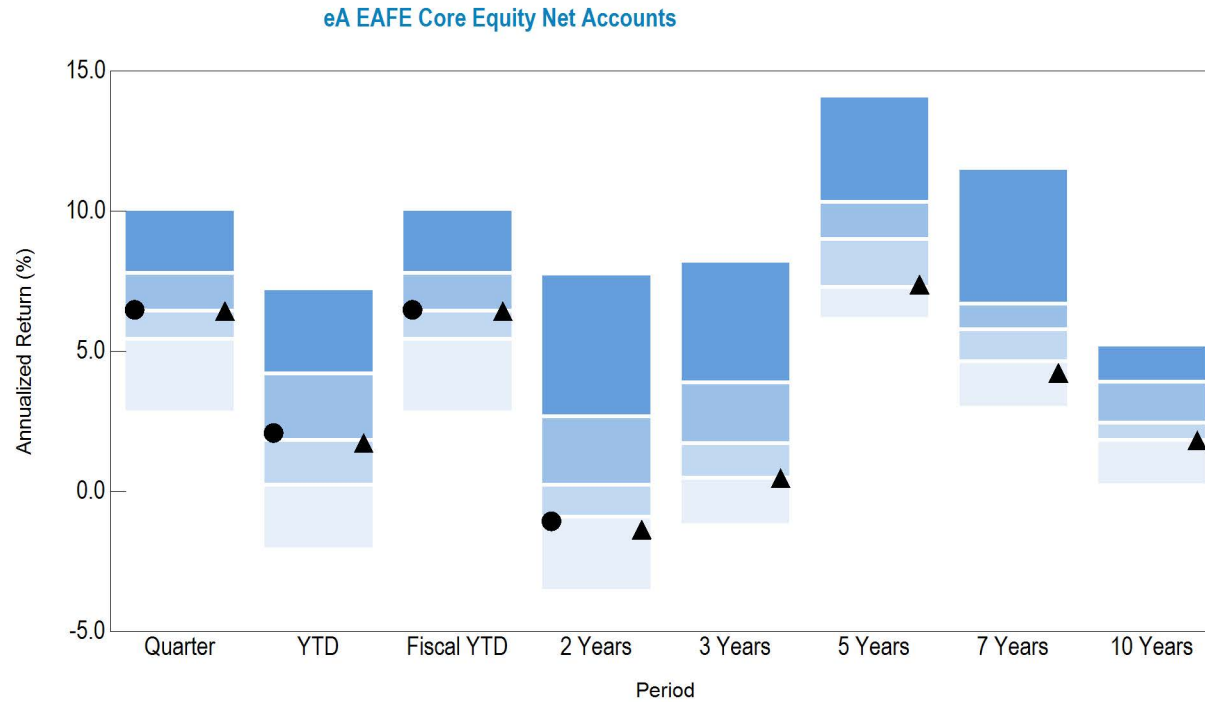
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	10.5%	8.0%	4.8%	5.1%	0.1%	0.0%	0.0%	0.0%	0.1%
China*	16.7%	13.9%	1.7%	5.7%	0.2%	-0.3%	0.0%	-0.1%	-0.2%
Hong Kong	5.4%	11.9%	2.6%	2.3%	-0.2%	0.0%	0.0%	0.0%	-0.2%
India*	6.8%	6.2%	1.3%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Indonesia*	16.5%	9.5%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	7.3%	8.5%	20.1%	16.6%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Korea*	9.2%	11.0%	2.2%	3.3%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Malaysia*	-2.6%	-1.5%	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	12.9%	12.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines*	-9.6%	-4.6%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	2.3%	-0.1%	3.5%	1.0%	0.0%	-0.1%	0.0%	0.1%	-0.1%
Taiwan*	11.3%	12.3%	2.1%	2.7%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Thailand*	1.4%	7.3%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	3.0%	11.4%	0.6%	1.6%	-0.1%	-0.1%	0.0%	0.1%	-0.1%
Canada	-1.0%	5.0%	0.4%	6.9%	-0.4%	0.0%	0.1%	0.4%	0.1%
Chile*	-6.9%	-1.9%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	--	2.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-7.4%	-2.3%	0.6%	0.9%	-0.1%	0.0%	0.0%	0.0%	0.0%
Peru*	-1.4%	1.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	13.0%	3.9%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%

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*	--	21.6%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	3.7%	-2.1%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Kazakhstan**	6.4%	10.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	6.8%	6.6%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	6.5%	13.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	10.0%	6.4%	1.5%	1.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Turkey*	-11.3%	-5.3%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	-6.3%	6.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	2.5%	5.1%	2.7%	9.9%	-0.3%	0.0%	0.1%	0.2%	0.0%
Europe	5.5%	5.4%	54.0%	46.2%	0.2%	-0.1%	-0.2%	0.0%	0.0%
Asia/Pacific	7.6%	9.3%	39.4%	40.9%	-0.6%	0.0%	-0.1%	0.0%	-0.7%
Other	7.3%	3.8%	2.2%	2.9%	0.1%	0.0%	0.0%	0.0%	0.1%
Cash	0.1%	--	1.7%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
<b>Total</b>	<b>6.2%</b>	<b>6.9%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.6%</b>	<b>-0.2%</b>	<b>-0.2%</b>	<b>0.2%</b>	<b>-0.7%</b>
<b>Totals</b>									
Developed	6.1%	6.3%	86.3%	77.5%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Emerging*	7.7%	9.1%	12.0%	22.5%	-0.3%	-0.1%	-0.1%	0.2%	-0.5%
Frontier**	6.5%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	1.7%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%

Excludes FIAM Equity holdings.



	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	10.1	7.2	10.1	7.8	8.2	14.1	11.5	5.2
<b>25th Percentile</b>	7.8	4.2	7.8	2.7	3.9	10.4	6.7	3.9
<b>Median</b>	6.5	1.8	6.5	0.3	1.7	9.0	5.8	2.5
<b>75th Percentile</b>	5.5	0.2	5.5	-0.9	0.5	7.3	4.7	1.8
<b>95th Percentile</b>	2.8	-2.1	2.8	-3.5	-1.2	6.2	3.0	0.2
<b># of Portfolios</b>	94	92	94	88	83	74	63	45
<b>● BlackRock EAFE Index</b>	6.5 (50)	2.1 (47)	6.5 (50)	-1.1 (79)	-- (--)	-- (--)	-- (--)	-- (--)
<b>▲ MSCI EAFE</b>	6.4 (52)	1.7 (52)	6.4 (52)	-1.4 (82)	0.5 (76)	7.4 (74)	4.2 (84)	1.8 (76)

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	1,441	927
Weighted Avg. Market Cap. (\$B)	119.8	52.2
Median Market Cap. (\$B)	11.6	8.9
Price To Earnings	22.8	20.5
Price To Book	4.4	2.4
Price To Sales	3.4	2.1
Return on Equity (%)	17.9	12.2
Yield (%)	2.3	3.2
Beta (holdings; global)	1.0	1.1

Top Holdings

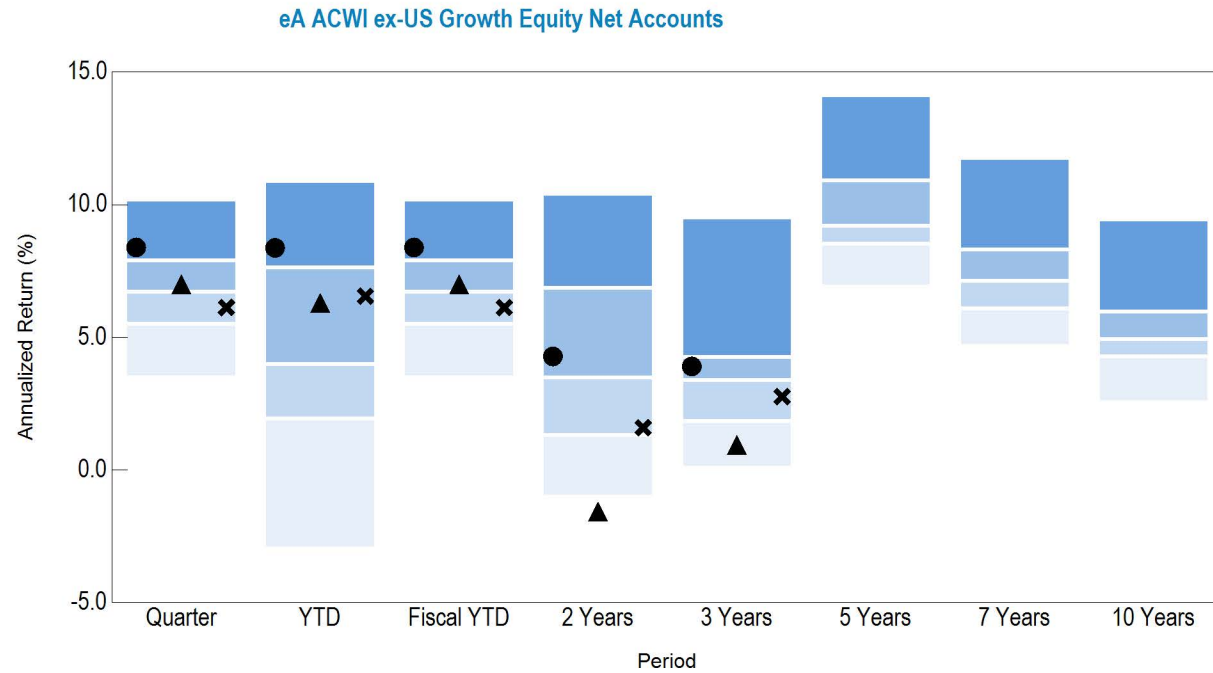
APPLE	2.7%
MICROSOFT	2.0%
EXXON MOBIL	1.6%
AMAZON.COM	1.4%
JOHNSON & JOHNSON	1.4%
FACEBOOK CLASS A	1.3%
BERKSHIRE HATHAWAY 'B'	1.2%
GENERAL ELECTRIC	1.2%
AT&T	1.1%
JP MORGAN CHASE & CO.	1.1%

Best Performers

	Return %
NINTENDO (J:NNDO)	84.8%
BROTHER INDUSTRIES (J:BI@N)	65.7%
SOUTH32	61.8%
SEAGATE TECH.	61.0%
ZALANDO	55.0%
FORTESCUE METALS GP.	49.0%
HITACHI HIGH - TECHS. (J:NSSS)	47.4%
FUJITSU (J:FT@N)	47.4%
NETAPP	46.8%
CHESAPEAKE ENERGY	46.5%

Worst Performers

	Return %
ONO PHARM. (J:PS@N)	-35.4%
CAPITA	-32.3%
CYBERDYNE	-30.4%
AGGREKO	-26.8%
BRISTOL MYERS SQUIBB	-26.7%
TRACTOR SUPPLY	-25.9%
TPG TELECOM (A:TPMX)	-25.6%
DOLLAR GENERAL	-25.3%
INGENICO GROUP	-25.2%
NRG ENERGY	-25.1%



	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	10.2	10.9	10.2	10.4	9.5	14.1	11.8	9.4
25th Percentile	7.9	7.6	7.9	6.9	4.3	10.9	8.3	6.0
Median	6.7	4.0	6.7	3.5	3.4	9.2	7.1	4.9
75th Percentile	5.5	1.9	5.5	1.3	1.9	8.5	6.1	4.3
95th Percentile	3.5	-3.0	3.5	-1.0	0.1	6.9	4.7	2.6
# of Portfolios	52	52	52	47	43	40	35	27
● Baillie Gifford	8.4 (16)	8.4 (14)	8.4 (16)	4.3 (37)	3.9 (36)	-- (--)	-- (--)	-- (--)
▲ MSCI ACWI ex US	7.0 (43)	6.3 (36)	7.0 (43)	-1.6 (97)	0.9 (89)	-- (--)	-- (--)	-- (--)
✕ MSCI ACWI ex US Growth	6.1 (68)	6.5 (32)	6.1 (68)	1.6 (73)	2.8 (61)	-- (--)	-- (--)	-- (--)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	88	1,853
Weighted Avg. Market Cap. (\$B)	35.6	51.2
Median Market Cap. (\$B)	11.3	6.8
Price To Earnings	28.5	19.9
Price To Book	6.2	2.6
Price To Sales	4.4	2.2
Return on Equity (%)	24.3	13.5
Yield (%)	1.8	3.0
Beta (holdings: global)	1.1	1.0

Top Holdings

COCHLEAR	3.3%
TAIWAN SEMICON.SPN.ADR 1:5	2.5%
NASPERS	2.5%
KAO	2.2%
SHIMANO	2.2%
HARGREAVES LANSDOWN	2.1%
NOVO NORDISK 'B'	2.0%
MS&AD INSURANCE GP.HDG.	2.0%
JAPAN EXCHANGE GROUP	2.0%
ATLAS COPCO 'B'	2.0%

Best Performers

	Return %
ZALANDO (D:ZAL)	55.0%
JAPAN EXCHANGE GROUP (J:OSEX)	37.6%
ALIBABA GROUP HLDG.SPN. ADR 1:1 (BABA)	33.0%
TREASURY WINE ESTATES (A:TWEX)	24.2%
IMAGINATION TECHNOLOGIES (UKIR:IMG)	23.4%
JD.COM 'A' ADR 1:2 (JD)	22.9%
ADIDAS (D:ADS)	21.4%
COCHLEAR (A:COHX)	20.5%
RAKUTEN (J:RAKT)	20.5%
BURBERRY GROUP (UKIR:BRBY)	18.2%

Worst Performers

	Return %
CAPITA (UKIR:CPI)	-32.3%
NOVO NORDISK 'B' (DK:NON)	-21.5%
PAX GLOBAL TECHNOLOGY (K:PGTL)	-15.2%
PROTALIX BIOTH. (PLX)	-10.9%
KAKAKU.COM (J:KAKA)	-8.1%
NOVOZYMES (DK:NZY)	-7.8%
WALMART DE MEXICO 'V' (MX:WAV)	-7.3%
OLYMPUS (J:OLYC)	-6.6%
ROCHE HOLDING (S:ROG)	-5.4%
KAO (J:KA@N)	-2.8%

**Baillie Gifford 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	0.3%	0.6%	0.2%	-0.5%	8.5%	2.3%	0.7%	6.9%			
Materials	-0.5%	-0.3%	-0.3%	0.1%	5.6%	12.7%	2.4%	7.1%			
Industrials	-0.5%	-0.4%	0.0%	-0.1%	4.7%	8.4%	13.9%	11.2%			
Consumer Discretionary	1.0%	0.4%	0.3%	0.3%	13.4%	10.5%	20.6%	11.4%			
Consumer Staples	0.2%	0.2%	-0.4%	0.3%	4.6%	1.9%	20.3%	11.6%			
Health Care	0.2%	0.2%	-0.1%	0.1%	0.6%	-1.9%	10.7%	9.4%			
Financials	-0.1%	0.3%	-0.2%	-0.2%	10.2%	9.4%	15.8%	24.5%			
Information Technology	0.7%	0.4%	0.3%	0.0%	17.7%	15.3%	13.5%	9.0%			
Telecommunication Services	0.3%	--	0.3%	--	--	0.5%	0.0%	5.3%			
Utilities	0.2%	--	0.2%	--	--	0.2%	0.0%	3.6%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	2.0%	0.0%			
<b>Portfolio</b>	<b>1.7%</b>	<b>=</b>	<b>1.4%</b>	<b>+</b>	<b>0.3%</b>	<b>+</b>	<b>-0.1%</b>	<b>8.6%</b>	<b>7.0%</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	--	16.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Belgium	--	4.3%	0.0%	1.0%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	-0.3%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-12.2%	-6.1%	5.5%	1.4%	-0.1%	-0.5%	0.0%	-0.3%	-0.8%
Finland	10.8%	7.4%	1.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	14.6%	6.4%	0.8%	6.8%	0.6%	0.1%	-0.1%	-0.5%	0.1%
Germany	32.0%	10.0%	2.7%	6.1%	1.3%	-0.1%	0.0%	-0.7%	0.5%
Greece*	--	1.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	10.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	7.6%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Italy	--	2.4%	0.0%	1.4%	--	0.1%	0.0%	--	0.1%
Netherlands	--	9.3%	0.0%	2.2%	--	0.0%	0.0%	--	-0.1%
Norway	--	6.4%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Poland*	--	4.1%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	10.3%	6.6%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	--	8.9%	0.0%	0.9%	--	0.0%	0.0%	--	0.0%
Spain	11.3%	9.4%	2.7%	2.1%	0.0%	0.0%	0.0%	0.0%	0.1%
Sweden	13.0%	7.5%	6.5%	1.9%	0.1%	0.1%	-0.1%	0.2%	0.3%
Switzerland	0.7%	2.7%	6.0%	6.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
United Kingdom	11.0%	4.0%	17.8%	13.8%	1.0%	0.1%	-0.1%	0.2%	1.2%

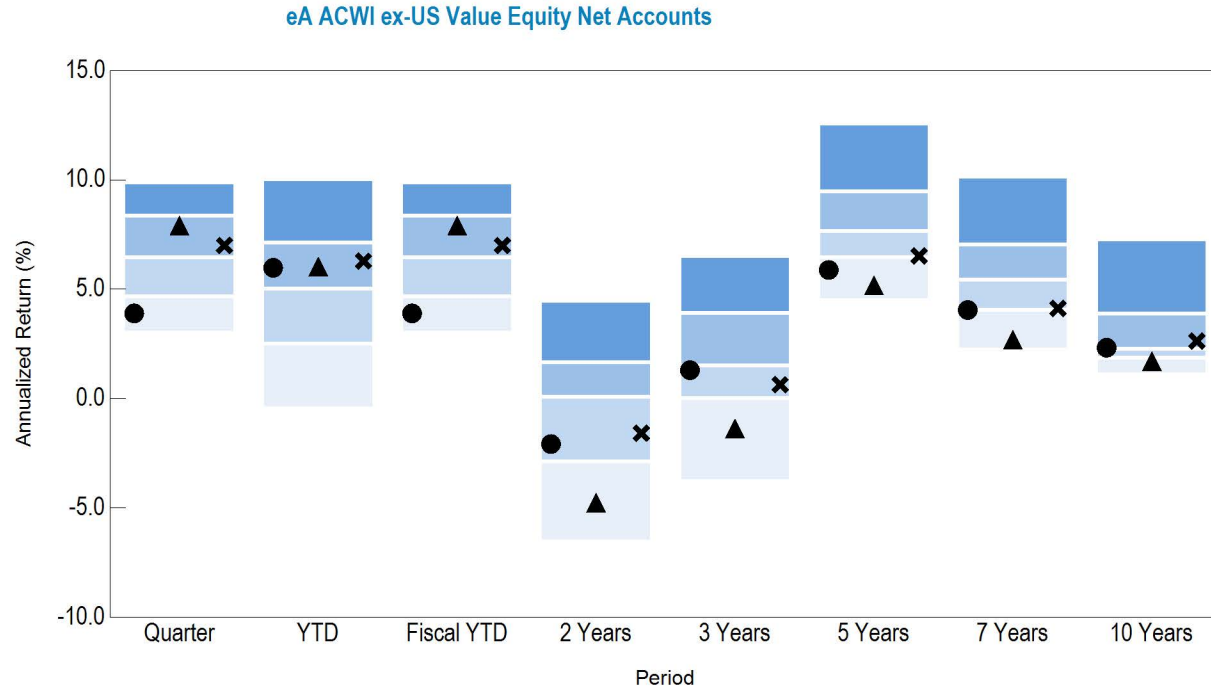


**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

	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	14.6%	8.0%	6.3%	5.1%	0.3%	0.0%	0.0%	0.1%	0.4%
China*	19.0%	13.8%	4.7%	5.8%	0.3%	-0.1%	0.0%	0.0%	0.2%
Hong Kong	1.4%	11.9%	1.4%	2.3%	-0.2%	0.0%	0.0%	0.1%	-0.2%
India*	0.8%	6.2%	1.6%	1.9%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Indonesia*	--	9.5%	0.0%	0.6%	--	0.0%	0.0%	--	0.0%
Japan	6.0%	8.5%	21.2%	16.6%	-0.4%	0.0%	0.1%	-0.1%	-0.4%
Korea*	13.7%	10.9%	3.2%	3.3%	0.2%	0.0%	-0.1%	0.0%	0.1%
Malaysia*	0.9%	-1.5%	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	12.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	-2.2%	-4.8%	0.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	5.3%	-0.1%	4.3%	1.0%	0.0%	-0.2%	0.0%	0.2%	0.0%
Taiwan*	12.9%	12.3%	3.4%	2.7%	0.1%	0.0%	-0.1%	0.0%	0.1%
Thailand*	--	7.4%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
<b>Americas</b>									
Brazil*	17.3%	11.3%	0.5%	1.6%	0.1%	-0.1%	0.0%	-0.1%	0.0%
Canada	--	5.0%	0.0%	6.9%	--	0.0%	0.1%	--	0.1%
Chile*	--	-1.8%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	2.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-7.3%	-2.3%	0.8%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Peru*	--	1.2%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United States	14.1%	3.9%	1.7%	0.0%	0.0%	0.0%	0.0%	0.2%	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*	--	21.5%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-2.2%	0.0%	0.5%	--	0.1%	0.0%	--	0.0%
Qatar*	--	6.6%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
South Africa*	12.3%	6.5%	3.4%	1.6%	0.1%	-0.1%	0.1%	0.1%	0.2%
Turkey*	--	-5.3%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	--	6.1%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
<b>Totals</b>									
Americas	9.2%	5.1%	3.0%	9.9%	0.4%	0.0%	0.1%	-0.3%	0.2%
Europe	8.2%	5.5%	44.4%	46.3%	1.7%	0.0%	-0.3%	-0.1%	1.3%
Asia/Pacific	9.0%	9.3%	47.1%	40.9%	0.1%	0.1%	-0.1%	0.0%	0.0%
Other	12.3%	3.9%	3.4%	2.9%	0.2%	0.0%	0.1%	0.0%	0.3%
Cash	0.1%	--	2.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
<b>Total</b>	<b>8.6%</b>	<b>7.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>2.3%</b>	<b>-0.1%</b>	<b>-0.2%</b>	<b>-0.3%</b>	<b>1.7%</b>
<b>Totals</b>									
Developed	8.0%	6.3%	79.4%	77.5%	1.5%	0.0%	-0.1%	0.0%	1.4%
Emerging*	12.0%	9.2%	18.6%	22.5%	0.7%	-0.1%	-0.1%	-0.1%	0.4%
Cash	0.1%	--	2.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	9.9	10.0	9.9	4.5	6.5	12.6	10.1	7.3
25th Percentile	8.4	7.2	8.4	1.7	3.9	9.5	7.1	3.9
Median	6.5	5.1	6.5	0.1	1.5	7.7	5.4	2.3
75th Percentile	4.7	2.5	4.7	-2.9	0.1	6.5	4.1	1.9
95th Percentile	3.0	-0.4	3.0	-6.5	-3.8	4.5	2.3	1.1
# of Portfolios	34	33	34	30	27	21	18	15
● Mondrian	3.9 (81)	6.0 (37)	3.9 (81)	-2.1 (70)	1.3 (61)	5.9 (88)	4.1 (77)	2.3 (47)
▲ MSCI ACWI ex USA Value Gross	7.9 (29)	6.0 (37)	7.9 (29)	-4.8 (91)	-1.4 (87)	5.2 (92)	2.7 (93)	1.7 (87)
✕ MSCI ACWI ex USA Gross	7.0 (46)	6.3 (36)	7.0 (46)	-1.6 (68)	0.6 (72)	6.5 (74)	4.1 (72)	2.6 (41)

Characteristics

	Portfolio	MSCI ACWI ex USA Value Gross
Number of Holdings	137	1,036
Weighted Avg. Market Cap. (\$B)	51.5	46.4
Median Market Cap. (\$B)	15.8	6.6
Price To Earnings	19.2	14.5
Price To Book	2.7	1.4
Price To Sales	1.7	1.5
Return on Equity (%)	10.8	9.2
Yield (%)	4.1	4.0
Beta (holdings: global)	0.9	1.1

Top Holdings

ABB LTD N	2.9%
SYNGENTA	2.7%
GLAXOSMITHKLINE	2.7%
IBERDROLA	2.5%
TAKEDA PHARMACEUTICAL	2.5%
UNILEVER (UK)	2.4%
HONDA MOTOR	2.4%
KIRIN HOLDINGS	2.3%
SANOFI	2.3%
AHOLD KON.	2.3%

Best Performers

	Return %
CAIRN INDIA (IN:CEI)	47.3%
SANDS CHINA (K:SNDC)	29.7%
INDIABULLS HOUSING FIN	26.4%
BIDVEST GROUP	26.0%
G4S (UKIR:GFS)	22.9%
SAP	21.5%
LUKOIL OAO SPN.ADR 1:1	21.4%
SHIN-ETSU CHEMICAL (J:UC@N)	19.9%
ABB LTD N (S:ABB)	19.2%
BANK MANDIRI	19.0%

Worst Performers

	Return %
PEARSON (UKIR:PSO)	-22.8%
PLDT.TEL.SPN.ADR 1:1	-17.9%
ARCA CONTINENTAL (MX:ARC)	-16.1%
TUPRAS TKI.PEL.RFNE.	-14.6%
COMPANIA CERVECERIAS UNIDAS	-13.8%
COMPANIA CVCS.UNIDAS SPN.ADR 1:2 (CCU)	-13.5%
FIBRA UNO ADMINISTRACION REIT	-12.0%
WANT WANT CHINA HOLDINGS	-11.9%
MTN GROUP (R:MTNJ)	-10.7%
INFOSYS	-10.3%

**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%	-0.2%	0.1%	0.0%	-1.0%	1.9%	8.8%	11.3%			
Materials	-0.5%	-0.3%	-0.3%	0.1%	12.2%	15.8%	3.2%	7.6%			
Industrials	0.1%	0.1%	0.0%	0.0%	11.5%	10.3%	9.4%	9.7%			
Consumer Discretionary	-0.3%	-0.2%	0.0%	-0.1%	8.6%	11.9%	8.7%	9.3%			
Consumer Staples	-0.8%	0.0%	-0.5%	-0.2%	0.7%	2.7%	13.8%	2.5%			
Health Care	-0.2%	0.0%	-0.3%	0.1%	1.4%	0.1%	10.1%	5.4%			
Financials	-1.5%	-2.1%	-0.6%	1.1%	4.6%	10.3%	15.4%	37.6%			
Information Technology	0.0%	0.0%	0.0%	0.0%	7.7%	8.7%	9.6%	5.2%			
Telecommunication Services	-0.5%	0.0%	-0.5%	0.0%	-0.7%	-0.6%	12.0%	5.8%			
Utilities	0.1%	0.2%	-0.1%	0.0%	2.6%	-0.4%	7.0%	5.7%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	-0.2%	0.0%	-0.2%	0.0%	0.1%	--	2.1%	0.0%			
<b>Portfolio</b>	<b>-3.9%</b>	<b>=</b>	<b>-2.5%</b>	<b>+</b>	<b>-2.5%</b>	<b>+</b>	<b>1.0%</b>	<b>3.9%</b>	<b>7.9%</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	--	17.2%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Belgium	--	13.6%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	4.9%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	10.7%	11.6%	0.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Finland	--	7.4%	0.0%	1.1%	--	0.0%	0.0%	--	0.0%
France	2.0%	5.8%	4.8%	8.2%	-0.3%	0.1%	0.0%	0.1%	-0.1%
Germany	9.3%	10.0%	8.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Greece*	--	4.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	12.5%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	1.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Italy	-7.9%	-0.3%	2.0%	2.0%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Netherlands	-1.1%	16.5%	3.9%	1.0%	-0.2%	0.2%	0.0%	-0.5%	-0.4%
Norway	--	7.2%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
Poland*	--	0.9%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	--	9.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Russia*	3.2%	6.6%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	5.1%	9.2%	4.3%	3.0%	-0.1%	0.0%	0.0%	-0.1%	-0.2%
Sweden	-4.5%	9.9%	3.7%	2.0%	-0.3%	0.1%	0.0%	-0.2%	-0.5%
Switzerland	8.4%	4.3%	11.3%	3.3%	0.1%	-0.3%	0.1%	0.3%	0.2%
United Kingdom	1.2%	4.5%	19.4%	16.4%	-0.6%	0.0%	-0.1%	-0.1%	-0.7%

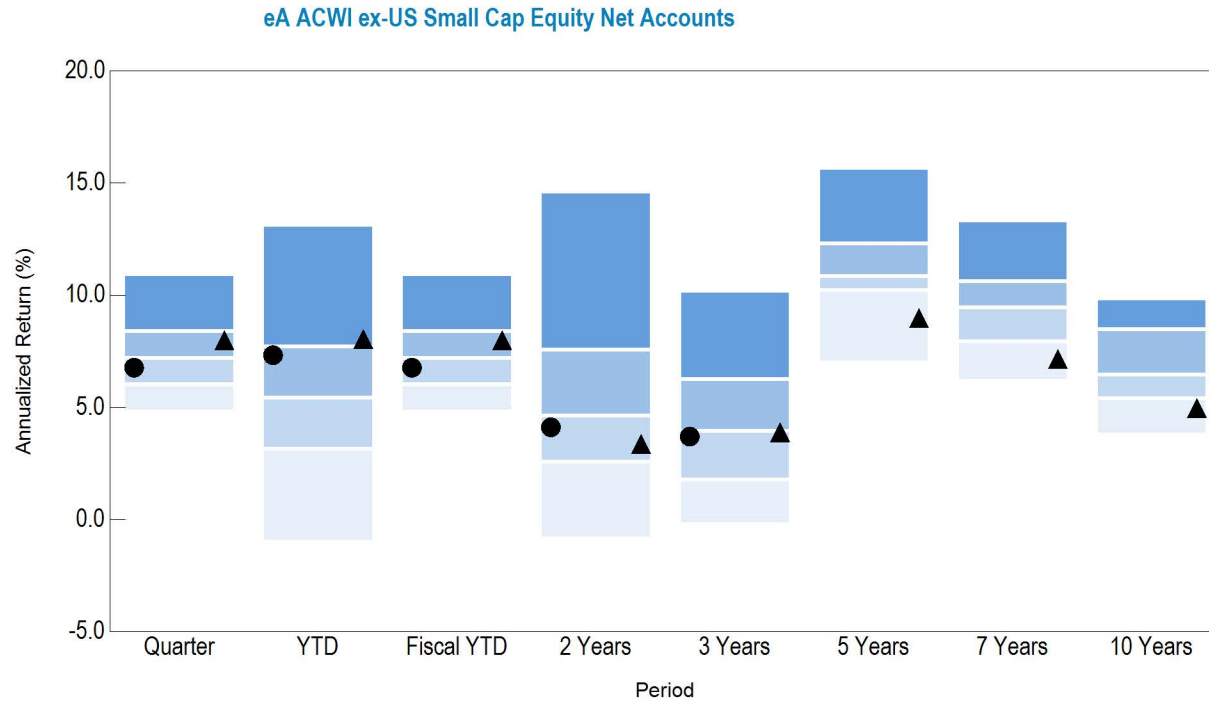
Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	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	-4.6%	11.4%	0.9%	5.1%	-0.8%	0.0%	-0.1%	0.7%	-0.3%
China*	0.3%	9.5%	0.4%	5.9%	-0.5%	-0.1%	0.0%	0.5%	-0.1%
Hong Kong	6.6%	14.2%	2.9%	2.3%	-0.2%	0.0%	0.0%	0.0%	-0.2%
India*	11.2%	4.4%	2.2%	1.9%	0.1%	0.0%	0.0%	0.0%	0.1%
Indonesia*	16.5%	14.2%	0.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	8.0%	11.1%	14.7%	16.4%	-0.5%	0.0%	0.0%	0.0%	-0.5%
Korea*	13.3%	12.5%	1.9%	3.4%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Malaysia*	-4.1%	-1.5%	1.1%	0.7%	0.0%	0.0%	0.0%	0.0%	-0.1%
New Zealand	--	14.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	-17.9%	-3.3%	0.4%	0.4%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Singapore	-0.5%	-1.2%	4.5%	1.0%	0.0%	-0.3%	0.0%	0.0%	-0.3%
Taiwan*	9.1%	10.6%	2.8%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand*	1.4%	6.9%	0.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	-2.9%	18.1%	1.3%	1.6%	-0.3%	0.0%	0.0%	0.1%	-0.3%
Canada	-1.0%	4.9%	1.1%	7.1%	-0.4%	0.1%	0.1%	0.4%	0.1%
Chile*	-6.9%	-6.4%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	--	-0.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-7.6%	-0.6%	1.1%	0.9%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Peru*	-1.4%	1.9%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	8.9%	3.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

**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*	--	18.9%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	0.5%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Kazakhstan**	6.4%	7.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	6.8%	6.5%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	6.5%	7.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	2.9%	6.3%	1.1%	1.6%	-0.1%	0.0%	0.0%	0.0%	0.0%
Turkey*	-11.3%	-5.9%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	-6.3%	3.8%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	-2.2%	6.1%	4.8%	10.1%	-0.9%	0.0%	0.1%	0.5%	-0.3%
Europe	3.4%	6.4%	58.3%	46.0%	-1.4%	-0.1%	-0.1%	-0.4%	-1.9%
Asia/Pacific	6.3%	10.2%	32.5%	41.0%	-1.4%	-0.1%	-0.3%	0.3%	-1.5%
Other	0.8%	3.9%	2.3%	2.9%	-0.1%	0.0%	-0.1%	0.0%	-0.1%
Cash	0.1%	--	2.1%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%
<b>Total</b>	<b>3.9%</b>	<b>7.9%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-3.7%</b>	<b>-0.3%</b>	<b>-0.3%</b>	<b>0.4%</b>	<b>-3.9%</b>
<b>Totals</b>									
Developed	4.0%	7.7%	82.6%	77.2%	-2.7%	0.0%	-0.2%	-0.2%	-3.0%
Emerging*	4.0%	8.4%	15.2%	22.8%	-1.0%	0.0%	-0.1%	0.3%	-0.7%
Frontier**	6.5%	--	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	2.1%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%





	Return (Rank)							
5th Percentile	10.9	13.1	10.9	14.6	10.2	15.7	13.3	9.8
25th Percentile	8.4	7.7	8.4	7.6	6.3	12.3	10.6	8.5
Median	7.2	5.5	7.2	4.6	4.0	10.9	9.5	6.5
75th Percentile	6.1	3.2	6.1	2.6	1.8	10.2	8.0	5.4
95th Percentile	4.8	-1.0	4.8	-0.8	-0.2	7.0	6.2	3.8
# of Portfolios	36	35	36	29	23	18	16	12
● FIAM Equity	6.8 (60)	7.3 (31)	6.8 (60)	4.1 (58)	3.7 (64)	-- (--)	-- (--)	-- (--)
▲ MSCI ACWI ex US Small Cap Gross	8.0 (31)	8.0 (22)	8.0 (31)	3.4 (63)	3.9 (55)	9.0 (83)	7.1 (91)	5.0 (79)

Characteristics

	Portfolio	MSCI ACWI ex-US Small Cap
No. of Securities	226	4,320
Wgtd. Avg. Market Cap (000's)	2,671	1,986
Price to Book Ratio	1.7	1.5
Return on Equity	12.2%	10.7%

Ten Holdings

NIHON PARKERIZING CO LTD	1.9
TECHTRONIC INDUSTRIES CO LTD	1.6
OBIC CO LTD	1.5
FRUTAROM INDS LTD	1.1
NITTO KOHKI CO LTD	1.0
QUEBECOR INC CL B SUB VTG	1.0
SURUGABANK LTD	1.0
REGUS PLC	1.0
MISUMI GROUP INC	1.0
JUNGHEINRICH AG NON-VTG PFD	0.9

Best Performers (Absolute Return %)

LIFESTYLE CHINA GROUP LTD	256.2
MINERAL DEPOSITS LTD	115.6
BRAMMER PLC	94.3
KINGBOARD LAMINAT HOLDINGS LTD	63.5
ZUMTOBEL GROUP AG	61.6
TCC INTERNATIONAL HLDGS LTD	52.0
RELIANCE CAPITAL LTD	41.2
NIHON PARKERIZING CO LTD	39.6
TEGMAGESTAO LOGISTICA	37.1
DOWA HOLDINGS CO LTD	36.2

Worst Performers (Absolute Return %)

WESTERN ENERGY SERVICES CORP	(32.9)
INGENICO GROUP	(25.1)
AWE LTD	(23.2)
ASALEO CARE LTD	(20.2)
T SUKUI CORP	(19.1)
AEON FINANCIAL SERVICE CO LTD	(17.7)
LIFESTYLE INTL HLDGS LTD	(17.5)
PAX GLOBAL TECHNOLOGY LTD	(15.2)
SEOBU T&D	(14.9)
LG INNOTEK CO LTD	(14.8)

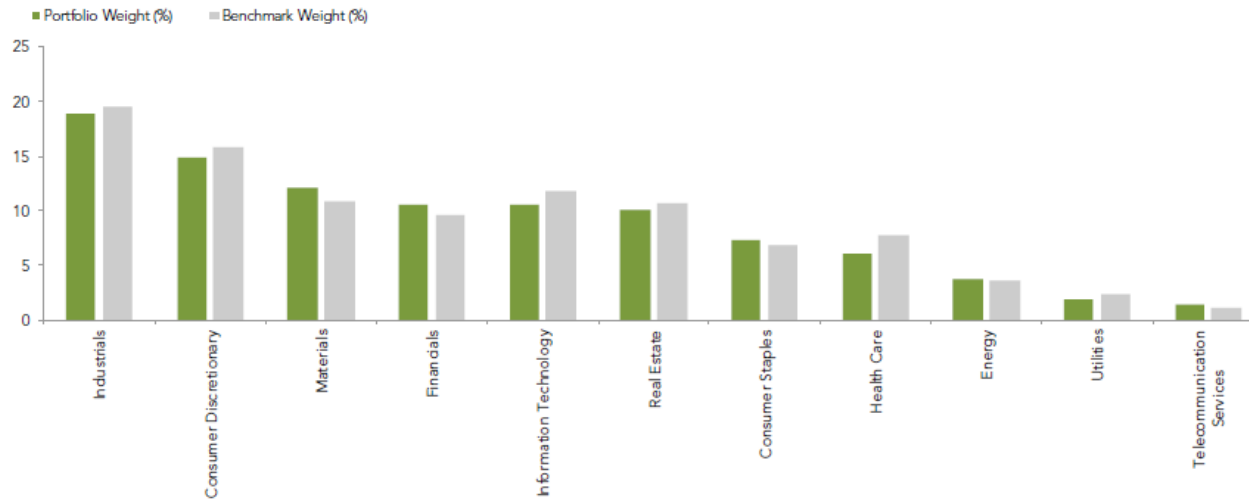
# FIAM Equity Regional and Sector Weights

Period Ending: September 30, 2016

## REGIONAL WEIGHTS



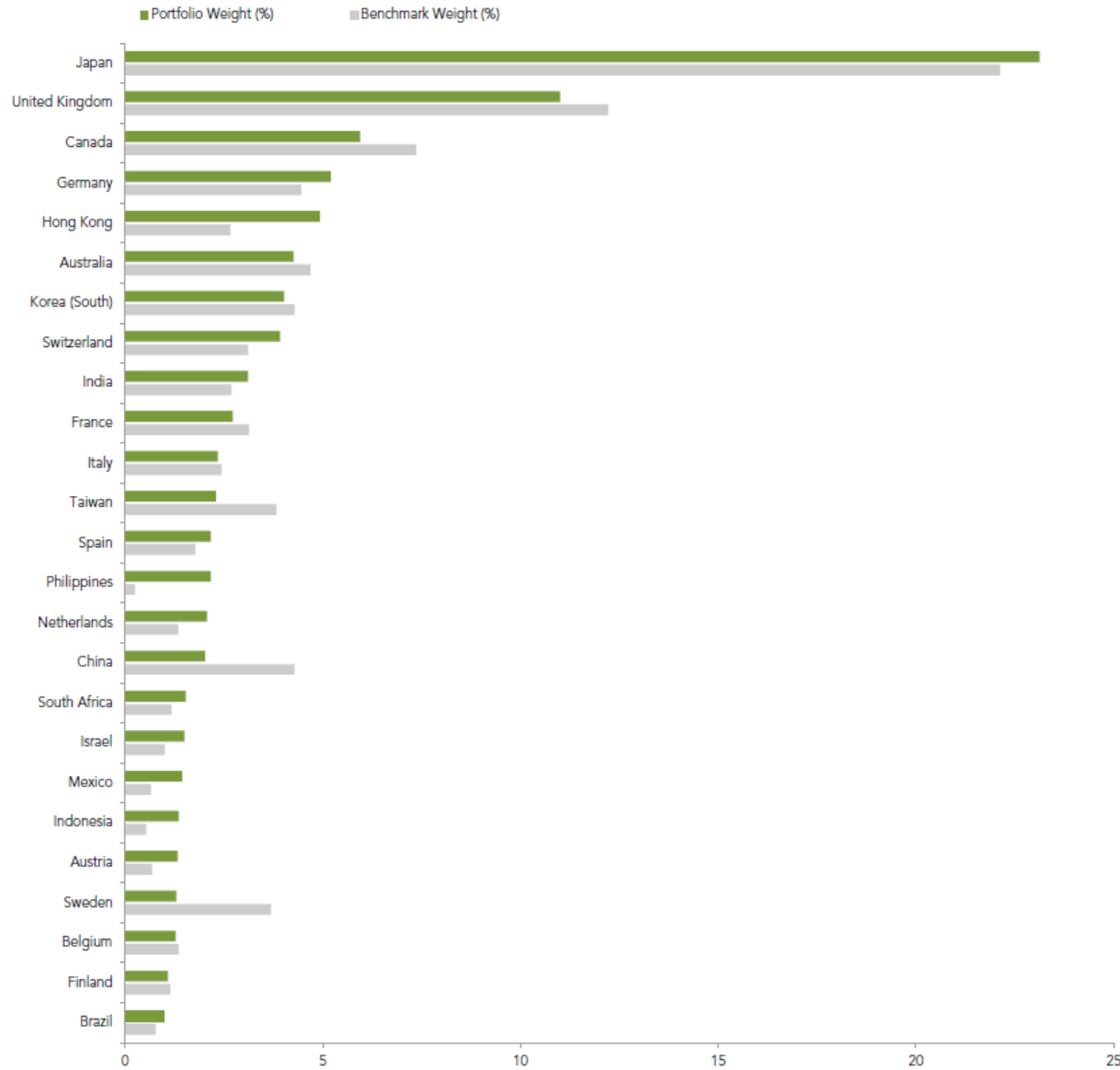
## SECTOR WEIGHTS



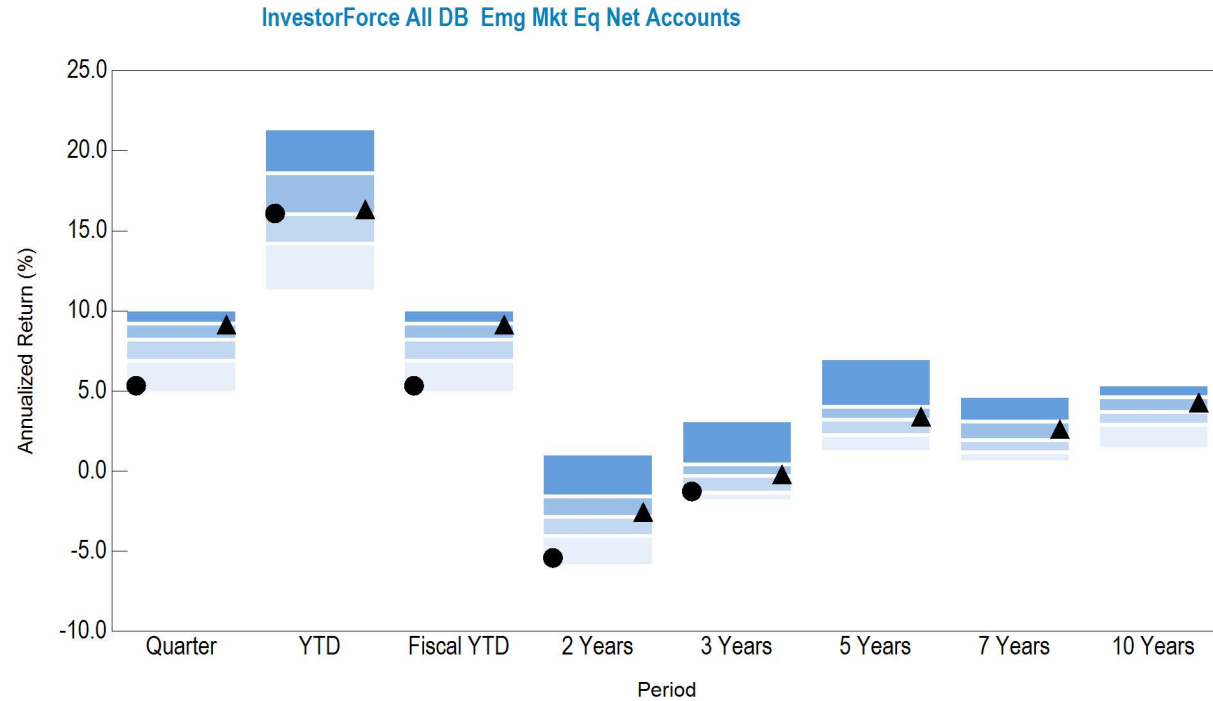
Sector breakdowns are only applied to equities and convertibles and the allocation percentages may not add to 100%.

On August 31, 2016, the Real Estate sector was created under the Global Industry Classification Standard (GICS) by carving out securities from the Financials sector.

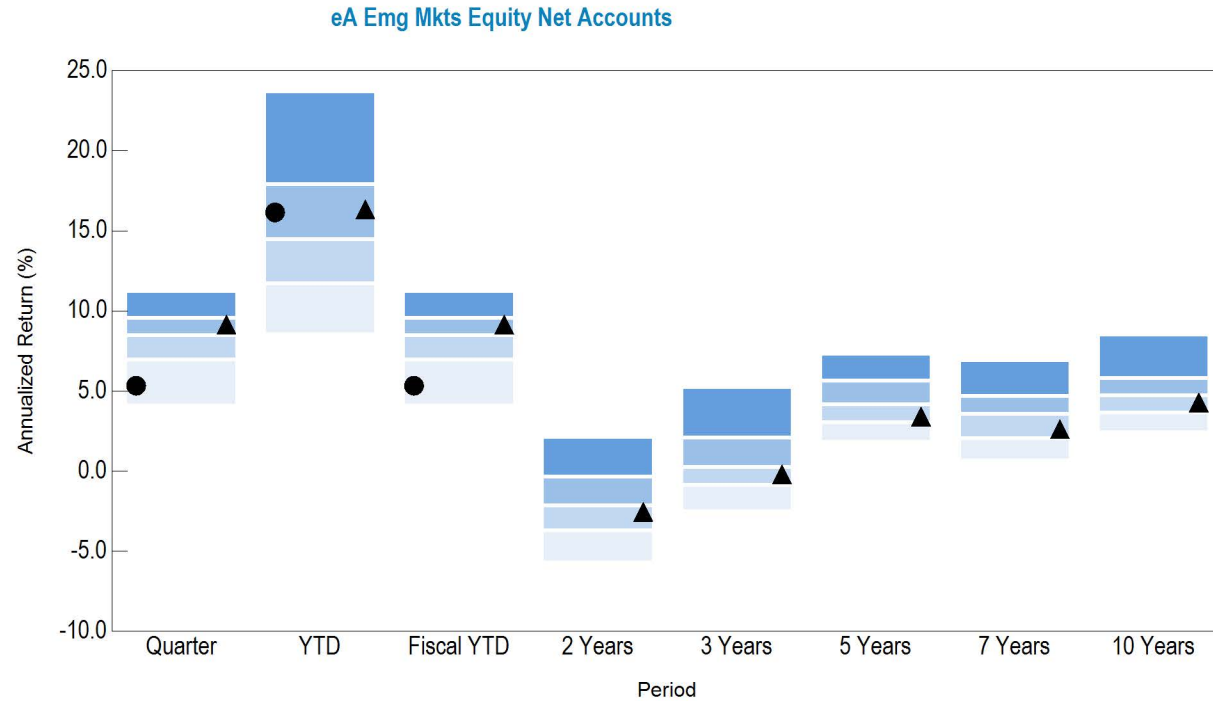
TOP 25 COUNTRY WEIGHTS



Benchmark: MSCI AC Wid Sm Cap xUS(N)



	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	10.1	21.4	10.1	1.1	3.1	7.0	4.6	5.4				
25th Percentile	9.2	18.6	9.2	-1.6	0.4	4.0	3.1	4.6				
Median	8.2	16.0	8.2	-2.8	-0.3	3.2	1.9	3.7				
75th Percentile	6.9	14.2	6.9	-4.0	-1.3	2.3	1.2	2.9				
95th Percentile	4.9	11.2	4.9	-5.9	-1.9	1.2	0.6	1.4				
# of Portfolios	87	87	87	83	74	49	22	16				
● Emerging Markets	5.3 (92)	16.1 (50)	5.3 (92)	-5.4 (93)	-1.3 (75)	-- (--)	-- (--)	-- (--)				
▲ MSCI Emerging Markets Gross	9.2 (26)	16.4 (47)	9.2 (26)	-2.6 (42)	-0.2 (47)	3.4 (46)	2.6 (29)	4.3 (30)				



	Quarter		YTD		Fiscal YTD		2 Years		3 Years		5 Years		7 Years		10 Years	
<b>Return (Rank)</b>																
5th Percentile	11.2	23.7	11.2	2.1	5.2	7.3	6.9	8.5								
25th Percentile	9.6	17.9	9.6	-0.4	2.1	5.7	4.7	5.8								
Median	8.5	14.5	8.5	-2.1	0.3	4.2	3.6	4.7								
75th Percentile	7.0	11.7	7.0	-3.7	-0.9	3.1	2.1	3.7								
95th Percentile	4.1	8.6	4.1	-5.7	-2.5	1.8	0.7	2.4								
# of Portfolios	167	166	167	159	147	105	73	49								
● Parametric Core	5.3 (91)	16.1 (37)	5.3 (91)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)								
▲ MSCI Emerging Markets Gross	9.2 (36)	16.4 (34)	9.2 (36)	-2.6 (58)	-0.2 (62)	3.4 (69)	2.6 (68)	4.3 (63)								

Characteristics

	Portfolio	MSCI Emerging Markets Gross
Number of Holdings	1,072	833
Weighted Avg. Market Cap. (\$B)	19.5	53.0
Median Market Cap. (\$B)	3.0	4.7
Price To Earnings	20.0	19.1
Price To Book	2.9	2.8
Price To Sales	2.5	2.3
Return on Equity (%)	15.4	16.9
Yield (%)	2.8	2.5
Beta (holdings; global)	1.0	1.0

Top Holdings

SBERBANK OF RUSSIA	1.1%
TAIWAN SEMICON.MNFG.	0.9%
AMERICA MOVIL SAB DE CV SPN.ADR 'L' 1:20	0.9%
CHINA MOBILE	0.9%
OAO GAZPROM SPN.ADR 1:2	0.7%
SASOL	0.7%
NASPERS	0.7%
SAMSUNG ELECTRONICS	0.7%
LUKOIL OAO SPN.ADR 1:1	0.6%
CIELO ON	0.6%

Best Performers

	Return %
JSW	218.6%
OI PN (BR:LR4)	115.2%
AEGEAN MARINE PTL.NET.	82.2%
USINAS SIDERURGICAS DE MINAS GERAIS A PN (BR:US5)	76.7%
WEIBO CLASS 'A' ADR	76.5%
FUFENG GROUP	69.6%
METALURGICA GERDAU PN (BR:GO4)	69.1%
GEELY AUTOMOBILE HDG.	65.2%
INDUS MOTOR COMPANY	65.2%
TONG YANG IND. (TW:TOY)	64.1%

Worst Performers

	Return %
TECH PRO TECHNOLOGY DEV. (K:TCPR)	-92.9%
DRYSHIPS (DRYS)	-79.9%
SUGIH ENERGY (ID:SUA)	-63.9%
BLOOMBERRY RESORTS	-33.4%
SIGMAGOLD INTI PERKASA	-32.3%
AXTEL CPO	-32.2%
AES GENER (CL:CHG)	-31.9%
WEST CHINA CEMENT (K:WCC)	-29.0%
EMPRESA NACIONAL DE ELECTRICIDAD	-28.4%
INTEGER PL SR.A B C D E	-27.1%

**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	-0.2%	-0.1%	0.0%	0.0%	6.2%	8.2%	9.9%	7.5%			
Materials	0.0%	0.0%	0.1%	0.0%	9.6%	10.4%	11.8%	6.5%			
Industrials	-0.1%	0.0%	-0.1%	0.0%	4.9%	4.6%	9.3%	5.9%			
Consumer Discretionary	-0.3%	-0.1%	0.0%	-0.2%	6.6%	9.6%	10.0%	10.5%			
Consumer Staples	0.0%	0.1%	-0.2%	0.1%	2.7%	1.3%	10.7%	8.5%			
Health Care	-0.2%	0.0%	-0.2%	0.1%	2.8%	2.5%	6.2%	2.7%			
Financials	-0.8%	-0.8%	-0.1%	0.1%	6.4%	10.0%	16.9%	26.1%			
Information Technology	-1.6%	-1.0%	-0.8%	0.2%	11.0%	16.0%	8.3%	22.5%			
Telecommunication Services	-0.3%	-0.1%	-0.2%	0.0%	0.9%	2.2%	9.2%	6.7%			
Utilities	0.0%	0.1%	-0.3%	0.1%	4.3%	1.0%	7.1%	3.2%			
Real Estate	0.0%	--	--	--	--	--	0.0%	0.0%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.5%	0.0%			
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>-3.4%</b>	<b>=</b>	<b>-1.9%</b>	<b>+</b>	<b>-1.9%</b>	<b>+</b>	<b>0.4%</b>	<b>5.7%</b>	<b>9.1%</b>	<b>100.0%</b>	<b>100.0%</b>

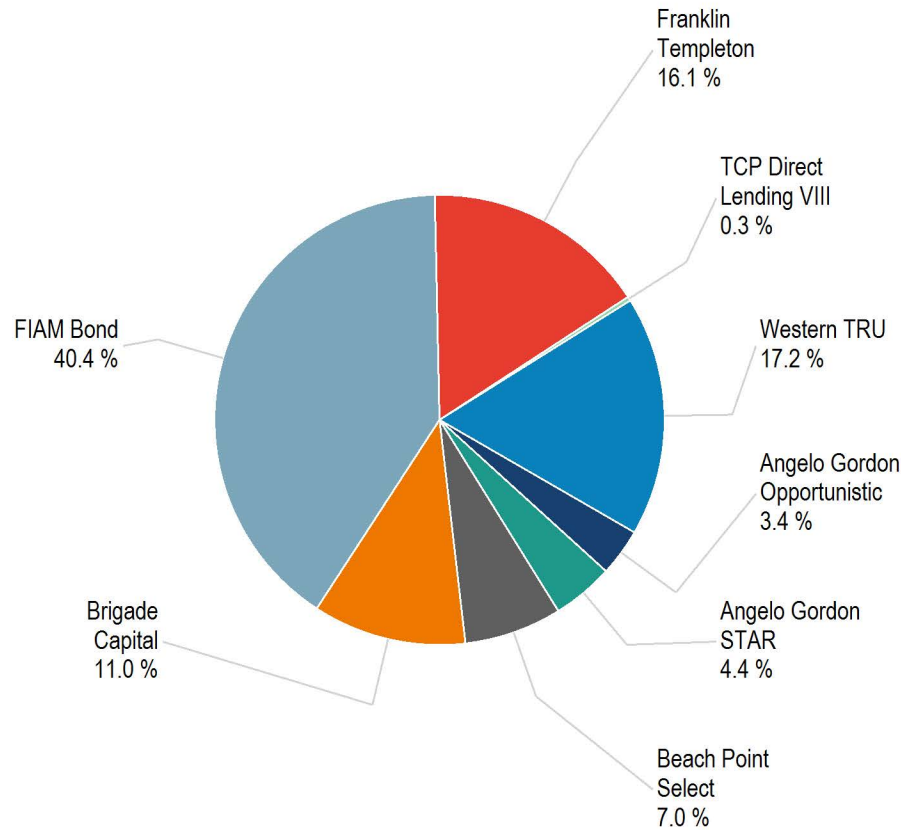


**Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross**

	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*	-1.4%	-0.4%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Greece*	6.1%	0.8%	1.5%	0.4%	0.0%	-0.1%	0.0%	0.1%	0.0%	0.0%
Hungary*	8.1%	10.9%	1.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Luxembourg	-6.1%	9.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-9.1%	9.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	7.5%	4.0%	3.3%	1.1%	0.0%	-0.2%	0.1%	0.1%	0.0%	0.0%
Russia*	10.8%	8.7%	6.9%	3.8%	0.1%	0.0%	0.0%	0.1%	0.1%	0.2%
United Kingdom	-13.7%	4.0%	0.4%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%
<b>AsiaPacific</b>										
China*	10.3%	13.9%	5.3%	25.5%	-0.9%	-1.2%	0.0%	0.7%	-1.4%	-1.4%
Hong Kong	8.5%	11.9%	5.5%	0.0%	0.0%	0.2%	0.0%	-0.2%	0.0%	0.0%
India*	8.5%	6.2%	5.4%	8.4%	0.3%	0.1%	-0.1%	-0.1%	0.2%	0.2%
Indonesia*	9.1%	9.5%	4.5%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Korea*	6.8%	11.0%	7.6%	14.6%	-0.6%	0.1%	-0.4%	0.3%	-0.5%	-0.5%
Malaysia*	-0.1%	-1.5%	3.8%	3.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
Philippines*	-4.7%	-4.6%	3.7%	1.6%	0.0%	-0.2%	-0.1%	0.0%	-0.3%	-0.3%
Singapore	5.9%	-0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	10.8%	12.3%	7.8%	12.1%	-0.2%	-0.1%	-0.1%	0.1%	-0.3%	-0.3%
Thailand*	5.7%	7.3%	3.4%	2.3%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
<b>Americas</b>										
Brazil*	9.1%	11.4%	7.7%	7.2%	-0.2%	0.0%	0.0%	0.0%	-0.2%	-0.2%
Chile*	3.5%	-1.9%	3.7%	1.2%	0.1%	-0.2%	0.0%	0.1%	0.0%	0.0%
Colombia*	2.8%	2.7%	1.9%	0.5%	0.0%	-0.1%	0.0%	0.0%	-0.1%	-0.1%
Mexico*	-2.0%	-2.3%	7.1%	4.1%	-0.1%	-0.2%	0.0%	0.0%	-0.3%	-0.3%
Peru*	5.0%	1.1%	1.8%	0.4%	0.0%	-0.1%	0.0%	0.1%	0.0%	0.0%
United States	4.5%	3.9%	1.4%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%

**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*	--	21.6%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Kuwait**	-2.0%	1.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	6.9%	6.6%	1.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	6.4%	6.4%	7.4%	7.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Turkey*	-5.2%	-5.3%	3.8%	1.4%	0.0%	-0.2%	-0.1%	0.0%	-0.3%
United Arab Emirates*	2.7%	6.2%	1.6%	0.9%	0.0%	0.0%	0.0%	0.0%	-0.1%
<b>Totals</b>									
Americas	3.8%	5.4%	23.5%	13.5%	-0.3%	0.0%	0.0%	-0.3%	-0.6%
Europe	7.8%	7.1%	14.0%	5.7%	0.0%	-0.2%	0.1%	0.1%	0.0%
Asia/Pacific	6.9%	10.6%	47.3%	70.2%	-2.1%	-0.3%	-0.7%	0.7%	-2.4%
Other	2.9%	5.2%	14.8%	10.6%	-0.1%	-0.3%	-0.1%	0.0%	-0.4%
Cash	0.1%	--	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>5.7%</b>	<b>9.1%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-2.5%</b>	<b>-0.8%</b>	<b>-0.6%</b>	<b>0.5%</b>	<b>-3.4%</b>
<b>Totals</b>									
Developed	6.2%	--	7.7%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Emerging*	5.7%	9.1%	91.5%	100.0%	-2.9%	0.0%	-0.6%	0.2%	-3.2%
Frontier**	-2.0%	--	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
Angelo Gordon Opportunistic	\$21,332,000	3.4%	0.2%
Angelo Gordon STAR	\$27,375,000	4.4%	0.2%
Beach Point Select	\$43,087,939	7.0%	0.1%
Brigade Capital	\$68,344,302	11.0%	0.3%
FIAM Bond	\$250,365,014	40.4%	0.4%
Franklin Templeton	\$99,875,590	16.1%	-0.2%
TCP Direct Lending VIII	\$2,136,150	0.3%	0.0%
Western Asset TRU	\$106,528,498	17.2%	0.4%
Actual vs. Policy Weight Difference			-0.6%
<b>Total</b>	<b>\$619,044,493</b>	<b>100.0%</b>	<b>0.9%</b>

**Statistics Summary**

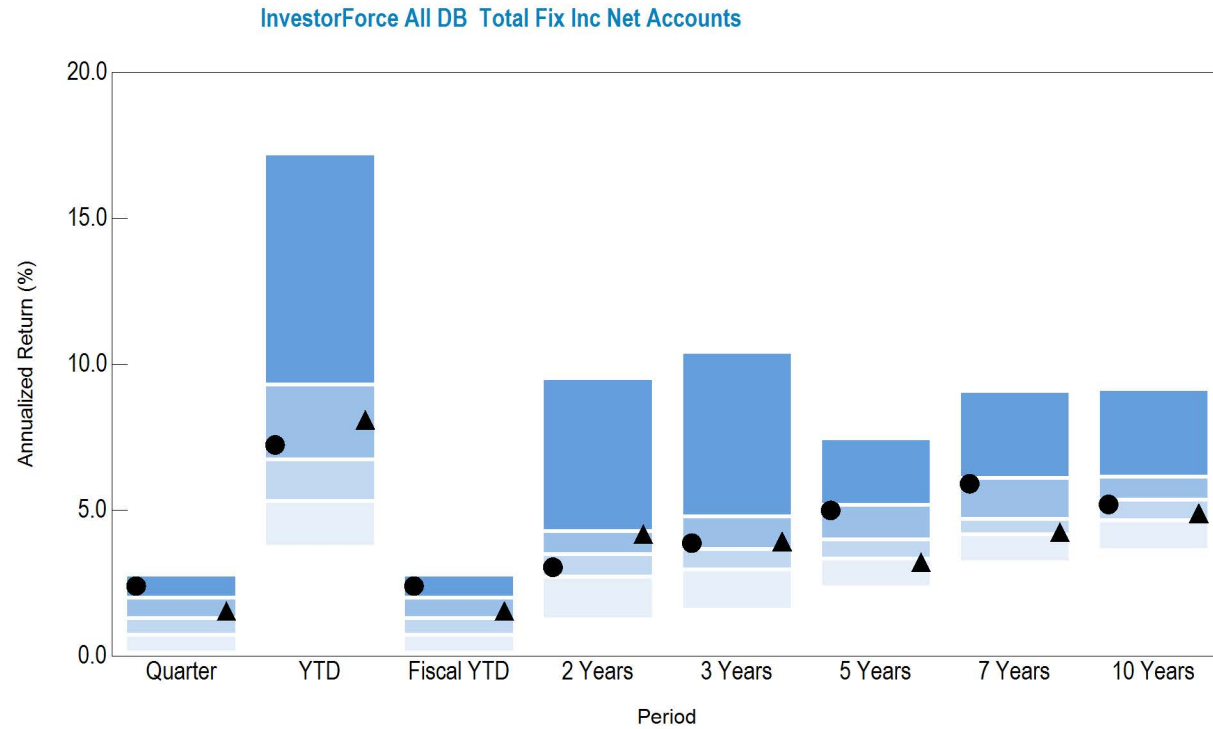
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	3.9%	2.9%	1.3	0.0	1.9%
Blended Fixed Income Index	3.9%	2.9%	1.3	--	0.0%
US Fixed Income	4.5%	2.7%	1.6	0.2	1.4%
Blended US Fixed Index	4.2%	2.9%	1.4	--	0.0%
FIAM Bond	4.6%	2.8%	1.6	0.7	0.9%
Barclays Aggregate	4.0%	2.6%	1.5	--	0.0%
Angelo Gordon STAR	9.5%	5.8%	1.6	0.8	7.0%
Barclays Aggregate	4.0%	2.6%	1.5	--	0.0%
Brigade Capital	3.1%	7.4%	0.4	-0.5	4.6%
Barclays BA Intermediate HY	5.3%	5.0%	1.1	--	0.0%
Franklin Templeton	0.2%	6.0%	0.0	-0.3	6.6%
Barclays Multi-verse	2.2%	4.2%	0.5	--	0.0%

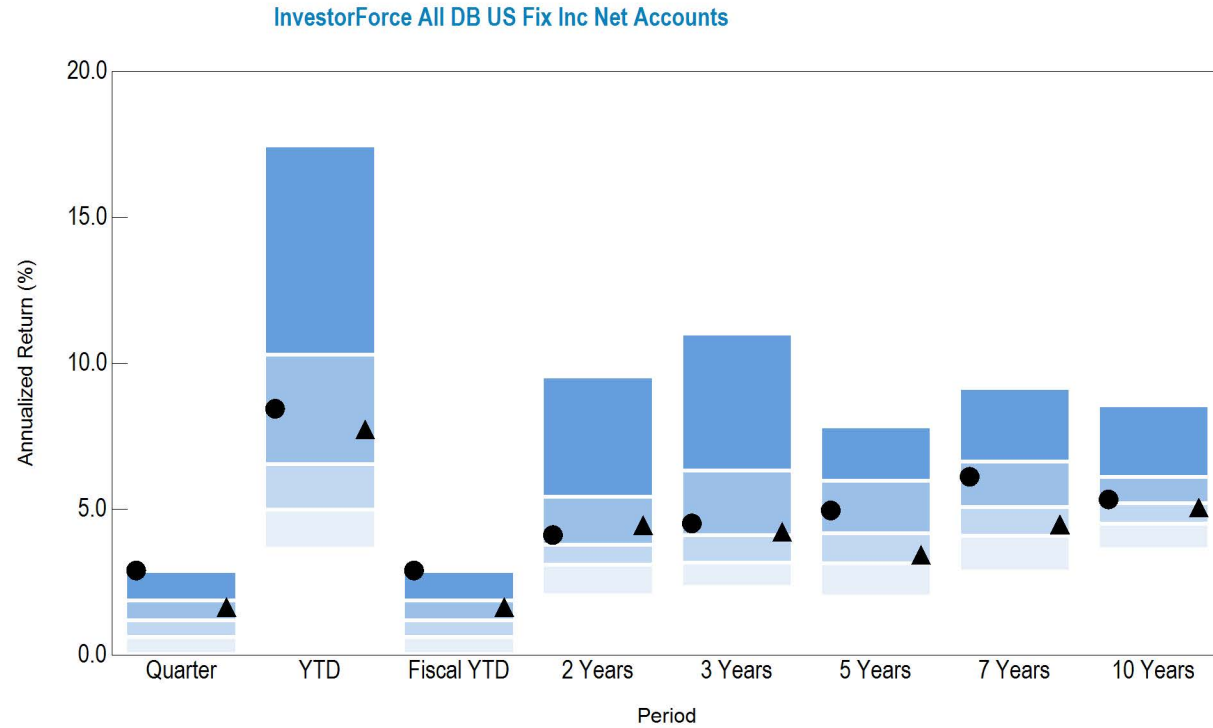
**Statistics Summary**

**5 Years**

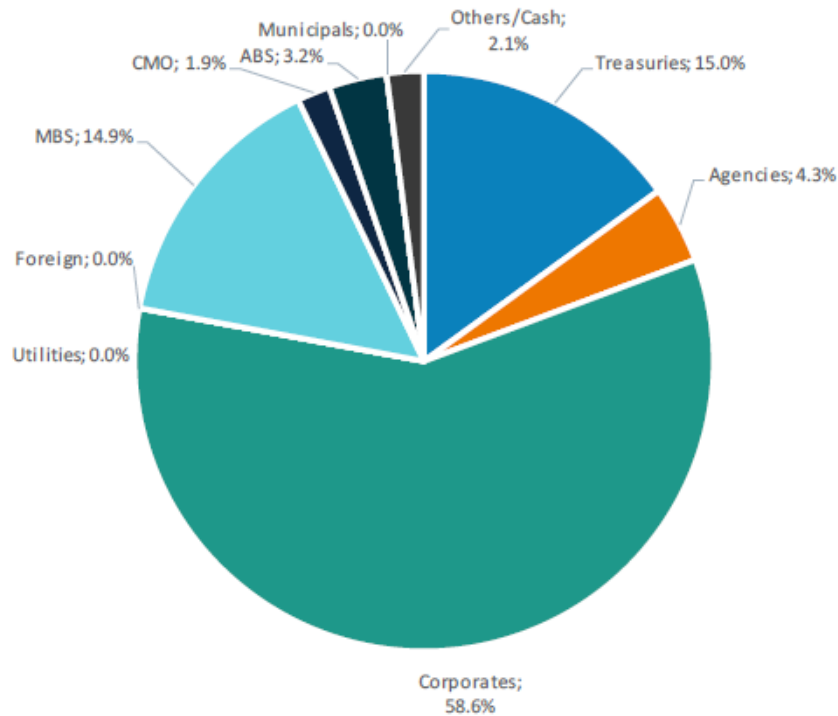
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	5.0%	3.5%	1.4	0.9	2.1%
Blended Fixed Income Index	3.2%	3.2%	1.0	--	0.0%
US Fixed Income	5.0%	3.0%	1.6	1.1	1.4%
Blended US Fixed Index	3.4%	3.2%	1.1	--	0.0%
FIAM Bond	4.0%	2.9%	1.3	1.1	0.8%
Barclays Aggregate	3.1%	2.7%	1.1	--	0.0%
Brigade Capital	6.6%	6.3%	1.0	0.3	4.4%
Barclays BA Intermediate HY	5.2%	5.1%	1.0	--	0.0%
Franklin Templeton	4.4%	8.5%	0.5	0.3	7.6%
Barclays Multi-verse	2.0%	4.2%	0.4	--	0.0%



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.8	17.2	2.8	9.5	10.4	7.5	9.1	9.1
25th Percentile	2.0	9.3	2.0	4.3	4.8	5.2	6.1	6.2
Median	1.3	6.8	1.3	3.5	3.7	4.0	4.7	5.4
75th Percentile	0.7	5.3	0.7	2.7	3.0	3.3	4.2	4.7
95th Percentile	0.1	3.7	0.1	1.3	1.6	2.4	3.2	3.6
# of Portfolios	346	345	346	335	321	282	231	193
● Fixed Income	2.4 (12)	7.2 (42)	2.4 (12)	3.0 (64)	3.9 (44)	5.0 (28)	5.9 (28)	5.2 (57)
▲ Blended Fixed Income Index	1.5 (40)	8.1 (34)	1.5 (40)	4.2 (29)	3.9 (42)	3.2 (79)	4.2 (73)	4.9 (68)



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.9	17.5	2.9	9.5	11.0	7.8	9.1	8.5
25th Percentile	1.9	10.3	1.9	5.4	6.3	6.0	6.6	6.1
Median	1.2	6.6	1.2	3.8	4.1	4.2	5.1	5.2
75th Percentile	0.6	5.0	0.6	3.1	3.2	3.2	4.1	4.5
95th Percentile	0.1	3.7	0.1	2.1	2.3	2.0	2.9	3.6
# of Portfolios	448	448	448	442	399	343	284	205
● US Fixed Income	2.9 (5)	8.4 (31)	2.9 (5)	4.1 (40)	4.5 (41)	5.0 (34)	6.1 (32)	5.3 (49)
▲ Blended US Fixed Index	1.6 (34)	7.7 (35)	1.6 (34)	4.4 (33)	4.2 (48)	3.4 (70)	4.5 (68)	5.1 (56)



Sector*	Account Weight	BC Aggregate Weight	Difference
Treasuries	15.0%	36.2%	-21.1%
Agencies	4.3%	8.1%	-3.8%
Corporates	58.6%	25.9%	32.7%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	14.9%	27.8%	-12.8%
CMO	1.9%	0.0%	1.9%
ABS	3.2%	2.1%	1.1%
Municipals	0.0%	0.0%	0.0%
Others/Cash	2.1%	0.0%	2.1%
<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: September 30, 2016

Portfolio Characteristics*		Portfolio
Total Number of Securities		
Total Market Value	\$	356,893,511
Current Coupon		2.48
Yield to Maturity		2.76
Average Life		7.30
Duration		3.93
Quality		AA-

BC Aggregate
--------------

			3.20
			1.96
			7.77
			5.60
			AA

Yield to Maturity		% Held
Range		
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

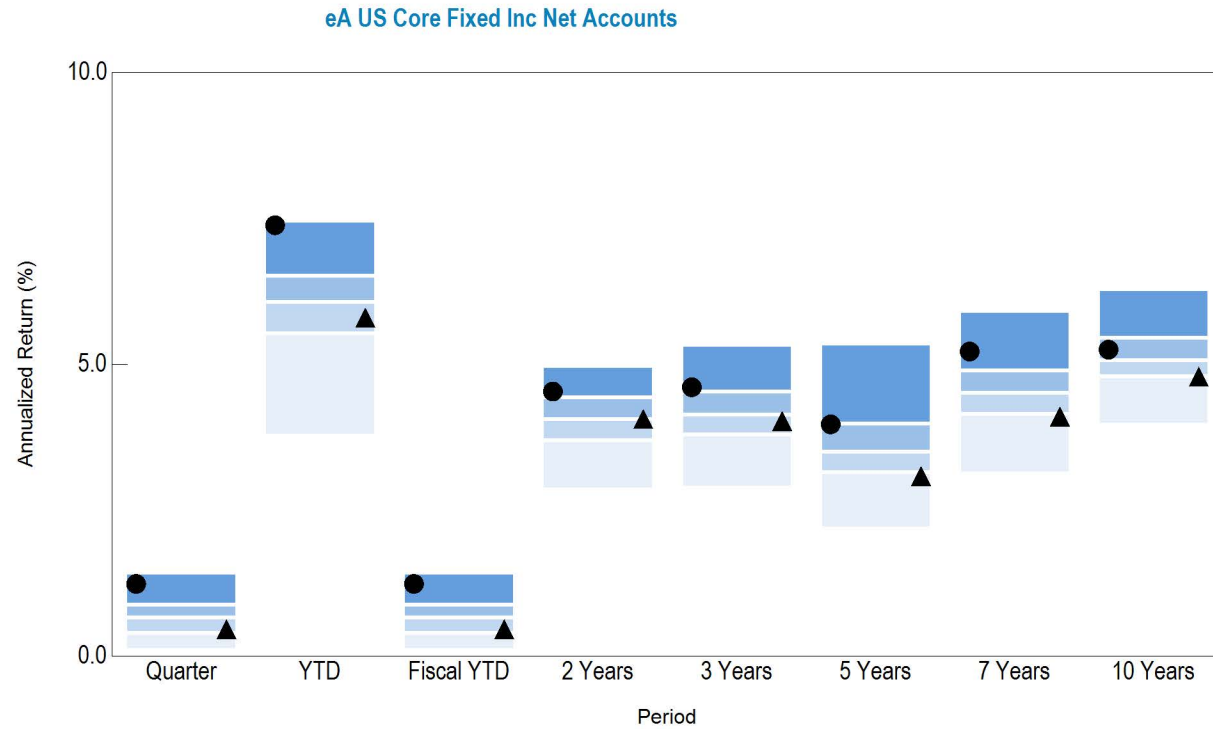
Average Life		% Held
Range		
0.0 - 1.0		2.2
1.0 - 3.0		7.4
3.0 - 5.0		57.6
5.0 - 10.0		20.6
10.0 - 20.0		2.7
20.0+		9.5
Unclassified		0.0

Duration		% Held
Range		
0.0 - 1.0		31.3
1.0 - 3.0		15.0
3.0 - 5.0		24.0
5.0 - 7.0		11.7
7.0 - 10.0		6.5
10.0+		11.4
Unclassified		0.0

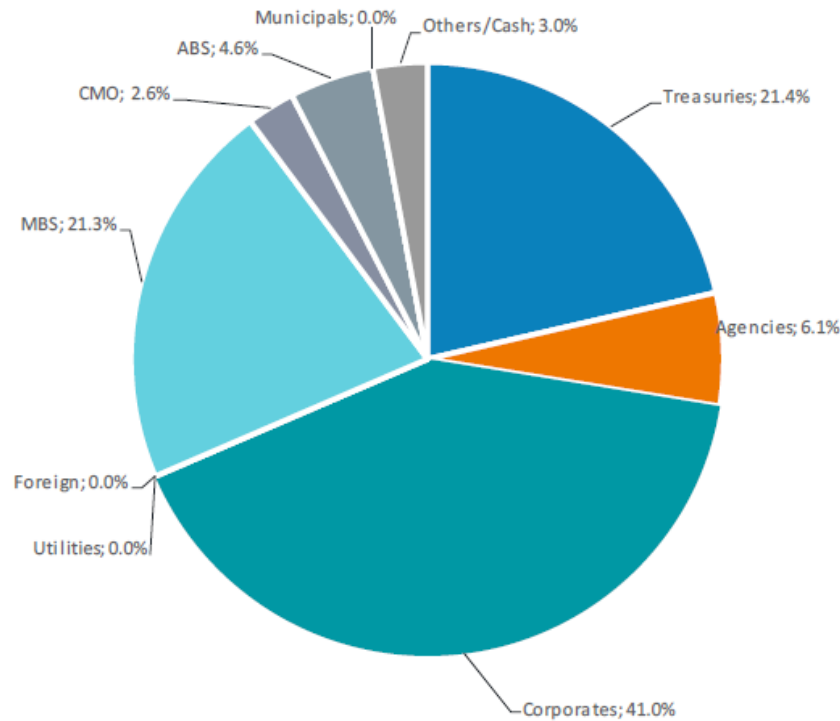
Quality		% Held
Range		
Govt (10)		31.9
Aaa (10)		1.5
Aa (9)		1.7
A (8)		13.4
Baa (7)		47.2
Below Baa (6-1)		2.2
Other		2.2

Coupon		% Held
Range		
0.0 - 5.0		82.3
5.0 - 7.0		12.8
7.0 - 9.0		2.3
9.0 - 11.0		0.1
11.0 - 13.0		0.0
13.0+		2.6
Unclassified		0.0

\* Characteristics excludes Opportunistic Credit Managers.



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.4	7.5	1.4	5.0	5.3	5.3	5.9	6.3
25th Percentile	0.9	6.5	0.9	4.4	4.5	4.0	4.9	5.5
Median	0.7	6.1	0.7	4.1	4.1	3.5	4.5	5.1
75th Percentile	0.4	5.5	0.4	3.7	3.8	3.2	4.2	4.8
95th Percentile	0.1	3.8	0.1	2.9	2.9	2.2	3.1	4.0
# of Portfolios	113	112	113	111	111	103	95	83
● FIAM Bond	1.2 (10)	7.4 (6)	1.2 (10)	4.5 (20)	4.6 (21)	4.0 (26)	5.2 (18)	5.2 (40)
▲ Barclays Aggregate	0.5 (72)	5.8 (64)	0.5 (72)	4.1 (50)	4.0 (61)	3.1 (79)	4.1 (79)	4.8 (78)



Sector	Account Weight	BC Aggregate Weight	Difference
Treasuries	21.4%	36.2%	-14.8%
Agencies	6.1%	8.1%	-1.9%
Corporates	41.0%	25.9%	15.1%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	21.3%	27.8%	-6.5%
CMO	2.6%	0.0%	2.6%
ABS	4.6%	2.1%	2.5%
Municipals	0.0%	0.0%	0.0%
Others/Cash	3.0%	0.0%	3.0%
<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: September 30, 2016

Portfolio Characteristics		
		Portfolio
Total Number of Securities		933
Total Market Value	\$	250,365,014
Current Coupon		3.54
Yield to Maturity		2.60
Average Life		8.55
Duration		5.81
Quality		A+

BC Aggregate	
	3.20
	1.96
	7.77
	5.60
	AA

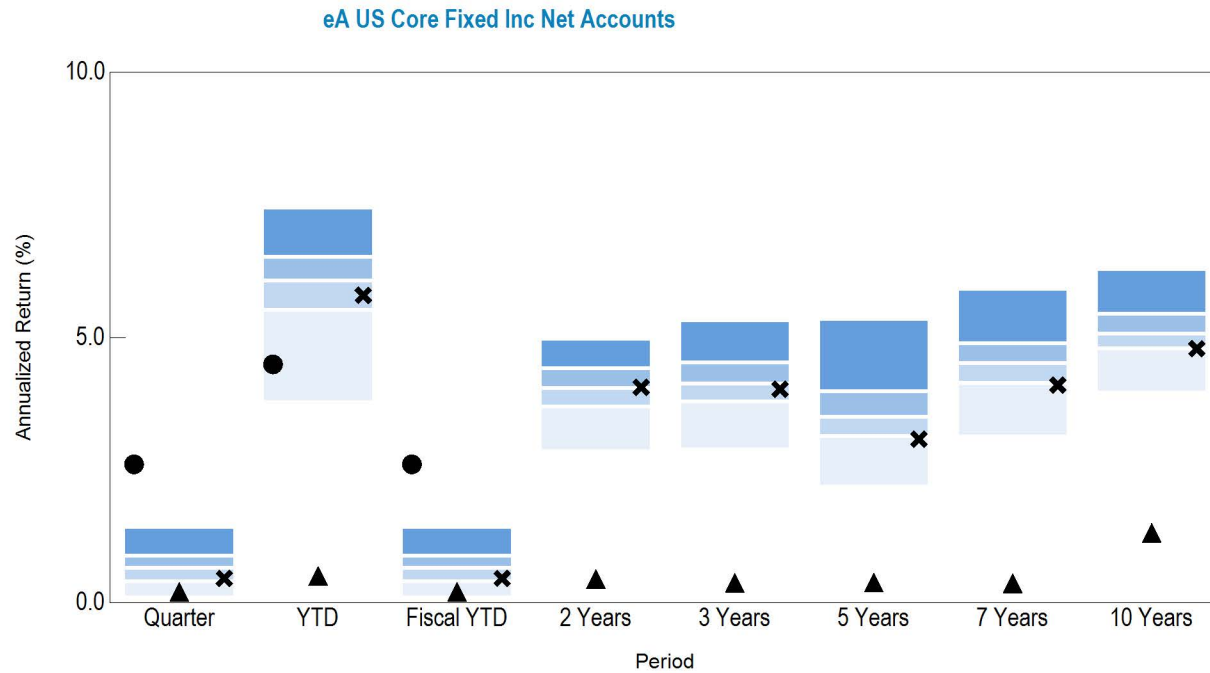
Yield to Maturity	
Range	% Held
0.0 - 5.0	91.4
5.0 - 7.0	5.4
7.0 - 9.0	0.4
9.0 - 11.0	0.2
11.0 - 13.0	0.1
13.0+	2.5
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 1.0	3.1
1.0 - 3.0	10.5
3.0 - 5.0	39.6
5.0 - 10.0	29.4
10.0 - 20.0	3.8
20.0+	13.6
Unclassified	0.0

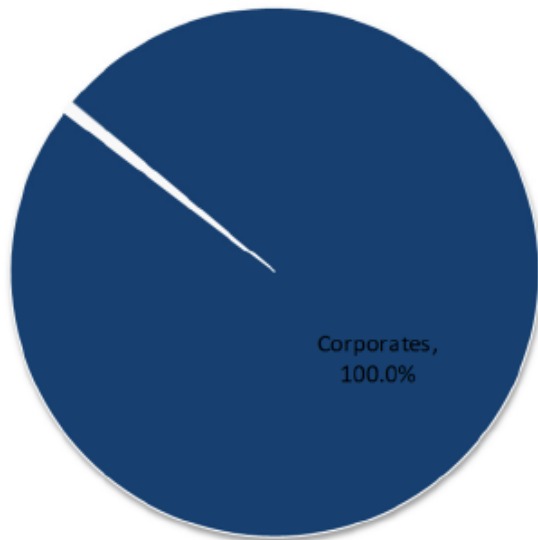
Duration	
Range	% Held
0.0 - 1.0	2.1
1.0 - 3.0	21.4
3.0 - 5.0	34.2
5.0 - 7.0	16.7
7.0 - 10.0	9.3
10.0+	16.3
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	45.4
Aaa (10)	2.1
Aa (9)	2.5
A (8)	19.1
Baa (7)	24.7
Below Baa (6-1)	3.1
Other	3.2

Coupon	
Range	% Held
0.0 - 5.0	74.8
5.0 - 7.0	18.2
7.0 - 9.0	3.3
9.0 - 11.0	0.1
11.0 - 13.0	0.0
13.0+	3.7
Unclassified	0.0



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.4	7.5	1.4	5.0	5.3	5.3	5.9	6.3
25th Percentile	0.9	6.5	0.9	4.4	4.5	4.0	4.9	5.5
Median	0.7	6.1	0.7	4.1	4.1	3.5	4.5	5.1
75th Percentile	0.4	5.5	0.4	3.7	3.8	3.2	4.2	4.8
95th Percentile	0.1	3.8	0.1	2.9	2.9	2.2	3.1	4.0
# of Portfolios	113	112	113	111	111	103	95	83
● Western TRU	2.6 (2)	4.5 (92)	2.6 (2)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ 3-Month Libor Total Return USD	0.2 (90)	0.5 (99)	0.2 (90)	0.4 (99)	0.4 (99)	0.4 (99)	0.4 (99)	1.3 (99)
✕ Barclays Aggregate	0.5 (72)	5.8 (64)	0.5 (72)	4.1 (50)	4.0 (61)	3.1 (79)	4.1 (79)	4.8 (78)



Sector	Account Weight	BC Aggregate Weight	Difference
Treasuries	0.0%	36.2%	-36.2%
Agencies	0.0%	8.1%	-8.1%
Corporates	100.0%	25.9%	74.1%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	0.0%	27.8%	-27.8%
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	BC Aggregate
Total Number of Securities			2	
Total Market Value	\$		106,528,498	
Current Coupon			0.00	3.20
Yield to Maturity			3.14	1.96
Average Life			4.37	7.77
Duration			-0.49	5.60
Quality			A-	AA

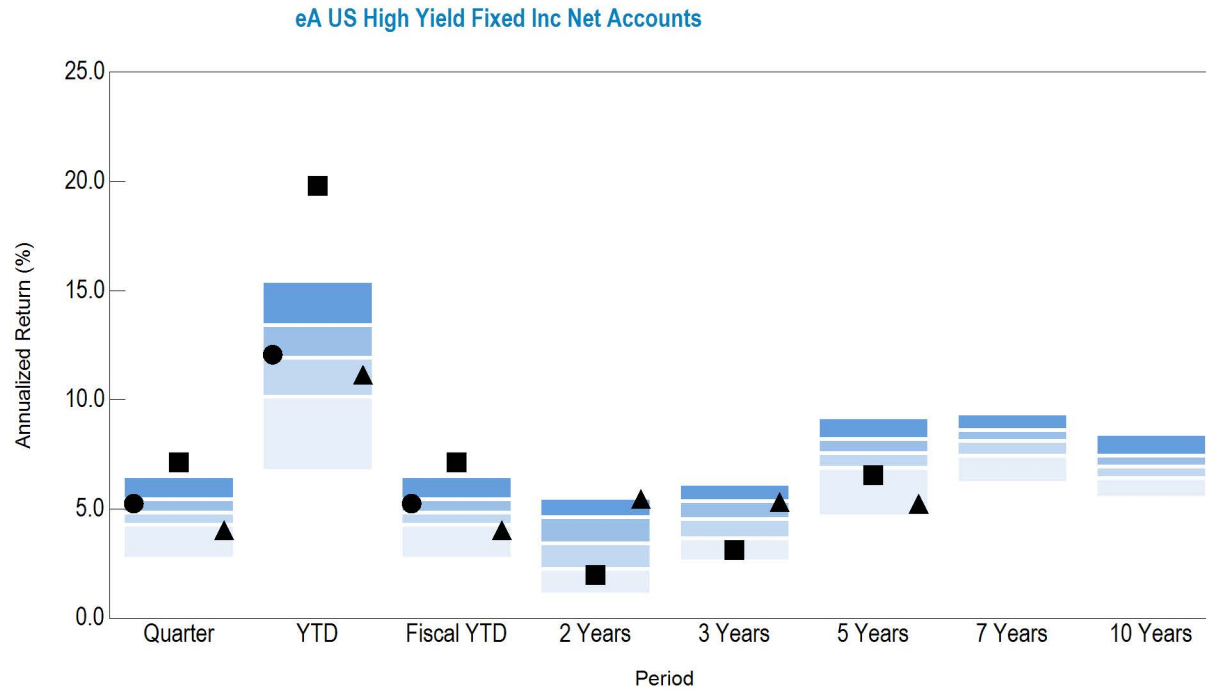
Yield to Maturity		
Range		% Held
0.0 - 5.0		n/a
5.0 - 7.0		n/a
7.0 - 9.0		n/a
9.0 - 11.0		n/a
11.0 - 13.0		n/a
13.0+		n/a
Unclassified		n/a

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

Duration		
Range		% Held
< 1.0		100.0
1.0 - 3.0		0.0
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

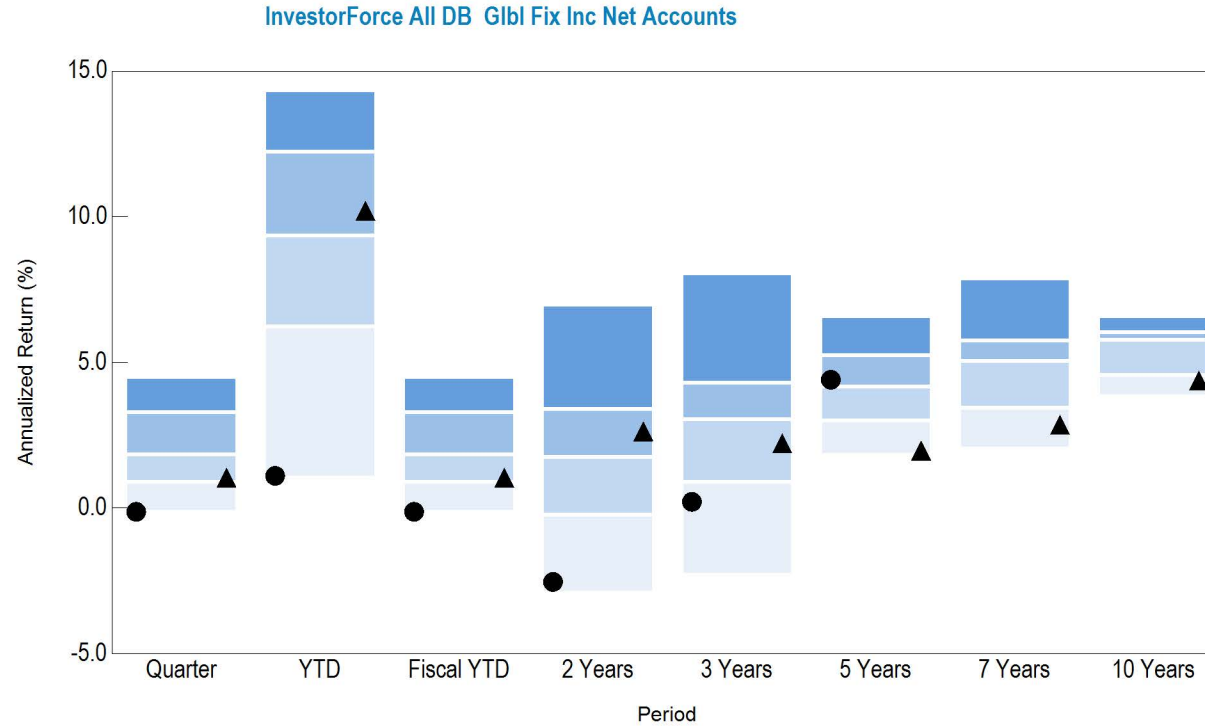
Quality		
Range		% Held
Govt (10)		0.0
Aaa (10)		0.0
Aa (9)		0.0
A (8)		0.0
Baa (7)		100.0
Below Baa (6-1)		0.0
Other		0.0

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

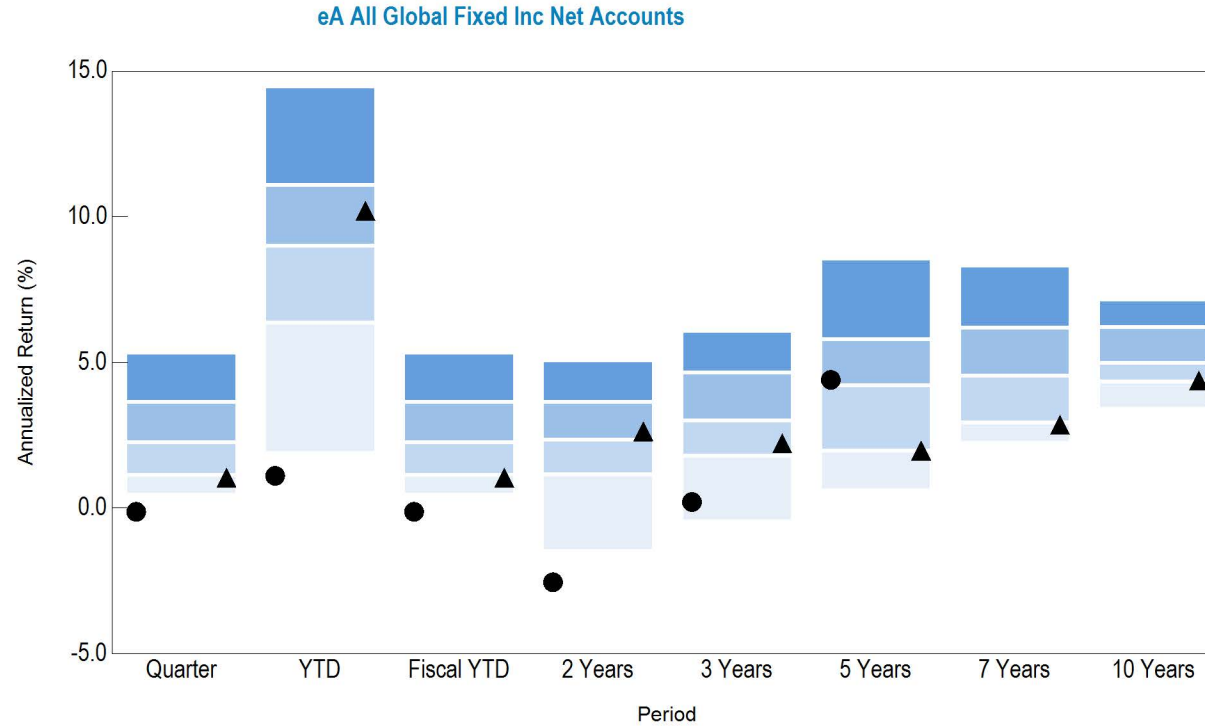


	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	6.5	15.4	6.5	5.5	6.1	9.2	9.4	8.4
25th Percentile	5.5	13.4	5.5	4.6	5.4	8.2	8.6	7.5
Median	4.8	11.9	4.8	3.4	4.6	7.6	8.1	7.0
75th Percentile	4.3	10.1	4.3	2.3	3.7	6.9	7.5	6.4
95th Percentile	2.7	6.8	2.7	1.1	2.6	4.7	6.2	5.5
# of Portfolios	87	87	87	82	80	74	63	52
● Beach Point Select	5.2 (32)	12.1 (50)	5.2 (32)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
■ Brigade Capital	7.1 (1)	19.8 (1)	7.1 (1)	2.0 (84)	3.1 (86)	6.6 (78)	-- (--)	-- (--)
▲ Barclays BA Intermediate HY	4.0 (80)	11.1 (64)	4.0 (80)	5.5 (6)	5.3 (27)	5.2 (94)	-- (--)	-- (--)

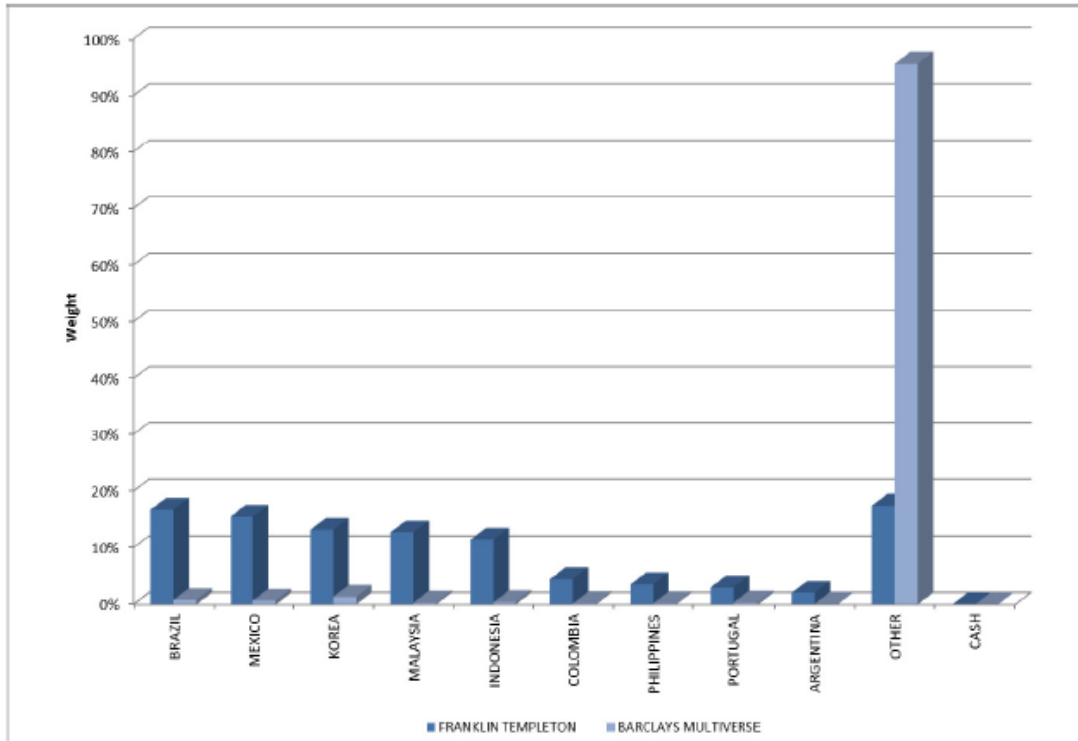




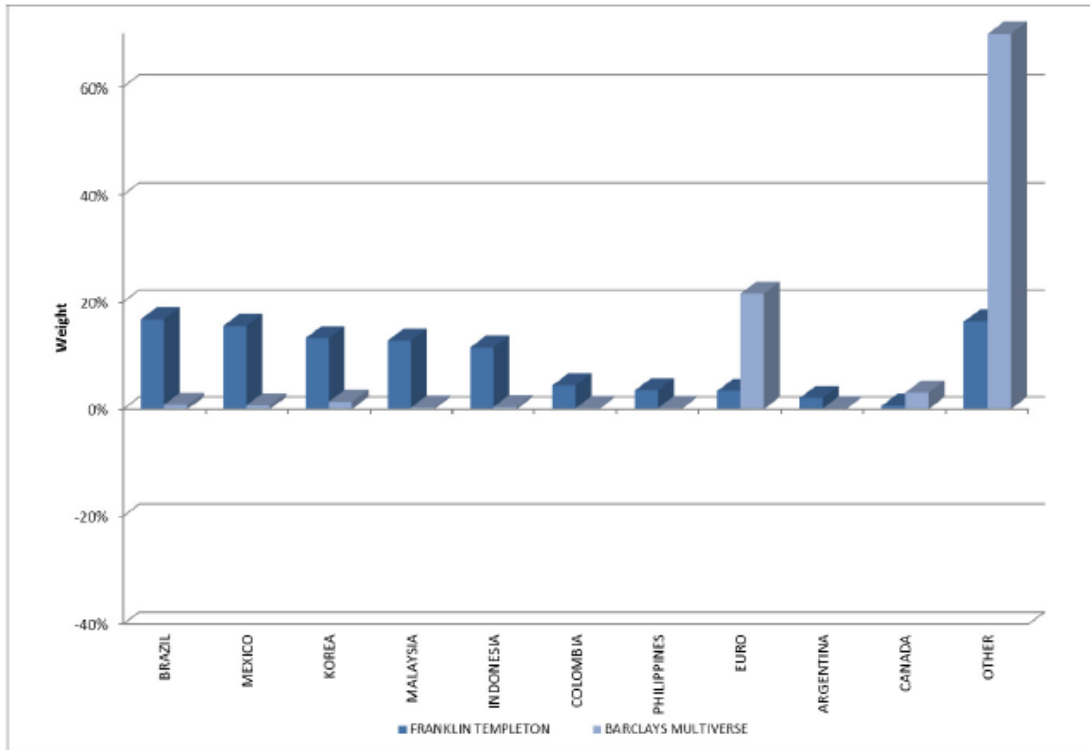
	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.5	14.3	4.5	7.0	8.0	6.6	7.9	6.6
25th Percentile	3.3	12.2	3.3	3.4	4.3	5.3	5.8	6.1
Median	1.9	9.4	1.9	1.8	3.1	4.2	5.1	5.8
75th Percentile	0.9	6.3	0.9	-0.2	0.9	3.0	3.5	4.6
95th Percentile	-0.1	1.1	-0.1	-2.9	-2.3	1.8	2.1	3.9
# of Portfolios	40	40	40	38	35	27	20	14
● Global Fixed Income	-0.1 (95)	1.1 (95)	-0.1 (95)	-2.5 (95)	0.2 (86)	4.4 (43)	-- (--)	-- (--)
▲ Barclays Multi-verse	1.0 (72)	10.2 (42)	1.0 (72)	2.6 (41)	2.2 (60)	2.0 (89)	2.9 (91)	4.4 (78)



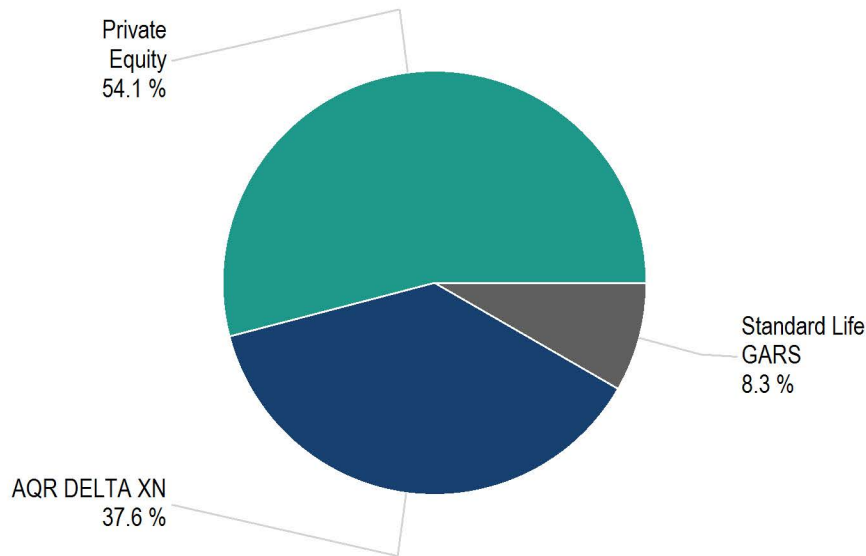
	Return (Rank)							
5th Percentile	5.3	14.5	5.3	5.1	6.1	8.6	8.3	7.1
25th Percentile	3.7	11.1	3.7	3.7	4.7	5.8	6.2	6.2
Median	2.3	9.0	2.3	2.4	3.0	4.2	4.6	5.0
75th Percentile	1.1	6.4	1.1	1.2	1.8	2.0	2.9	4.4
95th Percentile	0.5	1.9	0.5	-1.5	-0.4	0.6	2.2	3.4
# of Portfolios	174	173	174	158	153	125	97	73
● Franklin Templeton	-0.1 (98)	1.1 (97)	-0.1 (98)	-2.5 (97)	0.2 (92)	4.4 (48)	-- (--)	-- (--)
▲ Barclays Multi-verse	1.0 (79)	10.2 (34)	1.0 (79)	2.6 (44)	2.2 (66)	2.0 (77)	2.9 (78)	4.4 (73)



COUNTRY	MARKET VALUE	FRANKLIN TEMPLETON	BARCLAYS MULTIVERSE	DIFF
BRAZIL	\$ 16,699	16.7%	0.8%	+15.9%
MEXICO	\$ 15,444	15.5%	0.7%	+14.8%
KOREA	\$ 13,153	13.2%	1.3%	+11.8%
MALAYSIA	\$ 12,693	12.7%	0.3%	+12.4%
INDONESIA	\$ 11,410	11.4%	0.4%	+11.0%
COLOMBIA	\$ 4,478	4.5%	0.2%	+4.3%
PHILIPPINES	\$ 3,521	3.5%	0.2%	+3.3%
PORTUGAL	\$ 3,004	3.0%	0.3%	+2.7%
ARGENTINA	\$ 2,068	2.1%	0.1%	+2.0%
OTHER	\$ 17,407	17.4%	95.7%	-78.2%
CASH	\$ -	0.0%	0.0%	0.0%
	\$ 99,876	100.0%	100.0%	0.0%



CURRENCY	MARKET VALUE	FRANKLIN TEMPLETON	BARCLAYS MULTIVERSE	DIFF
BRAZIL	\$ 16,699	16.7%	0.8%	+15.9%
MEXICO	\$ 15,444	15.5%	0.7%	+14.8%
KOREA	\$ 13,153	13.2%	1.3%	+11.8%
MALAYSIA	\$ 12,693	12.7%	0.3%	+12.4%
INDONESIA	\$ 11,410	11.4%	0.4%	+11.0%
COLOMBIA	\$ 4,478	4.5%	0.2%	+4.3%
PHILIPPINES	\$ 3,521	3.5%	0.2%	+3.3%
EURO	\$ 3,428	3.4%	21.6%	-18.1%
ARGENTINA	\$ 2,068	2.1%	0.1%	+2.0%
CANADA	\$ 667	0.7%	3.1%	-2.4%
OTHER	\$ 16,317	16.3%	71.3%	-55.0%
	\$ 99,876	100.0%	100.0%	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR DELTA XN	\$153,000,131	37.6%	0.2%
Private Equity	\$219,858,478	54.1%	2.8%
Standard Life GARS	\$33,577,294	8.3%	-0.1%
Actual vs. Policy Weight Difference			-0.2%
<b>Total</b>	<b>\$406,435,903</b>	<b>100.0%</b>	<b>2.7%</b>

**Statistics Summary**

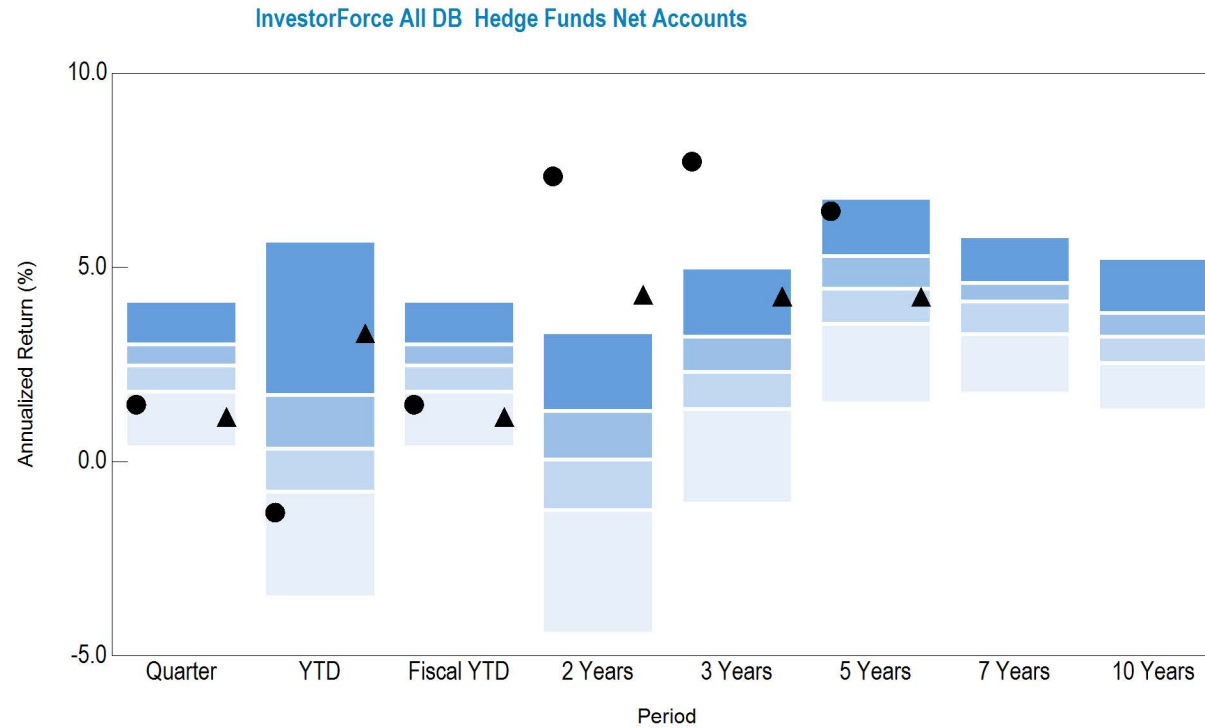
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	7.0%	5.1%	1.4	0.5	6.5%
Alternatives Allocation Index	4.1%	6.1%	0.7	--	0.0%
Private Equity	19.0%	10.7%	1.8	0.4	14.3%
Russell 3000 +3%	13.4%	10.8%	1.2	--	0.0%
Hedge Fund/Absolute Return	7.7%	5.1%	1.5	0.7	5.1%
Libor 1 month +4%	4.2%	0.1%	41.5	--	0.0%
AQR DELTA XN	8.1%	5.2%	1.5	0.7	5.2%
Libor 1 month +4%	4.2%	0.1%	41.5	--	0.0%

**Statistics Summary**

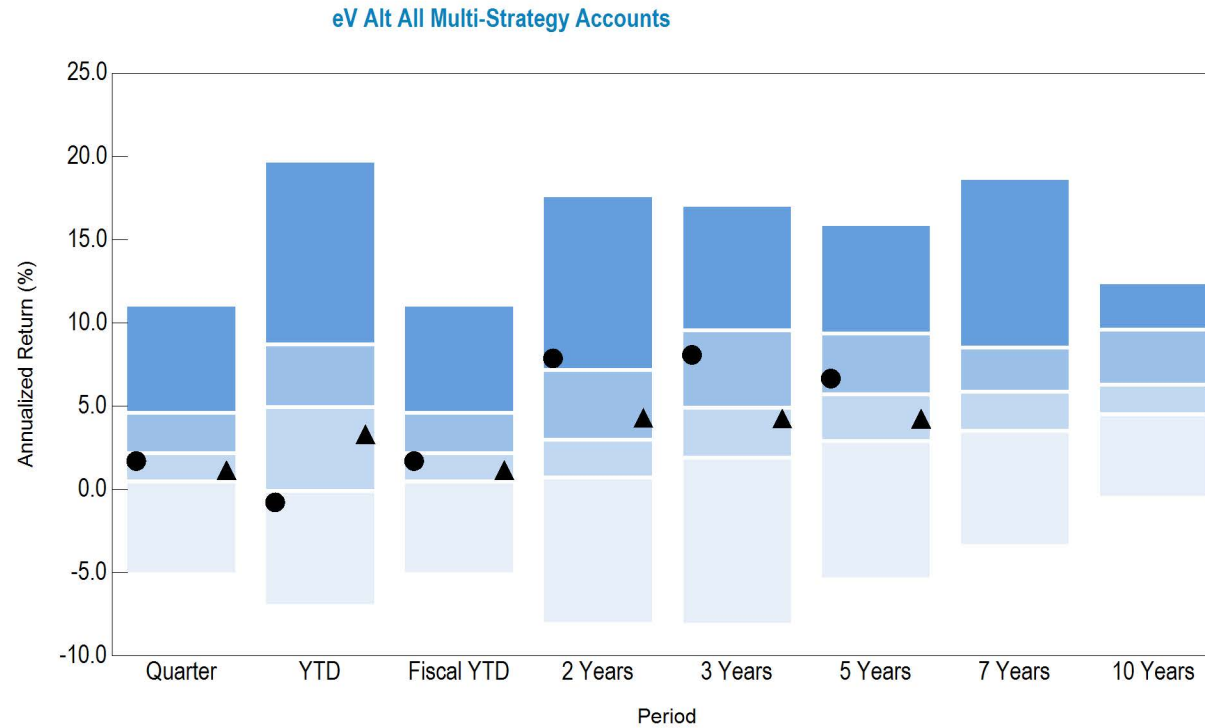
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	6.6%	5.8%	1.1	0.0	5.8%
Alternatives Allocation Index	6.4%	6.3%	1.0	--	0.0%
Private Equity	13.2%	10.5%	1.3	-0.4	15.7%
Russell 3000 +3%	19.4%	11.2%	1.7	--	0.0%
Hedge Fund/Absolute Return	6.4%	5.2%	1.2	0.4	5.2%
Libor 1 month +4%	4.2%	0.1%	44.4	--	0.0%
AQR DELTA XN	6.7%	5.3%	1.2	0.5	5.3%
Libor 1 month +4%	4.2%	0.1%	44.4	--	0.0%

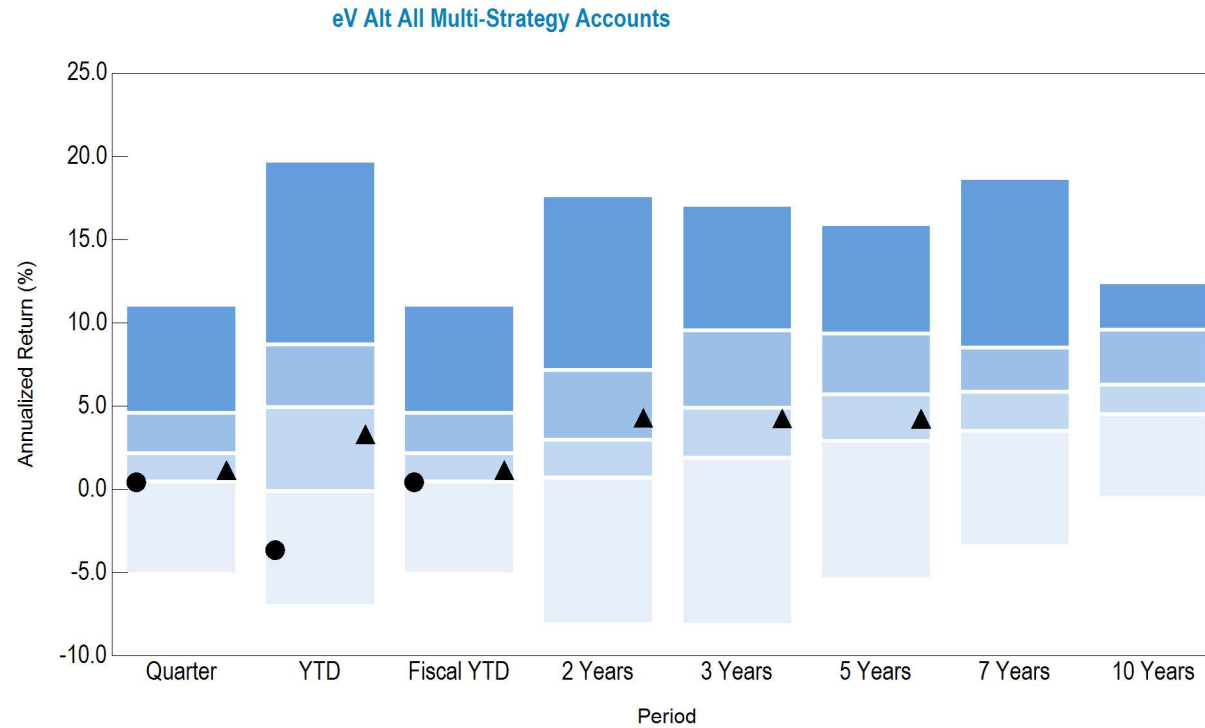


	Return (Rank)							
5th Percentile	4.1	5.7	4.1	3.3	5.0	6.8	5.8	5.2
25th Percentile	3.0	1.7	3.0	1.3	3.2	5.3	4.6	3.8
Median	2.5	0.3	2.5	0.1	2.3	4.5	4.1	3.2
75th Percentile	1.8	-0.8	1.8	-1.2	1.4	3.6	3.3	2.5
95th Percentile	0.4	-3.5	0.4	-4.4	-1.1	1.5	1.8	1.3
# of Portfolios	246	245	246	238	229	196	139	72
● Hedge Fund/Absolute Return	1.5 (86)	-1.3 (83)	1.5 (86)	7.3 (1)	7.7 (1)	6.4 (8)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.1 (89)	3.3 (13)	1.1 (89)	4.3 (5)	4.2 (12)	4.2 (55)	-- (--)	-- (--)

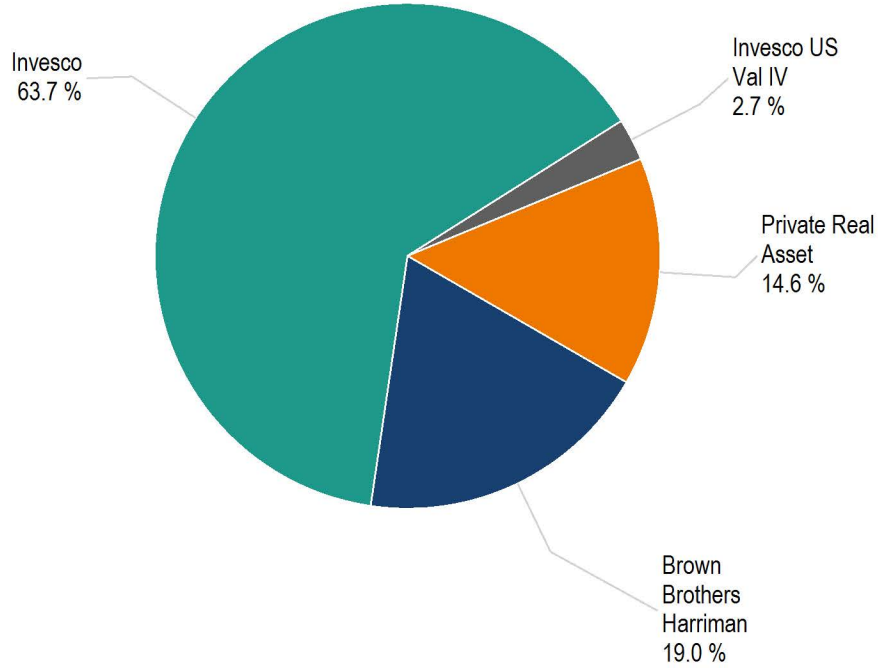




	Return (Rank)							
5th Percentile	11.1	19.7	11.1	17.6	17.1	15.9	18.7	12.4
25th Percentile	4.6	8.7	4.6	7.2	9.6	9.4	8.5	9.6
Median	2.2	4.9	2.2	3.0	4.9	5.7	5.9	6.3
75th Percentile	0.5	-0.1	0.5	0.7	1.9	2.9	3.5	4.5
95th Percentile	-5.1	-7.0	-5.1	-8.1	-8.1	-5.4	-3.4	-0.5
# of Portfolios	220	217	220	196	173	134	105	68
● AQR DELTA XN	1.7 (59)	-0.8 (78)	1.7 (59)	7.9 (24)	8.1 (31)	6.7 (44)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.1 (68)	3.3 (55)	1.1 (68)	4.3 (44)	4.2 (56)	4.2 (62)	-- (--)	-- (--)



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	11.1	19.7	11.1	17.6	17.1	15.9	18.7	12.4
25th Percentile	4.6	8.7	4.6	7.2	9.6	9.4	8.5	9.6
Median	2.2	4.9	2.2	3.0	4.9	5.7	5.9	6.3
75th Percentile	0.5	-0.1	0.5	0.7	1.9	2.9	3.5	4.5
95th Percentile	-5.1	-7.0	-5.1	-8.1	-8.1	-5.4	-3.4	-0.5
# of Portfolios	220	217	220	196	173	134	105	68
● Standard Life GARS	0.4 (77)	-3.7 (90)	0.4 (77)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.1 (68)	3.3 (55)	1.1 (68)	4.3 (44)	4.2 (56)	4.2 (62)	-- (--)	-- (--)



	Actual \$	Actual %	Manager Contribution to Excess Return %
Invesco	\$238,253,364	63.7%	-0.3%
Invesco US Val IV	\$9,997,857	2.7%	0.0%
Brown Brother Harriman	\$70,921,074	19.0%	0.0%
Private Real Asset	\$54,691,244	14.6%	-0.1%
Actual vs. Policy Weight Difference			1.2%
<b>Total</b>	<b>\$373,863,539</b>	<b>100.0%</b>	<b>0.8%</b>

**Statistics Summary**

**3 Years**

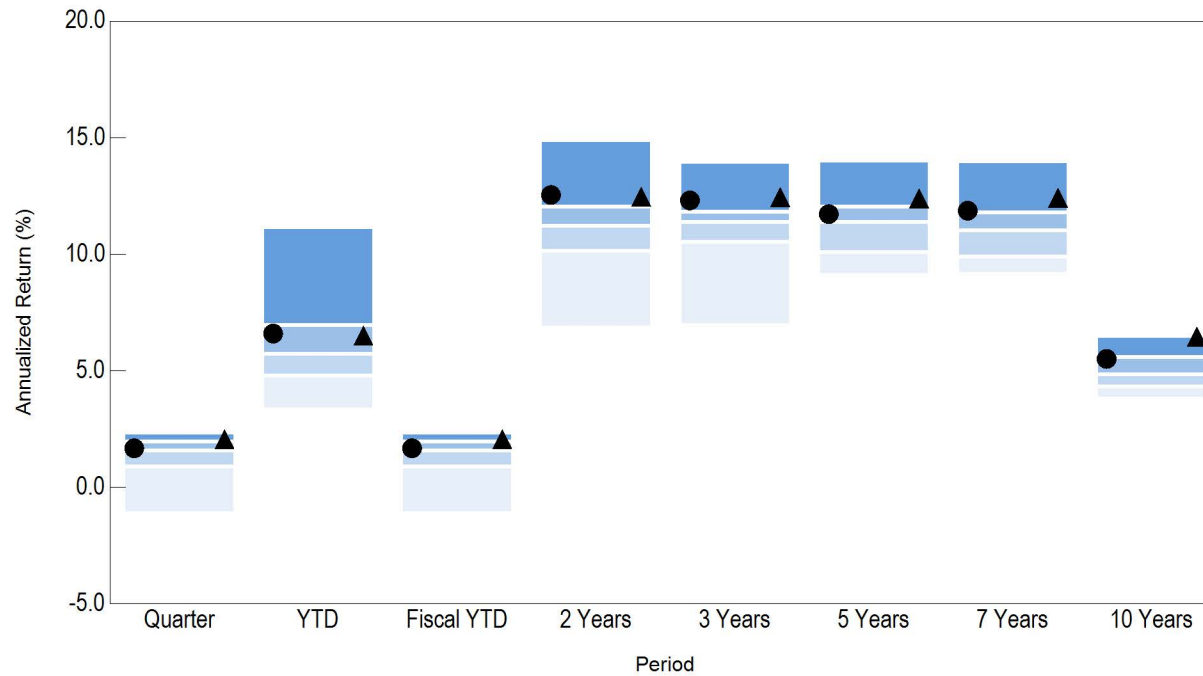
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Real Estate	12.31%	5.30%	2.30	-0.09	1.49%
NCREIF ODCE	12.45%	5.07%	2.44	--	0.00%
Invesco	12.17%	5.26%	2.29	-0.18	1.56%
NCREIF ODCE	12.45%	5.07%	2.44	--	0.00%
TIPS	1.23%	3.14%	0.36	-0.85	1.38%
Barclays US TIPS	2.40%	4.13%	0.56	--	0.00%
Brown Brothers Harriman	1.23%	3.14%	0.36	-0.85	1.38%
Barclays US TIPS	2.40%	4.13%	0.56	--	0.00%

Statistics Summary

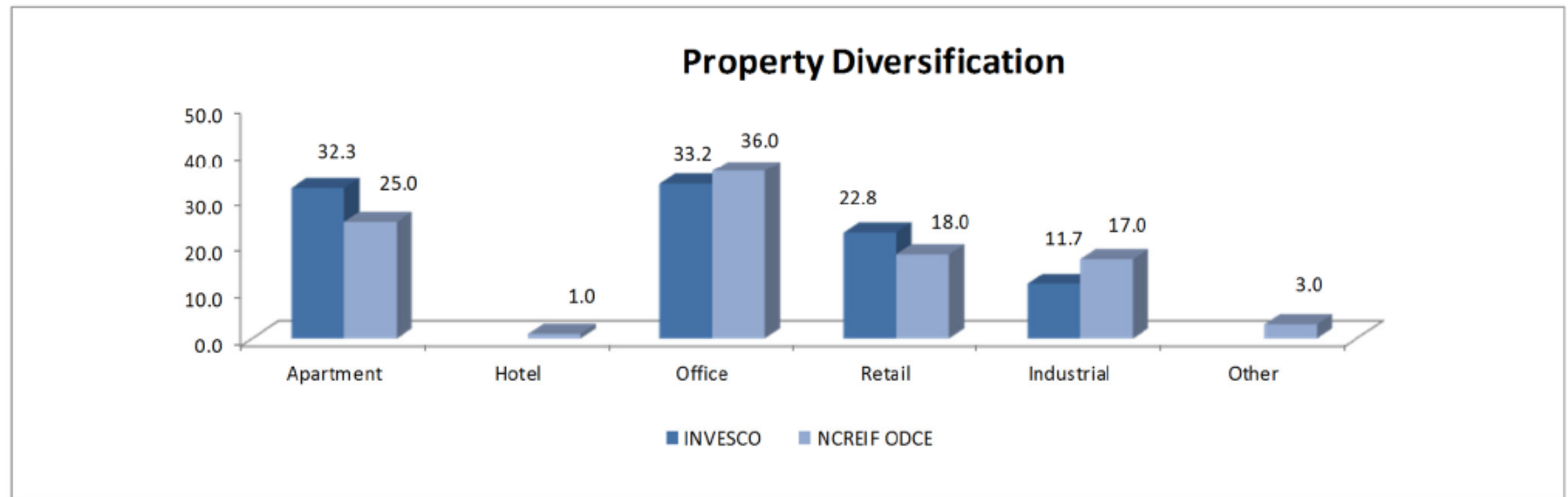
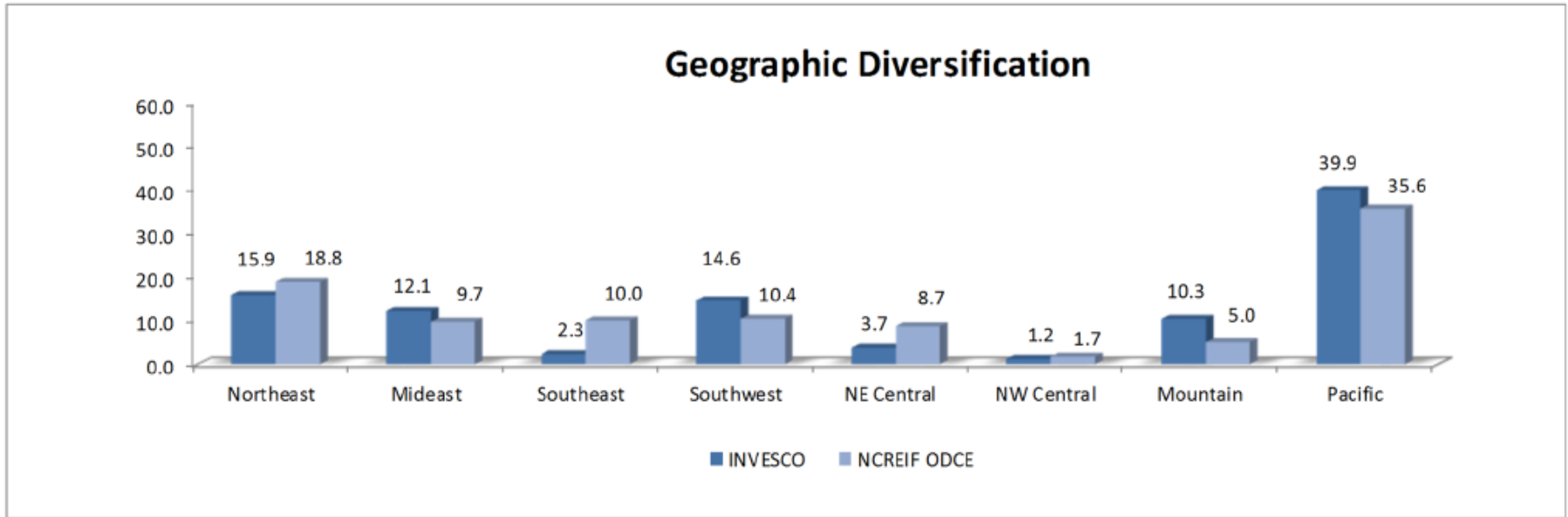
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	11.72%	5.05%	2.30	-0.45	26
NCREIF ODCE	12.40%	5.01%	2.46	--	1
Invesco	11.63%	5.03%	2.30	-0.49	--
NCREIF ODCE	12.40%	5.01%	2.46	--	--
TIPS	1.29%	4.35%	0.28	-0.56	--
Barclays US TIPS	1.92%	4.74%	0.39	--	--
Brown Brothers Harriman	1.29%	4.35%	0.28	-0.56	53
Barclays US TIPS	1.92%	4.74%	0.39	--	1

InvestorForce All DB Real Estate Pub Net Accounts



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.3	11.2	2.3	14.9	13.9	14.0	14.0	6.5
25th Percentile	2.0	7.0	2.0	12.1	11.8	12.1	11.8	5.6
Median	1.6	5.7	1.6	11.2	11.4	11.4	11.0	4.8
75th Percentile	0.9	4.8	0.9	10.2	10.6	10.1	9.9	4.3
95th Percentile	-1.1	3.3	-1.1	6.9	7.0	9.1	9.2	3.8
# of Portfolios	92	92	92	89	86	72	66	34
● Real Estate	1.7 (47)	6.6 (30)	1.7 (47)	12.5 (18)	12.3 (15)	11.7 (35)	11.9 (20)	5.5 (27)
▲ NCREIF ODCE	2.1 (12)	6.5 (32)	2.1 (12)	12.5 (18)	12.4 (15)	12.4 (17)	12.4 (14)	6.5 (6)



INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: September 30, 2016

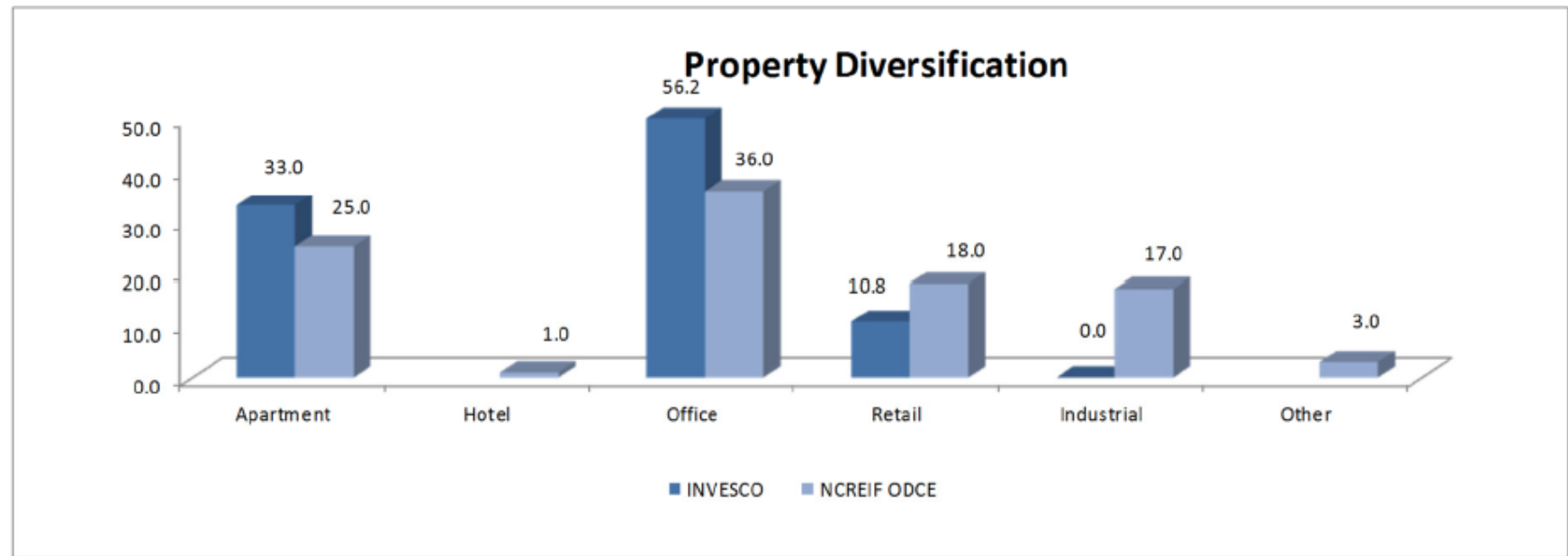
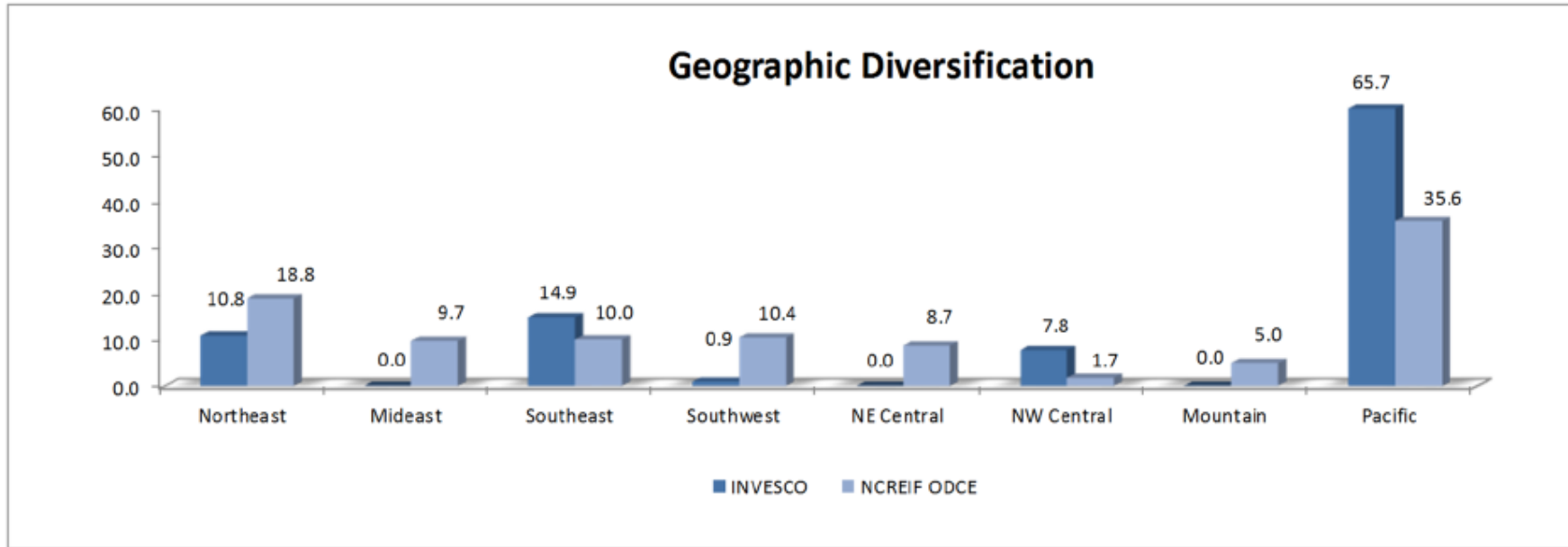
Property Name	MSA	Prior Quarter Carry Value	Current Quarter Carry Value	Net Market Value	Date Added to Fund	Last Valuation Date	SamCERA ownership as of 06/30/2016 2.94%
<b>APARTMENTS</b>							
Milestone Apt Portfolio	Various States - South	\$2,259,791	\$0	\$0	2Q06	Sold 3Q16	\$0
Stoneridge Apartments	Pleasanton, CA	\$227,400,000	\$228,000,000	\$228,000,000	4Q06	September-16	\$6,704,370
Instrata Pentagon City	Arlington, VA	\$151,000,000	\$148,000,000	\$87,937,766	3Q10	September-16	\$2,585,822
Ladd Tower	Portland, OR	\$135,000,000	\$135,000,000	\$77,718,649	4Q10	September-16	\$2,285,327
Legacy Fountain Plaza	San Jose, CA	\$144,957,952	\$151,956,119	\$151,956,119	1Q11	September-16	\$4,468,290
Instrata Gramercy (fka The Elektra)	New York, NY	\$173,100,000	\$173,000,000	\$99,935,452	1Q11	September-16	\$2,938,615
Instrata Brooklyn Heights (fka 75 Clinton Street)	Brooklyn, NY	\$70,800,000	\$70,800,000	\$70,800,000	1Q12	September-16	\$2,081,883
The Artisan Laguna Beach	Orange County, CA	\$158,000,000	\$159,000,000	\$97,009,737	3Q12	September-16	\$2,852,584
The GoodWynn	Atlanta, GA	\$100,000,000	\$100,000,000	\$63,000,000	4Q12	September-16	\$1,852,523
Instrata Hell's Kitchen	New York, NY	\$210,000,000	\$210,000,000	\$135,552,000	1Q13	September-16	\$3,985,925
Sunset Vine Tower	Los Angeles, CA	\$98,200,000	\$96,000,000	\$96,000,000	2Q13	September-16	\$2,822,893
The Ashton	Dallas, TX	\$118,000,000	\$119,000,000	\$61,415,334	4Q13	September-16	\$1,805,926
The Pointe at Westchester	West Chester, PA	\$67,600,000	\$62,700,000	\$62,700,000	4Q13	September-16	\$1,843,702
206 Bell	Seattle, WA	\$44,900,000	\$45,800,000	\$45,800,000	4Q13	September-16	\$1,346,755
Cadence Union Station	Denver, CO	\$88,000,000	\$86,700,000	\$49,313,375	1Q14	September-16	\$1,450,066
Joseph Arnold Lofts	Seattle, WA	\$72,000,000	\$70,100,000	\$35,614,500	2Q14	September-16	\$1,047,249
Verve	Denver, CO	\$108,000,000	\$113,000,000	\$113,000,000	3Q14	September-16	\$3,322,780
Broadstone Little Italy	San Diego CA	\$118,000,000	\$118,000,000	\$64,422,899	3Q14	September-16	\$1,894,364
33 Tehama	San Francisco, CA	\$106,251,501	\$154,801,246	\$151,417,265	3Q14	September-16	\$4,452,445
The Parker	Portland, OR	\$66,000,000	\$66,200,000	\$33,160,863	1Q15	September-16	\$975,100
Legacy West Apartments	Plano, TX	\$47,216,576	\$62,419,279	\$51,285,906	1Q15	September-16	\$1,508,069
Village at Park Place	Irvine, CA	\$70,733,481	\$89,020,025	\$80,475,429	2Q15	September-16	\$2,366,391
Wheaton 121	Wheaton, IL	\$92,700,000	\$93,100,000	\$93,100,000	2Q15	September-16	\$2,737,618
Jefferson Marketplace	Washington, DC	\$142,000,000	\$146,000,000	\$75,012,179	4Q15	September-16	\$2,205,743
Retreat at Park Meadows	Littleton, CO	\$126,000,000	\$127,000,000	\$127,000,000	4Q15	September-16	\$3,734,452
North Water	Chicago, IL	\$256,000,000	\$261,000,000	\$261,000,000	1Q16	September-16	\$7,674,740
2270 Broadway	Oakland, CA	\$18,938,467	\$18,940,464	\$18,940,464	1Q16	September-16	\$556,947
Runway at Playa Vista -Apartments	Playa Vista, CA	\$149,460,000	\$149,990,000	\$86,522,500	1Q16	September-16	\$2,544,206
Clayton Lane Apartments	Denver, CO	\$32,048,746	\$33,043,200	\$33,043,200	1Q16	September-16	\$971,640
Biscayne 27	Miami, FL	\$15,676,778	\$16,100,714	\$16,100,714	2Q16	September-16	\$473,444
Flats 8300	Washington DC	\$207,000,000	\$214,000,000	\$110,500,000	2Q16	September-16	\$3,249,267
		<b>\$3,417,243,292</b>	<b>\$3,518,671,047</b>	<b>\$2,677,734,351</b>			<b>\$78,739,133</b>
<b>INDUSTRIAL</b>							
Arjons Industrial Park	San Diego CA	\$39,500,000	\$39,500,000	\$39,500,000	2Q04	September-16	\$1,161,503
Gateway Business Park	Dallas TX	\$13,100,000	\$13,100,000	\$13,100,000	2Q04	September-16	\$385,207
Hayward Industrial	Oakland CA	\$151,700,000	\$149,300,000	\$149,300,000	3Q04-3Q07	September-16	\$4,390,186
Lackman Park	Kansas City MO-KS	\$24,300,000	\$24,700,000	\$24,700,000	2Q04	September-16	\$726,307
Crossroads Industrial	Kansas City MO-KS	\$7,900,000	\$7,900,000	\$7,900,000	1Q06	September-16	\$232,301
Oakesdale Commerce Center	Seattle - Belle - Eve WA	\$49,900,000	\$49,900,000	\$49,900,000	1Q06	September-16	\$1,467,316
South Bay Industrial	Los Angeles, CA	\$45,100,000	\$45,800,000	\$45,800,000	4Q06	September-16	\$1,346,755
Steeplechase 95 International Business Park	Capitol Heights, MD	\$92,700,000	\$92,800,000	\$92,800,000	1Q11	September-16	\$2,728,796
Airport Trade Center Portfolio	Dallas, TX	\$119,900,000	\$120,700,000	\$120,700,000	1Q11	September-16	\$3,549,199
IE Logistics	San Bernardino, CA	\$129,600,000	\$129,900,000	\$129,900,000	3Q11	September-16	\$3,819,727
Railhead Drive Industrial	Dallas, TX	\$62,000,000	\$62,100,000	\$62,100,000	4Q11	September-16	\$1,826,059
Empire Gateway aka Chino South Logistics Center	Chino, CA	\$241,000,000	\$242,000,000	\$242,000,000	4Q12	September-16	\$7,116,042
SFO Logistics Center	San Francisco, CA	\$142,000,000	\$142,000,000	\$142,000,000	4Q13	September-16	\$4,175,529
Miami Industrial Portfolio	Various ,FL	\$91,208,994	\$92,388,194	\$56,701,347	1Q16	September-16	\$1,667,311
OMP Burbank	Los Angeles, CA	\$67,139,802	\$67,483,981	\$67,483,981	2Q16	September-16	\$1,984,375
		<b>\$1,277,048,796</b>	<b>\$1,279,572,175</b>	<b>\$1,243,885,328</b>			<b>\$36,576,613</b>



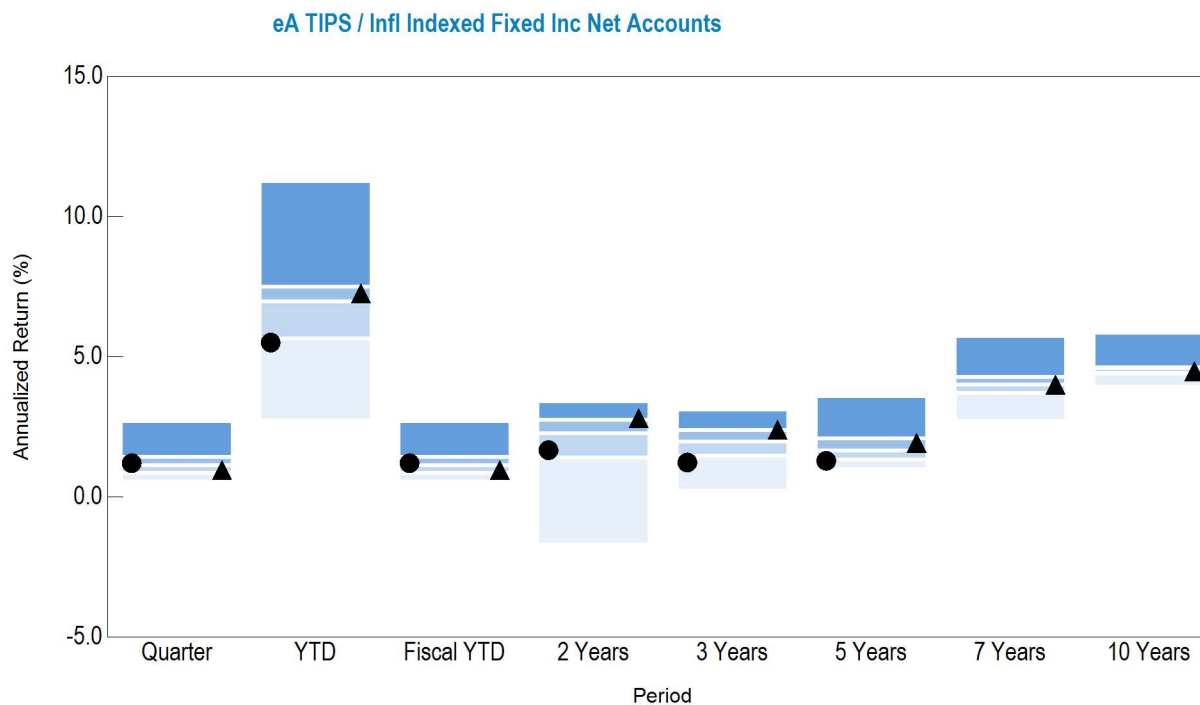
INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: September 30, 2016

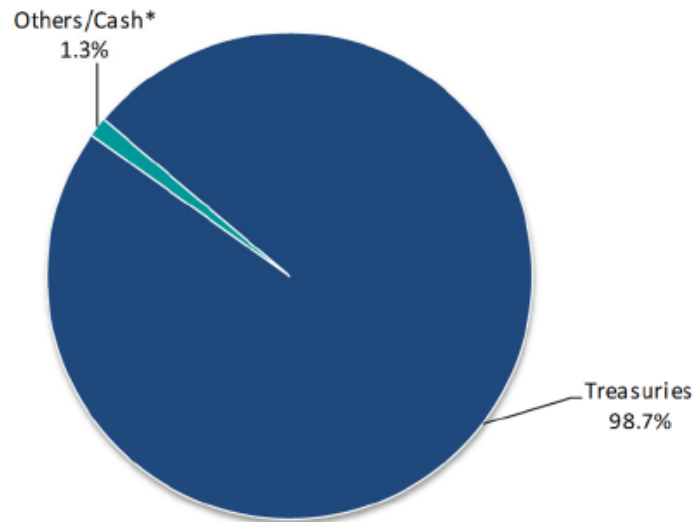
OFFICE							
55 Cambridge Parkway	Boston MA - NH	\$252,000,000	\$257,000,000	\$257,000,000	4Q06	September-16	\$7,557,119
The Executive Building	Washington, D.C.	\$231,000,000	\$228,000,000	\$228,000,000	2Q08	September-16	\$6,704,370
1111 Pennsylvania Avenue	Washington, D.C.	\$310,000,000	\$313,000,000	\$313,000,000	4Q10	September-16	\$9,203,806
1800 Larimer	Denver, CO	\$314,000,000	\$314,000,000	\$314,000,000	1Q11	September-16	\$9,233,212
Hillview Office	San Jose, CA	\$78,000,000	\$77,300,000	\$77,300,000	3Q12	September-16	\$2,273,017
Williams Tower	Houston, TX	\$585,000,000	\$586,000,000	\$400,122,479	1Q13	September-16	\$11,765,654
Westlake Park Place	Westlake Village, CA	\$111,000,000	\$111,000,000	\$111,000,000	4Q13	September-16	\$3,263,970
101 Second	San Francisco, CA	\$371,000,000	\$373,000,000	\$373,000,000	1Q14	September-16	\$10,968,114
Energy Crossing II	Houston, TX	\$113,000,000	\$108,000,000	\$108,000,000	2Q14	September-16	\$3,175,754
1776 Wilson Blvd.	Arlington, VA	\$95,000,000	\$93,900,000	\$93,900,000	3Q14	September-16	\$2,761,142
631 Howard	San Francisco, CA	\$90,500,000	\$93,600,000	\$93,600,000	3Q14	September-16	\$2,752,320
Barton Oaks	Austin, TX	\$84,500,000	\$86,500,000	\$86,500,000	3Q14	September-16	\$2,543,544
Hercules East and South Campus	Los Angeles, CA	\$149,711,997	\$156,943,473	\$156,943,473	3Q14	September-16	\$4,614,944
The Reserve	Playa Vista, CA	\$352,073,107	\$354,240,239	\$354,240,239	1Q15	September-16	\$10,416,481
Fort Point Portfolio	Boston, MA	\$210,580,355	\$215,519,271	\$126,647,580	2Q15	September-16	\$3,724,089
Legacy West Office	Plano, TX	\$33,962,800	\$46,622,955	\$29,459,005	1Q15	September-16	\$866,246
Summit IV	Aliso Viejo, CA	\$113,000,000	\$120,000,000	\$81,383,501	2Q15	September-16	\$2,393,093
1101 Westlake	Seattle, WA	\$85,300,000	\$85,300,000	\$85,300,000	3Q15	September-16	\$2,508,258
		<b>\$3,579,628,259</b>	<b>\$3,619,925,938</b>	<b>\$3,289,396,277</b>			<b>\$96,725,133</b>
RETAIL							
Broadway at Surf	Chicago IL	\$33,100,000	\$33,100,000	\$33,100,000	2Q04	September-16	\$973,310
Chandler Pavilion	Phoenix - Mesa AZ	\$22,700,000	\$22,500,000	\$22,500,000	2Q04	September-16	\$661,615
Matthews Township	Charlotte - G - RH NC-SC	\$26,000,000	\$26,000,000	\$26,000,000	2Q04	September-16	\$764,533
Windward Commons	Atlanta GA	\$24,800,000	\$0	\$0	2Q04	Sold 3Q16	\$0
Cityline at Tenley	Washington, D.C.	\$58,100,000	\$58,600,000	\$58,600,000	4Q05	September-16	\$1,723,141
Ridgehaven Shopping Center	Minnetonka, MN	\$42,600,000	\$41,500,000	\$41,500,000	4Q05	September-16	\$1,220,313
The Beacon Retail	San Francisco, CA	\$65,000,000	\$65,100,000	\$65,100,000	1Q06	September-16	\$1,914,274
The Beacon Garage (units)	San Francisco, CA	\$35,600,000	\$35,600,000	\$35,600,000	1Q06	September-16	\$1,046,823
The Beacon Office (210 King)	San Francisco, CA	\$23,000,000	\$22,400,000	\$22,400,000	1Q15	September-16	\$658,675
Hawthorne Plaza	Overland Park, KS	\$54,800,000	\$54,800,000	\$54,800,000	4Q07	September-16	\$1,611,401
The Loop	Boston MA - NH	\$96,400,000	\$96,900,000	\$96,900,000	1Q08	September-16	\$2,849,357
Westbank Market	Austin, TX	\$60,300,000	\$59,600,000	\$59,600,000	3Q10	September-16	\$1,752,546
910 Lincoln Road	Miami, FL	\$36,600,000	\$37,100,000	\$37,100,000	4Q10	September-16	\$1,090,930
Lake Pointe Village	Houston, TX	\$76,350,000	\$76,850,000	\$76,850,000	4Q11	September-16	\$2,259,784
Safeway Kapahulu	Hawaii	\$85,700,000	\$86,200,000	\$49,797,625	4Q11	September-16	\$1,464,306
Safeway Burlingame	San Francisco, CA	\$56,600,000	\$56,700,000	\$33,792,391	4Q11	September-16	\$993,670
Shamrock Plaza	Oakland, CA	\$38,100,000	\$38,600,000	\$22,256,549	4Q11	September-16	\$654,457
Pavilions Marketplace	West Hollywood, CA	\$62,200,000	\$62,400,000	\$37,565,865	1Q12	September-16	\$1,104,629
130 Prince	New York, NY	\$219,000,000	\$203,700,000	\$203,700,000	2Q12	September-16	\$5,989,825
Safeway Pleasanton	Pleasanton, CA	\$81,200,000	\$81,800,000	\$81,800,000	4Q12	September-16	\$2,405,340
Liberty Wharf	Boston, MA	\$89,700,000	\$90,000,000	\$56,304,262	4Q12	September-16	\$1,655,634
Shops at Legacy	Plano, TX	\$109,710,916	\$109,710,916	\$109,710,916	3Q13	September-16	\$3,226,064
Pasadena Commons	Pasadena, CA	\$51,800,000	\$52,900,000	\$52,900,000	4Q14	September-16	\$1,555,532
Rush Street Retail	Chicago, IL	\$15,500,000	\$15,600,000	\$15,600,000	4Q14	September-16	\$458,720
Legacy West Retail	Plano, TX	\$124,005,640	\$135,408,223	\$117,316,492	1Q15	September-16	\$3,449,707
Legacy West Land	Plano, TX	\$8,469,173	\$8,535,453	\$8,535,453	2Q16	September-16	\$250,986
131-137 Spring Street	New York, NY	\$230,887,714	\$230,879,027	\$118,235,626	3Q15	September-16	\$3,476,734
Runway at Playa Vista - Retail	Playa Vista, CA	\$118,720,000	\$117,130,000	\$54,722,500	1Q16	September-16	\$1,609,122
139 Spring	New York, NY	\$116,017,200	\$117,008,800	\$117,008,800	1Q16	September-16	\$3,440,659
Clayton Lane	Denver, CO	\$142,504,211	\$143,003,528	\$95,906,360	1Q16	September-16	\$2,820,139
4th & Colorado	Santa Monica, CA	\$12,640,000	\$12,720,000	\$12,720,000	1Q16	September-16	\$374,033
Shops at Crystals	Las Vegas, NV	\$271,980,000	\$287,500,000	\$148,970,038	2Q16	September-16	\$4,380,484
		<b>\$2,490,084,854</b>	<b>\$2,479,845,947</b>	<b>\$1,966,892,877</b>			<b>\$57,836,745</b>
<b>Portfolio Total</b>		<b>\$10,764,005,201</b>	<b>\$10,898,015,107</b>	<b>\$9,177,908,833</b>			<b>\$269,877,624</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	\$53,711,062	\$62,580,557	\$21,542,131	3Q14	September-16
Broadstone Harbor Beach	East	Southeast	Ft. Lauderdale, FL	\$65,349,263	\$75,441,690	\$37,077,878	1Q15	September-16
Downtown East	MidWest	West North Central	Minneapolis, MN	\$51,940,118	\$72,000,000	\$32,630,400	2Q15	September-16
Wyndham Park	West	Pacific	Portland, OR	\$81,000,000	\$88,000,000	\$46,575,759	2Q15	September-16
Legacy West Mid-Rise	MidWest	Southwest	Dallas, TX	\$7,858,777	\$8,210,036	\$8,219,939	2Q16	September-16
				<b>\$259,859,221</b>	<b>\$306,232,284</b>	<b>\$146,046,108</b>		
<b>INDUSTRIAL</b>								
<b>OFFICE</b>								
55 Hawthorne	East	Pacific	San Francisco, CA	\$126,100,000	\$119,000,000	\$54,658,806	3Q14	September-16
Silicon Valley Towers	East	Pacific	San Jose, CA	\$87,000,000	\$98,000,000	\$51,551,120	2Q15	September-16
Post 3rd	West	Pacific	Los Angeles, CA	\$78,528,274	\$82,246,503	\$32,719,029	1Q16	September-16
LAM Campus	West	Pacific	San Jose, CA	\$82,000,000	\$82,204,986	\$82,081,500	2Q16	September-16
Fashion Island	West	Pacific	San Mateo, CA	\$0	\$140,669,073	\$55,284,518	3Q16	September-16
				<b>\$373,628,274</b>	<b>\$522,120,562</b>	<b>\$276,294,972</b>		
<b>RETAIL</b>								
Ledgewood Mall	East	Northeast	Roxbury, NJ	\$30,000,000	\$32,000,000	\$16,660,704	3Q15	September-16
Paramus Retail Portfolio	East	Northeast	Paramus, NJ	\$58,800,000	\$68,500,000	\$31,913,154	4Q15	September-16
				<b>\$88,800,000</b>	<b>\$100,500,000</b>	<b>\$48,573,858</b>		
<b>Portfolio Total</b>				<b>\$722,287,495</b>	<b>\$928,852,846</b>	<b>\$470,914,938</b>		



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.7	11.3	2.7	3.4	3.1	3.6	5.7	5.8
25th Percentile	1.4	7.5	1.4	2.8	2.4	2.1	4.3	4.6
Median	1.1	7.0	1.1	2.3	2.0	1.7	4.0	4.6
75th Percentile	0.9	5.7	0.9	1.4	1.5	1.4	3.7	4.4
95th Percentile	0.5	2.7	0.5	-1.7	0.2	1.0	2.7	4.0
# of Portfolios	18	18	18	16	16	14	8	5
● Brown Brothers Harriman	1.2 (48)	5.5 (84)	1.2 (48)	1.7 (71)	1.2 (83)	1.3 (85)	-- (--)	-- (--)
▲ Barclays US TIPS	1.0 (63)	7.3 (41)	1.0 (63)	2.8 (20)	2.4 (26)	1.9 (34)	4.0 (53)	4.5 (69)



Sector	Account Weight	Barclays TIPS	
		Index	Difference
Treasuries	98.7%	100.0%	-1.3%
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*	1.3%	0.0%	1.3%
<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	\$	70,921,074
Current Coupon		0.80
Yield to Maturity		-0.16
Average Life		
Duration		4.70
Quality		GOV

Barclays TIPS	
Total Number of Securities	37
Total Market Value	N/A
Current Coupon	0.84
Yield to Maturity	-0.13
Average Life	
Duration	6.59
Quality	AAA

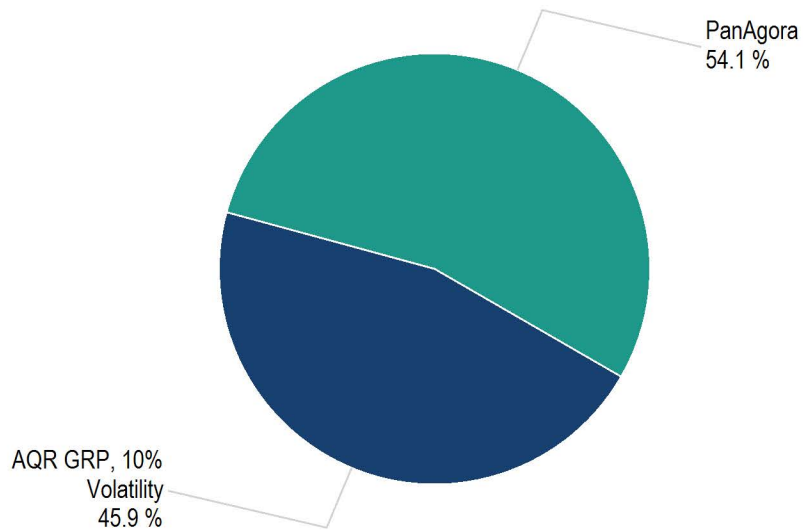
Yield to Maturity	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	n/a
7.0 - 9.0	n/a
9.0 - 11.0	n/a
11.0 - 13.0	n/a
13.0+	n/a
Unclassified	n/a

Average Life	
Range	% Held
0.0 - 3.0	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

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)	98.8
Aaa (10)	0.0
Aa (9)	0.0
A (8)	0.0
Baa (7)	0.0
Below Baa (6-1)	0.0
Other	1.2

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	\$131,507,185	45.9%	-0.3%
PanAgora	\$155,038,456	54.1%	-0.3%
Actual vs. Policy Weight Difference			0.0%
<b>Total</b>	<b>\$286,545,641</b>	<b>100.0%</b>	<b>-0.6%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	7.3%	8.6%	0.8	-0.1	6.4%
60/40 Russell 3000/Barclays Aggregate	8.0%	6.6%	1.2	--	0.0%
AQR GRP, 10% Volatility	4.0%	8.7%	0.4	-0.6	6.5%
60/40 Russell 3000/Barclays Aggregate	8.0%	6.6%	1.2	--	0.0%
PanAgora	--	--	--	--	--
60/40 Russell 3000/Barclays Aggregate	8.0%	6.6%	1.2	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	7.4%	8.8%	0.8	-0.5	6.7%
60/40 Russell 3000/Barclays Aggregate	11.1%	6.8%	1.6	--	0.0%
AQR GRP, 10% Volatility	5.4%	8.9%	0.6	-0.8	6.8%
60/40 Russell 3000/Barclays Aggregate	11.1%	6.8%	1.6	--	0.0%
PanAgora	--	--	--	--	--
60/40 Russell 3000/Barclays Aggregate	11.1%	6.8%	1.6	--	0.0%



Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund</b>	<b>3.8</b>	<b>7.6</b>	<b>3.8</b>	<b>5.2</b>	<b>6.8</b>	<b>10.3</b>	<b>5.2</b>
<i>Policy Index</i>	3.8	7.7	3.8	4.6	6.4	10.2	5.9
<i>Allocation Index</i>	3.5	7.5	3.5	4.5	6.3	--	--
<b>Total Fund ex Overlay</b>	<b>3.9</b>	<b>7.3</b>	<b>3.9</b>	<b>4.9</b>	<b>6.7</b>	<b>10.2</b>	<b>5.2</b>
<i>Policy Index</i>	3.8	7.7	3.8	4.6	6.4	10.2	5.9
<i>Allocation Index</i>	3.5	7.5	3.5	4.5	6.3	--	--
<b>Public Equity</b>	<b>5.1</b>	<b>7.2</b>	<b>5.1</b>	<b>4.5</b>	<b>6.9</b>	<b>13.1</b>	<b>5.0</b>
<i>Blended Public Equity Index</i>	5.7	7.6	5.7	3.8	6.4	12.8	5.6
<b>US Equity</b>	<b>4.4</b>	<b>7.1</b>	<b>4.4</b>	<b>6.9</b>	<b>9.4</b>	<b>16.1</b>	<b>6.4</b>
<i>Blended US Equity Index</i>	4.7	8.4	4.7	7.0	9.9	16.3	7.4
<i>Russell 3000</i>	4.4	8.2	4.4	7.0	10.4	16.4	7.4
<b>Large Cap Equity</b>	<b>4.2</b>	<b>7.2</b>	<b>4.2</b>	<b>7.5</b>	<b>10.6</b>	<b>16.3</b>	<b>6.6</b>
<i>Russell 1000</i>	4.0	7.9	4.0	6.9	10.8	16.4	7.4
Barrow Hanley	5.0	5.1	5.0	5.0	8.2	16.2	--
<i>Russell 1000 Value</i>	3.5	10.0	3.5	5.4	9.7	16.2	5.9
BlackRock S&P 500 Index	3.9	7.9	3.9	7.2	11.2	--	--
<i>S&amp;P 500</i>	3.9	7.8	3.9	7.1	11.2	16.4	7.2
Brown Advisory	3.7	2.4	3.7	7.4	8.5	--	--
<i>Russell 1000 Growth</i>	4.6	6.0	4.6	8.3	11.8	16.6	8.8
DE Shaw	5.3	10.6	5.3	9.6	12.4	18.6	--
<i>Russell 1000</i>	4.0	7.9	4.0	6.9	10.8	16.4	7.4
<b>Small Cap Equity</b>	<b>6.1</b>	<b>6.7</b>	<b>6.1</b>	<b>4.3</b>	<b>4.3</b>	<b>15.0</b>	<b>5.5</b>
<i>Russell 2000</i>	9.0	11.5	9.0	8.1	6.7	15.8	7.1
QMA US Small Cap	--	--	--	--	--	--	--
<i>Russell 2000</i>	9.0	11.5	9.0	8.1	6.7	15.8	7.1
<b>International Equity</b>	<b>6.3</b>	<b>7.3</b>	<b>6.3</b>	<b>0.7</b>	<b>2.4</b>	<b>7.2</b>	<b>2.1</b>
<i>MSCI ACWI ex US IMI</i>	7.1	6.5	7.1	-0.9	1.1	6.8	2.8
<i>MSCI EAFE Gross</i>	6.5	2.2	6.5	-0.9	0.9	7.9	2.3

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Developed Markets</b>	<b>6.4</b>	<b>6.4</b>	<b>6.4</b>	<b>1.3</b>	<b>2.7</b>	<b>7.8</b>	<b>2.4</b>
MSCI ACWI ex USA Gross	7.0	6.3	7.0	-1.6	0.6	6.5	2.6
Baillie Gifford	8.5	8.7	8.5	4.8	4.3	--	--
MSCI ACWI ex US	7.0	6.3	7.0	-1.6	0.9	--	--
MSCI ACWI ex US Growth	6.1	6.5	6.1	1.6	2.8	--	--
BlackRock EAFE Index	6.5	2.1	6.5	-1.0	--	--	--
MSCI EAFE	6.4	1.7	6.4	-1.4	0.5	7.4	1.8
MSCI EAFE Gross	6.5	2.2	6.5	-0.9	0.9	7.9	2.3
FIAM Equity	7.0	8.0	7.0	5.0	4.5	--	--
MSCI ACWI ex US Small Cap Gross	8.0	8.0	8.0	3.4	3.9	9.0	5.0
Mondrian	4.0	6.3	4.0	-1.7	1.6	6.2	2.6
MSCI ACWI ex USA Value Gross	7.9	6.0	7.9	-4.8	-1.4	5.2	1.7
MSCI ACWI ex USA Gross	7.0	6.3	7.0	-1.6	0.6	6.5	2.6
<b>Emerging Markets</b>	<b>5.4</b>	<b>16.4</b>	<b>5.4</b>	<b>-4.8</b>	<b>-0.6</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets Gross	9.2	16.4	9.2	-2.6	-0.2	3.4	4.3
Parametric Core	5.4	16.4	5.4	--	--	--	--
MSCI Emerging Markets Gross	9.2	16.4	9.2	-2.6	-0.2	3.4	4.3
<b>Fixed Income</b>	<b>2.5</b>	<b>7.5</b>	<b>2.5</b>	<b>3.4</b>	<b>4.2</b>	<b>5.3</b>	<b>5.5</b>
Blended Fixed Income Index	1.5	8.1	1.5	4.2	3.9	3.2	4.9
<b>US Fixed Income</b>	<b>3.0</b>	<b>8.7</b>	<b>3.0</b>	<b>4.5</b>	<b>4.9</b>	<b>5.3</b>	<b>5.6</b>
Blended US Fixed Index	1.6	7.7	1.6	4.4	4.2	3.4	5.1
<b>Core Fixed</b>	<b>1.7</b>	<b>6.6</b>	<b>1.7</b>	<b>4.2</b>	<b>4.6</b>	<b>4.3</b>	<b>5.1</b>
Barclays Aggregate	0.5	5.8	0.5	4.1	4.0	3.1	4.8
FIAM Bond	1.3	7.5	1.3	4.7	4.7	4.1	5.4
Western TRU	2.7	4.7	2.7	--	--	--	--
3-Month Libor Total Return USD	0.2	0.5	0.2	0.4	0.4	0.4	1.3
Barclays Aggregate	0.5	5.8	0.5	4.1	4.0	3.1	4.8

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Opportunistic Credit</b>	<b>5.9</b>	<b>12.9</b>	<b>5.9</b>	<b>5.4</b>	<b>7.1</b>	<b>11.3</b>	<b>--</b>
<i>Barclays BA Intermediate HY</i>	4.0	11.1	4.0	5.5	5.3	5.2	--
Angelo Gordon Opportunistic	5.4	5.9	5.4	3.7	--	--	--
Angelo Gordon STAR	5.2	6.0	5.2	7.4	11.0	--	--
<i>Barclays Aggregate</i>	0.5	5.8	0.5	4.1	4.0	3.1	4.8
Beach Point Select	5.5	12.9	5.5	--	--	--	--
<i>Barclays BA Intermediate HY</i>	4.0	11.1	4.0	5.5	5.3	5.2	--
Brigade Capital	7.1	20.1	7.1	2.6	3.8	7.1	--
<i>Barclays BA Intermediate HY</i>	4.0	11.1	4.0	5.5	5.3	5.2	--
50% <i>Barclays HY/ 50% Bank Loan</i>	4.3	11.2	4.3	3.8	4.5	6.9	--
TCP Direct Lending VIII	--	--	--	--	--	--	--
<i>Barclays BA Intermediate HY</i>	4.0	11.1	4.0	5.5	5.3	5.2	--
<b>Global Fixed Income</b>	<b>-0.1</b>	<b>1.1</b>	<b>-0.1</b>	<b>-2.5</b>	<b>0.3</b>	<b>4.6</b>	<b>--</b>
<i>Barclays Multi-verse</i>	1.0	10.2	1.0	2.6	2.2	2.0	4.4
Franklin Templeton	-0.1	1.1	-0.1	-2.5	0.3	4.6	--
<i>Barclays Multi-verse</i>	1.0	10.2	1.0	2.6	2.2	2.0	4.4
<b>Risk Parity</b>	<b>2.2</b>	<b>16.5</b>	<b>2.2</b>	<b>4.9</b>	<b>7.3</b>	<b>7.6</b>	<b>--</b>
60/40 Russell 3000/ <i>Barclays Aggregate</i>	2.8	7.4	2.8	6.0	8.0	11.1	6.7
AQR GRP, 10% Volatility	2.2	13.2	2.2	0.4	4.1	5.6	--
PanAgora	2.2	19.5	2.2	9.3	--	--	--
60/40 Russell 3000/ <i>Barclays Aggregate</i>	2.8	7.4	2.8	6.0	8.0	11.1	6.7
60/40 MSCI World/ <i>Barclays Global Aggregate</i>	3.1	6.1	3.1	3.8	5.7	8.8	--
<b>Alternatives</b>	<b>6.2</b>	<b>5.3</b>	<b>6.2</b>	<b>6.6</b>	<b>7.1</b>	<b>6.8</b>	<b>--</b>
<i>Alternatives Allocation Index</i>	3.5	7.0	3.5	2.2	4.1	6.4	--
<i>Blended Alternatives Index</i>	3.7	7.2	3.7	2.9	5.4	9.4	--
<b>Private Equity</b>	<b>10.5</b>	<b>9.2</b>	<b>10.5</b>	<b>18.1</b>	<b>19.0</b>	<b>13.2</b>	<b>--</b>
Russell 3000 +3%	5.5	10.3	5.5	10.0	13.4	19.4	10.4

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2016

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Hedge Fund/Absolute Return</b>	<b>1.5</b>	<b>-1.3</b>	<b>1.5</b>	<b>7.3</b>	<b>7.7</b>	<b>6.6</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.1	3.3	1.1	4.3	4.2	4.2	--
<b>AQR DELTA XN</b>	<b>1.7</b>	<b>-0.8</b>	<b>1.7</b>	<b>7.9</b>	<b>8.1</b>	<b>6.8</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.1	3.3	1.1	4.3	4.2	4.2	--
<b>Standard Life GARS</b>	<b>0.4</b>	<b>-3.7</b>	<b>0.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.1	3.3	1.1	4.3	4.2	4.2	--
<b>Inflation Pool</b>	<b>1.4</b>	<b>--</b>	<b>1.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Inflation Pool Index</i>	0.6	--	0.6	--	--	--	--
<b>Real Estate</b>	<b>1.8</b>	<b>6.9</b>	<b>1.8</b>	<b>12.9</b>	<b>12.7</b>	<b>12.1</b>	<b>5.9</b>
<i>NCREIF ODCE</i>	2.1	6.5	2.1	12.5	12.4	12.4	6.5
<i>Invesco</i>	1.7	6.9	1.7	12.7	12.5	12.0	5.9
<i>NCREIF ODCE</i>	2.1	6.5	2.1	12.5	12.4	12.4	6.5
<i>Invesco US Val IV</i>	3.8	6.6	3.8	--	--	--	--
<i>NCREIF ODCE</i>	2.1	6.5	2.1	12.5	12.4	12.4	6.5
<i>NCREIF CEVA 1Q Lag - NET</i>	2.2	10.3	2.2	15.5	--	--	--
<b>TIPS</b>	<b>1.2</b>	<b>5.6</b>	<b>1.2</b>	<b>1.8</b>	<b>1.4</b>	<b>1.4</b>	<b>--</b>
<i>Barclays US TIPS</i>	1.0	7.3	1.0	2.8	2.4	1.9	4.5
<i>Brown Brothers Harriman</i>	1.2	5.6	1.2	1.8	1.4	1.4	--
<i>Barclays US TIPS</i>	1.0	7.3	1.0	2.8	2.4	1.9	4.5
<b>Private Real Asset</b>	<b>0.0</b>	<b>44.6</b>	<b>0.0</b>	<b>22.0</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>CPI +5%</i>	1.4	5.4	1.4	5.4	--	--	--
<b>Cash</b>	<b>0.2</b>	<b>0.6</b>	<b>0.2</b>	<b>1.0</b>	<b>0.8</b>	<b>0.7</b>	<b>1.0</b>
<i>91 Day T-Bills</i>	0.1	0.2	0.1	0.1	0.1	0.1	0.8
<i>General Account</i>	0.2	0.8	0.2	1.5	1.1	0.7	1.4
<i>Treasury &amp; LAIF</i>	0.1	1.1	0.1	1.1	1.0	0.9	1.0
<i>91 Day T-Bills</i>	0.1	0.2	0.1	0.1	0.1	0.1	0.8

## **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.

### **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: September 30, 2016

Total Plan Policy Index	As of													
	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%	8.0%	10.0%	10.0%	
60% Russell 3000/40% BC Aggregate (RP)	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%	
Barclays Aggregate	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%	
Barclays BA Intermediate HY	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%	
Barclays BBB	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%	
Barclays Credit BAA	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%	
Barclays Multiverse	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%	
Barclays TIPS	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	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%	5.0%	9.0%	9.0%	
CPI + 5% (RA)	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%	
Libor +4% (HF)	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%	18.0%	18.0%	18.0%	21.0%	21.0%	15.0%	0.0%	0.0%	0.0%	
MSCI ACWI ex-US IMI	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%	20.0%	20.0%	20.0%	
NCREIF ODCE	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%	6.0%	6.0%	0.0%	0.0%	0.0%	
Russell 1000	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%	5.0%	5.0%	0.0%	
Russell 2000	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%	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%	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%	5.0%	
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	

Total Equity Benchmark	As of:					
	9/1/16	1/1/16	1/1/14	10/1/10	5/1/07	6/1/00
MSCI ACWI ex-US	0.0%	0.0%	0.0%	34.0%	31.3%	23.1%
MSCI ACWI ex-US IMI	41.7%	41.7%	40.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	50.0%	48.0%	52.8%	55.2%	61.5%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 2000	0.0%	8.3%	12.0%	13.2%	13.5%	15.4%
Russell 3000	58.3%					
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%	85.7%	80%	52%	50.0%	50.0%
Russell 1000 Value	0%	0.0%	0%	12%	12.5%	0.0%
Russell 2000	0%	14.3%	20%	36%	37.5%	37.5%
Russell 3000	100%					
S & P 500	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:					
	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10
Barclays Aggregate	55.5%	50.0%	46.3%	50.0%	50.0%	58.6%
Barclays BA Intermediate HY	27.8%	25.0%	25.0%	0.0%	0.0%	0.0%
Barclays BBB	0.0%	0.0%	0.0%	0.0%	0.0%	7.3%
Barclays Credit BAA	0.0%	0.0%	0.0%	16.0%	15.0%	0.0%
Barclays Multiverse	16.7%	15.0%	18.8%	20.0%	20.0%	20.5%
Barclays TIPS	0.0%	10.0%	10.0%	14.0%	15.0%	13.6%
Citigroup non-US WGBI	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:					
	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10
Barclays Aggregate	66.7%	58.8%	56.9%	62.5%	62.5%	73.7%
Barclays BA Intermediate HY	33.3%	29.4%	30.8%	0.0%	0.0%	0.0%
Barclays BBB	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%
Barclays Credit BAA	0.0%	0.0%	0.0%	20.0%	18.8%	0.0%
Barclays TIPS	0.0%	11.8%	12.3%	17.5%	18.8%	17.2%
	<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
Barclays BA Intermediate HY	100.0%	0.0%
Barclays Credit BAA	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

Risk Parity Benchmark	As of:
	10/1/10
Barclays Aggregate	40.0%
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% Russell 3000/40% BC 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 Pool	As of:
	4/1/16
Barclays TIPS	14.3%
Bloomberg Commodity	21.4%
CPI + 5% (RA)	14.3%
NCREIF ODCE	50.0%
	<b>100.0%</b>

Real Asset Benchmark	As of:
	1/1/14
CPI + 5%	100.0%
	<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	
Barclays 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:	0.35% 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	✓
Parametric Core	MSCI Emerging Markets Gross	--	--	--
FIAM Bond	Barclays Aggregate	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Beach Point Select	Barclays BA Intermediate HY	--	--	--
Brigade Capital	Barclays BA Intermediate HY	✓	R	✓
TCP Direct Lending VIII	Barclays BA Intermediate HY	--	--	--
Franklin Templeton	Barclays Multi-verse	✓	✓	✓

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	Barclays Aggregate	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Beach Point Select	Barclays BA Intermediate HY	--	--	--
Brigade Capital	Barclays BA Intermediate HY	✓	✗	✓
TCP Direct Lending VIII	Barclays BA Intermediate HY	--	--	--
Franklin Templeton	Barclays Multi-verse	✓	✓	✓

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: September 30, 2016

	Jul	Aug	Sep	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference	3rd Qtr. 2015	Difference
Verus	3.48%	1.59%	-0.16%	4.97%		1.69%		-1.50%		5.41%		-8.68%	
Barrow Hanley	3.49%	1.62%	-0.18%	4.98%	-0.01%	1.69%	0.00%	-1.51%	0.01%	5.40%	0.01%	-8.69%	0.01%
Russell 1000 Value Index	2.90%	0.77%	-0.21%	3.48%		4.58%		1.64%		5.64%		-8.40%	
Verus	3.69%	0.14%	0.02%	3.86%		2.46%		1.36%		7.05%		-6.43%	
BlackRock S&P 500 Fund	3.69%	0.14%	0.02%	3.86%	0.00%	2.46%	-0.00%	1.37%	-0.01%	7.05%	0.00%	-6.43%	0.00%
S&P 500 Index	3.69%	0.14%	0.02%	3.85%		2.46%		1.34%		7.03%		-6.43%	
Verus	4.02%	-0.75%	0.48%	3.74%		-0.04%		-1.26%		7.68%		-4.87%	
BrownAdvisory	4.06%	-0.75%	0.46%	3.75%	-0.01%	-0.05%	0.00%	-1.26%	0.00%	7.68%	0.01%	-4.89%	0.02%
Russell 1000 Growth Index	4.72%	-0.50%	0.37%	4.58%		0.61%		0.75%		7.33%		-5.28%	
Verus	4.47%	0.38%	0.44%	5.32%		4.28%		0.75%		6.11%		-5.87%	
D.E. Shaw	4.47%	0.38%	0.44%	5.33%	-0.01%	4.29%	-0.01%	0.76%	-0.01%	6.10%	0.00%	-5.86%	-0.01%
Russell 1000 Index	3.81%	0.13%	0.08%	4.03%		2.54%		1.18%		6.51%		-6.83%	
Verus	6.76%	-0.45%	2.08%	8.50%		-0.20%		0.42%		7.59%		-11.60%	
Baillie Gifford	6.81%	-0.48%	2.12%	8.55%	-0.05%	-0.21%	0.01%	0.42%	0.00%	7.57%	0.02%	-11.54%	-0.06%
MSCI ACWI ex US	4.97%	0.65%	1.28%	7.00%		-0.40%		-0.26%		3.29%		-12.11%	
MSCI ACWI ex US Growth	4.82%	-0.34%	1.58%	6.11%		0.64%		-0.24%		5.05%		-10.73%	
Verus	5.08%	0.08%	1.26%	6.49%		-1.24%		-2.90%		4.72%		-10.21%	
BlackRock EAFE Equity	5.08%	0.08%	1.26%	6.49%	0.00%	-1.24%	-0.00%	-2.90%	-0.00%	4.72%	0.00%	-10.21%	0.00%
MSCI EAFE (Net)	5.07%	0.07%	1.23%	6.43%		-1.46%		-3.01%		4.71%		-10.24%	
MSCI EAFE (Gross)	5.08%	0.08%	1.27%	6.51%		-1.19%		-2.89%		4.75%		-10.19%	
Verus	4.53%	-0.08%	2.44%	7.00%		-0.16%		1.12%		5.51%		-9.65%	
FIAM Equity	4.53%	-0.08%	2.44%	6.99%	0.01%	-0.15%	-0.01%	1.11%	0.01%	5.51%	0.00%	-9.65%	0.00%
MSCI ACWI -ex US Small Cap Index	5.59%	-0.22%	2.51%	8.00%		-0.72%		0.76%		5.34%		-9.95%	
Verus	2.91%	0.65%	0.39%	3.99%		0.49%		1.70%		2.33%		-10.72%	
Mondrian	2.91%	0.66%	0.40%	4.00%	-0.01%	0.50%	-0.01%	1.70%	-0.00%	2.33%	0.00%	-10.73%	0.01%
MSCI ACWI -ex US Value Index	5.12%	1.68%	0.97%	7.92%		-1.46%		-0.29%		1.50%		-13.49%	
MSCI ACWI -ex US	4.97%	0.65%	1.28%	7.00%		-0.40%		-0.26%		3.29%		-12.11%	

Manager Performance Comparison (Gross of Fees)

Period Ending: September 30, 2016

	Jul	Aug	Sep	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference	3rd Qtr. 2015	Difference
Verus	4.37%	0.35%	0.64%	5.41%		1.40%		8.88%		-0.97%		-11.81%	
Parametric Core	4.39%	0.37%	0.66%	5.47%	-0.06%	1.42%	-0.02%	8.91%	-0.03%	-0.97%	0.00%	-11.81%	0.00%
MSCI EM Market Index	5.09%	2.52%	1.32%	9.15%		0.80%		5.74%		0.72%		-17.78%	
Verus	1.00%	0.18%	0.09%	1.27%		2.77%		3.28%		-0.39%		0.50%	
FIAM Bond	1.00%	0.18%	0.09%	1.27%	-0.00%	2.77%	0.00%	3.28%	0.00%	-0.39%	0.00%	0.50%	0.00%
BC Aggregate Index	0.63%	-0.11%	-0.06%	0.46%		2.21%		3.02%		-0.58%		1.24%	
Verus	1.62%	0.97%	0.06%	2.67%		2.62%		-0.64%		0.63%		-1.01%	
Western TRU	1.62%	0.97%	0.06%	2.67%	0.00%	2.62%	-0.01%	-0.63%	-0.01%	0.63%	0.00%	-1.00%	-0.01%
3-Month Libor Total Return USD Index	0.07%	0.07%	0.07%	0.21%		0.17%		0.13%		0.13%		0.08%	
BC Aggregate Index	0.63%	-0.11%	-0.06%	0.46%		2.21%		3.04%		-0.58%		1.24%	
Verus (Net)				5.38%		0.31%		0.70%		-0.57%		0.34%	
Angelo Gordon Opportunistic				5.38%	0.00%	0.31%	0.00%	0.70%	0.00%		-0.57%		0.34%
BC Aggregate Index				-0.06%		2.21%		0.92%		-0.57%		1.24%	
Verus (Net)				5.17%		2.05%		-2.17%		-0.91%		1.22%	
Angelo Gordon STAR Fund (Net)				5.17%	0.00%	2.05%	0.00%	-2.17%	0.00%		-0.91%		1.22%
BC Aggregate Index				-0.06%		2.21%		0.92%		-0.57%		1.24%	
Verus	2.26%	1.77%	1.38%	5.50%		4.23%		2.67%		-1.35%		-0.41%	
Beach Point Select (Net)	2.17%	1.69%	1.30%	5.25%	0.25%	3.98%	0.26%	2.41%	0.26%	-1.35%	0.00%	-0.66%	0.25%
Barclays BA Intermediate HY	2.27%	1.38%	0.34%	4.04%		3.29%		3.43%		0.01%		-3.00%	
Verus	3.15%	2.65%	1.20%	7.15%		8.52%		3.29%		-6.30%		-5.87%	
Brigade Capital	3.11%	2.62%	1.21%	7.09%	0.06%	8.48%	0.05%	3.29%	0.00%	-6.30%	-0.01%	-5.87%	0.00%
Barclays BA Intermediate HY	2.27%	1.38%	0.34%	4.04%		3.29%		3.43%		0.01%		-3.00%	
50% Barclays HY/ 50% Bank Loan	2.05%	1.44%	0.77%	4.32%		4.19%		2.34%		-2.00%		-3.05%	

Manager Performance Comparison (Gross of Fees)

Period Ending: September 30, 2016

	Jul	Aug	Sep	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference	3rd Qtr. 2015	Difference
Verus	-0.62%	1.46%	-0.95%	-0.13%		1.11%		0.12%		2.22%		-6.66%	
Franklin Templeton Investments	-0.62%	1.46%	-0.95%	-0.13%	-0.00%	1.11%	0.00%	0.12%	0.00%	2.22%	0.00%	-6.66%	0.00%
BC Multiverse	0.84%	-0.36%	0.57%	1.05%		3.00%		5.88%		-0.87%		0.49%	
Verus	0.98%	-0.27%	1.52%	2.23%		5.80%		4.65%		-2.87%		-7.67%	
AQR GRP, 10% Volatility (Net)	0.98%	-0.27%	1.52%	2.24%	-0.01%	5.80%	-0.00%	4.65%	0.00%	-2.87%	0.00%	-7.67%	0.00%
60% R3000/ 40% BC Agg	2.63%	0.11%	0.07%	2.82%		2.47%		1.89%		3.54%		-3.89%	
60% MSCI World/ 40% BC GlobalAgg	2.77%	0.03%	0.31%	3.13%		1.62%		1.21%		3.37%		-4.60%	
Verus	2.69%	-0.44%	-0.04%	2.20%		7.99%		8.22%		-0.50%		-3.78%	
PanAgora (Net)	2.69%	-0.44%	-0.04%	2.20%	-0.00%	7.99%	0.00%	8.23%	-0.01%	-0.50%	0.00%	-3.78%	0.00%
60% R3000/ 40% BC Agg	2.63%	0.11%	0.07%	2.82%		2.47%		1.89%		3.54%		-3.89%	
60% MSCI World/ 40% BC GlobalAgg	2.77%	0.03%	0.31%	3.13%		1.62%		1.21%		3.37%		-4.60%	
Verus	0.78%	-0.13%	1.04%	1.69%		-1.39%		-1.06%		2.54%		7.68%	
AQR DELTA XN	0.78%	-0.13%	1.04%	1.70%	-0.01%	-1.39%	-0.00%	-1.07%	0.01%	2.54%	0.00%	7.68%	0.00%
Liber + 4%	0.39%	0.36%	0.39%	1.14%		1.13%		0.99%		1.09%		1.05%	
Verus	0.35%	0.55%	-0.48%	0.42%		-0.85%		-3.24%		0.00%		0.00%	
Standard Life GARS	0.35%	0.55%	-0.48%	0.42%	-0.00%	-0.85%	-0.01%	-3.25%	-0.01%	0.00%	0.00%	0.00%	0.00%
Liber + 4%	0.39%	0.36%	0.39%	1.14%		1.13%		0.99%		0.00%		0.00%	
Verus				1.68%		3.64%		1.47%		2.44%		2.98%	
INVESCO Real Estate				1.68%	0.00%	3.62%	0.02%	1.47%	0.00%	2.50%	-0.06%	2.96%	0.02%
NCREIF NFI ODCE Index				2.07%		2.13%		2.18%		3.34%		3.68%	
Verus				3.82%		2.31%		-0.19%		0.00%		0.00%	
Invesco US Val IV				3.82%	0.00%	2.31%	0.00%	-0.19%	0.00%	0.00%	0.00%	0.00%	0.00%
NCREIF NFI ODCE Index				2.07%		2.13%		2.18%		3.34%		3.68%	
NCREIF CEVA 1Q Lag - NET				2.17%		1.99%		5.84%		2.98%		4.88%	
Verus	0.66%	-0.12%	0.70%	1.24%		0.90%		3.41%		-0.18%		-1.87%	
Brown Brothers Harriman	0.68%	-0.15%	0.69%	1.22%	0.02%	0.91%	-0.02%	3.52%	-0.11%	-0.18%	-0.00%	-1.88%	0.01%
BC U.S Tips	0.87%	-0.45%	0.55%	0.97%		1.71%		4.46%		-0.64%		-1.14%	

**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
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 - adjustedmarket 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
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.

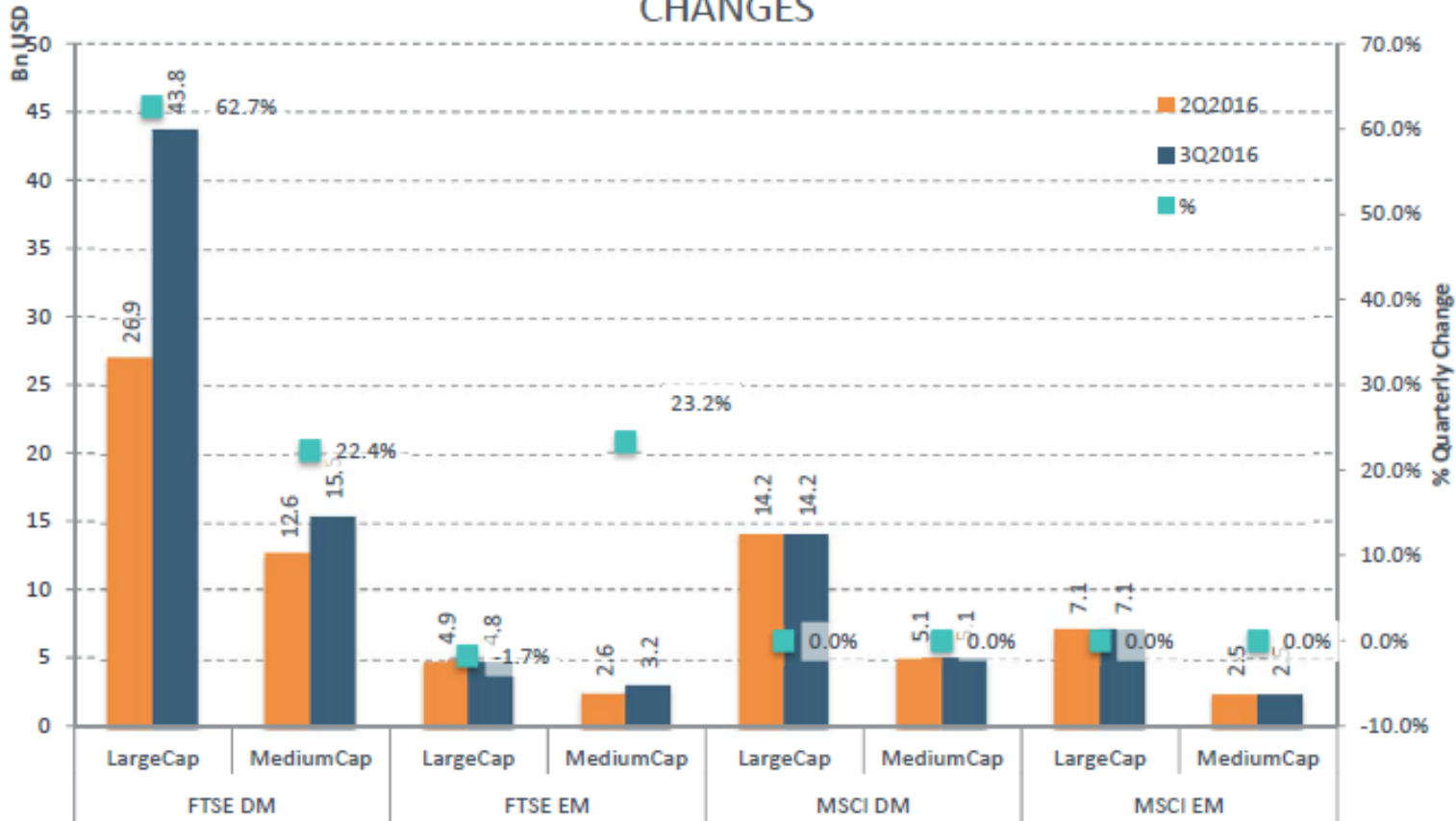
As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
9/30/2016	78.745	23.385	7.394	2.533	0
6/30/2016	77.349	22.250	7.1432	2.444	0
3/31/2016	83.360	22.414	7.435	2.395	0
12/31/2015	90.075	24.308	8.141	2.936	0
9/30/2015	88.944	23.139	7.993	2.946	0
6/30/2015	92.87	25.07	8.797	3.352	0
3/31/2015	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
3/31/2014	76.77	23.15	7.83	3.06	0

As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
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

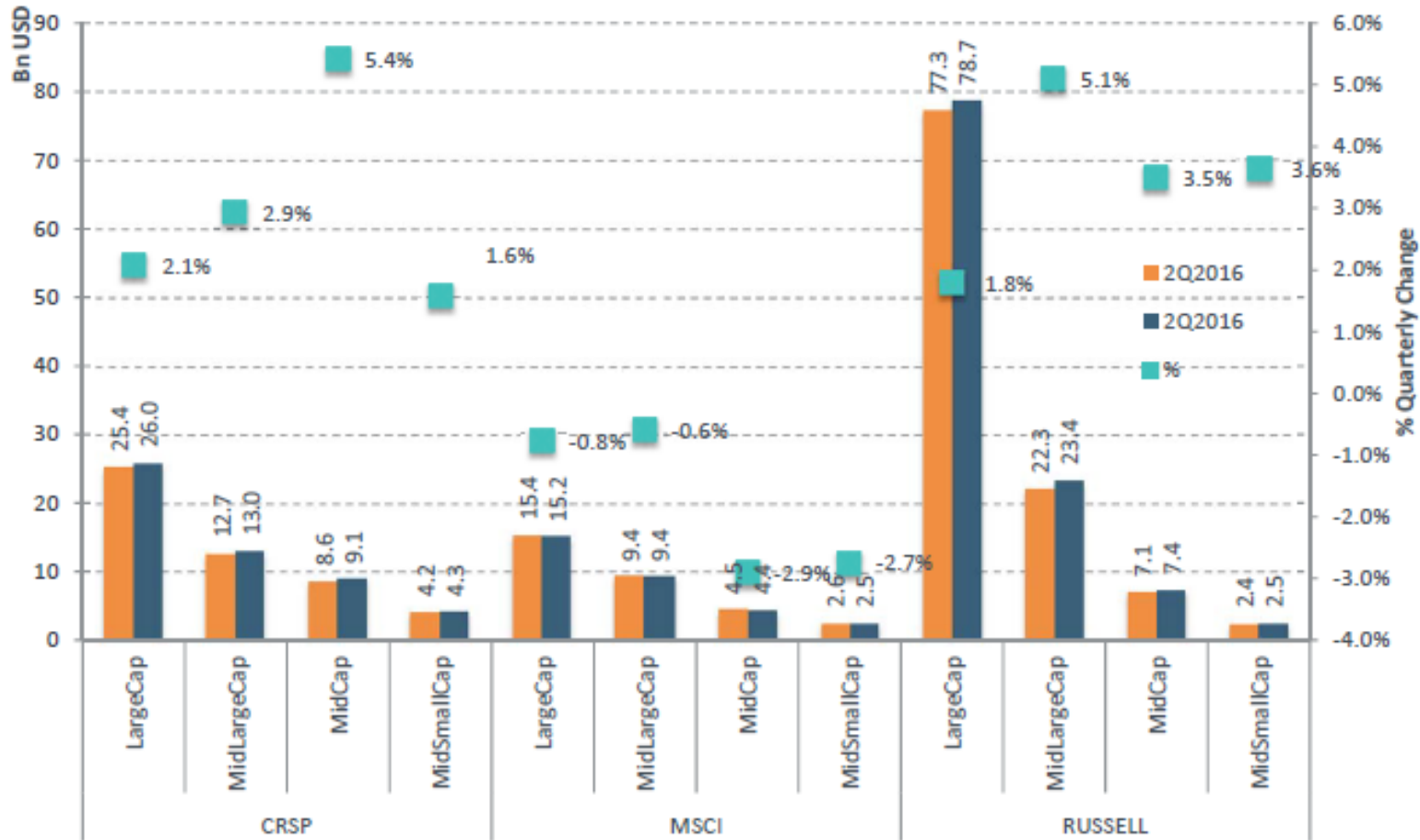
**BREAKPOINT TRENDS**

**3Q2016 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.

### 3Q2016 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**

4<sup>TH</sup> QUARTER 2016  
Investment Landscape

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SAN FRANCISCO 415-362-3484

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Appendix 41

# 3<sup>rd</sup> quarter summary

## THE ECONOMIC CLIMATE

- The U.S. labor market continues to improve but at a slower pace. Real wage growth has risen but not as quickly as other periods of similar labor market tightness. Consumer expenditures remain the primary positive contributor to GDP growth. *p. 8, 9*
- U.S. inflation has risen steadily with Core CPI at 2.3% YoY as of August. Energy and gasoline prices continue to weigh on the Headline CPI figure of 1.1% YoY. *p. 13*
- The presidential election approaches. There has historically been a weak relationship between election outcomes and market performance. This election appears to have unique characteristics and may cause more unpredictable effects. *p. 18*

## MARKET PORTFOLIO IMPACTS

- Central bank discussions indicate we may be nearing fiscal expansion as a next form of policy accommodation. As fiscal policies are typically less analyzed and less understood by investors, markets may be more prone to surprise in this environment. *p. 20*

## THE INVESTMENT CLIMATE

- U.S. corporate earnings are expected to decline by -2.1%, which would be the sixth consecutive quarter of YoY decline. Almost all of this decline is attributable to energy sector weakness. *p. 30*
- Low inflation and low bond yields may help to explain higher than usual equity valuations. However, this does not negate the fact that higher equity valuations historically have materially reduced subsequent returns. *p. 35*

## ASSET ALLOCATION ISSUES

- We continue to remain underweight risk and believe that downside market potential outweighs upside market potential. *p. 29*
- Emerging market earnings per share growth turned positive in 2016, reversing a 5-year downward trend. Valuations remain below average on a relative basis and upside potential seems attractive. Investors may consider moving to an overweight in emerging market equities, though risks should be carefully considered. *p. 33*

We remain underweight to risk

Investors should be watchful of corporate earnings, and U.S. inflation trends

# What drove the market in Q3?

**“FED STANDS PAT, BUT SAYS CASE FOR RATE INCREASE HAS STRENGTHENED”**

## December Rate Hike Expectations

Apr 29th	May 31st	June 30th	July 29th	Aug 31st	Sep 30th
41%	42%	9%	31%	45%	51%

Source: WSJ, September 22<sup>nd</sup> 2016

**“U.S. GOVERNMENT BONDS RALLY AS CENTRAL BANKS CALM INVESTORS”**

## 10-Year Treasury Yield

Aug 26th	Sep 2nd	Sep 9th	Sep 16th	Sep 23rd	Sep 30 <sup>th</sup>
1.63%	1.60%	1.67%	1.69%	1.62%	1.59%

Source: WSJ, September 22<sup>nd</sup> 2016

**“ELECTION UNCERTAINTY WEIGHS ON MARKETS”**

## U.S. Presidential Election Polls

March 31st		June 30th		September 30th	
Trump	Clinton	Trump	Clinton	Trump	Clinton
39.1%	49.7%	39.8%	44.6%	44.4%	47.5%

Source: CNBC, September 27<sup>th</sup> 2016

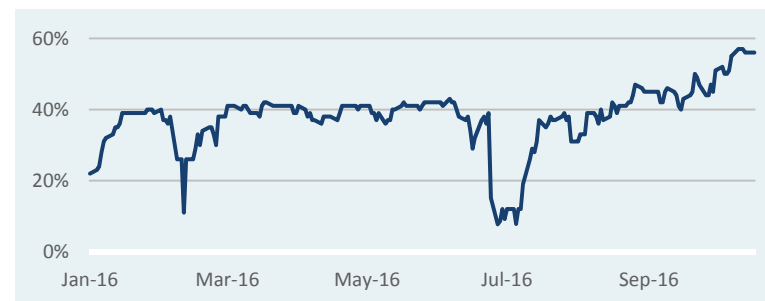
**“POUND STERLING FALLS BELOW \$1.31 HITTING NEW 31-YEAR LOW”**

## GBP/USD

Apr 29th	May 31st	June 30th	July 29th	Aug 31st	Sep 30th
\$1.46	\$1.45	\$1.32	\$1.33	\$1.31	\$1.30

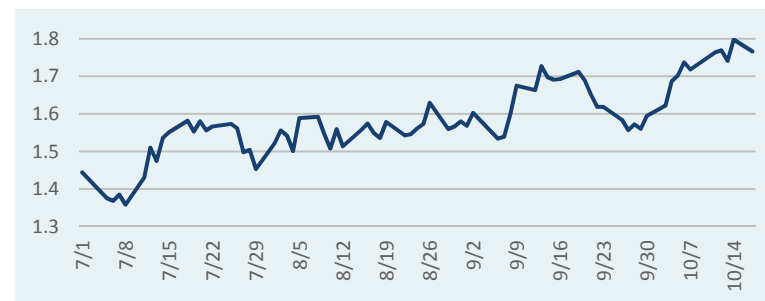
Source: The Independent, July 5<sup>th</sup> 2016

## DECEMBER RATE HIKE EXPECTATIONS



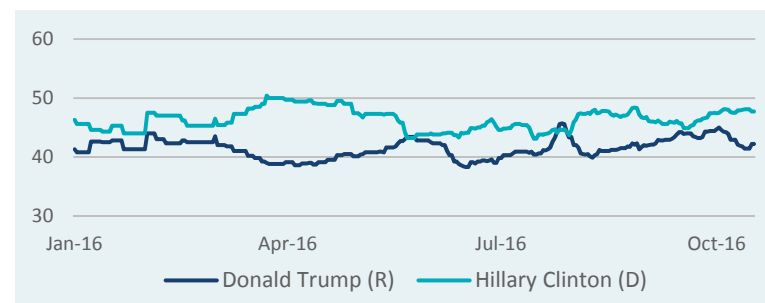
Source: Bloomberg, as of 10/17/16

## U.S. 10-YEAR TREASURY YIELD



Source: Federal Reserve, as of 10/17/16

## U.S. PRESIDENTIAL ELECTION POLLS



Source: Bloomberg, Real Clear Politics, as of 10/17/16



# Economic environment

# U.S. economics summary

- U.S. real GDP grew 1.4% YoY in Q2, up from 0.8% in Q1. This positive growth reflects contributions from greater consumer expenditures, exports, and non-residential fixed investments. These were partially offset by a decrease in private inventory investment.
- Headline inflation (CPI) rose 1.1% as of August YoY while core CPI rose 2.3%. Lower energy prices, and gasoline in particular (-17.8%), have weighed heavily on the headline inflation figure. Medical care services (+4.9%) and shelter (+3.4%) contributed to higher prices.
- If the U.S. economy continues to move closer to full employment and higher inflation, the market has expected the Fed to want to push harder for rate

“normalization”. However, the fear of disrupting financial markets and raising rates too early, too quickly, remains.

- Over the last few quarters we have continued to see the slow and steady return to the workforce of discouraged workers. This may help explain why productivity growth and wage inflation are lower than might be expected at this level of unemployment.
- Additions to nonfarm payrolls averaged slightly under 200,000 in the third quarter as the overall labor market continued to show strength. The unemployment rate increased slightly to 5.0% as more people entered the labor force.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	1.4% 6/30/16	3.9% 6/30/15
Inflation (CPI YoY, <i>Headline</i> )	1.1% 8/31/16	0.2% 8/31/15
Expected Inflation (5yr-5yr <i>forward</i> )	1.8% 9/30/16	1.8% 9/30/15
Fed Funds Rate	0.25% 9/30/16	0.12% 9/30/15
10 Year Rate	1.6% 9/30/16	2.0% 9/30/15
U-3 Unemployment	5.0% 9/30/16	5.1% 9/30/15
U-6 Unemployment	9.7% 9/30/16	10.0% 9/30/15

# U.S. economics – GDP growth

U.S. real GDP grew 1.4% YoY in the second quarter, up from 0.8% in the first quarter. This positive growth reflects contributions from personal consumption expenditures, exports, and non-residential fixed investment. These were partially offset by a decrease in private inventory investment.

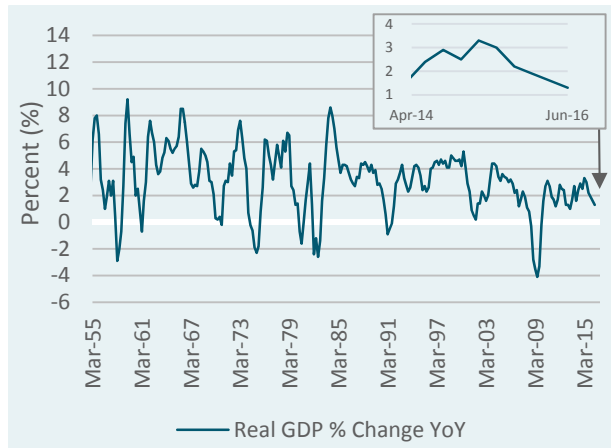
Domestic exports of goods and services grew 1.8% YoY in the second quarter while imports grew 0.2%. A stronger U.S. dollar and weaker demand from China have likely detracted somewhat from export growth.

The manufacturing sector continues to show weakness as durable goods orders have declined during three of the past four months. Additionally, shipments of manufactured durable goods also fell in August, down -0.4%.

The IMF cut U.S. growth expectations to 1.6% for 2016, down from 2.6% in 2015 and down 0.6% from three months prior. Lower business investment has been a primary headwind to growth, with investment decreasing for three consecutive quarters.

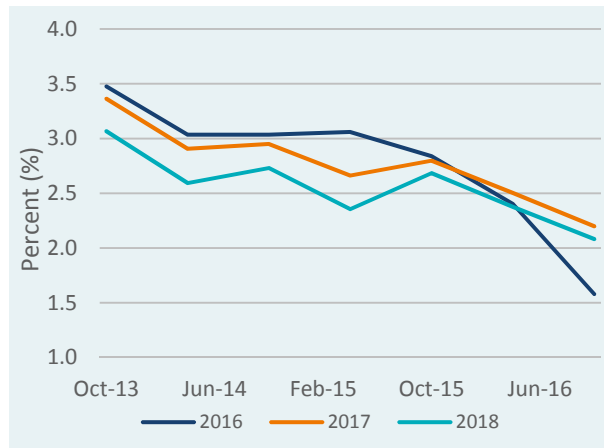
**Consumer spending continues to drive growth**

**U.S. REAL GDP GROWTH**



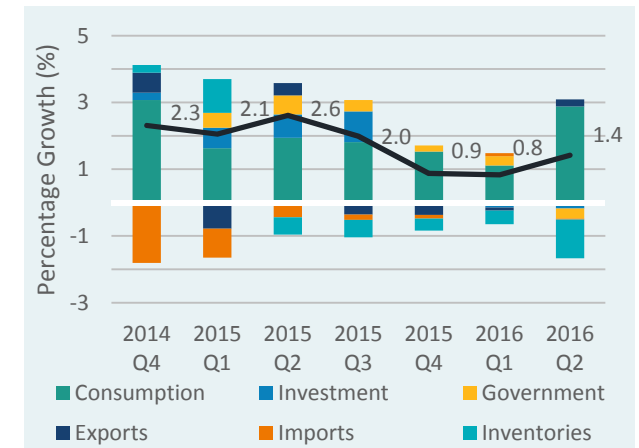
Source: FRED, as of 6/30/16

**IMF U.S. GROWTH EXPECTATIONS**



Source: IMF, as of 10/4/16

**U.S. GDP COMPONENTS**



Source: FRED

# U.S. economics – Unemployment

U.S. unemployment has fluctuated between 4.7% and 5.0% over the past year, and currently sits at a rate of 5.0%. The back-and-forth pull between unemployment rate and participation rate continues as workers rejoin the workforce (higher participation) which then adds to the employment candidate pool (higher unemployment).

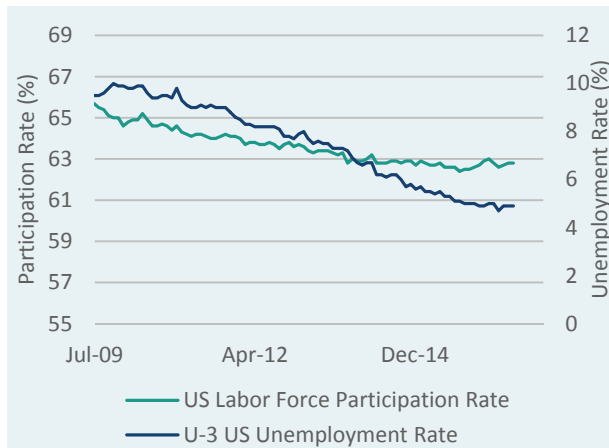
Average length of unemployment has trended downward to 27.6 weeks in August relative to 28.3

weeks one year prior. This is still substantially higher than the long-term median of 14 weeks (since 1948).

In August 151,000 nonfarm jobs were added, below the trailing 12 month average of 204,000.

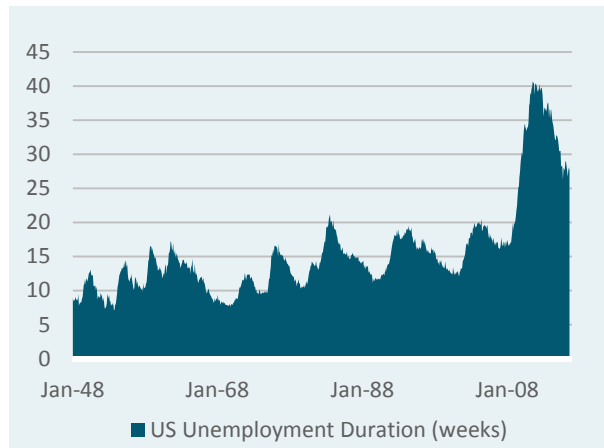
Over the past year, real average hourly earnings have risen by 1.3%. Positive upward pressure in average hourly earnings may help sustain economic growth and may also add to inflation pressures.

**U.S. UNEMPLOYMENT & PARTICIPATION**



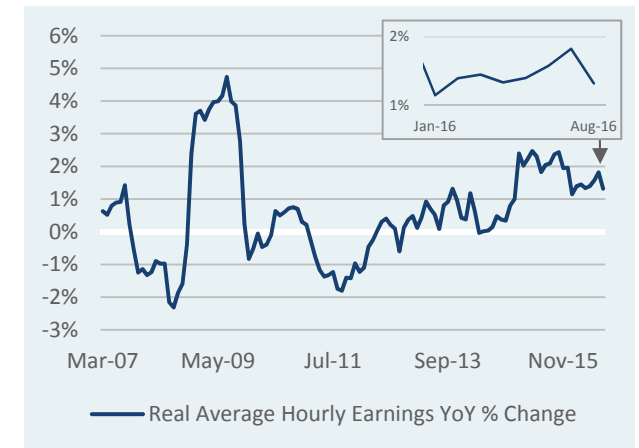
Source: FRED, as of 8/31/16

**UNEMPLOYMENT DURATION**



Source: FRED, as of 8/31/16

**REAL AVERAGE HOURLY EARNINGS**



Source: FRED, as of 8/31/16

# U.S. economics – The consumer

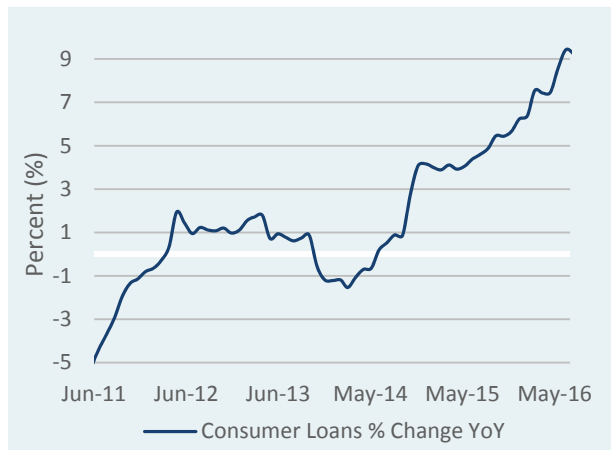
While corporates and governments seem to be at a later stage in terms of their credit cycles, consumer credit expansion has not been as pronounced. A healthy deleveraging has occurred across households since the global financial crisis, with credit expansion only picking up in recent years. It may make sense that the U.S. consumer has been a major contributor to economic growth.

Relatively strong gains in spending have been accompanied by modest increases in real wages and disposable income. Consumer lending growth accelerated

during the quarter, in part due to low borrowing costs and higher consumer confidence. Consumer loans at commercial banks rose 8.8% year-over-year in August. While this growth rate is higher than what we have seen during the current economic expansion, it is within a normal range with regard to historical experience.

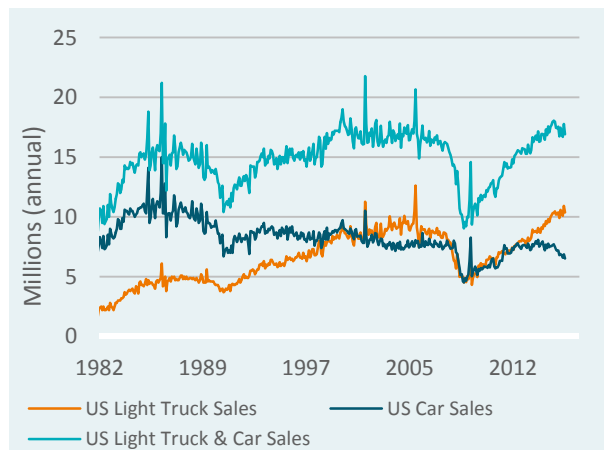
Auto sales have also been robust this year, a good indicator of consumer strength, though sales growth has flattened somewhat and automakers have increased per-vehicle incentive spending to all time highs.

## CONSUMER LOAN GROWTH



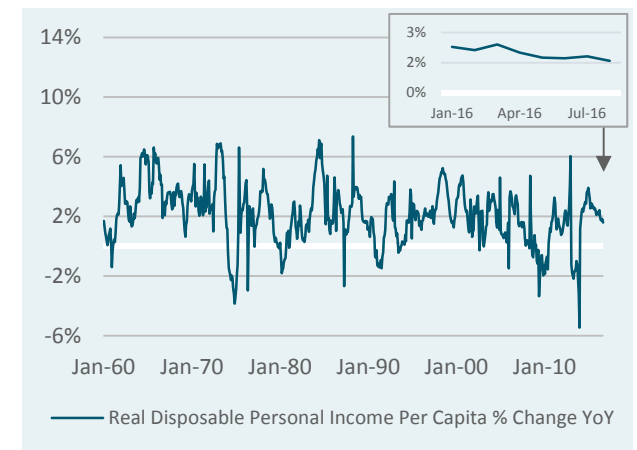
Source: FRED, as of 8/31/16

## AUTO SALES



Source: FRED, as of 8/31/16

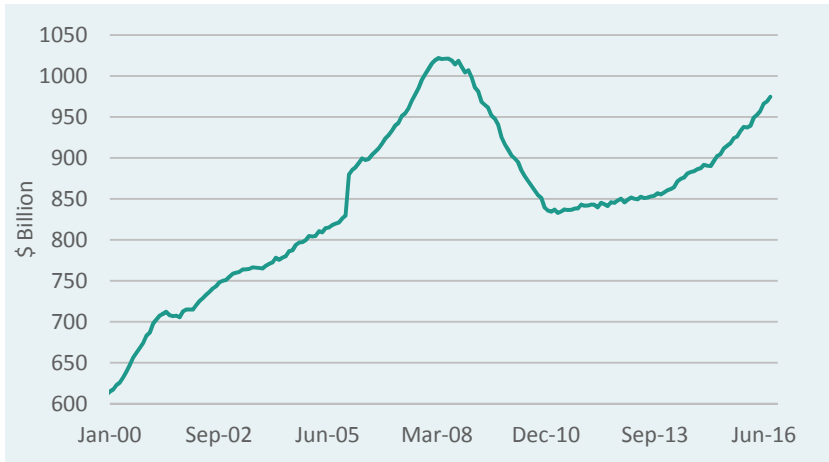
## GROWTH OF DISPOSABLE INCOME



Source: FRED, as of 8/31/16

# U.S. economics – The consumer

US REVOLVING OUTSTANDING CONSUMER CREDIT



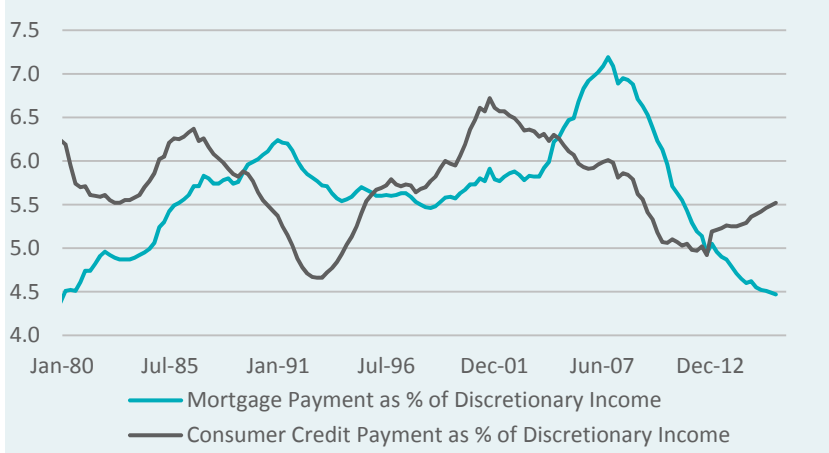
US HOUSEHOLD DEBT AS % OF DISPOSABLE INCOME



Consumer credit expansion has not been as robust as previous recoveries

Debt service ratios remain low

HOUSEHOLD DEBT SERVICE RATIO %



HOUSING STARTS



Source: FRED, as of 8/31/16

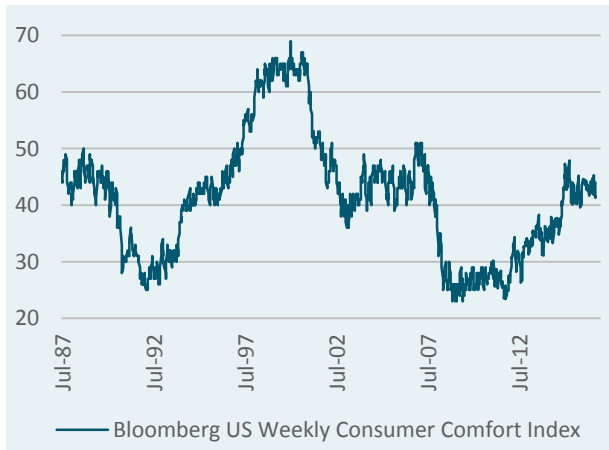
# U.S. economics – Sentiment

Consumer sentiment weakened slightly over the quarter. The University of Michigan Sentiment Index ended the quarter lower. Those surveyed indicated that current conditions worsened while expectations for future conditions brightened. The Bloomberg Consumer Comfort Index also declined, falling to its lowest level since mid-December.

zero for 18 consecutive months. However, following July the indicator slipped back into slightly negative territory.

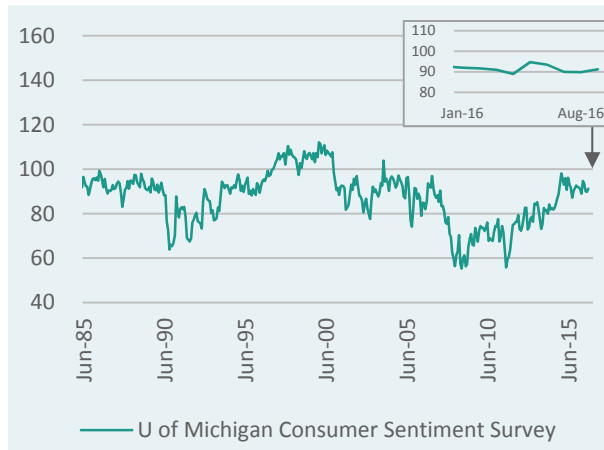
The Citigroup Economic Surprise Index unexpectedly jumped into positive territory in July after staying below

**CONSUMER COMFORT INDEX**



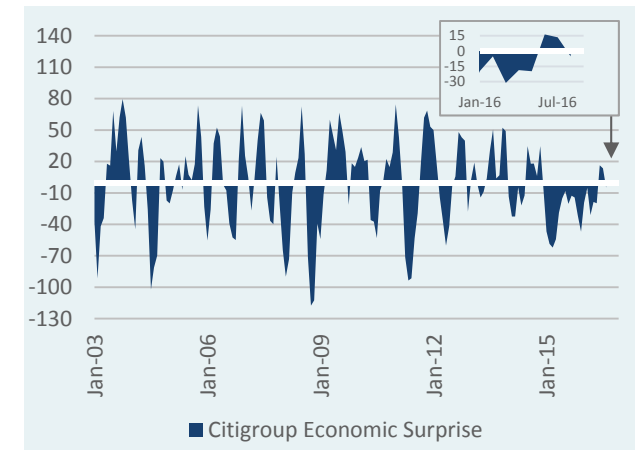
Source: Bloomberg, as of 9/25/16 (see Appendix)

**CONSUMER SENTIMENT**



Source: University of Michigan, as of 9/30/16 (see Appendix)

**ECONOMIC SURPRISE**



Source: Bloomberg, as of 9/30/16 (see Appendix)

# U.S. economics – Housing

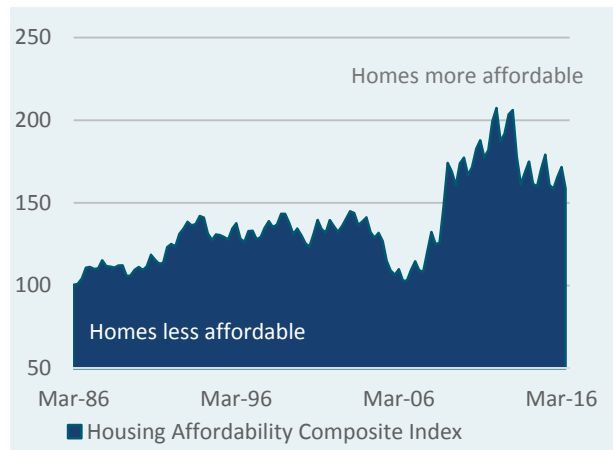
U.S. housing inventories are near historic lows across single and multifamily markets. Limited supply may help to put upward pressure on new construction activity, which has been below average.

Vacancy rates are near all-time lows in the rental space while homeownership rates continue to fall. Demand for rental properties has increased and multifamily housing starts continue to ramp up; however, multifamily homes are thought to contribute

substantially less to economic growth than that of single-family homes. This may factor into future economic growth.

Lower mortgage rates and moderate wage growth have helped to suppress household debt burdens through greater discretionary income. These forces have contributed to a stronger consumer which may bolster future home purchase and ownership trends, especially as home affordability remains high.

## HOME AFFORDABILITY



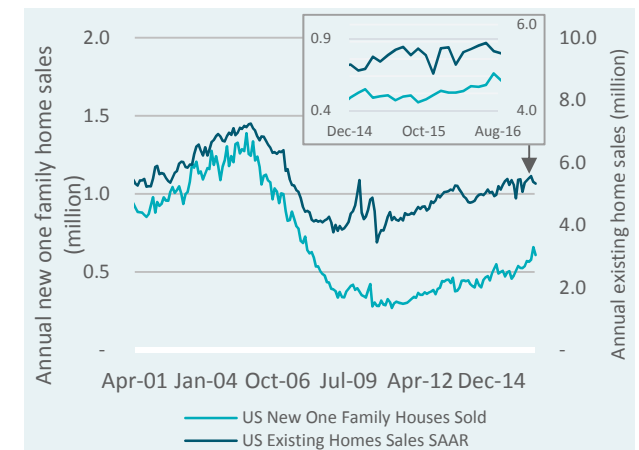
Source: National Association of Realtors, as of 6/30/16

## HOMEOWNERSHIP RATE



Source: FRED, as of 7/1/2016

## NEW & EXISTING HOME SALES



Source: Bloomberg, as of 8/31/16



# U.S. economics – Inflation

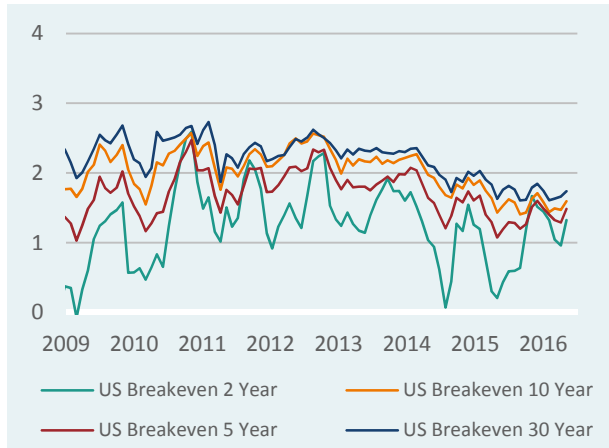
Inflation expectations were mixed during the quarter. The University of Michigan Inflation Expectations Survey reflected lower expected inflation, while the U.S. 10yr TIPS Breakeven indicated higher expectations.

Headline inflation rose 1.1% YoY while core inflation rose 2.3% YoY. Energy and gasoline continue to weigh on prices, while medical care services and shelter (housing costs) put upward pressure on overall prices.

Inflation surveys and inflation-sensitive instruments are inherently different and we might therefore expect discrepancies across these indicators.

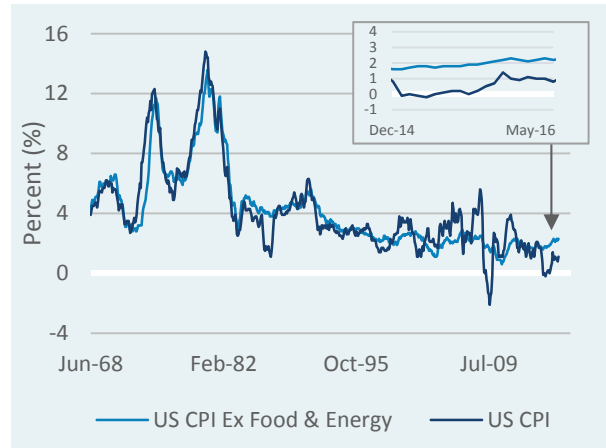
Public fear of inflation remains very low, and the Federal Reserve is hesitant to raise rates. We believe investors should be watchful of inflation trends. An inflation overshoot remains a potential danger, given less worry over inflation and less ability and/or willingness of the Fed to raise rates.

**U.S. TIPS BREAKEVEN INFLATION**



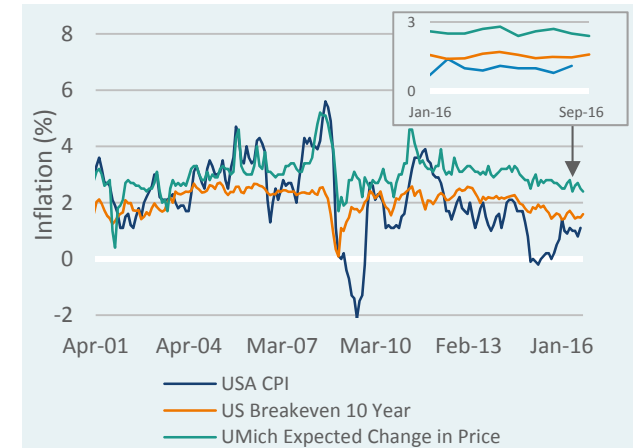
Source: FRED, as of 8/31/16

**U.S. CPI (YOY)**



Source: FRED, as of 7/31/16

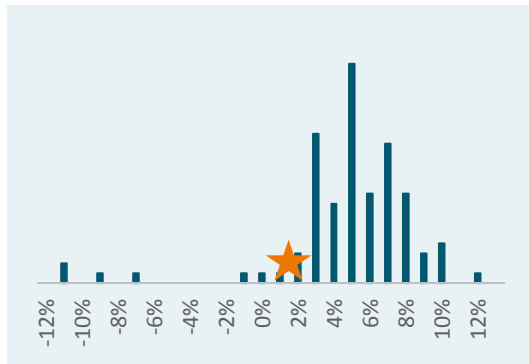
**MARKET EXPECTATIONS OF INFLATION**



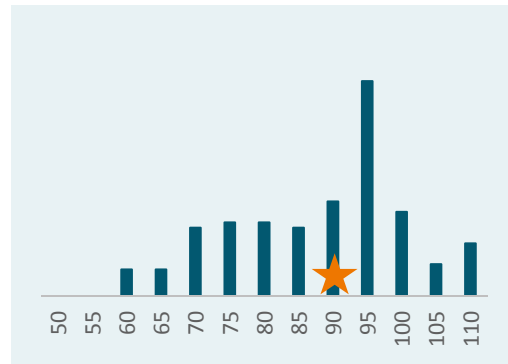
Source: Bloomberg, as of 9/30/16

# Where are we now?

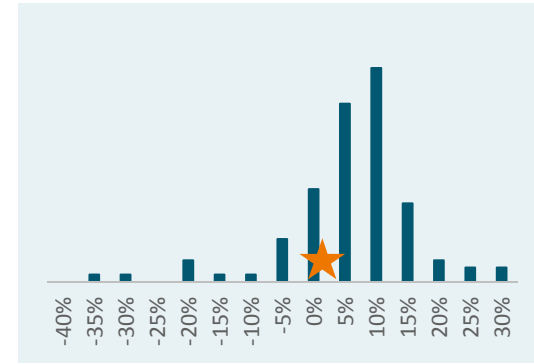
RETAIL SALES, YOY (SINCE 1993)



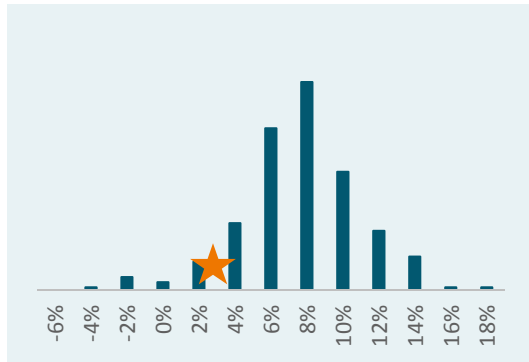
U OF MICH. CONFIDENCE (SINCE 1978)



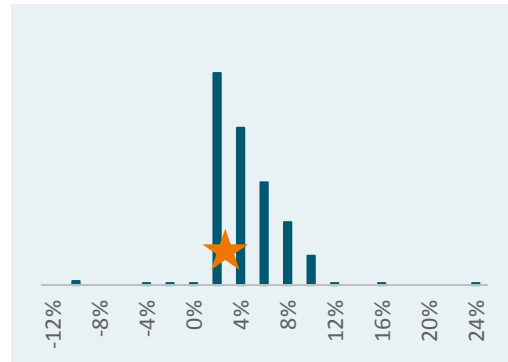
DURABLE GOODS ORDERS, YOY (SINCE 1992)



PERSONAL INCOME, YOY (1948)



PERSONAL CONSUMPTION, YOY (SINCE 1947)



CITI SURPRISE INDEX (SINCE 2003)



While these metrics clearly do not fall at the top end of their historical distribution, they are not outside normal ranges

Source: Bloomberg, as of 9/30/16

# International economics summary

- Developed economies continued to experience slow growth and low inflation. While inflation ticked up slightly in the Eurozone to 0.4%, it remains materially under the ECB’s target of “below, but close to, 2%”.
- The ECB left monetary policy unchanged at its September meeting, and cut economic growth expectations for the next three years.
- The BOJ shook up its monetary policy after completing a “comprehensive assessment of its current easing programs”. The central bank stated it will intentionally overshoot its inflation target of 2% and introduced a 0% target for the 10-year yield.
- Britain elected new prime minister Theresa May, who will be responsible for implementing Brexit. Increased uncertainty surrounding the timing and nature of the political change will continue. The potential impact of this uncertainty led to the first rate cut by the BOE since 2009.
- The IMF once again downgraded global growth forecasts for 2016 and 2017, this time to just above 3%. It now warns against economic stagnation and states that countries have found themselves in the position of relying on monetary and fiscal policy to lift growth prospects, and that this may be unsustainable.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.4% <i>6/30/16</i>	1.1% <i>8/31/16</i>	5.0% <i>9/30/16</i>
Western Europe	1.8% <i>6/30/16</i>	0.4% <i>9/30/16</i>	8.5% <i>6/30/16</i>
Japan	0.8% <i>6/30/16</i>	(0.5%) <i>8/31/16</i>	3.2% <i>6/30/16</i>
BRIC Nations	5.1% <i>6/30/16</i>	3.8% <i>6/30/16</i>	5.5% <i>6/30/16</i>
Brazil	(3.8%) <i>6/30/16</i>	9.0% <i>8/31/16</i>	11.7% <i>9/30/16</i>
Russia	(0.6%) <i>6/30/16</i>	6.9% <i>8/31/16</i>	5.6% <i>6/30/16</i>
India	7.1% <i>6/30/16</i>	5.1% <i>8/31/16</i>	7.1% <i>12/31/15</i>
China	6.7% <i>6/30/16</i>	1.3% <i>8/31/16</i>	4.1% <i>6/30/16</i>

# International economics

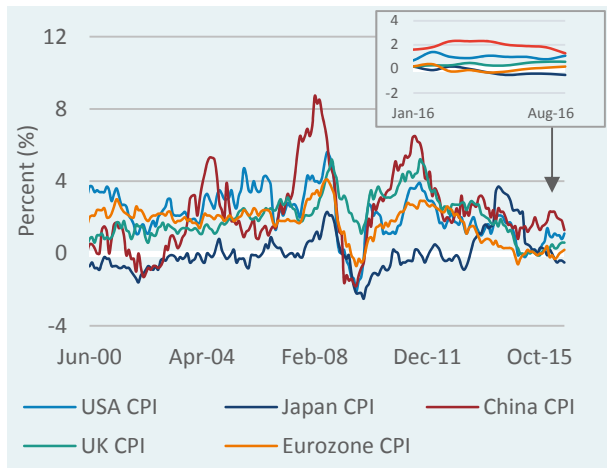
Further downward revisions and lackluster growth in Europe and Japan have encouraged central banks to maintain stimulus measures. Japan implemented a policy initiative which will target a 0% yield for the 10-year government bond. Japan continues to struggle with deflation as headline CPI fell to -0.5% YoY in August.

While economic data released in the U.K. post-Brexit has significantly beaten expectations, uncertainty remains regarding the specific details of the country's exit from the European Union. In its latest report, the BOE lowered the

2017 growth forecast to 0.8% from 2.3%. The central bank also expects inflation to hit 2.4% in 2018 and 2019, citing the fall of the pound sterling.

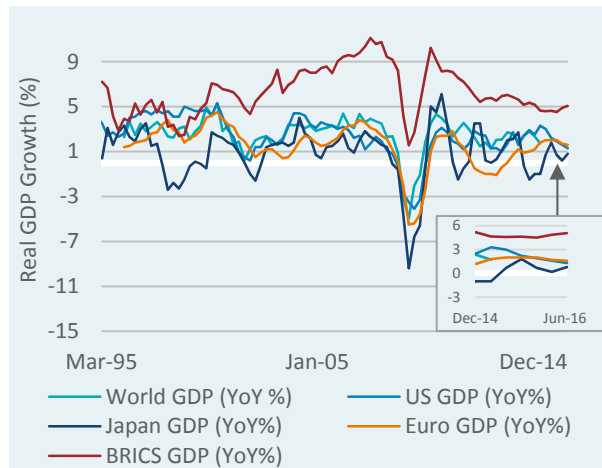
Emerging market economic growth picked up slightly at 4.6% YoY in the second quarter. After a drop off in growth following the global financial crisis, the outlook for emerging economies has improved. With slow growth expectations for developed markets, an opportunity may exist in both emerging market equities and fixed income.

## INTERNATIONAL INFLATION



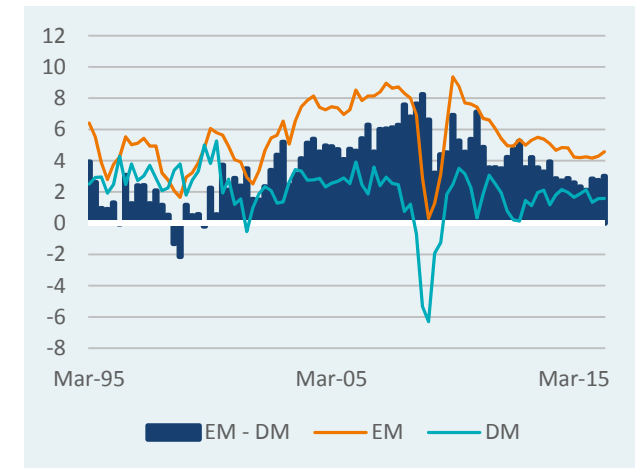
Source: Bloomberg, as of 8/31/16

## REAL GDP GROWTH



Source: Bloomberg, as of 6/30/16

## EM VS. DM REAL GDP GROWTH



Source: Bloomberg, as of 6/30/16

# Post-Brexit

There have been significant changes in U.K. and European political behavior following the Brexit vote. Rear guard actions in both Parliament and the courts in the U.K. have begun to attempt to slow or stop the implementation of Brexit. The Prime Minister has said that Article 50 will be triggered in March 2017.

One of the key elements of the discussion has been debate over whether Brexit should be a 'hard' Brexit (full withdrawal from the Single Market) or a 'soft' Brexit (with continuing participation in the Single Market for a fee, and with continuing free movement of people). Pro-Brexit

campaigners point out that this issue was extensively discussed during the campaign, while Remainers claim that the U.K. population was ill-informed during the run-up to the vote, although their hand is weakened by the fact that their predictions of economic chaos were a Brexit vote to win have so far failed to materialize.

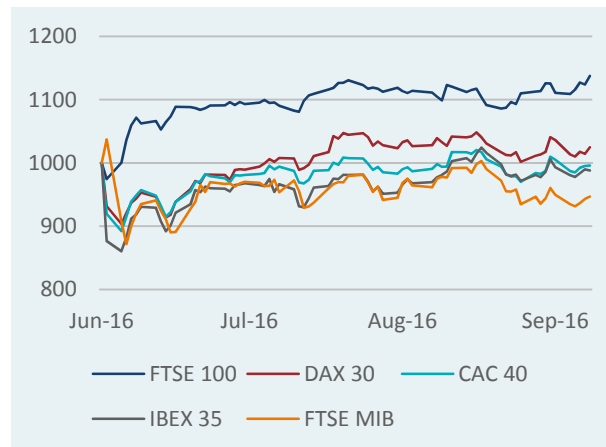
The remaining EU members remain unsure how to proceed, with hard-line negotiators appointed by the EU but strong financial interests in many countries in close ongoing trading links with the U.K.

**GBP/USD**



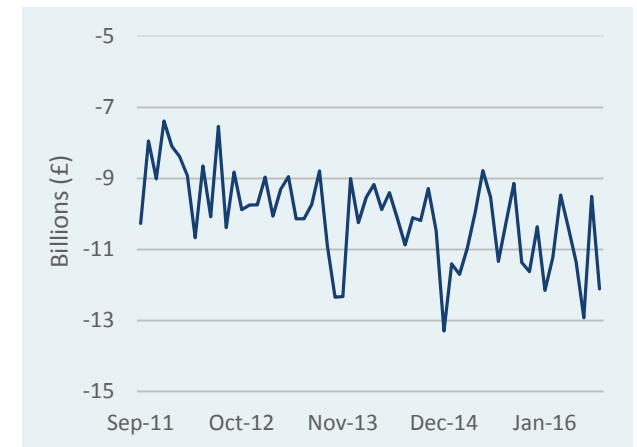
Source: FRED, as of 10/19/16

**EUROPEAN EQUITY MOVEMENT**



Source: Bloomberg, 6/23-9/30/16 – shown in local currency terms

**U.K. BALANCE OF TRADE**



Source: Bloomberg, as of 9/30/16

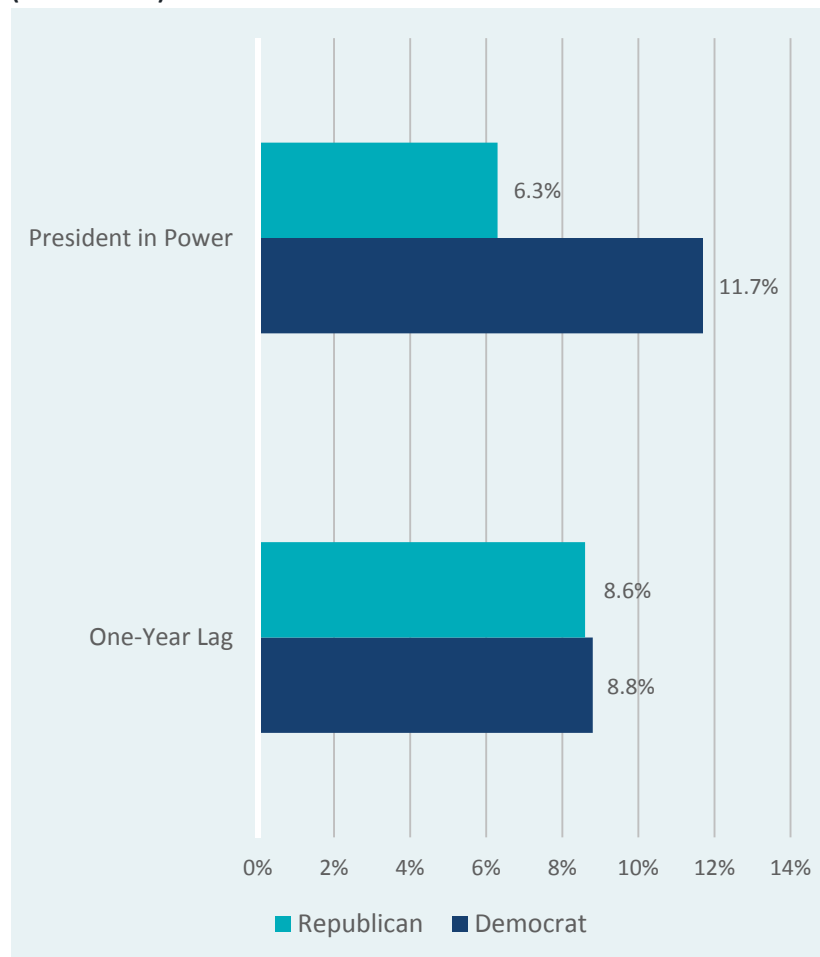
# U.S. presidential election

Correlation between election results and long-term market performance has generally been weak, and the outcome depends on how the data is sliced. The S&P 500 has experienced greater price appreciation with a Democrat in power, but the results are less clear when a one-year policy lag is introduced; research results depend on how the relationship is defined.

It appears that a Clinton win would most likely result in little change from the current macroeconomic policy. However, strong congressional pressure would be likely on trade issues, and there would be continuing challenges to the long term sustainability of the Affordable Care Act. Both candidates have supported increased spending on infrastructure, which would provide support for the materials and construction sectors.

A Trump win might bring greater uncertainty because his economic policy plans are less known/understood. Trump's impact may also be felt more quickly through his use of executive orders to reshape the regulatory environment, and some policies enacted by Obama may be undone, through the same means.

**AVERAGE CALENDAR YEAR S&P 500 PRICE RETURN  
(1951-2015)**



The relationship between election results and market performance is weak

*Note: Top chart = annualized return during time in office, Lower chart = annualized return during time in office but with 1-year lag*

# Fixed income rates & credit

# Interest rate environment

- The U.S. Treasury curve continued to flatten, influenced by increased expectations of an interest rate hike by the end of the year.
- Global interest rates remain near all time lows, although volatility picked up. Continued easing by central banks in addition to low inflation and expectations for slowing growth contribute to an environment of secularly low yields.
- When thinking about bond yields today, it may be useful not only to consider nominal yields, which are at historic lows, but also *real* yields, which paint a much more reasonable picture. Current levels of inflation and future expectations may help put things into context. Furthermore, investors may see markets drive yields higher if inflation expectations were to rise.
- Negative yielding sovereign and corporate debt was \$11.6 trillion at quarter end, mostly from Japan and the Eurozone. We remain concerned about Japanese and European rates as negative yields and low liquidity detract from the attractiveness of these assets.
- Yields on Japanese Treasuries increased sharply in late July after the BOJ chose to keep stimulus measures on hold. The 10-year JGB yield briefly traded around 0% before falling back into negative territory at the end of September.
- European sovereign bonds sold off during the beginning of September over concerns that central banks may begin cutting back on monetary easing measures.

Area	Short Term (3M)	10 Year
United States	0.27%	1.59%
Germany	(0.76%)	(0.12%)
France	(0.67%)	0.19%
Spain	(0.60%)	0.88%
Italy	(0.39%)	1.19%
Greece	3.34%	8.28%
U.K.	0.32%	0.75%
Japan	(0.33%)	(0.09%)
Australia	1.75%	1.91%
China	2.23%	2.74%
Brazil	13.73%	11.60%
Russia	9.80%	8.17%

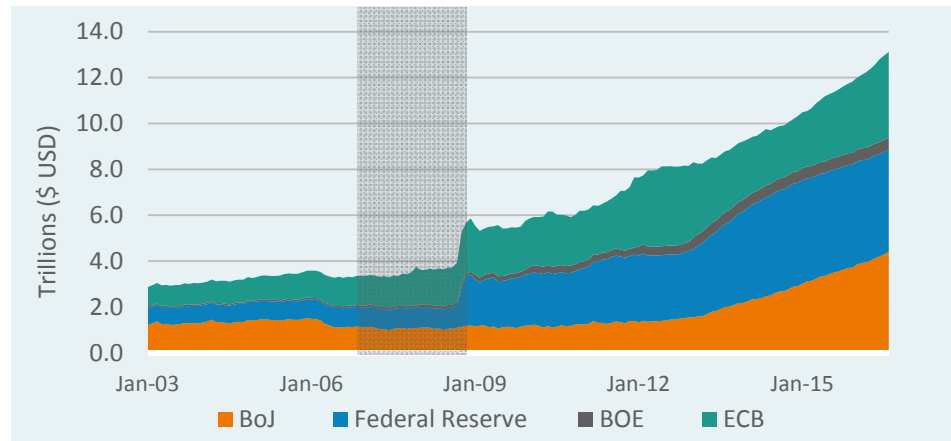
Source: Bloomberg, as of 9/30/16



# Unwinding QE

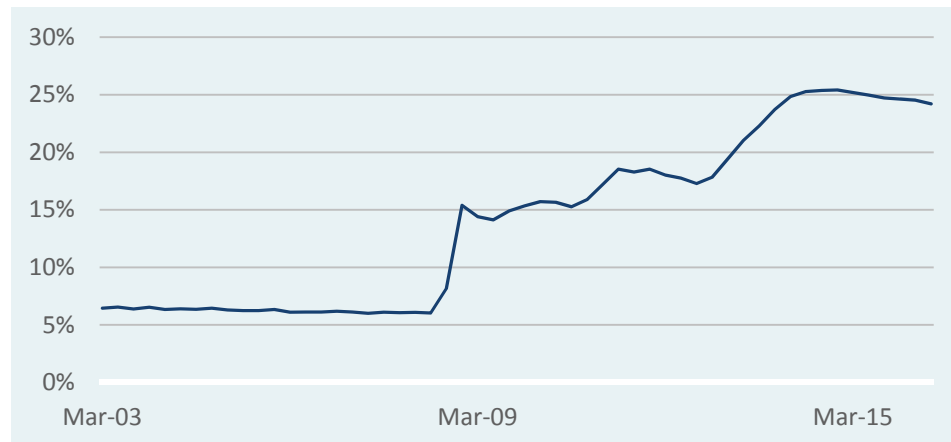
- It appears that we may be nearing the end stage of monetary policy expansion, with over \$7 trillion added to central bank balance sheets. The way in which central banks choose to unwind asset purchases, or how they manage them, could have a significant impact on financial markets.
- Balance sheets may be slowly trimmed through gradual asset sales, or by allowing existing bonds to mature. Shrinking the balance sheet in this manner naturally has a tightening effect, which places downward pressure on asset prices.
- Balance sheet sizes may also be maintained for some time or possibly indefinitely. Were the velocity of money to begin to pick up this balance sheet expansion might lead to inflationary pressure.
- Balance sheets might also be monetized by writing off assets, allowing governments to “walk away” from their debt. With few historical comparisons, forecasting the effects of such write offs is exceptionally difficult. In addition to inflation concerns, this strategy could undermine the independence of central banks and public confidence in them.

**CENTRAL BANKS BALANCE SHEETS**



Source: FRED, Federal Reserve, BOE, ECB, Verus, as of 8/1/16

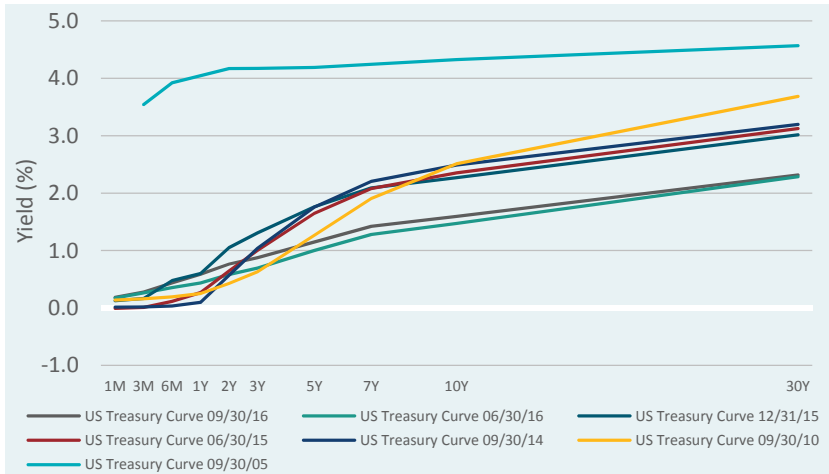
**FEDERAL RESERVE ASSETS TO GDP**



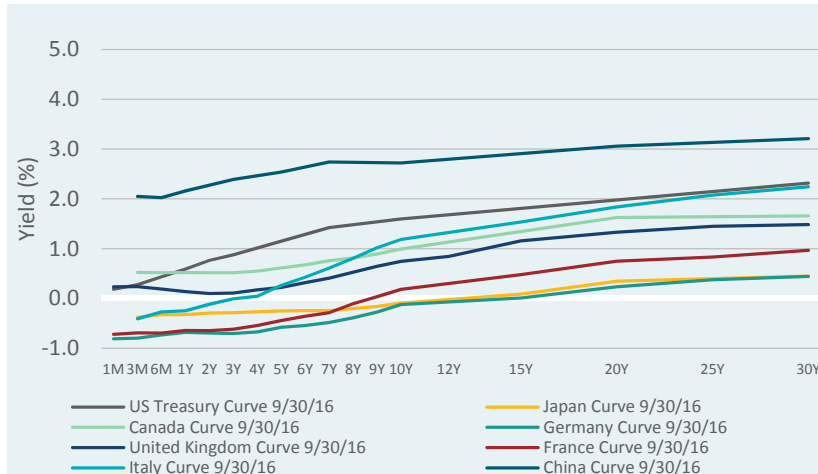
Source: FRED, as of 6/30/16

# Yield environment

U.S. YIELD CURVE

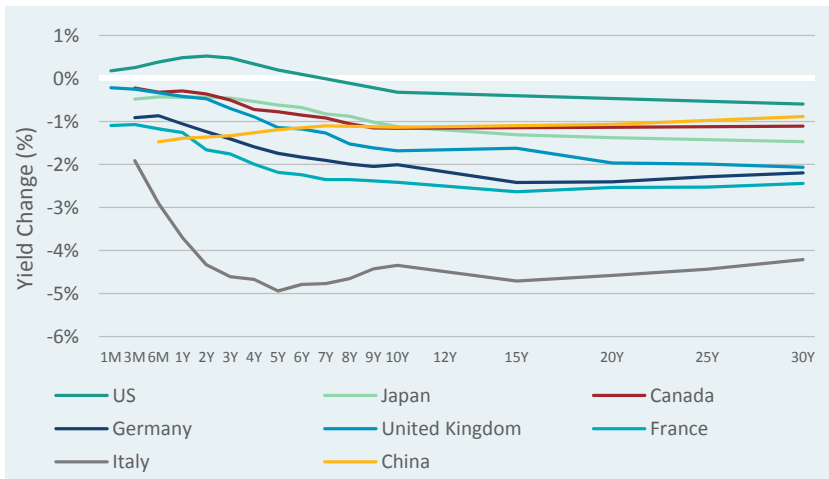


GLOBAL GOVERNMENT YIELD CURVES

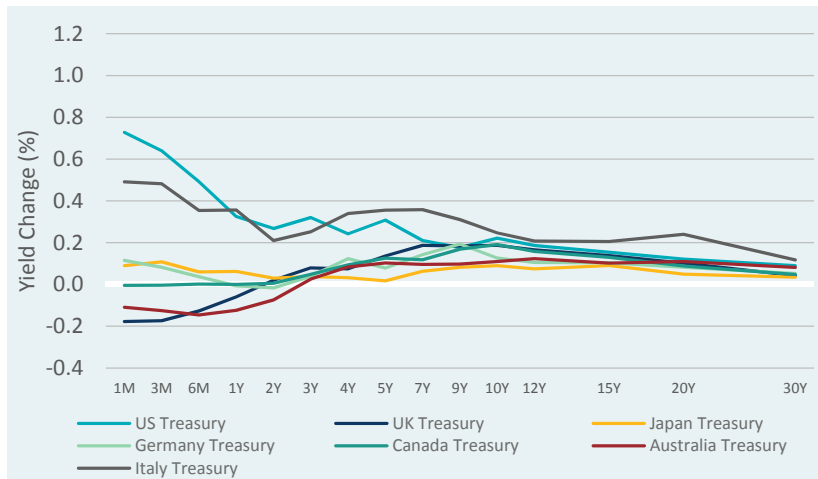


Global investors continue to prefer U.S. Treasuries due to higher relative yields

YIELD CURVE CHANGES OVER LAST FIVE YEARS

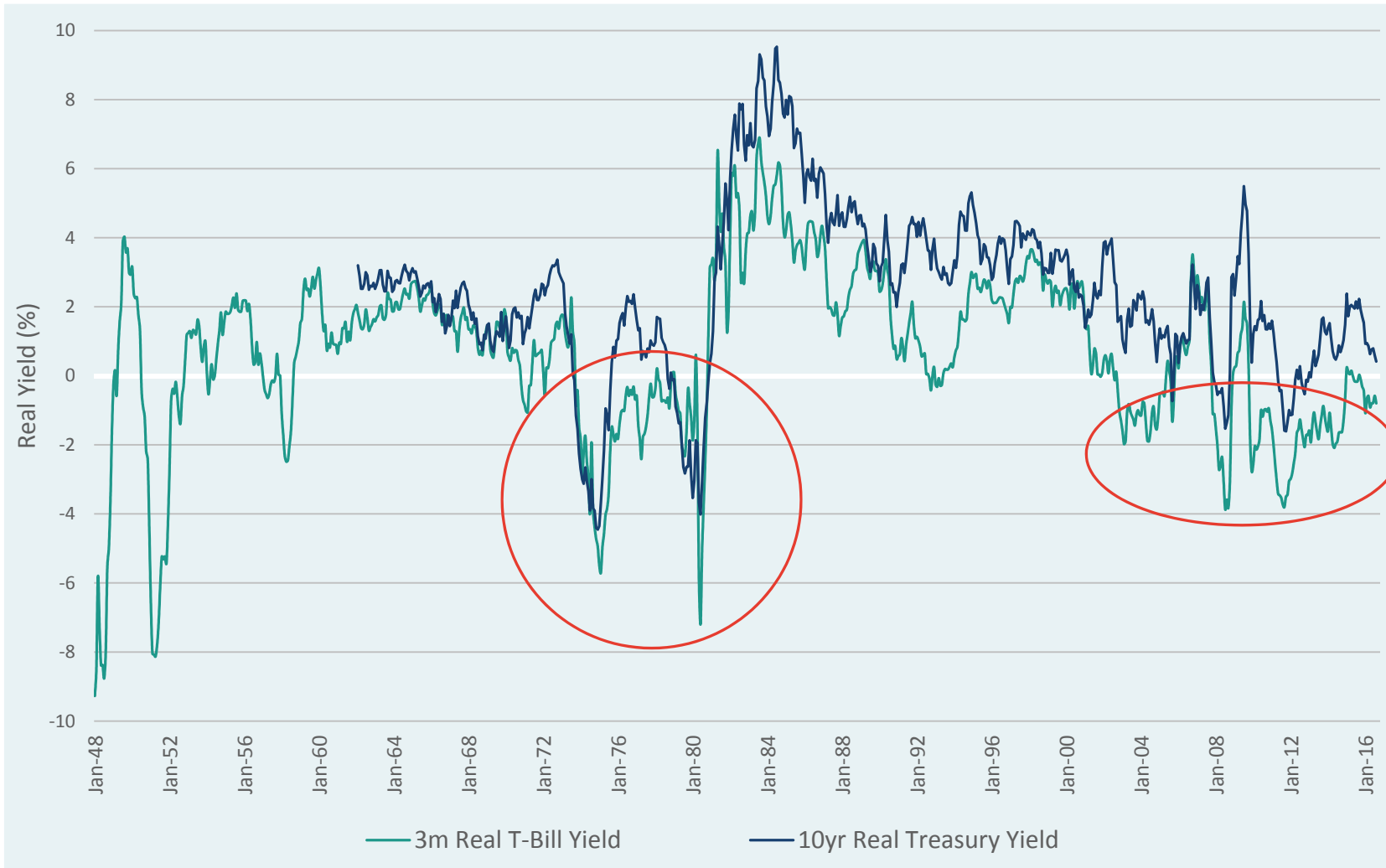


IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/16

# Yield environment



Negative real yields are not a new phenomenon

Yield levels should be viewed in context of the inflation environment

Source: Verus, as of 8/31/16

# Credit environment

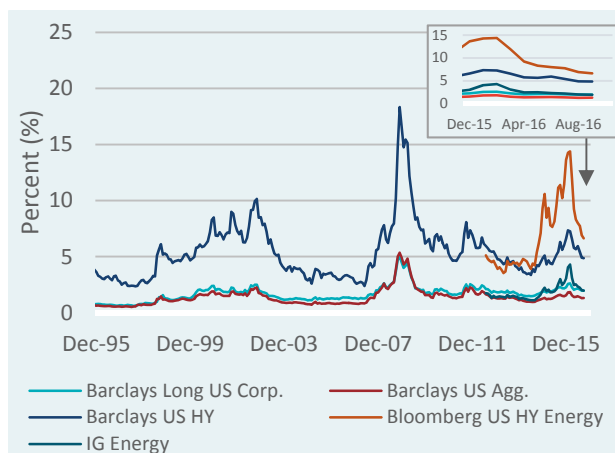
High yield returns across all sectors - energy and metals and mining in particular - have been strong since the trough in Q1. As evidence of this performance, high yield spreads have compressed to below 5.1% as of September from a high of 8.9% earlier in the year.

U.S. credit markets have broadly normalized following increased volatility in Q1. While below the long-term trend, U.S. GDP growth has remained positive, which has been a tailwind to credit markets in general. In addition, 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.

LIBOR rates have increased meaningfully as investors prepared for the pending regulatory changes to money market funds. Prime funds will now report a floating NAV. This change has prompted some investors to redeem their exposures, thereby reducing their demand for commercial paper and LIBOR-based loans causing the rate to increase.

## CREDIT SPREADS



Source: Barclays Capital Indices, Bloomberg, as of 9/30/16

## 3 MONTH LIBOR



Source: Bloomberg, as of 9/30/16

## SPREADS

Market	Credit Spread (9/30/16)	Credit Spread (1 Year Ago)
Long US Corporate	1.8%	2.1%
US Aggregate	0.9%	1.2%
US High Yield	5.1%	6.8%
US High Yield Energy	6.6%	11.4%
US Bank Loans	3.9%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 9/30/16

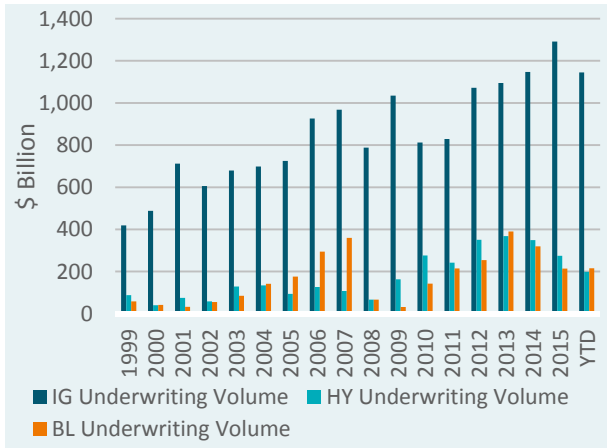
# Issuance and default

Defaults have trended higher in recent months, particularly in the high yield debt space. Default rates have risen well above the trailing 20-year average and are at the highest levels since the global financial crisis; however, much of this activity has been driven specifically by energy issuers. Overall issuance is on track for a year-over-year decline.

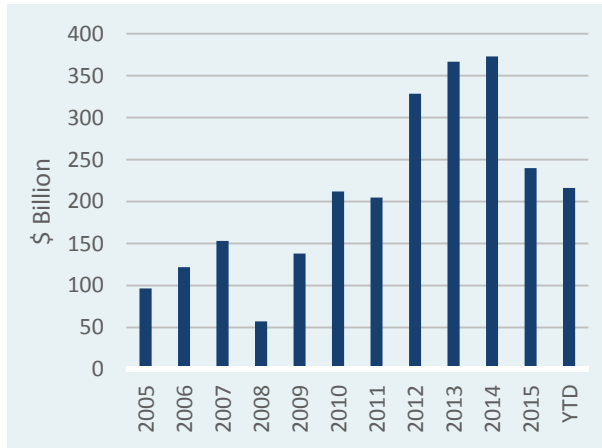
New bond issuance in emerging markets, especially corporates, has continued at a relatively strong pace. Many of these issuers can only borrow in U.S. dollars. As such, eventual rises in U.S. interest rates would increase borrowing costs. Investors' appetites for emerging market debt remains strong based on relative value compared to developed market bonds.

The recent increase in LIBOR rates has been a headwind for bank loan borrowers, as reflected in flattening issuance.

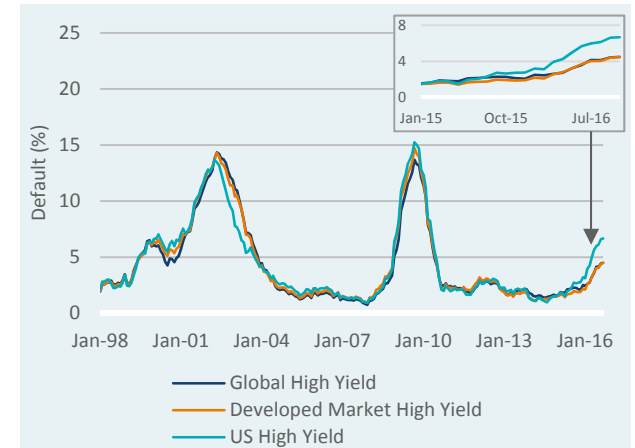
## U.S. DEBT ISSUANCE



## EM DEBT ISSUANCE



## HY DEFAULT TRENDS (ROLLING 1 YEAR)

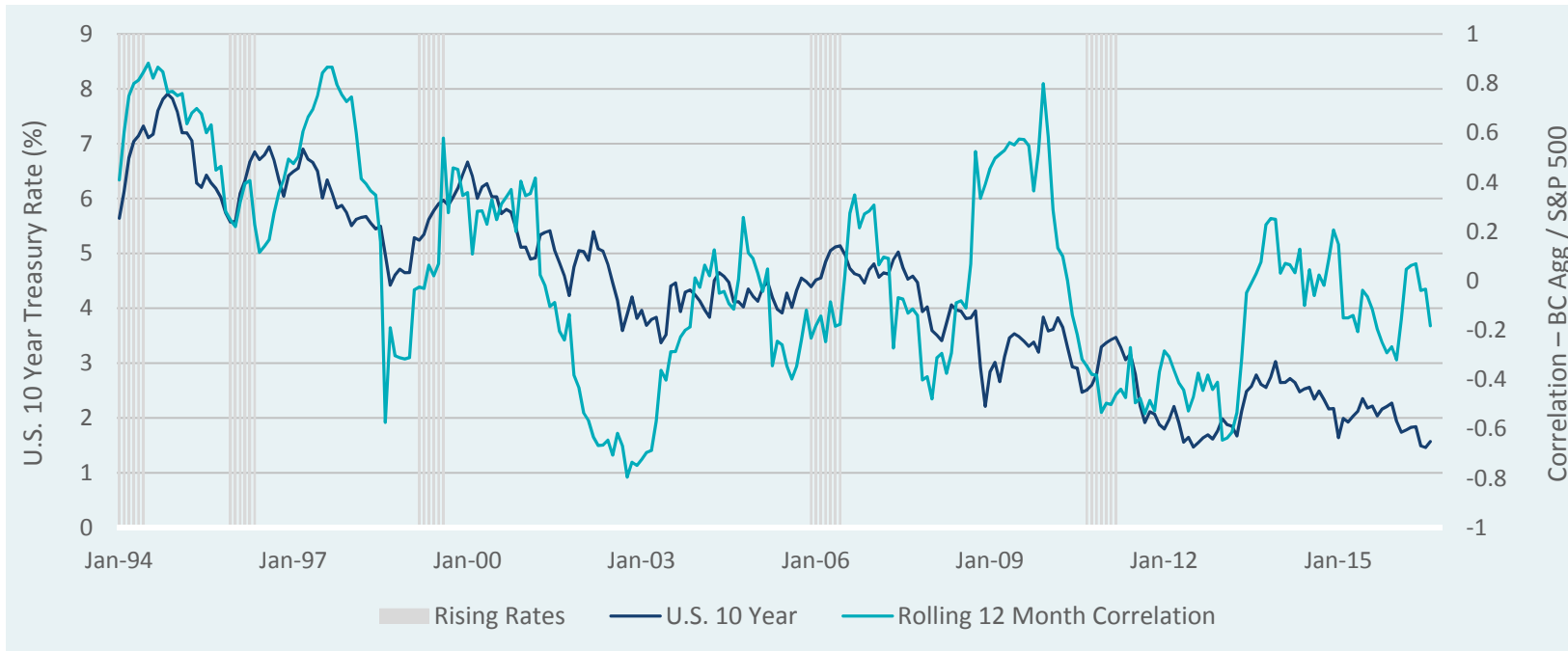


Source: Bloomberg, BofA Merrill Lynch, as of 9/30/16

Source: JP Morgan, as of 9/30/16

Source: Credit Suisse, BofA, as of 9/30/16

# Fixed income – rising yields



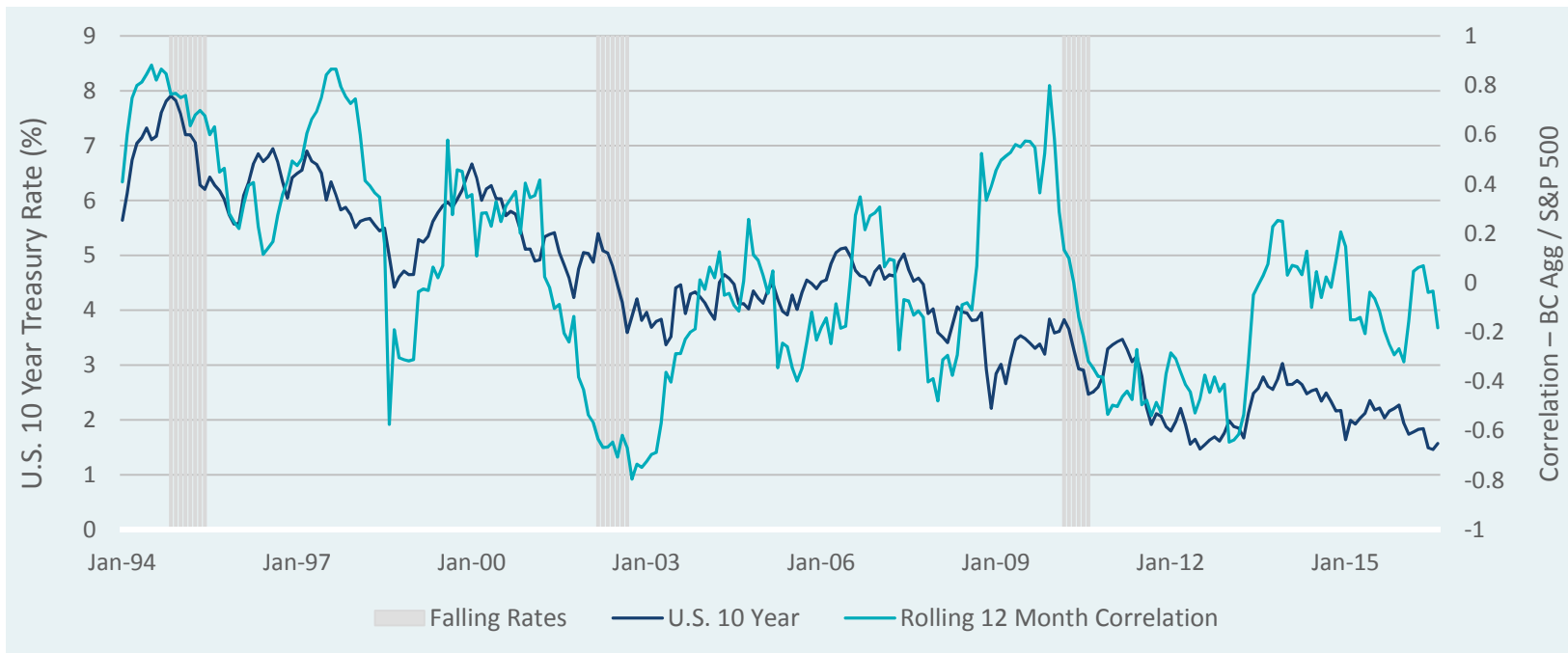
During rising yield environments (6 months of consecutive rising yields) BC Agg and S&P 500 returns have shown very different correlation

We are currently in a negative correlation environment

Date	Months	Yield increase	Average return correlation*
Jan 1994-Jun 1994	6	1.68	0.70
Dec 1995-May 1996	6	1.28	0.30
Mar 1999-Aug 1999	6	0.73	0.11
Dec 2005-June 2006	7	0.75	-0.18
Sep 2010-Mar 2011	7	0.96	-0.44

\*Rolling 12 Month correlation between Barclays US Aggregate and S&P 500. "Rising yield environment" is defined as 6 months of consecutive yield increases  
Source: Bloomberg, MPI, as of 8/31/16

# Fixed income – decreasing yields



Correlations have varied during decreasing yield environments (6 months of falling yields), from -0.66 to 0.71

Diversification benefits have not been clearly linked to the rate environment

Date	Months	Yield decrease	Average return correlation*
Nov 1994-June 1995	8	1.70	0.71
Mar 2002-Sep 2002	7	1.80	-0.66
Mar 2010-Aug 2010	6	1.36	-0.07

\*Rolling 12 Month correlation between Barclays US Aggregate and S&P 500. "Decreasing yield environment" is defined as 6 months of consecutive yield decreases.

Source: Bloomberg, MPI, as of 8/31/16

# Equity



# Equity environment

- Equity market risks continue to appear asymmetrical to the downside - the U.S. equity market in particular.
- U.S. equities rallied to start the quarter as central banks communicated to the markets that further monetary easing would be available if necessary, in response to the Brexit vote. In the final two months of the quarter, the U.S. equity markets stayed relatively flat and volatility was below average.
- A sixth consecutive quarter of year-over-year earnings decline is expected for the S&P. FactSet has forecast a -2.1% earnings decline for Q3.
- Information technology (12.9%) was the best performing sector in the S&P 500 by a large margin on the back of higher earnings expectations. Utilities (-5.9%) and telecom services (-5.6%) were the worst performing sectors in the index.
- The FTSE 100 (hedged) returned 7.1% over the third quarter after concerns over the impact of Brexit somewhat subsided.
- The U.S. dollar fell 0.7% in Q3 on a trade-weighted basis. Recent dollar stabilization may be disrupted if the Fed goes ahead with further rate hikes. As most developed economies remain in easing mode, further U.S. hikes would likely add to dollar strength.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	4.0%		7.9%		14.9%	
US Small Cap (Russell 2000)	9.0%		11.5%		15.5%	
US Large Value (Russell 1000 Value)	3.5%		10.0%		16.2%	
US Large Growth (Russell 1000 Growth)	4.6%		6.0%		13.8%	
International Large (MSCI EAFE)	6.4%	6.3%	1.7%	(1.0%)	6.5%	5.3%
Eurozone (Euro Stoxx 50)	6.3%	4.8%	(2.4%)	(4.1%)	0.4%	0.5%
U.K. (FTSE 100)	4.0%	7.1%	0.6%	14.1%	1.5%	18.4%
Japan (NIKKEI 225)	8.2%	5.9%	4.4%	(14.3%)	13.6%	(6.2%)
Emerging Markets (MSCI Emerging Markets)	9.0%	6.3%	16.0%	9.7%	16.8%	10.7%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/16

# Domestic equity

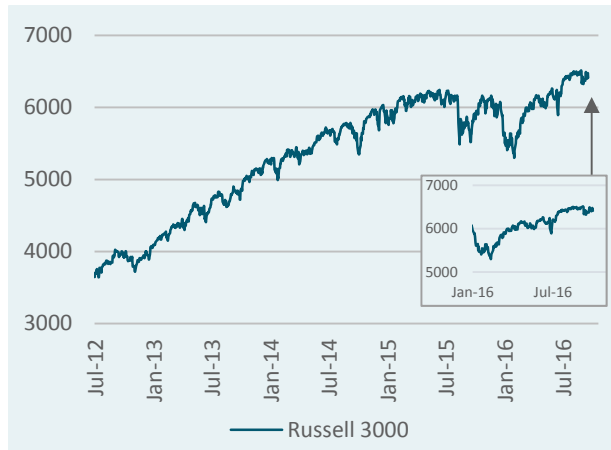
After minimal reaction to Brexit, domestic equities continued higher in July, then delivered two quiet months to finish the quarter. The S&P 500 returned 3.9% in Q3. The market appears to be taking a wait-and-see approach with important oncoming events such as elections and Federal Reserve meetings.

With higher equity prices and lower overall earnings, valuations have expanded. The forward earnings multiple for the S&P 500 was 18.5 at quarter end,

relative to its 25-year average of 16.6 (in the 81<sup>st</sup> percentile). Year-over-year earnings growth is expected to be negative for the sixth consecutive quarter, heavily influenced by the energy sector and lower oil prices. As the effects of monetary stimulus on U.S. financial markets wanes, earnings will play an important role for future equity returns.

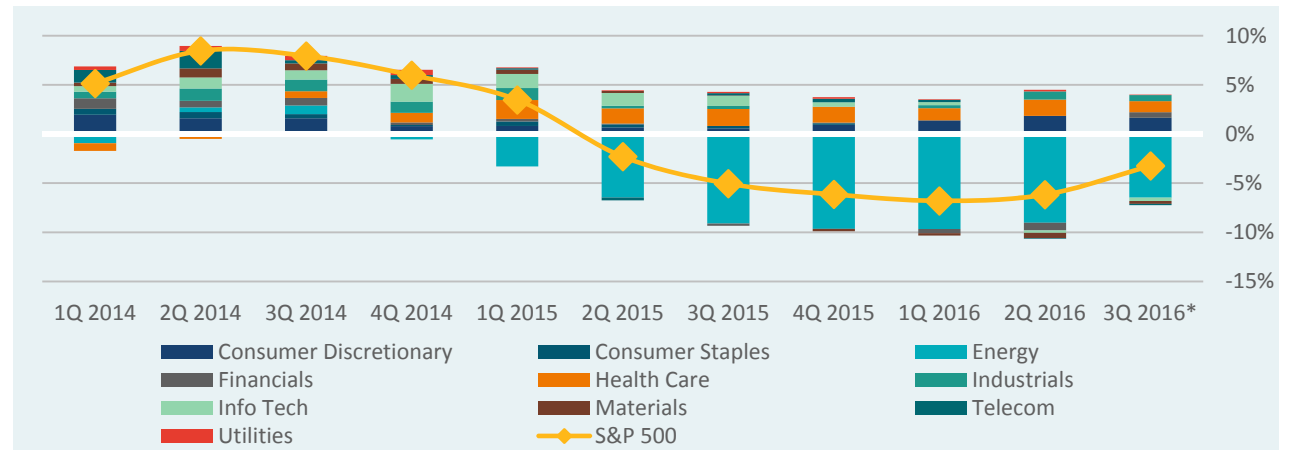
U.S. earnings results will likely dictate the path of equities

## U.S. EQUITIES



Source: Russell Investments, as of 9/26/16

## SECTOR IMPACT ON S&P 500 EARNINGS GROWTH



Source: Bloomberg, as of 9/30/16

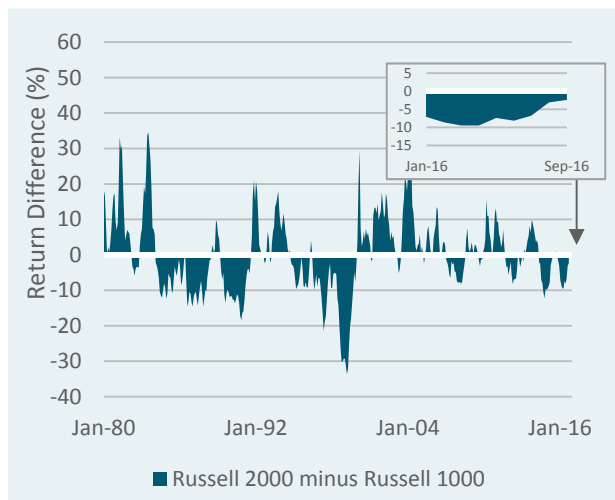
# Domestic equity size and style

Growth stocks outperformed value during the third quarter as the Russell 1000 Growth Index and Russell 1000 Value Index returned 4.6% and 3.5%, respectively. However, value has outperformed growth by 4.0% year-to-date.

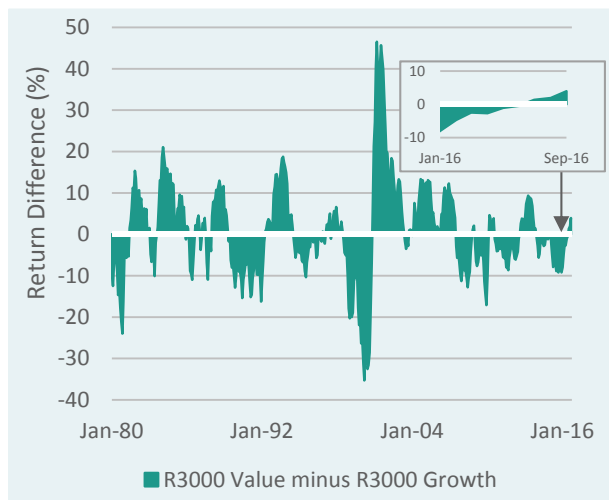
3.5% year-to-date, reversing a recent trend of large cap outperformance. The relative P/E ratio of small to large cap equities at the end of September was 2.07 - well above its long-term average of 1.39 - suggesting that small cap stocks may be relatively overvalued.

In the third quarter, the Russell 2000 Index returned 9.0% and the Russell 1000 Index returned 4.0%. Small cap equities have also beaten large cap equities by

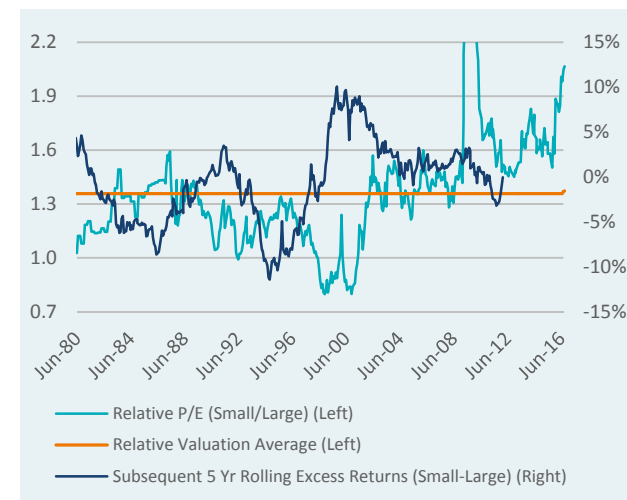
**SMALL CAP VS LARGE CAP (YOY)**



**VALUE VS GROWTH (YOY)**



**RELATIVE P/E RATIO (SMALL VS LARGE)**



Source: Russell Investments, as of 9/30/16

Source: Russell Investments, as of 9/30/16

Source: Russell, Bloomberg, as of 9/30/16

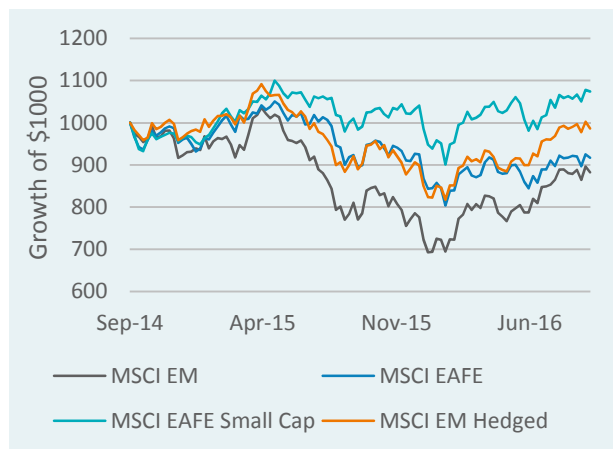
# International equity

Central banks remained accommodative in Q3, helping to generate a rally in international equities. Low and negative yields in Japan and the Eurozone helped maintain the relative attractiveness of equities in these markets.

On a hedged basis, international developed equities outperformed domestic equities with the MSCI EAFE returning 6.3%, and the S&P 500 returning only 3.9% during the quarter.

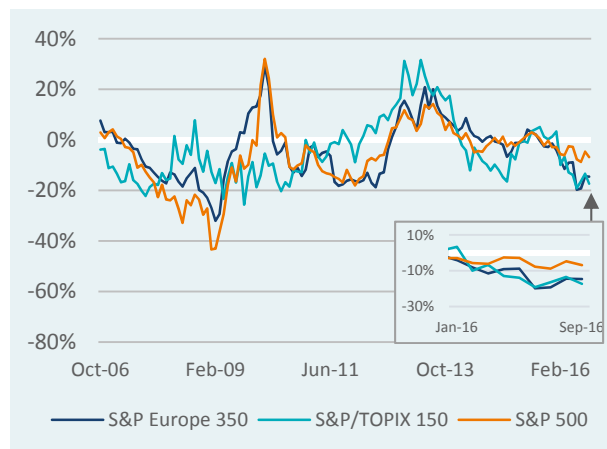
Financial stocks continue to lag, though the third quarter saw more healthy returns. Banks in Japan and the Eurozone were given a boost when the BOJ and ECB chose not to increase stimulus measures. Significant headwinds remain, however, as negative interest rates continue to hurt bank profitability.

**GLOBAL EQUITY PERFORMANCE**



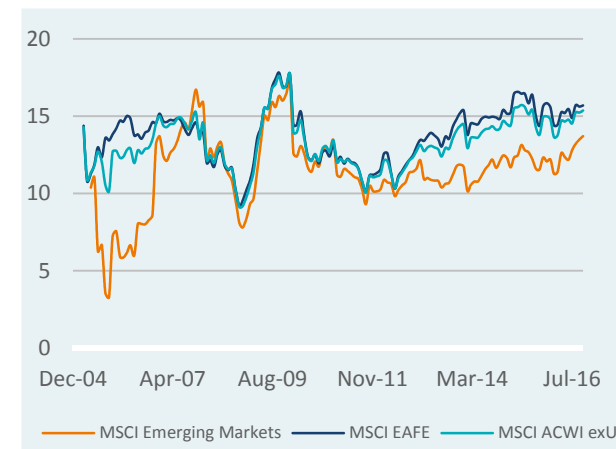
Source: Bloomberg, as of 9/30/16

**12-MONTH ROLLING RELATIVE FINANCIAL SECTOR RETURNS**



Source: MPI, as of 9/30/16, in local currency terms

**INTERNATIONAL FORWARD P/E RATIOS**



Source: MSCI, as of 9/30/16

# Emerging market equity

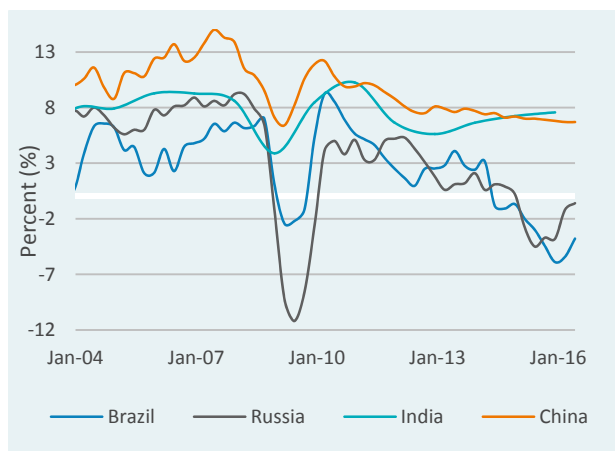
Emerging market equities experienced a rebound during Q3, returning 6.3% on a hedged basis and 9% unhedged. Emerging market earnings per share growth turned positive in 2016, reversing a 5-year downward trend. Valuations remain below average and materially more attractive than those of developed markets.

Moderating commodity prices, continued developed central bank accommodation, less U.S. dollar strengthening, and stability in China, have helped to bolster investor risk appetites and the emerging market

outlook, fueling fund flows into these markets.

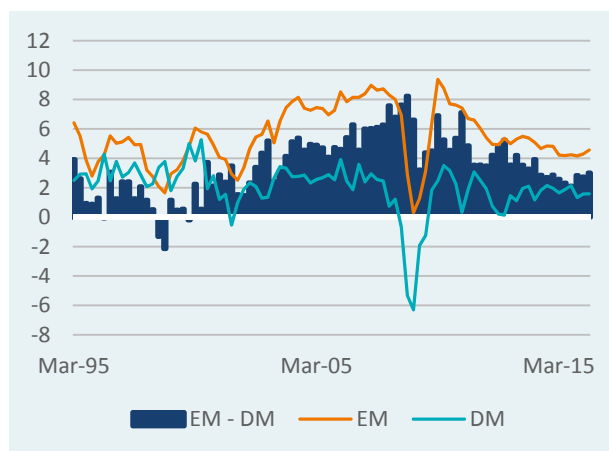
Many emerging market economies experienced a rough readjustment period following the commodity supercycle reversal and saw severe currency depreciation. However, many economies such as Russia have allowed currency devaluation to work as an effective economic shock absorber to mitigate current account problems which these economies often experience during commodity (export) price choppiness.

**ECONOMIC GROWTH (REAL GDP YOY)**



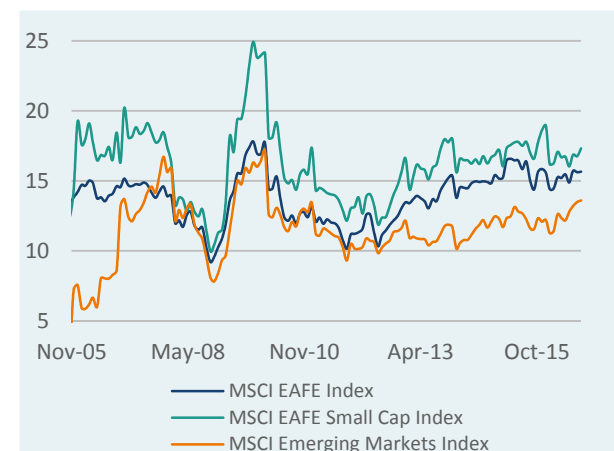
Source: Bloomberg, as of 6/30/16

**EM VS. DM REAL GDP GROWTH**



Source: Bloomberg, as of 6/30/16

**FORWARD P/E**



Source: MSCI, as of 9/30/16

# Equity valuations

Domestic large cap equity valuations remain above average. The forward earnings multiple for the S&P 500 was 18.5 at quarter end, relative to its 25-year average of 16.6. This places the forward P/E in the 81<sup>st</sup> percentile of the past 25 years.

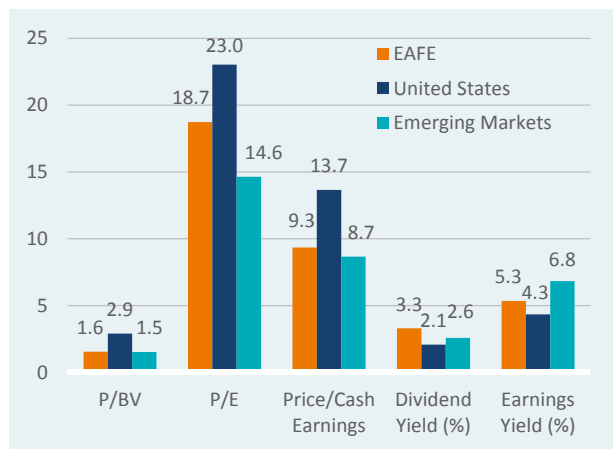
Large cap equity valuations are also slightly above average based on the Shiller P/E ratio.

Small cap equity valuations are above long-term

averages, suggesting that small caps are currently overvalued. The forward P/E ratio for the Russell 2000 as of September 30<sup>th</sup> was 28.1, compared to the long-term average of 25.3.

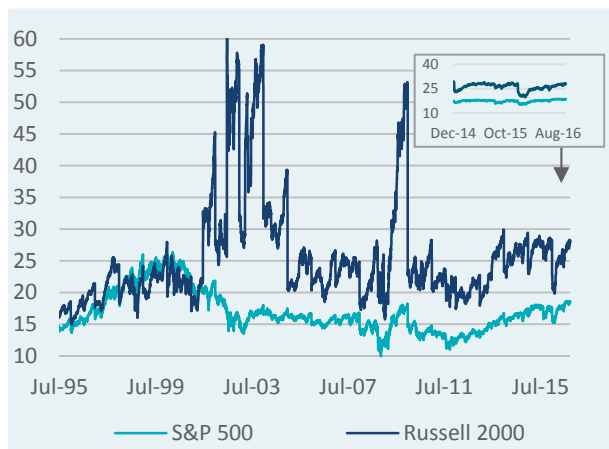
Historically, low interest rate and low inflationary environments have coincided with above-average valuations (see slide 35). This makes it difficult to tell whether equities are truly overvalued or if current valuations simply reflect the economic environment.

## MSCI VALUATION METRICS (3 MONTH AVERAGE)



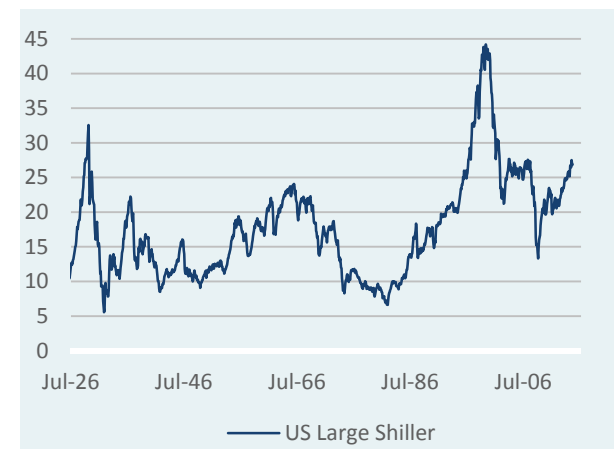
Source: MSCI, as of 9/30/16

## FORWARD P/E



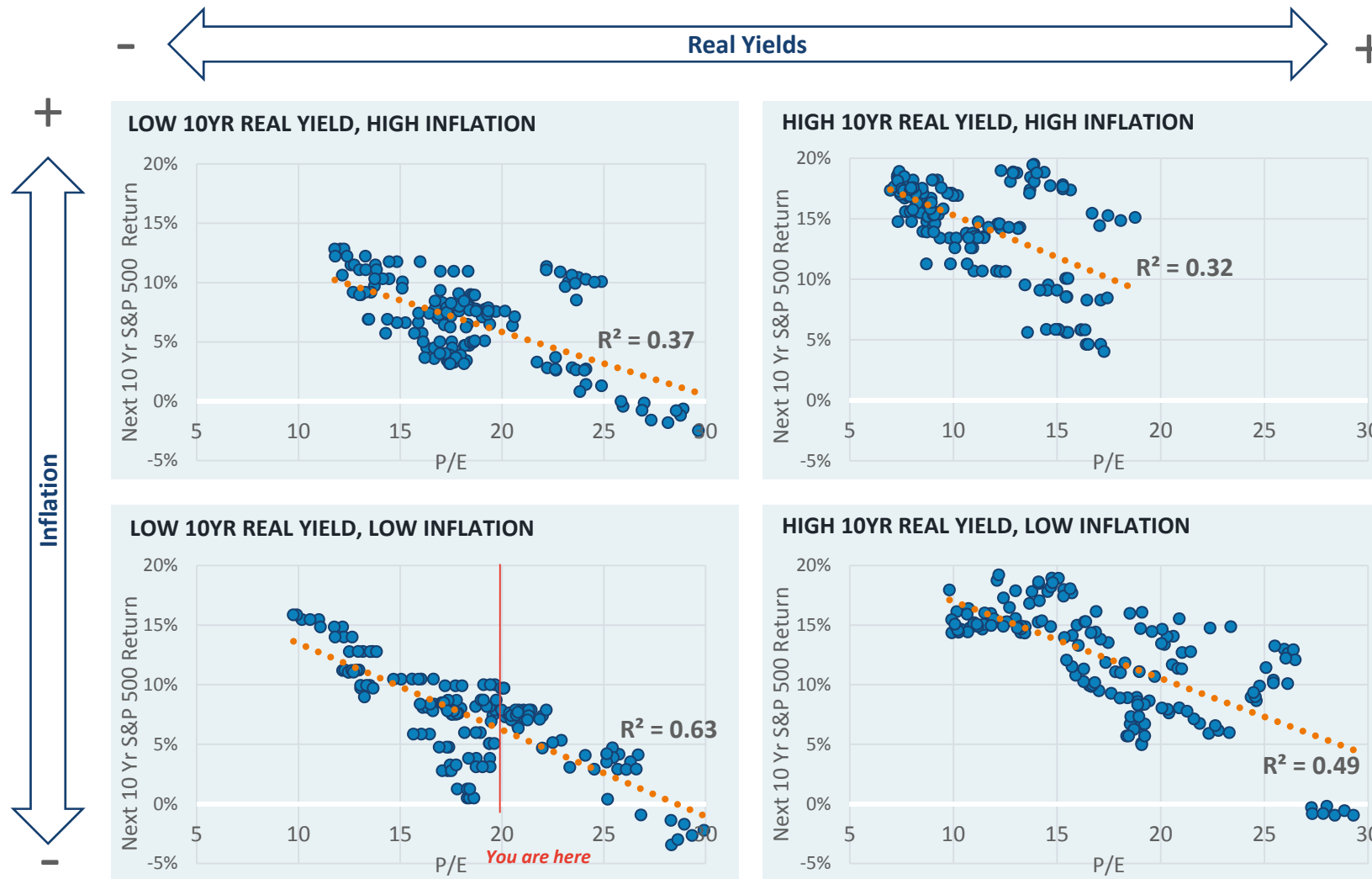
Source: Yale/Shiller, Verus as of 9/30/16

## S&P 500 SHILLER P/E RATIO



Source: Yale/Shiller, as of 9/30/16

# Putting valuations into context



P/E tends to be higher during low yield, low inflation environments

Just because environment may justify higher P/E, higher valuations still bode poorly for future returns

Using data since 1954, sorted the economic environment into the above 4 market environments: low 10yr Treasury real yield & high inflation, high 10yr Treasury real yield & high inflation, low 10yr Treasury real yield & low inflation, and high 10yr real yield & low inflation. Within each quadrant, plotted each point-in-time P/E level for the S&P 500 (the x-axis) and the subsequent 10 year equity return (y-axis).

# Equity volatility

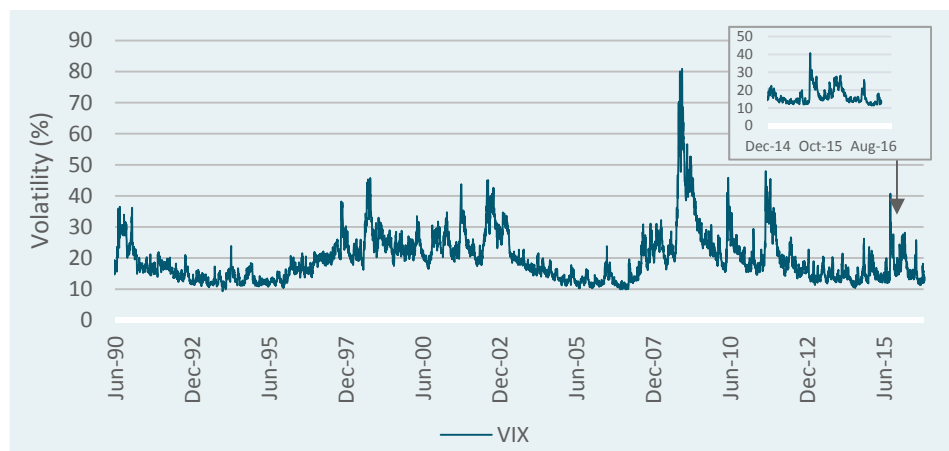
Following a substantial spike in volatility during the Brexit vote announcement, equity volatility fell and remained subdued. The VIX index has averaged around a level of 20 during the past 25 years. More recently investors have seen VIX levels below this average which is typical during equity bull markets.

Volatility expectations, as indicated by VIX, continue to be low, though we might expect rising levels given

political uncertainty leading up to the U.S. presidential election.

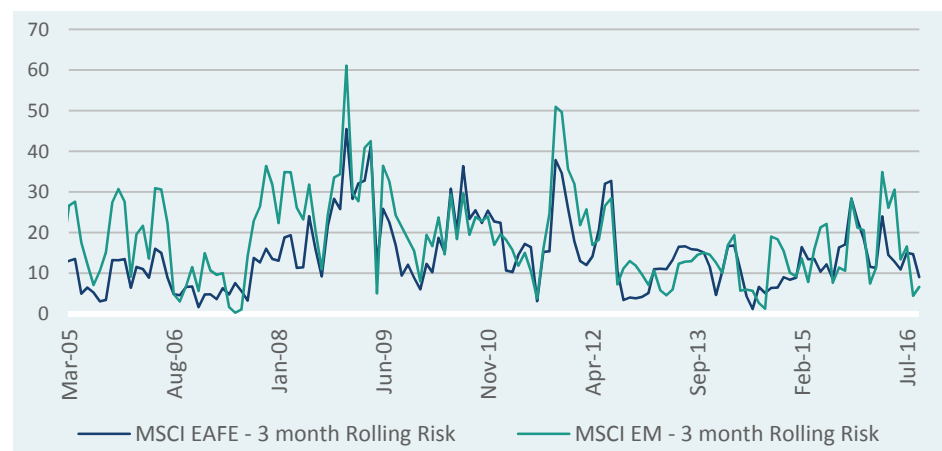
International equity market volatility has remained in a normal range, following choppiness during news surrounding and following the Brexit referendum. Unhedged currency exposure has also added to variation in investors' experienced equity returns – and much more so in recent years.

## U.S. EQUITY VOLATILITY



Source: CBOE, as of 9/22/16

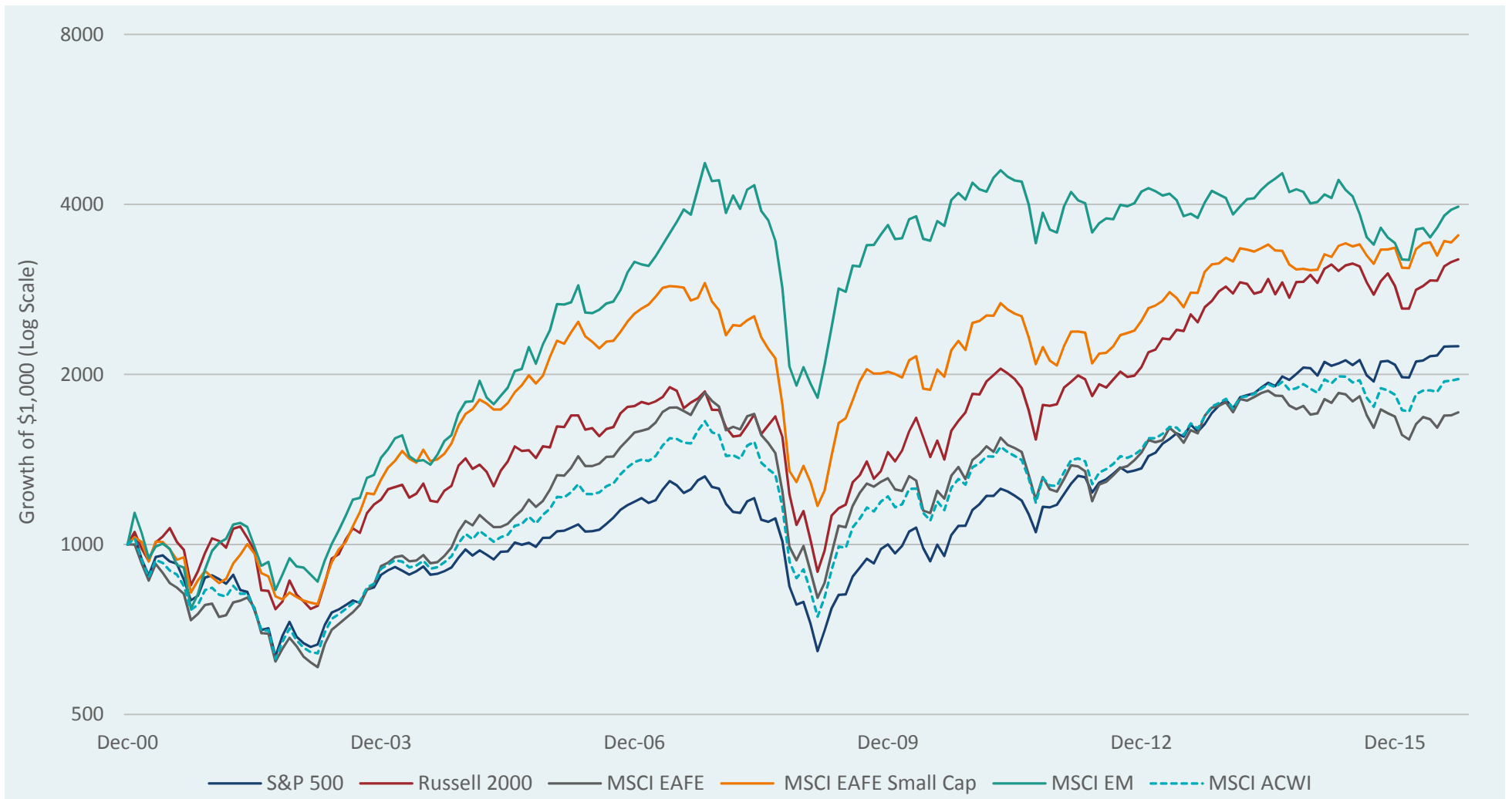
## INTERNATIONAL EQUITY VOLATILITY



Source: MSCI, as of 9/30/16



# Long-term equity performance



Source: MPI, as of 9/30/16

# Other assets

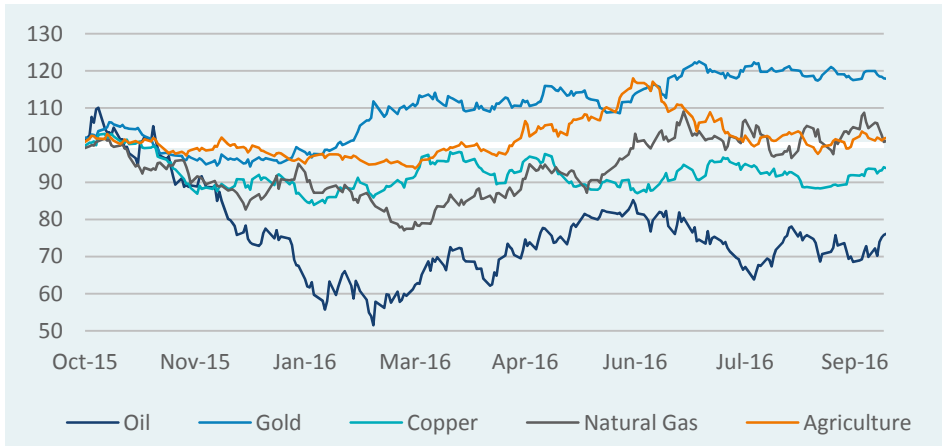
# Commodities

Commodity prices, and oil in particular, continue to fill the news headlines. Though short-term price movements are not particularly relevant to portfolio decision-making, effects of the commodity supercycle reversal are important.

Declining profits in the energy sector have pushed U.S. equity earnings into negative territory for the past 1.5 years. Many commodity exporting nations have

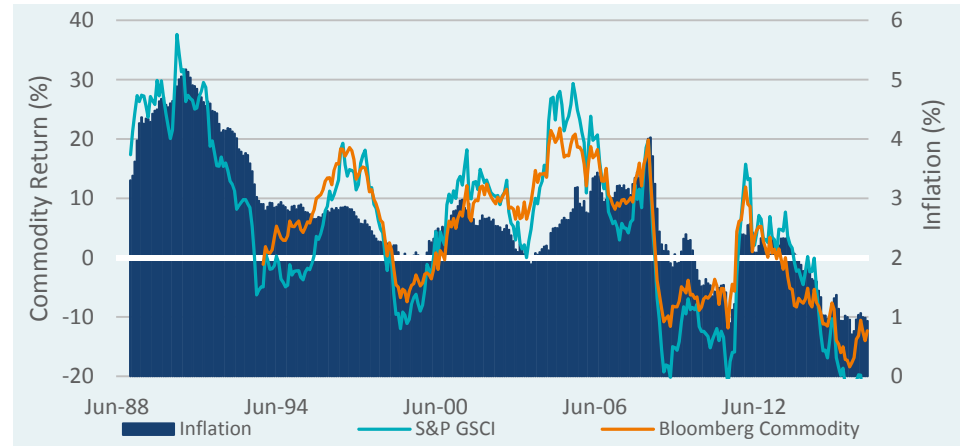
realized extreme currency devaluation which has harshly impacted the unhedged returns of foreign investors. Here at home energy-related debt defaults are accelerating and fueling worries that a prolonged energy slump could have a serious fallout effects for the U.S. energy sector. OPEC members and non-members alike continue discussions regarding production cut strategies and agreements, though it is debatable whether these agreements will be upheld.

## COMMODITY PERFORMANCE



Source: Bloomberg, as of 9/30/16

## INFLATION BETA



Source: Standard & Poor's, Bloomberg, as of 9/30/16

# Currency

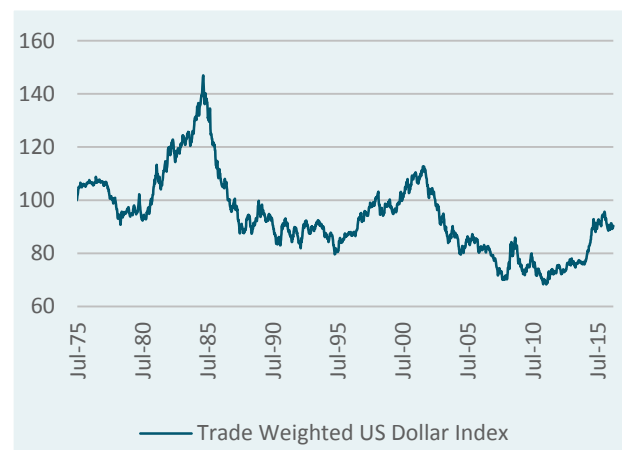
The U.S. dollar, weighted by major trading partners, fell 0.7% in the third quarter, benefitting investors with unhedged equity exposure. The pound sterling has had the opposite effect for U.S. investors, as new multi-decade lows were reached during the quarter, following a significant market flash crash (but recovery).

After a recent period of appreciation, the dollar has stabilized so far this year. Moderation of the USD would have a positive impact on earnings of U.S. companies with significant international exposure.

However, with the Fed expected to continue increasing interest rates while other central banks are still in easing mode, there may be upward pressure on the dollar as interest rate differentials increase.

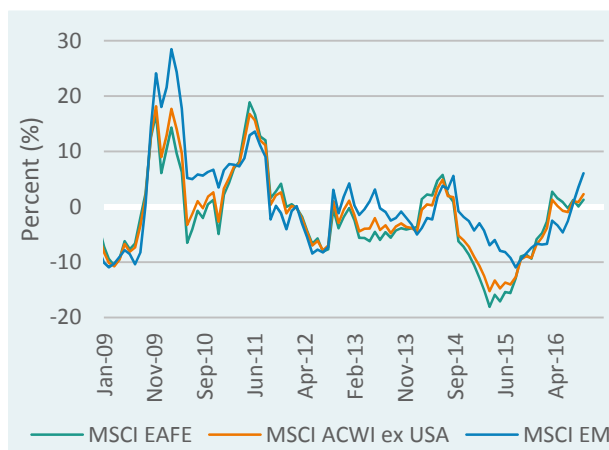
The pound sterling fell to a 31-year low against the U.S. dollar, influenced by uncertainty surrounding the details of the U.K.'s exit from the European Union. Theresa May announced that she would invoke Article 50 by March 2017.

**LONG-TERM TRADE WEIGHTED USD**



Source: FRED, as of 9/30/16

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



Source: MSCI, as of 9/30/16

**GBP/USD**



Source: FRED, as of 10/19/16

# Appendix

# Periodic table of returns – September 2016

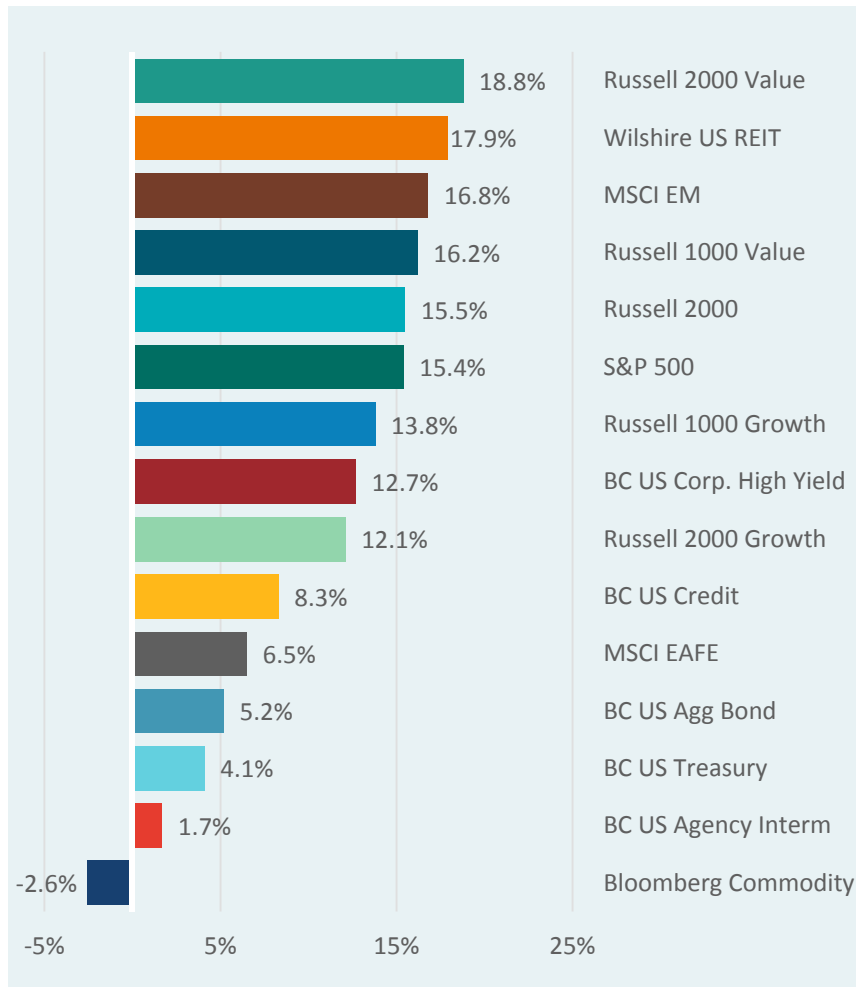
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	YTD	5-Year	10-Year
Small Cap Value	74.8	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	10.1	16.0	16.6	8.8
Emerging Markets Equity	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	15.5	16.4	8.3
Small Cap Equity	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	11.5	16.2	7.4
Large Cap Value	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	10.0	16.1	7.4
Large Cap Equity	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	8.9	15.8	7.1
60/40 Global Portfolio	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	8.0	15.4	5.9
Small Cap Growth	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	7.9	11.5	5.8
US Bonds	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	7.5	7.4	4.8
Large Cap Growth	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	6.0	7.2	4.6
Commodities	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	5.8	3.2	3.9
Real Estate	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	4.3	3.1	1.8
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	1.7	3.0	1.8
Cash	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	0.2	0.1	0.8
Hedge Funds of Funds	-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	-0.1	-9.4	-5.3

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

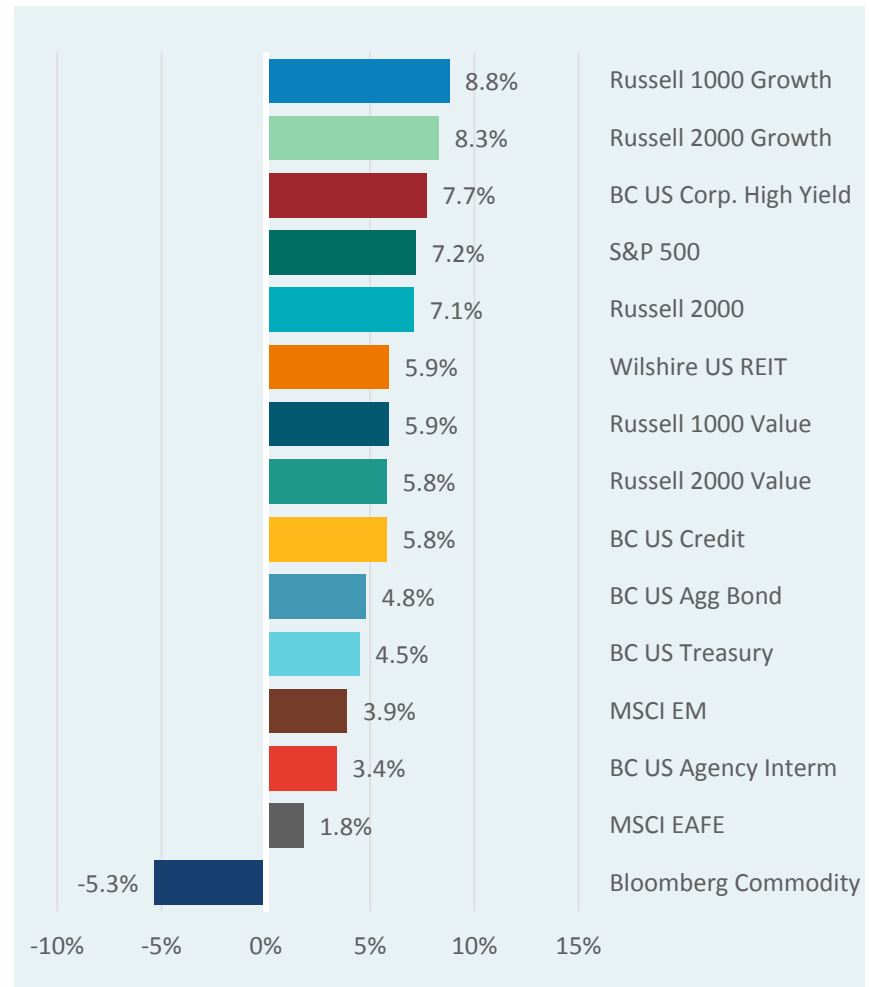
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BC Agg, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BC Global Bond. NCREIF Property performance data as of 6/30/16.

# Major asset class returns

ONE YEAR ENDING SEPTEMBER



TEN YEARS ENDING SEPTEMBER

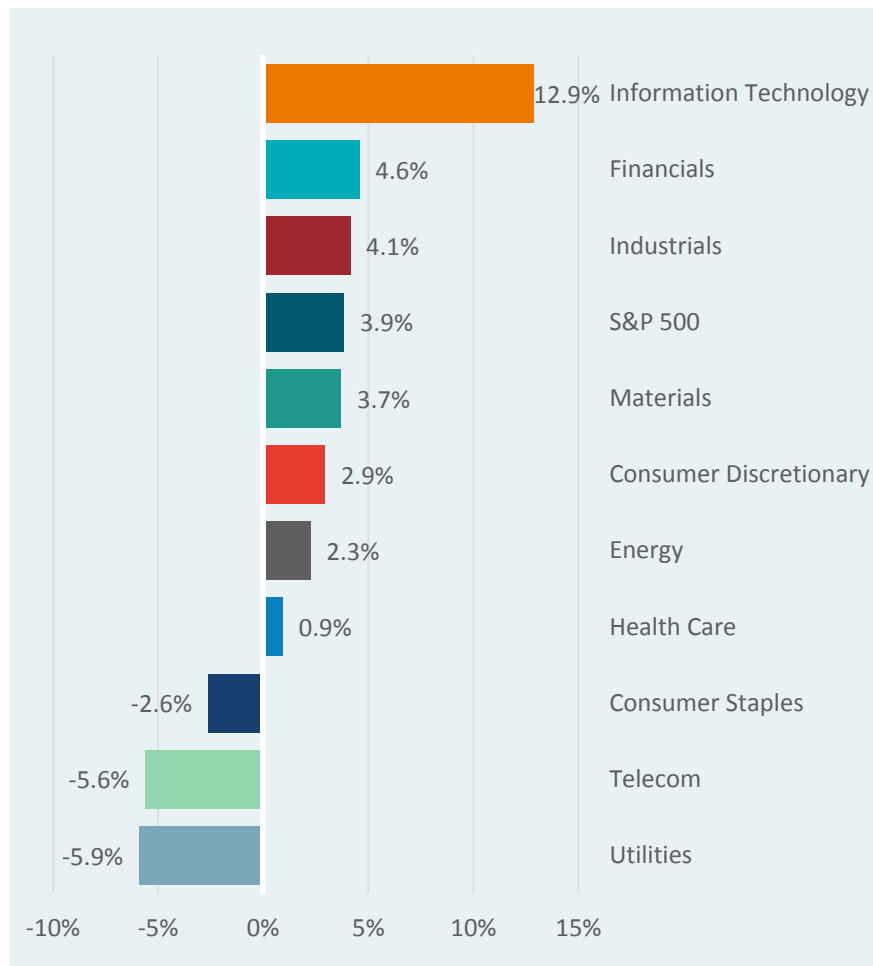


Source: Morningstar, as of 9/30/16

Source: Morningstar, as of 9/30/16

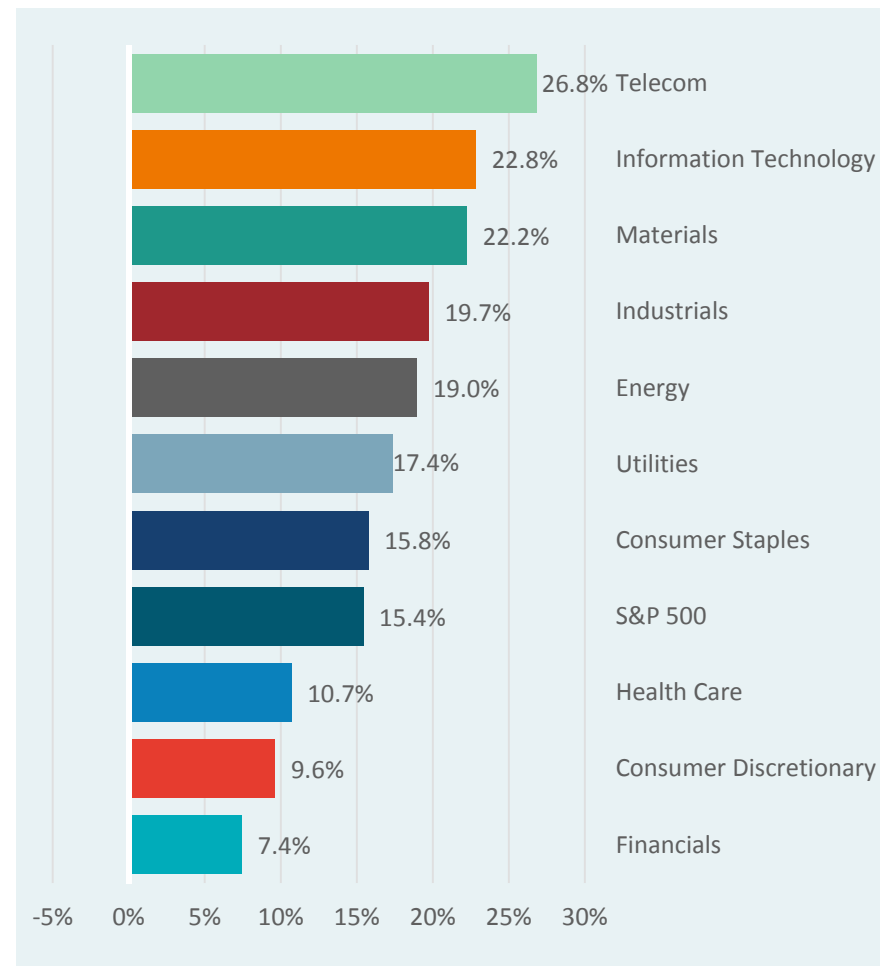
# S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/16

ONE YEAR ENDING SEPTEMBER



Source: Morningstar, as of 6/30/16



# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	0.0	3.9	7.8	15.4	11.2	16.4	7.2
S&P 500 Equal Weighted	0.1	4.5	10.6	16.1	10.8	17.4	8.8
DJ Industrial Average	(0.4)	2.8	7.2	15.5	9.2	13.8	7.4
Russell Top 200	0.0	3.8	7.0	15.2	11.3	16.3	7.0
Russell 1000	0.1	4.0	7.9	14.9	10.8	16.4	7.4
Russell 2000	1.1	9.0	11.5	15.5	6.7	15.8	7.1
Russell 3000	0.2	4.4	8.2	15.0	10.4	16.4	7.4
Russell Mid Cap	0.2	4.5	10.3	14.2	9.7	16.7	8.3
<b>Style Index</b>							
Russell 1000 Growth	0.4	4.6	6.0	13.8	11.8	16.6	8.8
Russell 1000 Value	(0.2)	3.5	10.0	16.2	9.7	16.2	5.9
Russell 2000 Growth	1.4	9.2	7.5	12.1	6.6	16.1	8.3
Russell 2000 Value	0.8	8.9	15.5	18.8	6.8	15.4	5.8

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	0.6	5.3	6.6	12.0	5.2	10.6	4.3
MSCI ACWI ex US	1.2	6.9	5.8	9.3	0.2	6.0	2.2
MSCI EAFE	1.2	6.4	1.7	6.5	0.5	7.4	1.8
MSCI EM	1.3	9.0	16.0	16.8	(0.6)	3.0	3.9
MSCI EAFE Small Cap	3.0	8.6	5.2	12.3	5.1	11.1	4.4
<b>Style Index</b>							
MSCI EAFE Growth	1.5	5.0	2.6	9.5	2.4	8.7	3.1
MSCI EAFE Value	1.0	8.0	0.8	3.5	(1.5)	6.0	0.4
<b>Regional Index</b>							
MSCI UK	1.0	4.0	0.8	1.5	(1.8)	6.0	1.4
MSCI Japan	1.6	8.6	2.5	12.1	3.3	7.4	1.0
MSCI Euro	0.7	7.3	(0.6)	2.8	(0.9)	7.3	0.2
MSCI EM Asia	1.3	10.5	13.0	16.9	3.5	6.3	5.6
MSCI EM Latin American	(0.8)	5.4	32.2	28.6	(7.9)	(3.9)	2.4

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BC US Treasury US TIPS	0.5	1.0	7.3	6.6	2.4	1.9	4.5
BC US Treasury Bills	0.0	0.1	0.3	0.3	0.2	0.1	1.0
BC US Agg Bond	(0.1)	0.5	5.8	5.2	4.0	3.1	4.8
<b>Duration</b>							
BC US Treasury 1-3 Yr	0.1	(0.1)	1.3	0.9	0.9	0.7	2.3
BC US Treasury Long	(1.6)	(0.4)	14.7	13.1	11.2	5.5	8.1
BC US Treasury	(0.1)	(0.3)	5.1	4.1	3.4	2.2	4.5
<b>Issuer</b>							
BC US MBS	0.3	0.6	3.7	3.6	3.6	2.6	4.7
BC US Corp. High Yield	0.7	5.6	15.1	12.7	5.3	8.3	7.7
BC US Agency Interm	0.2	(0.0)	2.3	1.7	1.8	1.4	3.4
BC US Credit	(0.3)	1.2	8.9	8.3	5.4	4.8	5.8

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	3.1	(3.9)	8.9	(2.6)	(12.3)	(9.4)	(5.3)
Wilshire US REIT	(2.1)	(1.2)	9.7	17.9	14.3	15.8	5.9
<b>Regional Index</b>							
JPM EMBI Global Div	0.4	4.0	14.8	16.2	8.2	7.8	7.7
JPM GBI-EM Global Div	2.0	2.7	17.1	17.1	(2.6)	0.1	5.5
<b>Currency (Spot)</b>							
Euro	0.9	1.2	3.5	0.7	(6.0)	(3.5)	(1.2)
Pound	(0.8)	(2.8)	(11.9)	(14.2)	(7.1)	(3.6)	(3.6)
Yen	2.1	1.3	18.8	18.3	(1.0)	(5.3)	1.5

Source: Morningstar, as of 9/30/16

# 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.langerresearch.com](http://www.langerresearch.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.

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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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Verus receives universe data from InvestorForce, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.

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

December 6, 2016

Agenda Item 6.3

**TO:** Board of Retirement

**FROM:** Doris Ng, Investment Analyst 

**SUBJECT:** Report on Hedge Fund and Risk Parity Annual Manager Reviews

**Staff Recommendation**

Accept and review the report on the annual review of SamCERA's Hedge Fund and Risk Parity managers.

**Background**

On October 13<sup>th</sup>, SamCERA staff and consultant held annual review meetings in SamCERA's office for our hedge fund and risk parity managers.

Each meeting lasted approximately 1.5 -2 hours, and consisted of a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook.

**Discussion**

On October 13<sup>th</sup>, AQR's Global Risk Premium fund, which is a strategy that balances risk among four main asset classes, was reviewed first. AQR's Delta Fund, a multi-strategy return fund that seeks to provide systematic exposure to a diversified set of hedge fund premia, was also reviewed. Lastly, SamCERA reviewed PanAgora's Diversified Risk Multi Asset fund, a complementary strategy to AQR's risk parity fund. PanAgora employs a strategic risk allocation between equities, nominal fixed income and inflation-protection.

There were no significant concerns identified during the portfolio reviews. Attached you will find meeting notes from Verus summarizing the findings from these annual reviews.

**Attachments**

- A. AQR Global Risk Premium and Delta Fund Annual Review Meeting Notes (*Confidential*)
- B. PanAgora Diversified Risk Multi Asset Fund Meeting Notes (*Confidential*)

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

December 6, 2016

Agenda Item 6.4

**TO:** Board of Retirement  
**FROM:** Michael Coultrip, Chief Investment Officer  
**SUBJECT:** Approval of Implementation Plan for the Revised Asset Allocation Policy



**Staff Recommendation**

Approve implementation plan for new asset allocation policy.

**Background**

As the final part of its asset liability study, in October the Board approved a new asset allocation policy portfolio. The new policy has a 9% reduction to Growth assets, with a corresponding 3% increase to Diversifying and a 6% increase to Inflation assets.

	Old Policy	New Policy	Change
Growth	63%	54%	-9%
Diversifying	15%	18%	3%
Inflation	14%	20%	6%
Risk Parity	8%	8%	

**Discussion**

Implementation of the new policy is anticipated to consist of multiple phases. The proposed first phase will reduce exposure to Growth assets by approximately 5%, with a corresponding increase to Diversifying (3%) and Inflation (2%). It is anticipated that this phase will be complete by January 2017. The second and third phases are expected to be completed during 2017, with Phase Three potentially taking multiple years to complete. The implementation plan will be distributed the day of the meeting.

The updated domestic equity and core fixed income manager structure will also be reviewed as part of the new policy implementation. Stephen Quirk from Verus will present the attached public markets manager structure.

**Attachment**

Verus Public Markets Manager Structure Analysis



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



DECEMBER 6, 2016

Public Markets Manager Structure

**San Mateo County Employees' Retirement Association**

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***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.*



# Considerations

- The recently adopted asset allocation includes an increase to alternative asset classes at the expense of public equity. The board expressed a desire to simplify the implementation of the public markets asset classes and to reduce fees. An optimal method to accomplish these goals simultaneously through manager structure is to reduce the number of active managers and to increase/incorporate low cost passive management.
- We recommend increasing the weighting of the Large Cap index allocation to 75% of US Equity. Additionally, we recommend converting the S&P 500 Index to the Russell 1000 Index to better align with the policy benchmark (Russell 3000 Index). The net expected effect of this change to the new US Equity portfolio is negligible style risk and minimal tracking error to the Russell 3000 Index.
- We recommend incorporating a passive Core Fixed Income allocation (Bloomberg Barclays Intermediate Government Index) as a first phase. The current manager structure has a high expected tracking error (approximately 3%). Additionally, the current managers (FIAM and Western) traditionally overweight credit relative to treasuries. Finally, opportunistic credit and private credit will be increased in Phase 2 so it is likely that we have sufficient credit exposure in other asset classes. We thus recommend a dedicated Government allocation.

# U.S. equity alternatives

	<b>Current</b>	<b>Alt 1</b>	<b>Alt 2</b>
S&P 500 Index	60%	75%	
Russell 1000 Index			75%
DESIM: BMCAE Strategy	10%	15%	15%
Brown Advisory: Large Cap Growth	10%		
Barrow Hanley: Diversified LCV	10%		
QMA: Small Cap Core	10%	10%	10%
<b>Style Risk</b>	<b>0.3%</b>	<b>0.7%</b>	<b>0.0%</b>
<b>Active Risk</b>	<b>0.8%</b>	<b>0.6%</b>	<b>0.6%</b>
<b>Risk to Bench</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.6%</b>
<b>Alpha</b>	<b>0.4%</b>	<b>0.2%</b>	<b>0.2%</b>
<b>IR</b>	<b>0.5</b>	<b>0.2</b>	<b>0.4</b>

- In the current structure, there are four active managers and the Risk to the Russell 3000 Index is nearly 1% (0.86%)
- In the first alternative structure (Alt 1), the two Large Cap style managers (Brown and Barrow Hanley) are removed and the index allocation is increased. However, the S&P 500 Index creates Style Risk relative to the Russell 3000 Index.
- In the second alternative structure (Alt 2), the S&P 500 Index is converted to the Russell 1000 Index and Style Risk is eliminated.

# Core fixed income alternatives

	<b>Current</b>	<b>Alt 1</b>	<b>Alt 2</b>
FIAM: BMD	70.0%	58.3%	58.3%
Western Asset: TRU	30.0%	25.0%	25.0%
Aggregate Index		16.7%	
Intermediate Government Index			16.7%
<b>Yield</b>	<b>3.3%</b>	<b>3.1%</b>	<b>3.0%</b>
<b>Duration (years)</b>	<b>3.9</b>	<b>4.2</b>	<b>3.9</b>
<b>Risk to Bench</b>	<b>3.1%</b>	<b>2.6%</b>	<b>2.6%</b>
<b>Alpha</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.8%</b>
<b>IR</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>

- In the current structure, there are two active managers and the Risk to the Bloomberg Barclays Aggregate Index is more than 3% (3.14%)
- In the first alternative structure (Alt 1), an Aggregate Index allocation is introduced. The Risk to Benchmark decreases to 2.62%
- In the second alternative structure (Alt 2), an Intermediate Government Index is used. This allocation diversifies the credit exposures of the existing core fixed income managers as well as the increased credit in other asset classes (opportunistic and private).

# Appendix

# Glossary

- **Tracking Error (TE):** *A measure of the dispersion of the difference in returns between two portfolios. Typically calculated as the standard deviation of the difference between the returns.*
- **Style Risk:** *The tracking error between the structure's actual style and the asset allocation target style.*
- **Active Risk:** *The structure's exposure to active management defined as the tracking error between the managers' portfolios and their styles.*
- **Risk to Benchmark:** *The structure's tracking error to the asset allocation target for the asset class.*
- **Alpha:** *The structure's projected excess return above the target benchmark due to manager active management.*
- **Information Ratio (IR):** *A measure of manager skill ( $\alpha/TE$ ).*

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

December 6, 2016

Agenda Item 6.5

**TO:** Board of Retirement



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

**SUBJECT:** Approval of Risk Parity Policy Benchmark Change

**Staff Recommendation**

Approve changing the risk parity policy benchmark from a domestic-only balanced index to a global balanced index. The current risk parity policy index is 60% Russell 3000 / 40% BC Aggregate, and the proposed risk parity policy benchmark is 60% MSCI World / 40% Global BC Aggregate.

**Discussion**

Given that SamCERA's risk parity portfolio contains both domestic and international equity and bond exposure, it seems appropriate that its policy benchmark also contain global exposure. A global benchmark would remove a potential source of tracking error that a domestic-only index contains, as risk parity contains global exposures. The domestic/global mismatch can muddle the assessment of how risk parity is performing, especially in times when there is a large performance disparity between domestic and international exposures.

The table below shows the current asset allocation policy benchmark and the proposed asset allocation policy benchmark with the only difference being the global balanced benchmark for the risk parity policy allocation. The current asset allocation policy benchmark shows the existing framework prior to implementation of the new asset allocation plan approved in October.

The attachment shows performance and correlation/goodness of fit characteristics for SamCERA's risk parity managers to both the current and proposed benchmarks. The data shows the global benchmark has a slightly higher goodness of fit than the domestic-only benchmark, especially over shorter horizons.

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

<b>Benchmark</b>	<b>Current Asset Allocation Policy Benchmark</b>	<b>Proposed Asset Allocation Policy Benchmark</b>
<b>Public Equity</b>	<b>47%</b>	<b>47%</b>
Russell 3000 Index	28%	28%
MSCI ACWI x US IMI Index	19%	19%
<b>Fixed Income</b>	<b>19%</b>	<b>19%</b>
BC Aggregate Index	10%	10%
BC BA Intermediate High Yield Index	6%	6%
BC Multiverse Index	3%	3%
<b>Risk Parity</b>	<b>8%</b>	<b>8%</b>
60% Russell 3000 / 40% BC Aggregate	8%	0%
60% MSCI World / 40% Global BC Aggregate	0%	8%
<b>Alternatives</b>	<b>12%</b>	<b>12%</b>
Russell 3000 +3%	7%	7%
LIBOR + 4%	5%	5%
<b>Inflation Hedge</b>	<b>14%</b>	<b>14%</b>
NCREIF ODCE	7%	7%
Custom Real Asset Index*	5%	5%
BC TIPS Index	2%	2%

\*Comprised of 34% Bloomberg Roll Select Commodity Index, 33% S&P Global Large-Midcap Natural Resources Index, and 33% S&P Global Infrastructure Index.

**Attachment**

Verus Risk Parity Policy Benchmark Comparison

**SamCERA Risk Parity Managers**

**Performance**

Firm Name	Product Name	Returns - 1 Years (9/2016)	Returns - 3 Years (9/2016)	Returns - 5 Years (9/2016)	Returns - 7 Years (9/2016)	Returns - 10 Years (9/2016)
AQR Capital Management LLC	Global Risk Premium Fund	10.7	4.5	6.0	8.6	6.4
PanAgora Asset Management, Inc.	Risk Parity Multi Asset	19.5	10.5	10.9	11.3	8.3
Balanced Index	60% MSCI World/40% Citi WGBI	11.0	4.4	7.3	6.0	4.7
Balanced Index	60% S&P 500/40% Barclays Agg.	11.4	8.4	11.1	9.7	6.6

**R-Squared**

Firm Name	Product Name	R2 - 3 Years using 60% MSCI World/40% Citi WGBI (9/2016)	R2 - 5 Years using 60% MSCI World/40% Citi WGBI (9/2016)	R2 - 7 Years using 60% MSCI World/40% Citi WGBI (9/2016)	R2 - 10 Years using 60% MSCI World/40% Citi WGBI (9/2016)
AQR Capital Management LLC	Global Risk Premium Fund	.55	.49	.42	.52
PanAgora Asset Management, Inc.	Risk Parity Multi Asset	.36	.33	.38	.45
Balanced Index	60% MSCI World/40% Citi WGBI	1	1	1	1
Balanced Index	60% S&P 500/40% Barclays Agg.	.72	.72	.84	.87

Firm Name	Product Name	R2 - 3 Years using 60% S&P 500/40% Barclays Agg. (9/2016)	R2 - 5 Years using 60% S&P 500/40% Barclays Agg. (9/2016)	R2 - 7 Years using 60% S&P 500/40% Barclays Agg. (9/2016)	R2 - 10 Years using 60% S&P 500/40% Barclays Agg. (9/2016)
AQR Capital Management LLC	Global Risk Premium Fund	.27	.31	.31	.44
PanAgora Asset Management, Inc.	Risk Parity Multi Asset	.23	.23	.28	.38
Balanced Index	60% MSCI World/40% Citi WGBI	.72	.72	.84	.87
Balanced Index	60% S&P 500/40% Barclays Agg.	1	1	1	1

**Correlations**

Firm Name	Product Name	Corr (r) - 3 Years using 60% MSCI World/40% Citi WGBI (9/2016)	Corr (r) - 5 Years using 60% MSCI World/40% Citi WGBI (9/2016)	Corr (r) - 7 Years using 60% MSCI World/40% Citi WGBI (9/2016)	Corr (r) - 10 Years using 60% MSCI World/40% Citi WGBI (9/2016)
AQR Capital Management LLC	Global Risk Premium Fund	.74	.70	.65	.72
PanAgora Asset Management, Inc.	Risk Parity Multi Asset	.60	.57	.61	.67
Balanced Index	60% MSCI World/40% Citi WGBI	1	1	1	1
Balanced Index	60% S&P 500/40% Barclays Agg.	.85	.85	.91	.93

Firm Name	Product Name	Corr (r) - 3 Years using 60% S&P 500/40% Barclays Agg. (9/2016)	Corr (r) - 5 Years using 60% S&P 500/40% Barclays Agg. (9/2016)	Corr (r) - 7 Years using 60% S&P 500/40% Barclays Agg. (9/2016)	Corr (r) - 10 Years using 60% S&P 500/40% Barclays Agg. (9/2016)
AQR Capital Management LLC	Global Risk Premium Fund	.52	.56	.56	.67
PanAgora Asset Management, Inc.	Risk Parity Multi Asset	.48	.48	.53	.61
Balanced Index	60% MSCI World/40% Citi WGBI	.85	.85	.91	.93
Balanced Index	60% S&P 500/40% Barclays Agg.	1	1	1	1

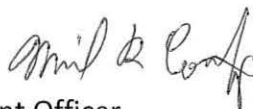


SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 6, 2016

Agenda Item 6.6

**TO:** Board of Retirement



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

**SUBJECT:** Approval of Issuance of Request for Proposal for Investment Consultant Services

**Staff Recommendation**

Approve the issuance of a Request for Proposal for Investment Consulting Services and provide direction to staff.

**Background**

In 2001, after being selected through a Request for Proposal (RFP) process, Strategic Investment Solutions (SIS), commenced providing investment consulting services to the Board. In 2009, the Board issued another RFP and selected SIS to remain as its consultant. The most recent agreement with SIS was entered into August 31, 2014 with a term ending August 31, 2019. This agreement can be terminated by either party with 30 days' notice.

In October of 2015, SIS merged with Versus Advisory and, at that time, the Board determined to assign its agreement with SIS to Verus rather than to go out to a truncated RFP process. Additionally, staff further discussed with the Board that it would be best to wait until after the asset liability study was completed in order to provide investment direction to staff before commencing an RFP process. That study was completed by the Board at its last meeting.

**Discussion**

If the Board decides to commence the RFP process, staff anticipates it would release the RFP document in January 2017, with the responses due sometime in early 2017.

Due to the anticipated volume of responses, staff recommends that staff review and screen the proposals, and make selected site visits. Staff would forward up to three finalists to an Ad Hoc Committee for interviews. The Ad Hoc Committee would then recommend a proposer (or more) to the Board for a full Board interview.

As for the proposed consulting services, the RFP will cover proposals for all investment services. If it is later determined by the Board, based upon the responses, to have different providers for different services, the RFP would provide the Board with that flexibility.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 6, 2016

Agenda Item 7.1

**TO:** Board of Retirement

**FROM:** Scott Hood, Chief Executive Officer



**SUBJECT:** Workshop on Delegation of Investment Activities and Direction to Staff (part 2)

**Staff Recommendation**

Provide direction to staff to bring back proposals for delegating certain investment activities.

**Discussion**

In October staff provided an educational presentation on the Board's fiduciary duty, delegation of authority and governance. Staff led a discussion as to how these three areas are intertwined. In November staff led a workshop to discuss ways the Board may wish to delegate certain activities in the selection of retirement fund investments, with the goal being effective Board governance and prudent investment decisions by having:

- Appropriate delegation of authority, along with proper alignment of responsibilities, authorities and expertise.
- Clear lines of authority and improved decision making.
- The right balance between strategy and oversight and day-to-day management.
- Increased focus on strategy by the Board.
- The best use of the Board's and staff's time.

During this session, the Board provided feedback regarding various governance models relating to the hiring of new managers. The general consensus relating to the public market new manager hire process was that the Board was comfortable with delegating certain interim steps in the process to staff. Under this approach, the Board would be updated on the process to develop the manager short-list and approve the final recommendation.

Also discussed were a number of potential governance models related to private market due diligence approaches. No consensus arose from these discussions, and the Board instructed staff to bring this item back to the Board for discussion. Staff will present a few options that represent differing levels of Board involvement and delegation to staff for the Board to consider.

Today's discussion will be led by Chief Investment Officer, Michael Coultrip.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 6, 2016

Agenda Item 7.2

**TO:** Board of Retirement  
**FROM:** Ad Hoc Education Policy Committee  
**SUBJECT:** Approval of Resolution Amending Board's Education Policy

**Ad Hoc Committee Recommendation**

Approve a resolution revising the Board's Education Policy.

**Background**

The Chair appointed the Ad Hoc Education Policy Committee (Mark Battey, Chair, Ben Bowler, David Spinello, Shirley Tourel) to review the Board's Education Policy to determine if any changes should be made, and if so, to present those recommended changes to the Board.

**Discussion**

As a preliminary step to its review process, the Committee identified the following core principles that should be reflected in the Board's Education Policy:

- **Fiduciary:** education must be consistent with our fiduciary responsibilities.
- **Prudent:** Exercising good judgment /decision making; understanding that the Board is entrusted with the Retirement Fund.
- **Relevant:** education must be relevant to our responsibilities and to our individual experience and background.
- **Focus:** the training/conference should focus on education not marketing
- **Cost Effective:** We need to apply the same discipline to Board travel/education as we do to all SamCERA expenses
- **Optics/Perception:** Location and perception of luxury are important.

The Committee is also of the opinion that:

- Approval for attendance of educational events outside the scope of the Education Policy should have a very high bar.
- Out-of-state travel should have a very high bar.
- The Board should evaluate additional in-house training (including outside speakers) vs. sending trustees to conferences.

Applying the above to the current Education Policy, the Committee approved with a vote of 3 to 1 (Spinello opposed), a motion to recommend the following changes:

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

**1. Section 1 A. Fiduciary duties (add)**

“Board members come to the Board with differing backgrounds, knowledge and expertise. Each member has a duty to receive the education that best fits his or her needs. Board member education should develop the individual knowledge of the Board members and in turn, improve the knowledge of the Board as whole so that it may discharge its fiduciary duties.”

**2. Section 1 D. Timely Report by Board Member of Educational Participation.** (changes requirement for an oral report to written reports) A sample report form is attached. This form just expands the current form that Board members already complete in order obtain substantive information about the course.

“Prior to the next regularly scheduled meeting of the Board following the Board member’s participation in an educational activity, the Board member shall submit for inclusion on the Consent Agenda, a summary written report on the content of educational activities. The report shall substantially reflect the information contained in the attached sample report.”

**3. Section 2 A. Limit for Attendance at Overnight Out-Of-Bay Area Educational Events.** Currently the Board may travel to up to 8 overnight events. Many of which are outside of California. Multiple education providers provide similar educational opportunities and the education can be received in California, or via tapes or webcasts. Travel expenses cost the system and directly impact the employers who are paying for the elected trustee’s time to travel to attend the conferences. The change would allow attendance at any SACRS or CALAPERS conference or educational program and in addition up to 2 other outside Bay area events from the list. In addition, it provides that Board members attendance at meetings should not be impacted by educational activities. The change reads as follows:

**“A. Limit for Attendance at Overnight Out-Of-Bay Area Educational Events.** Board member education should be obtained in a cost efficient manner minimizing costs wherever possible. Every Board member is authorized to attend conferences and education programs sponsored by the State Association of County Retirement Systems (SACRS) and the California Association of Public Retirement Systems (CALAPRS). In addition, every Board member is authorized to attend up to two (2) approved out-of-Bay Area educational events requiring overnight stays per fiscal year. Multiple education providers provide similar educational opportunities and each Board member shall make every effort to obtain his or her education within California. Board members should not attend educational activities that conflict with regularly scheduled Board meetings.”

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

4. **Section 2 B. Approved Educational Programs and Activities.** The Committee discussed the listed courses and edited them down to reflect the core principles and, to ensure that the conferences are educational and not marketing events, masked as educational activities. The latter type of events do not contain significant core education for the time spent at an overnight conference.

**“Approved Educational Programs and Activities.** In addition to the SACRS and CALAPRS conferences and educational programs listed in Section 2 A, a Board member’s attendance at and/or viewing of recordings of one or more programs listed below shall satisfy the required education for the subject matters presented at such programs and the required educational hours for the length of the program.

- (1) International Foundation of Employee Benefit Plans (IFEBP)
- (2) Wharton investment management programs
- (3) Chartered Financial Analyst (CFA) Institute
- (4) National Conference on Public Employee Retirement Systems (NCPERS)
- (5) Institutional Limited Partner Association (ILPA) Institute (Educational Programs)”

5. **Section 2 C. Recommended Education for New Trustees.** Because Trustees come with varying backgrounds, over time staff has been customizing the education for new members. The proposed language reflects this:

**“Recommended Education for New Trustees.** As part of a new Trustee’s orientation, staff will provide a recommended educational plan that best suits the trustee’s educational needs for his or her first term.”

6. **Section 2 D. Special Request to Attend Education Event.** (New section). This section is to provide guidance to the Board and to the individual Board member who is requesting approval to attend an event outside the scope of the policy.

**“D. Special Request to Attend Education Event.**

In considering each request to attend a specified educational activity that is not authorized in Section 2B, the Board will consider if the overnight travel is appropriate and consistent with the intent of this policy and shall consider items such as:

- 1) Are the conference topics of current interest and importance and related to issues facing SamCERA?
- 2) Have reports from previous attendees been favorable regarding the content of the conference and the continuing value of future attendance?

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

- 3) Will the conference meet the educational needs of the attendee?
- 4) Can similar education be received from an already approved provider or that provider's on-line resources?
- 5) Does the cost of the event and overnight travel justify the benefits particularly if the conference is out of California?
- 6) How many overnight trips has the Board member attended and/or is planning on attending this fiscal year?"

Attachments:

- a. Proposed Revisions to Education Policy (redline)
- b. Draft/Sample Trustee Participation Summary Report
- c. Resolution Approving Amendments to Education Policy
- d. Proposed Education Policy (clean version with revisions incorporated)

## BOARD EDUCATION POLICY

### SECTION 1. BOARD MEMBER EDUCATION IS REQUIRED

- A. **Fiduciary Duty.** Consistent with the Board's fiduciary responsibility to discharge ~~its~~their duties with respect to the system with care, skill, prudence, and diligence, the Board acknowledges the vital importance of making informed judgments on all matters which come before it and has determined that educational activities help provide the Board with knowledge and skills to make such informed decisions. Board members come to the Board with differing backgrounds, knowledge and expertise. Each member has a duty to receive the education that best fits his or her needs. Board member education should develop the individual knowledge of the Board members and in turn, improve the knowledge of the Board as whole so that it may discharge its fiduciary duties.
- B. **Minimum Required Hours of Training.** Each Board member shall receive a minimum of 24 hours of Board member education in the topics listed in Section 3 (A) within the first two years of assuming office and for every subsequent two-year period the Board member continues to hold membership, in accordance with Government Code §31522.8.
- C. **Posting of Policy and Board Member Compliance.** Staff shall maintain a record of Board member compliance with this policy and this policy and an annual report on Board member compliance will be posted on the Board's website which shall reflect the education completed for the prior fiscal year or calendar, depending upon when the Board member's term commences, in accordance with Government Code §31522.8.
- D. **Timely Report by Board Member of Educational Participation.** ~~Prior to~~At the next regularly scheduled meeting of the Board following the Board member's participation in an educational activity, the Board member shall submit for inclusion on the Consent Agenda, provide the Board with a summary written ~~oral~~ report on the content of educational activities. The report shall substantially reflect the information contained in the attached sample report.

### SECTION 2 COST EFFECTIVE EDUCATION

- A. **Limit for Attendance at Overnight Out-Of-Bay Area Educational Events.** ~~The Board desires that~~ Board member education should be obtained in a cost efficient manner minimizing costs wherever possible. Every Board member is authorized to attend conferences and education programs within the Bay Area, and programs sponsored by the State Association of County Retirement Systems (SACRS) and the California Association of Public Retirement Systems (CALAPRS). In addition, every Board member is authorized to attend up to ~~two~~eight (28) approved out-of-Bay Area educational events requiring overnight stays per fiscal year. Multiple education providers provide similar educational opportunities; and each Board member shall make every effort to obtain his or her education within California. Board members should not attend educational activities that conflict with regularly scheduled Board meetings.

~~A.B.~~ **Travel Expenses.** Travel expenses incurred by a Board member ~~for these eight approved for education events~~ are subject to reimbursement by SamCERA in accordance with this policy and the Board's "Policy For Reimbursement Of Travel And Other Official Expenses For Trustees." Any international travel by a Board member must be placed on the Board's regular agenda for the Board's pre-approval. Costs for attendance at educational events that are not consistent with ~~both this~~ policies will not be subject to reimbursement without Board approval.

**C. Education through Electronic Means.** The Board further encourages members to participate to the fullest extent possible in approved taped and electronic delivery of educational opportunities.

~~B.~~

~~C.D.~~ **Education Given bBy SamCERA Staff and Consultants.** Training provided by or arranged by the Chief Executive Officer, Chief Investment Officer, Chief Legal Counsel, and other SamCERA staff, the Board's Medical Advisor, Actuary, Investment Consultant, Investment Managers shall satisfy the required education for the subject matters presented at such training and the required educational hours for the length of the training.

~~D.E.~~ **Education from Publications.** A Board member may count up to three hours towards his or her biannual education requirement by reading Pensions & Investments, the Public Retirement Journal, and/or the Wall Street Journal.

~~E.F.~~ **Education from On Site Visits.** A Board member may count up to three hours towards his or her biannual education requirement by accompanying staff on an onsite visit to a potential or existing investment consultant, manager or other SamCERA provider. Visits outside of the Bay Area requiring an overnight stay will count as an approved trip in accordance with Section 2 (A).

### SECTION 3. APPROVED EDUCATIONAL TOPIC AREAS AND PROGRAMS

**A. Educational Topic Areas.** In accordance with Government Code §31522.8, appropriate topics for Board member education, may include, but are not limited to, the following:

- (1) Fiduciary responsibilities
- (2) Ethics
- (3) Pension fund investments and investment program management
- (4) Actuarial matters
- (5) Pension funding
- (6) Benefits administration
- (7) Disability evaluation
- (8) Fair hearings
- (9) Pension fund governance
- (10) New board member orientation

**B. Approved Educational Programs and Activities.** In addition to the SACRS and CALAPRS conferences and educational programs listed in Section 2 A, -a Board member's attendance at and/or viewing or listening of recordings of one or more programs listed



below shall satisfy the required education for the subject matters presented at such programs and the required educational hours for the length of the program.

- ~~(1) State Association of County Retirement Systems (SACRS)~~
- ~~(2) California Association of Public Retirement Systems (CALAPRS)~~
- ~~(3) Government Finance Officers Association (GFOA)~~
- ~~(14) International Foundation of Employee Benefit Plans (IFEBP)~~
- ~~(25) California Retired County Employees' Association (CRCEA)~~
- ~~(6) Pension Real Estate Association (PREA)~~
- ~~(37) Wharton investment management programs~~
- ~~(348) Chartered Financial Analyst (CFA) Institute~~
- ~~(9) Institute for International Research~~
- ~~(10) Institutional Investor Institute~~
- ~~(11) Information Management Network~~
- ~~(12) Opal Financial Group~~
- ~~(13) Pension Bridge~~
- ~~(4514) National Conference on Public Employee Retirement Systems (NCPERS)~~
- ~~(15) Public Funds Forum—The Future of Corporate Reform~~
- ~~(465) Institutional Limited Partner Association (ILPA) Institute (Educational Programs)~~

**C. Recommended Education for New Trustee Board members.** As part of a new Board member's orientation, staff will provide a recommended educational plan that best suits the Board member's educational needs for his or her first term.

**D. Special Request to attend Education Event.** In considering each request to attend a specified educational activity that is not authorized in Section 2B, the Board will consider if the overnight travel is appropriate and consistent with the intent of this policy and shall consider items such as:

- 1) Are the conference topics of current interest and importance and related to issues facing SamCERA?
- 2) Have reports from previous attendees been favorable regarding the content of the conference and the continuing value of future attendance?
- 3) Will the conference meet the educational needs of the attendee?
- 4) Can similar education be received from an already approved provider or that provider's on-line resources?
- 5) Does the cost of the event and overnight travel justify the benefits particularly if the conference is out of California?
- 6) How many overnight trips has the Board member attended and/or is planning on attending this fiscal year?

~~The recommended courses for new trustees to complete within their first three year term are: (1) SACRS Fall or Spring Conference &/or CALAPRS General Assembly, (2) CALAPRS' Trustee Roundtables, (3) CALAPRS Principles of Pension Management (4) CALAPRS @ Stanford Principles of Pension Management, (4) SACRS Public Pensions Investment Management Program (5) the IFEBP Certificate of Achievement in Public Plan Policy (5) IFEBP Certificates of Achievement in Public Plan Policy and (66) Wharton Pension Fund and Investment Management Program.~~

~~D. **Recommended Progression of Education.** It is recommended that Board members complete the programs listed in Section 3 (C) prior to participation in the following: Fiduciary Institute @ Stanford, IFEBP Public Funds Annual Conference, GFOA Annual Conference, Pension Real Estate Association Annual Conference and US-based programs of IFEBP & PPI.~~

**SECTION 4. EDUCATIONAL EXPENSES FOR STAFF**

The Chief Executive Officer is authorized to approve the participation and associated travel of the Chief Executive Officer and staff in educational activities to the extent that the Chief Executive Officer finds that such participation will contribute to the staff member's ability to perform her or his duties and the budget provides funds for such activities.

SamCERA Board of Retirement Trustee Education  
 Proof of Participation Certificate and Summary



<b>Trustee Name</b>		<b>Date(s) of Event</b>
<b>Education Event Name</b>		
<b>Event Provider</b>		
<b>Type of Participation:</b> Attended Event <input type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>		<b>Eligible Credit:</b> Total hours for sessions you participated in: _____ <i>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.)</i>

This event satisfies the following requirements of the Board of Retirement’s Education Policy and Government Code section 31522.8:

**Topic:** *(Check all that apply)*

- |   |   |
|---|---|
| <input type="checkbox"/> Fiduciary responsibilities                                 | <input type="checkbox"/> Disability evaluation        |
| <input type="checkbox"/> Ethics   | <input type="checkbox"/> Fair hearings                |
| <input type="checkbox"/> Benefits administration                                    | <input type="checkbox"/> Pension fund governance      |
| <input type="checkbox"/> Actuarial matters  | <input type="checkbox"/> New board member orientation |
| <input type="checkbox"/> Pension funding  | <input type="checkbox"/> Other: _____                 |
| <input type="checkbox"/> Pension fund investments and investment program management |   |

**Summary Report**

What concepts or information did you learn about?

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Would you recommend this event to other trustees?

- Yes       No       Maybe

*You may provide additional comments to SamCERA’s CEO.*

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

<b>Trustee Signature</b> <i>(print this form and sign)</i>	<b>Date</b>
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**NOTE:** Please return this completed form to SamCERA’s Executive Secretary prior to the mailing of the Board packet, so it can be included in that month’s Consent Agenda.

RESOLUTION 2016-\_\_\_\_

**RESOLUTION REVISING THE BOARD OF RETIREMENT'S  
EDUCATION POLICY**

**WHEREAS**, California Constitution Article XVI, § 17 provides that the Board of Retirement has fiduciary responsibility for investment of the Retirement Fund moneys and administration of retirement system; and

**WHEREAS**, Government Code §31522.8, requires that the Board have an Education Policy that sets forth a minimum number of required hours of requisite training in particular subject areas; and

**WHEREAS**, the Board acknowledges the vital importance of making informed judgments on all matters which come before it and has adopted a Code of Conduct and an Educational Policy to guide its actions; and

**WHEREAS**, the Board acknowledges that Board members come to the Board with differing backgrounds, knowledge and expertise and that each member has a duty to receive the education that best fits his or her needs in order to exercise his or her fiduciary duties; and

**WHEREAS**, consistent with its fiduciary duties, the Board wishes to encourage Board members and staff to receive education from the best quality providers; and

**WHEREAS**, consistent with its fiduciary duties, Board member education should be obtained in a cost efficient manner minimizing costs wherever possible and each Board member shall make every effort to obtain his or her education within California; and

**WHEREAS** the Board has reviewed the revisions to the Education Policy and believes that such changes are in the best interest of the Board and SamCERA;

**NOW, THEREFORE, BE IT RESOLVED**, that the Board of Retirement hereby approves the attached revised Board of Retirement Education Policy.

\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on December 6, 2016.*

*Ayes, Trustees:*

*Noes, Trustees:*

*Absent, Trustees:*

*Abstain, Trustees:*

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*Paul Hackelman, Board Chair  
SamCERA*

**BOARD EDUCATION POLICY**

**SECTION 1. BOARD MEMBER EDUCATION IS REQUIRED**

- A. **Fiduciary Duty.** Consistent with the Board's fiduciary responsibility to discharge its duties with respect to the system with care, skill, prudence, and diligence, the Board acknowledges the vital importance of making informed judgments on all matters which come before it and has determined that educational activities help provide the Board with knowledge and skills to make such informed decisions. Board members come to the Board with differing backgrounds, knowledge and expertise. Each member has a duty to receive the education that best fits his or her needs. Board member education should develop the individual knowledge of the Board members and in turn, improve the knowledge of the Board as whole so that it may discharge its fiduciary duties.
  
- B. **Minimum Required Hours of Training.** Each Board member shall receive a minimum of 24 hours of Board member education in the topics listed in Section 3 (A) within the first two years of assuming office and for every subsequent two-year period the Board member continues to hold membership, in accordance with Government Code §31522.8.
  
- C. **Posting of Policy and Board Member Compliance.** Staff shall maintain a record of Board member compliance with this policy and this policy and an annual report on Board member compliance will be posted on the Board's website which shall reflect the education completed for the prior fiscal year or calendar, depending upon when the Board member's term commences, in accordance with Government Code §31522.8.
  
- D. **Timely Report by Board Member of Educational Participation.** Prior to the next regularly scheduled meeting of the Board following the Board member's participation in an educational activity, the Board member shall submit for inclusion on the Consent Agenda, a summary written report on the content of educational activities. The report shall substantially reflect the information contained in the attached sample report.

**SECTION 2 COST EFFECTIVE EDUCATION**

- A. **Limit for Attendance at Overnight Out-Of-Bay Area Educational Events.** Board member education should be obtained in a cost efficient manner minimizing costs wherever possible. Every Board member is authorized to attend conferences and education programs within the Bay Area, and programs sponsored by the State Association of County Retirement Systems (SACRS) and the California Association of Public Retirement Systems (CALAPRS). In addition, every Board member is authorized to attend up to two (2) approved out-of-Bay Area educational events requiring overnight stays per fiscal year. Multiple education providers provide similar educational opportunities and each Board member shall make every effort to obtain his or her education within California. Board members should not attend educational activities that conflict with regularly scheduled Board meetings.

- B. **Travel Expenses.** Travel expenses incurred by a Board member for education are subject to reimbursement by SamCERA in accordance with this policy and the Board's "Policy For Reimbursement Of Travel And Other Official Expenses For Trustees." Any international travel by a Board member must be placed on the Board's regular agenda for the Board's pre-approval. Costs for attendance at educational events that are not consistent with both policies will not be subject to reimbursement without Board approval.
- C. **Education through Electronic Means.** The Board further encourages members to participate to the fullest extent possible in approved taped and electronic delivery of educational opportunities.
- D. **Education Given by SamCERA Staff and Consultants.** Training provided by or arranged by the Chief Executive Officer, Chief Investment Officer, Chief Legal Counsel, and other SamCERA staff, the Board's Medical Advisor, Actuary, Investment Consultant, Investment Managers shall satisfy the required education for the subject matters presented at such training and the required educational hours for the length of the training.
- E. **Education from Publications.** A Board member may count up to three hours towards his or her biannual education requirement by reading Pensions & Investments, the Public Retirement Journal, and/or the Wall Street Journal.
- F. **Education from On Site Visits.** A Board member may count up to three hours towards his or her biannual education requirement by accompanying staff on an onsite visit to a potential or existing investment consultant, manager or other SamCERA provider. Visits outside of the Bay Area requiring an overnight stay will count as an approved trip in accordance with Section 2 (A).

### **SECTION 3. APPROVED EDUCATIONAL TOPIC AREAS AND PROGRAMS**

- A. **Educational Topic Areas.** In accordance with Government Code §31522.8, appropriate topics for Board member education, may include, but are not limited to, the following:
  - (1) Fiduciary responsibilities
  - (2) Ethics
  - (3) Pension fund investments and investment program management
  - (4) Actuarial matters
  - (5) Pension funding
  - (6) Benefits administration
  - (7) Disability evaluation
  - (8) Fair hearings
  - (9) Pension fund governance
  - (10) New board member orientation

**B. Approved Educational Programs and Activities.** In addition to the SACRS and CALAPRS conferences and educational programs listed in Section 2 A, a Board member's attendance at and/or viewing or listening of recordings of one or more programs listed below shall satisfy the required education for the subject matters presented at such programs and the required educational hours for the length of the program.

- (1) International Foundation of Employee Benefit Plans (IFEBP)
- (2) Wharton investment management programs
- (3) Chartered Financial Analyst (CFA) Institute
- (4) National Conference on Public Employee Retirement Systems (NCPERS)
- (5) Institutional Limited Partner Association (ILPA) Institute (Educational Programs)

**C. Recommended Education for New Board members.** As part of a new Board member's orientation, staff will provide a recommended educational plan that best suits the Board member's educational needs for his or her first term.

**D. Special Request to attend Education Event.** In considering each request to attend a specified educational activity that is not authorized in Section 2B, the Board will consider if the overnight travel is appropriate and consistent with the intent of this policy and shall consider items such as:

- 1) Are the conference topics of current interest and importance and related to issues facing SamCERA?
- 2) Have reports from previous attendees been favorable regarding the content of the conference and the continuing value of future attendance?
- 3) Will the conference meet the educational needs of the attendee?
- 4) Can similar education be received from an already approved provider or that provider's on-line resources?
- 5) Does the cost of the event and overnight travel justify the benefits particularly if the conference is out of California?
- 6) How many overnight trips has the Board member attended and/or is planning on attending this fiscal year?

#### **SECTION 4. EDUCATIONAL EXPENSES FOR STAFF**

The Chief Executive Officer is authorized to approve the participation and associated travel of the Chief Executive Officer and staff in educational activities to the extent that the Chief Executive Officer finds that such participation will contribute to the staff member's ability to perform her or his duties and the budget provides funds for such activities.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 6, 2016

Agenda Item 7.3

**TO:** Board of Retirement

**FROM:** Scott Hood, Chief Executive Officer

**SUBJECT:** Resolution Calling a Special Election to Fill Vacancy in the Third Seat

**Staff Recommendation**

Approve a resolution calling a Special Election to fill vacancy in the Third Seat of the Board of Retirement.

**Background**

Natalie Kwan Lloyd, elected general member of the Third Seat of the Board of Retirement, left her employment with the County of San Mateo on November 28, 2016, which has created a vacancy on the Board. This vacancy has occurred more than nine months prior to the end of the term of the Third Seat which expires on June 30, 2019.

**Discussion**

Board Regulation 4.22 provides that if there is a vacancy that occurs more than nine months prior to the end of the term, the Board shall call a Special Election, which shall be held not less than 60 nor more than 120 days from the date the seat was vacated. Accordingly, the Board can select an election date sometime between January 27 and March 28, 2017.

This election is to be conducted in conformance with the provisions for regular elections, except that the schedule shall be adjusted by the Elections Officer to comply with the date of the Special Election set by the Board. In recommending a date, both SamCERA and the Elections Division staff focused on having the election on a Monday to give the Elections Officer the most amount of time to certify the election by the Friday after the election and to more closely conform the regulations. The chart below shows for each proposed election date the corresponding certification date and the first scheduled board meeting the newly elected trustee could attend:

<b>Election Date</b>	<b>Certification Date</b>	<b>Next Board Meeting</b>
March 13	March 20	March 28
March 20	March 27	March 28
March 27	April 3	April 25

After the date is set, staff will work with the Elections Officer for a schedule setting forth the deadlines, such as nomination period, candidate statements, mailing of ballot.

**Attachment**

Resolution Calling a Special Election to fill vacancy in the Third Seat of the Board of Retirement.



SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
RESOLUTION 2016-\_\_

**RESOLUTION CALLING A SPECIAL ELECTION TO FILL VACANCY IN THE  
THIRD SEAT OF THE BOARD OF RETIREMENT**

**RESOLVED**, by the Board of Retirement of the San Mateo County Employees' Retirement Association, that

**WHEREAS**, Natalie Kwan Lloyd, elected general member of the Third Seat of the Board of Retirement left her employment with the County of San Mateo on November 28, 2016; and

**WHEREAS**, the term for the Third Seat of the Board of Retirement expires on June 30, 2019; and

**WHEREAS**, Board of Retirement Regulation 4.22 provides that if there is a vacancy that occurs more than nine months prior to the end of the term, the Board shall call a Special Election, which shall be held not less than 60 nor more than 120 days from the date the seat was vacated; and

**WHEREAS**, the Special Election shall be conducted in conformance with the provisions of the Article for Regular Elections, except that the schedule shall be adjusted by the Elections Officer to comply with the date of the Special Election set by the Board; and

**WHEREAS**, this Board desires to call a special election to fill the vacancy on the Board of Retirement for the Third Seat and to hold that special election:

**NOW, THEREFORE, IT IS HEREBY DETERMINED AND ORDERED** as follows:

1. Pursuant to Board of Retirement Regulation 4.22, the Board hereby calls a special election to fill the vacancy on the Board of Retirement for the Third Seat resulting from the vacancy created by Natalie Kwan Lloyd leaving her County employment.
2. The special election to fill this vacancy shall be held on \_\_\_\_\_.
3. The Elections Officer shall publish a notice of this special election in accordance with the Regulations of the Board of Retirement.
4. (a) The special election shall be held and conducted, the returns canvassed, and the result declared in accordance with Regulations of the Board of Retirement.  
  
(b) The schedule of the posting of the notice of election and the conduct of the election may be adjusted by the Elections Officer to comply with the date of the Special Election set by the Board.

\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association,  
Board of Retirement, on December 6, 2016.*

*Ayes, Trustees:*

*Noes, Trustees:*

*Absent, Trustees:*

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*Paul Hackleman, Board Chair  
SamCERA*

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 6, 2016

Agenda Item 7.4

**TO:** Board of Retirement  
**FROM:** Scott Hood, Chief Executive Officer  
**SUBJECT:** 2016-17 Board-Staff Retreat Topics



**Staff Recommendation**

Provide direction for staff regarding the topics and schedule for the April 25 and 26, 2017, Board-Staff Retreat.

**Background**

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. This agenda item gives trustees its first opportunity to discuss retreat topics. We will bring this back to Board again prior to finalizing the agenda.

**Discussion**

Attached is a list of the 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. By popular demand, staff will also have a "team building" exercise for the Board. And, weather permitting, a walk around the Oracle pond. If you have additional topics or activities 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  
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.**

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

Proposed 2017 retreat topics:


<b>Actuarial Topics: Long term effects of lowering the assumed rate, Implementing separate General and Safety Salary Assumptions.</b> Led by Nick Collier, Milliman.
<b>Deep Dive.</b> Led by Mike Coultrip. Assess longer-term manager performance and other characteristics vs indexes and peer groups. Review Risk Dashboard.
<b>Soft Dollar Discussion.</b> Led by Mike Coultrip.
<b>Global Economist.</b> Staff is identifying an economist to speak.
<b>Mandated Ethics Training.</b> Led by Brenda Carlson. Specific topic to be determined, one hour in length.
<b>Medical Education.</b> Dr Brodtkin will provide an in-depth presentation on the medical mechanics of certain injuries to assist the Board in its disability matters, one hour or less in length.
<b>Overview of V3 Member Self Service.</b> A demo of the Member Self Service Features of V3 led by Elizabeth LeNguyen.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 6, 2016

Agenda Item 7.5

**TO:** Board of Retirement

**FROM:** Brenda B. Carlson, Chief Legal Counsel, SamCERA 

**SUBJECT:** Amendment of Agreement with Scott Hood for Chief Executive Officer Services

**Recommendation**

Adopt a resolution authorizing the Chair to execute an amendment to the agreement between the Board of Retirement and Scott Hood for his services as Chief Executive Officer.

**Background**

Government Code §31522.2 provides that the Board may appoint an administrator, also referred to as a Chief Executive Officer (CEO). On October 28, 2014, the Board entered into an agreement with Scott Hood for services as SamCERA's CEO.

**Discussion**

Section 31522.2 provides that the CEO be a County employee whose salary is contained in the County's salary resolution. The agreement between the Board and Mr. Hood sets his annual salary at the D step for the CEO position in the "Resolution Expressing the Salary and Benefits of Unrepresented Management Personnel of the County of San Mateo." The agreement further provides that "At the first review of the Chief Executive Officer, the Board shall consider adjusting his salary to the E step and if granted, said adjustment would be effective as of the date determined by the Board."

During agenda item C2, the Board will meet with Ms Carlson, as the designated labor negotiator, and give her direction regarding Mr. Hood's salary step. If the Board's direction is to adjust Mr. Hood's salary to the E step, under this agenda item, the Board would approve an amendment to section 8 of the agreement to reflect an annual salary at the E Step. The adjustment would be effective the commencement of next pay period, or other date as directed by the Board.

**Attachment**

Resolution Authorizing the Chair to Execute an Amendment to the Agreement Between the Board of Retirement and Robin Scott Hood for His Services as Chief Executive Officer

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**RESOLUTION 2016-\_\_\_\_\_**

**RESOLUTION AUTHORIZING THE CHAIR OF THE BOARD OF RETIREMENT TO EXECUTE AN AMENDMENT TO THE AGREEMENT BETWEEN THE BOARD AND ROBIN SCOTT HOOD FOR SERVICES OF CHIEF EXECUTIVE OFFICER**

**WHEREAS**, Government Code §31522.2 provides that the Board may appoint an administrator, also referred to as the Chief Executive Officer; and

**WHEREAS**, on October 28, 2014, the Board entered into an agreement with Mr. Hood for services as Chief Executive Officer and his first day of such employment was November 9, 2014; and

**WHEREAS**, Section 31522.2 further provides that the position of the Chief Executive Officer shall be an employee of San Mateo County whose salary shall be set forth in the County's ordinance or salary resolution; and

**WHEREAS**, this Board has determined that its Agreement with Mr. Hood be amended to reflect an adjustment in Mr. Hood's salary from the D Step to the E Step in the salary range for the "Chief Executive Officer, SamCERA", as set forth in the "Resolution Expressing the Salary and Benefits of Unrepresented Management Personnel of the County of San Mateo"; now, therefore, be it;

**RESOLVED**, that the Chair is hereby authorized to execute an amendment to the agreement with Robin Scott Hood that amends Section 8 to read as follows:

"The Chief Executive Officer shall receive an annual salary which is the E Step in the salary range for "Chief Executive Officer, SamCERA, as set forth in the "Resolution Expressing the Salary and Benefits of Unrepresented Management Personnel of the County of San Mateo."

**BE IT FURTHER RESOLVED**, that the amendment shall be effective at the commencement of the next pay period following the approval of this resolution.

\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on December 6, 2016.*

*Ayes, Trustees:*

*Noes, Trustees:*

*Absent, Trustees:*

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*Paul Hackleman, Board Chair  
SamCERA*